Appendix R2 Response to Comments

The responses to the comments received on the I-405 Improvement Project Supplemental Draft EIR/EIS are organized as follows. The comments and responses are grouped by type of commenter. The types of commenters are:

- Federal Government Agencies
- State Government Agencies
- Regional Government Agencies
- Local Government Agencies
- Community Groups
- Industry and Business Groups
- Public Comments (received via e-Mail, U.S. mail, etc) – Organized alphabetically by last name of the commenter, such that there are 26 separate public comment groups grouped by letter of the alphabet.
- Petitions
- Public Hearing Comments (received at a public hearing).

The comments and responses within each group are presented in a section, and the sections are consecutive according to the list above. The first part of each section provides the comments and the second part provides the responses. Table R-2 identifies each of the groups and the commenters in that group. For example, the first group is Government (Federal) and the first commenter is the Office of Environmental Policy and Compliance (OEPC).

Each comment is given a unique identifier for the commenter, followed by a serial number for each comment made by the commenter. For example, the first comment of the OEPC is GF1-1, with the GF1 being the unique identifier for OEPC and "-1" referring to OEPC's first comment. The page number of the comment is provided in Table R-2, followed by the page number of the response. The final column of the table is the subject code of the comment using the following abbreviations:

- E – Environmental
- T – Traffic
- D – Design
- A – Air Quality
- N – Noise
- V – Visual

The comment letters and e-mails are presented with the unique identifier of the commenter shown at the top of each page of the comment letter or e-mail. Each comment within the letter is bracketed and shows the serial number of the comment. For example, the OEPC letter shows OEPC's unique identifier (GF1) at the top of each page. The one comment within OEPC's letter is bracketed and identified with a serial number 1.

The responses are organized in the same order as the comments. The responses show the unique identifier of the commenter followed by the serial number of the comment within the commenter's letter. Comments and responses can be easily related with the identifiers.

An asterisk (*) in Table R-2 denotes comments received after close of the formal comment period.

After receiving comments from the public and reviewing agencies on the Supplemental Draft EIR/EIS, Caltrans performed additional analysis as discussed within the responses of this Appendix. Several engineering measures were studied to attempt to reduce impacts. Analyses that showed measures which resulted in unacceptable impacts or conclusions are discussed in this Appendix but were not proposed for the project. However, those that resulted in acceptable conclusions have been proposed as part of the project scope and are discussed in this Appendix and Chapter 2 of the Final EIR/EIS. The responses to comments in this Appendix and design options/variations that were developed as a result of the public comments were also part of the criteria used to identify the Preferred Alternative. The identification of the PA is discussed in the Final EIR/EIS, Summary, Section S.3., and Chapter 2.

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
GOVERNMENT (FEDERAL) COMMENTS				
United States Department of the Interior	GF1-1	R2-GF-1	R2-GF-6	E
United States Environmental Protection Agency	GF2-1	R2-GF-1	R2-GF-6	E
GOVERNMENT (STATE) COMMENTS				
California Department of Fish and Wildlife	GS1-1	R2-GS-1	R2-GS-5	E
California Public Utilities Commission	GS2-1	R2-GS-1	R2-GS-5	E
California Transportation Commission	GS3-1	R2-GS-2	R2-GS-5	E
Native American Heritage Commission	GS4-1	R2-GS-3	R2-GS-6	E

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
GOVERNMENT (REGIONAL) COMMENTS				
Metropolitan Transit Authority	GR1-1	R2-GR-1	R2-GR-5	T
	GR1-2	R2-GR-1	R2-GR-5	E
	GR1-3	R2-GR-1	R2-GR-5	T
	GR1-4	R2-GR-1	R2-GR-5	D
	GR1-5	R2-GR-1	R2-GR-6	T
	GR1-6	R2-GR-1	R2-GR-6	T
	GR1-7	R2-GR-1	R2-GR-6	T
	GR1-8	R2-GR-1	R2-GR-6	T
	GR1-9	R2-GR-1	R2-GR-7	T
South Coast Air Quality Management District*	GR2-1	R2-GR-2	R2-GR-7	A
	GR2-2	R2-GR-2	R2-GR-8	T
	GR2-3	R2-GR-2	R2-GR-8	A
	GR2-4	R2-GR-2	R2-GR-9	A
	GR2-5	R2-GR-3	R2-GR-9	A
	GR2-6	R2-GR-3	R2-GR-9	A
	GR2-7	R2-GR-3	R2-GR-9	A
	GR2-8	R2-GR-3	R2-GR-9	A
	GR2-9	R2-GR-3	R2-GR-9	A
Transportation Corridor Agencies	GR3-1	R2-GR-4	R2-GR-10	E
GOVERNMENT (LOCAL) COMMENTS				
Fountain Valley, City of	GL1-1	R2-GL-1	R2-GL-203	E
	GL1-2	R2-GL-1	R2-GL-203	D
	GL1-3	R2-GL-1	R2-GL-203	E
Long Beach, City of	GL2-1	R2-GL-2	R2-GL-203	T
	GL2-2	R2-GL-2	R2-GL-203	T
	GL2-3	R2-GL-2	R2-GL-203	E
	GL2-4	R2-GL-3	R2-GL-204	T
	GL2-5	R2-GL-3	R2-GL-204	T
	GL2-6	R2-GL-3	R2-GL-205	T
	GL2-7	R2-GL-3	R2-GL-205	T/E
	GL2-8	R2-GL-4	R2-GL-205	T
	GL2-9	R2-GL-4	R2-GL-206	T
	GL2-10	R2-GL-4	R2-GL-206	T

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
	GL2-11	R2-GL-4	R2-GL-206	T/E
	GL2-12	R2-GL-4	R2-GL-207	E
	GL2-13	R2-GL-5	R2-GL-207	T/E
	GL2-14	R2-GL-5	R2-GL-207	T
	GL2-15	R2-GL-5	R2-GL-207	T
	GL2-16	R2-GL-6	R2-GL-208	E
	GL2-17	R2-GL-6	R2-GL-208	T/E
	GL2-18	R2-GL-6	R2-GL-208	E
	GL2-19	R2-GL-6	R2-GL-208	T
	GL2-20	R2-GL-7	R2-GL-208	T/E
Los Alamitos, City of	GL3-1	R2-GL-10	R2-GL-2010	E
	GL3-2	R2-GL-10	R2-GL-210	E
	GL3-3	R2-GL-11	R2-GL-210	E
	GL3-4	R2-GL-11	R2-GL-211	D/E
	GL3-5	R2-GL-11	R2-GL-211	E
	GL3-6	R2-GL-11	R2-GL-211	E
Patrick O'Donnell	GL4-1	R2-GL-12	R2-GL-212	E
	GL4-2	R2-GL-12	R2-GL-212	T/E
Rossmoor Community Services District	GL5-1	R2-GL-12	R2-GL-212	E
Rossmoor Community Services District	GL6-1	R2-GL-13	R2-GL-212	E
	GL6-2	R2-GL-13	R2-GL-213	E
Rossmoor Community Services District	GL7-1	R2-GL-14	R2-GL-213	E
Rossmoor Community Services District	GL8-1	R2-GL-15	R2-GL-213	E
Seal Beach, City of	GL9-1	R2-GL-17	R2-GL-213	T
	GL9-2	R2-GL-17	R2-GL-214	T
	GL9-3	R2-GL-17	R2-GL-214	T
	GL9-4	R2-GL-17	R2-GL-214	T
	GL9-5	R2-GL-17	R2-GL-214	E
	GL9-6	R2-GL-17	R2-GL-214	E
	GL9-7	R2-GL-17	R2-GL-214	E
	GL9-8	R2-GL-17	R2-GL-214	T
	GL9-9	R2-GL-17	R2-GL-215	E
	GL9-10	R2-GL-17	R2-GL-215	T/E
	GL9-11	R2-GL-17	R2-GL-215	T/E

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
	GL9-12	R2-GL-17	R2-GL-215	T/D
	GL9-13	R2-GL-17	R2-GL-216	T/E
	GL9-14	R2-GL-17	R2-GL-216	D/E
	GL9-15	R2-GL-17	R2-GL-217	T
	GL9-16	R2-GL-18	R2-GL-217	E
	GL9-17	R2-GL-18	R2-GL-217	T
	GL9-18	R2-GL-18	R2-GL-217	T
	GL9-19	R2-GL-18	R2-GL-217	T
	GL9-20	R2-GL-18	R2-GL-217	T
	GL9-21	R2-GL-18	R2-GL-218	T/D
	GL9-22	R2-GL-18	R2-GL-218	E
	GL9-23	R2-GL-18	R2-GL-218	T
	GL9-24	R2-GL-18	R2-GL-218	E
	GL9-25	R2-GL-18	R2-GL-218	E
	GL9-26	R2-GL-18	R2-GL-219	T/E
	GL9-27	R2-GL-18	R2-GL-219	T/E
	GL9-28	R2-GL-18	R2-GL-219	T
	GL9-29	R2-GL-18	R2-GL-220	T
	GL9-30	R2-GL-19	R2-GL-220	T/E
	GL9-31	R2-GL-19	R2-GL-221	T/D
	GL9-32	R2-GL-19	R2-GL-221	T/E
	GL9-33	R2-GL-19	R2-GL-221	T/E
	GL9-34	R2-GL-20	R2-GL-221	E
	GL9-35	R2-GL-20	R2-GL-221	E
	GL9-36	R2-GL-21	R2-GL-222	E
	GL9-37	R2-GL-21	R2-GL-222	E
	GL9-38	R2-GL-21	R2-GL-222	E
	GL9-39	R2-GL-21	R2-GL-222	T/E
	GL9-40	R2-GL-21	R2-GL-222	E
	GL9-41	R2-GL-21	R2-GL-223	T/E
	GL9-42	R2-GL-22	R2-GL-223	T
	GL9-43	R2-GL-22	R2-GL-223	E
	GL9-44	R2-GL-26	R2-GL-224	E
	GL9-45	R2-GL-27	R2-GL-225	T

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
	GL9-46	R2-GL-27	R2-GL-225	T
	GL9-47	R2-GL-27	R2-GL-225	D/E
	GL9-48	R2-GL-28	R2-GL-226	E
	GL9-49	R2-GL-30	R2-GL-226	E/T
	GL9-50	R2-GL-34	R2-GL-227	E
	GL9-51	R2-GL-37	R2-GL-228	E
	GL9-52	R2-GL-37	R2-GL-228	T
	GL9-53	R2-GL-38	R2-GL-228	D/N
	GL9-54	R2-GL-38	R2-GL-229	E
	GL9-55	R2-GL-38	R2-GL-229	T/E
	GL9-56	R2-GL-40	R2-GL-229	E
	GL9-57	R2-GL-40	R2-GL-229	T/E
	GL9-58	R2-GL-41	R2-GL-230	E
	GL9-59	R2-GL-41	R2-GL-230	T/E
	GL9-60	R2-GL-42	R2-GL-230	T/E
	GL9-61	R2-GL-43	R2-GL-230	T/E
	GL9-62	R2-GL-44	R2-GL-230	T/E
	GL9-63	R2-GL-46	R2-GL-231	T/E
	GL9-64	R2-GL-46	R2-GL-231	T/E
	GL9-65	R2-GL-48	R2-GL-231	T/E
	GL9-66	R2-GL-51	R2-GL-231	T/E
	GL9-67	R2-GL-51	R2-GL-232	T/E
COMMUNITY GROUP COMMENTS				
Rossmoor Homeowners Association	CG1-1	R2-CG-1	R2-CG-4	E
Los Altos Unified Methodist Church	CG2-1	R2-CG-2	R2-CG-4	E
INDUSTRY AND BUSINESS GROUP COMMENTS				
The Gas Company	IBG1-1	R2-IBG-1	R2-IBG-3	E
Orange County Business Council	IBG2-1	R2-IBG-1	R2-IBG-3	E
PUBLIC COMMENTS				
Dillon Alley	PC-A1-1	R2-PC-A-1	R2-PC-A-3	E
Beth M. Auzmus	PC-A2-1	R2-PC-A-1	R2-PC-A-3	E
	PC-A2-2	R2-PC-A-1	R2-PC-A-3	T
	PC-A2-3	R2-PC-A-1	R2-PC-A-3	E/A
Ranko Balog	PC-B1-1	R2-PC-B-1	R2-PC-B-5	E

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
Tom Balutis	PC-B2-1	R2-PC-B-1	R2-PC-B-5	E
Jeanne Barragan	PC-B3-1	R2-PC-B-1	R2-PC-B-5	E
bcohenmsw	PC-B4-1	R2-PC-B-1	R2-PC-B-6	E
G. Wesley Barrett	PC-B5-1	R2-PC-B-2	R2-PC-B-6	E/N
Rebecca Barrett	PC-B6-1	R2-PC-B-2	R2-PC-B-6	N
	PC-B6-2	R2-PC-B-2	R2-PC-B-6	E
Emma Benavides	PC-B7-1	R2-PC-B-2	R2-PC-B-7	E
Robert Beckers	PC-B8-1	R2-PC-B-3	R2-PC-B-7	D/N
Kevin Bigelow	PC-B9-1	R2-PC-B-3	R2-PC-B-7	E
John Boland	PC-B10-1	R2-PC-B-3	R2-PC-B-8	E
Renee Bolanos	PC-B11-1	R2-PC-B-3	R2-PC-B-8	E
	PC-B11-2	R2-PC-B-3	R2-PC-B-8	T
Frank Boynton	PC-B12-1	R2-PC-B-3	R2-PC-B-8	E
Steve & Carol Brumm	PC-B13-1	R2-PC-B-4	R2-PC-B-9	D
Richard Butterfield	PC-B14-1	R2-PC-B-4	R2-PC-B-9	E
Cheryl Cameron	PC-C1-1	R2-PC-C-1	R2-PC-C-8	D/A/N/E
Diana Carey	PC-C2-1	R2-PC-C-1	R2-PC-C-8	T/D
Henrietta Carter	PC-C3-1	R2-PC-C-1	R2-PC-C-8	D
Glen Cauble	PC-C4-1	R2-PC-C-1	R2-PC-C-8	E
	PC-C4-2	R2-PC-C-1	R2-PC-C-9	E
Kim Clark	PC-C5-1	R2-PC-C-2	R2-PC-C-9	E
Arnie Cliffgard	PC-C6-1	R2-PC-C-2	R2-PC-C-9	D
Paul Cline	PC-C7-1	R2-PC-C-3	R2-PC-C-9	E
Paul Cline	PC-C8-1	R2-PC-C-4	R2-PC-C-10	E
Paul Cline	PC-C9-1	R2-PC-C-5	R2-PC-C-10	E
Paul Cline	PC-C10-1	R2-PC-C-6	R2-PC-C-11	E
Paul Cline	PC-C11-1	R2-PC-C-6	R2-PC-C-11	E
Manley Cohen	PC-C12-1	R2-PC-C-7	R2-PC-C-12	E
Mark Cole	PC-C13-1	R2-PC-C-7	R2-PC-C-12	T/D
Jane Conover	PC-C14-1	R2-PC-C-7	R2-PC-C-12	D
Dave Corp	PC-C15-1	R2-PC-C-7	R2-PC-C-12	E
David Cota	PC-C16-1	R2-PC-C-7	R2-PC-C-13	E
Melissa Cunningham	PC-C17-1	R2-PC-C-7	R2-PC-C-13	E
Sandy Davidson	PC-D1-1	R2-PC-D-1	R2-PC-D-2	T

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
Steve Dees	PC-D2-1	R2-PC-D-1	R2-PC-D-2	E
	PC-D2-2	R2-PC-D-1	R2-PC-D-3	D
Michael DeShazo	PC-D3-1	R2-PC-D-1	R2-PC-D-3	D
Lynn Duncan	PC-D4-1	R2-PC-D-1	R2-PC-D-3	E
Terri Epps	PC-E1-1	R2-PC-E-1	R2-PC-E-2	E
	PC-E1-2	R2-PC-E-1	R2-PC-E-2	E
	PC-E1-3	R2-PC-E-1	R2-PC-E-2	T/D
Angie Epstein	PC-E2-1	R2-PC-E-1	R2-PC-E-2	E
Steve Erickson	PC-E3-1	R2-PC-E-1	R2-PC-E-3	N/V/D
Glenda Favilla	PC-F1-1	R2-PC-F-1	R2-PC-F-7	E/N/A
Matt Filler	PC-F2-1	R2-PC-F-1	R2-PC-F-7	T
Matt Filler	PC-F3-1	R2-PC-F-1	R2-PC-F-7	D
Matt Filler	PC-F4-1	R2-PC-F-1	R2-PC-F-8	D
Matt Filler	PC-F5-1	R2-PC-F-2	R2-PC-F-8	E
Matt Filler	PC-F6-1	R2-PC-F-2	R2-PC-F-9	E
Matt Filler	PC-F7-1	R2-PC-F-3	R2-PC-F-9	D
Matt Filler	PC-F8-1	R2-PC-F-3	R2-PC-F-10	T
	PC-F8-2	R2-PC-F-3	R2-PC-F-10	T
	PC-F8-3	R2-PC-F-3	R2-PC-F-10	T
Mark and Alma Fisher	PC-F9-1	R2-PC-F-3	R2-PC-F-10	D
James Flanagan	PC-F10-1	R2-PC-F-4	R2-PC-F-11	E
Sylvia Flood	PC-F11-1	R2-PC-F-4	R2-PC-F-11	E
Luella Forrai	PC-F12-1	R2-PC-F-5	R2-PC-F-11	D
Steve Forrai	PC-F13-1	R2-PC-F-5	R2-PC-F-12	D
Fred and Midori Fujikawa	PC-F14-1	R2-PC-F-5	R2-PC-F-12	N
	PC-F14-2	R2-PC-F-6	R2-PC-F-12	D/T
Larry Fulton	PC-F15-1	R2-PC-F-6	R2-PC-F-12	E
Helga Gergens	PC-G1-1	R2-PC-G-1	R2-PC-G-4	E
William Giser	PC-G2-1	R2-PC-G-1	R2-PC-G-4	E
	PC-G2-2	R2-PC-G-1	R2-PC-G-4	E
Susan Graham	PC-G3-1	R2-PC-G-2	R2-PC-G-5	E
David Gray	PC-G4-1	R2-PC-G-2	R2-PC-G-5	T
L. Green	PC-G5-1	R2-PC-G-3	R2-PC-G-6	N/E
Travis Greene	PC-G6-1	R2-PC-G-3	R2-PC-G-7	E

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
Steve Grenier	PC-G7-1	R2-PC-G-3	R2-PC-G-7	E/D
Brian Hale	PC-H1-1	R2-PC-H-1	R2-PC-H-3	E
Janet Hoover	PC-H2-1	R2-PC-H-1	R2-PC-H-3	E
Walter Horne	PC-H3-1	R2-PC-H-1	R2-PC-H-3	E
David and Nancy Hunsaker	PC-H4-1	R2-PC-H-1	R2-PC-H-3	E
LG Hunting	PC-H5-1	R2-PC-H-2	R2-PC-H-4	E
LG Hunting	PC-H6-1	R2-PC-H-2	R2-PC-H-4	E
LG Hunting	PC-H7-1	R2-PC-H-2	R2-PC-H-4	E
Suzy Ito	PC-I1-1	R2-PC-I-1	R2-PC-I-2	D/N/A
Dr. J	PC-J1-1	R2-PC-J-1	R2-PC-J-3	E
Dick Jolly	PC-J2-1	R2-PC-J-1	R2-PC-J-3	E
Rodney and Paraskevi June	PC-J3-1	R2-PC-J-1	R2-PC-J-3	T/D
Rodney and Paraskevi June	PC-J4-1	R2-PC-J-2	R2-PC-J-4	T/D
Jim Kat	PC-K1-1	R2-PC-K-1	R2-PC-K-3	E
Keesgal*	PC-K2-1	R2-PC-K-1	R2-PC-K-3	E
Mike Kobel	PC-K3-1	R2-PC-K-1	R2-PC-K-3	E
Candace K. Koogler	PC-K4-1	R2-PC-K-2	R2-PC-K-3	D/N/A
Richard Krumhauer	PC-K5-1	R2-PC-K-2	R2-PC-K-4	E
Diana Lanham	PC-L1-1	R2-PC-L-1	R2-PC-L-6	E
Damon Lanier	PC-L2-1	R2-PC-L-1	R2-PC-L-6	E
	PC-L2-2	R2-PC-L-1	R2-PC-L-6	N/D
	PC-L2-3	R2-PC-L-1	R2-PC-L-6	E
Michelle Larsson	PC-L3-1	R2-PC-L-2	R2-PC-L-6	T
Jenea Lawley	PC-L4-1	R2-PC-L-2	R2-PC-L-7	D/N/E
Lorrie LeCou	PC-L5-1	R2-PC-L-3	R2-PC-L-7	D/N/A/T/E
Carl and Elena Levine	PC-L6-1	R2-PC-L-4	R2-PC-L-7	D/T/N/A/E
Van Loney	PC-L7-1	R2-PC-L-4	R2-PC-L-8	D/N
Amy Lounsbury	PC-L8-1	R2-PC-L-4	R2-PC-L-8	E
Greg and Sherryl Lunde	PC-L9-1	R2-PC-L-5	R2-PC-L-8	E
David Lyon	PC-L10-1	R2-PC-L-5	R2-PC-L-9	E
David Lyon	PC-L11-1	R2-PC-L-5	R2-PC-L-9	E
Lisa Peskay Malmsten	PC-M1-1	R2-PC-M-1	R2-PC-M-8	T
	PC-M1-2	R2-PC-M-1	R2-PC-M-8	E
	PC-M1-3	R2-PC-M-2	R2-PC-M-8	E

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
Luis and Jeannie Martinez	PC-M2-1	R2-PC-M-2	R2-PC-M-9	D/N/E
Michele McLeod	PC-M3-1	R2-PC-M-3	R2-PC-M-9	D/N/E
James and Lynn Medeiros	PC-M4-1	R2-PC-M-3	R2-PC-M-9	D/N/A/E
Stephani Meyers	PC-M5-1	R2-PC-M-4	R2-PC-M-10	D/N/E
Roger Michaud	PC-M6-1	R2-PC-M-4	R2-PC-M-10	E
Gary Miller	PC-M7-1	R2-PC-M-4	R2-PC-M-10	T
	PC-M7-2	R2-PC-M-4	R2-PC-M-11	T
Greg Millett	PC-M8-1	R2-PC-M-4	R2-PC-M-11	D/E
Teri Montgomery	PC-M9-1	R2-PC-M-5	R2-PC-M-11	E
Jeffrey Moore	PC-M10-1	R2-PC-M-5	R2-PC-M-12	E
Thomas Moore	PC-M11-1	R2-PC-M-5	R2-PC-M-12	T
	PC-M11-2	R2-PC-M-5	R2-PC-M-13	E
	PC-M11-3	R2-PC-M-5	R2-PC-M-13	E
Brad and Trisha Morris	PC-M12-1	R2-PC-M-6	R2-PC-M-13	D/T/E/A
Enette Murachver	PC-M13-1	R2-PC-M-7	R2-PC-M-13	E
Patricia Neal	PC-N1-1	R2-PC-N-1	R2-PC-N-3	E
Jane Nethers	PC-N2-1	R2-PC-N-1	R2-PC-N-3	E
Hung Nguyen	PC-N3-1	R2-PC-N-1	R2-PC-N-3	D
Mrs. Nguyen	PC-N4-1	R2-PC-N-1	R2-PC-N-3	E/N/A/D
Christine Nichols	PC-N5-1	R2-PC-N-2	R2-PC-N-4	E/T/D
Phyllis Nordstrom	PC-N6-1	R2-PC-N-2	R2-PC-N-4	E/N/D
Janine Parker	PC-P1-1	R2-PC-P-1	R2-PC-P-4	D/E
Janine Parker	PC-P2-1	R2-PC-P-1	R2-PC-P-4	D/N
William Petkus	PC-P3-1	R2-PC-P-2	R2-PC-P-4	E
Christian Porras	PC-P4-1	R2-PC-P-2	R2-PC-P-5	D
	PC-P4-2	R2-PC-P-2	R2-PC-P-5	D
	PC-P4-3	R2-PC-P-2	R2-PC-P-5	D
	PC-P4-4	R2-PC-P-2	R2-PC-P-6	E
	PC-P4-5	R2-PC-P-2	R2-PC-P-7	E
	PC-P4-6	R2-PC-P-2	R2-PC-P-7	E
	PC-P4-7	R2-PC-P-2	R2-PC-P-7	E
	PC-P4-8	R2-PC-P-3	R2-PC-P-7	N/D
	PC-P4-9	R2-PC-P-3	R2-PC-P-7	D
	PC-P4-10	R2-PC-P-3	R2-PC-P-7	D

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
	PC-P4-11	R2-PC-P-3	R2-PC-P-7	D
	PC-P4-12	R2-PC-P-3	R2-PC-P-8	E
	PC-P4-13	R2-PC-P-3	R2-PC-P-8	E
Mr. and Mrs. Woody Randolph	PC-R1-1	R2-PC-R-1	R2-PC-R-7	D/A/E
The Randolphs	PC-R2-1	R2-PC-R-2	R2-PC-R-7	E
The Randolphs	PC-R3-1	R2-PC-R-2	R2-PC-R-7	E
Deborah Randolph	PC-R4-1	R2-PC-R-2	R2-PC-R-8	D/E
	PC-R4-2	R2-PC-R-2	R2-PC-R-8	N/A
Timothy Reed	PC-R5-1	R2-PC-R-3	R2-PC-R-8	E
	PC-R5-2	R2-PC-R-3	R2-PC-R-8	T
Diane Reksc*	PC-R6-1	R2-PC-R-3	R2-PC-R-8	E
	PC-R6-2	R2-PC-R-3	R2-PC-R-9	T
	PC-R6-3	R2-PC-R-3	R2-PC-R-9	E
	PC-R6-4	R2-PC-R-3	R2-PC-R-9	D
	PC-R6-5	R2-PC-R-3	R2-PC-R-9	T/E
Kathe Repasi	PC-R7-1	R2-PC-R-4	R2-PC-R-10	E
Robin Ridley	PC-R8-1	R2-PC-R-4	R2-PC-R-10	E
Riem Family	PC-R9-1	R2-PC-R-4	R2-PC-R-10	N/D/A
	PC-R9-2	R2-PC-R-4	R2-PC-R-10	E
Scott and Mara Rivers	PC-R10-1	R2-PC-R-5	R2-PC-R-10	E/T
Kevin E. Robinson	PC-R11-1	R2-PC-R-5	R2-PC-R-11	D/N/E
Jim Rueff	PC-R12-1	R2-PC-R-5	R2-PC-R-11	E/T
	PC-R12-2	R2-PC-R-5	R2-PC-R-11	T
Joanne Runge	PC-R13-1	R2-PC-R-6	R2-PC-R-12	T
Diane Rush	PC-R14-1	R2-PC-R-6	R2-PC-R-12	E
Michael Sanders	PC-S1-1	R2-PC-S-1	R2-PC-S-10	E/T
Bob Satmary	PC-S2-1	R2-PC-S-1	R2-PC-S-10	E
	PC-S2-2	R2-PC-S-1	R2-PC-S-10	E
Dan Schechter and Felice Sussman	PC-S3-1	R2-PC-S-1	R2-PC-S-10	E
	PC-S3-2	R2-PC-S-1	R2-PC-S-11	D
Linda Scott	PC-S4-1	R2-PC-S-2	R2-PC-S-11	D/N/E
Kenneth Seiff	PC-S5-1	R2-PC-S-2	R2-PC-S-11	T
	PC-S5-2	R2-PC-S-3	R2-PC-S-12	T
	PC-S5-3	R2-PC-S-4	R2-PC-S-12	T

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
	PC-S5-4	R2-PC-S-4	R2-PC-S-13	T
	PC-S5-5	R2-PC-S-4	R2-PC-S-13	T
	PC-S5-6	R2-PC-S-4	R2-PC-S-13	T
	PC-S5-7	R2-PC-S-4	R2-PC-S-13	T
Alan Shipley	PC-S6-1	R2-PC-S-4	R2-PC-S-13	T/E
	PC-S6-2	R2-PC-S-4	R2-PC-S-14	E
	PC-S6-3	R2-PC-S-4	R2-PC-S-14	E
Elliott Singer	PC-S7-1	R2-PC-S-5	R2-PC-S-14	T
	PC-S7-2	R2-PC-S-5	R2-PC-S-14	E
	PC-S7-3	R2-PC-S-5	R2-PC-S-14	T
Paulette Smith	PC-S8-1	R2-PC-S-5	R2-PC-S-15	D/N/A/E/T
Mary Stebbins	PC-S9-1	R2-PC-S-6	R2-PC-S-15	D/N/A/E
S. Steponovich	PC-S10-1	R2-PC-S-6	R2-PC-S-15	E/T/A
Doreen Stevens*	PC-S11-1	R2-PC-S-6	R2-PC-S-16	T
Rosie Stewart	PC-S12-1	R2-PC-S-7	R2-PC-S-16	D/E
Harvey Storm	PC-S13-1	R2-PC-S-7	R2-PC-S-16	D/N/A
	PC-S13-2	R2-PC-S-7	R2-PC-S-16	E
	PC-S13-3	R2-PC-S-7	R2-PC-S-17	D
	PC-S13-4	R2-PC-S-7	R2-PC-S-17	D
Larry Strawther	PC-S14-1	R2-PC-S-8	R2-PC-S-17	E
Shelly Sustaric	PC-S15-1	R2-PC-S-8	R2-PC-S-17	T
	PC-S15-2	R2-PC-S-8	R2-PC-S-18	T
	PC-S15-3	R2-PC-S-8	R2-PC-S-18	E
	PC-S15-4	R2-PC-S-9	R2-PC-S-18	T
	PC-S15-5	R2-PC-S-9	R2-PC-S-18	T
	PC-S15-6	R2-PC-S-9	R2-PC-S-19	E
	PC-S15-7	R2-PC-S-9	R2-PC-S-19	T
Donald and Diane Thompson	PC-T1-1	R2-PC-T-1	R2-PC-T-3	T/E/N
Donald and Diane Thompson	PC-T2-1	R2-PC-T-1	R2-PC-T-3	T
	PC-T2-2	R2-PC-T-1	R2-PC-T-3	T
	PC-T2-3	R2-PC-T-1	R2-PC-T-3	D
	PC-T2-4	R2-PC-T-1	R2-PC-T-4	E
	PC-T2-5	R2-PC-T-1	R2-PC-T-4	D
	PC-T2-6	R2-PC-T-1	R2-PC-T-4	E

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
	PC-T2-7	R2-PC-T-1	R2-PC-T-4	D
Shirley Thronson	PC-T3-1	R2-PC-T-2	R2-PC-T-4	T
Jill Buczkowski Unze	PC-U1-1	R2-PC-U-1	R2-PC-U-2	E
	PC-U1-2	R2-PC-U-1	R2-PC-U-2	E
Jay Van Arsdale*	PC-V1-1	R2-PC-V-1	R2-PC-V-3	E
Dick Vincent	PC-V2-1	R2-PC-V-1	R2-PC-V-3	D/N/A
	PC-V2-2	R2-PC-V-1	R2-PC-V-3	E/T
Shannon Vincent	PC-V3-1	R2-PC-V-2	R2-PC-V-3	D/N/E
Melanie and Ernie Wallner	PC-W1-1	R2-PC-W-1	R2-PC-W-5	D
Davis E. Walner	PC-W2-1	R2-PC-W-1	R2-PC-W-5	D/N/A
	PC-W2-2	R2-PC-W-1	R2-PC-W-5	T/A/N
	PC-W2-3	R2-PC-W-1	R2-PC-W-5	E
David Kahn and Nancy Weintraub	PC-W3-1	R2-PC-W-2	R2-PC-W-5	D/N
Sara Wescott	PC-W4-1	R2-PC-W-2	R2-PC-W-6	T
Leslie Widdup	PC-W5-1	R2-PC-W-2	R2-PC-W-6	E
Nancy Williamson	PC-W6-1	R2-PC-W-3	R2-PC-W-7	A
	PC-W6-2	R2-PC-W-3	R2-PC-W-7	D/N
	PC-W6-3	R2-PC-W-3	R2-PC-W-7	E
	PC-W6-4	R2-PC-W-3	R2-PC-W-7	E
	PC-W6-5	R2-PC-W-3	R2-PC-W-7	E/D
	PC-W6-6	R2-PC-W-3	R2-PC-W-7	E
Allen Witbeck	PC-W7-1	R2-PC-W-3	R2-PC-W-7	E
Woody	PC-W8-1	R2-PC-W-3	R2-PC-W-8	E
Neal Woolston	PC-W9-1	R2-PC-W-4	R2-PC-W-8	E
David Zawolkow	PC-Z1-1	R2-PC-Z-1	R2-PC-Z-2	T/E
	PC-Z1-2	R2-PC-Z-1	R2-PC-Z-2	E
Unidentified 1	PC-UN1-1	R2-PC-UN-1	R2-PC-UN-2	E/D/N/A
Unidentified 2	PC-UN2-1	R2-PC-UN-1	R2-PC-UN-2	D/N/E/A
PETITIONS				
Nia Hartman – Remove Toll Roads	PC-PET1-1	PET-PC-1	PET-PC-34	E/A/N/T/D
Janine Parker – Braided Ramps	PC-PET2-1	PET-PC-6	PET-PC-34	D/N/A/E
PUBLIC HEARING COMMENTS – LONG BEACH				
Joseph DeMello	PH-LB1-1	R2-PH-LB-1	R2-PH-LB-12	E
Mr. DeMello	PH-LB2-1	R2-PH-LB-1	R2-PH-LB-12	E

Table R-2: Supplemental Draft EIR/EIS Comment Letter Matrix

Commenter	ID	Comment Page Number	Response Page Number	Subject Code
Nia Hartman – Remove Toll Roads	PH-LB3-1	R2-PH-LB-2	R2-PH-LB-12	E/A/N/T/D
Raylinn Roseman	PH-LB4-1	R2-PH-LB-10	R2-PH-LB-12	E
Mr. Sithe	PH-LB5-1	R2-PH-LB-10	R2-PH-LB-13	E
	PH-LB5-2	R2-PH-LB-11	R2-PH-LB-13	E/T

Note:
* Comment received after public review period.

GOVERNMENT (FEDERAL) COMMENTS (GF)

GF1

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
333 Bush Street, Suite 515
San Francisco, CA 94104

IN REPLY REFER TO:
(ER 13/0462)

Filed Electronically

12 August 2013

Christina Byrne
Manger of Community Outreach
Orange County Transportation Authority
550 S. Main Street
Orange, CA 92868

Subject: Draft Supplemental Environmental Impact Statement, Department of Transportation (DOT), Federal Highways Administration (FHA) for the San Diego Freeway (I-405) Improvement Project, Orange and Los Angeles Counties, CA

Dear Ms. Byrne:

The Department of the Interior has received and reviewed the subject document and has no comments to offer. 1

Thank you for the opportunity to review this project.

Sincerely,

Patricia Sanderson Port

Patricia Sanderson Port
Regional Environmental Officer

cc:
Director, OEPC
OEPC Staff Contact: Dave Sire

GF2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

August 12, 2013

Smita Deshpande
Branch Chief
Caltrans-District 12
Attn: 405 Supplemental Draft EIS
2201 Dupont Drive, Suite 200
Irvine, California 92612

Subject: Supplemental Draft Environmental Impact Statement for the San Diego Freeway (Interstate 405) Improvement Project between State Route 73 and Interstate 605 in Orange County, California (CEQ #20130185)

Dear Ms. Deschpande:

The Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. We previously reviewed the Draft Environmental Impact Statement (DEIS) for the project and provided comments in a July 17, 2012 letter. We rated the DEIS as EC-2, *Environmental Concerns, Insufficient Information* due to potential air quality impacts and a need to assess induced travel demand for the project. This Supplemental Draft Environmental Impact Statement (SDEIS) is a limited-scope document that provides information on potential project-related traffic effects within the City of Long Beach. We are rating the limited scope of actions assessed in this SDEIS as LO, *Lack of Objections*. Please note that we have continuing concerns regarding the project as described in our July 17, 2012 letter (attached) and look forward to a discussion of those issues in the Final Environmental Impact Statement (FEIS). Please see the attached *Summary of EPA Rating Definitions* for a description of our rating system. 1

We appreciate the opportunity to review this SDEIS. When the FEIS is released for public review, please send one hard copy and one electronic copy to the address above (mail code:

GF2 (Continued)

CED-2). If you have any questions, please contact Clifton Meek, the lead reviewer for this project, at 415-972-3370 or meek.clifton@epa.gov.

Sincerely,

Connell Dunning, Transportation Team Supervisor
Environmental Review Office
Communities and Ecosystems Division

Enclosures: EPA Comment (July 17, 2012) letter on the DEIS
Summary of EPA Rating Definitions

Cc via email: John Chisholm, Caltrans
Ron Kosinski, Caltrans District 7
Rich Macias, SCAG

GF2 (Continued)

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

GF2 (Continued)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

July 17, 2012

Smita Deshpande
Caltrans-District 12
Attn: 405
2201 Dupont Drive, Suite 200
Irvine, California 92612

Subject: Comments on the Draft Environmental Impact Statement for the San Diego Freeway (Interstate 405) Improvement Project between State Route 73 and Interstate 605 in Orange County, California (CEQ #20120152)

Dear Ms. Deschpande:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (Draft EIS) for the Interstate 405 (I-405) Improvement Project between State Route 73 (SR-73) and Interstate 605 (I-605) in Orange County, California. Our enclosed detailed comments were prepared pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations (40 CFR Parts 1500-1508) and our NEPA review authority under Section 309 of the Clean Air Act. The State of California has assumed responsibilities under NEPA for this project pursuant to the Memorandum of Understanding between the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans) Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program.

As described in the Draft EIS, this project aims to relieve congestion and improve operational efficiency on I-405 between SR 73 and I-605 through a combination of additional lanes and interchange enhancements. Three alternatives for I-405 improvement are presented. Alternatives 1 and 2 would add 1 and 2 general purpose lanes, respectively. Alternative 3 would add 1 general purpose lane and one express lane adjacent to the existing HOV lane to create a two-lane combined express HOV and toll facility. The Draft EIS does not identify a preferred alternative.

Based on our review, we have rated the Draft EIS as Environmental Concerns-Insufficient Information (EC-2; see enclosed Summary of EPA Rating Definitions) due to potential air quality impacts and a need to assess induced travel demand. EPA recommends an analysis of induced travel demand in order to disclose and quantify the reduced benefits to congestion relief that may occur in the future. An analysis of induced travel demand resulting from highway expansion will allow decision makers and the public to better understand when congestion will

GF2 (Continued)

return to existing levels and potentially worsen. EPA is particularly concerned with adverse air quality impacts that could result at a future point when congestion returns. In addition, EPA recommends implementing more stringent Transportation Demand Management (TDM) measures and integrating increased transit options throughout the project corridor to reduce air quality impacts. EPA supports the assessment of options such as increased high occupancy vehicle and tolling lanes, as in Alternative 3, to meet long-term transportation needs while reducing emissions from single occupancy vehicles. Proceeding without such measures, as is proposed in Alternatives 1 and 2, may result in worsened long-term air quality impacts due to emissions from a higher number of single occupancy vehicles.

We appreciate the opportunity to review this Draft EIS. When the Final EIS is released for public review, please send one hard copy and one copy on disc to the address above (mail code: CED-2). If you have any questions, please contact me at 415-947-4161 or Clifton Meek, the lead reviewer for this project. Clifton can be reached at 415-972-3370 or meek.clifton@epa.gov.

Sincerely,

Connell Dunning, Transportation Team Supervisor
Environmental Review Office

Enclosures: EPA's Detailed Comments
Summary of EPA Rating Definitions

Cc via email: John Chisholm, Caltrans
Ron Kosinski, Caltrans District 7
Rich Macias, SCAG

GF2 (Continued)

EPA'S DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE I-405 IMPROVEMENT PROJECT BETWEEN STATE ROUTE 73 AND INTERSTATE 605 IN ORANGE COUNTY, CALIFORNIA, JULY 17, 2012

Induced Travel Demand

Induced travel demand has been widely studied and has been acknowledged by the Transportation Research Board as far back as 1947[1]. Today it is widely accepted by transportation practitioners, and yet there is no analysis of induced travel demand in the Draft EIS. Relieving a bottleneck on a congested roadway or system can induce demand for use of that facility, generating more Vehicle Miles Traveled (VMT), and ultimately causing congestion issues similar to pre-project levels. Absent an analysis of induced demand, there is no way to determine at what point in time the air quality benefits described will no longer be realized. With the exception of the HOV/toll lanes in Alternative 3, there are no Transportation Demand Management (TDM) measures proposed in the Draft EIS that are guaranteed to maintain mobility through the project corridor. Without these robust TDM measures, it is not possible to reduce congestion to accommodate existing and projected future demand without also inducing new demand[2]; the capacity created can be used equally by "planned" motorists and unplanned motorists.

Recommendations:

- Add a background discussion and analysis of induced travel demand in the Final EIS explaining induced travel demand as it relates to this project, and particularly addressing how induced demand could affect each alternative's ability to meet the project purpose and need. Identify the future time when congestion will return to current levels and/or worsen due to induced travel demand and identify further measures to reduce this future increase in congestion.
- Include a discussion of the connection between induced travel demand and TDM measures and identify specific TDM measures for each alternative that, if implemented, would reduce effects of induced travel demand.

Air Quality

The project is located in the South Coast Air Basin, which is classified as extreme nonattainment for ozone, serious nonattainment for particulate matter less than 10 microns in diameter (PM10), and nonattainment for particulate matter less than 2.5 microns in diameter (PM2.5). As such, it is vital that the project reduce emissions of these compounds to the greatest extent possible. Without an analysis of induced travel demand, as recommended above, EPA questions the conclusion that air quality will be improved by the proposed project. Further, the reliance on road capacity expansion to ease traffic congestion, without integration of transit or other

[1] Jorgensen, R.E. "Influence of Expressways in Diverting Traffic from Alternate Routes and in Generating New Traffic." Proc. Highway Research Board, Volume 27. 1947. pp. 322-330.

[2] Litman, T.L. "Generated Traffic and Induced Travel Implications for Transport Planning". ITE Journal, Vol. 71, No. 4, Institute of Transportation Engineers, April 2001, pp. 38-47. An updated 2011 version of this paper is available at http://www.vtpi.org/gentraf.pdf.

GF2 (Continued)

alternatives to single occupancy vehicle travel, may hinder attainment of air quality standards in the South Coast Air Basin. As illustrated in the Draft EIS (page 3.1.6-23), Lane Density, Level of Service, and Volume to Capacity Ratios show only minor improvements between the existing and projected future project conditions (with the exception of Alternative 3). As such, small changes in model assumptions could easily eliminate any projected air quality benefits. If congestion is not significantly improved by the project, there is likely to be an increase in emissions due to the greater number of vehicles on an expanded highway.

EPA strongly advocates implementation of more stringent TDM measures throughout the project corridor. These measures can be implemented more quickly and at minimal cost to the environment. We believe these transportation tools should be aggressively implemented before development of costly highway construction projects, with those components which maximize congestion relief and provide the greatest reduction in VMT being given implementation priority. We also recommend Caltrans further discuss integration of mass transit components (e.g., light rail, Bus Rapid Transit) which can accommodate future transportation demand while reducing VMT and associated air emissions. As stated in the project's FAQ sheet (http://www.octa.net/pdf/405/faq.pdf), it has been estimated that the width of the I-405 would need to be doubled from the existing ten lanes to an unfeasible twenty lanes to serve the traffic demand in this corridor. As such, transportation demand in the project area will never be met by freeway expansion alone. If any true congestion relief is to be realized on the I-405, alternatives to freeway expansion (e.g. light rail, bus rapid transit) must become viable alternatives to the private automobile, and single occupancy vehicles must become a minority during peak periods.

Recommendations for the Final EIS:

- Provide commitments for more aggressive implementation of TDMs in order to achieve permanent long-term reduction in traffic congestion and improvement in air quality. We urge expanded use of HOV and bus-only lanes, conversion of general purpose lanes to HOV and bus-only lanes during peak hours, pricing measures such as those proposed in Alternative 3, and additional transit options.

Tolled Express Lanes (Alternative 3)

While EPA is supportive of TDM measures such as the toll lanes proposed in Alternative 3, the DEIS states that prior authority from FHWA is required to operate a toll facility on the Interstate Highway System (page 1-19). It is therefore unclear whether Alternative 3 can be considered a feasible alternative. Also, it is unclear how effective the proposed tolled express lanes would be if they were to terminate into a heavily congested freeway corridor in Los Angeles County, or further south in Orange County. The Final EIS should describe in detail how traffic flow will be managed north and south of the I-405 improvement project corridor, and should provide a vision of how these tolled express lanes might be tied into a much broader network of tolled lanes throughout the SCAG planning area.

Additionally, no concession is made in Alternative 3 for low-income individuals who might be unable to afford the full cost of the tolled express lanes. In similar toll lane projects currently being implemented on Interstate 10 and Interstate 110 in Los Angeles, a subsidy for low-income

GF2 (Continued)

drivers is being provided in the form of a $25 credit at the time of account initiation. This credit can then be applied to either the transponder deposit or pre-paid toll deposit, with the monthly $3 account maintenance fee being waived (http://www.metro.net/projects_studies/expresslanes/images/ExpressLanes_Factsheet_Toll_Credit_Program.pdf). In order to develop a more equitable transportation strategy to accompany a potential toll road in the future, a program offering a subsidy for low-income drivers should be instituted on the I-405.

Recommendations for the Final EIS:

- Provide assurance that FHWA has agreed to grant the authority to operate a toll facility on I-405.
- Provide additional details of studies being conducted or changes that are planned for the HOV lanes north and south of the project corridor in order to maintain efficient speeds for those who opt to pay the toll or commit to HOV 3+ status. Provide details of any coordination with the Los Angeles County Metropolitan Transportation Authority (LACMTA) and Caltrans District 7 regarding this issue.
- Commit to implementing a program that would provide subsidies to low-income motorists who use the tolled express lanes. If such a program is determined to be unsuitable for the I-405 improvement project, provide a discussion of alternatives that would ensure that the tolled lanes would be accessible to motorists at all income levels.

Transportation Control Measures

The document indicates that the proposed project qualifies as a Transportation Control Measure (TCM) in the Air Quality Management Plan and justifies this by stating that the project has TCM components, such as "...auxiliary lanes, ramp metering, traffic signal timing optimization, and other traffic flow improvements." However, the 2008 SCAG Regional Transportation Plan (RTP) describes the project as follows: "construct one additional all purpose lane in each direction on I-405 and provide additional capital improvements from SR 73 through the LA County line." The goal of a TCM should be to adjust trip patterns or modify vehicle use in ways that reduce air pollutant emissions. The project as identified in the RTP, described as adding all purpose lanes, does not appear to meet that goal.

Recommendations:

- Consult with SCAG to discuss the applicability of the project as a TCM. Should it be confirmed that this project does indeed qualify as a TCM, provide additional information in the Final EIS to support this claim.

GF2 (Continued)

Project Alternatives

A main component of the project purpose and need is to reduce congestion and improve mobility through the project corridor. As such, solely adding capacity through the construction of general purpose lanes, as described in Alternatives 1 and 2, without integrating additional congestion-relieving strategies or measure to improve mobility, may not meet the project purpose and need. Furthermore, the Draft EIS does not provide sufficient information on the relative transportation benefits of other project components, such as improving auxiliary lanes, ramp metering, and other transportation system management (TSM) measures. For example, the Draft EIS doesn't provide any information on how much could be improved by solely addressing ramp and interchange deficiencies so that traffic queues don't extend onto the freeway. The Final EIS should demonstrate if these project components alone could provide some improved mobility through the project corridor without the extensive cost and impact of adding new general purpose lanes. According to the analysis provided in the Draft EIS, the only alternative that guarantees any significant mobility increase through the project corridor is Alternative 3, with the implementation of TDM strategies that have been proven effective on other California freeways.

Recommendations for the Final EIS:

- Provide sufficient information on the relative transportation benefits of each project component such as TSM measures, addition of general purpose lanes, and implementation of TDM measures. We recommend the Final EIS provide data which describes the percent contribution of each project component towards meeting the project purpose and need. For example, clearly describe the level of congestion relief (e.g., Level of Service improvement, Volume to Capacity Ratios) achieved and how long this relief will last by implementing a particular project component. Compare different project components by providing a table showing how much each component contributes to achieving short and long-term transportation needs.

- Provide further explanation and rationale regarding why light-rail, bus rapid transit, or other mass transit alternatives are not considered feasible alternatives to meet travel demand in the I-405 corridor. As stated in Chapter 2 of the Draft EIS, the primary reason these alternatives were dismissed relates to their inability to reduce congestion in general purpose lanes, which appears also to be a weakness for alternatives 1, 2 and 3. Given the extensive current and future expansion of the Los Angeles Metro rail system, there will be an increased number of options for passengers on Orange County transit to make connections and access areas in almost any part of the greater Los Angeles metropolitan area. As such, mass transit could be a feasible alternative to much private automobile use by the time this project is projected to be complete in 2020 if additional transit options were available within Orange County.

RESPONSE TO GOVERNMENT (FEDERAL) COMMENTS (GF)

Response to Comment Letter GF1

Comment GF1-1

Caltrans and OCTA thank the Office of Environmental Policy and Compliance for participating in the environmental process for the I-405 Improvement Project and acknowledge that the Office of Environmental Policy and Compliance has no comments on the Supplemental Draft EIR/EIS. The Office of Environmental Policy and Compliance will be notified when the Final EIR/EIS is available for review.

Response to Comment Letter GF2

Comment GF2-1

Caltrans and OCTA thank the United States Environmental Protection Agency (EPA) for participating in the environmental process for the I-405 Improvement Project. EPA's comments were considered during selection of the Preferred Alternative as described in the Final EIR/EIS. Please see Appendix R1 for responses to the referenced comment letter dated July 17, 2012, regarding the Draft EIR/EIS. EPA will be notified when the Final EIR/EIS is available for review.

GOVERNMENT (STATE) COMMENTS (GS)

GS1

From: Dillingham, Tim@Wildlife [Tim.Dillingham@wildlife.ca.gov]
Sent: Thursday, July 18, 2013 2:56 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS; Smita.Deshpande@dot.ca.gov
Subject: Supplemental Draft Environmental Impact Report/Environmental Impact Statement for the I-405 Improvement Project, SR-73 to I-605

Thank you for the opportunity to review the above reverenced document. The California Department of Fish and Wildlife does not have any comments on this supplemental document. 1

Tim Dillingham
Senior Environmental Scientist (Specialist)
California Department of Fish and Wildlife
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4250

GS2

STATE OF CALIFORNIA — EDMUND G. BROWN JR., *Governor*

PUBLIC UTILITIES COMMISSION
320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013

July 22, 2013

Smita Deshpande
California Department of Transportation - District 12
3347 Michelson Drive, Suite 380
Irvine, CA 92612

Dear Ms. Deshpande:

Re: SCH 2009091001; San Diego Freeway (I-405) Improvement Project

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code requires Commission approval for the construction or alteration of crossings and grants the Commission exclusive power on the design, alteration, and closure of crossings.

The Commission's Rail Crossings Engineering Section (RCES) is in receipt of the *Supplement/Subsequent Environmental Impact Report* (SEIR) for San Diego Freeway (I-405) Improvement Project from the State Clearinghouse. According to the SEIR, the California Department of Transportation (Caltrans) proposes to improve the San Diego Freeway (I-405) located approximately between State Route 73 and Interstate Freeway 605. The United States Navy (US Navy) Seal Beach Branch line crossing (CPUC No. 122SB-1.32-A) and the Union Pacific Railroad Company (UPRR) Stanton Branch line crossing (CPUC No. 001BAA-518.96-A and DOT No. 748037J), according to our database, located under the I-405 within this particular freeway segment. 1

Modifications to an existing grade separated crossing require authorization from the Commission. More information can be found at:
http://www.cpuc.ca.gov/PUC/safety/Rail/Crossings/go88b.htm

Caltrans should arrange a meeting with RCES, US Navy and UPRR staff to discuss relevant safety issues and requirements for authorization to alter the existing grade-separated crossings.

If you have any questions, please contact Chi Cheung To at (213)-576-5766, email at cct@cpuc.ca.gov.

Sincerely,

Chi Cheung To
Utilities Engineer
Rail Crossings Engineering Section
Safety & Enforcement Division

CC: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044
Ken Chiang, CPUC Utilities Engineer, Los Angeles Office

GS3

JAMES C. GHIELMETTI, Chair
CARL GUARDINO, Vice Chair
BOB ALVARADO
DARIUS ASSEMI
YVONNE B. BURKE
LUCETTA DUNN
JAMES EARP
DARIO FROMMER
FRAN INMAN
JOSEPH TAVAGLIONE

SENATOR MARK DESAULNIER, Ex Officio
ASSEMBLY MEMBER BONNIE LOWENTHAL, Ex Officio

Andre Boutros, Executive Director

STATE OF CALIFORNIA

EDMUND G. BROWN Jr., Governor

CALIFORNIA TRANSPORTATION COMMISSION
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(916) 654-4245
http://www.catc.ca.gov

August 8, 2013

Ms. Smita Deshpande, Branch Chief
Caltrans – District 12, ATTN: 405 SDEIR-DEIS Comment Period
2201 Dupont Drive, Suite 200
Irvine, CA 92612

RE: Supplemental Draft Environmental Impact Report/Environmental Impact Statement (SDEIR/EIS) for the San Diego Freeway (Interstate 405) Improvement Project

Dear Ms. Deshpande,

The California Transportation Commission, as a Responsible Agency, received the SDEIR/EIS prepared by the California Department of Transportation (Department) for the San Diego Freeway (Interstate 405) Improvement Project (project) in Orange and Los Angeles Counties. The project proposes to construct improvements to Interstate 405 from State Route 73 to Interstate 605 that will widen the corridor, relieve congestion, and improve operational efficiencies.

The Commission considered the SDEIR/EIS at its August 6, 2013 meeting. The Commission has no comments pertaining to the environmental impacts or the alternatives considered in the SDEIR/EIS. However, the Commission recommends that the Department and its partners identify and secure the necessary funding to complete the project. In addition, since design-build procurement and tolling are under consideration, the Commission encourages Caltrans and its partners to ensure early communication and coordination with the Commission in the event it is anticipated that the Commission will be requested to approve the project for delivery through either a design-build or public private partnership procurement consistent with the provisions of Senate Bill 4 (SBX2 4, Statutes of 2009), or for construction approval to allow for financing and tolling approval by the California Transportation Financing Authority as provided for in Assembly Bill 798 (AB 798, Statutes of 2009).

The Commission should be notified as soon as the environmental process is complete as the Commission cannot allocate funds to a project for design, right of way or construction until the final environmental document is complete and the Commission has considered the

GS3 (Continued)

Ms. Smita Deshpande
August 8, 2013
Page 2 of 2

environmental impacts of the project and approved the environmentally cleared project for future consideration of funding.

Upon completion of the CEQA process, prior to the Commission's action to approve the project for future consideration of funding, the Commission expects the lead and/or implementing agency to provide written assurance whether the selected alternative identified in the final environmental document is or is not consistent with the project programmed by the Commission and included in the Regional Transportation Plan. In the absence of such assurance of consistency, it may be assumed that the project is not consistent and Commission staff will base its recommendations to the Commission on that fact. The Commission may deny funding to a project which is no longer eligible for funding due to scope modifications or other reasons. 1

If you have any questions, please contact Susan Bransen, Chief Deputy Director, at (916) 653-2090.

Sincerely,

ANDRE BOUTROS
Executive Director

c: Katrina Pierce, Chief, Caltrans Division of Environmental Analysis

GS4

STATE OF CALIFORNIA — Edmund G. Brown, Jr., *Governor*

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard
West Sacramento, CA 95691
(916) 373-3715
(916) 373-5471 – FAX
e-mail: ds_nahc@pacbell.net

July 8, 2013

Ms. Smita Deshpande, Chief
California Department of Transportation – District 12
3347 Michelson Drive, Suite 380
Irvine, CA 92612

RE: SCH# 2009091001 CEQA Notice of Completion; Supplemental Environmental Impact Report (SEIR) for the "**San Diego Freeway (I-405) Improvement Project ;"** located from Fountain Valley and Huntington beach to near Newport Beach; Orange County, California

Dear Ms. Deshpande:

The Native American Heritage Commission (NAHC) has reviewed the CEQA Notice regarding the above referenced project. In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA guidelines 15064.5(b). To adequately comply with this provision and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

Contact the appropriate Information Center for a record search to determine :If a part or all of the area of project effect (APE) has been previously surveyed for cultural places(s), The NAHC recommends that known traditional cultural resources recorded on or adjacent to the APE be listed in the draft Environmental Impact Report (DEIR).

If an additional archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. We suggest that this be coordinated with the NAHC, if possible. The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native

1

GS4 (Continued)

American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure pursuant to California Government Code Section 6254.10.

A list of appropriate Native American Contacts for consultation concerning the project site has been provided and is attached to this letter to determine if the proposed active might impinge on any cultural resources. Lack of surface evidence of archeological resources does not preclude their subsurface existence.

Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, pursuant to California Health & Safety Code Section 7050.5 and California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
Also, CEQA Guidelines Section 21083.2 require documentation and analysis of archaeological items that meet the standard in Section 15064.5 (a)(b)(f). Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans. Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

1

Sincerely,

Dave Singleton
Program Analyst
(916) 653-6251

CC: State Clearinghouse

Attachment: Native American Contacts list

GS4 (Continued)

Native American Contacts
Orange County
July 8, 2013

Ti'At Society/Inter-Tribal Council of Pimu
Cindi M. Alvitre, Chairwoman-Manisar
3094 Mace Avenue, Apt. B Gabrielino
Costa Mesa, , CA 92626
calvitre@yahoo.com
(714) 504-2468 Cell

Gabrielino Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

Juaneno Band of Mission Indians Acjachemen Nation
David Belardes, Chairperson
32161 Avenida Los Amigos Juaneno
San Juan Capistrano CA 92675 m
chiefdavidbelardes@yahoo.
(949) 493-4933 - home
(949) 293-8522

Juaneno Band of Mission Indians Acjachemen Nation
Teresa Romero, Chairwoman
31411-A La Matanza Street Juaneno
San Juan Capistrano CA 92675-2674
(949) 488-3484
(949) 488-3294 - FAX
(530) 354-5876 - cell

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Private Address Gabrielino Tongva
,
tattnlaw@gmail.com
310-570-6567

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-761-6417- fax

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX

Juaneno Band of Mission Indians
Alfred Cruz, Cultural Resources Coordinator
P.O. Box 25628 Juaneno
Santa Ana , CA 92799
alfredgcruz@sbcglobal.net
714-998-0721
714-998-0721 - FAX
714-321-1944 - cell

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

his list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2009091001; CEQA Notice of Completion; Supplemental Environmental Impact Report (SEIR) for the San Diego Freeway (I-405) Improvements Project; located in northern portion of Orange County, California.

GS4 (Continued)

Native American Contacts
Orange County
July 8, 2013

United Coalition to Protect Panhe (UCPP)
Rebecca Robles
119 Avenida San Fernando Juaneno
San Clemente CA 92672
rebrobles1@gmail.com
(949) 573-3138

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
gabrielenoindians@yahoo.
(626) 926-4131

Gabrielino-Tongva Tribe
Bernie Acuna, Co-Chairperson
P.O. Box 180 Gabrielino
Bonsall , CA 92003
(619) 294-6660-work
(310) 428-5690 - cell
(760) 636-0854- FAX
bacuna1@gabrielinotribe.org

Gabrielino-Tongva Tribe
Conrad Acuna,
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Bonsall , CA 92003

760-636-0854 - FAX

Juaneno Band of Mission Indians Acjachemen Nation
Joyce Perry, Representing Tribal Chairperson
4955 Paseo Segovia Juaneno
Irvine , CA 92612
kaamalam@gmail.com
949-293-8522

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson
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Bonsall , CA 92003
palmsprings9@yahoo.com
626-676-1184- cell
(760) 636-0854 - FAX

This list is current only as of the date of this document.

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his list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2009091001; CEQA Notice of Completion; Supplemental Environmental Impact Report (SEIR) for the San Diego Freeway (I-405) Improvements Project; located in northern portion of Orange County, California.

RESPONSE TO GOVERNMENT (STATE) COMMENTS (GS)

Response to Comment Letter GS1

Comment GS1-1

Caltrans and OCTA thank the California Department of Fish and Wildlife (CDFW) for participating in the environmental process for the I-405 Improvement Project and acknowledge that CDFW has no comments on the Supplemental Draft EIR/EIS. CDFW will be notified when the Final EIR/EIS is available for review.

Response to Comment Letter GS2

Comment GS2-1

Caltrans and OCTA thank the California Public Utilities Commission (CPUC) for participating in the environmental process for the I-405 Improvement Project. CPUC's comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. CPUC will be notified when the Final EIR/EIS is available for review.

A site diagnostics meeting will be arranged with the Commission's Rail Crossing Engineering Section, United States Navy, and Union Pacific Railroad (UPRR) during the design phase to discuss relevant safety issues and requirements for authorization to alter the existing grade-separated crossings.

Response to Comment Letter GS3

Comment GS3-1

Caltrans and OCTA thank the California Transportation Commission (CTC) for participating in the environmental process for the I-405 Improvement Project. CTC's comments were considered during identified of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

CTC shall receive a copy of the Final EIR/EIS and be notified as soon as the environmental process is complete so that it may consider the project for future consideration of funding. As described, beginning on Page 1-1 of the Final EIR/EIS, the Regional Transportation Plan (RTP) and Federal Transportation Improvement Program (FTIP) will be modified to include the Preferred Alternative.

Response to Comment Letter GS4

Comment GS4-1

Caltrans and OCTA thank the Native American Heritage Commission (NAHC) for participating in the environmental process for the I-405 Improvement Project. NAHC's comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. NAHC will be notified when the Final EIR/EIS is available for review. Please see Appendix R1 (Response to Comments on Draft EIR/EIS) for Responses to Comments GS5-1 through GS5-5.

GOVERNMENT (REGIONAL) COMMENTS (GR)

GR1

Metro

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

August 12, 2013

Smita Deshpande, Branch Chief
Caltrans-District 12
2201 Dupont Drive, Suite 200
Irvine, CA 92612
Attn: 405 SDEIR-DEIS Comment Period

RE: San Diego Freeway (I-405) Improvement Project Supplemental Draft Environmental Impact Report/Environmental Impact Statement

Dear Ms. Deshpande,

Thank you for the opportunity to comment on the Caltrans Supplemental Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the proposed San Diego Freeway I-405 Improvement Project in Orange County. The Los Angeles County Metropolitan Transportation Authority (LACMTA) is supportive of the efforts of the Orange County Transportation Authority (OCTA) and Caltrans to increase mobility and reduce congestion in the Southern California region and appreciates the investment in this key corridor. LACMTA would like to continue supporting OCTA by facilitating collaboration between Los Angeles County and Orange County cities and agencies in order to help address the impacts identified in the Supplemental Draft EIR/EIS.

Based on our review of the Supplemental Draft EIR traffic analysis and results, LACMTA offer the following comments concerning the proposed project:

General Comments

1. Traffic measures T-10 and T-11 are a good first step towards addressing the Project's impact on Los Angeles County roads. We encourage OCTA and Caltrans District 12 to work with the City of Long Beach and Caltrans District 7 to ensure that these traffic measures are acceptable and to establish a "rough proportionality" for their cost that is also agreeable to all parties. Because this Project is seeking to improve the State Highway System, we encourage OCTA and Caltrans District 12 to fully fund the traffic measures proposed for SR-22/7th Street. **1**

2. As documented in the Supplemental Draft EIR/EIS, the improvements to I-405 on the Orange County side, under all alternatives, will result in increases in traffic volumes on both I-605 and I-405 on the Los Angeles County side. As part of Measure R's I-605 "Hot Spots" program, LACMTA and the Gateway Cities Council of Governments (GCCOG) have begun studying improvement solutions for the I-405/I-605/SR-22 interchange and adjacent freeway segments in Los Angeles County. LACMTA is currently conducting an I-405 Freeway (OC Line to LAX) HOV to HOT Conversion Feasibility Study. As part of this study, we are exploring the possible continuation of Express Lanes on I-405 into Los Angeles County, as well as on I-605 to I-105 from the Orange County line. We request that Caltrans and OCTA coordinate with LACMTA on the terminus design to make sure the **2**

GR1 (Continued)

Metro

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

proposed cross-section of each of the build alternatives in Orange County do not create new bottlenecks at the county line. We also encourage OCTA and Caltrans District 12 to collaborate with LACMTA and the GCCOG in further developing improvement solutions for this interchange, as these improvements would benefit Orange County freeways as well. **2 cont.**

3. The Orange County Travel Analysis Model (OCTAM) was developed and validated primarily for application within Orange County. As part of the City of Long Beach's review, arterial volumes were compared between OCTAM and Gateway Cities' model to ensure the volume differences were not significant. A similar comparison of freeway forecast volumes between OCTAM and the Southern California Association of Governments (SCAG) regional model or Gateway Cities' model may be warranted to ensure freeway forecast volumes in the Supplemental Draft EIR/EIS were not underestimated. **3**

Specific Comments

1. The Supplemental Draft EIR/EIS states that Alternative 3 would require nine mandatory and 20 advisory design exceptions at one or more locations along the corridor. Please specify locations. **4**

2. Ramp analysis was included in the appendices of the Supplemental Draft EIR/EIS, but they were not summarized in the body of the report in order to identify any potential traffic impacts. Please include. **5**

3. Traffic volumes on I-405 SB to I-605 NB and I-605 SB to I-405 NB connectors are forecast to decrease under the Build alternatives. These volumes should not decrease as a result of the I-405 Improvement Project unless volumes divert to local arterials to avoid freeway congestion. Please check the volumes at these locations. **6**

4. Figures 3-11, 3-12 and 3-13 generally show lower forecast HOV volumes on I-405 in Los Angeles County under Alternative 3 compared to Alternatives 1 and 2, despite the dual Express Lanes feeding into the single HOV lane in Los Angeles County. Please check the volumes. **7**

5. The study lacks detailed operational analysis of the merge locations on I-405. We recommend that microscopic simulation analysis be performed at merge points and weave locations to ensure transition point design can minimize weaving and safety issues. The following locations may be considered for microscopic simulation analysis: **8**
   - GP lane where lane reductions occur
   - HOT (Alt 3) egress/ingress point where 2-lane HOT reduces to 1-lane existing HOV or future HOT

6. The Supplemental Draft EIR/EIS lacks a detailed analysis of the I-405/I-605/SR-22 interchange for each of the Build alternative lane configurations. Given the importance of **9**

GR1 (Continued)

Metro

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

this interchange location at the county line, please provide a focused analysis of this location. **9 cont.**

LACMTA looks forward to reviewing the Supplemental Final EIR/EIS. If you have any questions regarding this response, please contact Kathy McCune at 213-922-7241 or by email at McCuneK@metro.net.

Please send the Supplemental Final EIR/EIS to the following address:

LACMTA CEQA Review Manager
Attn: Nick Saponara
One Gateway Plaza MS 99-23-4
Los Angeles, CA 90012-2952

Sincerely,

Nick Saponara
CEQA Review Manager, Countywide Planning

GR2

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

E-Mailed: August 13, 2013
405.Supplemental.Draft.EIR.EIS@parsons.com

August 13, 2013

Ms. Smita Deshpande
Caltrans-District 12, "Attn: 405 SDEIR-DEIS Comment Period"
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Review of the Supplemental Draft Environmental Impact Report (Supplemental Draft EIR) for the Interstate 405 Improvement Project

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The following comments are intended to provide guidance to the lead agency and should be incorporated into the Final Environmental Impact Report (Supplemental DEIR or Final EIR) as appropriate. We maintain our concerns from the previous comment letter and incorporate them here by reference.

Based on a review of the Supplemental Draft EIR the SCAQMD staff is concerned about potential local, regional and cumulative air quality impacts from the proposed project. In a comment letter submitted to the lead agency on July 17, 2012 regarding the original DEIR for the proposed project the SCAQMD staff expressed concern that the lead agency did not analyze the bottleneck at the north end of the project boundary (I-605 junction) that could result in additional regional and localized air quality impacts. [1] **1**

Since the certification of the Final EIR for the project the lead agency completed a Supplemental Traffic Study for the Long Beach area (i.e., Supplemental Traffic Study) that demonstrates additional traffic impacts. For example, Table 3-6 of the Supplemental DEIR indicates that the project will increase density to capacity ratios along the I-405/I-605 mainline to Studebaker Road during AM and PM peak hours. However, the lead agency did not quantify any potential air quality impacts from this change in traffic activity. **2**

Further, the lead agency relied on additional traffic mitigation measures in the Supplemental DEIR (i.e., Mitigation Measures T-10 and T-11) to reduce the project's traffic impacts to a less than significant level. However, because these mitigation measures are contingent on the availability of funding, they lack enforceability as nothing in the Supplemental DEIR ensures funding for these measures. Also, the significance determination for the proposed project is based on a comparison between the project and no project baseline that appears to be contrary to recent guidance provided in the **3** **4**

[1] See comment #8 from SCAQMD Comments at:
http://www.aqmd.gov/ceqa/igr/2012/July/DEIRI405Improve.pdf

GR2 (Continued)

Neighbors for Smart Rail court decision.[2] Details regarding these comments are attached to this letter. **4 cont.**

Pursuant to Public Resources Code Section 21092.5, please provide the SCAQMD with written responses to all comments contained herein prior to the adoption of the Final EIR. Further, staff is available to work with the lead agency to address these issues and any other questions that may arise. Please contact Dan Garcia, Air Quality Specialist CEQA Section, at (909) 396-3304, if you have any questions regarding the enclosed comments. **5**

Sincerely,

Ian MacMillan
Program Supervisor, CEQA Inter-Governmental Review
Planning, Rule Development & Area Sources

Attachment

IM:DG

ORC130627-01
Control Number

GR2 (Continued)

Air Quality Impacts

1. In a comment letter submitted to the lead agency on July 17, 2012 regarding the Draft EIR for the proposed project the SCAQMD staff expressed concern that the lead agency did not analyze the bottleneck at the north end of the project site (I-605 junction) that could result in additional localized and regional air quality impacts. **6**
   Since the release of the Draft EIR for the project the lead agency completed a Supplemental Traffic Study for the Long Beach area (i.e., Supplemental Traffic Study) that demonstrates increased traffic congestion in the aforementioned area. For example, Table 3-6 of the Supplemental DEIR indicates that the project will increase density to capacity ratios along the I-405/I-605 mainline to Studebaker Road during AM and PM peak hours. In addition, comparisons of project alternatives to no project alternatives demonstrate that GP lanes may experienced increased traffic volumes after buildout. However, the lead agency concluded that this increase in traffic activity will not result in any new air quality impacts. The lead agency should provide additional technical analysis in the Final EIR to substantiate this conclusion. **7**

Operational Mitigation Measures

2. The lead agency relies on mitigation measures T-10 and T-11 to ensure that the project does not result in significant cumulative traffic impacts. However, on page 4-27 the lead agency indicates that it is possible that these measure will never be implemented due to a lack of funding between the City of Long Beach and the State of California. Given this statement the lead agency proceeded to determine that the project's traffic impacts are insignificant and does not identify any contingency measures to ensure less than significant traffic impacts from the project. Therefore, SCAQMD staff recommends that the lead agency provide additional mitigation measures (e.g., backstop mitigation measures) in the Supplemental FEIR to ensure the project does not create adverse traffic impacts that may result in additional air quality impacts from increased levels of congestions. **8**

Baseline

3. The lead agency appears to determine the project's impacts by comparing the project alternatives to the no project (future conditions) scenario. This comparison is based on traffic activity metrics such as volume to capacity (V/C), density to capacity (D/C) and level of service (LOS). Further, the lead agency presents the existing traffic activity levels (2009) but does not use this activity as the project baseline. This appears to be contrary to the recent California Supreme Court decision for *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority* in which the court explicitly stated that "Projected future conditions may be used as the sole baseline for impacts analysis if their use in place of measured existing conditions –departure from the norm stated in Guideline section 15125 (a) is justified by unusual aspects of the project or the surrounding conditions."[3] Therefore, SCAQMD staff recommends that the lead agency provide additional discussion in the Supplemental FEIR that substantiates the use of various baselines and clarifies the distinction between existing conditions, future conditions and project conditions relative to project impacts. **9**

GR2 (Continued)

Because both the future and existing conditions baselines are relevant to assessing impacts from this project, the lead agency should determine the significance of impacts utilizing both. **9 cont.**

GR3

San Joaquin Hills Transportation Corridor Agency

Chairman:
Rush Hill
Newport Beach

Transportation Corridor Agencies

Foothill/Eastern Transportation Corridor Agency

Chairwoman:
Lisa A. Bartlett
Dana Point

August 12, 2013

Ms. Smita Deshpande
Caltrans – District 12
"Attn: 405 SDEIR-DEIS Comment Period"
2201 Dupont Drive, Suite 200
Irvine, CA 92612

RE: Comments on the Draft Supplemental Environmental Impact Report/Environmental Impact Statement for the Interstate 405 Improvement Project in Orange County

Dear Ms. Deshpande:

The San Joaquin Hills Transportation Corridor Agency (TCA) appreciates the opportunity to review and provide comments on the Draft Supplemental Environmental Impact Report/Environmental Impact Statement (DEIR/EIS) for the Interstate 405 (I-405) Improvement Project. TCA previously submitted comments on the DEIR/EIS in June 2012 and would like to provide additional comments for the record:

1) TCA strongly suggests that we work with your agency and others to achieve a direct connection within the existing median at the I-405/SR 73 interchange. This connection should be included in whatever alternative is ultimately chosen for this project.

2) TCA also requests that Caltrans initiate discussions between our agency and the appropriate partners to effectuate and improve connections within the City of Costa Mesa. **1**

Again, we thank you for the opportunity to review the Supplemental DEIR/EIS and we look forward to the final EIR/EIS for the project. Should you have any questions or require any clarification regarding these comments, please feel free to contact Ms. Valarie McFall, Director, Environmental Services at 949.754.3475 or via email at vmcfall@thetollroads.com or Mr. David Lowe, Acting Chief Engineer at 949.754.3488 or via email at dlowe@thetollroads.com.

Sincerely,

Rush Hill, Chair
San Joaquin Hills Transportation Corridor Agency

cc: TCA Board of Directors
Darrell Johnson, OCTA

Neil Peterson, Chief Executive Officer

125 Pacifica, Suite 100, Irvine, CA 92618-3304 • (949) 754-3400 Fax (949) 754-3467
www.thetollroads.com

Members: Aliso Viejo • Anaheim • Costa Mesa • County of Orange • Dana Point • Irvine • Laguna Hills • Laguna Niguel • Laguna Woods • Lake Forest
Mission Viejo • Newport Beach • Orange • Rancho Santa Margarita • Santa Ana • San Clemente • San Juan Capistrano • Tustin • Yorba Linda

RESPONSE TO GOVERNMENT (REGIONAL) COMMENTS (GR)

Response to Comment Letter GR1

Comment GR1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identified of the Preferred Alternative, as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Caltrans District 12 and OCTA have been coordinating with the City of Long Beach and Caltrans District 7 on the project. The fair share percentages included in the Supplemental Draft EIR/EIS Measures T-10 and T-11 represent the proportionality for distribution of the costs of the improvements among the parties. The fair share funding for SR-22/7th Street is fully explained in the Responses to Long Beach Comments GL2-5 and GL2-6.

Comment GR1-2

The cross section of each of the build alternatives at the Los Angeles county line is unchanged from the existing condition. Caltrans District 12 and OCTA have no plans to make improvements to the I-405/I-605/SR-22 interchange beyond those currently under construction as part of the West County Connectors Project and those included in the proposed I-405 Improvement Project; however, Caltrans District 12 and OCTA will fully collaborate with Los Angeles County Metropolitan Transportation Authority (LACMTA) and Gateway Cities Council of Governments (GCCOG) in evaluating potential improvements to the interchange as part of ongoing planning and programming processes at any or all of the agencies.

Comment GR1-3

For a discussion of the Orange County Transportation Analysis Model (OCTAM) and Gateway Cities travel demand forecasting models, please see the Response to Long Beach Comment GR2-9. A comparison was made between the Gateway Cities model and the OCTAM model during development of the supplemental traffic study, and the forecast volume differences between the two were found to be within the range of validation error.

Comment GR1-4

The design exceptions are identified in the Draft Project Report, which is available on request from Caltrans. Design exceptions are not typically identified individually in environmental documents.

Comment GR1-5

Ramp analysis is included in the Supplemental Draft EIR/EIS. Table 2-4 presents ramp and ramp junction peak-hour level of service (LOS) and other data for the existing condition; future condition ramp junction analysis is presented in Tables 3-6, 3-9, 4-6, 4-9, 5-6, 5-9, 6-6, and 6-9. Analysis of LOS and queuing on-ramp approaches to arterial intersections are presented in Tables 2-1 and 2-2, respectively, for the existing condition; future conditions are presented in Tables 3-1, 3-2, 3-3, 3-4, 4-1, 4-2, 4-3, 4-4, 5-1, 5-2, 5-3, 5-4, 6-1, 6-2, 6-3, and 6-4. The analysis included in the Supplemental Draft EIR/EIS is consistent with the analysis presented in the Draft EIR/EIS.

Comment GR1-6

It is agreed that the projected traffic volumes for the build alternatives should not decrease compared to the No Build Alternative, unless there is some diversion onto other roadways. The decrease in the traffic volumes is minor (from 990/1,210 during the AM/PM peak hours under the No Build Alternative in 2040 to 870/1,080 under Alternative 1, 850/1,040 under Alternative 2, and 860/1,080 under Alternative 3). To the extent that this volume reduction results in diversion to other paths, increased traffic on those other paths has been accounted for and analyzed in the arterial analysis presented in the Supplemental Draft EIR/EIS and Draft EIR/EIS.

Comment GR1-7

Caltrans appreciate Metro's effort reviewing the Supplemental Draft EIR/EIS. After further investigation of the traffic volumes presented in the Supplemental Draft EIR/EIS, we have identified the cause of the lower high-occupancy vehicle (HOV) volumes on I-405 in Los Angeles County under Alternative 3 than under Alternatives 1 and 2 as an inconsistency in processing the traffic volumes, which is revised and corrected in the Final EIR/EIS. The revised traffic volumes show an increase in HOV volumes under Alternative 3 compared to Alternatives 1 and 2. The revised volumes and volume-to-capacity (v/c) ratios presented in the Final EIR/EIS do not materially change the findings of the Supplemental Draft EIR/EIS.

Comment GR1-8

The Supplemental Draft EIR/EIS includes analysis of locations in Los Angeles County. The locations referred to in the comment are all in Orange County and are covered in the Draft EIR/EIS and the *Traffic Study Report – San Diego Freeway (I-405) Improvement Project SR-73 to I-605*. No microsimulations were completed of these areas.

With respect to the locations where the additional general purpose (GP) lanes included in all of the build alternatives terminate within the I-405 interchange at SR-22/7th Street/I-605, please see

Common Response – Traffic Flow at the Orange County/Los Angeles County Line where a detailed summary of the analysis presented in the Draft EIR/EIS and Traffic Study is provided.

With respect to the areas where the Express Lanes in Orange County transition to the HOV lanes in Los Angeles County, traffic operations analysis is presented on page 3.1.6-96 and in Table 3.1.6-17 (page 3.1.6-97) of the Draft EIR/EIS.

Comment GR1-9

The Supplemental Draft EIR/EIS includes analysis of locations in Los Angeles County. The locations referred to in the comment are in Orange County. The Draft EIR/EIS and the *Traffic Study Report – San Diego Freeway (I-405) Improvement Project SR-73 to I-605* include evaluations of the I-405/I-605/SR-22 interchange referenced in the comment. Table 2.3.1 of the Traffic Study shows the existing traffic volume, volume-to-capacity (V/C) ratio, vehicle density, and LOS during the AM and PM peak hours in each direction for each mainline freeway link along I-405 within the project area. The table also includes evaluation of I-605 north of I-405. Tables 2.4.1 and 2.4.2 provide these same data for the No Build Alternative in years 2020 and 2040. Tables 3.4.1, 3.4.2, 4.4.1, 4.4.2, 5.4.1, and 5.4.2 provide these data for Alternatives 1, 2, and 3, respectively. The operations of the branch connectors (freeway-to-freeway ramps) within the interchange are summarized in Table 2.3.2 of the Traffic Study for the existing condition. Branch connectors under future conditions are summarized in Tables 2.4.3, 2.4.4, 2.4.5, 2.5.3, 2.5.4, 2.5.5, 2.6.3, 2.6.4, 2.6.5, 2.7.3, 2.7.4, and 2.7.5. Branch connector data are summarized in Tables 3.1.6-9 and 3.1.6-15 of the Draft EIR/EIS. For a discussion of northbound I-405 as it approaches the interchange, please see Common Response – Traffic Flow at the Orange County/ Los Angeles County Line.

Response to Comment Letter GR2

Comment GR2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identified of the Preferred Alternative, as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Appendix R1, Response to Comment GR4-16, for the response to South Coast Air Quality Management District's (SCAQMD) comment on the air quality analysis of the bottleneck at the north end of the project. The Draft EIR/EIS and Traffic Study provide data on traffic conditions on I-405 near the north end of the project. These data were used in the

determination of emissions and air quality impacts. See also Common Response – Traffic Flow at the Orange County/Los Angeles County Line.

Comment GR2-2

With the implementation of proposed traffic measures T-10 and T-11, all project contributions to adverse cumulative effects at all of these intersections would be minimized. As described in Measure T-10, improvements to City of Long Beach intersections shall be implemented by the City of Long Beach, with the City of Long Beach bearing responsibility for necessary clearances and permits. As described in Measure T-11, proposed improvements to Caltrans intersections shall be implemented by Caltrans, with Caltrans bearing responsibility for necessary clearances and permits. Therefore, the City of Long Beach and Caltrans would be responsible for quantifying any potential air quality impacts as a result of future improvements at these intersections.

Comment GR2-3

The significant impacts referenced in the comment are cumulative significant impacts. The proposed I-405 project contributes to those impacts but is not responsible for fully causing or fully mitigating these impacts. The mitigation is the payment of the fair share, not the implementation of the proposed improvement. Measures T-10 and T-11 require that OCTA enter into agreements with the City of Long Beach and Caltrans, respectively. Those agreements will specify the responsibilities of the parties to use the funds provided by OCTA to fund only the implementation of the improvements identified in the measures. The source of the remainder of the funds to implement the improvements identified in the measures is the responsibility of the implementing agency as in any fair share arrangement. The Supplemental Draft EIR/EIS acknowledges that the portion of the funding for the improvements identified in the measures that is not provided by OCTA has not been identified. On page 4-27, the Supplemental Draft EIR/EIS states: “Caltrans is committed to the fair share funding percentages as stated below. However, if the City of Long Beach and the State of California are unable to get 100 percent of the remaining funds, then Measure T-10 and/or Measure T-11 will be deemed infeasible due to impacts identified as significant and not fully mitigable; consequently, Findings and a Statement of Overriding Considerations would be prepared for inclusion in the Final EIR/EIS to comply with State CEQA Guidelines (Title 14 California Code of Regulations, Chapter 3, Section 15903), and the Department of Transportation and California Transportation Commission Environmental Regulations (Title 21 California Code of Regulations, Chapter 11, Section 1501).”

Comment GR2-4

Section 4-1 of the Supplemental Draft EIR/EIS provides a comparison of the future build conditions to the existing condition. This comparison is the basis for the identification of cumulative significant impacts under the California Environmental Quality Act (CEQA). Section 4-1 also includes a comparison of the build conditions to the no-build condition to determine the extent of the project's contribution to the cumulative significant impacts.

Comment GR2-5

Responses to all comments received on the Supplemental Draft EIR/EIS and the Draft EIR/EIS will be provided in the Final EIR/EIS. With regard to a potential bottleneck at the north end of the project, please see Response to Comment GR2-1.

Comment GR2-6

Please see Appendix R1, Response to Comment GR4-16, for the response to SCAQMD's comment on the air quality analysis of the bottleneck at the north end of the project.

Comment GR2-7

Please see Response to Comment GR2-2 above.

Comment GR2-8

The significant impacts referenced in the comment are cumulative significant impacts. The proposed I-405 project contributes to those impacts but is not responsible for fully causing or fully mitigating these impacts. The mitigation is the payment of the fair share, not the implementation of the proposed improvement. Please see Response to Comment GR2-3.

Comment GR2-9

Section 4-1 of the Supplemental Draft EIR/EIS provides a comparison of the build conditions to the existing condition. This comparison is the basis for the identification of cumulative significant impacts under CEQA. Section 4-1 also includes a comparison of the future build conditions to the no-build condition to determine the extent of the project's contribution to the cumulative significant impacts. Chapter 3 of the Supplemental Draft EIR/EIS determines adverse effects of the project under the National Environmental Policy Act (NEPA) using a comparison of the future build conditions to the future no-build condition.

Response to Comment Letter GR3

Comment GR3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

A direct connector between the medians of I-405 and SR-73 is included in Alternative 3, but it is not included in Alternatives 1 and 2, whose southern project limits are north of Harbor Boulevard.

Please see Common Response – Preferred Alternative Identified.

GOVERNMENT (LOCAL) COMMENTS (GL)

GL1

CITY OF FOUNTAIN VALLEY
www.fountainvalley.org
10200 SLATER AVENUE • FOUNTAIN VALLEY, CA 92708-4736 • (714) 593-4400, FAX (714) 593-4498

August 12, 2013

Smita Deshpande, Branch Chief
Caltrans District 12
Attn: I-405 SDEIR-EIS Comment Period
2201 Dupont Drive, Suite 200
Irvine, CA 92612

RE: I-405 SDEIR-EIS Comment Period

Dear Ms. Deshpande:

Since the City's last comment submittal on July 17, 2012, regarding the I-405 DEIR-DEIS, the City Council of Fountain Valley adopted Resolution No.: 9375 on July 17, 2012, supporting Alternative No. 2 of the I-405 Improvement Project (attached).

Since the adoption of that resolution, there have been two additional alternatives or concepts introduced by OCTA: 1) Concept A, which is Alternative 2 with conversion of the existing HOV lane to a single HOT lane and, 2) Concept B, which is essentially Alternative 2 in its entirety except the second NB lane is truncated at Valley View. The City finds Concept B to be consistent with the goals of Alternative 2 and the City supports it.

The following comments are in addition or are amendments to the City's previous comment letter dated July 17, 2012.

Right-of-Way Impacts

The City requests that the efforts underway to eliminate the braided ramp design at the Warner/Magnolia south side interchange continue in favor of a condition similar to existing to avoid the need for full takes of property. 1

As noted above, this letter is additional comments to our original DEIR-DEIS letter and as such make note of the on/off ramp at Warner/Magnolia north side of the freeway. It is proposed that a braided on/off ramp be built. We believe the DEIR did not adequately describe the project magnitude and its impacts on noise, privacy, and aesthetics to the adjacent properties on Daisy Avenue. The City is greatly concerned regarding impacts to these properties. 2

Sincerely,

Raymond H. Kromer
City Manager

Attachment

c: City Council
Director of Public Works/City Engineer
Planning Director

GL1 (Continued)

RESOLUTION NO. 9375

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF FOUNTAIN VALLEY SUPPORTING ALTERNATIVE NO. 2 OF THE I-405 IMPROVEMENT PROJECT

WHEREAS, the Orange County Transportation Authority (OCTA) in association with the State of California Department of Transportation (Caltrans) and the cities adjacent to the I-405 Freeway Corridor between the SR-73 and I-605 freeways, has been working on the I-405 Freeway Improvement Project; and

WHEREAS, Alternative No. 2, which adds two general purpose lanes in each direction, provides the greatest transportation benefit to the residents, businesses, and community of the City of Fountain Valley by providing the greatest travel time savings and vehicle capacity in the general purpose lanes; and

WHEREAS, Alternative No. 2 provides the greatest level of benefit to the entire I-405 Corridor, all cities along the corridor, and all users of the I-405 corridor without converting existing lanes to toll lanes and requiring the paying of tolls; and

WHEREAS, Alternative No. 2 has less right-of-way impacts to properties within Fountain Valley and other cities along the I-405 corridor than Alternative No. 3; and 3

WHEREAS, the City does not support the imposition of tolls for any portion of the I-405 Improvement Project as are included in Alternative No. 3; and

WHEREAS, the City agrees with OCTA that this is possibly the only chance in decades to make improvements to the I-405 corridor between SR-73 and I-605 and because of that rare opportunity the socially, economically, and politically responsible action is to provide for the greatest transportation improvements able to be constructed that best utilize taxpayer funds without requiring motorists to pay tolls to use portions of the improvements constructed

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Fountain Valley hereby affirms its support for the I-405 Freeway Improvement Project Alternative No. 2 as the superior and responsible transportation improvement alternative for the I-405 corridor from SR-73 to I-605.

PASSED and ADOPTED this 17th day of July, 2012.

ATTEST:

City Clerk (Deputy)

Mayor

APPROVED AS TO FORM:

City Attorney

GL1 (Continued)

VOTE

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss.
CITY OF FOUNTAIN VALLEY)

I, Kathleen Heard, Deputy City Clerk of the City of Fountain Valley, do hereby certify that the foregoing Resolution was adopted at the Council meeting held on July 17, 2012 by the following vote, to wit:

AYES: CRANDALL, NAGEL, VO, MCCURDY, COLLINS
ABSENT: NONE
NOES: NONE

Kathleen Heard, Deputy City Clerk

GL2

CITY OF LONG BEACH
DEPARTMENT OF PUBLIC WORKS
333 West Ocean Boulevard 9th Floor • Long Beach, CA 90802 • (562) 570-6331 • Fax (562) 570-7161

August 12, 2013

Smita Deshpande
Branch Chief
Caltrans District 12
2201 Dupont Drive, Suite 200
Irvine, CA 92612

SUBJECT: Supplemental Draft Environmental Impact Report / Environmental Impact Statement for the San Diego Freeway (I-405) Improvement Project. (SCH No. 2009091001)

Dear Ms. Deshpande:

The City of Long Beach ("City") appreciates the opportunity to review the Supplemental Draft Environmental Impact Report / Environmental Impact Statement for the San Diego Freeway (I-405) Improvement Project. The City respectfully submits the comments provided in this letter and three attachments for consideration.

On behalf of the City, Iteris, Inc. was contracted to conduct a review of the SDEIR / EIS document. Iteris' written technical review, dated June 28, 2013, is attached hereto and incorporated herein by this reference. 1

As a Participating Agency for the project, the City is disappointed that issues identified and submitted in writing by the City in response to the Draft Supplemental Traffic Study for the project were not addressed in the SDEIR / EIS document. The City's letter dated April 24, 2013, is attached hereto and incorporated herein by this reference. 2

In response to the Draft Supplemental Traffic Study for the project, the City requested that the SDEIR / EIS document be circulated for public comment only after key Los Angeles County agencies, including Caltrans District 7, Los Angeles Metropolitan Transportation Agency, Gateway Cities Council of Governments and the City have concurred that the scope of the proposed mitigating measures is feasible, how the mitigating measures will be funded, and what agency will be responsible for the implementation of each of the individual mitigating measures. Despite the City's request, the document has been circulated for public comment, without concurrence from any of these key Los Angeles County agencies. 3

GL2 (Continued)

SDEIR – DEIS I-405 Improvement Project
August 12, 2013
Page 2

Furthermore, the City of Long Beach does not concur with all of the proposed mitigating measures. For example, the proposed mitigation measure at the SR-22 and Studebaker Road interchange removes recently completed improvements at the intersection of the eastbound SR-22 off ramp to Studebaker Road and College Park Drive (the sole means of egress from the neighborhood of College Park East) and creates a potentially unsafe back-up of queued traffic on the off ramp and most certainly on to the freeway. Another example is the proposed mitigation measure at 7th Street and Bellflower Boulevard which requires the acquisition of federal land and thus has questionable feasibility. In response to the study's proposed mitigating measures, City traffic engineers have developed alternative traffic mitigation measures that do not create unsafe back-ups or require the acquisition of additional right-of-way. These alternatives, labeled as the Preferred Mitigation Program, are attached hereto and incorporated herein by this reference. 4

The City strongly rejects the proposed, or lack of a defined, funding approach for the implementation of traffic mitigation measures. The City views the project as a Caltrans', or State, project in Orange County and expects that the State and Orange County will fully fund and implement all traffic flow improvements required to mitigate adverse traffic impacts within Long Beach. The SR-22, or more commonly known as 7th Street in Long Beach, is a State owned and operated facility east of Pacific Coast Highway. This State facility currently operates at "Level of Service" F during peak traffic periods. Traffic impacts caused by the State's project designed to accommodate future traffic growth in Orange County further degrades the level of service on this key regional roadway providing access to Long Beach. Any degradation in traffic operations along 7th Street is unacceptable to the City. 5

A total of ten mitigating measures located within City limits are proposed depending on the project alternative chosen. These proposed mitigating measures have an estimated total construction cost of $5.4 million. Given the project's estimated total construction cost range of $1.3 - $1.7 billion, the estimated total construction cost of all of the mitigating measures represent less than one-half of one percent of the total estimated construction cost of the project. The City is particularly concerned that the study does not commit Caltrans to fund or construct any of the mitigating measures identified. 6

On July 16, 2013, the City Council acted to direct the City Manager to assure measures to mitigate traffic impacts within City limits are sufficient to fully mitigate the impacts, assure measures to mitigate traffic impacts located on State right–of–way and within City limits are 100% funded and performed by the project proponents, and to be prepared to take immediate legal action if necessary to protect the City's interests. 7

GL2 (Continued)

SDEIR – DEIS I-405 Improvement Project
August 12, 2013
Page 3

The City of Long Beach looks forward to working with Caltrans and the Orange County Transportation Authority to resolve the outstanding issues identified in this comment letter. However, please be advised that the City is prepared to take immediate legal action against the project if the project proponents do not fully fund and perform all improvements required to mitigate adverse traffic impacts with Long Beach. 7 cont.

Sincerely,

David Roseman
City Traffic Engineer

Attachments: (1) City of Long Beach letter in response to the draft Supplemental Traffic Study Report for the DEIR / EIS document (April 24, 2013)
(2) Iteris, Inc.'s summary of review of the SDEIR / EIS document (August 7, 2013)
(3) City of Long Beach revised mitigating measures (August 12, 2013)

CC: Ara Maloyan, Acting Director of Public Works
Tom Modica, Director of Government Affairs & Strategic Initiatives
Amy Bodek, Director of Development Services
Michael Mais, Assistant City Attorney
Doug Failing, Executive Director, Highway Programs, Los Angles Metropolitan Transportation Authority
Richard Powers, Executive Director, Gateway Council of Governments
Niall Barett, Project Manager, Orange County Transportation Authority

GL2 (Continued)

ITERIS

August 7, 2013

David Roseman
City Traffic Engineer
City of Long Beach
333 W. Ocean Boulevard
Long Beach, CA 90802

Re: Review of Caltrans "San Diego Freeway (I-405) Improvement Project SR-73 to I-605 Supplemental Traffic Study Report Long Beach Area"

Dear Mr. Roseman,

Iteris, Inc. has completed an initial review of the San Diego (I-405) Freeway Improvement Project SR-73 to I-605 Environmental Impact Report/Environmental Impact Statement Supplemental Traffic Study Report Long Beach Area (June 2013). Our comments are focused on the new information that is presented in the Supplemental Study.

As stated in the Supplemental Study, "the traffic information is the evaluation of the traffic changes in the Long Beach area along SR-22/7th Street, I-405 and I-605, at their local interchanges, and at nearby intersections due to the proposed build alternatives. The study area includes Carson Street in the vicinity of I-605 which, in addition to the City of Long Beach, includes Cities of Lakewood and Hawaiian Gardens. The objective of this evaluation is to determine the extent of any potential adverse cumulative effects of the propose project alternatives north of the limits of the proposed capacity improvements."

The comments within this letter focus on the major findings of the supplemental study but do not address all of the detailed numerical analysis in this large study nor do they address the specifically proposed mitigation measures or feasibility of potential mitigation measures. We suggest that a comment be made by the City to the effect that the City will continue to review the details of the mitigation proposals for appropriateness, feasibility, right of way impacts and other issues. While it is recommended that a more comprehensive review of the "proposed measures" and possible right of way impacts be conducted by the City, even that analysis may be premature and inadequate since it is likely that the growth impacts on Long Beach intersections are underestimated. The specific comments are provided below.

Comments:

- Arterial Segment and Intersection Analysis Missing - The supplemental study area focuses exclusively on the intersections directly adjacent to the I-405 at several arterials and at I-605 (Spring/Cerritos and Carson Street) and at the arterial interchanges as well as along SR-22/7th Street. Thus, the supplemental study only covers ramp terminus intersections directly adjacent to the freeway and along SR-22/7th Street and does not include any arterial roadway segments leading to and from I-405. Thus, no other study intersections were included along other potential freeway bypass or alternate routes that could also be impacted by the project as a result of traffic using various routes within Long Beach to avoid freeway congestion that will result from the project. A review of the OCTAM model run traffic assignment plots provided by the project team, as well as review of independent model runs conducted for the City of Long Beach using the Gateway Cities traffic model (created for the SR-91/I-605/I-405 Congestion Hot Spots Feasibility Study) showed that several other arterial routes would experience increases in traffic volumes due to the project which may be significant. Those include Palo Verde Avenue north of I-405, Studebaker Road north and south of I-405, Bellflower Boulevard north and south of I-405, Atherton Street and Los Coyotes Diagonal. Without analysis of the project related traffic flow on these arterials, the supplemental impact analysis is incomplete. The freeway analysis for both Year 2020 and Year 2040 indicate that the freeway level of service for the I-405 in Long Beach will be essentially LOS E and F at all weaving segments and also LOS E and F at many of the mainline segments, thus considerable by-pass and alternative route traffic would be expected on these other city arterials as opposed to only at the arterial ramp interchange intersections that were studied. **8**

8 cont.

- Use of OCTAM Model - Traffic Forecasts were prepared using the same methodology as the original EIR traffic study, namely via the application of the OCTAM model of the Orange County Transportation Authority (OCTA) and for the year 2020 and 2040. In Los Angeles County and the City of Long Beach, the OCTAM model may not yield the correct estimates of project traffic impacts due to the fact that OCTAM is a tool designed for planning studies in Orange County and it was primarily validated within Orange County. While it is not unusual or inappropriate to use the County's model for purposes of forecasting, it is important to note that the results may be different using a model that is more accurate within Los Angeles County. **9**

- Supplemental Study does not use City of Long Beach Standards or methods - Highway Capacity Manual (HCM) methodology was used for both freeway and arterial level of service calculations. The City of Long Beach applies the Intersection Capacity Utilization method for arterials, thus the results may differ due to the use of HCM at intersections. While it is not unusual or inappropriate to use one set of standards in and EIR, it is important to note that the results may be different using the City's methods. **10**

- No clear determination of significant impacts - The traffic study states on page 1-2 that "adverse cumulative effects are evaluated through application of professional judgment to changes in level-of-service (LOS) and volume-to-capacity ratios. For future conditions, the v/c ratio is the demand-to-capacity ratio, where the demand volume is used." Typically cumulative impacts and also project impacts are based on a clearly stated and approved scale upon which the project or cumulative impacts can be measured. Thus, a certain change in v/c or d/c due to the project or cumulative condition can then be declared to the public as a significant impact, and anything less would not be a significant impact. Without this type of impact measurement scale, the public and decision makers cannot be expected to understand what is or is not a significant impact. Also, when the determination of impact is left to "professional judgment" the resulting findings and conclusions will likely differ from one professional planner/engineer to another and cannot be relied upon for determination of environmental significance. **11**

- Similar to the prior comment, the Supplemental EIR also states on page S-2 that "it was determined that the proposed build alternatives would have project contributions to adverse cumulative effects on California Department of Transportation (Caltrans) and City of Long Beach intersections that were not previously considered within the May 2012 Draft EIR/EIS. Project contributions to adverse cumulative effects are evaluated through applications of professional judgment to changes in level-of-service (LOS) and volume-to-capacity (V/C) ratios." As noted, "professional judgment" can vary from person to person and is not an acceptable method to evaluate the results of a quantitative study that is based on traffic engineering and planning models and analysis.

- Unclear terminology for public and decision makers - Improvements that would mitigate impacts (called "effects" in the documentation) are labeled as "proposed measures" or "traffic measures to address the project contributions to adverse cumulative effects". It is unclear how this terminology compares to typical terminology used under traffic studies conducted to satisfy the California Environmental Quality Act (CEQA) that address "significant impacts" and "mitigation measures." Under CEQA, significant impacts are based on technical analysis and comparison against standardized scales to determine whether the level of impact is significant, and if significant, the mitigation measure must be implemented before the project can be constructed. It is unclear if the "proposed measures" are being committed to prior to project implementation. **12**

GL2 (Continued)

ITERIS

I-405 Improvement Project EIR/EIS Supplemental Study
Comments, August 7, 2013

- Fair Share estimates appear in accurate - The documents have a "fair share percentage calculation" which is based on Caltrans Guide for the Preparation of Traffic Impact Studies. The formula basically calculates a fair share contribution which is based on the project traffic added divided by the total traffic added. Thus the project is responsible for its own incremental share of total growth. This is a reasonable method to calculate a fair share estimate of cost. However, we question some of the numerical traffic growth data that has gone into the formula, as described below.

  - Cumulative growth rates in City of Long Beach not accurate – The fair share contribution by the project seems low at several locations. A review of Appendix B-3 shows that several of the intersections are shown to have total growth rates in traffic of up to 48 percent in one case (SR-22 WB Ramp/College Park Drive). Within the three scenarios, six locations have total growth rates of over 30 percent and four over 40 percent. Several more show total growth of over 20 percent. When taking out the estimated project incremental share and looking at "cumulative only" growth, the growth rates are still very high at many locations, with one location over 40 percent, six over 30 percent and two over 20 percent. The recently published and publicly circulated City of Long Beach Mobility Element of the City of Long Beach General Plan shows a growth in population of 15.5 percent to year 2035 and employment growth of less than ten percent to year 2035. Accounting for the likely future reduction in trip generation due to TDM, active transportation, transit and other measures, it is likely that that cumulative traffic growth due to the City of Long Beach growth in population and employment would be between ten to 15 percent and not greater. Thus, the very large cumulative growth rates as projected by the OCTAM model do not seem to be reasonable. If the total cumulative growth is in fact lower that stated in the study, then the project contribution would be proportionately higher and OCTA's fair share would be higher as well. If the cumulative growth is to be accepted, then it must be mostly attributed to regional growth that is essentially freeway by-pass traffic that would be the direct result of regional trips choosing to use Long Beach arterials rather than the congested Caltrans freeway facilities. Thus, most of the growth, even cumulative growth, is in fact directly related to changes in travel demand on the Caltrans system and not due to City growth patterns. Based on City of Long Beach growth projections, it is unlikely that background traffic growth due to City land use and socioeconomic changes would exceed 10 to 15 percent and there are no known major development projects in the study area that would cause the higher rates of cumulative growth as shown in the reports. In summary, overestimating cumulative growth and underestimating project increments, both may result in a fair share percentage that is too low and does not accurately reflect the responsibility for mitigation. **13**

  - OCTAM may underestimate project increment - Appendix B-3 of the Supplemental EIR document provides the fair share percentage calculations and the traffic numbers used to estimate each intersection's fair share allocation due to the project. As part of past comments, we have noted that the Gateway Cities traffic model in some locations shows a higher growth in traffic due to the project increment than the OCTAM model. As noted previously, the Gateway Cities model has been more rigorously validated in Los Angeles County and is more detailed and accurate in Los Angeles County than OCTAM. Thus, the incremental project values from the Gateway Cities model, where they show significantly higher project traffic contributions in some locations, should be used. The prior comment regarding the potential underestimate of project incremental traffic using OCTAM still stands, and as a result the OCTA fair share at some locations may be underestimated. **14**

  - Caltrans owns many of the facilities with "fair share" allocations - Many of the study intersections are along Caltrans-owned and operated facilities, including those along SR-22/7th Street as well as Pacific Coast Highway. At those facilities, the City of Long Beach would not be responsible for **15**

GL2 (Continued)

ITERIS

I-405 Improvement Project EIR/EIS Supplemental Study
Comments, August 7, 2013

funding or implementing improvements, thus the fair share allocation at these locations does not make sense as Caltrans would be responsible for bringing those facilities up to standard. It is unclear where the other "cumulative" funding would come from for any of the impact locations, but particularly for Caltrans locations it would logically come entirely from Caltrans. As this entire project is on a Caltrans facility, and impacts are caused by the Caltrans facility modifications, it seems that there should be dedicated funding for 100 percent of the cost for all intersections owned by Caltrans and that the other funding besides the fair share should not be left unresolved. That is true for six of the study intersections within the fair share calculation. **15 cont.**

This concludes our summary of comments on the Supplemental Traffic Study Report Long Beach Area and the San Diego Freeway (I-405) Improvement Project Supplemental Draft EIR/EIS, dated June 2013. Please let us know if you have any questions or concerns. Iteris, Inc. would be happy to meet with City staff to discuss the results of the review.

Sincerely,

Gary Hamrick
Vice President
Transportation Systems
Iteris, Inc.

GL2 (Continued)

CITY OF LONG BEACH
DEPARTMENT OF PUBLIC WORKS
333 WEST OCEAN BOULEVARD • LONG BEACH, CA 90802 • (562) 570-6383 • FAX (562) 570-6012

April 24, 2013

Smita Deshpande
Branch Chief
Caltrans District 12
3347 Michelson Drive
Irvine, CA 92612

Subject: Draft Supplemental Traffic Study, Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS) for the San Diego Freeway (I-405) Improvement Project

Dear Ms. Deshpande:

This letter is to express the City of Long Beach's concerns related to the planned circulation of the supplemental environmental documentation related to the subject project. It is of primary importance to the City that our constituents are provided an opportunity to review and comment on traffic impacts caused by the project and the proposed improvements to be made to mitigate those impacts through the EIR/EIS process. 16

In a Technical Working Group meeting on February 13th, 2013, Caltrans and OCTA staff and consultants repeatedly used terminology other than "significant traffic impact" when referring to project related traffic impacts within the City of Long Beach that were identified in the supplemental study effort. At that same meeting, it was also suggested that "mitigation measures" were not project mitigation but traffic flow enhancements that could be addressed in an Environmental Commitment Report, a report I understand may not be subject to the public review process or be directly attributable to the project. Another alternative promoted at the meeting was to package the proposed "mitigation measures" in a separate project that would be separately funded. The City perceives these actions as an attempt to supplant the environmental process and thus creates significant cause for concern. To be perfectly clear, the City of Long Beach will not accept any such environmental alternatives short of including both the identification of "significant traffic impacts" and their associated "mitigation measures" within the EIR/EIS for the project. 17

To this end, the City respectfully requests that the supplemental environmental documentation to be released to the public:

1. Clearly describe in detail both the "significant traffic impacts" of the project within the limits of the City of Long Beach and the project's proposed "mitigation measures" to address those impacts.

DIRECTOR'S OFFICE
BUDGET & PERSONNEL
333 W. Ocean Blvd., 9th Floor
Long Beach, CA 90802
Ph. (562) 570-6383
Fax (562) 570-6012

ENGINEERING
333 W. Ocean Blvd., 9th Floor
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Ph. (562) 570-6654
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ENVIRONMENTAL SERVICES
2929 E. Willow Street
Long Beach, CA 90806
Ph. (562) 570-2850
Fax (562) 570-2981

FLEET SERVICES
2950 Temple Avenue
Long Beach, CA 90806
Ph. (562) 570-5400
Fax (562) 570-5414

ASSET MANAGEMENT
333 W. Ocean Blvd., 3rd Floor
Long Beach, CA 90802
Ph. (562) 570-6089
Fax (562) 570-6380

PUBLIC SERVICE
1651 San Francisco Avenue
Long Beach, CA 90813
Ph. (562) 570-2782
Fax (562) 570-2729

GL2 (Continued)

2. Be circulated only after all involved Los Angeles County agencies, including Caltrans District 7, Los Angeles County Metropolitan Transportation Agency, Gateway Cities Council of Governments, and the City of Long Beach have concurred that the description of the proposed "mitigation measures" are feasible, how those "mitigation measures" will be funded, and what agency will be responsible for the implementation of each of the individual "mitigation measures". 18

The City is also in receipt of recently proposed project "mitigation measures" developed by Caltrans District 7. It is my understanding that Caltrans District 12 is also in receipt of this same proposal and has provided its concurrence. The City is currently evaluating this new proposal and we intend to complete that review by May 17, 2013. At this point the City is unclear as to which "mitigation measures" Caltrans plans on including in the supplemental environmental documentation for the project; those "traffic enhancements" provided by OCTA's consultants or the "mitigation measures" identified by Caltrans District 7. 19

The City of Long Beach continues to look forward to working with Caltrans and OCTA staff to resolve the outstanding issues and concerns identified in this letter.

Sincerely,

David Roseman
City Traffic Engineer

Attachments

cc: Ara Maloyan, Director of Public Works
Amy Bodek, Director of Development Services
Michael Mais, Assistant City Attorney
Kathy Jensen, Ratan and Tucker
Niall Barrett, OCTA

GL2 (Continued)

CITY OF LONG BEACH

I-405 Improvement Project

Preferred Mitigation Program

GL2 (Continued)

20

I-405 Improvement Project
Mitigation Measures Proposed in Response to Traffic Impacts within the City of Long Beach
August 12, 2013

	Location	Owned By	Proposed Improvements	Alt 1	Alt 2	Alt 3	Rough Construction Estimate
2	SR-22 Westbound On/offramp and College Park Drive	Caltrans	• Eliminate intersection of SR-22 on/offramp and College Park Drive. • Create separate intersections where the On/offramp and College Park Drive intersect with Studebaker Road.	X	X		$3,500,000
3	7th Street and Pacific Coast Highway	Caltrans	• Modify median and add 2nd left-turn lane to northbound approach.	X	X	X	$150,000
5	7th Street and Bellflower Boulevard	Caltrans	• Widen 7th Street between PCH and Bellflower Boulevard. • Modify median and refuge island on 7th Street, east of Bellflower and relocate signal masts. • Add 2nd left-turn lane to eastbound and westbound approach. • Align eastbound through lanes with their corresponding lanes east of Bellflower.	X	X	X	$1,500,000
9	7th Street and East Campus Drive	Caltrans	• Extend eastbound left turn lane.		X	X	$25,000
10	7th Street and Channel Drive	Caltrans	• Modify medians and add 2nd left-turn lanes to eastbound and westbound approaches.	X	X	X	$300,000

(Location numbers derived from Supplemental Traffic Report and District 7 reviews - Long Beach Area, March 2013)

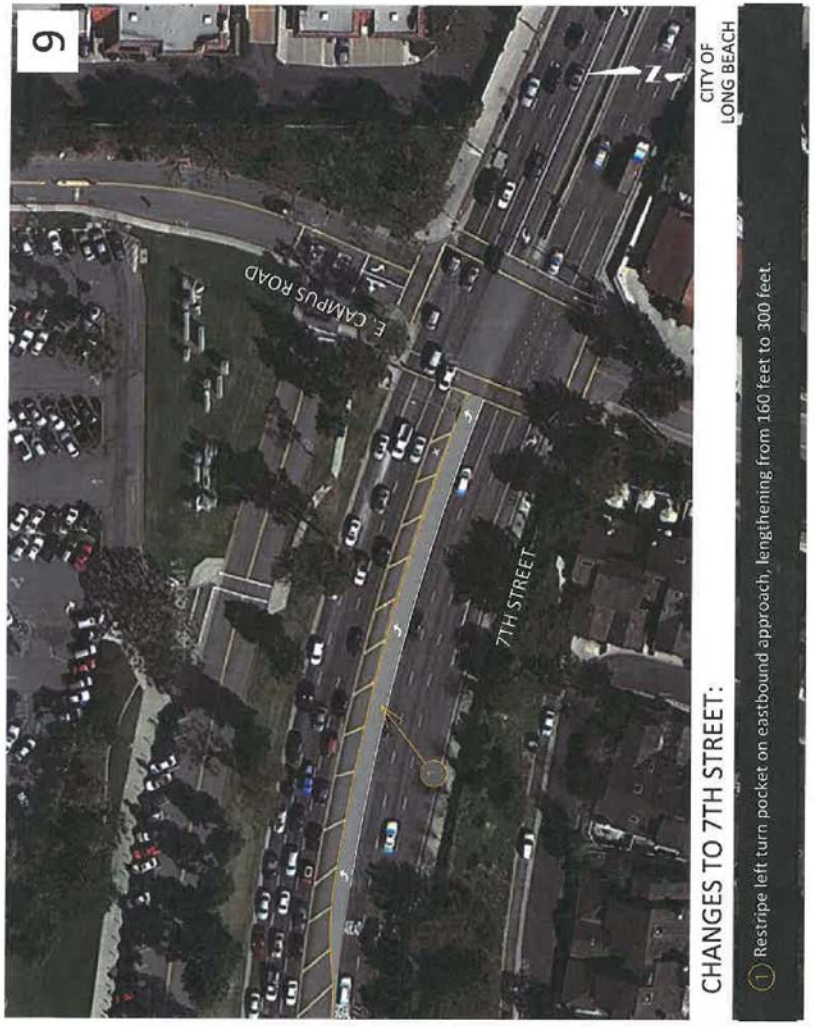
The City of Long Beach has no comments for locations 1, 4, 6, 7, and 8; those locations are accepted as feasible.

GL2 (Continued)

GL2 (Continued)

GL2 (Continued)

GL2 (Continued)



GL2 (Continued)

GL3

CITY OF LOS ALAMITOS

Mayor:
Warren Kusumoto

Mayor Pro Tem:
Gerri L. Graham-Mejia

Council Members:
Troy D. Edgar
Dean Grose
Richard D. Murphy

3191 Katella Avenue
Los Alamitos, CA
90720-5600

Telephone:
(562) 431-3538

FAX (562) 493-1255

www.cityoflosalamitos.org

August 12, 2013

VIA EMAIL: 405.Supplemental.Draft.EIR.EIS@parsons.com

Ms. Smita Deshpande
Caltrans-District 12,
"Attn: 405 DEIR-DEIS Comment Period"
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Subject: Interstate 405 (I-405) Improvement Project Comments to Supplemental Draft Environmental Impact Report (EIR)

Dear Ms. Deshpande:

The City of Los Alamitos appreciates the opportunity to comment on the above mentioned document. The City of Los Alamitos has the following comments on the Interstate 405 Improvement Project between State Route 73 and Interstate 605 Supplemental Draft Environmental Impact Report/Environmental Impact Statement prepared by the State of California Department of Transportation (Caltrans) dated June 2013:

1. The proposed project does not address the needs of the small southerly stretch of the I-605 Freeway completely within Orange County before it terminates at the I-405 Freeway. This portion of the I-605 Freeway includes its interchange with Willow Street/ Katella Avenue and is under the jurisdiction of Caltrans District 12, which is the Lead Agency for the proposed project. While the I-605 Freeway is primarily in Los Angeles County and under the jurisdiction of Caltrans District 7, any future project for the I-605 Freeway by Caltrans District 7 does not guarantee that this small southerly stretch will be included in that project. Consequently, this small portion of the I-605 Freeway could be "forgotten" and may not be improved for long stretches at a time. In order to construct a comprehensive freeway system, the proposed project needs to include this small portion of the I-605 Freeway. 1

2. The Willow Street/Katella Avenue at I-605 Freeway interchange needs to be modernized to meet existing and future traffic demands. This interchange was constructed in the 1960s and used a clover-leaf design with short and compact weaving areas and challenging merge and diverge points. The increase of traffic volumes since the 1960s practically necessitates modernization of 2

GL3 (Continued)

the entire interchange, which may include the installation of additional traffic signals to control traffic movements. The proposed project should identify and evaluate measures to modernize the interchange. Any proposed improvements to this interchange should involve representatives from the City of Los Alamitos. 2 cont.

3. The Spring Street/Cerritos Avenue at I-605 Freeway interchange needs to be modernized to meet existing and future traffic demands. This interchange was constructed in the 1960s, but only with accommodations for southbound off-ramps and northbound on-ramps. The proposed project should identify and evaluate measures to modernize the interchange by adding the southbound on-ramps and northbound off-ramps. Any proposed improvements to this interchange should involve representatives from the City of Los Alamitos. 3

4. During the construction of the proposed project, drivers will seek alternative routes to avoid the construction work on the I-405 Freeway project as seen with the ongoing West County Connectors (WCC) project. Los Alamitos Boulevard and Katella Avenue through the City of Los Alamitos Boulevard will be used as alternative routes during construction of the proposed project and may need improvements prior to commencement of the proposed project. An evaluation is needed to identify potential traffic impacts during construction impacts of the proposed project. It would help relieve some of the diverted traffic onto City streets during construction of the proposed project. 4

5. Caltrans District 7, in conjunction with the Los Angeles County Metropolitan Transportation Authority (Metro) and Gateway Cities Council of Governments (COG), is currently evaluating the proposed SR-91, I-405, I-605 Corridors project and has preliminarily identified various traffic improvements to streets and intersections in the City of Los Alamitos, including the intersection of Los Alamitos Boulevard at Katella Avenue, that would be implemented with the SR-91, I-405, I-605 Corridors project. The City of Los Alamitos requests that the sponsors of this I-405 Improvement project in Orange County also commit to implementing these potential improvements identified in the SR-91, I-405, I-605 Corridors Project prior to commencement of the proposed project. It would help relieve some of the diverted traffic onto City streets during construction of the proposed project. 5

Interstate 405 (I-405) Improvement Project
Page 2 of 3

GL3 (Continued)

Pursuant to Public Resources Code Section 21092.5, we request that the lead agency provide the City of Los Alamitos with written responses to all comments contained herein prior to the adoption of the final EIR. Should you have any questions, please contact myself at the number below. 6

Sincerely,

Steven A. Mendoza
Community Development/Public Works Director

GL4

Patrick O'Donnell
City of Long Beach
Councilmember Fourth District

Smita Deshpande - Branch Chief
Caltrans - District 12
Attn: 405 SDEIR - DEIS Comment Period
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Dear Ms. Deshpande:

Long Beach has had little to no input on the 405 Widening Project and now we're being told we will be paying for the impacts of an Orange County project. This is not acceptable. 1

The City of Long Beach was informed through the Supplemental Draft Environmental Impact Report (DEIR) that we would be held responsible for mitigation costs on state right-of-ways. On July 16, City Council voted unanimously to direct staff to work towards getting our concerns addressed, including but not limited to taking legal action. 2

We will continue to fight to protect our residents from impacts created by this project. Their streets and commutes will be affected and they should not be expected to pay the price.

Sincerely,

Patrick O'Donnell
Councilmember, Fourth District
City of Long Beach

333 West Ocean Boulevard • Long Beach • California 90802
Phone 562.570.6918 • Fax 562.570.5235
district4@longbeach.gov

GL5

From: Don Broun [donbroun@earthlink.net]
Sent: Monday, August 12, 2013 11:14 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: gmmontana@rossmoor-csd.org
Subject: Fw: Rossmoor Response to SDIR/EIS and Proposed Toll Lanes

-----Forwarded Message-----
From: Chris Montana
Sent: Aug 12, 2013 8:15 PM
To: "donbroun@earthlink.net"
Subject: Rossmoor Response to SDIR/EIS and Proposed Toll Lanes

On behalf of the Community of Rossmoor, please include the following items below as Comments:
(1) You Tube Link to Rossmoor residents' comments, and
(2) Change.Org Link to petition by Rossmoor residents. 1

http://youtu.be/aRGrcFkwFNM

http://www.change.org/petitions/caltrans-and-octa-remove-toll-roads-again-from-consideration-in-the-i-405-freeway-improvement-project

Please include both of these items as "Comments" on the SDEIR/EIS as well as Proposed Toll Lanes included in the Concepts of Alternative 1.

Chris Montana
General Manager
gmmontana@rossmoor-csd.org
www.rossmoor-csd.org

Rossmoor Community Services District
3001 Blume Drive, Rossmoor, CA 90720
562.430.3707

"Designated the number one suburb in California and number nine in the nation"

GL6

From: Henry Taboada [htaboada@rossmoor-csd.org]
Sent: Monday, August 12, 2013 7:55 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: RCSD Resolution-I-405 Improvement Project
Attachments: DOC017.pdf

This resolution is the RCSD's official statement during the EIR/EIS comment period.

Henry Taboada
External Affairs Consultant
562.430.3707
www.rossmoor-csd.org
Rossmoor Community Services District is located in the Community of Rossmoor in Orange County, California. Approximately 10,500 residents make their home in this unincorporated bedroom community located behind a signature brick wall situated between the cities of Seal Beach and Los Alamitos. The Special District of Rossmoor is governed by a five member Board of Directors, who are elected by the residents of Rossmoor and operates under the supervision of a General Manager. Rossmoor is known for its splendid urban forest, beautiful homes and strong family values. 1
3001 Blume Drive
Rossmoor, CA 90720

GL6 (Continued)

RESOLUTION NO. 13-07-22-01

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ROSSMOOR COMMUNITY SERVICES DISTRICT OPPOSING THE SCREENING OF CONCEPT A AND B HOT LANES AS OPTIONS TO THE PREVIOUSLY SELECTED PREFERRED ALTERNATIVE 1 TO THE I-405 IMPROVEMENT PROJECT

WHEREAS, the Rossmoor Community Services District (District) has previously taken an official position in favor of Alternative 1 and opposition to Alternatives 2 and 3.

WHEREAS, the District has had reliance on the vote of the Orange County Transportation Authority (OCTA) in selecting Alternative 1 which excluded High Occupancy Toll (HOT) lanes as the preferred Alternative in October of 2012.

WHEREAS, the District has been informed that a newly constituted Board of Directors of the OCTA voted in April 2013 to reconsider HOT lanes.

WHEREAS, the OCTA Board of Directors and the California Department of Transportation (Caltrans) has issued a Supplemental EIR/EIS which screens Concepts A and B and reintroduces the potential for HOT lanes.

WHEREAS, the District considers any variation to the I-405 Improvement Project other than Alternative 1 as detrimental to the well being of the Rossmoor community due to the impacts of traffic, noise and light and air pollution. 2

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors of the Rossmoor Community Services District strongly opposes any deviation from the previously selected Alternative 1 which excludes HOT lanes.

PASSED, APPROVED AND ADOPTED this 22nd day of July, 2013.

BOARD OF DIRECTORS
ROSSMOOR COMMUNITY SERVICES DISTRICT

By: _____
Michael Maynard, President

ATTEST:

_____
Chris Montana, Secretary
Rossmoor Community Services District

GL7

ROSSMOOR COMMUNITY SERVICES DISTRICT
3001 BLUME DRIVE, ROSSMOOR, CA 90720 / (562) 430-3707 / FAX (562) 431-3710

July 17, 2013

Smita Deshpande, Branch Chief
Caltrans-District 12
2201 Dupont Dr. Suite 200
Irvine. CA 92612

Dear Ms. Deshponde:

I am writing on behalf of the Rossmoor Community Services District Board of Directors and the Rossmoor Community. Specifically we are formally requesting an extension of the I-405 Improvement Project EIR/EIS comment period which ends August 12, 2013.

Our reasons are this. We first heard about the Supplemental EIR/EIS at the OCTA Policy Working Group meeting on June 26, 2013. The District's representative, Director Ron Casey reported on this at his first opportunity at our July 9, 2013 Board meeting. It was an informational report not an action item since neither the staff nor the Board had previously been briefed on this matter.

Unfortunately, our next Board meeting is on August 13, 2013. This is the only opportunity for our Board to inform our community about the implications of the Supplemental document and to obtain feedback. It is also our only opportunity for the Board to take a formal position on this matter.

We respectfully request an extension of at least several days after our August meeting to submit comments. We would call for a Special meeting of our Board, were it not for summer vacation schedules of our Board members. Also we would need time to adequately inform our residents that this matter will be on our August Agenda for possible action.

Given the public interest on this issue and the accommodation which was made for the City of Long Beach, we believe that it serves our common interests to grant an extension. Rossmoor's residents should be able to provide input to their elected representatives and for our Board to take a formal position on their behalf.

1

GL7 (Continued)

Thank you for your courtesy in this regard. Please let me know as soon as possible so that I can inform my Board if this request will be honored. Enclosed is my business card with contact information should you have any questions.

1 cont.

Cordially,

Chris Montana
General Manager
RCSD

Cc: RCSD Board of Directors

GL8

ROSSMOOR COMMUNITY SERVICES DISTRICT
3001 BLUME DRIVE, ROSSMOOR, CA 90720 / (562) 430-3707 / FAX (562) 431-3710

July 24, 2013

Smita Deshpande
Branch Chief
Caltrans District 12
Attention DEIR/DEIS Comment Period
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Dear Ms. Deshpande:

Based on your denial of the Rossmoor Community Services District's request for an extension of the I-405 comment period, the District's Board of Directors has adopted a Resolution opposing HOT lanes for the project. That Resolution and a Press Release on this development is attached for inclusion into the record.

The District is also pursuing other outreach measures with the Rossmoor community so that they get an opportunity to respond, as well. I cannot express strongly enough our disappointment at not receiving an extension, especially given our logistical limitations in this regard. We will, nonetheless, use whatever means to garner opposition to anything other than Preferred Alternative 1 for the project. 1

Please keep us informed of any new developments as you progress with a final decision on the scope of the project.

Cordially,

Chris Montana
General Manager
RCSD

Cc: RCSD Board of Directors

Attachments

GL-9

CITY OF SEAL BEACH
PUBLIC WORKS DEPARTMENT
211 Eighth Street
Seal Beach, CA 90740

TRANSMITTAL

TO: Smita Deshpande, Branch Chief
Caltrans-District 12, "Attn: 405 SDEIR-DEIS Comment Period"
2201 Dupont Drive, Suite 200
Irvine, CA 92612

SUBJECT: I-405 Improvement Project – Supplemental Draft EIR/EIS

WE ARE ENCLOSING:		THE FOLLOWING:		FOR:	
	Under Separate Cover		Letter		Your Review
x	Herewith		Prints		Your Approval
x	Via Hand Deliver		Specifications		Your Information
			Originals		Your Files
			Agreements	x	Your Use
			Drawings		Your Signature
		x	Other		Your Revision

REMARKS: City of Seal Beach comment to Supplemental Draft EIR/EIS. Dated June 2013

Thank you,
If we may be of further assistance, please contact me at (562) 431-2527 ext. 1318

Sincerely,

Sean Crumby
Assistant City Manager/Director of Public Works

GL-9 (Continued)

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1. California Department of Transportation, December 2012 Supplemental Traffic Study, December 2012
2. Correspondence from Jim Bell, OCTA Executive Director, June 25, 2013
3. Orange County Transportation Commission, High-Occupancy Vehicle Degradation Study Powerpoint, April 8, 2013
4. City of Long Beach, I-405 Freeway Improvement Project Letter and Memorandum, July 17-18, 2012
5. Kenneth A. Small and Chen Feng Ng, Optimizing Road Capacity and Type, June 1, 2013
6. City of Seal Beach, Studebaker Road/College Park Drive Alternative Street and Ramp Configuration, July 2013

GL-9 (Continued)

EXECUTIVE SUMMARY

June 2013 Supplemental Draft EIR/EIS

The City has completed its final review of the June 2013 Supplemental Draft EIR/EIS document for the I-405 Improvement Project and resulted with the following comments. The City is requesting an official response to, but not limited to, the below items and comments raised throughout this entire document.

1. The City provided a "Third Party Review Technical Comments (July 22, 2013 in response to the release of the June 2013 Supplemental Draft EIR.//EIS. Provide an acknowledgement of receipt of said document. 1
2. The February 2013 Supplemental Traffic Study is referenced but could not located through OCTA's website or other document references. Provide or make available the 2013 Supplemental Traffic Study. 2
3. The report is not consistent in regards to which Supplemental Traffic Study is being referenced, Provide a reference consistent through-out the document which traffic study is being used as a reference, i.e.; December 2012, February 2013, March 2013, April 2013, and/or June 2013. 3
4. Provide a discussion "Why" each Supplemental Traffic Study was not circulated. The December 2012 Supplemental traffic Study was only circulated to the Technical Working Group and not to the Affected Orange County Corridor Agencies. 4
5. Since the City of Seal Beach was initially excluded from the Technical Working Group, the City of Seal Beach formally requests electronic copies of **ALL** Supplemental traffic Studies to post on its Website to solicit Community Comments in conformance with the CEQA/NEPA Program. 5
6. Provide or extend the Comment period for an additional 30 days to receive Public Comments in the Supplemental Traffic Study previously not provided. 6
7. The December 2012 Supplemental traffic Study provided detailed information on the impacts to the entire mainline project, interchanges, and intersections. The June 2013 only focusses on the impacts to the City of Long Beach intersection and interchanges. Provide or include the December 2012 Supplemental Traffic Study in the June 2013 Draft Supplemental EIR/EIS 7
8. In July of 2012, the City of Seal Beach provided written comments to the DEIR/s. The LEAD agency has not responded to the City comments. Provide written responses by the LEAD agency on the City of Seal Beach's July 2012 Comments. 8

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9. The purpose of the June 2013 Supplemental Draft EIR/EIS was to include "significant new information"; however, the document did not include: 1) OCTA's Board of Director's selected Alternative 1 as the Local Preferred Alternative, 2) Alternative 2 is not consistent with SCAG's current RTP or FTIP, and 3) Alternative 3 is not consistent with SCAG's RTP or FTIP. Provide a discussion in the Supplemental Draft EIR/EIS to address these issues. 9
10. The Air Quality Analysis is based upon "Vehicle Speeds" will increase. However, the mainline Level of Service is maintained as "F" for Alternative 2 and 3. In addition, LACMTA has performed a operational analysis for the SR-110/I110 "110 Express Lanes Performance Update" which noted that "as traffic volumes have increased, the "average" GP (general purpose) lane speeds have declined". Update the Air Quality Analysis based upon the traffic Level of Service and the LACMTA. 10
11. The June 2013 Supplemental EIR/EIS does not address the impacts of public transportation ridership to any of the three alternatives (Alternative 1, Alternative 2, and Alternative 3) in conformance with California Vehicle Code Section 21655.5(a). Provide an analysis and impacts to the level of service for the mainline freeway system and comparative analysis for toll revenue impacts. 11
12. An HOV 3+ efficiency discussion was not provided. Provide an analysis of the HOV 3+ policy compared to the Alternative 3 (HOTL) impacts to the general purpose lane, costs, and efficiency. 12
13. A travel Demand Management Program (TDM) was not fully discussed. References were made for bikeways and roadway efficiencies, but the recommended result was a payment to the City of Long Beach for mitigation. In conformance with FHWA's Federal Aid Highway Program Guidance, include TDM alternatives including fixed guideway, BRT's, park-n-ride facilities, multi-modal travel, and other non-traffic related opportunities comparison to the HOTL alternative. 13
14. The limits of the project impacts are confined to the County line on the north and SR-73 on the south. In addition, the project has not thoroughly investigated the users of the toll facility. Therefore, provide an origin and destination of the HOTL users to justify the need of the facility and determine where appropriate lane drops or HOTL facility should terminate. 14
15. The 2013 Supplemental Draft EIR/EIS does not conduct a concomitant analysis for the newly introduced traffic impacts for the Long Beach Area. Provide a detailed analysis of 15

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the environmental impacts (air quality, water quality, noise..etc) for the introduced Long Beach intersections. 15 cont.

16. Reference material was not clearly demarcated. As an example, applicable page numbers or section numbers were not included in the Draft EIR/EIS or the Supplemental Draft EIR/EIS. Provide complete references for the Draft EIR/EIS and the Supplemental Draft EIR/EIS. It is also requested to be recirculated with this vital decision making information. 16
17. The Supplemental Draft EIR/EIS is predicated on new significant information; however, this information is very vague in its presentation and the analysis of the City of Long Beach Study. Provide a detailed listing of the significant information, and detailed environmental analysis of the City of Long Beach Traffic Study (prepared by Iteris). 17
18. In April of 2013 two new design Concepts were presented (Concept A and Concept B) to OCTA. These concepts represent new introduced information and were not included in the Supplemental Draft EIR/EIS. Provide an analysis for Concept A and Concept B in conformance with CEQA/NEPA determination. 18
19. A choke point will exist when all HOV(L) and General Purpose lanes terminate into the existing lanes at the County Line with Los Angeles. No additional analysis or mitigation measures are proposed for this condition or the cause and effect on Orange County Traffic along the 405 corridor. Provide a detailed analysis of the termini of the 405 at the county line to determine the operational and environmental characteristics impacts to the drivers and communities. 19
20. The Technical Working Group developed project findings and defined the limits of the Supplemental Draft EIR/S. However, the Technical Working Group support materials were not referenced or provided. Provide meeting Agendas, meeting minutes, meeting documents, exhibits, agreements, and other reference materials discussed at the Technical Working Group meetings. 20
21. Braided Ramps were removed from the project. The Draft EIR/S discussed the inclusion of these ramps as safety opportunities. However, in the Supplement Draft EIR/S some of these ramps were removed. Provide a safety analysis and discussion for the removal of braided ramps. 21
22. The City of Long Beach requested studies were included in the Supplemental Draft EIR/S. However, the City of Seal Beach's request for additional impact studies related to College Park East was not considered. Provide City of Seal Beach safety, traffic, and environmental impacts studies for the community of College Park East. 22

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23. Specific intersections impacted by the project were not address. These impacts include project related and construction detours. Lampson Avenue corridor shall be evaluated for project impacts and detour impacts. Seal Beach Boulevard and Westminster Avenue shall be evaluated for detour impacts. Almond Avenue shall be evaluated for Project and construction impacts. Mitigation measure shall be provided for each evaluation, similar to the Long Beach intersection evaluation. 23
24. The Toll Lane Analysis is incomplete by not discussing the linkages with the SCAG Express/HOT Lane Network. Provide a detailed analysis on the linkages with other existing and proposed Express/HOT lanes in the SCAG Model. 24
25. The Supplemental Draft EIR/EIS does not address the degradation of traffic flow during the Peak Hour of travel for each of the proposed alternatives and thereby reducing congestion. Provide an alternative which reduces congestion for the Peak Hour along with a full impact analysis. 25
26. The SR-22/7th Street Ramp at College Park Drive is discussed in Alternatives 1 and 2, but not included in Alternative 3. A discussion is requested for the elimination of any project impacts to this intersection. The traffic remains relatively constant for each Alternative. 26
27. Figure 3-2 does not correctly show the lane configuration at the intersection of SR-22/7th Street and College Park Drive. In addition, the December 2012, Supplemental Traffic Study analysis did not reflect the current lane configuration for the developed Model. A traffic signal is proposed at this intersection; however, the City of Long Beach provided an Alternative for a direct connect ramp to Studebaker Road and separating it from College Park Drive. College Park Drive also connected directly to Studebaker Road. Evaluate this Alternative for mitigation measures at the College Park Drive/SR-22/Studebaker Ramp. 27
28. Previously, the City of Seal Beach contacted Caltrans District 7 and Headquarters to install a traffic signal at this location. It was denied with Caltrans citing the backup onto SR-22/7th Street causes a safety concern. The report does not model is issue caused by placing a traffic signal at this location nor was an Agreement with Caltrans provided with this option. Since the City was previously denied by Caltrans, an Agreement with Caltrans to install a traffic signal at this location is required before it is proposed as a mitigation measure. 28
29. The Supplemental Draft EIR/EIS report provides congestion detail at the terminus of the project at I-405 and states the each alternative will impact I-405 north of the I-605 29

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interchange. However, no other information is provided on the impacts to the traffic as it reaches saturation at the I-605 interchange and what happens to both the general purpose lanes and the HOV lanes. A discussion is provided that provides mitigation in terms of "cash" value to Caltrans for future use to improve the affected I-405 interchanges north of I-605. Provide a traffic model to determine the impacts to traffic flow at the County Line, absence of I-405 improvements, and north of the I-605 for each Alternative. **29 cont.**

30. A letter was received by the City of Seal Beach from the project sponsor OCTA. It was dated June 25, 2013. Discussions in this letter, included review of City provided Alternatives, review of City proposed Mandatory and Advisory Exceptions, Project relocated Soundwall and Almond Avenue Impacts, and discussion of accident data. The June 2013 Supplemental Draft EIR/EIS report did not include any discussions of the City proposed alternatives, requested studies, and impacts to Almond Avenue. However, the December 2012 Draft Supplemental Traffic Study Report does address many of the City Alternatives. This information was omitted in the June version. Provide the omitted information and include in the Supplemental Draft EIR/S. **30**

31. Each proposed Alternative requires both Mandatory and Advisory Design Exceptions in conformance with the Highway Design Manual, Chapter 80. Chapter 2 of the Supplemental Draft EIR/EIS report discusses the need for mandatory and Advisory Design exceptions and details the number required for each. These are provided below as reference:

    Alternative 1: Nine Mandatory and 18 Advisory exceptions
    Alternative 2: Nine Mandatory and 17 Advisory (including reduction of 12-foot lanes to 11-fooot lanes) exceptions
    Alternative 3: Nine Mandatory and 20 Advisory exceptions

    A list of exceptions or document reference was not provided in order to review the Design Exceptions. Provide and include this is a critical document into the traffic study.. **31**

32. The December 2012 Supplemental Traffic Study provided greater detail relating to the impacts the interchanges, ramps, and intersections along the Orange County Corridor. In addition, Chapter 4 of this report included an analysis of the Long Beach Area. Both reports did not include the LOS analysis work sheets, The June 2013 Supplemental Draft EIR/RIS only provided Chapter 4 of the December 2012 report. The corridor information is a vital component of the EIR/EIS evaluation and provides an overview and the necessary mitigation measures to reduce the community impacts. Provide the June **32**

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2013 document and incorporate the information,, discussions, and results from the December 2012 Supplemental Traffic Study report. **32 cont.**

33. The Supplemental EIR/EIS does not address the traffic congestion from the OC/LA County Line to SR-73. The main focus of this report is the impacts to the City of Long Beach intersections adjacent to the "project". Missing from the analysis data is the impacts to the congestion at the County Line before and after the I-605 Interchange. The report discusses four (4) accomplishments of Alternative 3 which includes the following:
    1. Reduce Congestion
    2. Enhance Operations
    3. Increase mobility, improve trip reliability, maximize throughput, and optimize operations
    4. Minimize environmental impacts and ROW acquisitions

    Since the Supplemental Draft EIR/EIS does not include the corridor information such as level of service, v/c ratios, d/c ratios, link level of service, or a discussion of "F" verses "F ++", the ability to quantify the four accomplishments of Alternative 3 cannot be verified. Provide the information previously included in the December 2012 Supplement Traffic Study and compare it to the Supplemental Draft EIR/EIS defined accomplishments for Alternative 3 to quantify them. **33**

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1.0 INTRODUCTION

1.1 Preface

It may be human nature (if not a human foible) to look for the good in our own activities while ignoring, glossing over, or seeking to justify those same activity's less desirable attributes. It is, therefore, understandable (albeit not excusable) when a project proponent expends undue efforts to advocate the merits of those plans and programs that they have already put in motion while giving short-shift to both the fallacies in the plan or program being advanced and to those naysayers seeking to raise unaddressed or under-explored issues and suggesting the need for further refinement and/or alternative direction. Although one might hope that the elected decision-making body of a public agency might be more willing to engage in self-examination and more amenable to a variety of differing viewpoints, materials generated (by others) in advancement of that body's actual deliberations cannot avoid but to both reflect the inherent biases of their non-elected authors and that same human tendency's inclination to defend actions taken and positions previously espoused. To do otherwise might be perceived as an admission of poor judgment or suggestive of a personal or professional failing. Even when the elected body provides differing direction, it is a rarity when agency staff will actually shift gears.

The individuals and firms responsible for the preparation and processing of the proposed project and its associated environmental documentation are qualified professions whose actions, while overly zealous, were likely well intended but nonetheless both misguided and absence reasonable balance The comments presented herein are not intended to assert, infer, or otherwise claim that the California Department of Transportation (Caltrans or Lead Agency), the Orange County Transportation Authority (OCTA), or any other governmental or non-governmental entity, inclusive of the advisory and decision-making bodies of those organizations, their management, and the employees, consultants, and vendors thereof, have intentionally made or sought to make any material misrepresentations for the purpose of deception or otherwise or intentionally violated or sought to violate any laws, statutes, rules, regulations, or codes of conduct with regards to the proposed project.

Even qualified individuals, however, can embark on a course of action that, over time, is demonstrated to be ill-advised or which lacks solid footing. In an open, democratic process in which minds are not set and positions not too firmly entrenched, public comments (whether offered in praise or in criticisms) serve to enhance the decision-making process by allowing all viewpoints to be considered. Because statute stipulates that agency decisions need to be both informed and balanced, it is only through a willingness to consider additional information and to give credence to competing and/or conflicting viewpoints that better decisions are possible.

1.2 Introduction

The following comments serve to augment those written and oral comments previously submitted to Lead Agency and to OCTA by the City of Seal Beach (City or Seal Beach), its governmental entities, its elected and appointed officials, and its residents and business community as part of that National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) process which is now underway for the proposed "San Diego (I-405) Freeway Improvement Project," as described in the "Draft Environmental Impact Report/Environmental Impact Statement – San Diego Freeway Improvement Project, Orange and Los Angeles Counties, California, SCH #2009091001" (Caltrans and OCTA, May 2012) (DEIR/S or Draft EIR/EIS) and as supplemented in both the "Supplemental Draft Environmental

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Impact Report/Environmental Impact Statement – San Diego Freeway Improvement Project, Orange and Los Angeles Counties, California" (Caltrans and OCTA, June 2013) (SDEIR/S or Supplemental Draft EIR/EIS) and "Supplemental Traffic Study Report – Long Beach Area" (Caltrans, June 2013) (STS). All of those previous comments are again submitted to Caltrans and to the OCTA in response to the release of the SDEIR/S and the Lead Agency's solicitation for public and agency comments in response thereto. Pursuant to Section 15150 in Title 14, Chapter 3 of the California Code of Regulations (CCR), all previous comments from Seal Beach, its elected and appointed officials, and from its residents and its business community on the DEIR/S are incorporated herein by reference and, by this reference, assumed to be made a physical part hereof.

As required in 14 CCR 15088, Seal Beach requests that the Lead Agency provide a detailed written response to both the comments presented herein and to those additional comments incorporated herein by reference. Similarly, by incorporating those previous comments herein, independent of whether those comments were first presented by the City or by other parties, by making those previous comments a part of the City's own response to the Lead Agency's dissemination of the DEIR/S and the SDEIR/S, as required under Section 21092.5(a) of the Public Resources Code (PRC), Seal Beach requests that the Lead Agency provide the City with Caltrans' draft written responses (conforming to the requirements of CEQA) to all such comments at least ten days prior to certification of the environmental impact report (EIR).

Although Seal Beach's status has never been acknowledged by the Lead Agency, as defined in Section 1305(c) in Title 23 of the United States Code (U.S.C.) and in Section 15381 in Title 14 of the CCR, Seal Beach is appropriately categorized as a "Participating Agency" in the NEPA process and a "Responsible Agency" in the CEQA process. 34

As noted above, these comments are the result of the Lead Agency's dissemination of the SDEIR/S. The information presented therein is based, at least in part, on the analysis presented in the June 2013 STS; however, the June 2013 STS was neither included in nor disseminated with the SDEIR/S and was not "incorporated by reference" therein pursuant to Section 14 CCR 15150. In addition, neither the SDEIR/S nor the public notice announcing its release indicate where a copy of that STS can be view 35

In looking for the STS, the Lead Agency creates needless confusion as to the precise nature of that document. Referencing the SDEIR/S:

- "The new information and analysis presented within the Supplemental Draft EIR/EIS is based on the 'Supplemental Traffic Study Report – Long Beach Area,' prepared in April 2013 in response to City of Long Beach comments on the Draft EIR/EIS" (emphasis added) (General Information about this Document, unpaginated);
- "The new information and analysis presented within the Supplemental Draft EIR/EIS is based on the 'Supplemental Traffic Study Report – Long Beach Area,' prepared in March 2013 in response to City of Long Beach comments on the Draft EIR/EIS" (emphasis added) (SDEIR/S, p. S-1);
- "The City of Long Beach has reviewed the 'Draft Supplemental Traffic Study Report – San Diego Freeway (I-405) Improvement SR74 to I-605,' dated December 2012" (emphasis added) (SDEIR/S, Appendix A);
- Chapter 6 (References) of the SDEIR/S cites a "Supplemental Traffic Study Report – Long Beach Area, February 2013" (emphasis added) (p. 6-1); and

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- The OCTA's website links to and Caltrans' website displaying a "Supplemental Traffic Study Report – Long Beach Area," dated "June 2013" (emphasis added) (http://www.dot.ca.gov/dist12/405/LongBeach/SUPPLEMENTAL_Traffic%20Study.pdf).

As required, in part, in Section 15147 of the State CEQA Guidelines: "Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR. Appendices to the EIR may be prepared in volumes separate from the basic EIR document, but shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review" (emphasis added). 36

Because the "February 2013" version of the STS (February 2013 STS) is the document (and the only document) explicitly cited in the "references" section of the SDEIR/S, the February 2013 STS is given the greatest credence. That document, however, cannot be located in the libraries listed in the SDEIR/S (General Information about this Document, What You Should Do) or on either Caltrans' or the OCTA's website.

In Dry Creek Citizens Coalition v. County of Tulare (1999), the court noted that "[a]n adequate EIR must be 'prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences' [Citation]. It 'must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project' [Citation]."

Because the Lead Agency is not even internally consistent with regards to the key document upon which the information, analysis, and conclusions presented in the SDEIR/S is derived, it is not possible to know what or which STS is actually being referenced and/or to determine how the December 2012, February 2013, March 2013, April 2013, and June 2013 versions thereof may be materially different. Since neither those five documents nor any version thereof was either circulated with the SDEIR/S nor "incorporated by reference" therein, stakeholders have been denied the ability to compare and contrast each version, to independently determine the similarities and/or differences between those documents, to review any comments that may have been submitted thereupon, and/or to identify any actions (e.g., document revisions) taken by Caltrans or by others in response to any comments or concerns expressed by any reviewing individual or organization. 37

With the exception of the statement that "[t]his recirculation focuses on new traffic information in the Long Beach area," Caltrans' "Public Notice – Supplemental Draft Environmental Impact Report/Environmental Impact Statement Available for Interstate 405 & Announcement of Public Hearing" (Public Notice) (http://www.octa.net/pdf/405Supplemental_PublicNotice.pdf) contains no reference to a "Supplemental Traffic Study" or any version thereof, such that any reader of that notice would neither know of the existence of that document nor know how to obtain a copy thereof.

Seal Beach had the opportunity to review the December 2012 version (December 2012 STS) which the City has included herein as Attachment 1 (December 2012 Supplemental Traffic Study). Despite Caltrans' declaration that "[t]his Supplemental will be included in the Final EIR/EIS" (December 2012 STS, p. i), the December 2012 STS, the February 2013 STS, and/or the June 2013 STS (or any other version thereof) has not been widely circulated. With regards to circulation, Caltrans notes that "[a]s part of the coordination process, the initial draft of the

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[December 2012] Supplemental Traffic Study Report – Long Beach Area was submitted to members of the Technical Working Group in early December 2012 for review and comment" (June 2013 STS, p. 5-1). The "Technical Working Group" (TWG) consists of a limited number of governmental entities, all of which are located in Los Angeles County (e.g., "After the Draft EIR/EIS was circulated and during preparation of the Supplemental Traffic Study, Caltrans and OCTA coordinated with the technical representatives of the City of Long Beach, Gateway Cities Council of Governments (COG), Caltrans – District 7, and the Los Angeles County Metropolitan Transportation Authority (Metro) regarding potential effects to traffic and circulation in the Long Beach area," June 2013 STS, p. 5-1). Those governmental entities located in Orange County and/or within the project's designated "study area" which actively participated in the CEQA/NEPA process and submitted written or oral comments on the DEIR/S were all excluded from the TWG and were not given the opportunity to provide input concerning the scope of the STS. 38

Although it shares coterminous boundaries with Long Beach and Los Angeles County and has been an outspoken participant and both a Participating and Responsible Agency in the CEQA/NEPA process, Seal Beach believes that it was intentionally excluded from the TWG. As evident by information presented in the December 2012 STS, substantially greater traffic-related and associated environmental impacts will occur in Seal Beach than presently disclosed in the DEIR/S and SDEIR/S. 39

In general, as a result of both its withholding of key information and lack of forthcoming with regards to the precise nature, dissemination, and whereabouts of the STS, stakeholders in Seal Beach have not been provided a reasonable opportunity to comment on the information and analysis presented in the December 2012, February 2013, March 2013, and April 2013, and/or June 2013 versions of that document. Since the STS is the foundational basis for the SDEIR/S, absent reasonable access to that document, stakeholders' ability to comment on the SDEIR/S has also been unreasonably curtailed. 40

So that the evolving nature and content of the STS can be independently examined and so that each document can be posted (by the City) on Seal Beach's website for review by stakeholders in Seal Beach, in response to the release of the SDEIR/S, the City formally requests: (1) electronic copies of the December 2012, February 2013, March 2013, April 2013, and June 2013 versions of that document, including any and all appendices thereto and any and all comments that may have been submitted to or by Caltrans, the OCTA, the TWG, Long Beach, and by others thereupon; and (2) that Caltrans provide notice and extend the comment period on the SDEIR/S for an additional 30 days following the City's receipt of that material. 41

The June 2013 STS alleges that "[t]he purpose of the 'Supplemental Traffic Study Report – Long Beach Area' (Supplement) is to provide additional traffic information on the I-405 Improvement Project not included in the 'Traffic Study Report – San Diego Freeway (I-405) Improvement Project SR-73 to I-605' completed by Albert Grover & Associates in April 2011" (June 2013 STS, p. 1-1). It is, however, noted that the June 2013 STS (151 pages) contains at least 62 pages fewer pages that the December 2012 STS (213 pages). When compared with the June 2013 document, the December 2012 STS contains substantial more "additional traffic information" (fostering informed decisionmaking) directly relevant to an understanding of the proposed project. Although germane to the CEQA/NEPA process, the deleted information appears to have been intentionally withheld from both the general public and from the project's decision-making bodies. From that, it must be construed that the document's stated "purpose" is not actually greater disclosure but the manipulation of information so as to advance an

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agenda (e.g., generation of toll revenues) divergent from the October 22, 2012 actions of OCTA's Board of Directors (i.e., identifying Alternative 1 as the "locally preferred alternative").

It is further noted that the City's written comments on the DEIR/S, dated July 17, 2012, totaled approximately 500 pages. Excluding a brief letter from the "project sponsor" (not the Lead Agency), dated June 25, 2013, stating OCTA's rejection of the City's proposed design exceptions (formulated to allow for the retention of the Almond Avenue soundwall), Seal Beach has yet to receive a single written reply from the Lead Agency with regards to any of the issues raised therein. In contrast, Long Beach's 12-page letter predicated the preparation of the SDEIR/S and STS. 42

As indicated on the OCTA's website (http://www.octa.net/Freeways-and-Streets/San-Diego-Freeway-(I-405)/I-405-Improvement-Project/Overview/): "The California Department of Transportation (Caltrans), in cooperation with the Orange County Transportation Authority (OCTA), is proposing to widen the San Diego Freeway (I-405) between State Route 73 (SR-73) and Interstate 605 (I-605). The purpose of the proposed improvement is to improve travel conditions for work, recreation, school, and commerce by increasing freeway capacity, improving traffic and interchange operations, and enhancing road safety to meet state and federal standards. During the initial DEIR/EIS public review period in May 2013, Caltrans received comments on potential traffic impacts within the City of Long Beach. In an effort to address these comments, Caltrans prepared a Supplemental Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) to evaluate the existing and future traffic flow conditions within the Los Angeles County traffic study area including at a minimum, demand, capacity and level of service for the mainline freeway and arterial street intersections within the City of Long Beach not considered in the Draft EIR/EIS" (emphasis added).

Failing to distinguish the number of people actually moved (personal mobility) from vehicle counts (e.g., "throughput is the number of vehicles able to pass a fixed point along the corridor during the hour of greatest demand" [emphasis added], DEIR/S, pp. ES-3 and 4-2), Caltrans holds fast to the antiquated idea that building more freeway lanes is the panacea to increased both capacity and mobility. Nowhere in the DEIR/DEIS or in the SDEIR/S is there any serious and meaningful discussion of how to move people while reducing the number of vehicle on the road, how to increase the occupancy rate of those vehicles that are on the road, the actions necessary to place travelers into public transportation (or to provide motorists the alternative to utilize public transportation), or the more fundamental changes in land-use patterns and social structure needed to minimize the necessity of individuals to travel by private vehicle between destinations.

As indicated in the Federal Highway Administration's (FHWA) "Federal-Aid Highway Program Guidance on High-Occupancy Vehicle (HOV) Lanes" (November 2012) (Federal-Aid Highway Program Guidance) (http://ops.fhwa.dot.gov/freewaymgmt/hovguidance/hovguidance.pdf): "As stated in the 2007 Economic Report of the President, small changes in the number of cars using a particular roadway at a given time can result in large improvements in the flow of traffic. For instance, the addition of just a few school buses makes traffic flow noticeably worse on the first day of school, while traffic flow is noticeably better on some State holidays when only a small number of residents stay home from work" (emphasis added). If only a "small change" (e.g., relatively minor reduction in the number of vehicles) is necessary to produce potentially large returns (e.g., improved Level of Service [LOS]), an alternative to building more lanes to accommodate more vehicles is reducing the number of vehicles. None of the alternatives

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examined in the DEIR/S and in the SDEIR/S, however, seek to reduce the "number of cars using" the I-405 Freeway and/or any of the arterials that are linked thereto.

The DEIR/S states that "[t]he existing HOV lanes also experience congestion during the peak hours. The HOV lane volumes are exceeding the capacity of the HOV lanes in the corridor and throughout southern California. . .The travel time advantage of the HOV lanes on I-405 within the project limits is anticipated to be completely lost by the time the proposed project is open to traffic, except along the northernmost 3 miles of the corridor" (DEIR/S, p. 1-9). Among other factors, the Lead Agency asserts that only through the introduction of HOT lanes (Alternative 3) will travel times improve (e.g., "The Express Lanes provide an option to users to obtain increased reliability in travel time," DEIR/S, p. 2-11).

As indicated in the DEIR/S: "[t]he design concept and scope of the proposed project is consistent with the project description in the 2008 RTP, the 2008 TIP, and the assumptions in SCAG's [Southern California Association of Governments] regional emissions analysis" (emphasis added) (DEIR/S, p. 3.2.6-31); however, as further indicated therein:

- "Alternative 2 is not consistent with the current RTP or FTIP. OCTA is currently pursuing revisions to both documents. This will be completed prior to the Final EIR/EIS, which will include the revised description and reference to the conforming documents" (emphasis added) (DEIR/S, p. S-13); and
- "Alternative 3 is not consistent with the current RTP or FTIP. OCTA is currently pursuing revisions to both documents. This will be completed prior to the Final EIR/EIS, which will include the revised description and reference to the conforming documents" (emphasis added) (Ibid).

Besides pointing to one of many internal inconsistencies throughout the DEIR/S, the above excerpts further document: (1) the SDEIR/S' failure to include other "significant new information" and analysis about changed baseline conditions, outdated policy documents, and recently adopted regional plans, such as the Southern California Association of Governments' (SCAG) "2012-2035 Regional Transportation Plan/Sustainable Communities Strategy" (April 4, 2012); and (2) fragmentation of the proposed project, such that OCTA has pursued revisions to the RTP and FTIP in furtherance of Alternatives 2 and 3 independent of the project's CEQA/NEPA process and the OCTA's Board of Directors' selected LPA (i.e., Alternative 1). 43

The air quality analysis presented in the DEIR/S is further based on the assumption that "vehicle speeds would improve on both the mainline and in the HOV lanes" and that "[p]eak-hour congestion would be reduced, leading to a reduction in vehicle idling and associated emissions" and "[p]otential localized PM [particulate matter] increases associated with the increase in ADT [average daily trips] would be offset by the increase of vehicle speed in the project area" (DEIR/S, p. 3.2.6-41). Because it is based on false assumptions and material misrepresentations, the resulting analysis likely underestimates (in terms of conclusion and magnitude) the project's actual impacts.

The closest example of an operating HOT-lane (HOVL) system can be found along an 11-mile segment of the Harbor (SR-110) Freeway in Los Angeles County which commenced operations on November 10, 2012. As indicated in the Los Angeles County Metropolitan Transportation Authority's (LACMTA) "110 Express Lanes Performance Update, As of 2/28/13," as traffic volumes have increased, the "average GP [general purpose] lane speeds have declined" (https://www.metroexpresslanes.net/en/about/110_Performance_Report_Feb_2013.pdf). Based

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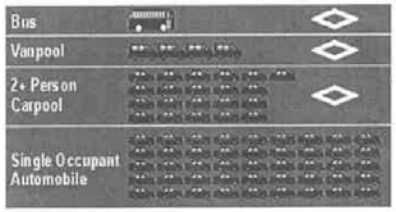
on operational experience, 40 percent of HOT-lane (HOTL) vehicles are single-occupant vehicles (SOVs). LACMTA recognizes that "[p]roviding high-quality transit service is the key to meeting the express lanes goal of moving more people - not more vehicles" (emphasis added). A comparable or even higher rates of SOVs usage as that evident on the SR-110 Freeway's express lanes (40 percent) would appear applicable to the proposed project.

Actual throughput (measured in the number of individuals transported) is not merely a by-product of how many vehicles per hour per lane the freeway can accommodate. If freeway lanes are to be added and/or operational changes are to be instituted, vehicle-based actions must be considered in combination concurrent transit-based facilities and improvements. Public transportation is not even represented as an incidental component of the proposed project and reference to and discussion of public transportation in the DEIR/S and SDEIR/S is virtually non-existent.

The DEIR/S alleges that, under all build-alternatives, "vehicle speeds would improve on both the mainline and in the HOV lanes" (p. 3.2.6-41). Caltrans' experience on other recent and proximal HOTL project, however, demonstrates that travel speeds actually decrease in GP lanes once a HOTL is operational.



As apparent in the accompanying exhibit (Source: Southwest Washington Regional Transportation Council), a wide variety of vehicle options exist to transport the same number of people. Although the poet may be correct in stating a "rose is a rose is a rose" (Gertrude Stein, Sacred Emily) the same adage does not hold true for motor vehicles. Because they contain different occupancy loads, a bus, a vanpool, a vehicle carrying three or more people, a 2-person automobile, and a SOV all may be the same to a vehicle-counting transponder but all are substantively different with regards to their implications with regards to both freeway capacity and personal mobility. With a large percentage of available HOTL capacity being consumed by SOVs, increased vehicle throughput represents a false standard with regards to personal mobility.

While the LACMTA appears committed to "moving more people - not more vehicles," Caltrans' adage would appear to be "moving more cars – not more people." When comparing a traditional HOVL wherein all vehicles are assumed to be 2-person carpools against a managed lane in which 40 percent of the vehicles are SOVs and all other vehicles are 2-person carpools, under a traditional HOVL, a total of 50 vehicles would be needed to transport 100 people; however, in the HOTL, a total of 70 vehicles (40 SOVs + 30 2-person carpools) would be needed to move those same 100 people (representing a 40 percent increase in the number of vehicles required to transport the same number of individuals.

None of the managed lanes now being proposed include a 40 percent increase in vehicle throughput capacity over that found in a GP lane, people-moving capacity will actually decrease under Alternative 3.

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While toll-paying SOVs may benefit from the introduction of HOTLs, the LACMTA's independent monitoring provides clear documentation that the majority of motorists traveling along a freeway with a HOTL system actually experience reduced vehicle speeds, longer travel times, and greater congestion. As a result, under Alternative 3, a nearly $6 billion investment (e.g., "the repayment cost of $5.8 billion exceeds the future toll revenue projections," William Kempton, April 16, 2012) will only benefit a privileged few (i.e., SOVs).

In addition, left unexamined in either the DEIR/S or in the SDEIR/S is the potential for a HOTL system, allowing usage by SOVs, to adversely impact public transportation ridership. Since the project description contains no public transportation commitment or component, the potential for reduced ridership and reduced person-per-vehicle ratio (person throughput) would appear an inevitable but unaddressed consequence of the proposed project. As posited in "Potential Mode Shift from Transit to Single-Occupancy Vehicles on a High-Occupancy Toll Lane" (Churn, Geoffrey L. and Buris, Mark W., Transportation Research Record: Journal of the Transportation Research Board, No. 2072, 2008):

> One of the benefits of modifying high-occupancy vehicle lanes to high-occupancy toll lanes is to allow vehicles that would otherwise be ineligible, such as single-occupancy vehicles, to utilize the excess capacity of an HOV lane. However, current carpoolers and transit riders may also become SOV travelers because of the additional flexibility and personal space benefits of driving alone while obtaining the travel time benefits on the HOT lane. Reductions in transit ridership and carpools reduce the person-carrying capacity of the HOT lanes and counter one of the original objectives of the HOV lane - to encourage a high person-per-vehicle ratio (emphasis added).

With regards to the "original objectives of the HOV lane," referencing Section 21655.5(a) and (f) of the California Vehicle Code, "[t]he Department of Transportation and local authorities, with respect to highways under their respective jurisdictions, may authorize or permit exclusive or preferential use of highway lanes for high-occupancy vehicles. . . It is the intent of the Legislature, in amending this section, to stimulate and encourage the development of ways and means of relieving traffic congestion on California highways and, at the same time, to encourage individual citizens to pool their vehicular resources and thereby conserve fuel and lessen emission of air pollutants" (emphasis added).

As reported by the California Legislative Analysis Office (LAO), the California Transportation Commission (CTC) and FHWA require that, whenever Caltrans is considering adding capacity (e.g., adding a new lane) to an urban freeway, Caltrans must also consider an HOV-lane option (http://www.lao.ca.gov/2000/010700_hov/010700_hov_lanes.html). A HOV-lane option (e.g., "Alternative M2 would provide an additional HOV lane in each direction, as well as transit improvements, including express buses operating in the HOV lanes and the addition of new park-and-ride facilities," DEIR/S, p. 2-38) was, however, rejected prior to the commencement of the DEIR/S and, potentially in violation of Caltrans' requirements, no HOVL option was reasonably examined in the project's CEQA/NEPA documentation. 43a

As indicated in the OCTA's Board of Directors' April 22, 2013 agenda, entitled "Path Forward for the Interstate 405 Improvement Project between State Route 55 and Interstate 605" (OCTA, April 15, 2013) (April 2013 Path Forward):

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> Another concept that surfaced in discussions with Caltrans proposes to add the M2 Project K single GP lane plus one HOV2+ lane in each direction. The HOV2+ lane would be combined with the existing HOV2+ lane to form a dual HOV2+ facility. This concept was studied as Alternative 8 in the I-405 MIS, but was not chosen as the locally preferred strategy. This concept would deliver on the promise of M2 Project K, as well as address the degraded HOV condition on this stretch of I-405. However, there is no identified funding to construct a dual HOV lane concept. Caltrans has not determined the method to address HOV degradation on the entire I-405 corridor and, therefore, it is not recommended it be further studied (emphasis added).

Although not addressed in either the DEIR/S or in the SDEIR/S, future unknown and, as yet, unspecified subsequent actions that may or may not be taken by Caltrans' relating to "HOV degradation on the entire I-405 corridor" (independent of Caltrans' response to other HOV degradation exhibited throughout southern California) is now being presented as the rationale for the adoption of the implementation of a HOTL.

As noted in the DEIR/S: (1) "Forecast year 2040 Alternative 1 speeds in the HOVLs during peak hours range from 10 to 27 mph" (DEIR/S, p. 3.1.6-83); (2) "Forecast year 2040 Alternative 2 speeds in the HOV lanes during peak hours range from 17 to 44 mph" (DEIR/S, p. 3.1.6-93); and (3) "Forecast year 2040 Alternative 3 speeds in the Express Lanes are expected to be 65 mph" (DEIR/S, p. 3.1.6-100). Based solely on the use of congestion pricing, as determined by the Lead Agency's selective disclosure and what would appear contrary to the policy position espoused on April 22, 2013 by the OCTA's Board of Directors, projected HOV degradation (i.e., operating speed of less than 45 mph for 90 percent of the time) appears only to be remedied by the creation of HOTLs along "the entire I-405 corridor." As a result of that disclosure, the inventory of related projects producing potential cumulative impacts, the proposed project's potential environmental and socioeconomic consequences, and analytical "study area" that needs to be considered in the project's CEQA/NEPA documentation increased substantially.

43b

The DEIR/S notes that "[a]nother option that could be jointly considered by OCTA, Caltrans, and FHWA to restore the travel speed incentive to use the carpool lanes on I-405 would be to increase the eligibility requirement from two to three persons per vehicle. An HOV3+ occupancy policy was not considered" (emphasis added) (DEIR/S, p. 3.1.6-82).

The rejection of a HOV3+ option appears to conflict with Caltrans' own "Updated Managed Lane Design" (April 7, 2011) (http://www.dot.ca.gov/hq/traffops/signtech/signdel/policy/11-02.pdf) which served to update Caltrans' "2003 High Occupancy Vehicle Guidelines for Planning, Design, and Operation" (HOV Guidelines). As specified therein:

> The following principals are expected to guide decision-making on the development and/or operations of managed lanes: [1] Employ a system management approach; managed lane strategies can affect the performance of the entire freeway system. The focus should not just be on the operation of the managed lane and its mobility benefits. [2] Balance system performance and overarching goals, including safety, mobility, delivery, stewardship, and customer service when selecting and analyzing project alternatives and key features. [3] Consider increasing occupancy requirements if HOV lanes are experiencing severe congestion. [4] Consider planning for two managed lanes in each direction of travel if analysis determines it to be practical and beneficial. [5] Consider

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> implementing congestion pricing to utilize the full capacity of under-utilized HOV lanes if analysis determines it to be practical and beneficial. [6] Ensure uniformity and consistency in the appearance of facilities within a region as much as possible; unique conditions and situations may require unconventional treatment(s). [7] Ensure enforcement considerations are taken into account. Consult the California Highway Patrol (CHP) during project development. [8] Consult with the Traffic Liaison to ensure that emerging best practices and recent "lessons learned" from collision analysis and research are fully considered and implemented (emphasis added).

It can be reasonably assumed that the Lead Agency's failure to consider a HOVL option, a modified HOV-occupancy policy, and HOVL vehicle eligibility requirements (e.g., exclusion of inherently low emission vehicles [ILEV]) was not the result of an inability to perform those analyses but to slant the CEQA/NEPA outcome in favor of a HOTL alternative (e.g., Alternatives 1 and 2 fail to meet specified HOVL performance standards specified in 23 Section 166[d][2]). As indicated in the FHWA's Federal-Aid Highway Program Guidance:

> HOV facilities offer States the ability to match vehicle eligibility criteria and vehicle occupancy requirements to the demand for the lane. Under 23 U.S.C. 166 (a), the States retain the authority to establish the minimum occupancy requirements of their HOV lanes, so long as the minimum occupancy is no less than two. The goal is to set the occupancy requirement at a level that will encourage the use of carpooling, vanpooling, and transit services without overloading the capacity of the HOV lane. Changes in the designated vehicle-occupancy restrictions may be needed over the life of an HOV facility. For example, some HOV lanes using a 2+ requirement have experienced congestion resulting in reductions in trip time reliability and slower travel times. This situation happened on both the I-10 West and U.S. 290 HOV lanes in Houston. To address this problem, the vehicle-occupancy requirements were increased to 3+ during the morning and afternoon peak-hours. States are strongly encouraged to increase vehicle-occupancy levels in the event that facility performance becomes degraded. In locations where HOV lanes are overcrowded, States may combine pricing and occupancy requirement modification strategies to improve performance. States should set an occupancy requirement that reasonably facilitates the use and operation of carpools. In other words, States should establish the occupancy requirement at a level related to the performance of HOVs on the facility.

Pursuant to 23 U.S.C. 166(b)(5), until September 30, 2017, individual states may allow ILEVs and vehicles certified and labeled as low-emission and energy-efficient vehicles (including alternative fuel vehicles) that do not meet the established occupancy requirements to use HOVL facilities so long as the state establishes procedures to enforce the restrictions on the use of the facility by these vehicles. Absent from the DEIR/S and SDEIR/S is any analysis of the number of ILEV vehicles using and the number of such vehicles projected to use the HOVL and how or whether performance of that lane may be enhanced by excluding those vehicles therefrom.

Referencing the FHWA's Federal-Aid Highway Program Guidance: "In addition to the pricing, occupancy requirement, and vehicle eligibility operational strategies, other travel demand management [TDM] strategies can also be used to improve HOV system performance on both a region-wide and facility-specific basis include: guaranteed ride home programs; telecommuting and alternate work schedules; growth management, land use policies, and zoning ordinances;

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parking management; trip reduction ordinances; and traveler information systems." None of these FHWA-recommended "travel demand management strategies" were, however, reasonably considered by the Lead Agency.

As indicated in the DEIR/S, "[t]he purpose of the proposed action is to: [1] Reduce congestion; [2] Enhance operations; [3] Increase mobility, improve trip reliability, maximize throughput, and optimize operations; and [4] Minimize environmental impacts and ROW acquisition" (emphasis added) (DEIR/S, p. 1-5).

Referencing the United States Department of Transportation's (USDOT) "Integrating Demand Management in the Transportation Planning Process: A Desk Reference" (August 2012) (TDM Desk Reference) (http://ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf): "Applying TDM in the planning process can play a pivotal role in helping agencies address their goals to reduce transportation system congestion, improve system reliability, and improve safety" (emphasis added). The USDOT' further notes:

> Congestion is an ever-increasing reality in today's communities, and not just in large metropolitan areas. Many urban corridors in most large cities have been expanded to the extent feasible from subsequent widening projects, leaving few options to improving performance and efficiency other than TDM. Each TDM strategy that works to influence travel choices, and minimize recurrent and non-recurrent congestion, can help reduce the strain on the overburdened system. This is accomplished by reducing VMT, shifting travel outside the peak periods, and eliminating the need to travel – contributing to reductions in delay or VHT. The end result can be a reduction in congestion and an improvement in system reliability for travelers. TDM can also help provide travelers with reliable options that might not have been available before. The TDM strategies that work to meet the policy goals of congestion reduction and reliability improvement are also strongly related to helping meet regional mobility and accessibility, safety, and goods movement goals.

43c

It is evident that TDM strategies could facilitate the achievement of many of the project's stated purposes. Although a clear linkage exists, absent any analysis and offering only bare conclusions, the Lead Agency concluded that a "TDM alternative" was not "considered viable" because it "fail[ed] to meet the project's purpose and need" (DEIR/S, p. S-2). Because TDM strategies addressed in the TDM Desk Reference include both "congestion pricing" and "HOV to HOT conversions," the Lead Agency seeks to assert that TDM actions are not "considered viable" while concurrently seeking to argue that TDM-related actions are the foundation upon which Alternative 3 is based.

In response to the Senate Bill (SB) 391, Caltrans is preparing the "California Interregional Blueprint" (CIB). That State-level transportation blueprint, focusing on the State's role with regards to the interregional movement of people and goods, will articulate California's vision for an integrated, multi-modal, interregional transportation system promoting the furtherance of regional transportation and land-use plans. When finalized, the CIB will become the foundational basis for the "California Transportation Plan 2040" (CTP) which is due to the State Legislature by December 2015. Absent from the Lead Agency's assessment of "mobility" (e.g., "increase mobility," DEIR/S, p. 1-5), however, is a discussion of "smart mobility," as addressed in Caltrans' "Interregional Transportation Strategic Plan – Review Draft" (December 2012)

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(ITSP) (http://www.dot.ca.gov/hq/tpp/offices/oasp/ITSP_document_FINAL.pdf#zoom=65). As indicated therein:

> In order to better integrate transportation and land-use decisions, Caltrans has developed "Smart Mobility 2010: A Call to Action for the New Decade." The plan was prepared in partnership with the U.S. Environmental Protection Agency, and in collaboration with the Governor's Office of Planning and Research and the California Department of Housing and Community Development. Smart Mobility 2010 incorporates current innovative practices such as smart growth, livable communities, context-sensitive design, transit-oriented development, complete streets, and sustainability. Smart Mobility 2010 defines the Caltrans 'mobility' mission as follows: "Smart Mobility moves people and freight while enhancing California's economic, environmental, and human resources by emphasizing: convenient and safe multimodal travel, speed suitability, accessibility, management of the circulation network, and efficient use of land." It establishes six Smart Mobility principles to be assessed using specific land use place-types and performance measures. The six Smart Mobility principles are: [1] Location Efficiency; [2] Reliable Mobility; [3] Health and Safety; [4] Environmental Stewardship; [5] Social Equity; [6] Robust Economy. California must meet ambitious environmental and sustainability goals included in the Global Warming Solutions Act (AB 32), SB 375, and SB 391. The Smart Mobility framework is seen as an important planning tool to help meet these new regulatory requirements (emphasis added) (ITSP, pp. 44-45).

Unlike the emphasis in the DEIR/S and SDEIR/S, noticeably absent from Caltrans' definition of "smart mobility" (e.g., "move people and freight) is any emphasis on moving vehicles rather than people. Similarly, unlike the DEIR/S and SDEIR/S, "smart mobility" focuses on "multi-modal travel" and not on a singular emphasis on the creation of more freeway lanes for added vehicle throughput (primarily by SOVs), with a corresponding increase in total vehicle miles traveled (VMT) (e.g., each of the three build alternatives examined in the DEIR/S and SDEIR/S substantively increases VMT over the no-build scenario).

As further indicated in the FHWA's "Reference Sourcebook for Reducing Greenhouse Gas Emissions from Transportation Sources" (February 2012), "the nexus between land use and transportation is important and may be critical to reducing GHG emissions" (emphasis added) (http://www.fhwa.dot.gov/environment/climate_change/mitigation/resources_and_publications/reference_sourcebook/referencesourcebook.pdf).

Referencing the USDOT's "Operational Design Guidelines for High Occupancy Vehicle Lanes on Arterial Roadways" (November 1994): "Urban planning and transportation experts concur that the generation of trips and the subsequent potential congestion is directly related to decisions made regarding the location, scope and type of land use in an urban area. In fact this linkage lies at the heart of the congestion issue which has resulted in the need for initiatives such as HOV priority and Travel Demand Management programs" (emphasis added) (http://ops.fhwa.dot.gov/freewaymgmt/publications/hov/00101625.pdf).

NEPA requires federal agencies proposing actions "significantly affecting the quality of the human environment" to provide a "detailed statement" concerning "alternatives to the proposed action" (42 U.S.C. 4332[C][iii]). The "alternatives requirement" of NEPA demands that agencies "rigorously explore and objectively evaluate all reasonable alternatives" (40 C.F.R. 1502.14[a]).

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The environmental impact statement (EIS) must take a "hard look" at the environmental consequences of the alternatives and must provide an explanation of the alternatives sufficient to permit a reasoned choice among different courses of action. The courts have held that NEPA does not allow an agency "to contrive a purpose so slender as to define competing 'reasonable alternatives' out of consideration" (Simmons v. United States Army Corps of Engineers [1997]).

One of the fundamental failings of the Lead Agency's CEQA/NEPA documentation is that, in reality, there are no meaningful alternatives presented therein. With the exception of the "no build" alternative mandated under both State and federal statutes, each option examined by the Lead Agency constitutes merely a minor variation on the theme of just "build more travel lanes" (all of which increase total VMT in GHG-emitting private vehicles). Absence from the CEQA/NEPA process are any public transportation options for the nearly $6 billion in public dollars being expended and for the additional right-of-way being consumed. As indicated in the DEIR/S: (1) "Alternative M3 [which included a "fixed-transit guideway"] is not considered a viable option" (DEIR/S, p. 4-41); and (2) "Alternative M9 [which included "fixed transit guideway service"] is not considered a viable option" (DEIR/S, p. 4-46). 44

As defined in Caltrans' "Bus Rapid Transit: A Handbook for Partners" (February 2007) (BRT Handbook) (http://www.dot.ca.gov/hq/MassTrans/Docs-Pdfs/BRT/BRT-Handbook-030706.pdf): "Bus Rapid Transit can best be described as a combination of facility, systems, and vehicle investments that convert conventional bus services into a fixed-facility transit service, greatly increasing their efficiency and effectiveness to the end user" (BRT Handbook, p. 5). As further indicated therein:

> The California Department of Transportation recognizes and supports the concept of implementation of Bus Rapid Transit (BRT) as a potential cost-effective strategy to maximize people throughput (emphasizing the movement of people, not just vehicles), reduce traveler delay, increase capacity, and foster energy savings on the California State Highway System, as well as on conventional highways. . .BRT represents a way to improve mobility at relatively low cost through incremental investment in a combination of bus infrastructure, equipment, operational improvements, and technology. The intended result of this policy is improved mobility options through the full integration of BRT as an investment alternative into system and comprehensive corridor planning documents and project development processes. . .Ensure that project initiation documents for capacity-increasing projects in urban areas consider, and , if appropriate, recommend BRT as the preferred alternative for the project (emphasis added) (BRT Handbook, Appendix A, Director's Policy, pp. 18 and 20).

As further indicated in the DEIR/S: (1) "Alternative M8 [which included BRT] is not considered a viable option because it does not fulfill the project purpose. Alternative M8 [d]oes not maximize throughput" (emphasis added) (DEIR/S, p. 4-44); and (2) "Alternative M11 [which included BRT] is not considered a viable option because it does not fulfill the project purpose" (emphasis added) (DEIR/S, p. 4-47). Despite this assertion, the BRT Handbook demonstrates that a BRT alternative can achieve many of the project's stated objectives and, therefore, should not have been prematurely and summarily rejected.

Another shortcoming with the project's CEQA/NEPA documentation relates to the establishment of an erroneous and unvetted "study area" (http://www.octa.net/pdf/405impmap.pdf). As indicated in Caltrans' "Guidance of Preparers of Cumulative Impact Assessments" (last updated

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February 3, 2012) (http://www.dot.ca.gov/ser/cumulative_guidance/defining_resource.htm), "[a] resource study area (RSA) is the geographic area within which impacts on a particular resource are analyzed." As further indicated therein, "[t]he boundaries of RSAs for cumulative impacts analysis are often broader than the boundaries used for the project-specific analysis, which focuses on the immediate project area" and "[p]olitical boundaries are often arbitrary; they are not likely to represent development trends nor do they identify habitat areas."

Notwithstanding the information presented in the SDEIR/S and June 2013 STS, the Lead Agency continues to examine the project through self-imposed blinders that artificially establish a myopic "study area," as if each individual motorist utilizing the 16-mile segment of the I-405 Freeway now under consideration commences and terminates there travel choices within an area which is coterminous with the physical boundaries of the proposed improvements, asserting (on the northern end) that the area of impaction originates and terminates at the Orange County/Los Angeles County line. Absent from the CEQA/NEPA documentation is any effort to: (1) determine the actual extent of project-related and cumulative impacts, beyond which environmental effects are diminimus; and (2) ascertain the origins and destinations of those motorists utilizing the specified segment of the I-405 Freeway and whether there exists any non-lane-adding options that might enhance both their abilities to get from here-to-there and the quality of the affected environment (e.g., overall reduction in VMT).

The inherent concept in VMT is "vehicle" miles traveled. Providing motorists opportunities and incentives to reduce individual private automobile trips, converting SOV-trips to HOV-trips, reducing the total number of vehicles on the roadway, and promoting the use of public transportation can all reduce VMT without necessitating shorter trips or more freeway lane miles. Under any of those options, total "person" miles traveled (PMT) can actually increase without a corresponding rise in VMT.

Unlike a library which exists as a fixed-point in space, the proposed project is, in actuality, only a conveyance mechanism (conduit) relating to travel between various fixed points. As a viable alternative, CEQA/NEPA documentation prepared for a new public library could elect to examine the corresponding environmental effects attributable to the use of new-technology-driven options (e.g., Internet) giving users greater resource options while avoiding the need for and the impacts associated with the need to construct new brick-and-mortar facilities. Conversely, Caltrans merely seeks to perpetuate the myth that adding new freeway travel lanes is the only means to improve both "travel conditions" and "traffic and interchange operations."

As indicated in the DEIR/S: (1) "Because CO emissions are produced almost entirely from automobiles, the highest CO concentrations in the basin are associated with heavy traffic" (DEIR/S, p. 3.2.6-9); (2) "[A]utomobile exhaust accounts for most of the CO emissions" (DEIR/S, p. 3.2.6-17); (3) "The primary sources of ROG and NO_x, which are the components of O_3, are automobile exhaust and industrial sources" (DEIR/S, p. 3.2.6-17); (4) "The greatest source of smog-producing gases is the automobile" (DEIR/S, p. 3.2.6-17); (5) "Traffic noise is a function of traffic type, volume, and speed. Generally, noise increases with increased speed and with higher volumes of traffic" (DEIR/S, p. 3.2.7-6); (6) "Noise in the study area is dominated by traffic" (DEIR/S, p. 3.2.7-8); (7) "Noise measurement results indicate that traffic noise levels at various locations along the freeway corridor either approach or exceed the aforementioned NAC [noise abatement criteria] of 67 dBA for frequent outdoor use areas during the peak noise hour" (DEIR/S, p. 3.2.7-8); and (8) "Without any additional barrier protection, noise analysis results indicate that the proposed project would raise noise levels in some areas from 3 to 6 dB compared to the Design Year (2040) No Build Alternative" (DEIR/S, p. 3.2.7-8).

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As defined under Section 15358(a) of the State CEQA Guidelines: "Effects include: (1) Direct or primary effects which are caused by the project and occur at the same time and place. (2) Indirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable." Other than the presentation of unsupported conclusions, absent from the SDEIR/S and June 2013 STS is any actual analysis of the potential indirect and secondary impacts resulting from the acknowledgement that significant environmental impacts extend beyond the DEIR/S' original "study area" and include additional and previously unidentified impacts within the "Long Beach study traffic study area" (p. 3-3)." Based on the above DEIR/S excerpts, if there are direct impacts, there is also a likelihood that additional indirect impacts will also exist as a secondary consequence thereof.

The Lead Agency mistakenly asserts that traffic impacts in Long Beach can be examined in isolation, such that one environmental effect has no relationship with any other, as if the direct impacts of traffic did not also produce other secondary impacts, including land use (e.g., "The main purpose of the MPAH [Master Plan of Arterial Highways] is to describe an arterial highway system that effectively serves existing and adopted future land uses," DEIR/S, p. 3.1.1-9), air quality (e.g., "Because CO emissions are produced almost entirely from automobiles, the highest CO concentrations in the basin are associated with heavy traffic," DEIR/S, p. 3.2.6-9; "In urban areas such as the project location, automobile exhaust accounts for most of the CO emissions," DEIR/S, p. 3.2.6-17; "The greatest source of smog-producing gases is the automobile," DEIR/S, p. 3.2.6-17), and noise (e.g., "Generally, noise increases with increased speed and with higher volumes of traffic," DEIR/S, p. 3.2.7-6; "Noise in the study area is dominated by traffic," p. 3.2.7-8). 45

Notwithstanding the fact that the DEIR/S and the SDEIR/S describe two separate and distinct "study areas," the Lead Agency appears to assert that a newly introduced "Long Beach study traffic study area" (p. 3-3) is warranted for traffic but that no concomitant analysis of indirect and secondary impacts within that new or expanded area need be conducted for any other topical issues included in the project's CEQA/NEPA documentation. As a result, the SDEIR/S contains no analysis of the potential indirect and secondary impacts of newly introduced "significant cumulative traffic impacts" (e.g., "The new information in this Supplemental Draft EIR/EIS results in new CEQA-significant cumulative traffic impacts," p. 1-2), thus producing both an incomplete and fragmented picture of the project's likely environmental consequences.

As indicated in the Public Notice: "This project is considered a Project of Air Quality Concern regarding particulate matter PM_{10} and $PM_{2.5}$ as defined in 40 CFR 93.123(b)(1). A qualitative PM_{10} and $PM_{2.5}$ hot spot analysis was completed as required by 40 CFR 93.116 and 93.123, based on U.S. EPA Guidance" [sic]." By inferring that a new analysis will be presented in the SDEIR/S, that statement appears intentionally misleading since the "qualitative analysis" being reference is the one presented in the DEIR/S (i.e., no post-DEIR/S air quality analysis appears to have been performed and none is referenced in the SDEIR/S).

As indicated in the DEIR/S, areas where a carbon dioxide (CO) analysis would be warranted include "[i]ntersections where air quality may be getting worse. . .criteria include increases in vehicles operating in cold-start mode, increases in traffic volumes greater than 5 percent, and a worsening of traffic flow" (DEIR/S, p. 3.2.6-32). In addition, "[i]ntersection reconfigurations may move the roadway closer to receptors and may increase peak-hour traffic volumes. This may result in higher CO concentrations near reconfigured intersections" (Ibid), further contributing to potential air quality impacts.

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While the SDEIR/S and STS identified potentially cumulatively significant traffic impacts at intersections within the "Long Beach study traffic study area" (p. 3-3), no further air quality analysis was conducted with regards to those intersections. Absent any analysis or even a declaration that the DEIR/S examined a worst-case scenario that would not be exceeded in Long Beach, it must be inferred that the Lead Agency seeks to rely on analysis derived from data generated in Mission Viejo (Orange County), more than 16 miles from Long Beach, as indicative of ambient air quality conditions in Long Beach (Los Angeles County) (i.e., "The Mission Viejo Monitoring Station was chosen for this analysis, DEIR/S, p. 3.2.6-38). 46

Although unsupported conclusory statements are presented in the SDEIR/S with regards to construction (e.g., "Noise and air quality impacts of construction would be temporary and not anticipated to be an adverse effect," pp. 3-69, 3-75, 3-84, 4-27), no analysis of secondary operational impacts has been presented therein. Similarly, neither construction-term nor operational land-use impacts relating, either directly or indirectly, for identified traffic-related impacts are addressed in the SDEIR/S.

The DEIR/S states that "[t]he proposed project would relieve congestion by widening I-405, braiding and reconstructing interchanges, and achieving the following safety improvements within the project limits by reducing: [1] Congestion-related collisions on the mainline of I-405; [2] Collisions within interchanges by adding braided ramps to eliminate traffic weaving maneuvers; [3] Off-ramp queuing onto the freeway mainline; [4] On-ramp queuing onto arterials due to mainline congestion and ramp meter operation" (emphasis added) (DEIR/S, pp. 3.2.6-40 and 41). The Lead Agency touts that the project has safety benefits because it includes "braided ramps"; however, following the release of the DEIR/S, one or more of those "braided ramps have been eliminated.

As indicated in the OCTA's April 2013 Path Forward, the proposed project has been revised. Those revisions include, but may not be limited to, the following changes: (1) "eliminates braided ramps in City of Fountain Valley" (Alternatives 1, 2, and 3); and (2) "truncates express lanes at Euclid Street/Ellis Street, eliminates State Route 73 connector" (Alternative 3) (emphasis added). Although addressed in the December 2012 STS, those revisions are neither identified in the SDEIR/S nor in the June 2013 STS. Additionally, the potential implications of those now proposed changes to those previously proposed "safety improvements" are not addressed in the project's CEQA/NEPA documentation. 47

The December 2012 STS states that "[t]he study area for the Long Beach Area Traffic Study includes: [1] I-405 from I-605 to Lakewood Boulevard; [2] I-605 from Katella Avenue to Carson Street; and [3] SR-22/7th Street from I-405 to Pacific Coast Highway" (emphasis added) (December 2012 STS, p. 4-1). In contrast, as described in the SDEIR/S: "The Long Beach study traffic study area includes: [1] I-405 from I-605 to Lakewood Boulevard; [2] I-605 from Katella Avenue to Carson Street; and [3] SR-22/7th Street from I-405 to Park Avenue" (emphasis added) (p. 3-3). 47a

As described in the DEIR/S: "The project study area is located within an extensively urbanized area of Orange County with few vacant or undeveloped parcels of land. Eight municipalities are responsible for land use and zoning oversight within the project study area and include the cities of Costa Mesa, Fountain Valley, Garden Grove, Huntington Beach, Los Alamitos, Westminster, Seal Beach, and the County of Orange unincorporated community of Rossmoor" (DEIR/S, p. 3.1.1-2). Long Beach is not included among the listing of responsible municipalities. Although CEQA/NEPA may allow for consideration of non-uniform study areas based on project-related 47b

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and cumulative impacts, reasonable justification for consideration of differing analytical areas needs to be provided. No such justification is, however, presented in either the DEIR/S or in the SDEIR/S.

The SDEIR/S states that "[r]eviewers are requested to limit their comments to only information that is provided in this Supplemental Draft EIR/EIS" (General Information About the Project, unpaginated); however, Caltrans' Public Notice contains no such admonishment or limitation. Because all the comments presented herein relate, either directly or indirectly, to traffic-related issues arising from the information presented in or absent from the SDEIR/S and the significance of those primary and/or secondary environmental and socioeconomic impacts, the Lead Agency is obligated to respond to the comments and issues raised herein. "In no case shall the lead agency fail to respond to pertinent comments on significant environmental issues" (14 CCR 15088.5[f]). 48

The comments and concerns raised herein neither replace nor supersede comments submitted on the DEIR/S and should be considered "new" or "additional" comments submitted in response to the project's CEQA/NEPA documentation. The order in which and labeling of comments herein, including the use of indentation and underlining, is for the City's convenience only and is not intended to represent a prioritization of the relative importance of each comment to Seal Beach or the relative magnitude of its possible implications to the proposed project and the project's associated CEQA/NEPA documentation. Unless otherwise noted, all page references herein are to the SDEIR/S. Additionally, unless otherwise noted, reference to the STS is to the June 2013 version of that document.

As required in Section 15148 of the State CEQA Guidelines, "[t]he EIR shall cite all documents used in its preparation including, where possible, the page and section number of any technical reports which were used as the basis for any statements in the EIR." When other technical material is cited herein which is not a part of the DEIR/S and/or SDEIR/S, the City has endeavored to clearly identify that document (including the author or agency responsible for its publication, the date of publication, and the corresponding page or section number) and, when available on the Internet, provide a webpage citation where that document can be viewed and the information cited independently verified. It is noted that in both the DEIR/S and SDEIR/S, the Lead Agency has not been so diligent.

2.0 RECIRCULATION AND SIGNIFICANT NEW INFORMATION

"EIRs shall be written in plain language" (14 CCR 15140).

With regards to assessing potential environmental impacts, the SDEIR/S is so indecipherable as to prevent any clear understanding of the document's purpose, analysis, and both pre-mitigated and post-mitigated conclusions. On one hand, the Lead Agency states that: (1) "[t]he new information in this Supplemental Draft EIR/EIS results in new CEQA-significant cumulative traffic impacts" (emphasis added) (p. 1-2); and (2) "OCTA will provide a fair share amount of funding for the measures that have been identified as part of this SDEIR/EIS to address significant cumulative impacts to traffic" (emphasis added) (p. 3-84). On the other hand, the Lead Agency states that "traffic and transportation-related direct or indirect cumulative impacts are not anticipated, and no further cumulative impact analysis or additional measures are required. . .the project's contribution to adverse cumulative effects within the Supplemental Draft EIR/EIS study area at the affected locations would be minimized" (p. 3-93). More specifically: 48a

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- With regards to Alternative 1, the Lead Agency states: (1) "the contribution of Alternative 1 to the cumulative impact on the freeway mainline is less than significant" (p. 4-3); (2) "there are no intersections where the contribution of Alternative 1 to the cumulative impacts is significant with the proposed mitigations in place"(p. 4-3); (3) "there are no significant impacts of Alternative 1 on performance or the LOS of the circulation system" (p. 4-4); (4) "Alternative 1 does not contribute to adverse cumulative effects on any study intersection in 2020" (p. 3-66); and (5) "Alternative 1 does not contribute to adverse cumulative effects on any study intersection in 2040" (p. 3-66).

- With regards to Alternative 2, the Lead Agency states: (1) "the contribution of Alternative 2 to the cumulative impact on the freeway mainline is less than significant." (p. 4-12); (2) "there are no intersections where the contribution of Alternative 2 to the cumulative impacts is significant with the proposed mitigations in place" (p. 4-12); (3) "there are no significant impacts of Alternative 2 on performance or the LOS of the circulation system" (p. 4-12); (4) "Alternative 2 does not contribute to adverse cumulative effects on any study intersection in 2020" (p. 3-75); and (5) "Alternative 2 does not contribute to adverse cumulative effects on any study intersection in 2040" (p. 3-75).

- With regards to Alternative 3, the Lead Agency states: (1) "the contribution of Alternative 3 to the cumulative impact on the freeway mainline is less than significant" (p. 4-20); (2) "there are no intersections where the contribution of Alternative 3 to the cumulative impacts is significant with the proposed mitigations in place" (p. 4-20); (3) "there are no significant impacts of Alternative 3 on performance or the LOS of the circulation system." (p. 4-20); (4) "Alternative 3 does not contribute to adverse cumulative effects on any study intersection in 2020" (p. 3-84); and (5) and "Alternative 3 does not contribute to adverse cumulative effects on any study intersection in 2040" (p. 3-84).

From the SDEIR/S, it is not even possible to determine what the "new significant information" (e.g., "Caltrans has determined that the Supplemental Traffic Study represents new significant information" [emphasis added], p. 1-2) actually is and whether the "new information" presented therein is, in fact, deemed to be "significant" by the Lead Agency (e.g., "This Supplemental Draft EIR/EIS for the proposed San Diego Freeway Improvement Project provides new information on potential project-related traffic effects within the City of Long Beach" [emphasis added], p. S-1).

The SDEIR/S acknowledges that the "Council on Environmental Quality (CEQ) regulations, 40 Code of Federal Regulations (CFR) Section 1502.9(c) allows agencies to prepare supplements to either a Draft or Final EIS if: (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts" (emphasis added) (p. 1-2). Because the SDEIR/S only discusses "new information," it is assumed that the Lead Agency is neither acknowledging nor disclosing the concurrent existence of "substantial changes in the proposed action" and/or "significant new circumstances." If such conditions exist, they are certainly not identified or described in the SDEIR/S.

"Substantial changes in the proposed action" and/or "significant new circumstances or information" are not necessarily confined to modifications in the physical design of the proposed project and/or the by-product of the Lead Agency's own analysis of project-related and cumulative environmental effects. Such conditions can result from comments raised by stakeholders, the Lead Agency's responses thereto, and/or the introduction of information and

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other relevant material whose subsequent disclosure has (a) substantively bearing on the adequacy and accuracy of the CEQA/NEPA documentation and (b) that was known to the Lead Agency prior to the DEIR/S' release but which was either knowingly withheld or which was not included therein.

"A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. . .'Significant new information' requiring recirculation include, for example, a disclosure showing that: (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented. (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance. (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it. (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded" (emphasis added) (14 CCR 15088.5[a]). Under CEQA, one of these conditions must exist to predicate recirculation; however, it is unclear which (if any) of these triggers has predicated the release of the SDEIR/S.

The SDEIR/S states that "only those portions of the Draft EIR/EIS that have been modified as a result of the new information are included within the Supplemental Draft EIR/EIS" (p. 1-2). However, since there has been no public disclosure of the Lead Agency's draft responses to stakeholders' comments on the DEIR/S and no opportunity to critique those draft responses under Section 21092.5(a) of CEQA, it would be presumptive for Caltrans to assume that no other comments (including the Lead Agency responses thereto) introduce new information of substantial importance, introduce new environmental effects not previously disclosed, increase the significance of impacts previously identified, introduce new alternatives and/or mitigation measures, and/or raise other substantive issues warranting recirculation of the DEIR/S.

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"In no case shall the lead agency fail to respond to pertinent comments on significant environmental issues" (14 CCR 15088.5[f]). Without even having to wait to see the Lead Agency's draft responses to comments on the DEIR/S, by the Lead Agency's own actions (i.e., an explicit or implicit declaration that there exists no other "significant new information" other than as disclosed in the SDEIR/S), it is evident that those responses will merely seek to defend both the work previously performed by Caltrans' and the OCTA's staff and consultants and the righteousness of the DEIR/S' analysis and conclusions and serve as a post-hoc rationalization for the Lead Agency's predetermined outcome. By limiting the context of the SDEIR/S (e.g., "The remaining sections of the Draft EIR/EIS are not included because they do not require modification," p. S-1), the Lead Agency, in essence, states that there is no other "significant new information" necessitating recirculation of the DEIR/S or any additional portion thereof.

The Lead Agency seeks to "piecemeal" not only the geographic extent of its "study area" and "logical termini" but also its "supplemental" environmental analysis to examine only a single issue (e.g., "As a result of comments received on potential traffic effects within the City of Long Beach, Caltrans prepared the Supplemental Traffic Study," p. 1-2) without due consideration of or the requisite "hard look" at: (1) the totality of comments submitted by other stakeholders and any "significant new information" arising therefrom; and (2) an evaluation of the indirect and secondary environmental consequences of that single issue's potential to affect other topical issues examined in the DEIR/S (e.g., land use, air quality, and noise).

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Since OCTA's name appears on the cover of both the DEIR/S and SDEIR/S and is represented as "project sponsor" therein, the OCTA's actions cannot be severed from either the proposed project or from Caltrans' disclosure and analytical obligations under CEQA/NEPA. Although recognizing that OCTA is not presented as the Lead Agency, evidence of fragmentation and/or the existence of a hidden agenda (e.g., OCTA staff's continuing advocacy for and Caltrans' continued endorsement of Alternative 3) can be found in the following extracts from OCTA's administrative record.

- **Identification of a Locally Preferred Strategy (2006).** Based on a more extensive alternatives analysis conducted at that time, the OCTA's "Interstate 405 Major Investment Study Final Report" (OCTA [Parsons], February 2006) (MIS) concluded that: "[MIS] Alternative 4 adds a single general purpose freeway lane in each direction to the I-405 segment from Brookhurst Street to Valley View Street which currently has only 4 such lanes. In order to avoid dropping a lane and creating a potential operational bottleneck, this lane is carried to the I-605 interchange on the north. . .[MIS] Alternative 4 is the Locally Preferred Strategy (LPS) for improvements to I-405 between I-605 and SR-73. The LPS provides for an additional general purpose lane in each direction on the freeway between I-605 and Brookhurst Street. It includes auxiliary lanes linking on-ramps to downstream off-ramps at numerous locations in the corridor" (MIS, pp. 26 and 91).

- **Regional Planning and Highways Committee's Recommendations (2012).** As indicated in the Board packet for their meeting on October 22, 2012 was a memorandum from Wendy Knowles, Clerk of the Board to Members of the Board of Directors (Subject: Selection of a Locally Preferred Alternative for the Interstate 405 Improvement Project between State Route 55 and Interstate 405), dated September 24, 2012, transmitting to the OCTA's Board of Directors the recommendations of the Regional Planning Highways Committee (Committee) as formulated at the Committee's September 17, 2012 meeting. The following "Committee Recommendations" are outlined therein: "(A) Select Alternative 1 as the locally preferred alternative for the Interstate 405 Improvement Project between State Route 55 and Interstate 605 and transmit this selection to the California Department of Transportation. (B) Direct staff to work with California Department of Transportation t ensure the final design of Alternative 1 does not preclude options that may be developed in the future to improve mobility in the corridor. (C) Direct staff to develop a financing plan for Alternative 1 and work with the Finance and Administration Committee on a recommended approach to accelerate the delivery of the project. (D) Direct staff to incorporate Alternative 1 into the Measure M2 M2020 Plan. (E) Direct staff to seek legislative authority through the state of California to construct the project using a design-build procurement and inform the appropriate agencies of Orange County Transportation Authority's decision and intent" (emphasis added).

- **Selection of a Locally Preferred Alternative (2012).** As indicated in the OCTA's April 2013 Path Forward: "On October 22, 2012, the Board selected Alternative 1, the single GP lane, as the locally preferred alternative (LPA). Alternative 1 delivers the M2 Project K scope approved by voters, and also eliminates the need to reconstruct the Fairview Road bridge in the City of Costa Mesa. The approved recommendation also included a design variation to remove braided on- and off-ramp structures between Magnolia Street and Warner Avenue, which eliminates the need for up to four full commercial property acquisitions and business relocations in the City of Fountain Valley. Parking impacts in the City of Westminster have also been greatly reduced through design modifications.

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Alternative 1 does not necessitate the relocation of the soundwall that exists along Almond Avenue in the City of Seal Beach" (emphasis added) (April 2013 Path Forward, p. 3). The identification of Alternative 1 as the LPA demonstrates as a policy-based continuity with the Board of Directors earlier actions arising out of the MIS.

Evidence of OCTA staff's advocacy for Alternative 3 can be demonstrated in the Board of Directors October 22, 2012 agenda. As indicated therein, the OCTA staff presented the following recommendations to the Board of Directors: "(A) Select the modified Alternative 3 as the locally preferred alternative to the Interstate 405 Improvement Project between State Route 55 and Interstate 605 and transmit this selection to the California Department of Transportation for consideration. (B) Direct staff to develop a financing plan for the modified Alternative 3 and work with the Finance and Administration Committee on a recommended approach. Continue to look for financing through mechanisms such as the Transportation Infrastructure Finance and Innovation Act to minimize interest costs. (C) Incorporate the Measure M2 cost of the single general purpose lane, inherent in all build alternatives, into the M2020 Plan, and direct staff to establish separate funding and accounting for express lanes costs and revenues under Alternative 3. (D) Adopt the 91 Express Lanes toll policy for the Interstate 405 Express Lanes, but allow carpools with three or more persons to ride free at all times. Continue to explore opportunities to allow two-person carpools to ride free during non-peak hours" (emphasis added).

The City wishes to extent its appreciation to the OCTA Board of Directors for both its courageous actions not to follow its own staff's recommendations and to implement the voter's Measures M/M2 directives and for its efforts to retain the Almond Avenue soundwall in Seal Beach. However, notwithstanding that clear policy direction, in correspondence from Jim Beil, Executive Director, Capital Projects of OCTA to the City's Director of Public Works, dated June 25, 2013, included herein as Attachment 2 (Correspondence from Jim Beil, OCTA Executive Director, June 25, 2013), OCTA staff continues to focus its attention on the pursuit of other alternatives. In that letter, Mr. Beil states that "[i]f the Mandatory Design Standards for lane and shoulder width on the I-405 are met, the sound wall would be relocated narrowing Almond Avenue from its current 40 foot width to approximately 36 feet west of Almond Park. . .Almond Avenue would be narrowed to between 40 and 34 feet" (emphasis added).

In addition, as outlined in the OCTA's April 2013 Path Forward, the following four "recommendations" are identified: "(A) Direct staff to proceed in accordance with an approach that advances project development of the Measure M2 Project K, which adds one general purpose lane in each direction on Interstate 405 between Euclid Street and Interstate 605. (B) Direct staff to concurrently screen a new concept for improvements to Interstate 405, which adds two general purpose lanes in each direction and also explores converting the existing high-occupancy vehicle lane to a single high-occupancy toll lane. The screening will consider traffic and revenue implications, identify additional right-of-way needed for this concept, and is estimated to cost $140,000. (C) Direct staff to concurrently screen a new concept for improvements to Interstate 405, which truncates the second northbound general purpose lane of Alternative 2 at Valley View Street. The screening is estimated to cost $15,000. (D) Direct staff to return to the Board of Directors in September 2013 for further discussion of existing alternatives and to present findings from the analysis of the new concepts" (emphasis added).

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If the OCTA's Board of Directors adopted (October 2012) a policy directive to advance Alternative 1 and retain the existing Almond Avenue sound wall, why is its own Executive Director in April and June 2013 not actively promoting that direction and discussing actions directly contrary thereto? Why does the SDEIR/S not include a letter from the OCTA staff to the Lead Agency requesting Caltrans' implementation of the Board of Director's October 22, 2012 policy directive? Is not the Board's formal selection of Alternative 1 as the LPA not itself considered" significant new information" under CEQA/NEPA?

Why is no reference to that action included therein? If no such reference to the Board's October 2012 action is presented in the SDEIR/S, why has the project sponsor's decision-making body's request for Caltrans' approval of Alternative 1 been hidden from CEQA/NEPA stakeholders? Why are comments from Long Beach given greater credence that the both the actions of OCTA's Board of Directors and comments submitted by other stakeholders in response to the release of the DEIR/S? 49

As further described in the OCTA's April 2013 Path Forward, two new build alternatives (Concepts A and B) have been identified and a Caltrans-authored degradation study of the Orange County HOVL system have been submitted. No reference to the Board of Directors' identification and consideration of alternative "Concepts A and B" is, however, presented in the SDEIR/S. Similarly, left unexplained is the criticality of the information presented in the SDEIR/S that its release could not have been delayed pending further discussions of "Concepts A and B." 49a

The April 2013 Path Forward agenda item noted that "[s]hould the Board select a new alternative to the DEIR/EIS within the existing footprint of the three build alternatives previously studied, it would require new technical studies that would need to be incorporated into the DEIR/EIS which would need to be recirculated. A supplemental DEIR/EIS would need to be prepared and a new round of public hearings would need to be carried out with public input recorded and addressed. It is estimated that this additional environmental work could take up to 18 months to complete and cost $1.7 million." Notably absent from that agenda is any staff discussion regarding the importance of and the role that alternatives analysis plays in both the CEQA/NEPA and decision-making processes, the merits of including or not including "Concepts A and B," and why either or both of those alternatives might warrant further consideration (e.g., effectively addressed a stated public concern).

In the absence of any concurrent discussion of the time and cost to prepare the SDEIR/S or even why that document was required at this time (e.g., "Caltrans, as the Lead Agency, made the decision to disclose this new information to the public by preparing and circulating this Supplemental Draft EIR/EIS," p. S-1) the discussion of time delays and cost overruns appears solely intended to dissuade the OCTA's Board of Directors from pursuing the analysis of new or modified alternatives. While recognizing that schedule and budget considerations are often important consideration, there exists no substantive information in the DEIR/S and SDEIR/S of the relevance of time and money to the formulation and selection of an implementation plan. Those variables have not previously been elevated to the same stature as that indicated in the April 2013 Path Forward. The release of the SDEIR/S appears more likely timed to support staff's argument that another recirculated CEQA/NEPA document would not be warranted.

It is noted that no reference to or information concerning Caltrans' HOVL degradation study is presented in the SDEIR/S. With much appreciation to Fifth District Supervisor Pat Bates for her

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diligent efforts to inform her constituency and provide full disclosure of the activities of the OCTA's Board of Directors, the following information was presented on Supervisor Bates' website (http://bos.ocgov.com/legacy5/newsletters/volume7Issue14.htm):

> Staff from the California Department of Transportation (Caltrans) gave a presentation to the Orange County Transportation Authority (OCTA) Board of Directors on the Caltrans Statewide High-Occupancy Vehicle (HOV) Degradation Study, which included information about HOV lanes that are degraded within Orange County and the options available to address the degradation. An HOV lane is considered "degraded" when speeds fall below 45 mph for 10% or more of the morning or evening weekday peak hour periods over a consecutive 180-day period. Contained within in the federal transportation reauthorization bill (Moving Ahead for Progress in the 21st Century), enacted July 6, 2012, are requirements for state departments of transportation to identify and remedy degraded HOV lanes. The Caltrans study, which has not yet been released in its entirety, identifies portions of the I-405, I-5, SR-55, SR-22 and SR-91 as having degraded HOV lanes. Caltrans recommendations for remedying the degradation include raising the HOV occupancy requirement from 2+ to 3+, adding second HOV/HOT lanes, and converting existing HOV lanes to High-Occupancy Toll (HOT) lanes, including any or all of these recommendations taken together. Unfortunately, Caltrans' presentation lacked adequate detail and did not include specific data by freeway segment. Caltrans is expected to provide this information within the next several weeks (emphasis added).

The above statement differs substantially from the written information presented to the OCTA's Board of Directors on April 22, 2012 (and discoverable to all but those in attendance at that meeting), namely, the declaration that "Caltrans has not determined the method to address HOV degradation on the entire I-405 corridor" (April 2013 Path Forward). Absent Caltrans' disclosure of its HOV degradation study and proposed response, the public is provided no means to reconcile those contradictory statements.

As of July 2008, as presented in "California HOV/Express Lane Business Plan, 2009" (Caltrans, March 31, 2009), with regards to HOVLs, Caltrans reported that there were a total of 1,424 existing lane miles and 124 lane miles under construction within the State. As further indicated therein: "According to a report by Caltrans, nearly 50% of the HOV lanes in the state experience periods of degradation in the peak hour according to the federal definition – meaning that average speeds of 45 mph speed or lower have been measured more than 10% of the time" (http://www.accma.ca.gov/Documents/22_136_74A0371_ExpressLaneBizPlan_033109_FINAL_check__2_.pdf). If, as reported, one-half of the State's 1,548 HOVL miles are already degraded, assuming Caltrans' recommendations apply universally to all degraded HOVLs throughout the State and are not limited only to that segment of the I-405 Freeway located in Orange County, from a cumulative environmental perspective, related projects (including other HOVLs where the State may mandate raising HOV-occupancy requirements, adding HOV/HOT lanes, and/or undertaking HOVL-to-HOTL conversions) producing cumulative environmental effects include 774 HOVL miles throughout California. Those related projects and those cumulative impacts are not, however, discussed in either the DEIR/S or in the SDEIR/S.

Based on the potential significance of the State's HOVL-degradation study with regards to the proposed project, the imminent timing of its scheduled release, and the fact that Caltrans is not scheduled to release its response to comments on the DEIR/S until "October 2013" (April 2013

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Path Forward), it is unclear why Caltrans elected to release the SDEIR/S at this time rather than delaying its release a couple of "weeks" so as to allow the SDEIR/S to also include the relevant project-specific information anticipated in that study.

As indicated by the California Senate Transportation & Housing Committee (February 18, 2013), "Caltrans' most recent HOV lane degradation report [was] submitted to FHWA in November 2011 [and] concluded that HOV lane degradation 'may continue to be the result of high traffic demand and congestion across the entire freeway facility'" (http://www.leginfo.ca.gov/pub/13-14/bill/sen/sb_0251-0300/sb_286_cfa_20130328_113404_sen_comm.html). If, as reported by the Senate Transportation & Housing Committee, the degradation study has been available since November 2011, then the withholding of that information while concurrently alleging its potential significance and direct relevancy to the proposed project raises questions as to the motivation behind the lack of disclosure.

The information presented in Attachment 3 (High-Occupancy Vehicle Degradation Study Powerpoint), which purports to be a summation of Caltrans' HOV degradation study appears to bear no relationship to either the Senate Transportation & Housing Committee's or Supervisor Bates' description of that document's content. Similarly, in recognition of its relevancy to the proposed project, it is unclear why a study completed in November 2011 has neither been disclosed as part of the project's CEQA/NEPA documentation nor made fully available to the general public.

3.0 "LOGICAL TERMINI" UNREASONABLY LIMITS ENVIRONMENTAL ANALYSIS

Substantial evidence exists that the "logical termini" identified by the Lead Agency and the identified "study area" misrepresent and/or underestimate the proposed project and its likely environmental effects. With regards to the "study area," referencing a memorandum from Will Kempton, OCTA Chief Executive Officer to Members of the Board of Directors (Subject: I-405 Improvement Project Follow-Up Items), dated October 11, 2012, included in the October 22, 2012 Board packet:

> To help define the potential area of benefit for net toll revenues, staff looked at year 3035 morning peak period trips that are expected to use the I-406 corridor project limits and analyzed the origins and destination of those trips. A graph summary of this information was presented to the Board on September 24, 2012 and is included as Attachment B. Four possible project boundaries were evaluated. These boundaries were based on commute shed of the trips using the I-405. Commute shed refers to the area defined by origin and destination points of morning peak period trips that are likely to use the I-405. The various concepts are depicted in Attachment C.

Year 2035 Origin and Destination for I-405 Corridor

Year 2035 Origins	Trips	% of Total Orange County Trip Origins
Total AM Origins: Concept A: 6-Mile Radius	49,000	76%
Total AM Origins: Concept B: 3-Mile Radius	38,000	59%
Total AM Origins: Concept C: Full Corridor 5-Mile Radius	57,400	89%
Total AM Origins: Concept D: Parallel Corridors	58,600	91%

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Year 2035 Destinations	Trips	% of Total Orange County Trip Origins
Total AM Origins: Concept A: 5-Mile Radius	55,100	78%
Total AM Origins: Concept B: 3-Mile Radius	35,839	50%
Total AM Origins: Concept C: Full Corridor 5-Mile Radius	65,640	94%
Total AM Origins: Concept D: Parallel Corridors	66,497	94%

> The above table shows that Concepts C and D encompass the majority (90 percent or more) of commuter trip origins and destinations. Therefore, these boundaries cover the bulk of the transportation systems which support the users of I-405 and represent an area where I-405 related investments could be made. Concept D provides for a clearer definition of the boundary as it is defined by the parallel transportation routes. However, Concept C is more consistent with SB 4 as it is defined by the I-405 corridor which is the facility where the revenue-generating improvements will be constructed (emphasis added).

Although an opportunity has not been provided to review the source data and analytical methodologies used to derive the above information, five items are worthy of note: (1) origin-and-destination studies have been conducted by OCTA (but are not included or referenced in the DEIR/S or SDEIR/S) and likely represent a more supportable basis for the establishment of the project's analytical "study area"; (2) the four "concepts" illustrated by OCTA staff (e.g., 5-mile radius, 3-mile radius, full corridor and 5-mile radius, and parallel corridors) differ substantially from the DEIR/S' original "study area" and the SDEIR/S' "Long Beach study traffic study area" (p. 3-3); (3) the "appropriate area where I-405 related investments could be made" (i.e., areas of potentially significant impact) are substantial larger than both the original (DEIR/S) and expanded (SDEIR/S) "study areas" further invalidating the geographically-limited CEQA/NEPA analysis; (4) total VMT traveled will likely exceed the quantities presented in the DEIR/S based on OCTA's acknowledged "commute shed"; and (5) the identified need (defined by the number of trips assigned to the I-405 Freeway) bears no relationship to the traffic projections and number of trips described in the DEIR/S and SDEIR/S.

With regards to "logical termini," Caltrans does not view the I-405 only in the context of a "14-mile" (DEIR/S, p. 2-20) or "15-mile" (DEIR/S, AQR, p. 51) or "16 mile" (DEIR/S, p. 1-12) segment of a larger transportation corridor. Caltrans' "transportation concept reports" (TCRs) is an internal planning document which expresses the agency's judgment on what the characteristics of each State highway should be in response to proposed land uses and projected travel demand over a 20-year planning period. As indicated in Caltrans' (District 12) "Route Concept Report Interstate 405 – San Diego Freeway" (November 1999) (RCR) (http://www.dot.ca.gov/dist12/planning/pdf/route405.pdf):

> Interstate 405 (I-405) also known as the San Diego Fwy [Freeway] has 24.18 miles located in Orange County and 48.2 miles located in Los Angeles County. It is considered a bypass route to the Santa Ana/Golden State Fwy [Freeway] (I-5). . .I-405 provides access between cities that are located in both Orange and Los Angeles Counties. It is used for commuting and inter-regional travel along with direct and indirect access to employment centers, recreational attractions, shopping malls, medical centers, universities, airports, etc. (emphasis added) (RCR, p. i).

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Caltrans' "Corridor System Management Plan - State Route 22/Interstate 405/Interstate 606 Final Report" (System Metrics Group/Braidwood Associates, August 2010) (CSMP) (http://www.dot.ca.gov/hq/tpp/corridor-mobility/CSMPs/d12_CSMPs/SR%2022-I%20405-I%20605/D12_SR-22_CSMP_Final_Technical_Report_dec2010.pdf) was prepared in response to the voters' approval of Proposition B (The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006) in November 2006. That ballot measure included a funding program identified as the "Corridor Mobility Improvement Account" (CMIA). In order to receive CMIA funds, California Transportation Commission's (CTC) guidelines required that project sponsors describe (in a CSMP) how mobility gains from CMIA-funded corridor improvements would be maintained, focusing on operational strategies and funded expansion projects.

Initially intended as a mean of prioritizing CMIA funding, CSMPs were subsequently included in the CTC's "Regional Transportation Plan Guidelines." There are presently about 50 CSMPs that have been developed or are in the process of being developed. Within the Los Angeles metropolitan area, Caltrans' network of CSMPs is illustrated in the accompanying graphic (Source: ITSP, Figure H, p. 43). CSMPs within Caltrans' Districts 7 and 12 are listed below.

Corridor System Management Plan (CSMP) Routes

District	County	Corridor	CSMP Limits
5 & 7	Santa Barbara	U.S. 101	Winchester Canyon Creek in SB Co. to Rice Ave. in VEN Co.
	Ventura		
7	Los Angeles	I-5	ORA/LOA Co. Line to I-710
	Los Angeles	I-5	From I-10 West to I-210
	Los Angeles	I-405	From I-110 to I-5
	Los Angeles	I-210	From SR-57 to I-5
12	Orange	SR-22	SR-22 from I-405/I-605 Junction to SR-55; I-405 from I-5 to LA Co. line; and I-605 from I-405 to LA Co. line
		I-405	
		I-605	
	Orange	SR-57	SR-22/I-5 Interchange to LA Co. line
	Orange	I-5	SD Co. line to LA Co. line
	Orange	SR-55	Entire route within District 12
	Orange	SR-91	From I-5/SR-91 separation in ORA Co. to just east of RIV Co. line
	Riverside		

Source: California Department of Transportation, Interregional Transportation Strategic Plan – Review Draft, December 2012, Appendix D (http://www.dot.ca.gov/hq/tpp/offices/oasp/ITSP_document_FINAL.pdf#zoom=65)

As noted, both District 7 and District 12 have identified an "I-405 Corridor" within their respective boundaries. As indicated in the SDEIR/S, the Lead Agency now acknowledges that significant environmental impacts are not confined to either an agency's managerial boundaries or the project's construction limits. As such, for the purpose of CEQA/NEPA compliance, neither an agency's jurisdictional boundaries nor the edge of planned construction serve as an appropriate geographic indices of the extend and magnitude of significant project-related and cumulatively

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significant environmental effects. When the contiguous "I-405 Corridors" in both District 7 and District 12 are combined into a single management area, the more supportable "logical termini" extends along the I-405 Freeway from the I-5 Freeway on the north to the I-5 Freeway on the south (e.g., "I-405 is considered a bypass route to the Interstate 5 Santa Ana/Golden State Freeway through Orange County," DEIR/S, Noise Study Report, p. 1). By viewing the I-405 Freeway as a north-south freeway and arterial "bypass" and considering the "logical termini" from a functional rather than a construction-defined or jurisdictional perspective, both the project and its potential impacts can be viewed from a systems perspective.

Caltrans' "Draft Final Corridor System Management Plan Orange County SR-22 Comprehensive Performance Assessment and Causality Analysis" (May 4, 2009) (Draft Final CSMP) (http://www.dot.ca.gov/hq/tpp/corridor-mobility/CSMPs/d12_CSMPs/SR%2022-I%20405-I%20605/SR-22%20&%20I-405%20&%20I-605%20CPA.pdf) states that "[o]ver the last few years, Caltrans and its stakeholders and partner agencies have been developing and committing to a framework called 'System Management'. . .This framework aims to get the most of our transportation infrastructure through a variety of strategies, not just through the traditional and increasingly expensive expansion projects. System Management has been embraced by the Administration as part of their Strategic Growth Plan and by the Southern California Association of Governments, the Metropolitan Planning Organization for Southern California and Orange County" (Draft Final CSMP, p. 3).

In that study, Caltrans identifies a larger "I-405 Freeway corridor" which includes "portions of three state routes, SR-22, I-405, and I-605 in Orange County. The corridor begins at an interchange involving all three freeways at the Los Angeles County border. From there, the corridor runs east along SR-22 (Garden Grove Freeway) to SR-55. The corridor also runs southeast along I-405 (San Diego Freeway) until it reaches I-5 (Golden State Freeway) just outside Irvine. The corridor includes a short, one-mile section of I-605 (San Gabriel River Freeway) as it heads north from the Los Alamitos Curve (SR-22/I-405/I-605) interchange to the Los Angeles County border. . .The portion of SR-22 in the study corridor traverses a large part of Orange County and includes all 13 miles of the freeway from its beginning in Seal Beach (Post Mile R0.000) through Westminster, Garden Grove, and Santa Ana to SR-55 (Post Mile R13.164). . .The portion of the study corridor along I-405 extends 24 miles (Post Mile 0.230 to Post Mile 24.178), paralleling the Orange County coastline from I-5 to SR-22."

Within that area, "[d]uring the AM peak period, only about 44 percent of all trips originate and terminate in Orange County (Zones 1 or 2). The remaining trips originate in Orange County and terminate in another county (26 percent), originate outside Orange County and terminate in Orange County (25 percent), or originate and terminate outside Orange County (6 percent). The picture is similar for the PM peak period, which experiences around 28 percent more demand than the AM. Around 44 percent of trips originate and terminate in Orange County. The remaining trips originate in Orange County and terminate in another county (25 percent), originate outside Orange County and terminate in Orange County (25 percent), or originate and terminate outside Orange County (7 percent)" (Draft Final CSMP, p. 36).

Caltrans' SR-22/I-405/I-605 corridor, which focuses primarily on freeway segments within a single Caltrans' organization district, is less representatives of traffic conditions and expected impacts than the linked "I-405 Corridors" in District 7 and District 12 but more encompassing that either the DEIR/S' original "study area" or the SDEIR/S' "Long Beach study traffic study area" (p. 3-3).

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Referencing correspondence from the City of Long Beach (Long Beach) presented to Caltrans in response to the release of the DEIR/S and included as Attachment 4 (I-405 Freeway Improvement Project Letter and Memorandum) herein:

> The I-405/I-605/SR-22 interchanges does not seem like a 'logical termini' for the northern segment of the I-405 Improvement Project. Traffic should be further evaluated after the termination of the proposed project's additional lanes to ensure that a choke point does not occur north of the Orange County/Los Angeles County line in the City of Long Beach. The City of Long Beach does not feel that the northern terminus of the proposed project meets the 'logical termini' requirements of the FHWA, as stated in the DEIR/EIS (p. 1-24), thus resulting in an issue of 'segmentation.' The FHWA's discussion of logical termini and segmentation is provided below (The Development of Logical Project Termini, November 1993):
>
>> In developing a project concept which can be advanced through the stages of planning, environment, design, and construction, the project sponsor needs to consider a "whole" or integrated project. This project should satisfy an identified need, such as safety, rehabilitation, economic development, or capacity improvements, and should be considered in the context of the local area socioeconomics and topography, the future travel demand, and other infrastructure improvements in the area. Without framing a project in this way, proposed improvements may miss the mark by only peripherally satisfying the need or by causing unexpected side effects which require additional corrective action. A problem of "segregation" may also occur where a transportation need extends throughout an entire corridor but environmental issues and transportation needs are inappropriately discussed for only a segment of the corridor (emphasis added).

As indicated in the FHWA's Federal-Aid Highway Program Guidance: "The FHWA supports HOV lanes as a cost-effective and environmentally friendly option to help move people along congested urban and suburban routes. As such, FHWA regulations at 23 C.F.R. 810.102 specifically provide that HOV lanes are eligible for Federal-aid participation. In locations where existing or anticipated excess HOV lane capacity is available, conversion to a HOT lane facility is encouraged as a way to increase throughput and to provide additional travel options for drivers. As part of an overall approach to respond to increased travel demand and address traffic congestion, HOV and HOT lanes can be a practical alternative to adding more general-purpose travel lanes. The FHWA encourages the implementation of HOV or HOT lanes as an important part of an area-wide approach to help metropolitan areas address their requirements for improved mobility, safety, and productivity, while also being sensitive to environmental and quality of life issues (emphasis added).

Referencing the FHWA's "NEPA and Transportation Decisionmaking – Developing and Evaluation of Alternatives" (November 15, 2006): "When developing a transportation project, project sponsors should consider how the end points of the action are determined, both for the improvement itself and for the scope of the environmental analysis. Whether the action has 'logical termini' or not is also a concern. Logical termini for project development are defined as rational end points for both a transportation improvement and a review of the environmental impacts" (http://environment.fhwa.dot.gov/projdev/tdmalts.asp).

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In "NEPA and Transportation Decisionmaking – The Development of Logical Project Termini" (November 5, 1993), the FHWA further noted that: (1) "the termini chosen must be such that: [1] environmental issues can be treated on a sufficiently broad scope to ensure that the project will function properly without requiring additional improvements elsewhere, and [2] the project will not restrict consideration of alternatives for other reasonably foreseeable transportation improvements"; and (2) "Choosing a corridor of sufficient length to look at all impacts need not preclude staged construction. Therefore, related improvements within a transportation facility should be evaluated as one project, rather than selecting termini based on what is programmed as short range improvements. Construction may then be 'staged,' or programmed for shorter sections or discrete construction elements as funding permits" (emphasis added) (http://environment.fhwa.dot.gov/projdev/tdmtermini.asp).

The SDEIR/S concludes that "[t]he new information in this Supplemental Draft EIR/EIS results in new CEQA significant cumulative traffic impacts" (p. 1-2). Based on the Lead Agency's own admission, when examining only previously undisclosed impacts to the north of the original "study area" (without consideration of possible cumulative impacts beyond that single expansion area), the information presented in the SDEIR/S demonstrates that the DEIR/S presented an erroneous "logical termini" in that the full extent of project-related and cumulative significant environmental impacts were not disclosed. The statements in the DEIR/S that "[t]he proposed project satisfies the requirements for independent utility and logical termini" (DEIR/S, p. 1-22) and "[t]he project corridor is of sufficient length to adequately address transportation issues" (DEIR/S, p. 1-23) are unsupported by information presented in the SDEIR/S.

Although current law, as set forth in 23 U.S.C. 301, generally provides that, subject to a few exceptions, federal highways "shall be free from tolls of all kinds," evidence demonstrates that concerted efforts are underway by Caltrans to convert many existing HOVLs within the Los Angeles-Orange County metropolitan area into HOTLs and to construct new lanes to accommodate tolling. Caltrans has failed to examine the broader environmental and socioeconomic implications of those actions at either a Statewide or regional level and has repeated sought to piecemeal (fragment) those improvements and other modifications based on falsely-conceived segmentation.

Rather than addressing the environmental and other implications of the larger fundamental shift in infrastructure financing (e.g., tolling) and the environmental justice and related issues relating to authorizing and encouraging SOVs usage of "express lanes," Although regional environmental impacts (e.g., air quality) do not logically cease at an agency's corporate boundaries, Caltrans seeks to perpetuate the myth that CEQA/NEPA allows a governmental entity to ignore the proven reality (as demonstrated in the SDEIR/S) that "significant" impacts do, in fact, occur beyond the physical limits of the proposed capital improvements and the confines of an agency's jurisdictional boundaries (e.g., Orange County is located within Caltrans District 12 while Long Beach is located within Caltrans District 7).

Because the SDEIR/S demonstrates that roadway improvements are required beyond the boundaries of the original "study area," the "logical termini" asserted by the Lead Agency: (1) misrepresents the nature of the proposed project; (2) fails to encompass the totality of the project's environmental effects; (3) ignores the functionality of the I-405 Freeway; (4) does not consider "related improvements"; and (5) artificially restricts the analysis only to areas of "short range improvements." 49b

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Since the SDIE/S report provides congestion detail at the terminus of the project at I-405 and states the each alternative will impact I-405 north of the I-605 interchange, it does not provide information these impacts to the traffic as it reaches saturation at the I-605 interchange and what happens to both the general purpose lanes and the HOV lanes. However, a discussion is provided that provides mitigation in terms of cash value to Caltrans for future use to improve the affected I-405 interchanges north of I-605, without mitigation measures proposed for the terminus at the I-605 interchange. The City is requesting development of a traffic model to determine the impacts to traffic flow at the County Line, absence of I-405 improvements, and north of the I-605 for each Alternative.

4.0 JUNE 25, 2013 LETTER FROM PROJECT SPONSOR

In response to its extensive comments on the DEIR/S, the City was surprised to receive a letter from Jim Beil, Executive Director, Capital Projects of OCTA, dated June 25, 2013. That letter was submitted by the "project sponsor" and not the Lead Agency and dealt with decisions already make with regards to the proposed project. As noted therein, "OCTA and Caltrans staff are preparing the supplemental draft environmental impact report/environmental impact statement that is scheduled to be circulated for public review and comment in summer 2013" (emphasis added). 50

It is noted that the SDEIR/S includes no reference to OCTA's role in the preparation of that document and the document contains no list of "persons, firms, or agencies preparing the draft EIR" (14 CCR 15129) or "list the names, together with their qualifications, of the persons who were primarily responsible for preparing the environmental impact statement" (40 CFR 1502.17). Because the "project sponsor" is not an impartial observer, it would appear a potential conflict of interest for that entity or parties under contract to that entity to: (1) prepare, on behalf of the Lead Agency, responses to comments relating to the project that the "project sponsor" seeks to undertake; (2) expect a party with a vested interest in the project to objectively response to criticisms regarding the manner in which the project has been managed and the adequacy of the project's CEQA/NEPA compliance; (3) determine whether further mitigation or other project conditions are warranted, particularly if such actions were to increase project costs or result in scheduling delays; and (4) endorse new or modified alternatives whose introduction might necessitate additional recirculation of the DEIR/S

Although the OCTA is identified as a joint preparer of the SDEIR/S, the document's authors failed to note that the OCTA's Board of Directors selected Alternative 1 as the LPA on October 22, 2012. As indicated on the OCTA's website (http://www.octa.net/pdf/actions102212.pdf), the Board of Directors took the following actions: "The board selected Alternative 1 for the Interstate 405 Improvement Project, choosing to add one general-purpose lane in each direction on the freeway between Euclid Street and I-605. The project to date, has taken nearly 10 years of planning with significant input from local and regional stakeholders. At the meeting, the board voted on all three alternatives and Alternative 1 passed with a 12-4 vote. The implementation of Alternative 1 will help to reduce congestion and increase mobility while minimizing environmental impacts and right-of-way acquisitions. The $1.3 billion project will be funded through Measure M2, the half-cent sales tax for transportation improvements. OCTA's selection of the locally preferred alternative will be forwarded to Caltrans for final review and approval."

In correspondence from Jim Beil, OCTA's Executive Director to Sean Crumby', Seal Beach's Director of Public Works, dated June 25, 2013 (prior to the release of the SDEIR/S on June 28, 2013 but subsequent to the actions of the OCTA's Board of Directors), OCTA stated, in part:

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Project plans for the three build alternatives have differing impacts to the soundwall: Project Alternatives 1 and 3 would not necessitate the reconstruction of the soundwall as both alternatives provide just one additional general purpose (GP) lane at this location. Alternative 2, however, does necessitate reconstruction of the existing soundwall as this alternative provides two additional GP lanes on I-405 along Almond Avenue, thus requiring some minimal additional right-of-way to accommodate the second GP lane. . .[T]he City proposed that the Project include non-standard features such as reduced widths for lanes and shoulders in order to reduce the Project footprint and eliminate the need to reconstruct the soundwall. Orange County Transportation Authority staff and consultants have met with the California Department of Transportation, City staff, and consultants to review these proposals. Based on discussions with Caltrans, there is no justification to substantiate approval for any of the three proposed design exceptions to the mandatory design safety standards that would be required to leave the soundwall in place with Alternative 2. Approval of the design exceptions must consider the tradeoffs between meeting the mandatory design safety standards on I-405 and the impacts to Almond Avenue. . .State approvals of mandatory design safety standard exceptions are contingent upon implications to safety when not meeting standards. There are no safety implications related to the removal of parking on the south side of Almond Avenue. In comparison, this section of I-405 has the highest accident concentrations in Orange County. Maintaining design standards on I-405 significantly outweights the minimal impacts to Almond Avenue when it comes to safety. . .Alternative 2 will maintain one lane of traffic in each direction and parking on both sides of the street with the exception of approximately 100 feet where parking will only be feasible on one side of the street. This appears to be in general compliance with the City's Municipal Code (emphasis added).

Mr. Bell's declaration that "this section of I-405 has the highest accident concentrations in Orange County" appears to contract the DEIR/S, which states, for existing conditions, "the actual accident rates in both directions of the entire 14.9 miles of I-405 are lower than the statewide average for similar facilities" (DEIR/S, p. 3.1.6-27). Contrary to the provisions of Section 149 of the Streets and Highways Code, noticeably absent from the DEIR/S and SDEIR/S is any "safety analysis" assessing post-project conditions.

The receipt of correspondence from OCTA rather than Caltrans creates confusion and raises questions concerning the roles and responsibilities of those two agencies with regards to the CEQA/NEPA process. This confusion is highlighted by the following additional facts: (1) OCTA's and Caltrans' name appears on the cover of both the DEIR/S and SDEIR/S; (2) virtually no information about the proposed project and the project's CEQA/NEPA documentation is available on Caltrans' website while substantial information can be found on OCTA's website; (3) the consulting firms preparing the DEIR/S (e.g., Parsons, Albert Grover & Associates, Group Delta Consultants, Paragon Partners, Psomas, TEC Management, and URS Corporation), as listed in Chapter 6 (List of Preparers) in the DEIR/S, are working under contract to OCTA (Contract No. C80693) rather than Caltrans; (4) with regards to the SDEIR/S, although the affiliation of the members of the "Report Preparation Team" (p. 7-1) are not listed, at least two of the four individuals listed (i.e., Neal Denno and Raizalyn Lubong) where listed as being affiliated with Parsons in the DEIR/S (DEIR/S, p. 6-6), suggesting that the SDEIR/S was also prepared by OCTA's vendors; and (5) the Public Notice directs stakeholders to submit comments electronically to "405.Supplemental.Draft.EIR.EIS@parsons.com."

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Why is the "project sponsor" and not the Lead Agency the governmental entity formally responding to a request from a Participating Agency (NEPA) and a Responsible Agency (CEQA) to the CEQA/NEPA Lead Agency relative to a request for a "design exception" (alternatively a "mitigation measure" of "condition of project approval") on a highway under Caltrans' jurisdiction?

Applicable statute and regulations dictate that Caltrans (as the CEQA/NEPA Lead Agency) is responsible for the preparation of written responses to comments received on the DEIR/S, environmental determinations under CEQA/NEPA, and the selection of the facility's physical design and operational attributes. Notwithstanding those obligations, it was the "project sponsor" and not the CEQA/NEPA Lead Agency that notified the City that: (1) "there is no justification to substantiate approval for any of the three proposed design exceptions to the mandatory design safety standards that would be required to leave the soundwall in place with Alternative 2"; (2) "[m]aintaining design standards on I-405 significantly outweights the minimal impacts to Almond Avenue when it comes to safety"; (3) that "there is no justification to accept the proposed design exceptions to mandatory design safety standards"; (4) "[t]here are no safety implications" relating to impacts along Almond Avenue; and (5) that the reducing in Almond Avenue right-of-way is in "general compliance with the City's Municipal Code."

Those determinations ("no justification"), that delicate balancing ("outweight") of a broad array of environmental and socioeconomic considerations, and that interpretation ("general compliance") of the City's existing municipal policies by an entity other than the Seal Beach City Council all occurred outside any CEQA/NEPA context, by an agency other than the Lead Agency, by an agency other than the one possessing management and maintenance responsibilities over the affected roadway, by an agency will an economic interest in the project, and whose decision-making body has explicitly endorsed Alternative 1 as the LPA and the retention of the Almond Avenue soundwall.

As indicated in the Board's agenda packet for its October 22, 2012 meeting (Subject: Selection of a Locally Preferred Alternative for the Interstate 405 Improvement Project Between State Route 55 and Interstate 605): "Staff is recommending the Board select the modified Alternative 3 as the LPA for the I-405 Improvement Project between SR-55 and I-605, and submit the LPA to Caltrans" (October 22, 2012 Agenda Packet, p. 12). Although program staff may disagree with the Board's decision, public policy requires that agency staff must nevertheless implement the directives of its own decision-making body. OCTA staff only needs to look toward the actions of its own Board of Directors for the requisite justification ("no justification"). By ignoring the Board's own vote and policy directive selecting Alternative 1 as the LPA and endorsing the preservation of the existing Almond Avenue soundwall, it would appear that that OCTA staff is acting contrary to and promoting an agenda (e.g., relocation of the existing Almond Avenue soundwall) which is divergent from that of its own Board of Directors.

Conversely, as described in "Fact Sheet: Exceptions to Advisory Design Standards -- I-405 Improvement Project" (Caltrans, April 2012) (Fact Sheet), Caltrans has "approved" a number of Advisory Design Exceptions, including, but not necessarily limited to the following: (1) Advisory Design Exception No. 1: HDM [Highway Design Manual] Index 101.1 - Selection of Design Speed; (2) Advisory Design Exception No. 2: HDM Index 202.5(1) & 202.5(2) - Superelevation Transition; (3) Advisory Design Exception No. 3: HDM Index 202.6 - Superelevation of Compound Curves; (4) Advisory Design Exception No. 4: HDM Index 203.5 - Compound Curves; (5) Advisory Design Exception No. 5: HDM Index 203.6 - Tangent Length between Reversing Curves; (6) Advisory Design Exception No. 6: HDM Index 204.3 - Minimum Grade;

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(7) Advisory Design Exception No. 7: HDM Index 502.2 - Isolated Off Ramps & Partial Interchanges; (8) Advisory Design Exception No. 8: HDM Index 504.3(3) - 4% Max Grade at Ramp Terminal; (9) Advisory Design Exception No. 9: HDM Index 504.3(6) - Two-Lane Exit Ramps; (10) Advisory Design Exception No. 10: HDM Index 504.7 - Weaving Section Capacity; and (11) Advisory Design Exception No. 12: HDM Index 504.8 - Access Rights Opposite Ramp Terminals. Safety considerations were likely a factor in assessing each exception (e.g., "At a minimum, it is not expected that the proposed project would contribute to an increase in accidents or compromised safety along the corridor," Fact Sheet, p. 28).

Although "this section of I-405 has the highest accident concentrations in Orange County," absent from the Fact Sheet is any evidence of a detailed safety analysis for the eleven "design exceptions" which have already been "approved" by Caltrans. It is further unclear how any "approval" has occurred prior to: (1) Caltrans' selection of which alternative will be pursued; and (2) completion of the CEQA/NEPA process. The City would assert that Seal Beach's requested "design exceptions" introduce no greater safety considerations that the eleven exceptions already endorsed by Caltrans and outlined above.

5.0 ADDITIONAL SUPPORT FOR SEAL BEACH'S REQUESTED DESIGN EXCEPTIONS

Pursuant to Caltrans' "Updated Managed Lane Design" (April 7, 2011): "Geometric design of managed lane projects, including lane and shoulder widths, shall conform to the HDM [Highway Design Manual]. Deviations from the requirements of the HDM shall be evaluated and approved on a case-by-case basis in the manner prescribed in HDM Index 82.2. Section 3.10 of the HOV Guidelines provides a priority listing for reductions in cross-sectional elements for various managed lane configurations. This priority listing shall be utilized in the development of managed lane projects where reductions to cross-sectional elements are deemed necessary" (emphasis added).

Seal Beach has determined that the relocation of the Almond Avenue soundwall and the reduction of the Almond Avenue right-of-way would significantly impact the residents of the College Park East neighborhood and the safety of vehicular and non-vehicular usage of Almond Avenue. As such, the City-recommended design exceptions sought to not foreclose the ability of Caltrans to select and implement Alternative 2 but allow that action to occur in a manner which would neither necessitate the relocation of that soundwall nor adversely impact that established residential area. In order to accommodate both objectives, design variations were identified and those or similar exceptions were "deemed necessary" by the City.

As indicated above, Caltrans' existing policies allow for approval of design exceptions on a "case-by-case basis" (e.g., when conditions warrant). Eleven such exceptions have already been approved. Similarly, design plans initially proposed to enhance safety (e.g., "adding braided ramps to eliminate traffic weaving maneuvers, DEIR/S, pp. 3.2.6-40 and 41) have subsequently been eliminated from the project. However, each proposed Alternative requires both Mandatory and Advisory Design Exceptions in conformance with the Highway Design Manual, Chapter 80. Chapter 2 of the Supplemental Draft EIR/EIS report discusses the need for mandatory and Advisory Design exceptions and details the number required for each. These are provided below as reference:

Alternative 1: Nine Mandatory and 18 Advisory exceptions
Alternative 2: Nine Mandatory and 17 Advisory (including reduction of 12-foot lanes to 11-foot lanes) exceptions

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Alternative 3: Nine Mandatory and 20 Advisory exceptions

A list of exceptions or document reference was not provided in order to review the Design Exceptions. This is a critical document for the traffic study and should be included.

Researchers at the University of California Irvine and California State University, Long Beach have concluded that slimmer and slower highways, with extra lanes, are a better investment in urban areas than the American Association of State Highway Transportation Officials (AASHTO) recommended standard of 12-feet (3.65-meter) wide travel lanes and 10-foot (3.05-meter) wide shoulders on each side of two directional roadways. In "Optimizing Road Capacity and Type" (Small, Kenneth A. and Ng, Chen Feng, June 1, 2013), included in Attachment 5 (Optimizing Road Capacity and Type) herein, the authors conclude:

> [T]hat typical freeways in large urban areas are over-designed for free-flow speed at the expense of capacity. This arises largely from the finding that the cost elasticity for increasing free-flow speed is, on average, more than three times that for expanding capacity (roughly 1.4 vs. 0.4); as a result even modest amounts of congestion favor incremental investments in capacity relative to free-flow speed. While the optimal road configuration is very case-specific, we can state a more general policy conclusion: road design needs to allow for variety and flexibility, rather than being constrained to meet a predetermined set of standards such as those for US Interstate Highways

The report concludes that "empirical analysis provides suggestive evidence that in many large congested cities, standard expressway designs are unbalanced in the sense of providing more free-flow speed than is desirable relative to capacity; whereas the same is not true for urban streets and arterial highways. This observation in turn suggests giving greater attention to the possibilities of more low-footprint roads which offer considerable capacity even though speeds are only moderate even at low traffic levels."

6.0 SUBSEQUENT PROJECT MODIFICATIONS

6.1 HOVL Degradation

For HOVLs, the "minimum average operating speed" is defined in 23 U.S.C. 166(d)(2)(A) as 45 miles per hour (mph) for a facility with a speed limit of 50 mph or greater and not more than 10 mph below the speed limit for a facility with a speed limit of less than 50 mph. Facility "degradation" is defined in Section 166(d)(2) as one that does not meet minimum average operating speed of 45 mph for 90 percent of the time during a 180-day morning or evening weekday peak-hour period (or both for a reversible facility) in the case of a HOV facility with a speed limit of 50 mph or greater or not more than 10 mph below the speed limit in the case of a facility with a speed limit of less than 50 mph.

Under H.R. 4248 (Moving Ahead for Progress in the 21st Century) (MAP-21), as signed by the President on August 6, 2012, Section (d)(D) prescribes that the State has 180 days following notice of degradation to "bring the facility into compliance with the minimum average operating speed performance standard through changes to operation of the facility, including: (1) increasing the occupancy requirement for HOV lanes; (2) varying the toll charged to vehicles under subsection (b); (3) discontinuing allowing non-HOV vehicles to use the HOV lanes under subsection (b); or, (4) increasing the available capacity of the HOV facility." Pursuant to Section

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(d)(E) therein, "[i]f the Administrator determines that a State has violated or failed to comply with the Federal laws or the regulations in this part with respect to a project, he may withhold payment to the State of Federal funds on account of such project, withhold approval of further projects in the State, and take such other action that he deems appropriate under the circumstances, until compliance or remedial action has been accomplished by the State to the satisfaction of the Administrator." As authorized therein, the Secretary of Transportation can prescribe penalties, such that if the state fails to bring a facility into compliance, then the Secretary shall subject the state to appropriate program sanctions under Section 1.36 of Title 23 (or successor) until the performance is no longer degraded. As noted in the FHWA's Federal-Aid Highway Program Guidance:

> State agencies with jurisdiction over HOV facilities hold the sole authority to set occupancy requirements and to implement any of the HOV occupancy exceptions under 23 U.S.C. 166(b). There is no discretionary decision or any approval action to be made by the FHWA in these areas, except where a State wishes to exclude motorcycles or bicycles from an HOV lane under 23 U.S.C. 166(b)(2)(B). As such, NEPA does not apply to the States' actions in setting the occupancy requirements or implementing any of the HOV occupancy exceptions, including converting HOV lanes into HOT lanes under 23 U.S.C. 166(b)(4). Only when other factors, such as Federal-aid funding or a need to amend previous commitments, give rise to a FHWA approval must the FHWA perform a NEPA evaluation (emphasis added).

Based on those provisions, independent of the alternative selected under the current CEQA/NEPA process, it would appear that Caltrans, absent any subsequent NEPA review and concurrent public participation, retains the authority to implement a HOV-to-HOT lane conversion at any later date. It is uncertain whether a local governmental entity, such as OCTA, could so condition the project as to preclude such later actions or whether any such preclusion would bind subsequent administrations. As further indicated therein:

> Much of the legislation pertaining to tolling is included in MAP-21 Section 1512 'Tolling', which amends Section 129 of Title 23 U.S.C. MAP-21 has removed the requirement for an agreement to be executed with the U.S. DOT [United States Department of Transportation] prior to tolling under mainstream tolling programs, though such agreements will still be required under any toll pilot programs. Specifically, the tolling of new Interstates and added lanes on existing Interstates are now mainstreamed; previously these conditions existed under the Interstate System Construction Toll Pilot Program and the Express Lanes Demonstration Program, both of which no longer exist.

As such, it is unclear whether the requisite legislation identified in the DEIR/S (e.g., "If Alternative 3 is selected for construction, authority to operate the tolled Express Lane component of the alternative would be needed from the state legislature. Authority to operate a toll facility on the Interstate Highway System would be required from FHWA," DEIR/S, p. 1-19) is still required. If not, then the change in implementing legislation constitutes additional "significant new information" requiring disclosure in the SDEIR/S. 51

With regards to the proposed project, neither the DEIR/S nor the SDEIR/S explicitly describe what "factors" trigger the need for NEPA compliance and what federal actions may occur following CEQA/NEPA compliance without triggering further NEPA review. An understanding of

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those actions is necessary to determine whether the Lead Agency has met any associated burden of proof that may be required for those actions.

6.2 Decision to Toll

At a community meeting conducted in Seal Beach on July 9, 2013, with representatives of the OCTA in attendance, members of the public asked City representatives "When will decisions concerning which alternative Caltrans will implemented be made?"

In response, it was the City's apparently mistaken belief that that decision will be made at the end of the current CEQA/NEPA process. However, as noted in the Federal-Aid Highway Program Guidance, the FHWA notes that: (1) "The decision to toll as part of a 'reconstruction' project may occur anytime up until the completion of all work under the contract for the physical construction of the project. If a the physical construction of the location to be tolled is to be conducted under multiple contracts, then the decision to toll may occur anytime up until the completion of the final contract comprising the reconstruction activities" (emphasis added). (2) "The decision to toll lanes that are added to any existing free facility through initial construction, reconstruction, rehabilitation, or restoration, so long as the facility has the same number of free lanes after construction as it did before, may occur any time up until the new lanes are open to traffic" (emphasis added). (3) "Decisions regarding the amount of toll rates are to be made solely by the State DOT [Department of Transportation] or other qualified public authority. These decisions require no review, input or oversight by the FHWA" (emphasis added).

As a result, independent of which alternative is selected by OCTA and Caltrans, subsequent decisionmakers appear to have the authority to materially alter that initial selection and implement a tolled facility along the I-405 Freeway at any time up until the date the facilities are operational. Since construction is estimated to require approximately 4-1/2 years, assuming Caltrans acts on the CEQA/NEPA document in "September 2013" (April 2013 Path Forward), the I-405 Freeway could be converted to a HOTL project at any time before around February 2018.

Absent from the DEIR/S and SDEIR/S is any reference to or discussion of what authorization may be provided (under statute or agency procedures) to subsequent boards and/or executive staffs which would allow those parties to materially alter any decisions by current boards and current officials with regards to the proposed project. Since once "new" or "reconstructed" lanes would already be in place (e.g., changes to the physical environment have been completed), subsequent operational changes (e.g., HOV-to-HOT lane conversion) appears exempt from CEQA/NEPA and can, therefore, occur with minimal fanfare and outside public scrutiny. The flexibility provided under statute allowing for subsequent HOV-to-HOT lane conversion gives further credence to the need to examine the proposed project in a substantially broader, system-wide perspective.

Additionally, the DEIRS/S does not address the traffic congestion from the OC/LA County Line to SR-73. The main focus of this report is the impacts to the City of Long Beach intersections adjacent to the "project". Missing from the analysis data is the impacts to the congestion at the County Line before and after the I-605 Interchange. The report discusses four (4) accomplishments of Alternative 3 which includes the following: 52

1. Reduce Congestion
2. Enhance Operations

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3. Increase mobility, improve trip reliability, maximize throughput, and optimize operations
4. Minimize environmental impacts and ROW acquisitions

Since the Supplemental Draft EIR/EIS does not include the corridor information such as level of service, v/c ratios, d/c ratios, link level of service, or a discussion of "F" verses "F ++", the ability to quantify the four accomplishments of Alternative 3 cannot be verified. The information previously provided in the December 2012 Supplement Traffic Study should be included and compared to the Supplemental Draft EIR/EIS defined accomplishments for Alternative 3 to quantify them. 52 cont.

Is Seal Beach correct in its interpretation of the above provisions, namely that a subsequent decision by a federal agency could materially alter the nature and operational characteristics of any actions that may be taken by Caltrans with regards to the proposed project? Would a later HOV-to-HOT lane conversion require any additional CEQA/NEPA analysis? If there are no requirements for subsequent or supplemental environmental review prior to such conversion, why is the DEIR/S and SDEIR/S not defective based on its failure to disclose and analyze that scenario? What local, State, or federal agencies could initiate that subsequent change?

7.0 SUPPLEMENTAL DEIR/S AND SUPPLEMENTAL TRAFFIC STUDY

7.1 General Comment

Alternative one, Alternative 2, and Alternative 3 requires both Mandatory and Advisory design Exceptions. Most notably is Alternative 2 where the "Project" is proposing 11-foot mainline lanes from Seal Beach Boulevard to SR-22 to avoid the Seal Beach Naval Weapons Station. Eleven foot mainline lanes were proposed by the City of Seal Beach for the northbound direction between SR-22 and the Seal Beach Boulevard interchange. This request was denied in a letter dated June 25, 2013 from Mr. Jim Bell, Executive Director, Capital Programs, to Mr. Sean Crumby, Director of Public Work for the City of Seal Beach. As referenced in Attachment A, the City proposed 11-foot lanes were denied based upon the safety implications and shown in the accompanying table showing that the HDM standard for travel lanes is 12-feet. But it does not address the 11-foot lanes proposed by the project in the same area. If the project is considering 11-foot lanes, the same consideration should also be given to the City of Seal Beach's request for the same design exception. See Page 2-5, second paragraph 53

The section labeled "Transportation System Management/Transportation Demand Management Alternative" does not provide very much detail in supporting other mode of transportation to reduce overall SOV's or traffic congestion. In addition, this section focused on TDM opportunities for local roadways and not the affected freeways. This section should be expanded to include the freeways and detailed local streets affected by the project. 54

Finally, Section 3.1 "Traffic and Transportation Facilities" does not elaborate on the project impacts to Long Beach. With the background traffic and development within the Long Beach area, traffic is expected to increase. Yet, no discussion on how this project will create new trips within this area. A detailed analysis and discussion for this impact is requested. 55

7.2 Incomplete Project Description

"'Project' means the whole of the action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the

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environment, and that is any of the following: (1) An activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100-65700. (2) An activity undertaken by a person which is supported in whole or in part through public agency contacts, grants, subsidies, loans, or other forms of assistance from one or more public agencies. (3) An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies" (emphasis added) (14 CCR 15379[a]).

Because key aspects of the proposed project remain undefined, it is not possible to accurately assess potential project-related and cumulative environmental effects. For example, in response to an inquiry from the OCTA Board of Directors regarding the use of "net toll revenues," it is apparent that not all aspects of the proposed project have been described or analyzed in the DEIR/S and SDEIR/S.

Referencing a memorandum from Will Kempton, OCTA Chief Executive Officer to Members of the Board of Directors (Subject: I-405 Improvement Project Follow-Up Items), dated October 11, 2012, included in the October 22, 2012 Board packet:

> Staff proposes to review the I-405 Major Investment Study (MIS) and the Central County Corridor MIS to develop an initial inventory of projects. The projects will include freeway, transit, and arterial highway system improvements. Staff will also use the OCTA Long Range Transportation Plan to further refine the projects and relative priorities. The initial listing of work can be completed within 60 days of Board approval of an I-405 alternative (emphasis added).

Absent from the DEIR/S and SDEIR/S is any discussion or analysis of the intended or likely use of toll revenues under Alternative 3. If additional revenues are projected over those associated with capital costs and debt service and if those funds are to be used for other "freeway, transit, and arterial highway system improvements," the environmental impacts of those revenue expenditure need to be addressed as part of the project's CEQA/NEPA documentation.

7.3 Corridor System Management Plan

As indicated in the Draft Final CSMP: "Major bottlenecks are the primary cause of corridor performance degradation and the resulting congestion and lost productivity. It is important to verify the actual location and cause(s) of each major bottleneck to determine traffic operational problems. . .By definition, a bottleneck is a condition where traffic demand exceeds the capacity of the roadway facility. In most cases, the cause of bottlenecks is related to a sudden reduction in capacity, such as roadway geometry, heavy merging and weaving, and driver distractions; or a surge in demand that the facility cannot accommodate. In many cases, it is a combination of increased demand and capacity reductions" (Draft Final CSMP, p. 155).

Caltrans' recognized that "bottlenecks are generally the major cause for mobility and productivity performance degradations and are often related to safety degradations as well" (Draft Final CSMP, p. 2). If bottlenecks adversely affect mobility and contribute to congestion, then any plans whose goal is to "reduce congestion" and "increase mobility" (DEIR/S, p. 1-5) would need to focus on the elimination of existing bottlenecks (choke points) and the avoidance of the creation of new ones.

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Citing the I-605/I-405 Interchange as an existing bottleneck (e.g., "[t]he I-605 has a potential bottleneck location at the I-405 Interchange in both peak periods," Draft Final CSMP, p. 201), Caltrans states that "[d]uring the PM peak hours, the traffic from the I-605 at about 3,100 vph [vehicles per hour] merges with the southbound I-405 traffic carrying about 6,500 vph in 4 lanes, for a total of over 9,600 vph in five lanes, as the outer lane is dropped. This lane drop results in the mainline traffic over the threshold level creating the bottleneck condition and resulting traffic congestion" (emphasis added) (Draft Final CSMP, p. 183). In addition, with regards to the larger "corridor" area examined therein, Caltrans identified the following pre-project bottlenecks:

> **State Route 22**
> Eastbound Bottlenecks. Starting from the Los Angeles/Orange County Line and moving eastbound, the following bottlenecks were found: [1] Euclid On – This bottleneck occurs when there are high volumes on the on-ramp and mainlines. [2] Harbor On – This bottleneck also occurs when there are high volumes on the onramp and mainlines. [3] Fairview On – A lane drop causes vehicles to weave between the Fairview onramp and the City Drive/I-5, creating the bottleneck. [4] I-5 Off/City Drive IC – The inability of the exit facility to accommodate the demand creates this bottleneck. [5] I-5 On/Town and Country Off – Heavy cross-weaving between the I-5 on-ramp and Town and Country exit contributes to this bottleneck.
>
> Westbound Bottlenecks. Starting from SR-55 and moving westbound, the following bottlenecks were identified: [1] Northbound I-5 On-Ramp – This bottleneck relates to high volumes and cross-weaving and queuing of vehicles destined for SR-22. [2] Garden Grove On – Congestion and queuing can be seen from the southbound I-5 connector on-ramp. [3] Valley View Off – A lane drop from four to three lanes contributes to this bottleneck. [4] I-405 On-Ramp – This bottleneck relates to a lane drop from three to two lanes and cross-weaving of vehicles destined for I-405
>
> **Interstate 405**
> Northbound Bottlenecks. Starting from I-5 and moving northbound, the following bottlenecks were identified: [1] Sand Canyon Off-ramp: A lane drop contributes to this bottleneck location. [2] Jeffrey/University On-ramp: Consecutive on-ramp merges contribute to this bottleneck location. [3] SR-73/Fairview On-ramp: An uphill grade and reduced mainline capacity creates a bottleneck. [4] Euclid On-ramp: Weaving at this location creates a bottleneck. [5] Brookhurst On-ramp: A platoon of vehicles from the collector/distributor contributes to this bottleneck. [6] SR-39 On-ramp: The platoon of vehicles from the collector/distributor also contributes to this bottleneck. [7] SR-22 On-ramp: A lane drop on the SR-22 ramp does not provide enough capacity for the vehicles merging on the I-405 mainline.
>
> Southbound Bottlenecks. Starting from the Los Angeles/Orange County Line and moving southbound, the following bottlenecks were identified: [1] I-605 On-ramp: A lane drop occurs at the I-405 merge reducing the total lanes from six to five lanes. [2] Seal Beach On-ramp: Although not a major bottleneck location, congestion occurs as a result of cross-weaving between the Seal Beach Boulevard on-ramp and SR-22 off-ramp. [3] Valley View/SR-22: High demand likely contributes to this bottleneck location. [4] SR-39 On-ramp: Consecutive on-ramp merges occur at this location. [5] Warner On-ramp: This location is the most significant bottleneck on this corridor with queues extending for many miles. [6] Talbert On-ramp: The

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> mainline capacity cannot accommodate the flow of vehicles during the peak hours. [7] Bristol Off-ramp: Cross-weaving traffic between two ramps contributes to this bottleneck location. [8] MacArthur Off-ramp: Consecutive SR-55 on-ramp merges contributes to this bottleneck. [9] Culver On-ramp: The mainline cannot accommodate the flow from back-to-back merges. [10] Jeffrey/University On-ramp: Again, the mainline cannot accommodate the flow from back-to-back merges. [11] Sand/Shady Canyon On-ramp: The high demand on the on-ramp combined with the already high demand on the mainline creates this bottleneck.
>
> **Interstate 605**
> Southbound Bottleneck. Southbound I-405 On-ramp: this bottleneck location occurs during the PM peak as a result of lane drop that occurs after the I-405 merge (emphasis added) (Draft Final CSMP, p. 126-128).

As indicated above, a number of conditions can cause or contribution to the creation of bottlenecks, including: (1) lane drops and lane mergers; (2) weaving and cross-weaving; (3) capacity limitations and reductions; and (4) high traffic demands. Where these conditions exist or are created, choke points can be established causing traffic to backup, level of service conditions to drop, and creating additional safety concerns.

In the Draft Final CSMP, Caltrans examined bottlenecks attributable to existing HOV facilities. These bottlenecks were primarily associated with ingress/egress locations and were the result of speed differentials between the HOV and GP lanes. Specifically, Caltrans noted that:

> [V]ehicles on the HOV lane that intend to exit the corridor must stop to squeeze into the mainline congested traffic stream. Similarly, the vehicles on the mainline which intend to enter the HOV lane must do so from a very low speed, disrupting the HOV lane flow. . .When the mainline freeway is congested, vehicles have a difficult time entering and exiting the HOV lane. As a result, bottleneck conditions occur and vehicles queue behind these locations (Draft Final CSMP, pp. 186 and 191).

Whether with regards to HOVLs (including other managed lanes) and/or at all on-ramps where ramp speeds exceed merging GP-lane speeds, these problematic conditions would appear equally applicable at all access points when speed differentials exist between the managed and GP lanes. Although the proposed project seeks to address many of these existing conditions, the Lead Agency has sought to avoid acknowledging and analyzing remaining choke points, ignored the existence of new bottlenecks that the proposed project will create, and the project's potential to exacerbate existing bottlenecks (e.g., lane drops and ingress/egress into and from managed lanes).

Absent from the DEIR/S and SDEIR/S is any reference to the CSMP. In addition, the document includes no discussion of: (1) the project's relationship to and consistency with the CSMP; (2) Caltrans' "systems management plan" (e.g., "This framework aims to get the most of our transportation infrastructure through a variety of strategies, not just through the traditional and increasingly expensive expansion projects," Draft Final CSMP, p. 3) for the SR-22/I-405/I-605 corridor; (3) whether the proposed project will effectively eliminate the identified bottlenecks; and (3) the potential for the proposed project to cause or contribute to new bottlenecks based on the contributing causes described therein.

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7.4 Long Beach Area Traffic Study Technical Working Group

As indicated in material provided to the OCTA's Board of Directors on January 28, 2013 (http://www.octa.net/pdf/4.22.13I-405PathForwardrc_REVISED.pdf), unspecified parties (likely Caltrans and OCTA) "[f]ormed the Long Beach Area Traffic Study Technical Working Group (TWG) (Orange County Transportation Authority, California Department of Transportation, Los Angeles County Metropolitan Transportation Authority, City of Long Beach, Gateway Cities Council of Governments. TWG agreed on parameters for a supplemental traffic study report."

The OCTA possesses an economic interest in the project (including any resulting revenues) and, as a result of its lack of impartiality, an inherent disinclination to increase entitlement costs, extend the entitlement schedule, or for its own consultants to find and disclose material defects with its own technical analyses. With a name "Long Beach Area Traffic Study Technical Working Group" and with no other representation by Orange County or its affected municipalities, it is not surprising that no supplemental traffic analysis in Orange County was recommended by the TWG or included in the SDEIR/S.

Absent from the SDEIR/S and STS are copies of any agendas, minutes, handouts, other materials considered by the TWG, and any discoverable writings stating the TWG's findings and recommendations. It is also not known whether their meetings (e.g., "Long Beach Area Traffic Study Technical Working Group on September 11, October 17, November 14, and December 12, 2012, and January 8 and February 13, 2013," p. 5-1; "A meeting was held in the field on March 15, 2012, to review potential impacts and avoidance and minimization/mitigation along 7th Street in the City of Long Beach. The field review was attended by representatives of OCTA, Caltrans District 7, and OCTA's consultant," p. 5-1) were publicly notice, whether those meetings were open to the general public and other affected agencies, whether the public and other affected agencies had an opportunity to participate in meeting discussions, or even the level of attendance by TWG participants. In the absence of that information, it is not possible to know the TWG's charter, the reasons supporting the group's composition, what questions the TWG were asked to answer, what supporting documentation was provided, and whether there existed any dissenting options and/or recommendations for an alternative analytical scope. 56

The substantive differences between the December 2012 STS and the June 2013 STS suggest the possibility of dissention among TWG participants, radically different understandings of the TWG's purpose and the issues that the TWG were tasked to answer, Caltrans' and/or the OCTA's subsequent rejection of many of the TWG's findings and recommendations, and/or attempts by Caltrans and/or the OCTA to conceal information concerning the nature and extend of project-related and cumulative impacts. As indicated in the December 2012 STS

> [T]his Supplement contains four sections, numbered and providing additional traffic Information on the four topics in the list below: (1) Alternative 3 Modified. Section 1 provides traffic analysis assuming truncation of the Express Lanes near the Euclid Street interchange. Alternative 3 Modified also includes an optional design of the Magnolia/Warner interchange that does not include braided ramps and a modification to the northbound merge of the direct connector from westbound SR-22 into the Express Lanes. (2) Alternative 1 Magnolia/Warner Interchange. Section 2 provides traffic analysis of design options for the Magnolia/Warner interchange that do not include braided ramps. (3) Operational Analysis Northbound Approaching I-605. Potential for operational difficulties northbound on I-405 at I-605 is analyzed. As the build alternatives approach the LA County line, the

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> additional lanes proposed in each of the build alternatives continue into receiving lanes on branch connectors to SR-22/7th Street westbound and I-605 northbound. If more motorists desire to continue northbound on I-405 in LA County than the freeway can handle as the additional lanes exit to SR-22/7th Street and I-605, there is the potential for a bottleneck to occur. (4) Long Beach Area Traffic Study. Traffic changes in the Long Beach area along SR-22/7th Street, I-405, and I-605, at their local interchanges, and at nearby intersections due to the proposed build alternatives are evaluated. The study area includes Carson Street in the vicinity of I-605 which, in addition to the City of Long Beach, includes the Cities of Lakewood and Hawaiian Gardens (emphasis added) (December 2012 STS, p. i).

In contrast to the information presented in the December 2012 STS and CSMP, the June 2013 STS states: "This Supplemental provides traffic information to the areas north of the limits of the proposed freeway capacity enhancement in Orange County. The traffic information is the evaluation of the traffic changes in the Long Beach area along SR-22/7th Street, I-405, and I-605, at their local interchanges, and at nearby intersections due to the proposed build alternatives. The study area includes Carson Street in the vicinity of I-605 which, in addition to the City of Long Beach, includes Cities of Lakewood and Hawaiian Gardens. The objective of this evaluation is to determine the extent of any potential adverse cumulative traffic effects of the proposed project alternatives north of the limits of the proposed capacity improvements" (emphasis added) (STS, p. 1-1).

It is not known what is meant by OCTA's statement that "TWG agreed on parameters for a supplemental traffic study report." What was the nature of that agreement and how was that agreement documented? If an agreed upon work plan was established prior to the release of the Public Notice, why was information concerning the precise scope of that analysis not more thoroughly described therein (e.g., "The recirculation focus on new traffic information in the Long Beach area," Public Notice) so that parties suggesting a different or expanded scope could present meaningful recommendations thereupon? Because the December 2012 STS differs substantially from the June 2013 STS, which of those two diverse reports more precisely contains the "TWG agreed on parameters"? What written documentation evidences TWG's agreed on parameters"? Did those parameters include anything approximating an "operational analysis" of I-405 Freeway traffic relating to "northbound approaching I-605" (as referenced in the December 2012 STS)? 57

As indicated in the OCTA's April 2013 Path Forward, the proposed project has been subsequently revised. Those revisions include, but may not be limited to, the following changes: (1) "eliminates braided ramps in City of Fountain Valley" (Alternatives 1, 2, and 3); and (2) "truncates express lanes at Euclid Street/Ellis Street, eliminates State Route 73 connector" (Alternative 3) (emphasis added). It appears that both of those changes were addressed in the December 2012 STS; however, none of the analysis relating to those changes has been included in the SDEIR/S and no record of those discussions presented in the June 2013 STS.

As required under Section 15020 of the State CEQA Guidelines, "[e]ach public agency is responsible for complying with CEQA and these Guidelines. A public agency must meet its own responsibilities under CEQA and shall not rely on comments from other public agencies or private citizens as a substitute for work CEQA requires the lead agency to accomplish." It is the function of the Lead Agency and not the TWG to determine the nature and extent of the technical analysis required under CEQA/NEPA. If the Lead Agency sought to delegate to other parties responsibility for the identification of defects in the DEIR/S, representation by a broader

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range of stakeholders should have been undertaken. As a result of the Lead Agency's delegation of its own obligations to another entity, the TWG's limited composition and representation, the exclusive Los Angeles County-based focus of the TWG, its apparent limited focus, and the substantive unexplained differences between the December 2012 STS and the June 2013 STS, the findings and recommendations of TWG and any technical studies resulting therefrom (inclusive of both the SDEIR/S and the June 2013 STS) cannot themselves be deemed indicative of the project's traffic and non-traffic-related analytical defects.

Pursuant to Section 21092.4(a) of CEQA: "For a project of statewide, regional, or areawide significance, the lead agency shall consult with transportation planning agencies and public agencies that have transportation facilities within their jurisdictions that could be affected by the project. Consultation shall be conducted in the same manner as for responsible agencies pursuant to this division, and shall be for the purpose of the lead agency obtaining information concerning the project's effect on major local arterials, public transit, freeways, highways, overpasses, on-ramps, off-ramps, and rail transit service within the jurisdiction of a transportation planning agency or a public agency that is consulted by the lead agency" (emphasis added). As defined in Section 21092.4(b) therein, "'transportation facilities' includes major local arterials and public transit within five miles of the project site and freeways, highways, overpasses, on-ramps, off-ramps, and rail transit service within 10 miles of the project site."

In addition, as further indicated in Section 21104 of CEQA: "(a) Prior to completing an environmental impact report, the state lead agency shall consult with, and obtain comments from, each responsible agency, trustee agency, any public agency that has jurisdiction by law with respect to the project, and any city or county that borders on a city or county within which the project is located unless otherwise designated annually by agreement between the state lead agency and the city or county, and may consult with any person who has special expertise with respect to any environmental impact involved. In the case of a project described in subdivision (c) of Section 21065, the state lead agency shall, upon the request of the applicant, provide for early consultation to identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in the environmental impact report. The state lead agency may consult with persons identified by the applicant who the applicant believes will be concerned with the environmental effects of the project and may consult with members of the public who have made a written request to be consulted on the project. A request by the applicant for early consultation shall be made not later than 30 days after the determination required by Section 21080.1 with respect to the project. (b) The state lead agency shall consult with, and obtain comments from, the State Air Resources Board in preparing an environmental impact report on a highway or freeway project, as to the air pollution impact of the potential vehicular use of the highway or freeway" (emphasis added).

Although they have not been disclosed, Seal Beach believes that any comments submitted to the Lead Agency from the California Air Resources Control Board (CARB) and/or the South Coast Air Quality Management District (SCAQMD) likely raise substantive technical issues regarding the adequacy of the project's air quality analysis and an adequate technical response thereto would likely result in the introduction of additional "significant new information." 58

As defined in Section 15005(a) of the State CEQA Guidelines: "'Must' or 'shall' identifies a mandatory element which all public agencies are required to follow." Seal Beach believes that no such consultation occurred prior to the dissemination of the SDEIR/S. Because the SDEIR/S and June 2013 STS had already been completed prior to its release, Caltrans' Public Notice

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was not a solicitation for comments but merely an announcement that unspecified technical studies had already been completed and the SDEIR/S had already been prepared and published.

7.5 City of Long Beach Comment Letter

Despite the time and effort expended to produce the SDEIR/S, the concerns expressed by Seal Beach, its residents, and business community generally remain unaddressed. In clear contrast to Seal Beach's comments on the DEIR/S (as well as every other comment that was submitted by every other stakeholders in response to the release of the DEIR/S), Long Beach's 12-page comment letter (purported including as "Appendix A" in the SDEIR/S) not only received an early response but apparently predicated the preparation of both the SDEIR/S and multiple iterations of the STS. In making that distinction, the Lead Agency appears to categorize Long Beach's comments as exceptionally meritorious (e.g., "As a result of the comments received on potential traffic effects within the City of Long Beach, Caltrans prepared the Supplemental Traffic Study," p. 1-2) while concurrently categorize all other stakeholder comments as trivial, insignificant, and/or unsubstantial. 59

Although many of the comments and concerns raised by Long Beach may be similar to those presented by Seal Beach, the City's comments are neither acknowledged nor expressly addressed in the SDEIR/S. What was the nature of Long Beach's comments that singled only those comments out for special consideration while relegating all other comments to a separate CEQA/NEPA process (e.g., "Comments that are received on information provided in this Supplemental Draft EIR/EIS will be responded to, and these responses will be provided in the Final EIR/EIS for the Interstate 405 Improvement Project, along with responses to comments on the original Draft EIR/EIS" [emphasis added], p. 1-3)?

As indicated by the Lead Agency: "The new information and analysis presented within the Supplemental Draft EIR/EIS is based on the Supplemental Traffic Study, prepared in April 2013 in response to City of Long Beach comments on the Draft EIR/EIS (See Appendix A for a copy of the City's comment letter)" (p. 1-2). In actuality, the Lead Agency even misrepresents the document that purports to be foundational basis for the preparation of the SDEIR/S. Presented in "Appendix A" is a letter from Long Beach, dated January 31, 2013, submitted in response to the December 2012 STS. Long Beach's actual comment letter on the DEIR/S (which was not included in the SDEIR/S) is dated July 17-18, 2012 and is included as Attachment 4 (I-405 Freeway Improvement Project Letter and Memorandum) herein.

Among other things, the December 2012 STS and the June 2013 STS demonstrate that arterial roadways and intersections substantially removed (geographically) from the project's alleged "logical termini" will be significantly and cumulatively impacted by the proposed project. While focusing primarily on intersections located in Long Beach (i.e., "The study area includes Carson Street in the vicinity of I-605 which, in addition to the City of Long Beach, includes Cities of Lakewood and Hawaiian Gardens," STS, p. 1-1), based on the results of those analyses, Seal Beach believes that other non-analyzed arterials within the City and elsewhere will also be adversely impacted by the proposed project.
Representatives of the Lead Agency are invited to meet with the City's Public Works Director to identify those additional intersections within Seal Beach that will be adversely impacted by the proposed project and discuss Seal Beach's concerns relative thereto.

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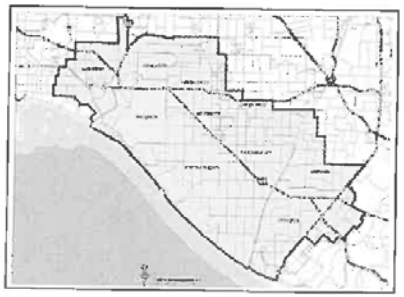
The SDEIR/S expands the "study area" described in the DEIR/S and introduces the "Long Beach study traffic study area" (p. 3-3). The "Long Beach study area" is illustrated in Figure 3-1 (Long Beach Study Area) in the SDEIR/S and described as: "[1] I-405 from I-605 to Lakewood Boulevard; [2] I-605 from Katella Avenue to Carson Street; and [3] SR-22/7th Street from I-405 to Park Avenue. The study area includes all of the interchanges along I-405 and I-605 within the limits noted above, including arterial/ramp intersections and arterial/arterial intersections in the immediate vicinity of the interchanges" (p. 3-3). In contrast, the DEIR/S notes that "[t]he project study area is located within an extensively urbanized area of Orange County" (DEIR/S, p. 3.1.1-2) and "[t]he northern terminus of the proposed project is at the interchange of the I-405 and I-605 freeways" (DEIR/S, p. 1-24). It is, therefore, evident that both the geographic boundaries of the "study area" and the project's "logical termini" are no longer as represented in the DEIR/S. As a result, the totality of the CEQA/NEPA analysis must also expand, not merely that associated with traffic impacts at select intersections. 60

Similarly, if the proposed project is demonstrated to produce exogenous impacts extending to the north (thus warranting the introduction of a new "Long Beach study area" and predicating the preparation of the SDEIR/S and document recirculation), it must be equally assumed that those same external consequences and expanded area of potentially significant environmental impacts would also be evident to the south, east, and west of the DEIR/S' original "study area." No reference to, consideration of, or evaluation of the further expansion of the DEIR/S' original "study area" to the south, east, or west is, however, presented in the SDEIR/S (e.g., "The objective of the Long Beach Area Traffic Study is to determine the extent of any potential traffic impacts of the proposed project alternatives north of the limits of the proposed capacity improvements" [emphasis added], December 2012 STS, p. 4-1).

The inclusion of the "Long Beach study area" is nothing new. As illustrated (Source: OCTA, Interstate 405 Major Investment Study Final Report, February 2006, p. 8), a larger geographic area than that encompassing the SDEIR/S' original "study area" and the SDEIR/S' "Long Beach study area" was included in OCTA's MIS. In addition to the "study area" extending further to the north into Long Beach, it is noted that the MIS' depicted area also extends southward beyond the SR-55 Freeway (e.g., southern study area) and further east along the SR-22 Freeway (eastern study area).



As indicated in Long Beach's comments on the December 2012 STS:

> Based on the fact that the Supplemental Traffic Study reveals significant impacts and the fact that the Gateway Cities model shows that the Supplemental Traffic Study impacts are under-represented, the [Long Beach] study area is inadequate. The significant impacts likely go further than the area that was studied, based on the analysis conducted by the City [of Long Beach]" (STS, Appendix A, p. 3).

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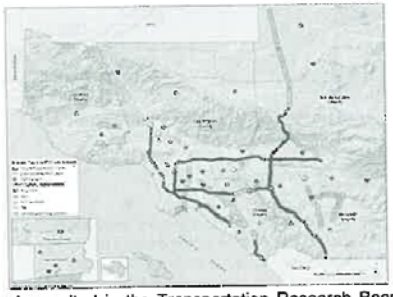
As evident by the SDEIR/S, the STS, and Long Beach's critique of the December 2012 STS, significant impacts (requiring mitigation) have been demonstrated to occur beyond the confines of the "study area" examined in the DEIR/S. Although part of the planning effort upon which the proposed project is derived, absent evidence that intersections within those areas do not warrant further investigation based on anticipated project-related and cumulative contributions to those intersections, those additional areas of potential impaction which were identified in the MIS have been excluded from the CEQA/NEPA analyses.

The continuing and unaddressed fallacy of the DEIR/S and SDEIR/S is the Lead Agency's failure to examine the larger transportation "corridor" of which the proposed project is but a part, its fragmentation of proposed and reasonably foreseeable improvements to and in proximity of that corridor (e.g., 5-mile radius), the anticipated traffic diversion onto and from other linked freeways and arterials based on both the presence of HOTLs and congested GP lanes (e.g., "VMT can be expected to increase on I-405 under the build alternatives because freeway congestion would be reduced with a consequential reduction in diversion from the freeway to local streets, DEIR/S, p. 3.1.6-80), and continuing failure to fully address the on-site/off-site and direct/indirect environmental consequences of the proposed project.

While the Lead Agency's efforts to analyze arterial impacts in Los Angeles County are commendable, Caltrans continues to examine only a part of a larger problem by ignoring congestion and mobility-related issues beyond the project's stated "logical termini."

As indicated in the accompanying graphic, extracted from the "2012-2035 Regional Transportation Plan/Sustainable Communities Strategy" (SCAG, April 4, 2012) (Figure 2.6), with regards to the I-405 Freeway, the proposed "Express/HOT Lane Network" within the SCAG region does not terminate at the Orange/Los Angeles County border but continues northward to its northern linkage with the I-5 Freeway in the San Fernando Valley. Other linked freeway segments which have been ignored by the Lead Agency include the I-110 and SR-91 Freeways. Since "CEQA was intended to be interpreted in such a manner as to afford the fullest possible protection to the environment" (14 CCR 15003[f]), for the purpose of CEQA/NEPA compliance, the proposed project and both its direct and indirect impacts, must be examined in a broader regional geographic context.



The proposed project does not exist in isolation but is a component of the regional's existing and proposed HOTL network. With each new link, by repeatedly segregating that network into isolated component parts and ignoring their connectivity, contrary to CEQA/NEPA, Caltrans seeks to avoid a broader system-wide analysis of the larger environmental and socioeconomic consequences of this rapidly growing system. If the State refuses to conduct this analysis, what agency should then bear responsibility for the more comprehensive analysis required for environmental protection?

As posited in the Transportation Research Board's "Research Needs Statement" (posted on January 6, 2010) (http://rns.trb.org/dproject.asp?n=24742) and as presented herein as an inquiry to the Lead Agency:

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High Occupancy Toll lanes are gradually becoming a mainstream congestion management strategy. Thus far, most of the HOTLs have been implemented as isolated projects. Some areas have begun to plan for HOTL networks. But little attention has been given to issues relating to transitioning HOTLs or HOTL networks to full system pricing environments. Will this mentality create potential problems later if full system pricing is ultimately where we are headed?

7.6 Fragmentation

By preparing a SDEIR/S addressing only "project-related traffic effects within the City of Long Beach" (p. S-1), the Lead Agency ignores other "new information" originating after the release of the DEIR/S (e.g., "The information and analysis within this Supplemental Draft EIR/EIS was not available during the circulation period for the Draft EIR/EIS," p. S-1) which also has direct and meaningful relevancy with regards to the proposed project and its CEQA/NEPA compliance obligations. That information includes, but may not be limited to, the OCTA's Board of Directors' selection of a LPA, issues raised by affected stakeholders in response to the release of the DEIR/S, new executive policies relating to greenhouse gas (GHG) emissions, and changes in State law relating to continuous access to HOVLs.

Other "recent actions" identified by the OCTA and presented to its Board of Directors on January 28, 2013 (http://www.octa.net/pdf/1.28.12I-405ImprovementProjectUpdate.pdf) include: "[1] City of Long Beach request for re-circulation of DEIR/DEIS with revised traffic study; [2] Caltrans direction to re-circulate with revised traffic study; [3] Caltrans high-occupancy vehicle (HOV) lane degradation report; [4] LACMTA [Los Angeles County Metropolitan Transportation Authority] feasibility study to convert Interstate 405 HOV in LA [Los Angeles] County into high-occupancy toll lanes." With the exception of recirculation, none of these issues and related actions are either identified or addressed in the SDEIR/S.

Information concerning the Caltrans "District 12 HOV Degradation" study, as presented to OCTA's Board of Directors on April 8, 2013, is included as Attachment 3 (High-Occupancy Vehicle Degradation Study Powerpoint) herein. As illustrated therein, in Orange County, "HOV lane degradation" has been identified on Interstates 5 and 405 and on State Routes 22, 57, and 91. As a result, the condition is not unique to the I-405 Freeway.

Proposed improvements to the I-405 Freeway would divert traffic from or to other linked freeway segments and arterials (e.g., "VMT can be expected to increase on I-405 under the build alternatives because freeway congestion would be reduced with a consequential reduction in diversion from the freeway to local streets," DEIR/S, p. 3.1.6-81). Additionally, the I-405 Freeway has been shown to be an alternative route to the I-5 Freeway and other freeways and arterials for motorists in both Los Angeles and Orange County (e.g., "I-405 is considered a bypass route to the Interstate 5 Santa Ana/Golden State Freeway through Orange County," DEIR/S, Noise Study Report, p. 1). As a result, for the purpose of CEQA/NEPA compliance, the actual "study area" and the resulting environmental analysis must include all linked freeway segments. Although neither addressed in the DEIR/S nor in the SDEIR/S, "related projects" producing potentially cumulative impacts (e.g., "most of the reasonably foreseeable projects are primarily transportation improvements," DEIR/S, p. 3.1.1-9) include all identified degraded freeway segments within Caltrans' District 7 and District 12.

In addition, the OCTA notes that LACMTA has initiated a "feasibility study to covert Interstate 405 HOV [lanes] in LA County into high-occupancy toll lanes." Although no additional

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information on that study is presented, it is believed that the reference relates to an action by the LACMTA's Board of Directors on June 27, 2013 which directed LACMTA "staff [to] come back next month with a feasibility study on implementing a congestion pricing toll program for the 405 HOV lanes" (http://media.metro.net/board/recap/2013/recap_20130627rbm.pdf). Separate committee actions had occurred prior to that meeting.

Because it predicates a more corridor-wide analysis, the introduction of managed lanes on the abutting segment of the I-405 Freeway in Los Angeles County serves to substantially alter the nature of the CEQA/NEPA documentation and the potential environmental impacts associated with those linked activities. Even prior to the LACMTA's action, independent of its representation in the DEIR/S and SDEIR/S, for the purpose of CEQA/NEPA compliance, the project at hand constitutes the totality of the proposed improvements to the I-405 Freeway in both Orange and Los Angeles Counties.

The Lead Agency seeks to stifle discussion and public participation through the release of a SDEIR/S that focuses on only a very limited aspect of that project while concurrently ignoring other "significant new information" of direct relevancy. As indicated in the SDEIR/S, "[r]eviewers are requested to limit their comments to only information that is provided in this Supplemental Draft EIR/EIS. Comments that are received on information provided in this Supplemental Draft EIR/EIS will be responded to, and these responses will be provided in the Final EIR/EIS for the Interstate 405 Improvement Project" (pp. S-1 and S-2). 61

In light of the release of an incomplete and inadequate SDEIR/S (e.g., "traffic or transportation-related direct or indirect cumulative impacts are not anticipated, and no further cumulative impact analysis or additional measures are required," SDEIR/S, p. 3-93) and the withholding of critical information concerning the project's potential impacts (including "significant new information" removed from the December 2012 STS), the Lead Agency should not seek to hide behind self-imposed constraints on what, in the opinion of the Lead Agency, does or does not constitute an appropriate and acceptable comment (i.e., "comments on only information that is provided in this Supplemental Draft EIR/EIS"). The SDEIR/S and STS are wrong-headed in so many different ways and serve to further highlight the inadequacies of the DEIR/S.

7.7 December 2012 Supplemental Traffic Study

The December 2012 Supplemental Traffic Study provided greater detail relating to the impacts the interchanges, ramps, and intersections along the Orange County Corridor. In addition, Chapter 4 of this report included an analysis of the Long Beach Area. Both reports did not include the LOS analysis work sheets, The June 2013 Supplemental Draft EIR/RIS only provided Chapter 4 of the December 2012 report. The corridor information is a vital component of the EIR/EIS evaluation and provides an overview and the necessary mitigation measures to reduce the community impacts. The June 2013 document should incorporate the information an, discussions, and results from the December 2012 Supplemental Traffic Study report.
As specified in Section 21061 of CEQA: "An environmental impact report is an informational document," the purpose of which "is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list the ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project." Inherent therein is the obligation of the Lead Agency to disclose all it can about a project's potentially significant environmental effects." As further specified in Section 21005(a) therein: "The Legislature finds and declares that it is the policy of the state that noncompliance with the informational disclosure provisions of

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this division which precludes relevant information from being presented to the public agency, or noncompliance with substantive requirements of this division may constitute a prejudicial abuse of discretion within the meaning of Sections 21168 and 21168.5, regardless of whether a different outcome would have resulted if the public agency had complied with those provisions."

Pursuant to Section 15151 of the State CEQA Guidelines: "Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure."

The SDEIR/S states that '[t]he new information and analysis presented within the Supplemental Draft EIR/EIS is based on the 'Supplemental Traffic Study Report – Long Beach Area' (Supplemental Traffic Study), prepared in April 2013 in response to City of Long Beach comments on the Draft EIR/EIS" (General Information About this Document). Notwithstanding its key role and relationship to the SDEIR/S, it is noted that no version of the STS was physically included as a component part of the SDEIR/S, "incorporated by reference" therein, or concurrently disseminated therewith. Based on the exclusion of that document, it is incumbent upon the Lead Agency to ensure that the SDEIR/S accurately describes the information, analysis, and recommendations presented therein, such that the two documents are consistent both in terms of content and conclusions. Clearly, that is not the case here. 62

Referencing the December 2012 STS: "The purpose of the Supplemental Traffic Study Report is to provide additional traffic information on the I-405 Improvement Project not included in the 'Traffic Study Report –San Diego Freeway (I-405) Improvement Project SR-73 to I-605' completed by Albert Grover & Associates in April 2011. These improvements [sic] were included as a result of public comments during the Draft Environmental Impact Report/Environmental Impact Statement circulation" (emphasis added) (December 2012 STS, p. i). No qualifier is used to limit or otherwise narrow the meaning of the term "public comments" therein. Similarly, no exclusive reference to only those "comments received on potential traffic effects within the City of Long Beach" (emphasis added) (p. 1-2) is included in that excerpt.

As indicated in the December 2012 STS, the following "topics" are addressed in that analysis:

> (1) Alternative 3 Modified - Section 1 provides traffic analysis assuming truncation of the Express Lanes near the Euclid Street interchange. Alternative 3 Modified also includes an optional design of the Magnolia/Warner interchange that does not include braided ramps and a modification to the northbound merge of the direct connector from westbound SR-22 into the Express Lanes. (2) Alternative 1 Magnolia/Warner Interchange - Section 2 provides traffic analysis of design options for the Magnolia/Warner interchange that do not include braided ramps. (3) Operational Analysis Northbound Approaching I-605 - Potential for operational difficulties northbound on I-405 at I-605 is analyzed. As the build alternatives approach the LA County line, the additional lanes proposed in each of the build alternatives continue into receiving lanes on branch connectors to SR-22/7th Street westbound and I-605 northbound. If more motorists desire to continue northbound on I-405 in LA County than the freeway can handle as the additional lanes exit to SR-22/7th Street and I-605, there is the potential for a bottleneck to occur. (4) Long Beach Area Traffic Study. Traffic changes in the Long Beach area along SR-22/7th Street, I-405, and I-605, at their local interchanges, and at nearby intersections due to the proposed build alternatives are evaluated. The study area includes

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> Carson Street in the vicinity of I-605 which, in addition to the City of Long Beach, includes the Cities of Lakewood and Hawaiian Gardens. Each of the four sections is independent (emphasis added) (December 2012 STS, p. i).

As indicated in the DEIR/S: "An increase of PM emissions would occur if the project significantly increased ADT in the project area and at locations where there are more traffic delays. Traffic delays would occur at freeway segments and intersections where vehicles are accumulating and idling. It is unlikely that PM hot spots would be associated with the proposed project because local accumulation and delay of vehicles would be reduced by the project. . .[T]he project is not expected to cause an adverse effect with respect to localized concentrations of $PM_{2.5}$ or PM_{10} at any nearby sensitive receptor"(DEIR/S, p. 3.2.6-41). Because it is based on false assumptions, the resulting analysis likely underestimates, both in terms of magnitude and its presented conclusions, the project's actual air quality, GHG-emission, and global climate change impacts.

As indicated in the MIS, "[o]perational problems occur on the freeway, primarily because of physical bottlenecks" (MIS, p. 11-13). As further indicated in the DEIR/S, "[o]perational problems occur on I-405 primarily because of physical bottlenecks" (DEIR/S, p. 1-14) and, with regards to existing conditions, "[w]ithin the project corridor, three 'bottleneck' locations (i.e., where GP lanes terminate) occur, creating operational problems" (Ibid). Although they relate to different locations and are presented in the context of project-related benefits, the DEIR/S nonetheless recognizes that bottlenecks (e.g., "lane termination creates a bottleneck," DEIR/S, p. 3.1.6-101) and lane drops (e.g., "lane drops. . .creates peak-period backups of traffic on I-405," DEIR/S, p. 1-24) produce adverse and undesirable traffic conditions.

If, as represented, the SDEIR/S purports to have been prepared in response to comments from Long Beach (e.g., "The new information and analysis presented within the Supplemental Draft EIR/EIS is based on the Supplemental Traffic Study Report – Long Beach Area, prepared in April 2013 in response to City of Long Beach comments on the Draft EIR/EIS" [emphasis added], General Information about this Document), then it is surprising that the SDEIR/S fails to also more specifically address Long Beach's comments. As indicated in correspondence from Long Beach, included in Attachment 4 (I-405 Freeway Improvement Project Letter and Memorandum) herein, "[i]t remains unclear how the added lanes will transition beyond the Orange County line into Los Angeles County and the City of Long Beach. . .Proper evaluation of I-405 north of the Orange County/Los Angeles County line needs to be conducted to ensure that a choke point does not occur north of the Orange County/Los Angeles County line in the City of Long Beach."

Noticeably absent from both the SDEIR/S and from the June 2013 STS is any reference to "operational analysis northbound approaching I-605." Additionally, no justification is presented in the SDEIR/S or elsewhere supporting the Lead Agency's decision to eliminate from the SDEIR/S and June 2013 STS two additional "topics" included in the December 2012 STS (i.e., "Alternative 3 Modified" and "Alternative 1 Magnolia/Warner Interchange").

In correspondence from Jim Beil, OCTA's Executive Director to Sean Crumby', Seal Beach's Director of Public Works, dated June 25, 2013, OCTA stated that the northernmost segment of the I-405 Freeway in Orange County (in proximity to Seal Beach) "has the highest accident concentrations in Orange County." The Lead Agency's apparent attempts to "sanitize" the December 2012 STS becomes critical in light of both Mr. Beil's declaration and the following undisclosed "significant new information" from the December 2012 STS:

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> The accident data above indicates that the prevalent cause of accidents along the freeway mainline is traffic congestion, resulting in rear end, sideswipe and hit object collisions. These accident types may be attributed to higher speed vehicles approaching a mainline chokepoint with slower/stopped vehicles, resulting in abrupt lane change and vehicles striking other vehicles or roadside objects. It also appears that in addition to the freeway congestion, heavy lane change activities could be possible factors in sideswipe collisions. According to the TASAS [Traffic Accident Surveillance and Analysis System], there is a higher frequency of sideswipe collisions near the I-405/SR-73 and I-405/SR-22/I-605 freeway-to-freeway interchanges where there are multiple lane change and lane continuity issues (Fact Sheet, p. 28).

An operational analysis was conducted of northbound I-405 as it approaches the Seal Beach Boulevard, SR-22/7th Street, and I-605 interchanges. The purpose of the analysis is to evaluate the potential for disruption of smooth traffic flow to occur in this area as the additional lanes proposed in the build alternatives are terminated. The additional lanes proposed in each of the build alternatives continue into receiving lanes on branch connectors to SR-22/7th Street westbound and I-605 northbound. If more motorists desire to continue northbound on I-405 into LA County than there is freeway capacity continuing northbound on I-405 into LA County, there is the potential for disruption of the traffic flow along I-405.

> The analysis is limited to the general purpose (GP) lanes. The study area includes northbound I-405 from the SR-22 confluence near Valley View Street through the exit to I-605 northbound and traffic data were collected for that area. The study takes speed as the primary indicator of a disruption of the smooth flow of traffic. Based on the information presented in the [December 2012] Traffic Study in Tables 3.1.6-4 and 3.1.6-12, the GP lanes of I-405 within the study area are anticipated to be over capacity during peak hours in years 2020 and 2040 with or without the proposed project and operating at LOS F under severely congested conditions. Section 4 of this Supplement shows that I-405 north of the project limits is also anticipated to operate under heavily congested conditions. Accordingly, it is not possible to accurately assess peak hour congestion attributable to the termination of the proposed new lanes, because heavy congestion is anticipated to occur along the entire corridor during peak hours regardless of the proposed project (emphasis added) (December 2012 STS, p. 3-1).
>
> During the AM peak hour in year 2040 Table 3.2 shows that there will be substantial disruption to traffic flow under all of the alternatives. Under the No Build Alternative speeds will decrease to as low as 49 mph, as low as 36 mph under Alternatives 1 and 3, and as low as 16 mph under Alternative 2. In general, the more lanes that are added by the build alternatives the greater the magnitude of the disruption to traffic flow in the Seal Beach Boulevard, SR-22/7th Street, and I-605 interchange area. . .[S]lowing and substantial disruption in traffic flow is anticipated during the PM peak hour under Alternative 2. During the AM peak hour substantial slowing and substantial disruption in traffic flow is anticipated during the AM peak hour under all alternatives. The magnitude of the slowing and disruption in traffic flow is least under the No Build Alternative and increases with the number of additional general purpose lanes proposed under the build alternatives (emphasis added) (December 2012 STS, pp. 3-3 and 3-4).

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The above findings contradict the DEIR/S' assertion that "[t]he proposed project alternatives would relieve congestion and improve operational efficiency" (DEIR/S, p. 1-1) and the SDEIR/S' statements that "the project's contribution to adverse cumulative effects within the Supplemental Draft EIR/EIS study area at the affected locations would be minimized" (p. 3-93). Since "substantial disruption to traffic flow under all of the alternatives" will exist "north of the project limits," neither the project nor the designated "study area" can be demonstrated to have independent utilize and, therefore, individually and jointly fail to meet the standard for "logical termini." Segmenting a larger areawide problem, failing to actually remedy the condition that the project has been purportedly formulated to address, pushing or compounding congestion to the north (if not elsewhere), and scrubbing the SDEIR/S clean of critical information about the project's adverse environmental effects does not constitute a reasonable or supportable approach to congestion management and/or CEQA/NEPA compliance.

Because the above findings are limited to GP lanes and do not consider, either in isolation or as part of how those lane drops could further contribute to the impacts identified, other managed lanes, actual impacts will likely be greater than those already presented. Additionally, neither the DEIR/S / SDEIRS nor the December 2012 STS / June 2013 STS contain any "safety analysis" how or to what extent this project-induced "substantial disruption to traffic flow" would add to existing safety hazards "in the Seal Beach Boulevard, SR-22/7th Street, and I-605 interchange area."

As specified under "managed lanes engineering study requirements," as contained in Caltrans' "Updated Managed Lane Design" (April 7, 2011), "Section 149 of the Streets and Highways Code requires that competent engineering estimates be made of the effects of a managed lane on safety, congestion, and highway capacity prior to constructing such lanes. A traffic study shall be performed for all managed lane projects. This study shall be composed of an operational analysis and a safety analysis. The traffic safety analysis shall be performed by or approved by the district traffic safety office. This analysis will focus on the safety impact of the proposed improvements on operating conditions and collision potential by utilizing traffic and collision data and analytical tools and processes. This is especially important when the project proposes a change in the type of access" (emphasis added).

In recognition of the exclusion of important information presented in the December 2012 STS (e.g., "substantial disruption to traffic flow under all of the alternatives"), the information presented in the Fact Sheet (e.g., "The accident data above indicates that the prevalent cause of accidents along the freeway mainline is traffic congestion, resulting in rear end, sideswipe and hit object collisions"), Mr. Beil's declaration that "this section of I-405 has the highest accident concentrations in Orange County," and OCTA's rejection of Seal Beach's requested "design exceptions" purportedly for safety reasons (while concurrently granting itself eleven "design exceptions"), it is important that the required "safety analysis" become part of the STS and not be deferred to a later time when opportunities for public and agency review would be limited.

In light of Caltrans' approval of eleven "design exceptions" and the alleged "safety implications" of Seal Beach's request for additional exceptions allowing for the retention of the existing Almond Avenue soundwall, why has a "safety analysis" yet to be conducted? Specifically, what analysis has been conducted supporting Caltrans' and/or the OCTA's acceptance or rejection of those exceptions?

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The December 2012 STS concluded that, in the GP lanes, as northbound traffic along the I-405 Freeway approaches the Seal Beach Boulevard/SR-22/7th Street/I-605 interchanges, "slowing and substantial disruption in traffic flow is anticipated during the PM peak hour under Alternative 2. During the AM peak hour substantial slowing and substantial disruption in traffic flow is anticipated during the AM peak hour under all alternatives. The magnitude of the slowing and disruption in traffic flow is least under the No Build Alternative" (emphasis added) (December 2012 STS, p. 3-1). When doing nothing (i.e., "No Build Alternative") is demonstrated to have a greater beneficial impact that implementing one or more of the Lead Agency's self-generated alternatives, it is not surprising that the December 2012 STS was materially altered prior to its subsequent release as the June 2013 STS.

The environmental consequences of "slowing and substantial disruption in traffic flow" are neither examined nor are those impacts disclosed in the SDEIR/S. Similarly, since no threshold of significance criteria are presented in either the DEIR/S or in the SDEIR/S (e.g., "Because Caltrans does not use threshold criteria for the determination of significance of impacts, discussion of the threshold criteria was removed from the document at the request of Caltrans environmental staff," STS, Response to Comments Matrix, Comments from Eduardo Amezcua in January 22, 2013 Email to Smita Deshpande), no CEQA-based conclusions are or can be drawn with regards to the potential significance of those adverse conditions. Absence a quantitative, qualitative, or performance-based threshold of significance, the Lead Agency seeks to avoid the identification of significant environmental impacts, mitigation measures, and/or other actions that might avoid, reduce, rectify, or compensate for the "substantial disruption in traffic flow" which was identified by the Lead Agency but which has not been publically disclosed. 63

While clearly within its possession, with the release of the SDEIR/S, what remains unclear is why the Lead Agency fails to acknowledge this "substantial disruption in traffic flow" and why the Lead Agency consciously and knowingly elected not to release that information as part of the SDEIR/S. The Lead Agency must acknowledge that its own consultant (i.e., authors of the December 2012 STS) were the source of the operational analysis presented in the December 2012 STS. Although it may not like the information produced, Caltrans nevertheless has an obligation for full disclose (e.g., cannot cherry-pick the information its own experts produce).

It is further noted that the December 2012 STS did not examine peak-hour conditions. As noted therein, "it is not possible to accurately assess peak hour congestion attributable to the termination of the proposed new lanes, because heavy congestion is anticipated to occur along the entire corridor during peak hours regardless of the proposed project" (emphasis added) (December 2012 STS, p. 3-1). As such, through fragmentation, the proposed project seeks to ignore the formulation of a more comprehensive system-based strategy addressing the peak-hour "heavy congestion" that occurs along the larger "I-405 Corridor," fails to present any alternatives that actually remedy that congestion, and does not present either a realistic or reasonable assessment of the project's potential impacts. It is the existence of peak-hour conditions that purports to be the basis for the introduction of HOTLs; however, based on the Lead Agency's own admission "it is not possible to accurately assess peak hour congestion."

7.8 Environmental Impact "Significance" Criteria

As mandated under Section 21002 of CEQA, "[t]he Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen

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the significant environmental effects of such projects" (emphasis added). Based on that requirement, a substantial component of any CEQA process is the determination of whether the magnitude and/or context of an identified impact results in that effect being deemed to be "significant." Similarly, with regards to the recirculated DEIR/S, a factual basis needs to be presented in order to distinguish "new information" from "significant new information." When the agency's threshold standards are not clearly articulated, determinations of "significance" are not possible and the resulting documentation cannot fulfill its primary CEQA purpose.

As noted in the City's comments on the DEIR/S, absent from the DEIR/S (and now again from the SDEIR/S) are concise threshold of significance standards which are clearly articulated so as to allow stakeholders the ability to independently consider and subsequently comment on the appropriateness of those or to suggest other alternative standards. It is only through the identification of qualitative, quantitative, or performance-based threshold criteria that: (1) it is possible to determine whether the proposed project will produce project-related and/or cumulative environmental impacts; (2) determine whether mitigation measures or other alternative implementation strategies need to be formulated in response to those environmental effects; (3) assess the level of significance of each impact following the application of mitigation measures or other actions; and (4) support CEQA's requisite findings. 64

In attempting to ascertain the Lead Agency's conclusions concerning the post-project level of significance of project-related and cumulative environmental effects, the same confusion exists with the STS as was previously noted with both the DEIR/S and the SDEIR/S. In the case of the STS, the confusion is compounded by both a change in vernacular and continued failure of the Lead Agency to describe its significance criteria (e.g., "The intersection does not meet the significant impact criteria and there are no significant traffic impacts at the intersection," December 2012 STS, pp. 1-9 and 2-3).

With regards to assessing the significance of the proposed project's traffic-related impacts, as noted in the December 2012 STS: (1) "Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads. Refer to Table 2.1.3 for the LOS criteria" (December 2012 STS, Tables 1-6, I-17, and 1-18); (2) "The density LOS thresholds for the freeway mainline are shown in Table 2.1.3" (December 2012 STS, Table 1-7); and (3) "The density LOS thresholds for the C-D roads are shown in Table 2.1.3" (December 2012 STS, Table 1-8). It is noted that no "Table 2.1.3" is, however, presented in the December 2012 STS. "Table 2.1.3" (Capacity Values for Merge Areas), as presented in the DEIR/S' "Traffic Study - San Diego Freeway Improvement Project, SR-73 to I-605, Orange and Los Angeles Counties" (Caltrans, May 2011) (May 2011 Traffic Study), includes no such "criteria."

As further noted in the December 2012 STS: "For the freeways, impacts are evaluated in terms of changes in level-of-service (LOS) and volume-to-capacity (V/C) or demand-to-capacity (D/C) ratios. For arterial intersections the City of Long Beach criteria are used to evaluate potential impacts. The City of Long Beach criteria are applied using the Highway Capacity Manual operational intersection analysis methods for signalized and unsignalized intersections. A signalized intersection operating with a LOS E or F and whose D/C ratio increases by more than 0.02 under 'with project' condition compared to No Build Alternative is considered [sic] exceeds the City of Long Beach criteria" (emphasis added) (December 2012 STS, p. 4-2).

The June 2013 STS notes that: (1) "The HCM method is the method recognized by Caltrans for intersection analysis. It was used for all intersection analysis in the Orange County portion of the

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study area in the original Traffic Study. For consistency, it is used in the Supplemental Traffic Study for the Long Beach area"; and (2) "The Supplemental Traffic Study for the Long Beach area has been revised to set to threshold for action equal to or greater than an increase in an intersection's volume-to-capacity ratio of 0.20 when the project condition is LOS E or F. Because Caltrans does not use threshold criteria for the determination of significance of impacts, discussion of the threshold criteria was removed from the document at the request of Caltrans environmental staff" (emphasis added) (STS, Response to Comments Matrix, Comments from Eduardo Amezcua in January 22, 2013 Email to Smita Deshpande).

In lieu of "significance of impacts," the June 2013 STS substitutes the phrase "adverse effect" (e.g., "The objective of this evaluation is to determine the extent of any potential adverse cumulative traffic effects of the proposed project alternatives north of the limits of the proposed capacity improvements" [emphasis added], STS, p. 1-1). In addition, in lieu of a definitive criteria, the document states that "[a]dverse cumulative effects are evaluated through application of professional judgment to changes in level-of-service (LOS) and volume-to-capacity (V/C) ratios" (emphasis added) (STS, p. 1-2). Assuming that the difference between "adverse" and "significant" is only one of semantics and that the "professional judgment" of the study's authors is both transparent and consistent with common traffic engineering standards, the June 2013 STS concludes:

- With regards to Alternative 1: (1) "Alternative 1 does not have an adverse cumulative effect on any study intersections in year 2020" (STS, p. 4-9); and (2) "Alternative 1 does not have an adverse cumulative effect on any study intersections in year 2040" (STS, p. 4-9).

  Although neither stated as "significant" nor "adverse" (conversely, not stated as being either "insignificant" or "not adverse"), with regards to Alternative 1, the STS identifies the following "over capacity" and "increase in D/C ratio" conditions:

  - "The northbound and southbound I-405 HOV lanes within the project limits are anticipated to operate over capacity during the AM or PM peak hours under year 2020 Alternative 1 conditions with D/C ratios ranging from 1.16 to 1.41" (STS, p. 4-9).

  - In what appears to be a typographic error (i.e., referencing "2020" rather than "2040"), the document further notes that "[u]nder Alternative 1 conditions for year 2040, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions. The northbound and southbound I-405 HOV lanes within the project limits are anticipated to operate over capacity during the AM or PM peak hours under year 2020 [sic] Alternative 1 conditions with D/C ratios ranging from 1.16 to 1.41" (STS, p. 4-6).

  - "Table 4-13 presents a comparison of year 2020 No Build Alternative and year 2020 Alternative 1 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 1 in many segments, with the range of increase in the GP lanes from 0.01 to 0.13 during peak hours and 0.02 to 0.18 in the HOV lanes. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits" (STS, p. 4-9).

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  - "Table 4-14 presents a comparison of year 2040 No Build Alternative and year 2040 Alternative 1 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 1 in many segments, with the range of increase in the GP lanes from 0.01 to 0.15 during peak hours and 0.02 to 0.31 in the HOV lanes. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits" (STS, p. 4-9).

- With regards to Alternative 2: (1) "Alternative 2 does not have an adverse cumulative effect on any study intersections in year 2020" (STS, p. 5-10); and (2) "Alternative 2 does not have an adverse cumulative effect on any study intersections in year 2040" (STS, p. 5-10).

  Although neither stated as "significant" nor "adverse" (conversely, not stated as being either "insignificant" or "not adverse"), with regards to Alternative 2, the STS identifies the following "over capacity" and "increase in D/C ratio" conditions:

  - "The majority of the northbound and southbound I-405 HOV lanes are anticipated to operate over capacity during the AM or PM peak hours under year 2020 Alternative 2 conditions with D/C ratios ranging from 1.04 to 1.46" (STS, p. 5-5). In what appears to be two typographic errors (i.e., referencing "2020" rather than "2040" and referencing "No Build" rather than "Alternative 2").

  - In what appears to be a two typographic errors (i.e., referencing "2020" rather than "2040" and referencing "No Build" rather than "Alternative 2"), the document further notes that "[u]nder Alternative 2 conditions for year 2040, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions. The northbound and southbound I-405 HOV lanes within the project limits are anticipated to operate over capacity during the AM or PM peak hours under year 2020 [sic] No Build Alternative [sic] conditions with D/C ratios ranging from 1.06 to 1.58" (STS, p. 5-6).

  - "Table 5-13 presents a comparison of 2020 No Build and 2020 Alternative 2 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 2 in many segments, with the range of increase in the GP lanes from 0.01 to 0.10 during peak hours and 0.01 to 0.18 in the HOV lanes. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits" (STS, p. 5-11).

  - "Table 5-14 presents a comparison of 2040 No Build and 2040 Alternative 2 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 2 in many segments, with the range of increase in the GP lanes from 0.01 to 0.11 during peak hours and 0.01 to 0.32 in the HOV lanes. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits" (STS, p. 5-11).

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- With regards to Alternative 3: (1) "Alternative 3 does not have an adverse cumulative effect on any study intersections in year 2020" (STS, p. 6-10); and (2) "Alternative 3 does not have an adverse cumulative effect on any study intersections in year 2040" (STS, p. 6-10).

  Although neither stated as "significant" nor "adverse" (conversely, not stated as being either "insignificant" or "not adverse"), with regards to Alternative 3, the STS identifies the following "over capacity" and "increase in D/C ratio" conditions:

  - "The majority of the northbound and southbound I-405 HOV lanes are anticipated to operate over capacity during the AM or PM peak hours under year 2020 Alternative 3 conditions with D/C ratios ranging from 1.04 to 1.24" (STS, p. 6-5).
  - "Under Alternative 3 conditions for year 2040, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions. The northbound and southbound I-405 HOV lanes within the project limits are anticipated to operate over capacity during the AM or PM peak hours under year 2040 Alternative 3 conditions with D/C ratios ranging from 1.02 to 1.34" (STS, p. 6-6).
  - "The transition areas are anticipated to operate at a level of service similar to the level expected for the HOV and/or general purpose lanes in the vicinity of the transition area. The northbound transition area on I-405 from I-605 to the end of the HOV access is expected to operate at LOS F in year 2040. As shown in Table 6-8, the northbound GP and HOV lanes in the transition area on I-405 from I-605 to Studebaker Road are anticipated to operate over capacity (LOS F) during peak hours. In the southbound direction, Table 6-8 shows LOS E conditions in the GP lanes and over capacity conditions in the HOV lanes during the AM peak hour; over capacity (LOS F) conditions area anticipated southbound during the PM peak hour" (STS, p. 6-11).
  - "Table 6-13 presents a comparison of 2020 No Build and 2020 Alternative 3 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 3 in many segments, with the range of increase in the GP lanes from 0.02 to 0.34 during peak hours and 0.03 to 0.09 in the HOV lanes. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits" (STS, p. 6-10).
  - "Table 6-14 presents a comparison of 2040 No Build and 2040 Alternative 3 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 3 in many segments, with the range of increase in the GP lanes from 0.02 to 0.37 during peak hours and 0.03 to 0.10 in the HOV lanes. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits" (STS, p. 6-10).

In assessing potential project-related and cumulative impacts, the difference between "0.20" and "0.03" is substantial. In lieu of a single intersection standard, the Lead Agency notes:

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- **June 2013 STS.** A 0.20 volume-to-capacity (v/c) threshold standard is identified in the June 2013 STS (i.e., "The Supplemental Traffic Study for the Long Beach area has been revised to set to threshold for action equal to or greater than an increase in an intersection's volume-to-capacity ratio of 0.20 when the project condition is LOS E or F" [emphasis added], STS, Response to Comments Matrix, Comments from Eduardo Amezcua in January 22, 2013 Email to Smita Deshpande).

- **DEIR/S.** The DEIR/S' May 2011 Traffic Study states that "[a]ll interchange signalized intersections and adjacent arterial intersections were analyzed using the Highway Capacity Manual based Level of Service methodology, including queuing. A criterion of an increase of (0.03) in the overall v/c ratios was used to identify potential significant traffic impacts of the project to the study intersections. This criterion was applied to intersections that were operating at LOS of E or F during the peak hours" (emphasis added) (May 2011 Traffic Study, p. ES-6).

It is apparent that, at least with regards to v/c ratio, the threshold of significance criteria presented in the SDEIR/S (0.03) and STS (0.20) differ substantially. No attempt has, however, been made to: (1) explain the use of differing criteria (e.g., separate Orange and Los Angeles County criteria); (2) discuss the potential merits and drawbacks of applying separate criteria to different geographic areas; (3) explain why the criteria of each affected municipality has also not been considered with regards to intersections within each agency's jurisdiction; (4) reconcile those differences so as to produce a cohesive and internally consistent document; and/or (5) consistently compare impacts in the DEIR/S' original "study area" and SDEIR/S' "Long Beach study area." 65

Since motorists in Long Beach and motorists in communities in Orange County likely have the same (or similar) general aversion to and tolerance (or lack of tolerance) to congestion and travel delays and the same (or similar) expectations concerning the functionality of the region's transportation system, it seems unreasonable to suggest that difference standards should apply to different areas (e.g., Long Beach motorists should be provided a better performing street system that motorists in Orange County). Because the DEIR/S and the SDEIR/S are intended to be informational and internally consistent documents, an analysis based on the use of a single threshold standard should be presented so that relative magnitude of project-related and cumulative impacts can be consistently assessed.

It is noted that each of the affected municipalities have adopted local general plans containing individual "Circulation Elements" that define each locale's adopted performance standards. The Lead Agency has not previously sought to apply jurisdiction-specific threshold standards relating to impact assessment within each agency's corporate boundaries but has previously applied a single project-wide standard to the environmental assessment of the proposed project. If Caltrans now believes that a 0.20 v/c ratio (rather than the 0.03 v/c ratio presented in the DEIR/S) is, in fact, the appropriate standard, then the roadway analysis within the DEIR/S' original "study area" should be redone based on that higher performance standard.

It is not unreasonable for the Lead Agency to present multiple model runs based on differing performance standards. From those model runs, stakeholders can consistently assess impacts independent of jurisdiction and individual agencies can individually determine the standard most applicable within their corporate boundaries. Only by including a comparable analysis can an "apples-to-apples" comparison be provided throughout the project's multiple "study areas."

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7.9 Absence of Measurable Performance Standards

As indicated in the DEIR/S, "[t]he purpose of the proposed action is to: [1] Reduce congestion; [2] Enhance operations; [3] Increase mobility, improve trip reliability, maximize throughput, and optimize operations; and [4] Minimize environmental impacts and ROW acquisition" (emphasis added) (DEIR/S, p. 1-5). Terms like "reduce," "enhance," "increase," and "minimize" are not, in fact, objectives but only directional guidance relative to an existing point in time and space and offer no means of measuring or comparing actual performance (e.g., was congestion reduced by the amount desired?). A single vehicle's one second reduction in the amount of time required to traverse an arbitrarily established distance could support an agency's contention that it "increased" mobility.: Unasked is whether than one second saving was: (1) the appropriate goal to start with; (2) whether the efforts and cost required to achieve that reduction were well expended; (3) whether a similar comparative benefit could be gained through less costly, less environmentally damaging, or more socially beneficial actions; and (4) whether the benefit horizon should be viewed from a short-term, mid-term, or long-term perspective.

Caltrans never defines (from a quantitative, qualitative, or performance-based perspective) either their specific horizon or the envisioned future that its proposed and alternative actions seek to accomplish. During peak periods, conditions on the I-405 Freeway are presently operating at level of service (LOS) "F." When the project is completed in 2020, level of service conditions will remain at LOS "F" (e.g., "much of I-405 within the project area operates and is expected in the future to operate at LOS F conditions," STS, p. 3-2). From most viewers' perspective, nothing will have changed (other than traffic speeds will be reduced for all but SOVs in the HOVL).

In what appears to be a direct contradiction to the assertion that "Caltrans does not use threshold criteria for the determination of significance of impacts" (STS, Response to Comments Matrix, Comments from Eduardo Amezcua In January 22, 2013 Email to Smita Deshpande), in "Smart Mobility 2010 - A Call to Action for the New Decade" (February 2010) (Smart Mobility) (http://www.dot.ca.gov/hq/tpp/offices/ocp/documents/smf_files/SMF_handbook_062210.pdf), Caltrans states that:

> Performance measures provide quantified evidence of the consequences of a decision or action. Performance measures are an efficient means through which to present key information for system users, managers and decision makers in an objective, concise and consistent format. Transportation performance measures forecast, evaluate, and monitor the degree to which the transportation system accomplishes adopted public goals and mobility objectives. Smart Mobility Performance Measures (SMPMs) demonstrate the relationship between integrated transportation and land use decisions and the consequent effects on the full range of economic, social, and environmental conditions. SMPMs are intended for use in decision-making at both the planning and the project level to evaluate progress toward implementing the principles of Smart Mobility and attaining Smart Mobility benefits. . . SMPMs evaluate the degree to which Caltrans policies and planning decisions advance the six Smart Mobility principles: [1] Location Efficiency; [2] Reliable Mobility; [3] Health and Safety; [4] Environmental Stewardship; [5] Social Equity; [6] Robust Economy (emphasis added) (Smart Mobility, p. 50).

In order to facilitate decisions concerning public expenditures, the State's Statewide Needs Assessment notes that "[a]ccording to Caltrans, 'SMPMs are intended for use in decisionmaking

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at both the planning and the project level to evaluate progress toward implementing the principles of Smart Mobility and attaining Smart Mobility benefits'" (Statewide Needs Assessment, p. 6-1). The SMPMs to be used in planning and project-level decisionmaking are included in the accompanying exhibit (Source: Smart Mobility 2010, p. 55; Statewide Needs Assessment, p. 6-2). Surprisingly, none of Caltrans' own SMPMs were included in the DEIR/S, SDEIR/S, or in the formulation or assessment of project alternatives.

Smart Mobility Performance Measures

Goal	Performance Measure	Recommended Metrics
Location Efficiency	1. Support for Sustainable Growth	Consistency with regional Sustainable Communities Strategy or Alternative Planning Strategy meeting regional performance standards. Comparison of alternatives based on acres of land urbanized, and relative reductions in induced VMT through compact land use strategies, demand management, and network management
	2. Transit Mode Share	Percentage of trips within a corridor or region occurring by bus, rail or by other form of high-occupancy-vehicle
	3. Accessibility and Connectivity	Number of households within 30 minute transit ride of major employment centre, within 20 minute auto ride of employment, within walking distance of schools. Weighted regional travel time and cost among trip producers and trip attractors
Reliable Mobility	4. Multi-Modal Travel Mobility	Travel times and costs by mode between representative origins and destinations, aggregated over corridor or region
	5. Multi-Modal Travel Reliability	Day-to-day variability of travel times between representative origins and destinations by mode, aggregated over corridor or region
	6. Multi-Modal Service Quality (Level of Service: LOS)	Mode-specific and blended LOS measures of pedestrian and bicycle accommodation and comfort, transit availability and reliability, and auto travel efficiency[a]
Health and Safety	7. Multi-Modal Safety	Collision rate and severity by travel mode and facility, compared to statewide averages for each user group and facility type
	8. Design and Speed Suitability	Conformance with guidance identifying suitable design elements and traffic speed with respect to mix of modes and adjoining land uses and area character[b]
	9. Pedestrian & Bicycle Mode Share	Percentage of trips within a corridor or region occurring by walking or cycling
Environmental Stewardship	10. Climate and Energy Conservation	VMT per capita by speed range relative to State and regional targets[c]
	11. Emission Reduction	Quantities of criteria pollutants and GHGs
Social Equity	12. Equitable Distribution of Impacts	Impact of investments on low-income, minority, disabled, youth and elderly populations relative to impacts on population as a whole
	13. Equitable Distribution of Access and Mobility	Comparative travel times and costs by income groups and by minority and non-minority groups for work/school and other trips
Robust Economy	14. Congestion effects on Productivity	Time lost to congestion by trips that are economically productive and/or sustaining of essential mobility, measured as vehicle hours of delay (VHD)
	15. Efficient Use of System Resources	Additional VMT that are associated with economic productivity and/or sustaining of essential mobility compared with system expansion cost and impact
	16. Network Performance Optimization	VHD per capita, per lane mile, per private vehicle mile, per freight vehicle mile, per transit revenue mile, and its total
	17. Return on Investment	Person miles and revenue per lane mile of road, per transit revenue mile and per dollar invested (from all public and private funding sources). Comparison of alternatives based on benefits per dollar invested relative to: a) system user benefits (time and expenses) and b) other Smart Mobility Performance Measures

[a] Typical resource: Transportation Research Board 2010 Highway Capacity Manual.
[b] Typical resources: Caltrans DD64 Complete Streets guidelines; ITE practices on Context Sensitive Solutions.
[c] Targets set by California Air Resources Board under SB375. Rates of GHG emissions and fuel consumption both vary by speed range or "fleet."

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As indicated in the California Transportation Commission's (CTC) "Statewide Transportation Systems Needs Assessment – Final Report" (October 2011) (Statewide Needs Assessment) (http://www.catc.ca.gov/reports/2011Reports/2011_Needs_Assessment_updated.pdf): "The total cost of all system preservation, system management, and system expansion projects during the ten-year study period is nearly $538.1 billion. . .The total estimated revenue from all sources during the ten-year study period is $242.4 billion. This represents about 45 percent of the overall estimated costs of projects and programs that were identified in the needs analysis, and leads to a shortfall of about $295.7 billion over the ten-year period" (Statewide Needs Assessment, p. 1-2).

Households living on limited budgets must made periodic decisions concerning how available monies are to be expended. Typically, expenditures for necessities and other criticalities receive the first priority with regards to those funds and desirous but non-essential items are often deferred. Anyone on a fixed budget understands the quandary of deciding the best use of available resources. Isn't it time that governmental entities, whose existence is dependent upon public proceeds, also ask the question "how do we get the 'best bang' for the buck?"

Since transportation-related needs will exceed available revenues at least in the near term, the funds that are available need to be effectively and efficiently expended. The Lead Agency's objectives to reduce congestion, enhance operations, increase mobility, improve trip reliability, maximize throughput, and optimize operations (DEIR/S, p. 1-5) need to be unitized so that, for each alternative, a comparative cost can be allocated to each "unit" of congestion relief, mobility, etc. Since each alternative carried a different price tag, as now presented, there exists no mechanism to determine benefits gains versus costs incurred.

7.10 Unreliable Performance Data

As indicated in a joint release by the FHWA and Caltrans in a recent Transportation Review Board (TRB) announcement (Request For Information On Managed-Lane Projects): "It is difficult to predict the impacts that changing HOV occupancy requirements may have on corridor performance because existing travel-demand models do not appear capable of predicting the numerous possible mode changes (e.g., shifts from HOV2 in HOV lane to two SOVs in GP lanes, etc.)" (FHWA and Caltrans, undated).

The performance expectation of Alternative 3, including ridership and LOS conditions within the proposed express lanes, are presented as if broad consensus exists as to the assumptions and methodologies presented therein. In reality, predicted performance is, at best, guesswork which can be easily manipulated based on the philosophic perspective of the party conducting or contracting for the analysis.

Absent from the DEIR/S and SDEIR/S is any indication of the possible variability of the data or declaration that actual performance may differ from the modeling. As indicated in "Impacts of Increasing Vehicle-Occupancy Requirements on HOV/HOT Lanes" (Caltrans, March 25, 2013) (http://www.dot.ca.gov/newtech/researchreports/preliminary_investigations/docs/HOV_and_HOT_Lanes_Preliminary_Investigation_03-25-13.pdf): "California's high occupancy vehicle (HOV) lane network is heavily used, and portions of it are becoming congested during peak periods. To address this congestion, Caltrans is exploring several solutions: increased enforcement, bottleneck reductions, hybrid/BEV exclusions, raising the minimum required occupancy of vehicles using these lanes from two to three persons (from HOV2+ to HOV3+) and converting lanes into high occupancy toll (HOT3+) lanes. However, the likely impacts of these measures on

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corridor performance are not easy to predict since existing travel demand models do not appear capable of predicting the numerous possible mode changes (for instance, the possibility that increasing occupancy requirements will lead to more single occupant vehicles in regular lanes). Consequently, Caltrans is interested in conducting an investigation into the effects of raising HOV occupancy requirements or converting HOV to HOT lanes" (emphasis added).

In addition, agency expectations concerning revenue projections under Alternative 3 appear overstated. As indicated in the National Center for Transit Research's (NCTR) "Integrating Transit and Road Pricing Projects Final Report" (NCTR, June 2013) (http://www.dot.state.fl.us/research-center/Completed_Proj/Summary_PTO/FDOT-BDK85-977-43-rpt.pdf): "A misconception exists for some that when tolling is implemented, the HOT or express lanes will generate an extraordinary amount of revenue. Depending upon the cost of the project and the plan of finance, it is unlikely that the tolls will cover the capital and operating costs of the physical roadway elements" (emphasis added).

One not need look far afield to identify examples of local transportation agencies' failures to accurately predict post-project conditions (e.g., tolling revenues and ridership). As reported in the California Debt and Investment Advisory Commission's "Final Foothill/Eastern Transportation Corridor Agency Foothill/Eastern Toll Road Project – Proposed 2013 Restructuring Financial Advisor Evaluation" (July 3, 2013):

> The [Foothill/Eastern Transportation Corridor] Agency was formed in 1986 as a joint powers agency by the County of Orange (the "County") and twelve cities in Orange County, California. The Agency was created to plan, design, finance, construct and operate the Foothill (State Route 241) and Eastern (State Route 241, State Route 261, and State Route 133) Toll Roads.
>
> The Agency is one of two transportation corridor joint powers agencies established among the County and various cities within the County in order to plan, design, finance, construct and operate toll roads. While the Agency is administered by a common staff with its sister Agency, the San Joaquin Hills Agency, all policy decisions regarding the Foothill/Eastern System are made by the Agency's Board of Directors, an appointed body of elected officials separate from the Board of Directors of the San Joaquin Hills Agency. The System provides an important connection between the Orange, Riverside, and San Bernardino Counties.
>
> In the mid-1980s, two state laws were passed authorizing the Agency to collect tolls and development impact fees to fund road construction. With a pledged revenue stream from future tolls, the Agency issued toll-revenue bonds to fund road construction. The Agency also entered into a Cooperative Agreement with the California Department of Transportation ("Caltrans") to assume ownership, liability, and maintenance of the State Route 241, State Route 261, and State Route 133 Toll Roads as part of the state highway system. This agreement eliminates the need for the Agency to pay for road maintenance.
>
> In 1995, the Agency issued $1,262,750,597.70 in principal amount of its Toll Road Revenue Bonds, Series 1995A (Fixed Rate) and $245,600,000 of Series 1995B-E (Variable Rate) (together the "Series 1995 Bonds"). The proceeds of the Series 1995 Bonds were used to finance a portion of the costs associated with the design of, acquisition of property for, and construction of, the Foothill/Eastern toll road.

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In 1999, the Agency issued $1,588,143,865.05 in Series 1999 Bonds. The Bonds were issued to (i) advance refund a substantial portion of the Series 1995 Fixed Rate Bonds and refund all of the Series 1995 Variable Rate Bonds, (ii) fund capitalized interest on the Series 1999 Bonds and fund a toll stabilization fund for the Series 1999 Bonds, and (iii) fund a use and occupancy fund for the Series 1999 Bonds. Based on the revenue projections by Wilbur Smith Associates (now CDM Smith), debt service on the Agency's debt was structured to grow at an average rate of 4.4% per year.

According to the Agency's disclosure document, over the past ten years, annual traffic transactions on the Foothill/Eastern System increased by an average of 0.03% per year, and annual revenues have increased by an average of approximately 3% per year during the same ten-year period. This is below the rate needed to keep up with escalating debt service.

In FY 2007-08, average weekday transactions decreased 5%, falling below 202,000 per day with annual revenues down 3% to $102.8 million. Decreases in toll transactions and revenues continued to worsen the following year, dropping an additional 8% to $94.1 million in FY 200809, with average weekday transactions of approximately 185,000 per day. Toll transactions continued to fall in 2009-10 to approximately 173,000 per day due at least in part to a toll increase in July that averaged 12%. However, 2009-10 revenues increased 6% to $99.7 million. Toll transactions in FY 2010-11 and FY 2011-12 were flat with almost no growth; however, given the implementation of a system-wide toll increase in July 2011 of 7% on average, revenues increased 7% from FY 2010-11 to FY 2011-12. The Agency has approved a further toll increase of 4.8% for FY 2013-14, and has projected for budgeting purposes that annual gross revenues will increase by an equivalent amount, reflecting no growth in toll traffic.

The slower than anticipated revenue growth compared to the growth in debt service of 4.4% annually has made it necessary for the Agency to consider restructuring its debt in order to meet its bond covenants and payment obligations. . .In the past, the Agency's previous T&R [traffic and revenue] studies by Wilbur Smith Associates have significantly over - estimated revenues, lending to an over issuance of debt.

By its own admission, Caltrans acknowledges that existing traffic models are incapable of predicting changing HOV occupancy requirements and the numerous possible mode changes that may be associated with the proposed project. An example of potential errors in modeling assumptions can be found in the December 2012 STS. As indicated therein: "A direct comparison of the forecast and existing condition speeds must be made with caution, because the forecast speeds are based on modeling and existing speeds are based on field observation. It is not likely that speeds will increase with growth in traffic. The largest increases in speed from the existing condition to the No Build Alternative occur on the segment north of the exit to I-605 northbound and could be partially attributable to the forecast speed model not accounting for any back up and reduced speeds due to downstream congestion" (December 2012 STS, p. 3-4). Although the projections remain the same, that "caution" and the analysis of predicted bottleneck conditions north of the I-405/I-605 junction were removed from the June 2013 STS.

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Based on the assumptions make, variables selected, and the limitations of the modeling, how might actual 2020 and 2040 traffic conditions vary from those projected in the DEIR/S and SDEIR/S? From an environmental worst-case perspective, what are the possible consequences of the potential unrealized projections and failed performance expectations presented in the CEQA/NEPA documentation? What is to ensure that revenue projections under Alternative 3 do not suffer the same fate as those of the Foothill/Eastern Transportation Corridor Agency?

7.11 Committed Funding

As indicated in the SDEIR/S: "It should be noted that the State of California would implement a project only when enough funds have been collectively received for that specific mitigation measure. (A) If PA [preferred alterative] is Alternative 1. . .(B) If PA is Alternative 2. . .(C) If PA is Alternative 3" (emphasis added) (pp. S-5 thru S-7, 3-90 thru 3-91, and 4-30 thru 4-31). Since the OCTA's Board of Directors has already selected Alternative 1 as the LPA, it is both disingenuous to suggest that a different PA might now exists (e.g., "After the public circulation period for the Draft EIR/EIS, all comments will be considered, and the Project Development Team will select a preferred alternative and make the final determination of the project's effect on the environment." DEIR/S, p. 2-27).

With regards to funding, the above excerpt appears to lump together the terms "project" and "mitigation measures," such that the excerpt could be equally interpreted to read "the State of California would implement a project only when enough funds have been collectively received for that specific 'project" (i.e., substituting the term "project" for "mitigation measure"). Since "mitigation" is only a line-item cost, the State's purported policy declaration would appear to relate to both any individual line-items and, more generally, to the total cost of a proposed action.

From what source or precedent is California's policy and/or implementation procedure derived that the State will "only [implement a project] when enough funds have been collected"? Is that an adopted policy and/or written implementation procedure? What is the meaning of the phrase "enough funds"? Would the State allow a National Highway System (NHS) improvement project to proceed absent evidence of sufficient funding for the totality of the identified improvements? Is the proposed project intended to be constructed as a phased undertaking (e.g., spend the available money now and defer later improvement until funds become available at a later date) or constructed as a single set of improvements? Does the "project sponsor" have sufficient dedicated and budgeted funds to implement any of the alternatives? Is it Caltrans' intent to select a PA and then look for the money to pay for it? 66

What is the meaning of the word "implement"? What does "implement" mean in the context of a separate "project sponsor" paying or substantially contributing to the cost of those improvements? Clearly, Caltrans has initiated a CEQA/NEPA process, including the preparation of associated engineering studies and design drawings, with only an estimated $600,000 in available Renewed Measure M Program" (M2) funding. How is the introduction of alternatives whose costs exceed that number consistent with the above policy declaration?

Notwithstanding the above statement, neither the project's described "purpose and need" nor the project's stated "objectives" include any declaration or inference that funding may be a controlling or contributing factor with regards to alternative selection. What role does funding

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play in Caltrans' selection of its chosen alternative? Is it presently the State's intent to full all or a portion of the proposed I-405 Freeway improvements?

As indicated in correspondence from William Kempton, OCTA's CEO to OCTA's Regional Planning and Highway Committee (Subject: Update on the Interstate 405 Improvement Project Alternatives, Business Models, and Delivery Option), dated April 16, 2012, current project cost estimates and funding options are described below:

> For Alternatives 1 and 2, the total estimated project cost is $1.3 billion and $1.4 billion, respectively. As the M2 revenues for this project are currently estimated to be $600 million over the life of the M2 program, this leaves an estimated funding need of $700 million for Alternative 1 and $800 million for Alternative 2. For Alternative 3, the express lanes alternative, the total estimated project cost is $1.7 billion. Alternative 3 is approximately two miles longer than the other two alternatives and includes an Express Lanes direct connector between the I-405 and the SR-73, and would require additional Intelligent Transportation System components to operate the Express Lanes facility. Alternative 3 delivers congestion management via tolling to provide the public with the option of a guaranteed speed and travel time through the corridor. Alternative 3 provides for greater vehicle throughput, as vehicles travelling at or near the speed limit in the Express Lanes will move through the corridor in greater numbers than vehicles in slower moving general purpose lanes. With the same M2 revenues of $600 million for the Express Lanes Alternative, the funding need is approximately $1.1 billion.

As indicated in the DEIR/S: "Alternative 4 [was] proposed to provide localized improvements within the I-405 corridor that could be fully funded and implemented with available revenue from Orange County's Renewed Measure M transportation sales tax initiative" (DEIR/S, pp. 2-3 and 4); however, "Alternative 4 would neither provide additional capacity along the entire corridor nor enhance interchange operations. It would not meet the project purpose and was eliminated from further consideration in this Draft EIR/EIS" (DEIR/S, p. 2-4). If the proposed project's origins are directly linked to Measures M/M2 and if implementation of Measure M/M2 improvements and cost constraints are deemed inconsistent with the "project purpose," then it is obvious that the stated purpose is wrong and the totality of the CEQA/NEPA analysis fatally flawed.

As indicated, the only alternative that could be "implemented with available revenues" was eliminated prior to the publication of the DEIR/S (e.g., "Funding options to address the shortfall are currently under study," DEIR/S, p. 1-18).

Based on that information, there is presently insufficient funding for the completion of any of the three build alternatives described in the DEIR/S and SDEIR/S. Acknowledging that funding is currently insufficient for any of the alternatives, how does Caltrans reconcile the statement that the State will not precede with the advancement of any project until such time as sufficient funds have been committed? Could the "project sponsor" (e.g., "The term 'project sponsor' means the agency or other entity, including any private or public-private entity, that seeks approval of the Secretary for a project" [emphasis added], 23 U.S.C. 139[a][7]) or another party, proceed with the preparation of detailed engineering drawings, solicitation for a design-build contractor, and/or contract award for a project prior to the State's receipt of a commitment for full project funding?

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7.12 TDM/TSM and Other Alternatives

The Lead Agency continues to misrepresent that inclusion of a transportation system management (TSM) and transportation demand management (TDM) alternative is presented in the DEIR/S and SDEIR/S. The SDEIR/S asserts that "[a] stand-alone Transportation System Management (TSM)/Transportation Demand Management (TDM) Alternative was identified for the corridor" (p. 2-8); however, "[i]t does not meet the project purpose and is described in Section 2.2.7, Alternatives Considered but Eliminated from Further Discussion" (DEIR/S, p. 2-22). The entire analysis comprises about one page and concludes that "[t]he TSM/TDM Alternative is not considered a viable option because it does not fulfill the project purpose" (DEIR/S, p. 2-50).

The mandate of Measure M is to "make best use of available freeway property, update interchanges and widen all local overcrossings according to city and regional master plans" (emphasis added) (Measure M, Project K). The term "best use" is not specifically defined therein nor does it contain language which limits Measure M-eligible projects exclusively to new freeway lane additions.

Because factors relating to "efficiency" and "effectiveness" are neither part of the project's stated purpose nor a performance criterion against which alternatives are to be examined and since cost appears not to have been a factor in alternative formulation, neither Caltrans nor the OCTA ever appear to contemplate (from a transportation investment perspective) "what is the 'best use' of Measure M resources?" Since the question is never asked and since only "build more freeway lanes" is ever considered, it is not possible to ascertain whether $1 spend on public transportation would reap higher returns (e.g., Smart Mobility benefits) than that same $1 spend on freeway lane expansion. As a result, to the extent that Caltrans and OCTA assert a nexus between the proposed project and Measure M, the Lead Agency has artificially narrowed the range of reasonable alternatives that need to be considered under CEQA/NEPA.

Clearly, an alternative to adding more lane capacity is fewer vehicles. If the Lead Agency's objective is to reduce congestion, while it may seem counterintuitive, one of the performance measures that would appear applicable related to the number of privately-operated vehicles or vehicle trips removed from the affected roadway and the number of such trips that are converted to transit-based trips.

Since "congestion" is a symptom of a larger mobility problem and not its root cause, setting a goal of reducing congestion (i.e., "Reduce congestion," DEIR/S, p. 1-5) is analogous to putting a band-aid on a terminally ill patient in that it may temporarily cover the physical manifestations of the illness but does not promote either a cure or lasting remedy. As indicated in the DEIR/S and SDEIR/S, between now and 2020, traffic problems along the I-405 Freeway will grow such that the improvements will already be outdated once they are completed. It is unlikely that the County's voters elected to tax themselves for actions that will not meaningfully benefit the majority of County motorists.

If Caltrans and OCTA wish to implement a HOTL project using Measures M/M2 funds, since there exists no reference to tolling in those ballot measures and since funding cannot be so differentiated as to segregate Measures M/M2 funds from the total cost of project improvements, independent of any memorandum from legal counsel, why would OCTA's Board of Directors not seek input from County voters whether such an expenditure is consistent with the voters' earlier directives?

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What factual basis exists to support a determination that Alternative 1 constitutes the "best use of available freeway property"? What factual basis exists to support a determination that Alternative 2 constitutes the "best use of available freeway property"? What factual basis exists to support a determination that Alternative 3 constitutes the "best use of available freeway property"?

7.13 CEQA Considerations Relating to Supplemental EIRs

Referencing Section 21166 of CEQA:

> When an environmental impact report has been prepared for a project pursuant to this division, no subsequent or supplemental environmental impact report shall be required by the lead agency or by any responsible agency, unless one or more of the following events occurs: (a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report. (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report. (c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available (emphasis added).

Section 21166 of CEQA applies only after an environmental impact report (EIR) has been certified (which is not the case herein). Prior to certification, Section 21092.1 of CEQA applies. As indicated therein:

> When significant new information is added to an environmental impact report after notice has been given pursuant to Section 21092 and consultation has occurred pursuant to Sections 21104 and 21153, but prior to certification, the public agency shall give notice again pursuant to Section 21092, and consult again pursuant to Sections 21104 and 21153 before certifying the environmental impact report" (emphasis added).

With regards to the use of a subsequent (Section 15162), supplemental (Section 15163), or an addendum (Section 15164) to an EIR, a California appellate court has ruled that "[a]ll three cited guidelines refer to preparation of documents after the certification of an EIR. These documents are prepared only when, subsequent to certification, changed circumstances occur or when new information, which was not known and could not have been known when the original EIR was certified, becomes available [Citation]" (Galante Vineyards v. Monterey Peninsula Water Management District [1998]). In Bowman v. City of Petaluma (1986), the court noted: ""We question the applicability of section 21166 where the original EIR has not been finally certified as complete. (See Stevens v. City of Glendale [Citation] [where certification of EIR was vacated, it would be 'premature' to require a supplemental EIR]."

As a result, unlike NEPA (40 CFR 1502.9[c]), under CEQA, Caltrans is precluded from preparing a "Supplemental Draft Environmental Impact Report" (emphasis added). No "supplemental draft" EIR exists under CEQA or its implementing guidelines. As such, any reference thereto is a misnomer and only serves to misrepresent the precise nature of the current CEQA document to affected stakeholders.

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7.14 Recirculated DEIR/S

As indicated in the SDEIR/S: "As a result of comments received during circulation of the Draft EIR/EIS on project-related traffic effects within the City of Long Beach, and new information, analysis, and project effects in the Supplemental Traffic Study, Caltrans, as the Lead Agency, made the decision to disclose this new information to the public by preparing and circulating this Supplemental Draft EIR/EIS. The [State] CEQA Guidelines Section 15088.5(c) allow for the lead agency to recirculate an environmental document that has been modified and address the new information that is the basis for the recirculation" (p. S-1).

To add to the confusion as to the precise nature and intent of the document, the Lead Agency refers to the SDEIR/S as both a "supplemental draft" and a "recirculate[d]" environmental document. As the SDEIR/S (pp. S-1 and S-2, see also 1-2 and 1-3) further notes:

> This Supplemental Draft EIR/EIS only includes supplemental information, as applicable, for relevant sections related to the new information described in Table S-1 below.

Table S-1: Summary of Draft EIR/EIS Sections Addressed in the Supplemental Draft EIR/EIS

Section	Change
3.1.6 Traffic and Transportation/ Pedestrian and Bicycle Facilities	Discussion added as a result of the Supplemental Traffic Study
3.6 Cumulative Impacts	Discussion added as a result of the Supplemental Traffic Study
4.0 California Environmental Quality Act Evaluation	Discussion added as a result of the Supplemental Traffic Study

If the SDEIR/S only seeks to augment the three above referenced sections, then there exists a substantial amount of tangential information whose purpose and intent remain unclear and whose integration into the DEIR/S remains unexplained. Since the formatting of the DEIR/S and the SDEIR/S are not internally consistent and since the Lead Agency has elected to present separate and independent subheadings and numbering in the SDEIR/S which are not reflective of the DEIR/S, the two documents are not organized in a manner which allows stakeholders to understanding: (1) what significant new information is actually being introduced; and (2) how the DEIR/S has been augmented or otherwise modified to reflect the information and analysis presented in the SDEIR/S.

With the exception of the following sections, it is unclear how the Lead Agency seeks to integrate the remainder of the SDEIR/S into the DEIR/S:

- **Section 3.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities.** In Chapter 3 (Environmental Setting, Consequences, and Avoidance, Minimization, and Mitigation Measures) of the SDEIR/S, the Lead Agency states that "[t]he following is additional information for Draft EIR/EIS Section 3.1.6, Traffic and Transportation/ Pedestrian and Bicycle Facilities. This information will be added to Section 3.1.6, Traffic and Transportation/Pedestrian and Bicycle Facilities of the Final EIR/EIS" (p. 3-1).

  The analysis presented in the SDEIR/S is not, however, consistent with the analysis presented in the DEIR/S. For example, the DEIR/S states that the "[a]nalysis of vehicle

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queues was conducted for AM and PM peak hours at <u>four</u> types of locations" (emphasis added) (DEIR/S, p. 3.1.6-1). In contrast, the SDEIR/S states that the "[a]nalysis of vehicle queues was conducted for AM and PM peak hours at <u>three</u> types of locations" (emphasis added) (p. 3-2). Although none of the freeway ramps in the expanded "study area" were examined in the DEIR/S, without explanation, the analysis of "[v]ehicle storage at freeway on-ramp meters" (DEIR/S, p. 3.1.6-2) was excluded from the SDEIR/S. In addition, with regards to the freeway mainline within the "Long Beach study area," integration of the two documents is made difficult since other analyses presented in the DEIR/S (e.g., "peak-hour performance," DEIR/S, p. 3.1.6-21; "daily vehicle miles traveled," DEIR/S, p. 3.1.6-22; "corridor travel times," DEIR/S, pp 3.1.6-25 and 26; "traffic accident data," DEIR/S, p. 3.1.6-27; "pedestrian and bicycle facilities," DEIR/S pp. 3.1.6-34 and 35) have not been repeated or modified based on the information and analysis presented in the SDEIR/S.

- **Section 3.6 Cumulative Impacts.** In Section 3.2 (Cumulative Impacts) of the SDEIR/S, the Lead Agency notes: "The following is additional information for Draft EIR/EIS Section 3.6, Cumulative Impacts under Subsection 3.6.5.7, Traffic and Transportation/Pedestrian and Bicycle Facilities. This information will be added to Section 3.6.5.7 of the Final EIR/EIS" (p. 3-92).

  Section 3.6 consists of only two pages (pp. 3-92 and 3-93). As a result, the cumulative impact analysis presented in the DEIR/S is only "supplemented" by the referenced pages in the SDEIR/S.

- **Section 4.0 California Environmental Quality Act Evaluation.** In Chapter 4 (California Environmental Quality Act Evaluation), the Lead Agency notes: "The following is additional information for Draft EIR/EIS Section 4.2.3, Significant Environmental Effects of the Proposed Project, under Subsection 4.2.3.5, Transportation/Traffic Checklist Questions a) – b). This information will be added to Section 4.2.3.5 of the Final EIR/EIS" p. 4-1). In addition, Section 4.2 (Mitigation Measures for Significant Impacts under CEQA notes: "The following is additional information for Draft EIR/EIS Section 4.2.8, Mitigation Measures for Significant Impacts under CEQA. This information will be added to Section 4.2.8 in the Final EIR/EIS. With implementation of the proposed traffic measures below, the project contribution to significant cumulative impacts would be mitigated" (pp. 4-26 and 27).

  Comments concerning the adequacy of the DEIR/S' and SDEIR/S' compliance with CEQA are presented elsewhere herein.

The State CEQA Guidelines present agencies with two options with regards to "recirculation of an EIR prior to certification" (14 CCR 15088.5). As stipulated therein:

> (1) When an EIR is substantially revised and the entire document is recirculated, the lead agency may require reviewers to submit new comments and, in such cases, need not respond to those comments received during the earlier circulation period. The lead agency shall advise reviewers, either in the text of the revised EIR or by an attachment to the revised EIR, that although part of the administrative record, the previous comments do not require a written response in the final EIR, and that new comments must be submitted for the revised EIR. The lead agency need only respond to those comments submitted in response to the recirculated

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> revised EIR. (2) When the EIR is revised only in part and the lead agency is recirculating only the revised chapters or portions of the EIR, the lead agency may request that reviewers limit their comments to the revised chapters or portions of the recirculated EIR. The lead agency need only respond to (i) comments received during the initial circulation period that relate to chapters or portions of the document that were not revised and recirculated, and (ii) comments received during the recirculation period that relate to the chapters or portions of the earlier EIR that were revised and recirculated. The lead agency's request that reviewers limit the scope of their comments shall be included either within the text of the revised EIR or by an attachment to the revised EIR.

As presented and as organized, the SDEIR/S neither constitutes "the entire EIR" (14 CCR 15088.5[f][1]) nor the "revised chapters or portions thereof" (14 CCR 15088.5[f][2]). As such, since the SDEIR/S is neither of the two authorized versions, the Lead Agency cannot then stipulate that previous public and agency comments submitted in response to the DEIR/S no longer "require a written response" or that comments submitted in response to the release of the SDEIR/S be confined to the "revised chapters or portions."

7.15 Feasibility

Conclusions presented in the SDEIR/S relating to the proposed project's post-mitigated level of significance are predicated on unspecified future events, such that the document is written in a fashion whereby the Lead Agency can avoid implementing the mitigation measures which it purports to be necessary to reduce otherwise significant environmental impacts to a less-than-significant level (e.g., "With implementation of the proposed traffic measures below, the project contribution to significant cumulative impacts would be mitigated," p. 4-27). As indicated in the SDEIR/S:

> Funding from additional sources will be required to fully fund implementation of each of the improvements proposed in Measures T-10 and T-11. It is unsure at this time if and when 100 percent of the funding will be available to implement each intersection identified in Mitigation Measures T-10 and T-11 because they are dependent on mitigation funds from future developments and projects in the area. The Department is committed to the fair share funding percentages as stated below. However, if the City of Long Beach and the State of California are unable to get 100 percent of the remaining funds, then <u>Measure T-10 and/or Measure T-11 will be deemed infeasible</u> due to impacts identified as significant and not fully mitigable; consequently, Findings and a Statement of Overriding Considerations would be prepared for inclusion in the Final EIR/EIS to comply with State CEQA Guidelines (Title 14 California Code of Regulations, Chapter 3, Section 15903), and the Department of Transportation and California Transportation Commission Environmental Regulations (Title 21 California Code of Regulations, Chapter 11, Section 1501) (emphasis added) (p. 4-27).

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The above statement appears inconsistent with the Lead Agency's declaration that "[w]ith implementation of the fair share agreement within 90 days of publication of the project's Record of Decision (ROD) and payment of related funding prior to construction, as described in proposed traffic measures T-10 and T-11, the project's contribution to adverse cumulative effects within the Supplemental Draft EIR/EIS study area at the affected locations would be minimized" (p. 3-93).

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Is the Lead Agency asserting that the term "minimized" is synonymous with "reduced to below a level of significance"? Are traffic-related impacts within the "Long Beach study area" deemed to be "significant" in the absence of Measures T-10 and T-11 and "less than significance" once those mitigation measures are implemented?

Since it is unlikely that either Long Beach or the State can demonstrate the availability of 100 percent of dedicated and committed funds for specified roadway improvements (e.g., "It should be noted that the State of California would implement a project only when enough funds have been collectively received for the specified mitigation measure," p. 3-89), the Lead Agency appears to be inclined to deem the identified mitigation measures infeasible and avoid the payment of its fair-share contributions thereunder. No private "project sponsor" can so condition its mitigation obligations (as specified both under CEQA and the County's "Congestion Management Program") so as to: (1) independently determine whether it bears any obligation to fully or proportionately address the impacts of its own actions; (2) condition the mitigation measure on the performance of other parties not related to the proposed project; and/or (3) defer performance to an unspecified later date, bearing no time-dependent nexus between the impacts of its actions and the faithful implementation of the stated mitigation measure.

Under CEQA, mitigation measures (14 CCR 15126.4[a][1]) and project alternatives (14 CCR 15126.6[c]) must be deemed feasible. In addition, mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments (14 CCR 15126.6[2]). To the extent that the Lead Agency were to subsequently deem Measures T-10 and T-11 to be "infeasible," those recommendations actions would not constitute valid mitigation measures under CEQA. Since no additional or alternative measures are presented in the SDEIR/S, the Lead Agency would violate CEQA's primary tenet not to prevent or minimize environmental damage (14 CCR 15021).

Similarly, public agencies tasked with mitigation (e.g., "That the proposed improvements shall be implemented by the City of Long Beach, with the City of Long Beach bearing responsibility for necessary clearances and permits," Mitigation Measure T-10) should be provided reasonable flexibility in the manner in which that implementing agency elects to compensate for a project's identified impacts. Independent of the location specified, a public agency might elect to undertake comparable improvements in another location so as to reduce traffic to a comparable amount; however, as drafted, the identified mitigation measures unreasonably limits a Responsible Agency's discretionary authority by stipulating that any allocated funds are restricted to only the location noted (e.g., "That the payment made by OCTA shall be placed into the City of Long Beach Transportation Mitigation Program and shall only be used to provide improvements to remedy impacts of the PA at the intersections listed below," Mitigation Measure T-10; "That the payment made by OCTA shall be held by Caltrans and shall only be used to provide improvements to remedy impacts of the PA at the intersections listed below," Mitigation Measure T-11).

7.16 Improper Delegation of Authority

As specified under Section 15100(b) of the State CEQA Guidelines, "[p]ublic agencies should carry out their responsibilities for preparing and reviewing EIRs." As further specified under Section 15025 of the State CEQA Guidelines:

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(a) A public agency may assign specific functions to its staff to assist in administering CEQA. Functions which may be delegated include but are not limited to: (1) Determining whether a project is exempt. (2) Conducting an Initial Study and deciding whether to prepare a draft EIR or Negative Declaration. (3) Preparing a Negative Declaration or EIR. (4) Determining that a Negative Declaration has been completed within a period of 180 days. (5) Preparing responses to comments on environmental documents. (6) Filing of notices. (b) The decision-making body of a public agency shall not delegate the following functions: (1) Reviewing and considering a final EIR or approving a Negative Declaration prior to approving a project. (2) The making of findings as required by Sections 15091 and 15093. (c) Where an advisory body such as a planning commission is required to make a recommendation on a project to the decision-making body, the advisory body shall also review and consider the EIR or Negative Declaration in draft or final form."

The administrative records suggests or demonstrates that there has been an improper delegation of authority with regards to the proposed project. As indicated in the SDEIR/S: "The Department is the lead agency under the California Environmental Quality Act and National Environmental Policy Act. The Orange County Transportation Authority is the project sponsor" (General Information about this Document, unpaginated). However, the DEIR/S notes that "[a]fter the public circulation period for the Draft EIR/EIS, all comments will be considered, and the Project Development Team (PDT) will select a preferred alternative and make the final determination of the project's effect on the environment" (emphasis added) (DEIR/S, p. 2-27).

It is not believed that the PDT is the decision-making body of Caltrans and accountable to any constituency for their actions. Additionally, neither the composition of nor the criteria that the PDT will use in making that "final determination" and selecting the "preferred alternative" (e.g., "CEQA requires that decisions be informed and balanced," 14 CCR 15003[j]) have been identified. As a result, assigned roles and delegated responsibilities with regards to both the project's approval and the "final determination" regarding the significance of environmental and socioeconomic impacts appear inconsistent with statutory and regulatory requirements.

Is the PDT Caltrans' designated "advisory body" or "advisory committee"? Who determined the composition of the PDT and when and who appointed its members? Specifically, by name and agency affiliation, what is the PDT's membership? Are the PDT's deliberations publicly noticed and open to the general public? With regards to the proposed project, what role has the PDT played to date and where are the official records of that body located? Are the PDT's meeting recorded or taped and, if so, who is the custodian of those records? Is the proposed action a "Category 1" or "Category 2" project and what specific procedures apply to decisions concerning those projects? What is the composition of Caltrans' decision-making body? What role, if any, does the CTC have in the selection of the "preferred alternative" and "final determination"?

8.0 AREAS AND FACILITIES OF SPECIFIC CONCERN

8.1 College Park East

As indicated in correspondence from Jim Bell, Executive Director, Capital Projects of OCTA to the City's Director of Public Works, dated June 25, 2013, included herein as Attachment 2 (Correspondence from Jim Bell, OCTA Executive Director, June 25, 2013), OCTA notes that the existing Almond Avenue would be removed and relocated under Alternative 2 and that the City's

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requested "design exceptions," formulated to allow for the retention of that soundwall should Alternative 2 be selected, have been rejected by the OCTA. Discussions in this letter, included review of City provided Alternatives, review of City proposed Mandatory and Advisory Exceptions, Project relocated Soundwall and Almond Avenue Impacts, and discussion of accident data. The June 2013 Supplemental Draft EIR/EIS report did not include any discussions of the City proposed alternatives, requested studies, and impacts to Almond Avenue. However, the December 2012 Draft Supplemental Traffic Study Report does address many of the City Alternatives. This information was omitted in the June version and should be included. As a result, Seal Beach does not support the Lead Agency's selection of Alternative 2 as the "preferred alternative" and requests that Caltrans reject and cease all activities in furtherance Alternative 2.

8.2 College Park West

The SR-22/7th Street Ramp at College Park Drive is discussed in Alternatives 1 and 2, but not included in Alternative 3. A discussion is requested for the elimination of any project impacts to this intersection for Alternative 3. The traffic remains relatively constant for each Alternative.

Figure 3-2 does not correctly show the lane configuration at the intersection of SR-22/7th Street and College Park Drive. In addition, the December 2012, Supplemental Traffic Study analysis did not reflect the current lane configuration for the developed Model. A traffic signal is proposed at this intersection. Previously, the City of Seal Beach contacted Caltrans District 7 and Headquarters to install a traffic signal at this location. It was denied with Caltrans citing the backup onto SR-22/7th Street causes a safety concern. The report does not model is issue caused by placing a traffic signal at this location nor was an Agreement with Caltrans provided with this option. Since the City was previously denied by Caltrans, an Agreement with Caltrans to install a traffic signal at this location before it is provided as a mitigation measure.

Since College Park West neighborhood, located to the north west of the I-405/I-605 Freeway interchange, has only a single means of vehicular access (i.e., College Park Drive) and since the northbound on-ramp and off-ramp configurations for Studebaker Road which has been proposed by Caltrans creates access, mobility, and safety concerns both for that neighborhood and for freeway motorists, Seal Beach has formulated an alternative street and ramp configuration which enhances access, mobility, and public safety. This plan is identical to the City of Long Beach Alternative for a direct connect ramp to Studebaker Road and separating it from College Park Drive. College Park Drive also connected directly to Studebaker Road.

In lieu of the design plan presented in the SDEIR/S (Figure 4-6), the City requests that Caltrans adopt the alternative street and ramp configuration that is presented as Attachment 6 (Studebaker Road/College Park Drive Alternative Street and Ramp Configuration) herein.

8.3 HOT Lanes

Based on the proposed access limitation to the managed lanes, neither Seal Beach nor its residents and business community would benefit from the implementation of Alternative 3. For those and for the reasons articulated in the City's responses to the DEIR/S and SDEIR/S, Seal Beach does not support the Lead Agency's selection of Alternative 3 as the "preferred alternative" and requests that Caltrans reject and cease all activities in furtherance of Alternative 3.

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10.0 ATTACHMENTS

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Attachment 1

California Department of Transportation
December 2012 Supplemental Traffic Study
December 2012

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SUPPLEMENTAL TRAFFIC STUDY REPORT

San Diego Freeway (I-405) Improvement Project
SR-73 to I-605

Orange and Los Angeles Counties

December 2012

STATE OF CALIFORNIA
Department of Transportation

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INTRODUCTION

The purpose of the Supplemental Traffic Study Report (Supplement) is to provide additional traffic information on the I-405 Improvement Project not included in the *Traffic Study Report – San Diego Freeway (I-405) Improvement Project SR-73 to I-605* completed by Albert Grover & Associates in April 2011 (Traffic Study). These improvements were included as a result of public comments during the Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) circulation. This Supplemental will be included in the Final EIR/EIS. In addition to this Introduction, this Supplement contains four sections, numbered and providing additional traffic information on the four topics in the list below:

1. Alternative 3 Modified. Section 1 provides traffic analysis assuming truncation of the Express Lanes near the Euclid Street interchange. Alternative 3 Modified also includes an optional design of the Magnolia/Warner interchange that does not include braided ramps and a modification to the northbound merge of the direct connector from westbound SR-22 into the Express Lanes.
2. Alternative 1 Magnolia/Warner Interchange. Section 2 provides traffic analysis of design options for the Magnolia/Warner interchange that do not include braided ramps.
3. Operational Analysis Northbound Approaching I-605. Potential for operational difficulties northbound on I-405 at I-605 is analyzed. As the build alternatives approach the LA County line, the additional lanes proposed in each of the build alternatives continue into receiving lanes on branch connectors to SR-22/7th Street westbound and I-605 northbound. If more motorists desire to continue northbound on I-405 in LA County than the freeway can handle as the additional lanes exit to SR-22/7th Street and I-605, there is the potential for a bottleneck to occur.
4. Long Beach Area Traffic Study. Traffic changes in the Long Beach area along SR-22/7th Street, I-405, and I-605, at their local interchanges, and at nearby intersections due to the proposed build alternatives are evaluated. The study area includes Carson Street in the vicinity of I-605 which, in addition to the City of Long Beach, includes the Cities of Lakewood and Hawaiian Gardens.

Each of the four sections is independent and complete on its own with respect to its topic. References are made as necessary to the Traffic Study to avoid extensive duplication of topics fully covered in that report. Each of the four topics covered in this Supplement is more fully defined in their respective sections of this Supplement. All of the figures and tables associated with a section are presented at the end of the section, with the figures following the text and the tables at the end of the section. Appendices are provided electronically.

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1.0 ALTERNATIVE 3 MODIFIED

Alternative 3 Modified was introduced during the environmental process by Orange County Transportation Authority (OCTA), the project sponsor, to address public comments received during the public circulation of the Draft EIR/EIS.

Alternative 3 Modified would add one GP lane in each direction on I-405 from Euclid Street to the I-605 interchange (as in Alternatives 1 and 2), plus add a tolled Express Lane in each direction of I-405 from Euclid Street to SR-22 East. The tolled Express Lane and the existing HOV lanes would be managed jointly as a tolled Express Lane Facility with two lanes in each direction from Euclid Street to I-605. The Express Lanes would encourage carpooling by providing discounted tolls for HOVs with 3 or more occupants. Alternative 3 Modified removes the direct connector from SR-73 to I-405.

Auxiliary lanes would be provided at the following locations on I-405:

- Northbound to the Euclid Street off-ramp from a point 1200' south of the off-ramp;
- Northbound from the Magnolia Street on-ramp to the Beach Boulevard off-ramp;
- Northbound from the Seal Beach Boulevard on-ramp to the SR-22 Westbound/7th Street off-ramp;
- Southbound from the SR-22/7th Street on-ramp to Seal Beach Boulevard off-ramp;
- Southbound from the Magnolia Street on-ramp to a point south of the Warner Avenue off-ramp;
- Southbound from the Euclid Street on-ramp to Harbor Boulevard off-ramp; and
- Southbound from the Harbor Boulevard on-ramp to the Fairview Road off-ramp.

The existing northbound auxiliary lane from Magnolia Street to Beach Boulevard will be retained. The existing southbound auxiliary lanes from SR-22/7th Street to Seal Beach Boulevard and from Harbor Boulevard to Fairview Road will be retained, and the existing southbound auxiliary lane from the Beach Boulevard interchange to the Magnolia Street interchange would be incorporated as part of the new southbound general purpose lane.

A design option is also proposed for the northbound I-405 ramps between Warner Avenue and Magnolia Street. The design option proposes to modify the existing collector-distributor (C-D) system by providing an exclusive exit ramp for the northbound loop Off-Ramp to Warner Avenue and beginning the collector distributor road just downstream from the exit ramp to Warner Avenue. The C-D road consists of two lanes providing for a one lane entrance ramp from Warner Avenue and two lane exit ramp to Magnolia Street. Analysis for the design option is presented in Section 1.7.

Alternative 3 Modified would include the same interchange improvements included in Alternative 3 except for minor lane designations on southbound Magnolia Street at the I-405 southbound ramp intersection. The analysis presented here assumes that there are not braided

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ramps in the southbound direction at the Magnolia Street/Warner Avenue interchange and that there is a southbound auxiliary lane starting from the loop on-ramps from Magnolia Street and continuing south of the Warner Avenue off-ramp before terminating north of the Warner Avenue on-ramp. This design option was suggested to retain business (Boomers, Fountain Valley Skate Center, Days Inn and Sports Authority).

Express Lane Access

To facilitate access to the Express Lane Facility, the following six access points are currently under consideration on:

1. I-405 near Euclid Street, by an at-grade access;
2. I-405 in the Magnolia Street/Warner Avenue area, by an at-grade access;
3. I-405 in the Bolsa Avenue/Goldenwest Street area, by an at-grade access;
4. SR-22 east of the I-405 junction, by a direct connector;
5. I-605 north of the I-405 junction, by a direct connector; and
6. I-405 north of the I-605 junction, by an at-grade access.

Access to the Express Lane Facility from SR-22 and I-605 would be via the HOV direct connectors to be constructed as part of the SR-22 West County Connectors (WCC) Project. Under Alternative 3 Modified, the SR-22 WCC Project HOV direct connectors would become part of the I-405 tolled Express Lane Facility, and use of the direct connectors would become tolled.

Express Lane Transition Areas

Access points where Express Lanes begin or end would require transition areas. Transition areas near the beginning of Express Lanes would allow for traffic in HOV and GP lanes to change lanes to access the GP and Express Lanes within the project limits of Alternative 3 Modified. Transition areas at the end of Express Lanes would allow traffic in the Express and GP lanes to change lanes to access the GP and HOV lanes downstream of the end of the Express Facility. Transition Express Lanes would begin and end at four locations:

1. On SR-22 East at the I-405 interchange;
2. On I-605 at the I-405 interchange;
3. On I-405 at the Euclid Street interchange; and
4. On I-405 at the I-605 interchange.

Two transition areas (one in each direction) would be required for each location, for a total of 8 transition areas.

Express Lane Operations

The type of tolling to be used in the Express Lanes is likely to be either variable or dynamic. Variable tolling provides different toll amounts by hour of the day and day of the week. Variable tolling is currently used on the SR-91 Express Lanes, with toll amounts adjusted every few months based on traffic levels by hour of the day and day of the week during the previous few months. Dynamic tolling varies toll amounts minute to minute in response to the real-time volume of traffic in the Express Lanes and levels of congestion in the GP lanes.

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During peak hours of traffic congestion, the volume of traffic using the Express Lanes would be managed to maintain high speeds and minimize congestion in the Express Lanes. This would be accomplished by limiting the volume of traffic in the Express Lanes to a maximum of 1,700 vehicles per hour per lane (vphpl). Tolls amounts would be adjusted up when the 1,700 vphpl target volume is exceeded to reduce the volume in the Express Lanes; conversely, toll amounts would be adjusted down when volumes fall below the target volume to attract more traffic into the Express Lanes.

The current plan is that the Express Lanes would use the same discount structure that is currently used on the SR-91 Express Lanes. HOVs with 3 or more occupants, zero omission vehicles, motorcycles, vehicles with disabled license plates, and disabled veterans would use the I-405 Express Lanes free of charge except during the most congested hours when such vehicles receive a 50 percent toll discount. The Express Lanes would be free to the following users at all times; transit vehicles, California Highway Patrol (CHP) vehicles, Caltrans vehicles, and emergency vehicles responding to an emergency.

All tolls on the I-405 Express Lanes would be collected electronically. All vehicles on the I-405 Express Lanes would be required to use a transponder, even when under a full toll discount.

Traffic volumes in the Express Lanes are based on congestion pricing limiting traffic in the lanes to a maximum of 1,700 vehicles per hour per lane as described in Section 1 of the Traffic Study. Volumes in the Express Lanes are expected to be slightly higher in the northern end of the corridor based on the Phase II Traffic & Revenue Study conducted for the corridor. The forecast volumes in the Express Lanes for Opening Year (2020) and Design Year (2040) are shown in **Figures 1.1 and 1.2** along with volumes in the general purpose lanes.

Sections 1.1 through 1.5 below provide an analysis of the mainline freeway as well as the ramp junctions for Opening Year (2020) and Design Year (2040) conditions for Alternative 3 Modified. All analysis of arterial intersections with ramps and other arterials, as well as queuing analysis, is the same as for Alternative 3, except for the intersection analysis of Magnolia Street at the southbound I-405 ramps, which is presented in Section 1.6.

All LOS worksheets for mainline freeway segment and ramp junction locations north of Harbor Boulevard to Magnolia Street are provided in Appendix I. Under Alternative 3 Modified, mainline freeway segments and ramp junctions north of Magnolia Street are the same as under Alternative 3, except for the merge from the westbound SR-22 direct connector into the northbound Express Lanes. LOS worksheets for mainline freeway segment and ramp junction locations north of Magnolia Street can be found in the approved Traffic Study. The LOS worksheets for the merge into the northbound Express Lanes from the SR-22 westbound direct connector are presented in Appendix I Sections A3 and A4.

Mainline freeway segment and ramp junction locations from Harbor Boulevard south are the same as for Alternatives 1 and 2. The LOS worksheets for Harbor Boulevard and locations south of Harbor Boulevard for Alternative 2 are included in Appendix II for reference; they are identical to the appendix material for Alternative 2 in the approved Traffic Study.

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Section 1.6 describes and provides analysis of revisions to lane designations on southbound Magnolia Street at its intersection with the I-405 southbound ramps. Under Alternative 3 Modified the southbound approach would provide two exclusive through lanes and one exclusive right turn lane into the on-ramp to southbound I-405; under Alternative 3 there would be two exclusive through lanes and one shared through/right turn lane. The Synchro worksheets for this intersection under Alternative 3 Modified are provided in Appendix I B.

Section 1.7 describes and provides analysis of a design option for I-405 northbound between Warner Avenue and Magnolia Street using a C-D (collector-distributor) road design. The LOS worksheets for the C-D road design option are presented in Appendix I C.

1.1 Freeway Analysis and Levels of Service

In this section, Alternative 3 Modified is analyzed using projected Opening Year (2020) traffic volumes and Design Year (2040) traffic volumes. HCM methodology was used to analyze the LOS on freeway segments based on speed-flow-density relationships. The measure used to provide an estimate of LOS is density. A base free flow speed of 70 miles per hour was used to facilitate calculating the density and LOS for each freeway segment.

The Opening Year (2020) and Design Year (2040) AM and PM peak hour traffic volumes along with lane schematics for I-405 mainline and all interchange ramps within the project limits for Alternative 3 Modified are illustrated on **Figures 1.1 and 1.2**, respectively.

Tables 1.1 and 1.2 summarize the findings for Opening Year (2020) and Design Year (2040) northbound and southbound freeway conditions for Alternative 3 Modified. The peak hour capacity, demand volume, demand-to-capacity (d/c) ratio, density and LOS for all the freeway segments are shown. In general, under Alternative 3 Modified conditions, the freeway mainline general purpose lanes are expected to operate at LOS F in the AM and PM peak hours in both the southbound and northbound directions under 2020 and 2040 conditions. The express lanes are expected to operate generally at LOS C to D under 2020 and 2040 conditions.

1.2 Ramps and Ramp-Freeway Junction Analysis and Levels of Service

The density and LOS for each of the ramps along I-405 within the study area for Alternative 3 Modified are based on projected Opening Year (2020) traffic volumes and Design Year (2040) traffic volumes. **Table 1.3** provides a summary of the findings from the analyses for Opening Year (2020) conditions. As discussed under Analysis Methodology (Section 2.1.2 of Final Traffic Study), for the Design Year (2040) conditions two separate analyses were conducted for ramps and ramp-freeway junctions: one for Unconstrained Mainline Volumes and another for Constrained Mainline Volumes.

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Tables 1.4 and 1.5 provide a summary of the findings from the analyses for Design Year (2040) conditions for the AM and PM time periods, respectively. The peak hour capacity, demand volume, demand-to-capacity (d/c) ratio, density and LOS for each of the freeway ramps are presented. Under Alternative 3 Modified conditions for 2020, the ramp junction peak hour LOS generally varies from B to F, with most ramps north of the Brookhurst Street/Talbert Avenue interchange operating at LOS C to E during both the AM and PM peak hours. For 2040, most ramp junctions operate at LOS F under the unconstrained analysis and LOS C to E under the constrained analysis.

The westbound SR-22 branch connector to northbound 405 Express Lanes merge location is expected to operate at LOS D during the AM and PM peak hours for both Opening Year (2020) and Design Year (2040). The design assumed for this merge would not result in removal of the College Park East sound wall and would provide a merging distance of 500 feet with three 12 ft lanes followed by a 600 ft taper to two 12 ft lanes.

1.3 Weaving Analysis

Weaving analysis is conducted between an on-ramp and an off-ramp spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and collector-distributor roads. Weaving analyses for Alternative 3 Modified are based on projected Opening Year (2020) traffic volumes and Design Year (2040) traffic volumes.

Table 1.6 summarizes the weaving analysis findings for Opening Year (2020) conditions for Alternative 3 Modified for both the freeway and the collector-distributor roads. For the Design Year (2040) conditions, two separate analyses were conducted to evaluate freeway weaving conditions: one for Unconstrained Mainline Volumes, and another for Constrained Mainline Volumes.

Table 1.7 provides a summary of the findings from the freeway weaving analyses for Alternative 3 Modified for Design Year (2040) conditions. **Table 1.8** summarizes the weaving analysis findings for Design Year (2040) conditions for Alternative 3 Modified for the collector-distributor roads; the density and LOS for all the weaving sections are shown. Most mainline freeway weaving segments and collector-distributor roads operate at LOS C to E under both 2020 and 2040 conditions.

1.4 Alternative 3 Modified Analysis Summary

Tables 1.1 and 1.2 document that LOS F is expected to occur in the general purpose lanes during the AM and PM peak hours on nearly all links in 2020 and on all links in 2040. The tables document that LOS C and D are expected in the express lanes.

Table 1.9 presents LOS and the percent increase in throughput of Alternative 3 Modified compared to the No Build alternative for three summary segments. Because the Express Lanes

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terminate at Euclid Street, the summary segments are slightly revised from those presented in the Traffic Study. The table shows that the general purpose lanes on all segments are expected to operate at LOS F during the peak hours. Due to the jammed LOS F conditions, throughput for the general purpose lanes is calculated based on 1200 v/h/ln, consistent with the methodology described in Section 2.1 of the Traffic Study. Since the express lanes will be managed to avoid operations under jammed conditions, throughput is determined based on 1700 v/h/ln, the volume to which the express lanes will be managed through the imposition of tolls.

Table 1.10 summarizes the speed index and d/c ratios for 2040 conditions under Alternative 3 Modified. The table shows that the d/c ratios in the general purpose lanes are expected to be in excess of 1.23 along the entire corridor. The d/c ratios in the express lanes are expected to range from 0.78 to 0.92. The speed index ranges from 6 to 42 in the general purpose lanes and 65 in the express lanes whose speeds and volumes are managed through the imposition of tolls.

1.5 Express Lane Transition and Access Areas

This section summarizes the LOS expected in the transition areas and intermediate access locations associated with the Express Lanes in Alternative 3 Modified.

Transition Areas

Transition areas are along the roadways at the beginning and end of the Express Lanes and allow traffic in HOV and GP lanes to change lanes, if necessary, to access the GP and Express Lanes or vice versa. Transition areas may add new lanes and/or redesignate lanes from HOV to Express. The four proposed transition areas are listed above.

Limits of transition areas approaching the start of the Express Lanes are defined upstream by the termination of an HOV restriction and downstream by the solid striping used to delineate the separation between the Express Lanes and the general purpose lanes. Limits of the transition areas approaching the end of the Express Lanes are defined upstream by the termination of solid striping used to delineate the separation between the Express Lanes and the general purpose lanes and the beginning of the downstream HOV access restriction.

The length of the transition areas ranges from 2,600 feet to 12,150 feet. Due to the length of these areas, they are analyzed using the HCM freeway segment analysis. (Weaving analysis is not appropriate for these transition areas because the HCM weaving analysis method is limited "to weaving segments up to 2,500 ft long." (HCM 2000 p 13-18))

Tables 1.11 and 1.12 summarize the LOS in each of the transition areas anticipated for Opening Year (2020) and Design Year (2040), respectively. The transition areas are anticipated to operate at a level similar to the level expected for the HOV and/or general purpose lanes in the vicinity of the transition area. The northbound transition area on I-405 from Harbor Blvd to Euclid St is shown in **Table 1.12** to operate at LOS F in 2040; **Table 1.2** shows that the segment of I-405 northbound from Harbor Blvd to Euclid is expected to operate at LOS F in both the HOV and general purpose lanes. In the southbound direction both the transition area and the adjacent HOV and GP lanes are also expected to operate at LOS F in 2040.

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The northbound transition area on I-405 from I-605 to the end of the HOV access is shown in **Table 1.12** to operate at LOS F in 2040; **Table 1.2** shows that this segment of I-405 northbound is expected to operate at LOS F in both the HOV and general purpose lanes. In the southbound direction both the transition area and the segment HOV and GP lanes are also expected to operate at LOS F in 2040.

The westbound transition area on SR-22 from the end of the HOV restriction to Valley View Street is shown in **Table 1.12** to operate at LOS F in 2040; **Table 1.4** shows that the branch connector from SR-22 westbound to northbound I-405 is expected to operate with a V/C ratio of 1.56 (LOS F) in 2040 under Alternative 3 Modified. The Express Lane direct connector is forecast to have a volume of 700 per hour (see **Figure 1.2**) with a V/C ratio of 0.47 based on a capacity of 1,500. Under the No Build Alternative the volume on the HOV direct connector from SR-22 westbound to northbound I-405 is forecast to be 1,739 and 2,030 during the AM and PM peak hours, respectively, (see Figure 2.4.2 of the Traffic Study) both well in excess of the capacity of a single lane HOV direct connector of 1,500. Under the No Build Alternative the general purpose branch connector from SR-22 westbound to northbound I-405 is forecast to operate with a V/C ratio of 1.33 in 2040 (see Table 2.4.4 of the Traffic Study). In short westbound SR-22 approaching I-405 northbound is expected to operate at LOS F under all conditions, except that the Express Lane direct connector itself would operate below capacity under Alternative 3 Modified.

The eastbound transition area on SR-22 is shown in **Table 1.12** to operate at LOS F in 2040; **Table 1.4** shows that branch connector from I-405 southbound to eastbound SR-22 is expected to operate with a V/C ratio of 1.40 (LOS F) in 2040 under Alternative 3 Modified. The Express Lane direct connector is forecast to have a volume of 700 per hour (see Figure 2.7.2 of the Traffic Study) with a V/C ratio of 0.47 based on a capacity of 1,500. Under the No Build Alternative the volume on the HOV direct connector from I-405 southbound to eastbound SR-22 is forecast to be 1,644 and 1,819 during the AM and PM peak hours, respectively, (see Figure 2.4.2 of the Traffic Study) both well in excess of the capacity of a single lane HOV direct connector of 1,500. Under the No Build Alternative the general purpose branch connector from I-405 southbound to eastbound SR-22 is forecast to operate with a V/C ratio of 0.97 in 2040 (see Table 2.4.4 of the Traffic Study). Under the No Build Alternative, the combined volume of the HOV and general purpose connectors will result in an over capacity condition on SR-22 eastbound downstream of the direct connector. In short the HOV direct connector to eastbound SR-22 is expected to operate with a V/C ratio in excess of 1.00 under the No Build condition and under 1.00 with the Express Lanes in Alternative 3 Modified and the transition area along eastbound SR-22 is anticipated to operate at LOS F under all conditions.

The northbound transition area on I-605 from the termination of the direct connector separation to the end of the HOV access is shown in **Table 1.12** to operate at LOS D and F during the AM and PM peak hours, respectively, in 2040; **Table 1.2** shows that this segment of I-605 northbound is expected to operate at LOS C and F in both the HOV and general purpose lanes during the AM and PM peak hours, respectively, in 2040. In the southbound direction the transition area is expected to operate at LOS F and C during the AM and PM peak hours, respectively; the segment HOV lanes are expected to operate at LOS E and D during the AM and

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PM peak hours, respectively, while the GP lanes are expected to operate at LOS F and D during the AM and PM peak hours, respectively.

Generally, the transition areas are anticipated to operate at a level similar to the level expected for the HOV and/or general purpose lanes in the vicinity of the transition area. In only one case is the 2040 HOV lane LOS better than the transition area LOS: I-605 during the AM peak hour where the northbound LOS in the HOV lane is C compared to D in the transition area and the southbound where the LOS in the HOV lane is E compared to F in the transition area. Overall, the transition areas are not expected to degrade operations of the HOV system adjacent to the transition areas.

Intermediate Access Areas

The two intermediate at-grade access locations are near the Magnolia/Warner interchange and the Bolsa/Goldenwest interchange. The design of the Magnolia/Warner intermediate access area is a skip stripe similar to the existing access locations to HOV lanes on I-405. The length of the skip stripe area is 2,000 feet. The design of the Bolsa/Goldenwest access area includes a "weaving" lane between the #2 Express Lane and the #1 general purpose lane; the "weaving" lane is 2100 feet in length. These proposed designs are consistent with the Caltrans Traffic Operations Policy Directive (TOPD) 11-02.

The following qualitative analysis is presented for the year 2040 operations anticipated in the two intermediate access areas. HCM weaving analysis is not used to evaluation operations for either intermediate access location because the LOS F conditions expected in the general purpose lanes (see **Table 1.2**) make such an HCM analysis unreliable. The HCM weaving method effectively averages the densities of the two incoming roadways, represented by LOS C in the Express Lanes and LOS F in the general purpose lanes, resulting in a determination of LOS D or E in the weaving section. Such a result does not reliably relate the expected operations in the intermediate access area.

The LOS F conditions expected during peak hours in the general purpose lanes at the Magnolia/Warner intermediate access area will affect vehicles exiting the Express Lanes. Slower speeds are expected in the #2 Express Lane as motorists exiting the Express Lanes match the slower speed of the general purpose lanes before making the lane change to the #1 general purpose lane. Slower speeds are also expected in the #2 Express Lane as motorists entering the Express Lanes move out of the LOS F conditions in the #1 general purpose lane into the #2 Express Lane. This condition is similar to the condition experienced in the existing limited access HOV lanes along I-405 during periods of congestion in the adjacent general purpose lanes. Experience over the last 20 years has shown that these HOV access locations operate efficiently and safely. Motorists adjust speeds as necessary to complete the required lane changes between the higher speed HOV lane and the lower speed general purpose lane. Some deterioration in LOS is anticipated in the Express Lanes in the vicinity of the Magnolia/Warner intermediate access area.

The LOS F conditions expected in the general purpose lanes at the Bolsa/Goldenwest intermediate access area are not expected to affect vehicles exiting or entering the Express Lanes. A weaving lane is provided between the #2 Express Lane and the #1 general purpose lane

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to accommodate adjustments in speed between those lanes. The weaving lane provides the necessary length (per Caltrans TOPD 11-02) to accommodate motorists entering and exiting the Express Lanes as they adjust their speed between the higher speed #2 Express Lane and the lower speed #1 general purpose lane.

A third intermediate access area is located at the SR-22 East. The direct connector from the median of SR-22 East to the median of I-405 being constructed as part the WCC project would become part of the Express Facility and would be tolled. The transition areas on SR-22 are covered above. The merge of the single lane direct connector from SR-22 westbound into the northbound Express Lanes on I-405 is forecast to operate at LOS D during both the AM and PM peak hours in years 2020 and 2040 as noted above in Section 1.2. The volumes using the direct connector and the Express Lanes would be managed to maintain the same volumes on those facilities in both directions in years 2020 and 2040, as shown in Figures 2.7.1 and 2.7.2. The diverge of the single lane direct connector to SR-22 eastbound from the southbound Express Lanes on I-405 is forecast to operate at LOS C during both the AM and PM peak hours in years 2020 and 2040.

1.6 I-405 Southbound Ramps/Magnolia Street Intersection Analysis

Under Alternative 3 Modified, the Project Condition lane configuration at the intersection of the I-405 Southbound Ramps and Magnolia Street would be three exclusive northbound through lanes, two exclusive southbound through lanes, one exclusive southbound right turn lane, dual left turn lanes eastbound and dual right turn lanes eastbound. The intersection would be signalized. LOS was conducted for the I-405 southbound ramp and Magnolia Street intersection for Year 2020 and 2040 Project Conditions. Analysis was conducted for Project traffic with the proposed improvements. **Table 1.13** shows the resulting LOS at the intersection with the minor lane designation change. As shown in **Table 1.13** the I-405 southbound ramp and Magnolia Street intersection is expected to operate at LOS A and B during both peak hours under Year 2020 and Year 2040 conditions. The resulting peak hour queues under Year 2020 and 2040 indicate that the storage being provided under the Project Condition will be sufficient.

For comparison purposes, **Table 1.13** also summarizes LOS, v/c ratios and average delays under No Build Condition and Project traffic under No Build lane geometrics. LOS worksheets for these two conditions can be found in the Traffic Study.

As shown in **Table 1.13**, the widening of Magnolia Street and the improvement of the I-405 Southbound Off-Ramp under the Project Condition allows the I-405 Southbound Off-Ramp/Magnolia Street intersection to operate at LOS B or better compared to LOS F under Year 2040 No Build Condition. The intersection does not meet the significant impact criteria and there are no significant traffic impacts at the intersection.

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1.7 Design Option for I-405 Northbound Between Warner Avenue and Magnolia Street

The following is the traffic analysis for the proposed design option on northbound I-405 between Warner Avenue and Magnolia Street. For the design option, weaving and freeway-ramp junction analyses were conducted.

Ramp Junction Analysis
The ramp junction analysis is conducted for the following locations:

- Northbound I-405 Loop Off-Ramp to Warner Avenue
- Northbound I-405 Off-Ramp to Collector-Distributor (C-D) Road (between Warner Ave and Magnolia St)

The density and LOS for each of the ramps listed above are based on projected Opening Year (2020) traffic volumes and Design Year (2040) traffic volumes. **Table 1.14** provides a summary of the findings from the analyses for Opening Year (2020) conditions. **Tables 1.15 and 1.16** provide a summary of the findings from the analyses for Design Year (2040) conditions for the AM and PM time periods, respectively. The peak hour capacity, demand volume, demand-to-capacity (d/c) ratio, density and LOS for each of the freeway ramps are presented.

Under the proposed design option for 2020 Alternative 3 Modified, the ramp junction peak hour LOS generally varies from D to F during both the AM and PM peak hours. For 2040, the ramps operate at LOS E and F under the unconstrained analysis and LOS D and E under the constrained analysis.

Weaving Analysis: C-D Road
Weaving analysis was conducted for the northbound C-D road between the loop on-ramp from Warner Avenue and the direct off-ramp to Magnolia Street. Weaving analyses are based on projected Opening Year (2020) traffic volumes and Design Year (2040) traffic volumes.

Tables 1.17 and 1.18 summarize the weaving analysis findings for Opening Year (2020) and Design Year (2040) conditions for the proposed design option. Under 2020 conditions, the weaving segment is expected to operate at LOS B and D during the AM and PM peak hours. For 2040, the weaving segment is expected to operate at LOS B and D during the AM and PM peak hours.

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Table 1.1: Alternative 3 Modified (2020) I-405 Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 3 Modified Condition (2020)							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[2]	d/c	Density[2]	LOS[3]	Traffic Demand Volume[2]	d/c	Density[2]	LOS[3]
Bristol Street to Fairview Road	GP	NB	5	9,250	9,734	1.05	33.2	F	10,322	1.12	37.0	F
		SB	5	9,250	12,490	1.35	*	F	9,943	1.07	34.4	F
	HOV	NB	1	1,850	1,947	1.05	33.2	F	2,064	1.12	37.0	F
		SB	1	1,850	2,498	1.35	*	F	1,989	1.08	34.4	F
Fairview Road to Harbor Boulevard/Hyland Avenue	GP	NB	6	11,100	11,023	0.99	30.2	D	12,153	1.09	35.6	F
		SB	7	12,950	16,775	1.30	*	F	13,430	1.04	32.4	F
	HOV	NB	1	1,850	1,837	0.99	30.2	D	2,026	1.10	35.6	F
		SB	1	1,850	2,387	1.30	*	F	1,939	1.04	32.4	F
Harbor Boulevard/Hyland Avenue to Euclid Street/Ellis Avenue	GP	NB	6	11,100	11,927	1.07	34.4	F	13,470	1.21	*	F
		SB	6	11,100	15,486	1.40	*	F	12,596	1.13	38.3	F
	HOV	NB	1	1,850	1,988	1.07	34.4	F	2,245	1.21	*	F
		SB	1	1,850	2,581	1.40	*	F	2,099	1.13	38.3	F
Euclid Street/Ellis Avenue to Brookhurst Street/Talbert Avenue	GP	NB	6	11,100	11,015	0.88	25.5	C	12,515	1.00	30.5	D
		SB	5	9,250	13,266	1.43	*	F	10,224	1.11	36.3	E
	Express	NB	2	3,700	2,900	0.78	22.3	C	3,200	0.86	24.6	C
		SB	2	3,700	3,200	0.86	24.6	C	2,900	0.78	22.3	C
Brookhurst Street/Talbert Avenue to Magnolia Street/Warner Avenue	GP	NB	5	9,250	9,625	1.04	32.5	F	10,909	1.18	41.9	F
		SB	5	9,250	11,654	1.26	*	F	9,707	1.05	33.0	F
	Express	NB	2	3,700	2,900	0.78	22.3	C	3,200	0.86	24.6	C
		SB	2	3,700	3,200	0.86	24.6	C	2,900	0.78	22.3	C
Magnolia Street/Warner Avenue to Beach Boulevard/Edinger Street	GP	NB	5	9,250	10,378	1.12	37.4	F	11,079	1.20	43.6	F
		SB	5	9,250	10,480	1.13	38.2	F	10,277	1.11	36.7	F
	Express	NB	2	3,700	2,800	0.76	21.5	C	3,000	0.81	23.1	C
		SB	2	3,700	3,000	0.81	23.1	C	2,950	0.80	22.7	C

Table 1.1: Alternative 3 Modified (2020) I-405 Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 3 Modified Condition (2020)							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]
Beach Boulevard/Edinger Street to Goldenwest Street/Bolsa Avenue	GP	NB	5	9,250	9,900	1.07	34.2	F	10,465	1.13	38.1	F
		SB	5	9,250	9,692	1.05	32.9	F	10,108	1.09	35.5	F
	Express	NB	2	3,700	2,800	0.76	21.5	C	3,000	0.81	23.1	C
		SB	2	3,700	3,000	0.81	23.1	C	2,950	0.80	22.7	C
Goldenwest Street/Bolsa Avenue to Springdale Street/Westminster Boulevard	GP	NB	5	9,250	9,960	1.08	34.5	F	10,881	1.18	41.6	F
		SB	5	9,250	10,130	1.10	35.7	F	10,090	1.09	35.4	F
	Express	NB	2	3,700	2,700	0.73	20.8	C	2,700	0.73	20.8	C
		SB	2	3,700	2,700	0.73	20.8	C	2,700	0.73	20.8	C
Springdale Street/Westminster Boulevard to Bolsa Chica Road/Valley View Street	GP	NB	5	9,250	10,178	1.10	36.0	F	10,859	1.17	41.4	F
		SB	5	9,250	9,998	1.08	34.8	F	9,792	1.06	33.5	F
	Express	NB	2	3,700	2,700	0.73	20.8	C	2,700	0.73	20.8	C
		SB	2	3,700	2,700	0.73	20.8	C	2,700	0.73	20.8	C
Bolsa Chica Road/Valley View Street to Seal Beach Boulevard	GP	NB	7	12,950	15,341	1.18	42.3	F	15,313	1.18	42.2	F
		SB	7	12,950	15,479	1.20	43.3	F	15,165	1.17	41.2	F
	Express	NB	2	3,700	3,400	0.92	26.2	D	3,400	0.92	26.2	D
		SB	2	3,700	3,400	0.92	26.2	D	3,400	0.92	26.2	D
Seal Beach Boulevard to I-605	GP	NB	7	12,950	15,391	1.19	42.7	F	15,230	1.18	41.6	F
		SB	7	12,950	15,484	1.20	48.4	F	15,237	1.18	41.6	F
	Express	NB	2	3,700	3,400	0.92	26.2	D	3,400	0.92	26.2	D
		SB	2	3,700	3,400	0.92	26.2	D	3,400	0.92	26.2	D
I-605 to San Gabriel River	GP	NB	4	7,400	9,518	1.29	*	F	7,888	1.07	34.5	F
		SB	4	7,400	8,650	1.17	41.7	F	8,872	1.20	44.4	F
	HOV	NB	1	1,850	2,379	1.29	*	F	1,972	1.07	34.5	F
		SB	1	1,850	2,162	1.17	41.7	F	2,218	1.20	44.4	F

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Table 1.1: Alternative 3 Modified (2020) I-405 Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 3 Modified Condition (2020)							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]
I-605 — I-405 to Express/HOV Transition	GP	NB	5	9,250	6,406	0.69	19.9	C	7,957	0.86	25.0	C
		SB	4	7,400	6,795	0.92	27.6	D	5,646	0.76	22.4	C
	Express/ HOV	NB	1	1,850	1,550	0.84	19.9	C	1,700	0.92	25.0	C
		SB	1	1,850	1,500	0.81	27.6	D	1,400	0.76	22.4	C
I-605 — Express/HOV Transition to Katella Avenue	GP	NB	4	7,400	6,365	0.86	19.8	C	7,726	1.04	24.2	F
		SB	4	7,400	6,885	0.93	28.1	D	5,848	0.79	23.3	C
	HOV	NB	1	1,850	1,591	0.86	19.8	C	1,931	1.04	24.2	F
		SB	1	1,850	1,410	0.76	28.1	D	1,198	0.65	23.3	C

Notes:

1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/in).
3. Level of Service (LOS): General Purpose (GP) lane, High Occupancy Vehicle (HOV) lane and Express Toll lane LOS is based on density except when demand-to-capacity (d/c) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single HOV/Express lane and 3,700 vph for dual HOV/Express lanes.
5. * Density is in excess of 45 pc/mi/in; therefore LOS is F.

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GL-9 (Continued)

Table 1.2: Alternative 3 Modified (2040) I-405 Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 3 Modified Condition (2040)							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]
Bristol Street to Fairview Road	GP	NB	5	9,250	11,079	1.20	43.6	F	11,867	1.28	*	F
		SB	5	9,250	14,301	1.55	*	F	11,139	1.20	44.2	F
	HOV	NB	1	1,850	2,216	1.20	43.6	F	2,373	1.28	*	F
		SB	1	1,850	2,860	1.55	*	F	2,228	1.20	44.2	F
Fairview Road to Harbor Boulevard/Hyland Avenue	GP	NB	6	11,100	12,545	1.13	38.0	F	14,239	1.28	*	F
		SB	7	12,950	19,451	1.50	*	F	15,085	1.16	40.6	F
	HOV	NB	1	1,850	2,091	1.13	38.0	F	2,373	1.28	*	F
		SB	1	1,850	2,779	1.50	*	F	2,155	1.16	40.6	F
Harbor Boulevard/Hyland Avenue to Euclid Street/Ellis Avenue	GP	NB	6	11,100	13,635	1.23	*	F	15,597	1.41	*	F
		SB	6	11,100	18,069	1.63	*	F	14,196	1.28	*	F
	HOV	NB	1	1,850	2,273	1.23	*	F	2,600	1.41	*	F
		SB	1	1,850	3,012	1.63	*	F	2,366	1.28	*	F
Euclid Street/Ellis Avenue to Brookhurst Street/Talbert Avenue	GP	NB	6	11,100	11,647	1.05	33.0	F	13,316	1.20	43.8	F
		SB	5	9,250	15,955	1.72	*	F	11,836	1.28	*	F
	Express	NB	2	3,700	2,900	0.78	22.3	C	3,200	0.86	24.6	C
		SB	2	3,700	3,200	0.86	24.6	C	2,900	0.78	22.3	C
Brookhurst Street/Talbert Avenue to Magnolia Street/Warner Avenue	GP	NB	5	9,250	11,616	1.26	*	F	13,121	1.42	*	F
		SB	5	9,250	14,277	1.54	*	F	11,313	1.22	*	F
	Express	NB	2	3,700	2,900	0.78	22.3	C	3,200	0.86	24.6	C
		SB	2	3,700	3,200	0.86	24.6	C	2,900	0.78	22.3	C
Magnolia Street/Warner Avenue to Beach Boulevard/Edinger Street	GP	NB	5	9,250	12,404	1.34	*	F	13,149	1.42	*	F
		SB	5	9,250	13,219	1.43	*	F	11,898	1.29	*	F
	Express	NB	2	3,700	2,800	0.76	21.5	C	3,000	0.81	23.1	C
		SB	2	3,700	3,000	0.81	23.1	C	2,950	0.80	22.7	C

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GL-9 (Continued)

Table 1.2: Alternative 3 Modified (2040) I-405 Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 3 Modified Condition (2040)							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]
Beach Boulevard/Edinger Street to Goldenwest Street/Bolsa Avenue	GP	NB	5	9,250	11,928	1.29	*	F	12,423	1.34	*	F
		SB	5	9,250	12,507	1.35	*	F	11,768	1.27	*	F
	Express	NB	2	3,700	2,800	0.76	21.5	C	3,000	0.81	23.1	C
		SB	2	3,700	3,000	0.81	23.1	C	2,950	0.80	22.7	C
Goldenwest Street/Bolsa Avenue to Springdale Street/Westminster Boulevard	GP	NB	5	9,250	11,993	1.30	*	F	12,858	1.39	*	F
		SB	5	9,250	12,929	1.40	*	F	11,751	1.27	*	F
	Express	NB	2	3,700	2,700	0.73	20.8	C	2,700	0.73	20.8	C
		SB	2	3,700	2,700	0.73	20.8	C	2,700	0.73	20.8	C
Springdale Street/Westminster Boulevard to Bolsa Chica Road/Valley View Street	GP	NB	5	9,250	12,218	1.32	*	F	12,817	1.38	*	F
		SB	5	9,250	12,793	1.38	*	F	11,435	1.24	*	F
	Express	NB	2	3,700	2,700	0.73	20.8	C	2,700	0.73	20.8	C
		SB	2	3,700	2,700	0.73	20.8	C	2,700	0.73	20.8	C
Bolsa Chica Road/Valley View Street to Seal Beach Boulevard	GP	NB	7	12,950	18,304	1.41	*	F	18,506	1.43	*	F
		SB	7	12,950	19,299	1.49	*	F	17,667	1.36	*	F
	Express	NB	2	3,700	3,400	0.92	26.2	D	3,400	0.92	26.2	D
		SB	2	3,700	3,400	0.92	26.2	D	3,400	0.92	26.2	D
Seal Beach Boulevard to I-605	GP	NB	7	12,950	18,356	1.42	*	F	18,438	1.42	*	F
		SB	7	12,950	19,298	1.49	*	F	17,840	1.38	*	F
	Express	NB	2	3,700	3,400	0.92	26.2	D	3,400	0.92	26.2	D
		SB	2	3,700	3,400	0.92	26.2	D	3,400	0.92	26.2	D
I-605 to San Gabriel River	GP	NB	4	7,400	11,076	1.50	*	F	8,914	1.20	45.0	F
		SB	4	7,400	10,563	1.43	*	F	10,420	1.41	*	F
	HOV	NB	1	1,850	2,769	1.50	*	F	2,228	1.20	45.0	F
		SB	1	1,850	2,641	1.43	*	F	2,605	1.41	*	F

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GL-9 (Continued)

Table 1.2: Alternative 3 Modified (2040) I-405 Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 3 Modified Condition (2040)							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]	Traffic Demand Volume[1]	d/c	Density[2]	LOS[3]
I-605 — I-405 to Express/HOV Transition	GP	NB	5	9,250	7,397	0.80	23.1	C	9,841	1.06	33.8	F
		SB	4	7,400	8,162	1.10	36.7	F	6,811	0.92	27.7	D
	Express/ HOV	NB	1	1,850	1,650	0.89	23.1	C	1,800	0.97	33.8	D
		SB	1	1,850	1,600	0.86	36.7	E	1,400	0.76	27.7	D
I-605 — Express/HOV Transition to Katella Avenue	GP	NB	4	7,400	7,238	0.98	22.5	C	9,313	1.26	30.9	F
		SB	4	7,400	8,103	1.10	35.2	F	6,815	0.92	27.7	D
	HOV	NB	1	1,850	1,809	0.98	22.5	C	2,328	1.26	30.9	F
		SB	1	1,850	1,659	0.90	36.2	E	1,396	0.75	27.7	D

Notes:

1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane, High Occupancy Vehicle (HOV) lane and Express Toll lane LOS is based on density except when demand-to-capacity (d/c) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single HOV/Express lane and 3,700 vph for dual HOV/Express lanes.
5. * Density is in excess of 45 pc/mi/ln; therefore LOS is F.

GL-9 (Continued)

Table 1.3: Alternative 3 Modified (2020) I-405 Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition (2020)							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	d/c	Density[2]	LOS[1,5]	Traffic Volume[1]	d/c	Density[2]	LOS[3,5]
Bristol Street	NB On Loop	1	1,500	148	0.10	31.0	D	335	0.22	33.0	D
	NB On Direct	1	1,500	349	0.23	22.7	C	238	0.16	24.5	C
	SB Off Direct	2	3,000	1,295	0.43	--	F	935	0.31	20.2	C
	SB On Loop	1	1,500	1,042	0.69	--	F	1,418	0.95	28.1	D
Fairview Road	NB Off Direct	2	3,000	2,975	0.99	--	F	3,512	1.17	--	F
	NB On Direct	1	1,500	743	0.50	22.0	C	707	0.47	24.3	C
	SB Off Direct	2	3,000	788	0.26	--	F	844	0.28	22.5	C
	SB On Direct	1	1,500	1,371	0.91	--	F	1,043	0.70	23.4	C
Harbor Boulevard	NB On Loop	1	1,500	502	0.33	30.1	D	603	0.40	33.5	D
	NB On Direct	1	1,500	553	0.37	24.9	C	933	0.62	--	F
	SB Off Direct	2	3,000	1,202	0.40	--	F	1,132	0.38	15.4	B
	SB On Loop	1	1,500	968	0.65	--	F	1,039	0.69	23.1	C
	SB On Direct	1	1,500	1,339	0.89	--	F	747	0.50	24.5	C
Euclid Street & Ellis Avenue	NB Off Loop	2	3,000	1,573	0.52	15.9	B	2,097	0.70	21.8	C
	NB On Direct	1	1,500	273	0.18	20.8	C	668	0.45	23.5	C
	SB Off Direct	1	1,500	474	0.32	--	F	429	0.29	25.6	C
	SB On Loop	1	1,500	949	0.63	--	F	1,230	0.82	28.3	D
	SB On Direct	1	1,500	1,126	0.75	--	F	770	0.51	24.7	C
Brookhurst Street & Talbert Avenue	NB Off Direct	2	3,000	1,204	0.40	*	A	1,395	0.47	*	B
	NB On Loop	1	1,500	775	0.52	26.0	C	861	0.57	29.3	D
	NB On Direct	1	1,500	339	0.23	23.3	C	357	0.24	26.8	C
	SB Off Direct	1	1,500	820	0.55	--	F	950	0.63	38.8	E
	SB On Loop	1	1,500	1,325	0.88	--	F	723	0.48	27.2	C
	SB On Direct	1	1,500	--	--	--	--	--	--	--	--

GL-9 (Continued)

Table 1.3: Alternative 3 Modified (2020) I-405 Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition (2020)							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	d/c	Density[2]	LOS[3,5]	Traffic Volume[1]	d/c	Density[2]	LOS[3,5]
Magnolia Street & Warner Avenue	NB Off Loop	1	1,500	505	0.34	36.3	E	781	0.52	--	F
	NB Off Direct	1	1,500	236	0.16	33.2	D	673	0.45	38.7	E
	NB On Direct (Warner)	1	1,500	534	0.36	22.1	C	856	0.57	23.5	C
	NB On Loop + Direct (Magnolia)	1	1,500	850	0.57	21.9	C	568	0.38	23.9	C
	SB Off Direct	1	1,500	554	0.37	39.4	E	1,141	0.76	--	F
	SB On Direct	1	1,500	1,391	0.93	--	F	732	0.49	22.1	C
Beach Boulevard & Edinger Avenue	NB Off Direct	2	3,000	1,595	0.53	*	B	1,893	0.63	*	B
	NB On Loop	1	1,500	828	0.55	27.8	C	1,002	0.67	29.1	D
	NB On Direct	1	1,500	289	0.19	26.2	C	277	0.18	28.1	D
	SB Off Direct	2	3,000	968	0.32	26.2	C	1,508	0.50	30.6	D
	SB On Loop	1	1,500	758	0.51	24.7	C	897	0.60	24.4	C
	SB On Direct	1	1,500	998	0.67	23.2	C	780	0.52	23.2	C
Goldenwest Street & Bolsa Avenue	NB Off Loop	1	1,500	866	0.58	39.0	E	769	0.51	40.3	E
	NB On Loop	1	1,500	826	0.55	27.3	C	885	0.59	29.1	D
	SB Off (Direct + Loop)	1	1,500	1,041	0.69	40.7	E	943	0.63	40.0	E
	SB On (Direct + Loop)	1	1,500	903	0.60	22.1	C	1,211	0.81	22.5	C
Springdale Street & Westminster Boulevard	NB Off Loop	1	1,500	752	0.50	38.6	E	931	0.62	--	F
	NB On Direct	1	1,500	970	0.65	22.1	C	909	0.61	23.4	C
	SB Off Direct	1	1,500	367	0.24	36.8	E	435	0.29	35.5	E
	SB Off Loop	1	1,500	269	0.18	35.1	E	235	0.16	34.0	D
	SB On Direct	1	1,500	768	0.51	22.8	C	968	0.65	22.4	C

GL-9 (Continued)

Table 1.3: Alternative 3 Modified (2020) I-405 Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition (2020)							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	d/c	Density[2]	LOS[3,5]	Traffic Volume[1]	d/c	Density[2]	LOS[3,5]
Bolsa Chica Road & Garden Grove Boulevard	NB Off Direct	1	1,500	901	0.60	40.1	E	1,252	0.83	--	F
	SB Off Direct	2	3,000	1,204	0.40	21.6	C	1,024	0.34	19.2	B
	SB On Loop	1	1,500	944	0.63	27.4	C	1,145	0.76	26.5	C
Seal Beach Boulevard	NB Off Direct	1	1,500	769	0.51	--	F	1,096	0.73	--	F
	NB On Loop	1	1,500	819	0.55	*	F	1,013	0.68	*	F
	SB Off Loop	2	3,000	944	0.31	*	B	1,191	0.40	*	B
	SB On Direct	1	1,500	939	0.63	25.3	C	1,119	0.75	24.5	C
I-405 Express & SR-22	NB On from WB SR-22	1	1,500	700	0.47	32.2	D	700	0.47	32.2	D
Freeway - to - Freeway Branch Connectors[8]											
I-405 Freeway Interchanges with SR-73, SR-22 & I-605	NB On from NB SR-73	3	5,400	3,411	0.63	--	--	4,598	0.85	--	--
	NB On from WB SR-22[7]	2.5	4,500	6,064	1.35	--	--	5,706	1.27	--	--
	NB Off to WB SR-22	2	3,600	2,665	0.74	--	--	2,937	0.82	--	--
	NB Off to NB I-605	2	3,600	2,729	0.76	--	--	4,333	1.20	--	--
	SB On from SB I-605	2	3,600	3,890	1.08	--	--	3,030	0.84	--	--
	SB On from EB SR-22	2	3,600	2,682	0.75	--	--	3,017	0.84	--	--
	SB Off to EB SR-22	3	5,400	5,221	0.97	--	--	5,494	1.02	--	--
	SB Off to SB SR-73	3	5,400	4,767	0.88	--	--	3,616	0.67	--	--

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); d/c - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. As the 3 lanes on WB SR-22 are reduced to 2 lanes at I-405 connection, 2.5 lanes are assumed for increased capacity due to forced flow conditions.
8. For freeway-to-freeway branch connectors, d/c ratios are provided.

GL-9 (Continued)

Table 1.4: Alternative 3 Modified (2040) I-405 Ramp Junction Peak Hour Level of Service - AM

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition (2040) - AM							
				Peak Condition (Unconstrained Mainline Volume)				Non-Peak Condition (Constrained Mainline Volume)			
				Ramp		Ramp Junction		Ramp			
				Traffic Volume[1]	d/c	Density[2]	LOS[3,5]	Traffic Volume[1]	d/c	Density[2]	LOS[3]
Bristol Street	NB On Loop	1	1,500	152	0.10	36.3	E	152	0.10	30.7	D
	NB On Direct	1	1,500	379	0.25	26.0	C	379	0.25	22.2	C
	SB Off Direct	2	3,000	1,347	0.45	--	F	1,347	0.45	21.7	C
	SB On Loop	1	1,500	1,084	0.72	--	F	1,084	0.72	28.3	D
Fairview Road	NB Off Direct	2	3,000	3,107	1.04	--	F	3,107	1.04	30.3	F
	NB On Direct	1	1,500	794	0.53	24.9	C	794	0.53	23.4	C
	SB Off Direct	2	3,000	820	0.27	--	F	820	0.27	21.7	C
	SB On Direct	1	1,500	1,444	0.96	--	F	1,444	0.96	23.8	C
Harbor Boulevard	NB On Loop	1	1,500	522	0.35	34.7	D	522	0.35	30.4	D
	NB On Direct	1	1,500	750	0.50	--	F	750	0.50	24.2	C
	SB Off Direct	2	3,000	1,251	0.42	--	F	1,251	0.42	13.8	B
	SB On Loop	1	1,500	1,007	0.67	--	F	1,007	0.67	22.3	B
	SB On Direct	1	1,500	1,393	0.93	--	F	1,393	0.93	24.9	C
Euclid Street & Ellis Avenue	NB Off Loop	2	3,000	1,679	0.56	19.8	B	1,679	0.56	16.7	B
	NB On Direct	1	1,500	318	0.21	25.7	C	318	0.21	25.1	C
	SB Off Direct	1	1,500	639	0.43	--	F	639	0.43	23.5	C
	SB On Direct	1	1,500	1,479	0.99	--	F	1,479	0.99	23.3	C
	SB On Loop	1	1,500	1,086	0.72	--	F	1,086	0.72	28.7	D
Brookhurst Street & Talbert Avenue	NB Off Direct	2	3,000	1,329	0.44	*	B	1,329	0.44	*	B
	NB On Loop	1	1,500	867	0.58	31.1	D	867	0.58	28.1	D
	NB On Direct	1	1,500	431	0.29	--	F	431	0.29	23.2	C
	SB Off Direct	1	1,500	853	0.57	--	F	853	0.57	36.9	E
	SB On Loop	1	1,500	1,379	0.92	--	F	1,379	0.92	28.8	D
	SB On Direct	1	1,500	--	--	--	--	--	--	--	--

GL-9 (Continued)

Table 1.4: Alternative 3 Modified (2040) I-405 Ramp Junction Peak Hour Level of Service - AM

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition (2040) - AM							
				Peak Condition (Unconstrained Mainline Volume)				Non-Peak Condition (Constrained Mainline Volume)			
				Ramp		Ramp Junction		Ramp			
				Traffic Volume[1]	d/c	Density[2]	LOS[3,5]	Traffic Volume[1]	d/c	Density[2]	LOS[3]
Magnolia Street & Warner Avenue	NB Off Loop	1	1,500	520	0.35	--	F	520	0.35	35.2	E
	NB Off Direct	1	1,500	259	0.17	39.6	E	259	0.17	33.7	D
	NB On Direct (Warner)	1	1,500	556	0.37	--	F	556	0.37	23.0	C
	NB On Loop + Direct (Magnolia)	1	1,500	911	0.61	--	F	911	0.61	21.4	C
	SB Off Direct	1	1,500	577	0.38	--	F	577	0.38	35.6	E
	SB On Direct	1	1,500	1,423	0.95	--	F	1,423	0.95	22.8	C
Beach Boulevard & Edinger Avenue	NB Off Direct	2	3,000	1,643	0.55	*	F	1,643	0.55	*	B
	NB On Loop	1	1,500	866	0.58	--	F	866	0.58	29.3	D
	NB On Direct	1	1,500	301	0.20	--	F	301	0.20	25.0	C
	SB Off Direct	2	3,000	1,160	0.39	--	F	1,160	0.39	25.6	C
	SB On Loop	1	1,500	813	0.54	--	F	813	0.54	26.3	C
	SB On Direct	1	1,500	1,059	0.71	--	F	1,059	0.71	22.7	C
Goldenwest Street & Bolsa Avenue	NB Off Loop	1	1,500	908	0.61	--	F	908	0.61	37.2	E
	NB On Loop	1	1,500	873	0.58	--	F	873	0.58	27.9	C
	SB Off (Direct + Loop)	1	1,500	1,082	0.72	--	F	1,082	0.72	38.1	E
	SB On (Direct + Loop)	1	1,500	960	0.64	--	F	960	0.64	23.0	C
Springdale Street & Westminster Boulevard	NB Off Loop	1	1,500	783	0.52	--	F	783	0.52	36.5	E
	NB On Direct	1	1,500	1,008	0.67	--	F	1,008	0.67	22.2	C
	SB Off Direct	1	1,500	382	0.25	--	F	382	0.25	34.5	D
	SB Off Loop	1	1,500	289	0.19	--	F	289	0.19	34.0	D
	SB On Direct	1	1,500	807	0.54	--	F	807	0.54	22.6	C

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Table 1.4: Alternative 3 Modified (2040) I-405 Ramp Junction Peak Hour Level of Service - AM

Interchange	Ramp Type	Ramp Lanes	Ramp[2,4] Capacity	Alternative 3 Modified Condition (2040) - AM							
				Peak Condition (Unconstrained Mainline Volume)				Non-Peak Condition (Constrained Mainline Volume)			
				Ramp		Ramp Junction		Ramp			
				Traffic Volume[1]	d/c	Density[2]	LOS[3,5]	Traffic Volume[1]	d/c	Density[2]	LOS[3]
Bolsa Chica Road & Garden Grove Boulevard	NB Off Direct	1	1,500	938	0.63	--	F	938	0.63	37.3	E
	SB Off Direct	2	3,000	1,448	0.48	--	F	1,448	0.48	21.3	C
	SB On Loop	1	1,500	1,074	0.72	--	F	1,074	0.72	28.0	C
Seal Beach Boulevard	NB Off Direct	1	1,500	800	0.53	--	F	800	0.53	36.6	E
	NB On Loop	1	1,500	852	0.57	*	F	852	0.57	*	F
	SB Off Loop	2	3,000	983	0.33	*	F	983	0.33	*	B
	SB On Direct	1	1,500	984	0.66	--	F	984	0.66	23.0	C
I-405 Express & SR-22	NB On from WB SR-22	1	1,500	700	0.47	32.2	D	700	0.47	32.2	D
Freeway - to - Freeway Branch Connectors[8]											
I-405 Freeway Interchanges with SR-73, SR-22 & I-605	NB On from NB SR-73	3	5,400	3,654	0.68	--	--	3,654	0.68	--	--
	NB On from WB SR-22[7]	2.5	4,500	7,024	1.56	--	--	7,024	1.56	--	--
	NB Off to WB SR-22	2	3,600	2,929	0.81	--	--	2,929	0.81	--	--
	NB Off to NB I-605	2	3,600	3,482	0.97	--	--	3,482	0.97	--	--
	SB On from SB I-605	2	3,600	4,920	1.37	--	--	4,920	1.37	--	--
	SB On from EB SR-22	2	3,600	3,074	0.85	--	--	3,074	0.85	--	--
	SB Off to EB SR-22	3	5,400	7,580	1.40	--	--	7,580	1.40	--	--
	SB Off to SB SR-73	3	5,400	5,693	1.05	--	--	5,693	1.05	--	--

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); d/c - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. As the 3 lanes on WB SR-22 are reduced to 2 lanes at I-405 connection, 2.5 lanes are assumed for increased capacity due to forced flow conditions.
8. For freeway-to-freeway branch connectors, d/c ratios are provided.

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Table 1.5: Alternative 3 Modified (2040) I-405 Ramp Junction Peak Hour Level of Service - PM

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition (2040) - PM							
				Peak Condition (Unconstrained Mainline Volume)				Non-Peak Condition (Constrained Mainline Volume)			
				Ramp		Ramp Junction		Ramp			
				Traffic Volume[1]	d/c	Density[2]	LOS[2,5]	Traffic Volume[1]	d/c	Density[2]	LOS[3]
Bristol Street	NB On Loop	1	1,500	348	0.23	--	F	348	0.23	30.7	D
	NB On Direct	1	1,500	248	0.17	--	F	248	0.17	22.2	C
	SB Off Direct	2	3,000	998	0.33	22.9	C	998	0.33	19.3	B
	SB On Loop	1	1,500	1,476	0.98	--	F	1,476	0.98	28.3	D
Fairview Road	NB Off Direct	2	3,000	3,625	1.21	--	F	3,625	1.21	33.8	F
	NB On Direct	1	1,500	769	0.51	--	F	769	0.51	23.4	C
	SB Off Direct	2	3,000	865	0.29	24.9	C	865	0.29	22.0	C
	SB On Direct	1	1,500	1,092	0.73	25.8	C	1,092	0.73	23.8	C
Harbor Boulevard	NB On Loop	1	1,500	628	0.42	--	F	628	0.42	30.4	D
	NB On Direct	1	1,500	957	0.64	--	F	957	0.64	24.2	C
	SB Off Direct	2	3,000	1,180	0.39	--	F	1,180	0.39	13.3	B
	SB On Loop	1	1,500	1,081	0.72	--	F	1,081	0.72	22.3	C
	SB On Direct	1	1,500	777	0.52	27.6	C	777	0.52	24.8	C
Euclid Street & Ellis Avenue	NB Off Loop	2	3,000	2,395	0.80	--	F	2,395	0.80	21.6	C
	NB On Direct	1	1,500	714	0.48	28.8	D	714	0.48	25.2	C
	SB Off Direct	1	1,500	504	0.34	--	F	504	0.34	22.9	C
	SB On Direct	1	1,500	897	0.60	--	F	897	0.60	23.2	C
	SB On Loop	1	1,500	1,433	0.96	--	F	1,433	0.96	28.8	D
Brookhurst Street & Talbert Avenue	NB Off Direct	2	3,000	1,622	0.54	*	B	1,622	0.54	*	B
	NB On Loop	1	1,500	1,000	0.67	--	F	1,000	0.67	28.1	D
	NB On Direct	1	1,500	427	0.28	--	F	427	0.28	23.2	C
	SB Off Direct	1	1,500	1,003	0.67	--	F	1,003	0.67	37.7	E
	SB On Loop	1	1,500	752	0.50	31.9	D	752	0.50	28.7	D
	SB On Direct	1	1,500	--	--	--	--	--	--	--	--

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Table 1.5: Alternative 3 Modified (2040) I-405 Ramp Junction Peak Hour Level of Service - PM

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition (2040) - PM							
				Peak Condition (Unconstrained Mainline Volume)				Non-Peak Condition (Constrained Mainline Volume)			
				Ramp		Ramp Junction		Ramp			
				Traffic Volume[1]	d/c	Density[2]	LOS[3,5]	Traffic Volume[1]	d/c	Density[2]	LOS[3]
Magnolia Street & Warner Avenue	NB Off Loop	1	1,500	878	0.59	--	F	878	0.59	37.0	E
	NB Off Direct	1	1,500	777	0.52	--	F	777	0.52	36.4	E
	NB On Direct (Warner)	1	1,500	888	0.59	--	F	888	0.59	23.1	C
	NB On Loop + Direct (Magnolia)	1	1,500	595	0.40	--	F	595	0.40	21.4	C
	SB Off Direct	1	1,500	1,178	0.79	--	F	1,178	0.79	38.7	E
	SB Off Loop	1	1,500	597	0.40	40.3	E	597	0.40	35.6	E
	SB On Loop	1	1,500	378	0.25	23.8	C	378	0.25	21.7	C
	SB On Direct	1	1,500	762	0.51	25.5	C	762	0.51	22.7	C
Beach Boulevard & Edinger Avenue	NB Off Direct	2	3,000	2,078	0.69	*	F	2,078	0.69	*	B
	NB On Loop	1	1,500	1,061	0.71	--	F	1,061	0.71	29.3	D
	NB On Direct	1	1,500	291	0.19	--	F	291	0.19	25.0	C
	SB Off Direct	2	3,000	1,623	0.54	--	F	1,623	0.54	29.8	D
	SB On Loop	1	1,500	950	0.63	28.9	D	950	0.63	26.3	C
	SB On Direct	1	1,500	803	0.54	--	F	803	0.54	22.7	C
Goldenwest Street & Bolsa Avenue	NB Off Loop	1	1,500	812	0.54	--	F	812	0.54	36.7	E
	NB On Loop	1	1,500	947	0.63	--	F	947	0.63	27.9	C
	SB Off (Direct + Loop)	1	1,500	981	0.65	--	F	981	0.65	37.6	E
	SB On (Direct + Loop)	1	1,500	1,248	0.83	--	F	1,248	0.83	23.1	C
Springdale Street & Westminster Boulevard	NB Off Loop	1	1,500	997	0.66	--	F	997	0.66	37.6	E
	NB On Direct	1	1,500	956	0.64	--	F	956	0.64	22.2	C
	SB Off Direct	1	1,500	453	0.30	--	F	453	0.30	34.8	D
	SB Off Loop	1	1,500	245	0.16	39.3	E	245	0.16	33.8	D
	SB On Direct	1	1,500	1,014	0.68	--	F	1,014	0.68	22.6	C

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Alternative 3 Modified

Table 1.5: Alternative 3 Modified (2040) I-405 Ramp Junction Peak Hour Level of Service - PM

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition (2040) - PM							
				Peak Condition (Unconstrained Mainline Volume)				Non-Peak Condition (Constrained Mainline Volume)			
				Ramp		Ramp Junction		Ramp			
				Traffic Volume[1]	d/c	Density[2]	LOS[3,5]	Traffic Volume[1]	d/c	Density[2]	LOS[3]
Bolsa Chica Road & Garden Grove Boulevard	NB Off Direct	1	1,500	1,297	0.86	--	F	1,297	0.86	39.2	E
	SB Off Direct	2	3,000	1,243	0.41	--	F	1,243	0.41	19.9	B
	SB On Loop	1	1,500	1,288	0.86	--	F	1,288	0.86	28.0	D
Seal Beach Boulevard	NB Off Direct	1	1,500	1,140	0.76	--	F	1,140	0.76	38.4	E
	NB On Loop	1	1,500	1,072	0.71	*	F	1,072	0.71	*	F
	SB Off Loop	2	3,000	1,343	0.45	*	F	1,343	0.45	*	B
	SB On Direct	1	1,500	1,170	0.78	--	F	1,170	0.78	23.1	C
Freeway - to - Freeway Branch Connectors[6]											
I-405 Freeway Interchanges with SR-73, SR-22 & I-605	NB On from NB SR-73	3	5,400	5,228	0.97	--	--	5,228	0.97	--	--
	NB On from WB SR-22[7]	2.5	4,500	6,986	1.55	--	--	6,986	1.55	--	--
	NB Off to WB SR-22	2	3,600	3,535	0.98	--	--	3,535	0.98	--	--
	NB Off to NB I-605	2	3,600	5,661	1.57	--	--	5,661	1.57	--	--
	SB On from SB I-605	2	3,600	3,603	1.00	--	--	3,603	1.00	--	--
	SB On from EB SR-22	2	3,600	3,112	0.86	--	--	3,112	0.86	--	--
	SB Off to EB SR-22	3	5,400	7,520	1.39	--	--	7,520	1.39	--	--
	SB Off to SB SR-73	3	5,400	4,100	0.76	--	--	4,100	0.76	--	--

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); d/c - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. As the 3 lanes on WB SR-22 are reduced to 2 lanes at I-405 connection, 2.5 lanes are assumed for increased capacity due to forced flow conditions.
8. For freeway-to-freeway branch connectors, d/c ratios are provided.

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Alternative 3 Modified

Table 1.6 Alternative 3 Modified (2020) Weaving Level-of-Service
Freeway and Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Northbound - Seal Beach Boulevard to SR-22 Westbound	33.2	D	38.3	E
I-405 Southbound - SR-22 Eastbound to Seal Beach Boulevard	31.2	D	37.7	E
I-405 Southbound - Magnolia Street to Warner Avenue	35.8	E	28.1	D
I-405 Southbound - Harbor Boulevard to Fairview Road	43.9	F	28.5	D
SR-73 Northbound - Bear Street to Fairview Road	19.7	B	24.1	C
SR-73 Southbound - Fairview Road to Bear Street	25.2	C	19.8	B
Collector-Distributor (C-D) Roads				
Goldenwest Street & Bolsa Avenue Interchange at I-405				
Southbound C-D Road	22.2	B	12.6	B
Katella Avenue/Willow Street Interchange at I-605				
Southbound C-D Road	53.6	F	53.2	F

Notes:
1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads. Refer to Table 2.1.3 for the LOS criteria.
3. Highway Capacity Software analysis worksheets are included in Appendix E1.

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Alternative 3 Modified

Table 1.7 Alternative 3 Modified (2040) Weaving Level-of-Service
Freeway

Freeway Mainline Weaving Segment	Alternative 3 Modified Condition (2040) - AM				Alternative 3 Modified Condition (2040) - PM			
	Peak Condition (Unconstrained Mainline Volume)		Non-Peak Condition (Constrained Mainline Volume)		Peak Condition (Unconstrained Mainline Volume)		Non-Peak Condition (Constrained Mainline Volume)	
	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
I-405 Northbound - Seal Beach Boulevard to SR-22 Westbound	42.0	E	34.1	D	47.6	F	41.3	E
I-405 Southbound - SR-22 Eastbound to Seal Beach Boulevard	36.8	E	34.4	D	40.1	E	39.2	E
I-405 Southbound - Magnolia Street to Warner Avenue	48.0	F	34.9	D	33.8	D	28.7	D
I-405 Southbound - Harbor Boulevard to Fairview Road	49.1	F	41.2	E	31.4	D	29.5	D
SR-73 Northbound - Bear Street to Fairview Road	21.5	C	21.5	C	27.2	C	25.2	C
SR-73 Southbound - Fairview Road to Bear Street	28.9	D	28.4	D	22.3	C	22.3	C

Notes:
1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds for the freeway mainline are shown in Table 2.1.3.
3. Highway Capacity Software analysis worksheets are included in Appendix E2.

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I-405 Improvement Project Supplemental Traffic Study — Alternative 3 Modified

Table 1.8 Alternative 3 Modified (2040) Weaving Level-of-Service
Collector-Distributor (C-D) Roads

Interchange Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Goldenwest Street & Bolsa Avenue Interchange at I-405				
Southbound C-D Road	24.0	B	13.4	B
Katella Avenue/Willow Street Interchange at I-605				
Southbound C-D Road	56.2	F	55.7	F

Notes:

1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds for the C-D roads are shown in Table 2.1.3.
3. Highway Capacity Software analysis worksheets are included in Appendix E2.

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I-405 Improvement Project Supplemental Traffic Study — Alternative 3 Modified

Table 1.9: Level of Service and Throughput Summary
Alternative 3 Modified (2040) - AM & PM

Level of Service[1]

Study Segment	No Build Alternative				Alternative 3 Modified			
	NB		SB		NB		SB	
	GP	HOV	GP	HOV	GP	HOV/ Express	GP	HOV/ Express
SR-73 to Euclid	F	F	F	F	F	F	F	F
Euclid to SR-22 East	F	F	F	F	F	C	F	C
SR-22 East to I-605	F	F	F	F	F	D	F	D

Throughput[2]

Study Segment		No Build Alternative				Alternative 3 Modified				Percent Increase in Throughput (over No Build)	
		NB		SB		NB		SB		NB	SB
		GP	HOV	GP	HOV	GP	HOV/ Express	GP	HOV/ Express		
SR-73 to Euclid	Lanes	6	1	6	1	6	1	6	1	0%	0%
	Throughput	7200	1200	7200	1200	7200	1200	7200	1200		
		8400		8400		8400		8400			
Euclid to SR-22 East	Lanes	4	1	4	1	5	2	5	2	50%	50%
	Throughput	4800	1200	4800	1200	6000	3000	6000	3000		
		6000		6000		9000		9000			
SR-22 East to I-605	Lanes	6	2	6	2	7	2	7	2	23%	23%
	Throughput	7200	2400	7200	2400	8400	3400	8400	3400		
		9600		9600		11800		11800			

Notes:

1. Level of Service (LOS) is based on density (pc/mi/ln) per Highway Capacity Manual.
2. Traffic flow throughput for each GP and HOV lane is 1,200 vehicles/hour under congested (LOS F) conditions. Traffic flow throughput for each managed Express lane is equivalent to forecast traffic (vehicles/hour).
3. LOS reported is for worst case link within each study segment.
4. GP = General Purpose; HOV = High Occupancy Vehicle; Throughput units are vehicles/hour.
5. The LOS shown above applies for both AM and PM peak periods.

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Table 1.10: Speed Index and Demand-to-Capacity Ratio Summary
Alternative 3 Modified (2040) - AM & PM

Speed Index[1]

Study Segment		No Build Alternative				Alternative 3 Modified			
		NB		SB		NB		SB	
		GP	HOV	GP	HOV	GP	HOV/ Express	GP	HOV/ Express
SR-73 to Euclid	AM	41	41	6	6	41	41	6	6
	PM	19	19	32	32	19	19	32	32
Euclid to SR-22 East	AM	6	6	5	5	40	65	17	65
	PM	5	5	7	7	30	65	42	65
SR-22 East to I-605	AM	7	15	5	10	22	65	14	65
	PM	7	15	8	19	22	65	24	65

Demand-to-Capacity Ratio[2]

Study Segment		No Build Alternative				Alternative 3 Modified			
		NB		SB		NB		SB	
		GP	HOV	GP	HOV	GP	HOV/ Express	GP	HOV/ Express
SR-73 to Euclid	AM	1.23	1.23	1.63	1.63	1.23	1.23	1.63	1.63
	PM	1.41	1.41	1.28	1.28	1.41	1.41	1.28	1.28
Euclid to SR-22 East	AM	1.64	1.64	1.89	1.89	1.34	0.78	1.72	0.86
	PM	1.76	1.76	1.61	1.61	1.42	0.86	1.29	0.80
SR-22 East to I-605	AM	1.51	1.36	1.57	1.43	1.42	0.92	1.49	0.92
	PM	1.52	1.37	1.47	1.33	1.43	0.92	1.38	0.92

Notes:

1. Relative Speed Index is based on Demand-to-Capacity ratios and speed curves developed by Bay Area Metropolitan Transportation Commission.
2. Demand-to-Capacity ratio reported is for worst case link within each study segment.
3. GP = General Purpose; HOV = High Occupancy Vehicle.

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Table 1.11: Alternative 3 Modified (2020) I-405 Mainline Transition Areas Peak Hour Level of Service

Location	Direction	Mainline		Alternative 3 Modified Condition (2020)							
				AM Peak Hour				PM Peak Hour			
		Lanes	Capacity[1,4]	Traffic Demand Volumes[1]	d/c	Density[2]	LOS[3]	Traffic Demand Volumes[1]	d/c	Density[2]	LOS[3]
I-405 - Harbor Blvd to Euclid St	NB	7	12,950	13,915	1.07	34.4	D	15,715	1.21	*	F
	SB	7	12,950	18,067	1.40	*	F	14,695	1.13	38.3	E
I-405 - I-605 to End HOV Access	NB	5	9,250	11,897	1.29	*	F	9,860	1.07	33.9	F
	SB	5	9,250	10,812	1.17	41.0	F	11,080	1.20	43.7	F
SR-22 - End HOV Restriction to Valley View St	WB	3	5,550	6,764	1.22	*	F	6,406	1.15	41.1	F
	EB	4	7,400	5,921	0.80	23.6	C	6,194	0.84	24.7	C
I-605 - Direct Connector Separation to End HOV Access	NB	5	9,250	7,956	0.86	25.0	C	9,657	1.04	32.7	F
	SB	5	9,250	8,295	0.90	26.3	D	7,046	0.76	21.9	C

Notes:

1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density except when demand-to-capacity (d/c) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each lane.
5. *Density is in excess of 45 pc/mi/ln; therefore LOS is F.

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Table 1.12: Alternative 3 Modified (2040) I-405 Mainline Transition Areas Peak Hour Level of Service

Location	Direction	Mainline		Alternative 3 Modified Condition (2020)							
				AM Peak Hour				PM Peak Hour			
		Lanes	Capacity[1,4]	Traffic Demand Volumes[1]	d/c	Density[2]	LOS[3]	Traffic Demand Volumes[1]	d/c	Density[2]	LOS[3]
I-405 - Harbor Blvd to Euclid St	NB	7	12,950	15,908	1.23	*	F	18,197	1.41	*	F
	SB	7	12,950	21,081	1.63	*	F	16,562	1.28	*	F
I-405 - I-605 to End HOV Access	NB	5	9,250	13,845	1.50	*	F	11,142	1.20	44.2	F
	SB	5	9,250	13,204	1.43	*	F	13,025	1.41	*	F
SR-22 - End HOV Restriction to Valley View St	WB	3	5,550	7,724	1.39	*	F	7,686	1.38	*	F
	EB	4	7,400	8,280	1.12	37.8	F	8,220	1.11	37.3	F
I-605 - Direct Connector Separation to End HOV Access	NB	5	9,250	9,047	0.98	29.6	D	11,641	1.26	*	F
	SB	5	9,250	9,762	1.06	33.3	F	8,211	0.89	26.0	C

Notes:

1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density except when demand-to-capacity (d/c) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each lane.
5. *Density is in excess of 45 pc/mi/ln; therefore LOS is F.

Table 1.13 Alternative 3 Modified Intersection Level of Service
I-405 Southbound Ramps & Magnolia Street

Analysis Year	Location		Traffic Control	AM Peak Hour											PM Peak Hour										
				No Build Conditions			Project Conditions (Build Traffic)								No Build Conditions			Project Conditions (Build Traffic)							
							No Improvements (No Build Geometry)			With Improvements (Build Geometry)								No Improvements (No Build Geometry)			With Improvements (Build Geometry)				
	East/West Street	North/South Street		V/C	Avg Delay (sec)	LOS	V/C	Avg Delay (sec)	LOS	V/C	Avg Delay (sec)	LOS	Exceeds Impact Threshold	Impact Mitigated	V/C	Avg Delay (sec)	LOS	V/C	Avg Delay (sec)	LOS	V/C	Avg Delay (sec)	LOS	Exceeds Impact Threshold	Impact Mitigated
Existing (2009)	I-405 SB On-Ramp (from SB Magnolia St)	Magnolia St	Unsignalized Loop On-Ramp	0.66	--	--	--	--	--				N/A		0.23	--	--	--	--	--				N/A	
	I-405 SB Off-Ramp (to NB & SB Magnolia St)	Magnolia St	Existing Traffic Signal	0.88	23.0	C	--	--	--	--	--	--	N/A		0.77	18.0	B	--	--	--	--	--	--	N/A	
2020	I-405 SB On-Ramp (from SB Magnolia St)	Magnolia St	Unsignalized Loop On-Ramp	0.71	--	--	0.71	--	--				N/A		0.24	--	--	0.24	--	--				N/A	
	I-405 SB Off-Ramp (to NB & SB Magnolia St)	Magnolia St	Existing Traffic Signal	0.97	35.7	D	0.99	38.7	D	0.77	6.5	A	N	--	0.83	16.7	B	0.83	16.4	B	0.71	10.2	B	N	--
2040	I-405 SB On-Ramp (from SB Magnolia St)	Magnolia St	Unsignalized Loop On-Ramp	0.73	--	--	0.73	--	--				N/A		0.25	--	--	0.25	--	--				N/A	
	I-405 SB Off-Ramp (to NB & SB Magnolia St)	Magnolia St	Existing Traffic Signal	1.02	37.8	F*	1.15	70.4	F*	0.80	9.2	A	N	--	0.88	20.2	C	0.95	26.9	C	0.80	19.8	B	N	--

Notes:

1. LOS: Level of Service per delay methodology (2000 Highway Capacity Manual).
2. Level of Service analysis worksheets are included in Appendix B.
3. F*: Due to excessive volume-to-capacity ratio (over 1.0), the intersection is expected to operate at LOS F.
4. No Build Condition analysis is based on No Build traffic and geometry.
5. Project Condition (Build Traffic) No Improvements - Analysis is based on Project traffic under No Build Geometry.
6. Project Condition (Build Traffic) With Improvements - Analysis is based on Project traffic under Build Geometry.

GL-9 (Continued)

Table 1.14: Alternative 3 Modified (2020) - Design Option
I-405 Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	d/c	Density[2]	LOS[2,5]	Traffic Volume[1]	d/c	Density[2]	LOS[2,5]
Magnolia Street & Warner Avenue	NB Off Loop	1	1,500	505	0.34	36.3	E	781	0.52	--	F
	NB Off Direct (C-D Road)	1	1,500	236	0.16	33.2	D	673	0.45	38.7	E

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); d/c - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.

GL-9 (Continued)

Table 1.15: Alternative 3 Modified (2040) - Design Option
I-405 Ramp Junction Peak Hour Level of Service - AM

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 Modified Condition (2040) - AM							
				Peak Condition (Unconstrained Mainline Volume)				Non-Peak Condition (Constrained Mainline Volume)			
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	d/c	Density[2]	LOS[2,5]	Traffic Volume[1]	d/c	Density[2]	LOS[2,5]
Magnolia Street & Warner Avenue	NB Off Loop	1	1,500	520	0.35	--	F	520	0.35	35.2	E
	NB Off Direct (C-D Road)	1	1,500	259	0.17	39.6	E	259	0.17	33.7	D

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); d/c - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.

GL-9 (Continued)

Table 1.16: Alternative 3 Modified (2040) - Design Option
I-405 Ramp Junction Peak Hour Level of Service - PM

Interchange	Ramp Type	Ramp Lanes	Ramp[3,4] Capacity	Alternative 3 Modified Condition (2040) - PM									
				Peak Condition (Unconstrained Mainline Volume)					Non-Peak Condition (Constrained Mainline Volume)				
				AM Peak					PM Peak				
				Ramp		Ramp Junction			Ramp		Ramp Junction		
				Traffic Volume[2]	d/c	Density[2]	LOS[3,5]		Traffic Volume[1]	d/c	Density[2]	LOS[3,5]	
Magnolia Street & Warner Avenue	NB Off Loop	1	1,500	878	0.59	–	F		878	0.59	37.0	E	
	NB Off Direct (C-D Road)	1	1,500	777	0.52	–	F		777	0.52	36.4	E	

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln). d/c - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,600 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.

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Table 1.17 Alternative 3 Modified (2020) - Design Option
Weaving Level-of-Service
Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Collector-Distributor (C-D) Roads				
Warner Ave and Magnolia Street Interchange at I-405				
Northbound C-D Road	13.1	B	29.4	D

Notes:

1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads. Refer to Table 2.1.3 for the LOS criteria.

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Table 1.18 Alternative 3 Modified (2040) - Design Option
Weaving Level-of-Service
Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Collector-Distributor (C-D) Roads				
Warner Ave and Magnolia Street Interchange at I-405				
Northbound C-D Road	14.0	B	32.5	D

Notes:

1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads. Refer to Table 2.1.3 for the LOS criteria.

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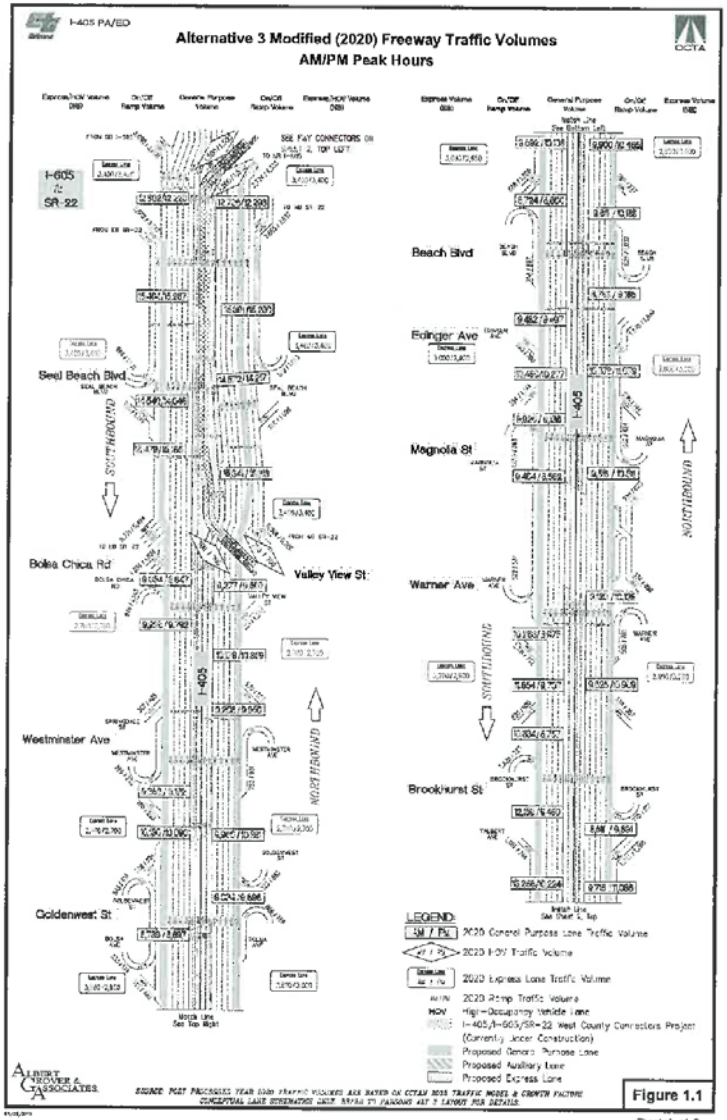

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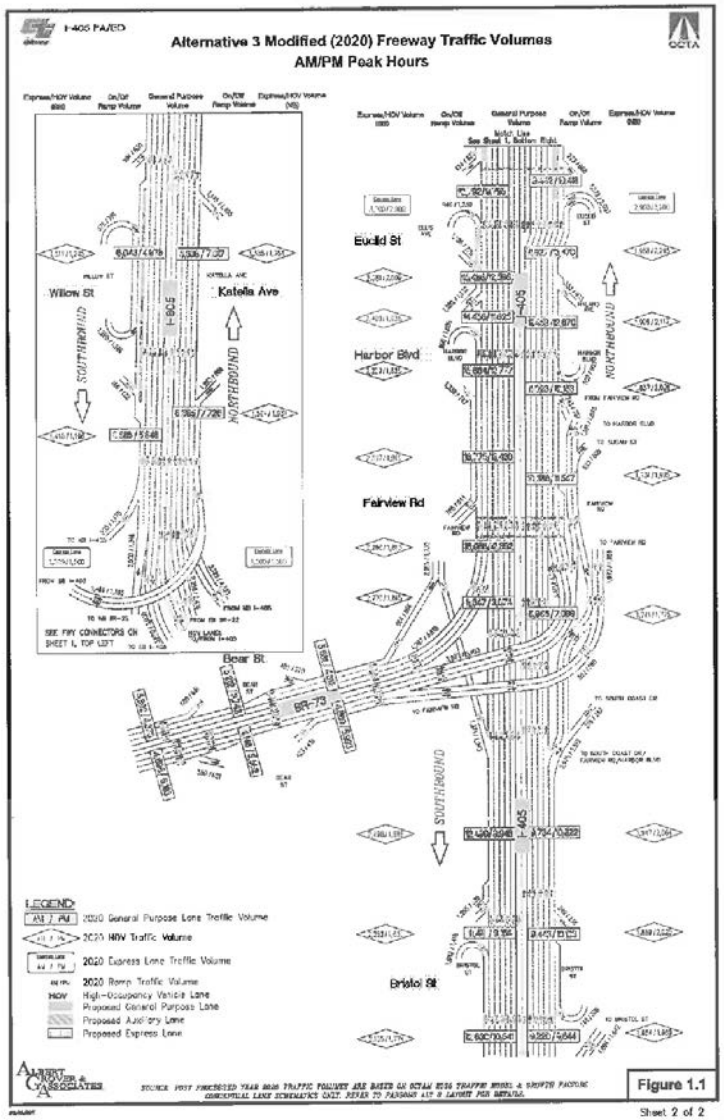

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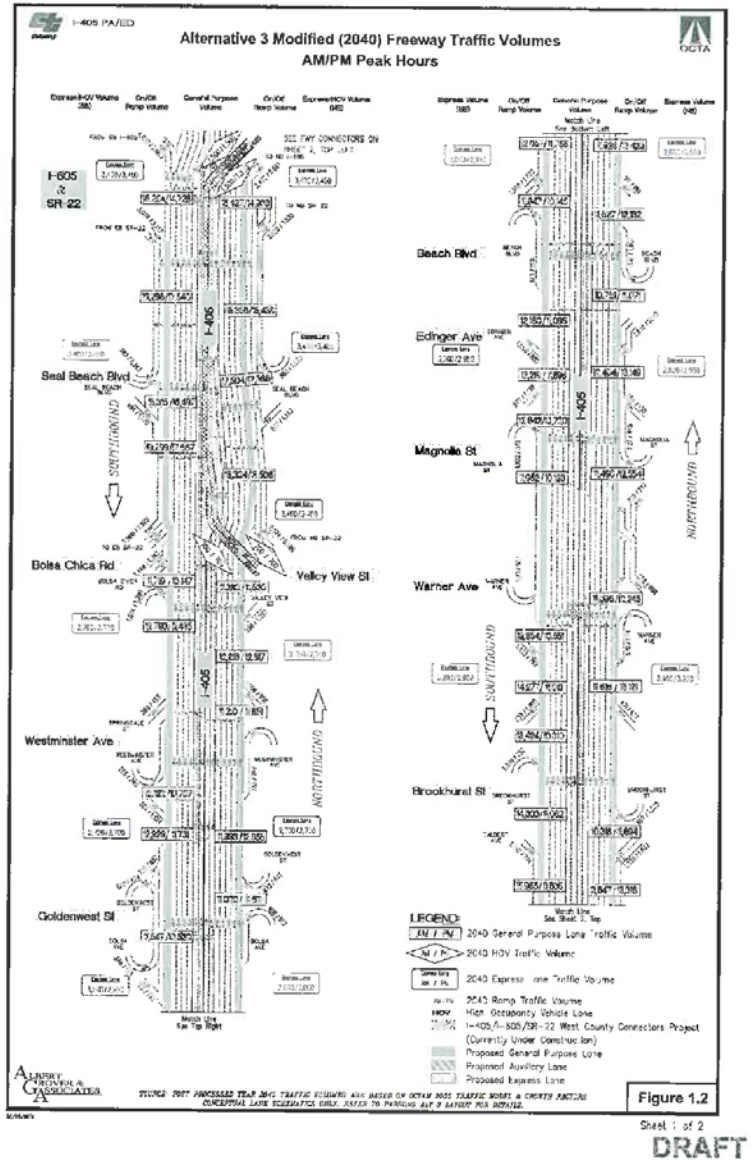

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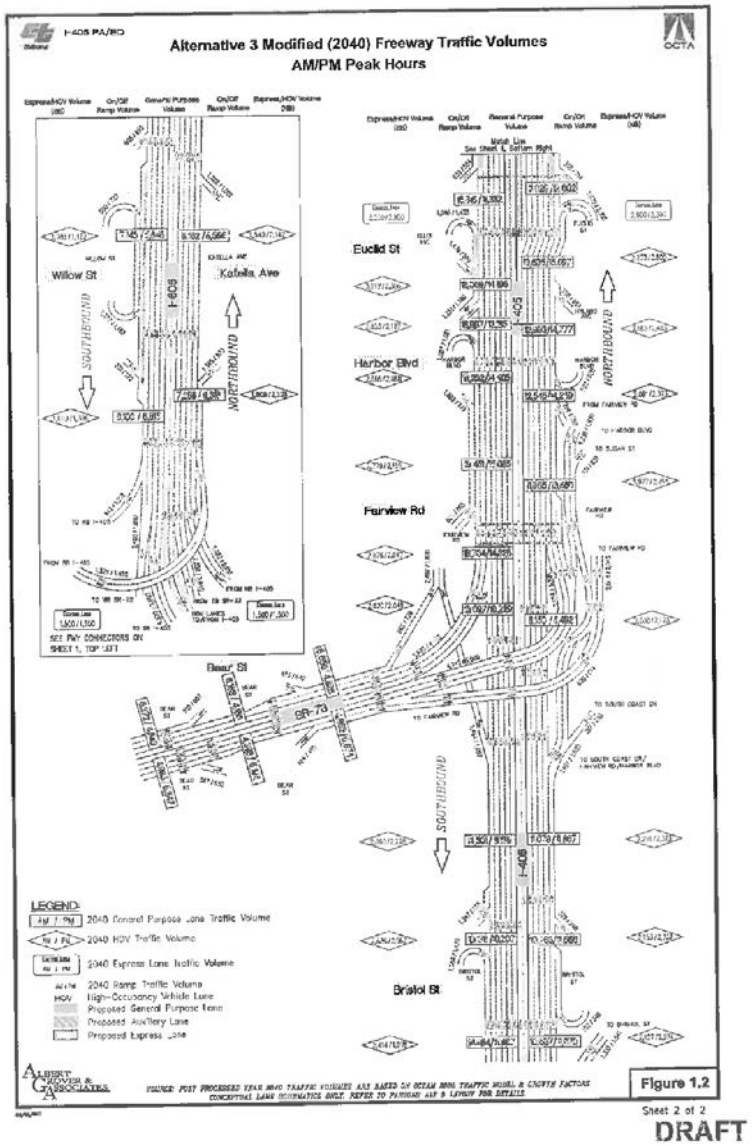

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2.0 MAGNOLIA/WARNER INTERCHANGE

Traffic operations are evaluated for two design options at the Magnolia/Warner interchange. The first design option provides a southbound auxiliary lane from the Magnolia Street on-ramp to a point south of the Warner Avenue off-ramp in lieu of the southbound braided ramps proposed in the DEIR/EIS. The second design option provides a northbound C-D road serving the Warner Avenue on-ramp to and the Magnolia Street off-ramp from northbound I-405 mainline in lieu of the braided ramps proposed in the DEIR/EIS. Analysis provided below is based on Alternative 1 traffic conditions. The analysis for Alternatives 2 and 3 are assumed to be generally similar to Alternative 1.

2.1 I-405 Southbound Auxiliary Lane for Magnolia and Warner Ramps

Under this design option the weave between the on-ramp to southbound I-405 from Magnolia Street and the off-ramp from southbound I-405 to Warner Avenue would be treated with an auxiliary lane extending from the Magnolia Street on-ramp beyond the Warner off-ramp for a distance of approximately 1,688 feet where it would be dropped with a taper extending an additional 600 feet. The auxiliary lane and taper would end approximately 481 feet north of the six (6) foot separation between the Warner Avenue on-ramp and southbound I-405.

The on-ramp to southbound I-405 from Magnolia Street would have two lanes from the Magnolia Street intersection to the ramp meter, a distance of 754 feet. Downstream of the ramp meter the ramp would taper to a single lane entering the freeway at the beginning of the auxiliary lane described in the preceding paragraph.

In the event that the amount of storage upstream of the ramp meter limit line on the on-ramp to southbound I-405 from Magnolia Street is inadequate to contain ramp meter queuing, the Project Condition lane configuration at the intersection of the I-405 Southbound Ramps and Magnolia Street would be reconfigured from the configuration included in the DEIR/EIS. The reconfiguration would provide three exclusive northbound through lanes, two exclusive southbound through lanes, one exclusive southbound right turn lane, dual left-turn lanes eastbound and dual-right turn lanes eastbound. The intersection would be signalized.

The analysis consists of two components:

- Weaving analysis on southbound I-405 between the Magnolia Street on-ramp and the Warner Avenue off-ramp; and
- Intersection LOS analysis of the Magnolia/SB intersection.

The HCS weaving analysis worksheets and the Synchro intersection LOS analysis worksheets are presented in the Appendix III A.

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Weaving Analysis.
Weaving analysis was conducted for the proposed auxiliary lane between the on-ramp to southbound I-405 from Magnolia Street and the off-ramp from southbound I-405 to Warner Avenue. Analysis was conducted for both AM and PM peak hours in both the opening year (2020) and the design year (2040). The traffic volumes used for the analysis are those reported in the Traffic Study in Figures 2.5.1 and 2.5.2. However, the HCS software used for the analysis is limited to a weaving section with 5 lanes. The proposed weaving section would have 6 lanes (5 mainline GP lanes and the auxiliary lane). Therefore, the volumes input to the HCS software were adjusted to remove the through volumes associated with one GP lane.

The analysis shows that the weaving section is anticipated to operate at LOS E and D during the AM and PM peak hours, respectively, in 2020 and LOS F and E in 2040. Figures 2.5.1 and 2.5.2 of the Traffic Study show the minimum southbound mainline peak hour volume under Alternative 1 in the vicinity of the Magnolia/Warner interchange is 9,593. A volume of 9,593 exceeds the capacity of the Alternative 1 southbound GP lanes (1,850 vehicles per lane per hour x 5 GP lanes = 9,250). Given this over capacity condition, it is unlikely that the weaving segment will operate better than LOS F.

Consistent with Section 2.1.3 Weaving Analysis Methodology of the Traffic Study, an additional weaving analysis was conducted for year 2040 using mainline freeway volumes constrained to a maximum volume per lane of 1,850 vehicles per hour. By constraining the mainline volumes, the second analysis provides an evaluation of the weaving without being overshadowed by oversaturated conditions on the freeway. This analysis of constrained freeway volumes provides an analysis of how well the weaving section is anticipated to operate when the freeway mainline is congested but not oversaturated, as in shoulder hours rather than peak hours. The constrained analysis shows that the weaving segment is anticipated to operate at LOS E and D, respectively, during the AM and PM shoulder hours.

Intersection LOS Analysis
The amount of available storage on the Magnolia Street on-ramp to southbound I-405 upstream of the ramp meter limit line is 754 feet per lane for each of the two lanes. Table 3.8.6 in the Traffic Study shows the ramp meter queues for a two lane on-ramp upstream of the ramp meter under project conditions. The table shows that a maximum queue length of approximately 25 feet per lane is anticipated with a metering rate of 650 vehicles per hour (using a meter cycle length of approximately 5.5 seconds).

In the event that a metering rate is selected that causes traffic to queue beyond the ramp onto southbound Magnolia Street, intersection LOS analysis was conducted to determine if the ramp intersection with Magnolia Street would operate acceptably with the curb lane dedicated to exclusively serving ramp traffic. The analysis shows that the intersection is anticipated to operate at LOS A during the AM peak hour and LOS B during the PM peak hour in years 2020 and 2040.

For comparison purposes, Table 2.1 summarizes LOS, v/c ratios and average delays under the No Build Condition and Project traffic under No Build lane geometrics. As shown in Table 2.1, the proposed intersection geometrics under Project Condition allows the I-405 Southbound Off-

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Ramp/Magnolia Street intersection to operate at LOS B or better compared to LOS F under the 2040 No Build Condition. The intersection does not meet the significant impact criteria and there are no significant traffic impacts at the intersection.

2.2 Design Option for I-405 Northbound Between Warner Avenue and Magnolia Street

Under this design option a C-D road serving the Warner on-ramp to and the Magnolia Street off-ramp from northbound I-405 would be provided. The off-ramp to Warner from northbound I-405 would be served by a separate ramp departing the I-405 mainline 1,000 feet upstream of the exit to the proposed C-D road. The on-ramp Magnolia Street would be served by a separate ramp entering the I-405 mainline 2,078 feet downstream of the C-D road entrance to the freeway mainline.

Operationally the ramps and their volumes entering and exiting the I-405 northbound mainline are the same as those evaluated in the Traffic Study. Therefore, the ramp junction analysis presented in Tables 2.5.3, 2.5.4, and 2.5.5 of the Traffic Study apply to this design option. The only operational difference between this design option and the braided ramp design analyzed in the Traffic Study is that the traffic volumes using the Warner on-ramp and the Magnolia Street off-ramp from northbound I-405 would weave on the proposed C-D road. In the Traffic Study these ramps are braided so that there is no weaving maneuver.

Weaving analysis was conducted for the volumes weaving on the proposed C-D road. The HCS weaving analysis worksheets are presented in the Appendix III B. The worksheets for year 2020 show that the weaving section is anticipated to operate at LOS B and C during the AM and PM peak hours, respectively. The worksheets for year 2040 show that the weaving section is anticipated to operate at LOS B and D during the AM and PM peak hours, respectively.

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Table 2.1 Alternative 1 Magnolia/Warner Southbound Auxiliary Lane Design Option
Intersection Level of Service for I-405 Southbound Ramps & Magnolia Street

Analysis Year	Location: East/West Street	Location: North/South Street	Traffic Control	AM Peak Hour: No Build Conditions V/C	AM Peak Hour: No Build Conditions Avg Delay (sec)	AM Peak Hour: No Build Conditions LOS	AM Peak Hour: Project Conditions (Build Traffic): No Improvements (No Build Geometry) V/C	AM Peak Hour: Project Conditions (Build Traffic): No Improvements (No Build Geometry) Avg Delay (sec)	AM Peak Hour: Project Conditions (Build Traffic): No Improvements (No Build Geometry) LOS	AM Peak Hour: Project Conditions (Build Traffic): With Improvements (Build Geometry) V/C	AM Peak Hour: Project Conditions (Build Traffic): With Improvements (Build Geometry) Avg Delay (sec)	AM Peak Hour: Project Conditions (Build Traffic): With Improvements (Build Geometry) LOS	AM Peak Hour: Exceeds Impact Threshold	AM Peak Hour: Impact Mitigated	PM Peak Hour: No Build Conditions V/C	PM Peak Hour: No Build Conditions Avg Delay (sec)	PM Peak Hour: No Build Conditions LOS	PM Peak Hour: Project Conditions (Build Traffic): No Improvements (No Build Geometry) V/C	PM Peak Hour: Project Conditions (Build Traffic): No Improvements (No Build Geometry) Avg Delay (sec)	PM Peak Hour: Project Conditions (Build Traffic): No Improvements (No Build Geometry) LOS	PM Peak Hour: Project Conditions (Build Traffic): With Improvements (Build Geometry) V/C	PM Peak Hour: Project Conditions (Build Traffic): With Improvements (Build Geometry) Avg Delay (sec)	PM Peak Hour: Project Conditions (Build Traffic): With Improvements (Build Geometry) LOS	PM Peak Hour: Exceeds Impact Threshold	PM Peak Hour: Impact Mitigated
Existing (2003)	I-405 SB On Ramp (from SB Magnolia St)	Magnolia St	Unsignalized Loop On Ramp	0.56	–	–	–	–	–	–	–	–	N/A	–	0.23	–	–	–	–	–	–	–	N/A	–
	I-405 SB Off-Ramp (to NB & SB Magnolia St)	Magnolia St	Existing Traffic Signal	0.88	23.0	C	–	–	–	–	–	–	N/A	–	0.77	18.0	B	–	–	–	–	–	N/A	–
2020	I-405 SB On Ramp (from SB Magnolia St)	Magnolia St	Unsignalized Loop On Ramp	0.71	–	–	0.71	–	–	–	–	–	N/A	–	0.24	–	–	0.24	–	–	–	–	N/A	–
	I-405 SB Off-Ramp (to NB & SB Magnolia St)	Magnolia St	Existing Traffic Signal	0.97	36.7	D	0.99	38.7	D	0.77	6.9	A	N	–	0.93	16.7	B	0.83	16.4	B	0.71	10.2	B	–
2040	I-405 SB On-Ramp (from SB Magnolia St)	Magnolia St	Unsignalized Loop On Ramp	0.73	–	–	0.73	–	–	–	–	–	N/A	–	0.25	–	–	0.25	–	–	0.80	20.8	B	–
	I-405 SB Off-Ramp (to NB & SB Magnolia St)	Magnolia St	Existing Traffic Signal	1.02	37.8	F*	1.15	70.4	F*	0.80	9.2	A	N	–	0.88	20.2	C	0.95	25.9	C	–	–	N/A	–

Notes:
1. LOS: Level of Service per delay methodology (TCQSM, Highway Capacity Manual).
2. Level of Service analysis results are included in Appendix 2A.
3. V/C: Due to excessive volume-to-capacity ratio (over 1.0), the intersection is expected to operate at LOS F.
4. No Build Condition analysis is based on No Build traffic and geometry.
5. Project Condition (Build Traffic) No Improvements - Analysis is based on Project traffic under No Build Geometry.
6. Project Condition (Build Traffic) With Improvements - Analysis is based on Project traffic under Build Geometry.

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3.0 I-405 NORTHBOUND APPROACHING I-605

An operational analysis was conducted of northbound I-405 as it approaches the Seal Beach Boulevard, SR-22/7th Street, and I-605 interchanges. The purpose of the analysis is to evaluate the potential for disruption of smooth traffic flow to occur in this area as the additional lanes proposed in the build alternatives are terminated. The additional lanes proposed in each of the build alternatives continue into receiving lanes on branch connectors to SR-22/7th Street westbound and I-605 northbound. If more motorists desire to continue northbound on I-405 into LA County than there is freeway capacity continuing northbound on I-405 into LA County, there is the potential for disruption of the traffic flow along I-405.

The analysis is limited to the general purpose (GP) lanes. The study area includes northbound I-405 from the SR-22 confluence near Valley View Street through the exit to I-605 northbound and traffic data were collected for that area. The study takes speed as the primary indicator of a disruption of the smooth flow of traffic. Based on the information presented in the Traffic Study in Tables 3.1.6-4 and 3.1.6-12, the GP lanes of I-405 within the study area are anticipated to be over capacity during peak hours in years 2020 and 2040 with or without the proposed project and operating at LOS F under severely congested conditions. Section 4 of this Supplement shows that I-405 north of the project limits is also anticipated to operate under heavily congested conditions. Accordingly, it is not possible to accurately assess peak hour congestion attributable to the termination of the proposed new lanes, because heavy congestion is anticipated to occur along the entire corridor during peak hours regardless of the proposed project. Therefore, rather than evaluating conditions during peak hours, the analysis here evaluates "shoulder" hours (hours immediately preceding or following peak hours) during which the freeway is expected to be operating at or just below capacity; mainline freeway volumes used in the analysis are constrained to values indicative of somewhat limited congestion compared to extensive congestion anticipated during peak hours.

3.1 Existing Condition

Peak hour volume and speed data were collected from the California Freeway Performance Measurement System (PEMS) for Tuesdays through Fridays during the month of March, 2009 at the following locations along northbound I-405:

- North of the SR-22 merge near Valley View Street;
- Between the ramps serving Seal Beach Boulevard;
- North of the SR-22/7th Street exit; and
- North of the exit to I-605 northbound.

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From the 17 days of data in March 2009, the daily AM and PM peak traffic hours were identified for the segment of I-405 north of the SR-22 merge. The peak hours identified north of the SR-22 merge were used to determine the average AM and PM peak hour volumes that are shown in Table 3.1. The average speeds for those same peak hours are also shown and were calculated by averaging the 12 five (5)-minute interval speeds that occurred over the peak hour.

Table 3.1 shows that, during the PM peak hour, the existing reduction in the number of lanes in the northbound direction at the exits to SR-22/7th Street westbound and I-605 northbound does not adversely affect speeds. Indeed, the data show that, as traffic and lanes exit I-405 northbound, traffic speeds through the area increase.

However, during the AM peak hour the data show that traffic speeds are reduced under the existing condition as motorists travel northbound along I-405 from SR-22 near Valley View Street to the I-605 interchange. Average speeds north of the exit to I-605 northbound during the AM peak hour prior to construction of the WCC project slow to an average of 49 miles-per-hour (mph) with some stop-and-go conditions.

The AM peak hour volume and speed data for the segment of I-405 north of the exit to I-605 northbound are affected by congestion from the merge into northbound I-405 of the entrance ramp from southbound I-605. PEMS data for the AM peak hour volume and speed data show an hourly volume of 7,397 with an average speed of 46 mph in this congested area. This congested area backs into the upstream segment of northbound I-405 north of the exit to I-605 northbound and disrupts the traffic flow in that segment. If the congestion at the merge into northbound I-405 of the entrance ramp from southbound I-605 did not exist, traffic volumes and speeds on the upstream segment of northbound I-405 would be substantially higher.

The magnitude of the existing AM traffic flow disruption of I-405 northbound traffic approaching the Seal Beach Boulevard, SR-22/7th Street, and I-605 interchange area is limited by upstream geometrics that "meter" (or limit) the maximum volume of I-405 northbound traffic approaching the area. If upstream geometrics permitted a higher traffic volume per hour to approach the Seal Beach Boulevard, SR-22/7th Street, and I-605 interchange area the magnitude of the traffic flow disruption would increase.

3.2 Future 2040 Condition

Forecasts of future condition general purpose lane speeds are based on the following process. Under existing conditions the segment of northbound I-405 north of the SR-22 merge near Valley View Street operates at capacity during both AM and PM peak hours. Future traffic demand for this freeway segment is over capacity. (Refer to Traffic Study Tables 3.1.6-4 and 3.1.6-12.) It is therefore assumed that the maximum existing volume per lane in this segment would represent the future maximum operating volume per lane in this segment. The forecast AM and PM peak hour general purpose lane volumes in this segment are therefore the volume per lane under existing conditions multiplied by the number of lanes in each of the proposed alternatives. The 2040 northbound forecast volumes used in this analysis are presented in Table 3.2.

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The volumes used in this analysis are not the forecast traffic demand volumes presented in the Traffic Study, because those volumes are the same for all of the alternatives and because those are demand volumes that the freeway may not be capable of fully serving in a single hour. A complete table showing the traffic volumes and all other values used in this analysis is presented in Appendix IV.

Alternatives 1 and 3 have the same number of general purpose lanes throughout the study area; consequently their data are the same and are presented in the tables below under a common heading.

For segments downstream of the segment north of the SR-22 merge, future volumes were determined by subtracting forecast exiting volumes and adding forecast entering volumes. Forecast exiting volumes to Seal Beach Boulevard, SR-22/7th Street westbound, and I-605 northbound presented in the Traffic Study were reduced by the percentage by which their upstream mainline freeway volumes used in this analysis are lower than the volumes in the Traffic Study for the same segment. This process maintains the proportional relationship between freeway traffic and exiting traffic. Entering traffic at Seal Beach Boulevard is assumed to be the forecast demand volume presented in the Traffic Study. The entering and exiting volumes used in this analysis are presented in the Appendix IV.

Volume-to-capacity (V/C) ratios were calculated for each of the northbound I-405 freeway segments shown in Table 3.2. For the calculation a capacity of 2,000 vehicles per lane per hour (vplph) was used for the segment "North of SR-22 Merge" and a capacity of 1,850 vplph was used for the segments in the Seal Beach Boulevard, SR-22/7th Street, and I-605 interchange area. The 2,000 vplph capacity used for the segment "North of SR-22 Merge" is based on the values found in the PEMS data indicating that the current capacity of this segment is nearly 2,000 vplph (nearly 12,000 summed across the existing 6 general purpose lanes). The 1,850 vplph used in the interchange areas is consistent with the capacity used in the Traffic Study and is fully explained in Appendix A1 of the Traffic Study. The V/C ratios for each segment are shown in the Appendix IV of this Supplement.

Forecast speeds were calculated using the V/C ratios based on the same process used to forecast speeds in the Traffic Study. The process is documented in Appendix A1 of the Traffic Study. The forecast volumes and speeds for each alternative are presented in Table 3.2.

Table 3.2 shows that, during the PM peak hour in year 2040, there will be minor disruption to traffic flow in the general purpose lanes under the No Build Alternative, Alternative 1, and Alternative 3. Under the No Build Alternative speeds will fall to 54 mph and to 58 mph under Alternatives 1 and 3. Under Alternative 2 more substantial disruption to traffic will occur with speeds decreased to as low as 42 mph.

During the AM peak hour in year 2040 Table 3.2 shows that there will be substantial disruption to traffic flow under all of the alternatives. Under the No Build Alternative speeds will decrease to as low as 49 mph, as low as 36 mph under Alternatives 1 and 3, and as low as 16 mph under Alternative 2. In general, the more lanes that are added by the build alternatives the greater the

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magnitude of the disruption to traffic flow in the Seal Beach Boulevard, SR-22/7th Street, and I-605 interchange area.

A comparison of the No Build Alternative in Table 3.2 to the existing condition in Table 3.1 appears to show that the disruption in traffic flow will improve despite increased traffic volumes on I-405 in the area of the Seal Beach Boulevard, SR-22/7th Street, and I-605 interchanges. A direct comparison of the forecast and existing condition speeds must be made with caution, because the forecast speeds are based on modeling and existing speeds are based on field observation. It is not likely that speeds will increase with growth in traffic. The largest increases in speed from the existing condition to the No Build Alternative occur on the segment north of the exit to I-605 northbound and could be partially attributable to the forecast speed model not accounting for any back up and reduced speeds due to downstream congestion where the I-605 southbound ramp merges into northbound I-405. It is also possible that the forecast speed model is slightly overstating forecast speeds on I-405, but the forecasts across the alternatives provide an accurate relative comparison.

In summary, during the PM peak hour there is not substantial disruption in traffic flow in the general purpose lanes on northbound I-405 approaching the Seal Beach Boulevard, SR-22/7th Street, I-605 interchanges, nor is any expected under the future No Build Alternative or under Alternatives 1 or 3 in year 2040. However, slowing and substantial disruption in traffic flow is anticipated during the PM peak hour under Alternative 2. During the AM peak hour substantial slowing and substantial disruption in traffic flow is anticipated during the AM peak hour under all alternatives. The magnitude of the slowing and disruption in traffic flow is least under the No Build Alternative and increases with the number of additional general purpose lanes proposed under the build alternatives.

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I-405 Improvement Project Supplemental Traffic Study — I-405 Northbound Approaching I-605

Table 3.1 Existing 2009 Peak Hour Traffic Volumes and Speeds
Northbound on I-405 approaching the I-605/SR-22/7th Street Interchange

Location	Number of Lanes	AM Peak Hour		PM Peak Hour	
		Volume	Speed	Volume	Speed
North of SR-22 Merge	6	11,758	59	11,896	59
At Seal Beach Boulevard	6	11,048	59	11,156	58
North of SR-22/7th St Exit	5	9,677	58	9,653	64
North of Exit to I-605 Northbound	4	6,510	49	5,822	67

Notes:
GP=General Purpose
Note: Peak hour is defined by the location North of SR-22; other locations show the volume and speed for that same hour.
Source: PEMS

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I-405 Improvement Project Supplemental Traffic Study — I-405 Northbound Approaching I-605

Table 3.2 2040 Peak Hour Traffic Volumes and Speeds
Northbound on I-405 approaching the I-605/SR-22/7th Street Interchange

Location	Number of Lanes	AM Peak Hour		PM Peak Hour	
		Volume	Speed	Volume	Speed
No Build Alternative					
North of SR-22 Merge	6	11,758	59	11,896	59
At Seal Beach Boulevard	6	11,048	59	11,156	58
North of SR-22/7th St Exit	5	9,677	58	9,653	64
North Exit to I-605 Northbound	4	6,510	49	5,822	67
Alternatives 1 and 3					
North of SR-22 Merge	7	13,718	61	13,879	59
At Seal Beach Boulevard	7	13,075	58	12,961	58
North of SR-22/7th St Exit	6	11,545	54	11,146	58
North Exit to I-605 Northbound	4	8,712	36	7,097	63
Alternative 2					
North of SR-22 Merge	6	15,677	61	15,861	59
At Seal Beach Boulevard	6	14,943	58	14,812	58
North of SR-22/7th St Exit	5	13,093	36	12,617	42
North Exit to I-605 Northbound	4	9,881	16	8,033	49

Notes:
Source: Parsons
GP=General Purpose

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4.0 LONG BEACH AREA TRAFFIC STUDY

4.1 Introduction

The purpose of the Long Beach Area Traffic Study is to supplement the Traffic Study with traffic information to the areas north of the limits of the proposed freeway capacity enhancements in Orange County. The objective of the Long Beach Area Traffic Study is to determine the extent of any potential traffic impacts of the proposed project alternatives north of the limits of the proposed capacity improvements.

The study area for the Long Beach Area Traffic Study includes:

- I-405 from I-605 to Lakewood Boulevard;
- I-605 from Katella Avenue to Carson Street; and
- SR-22/7th Street from I-405 to Pacific Coast Highway.

The study area includes all of the interchanges along I-405 and I-605 within the limits noted above including arterial/ramp intersections and arterial/arterial intersections in the immediate vicinity of the interchanges. **Figure 4.1-1** shows the study area. The 35 intersections included in the study area are shown in **Figure 4.1-2**.

Traffic forecasts were prepared for each of the four alternatives under study utilizing OCTAM model. The four alternatives are fully described in the Traffic Study in Section 1.6 Project Alternatives Description. The following summaries of the four alternatives are presented for reference.

- No Build Alternative: Under the No Build Alternative, no improvements would be made to the I-405 corridor within the project limits by the proposed project. No additional lanes or interchange improvements would be provided. Compared to the existing condition, as recorded in the Notice of Preparation (NOP) (issued August 31, 2009) and the Notice of Intent (NOI) (issued September 1, 2009), the future No Build Alternative includes completion of the SR-22 West County Connectors Project, which is currently under construction.
- Alternative 1: Alternative 1 would add a single GP lane in each direction on I-405 from Euclid Street to the I-605 interchange.
- Alternative 2: Alternative 2 would add one GP lane in each direction on I-405 from Euclid Street to the I-605 interchange (as in Alternative 1), plus add a second GP lane in the northbound direction from Brookhurst Street to the SR-22/7th Street interchange and a second GP lane in the southbound direction from the Seal Beach Boulevard on-ramp to Brookhurst Street.
- Alternative 3: Alternative 3 would add one GP lane in each direction on I-405 from Euclid Street to the I-605 interchange (as in Alternatives 1 and 2), plus add a tolled

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Express Lane in each direction of I-405 from SR-73 to SR-22 East. The tolled Express Lane and the existing high occupancy vehicle (HOV) lanes would be managed jointly as a tolled Express Facility with two lanes in each direction from SR-73 to I-605. The tolled Express Facility would operate so that HOV2s would be tolled and HOV3+ would either be free or receive a discount. From SR-22 to I-605, the existing HOV lane and the second HOV lane that is being built as part of the WCC Project would become part of the tolled Express Facility.

Traffic forecasts were prepared for each freeway segment and each study intersection within the study area. The forecast years are the same as the forecast years in the Traffic Study: opening year 2020 and design year 2040. The forecast method uses the same OCTAM forecasts that were used in the Traffic Study and explained in Section 2.2.2 of the Traffic Study, except that the fourth step of the forecasting process, trip assignment, was rerun after additional roadway segments were coded into the highway network within the study area for the Long Beach Area Traffic Study. Additionally, separate traffic forecasts were used for each of the four alternatives under study.

The analytical methods used for the freeway are the same Highway Capacity Manual methods those described in the Traffic Study in Section 2.1.1 Freeway Mainline Analysis Methodology, Section 2.1.2 Ramps and Ramp-Freeway Junction Analysis Methodology, and Section 2.1.3 Weaving Analysis Methodology. The analytical methods used for the arterials in the interchange areas are the same Highway Capacity Manual (HCM) methods described in the Traffic Study in Section 3.1.1 Intersection Level of Service Analyses and Section 3.1.2 Vehicle Queuing at Freeway Off-Ramps.

For the freeways, impacts are evaluated in terms of changes in level-of-service (LOS) and volume-to-capacity (V/C) or demand-to-capacity (D/C) ratios. For arterial intersections the City of Long Beach criteria are used to evaluate potential impacts. The City of Long Beach criteria are applied using the Highway Capacity Manual operational intersection analysis methods for signalized and unsignalized intersections. A signalized intersection operating with a LOS E or F and whose D/C ratio increases by more than 0.02 under "with project" condition compared to No Build Alternative is considered exceeds the City of Long Beach criteria. An unsignalized intersection operating with LOS E or F under "with project" conditions is to be reanalyzed assuming a traffic signal to determine if the intersection exceeds the City of Long Beach criteria.

The geometric conditions and type of traffic control for years 2020 and 2040 are assumed to be unchanged from the existing conditions. There are no committed projects within the study area for the Long Beach Traffic Study. **Figure 4.1-3** presents the intersection geometrics and **Figure 4.1-4** presents the freeway geometrics.

4.2 Existing (Year 2009) Conditions

This section of the report provides an analysis of the study intersections and mainline freeway as well as the freeway/ramp junction locations for Existing (Year 2009) conditions. Existing (Year 2009) conditions analyses are based on year 2009 traffic volumes and current traffic control/lane

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geometrics at the study intersections and freeway segments and ramps within the project limits. The HCM methodology was used to analyze the LOS at all the analysis locations. Intersection analysis worksheets for Existing (Year 2009) condition are provided in **Appendix V.A.** Freeway analyses worksheets for Existing (Year 2009) condition are provided in **Appendix V.B, V.C and V.D.**

4.2.1 Existing (Year 2009) Traffic Volumes

Existing (Year 2009) peak hour intersection traffic volumes is presented in **Figure 4.2-1** and peak hour freeway traffic volumes along the I-405 mainline, I-605 mainline and SR-22/7th Street mainline and all interchange ramps within the study area are illustrated in **Figure 4.2-2.**

4.2.2 Existing (2009) Intersection Traffic Analysis

A summary of level of service (LOS) for the morning (AM) and evening (PM) peak hours for existing conditions, including traffic control at study intersections, is provided in **Table 4.2-1**. The LOS analysis conducted for existing conditions indicates that all study currently operate at LOS D or better during the AM and PM peak hours except for the following intersections that are currently operating at LOS E or F during the AM or PM peak hours:

- Willow Street/Lakewood Boulevard (PM LOS = E and V/C = 0.92)
- Willow Street/Bellflower Boulevard (AM LOS = F and V/C = 0.84)
- Los Coyotes Diagonal/Bellflower Boulevard (PM LOS = E and V/C = 0.97)
- Willow Street/Los Coyotes Diagonal (PM LOS = F and V/C = 0.74)
- Willow Street/Woodruff Avenue (AM LOS = F and V/C = 1.07)
- Woodruff Avenue/Palo Verde (AM LOS = F and V/C = 0.87)
- SR-22 WB On/Off-Ramp/College Park Dr (PM LOS = F and V/C = 0.65)
- 7th Street/Pacific Coast Highway (AM LOS = F and V/C = 0.95; PM LOS = F and V/C = 1.03)
- 7th Street/Bellflower Boulevard (AM LOS = E and V/C = 1.01; PM LOS = F and V/C = 0.91)
- 7th Street/W. Campus Drive (AM LOS = F and V/C = 0.83)

A comparison of existing vehicle queuing (AM and PM peak hour 95th percentile queues) and available queue storage (in feet) is included in **Table 4.2-2.** During the peak hours, most of the turn pockets at the arterial intersections currently provide sufficient queue storage except at the following locations:

- Carson Street/Pioneer Boulevard
  - Northbound left turn lane
  - Eastbound left turn lane
- Willow Street/Bellflower Boulevard
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Los Coyotes Diagonal/Bellflower Boulevard
  - Northbound right turn lane
  - Eastbound left turn lane

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  - Westbound left turn lane
- Willow Street/Los Coyotes Diagonal
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Woodruff Avenue
  - Northbound left turn lane
  - Southbound left turn lane
  - Westbound left turn lane
- Willow Street/Palo Verde
  - Eastbound right turn lane
- Stearns Street/Palo Verde
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- I-405 NB Direct On-Ramp/Studebaker Road
  - Northbound left turn lane
- Atherton Street/Studebaker Road
  - Eastbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Northbound right turn lane
- 7th Street/Bellflower Boulevard
  - Northbound right turn lane
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
- Pacific Coast Highway/Bellflower Boulevard
  - Westbound left turn lane
- 7th Street/Channel Drive
  - Westbound left turn lane
- 7th Street/W. Campus Drive
  - Southbound left/right turn lane
- 7th Street/E. Campus Drive
  - Southbound left turn lane
  - Eastbound left turn lane

The freeway off-ramp vehicle queuing is also shown in **Table 4.2-2**. During the peak hours all the freeway off-ramps provide sufficient storage to accommodate the queues under Existing (Year 2009) conditions.

4.2.3 Existing (Year 2009) Freeway Traffic Analysis

Findings for the northbound and southbound freeway segments under Existing (Year 2009) conditions are summarized in **Table 4.2-3**. The peak hour capacity, volume, V/C ratio, density and LOS for all the freeway segments are shown.

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Under Existing (Year 2009) conditions, the northbound I-405 mainline currently operates at LOS E during the AM peak hour and LOS D during the PM peak hour. The southbound I-405 mainline currently operates at LOS D during both the AM and PM peak hours except at one segment location. The southbound I-405 segment between Woodruff Avenue and Palo Verde Avenue/Stearns Street currently operates at LOS E during the AM and PM peak hours. The northbound and southbound I-405 HOV lanes currently operate below capacity except during the AM peak hour in the northbound direction between Temple Avenue and Studebaker Road with D/C ratios ranging between 1.04 and 1.06.

Under Existing (Year 2009) conditions, the I-605 freeway mainline segments currently operate at LOS C or D during the AM and PM peak hours in both directions except for the segments between Carson Street and Spring Street. In the northbound direction, the segments between Carson Street and Spring Street are currently operating at LOS E during the PM peak hour. In the southbound direction, the segment between Carson Street and the HOV transition area is currently operating at LOS E during both the AM and PM peak hours. The northbound and southbound I-605 HOV lanes are currently operating below capacity.

Under Existing (Year 2009) conditions, the SR-22/7th Street freeway mainline segment between Pepper Tree Lane and Studebaker Road operates from LOS A to LOS D during the AM and PM peak hours in both directions, while the segment between Studebaker Road and I-605 operates from LOS D to LOS F during the AM and PM peak hours in both directions.

Ramps and Ramp-Freeway Junction Analysis and Levels of Service

The density and LOS for each of the ramps along I-405, I-605 and SR-22/7th Street within the study area for Existing (Year 2009) conditions are based on year 2009 traffic volumes. **Table 4.2-4** provides a summary of the findings from the analyses for Existing (Year 2009) conditions during the AM and PM peak hours, respectively. The peak hour capacity, volume, V/C ratio, density, and LOS for each of the freeway ramps are presented.

Under Existing (Year 2009) conditions, the I-405 ramp junction peak hour LOS generally ranges from LOS B to LOS F, depending upon time of day and direction of travel. Similarly, the SR-22/7th Street ramp junction peak hour LOS generally ranges from LOS B to LOS F, depending upon time of day and direction of travel. For the I-605 ramp junction peak hour LOS generally ranges from LOS A to LOS E, depending upon time of day and direction of travel.

The freeway-to-freeway branch connectors are currently operating at under-capacity during both AM and PM peak hours except at one location. The V/C ratio for the branch connector from I-605 southbound to 7th Street/I-405 is currently 1.51 and 1.33 during the AM and PM peak hours, respectively.

Weaving Analysis

Weaving analysis was conducted between on-ramps and off-ramps spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and collector-distributor (C-D) roads. Weaving analyses for Existing (2009) conditions is based on year 2009 traffic volumes. **Table 4.2-5** summarizes the weaving analysis findings for Existing (2009) conditions

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for both the freeway segments and the C-D roads. The density and LOS for all the weaving sections are shown.

Under Existing (Year 2009) conditions, I-405 mainline freeway weaving segments operate between LOS D and LOS F. Weaving analysis was conducted for the C-D roads at the Lakewood Boulevard/Willow Street interchange and the Bellflower Boulevard/Los Coyotes Diagonal interchange. The analysis shows that the weaving segments on the C-D roads currently operate between LOS A and C during the peak hours.

4.3 No Build Alternative Conditions

This section of the report provides an analysis of the study intersections and mainline freeway as well as the freeway/ramp junction locations for years 2020 and 2040 No Build Alternative conditions. No Build Alternative conditions analyses are based on forecasted years 2020 and 2040 No Build Alternative traffic volumes and year 2009 traffic control/lane geometrics at the study intersections and freeway segments and ramps within the project limits. As discussed in Section 4.1, geometric conditions and type of traffic control for years 2020 and 2040 are assumed to be unchanged from existing conditions (Year 2009). Intersection analysis worksheets for years 2020 and 2040 No Build Alternative conditions are provided in **Appendix VI.A**. Freeway analyses worksheets for years 2020 and 2040 No Build Alternative conditions are provided in **Appendix VI.B**.

4.3.1 No Build Alternative Traffic Volumes

Year 2020 No Build Alternative intersection peak hour traffic volumes are presented in **Figure 4.3-1**. Year 2040 No Build Alternative intersection peak hour traffic volumes are presented in **Figure 4.3-2**. Years 2020 and 2040 No Build peak hour traffic volumes for the I-405 mainline, I-605 mainline and SR-22/7th Street mainline and all interchange ramps within the study area are illustrated in **Figures 4.3-3** and **4.3-4**, respectively.

4.3.2 No Build Alternative (Year 2020) Intersection Traffic Analysis

A summary of LOS for AM and PM peak hours for year 2020 No Build Alternative conditions, including traffic control at study intersections, is provided in **Table 4.3-1**. The LOS analysis conducted for year 2020 No Build Alternative conditions indicates that all study intersections are anticipated to operate at LOS D or better during the AM and PM peak hours except for the following intersections that are anticipated to operate at LOS E or F during the AM or PM peak hours:

- Willow Street/Woodruff Avenue (AM LOS = F and D/C = 1.33)
- I-405 SB Direct Off-Ramp/Studebaker Rd (AM LOS = F and D/C = 0.86)
- SR-22 WB On/Off-Ramp/College Park Dr (PM LOS = F and D/C = 0.61)
- 7th Street/Bellflower Boulevard (AM LOS = E and D/C = 1.04)

A comparison of year 2020 No Build Alternative vehicle queuing (AM and PM peak hour 95th percentile queues) and available queue storage (in feet) is included in **Table 4.3-2**. During the peak hours, most of the turn pockets at the arterial intersections are anticipated to provide sufficient queue storage except at the following locations:

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- Carson Street/Pioneer Boulevard
  - Northbound left turn lane
  - Eastbound left turn lane
- Willow Street/Lakewood Boulevard
  - Westbound left turn lane
- Willow Street/Bellflower Boulevard
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Los Coyotes Diagonal/Bellflower Boulevard
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Los Coyotes Diagonal
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Woodruff Avenue
  - Northbound left turn lane
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Stearns Street/Palo Verde
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Atherton Street/Studebaker Road
  - Eastbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Northbound right turn lane
  - Southbound left turn lane
- 7th Street/Pacific Coast Highway
  - Southbound left turn lane
- 7th Street/Bellflower Boulevard
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
- Pacific Coast Highway/Bellflower Boulevard
  - Southbound left turn lane
- 7th Street/W. Campus Drive
  - Southbound left/right turn lane
- 7th Street/E. Campus Drive

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  - Southbound left turn lane
  - Eastbound left turn lane

The freeway off-ramp vehicle queuing is also shown in **Table 4.3-2**. During the peak hours, two freeway off-ramp locations are anticipated to exceed the available storage length under year 2020 No Build Alternative conditions:

- Carson Street/I-605 SB Off-Ramp
  - Southbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Westbound right turn lane

4.3.3 No Build Alternative (Year 2040) Intersection Traffic Analysis

A summary of LOS for AM and PM peak hours for year 2040 No Build Alternative conditions, including traffic control at study intersections, is provided in **Table 4.3-3**. The LOS analysis conducted for year 2040 No Build Alternative conditions indicates that all study intersections are anticipated to operate at LOS D or better during the AM and PM peak hours except for the following intersections that are anticipated to operate at LOS E or F during the AM or PM peak hours:

- Willow Street/Bellflower Boulevard (AM LOS = E and D/C = 1.09; PM LOS = E, D/C = 1.09)
- Los Coyotes Diagonal/Bellflower Boulevard (PM LOS = E and D/C = 1.13)
- Willow Street/Woodruff Avenue (AM LOS = F and D/C = 1.44)
- I-405 SB Direct Off-Ramp/Studebaker Rd (AM LOS = F and D/C = 1.02)
- SR-22 WB On/Off-Ramp/College Park Dr (PM LOS = F and D/C = 0.84)
- 7th Street/Pacific Coast Highway (AM LOS = E and D/C = 1.02; PM LOS = E, D/C = 1.03)
- 7th Street/Bellflower Boulevard (AM LOS = F and D/C = 1.13; PM LOS = E and D/C = 1.06)
- 7th Street/W. Campus Drive (PM LOS = E and D/C = 0.87)
- 7th Street/E. Campus Drive (AM LOS = E and D/C = 1.12)

A comparison of year 2040 No Build Alternative vehicle queuing (AM and PM peak hour 95th percentile queues) and available queue storage (in feet) is included in **Table 4.3-4**. During the peak hours, most of the turn pockets at the arterial intersections are anticipated to provide sufficient queue storage except at the following locations:

- Carson Street/Pioneer Boulevard
  - Northbound left turn lane
  - Eastbound left turn lane
- Spring Street/Cerritos Ave/I-605 NB On-Ramp
  - Westbound left turn lane
- Willow Street/Lakewood Boulevard
  - Westbound left turn lane
- Willow Street/Bellflower Boulevard
  - Northbound left turn lane
  - Southbound left turn lane

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- Eastbound left turn lane
- Westbound left turn lane

- Los Coyotes Diagonal/Bellflower Boulevard
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Los Coyotes Diagonal
  - Southbound left turn lane
  - Westbound left turn lane
  - Eastbound left turn lane
- Willow Street/Woodruff Avenue
  - Northbound left turn lane
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Woodruff Ave/Palo Verde
  - Eastbound left turn lane
- Stearns Street/Palo Verde
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Atherton Street/Studebaker Road
  - Eastbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Northbound right turn lane
  - Southbound left turn lane
- 7th Street/Pacific Coast Highway
  - Southbound left turn lane
- 7th Street/Bellflower Boulevard
  - Northbound right turn lane
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
- Pacific Coast Highway/Bellflower Boulevard
  - Southbound left turn lane
  - Eastbound left turn lane
- 7th Street/W. Campus Drive
  - Southbound left/right turn lane
- 7th Street/E. Campus Drive
  - Southbound left turn lane
  - Eastbound left turn lane

The freeway off-ramp vehicle queuing is also shown in **Table 4.3-4**. During the peak hours, two freeway off-ramp locations are anticipated to exceed the available storage length under year 2040 No Build Alternative conditions:

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- Carson Street/I-605 SB Off-Ramp
  - Southbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Westbound right turn lane

4.3.4 No Build Alternative (Year 2020) Freeway Traffic Analysis

Findings for the northbound and southbound freeway segments under No Build Alternative conditions for year 2020 are summarized in **Table 4.3-5**. The peak hour capacity, demand volume, D/C ratio, density and LOS for all the freeway segments are shown.

Under No Build Alternative conditions for year 2020, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions with few exceptions. The exceptions include the I-405 southbound segment between Studebaker Road to I-605 southbound ramp which is projected to operate at LOS D during the PM peak hour. Majority of the northbound and southbound I-405 HOV lanes are anticipated to operate at over-capacity during the AM or PM peak hours under year 2020 No Build Alternative conditions with D/C ratios ranging from 1.01 to 1.51.

Under No Build Alternative conditions for year 2020, the I-605 freeway mainline segments are projected to operate between LOS B and LOS D during the AM and PM peak hours in both directions except for the segment between Carson Street and Spring Street, which southbound movement is anticipated to operate at LOS E during the AM peak hour and the northbound movement is anticipated to operates at LOS E during the PM peak hour.

Under No Build Alternative conditions for year 2020, the SR-22/7th Street freeway mainline segment between Pepper Tree Lane and Studebaker Road, is anticipated to operate at LOS B or LOS C during the AM and PM peak hours in both directions, while the segment between Studebaker Road and I-605, is anticipated to operate from LOS E to LOS F during the AM and PM peak hours in both directions.

Ramps and Ramp-Freeway Junction Analysis and Levels of Service

The density and LOS for each of the ramps along I-405, I-605 and SR-22/7th Street within the study area for No Build Alternative are based on projected year 2020 traffic volumes. **Table 4.3-6** provide a summary of the findings from the analysis for year 2020 No Build Alternative conditions during the AM and PM peak hours. The peak hour capacity, demand volume, D/C ratio, density, and LOS for each of the freeway ramps are presented.

Under No Build Alternative conditions for year 2020, the projected LOS for the I-405 ramp junctions generally ranges from LOS B to LOS F, depending upon time of day and direction of travel. For the I-605 ramp junctions, the peak hour LOS generally ranges from LOS A to LOS E, depending upon time of day and direction of travel. The peak hour LOS expected for the SR-22/7th Street ramp junctions, generally ranges from LOS C to LOS F, depending upon time of day and direction of travel.

The freeway-to-freeway branch connectors are anticipated to operate at under-capacity during both AM and PM peak hours except at two locations. The D/C ratio for the branch connector

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from I-605 southbound to 7th Street/I-405 is anticipated to be 1.32 and 1.12 during the AM and PM peak hours, respectively. The branch connector from I-605 southbound/I-405 southbound to 7th Street is expected to have a D/C ratio of 1.13 during the AM peak hour.

Weaving Analysis
Weaving analysis was conducted between on-ramps and off-ramps spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and C-D roads. Weaving analyses for No Build Alternative are based on projected year 2020 traffic volumes. **Table 4.3-7** summarizes the weaving analysis findings for year 2020 conditions for No Build Alternative for both the freeway segments and the C-D roads. The density and LOS for all the weaving sections are shown.

Under year 2020 No Build Alternative condition, the I-405 freeway weaving segments are anticipated to operate at LOS E or LOS F during the peak hours except at one location during the AM peak hour. The I-405 southbound freeway weaving segment between Palo Verde Avenue/Stearns Street and Studebaker Road is expected to operate at LOS D during the AM peak hour. Weaving analysis was conducted for the C-D roads at the Lakewood Boulevard/Willow Street interchange and the Bellflower Boulevard/Los Coyotes Diagonal interchange. The analysis shows that the weaving segments on the C-D roads are anticipated to operate between LOS A and C during the peak hours.

4.3.5 No Build Alternative (Year 2040) Freeway Traffic Analysis

Findings for the northbound and southbound freeway segments under No Build Alternative conditions for year 2040 are summarized in **Table 4.3-8**. The peak hour capacity, demand volume, D/C ratio, density and LOS for all the freeway segments are shown.

Under No Build Alternative conditions for year 2040, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions with few exceptions. The exceptions include the I-405 southbound segment between Studebaker Road to I-605 southbound ramp which is projected to operate at LOS D during the AM peak hour. The northbound and southbound I-405 HOV lanes within the project limits are anticipated to operate at over-capacity during the AM or PM peak hours under year 2040 No Build Alternative conditions with D/C ratios ranging from 1.01 to 1.63.

Under No Build Alternative conditions for year 2040, the I-605 freeway mainline segments are anticipated to operate between LOS C and LOS D during the AM and PM peak hours in both directions except for the freeway segment between Carson Street and Spring Street. The northbound I-605 freeway segment between Carson Street and Spring Street is anticipated to operate at LOS E during the PM peak hour. The southbound I-605 freeway segment between Carson Street and Spring Street is anticipated to operate at LOS F and E during the AM and PM peak hours, respectively.
Under No Build Alternative conditions for year 2040, the SR-22/7th Street freeway mainline segment between Pepper Tree Lane and Studebaker Road, is anticipated to operate at LOS B or LOS C during the AM and PM peak hours in both directions, while the segment between Studebaker Road and I-605, is anticipated to operate between LOS E to LOS F during the AM and PM peak hours in both directions.

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Ramps and Ramp-Freeway Junction Analysis and Levels of Service
The density and LOS for each of the ramps along I-405, I-605 and SR-22/7th Street within the study area for No Build Alternative are based on projected year 2040 traffic volumes. **Table 4.3-9** provide a summary of the findings from the analysis for year 2040 No Build Alternative conditions during the AM and PM peak hours. The peak hour capacity, demand volume, D/C ratio, density, and LOS for each of the freeway ramps are presented.

Under No Build Alternative conditions for year 2040, the projected LOS for the I-405 ramp junctions generally ranges from LOS B to LOS F, depending upon time of day and direction of travel. For the I-605 ramp junctions, the peak hour LOS generally ranges from LOS A to LOS F, depending upon time of day and direction of travel. The peak hour LOS expected for the SR-22/7th Street ramp junctions, generally ranges from LOS C to LOS F, depending upon time of day and direction of travel.

The freeway-to-freeway branch connectors are anticipated to operate at under-capacity during both AM and PM peak hours except at two locations. The D/C ratio for the branch connector from I-605 southbound to 7th Street/I-405 is anticipated to be 1.43 and 1.21 during the AM and PM peak hours, respectively. The branch connector from I-605 southbound/I-405 southbound to 7th Street is expected to have a D/C ratio of 1.22 during the AM peak hour.

Weaving Analysis
Weaving analysis was conducted between on-ramps and off-ramps spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and C-D roads. Weaving analyses for No Build Alternative are based on projected year 2040 traffic volumes. **Table 4.3-10** summarizes the weaving analysis findings for year 2040 conditions for No Build Alternative for both the freeway segments and the C-D roads.

For year 2040 conditions, the mainline freeway weaving segments are projected to operate at LOS E to LOS F during the peak hours. Weaving analysis was conducted for the C-D roads at the Lakewood Boulevard/Willow Street interchange and the Bellflower Boulevard/Los Coyotes Diagonal interchange. The analysis shows that the weaving segments on the C-D roads are anticipated to operate between LOS A and C during the peak hours.

4.4 Alternative 1 Conditions

This section of the report provides an analysis of the study intersections and mainline freeway as well as the freeway/ramp junction locations for years 2020 and 2040 Alternative 1 conditions. Alternative 1 condition analyses are based on forecasted years 2020 and 2040 Alternative 1 traffic volumes and year 2009 traffic control/lane geometrics at the study intersections and freeway segments and ramps within the project limits. As discussed in Section 4.1, geometric conditions and type of traffic control for years 2020 and 2040 are assumed to be unchanged from existing conditions (Year 2009). Intersection analysis worksheets for years 2020 and 2040 Alternative 1 conditions are provided in **Appendix VII.A**. Freeway analyses worksheets for years 2020 and 2040 Alternative 1 conditions are provided in **Appendix VII.B**.

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4.4.1 Alternative 1 Traffic Volumes

Year 2020 Alternative 1 intersection peak hour traffic volumes are presented in **Figure 4.4-1**. Year 2040 Alternative 1 intersection peak hour traffic volumes are presented in **Figure 4.4-2.** Years 2020 and 2040 Alternative 1 peak hour traffic volumes for the I-405 mainline, I-605 mainline and SR-22/7th Street mainline and all interchange ramps within the study area are illustrated in **Figures 4.4-3** and **4.4-4**, respectively.

4.4.2 Alternative 1 (Year 2020) Intersection Traffic Analysis

A summary of LOS for AM and PM peak hours for year 2020 Alternative 1 conditions, including traffic control at study intersections, is provided in **Table 4.4-1**. The LOS analysis conducted for year 2020 Alternative 1 conditions indicates that all study intersections are anticipated to operate at LOS D or better during the AM and PM peak hours except for the following intersections that are anticipated to operate at LOS E or F during the AM or PM peak hours:

- Willow Street/Woodruff Avenue (AM LOS = F and D/C = 1.32)
- I-405 SB Direct Off-Ramp/Studebaker Rd (AM LOS = F and D/C = 1.03)
- SR-22 WB On/Off-Ramp/College Park Dr (PM LOS = F and D/C = 0.73)
- 7th Street/Bellflower Boulevard (AM LOS = E and D/C = 1.06)

A comparison of year 2020 Alternative 1 vehicle queuing (AM and PM peak hour 95th percentile queues) and available queue storage (in feet) is included in **Table 4.4-2**. During the peak hours, most of the turn pockets at the arterial intersections are anticipated to provide sufficient queue storage except at the following locations:

- Carson Street/Pioneer Boulevard
  - Northbound left turn lane
  - Eastbound left turn lane
- Willow Street/Bellflower Boulevard
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Los Coyotes Diagonal/Bellflower Boulevard
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Los Coyotes Diagonal
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Woodruff Avenue
  - Northbound left turn lane
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
  - Westbound left turn lane

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- Stearns Street/Palo Verde
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Atherton Street/Studebaker Road
  - Eastbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Northbound right turn lane
  - Southbound left turn lane
- 7th Street/Pacific Coast Highway
  - Southbound left turn lane
- 7th Street/Bellflower Boulevard
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
- 7th Street/W. Campus Drive
  - Southbound left/right turn lane
- 7th Street/E. Campus Drive
  - Southbound left turn lane
  - Eastbound left turn lane

The freeway off-ramp vehicle queuing is also shown in **Table 4.4-2**. During the peak hours, two freeway off-ramp locations are anticipated to exceed the available storage length under year 2020 Alternative 1 conditions:

- Carson Street/I-605 SB Off-Ramp
  - Southbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Westbound right turn lane

4.4.3 Alternative 1 (Year 2040) Intersection Traffic Analysis

A summary of LOS for AM and PM peak hours for year 2040 Alternative 1 conditions, including traffic control at study intersections, is provided in **Table 4.4-3**. The LOS analysis conducted for year 2040 Alternative 1 conditions indicates that all study intersections are anticipated to operate at LOS D or better during the AM and PM peak hours except for the following intersections that are anticipated to operate at LOS E or F during the AM or PM peak hours:

- Willow Street/Bellflower Boulevard (AM LOS = E and D/C = 1.09; PM LOS = E, D/C = 1.10)
- Los Coyotes Diagonal/Bellflower Boulevard (PM LOS = E and D/C = 1.15)
- Willow Street/Woodruff Avenue (AM LOS = F and D/C = 1.43)
- I-405 SB Direct Off-Ramp/Studebaker Rd (AM LOS = F and D/C = 1.24)
- SR-22 WB On/Off-Ramp/College Park Dr (PM LOS = F and D/C = 1.00)
- 7th Street/Pacific Coast Highway (AM LOS = E and D/C = 1.04; PM LOS = E, D/C = 1.04)

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- 7th Street/Bellflower Boulevard (AM LOS = F and D/C = 1.14; PM LOS = E and D/C = 1.04)
- 7th Street/W. Campus Drive (AM LOS = E and D/C = 0.86; PM LOS = E, D/C = 0.89)
- 7th Street/E. Campus Drive (AM LOS = E and D/C = 1.13)

A comparison of year 2040 Alternative 1 vehicle queuing (AM and PM peak hour 95th percentile queues) and available queue storage (in feet) is included in **Table 4.4-4**. During the peak hours, most of the turn pockets at the arterial intersections are anticipated to provide sufficient queue storage except at the following locations:

- Carson Street/Pioneer Boulevard
  - Northbound left turn lane
  - Eastbound left turn lane
- Willow Street/Lakewood Boulevard
  - Westbound left turn lane
- Willow Street/Bellflower Boulevard
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Los Coyotes Diagonal/Bellflower Boulevard
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Los Coyotes Diagonal
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Woodruff Avenue
  - Northbound left turn lane
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Woodruff Avenue/Palo Verde
  - Eastbound left turn lane
- Stearns Street/Palo Verde
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Atherton Street/Studebaker Road
  - Southbound right turn lane
  - Eastbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Northbound right turn lane
  - Southbound left turn lane

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- 7th Street/Pacific Coast Highway
  - Southbound left turn lane
- 7th Street/Bellflower Boulevard
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
- Pacific Coast Highway/Bellflower Boulevard
  - Southbound left turn lane
  - Eastbound left turn lane
- 7th Street/W. Campus Drive
  - Southbound left/right turn lane
- 7th Street/E. Campus Drive
  - Southbound left turn lane
  - Eastbound left turn lane

The freeway off-ramp vehicle queuing is also shown in **Table 4.4-4**. During the peak hours, two freeway off-ramp locations are anticipated to exceed the available storage length under year 2040 Alternative 1 conditions:

- Carson Street/I-605 SB Off-Ramp
  - Southbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Westbound right turn lane

4.4.4 Alternative 1 (Year 2020) Freeway Traffic Analysis

Findings for the northbound and southbound freeway segments under Alternative 1 conditions for year 2020 are summarized in **Table 4.4-5**. The peak hour capacity, demand volume, D/C ratio, density and LOS for all the freeway segments are shown.

Under Alternative 1 conditions for year 2020, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions with few exceptions. The exceptions include the I-405 southbound segments between Studebaker Road to I-605 southbound ramp which is projected to operate at LOS D during the AM peak hour. Majority of the northbound and southbound I-405 HOV lanes are anticipated to operate at over-capacity during the AM or PM peak hours under year 2020 No Build Alternative conditions with D/C ratios ranging from 1.07 to 1.30.

Under Alternative 1 conditions for year 2020, the I-605 freeway mainline segments are projected to operate between LOS B and LOS D during the AM and PM peak hours in both directions except for the segment between Carson Street and Spring Street, which southbound movement is anticipated to operate at LOS E during both peak hours and the northbound movement is anticipated to operates at LOS E during the PM peak hour.

Under No Build Alternative conditions for year 2020, the SR-22/7th Street freeway mainline segment between Pepper Tree Lane and Studebaker Road, is anticipated to operate at LOS B or

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LOS C during the AM and PM peak hours in both directions, while the segment between Studebaker Road and I-605 is anticipated to operate from LOS D to LOS F during the AM and PM peak hours in both directions.

Ramps and Ramp-Freeway Junction Analysis and Levels of Service
The density and LOS for each of the ramps along I-405, I-605 and SR-22/7th Street within the study area for No Build Alternative are based on projected year 2020 traffic volumes. **Table 4.4-6** provide a summary of the findings from the analyses for year 2020 Alternative 1 conditions during the AM and PM peak hours. The peak hour capacity, demand volume, D/C ratio, density, and LOS for each of the freeway ramps are presented.

Under Alternative 1 conditions for year 2020, the projected LOS for the I-405 ramp junctions generally ranges from LOS B to LOS F, depending upon time of day and direction of travel. For the I-605 ramp junctions, the peak hour LOS generally ranges from LOS A to LOS E, depending upon time of day and direction of travel. The peak hour LOS expected for the SR-22/7th Street ramp junctions, generally ranges from LOS C to LOS F, depending upon time of day and direction of travel.

The freeway-to-freeway branch connectors are anticipated to operate at under-capacity during both AM and PM peak hours except at two locations. The D/C ratio for the branch connector from I-605 southbound to 7th Street/I-405 is anticipated to be 1.38 and 1.18 during the AM and PM peak hours, respectively. The branch connector from I-605 southbound/I-405 southbound to 7th Street is expected to have a D/C ratio of 1.19 during the AM peak hour.

Weaving Analysis
Weaving analysis was conducted between on-ramps and off-ramps spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and C-D roads. Weaving analysis for Alternative 1 is based on projected year 2020 traffic volumes. **Table 4.4-7** summarizes the weaving analysis findings for year 2020 conditions for Alternative 1 for both the freeway segments and the C-D roads. The density and LOS for all the weaving sections are shown.

Under year 2020 Alternative 1 condition, the I-405 freeway weaving segments are anticipated to operate at LOS E or LOS F during the peak hours except at one location during the AM peak hour. The I-405 southbound freeway weaving segment between Palo Verde Avenue/Stearns Street and Studebaker Road is expected to operate at LOS D during the AM peak hour. Weaving analysis was conducted for the C-D roads at the Lakewood Boulevard/Willow Street interchange and the Bellflower Boulevard/Los Coyotes Diagonal interchange. The analysis shows that the weaving segments on the C-D roads are anticipated to operate between LOS A and C during the peak hours.

4.4.5 Alternative 1 (Year 2040) Freeway Traffic Analysis

Findings for the northbound and southbound freeway segments under Alternative 1 conditions for year 2040 are summarized in **Table 4.4-8**. The peak hour capacity, demand volume, D/C ratio, density and LOS for all the freeway segments are shown.

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Under Alternative 1 conditions for year 2040, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions The northbound and southbound I-405 HOV lanes within the project limits are anticipated to operate at over-capacity during the AM or PM peak hours under year 2020 Alternative 1 conditions with D/C ratios ranging from 1.16 to 1.41.

Under Alternative 1 conditions for year 2040, the I-605 freeway mainline segments are anticipated to operate between LOS C and LOS D during the AM and PM peak hours in both directions except for the freeway segment between Carson Street and Spring Street. The northbound I-605 freeway segment between Carson Street and Spring Street is anticipated to operate at LOS F during the PM peak hour. The southbound I-605 freeway segment between Carson Street and Spring Street is anticipated to operate at LOS F and E during the AM and PM peak hours, respectively.

Under Alternative 1 conditions for year 2040, the SR-22/7th Street freeway mainline segment between Pepper Tree Lane and Studebaker Road, is anticipated to operate at LOS B or LOS C during the AM and PM peak hours in both directions, while the segment between Studebaker Road and I-605, is anticipated to operate between LOS D to LOS F during the AM and PM peak hours in both directions.

Ramps and Ramp-Freeway Junction Analysis and Levels of Service
The density and LOS for each of the ramps along I-405, I-605 and SR-22/7th Street within the study area for Alternative 1 are based on projected Alternative 1 year 2040 traffic volumes. **Table 4.4-9** provide a summary of the findings from the analysis for year 2040 Alternative 1 conditions during the AM and PM peak hours. The peak hour capacity, demand volume, D/C ratio, density, and LOS for each of the freeway ramps are presented.

Under Alternative 1 conditions for year 2040, the projected LOS for the I-405 ramp junctions generally ranges from LOS B to LOS F, depending upon time of day and direction of travel. For the I-605 ramp junctions, the peak hour LOS generally ranges from LOS A to LOS F, depending upon time of day and direction of travel. The peak hour LOS expected for the SR-22/7th Street ramp junctions, generally ranges from LOS C to LOS F, depending upon time of day and direction of travel.

The freeway-to-freeway branch connectors are anticipated to operate at under-capacity during both AM and PM peak hours except at two locations. The D/C ratio for the branch connector from I-605 southbound to 7th Street/I-405 is anticipated to be 1.49 and 1.27 during the AM and PM peak hours, respectively. The branch connector from I-605 southbound/I-405 southbound to 7th Street is expected to have a D/C ratio of 1.19 during the AM peak hour.

Weaving Analysis
Weaving analysis was conducted between on-ramps and off-ramps spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and C-D roads. Weaving analysis for Alternative 1 are based on projected year 2040 traffic volumes. **Table 4.4-10** summarizes the weaving analysis findings for year 2040 conditions for Alternative 1 for both the freeway segments and the C-D roads.

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For year 2040 Alternative 1 conditions, the mainline freeway weaving segments are projected to operate at LOS E or LOS F during the peak hours. Weaving analysis was conducted for the C-D roads at the Lakewood Boulevard/Willow Street interchange and the Bellflower Boulevard/Los Coyotes Diagonal interchange. The analysis shows that the weaving segments on the C-D roads are anticipated to operate between LOS A and C during the peak hours.

4.4.6 Alternative 1 vs. No Build Alternative Comparison and Proposed Roadway Improvements

Intersection

Table 4.4-12 presents a comparison of Year 2040 No Build Alternative and Year 2040 Alternative 1 operating conditions anticipated for the study intersections. As shown in the table, the SR-22 westbound On/Off Ramp and College Park Drive intersection is projected to operate with LOS F during the PM peak hour under the No-Build Alternative with a Demand to Capacity (D/C) ratio of 1.16. This intersection under Alternative 1 is projected to have an increase in the D/C ratio of 0.03 for a total operating D/C ratio of 1.19 during the PM peak hour.

Based on the comparison above, the following roadway improvements could be considered to improve the intersection year 2040 operating condition as well as improve safety:

- Widen SR-22 westbound On/Off Ramp from one lane to two lanes approximately 200 feet east of the intersection extending to Studebaker Road as shown on **Figure 4.4-5**. This proposed roadway improvement could be accommodated within existing right-of-way; and
- Provide a traffic signal to control traffic movements instead of existing one-way stop control placed at the westbound College Park Drive.

Table 4.4-11 presents a comparison of Year 2020 No Build Alternative and Year 2020 Alternative 1 operating conditions anticipated for the study intersections. As shown in the table, the above roadway improvements are necessary by year 2020 to improve the intersection operating condition, which is projected to have a D/C ratio of 1.07 and LOS F under the No-Build Alternative and D/C ratio of 1.10 and LOS F under Alternative 1.

Table 4.4-12 shows intersections LOS and D/C ratio during AM and PM peak hours for Year 2040 Alternative 1 with the recommended roadway improvements.

Freeway Mainline

Table 4.4-13 presents a comparison of year 2020 No Build Alternative and year 2020 Alternative 1 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 1 in many segments, with the range of increase in the GP lanes from 0.01 to 0.18 during peak hours. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits. There are several segments in which there is a decrease in the D/C ratio, shown in red on **Table 4.4-13**. Those segments that are anticipated to have a change in LOS are identified in the Evaluation column in the table.

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Table 4.4-14 presents a comparison of year 2040 No Build Alternative and year 2040 Alternative 1 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 1 in many segments, with the range of increase in the GP lanes from 0.01 to 0.31 during peak hours. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits. There are several segments in which there is a decrease in the D/C ratio, shown in red on **Table 4.4-14**. Those segments that are anticipated to have a change in LOS are identified in the Evaluation column in the table.

4.5 Alternative 2 Conditions

This section of the report provides an analysis of the study intersections and mainline freeway as well as the freeway/ramp junction locations for years 2020 and 2040 Alternative 2 conditions. Alternative 2 condition analyses are based on forecasted years 2020 and 2040 Alternative 2 traffic volumes and year 2009 traffic control/lane geometrics at the study intersections and freeway segments and ramps within the project limits. As discussed in Section 4.1, geometric conditions and type of traffic control for years 2020 and 2040 are assumed to be unchanged from existing conditions (Year 2009). Intersection analysis worksheets for years 2020 and 2040 Alternative 2 conditions are provided in **Appendix VIII.A**. Freeway analyses worksheets for years 2020 and 2040 Alternative 2 conditions are provided in **Appendix VIII.B**.

4.5.1 Alternative 2 Traffic Volumes

Year 2020 Alternative 2 intersection peak hour traffic volumes are presented in **Figure 4.5-1**. Year 2040 Alternative 2 intersection peak hour traffic volumes are presented in **Figure 4.5-2**. Years 2020 and 2040 Alternative 2 peak hour traffic volumes for the I-405 mainline, I-605 mainline and SR-22/7th Street mainline and all interchange ramps within the study area are illustrated in **Figures 4.5-3** and **4.5-4**, respectively.

4.5.2 Alternative 2 (Year 2020) Intersection Traffic Analysis

A summary of LOS for AM and PM peak hours for year 2020 Alternative 2 conditions, including traffic control at study intersections, is provided in **Table 4.5-1**. The LOS analysis conducted for year 2020 Alternative 2 conditions indicates that all study intersections are anticipated to operate at LOS D or better during the AM and PM peak hours except for the following intersections that are anticipated to operating at LOS E or F during the AM or PM peak hours:

- Willow Street/Bellflower Boulevard (PM LOS = E and D/C = 1.16)
- Willow Street/Los Coyotes Diagonal (PM LOS = E and D/C = 1.25)
- Willow Street/Woodruff Avenue (AM LOS = F and D/C = 1.41)
- I-405 SB Direct Off-Ramp/Studebaker Rd (AM LOS = F and D/C = 0.90)
- SR-22 WB On/Off-Ramp/College Park Dr (PM LOS = F and D/C = 1.14)
- 7th Street/Bellflower Boulevard (AM LOS = E and D/C = 1.09)

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A comparison of year 2020 Alternative 2 vehicle queuing (AM and PM peak hour 95th percentile queues) and available queue storage (in feet) is included in **Table 4.5-2**. During the peak hours, most of the turn pockets at the arterial intersections are anticipated to provide sufficient queue storage except at the following locations:

- Carson Street/Pioneer Boulevard
  - Northbound left turn lane
  - Eastbound left turn lane
- Willow Street/Bellflower Boulevard
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Los Coyotes Diagonal/Bellflower Boulevard
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Los Coyotes Diagonal
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Woodruff Avenue
  - Northbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Stearns Street/Palo Verde
  - Northbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Atherton Street/Studebaker Road
  - Eastbound left turn lane
- SR-22 WB On/Off-Ramp/Studebaker Road
  - Southbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Northbound right turn lane
  - Southbound left turn lane
- 7th Street/Pacific Coast Highway
  - Southbound left turn lane
- 7th Street/Bellflower Boulevard
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
- Pacific Coast Highway/Bellflower Boulevard
  - Eastbound left turn lane
- 7th Street/W. Campus Drive

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  - Southbound left/right turn lane
- 7th Street/E. Campus Drive
  - Southbound left turn lane
  - Eastbound left turn lane

The freeway off-ramp vehicle queuing is also shown in **Table 4.5-2**. During the peak hours, two freeway off-ramp locations are anticipated to exceed the available storage length under year 2020 Alternative 2 conditions:

- Carson Street/I-605 SB Off-Ramp
  - Southbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Westbound right turn lane

4.5.3 Alternative 2 (Year 2040) Intersection Traffic Analysis

A summary of LOS for AM and PM peak hours for year 2040 Alternative 2 conditions, including traffic control at study intersections, is provided in **Table 4.5-3**. The LOS analysis conducted for year 2040 Alternative 2 conditions indicates that all study intersections are anticipated to operate at LOS D or better during the AM and PM peak hours except for the following intersections that are anticipated to operate at LOS E or F during the AM or PM peak hours:

- Willow Street/Bellflower Boulevard (PM LOS = E, D/C = 1.25)
- Willow Street/Los Coyotes Diagonal (AM LOS = E and D/C = 0.99; PM LOS = F and D/C = 1.41)
- Willow Street/Woodruff Avenue (AM LOS = F and D/C = 1.53; PM LOS = F, D/C = 0.95)
- I-405 SB Direct Off-Ramp/Studebaker Rd (AM LOS = F and D/C = 1.04)
- SR-22 WB On/Off-Ramp/College Park Dr
  (AM LOS = E and D/C = 0.75; PM LOS = F and D/C = 1.59)
- 7th Street/Pacific Coast Highway (AM LOS = E and D/C = 1.04; PM LOS = E, D/C = 1.07)
- 7th Street/Bellflower Boulevard (AM LOS = F and D/C = 1.18; PM LOS = E and D/C = 1.06)
- 7th Street/W. Campus Drive (AM LOS = E and D/C = 0.89; PM LOS = E, D/C = 0.90)
- 7th Street/E. Campus Drive (AM LOS = E and D/C = 1.17)

A comparison of year 2040 Alternative 2 vehicle queuing (AM and PM peak hour 95th percentile queues) and available queue storage (in feet) is included in **Table 4.5-4**. During the peak hours, most of the turn pockets at the arterial intersections are anticipated to provide sufficient queue storage except at the following locations:

- Carson Street/Pioneer Boulevard
  - Northbound left turn lane
  - Eastbound left turn lane
- Willow Street/Lakewood Boulevard
  - Westbound left turn lane
- Willow Street/Bellflower Boulevard
  - Northbound left turn lane

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- Southbound left turn lane
- Eastbound left turn lane
- Westbound left turn lane

- Los Coyotes Diagonal/Bellflower Boulevard
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Los Coyotes Diagonal
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Woodruff Avenue
  - Northbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Stearns Street/Palo Verde
  - Northbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Atherton Street/Studebaker Road
  - Eastbound left turn lane
- SR-22 WB On/Off-Ramp/Studebaker Road
  - Southbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Northbound right turn lane
  - Southbound left turn lane
- 7th Street/Pacific Coast Highway
  - Southbound left turn lane
- 7th Street/Bellflower Boulevard
  - Northbound right turn lane
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
- Pacific Coast Highway/Bellflower Boulevard
  - Southbound left turn lane
  - Eastbound left turn lane
- 7th Street/W. Campus Drive
  - Southbound left/right turn lane
- 7th Street/E. Campus Drive
  - Southbound left turn lane
  - Eastbound left turn lane

The freeway off-ramp vehicle queuing is also shown in **Table 4.5-4**. During the peak hours, two freeway off-ramp locations are anticipated to exceed the available storage length under year 2040 Alternative 2 conditions:

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- Carson Street/I-605 SB Off-Ramp
  - Southbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Westbound right turn lane

4.5.4 Alternative 2 (Year 2020) Freeway Traffic Analysis

Findings for the northbound and southbound freeway segments under Alternative 2 conditions for year 2020 are summarized in **Table 4.5-5**. The peak hour capacity, demand volume, D/C ratio, density and LOS for all the freeway segments are shown.

Under Alternative 2 conditions for year 2020, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions with few exceptions. The exceptions include the I-405 southbound segments between Studebaker Road to I-605 southbound ramp which is projected to operate at LOS D during the AM peak hour. Majority of the northbound and southbound I-405 HOV lanes are anticipated to operate at over-capacity during the AM or PM peak hours under year 2020 Alternative 2 conditions with D/C ratios ranging from 1.04 to 1.46.

Under Alternative 2 conditions for year 2020, the I-605 freeway mainline segments are projected to operate between LOS B and LOS E during the AM and PM peak hours in both directions except for the segment between Carson Street and Spring Street, which southbound movement is anticipated to operate at LOS E during both the AM and PM peak hour.

Under Alternative 2 conditions for year 2020, the SR-22/7th Street freeway mainline segment between Pepper Tree Lane and Studebaker Road, is anticipated to operate at LOS B or LOS C during the AM and PM peak hours in both directions, while the segment between Studebaker Road and I-605, is anticipated to operate from LOS D to LOS F during the AM and PM peak hours in both directions.

Ramps and Ramp-Freeway Junction Analysis and Levels of Service

The density and LOS for each of the ramps along I-405, I-605 and SR-22/7th Street within the study area for Alternative 2 are based on projected Alternative 2 year 2020 traffic volumes. **Table 4.5-6** provide a summary of the findings from the analyses for year 2020 Alternative 2 conditions during the AM and PM peak hours. The peak hour capacity, demand volume, D/C ratio, density, and LOS for each of the freeway ramps are presented.

Under Alternative 2 conditions for year 2020, the projected LOS for the I-405 ramp junctions generally ranges from LOS B to LOS F, depending upon time of day and direction of travel. For the I-605 ramp junctions, the peak hour LOS generally ranges from LOS A to LOS E, depending upon time of day and direction of travel. The peak hour LOS expected for the SR-22/7th Street ramp junctions, generally ranges from LOS C to LOS F, depending upon time of day and direction of travel.

The freeway-to-freeway branch connectors are anticipated to operate at under-capacity during both AM and PM peak hours except at two locations. The D/C ratio for the branch connector

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from I-605 southbound to 7th Street/I-405 is anticipated to be 1.42 and 1.17 during the AM and PM peak hours, respectively. The branch connector from I-605 southbound/I-405 southbound to 7th Street is expected to have a D/C ratio of 1.14 during the AM peak hour.

Weaving Analysis
Weaving analysis was conducted between on-ramps and off-ramps spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and C-D roads. Weaving analysis for Alternative 2 are based on projected year 2020 Alternative 2 traffic volumes. **Table 4.5-7** summarizes the weaving analysis findings for year 2020 conditions for Alternative 2 for both the freeway segments and the C-D roads. The density and LOS for all the weaving sections are shown.

Under year 2020 Alternative 2 condition, the I-405 freeway weaving segments are anticipated to operate at LOS E or LOS F during the peak hours except at one location during the AM peak hour. The I-405 southbound freeway weaving segment between Palo Verde Avenue/Stearns Street and Studebaker Road is expected to operate at LOS D during the AM peak hour. Weaving analysis was conducted for the C-D roads at the Lakewood Boulevard/Willow Street interchange and the Bellflower Boulevard/Los Coyotes Diagonal interchange. The analysis shows that the weaving segments on the C-D roads are anticipated to operate between LOS A and C during the peak hours.

4.5.5 Alternative 2 (Year 2040) Freeway Traffic Analysis

Findings for the northbound and southbound freeway segments under Alternative 2 conditions for year 2040 are summarized in **Table 4.5-8**. The peak hour capacity, demand volume, D/C ratio, density and LOS for all the freeway segments are shown.

Under Alternative 2 conditions for year 2040, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions. The northbound and southbound I-405 HOV lanes within the project limits are anticipated to operate at over-capacity during the AM or PM peak hours under year 2020 No Build Alternative conditions with D/C ratios ranging from 1.06 to 1.58.

Under Alternative 2 conditions for year 2040, the I-605 freeway mainline segments are anticipated to operate between LOS C and LOS D during the AM and PM peak hours in both directions except for the freeway segment between Carson Street and Spring Street. The southbound I-605 freeway segment between Carson Street and Spring Street is anticipated to operate at LOS F and E during the AM and PM peak hours, respectively.

Under Alternative 2 conditions for year 2040, the SR-22/7th Street freeway mainline segment between Pepper Tree Lane and Studebaker Road, is anticipated to operate at LOS B or LOS C during the AM and PM peak hours in both directions, while the segment between Studebaker Road and I-605, is anticipated to operate between LOS D to LOS F during the AM and PM peak hours in both directions.

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GL-9 (Continued)

Ramps and Ramp-Freeway Junction Analysis and Levels of Service
The density and LOS for each of the ramps along I-405, I-605 and SR-22/7th Street within the study area for Alternative 2 are based on projected year 2040 Alternative 2 traffic volumes. **Table 4.5-9** provide a summary of the findings from the analysis for year 2040 Alternative 2 conditions during the AM and PM peak hours. The peak hour capacity, demand volume, D/C ratio, density, and LOS for each of the freeway ramps are presented.

Under Alternative 2 conditions for year 2040, the projected LOS for the I-405 ramp junctions generally ranges from LOS B to LOS F, depending upon time of day and direction of travel. For the I-605 ramp junctions, the peak hour LOS generally ranges from LOS A to LOS F, depending upon time of day and direction of travel. The peak hour LOS expected for the SR-22/7th Street ramp junctions, generally ranges from LOS C to LOS F, depending upon time of day and direction of travel.

The freeway-to-freeway branch connectors are anticipated to operate at under-capacity during both AM and PM peak hours except at two locations. The D/C ratio for the branch connector from I-605 southbound to 7th Street/I-405 is anticipated to be 1.54 and 1.26 during the AM and PM peak hours, respectively. The branch connector from I-605 southbound/I-405 southbound to 7th Street is expected to have a D/C ratio of 1.14 during the AM peak hour.

Weaving Analysis
Weaving analysis was conducted between on-ramps and off-ramps spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and C-D roads. Weaving analysis for Alternative 2 is based on projected year 2040 Alternative 2 traffic volumes. **Table 4.5-10** summarizes the weaving analysis findings for year 2040 conditions for Alternative 2 for both the freeway segments and the C-D roads.

For year 2040 conditions, the mainline freeway weaving segments are projected to operate at LOS E to LOS F during the peak hours. Weaving analysis was conducted for the C-D roads at the Lakewood Boulevard/Willow Street interchange and the Bellflower Boulevard/Los Coyotes Diagonal interchange. The analysis shows that the weaving segments on the C-D roads are anticipated to operate between LOS A and C during the peak hours.

4.5.6 Alternative 2 vs. No Build Alternative Comparison and Proposed Roadway Improvements

Intersection
Table 4.5-12 presents a comparison of Year 2040 No Build Alternative and Year 2040 Alternative 2 operating conditions anticipated for the study intersections. As shown in the table, the majority of the intersections with an "Exceed Evaluation" are projected to operate with LOS F during the AM/PM peak hour under the No-Build Alternative. These intersections under Alternative 2 are projected to operate with LOS F during the AM/PM peak hour but with an increase in the D/C ratio.

Based on the comparison analysis, the following roadway improvements could be considered to improve intersections year 2040 operating conditions:

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Willow Street and Bellflower Boulevard intersection (during PM peak hour and under No-Build Alternative projected D/C ratio is 1.09 and LOS F, and under Alternative 2 projected D/C ratio is 1.25 and LOS F).

- Add an exclusive right-turn lane to eastbound approach; and
- Add a 2nd left-turn lane to westbound approach.

As shown on **Figure 4.5-5**, these proposed roadway improvements could be accommodated within the existing right-of-way.

Willow Street and Los Coyotes Diagonal intersection (during PM peak hour and under No-Build Alternative projected D/C ratio is 1.18 and LOS F, and under Alternative 2 projected D/C ratio is 1.41 and LOS F).

- Add a 2nd left-turn lane to eastbound approach; and
- Add a 2nd left-turn lane to southbound approach.

As shown on **Figure 4.5-6**, these proposed roadway improvements could be accommodated within the existing right-of-way.

Willow Street and Woodruff Avenue intersection (during AM peak hour and under No-Build Alternative projected D/C ratio is 1.44 and LOS F, and under Alternative 2 projected D/C ratio is 1.53 and LOS F).

- Add a 2nd left-turn lane to northbound approach.

As shown on **Figure 4.5-7**, this proposed roadway improvement could be accommodated within the existing right-of-way.

SR-22 westbound on/off Ramp and College Park Drive intersection (during PM peak hour and under No-Build Alternative projected D/C ratio is 1.16 and LOS F, and under Alternative 2 projected D/C ratio is 1.24 and LOS F).

- Widen SR-22 westbound On/Off Ramp from one lane to two lanes approximately 200 feet east of the intersection extending to Studebaker Road as shown on the figure below. This roadway improvement could be accommodated with existing right-of-way; and
- Provide a traffic signal to control traffic movements instead of existing one-way stop control placed at the westbound College Park Drive.

As shown on **Figure 4.4-5**, these proposed roadway improvements could be accommodated within the existing right-of-way.

7th Street and Pacific Coast Highway intersection (during PM peak hour and under No-Build Alternative projected D/C ratio is 1.03 and LOS F, and under Alternative 2 projected D/C ratio is 1.07 and LOS F).

- Add an exclusive right-turn lane to northbound approach.

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GL-9 (Continued)

As shown on **Figure 4.5-8**, this proposed roadway improvement could be accommodated within the existing right-of-way.

7th Street and Bellflower Boulevard intersection (during AM peak hour and under No-Build Alternative projected D/C ratio is 1.13 and LOS F, and under Alternative 2 projected D/C ratio is 1.18 and LOS F).

- Add an exclusive right-turn lane to westbound approach.

As shown on **Figure 4.5-9**, this proposed roadway improvement could be accommodated within the existing right-of-way.

7th Street and West Campus Drive intersection (during AM peak hour and under No-Build Alternative projected D/C ratio is 0.85 and LOS D, and under Alternative 2 projected D/C ratio is 0.89 and LOS E).

- Add an exclusive right-turn lane to westbound approach.

As shown on **Figure 4.5-10**, the proposed roadway improvement could be accommodated within the existing right-of-way.

7th Street and East Campus Drive intersection (during AM peak hour and under No-Build Alternative projected D/C ratio is 1.12 and LOS F, and under Alternative 2 projected D/C ratio is 1.17 and LOS F).

- Add a right-turn lane to westbound approach.

As shown on **Figure 4.5-11**, the proposed roadway improvement could be accommodated within the existing right-of-way.

Table 4.5-11 presents a comparison of Year 2020 No Build Alternative and Year 2020 Alternative 2 operating conditions anticipated for the study intersections. As shown in the table, roadway improvements for four (4) intersections (out of the eight listed above) are necessary by year 2020 under both the No-Build Alternative and Alternative 2 to improve intersections operating condition that are projected to operate at LOS F during the AM/PM peak hour.

Table 4.5-12 shows intersections LOS and D/C ratio during AM and PM peak hours for Year 2040 Alternative 2 with recommended roadway improvements.

Freeway Mainline

Table 4.5-13 presents a comparison of 2020 No Build and 2020 Alternative 2 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 2 in many segments, with the range of increase in the GP lanes from 0.01 to 0.18 during peak hours. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits. There are several segments in which there is a decrease in the D/C ratio, shown in red on **Table 4.5-13**. Those segments that are anticipated to have a change in LOS are identified in the Evaluation column in the table.

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Table 4.5-14 presents a comparison of 2040 No Build and 2040 Alternative 2 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 1 in many segments, with the range of increase in the GP lanes from 0.01 to 0.19 during peak hours. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits. There are several segments in which there is a decrease in the D/C ratio, shown in red on Table 4.5-14. Those segments that are anticipated to have a change in LOS are identified in the Evaluation column in the table.

4.6 Alternative 3 Conditions

This section of the report provides an analysis of the study intersections and mainline freeway as well as the freeway/ramp junction locations for years 2020 and 2040 Alternative 3 conditions. Alternative 3 condition analyses are based on forecasted years 2020 and 2040 Alternative 3 traffic volumes and year 2009 traffic control/lane geometrics at the study intersections and freeway segments and ramps within the project limits. As discussed in Section 4.1, geometric conditions and type of traffic control for years 2020 and 2040 are assumed to be unchanged from existing conditions (Year 2009). Intersection analysis worksheets for years 2020 and 2040 Alternative 3 conditions are provided in **Appendix IX.A**. Freeway analyses worksheets for years 2020 and 2040 Alternative 3 conditions are provided in **Appendix IX.B**.

4.6.1 Alternative 3 Traffic Volumes

Year 2020 Alternative 3 intersection peak hour traffic volumes are presented in **Figure 4.6-1**. Year 2040 Alternative 3 intersection peak hour traffic volumes are presented in **Figure 4.6-2.** Years 2020 and 2040 Alternative 3 peak hour traffic volumes for the I-405 mainline, I-605 mainline and SR-22/7th Street mainline and all interchange ramps within the study area are illustrated in **Figures 4.6-3** and **4.6-4**, respectively.

4.6.2 Alternative 3 (Year 2020) Intersection Traffic Analysis

A summary of LOS for AM and PM peak hours for year 2020 Alternative 3 conditions, including traffic control at study intersections, is provided in **Table 4.6-1**. The LOS analysis conducted for year 2020 Alternative 3 conditions indicates that all study intersections are anticipated to operate at LOS D or better during the AM and PM peak hours except for the following intersections that are anticipated to operating at LOS E or F during the AM or PM peak hours:

- Willow Street/Bellflower Boulevard (PM LOS = E and D/C = 1.15)
- Willow Street/Los Coyotes Diagonal (PM LOS = E and D/C = 1.26)
- Willow Street/Woodruff Avenue (AM LOS = F and D/C = 1.30)
- I-405 SB Direct Off-Ramp/Studebaker Rd (AM LOS = F and D/C = 1.04)
- SR-22 WB On/Off-Ramp/College Park Dr (PM LOS = F and D/C = 0.32)
- 7th Street/Bellflower Boulevard (AM LOS = E and D/C = 1.09)

A comparison of year 2020 Alternative 3 vehicle queuing (AM and PM peak hour 95th percentile queues) and available queue storage (in feet) is included in **Table 4.6-2**. During the peak hours,

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most of the turn pockets at the arterial intersections are anticipated to provide sufficient queue storage except at the following locations:

- Carson Street/Pioneer Boulevard
  - Northbound left turn lane
  - Eastbound left turn lane
- Willow Street/Bellflower Boulevard
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Los Coyotes Diagonal/Bellflower Boulevard
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Los Coyotes Diagonal
  - Southbound left turn lane
  - Westbound left turn lane
- Willow Street/Woodruff Avenue
  - Northbound left turn lane
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Stearns Street/Palo Verde
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Atherton Street/Studebaker Road
  - Eastbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Northbound right turn lane
  - Southbound left turn lane
- 7th Street/Pacific Coast Highway
  - Southbound left turn lane
- 7th Street/Bellflower Boulevard
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
- Pacific Coast Highway/Bellflower Boulevard
  - Southbound left turn lane
  - Eastbound left turn lane
- 7th Street/W. Campus Drive
  - Southbound left/right turn lane
- 7th Street/E. Campus Drive

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- Southbound left turn lane
- Eastbound left turn lane

The freeway off-ramp vehicle queuing is also shown in **Table 4.6-2**. During the peak hours, two freeway off-ramp locations are anticipated to exceed the available storage length under year 2020 Alternative 3 conditions:

- Carson Street/I-605 SB Off-Ramp
  - Southbound left turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Westbound right turn lane

4.6.3 Alternative 3 (Year 2040) Intersection Traffic Analysis

A summary of LOS for AM and PM peak hours for year 2040 Alternative 3 conditions, including traffic control at study intersections, is provided in **Table 4.6-3**. The LOS analysis conducted for year 2040 Alternative 3 conditions indicates that all study intersections are anticipated to operate at LOS D or better during the AM and PM peak hours except for the following intersections that are are anticipated to operate at LOS E or F during the AM or PM peak hours:

- Willow Street/Bellflower Boulevard (PM LOS = F, D/C = 1.25)
- Los Coyotes Diagonal/Bellflower Boulevard (PM LOS = E, D/C = 1.22)
- Willow Street/Los Coyotes Diagonal (PM LOS = F and D/C = 1.41)
- Willow Street/Woodruff Avenue (AM LOS = F and D/C = 1.40)
- I-405 SB Direct Off-Ramp/Studebaker Rd (AM LOS = F and D/C = 1.20)
- SR-22 WB On/Off-Ramp/College Park Dr (PM LOS = F and D/C = 0.45)
- 7th Street/Pacific Coast Highway (AM LOS = E and D/C = 1.04)
- 7th Street/Bellflower Boulevard (AM LOS = E and D/C = 1.17; PM LOS = E and D/C = 1.10)
- 7th Street/W. Campus Drive (AM LOS = E and D/C = 0.87; PM LOS = E, D/C = 0.93)
- 7th Street/E. Campus Drive (AM LOS = E and D/C = 1.14)

A comparison of year 2040 Alternative 3 vehicle queuing (AM and PM peak hour 95th percentile queues) and available queue storage (in feet) is included in **Table 4.6-4**. During the peak hours, most of the turn pockets at the arterial intersections are anticipated to provide sufficient queue storage except at the following locations:

- Carson Street/Pioneer Boulevard
  - Northbound left turn lane
  - Eastbound left turn lane
- Willow Street/Lakewood Boulevard
  - Westbound left turn lane
- Willow Street/Bellflower Boulevard
  - Northbound left turn lane
  - Southbound left turn lane
  - Eastbound left turn lane

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  - Westbound left turn lane
- Los Coyotes Diagonal/Bellflower Boulevard
  - Eastbound left turn lane
  - Westbound left turn lane
- Willow Street/Los Coyotes Diagonal
  - Southbound left turn lane
  - Westbound left turn lane
- Willow Street/Woodruff Avenue
  - Northbound left turn lane
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Stearns Street/Palo Verde
  - Northbound left turn lane
  - Eastbound left turn lane
  - Westbound left turn lane
- Atherton Street/Studebaker Road
  - Eastbound left turn lane
- SR-22 WB On/Off-Ramp/Studebaker Road
  - Southbound right turn lane
- SR-22 EB On/Off-Ramp/Studebaker Road
  - Northbound right turn lane
  - Southbound left turn lane
- 7th Street/Pacific Coast Highway
  - Southbound left turn lane
- 7th Street/Bellflower Boulevard
  - Southbound left turn lane
  - Southbound right turn lane
  - Eastbound left turn lane
- Pacific Coast Highway/Bellflower Boulevard
  - Southbound left turn lane
  - Eastbound left turn lane
- 7th Street/W. Campus Drive
  - Southbound left/right turn lane
- 7th Street/E. Campus Drive
  - Southbound left turn lane
  - Eastbound left turn lane

The freeway off-ramp vehicle queuing is also shown in **Table 4.6-4**. During the peak hours, two freeway off-ramp locations are anticipated to exceed the available storage length under year 2040 Alternative 3 conditions:

- Carson Street/I-605 SB Off-Ramp
  - Southbound left turn lane

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- SR-22 EB On/Off-Ramp/Studebaker Road
  - Westbound right turn lane

4.6.4 Alternative 3 (Year 2020) Freeway Traffic Analysis

Findings for the northbound and southbound freeway segments under Alternative 3 conditions for year 2020 are summarized in **Table 4.6-5**. The peak hour capacity, demand volume, D/C ratio, density and LOS for all the freeway segments are shown.

Under Alternative 3 conditions for year 2020, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions except at one location. The I-405 southbound segment between Studebaker Road to I-605 northbound off-ramp which is projected to operate at LOS D during the AM peak hour. Majority of the northbound and southbound I-405 HOV lanes are anticipated to operate at over-capacity during the AM or PM peak hours under year 2020 Alternative 3 conditions with D/C ratios ranging from 1.04 to 1.24.

Under Alternative 3 conditions for year 2020, the I-605 freeway mainline segments are projected to operate between LOS B and LOS D during the AM and PM peak hours in both directions except for the segment between Carson Street and Spring Street, which southbound movement is anticipated to operate at LOS E during both the AM and PM peak hour.

Under Alternative 3 conditions for year 2020, the SR-22/7th Street freeway mainline segment between Pepper Tree Lane and Studebaker Road, is anticipated to operate at LOS B or LOS C during the AM and PM peak hours in both directions, while the segment between Studebaker Road and I-605, is anticipated to operate from LOS D to LOS F during the AM and PM peak hours in both directions.

Ramps and Ramp-Freeway Junction Analysis and Levels of Service

The density and LOS for each of the ramps along I-405, I-605 and SR-22/7th Street within the study area for Alternative 3 are based on projected year 2020 Alternative 3 traffic volumes. **Table 4.6-6** provide a summary of the findings from the analyses for year 2020 Alternative 3 conditions during the AM and PM peak hours. The peak hour capacity, demand volume, D/C ratio, density, and LOS for each of the freeway ramps are presented.

Under Alternative 3 conditions for year 2020, the projected LOS for the I-405 ramp junctions generally ranges from LOS B to LOS F, depending upon time of day and direction of travel. For the I-605 ramp junctions, the peak hour LOS generally ranges from LOS A to LOS E, depending upon time of day and direction of travel. The peak hour LOS expected for the SR-22/7th Street ramp junctions, generally ranges from LOS A to LOS F, depending upon time of day and direction of travel.

The freeway-to-freeway branch connectors are anticipated to operate at under-capacity during both AM and PM peak hours except at two locations. The D/C ratio for the branch connector from I-605 southbound to 7th Street/I-405 is anticipated to be 1.35 and 1.25 during the AM and PM peak hours, respectively. The branch connector from I-605 southbound/I-405 southbound to

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7th Street is expected to have D/C ratios of 1.12 and 1.07 during the AM and PM peak hour, respectively.

Weaving Analysis

Weaving analysis was conducted between on-ramps and off-ramps spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and C-D roads. Weaving analysis for Alternative 3 is based on projected year 2020 Alternative 3 traffic volumes. **Table 4.6-7** summarizes the weaving analysis findings for year 2020 conditions for Alternative 3 for both the freeway segments and the C-D roads. The density and LOS for all the weaving sections are shown.

Under year 2020 Alternative 3 condition, the I-405 freeway weaving segments are anticipated to operate at LOS E or LOS F during the peak hours except at one location during the AM peak hour. The I-405 southbound freeway weaving segment between Palo Verde Avenue/Stearns Street and Studebaker Road is expected to operate at LOS D during the AM peak hour. Weaving analysis was conducted for the C-D roads at the Lakewood Boulevard/Willow Street interchange and the Bellflower Boulevard/Los Coyotes Diagonal interchange. The analysis shows that the weaving segments on the C-D roads are anticipated to operate between LOS A and C during the peak hours.

4.6.5 Alternative 3 (Year 2040) Freeway Traffic Analysis

Findings for the northbound and southbound freeway segments under Alternative 3 conditions for year 2040 are summarized in **Table 4.6-8**. The peak hour capacity, demand volume, D/C ratio, density and LOS for all the freeway segments are shown.

Under Alternative 3 conditions for year 2040, the I-405 freeway mainline segments are projected to operate at either LOS E or F during the AM and PM peak hours in both directions. The northbound and southbound I-405 HOV lanes within the project limits are anticipated to operate at over-capacity during the AM or PM peak hours under year 2040 Alternative 3 conditions with D/C ratios ranging from 1.02 to 1.34.

Under Alternative 3 conditions for year 2040, the I-605 freeway mainline segments are anticipated to operate between LOS B and LOS D during the AM and PM peak hours in both directions except for the freeway segment between Carson Street and Spring Street. The southbound I-605 freeway segment between Carson Street and Spring Street is anticipated to operate at LOS F during the AM and PM peak hours.

Under Alternative 3 conditions for year 2040, the SR-22/7th Street freeway mainline segment between Pepper Tree Lane and Studebaker Road, is anticipated to operate at LOS B or LOS C during the AM and PM peak hours in both directions, while the segment between Studebaker Road and I-605, is anticipated to operate between LOS D to LOS F during the AM and PM peak hours in both directions.

Ramps and Ramp-Freeway Junction Analysis and Levels of Service

The density and LOS for each of the ramps along I-405, I-605 and SR-22/7th Street within the study area for Alternative 3 are based on projected year 2040 Alternative 3 traffic volumes.

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Table 4.6-9 provide a summary of the findings from the analysis for year 2040 Alternative 3 conditions during the AM and PM peak hours. The peak hour capacity, demand volume, D/C ratio, density, and LOS for each of the freeway ramps are presented.

Under Alternative 3 conditions for year 2040, the projected LOS for the I-405 ramp junctions generally ranges from LOS D to LOS F, depending upon time of day and direction of travel. For the I-605 ramp junctions, the peak hour LOS generally ranges from LOS A to LOS F, depending upon time of day and direction of travel. The ramp junctions along SR-22/7th Street are anticipated to operate at LOS D and F, depending upon time of day and direction of travel.

The freeway-to-freeway branch connectors are anticipated to operate at under-capacity during both AM and PM peak hours except at two locations. The D/C ratio for the branch connector from I-605 southbound to 7th Street/I-405 is anticipated to be 1.46 and 1.35 during the AM and PM peak hours, respectively. The branch connector from I-605 southbound/I-405 southbound to 7th Street is expected to have D/C ratios of 1.12 and 1.07 during the AM and PM peak hour.

Weaving Analysis

Weaving analysis was conducted between on-ramps and off-ramps spaced less than 2,500 feet apart. Separate analyses were conducted, as appropriate, for freeways and C-D roads. Weaving analysis for Alternative 3 is based on projected year 2040 Alternative 3 traffic volumes. **Table 4.6-10** summarizes the weaving analysis findings for year 2040 conditions for Alternative 3 for both the freeway segments and the C-D roads.

For year 2040 conditions, the mainline freeway weaving segments are projected to operate at LOS E or LOS F during the peak hours. Weaving analysis was conducted for the C-D roads at the Lakewood Boulevard/Willow Street interchange and the Bellflower Boulevard/Los Coyotes Diagonal interchange. The analysis shows that the weaving segments on the C-D roads are anticipated to operate between LOS A and C during the peak hours.

4.6.6 Alternative 3 vs. No Build Alternative Comparison and Proposed Roadway Improvements

Intersection

Table 4.6-12 presents a comparison of Year 2040 No Build Alternative and Year 2040 Alternative 3 operating conditions anticipated for the study intersections. As shown in the table, the majority of the intersections with an "Exceed Evaluation" are projected to operate with LOS F during the PM peak hour under the No-Build Alternative. These intersections under Alternative 3 are projected to operate with LOS F during the AM/PM peak hour but with an increase in the D/C ratio.

Based on the comparison analysis, the following roadway improvements could be considered to improve intersections year 2040 operating conditions:

Willow Street and Bellflower Boulevard intersection (during AM peak hour and under No-Build Alternative projected D/C ratio is 1.09 and LOS F, and under Alternative 2 projected D/C ratio is 1.25 and LOS F).

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- Add an exclusive right-turn lane to eastbound approach; and
- Add a 2nd left-turn lane to westbound approach.

As shown on **Figure 4.5-5**, these proposed roadway improvements could be accommodated within the existing right-of-way.

Los Coyotes Diagonal and Bellflower Boulevard intersection (during AM peak hour and under No-Build Alternative projected D/C ratio is 1.13 and LOS F, and under Alternative 2 projected D/C ratio is 1.22 and LOS F).

- Add a 2nd left-turn lane to eastbound approach.

As shown on **Figure 4.6-5**, this proposed roadway improvement could be accommodated within the existing right-of-way.

Willow Street and Los Coyotes Diagonal intersection (during AM peak hour and under No-Build Alternative projected D/C ratio is 1.18 and LOS F, and under Alternative 2 projected D/C ratio is 1.41 and LOS F).

- Add a 2nd left-turn lane to eastbound approach; and
- Add a 2nd left-turn lane to southbound approach.

As shown on **Figure 4.5-6**, these proposed roadway improvements could be accommodated within the existing right-of-way.

7th Street and Bellflower Boulevard intersection (during AM peak hour and under No-Build Alternative projected D/C ratio is 1.06 and LOS F, and under Alternative 2 projected D/C ratio is 1.10 and LOS F).

- Add an exclusive right-turn lane to westbound approach.

As shown on **Figure 4.5-9**, this proposed roadway improvement could be accommodated within the existing right-of-way.

Table 4.6-11 presents a comparison of Year 2020 No Build Alternative and Year 2020 Alternative 3 operating conditions anticipated for the study intersections. As shown in the table, roadway improvements for three intersections (out of the four listed above) are necessary by year 2020 under both the No-Build Alternative and Alternative 3 to improve intersections operating condition that are projected to operate at LOS F during the AM/PM peak hour.

Table 4.6-12 shows intersections LOS and D/C ratio during AM and PM peak hours for Year 2040 Alternative 3 with recommended roadway improvements.

Freeway Mainline

Table 4.6-13 presents a comparison of 2020 No Build and 2020 Alternative 3 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 3 in many segments, with the range of increase in the GP lanes from 0.03 to 0.34 during peak hours. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with

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increasing distance from those limits. There are several segments in which there is a decrease in the D/C ratio, shown in red on **Table 4.6-13**. Those segments that are anticipated to have a change in LOS are identified in the Evaluation column in the table.

Table 4.6-14 presents a comparison of 2040 No Build and 2040 Alternative 3 operating conditions anticipated for the mainline freeway segments. The table shows that there is an increase in the D/C ratio from the No Build Alternative to Alternative 3 in many segments, with the range of increase in the GP lanes from 0.02 to 0.37 during peak hours. Higher levels of increase are generally found closer to the limits of the project improvements and diminish with increasing distance from those limits. There are several segments in which there is a decrease in the D/C ratio, shown in red on **Table 4.6-14**. Those segments that are anticipated to have a change in LOS are identified in the Evaluation column in the table.

4.6.7 Transition Areas

This section summarizes the LOS expected in the transition areas associated with the Express Lanes in Alternative 3. Transition areas are along the freeways at the beginning and end of the Express Lanes and allow traffic in HOV and GP lanes to change lanes, if necessary, to access the GP and Express Lanes or vice versa. Transition areas may add new lanes and/or redesignate lanes from HOV to Express. The two proposed transition areas located within the study limits are as follows:

1. On I-605 at the I-405 interchange; and
2. On I-405 at the I-605 interchange.

Limits of transition areas approaching the start of the Express Lanes are defined upstream by the termination of an HOV restriction and downstream by the solid striping used to delineate the separation between the Express Lanes and the general purpose lanes. Limits of the transition areas approaching the end of the Express Lanes are defined upstream by the termination of solid striping used to delineate the separation between the Express Lanes and the general purpose lanes and the beginning of the downstream HOV access restriction.

The transition areas are anticipated to operate at a level similar to the level expected for the HOV and/or general purpose lanes in the vicinity of the transition area. The northbound transition area on I-405 from I-605 to the end of the HOV access is expected to operate at LOS F in year 2040. As shown in **Table 4.6-8**, the northbound GP and HOV lanes in the transition area on I-405 from I-605 to the end of the HOV access are anticipated to operate at LOS F for the GP lanes and/or HOV lanes.

The northbound transition area on I-605 from the termination of the direct connector separation to the end of the HOV access is expected to operate at LOS B and C during the AM and PM peak hours, respectively. **Table 4.6-8** shows that this segment of I-605 northbound is expected to operate at LOS B and C in the general purpose lanes during the AM and PM peak hours, respectively. In the southbound direction the transition area is expected to operate at LOS D during the AM and PM peak hours.

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Generally, the transition areas are anticipated to operate at a level similar to the level expected for the HOV and/or general purpose lanes in the vicinity of the transition area. Overall, the transition areas are not expected to degrade operations of the HOV system adjacent to the transition areas.

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I-405 Improvement Project Supplemental Traffic Study

Long Beach Area Traffic Study

Table 4.2-1 Existing (Year 2009) Intersection Level of Service - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Traffic Control/Comments	Existing (2009) LOS: AM Peak Hour V/C	AM Peak Hour Avg Delay (sec)	AM Peak Hour LOS	PM Peak Hour V/C	PM Peak Hour Avg Delay (sec)	PM Peak Hour LOS
1	Carson St	I-605 SB Off Ramp	Existing Traffic Signal	0.58	21.9	C	0.61	17.8	B
2	Carson St	I-605 SB Direct On Ramp	Unsignalized On Ramp	0.15	--	--	0.25	--	--
		I-605 SB Loop On Ramp	Unsignalized On Ramp	0.24	--	--	0.20	--	--
3	Carson St	I-605 NB Off Ramp	Existing Traffic Signal	0.55	14.8	B	0.66	12.4	B
		I-605 NB Loop On Ramp	Unsignalized On Ramp	0.23	--	--	0.45	--	--
		I-605 NB Direct On Ramp	Unsignalized On Ramp	0.40	--	--	0.32	--	--
4	Carson St	Pioneer Blvd	Existing Traffic Signal	0.76	48.1	D	0.76	35.1	D
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	Existing Traffic Signal	0.79	26.2	C	0.60	18.4	B
6	Spring St/Cerritos Ave	I-605 NB On Ramp	Existing Traffic Signal	0.84	13.5	B	0.81	11.1	B
7	I-405 NB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.35	--	--	0.34	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.22	--	--	0.21	--	--
	I-405 NB Loop Off Ramp		Unsignalized Off Ramp	0.19	--	--	0.18	--	--
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.50	--	--	0.38	--	--
8	I-405 SB Loop On Ramp	Lakewood Blvd	Unsignalized On Ramp	0.19	--	--	0.23	--	--
	I-405 SB Direct Off Ramp		Unsignalized Off Ramp	0.40	--	--	0.31	--	--
9	Willow St	Lakewood Blvd	Existing Traffic Signal	0.76	31.1	C	0.92	66.2	E
10	Willow St	I-405 SB Loop Off Ramp	Unsignalized Off Ramp	0.32	--	--	0.30	--	--
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.26	--	--	0.38	--	--
11	I-405 NB Off Ramp	Bellflower Blvd	Existing Traffic Signal	0.41	9.3	A	0.48	11.9	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.49	--	--	0.35	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.28	--	--	0.18	--	--
12	Willow St	Bellflower Blvd	Existing Traffic Signal	0.84	81.2	F	0.92	40.1	D
13	Los Coyotes Diagonal	Bellflower Blvd	Existing Traffic Signal	0.63	31.3	C	0.97	72.8	E
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.06	--	--	0.09	--	--
14	I-405 SB Loop Off Ramp	Bellflower Blvd	Unsignalized On Ramp	0.12	--	--	0.26	--	--
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	Existing Traffic Signal	0.44	14.4	B	0.45	13.4	B
		I-405 SB Loop On Ramp	Unsignalized On Ramp	0.14	--	--	0.13	--	--
16	Willow St	Los Coyotes Diagonal	Existing Traffic Signal	0.72	51.5	D	0.74	102.8	F
17	Willow St	Woodruff Ave	Existing Traffic Signal	1.07	86.8	F	0.77	30.4	C
18	I-405 NB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.15	--	--	0.17	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.25	--	--	0.20	--	--
19	I-405 SB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.48	--	--	0.38	--	--
	I-405 SB Direct On Ramp		Unsignalized On Ramp	0.27	--	--	0.19	--	--
20	I-405 NB Direct Off Ramp	Palo Verde	Existing Traffic Signal	0.54	11.3	B	0.45	13.7	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.11	--	--	0.20	--	--
21	Woodruff Ave	Palo Verde	Existing Traffic Signal	0.87	86.6	F	0.59	21.3	C
22	Stearns St	Palo Verde	Existing Traffic Signal	0.73	19.4	B	0.75	25.2	C
23	Stearns St	I-405 SB Direct On Ramp	Unsignalized On Ramp	0.28	--	--	0.39	--	--
24	I-405 NB Direct On Ramp	Studebaker Rd	Existing Traffic Signal	0.58	4.0	A	0.55	4.3	A
25	I-405 SB Direct Off Ramp	Studebaker Rd	Unsignalized Intersection	0.15	13.8	B	0.04	10.8	B
26	Atherton St	Studebaker Rd	Existing Traffic Signal	0.46	9.2	A	0.74	23.3	C
27	SR-22 WB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.49	16.0	B	0.74	22.1	C
28	SR-22 EB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.72	17.6	B	0.82	17.1	B
29	SR-22 WB On/Off Ramp	College Park Dr	Unsignalized Intersection	0.39	18.8	C	0.65	59.9	F
30	7th St	Pacific Coast Highway	Existing Traffic Signal	0.95	92.9	F	1.03	82.6	F
31	7th St	Bellflower Blvd	Existing Traffic Signal	1.01	73.6	E	0.91	90.3	F
32	Pacific Coast Highway	Bellflower Blvd	Existing Traffic Signal	0.47	22.3	C	0.73	22.5	C
33	7th St	Channel Dr	Existing Traffic Signal	0.72	32.9	C	0.88	30.3	C
34	7th St	W. Campus Dr	Existing Traffic Signal	0.83	112.9	F	0.72	31.1	C
35	7th St	E. Campus Dr	Existing Traffic Signal	0.97	23.1	C	0.73	24.7	C

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I-405 Improvement Project Supplemental Traffic Study

Long Beach Area Traffic Study

Table 4.2-2 Existing (Year 2009) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Movement	Available Storage (ft)	Existing (2009) Conditions: AM Peak Hour 95th Percentile Queue (ft)	AM Peak Hour Adequate Storage? (Yes or No)	PM Peak Hour 95th Percentile Queue (ft)	PM Peak Hour Adequate Storage? (Yes or No)
1	Carson St	I-605 SB Off Ramp	SBL	300	168	Yes	255	Yes
			SBT	1,130	128	Yes	180	Yes
			SBR	300	273	Yes	225	Yes
3	Carson St	I-605 NB Off Ramp	NBL	300 (650)	165	Yes	144	Yes
			NBR	300(1175)	178	Yes	207	Yes
4	Carson St	Pioneer Blvd	NBL	120	369	No	296	No
			SBL	140	59	Yes	63	Yes
			SBR	140	80	Yes	61	Yes
			EBL	250	214	Yes	251	No
			WBL	80	17	Yes	17	Yes
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	SBL	220 (1240)	250	Yes	274	Yes
			SBR	300	482	Yes	314	Yes
6	Spring St/Cerritos Ave	I-605 NB On Ramp	WBL	260	247	Yes	258	Yes
9	Willow St	Lakewood Blvd	NBL	180	91	Yes	51	Yes
			SBL	150	48	Yes	129	Yes
			EBL	175	70	Yes	151	Yes
			WBL	150	36	Yes	80	Yes
11	I-405 NB Off Ramp	Bellflower Blvd	WBL	1,870	123	Yes	184	Yes
			WBL/T/R	1,130	71	Yes	146	Yes
			WBR	410	47	Yes	80	Yes
12	Willow St	Bellflower Blvd	NBL	150	335	No	122	Yes
			SBL	120	109	Yes	125	No
			EBL	140	158	No	280	No
			WBL	110	160	No	128	No
13	Los Coyotes Diagonal	Bellflower Blvd	NBL	160	23	Yes	61	Yes
			NBR	280	49	Yes	244	No
			EBL	190	222	No	307	No
			WBL	150	134	Yes	245	No
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	SBL	1525 (500)	258	Yes	240	Yes
16	Willow St	Los Coyotes Diagonal	SBL	120	18	Yes	21	Yes
			EBL	140	151	No	307	No
			WBL	160	376	No	452	No
17	Willow St	Woodruff Ave	NBL	140	190	No	118	Yes
			NBR	60	31	Yes	22	Yes
			SBL	120	298	No	109	Yes
			SBR	120	61	Yes	36	Yes
			EBL	200	170	Yes	129	Yes
			WBL	180	370	No	284	No
20	I-405 NB Direct Off Ramp	Palo Verde	WBL	550	220	Yes	335	Yes
			WBT/R	1,155	53	Yes	55	Yes
21	Woodruff Ave	Palo Verde	EBL	335	272	Yes	201	Yes
			EBR	335	735	No	408	No
22	Stearns St	Palo Verde	NBL	130	104	Yes	132	No
			SBL	120	138	No	396	No
			EBL	90	101	No	158	No
			WBL	80	80	No	57	Yes
24	I-405 NB Direct On Ramp	Studebaker Rd	NBL	100	95	Yes	124	No
			SBR	70	19	Yes	16	Yes

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I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.2-2 Existing (Year 2009) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Movement	Available Storage (ft)	Existing (2009) Conditions: AM Peak Hour: 95th Percentile Queue (ft)	AM Peak Hour: Adequate Storage? (Yes or No)	PM Peak Hour: 95th Percentile Queue (ft)	PM Peak Hour: Adequate Storage? (Yes or No)
26	Atherton St	Studebaker Rd	NBL	200	49	Yes	54	Yes
			SBL	260	4	Yes	10	Yes
			SBR	70	60	Yes	47	Yes
			EBL	120	106	Yes	410	No
			WBL	220	40	Yes	31	Yes
27	SR-22 WB On/Off Ramp	Studebaker Rd	NBR	150	31	Yes	20	Yes
			SBL	200	55	Yes	76	Yes
28	SR-22 EB On/Off Ramp	Studebaker Rd	NBR	300	453	No	430	No
			SBL	150	139	Yes	94	Yes
			WBR	60	22	Yes	24	Yes
30	7th St	Pacific Coast Highway	NBL	330	187	Yes	259	Yes
			SBL	290	195	Yes	285	Yes
31	7th St	Bellflower Blvd	NBR	130	108	Yes	136	No
			SBL	160	125	Yes	255	No
			SBR	160	86	Yes	400	No
			EBL	200	390	No	321	No
			WBL	200	53	Yes	120	Yes
32	Pacific Coast Highway	Bellflower Blvd	NBL	280	114	Yes	88	Yes
			SBL	240	22	Yes	16	Yes
			SBR	50	1	Yes	0	Yes
			EBL	110	4	Yes	60	Yes
			WBL	120	42	Yes	234	No
			WBR	200	46	Yes	45	Yes
33	7th St	Channel Dr	EBL	270	203	Yes	33	Yes
			EBR	180	2	Yes	14	Yes
			WBL	280	82	Yes	371	No
34	7th St	W. Campus Dr	SBL/R	150	52	Yes	205	No
			EBL	400	261	Yes	128	Yes
35	7th St	E. Campus Dr	SBL	150	79	Yes	208	No
			SBT/R	150	70	Yes	142	Yes
			EBL	150	172	No	113	Yes
			WBL	300	76	Yes	109	Yes

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I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.2-3: Existing (Year 2009) Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline: Lanes	Mainline: Capacity[1,4]	Existing (2009) Conditions: AM Peak Hour: Traffic Demand Volume[1]	AM Peak Hour: V/C	AM Peak Hour: Density[2,5]	AM Peak Hour: LOS[3]	PM Peak Hour: Traffic Demand Volume[1]	PM Peak Hour: V/C	PM Peak Hour: Density[2,5]	PM Peak Hour: LOS[3]
I-405 Mainline												
Temple Avenue to Lakewood Boulevard/Willow Street	GP	NB	5	9,250	9,796	1.06	43.7	E	8,666	0.94	35.8	D
		SB	5	9,250	8,199	0.89	32.6	D	8,322	0.90	34.4	D
	HOV	NB	1	1,650	1,746	1.06	–	–	1,222	0.74	–	–
		SB	1	1,650	778	0.47	–	–	1,599	0.97	–	–
Lakewood Boulevard/Willow Street to Bellflower Boulevard	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,650	1,746	1.06	–	–	1,222	0.74	–	–
		SB	1	1,650	778	0.47	–	–	1,599	0.97	–	–
Bellflower Boulevard to Woodruff Avenue	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,650	1,720	1.04	–	–	1,182	0.72	–	–
		SB	1	1,650	788	0.47	–	–	1,570	0.95	–	–
Woodruff Avenue to Palo Verde Avenue/Stearns Street	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	4	7,400	7,937	1.07	39.7	E	7,175	0.97	32.7	E
	HOV	NB	1	1,650	1,720	1.04	–	–	1,182	0.72	–	–
		SB	1	1,650	793	0.48	–	–	1,710	1.04	–	–
Palo Verde Avenue/Stearns Street to Studebaker Road	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,650	1,720	1.04	–	–	1,182	0.72	–	–
		SB	1	1,650	830	0.50	–	–	1,550	0.95	–	–
Studebaker Road to I-605 NB Off Ramp	GP	NB	4	7,400	7,240	0.98	38.2	E	6,030	0.81	26.9	D
		SB	5	9,250	7,884	0.85	28.6	D	7,738	0.84	31.9	D
	HOV	NB	1	1,650	1,380	0.84	–	–	1,440	0.87	–	–
		SB	1	1,650	830	0.50	–	–	1,560	0.95	–	–
I-605 NB Off Ramp to 7th St Off Ramp	GP	NB	4	7,400	7,240	0.98	38.2	E	6,030	0.81	26.9	D
		SB	4	7,400	6,500	0.88	27.7	D	6,428	0.87	28.1	D
	HOV	NB	1	1,650	1,380	0.84	–	–	1,440	0.87	–	–
		SB	1	1,650	830	0.50	–	–	1,560	0.95	–	–
7th St Off Ramp to I-605 SB On Ramp	GP	NB	4	7,400	7,240	0.98	38.2	E	6,030	0.81	26.9	D
		SB	4	7,400	6,420	0.87	27.2	D	6,900	0.88	32.5	D
	HOV	NB	1	1,650	1,380	0.84	–	–	1,440	0.87	–	–
		SB	1	1,650	830	0.50	–	–	1,560	0.95	–	–
I-605 Mainline												
Carson Street to HOV Transition	GP	NB	4	7,400	5,997	0.81	24.9	D	7,162	0.97	35.7	E
		SB	4	7,400	8,268	1.09	41.1	E	7,417	1.00	36.1	E
	HOV	NB	1	1,650	737	0.45	–	–	633	0.38	–	–
		SB	1	1,650	1,086	0.66	–	–	707	0.43	–	–
HOV Transition to Spring Street	GP	NB	4	7,400	5,997	0.81	26.3	D	7,162	0.97	35.7	E
		SB	5	9,250	8,066	0.87	27.9	D	7,417	0.80	28.6	D
	HOV	NB	1	1,650	737	0.45	–	–	633	0.38	–	–
		SB	–	–	–	–	–	–	–	–	–	–
Spring Street to Willow Street/Katella Avenue	GP	NB	4	7,400	5,353	0.72	21.9	C	6,488	0.87	27.3	D
		SB	4	7,400	7,442	1.01	34.9	D	6,787	0.92	29.2	D
	HOV	NB	1	1,650	737	0.45	–	–	633	0.38	–	–
		SB	–	–	–	–	–	–	–	–	–	–
Willow Street/Katella Avenue CD Road On Ramp to I-405	GP	NB	5	9,250	6,250	0.68	20.7	C	6,540	0.71	23.7	C
		SB	4	7,400	6,230	0.85	27.5	D	5,880	0.79	28.0	D
	HOV	NB	1	1,650	429	0.26	–	–	694	0.42	–	–
		SB	–	–	–	–	–	–	–	–	–	–
7th Street Mainline												
Pepper Tree Lane to Studebaker Road	GP	EB	2	3,700	3,353	0.91	27.9	D	3,875	1.06	20.7	C
		WB	2	3,699	3,407	0.92	28.2	C	1,985	0.54	10.6	A
Studebaker Road to I-605	GP	EB	2	3,700	4,598	1.24	–*	F	5,121	1.38	–*	F
		WB	2	3,735	4,064	1.08	38.3	E	3,280	0.89	27.3	D

Notes:
1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane LOS is based on density except when demand-to-capacity (D/C) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 2,350 vph for each GP lane and a single High Occupancy Vehicle (HOV) lane.
5. * Density is in excess of 45 pc/mi/ln; therefore LOS is F.

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Table 4.2-4: Existing (Year 2009) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Existing (Year 2009) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	V/C	Density[2]	LOS[2,5]	Traffic Volume[1]	V/C	Density[2]	LOS[2,5]
I-405 Ramp Junctions											
Lakewood Blvd & Willow St	NB Off Direct	2	3,000	808	0.27	13.2	B	779	0.26	11.0	B
	NB On Loop	1	1,500	754	0.50	47.7	F	565	0.38	43.1	F
	NB On Direct	1	1,500	323	0.22	26.3	C	319	0.21	23.0	C
	SB Off (Direct + Loop)	2	3,000	1,079	0.36	16.3	B	918	0.31	13.3	B
	SB On Loop	1	1,500	287	0.19	40.5	F	343	0.23	36.9	F
	SB On Direct (from Willow St)	1	1,500	393	0.26	21.0	C	567	0.38	19.7	B
Bellflower Blvd & Los Coyotes Diagonal	NB Off Direct	1	1,500	305	0.20	26.5	C	494	0.33	26.2	C
	NB On (Direct + Loop)	2	3,000	1,162	0.39	14.3	F	787	0.26	10.4	F
	SB Off (Direct + Loop)	2	3,000	1,358	0.45	15.7	B	2,021	0.67	19.5	B
	SB On (Direct + Loop)	1	1,500	804	0.54	33.4	D	1,326	0.88	29.6	D
Woodruff Ave	NB Off Direct	1	1,500	222	0.15	21.0	C	248	0.17	20.2	C
	NB On Direct	1	1,500	371	0.25	36.2	F	296	0.20	35.1	E
	SB Off Direct	1	1,500	724	0.48	27.3	C	572	0.38	24.3	C
	SB On Direct	1	1,500	400	0.27	22.5	C	279	0.19	21.6	C
Palo Verde Ave & Stearn St	NB Off Direct	1	1,500	365	0.24	21.6	C	511	0.34	21.4	C
	NB On Loop	1	1,500	168	0.11	52.4	F	304	0.20	49.3	F
	SB On Direct (from Stearn St)	1	1,500	417	0.28	24.8	C	583	0.39	23.1	C
Studebaker Rd	NB On Direct	1	1,500	288	0.19	53.1	F	315	0.21	51.0	F
	SB Off Direct	1	1,500	403	0.27	32.4	D	175	0.12	29.8	D
7th St	SB Off Direct	1	1,500	88	0.06	30.6	D	128	0.09	30.5	D

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Table 4.2-4: Existing (Year 2009) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Existing (Year 2009) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	V/C	Density[2]	LOS[2,5]	Traffic Volume[1]	V/C	Density[2]	LOS[2,5]
I-605 Ramp Junctions											
Carson St	NB Off Direct	1	1,500	899	0.60	32.1	D	879	0.59	37.0	E
	NB On Loop	1	1,500	338	0.23	20.7	C	681	0.45	24.5	C
	NB On Direct	1	1,500	605	0.40	20.5	C	481	0.32	24.1	C
	SB Off Direct	2	3,000	1,395	0.47	16.2	B	1,674	0.56	17.3	B
	SB On Loop	1	1,500	366	0.24	23.2	C	301	0.20	21.7	C
	SB On Direct	1	1,500	230	0.15	23.5	C	369	0.25	21.6	C
Spring St/Cerritos Ave	NB On Loop	1	1,500	644	0.43	18.6	B	709	0.47	20.5	C
	SB Off Direct	1	1,500	1,663	1.11	39.2	E	1,337	0.89	35.2	E
Willow St/Katella Ave	NB Off (Direct + Loop)	1	1,500	1,185	0.79	3.4	A	813	0.54	2.3	A
	NB On Direct	1	1,500	1,025	0.68	21.0	C	1,359	0.91	22.5	C
	SB Off Direct	1	1,500	547	0.36	37.1	E	534	0.36	34.2	D
	SB Off Loop	1	1,500	1,204	0.80	38.3	E	1,073	0.72	34.9	D
	SB On Direct (Direct + Loop)	1	1,500	599	0.40	26.0	C	700	0.47	24.3	C
7th Street Ramp Junctions											
Studebaker Rd	EB Off Loop	1	1,500	51	0.03	36.0	E	65	0.04	41.1	F
	EB On Loop	1	1,500	1,296	0.86	42.5	F	1,311	0.87	47.1	F
	WB Off Loop	1	1,500	683	0.46	47.7	F	1,345	0.90	46.8	D
	WB On Loop	1	1,500	86	0.06	25.9	C	45	0.03	13.4	B

GL-9 (Continued)

Table 4.2-4: Existing (Year 2009) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[3,4] Capacity	Existing (Year 2009) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	V/C	Density[2]	LOS[3,5]	Traffic Volume[1]	V/C	Density[2]	LOS[3,5]
Freeway - to - Freeway Branch Connectors[7]											
I-405/I-605 Freeway Interchanges	I-605 SB to I-405 NB	1	1,800	848	0.47	-	-	1,096	0.61	-	-
	I-605 SB/7th St to I-405 NB	2	3,600	1,555	0.43	-	-	1,864	0.52	-	-
	I-405 SB to I-605 NB	2	3,600	1,376	0.38	-	-	1,305	0.36	-	-
	I-605 SB to 7th St/I-405 SB	2	3,600	5,442	1.51	-	-	4,784	1.33	-	-
	I-605 SB/I-405 SB to 7th St	1	1,800	1,754	0.97	-	-	1,280	0.71	-	-
	7th St to I-605 NB/I-405 NB	2	3,600	2,531	0.70	-	-	2,253	0.63	-	-
	7th St to I-405 NB	1	1,800	707	0.39	-	-	768	0.43	-	-

Notes:
1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); D/C - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. For freeway-to-freeway branch connectors, D/C ratios are provided.

GL-9 (Continued)

Table 4.2-5: Existing (Year 2009) Weaving Level-of-Service Freeway and Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Southbound - Lakewood Boulevard/Willow Street to Bellflower Boulevard	42.0	E	61.6	F
I-405 Northbound - Bellflower Boulevard to Lakewood Boulevard/Willow Street	48.5	F	34.9	D
I-405 Southbound - Bellflower Boulevard to Woodruff Avenue	38.0	E	55.3	F
I-405 Northbound - Woodruff Avenue to Bellflower Boulevard	52.4	F	38.1	E
I-405 Northbound - Palo Verde Avenue/Stearns Street to Woodruff Avenue	44.6	F	32.6	D
I-405 Southbound - Palo Verde Avenue/Stearns Street to Studebaker Road	29.9	D	35.5	E
I-405 Northbound - Studebaker Road to Palo Verde Avenue/Stearns Street	40.6	E	34.3	D
Collector-Distributor (C-D) Roads				
Lakewood Boulveard/Willow Street Interchange at I-405				
Southbound C-D Road	19.6	B	20.4	C
Bellflower Boulevard/Los Coyotes Diagonal Interchange at I-405				
Southbound C-D Road	9.0	A	15.0	B

Notes:
1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads.

GL-9 (Continued)

I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.3-1 No Build Alternative (Year 2020) Intersection Level of Service - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Traffic Control/Comments	No Build Alternative (Year 2020) LOS: AM Peak Hour D/C	AM Peak Hour Avg Delay (sec)	AM Peak Hour LOS	PM Peak Hour D/C	PM Peak Hour Avg Delay (sec)	PM Peak Hour LOS
1	Carson St	I-605 SB Off Ramp	Existing Traffic Signal	0.57	22.3	C	0.68	23.8	C
2	Carson St	I-605 SB Direct On Ramp	Unsignalized On Ramp	0.22	--	--	0.33	--	--
		I-605 SB Loop On Ramp	Unsignalized On Ramp	0.33	--	--	0.33	--	--
3	Carson St	I-605 NB Off Ramp	Existing Traffic Signal	0.59	21.8	C	0.76	20.6	C
		I-605 NB Loop On Ramp	Unsignalized On Ramp	0.31	--	--	0.35	--	--
		I-605 NB Direct On Ramp	Unsignalized On Ramp	0.52	--	--	0.49	--	--
4	Carson St	Pioneer Blvd	Existing Traffic Signal	0.79	31.1	C	0.84	33.7	C
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	Existing Traffic Signal	0.68	14.2	B	0.65	10.9	B
6	Spring St/Cerritos Ave	I-605 NB On Ramp	Existing Traffic Signal	0.76	10.5	B	0.79	8.2	A
7	I-405 NB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.38	--	--	0.38	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.38	--	--	0.23	--	--
	I-405 NB Loop Off Ramp		Unsignalized Off Ramp	0.23	--	--	0.22	--	--
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.53	--	--	0.41	--	--
8	I-405 SB Loop On Ramp	Lakewood Blvd	Unsignalized On Ramp	0.22	--	--	0.25	--	--
	I-405 SB Direct Off Ramp		Unsignalized Off Ramp	0.48	--	--	0.48	--	--
9	Willow St	Lakewood Blvd	Existing Traffic Signal	0.75	31.2	C	0.89	43.0	D
10	Willow St	I-405 SB Loop Off Ramp	Unsignalized Off Ramp	0.35	--	--	0.46	--	--
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.28	--	--	0.41	--	--
11	I-405 NB Off Ramp	Bellflower Blvd	Existing Traffic Signal	0.51	10.8	B	0.53	10.6	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.53	--	--	0.37	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.31	--	--	0.19	--	--
12	Willow St	Bellflower Blvd	Existing Traffic Signal	1.01	48.8	D	1.01	54.4	D
13	Los Coyotes Diagonal	Bellflower Blvd	Existing Traffic Signal	0.65	26.4	C	1.00	42.1	D
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.06	--	--	0.12	--	--
14	I-405 SB Loop Off Ramp	Bellflower Blvd	Unsignalized On Ramp	0.12	--	--	0.32	--	--
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	Existing Traffic Signal	0.52	10.0	B	0.47	16.0	B
		I-405 SB Loop On Ramp	Unsignalized On Ramp	0.16	--	--	0.17	--	--
16	Willow St	Los Coyotes Diagonal	Existing Traffic Signal	0.78	44.4	D	1.02	35.1	D
17	Willow St	Woodruff Ave	Existing Traffic Signal	1.33	147.9	F	0.87	40.4	D
18	I-405 NB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.39	--	--	0.19	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.31	--	--	0.21	--	--
19	I-405 SB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.52	--	--	0.47	--	--
	I-405 SB Direct On Ramp		Unsignalized On Ramp	0.41	--	--	0.23	--	--
20	I-405 NB Direct Off Ramp	Palo Verde	Existing Traffic Signal	0.78	17.7	B	0.61	11.8	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.13	--	--	0.22	--	--
21	Woodruff Ave	Palo Verde	Existing Traffic Signal	0.84	13.6	B	0.66	10.3	B
22	Stearns St	Palo Verde	Existing Traffic Signal	0.86	18.9	B	0.83	20.5	C
23	Stearns St	I-405 SB Direct On Ramp	Unsignalized On Ramp	0.30	--	--	0.46	--	--
24	I-405 NB Direct On Ramp	Studebaker Rd	Existing Traffic Signal	0.51	2.6	A	0.47	4.7	A
25	I-405 SB Direct Off Ramp	Studebaker Rd	Unsignalized Intersection	0.86	68.4	F	0.34	16.2	C
26	Atherton St	Studebaker Rd	Existing Traffic Signal	0.54	9.3	A	0.78	13.8	B
27	SR-22 WB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.46	12.8	B	0.79	28.0	C
28	SR-22 EB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.91	21.3	C	0.99	25.8	C
29	SR-22 WB On/Off Ramp	College Park Dr	Unsignalized Intersection	0.43	21.3	C	0.61	88.7	F
30	7th St	Pacific Coast Highway	Existing Traffic Signal	0.94	49.2	D	0.95	35.9	D
31	7th St	Bellflower Blvd	Existing Traffic Signal	1.04	68.9	F	0.98	47.9	D
32	Pacific Coast Highway	Bellflower Blvd	Existing Traffic Signal	0.53	38.8	D	0.70	20.4	C
33	7th St	Channel Dr	Existing Traffic Signal	0.71	24.5	C	0.94	22.7	C
34	7th St	W. Campus Dr	Existing Traffic Signal	0.79	31.2	C	0.81	32.0	C
35	7th St	E. Campus Dr	Existing Traffic Signal	1.03	35.8	D	0.87	14.6	B

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Table 4.3-2 No Build Alternative (Year 2020) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Movement	Available Storage (ft)	2020 No Build Alternative Conditions: AM Peak Hour 95th Percentile Queue (ft)	AM Peak Hour Adequate Storage? (Yes or No)	PM Peak Hour 95th Percentile Queue (ft)	PM Peak Hour Adequate Storage? (Yes or No)
1	Carson St	I-605 SB Off Ramp	SBL	300	229	Yes	341	No
			SBT	1,130	122	Yes	163	Yes
			SBR	300	237	Yes	171	Yes
3	Carson St	I-605 NB Off Ramp	NBL	300 (650)	225	Yes	291	Yes
			NBR	300(1175)	193	Yes	125	Yes
4	Carson St	Pioneer Blvd	NBL	120	245	No	271	No
			SBL	140	78	Yes	76	Yes
			SBR	140	73	Yes	83	Yes
			EBL	250	271	No	406	No
			WBL	80	17	Yes	18	Yes
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	SBL	220 (1240)	268	Yes	165	Yes
			SBR	900	0	Yes	0	Yes
6	Spring St/Cerritos Ave	I-605 NB On Ramp	WBL	260	246	Yes	174	Yes
9	Willow St	Lakewood Blvd	NBL	180	135	Yes	113	Yes
			SBL	150	47	Yes	87	Yes
			EBL	175	69	Yes	93	Yes
			WBL	150	42	Yes	151	No
11	I-405 NB Off Ramp	Bellflower Blvd	WBL	1,870	97	Yes	175	Yes
			WBL/T/R	1,130	70	Yes	171	Yes
			WBR	410	63	Yes	155	Yes
12	Willow St	Bellflower Blvd	NBL	150	366	No	130	Yes
			SBL	120	142	No	96	Yes
			EBL	140	215	No	351	No
			WBL	110	127	No	267	No
13	Los Coyotes Diagonal	Bellflower Blvd	NBL	160	22	Yes	39	Yes
			NBR	230	49	Yes	161	Yes
			EBL	190	323	No	539	No
			WBL	150	207	No	255	No
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	SBL	1525 (500)	144	Yes	259	Yes
16	Willow St	Los Coyotes Diagonal	SBL	120	156	No	233	No
			EBL	140	144	No	79	Yes
			WBL	160	328	No	586	No
17	Willow St	Woodruff Ave	NBL	140	670	No	287	No
			NBR	60	33	Yes	17	Yes
			SBL	120	132	No	59	Yes
			SBR	120	151	No	53	Yes
			EBL	200	268	No	204	No
			WBL	180	247	No	180	No
20	I-405 NB Direct Off Ramp	Palo Verde	WBL	550	401	Yes	266	Yes
			WBT/R	1,155	60	Yes	141	Yes
21	Woodruff Ave	Palo Verde	EBL	335	318	Yes	209	Yes
			EBR	335	228	Yes	190	Yes
22	Stearns St	Palo Verde	NBL	130	174	No	172	No
			SBL	130	89	Yes	161	No
			EBL	90	205	No	171	No
			WBL	80	38	Yes	118	No
24	I-405 NB Direct On Ramp	Studebaker Rd	NBL	100	53	Yes	78	Yes
			SBR	70	12	Yes	23	Yes

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I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.3-2 No Build Alternative (Year 2020) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Movement	Available Storage (ft)	2020 No Build Alternative Conditions: AM Peak Hour: 95th Percentile Queue (ft)	AM Peak Hour: Adequate Storage? (Yes or No)	PM Peak Hour: 95th Percentile Queue (ft)	PM Peak Hour: Adequate Storage? (Yes or No)
26	Atherton St	Studebaker Rd	NBL	200	42	Yes	50	Yes
			SBL	260	1	Yes	2	Yes
			SBR	70	20	Yes	6	Yes
			EBL	120	77	Yes	222	No
			WBL	220	29	Yes	24	Yes
27	SR-22 WB On/Off Ramp	Studebaker Rd	NBR	150	14	Yes	20	Yes
			SBL	200	68	Yes	169	Yes
28	SR-22 EB On/Off Ramp	Studebaker Rd	NBR	300	1069	No	970	No
			SBL	150	331	No	318	No
			WBR	60	44	Yes	119	No
30	7th St	Pacific Coast Highway	NBL	330	172	Yes	292	Yes
			SBL	290	253	Yes	338	No
31	7th St	Bellflower Blvd	NBR	130	120	Yes	47	Yes
			SBL	160	195	No	243	No
			SBR	160	80	Yes	277	No
			EBL	200	419	No	400	No
			WBL	200	39	Yes	71	Yes
32	Pacific Coast Highway	Bellflower Blvd	NBL	280	92	Yes	73	Yes
			SBL	240	258	No	212	Yes
			SBR	60	17	Yes	36	Yes
			EBL	110	53	Yes	100	Yes
			WBL	120	56	Yes	64	Yes
			WBR	200	64	Yes	41	Yes
33	7th St	Channel Dr	EBL	270	109	Yes	28	Yes
			EBR	180	23	Yes	6	Yes
			WBL	280	107	Yes	264	Yes
34	7th St	W. Campus Dr	SBL/R	150	67	Yes	213	No
			EBL	400	88	Yes	3	Yes
35	7th St	E. Campus Dr	SBL	150	76	Yes	183	No
			SBT/R	150	68	Yes	108	Yes
			EBL	150	207	No	99	Yes
			WBL	300	74	Yes	131	Yes

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I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.3-3 No Build Alternative (Year 2040) Intersection Level of Service - AM/PM Peak Hours

No	Location: East/West Street	Location: North/South Street	Traffic Control/Comments	No Build Alternative (Year 2040) LOS: AM Peak Hour: D/C	AM Peak Hour: Avg Delay (sec)	AM Peak Hour: LOS	PM Peak Hour: D/C	PM Peak Hour: Avg Delay (sec)	PM Peak Hour: LOS
1	Carson St	I-605 SB Off Ramp	Existing Traffic Signal	0.62	22.4	C	0.73	24.5	C
2	Carson St	I-605 SB Direct On Ramp	Unsignalized On Ramp	0.24	--	--	0.36	--	--
		I-605 SB Loop On Ramp	Unsignalized On Ramp	0.35	--	--	0.36	--	--
3	Carson St	I-605 NB Off Ramp	Existing Traffic Signal	0.63	23.6	C	0.82	23.2	C
		I-605 NB Loop On Ramp	Unsignalized On Ramp	0.33	--	--	0.37	--	--
		I-605 NB Direct On Ramp	Unsignalized On Ramp	0.56	--	--	0.53	--	--
4	Carson St	Pioneer Blvd	Existing Traffic Signal	0.86	35.1	D	0.92	43.9	D
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	Existing Traffic Signal	0.74	15.4	B	0.71	12.0	B
6	Spring St/Cerritos Ave	I-605 NB On Ramp	Existing Traffic Signal	0.82	11.6	B	0.86	9.8	A
7	I-405 NB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.41	--	--	0.41	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.41	--	--	0.25	--	--
	I-405 NB Loop Off Ramp		Unsignalized Off Ramp	0.25	--	--	0.23	--	--
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.57	--	--	0.44	--	--
8	I-405 SB Loop On Ramp	Lakewood Blvd	Unsignalized On Ramp	0.24	--	--	0.27	--	--
	I-405 SB Direct Off Ramp		Unsignalized Off Ramp	0.46	--	--	0.52	--	--
9	Willow St	Lakewood Blvd	Existing Traffic Signal	0.81	33.6	C	0.93	48.4	D
10	Willow St	I-405 SB Loop Off Ramp	Unsignalized Off Ramp	0.37	--	--	0.50	--	--
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.31	--	--	0.44	--	--
11	I-405 NB Off Ramp	Bellflower Blvd	Existing Traffic Signal	0.55	11.6	B	0.58	11.3	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.57	--	--	0.40	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.33	--	--	0.20	--	--
12	Willow St	Bellflower Blvd	Existing Traffic Signal	1.09	67.3	E	1.09	70.6	E
13	Los Coyotes Diagonal	Bellflower Blvd	Existing Traffic Signal	0.70	26.9	C	1.13	56.8	E
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.07	--	--	0.13	--	--
14	I-405 SB Loop Off Ramp	Bellflower Blvd	Unsignalized On Ramp	0.13	--	--	0.34	--	--
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	Existing Traffic Signal	0.55	10.6	B	0.51	16.8	B
		I-405 SB Loop On Ramp	Unsignalized On Ramp	0.18	--	--	0.18	--	--
16	Willow St	Los Coyotes Diagonal	Existing Traffic Signal	0.87	48.8	D	1.18	45.4	D
17	Willow St	Woodruff Ave	Existing Traffic Signal	1.44	180.5	F	0.94	51.5	D
18	I-405 NB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.42	--	--	0.20	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.34	--	--	0.23	--	--
19	I-405 SB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.56	--	--	0.51	--	--
	I-405 SB Direct On Ramp		Unsignalized On Ramp	0.45	--	--	0.25	--	--
20	I-405 NB Direct Off Ramp	Palo Verde	Existing Traffic Signal	0.95	21.2	C	0.70	12.6	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.14	--	--	0.23	--	--
21	Woodruff Ave	Palo Verde	Existing Traffic Signal	0.91	15.9	B	0.72	11.3	B
22	Stearns St	Palo Verde	Existing Traffic Signal	0.94	22.0	C	0.92	24.4	C
23	Stearns St	I-405 SB Direct On Ramp	Unsignalized On Ramp	0.33	--	--	0.50	--	--
24	I-405 NB Direct On Ramp	Studebaker Rd	Existing Traffic Signal	0.55	2.8	A	0.51	4.9	A
25	I-405 SB Direct Off Ramp	Studebaker Rd	Unsignalized Intersection	1.02	98.3	F	0.33	15.7	C
26	Atherton St	Studebaker Rd	Existing Traffic Signal	0.60	10.7	B	0.85	15.7	B
27	SR-22 WB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.50	13.1	B	0.86	30.4	C
28	SR-22 EB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.99	30.4	C	1.03	37.1	D
29	SR-22 WB On/Off Ramp	College Park Dr	Unsignalized Intersection	0.51	25.3	D	0.84	152.1	F
30	7th St	Pacific Coast Highway	Existing Traffic Signal	1.02	65.8	E	1.03	58.7	E
31	7th St	Bellflower Blvd	Existing Traffic Signal	1.13	82.4	F	1.06	63.0	E
32	Pacific Coast Highway	Bellflower Blvd	Existing Traffic Signal	0.57	39.1	D	0.82	32.1	C
33	7th St	Channel Dr	Existing Traffic Signal	0.77	25.7	C	1.02	50.8	D
34	7th St	W. Campus Dr	Existing Traffic Signal	0.85	53.1	D	0.87	58.5	E
35	7th St	E. Campus Dr	Existing Traffic Signal	1.12	55.8	E	0.96	16.7	B

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I-405 Improvement Project Supplemental Traffic Study

Long Beach Area Traffic Study

Table 4.3-4 No Build Alternative (Year 2040) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2040 No Build Alternative Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
1	Carson St	I-605 SB Off Ramp	SBL	300	252	Yes	379	No
			SBT	1,130	134	Yes	178	Yes
			SBR	300	263	Yes	187	Yes
3	Carson St	I-605 NB Off Ramp	NBL	300 (650)	246	Yes	319	Yes
			NBR	300(1175)	214	Yes	135	Yes
4	Carson St	Pioneer Blvd	NBL	120	270	No	299	No
			SBL	140	84	Yes	82	Yes
			SBR	140	76	Yes	86	Yes
			EBL	250	303	No	431	No
			WBL	80	17	Yes	18	Yes
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	SBL	220 (1240)	283	Yes	175	Yes
			SBR	900	0	Yes	0	Yes
6	Spring St/Cerritos Ave	I-605 NB On Ramp	WBL	260	287	No	151	Yes
9	Willow St	Lakewood Blvd	NBL	180	150	Yes	155	Yes
			SBL	150	52	Yes	101	Yes
			EBL	175	76	Yes	100	Yes
			WBL	150	45	Yes	163	No
11	I-405 NB Off Ramp	Bellflower Blvd	WBL	1,870	106	Yes	185	Yes
			WBL/T/R	1,130	83	Yes	198	Yes
			WBR	410	75	Yes	173	Yes
12	Willow St	Bellflower Blvd	NBL	150	403	No	129	Yes
			SBL	120	157	No	98	Yes
			EBL	140	234	No	368	No
			WBL	110	139	No	274	No
13	Los Coyotes Diagonal	Bellflower Blvd	NBL	160	24	Yes	43	Yes
			NBR	230	51	Yes	202	Yes
			EBL	190	347	No	599	No
			WBL	150	218	No	277	No
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	SBL	1525 (500)	154	Yes	275	Yes
16	Willow St	Los Coyotes Diagonal	SBL	120	185	No	272	No
			EBL	140	155	No	79	Yes
			WBL	160	358	No	645	No
17	Willow St	Woodruff Ave	NBL	140	730	No	318	No
			NBR	60	35	Yes	17	Yes
			SBL	120	141	No	63	Yes
			SBR	120	170	No	62	Yes
			EBL	200	288	No	225	No
			WBL	180	272	No	196	No
20	I-405 NB Direct Off Ramp	Palo Verde	WBL	550	447	Yes	300	Yes
			WBT/R	1,155	74	Yes	170	Yes
21	Woodruff Ave	Palo Verde	EBL	335	356	No	280	Yes
			EBR	335	274	Yes	223	Yes
22	Stearns St	Palo Verde	NBL	130	189	No	188	No
			SBL	120	88	Yes	155	No
			EBL	90	229	No	191	No
			WBL	80	40	Yes	134	No
24	I-405 NB Direct On Ramp	Studebaker Rd	NBL	100	53	Yes	77	Yes
			SBR	70	12	Yes	26	Yes

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GL-9 (Continued)

I-405 Improvement Project Supplemental Traffic Study

Long Beach Area Traffic Study

Table 4.3-4 No Build Alternative (Year 2040) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2040 No Build Alternative Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
26	Atherton St	Studebaker Rd	NBL	200	88	Yes	61	Yes
			SBL	260	1	Yes	2	Yes
			SBR	70	29	Yes	6	Yes
			EBL	120	84	Yes	248	No
			WBL	220	30	Yes	26	Yes
27	SR-22 WB On/Off Ramp	Studebaker Rd	NBR	150	14	Yes	22	Yes
			SBL	200	74	Yes	186	Yes
28	SR-22 EB On/Off Ramp	Studebaker Rd	NBR	300	1244	No	1127	No
			SBL	150	359	No	336	No
			WBR	60	46	Yes	171	No
30	7th St	Pacific Coast Highway	NBL	330	182	Yes	324	Yes
			SBL	290	275	Yes	382	No
31	7th St	Bellflower Blvd	NBR	130	151	No	37	Yes
			SBL	160	228	No	267	No
			SBR	160	85	Yes	323	No
			EBL	200	435	No	372	No
			WBL	200	38	Yes	0	Yes
32	Pacific Coast Highway	Bellflower Blvd	NBL	280	98	Yes	75	Yes
			SBL	240	273	No	201	Yes
			SBR	60	17	Yes	35	Yes
			EBL	110	55	Yes	127	No
			WBL	120	67	Yes	72	Yes
			WBR	200	91	Yes	42	Yes
33	7th St	Channel Dr	EBL	270	112	Yes	24	Yes
			EBR	180	20	Yes	61	Yes
			WBL	280	109	Yes	266	Yes
34	7th St	W Campus Dr	SBL/R	150	73	Yes	232	No
			EBL	400	90	Yes	29	Yes
35	7th St	E. Campus Dr	SBL	150	82	Yes	206	No
			SBT/R	150	71	Yes	127	Yes
			EBL	150	212	No	101	Yes
			WBL	300	78	Yes	144	Yes

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Orange County Transportation Authority

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Table 4.3-5: No Build Alternative (Year 2020) Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline Lanes	Mainline Capacity[1,4]	No Build Alternative (Year 2020) Conditions – AM Peak Hour: Traffic Demand Volume[1]	D/C	Density[2]	LOS[5]	PM Peak Hour: Traffic Demand Volume[1]	D/C	Density[2]	LOS[5]
I-405 Mainline												
Temple Avenue to Lakewood Boulevard/Willow Street	GP	NB	5	9,250	9,530	1.03	41.5	E	9,810	1.06	41.2	F
		SB	5	9,250	9,770	1.05	36.5	E	10,090	1.09	--*	F
	HOV	NB	1	1,850	1,860	1.01	--	--	2,190	1.18	--	--
		SB	1	1,850	1,820	0.98	--	--	1,960	1.06	--	--
Lakewood Boulevard/Willow Street to Bellflower Boulevard	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,880	1.01	--	--	2,190	1.18	--	--
		SB	1	1,850	1,820	0.98	--	--	1,960	1.06	--	--
Bellflower Boulevard to Woodruff Avenue	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,730	0.94	--	--	2,080	1.12	--	--
		SB	1	1,850	1,910	1.03	--	--	2,080	1.12	--	--
Woodruff Avenue to Palo Verde Avenue/Stearns Street	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	4	7,400	8,580	1.15	--*	F	8,790	1.19	--*	F
	HOV	NB	1	1,850	1,730	0.94	--	--	2,080	1.12	--	--
		SB	1	1,850	2,060	1.11	--	--	1,990	1.08	--	--
Palo Verde Avenue/Stearns Street to Studebaker Road	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,730	0.94	--	--	2,080	1.12	--	--
		SB	1	1,850	2,140	1.16	--	--	2,060	1.11	--	--
Studebaker Road to I-605 NB Off Ramp	GP	NB	4	7,400	8,600	1.16	--*	F	9,560	1.29	--*	F
		SB	5	9,250	8,550	0.92	29.7	D	9,080	0.98	38.5	E
	HOV	NB	1	1,850	2,480	1.35	--	--	2,790	1.51	--	--
		SB	1	1,850	2,140	1.16	--	--	2,060	1.11	--	--
I-605 NB Off Ramp to 7th St Off Ramp	GP	NB	1	7,400	6,910	0.93	85.9	E	7,940	1.07	41.0	E
		SB	4	7,400	7,150	0.97	31.8	D	7,830	1.06	48.7	E
	HOV	NB	1	1,850	2,490	1.35	--	--	2,790	1.51	--	--
		SB	1	1,850	2,140	1.16	--	--	2,060	1.11	--	--
7th St Off Ramp to I-605 SB On Ramp	GP	NB	4	7,400	6,910	0.93	85.9	E	7,545	1.07	41.0	E
		SB	4	7,400	7,050	0.95	32.1	D	7,690	1.04	42.7	E
	HOV	NB	1	1,850	2,490	1.35	--	--	2,790	1.51	--	--
		SB	1	1,850	2,140	1.16	--	--	2,060	1.11	--	--
I-605 Mainline												
Carson Street to Spring Street	GP	NB	4	7,400	5,990	0.80	25.8	C	7,420	1.00	37.9	E
		SB	4	7,400	7,750	1.05	47.7	F	7,280	0.98	35.0	D
	HOV	NB	1	1,850	1,510	0.82	--	--	1,900	1.03	--	--
		SB	1	1,850	1,940	1.05	--	--	1,740	0.94	--	--
Spring Street to Willow Street/Katella Avenue	GP	NB	4	7,400	5,123	0.69	20.9	C	6,330	0.86	29.6	D
		SB	4	7,400	6,720	0.91	28.8	D	5,840	0.79	24.1	C
	HOV	NB	1	1,850	1,870	1.01	--	--	2,450	1.32	--	--
		SB	1	1,850	2,140	1.16	--	--	1,840	0.99	--	--
Willow Street/Katella Avenue CD Road On Ramp to I-405	GP	NB	5	9,250	5,120	0.55	17.0	B	5,740	0.62	20.8	C
		SB	4	7,400	5,660	0.76	24.3	C	5,140	0.69	24.5	C
	HOV	NB	1	1,850	1,690	0.91	--	--	2,220	1.20	--	--
		SB	1	1,850	1,660	0.90	--	--	1,470	0.79	--	--
7th Street Mainline												
Pepper Tree Lane to Studebaker Road	GP	EB	2	3,700	3,270	0.88	17.5	B	3,150	0.85	16.9	B
		WB	3	5,550	3,690	0.66	19.7	C	2,870	0.52	10.4	B
Studebaker Road to I-605	GP	EB	2	3,700	4,390	1.19	--*	F	4,030	1.08	38.4	E
		WB	2	3,700	3,910	1.06	36.4	E	3,800	1.03	36.2	E

Notes:
1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane LOS is based on density except when demand-to-capacity (D/C) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single High Occupancy Vehicle (HOV) lane.
5. * Density is in excess of 45 pc/mi/ln; therefore LOS is F.

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Table 4.3-6: No Build Alternative (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp Capacity[1,4]	No Build Alternative (Year 2020) Conditions – AM Peak: Ramp Traffic Volume[1]	Ramp D/C	Ramp Junction Density[2]	Ramp Junction LOS[4,5]	PM Peak: Ramp Traffic Volume[1]	Ramp D/C	Ramp Junction Density[2]	Ramp Junction LOS[4,5]
I-405 Ramp Junctions											
Lakewood Blvd & Willow St	NB Off Direct	2	3,000	870	0.29	12.6	B	880	0.29	14.1	B
	NB On Loop	1	1,500	790	0.53	44.8	F	610	0.41	48.9	F
	NB On Direct	1	1,500	570	0.38	24.8	C	350	0.23	26.3	C
	SB Off (Direct + Loop)	2	3,000	1,160	0.39	17.9	B	1,400	0.47	20.4	F
	SB On Loop	1	1,500	310	0.21	42.6	F	370	0.25	43.1	F
	SB On Direct (from Willow St)	1	1,500	420	0.28	22.0	C	610	0.41	22.4	C
Bellflower Blvd & Los Coyotes Diagonal	NB Off Direct	1	1,500	540	0.36	26.5	C	560	0.37	30.5	D
	NB On (Direct + Loop)	2	3,000	1,260	0.42	14.0	F	840	0.28	12.6	F
	SB Off (Direct + Loop)	2	3,000	1,460	0.49	17.4	B	1,960	0.65	21.8	C
	SB On (Direct + Loop)	1	1,500	860	0.57	35.0	F	1,400	0.93	33.9	F
Woodruff Ave	NB Off Direct	1	1,500	580	0.39	22.6	C	280	0.19	24.3	C
	NB On Direct	1	1,500	470	0.31	34.1	F	320	0.21	39.6	F
	SB Off Direct	1	1,500	780	0.52	29.1	D	620	0.41	29.6	D
	SB On Direct	1	1,500	620	0.41	22.9	F	300	0.20	24.7	F
Palo Verde Ave & Stearn St	NB Off Direct	1	1,500	690	0.46	24.0	C	790	0.53	27.8	F
	NB On Loop	1	1,500	200	0.13	51.4	F	330	0.22	56.8	F
	SB On Direct (from Stearn St)	1	1,500	450	0.30	26.2	F	630	0.42	26.3	F
Studebaker Rd	NB On Direct	1	1,500	330	0.22	53.5	F	330	0.22	59.8	F
	SB Off Direct	1	1,500	430	0.29	34.9	D	330	0.22	35.8	E
7th St	SB Off Direct	1	1,500	90	0.06	33.3	D	140	0.09	36.5	E

GL-9 (Continued)

Table 4.3-6: No Build Alternative (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	No Build Alternative (Year 2020) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
I-605 Ramp Junctions											
Carson St	NB Off Direct	1	1,500	960	0.64	32.0	D	940	0.63	38.4	E
	NB On Loop	1	1,500	460	0.31	20.4	C	510	0.34	25.0	C
	NB On Direct	1	1,500	780	0.52	20.7	C	730	0.49	24.1	C
	SB Off Direct	2	3,000	1,210	0.40	13.6	B	1,400	0.47	14.4	B
	SB On Loop	1	1,500	490	0.33	22.2	C	410	0.27	21.2	C
	SB On Direct	1	1,500	250	0.17	22.7	C	330	0.22	21.5	C
Spring St/Cerritos Ave	NB On Loop	1	1,500	780	0.52	18.5	B	1,090	0.73	20.4	C
	SB Off Direct	1	1,500	1,030	0.69	34.6	D	1,440	0.96	35.3	E
Willow St/Katella Ave	NB Off (Direct + Loop)	1	1,500	1,210	0.81	0.2	A	870	0.58	1.1	A
	NB On Direct	1	1,500	1,120	0.75	19.8	B	1,460	0.97	22.4	C
	SB Off Direct	1	1,500	590	0.39	34.2	D	560	0.37	30.3	D
	SB Off Loop	1	1,500	1,120	0.75	34.6	D	1,030	0.69	30.5	D
	SB On Direct (Direct + Loop)	1	1,500	650	0.43	23.6	C	890	0.59	21.5	C
7th Street Ramp Junctions											
Studebaker Rd	EB Off Loop	1	1,500	90	0.06	35.2	E	560	0.37	34.1	D
	EB On Loop	1	1,500	1,210	0.81	40.8	F	1,410	0.94	37.3	E
	WB Off Loop	1	1,500	740	0.49	40.5	F	1,400	0.93	40.4	F
	WB On Loop	1	1,500	520	0.35	28.1	D	370	0.25	20.9	C

GL-9 (Continued)

Table 4.3-6: No Build Alternative (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	No Build Alternative (Year 2020) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
Freeway - to - Freeway Branch Connectors[7]											
I-405/I-605 Freeway Interchanges	I-605 SB to I-405 NB	1	1,800	920	0.51	--	--	1,120	0.62	--	--
	I-605 SB/7th St to I-405 NB	2	3,600	1,680	0.47	--	--	1,620	0.45	--	--
	I-405 SB to I-605 NB	2	3,600	1,400	0.39	--	--	1,260	0.35	--	--
	I-605 SB to 7th St/I-405 SB	2	3,600	4,750	1.32	--	--	4,020	1.12	--	--
	I-605 SB/I-405 SB to 7th St	1	1,800	2,040	1.13	--	--	1,360	0.76	--	--
	7th St to I-605 NB/I-405 NB	2	3,600	1,210	0.34	--	--	1,330	0.37	--	--
	7th St to I-405 NB	1	1,800	770	0.43	--	--	440	0.24	--	--

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); D/C - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. For freeway-to-freeway branch connectors, D/C ratios are provided.

GL-9 (Continued)

Table 4.3-7: No Build Alternative (Year 2020) Weaving Level-of-Service
Freeway and Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Southbound - Lakewood Boulevard/Willow Street to Bellflower Boulevard	45.2	F	71.1	F
I-405 Northbound - Bellflower Boulevard to Lakewood Boulevard/Willow Street	46.7	F	39.4	E
I-405 Southbound - Bellflower Boulevard to Woodruff Avenue	40.3	E	66.9	F
I-405 Northbound - Woodruff Avenue to Bellflower Boulevard	51.5	F	45.2	F
I-405 Northbound - Palo Verde Avenue/Stearns Street to Woodruff Avenue	45.3	F	38.3	E
I-405 Southbound - Palo Verde Avenue/Stearns Street to Studebaker Road	32.6	D	44.2	F
I-405 Northbound - Studebaker Road to Palo Verde Avenue/Stearns Street	43.6	F	43.1	F
Collector-Distributor (C-D) Roads				
Lakewood Boulveard/Willow Street Interchange at I-405				
Southbound C-D Road	16.5	B	23.7	C
Bellflower Boulevard/Los Coyotes Diagonal Interchange at I-405				
Southbound C-D Road	4.0	A	5.2	A

Notes:

1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads.

GL-9 (Continued)

Table 4.3-8: No Build Alternative (Year 2040) Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		No Build Alternative (Year 2040) Conditions							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[3]	D/C	Density[2]	LOS[5]	Traffic Demand Volume[3]	D/C	Density[2]	LOS[5]
I-405 Mainline												
Temple Avenue to Lakewood Boulevard/Willow Street	GP	NB	5	9,250	10,300	1.11	--*	F	10,610	1.15	--*	F
		SB	5	9,250	10,580	1.14	45.5	F	10,910	1.18	--*	F
	HOV	NB	1	1,850	2,010	1.09	--	--	2,370	1.28	--	--
		SB	1	1,850	1,970	1.06	--	--	2,120	1.15	--	--
Lakewood Boulevard/Willow Street to Bellflower Boulevard	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,010	1.09	--	--	2,370	1.28	--	--
		SB	1	1,850	1,972	1.09	-	--	2,120	1.15	--	--
Bellflower Boulevard to Woodruff Avenue	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,873	1.01	--	--	2,250	1.22	-	--
		SB	1	1,850	2,060	1.11	-	--	2,240	1.21	--	--
Woodruff Avenue to Palo Verde Avenue/Stearns Street	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	4	7,400	9,320	1.25	--*	F	8,500	1.28	--*	F
	HOV	NB	1	1,850	1,870	1.01	--	--	2,250	1.22	--	--
		SB	1	1,850	2,250	1.21	--	--	2,150	1.16	--	--
Palo Verde Avenue/Stearns Street to Studebaker Road	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,870	1.01	--	--	2,250	1.22	--	--
		SB	1	1,850	2,310	1.25	--	--	2,280	1.21	--	--
Studebaker Road to I-605 NB Off Ramp	GP	NB	4	7,400	9,290	1.26	--*	F	10,390	1.40	--*	F
		SB	5	9,250	9,240	1.00	33.7	D	9,830	1.06	44.1	E
	HOV	NB	1	1,850	2,720	1.46	--	--	3,020	1.63	--	--
		SB	1	1,850	2,310	1.25	-	--	2,280	1.21	--	--
I-605 NB Off Ramp to 7th St Off Ramp	GP	NB	4	7,400	7,470	1.01	40.1	E	8,590	1.16	--*	F
		SB	4	7,400	7,730	1.04	26.7	E	8,460	1.14	--*	F
	HOV	NB	1	1,850	2,720	1.46	--	--	3,020	1.63	--	--
		SB	1	1,850	2,310	1.25	--	--	2,280	1.21	--	--
7th St Off Ramp to I-605 SB On Ramp	GP	NB	4	7,400	7,470	1.01	40.1	E	8,590	1.16	--*	F
		SB	4	7,400	7,630	1.03	33.8	E	8,320	1.12	--*	F
	HOV	NB	1	1,850	2,720	1.46	--	--	3,020	1.63	--	--
		SB	1	1,850	2,310	1.25	--	--	2,230	1.21	--	--
I-605 Mainline												
Carson Street to Spring Street	GP	NB	4	7,400	6,560	0.89	28.8	D	8,020	1.08	44.4	E
		SB	4	7,400	8,370	1.13	--*	F	7,970	1.08	40.6	E
	HOV	NB	1	1,850	1,630	0.88	-	--	2,050	1.11	--	--
		SB	1	1,850	2,100	1.14	--	-	1,880	1.02	--	--
Spring Street to Willow Street/Katella Avenue	GP	NB	4	7,400	5,540	0.75	22.7	C	6,840	0.92	39.6	D
		SB	4	7,400	7,260	0.98	32.6	D	6,510	0.88	38.5	D
	HOV	NB	1	1,850	1,630	0.88	--	--	2,050	1.11	--	--
		SB	1	1,850	2,100	1.14	--	--	1,880	1.02	--	--
Willow Street/Katella Avenue CD Road On Ramp to I-405	GP	NB	5	9,250	5,540	0.60	19.3	C	6,200	0.67	22.5	C
		SB	4	7,400	6,120	0.83	26.6	D	5,560	0.75	26.5	D
	HOV	NB	1	1,850	2,020	1.09	--	--	2,650	1.43	--	--
		SB	1	1,850	2,310	1.25	--	--	1,880	1.02	--	--
7th Street Mainline												
Pepper Tree Lane to Studebaker Road	GP	EB	2	3,700	3,340	0.90	18.8	C	3,420	0.92	18.3	C
		WB	3	5,550	3,990	0.72	21.4	C	3,100	0.56	16.6	B
Studebaker Road to I-605	GP	EB	2	3,700	4,750	1.28	--*	F	4,840	1.37	--*	F
		WB	2	3,700	4,320	1.14	48.4	E	4,010	1.14	43.1	E

Notes:

1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane LOS is based on density except when demand-to-capacity (D/C) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single High Occupancy Vehicle (HOV) lane.
5. * Density is in excess of 45 pc/mi/ln, therefore LOS is F.

GL-9 (Continued)

Table 4.3-9: No Build Alternative (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	No Build Alternative (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
I-405 Ramp Junctions											
Lakewood Blvd & Willow St	NB Off Direct	2	3,000	940	0.31	14.6	B	950	0.32	16.2	F
	NB On Loop	1	1,500	860	0.57	48.0	F	660	0.44	52.6	F
	NB On Direct	1	1,500	620	0.41	26.6	F	370	0.25	28.4	F
	SB Off (Direct + Loop)	2	3,000	1,250	0.42	20.2	C	1,520	0.51	22.9	F
	SB On Loop	1	1,500	330	0.22	45.9	F	400	0.27	46.4	F
	SB On Direct (from Willow St)	1	1,500	460	0.31	23.6	C	660	0.44	23.8	F
Bellflower Blvd & Los Coyotes Diagonal	NB Off Direct	1	1,500	590	0.39	29.1	D	610	0.41	33.4	F
	NB On (Direct + Loop)	2	3,000	1,360	0.45	16.0	F	910	0.30	14.5	F
	SB Off (Direct + Loop)	2	3,000	1,580	0.53	19.8	B	2,120	0.71	24.5	F
	SB On (Direct + Loop)	1	1,500	930	0.62	37.2	F	1,520	1.01	35.5	F
Woodruff Ave	NB Off Direct	1	1,500	630	0.42	25.2	C	300	0.20	27.0	C
	NB On Direct	1	1,500	510	0.34	36.5	F	340	0.23	42.5	F
	SB Off Direct	1	1,500	840	0.56	31.8	D	670	0.45	32.4	D
	SB On Direct	1	1,500	670	0.45	23.9	F	320	0.21	26.1	F
Palo Verde Ave & Stearn St	NB Off Direct	1	1,500	750	0.50	26.8	C	860	0.57	30.9	F
	NB On Loop	1	1,500	210	0.14	55.7	F	350	0.23	61.5	F
	SB On Direct (from Stearn St)	1	1,500	490	0.33	27.6	F	680	0.45	27.5	F
Studebaker Rd	NB On Direct	1	1,500	350	0.23	58.0	F	350	0.23	64.8	F
	SB Off Direct	1	1,500	470	0.31	37.6	E	350	0.23	38.5	F
7th St	SB Off Direct	1	1,500	100	0.07	35.9	E	150	0.10	39.2	F

GL-9 (Continued)

Table 4.3-9: No Build Alternative (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	No Build Alternative (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
I-605 Ramp Junctions											
Carson St	NB Off Direct	1	1,500	1,040	0.69	34.5	D	1,020	0.68	41.4	F
	NB On Loop	1	1,500	500	0.33	21.7	C	560	0.37	26.5	C
	NB On Direct	1	1,500	840	0.56	21.7	C	790	0.53	25.2	F
	SB Off Direct	2	3,000	1,310	0.44	15.7	B	1,520	0.51	16.6	B
	SB On Loop	1	1,500	530	0.35	23.3	C	440	0.29	22.3	C
	SB On Direct	1	1,500	270	0.18	24.0	F	350	0.23	22.6	C
Spring St/Cerritos Ave	NB On Loop	1	1,500	850	0.57	19.2	B	1,180	0.79	21.0	C
	SB Off Direct	1	1,500	1,110	0.74	37.2	E	1,560	1.04	38.0	E
Willow St/Katella Ave	NB Off (Direct + Loop)	1	1,500	1,210	0.81	2.2	A	940	0.63	1.8	A
	NB On Direct	1	1,500	1,210	0.81	20.8	C	1,580	1.05	23.3	C
	SB Off Direct	1	1,500	640	0.43	36.8	E	610	0.41	32.6	D
	SB Off Loop	1	1,500	1,210	0.81	37.2	E	1,110	0.74	32.7	D
	SB On Direct (Direct + Loop)	1	1,500	710	0.47	25.2	C	960	0.64	22.9	C
7th Street Ramp Junctions											
Studebaker Rd	EB Off Loop	1	1,500	100	0.07	37.8	E	610	0.41	36.6	E
	EB On Loop	1	1,500	1,310	0.87	43.8	F	1,530	1.02	40.2	F
	WB Off Loop	1	1,500	800	0.53	43.6	F	1,520	1.01	43.5	F
	WB On Loop	1	1,500	570	0.38	30.7	D	400	0.27	23.0	C

GL-9 (Continued)

Table 4.3-9: No Build Alternative (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	No Build Alternative (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
Freeway - to - Freeway Branch Connectors[7]											
I-405/I-605 Freeway Interchanges	I-605 SB to I-405 NB	1	1,800	990	0.55	--	--	1,210	0.67	--	--
	I-605 SB/7th St to I-405 NB	2	3,600	1,820	0.51	--	--	1,750	0.49	--	--
	I-405 SB to I-605 NB	2	3,600	1,510	0.42	--	--	1,350	0.38	--	--
	I-605 SB to 7th St/I-405 SB	2	3,600	5,130	1.43	--	--	4,340	1.21	--	--
	I-605 SB/I-405 SB to 7th St	1	1,800	2,200	1.22	--	--	1,470	0.82	--	--
	7th St to I-605 NB/I-405 NB	2	3,600	1,310	0.36	--	--	1,430	0.40	--	--
	7th St to I-405 NB	1	1,800	830	0.46	--	--	480	0.27	--	--

Notes:
1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); D/C - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. For freeway-to-freeway branch connectors, D/C ratios are provided.

GL-9 (Continued)

Table 4.3-10: No Build Alternative (Year 2040) Weaving Level-of-Service
Freeway and Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Southbound - Lakewood Boulevard/Willow Street to Bellflower Boulevard	50.1	F	78.5	F
I-405 Northbound - Bellflower Boulevard to Lakewood Boulevard/Willow Street	51.2	F	43.3	F
I-405 Southbound - Bellflower Boulevard to Woodruff Avenue	44.6	F	73.8	F
I-405 Northbound - Woodruff Avenue to Bellflower Boulevard	57.0	F	50.2	F
I-405 Northbound - Palo Verde Avenue/Stearns Street to Woodruff Avenue	49.7	F	42.1	E
I-405 Southbound - Palo Verde Avenue/Stearns Street to Studebaker Road	35.7	E	48.3	F
I-405 Northbound - Studebaker Road to Palo Verde Avenue/Stearns Street	48.0	F	47.7	F
Collector-Distributor (C-D) Roads				
Lakewood Boulvcard/Willow Street Interchange at I-405				
Southbound C-D Road	16.5	B	23.7	C
Bellflower Boulevard/Los Coyotes Diagonal Interchange at I-405				
Southbound C-D Road	4.0	A	5.2	A

Notes:
1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads.

GL-9 (Continued)

I-405 Improvement Project Supplemental Traffic Study

Long Beach Area Traffic Study

Table 4.4-1 Alternative 1 (Year 2020) Intersection Level of Service - AM/PM Peak Hours

No	Location: East/West Street	Location: North/South Street	Traffic Control/Comments	Alternative 1 (Year 2020) LOS: AM Peak Hour D/C	AM Peak Hour Avg Delay (sec)	AM Peak Hour LOS	PM Peak Hour D/C	PM Peak Hour Avg Delay (sec)	PM Peak Hour LOS
1	Carson St	I-605 SB Off Ramp	Existing Traffic Signal	0.55	18.7	B	0.67	20.1	C
2	Carson St	I-605 SB Direct On Ramp	Unsignalized On Ramp	0.24	--	--	0.38	--	--
		I-605 SB Loop On Ramp	Unsignalized On Ramp	0.35	--	--	0.36	--	--
3	Carson St	I-605 NB Off Ramp	Existing Traffic Signal	0.59	20.3	C	0.76	16.6	B
		I-605 NB Loop On Ramp	Unsignalized On Ramp	0.30	--	--	0.35	--	--
		I-605 NB Direct On Ramp	Unsignalized On Ramp	0.51	--	--	0.46	--	--
4	Carson St	Pioneer Blvd	Existing Traffic Signal	0.79	30.7	C	0.87	31.6	C
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	Existing Traffic Signal	0.68	14.0	B	0.64	10.3	B
6	Spring St/Cerritos Ave	I-605 NB On Ramp	Existing Traffic Signal	0.73	9.3	A	0.78	8.1	A
7	I-405 NB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.43	--	--	0.41	--	--
	I-405 NB Direct On Ramp		Unsignalized Off Ramp	0.38	--	--	0.22	--	--
	I-405 NB Loop Off Ramp		Unsignalized Off Ramp	0.26	--	--	0.22	--	--
	I-405 NB Loop On Ramp		Unsignalized Off Ramp	0.53	--	--	0.41	--	--
8	I-405 SB Loop On Ramp	Lakewood Blvd	Unsignalized On Ramp	0.23	--	--	0.25	--	--
	I-405 SB Direct Off Ramp		Unsignalized Off Ramp	0.41	--	--	0.46	--	--
9	Willow St	Lakewood Blvd	Existing Traffic Signal	0.74	28.9	C	0.96	46.5	D
10	Willow St	I-405 SB Loop Off Ramp	Unsignalized Off Ramp	0.33	--	--	0.45	--	--
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.28	--	--	0.41	--	--
11	I-405 NB Off Ramp	Bellflower Blvd	Existing Traffic Signal	0.51	10.4	B	0.53	10.9	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.51	--	--	0.37	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.29	--	--	0.19	--	--
12	Willow St	Bellflower Blvd	Existing Traffic Signal	1.00	50.1	D	1.00	51.2	D
13	Los Coyotes Diagonal	Bellflower Blvd	Existing Traffic Signal	0.64	27.5	C	1.06	44.6	D
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.08	--	--	0.12	--	--
14	I-405 SB Loop Off Ramp	Bellflower Blvd	Unsignalized On Ramp	0.12	--	--	0.29	--	--
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	Existing Traffic Signal	0.52	10.3	B	0.47	14.0	B
		I-405 SB Loop On Ramp	Unsignalized On Ramp	0.25	--	--	0.17	--	--
16	Willow St	Los Coyotes Diagonal	Existing Traffic Signal	0.77	31.7	C	1.04	36.7	D
17	Willow St	Woodruff Ave	Existing Traffic Signal	1.32	146.2	F	0.88	40.9	D
18	I-405 NB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.39	--	--	0.20	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.31	--	--	0.21	--	--
19	I-405 SB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.51	--	--	0.45	--	--
	I-405 SB Direct On Ramp		Unsignalized On Ramp	0.43	--	--	0.23	--	--
20	I-405 NB Direct Off Ramp	Palo Verde	Existing Traffic Signal	0.78	17.0	B	0.63	12.0	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.15	--	--	0.20	--	--
21	Woodruff Ave	Palo Verde	Existing Traffic Signal	0.84	12.9	B	0.68	10.2	B
22	Stearns St	Palo Verde	Existing Traffic Signal	0.86	18.5	B	0.85	21.0	C
23	Stearns St	I-405 SB Direct On Ramp	Unsignalized On Ramp	0.33	--	--	0.44	--	--
24	I-405 NB Direct On Ramp	Studebaker Rd	Existing Traffic Signal	0.51	1.2	A	0.50	3.1	A
25	I-405 SB Direct Off Ramp	Studebaker Rd	Unsignalized Intersection	1.03	113.3	F	0.51	24.8	C
26	Atherton St	Studebaker Rd	Existing Traffic Signal	0.54	10.3	B	0.79	14.8	B
27	SR-22 WB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.53	13.0	B	0.76	27.3	C
28	SR-22 EB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.97	28.9	C	0.96	28.6	C
29	SR-22 WB On/Off Ramp	College Park Dr	Unsignalized Intersection	0.51	24.3	C	0.73	104.8	F
30	7th St	Pacific Coast Highway	Existing Traffic Signal	0.96	53.2	D	0.96	37.4	D
31	7th St	Bellflower Blvd	Existing Traffic Signal	1.06	71.4	E	0.96	42.8	D
32	Pacific Coast Highway	Bellflower Blvd	Existing Traffic Signal	0.50	36.6	D	0.69	19.5	B
33	7th St	Channel Dr	Existing Traffic Signal	0.74	23.2	C	0.95	25.6	C
34	7th St	W. Campus Dr	Existing Traffic Signal	0.79	33.2	C	0.82	35.6	D
35	7th St	E. Campus Dr	Existing Traffic Signal	1.03	38.0	D	0.88	14.9	B

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Table 4.4-2 Alternative 1 (Year 2020) Intersection Queues vs Storage - AM/PM Peak Hours

No	Location: East/West Street	Location: North/South Street	Movement	Available Storage (ft)	2020 Alternative 1 Conditions: AM Peak Hour 95th Percentile Queue (ft)	AM Peak Hour Adequate Storage? (Yes or No)	PM Peak Hour 95th Percentile Queue (ft)	PM Peak Hour Adequate Storage? (Yes or No)
1	Carson St	I-605 SB Off Ramp	SBL	300	211	Yes	337	No
			SBT	1,130	121	Yes	178	Yes
			SBR	300	238	Yes	186	Yes
3	Carson St	I-605 NB Off Ramp	NBL	300 (650)	234	Yes	294	Yes
			NBR	300(1175)	210	Yes	133	Yes
4	Carson St	Pioneer Blvd	NBL	120	232	No	285	No
			SBL	140	77	Yes	76	Yes
			SBR	140	72	Yes	84	Yes
			EBL	250	273	No	418	No
			WBL	80	17	Yes	16	Yes
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	SBL	220 (1240)	264	Yes	160	Yes
			SBR	900	0	Yes	0	Yes
6	Spring St/Cerritos Ave	I-605 NB On Ramp	WBL	260	221	Yes	165	Yes
9	Willow St	Lakewood Blvd	NBL	180	130	Yes	130	Yes
			SBL	150	44	Yes	97	Yes
			EBL	175	68	Yes	78	Yes
			WBL	150	39	Yes	126	Yes
11	I-405 NB Off Ramp	Bellflower Blvd	WBL	1,870	103	Yes	175	Yes
			WBL/T/R	1,130	54	Yes	173	Yes
			WBR	410	51	Yes	156	Yes
12	Willow St	Bellflower Blvd	NBL	150	357	No	135	Yes
			SBL	120	135	No	113	Yes
			EBL	140	212	No	342	No
			WBL	110	215	No	239	No
13	Los Coyotes Diagonal	Bellflower Blvd	NBL	160	23	Yes	36	Yes
			NBR	230	49	Yes	163	Yes
			EBL	180	319	No	587	No
			WBL	150	206	No	263	No
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	SBL	1525 (500)	140	Yes	257	Yes
16	Willow St	Los Coyotes Diagonal	SBL	120	142	No	239	No
			EBL	140	158	No	72	Yes
			WBL	160	326	No	599	No
17	Willow St	Woodruff Ave	NBL	140	688	No	288	No
			NBR	60	34	Yes	18	Yes
			SBL	120	129	No	63	Yes
			SBR	120	138	No	50	Yes
			EBL	200	246	No	173	Yes
			WBL	180	260	No	194	No
20	I-405 NB Direct Off Ramp	Palo Verde	WBL	550	383	Yes	259	Yes
			WBT/R	1,155	72	Yes	163	Yes
21	Woodruff Ave	Palo Verde	EBL	335	319	Yes	209	Yes
			EBR	335	194	Yes	180	Yes
22	Stearns St	Palo Verde	NBL	130	155	No	167	No
			SBL	120	95	Yes	173	No
			EBL	90	219	No	178	No
			WBL	80	36	Yes	117	No
24	I-405 NB Direct On Ramp	Studebaker Rd	NBL	100	1	Yes	58	Yes
			SBR	70	8	Yes	18	Yes

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Table 4.4-2 Alternative 1 (Year 2020) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2020 Alternative 1 Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
26	Atherton St	Studebaker Rd	NBL	200	40	Yes	56	Yes
			SBL	260	1	Yes	3	Yes
			SBR	70	61	Yes	21	Yes
			EBL	120	77	Yes	223	No
			WBL	220	28	Yes	26	Yes
27	SR-22 WB On/Off Ramp	Studebaker Rd	NBR	150	15	Yes	21	Yes
			SBL	200	64	Yes	176	Yes
28	SR-22 EB On/Off Ramp	Studebaker Rd	NBR	300	1180	No	1032	No
			SBL	150	386	No	257	No
			WBR	60	50	Yes	145	No
30	7th St	Pacific Coast Highway	NBL	330	163	Yes	243	Yes
			SBL	290	275	Yes	364	No
31	7th St	Bellflower Blvd	NBR	130	95	Yes	35	Yes
			SBL	160	166	No	228	No
			SBR	160	82	Yes	250	No
			EBL	200	450	No	365	No
			WBL	200	39	Yes	74	Yes
32	Pacific Coast Highway	Bellflower Blvd	NBL	280	96	Yes	73	Yes
			SBL	240	231	Yes	204	Yes
			SBR	60	21	Yes	33	Yes
			EBL	110	53	Yes	105	Yes
			WBL	120	49	Yes	59	Yes
			WBR	200	58	Yes	39	Yes
33	7th St	Channel Dr	EBL	270	107	Yes	29	Yes
			EBR	180	22	Yes	6	Yes
			WBL	280	106	Yes	262	Yes
34	7th St	W. Campus Dr	SBL/R	150	68	Yes	216	No
			EBL	400	91	Yes	28	Yes
35	7th St	E. Campus Dr	SBL	150	76	Yes	186	No
			SBT/R	150	67	Yes	109	Yes
			EBL	150	207	No	102	Yes
			WBL	300	76	Yes	135	Yes

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Table 4.4-3 Alternative 1 (Year 2040) Intersection Level of Service - AM/PM Peak Hours

No.	Location		Traffic Control/Comments	Alternative 1 (Year 2040) LOS					
				AM Peak Hour			PM Peak Hour		
	East/West Street	North/South Street		D/C	Avg Delay (sec)	LOS	D/C	Avg Delay (sec)	LOS
1	Carson St	I-605 SB Off Ramp	Existing Traffic Signal	0.61	18.8	B	0.73	20.8	C
2	Carson St	I-605 SB Direct On Ramp	Unsignalized On Ramp	0.26	--	--	0.41	--	--
		I-605 SB Loop On Ramp	Unsignalized On Ramp	0.38	--	--	0.39	--	--
3	Carson St	I-605 NB Off Ramp	Existing Traffic Signal	0.63	21.8	C	0.82	18.4	B
		I-605 NB Loop On Ramp	Unsignalized On Ramp	0.33	--	--	0.37	--	--
		I-605 NB Direct On Ramp	Unsignalized On Ramp	0.55	--	--	0.49	--	--
4	Carson St	Pioneer Blvd	Existing Traffic Signal	0.87	34.7	C	0.90	41.4	D
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	Existing Traffic Signal	0.73	15.2	B	0.70	11.4	B
6	Spring St/Cerritos Ave	I-605 NB On Ramp	Existing Traffic Signal	0.79	10.3	B	0.85	9.5	A
7	I-405 NB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.47	--	--	0.44	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.41	--	--	0.24	--	--
	I-405 NB Loop Off Ramp		Unsignalized Off Ramp	0.28	--	--	0.24	--	--
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.57	--	--	0.44	--	--
8	I-405 SB Loop On Ramp	Lakewood Blvd	Unsignalized On Ramp	0.25	--	--	0.27	--	--
	I-405 SB Direct Off Ramp		Unsignalized Off Ramp	0.44	--	--	0.50	--	--
9	Willow St	Lakewood Blvd	Existing Traffic Signal	0.79	33.1	C	0.93	48.7	D
10	Willow St	I-405 SB Loop Off Ramp	Unsignalized Off Ramp	0.36	--	--	0.48	-	--
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.31	--	--	0.44	--	--
11	I-405 NB Off Ramp	Bellflower Blvd	Existing Traffic Signal	0.55	11.3	B	0.58	11.3	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.55	--	--	0.40	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.32	--	--	0.20	--	--
12	Willow St	Bellflower Blvd	Existing Traffic Signal	1.09	68.2	E	1.10	68.1	E
13	Los Coyotes Diagonal	Bellflower Blvd	Existing Traffic Signal	0.70	28.1	C	1.15	59.4	E
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.08	--	--	0.13	--	--
14	I-405 SB Loop Off Ramp	Bellflower Blvd	Unsignalized On Ramp	0.13	--	--	0.32	--	--
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	Existing Traffic Signal	0.56	10.8	B	0.51	14.7	B
		I-405 SB Loop On Ramp	Unsignalized On Ramp	0.27	--	--	0.18	--	--
16	Willow St	Los Coyotes Diagonal	Existing Traffic Signal	0.86	36.4	D	1.20	50.4	D
17	Willow St	Woodruff Ave	Existing Traffic Signal	1.43	179.2	F	0.94	53.1	D
18	I-405 NB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.43	--	--	0.22	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.34	--	--	0.23	--	--
19	I-405 SB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.55	--	--	0.49	--	--
	I-405 SB Direct On Ramp		Unsignalized On Ramp	0.47	--	--	0.25	--	--
20	I-405 NB Direct Off Ramp	Palo Verde	Existing Traffic Signal	0.96	20.6	C	0.73	13.1	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.17	--	--	0.21	--	--
21	Woodruff Ave	Palo Verde	Existing Traffic Signal	0.91	15.4	B	0.74	11.2	B
22	Stearns St	Palo Verde	Existing Traffic Signal	0.94	21.7	C	0.93	25.1	C
23	Stearns St	I-405 SB Direct On Ramp	Unsignalized On Ramp	0.35	--	--	0.48	--	--
24	I-405 NB Direct On Ramp	Studebaker Rd	Existing Traffic Signal	0.55	1.4	A	0.54	3.2	A
25	I-405 SB Direct Off Ramp	Studebaker Rd	Unsignalized Intersection	1.24	170.6	F	0.53	25.2	D
26	Atherton St	Studebaker Rd	Existing Traffic Signal	0.58	11.1	B	0.86	16.9	B
27	SR-22 WB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.52	13.5	B	0.82	29.1	C
28	SR-22 EB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	1.05	43.5	D	1.06	40.4	D
29	SR-22 WB On/Off Ramp	College Park Dr	Unsignalized Intersection	0.61	30.2	D	1.00	184.2	F
30	7th St	Pacific Coast Highway	Existing Traffic Signal	1.04	71.5	E	1.04	62.4	E
31	7th St	Bellflower Blvd	Existing Traffic Signal	1.14	84.9	F	1.04	57.2	E
32	Pacific Coast Highway	Bellflower Blvd	Existing Traffic Signal	0.54	36.9	D	0.81	32.0	C
33	7th St	Channel Dr	Existing Traffic Signal	0.80	24.3	C	1.03	55.3	E
34	7th St	W. Campus Dr	Existing Traffic Signal	0.88	55.3	E	0.89	64.3	E
35	7th St	E. Campus Dr	Existing Traffic Signal	1.13	58.6	E	0.97	17.2	B

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Table 4.4-4 Alternative 1 (Year 2040) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2040 Alternative 1 Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
1	Carson St	I-605 SB Off Ramp	SBL	300	231	Yes	374	No
			SBT	1,130	133	Yes	195	Yes
			SBR	300	267	Yes	205	Yes
3	Carson St	I-605 NB Off Ramp	NBL	300 (650)	255	Yes	322	Yes
			NBR	300(1175)	234	Yes	143	Yes
4	Carson St	Pioneer Blvd	NBL	120	256	No	313	No
			SBL	140	82	Yes	81	Yes
			SBR	140	74	Yes	88	Yes
			EBL	250	307	No	452	No
			WBL	80	18	Yes	16	Yes
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	SBL	220 (1240)	279	Yes	167	Yes
			SBR	900	0	Yes	0	Yes
6	Spring St/Cerritos Ave	I-605 NB On Ramp	WBL	260	239	Yes	181	Yes
9	Willow St	Lakewood Blvd	NBL	180	140	Yes	157	Yes
			SBL	150	52	Yes	103	Yes
			EBL	175	80	Yes	100	Yes
			WBL	150	45	Yes	152	No
11	I-405 NB Off Ramp	Bellflower Blvd	WBL	1,870	110	Yes	187	Yes
			WBL/T/R	1,130	65	Yes	196	Yes
			WBR	410	61	Yes	176	Yes
12	Willow St	Bellflower Blvd	NBL	150	394	No	135	Yes
			SBL	120	147	No	115	Yes
			EBL	140	230	No	377	No
			WBL	110	216	No	247	No
13	Los Coyotes Diagonal	Bellflower Blvd	NBL	160	25	Yes	30	Yes
			NBR	230	51	Yes	203	Yes
			EBL	190	344	No	647	No
			WBL	150	217	No	286	No
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	SBL	1525 (500)	153	Yes	274	Yes
16	Willow St	Los Coyotes Diagonal	SBL	120	173	No	279	No
			EBL	140	167	No	71	Yes
			WBL	160	356	No	660	No
17	Willow St	Woodruff Ave	NBL	140	753	No	318	No
			NBR	60	35	Yes	19	Yes
			SBL	120	137	No	66	Yes
			SBR	120	155	No	58	Yes
			EBL	200	268	No	193	Yes
			WBL	180	289	No	212	No
20	I-405 NB Direct Off Ramp	Palo Verde	WBL	550	426	Yes	290	Yes
			WBT/R	1,155	90	Yes	225	Yes
21	Woodruff Ave	Palo Verde	EBL	335	355	No	291	Yes
			EBR	335	238	Yes	204	Yes
22	Stearns St	Palo Verde	NBL	130	169	No	181	No
			SBL	120	94	Yes	162	No
			EBL	90	245	No	199	No
			WBL	80	39	Yes	132	No
24	I-405 NB Direct On Ramp	Studebaker Rd	NBL	100	1	Yes	57	Yes
			SBR	70	9	Yes	20	Yes

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Table 4.4-4 Alternative 1 (Year 2040) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2040 Alternative 1 Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
26	Atherton St	Studebaker Rd	NBL	200	67	Yes	75	Yes
			SBL	260	2	Yes	3	Yes
			SBR	70	85	No	21	Yes
			EBL	120	81	Yes	248	No
			WBL	220	30	Yes	28	Yes
27	SR-22 WB On/Off Ramp	Studebaker Rd	NBR	150	15	Yes	22	Yes
			SBL	200	77	Yes	199	Yes
28	SR-22 EB On/Off Ramp	Studebaker Rd	NBR	300	1362	No	1198	No
			SBL	150	421	No	270	No
			WBR	60	51	Yes	174	No
30	7th St	Pacific Coast Highway	NBL	330	174	Yes	269	Yes
			SBL	290	303	No	411	No
31	7th St	Bellflower Blvd	NBR	130	127	Yes	29	Yes
			SBL	160	188	No	254	No
			SBR	160	87	Yes	310	No
			EBL	200	473	No	345	No
			WBL	200	37	Yes	70	Yes
32	Pacific Coast Highway	Bellflower Blvd	NBL	280	102	Yes	76	Yes
			SBL	240	247	No	195	Yes
			SBR	60	19	Yes	33	Yes
			EBL	110	62	Yes	127	No
			WBL	120	52	Yes	66	Yes
			WBR	200	60	Yes	40	Yes
33	7th St	Channel Dr	EBL	270	107	Yes	24	Yes
			EBR	180	21	Yes	61	Yes
			WBL	280	107	Yes	264	Yes
34	7th St	W. Campus Dr	SBL/R	150	73	Yes	235	No
			EBL	400	85	Yes	28	Yes
35	7th St	E. Campus Dr	SBL	150	82	Yes	207	No
			SBT/R	150	71	Yes	128	Yes
			EBL	150	212	No	104	Yes
			WBL	300	80	Yes	147	Yes

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Table 4.4-5: Alternative 1 (Year 2020) Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 1 (Year 2020) Conditions							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[1]	D/C	Density[2]	LOS[3]	Traffic Demand Volume[1]	D/C	Density[2]	LOS[3]
I-405 Mainline												
Temple Avenue to Lakewood Boulevard/Willow Street	GP	NB	5	9,250	9,540	1.03	41.6	E	10,490	1.12	–*	F
		SB	5	9,250	9,660	1.05	36.6	F	10,060	1.09	–*	F
	HOV	NB	1	1,850	2,070	1.12	–	–	1,980	1.07	–	–
		SB	1	1,850	1,990	1.08	–	–	2,140	1.16	–	–
Lakewood Boulevard/Willow Street to Bellflower Boulevard	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,050	1.11	–	–	2,050	1.11	–	–
		SB	1	1,850	1,990	1.08	–	–	2,140	1.16	–	–
Bellflower Boulevard to Woodruff Avenue	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,050	1.11	–	–	2,050	1.11	–	–
		SB	1	1,850	1,990	1.08	–	–	2,140	1.16	–	–
Woodruff Avenue to Palo Verde Avenue/Stearns Street	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	4	7,400	8,670	1.17	–*	F	8,810	1.19	–*	F
	HOV	NB	1	1,850	2,070	1.12	–	–	2,060	1.11	–	–
		SB	1	1,850	2,180	1.18	–	–	2,020	1.09	–	–
Palo Verde Avenue/Stearns Street to Studebaker Road	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,070	1.12	–	–	2,060	1.11	–	–
		SB	1	1,850	2,240	1.21	–	–	2,020	1.09	–	–
Studebaker Road to I-605 NB Off Ramp	GP	NB	4	7,400	8,810	1.19	–*	F	10,390	1.40	–*	F
		SB	5	9,250	8,740	0.94	30.7	D	9,060	0.98	32.5	E
	HOV	NB	1	1,850	2,410	1.30	–	–	1,990	1.08	–	–
		SB	1	1,850	2,240	1.21	–	–	2,010	1.09	–	–
I-605 NB Off Ramp to 7th St Off Ramp	GP	NB	1	7,400	7,260	0.98	38.4	E	8,800	1.20	–*	F
		SB	4	7,400	7,480	1.01	34.3	D	8,030	1.09	–*	F
	HOV	NB	1	1,850	2,410	1.30	–	–	1,990	1.08	–	–
		SB	1	1,850	2,140	1.16	–	–	2,010	1.09	–	–
7th St Off Ramp to I-605 SB On Ramp	GP	NB	4	7,400	7,260	0.98	38.4	E	8,900	1.20	–*	F
		SB	4	7,400	7,380	1.00	33.6	D	7,910	1.07	44.6	E
	HOV	NB	1	1,850	2,410	1.30	–	–	1,990	1.08	–	–
		SB	1	1,850	2,140	1.16	–	–	2,010	1.09	–	–
I-605 Mainline												
Carson Street to Spring Street	GP	NB	4	7,400	6,140	0.83	27.0	D	7,490	1.01	38.5	E
		SB	4	7,400	7,890	1.07	39.1	E	7,410	1.00	39.1	E
	HOV	NB	1	1,850	1,590	0.86	–	–	1,980	1.07	–	–
		SB	1	1,850	1,900	1.03	–	–	1,780	0.96	–	–
Spring Street to Willow Street/Katella Avenue	GP	NB	4	7,400	5,360	0.72	21.9	C	6,410	0.87	27.0	D
		SB	4	7,400	6,800	0.93	29.8	D	6,010	0.81	24.9	C
	HOV	NB	1	1,850	1,850	1.00	–	–	2,430	1.31	–	–
		SB	1	1,850	2,200	1.19	–	–	1,890	1.02	–	–
Willow Street/Katella Avenue CD Road On Ramp to I-405	GP	NB	5	9,250	5,320	0.58	17.6	B	6,650	0.72	24.0	C
		SB	4	7,400	5,770	0.78	24.8	C	5,220	0.71	24.8	C
	HOV	NB	1	1,850	1,480	0.80	–	–	1,990	1.08	–	–
		SB	1	1,850	1,400	0.75	–	–	980	0.53	–	–
7th Street Mainline												
Pepper Tree Lane to Studebaker Road	GP	EB	2	3,700	3,180	0.85	36.9	B	2,750	0.74	34.7	B
		WB	4	5,550	3,980	0.72	21.2	C	2,900	0.52	15.5	B
Studebaker Road to I-605	GP	EB	2	3,700	4,410	1.19	–*	F	3,630	0.98	31.8	D
		WB	2	3,700	4,240	1.15	48.8	E	4,030	1.09	38.8	F

Notes:
1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane LOS is based on density except when demand-to-capacity (D/C) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single High Occupancy Vehicle (HOV) lane.
5. * Density is in excess of 45 pc/mi/ln; therefore LOS is F.

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Table 4.4-6: Alternative 1 (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 1 (Year 2020) Conditions									
				AM Peak				PM Peak					
				Ramp		Ramp Junction		Ramp		Ramp Junction			
				Traffic Volume[1]	D/C	Density[2]	LOS[2,3]	Traffic Volume[1]	D/C	Density[2]	LOS[2,3]		
I-405 Ramp Junctions													
Lakewood Blvd & Willow St	NB Off Direct	2	3,000	990	0.33	13.8	B	950	0.32	15.0	F		
	NB On Loop	1	1,500	790	0.53	44.9	F	610	0.41	52.1	F		
	NB On Direct	1	1,500	570	0.38	24.8	C	320	0.21	28.1	D		
	SB Off (Direct + Loop)	2	3,000	1,110	0.37	17.5	B	1,360	0.45	20.0	F		
	SB On Loop	1	1,500	310	0.21	42.6	F	380	0.25	43.1	F		
	SB On Direct (from Willow St)	1	1,500	430	0.29	22.1	C	610	0.41	22.4	C		
Bellflower Blvd & Los Coyotes Diagonal	NB Off Direct	1	1,500	520	0.35	26.9	C	590	0.39	33.1	F		
	NB On (Direct + Loop)	2	3,000	1,200	0.40	13.9	F	830	0.28	13.8	F		
	SB Off (Direct + Loop)	2	3,000	1,450	0.48	17.4	B	1,960	0.65	21.8	C		
	SB On (Direct + Loop)	1	1,500	930	0.62	35.0	E	1,410	0.94	33.9	F		
Woodruff Ave	NB Off Direct	1	1,500	600	0.40	23.3	C	300	0.20	26.9	C		
	NB On Direct	1	1,500	470	0.31	34.8	F	320	0.21	42.5	F		
	SB Off Direct	1	1,500	760	0.51	29.3	D	600	0.40	29.6	D		
	SB On Direct	1	1,500	640	0.43	23.1	F	290	0.19	24.7	F		
Palo Verde Ave & Stearn St	NB Off Direct	1	1,500	690	0.46	24.5	C	800	0.53	30.5	F		
	NB On Loop	1	1,500	230	0.15	52.4	F	290	0.19	62.1	F		
	SB On Direct (from Stearn St)	1	1,500	490	0.33	26.4	F	590	0.39	26.4	F		
Studebaker Rd	NB On Direct	1	1,500	270	0.18	55.1	F	280	0.19	65.5	F		
	SB Off Direct	1	1,500	410	0.27	35.4	E	310	0.21	35.7	E		
7th St	SB Off Direct	1	1,500	80	0.05	34.6	D	120	0.08	37.2	F		

Table 4.4-6: Alternative 1 (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 1 (Year 2020) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[2,5]	Traffic Volume[1]	D/C	Density[2]	LOS[2,5]
I-605 Ramp Junctions											
Carson St	NB Off Direct	1	1,500	1,010	0.67	33.4	D	960	0.64	38.8	E
	NB On Loop	1	1,500	450	0.30	21.0	C	520	0.35	25.2	C
	NB On Direct	1	1,500	770	0.51	21.1	C	690	0.46	24.2	C
	SB Off Direct	2	3,000	1,210	0.40	13.7	B	1,390	0.46	14.4	B
	SB On Loop	1	1,500	530	0.35	22.3	C	440	0.29	21.4	C
	SB On Direct	1	1,500	270	0.18	22.9	C	350	0.23	21.7	C
Spring St/Cerritos Ave	NB On Loop	1	1,500	780	0.52	18.9	B	1,090	0.73	20.5	C
	SB Off Direct	1	1,500	1,020	0.68	35.0	E	1,410	0.94	35.6	E
Willow St/Katella Ave	NB Off (Direct + Loop)	1	1,500	1,060	0.71	0.6	A	1,630	1.09	7.1	A
	NB On Direct	1	1,500	1,100	0.73	20.3	C	1,400	0.93	22.5	C
	SB Off Direct	1	1,500	560	0.37	34.7	D	570	0.38	31.1	D
	SB Off Loop	1	1,500	1,120	0.75	35.3	E	1,020	0.68	31.1	D
	SB On Direct (Direct + Loop)	1	1,500	590	0.39	24.2	C	800	0.53	21.9	C
7th Street Ramp Junctions											
Studebaker Rd	EB Off Loop	1	1,500	110	0.07	34.1	D	610	0.41	30.1	D
	EB On Loop	1	1,500	1,270	0.85	40.0	F	1,420	0.95	33.1	D
	WB Off Loop	1	1,500	790	0.53	43.8	F	1,440	0.96	41.7	F
	WB On Loop	1	1,500	550	0.37	30.3	D	590	0.26	21.0	C

Table 4.4-6: Alternative 1 (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 1 (Year 2020) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[2,5]	Traffic Volume[1]	D/C	Density[2]	LOS[2,5]
Freeway - to - Freeway Branch Connectors[7]											
I-405/I-605 Freeway Interchanges	I-605 SB to I-405 NB	1	1,800	800	0.44	--	--	1,000	0.56	--	--
	I-605 SB/7th St to I-405 NB	2	3,600	1,550	0.43	--	--	1,480	0.41	--	--
	I-405 SB to I-605 NB	2	3,600	1,290	0.36	--	--	1,060	0.29	--	--
	I-605 SB to 7th St/I-405 SB	2	3,600	4,970	1.38	--	--	4,230	1.18	--	--
	I-605 SB/I-405 SB to 7th St	1	1,800	2,150	1.19	--	--	1,120	0.62	--	--
	7th St to I-605 NB/I-405 NB	2	3,600	1,120	0.31	--	--	1,230	0.34	--	--
	7th St to I-405 NB	1	1,800	750	0.42	--	--	430	0.24	--	--

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); D/C - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calulated for areas exceeding 1,500 ft in length.
7. For freeway-to-freeway branch connectors, D/C ratios are provided.

GL-9 (Continued)

Table 4.4-7: Alternative 1 (Year 2020) Weaving Level-of-Service
Freeway and Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Southbound - Lakewood Boulevard/Willow Street to Bellflower Boulevard	45.3	F	75.7	F
I-405 Northbound - Bellflower Boulevard to Lakewood Boulevard/Willow Street	47.6	F	42.5	E
I-405 Southbound - Bellflower Boulevard to Woodruff Avenue	41.1	E	67.0	F
I-405 Northbound - Woodruff Avenue to Bellflower Boulevard	52.6	F	49.7	F
I-405 Northbound - Palo Verde Avenue/Stearns Street to Woodruff Avenue	46.6	F	41.8	E
I-405 Southbound - Palo Verde Avenue/Stearns Street to Studebaker Road	33.4	D	43.9	F
I-405 Northbound - Studebaker Road to Palo Verde Avenue/Stearns Street	44.2	F	45.1	F
Collector-Distributor (C-D) Roads				
Lakewood Boulveard/Willow Street Interchange at I-405				
Southbound C-D Road	18.1	B	22.5	C
Bellflower Boulevard/Los Coyotes Diagonal Interchange at I-405				
Southbound C-D Road	5.0	A	5.0	A

Notes:
1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads.

GL-9 (Continued)

Table 4.4-8: Alternative 1 (Year 2040) Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 1 (Year 2040) Conditions							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[1]	D/C	Density[2]	LOS[3]	Traffic Demand Volume[1]	D/C	Density[2]	LOS[3]
I-405 Mainline												
Temple Avenue to Lakewood Boulevard/Willow Street	GP	NB	5	9,250	10,510	1.11	–*	F	11,240	1.22	–*	F
		SB	5	9,250	10,460	1.13	48.5	E	10,890	1.17	–*	F
	HOV	NB	1	1,850	2,240	1.21	–	–	2,140	1.16	–	–
		SB	1	1,850	2,160	1.17	–	–	2,310	1.25	–	–
Lakewood Boulevard/Willow Street to Bellflower Boulevard	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,220	1.20	–	–	2,210	1.19	–	–
		SB	1	1,850	2,160	1.17	–	–	2,310	1.25	–	–
Bellflower Boulevard to Woodruff Avenue	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,220	1.20	–	–	2,210	1.19	–	–
		SB	1	1,850	2,150	1.16	–	–	2,350	1.25	–	–
Woodruff Avenue to Palo Verde Avenue/Stearns Street	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	4	7,400	9,370	1.27	–*	F	9,530	1.29	–*	F
	HOV	NB	1	1,850	2,240	1.21	–	–	2,220	1.20	–	–
		SB	1	1,850	2,350	1.27	–	–	2,180	1.18	–	–
Palo Verde Avenue/Stearns Street to Studebaker Road	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,240	1.21	–	–	2,220	1.20	–	–
		SB	1	1,850	2,420	1.31	–	–	2,180	1.18	–	–
Studebaker Road to I-605 NB Off Ramp	GP	NB	4	7,400	9,520	1.29	–*	F	11,235	1.52	–*	F
		SB	5	9,250	9,450	1.02	35.1	E	9,880	1.06	44.1	E
	HOV	NB	1	1,850	2,610	1.41	–	–	2,150	1.16	–	–
		SB	1	1,850	2,420	1.31	–	–	2,170	1.17	–	–
I-605 NB Off Ramp to 7th St Off Ramp	GP	NB	4	7,400	7,860	1.06	43.9	E	9,620	1.30	–*	F
		SB	4	7,400	8,080	1.09	43.2	E	8,270	1.12	–*	F
	HOV	NB	1	1,850	2,610	1.41	–	–	2,150	1.16	–	–
		SB	1	1,850	2,420	1.31	–	–	2,170	1.17	–	–
7th St Off Ramp to I-605 SB On Ramp	GP	NB	4	7,400	7,850	1.06	43.9	E	9,620	1.30	–*	F
		SB	4	7,400	7,980	1.08	38.3	E	8,140	1.10	–*	F
	HOV	NB	1	1,850	2,610	1.41	–	–	2,150	1.16	–	–
		SB	1	1,850	2,310	1.25	–	–	2,170	1.17	–	–
I-605 Mainline												
Carson Street to Spring Street	GP	NB	4	7,400	6,640	0.90	29.9	D	8,190	1.09	–*	F
		SB	4	7,400	8,530	1.15	–*	F	8,010	1.08	42.4	E
	HOV	NB	1	1,850	1,720	0.93	–	–	2,140	1.16	–	–
		SB	1	1,850	2,050	1.11	–	–	1,920	1.04	–	–
Spring Street to Willow Street/Katella Avenue	GP	NB	4	7,400	5,790	0.78	22.8	C	6,930	0.94	30.2	D
		SB	4	7,400	7,420	1.00	33.9	D	6,500	0.88	27.5	D
	HOV	NB	1	1,850	2,000	1.08	–	–	2,630	1.42	–	–
		SB	1	1,850	2,370	1.28	–	–	2,040	1.10	–	–
Willow Street/Katella Avenue CD Road On Ramp to I-405	GP	NB	5	9,250	5,730	0.62	19.0	C	7,190	0.78	26.0	D
		SB	4	7,400	6,240	0.84	27.2	D	5,880	0.79	26.9	D
	HOV	NB	1	1,850	2,000	1.05	–	–	2,630	1.42	–	–
		SB	1	1,850	1,520	0.82	–	–	1,060	0.57	–	–
7th Street Mainline												
Pepper Tree Lane to Studebaker Road	GP	EB	2	3,700	3,160	0.85	18.5	B	2,730	0.74	14.7	B
		WB	3	5,550	3,880	0.70	21.3	C	2,900	0.52	15.5	B
Studebaker Road to I-605	GP	EB	2	3,700	4,410	1.19	–*	F	3,630	0.98	31.8	D
		WB	3	5,700	4,240	1.15	45.9	E	4,080	1.09	38.8	E

Notes:
1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/ lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane LOS is based on density except when demand-to-capacity (D/C) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single High Occupancy Vehicle (HOV) lane.
5. * Density is in excess of 45 pc/mi/ln; therefore LOS is F.

GL-9 (Continued)

Table 4.4-9: Alternative 1 (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 1 (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[2,5]	Traffic Volume[1]	D/C	Density[2]	LOS[2,5]
I-405 Ramp Junctions											
Lakewood Blvd & Willow St	NB Off Direct	2	3,000	1,070	0.36	15.9	B	1,020	0.34	18.3	F
	NB On Loop	1	1,500	860	0.57	48.1	F	660	0.44	56.1	F
	NB On Direct	1	1,500	610	0.41	26.7	F	340	0.23	30.4	F
	SB Off (Direct + Loop)	2	3,000	1,200	0.40	19.7	B	1,470	0.49	22.5	F
	SB On Loop	1	1,500	340	0.23	46.0	F	410	0.27	46.4	F
	SB On Direct (from Willow St)	1	1,500	460	0.31	23.6	C	660	0.44	23.8	F
Bellflower Blvd & Los Coyotes Diagonal	NB Off Direct	1	1,500	560	0.37	29.5	D	630	0.42	36.1	F
	NB On (Direct + Loop)	2	3,000	1,300	0.43	15.9	F	900	0.30	15.8	F
	SB Off (Direct + Loop)	2	3,000	1,570	0.52	19.8	B	2,120	0.71	24.6	F
	SB On (Direct + Loop)	1	1,500	1,010	0.67	37.1	F	1,520	1.01	35.5	F
Woodruff Ave	NB Off Direct	1	1,500	640	0.43	25.9	C	330	0.22	29.9	F
	NB On Direct	1	1,500	510	0.34	37.2	F	340	0.23	45.7	F
	SB Off Direct	1	1,500	820	0.55	32.1	D	650	0.43	32.4	D
	SB On Direct	1	1,500	700	0.47	24.0	F	320	0.21	26.1	F
Palo Verde Ave & Steam St	NB Off Direct	1	1,500	750	0.50	27.3	C	860	0.57	33.8	F
	NB On Loop	1	1,500	250	0.17	56.9	F	320	0.21	67.2	F
	SB On Direct (from Steam St)	1	1,500	530	0.35	27.7	F	640	0.43	27.7	F
Studebaker Rd	NB On Direct	1	1,500	300	0.20	59.7	F	310	0.21	70.9	F
	SB Off Direct	1	1,500	450	0.30	38.1	E	330	0.22	38.4	F
7th St	SB Off Direct	1	1,500	80	0.05	37.1	E	130	0.09	40.1	F

GL-9 (Continued)

Table 4.4-9: Alternative 1 (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 1 (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[2,5]	Traffic Volume[1]	D/C	Density[2]	LOS[2,5]
I-605 Ramp Junctions											
Carson St	NB Off Direct	1	1,500	1,090	0.73	35.9	E	1,030	0.69	41.8	F
	NB On Loop	1	1,500	490	0.33	22.2	C	560	0.37	26.7	C
	NB On Direct	1	1,500	830	0.55	22.1	C	740	0.49	25.3	F
	SB Off Direct	2	3,000	1,300	0.43	15.8	B	1,500	0.50	16.6	B
	SB On Loop	1	1,500	570	0.38	23.4	C	480	0.32	22.5	C
	SB On Direct	1	1,500	290	0.19	24.2	F	380	0.25	22.8	C
Spring St/Cerritos Ave	NB On Loop	1	1,500	840	0.56	19.6	B	1,170	0.78	21.1	F
	SB Off Direct	1	1,500	1,110	0.74	37.7	E	1,520	1.01	38.3	E
Willow St/Katella Ave	NB Off (Direct + Loop)	1	1,500	1,140	0.76	2.6	A	1,760	1.17	9.7	A
	NB On Direct	1	1,500	1,190	0.79	21.3	C	1,520	1.01	23.4	C
	SB Off Direct	1	1,500	610	0.41	37.3	E	620	0.41	33.5	D
	SB Off Loop	1	1,500	1,210	0.81	38.0	E	1,110	0.74	33.5	D
	SB On Direct (Direct + Loop)	1	1,500	630	0.42	25.8	C	870	0.58	23.3	C
7th Street Ramp Junctions											
Studebaker Rd	EB Off Loop	1	1,500	120	0.08	34.1	D	660	0.44	30.1	D
	EB On Loop	1	1,500	1,370	0.91	40.9	F	1,540	1.03	34.0	D
	WB Off Loop	1	1,500	850	0.57	43.8	F	1,560	1.04	41.7	F
	WB On Loop	1	1,500	600	0.40	30.7	D	430	0.29	21.3	C

GL-9 (Continued)

Table 4.4-9: Alternative 1 (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 1 (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[5]	D/C	Density[7]	LOS[1,5]	Traffic Volume[5]	D/C	Density[7]	LOS[1,5]
	Freeway - to - Freeway Branch Connectors[7]										
I-405/I-605 Freeway Interchanges	I-605 SB to I-405 NB	1	1,800	870	0.48	--	--	1,080	0.60	--	--
	I-605 SB/7th St to I-405 NB	2	3,600	1,570	0.46	--	--	1,600	0.44	--	--
	I-405 SB to I-605 NB	2	3,600	1,390	0.39	--	--	1,560	0.43	--	--
	I-605 SB to 7th St/I-405 SB	2	3,600	5,380	1.49	--	--	4,570	1.27	--	--
	I-605 SB/I-405 SB to 7th St	1	1,800	2,150	1.19	--	--	1,120	0.62	--	--
	7th St to I-605 NB/I-405 NB	2	3,600	1,200	0.33	--	--	1,330	0.37	--	--
	7th St to I-405 NB	1	1,800	810	0.45	--	--	470	0.26	--	--

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); D/C - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. For freeway-to-freeway branch connectors, D/C ratios are provided.

GL-9 (Continued)

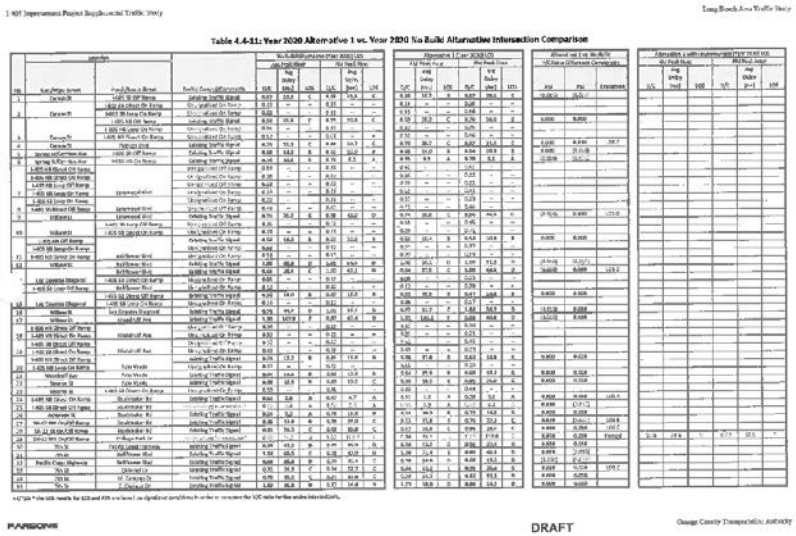
Table 4.4-10: Alternative 1 (Year 2040) Weaving Level-of-Service Freeway and Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Southbound - Lakewood Boulevard/Willow Street to Bellflower Boulevard	49.9	F	78.5	F
I-405 Northbound - Bellflower Boulevard to Lakewood Boulevard/Willow Street	52.3	F	46.6	F
I-405 Southbound - Bellflower Boulevard to Woodruff Avenue	45.6	F	73.7	F
I-405 Northbound - Woodruff Avenue to Bellflower Boulevard	58.3	F	53.2	F
I-405 Northbound - Palo Verde Avenue/Stearns Street to Woodruff Avenue	51.3	F	46.2	F
I-405 Southbound - Palo Verde Avenue/Stearns Street to Studebaker Road	36.5	E	48.0	F
I-405 Northbound - Studebaker Road to Palo Verde Avenue/Stearns Street	48.8	F	55.1	F
Collector-Distributor (C-D) Roads				
Lakewood Boulvear/Willow Street Interchange at I-405				
Southbound C-D Road	18.1	B	22.5	C
Bellflower Boulevard/Los Coyotes Diagonal Interchange at I-405				
Southbound C-D Road	5.0	A	5.0	A

Notes:

1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads.

GL-9 (Continued)



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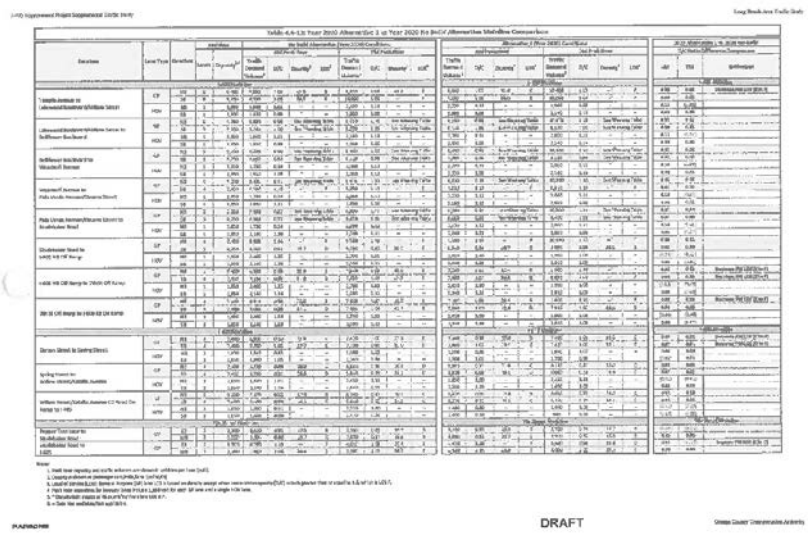

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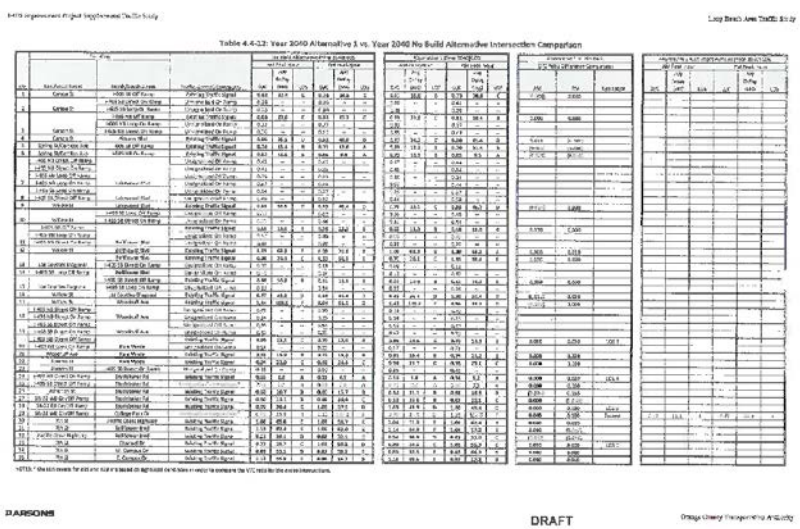

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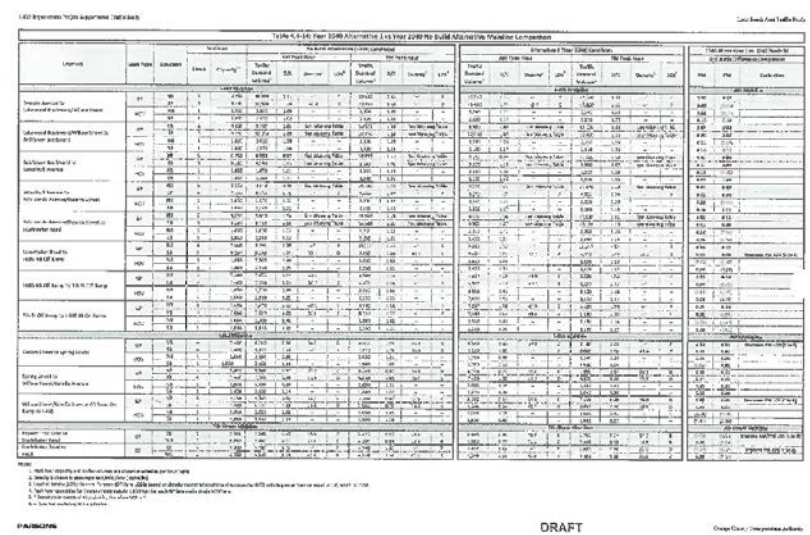

GL-9 (Continued)

I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.5-1 Alternative 2 (Year 2020) Intersection Level of Service - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Traffic Control/Comments	Alternative 1 (Year 2020) LOS: AM Peak Hour D/C	AM Peak Hour Avg Delay (sec)	AM Peak Hour LOS	PM Peak Hour D/C	PM Peak Hour Avg Delay (sec)	PM Peak Hour LOS
1	Carson St	I-605 SB Off Ramp	Existing Traffic Signal	0.58	19.1	B	0.67	20.3	C
2	Carson St	I-605 SB Direct On Ramp	Unsignalized On Ramp	0.24	--	--	0.32	--	--
		I-605 SB Loop On Ramp	Unsignalized On Ramp	0.37	--	--	0.36	--	--
3	Carson St	I-605 NB Off Ramp	Existing Traffic Signal	0.60	20.1	C	0.75	16.5	B
		I-605 NB Loop On Ramp	Unsignalized On Ramp	0.33	--	--	0.36	--	--
		I-605 NB Direct On Ramp	Unsignalized On Ramp	0.51	--	--	0.46	--	--
4	Carson St	Pioneer Blvd	Existing Traffic Signal	0.78	34.4	C	0.84	31.2	C
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	Existing Traffic Signal	0.68	14.5	B	0.57	9.8	A
6	Spring St/Cerritos Ave	I-605 NB On Ramp	Existing Traffic Signal	0.69	7.9	A	0.74	7.7	A
7	I-405 NB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.42	--	--	0.42	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.39	--	--	0.20	--	--
	I-405 NB Loop Off Ramp		Unsignalized Off Ramp	0.23	--	--	0.28	--	--
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.54	--	--	0.41	--	--
8	I-405 SB Loop On Ramp	Lakewood Blvd	Unsignalized On Ramp	0.22	--	--	0.25	--	--
	I-405 SB Direct Off Ramp		Unsignalized Off Ramp	0.42	--	--	0.47	--	--
9	Willow St	Lakewood Blvd	Existing Traffic Signal	0.75	28.3	C	0.90	44.3	D
10	Willow St	I-405 SB Loop Off Ramp	Unsignalized Off Ramp	0.33	--	--	0.45	--	--
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.31	--	--	0.43	--	--
11	I-405 NB Off Ramp	Bellflower Blvd	Existing Traffic Signal	0.52	10.5	B	0.53	11.6	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.51	--	--	0.36	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.30	--	--	0.18	--	--
12	Willow St	Bellflower Blvd	Existing Traffic Signal	0.98	39.0	D	1.16	78.7	E
13	Los Coyotes Diagonal	Bellflower Blvd	Existing Traffic Signal	0.62	27.4	C	1.03	41.2	D
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.08	--	--	0.14	--	--
14	I-405 SB Loop Off Ramp	Bellflower Blvd	Unsignalized On Ramp	0.12	--	--	0.25	--	--
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	Existing Traffic Signal	0.52	10.4	B	0.48	14.1	B
		I-405 SB Loop On Ramp	Unsignalized On Ramp	0.31	--	--	0.20	--	--
16	Willow St	Los Coyotes Diagonal	Existing Traffic Signal	0.88	54.7	D	1.25	79.6	E
17	Willow St	Woodruff Ave	Existing Traffic Signal	1.41	203.6	F	0.88	54.3	D
18	I-405 NB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.44	--	--	0.23	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.29	--	--	0.21	--	--
19	I-405 SB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.51	--	--	0.46	--	--
	I-405 SB Direct On Ramp		Unsignalized On Ramp	0.44	--	--	0.26	--	--
20	I-405 NB Direct Off Ramp	Palo Verde	Existing Traffic Signal	0.69	15.3	B	0.59	11.8	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.10	--	--	0.19	--	--
21	Woodruff Ave	Palo Verde	Existing Traffic Signal	0.82	13.8	B	0.70	11.3	B
22	Stearns St	Palo Verde	Existing Traffic Signal	0.83	17.9	B	0.83	20.2	C
23	Stearns St	I-405 SB Direct On Ramp	Unsignalized On Ramp	0.29	--	--	0.40	--	--
24	I-405 NB Direct On Ramp	Studebaker Rd	Existing Traffic Signal	0.54	3.3	A	0.52	2.7	A
25	I-405 SB Direct Off Ramp	Studebaker Rd	Unsignalized Intersection	0.90	61.5	F	0.61	31.4	D
26	Atherton St	Studebaker Rd	Existing Traffic Signal	0.59	8.5	A	0.79	15.0	B
27	SR-22 WB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.49	13.0	B	0.83	28.9	C
28	SR-22 EB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.97	30.9	C	0.98	30.1	C
29	SR-22 WB On/Off Ramp	College Park Dr	Unsignalized Intersection	0.62	28.6	D	1.14	172.9	F
30	7th St	Pacific Coast Highway	Existing Traffic Signal	0.96	51.2	D	0.99	39.9	D
31	7th St	Bellflower Blvd	Existing Traffic Signal	1.09	74.9	E	0.98	46.3	D
32	Pacific Coast Highway	Bellflower Blvd	Existing Traffic Signal	0.51	39.7	D	0.64	19.3	B
33	7th St	Channel Dr	Existing Traffic Signal	0.73	24.0	C	0.96	24.8	C
34	7th St	W. Campus Dr	Existing Traffic Signal	0.92	45.2	D	0.83	41.7	D
35	7th St	E. Campus Dr	Existing Traffic Signal	1.07	46.4	D	0.90	16.1	B

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Table 4.5-2 Alternative 2 (Year 2020) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Movement	Available Storage (ft)	2020 Alternative 2 Conditions: AM Peak Hour 95th Percentile Queue (ft)	AM Peak Hour Adequate Storage? (Yes or No)	PM Peak Hour 95th Percentile Queue (ft)	PM Peak Hour Adequate Storage? (Yes or No)
1	Carson St	I-605 SB Off Ramp	SBL	300	203	Yes	335	No
			SBT	1,130	126	Yes	183	Yes
			SBR	300	256	Yes	195	Yes
3	Carson St	I-605 NB Off Ramp	NBL	300 (650)	230	Yes	285	Yes
			NBR	300(1175)	220	Yes	155	Yes
4	Carson St	Pioneer Blvd	NBL	120	315	No	332	No
			SBL	140	57	Yes	72	Yes
			SBR	140	77	Yes	85	Yes
			EBL	250	257	No	372	No
			WBL	80	15	Yes	16	Yes
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	SBL	220 (1240)	274	Yes	155	Yes
			SBR	900	0	Yes	0	Yes
6	Spring St/Cerritos Ave	I-605 NB On Ramp	WBL	260	196	Yes	145	Yes
9	Willow St	Lakewood Blvd	NBL	180	130	Yes	137	Yes
			SBL	150	50	Yes	119	Yes
			EBL	175	56	Yes	74	Yes
			WBL	150	39	Yes	143	Yes
11	I-405 NB Off Ramp	Bellflower Blvd	WBL	1,870	102	Yes	181	Yes
			WBL/T/R	1,130	59	Yes	182	Yes
			WBR	410	55	Yes	165	Yes
12	Willow St	Bellflower Blvd	NBL	150	289	No	79	Yes
			SBL	120	189	No	246	No
			EBL	140	147	No	125	Yes
			WBL	110	188	No	311	No
13	Los Coyotes Diagonal	Bellflower Blvd	NBL	160	23	Yes	43	Yes
			NBR	230	49	Yes	147	Yes
			EBL	190	316	No	583	No
			WBL	150	197	No	207	No
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	SBL	1525 (500)	137	Yes	260	Yes
16	Willow St	Los Coyotes Diagonal	SBL	120	166	No	355	No
			EBL	140	159	No	54	Yes
			WBL	160	329	No	697	No
17	Willow St	Woodruff Ave	NBL	140	982	No	393	No
			NBR	60	22	Yes	9	Yes
			SBL	120	74	Yes	29	Yes
			SBR	120	211	No	56	Yes
			EBL	200	351	No	411	No
			WBL	180	191	No	108	Yes
20	I-405 NB Direct Off Ramp	Palo Verde	WBL	550	327	Yes	172	Yes
			WBT/R	1,155	68	Yes	236	Yes
21	Woodruff Ave	Palo Verde	EBL	335	257	Yes	207	Yes
			EBR	335	290	Yes	227	Yes
22	Stearns St	Palo Verde	NBL	130	161	No	165	No
			SBL	120	92	Yes	112	Yes
			EBL	90	168	No	164	No
			WBL	80	44	Yes	112	No
24	I-405 NB Direct On Ramp	Studebaker Rd	NBL	100	68	Yes	51	Yes
			SBR	70	16	Yes	16	Yes

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I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.5-2 Alternative 2 (Year 2020) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Movement	Available Storage (ft)	2020 Alternative 2 Conditions: AM Peak Hour: 95th Percentile Queue (ft)	AM Peak Hour: Adequate Storage? (Yes or No)	PM Peak Hour: 95th Percentile Queue (ft)	PM Peak Hour: Adequate Storage? (Yes or No)
26	Atherton St	Studebaker Rd	NBL	200	55	Yes	56	Yes
			SBL	260	1	Yes	4	Yes
			SBR	70	16	Yes	21	Yes
			EBL	120	79	Yes	223	No
			WBL	220	29	Yes	26	Yes
27	SR-22 WB On/Off Ramp	Studebaker Rd	NBR	150	14	Yes	23	Yes
			SBL	200	81	Yes	226	No
28	SR-22 EB On/Off Ramp	Studebaker Rd	NBR	300	1212	No	1035	No
			SBL	150	368	No	242	No
			WBR	60	62	No	223	No
30	7th St	Pacific Coast Highway	NBL	380	155	Yes	239	Yes
			SBL	290	288	Yes	390	No
31	7th St	Bellflower Blvd	NBR	130	99	Yes	40	Yes
			SBL	160	196	No	237	No
			SBR	160	87	Yes	352	No
			EBL	200	491	No	395	No
			WBL	200	36	Yes	58	Yes
32	Pacific Coast Highway	Bellflower Blvd	NBL	280	88	Yes	70	Yes
			SBL	240	226	Yes	208	Yes
			SBR	60	17	Yes	31	Yes
			EBL	110	54	Yes	118	No
			WBL	120	53	Yes	59	Yes
			WBR	200	65	Yes	41	Yes
33	7th St	Channel Dr	EBL	270	107	Yes	27	Yes
			EBR	180	22	Yes	6	Yes
			WBL	280	105	Yes	258	Yes
34	7th St	W. Campus Dr	SBL/R	150	70	Yes	212	No
			EBL	400	80	Yes	24	Yes
35	7th St	E. Campus Dr	SBL	150	78	Yes	183	No
			SBT/R	150	69	Yes	108	Yes
			EBL	150	207	No	95	Yes
			WBL	300	77	Yes	120	Yes

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I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.5-3 Alternative 2 (Year 2040) Intersection Level of Service - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Traffic Control/Comments	Alternative 1 (Year 2040) LOS: AM Peak Hour: D/C	AM Peak Hour: Avg Delay (sec)	AM Peak Hour: LOS	PM Peak Hour: D/C	PM Peak Hour: Avg Delay (sec)	PM Peak Hour: LOS
1	Carson St	I-605 SB Off Ramp	Existing Traffic Signal	0.63	19.3	B	0.73	21.0	C
2	Carson St	I-605 SB Direct On Ramp	Unsignalized On Ramp	0.26	--	--	0.34	--	--
		I-605 SB Loop On Ramp	Unsignalized On Ramp	0.40	--	--	0.39	--	--
3	Carson St	I-605 NB Off Ramp	Existing Traffic Signal	0.65	21.9	C	0.81	18.1	B
		I-605 NB Loop On Ramp	Unsignalized On Ramp	0.35	--	--	0.39	--	--
		I-605 NB Direct On Ramp	Unsignalized On Ramp	0.55	--	--	0.49	--	--
4	Carson St	Pioneer Blvd	Existing Traffic Signal	0.86	41.9	D	0.93	39.0	D
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	Existing Traffic Signal	0.74	15.7	B	0.62	10.8	B
6	Spring St/Cerritos Ave	I-605 NB On Ramp	Existing Traffic Signal	0.75	8.7	A	0.81	8.6	A
7	I-405 NB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.46	--	--	0.45	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.43	--	--	0.21	--	--
	I-405 NB Loop Off Ramp		Unsignalized Off Ramp	0.25	--	--	0.25	--	--
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.58	--	--	0.44	--	--
8	I-405 SB Loop On Ramp	Lakewood Blvd	Unsignalized On Ramp	0.24	--	--	0.27	--	--
	I-405 SB Direct Off Ramp		Unsignalized Off Ramp	0.45	--	--	0.51	--	--
9	Willow St	Lakewood Blvd	Existing Traffic Signal	0.79	32.2	C	1.02	52.0	D
10	Willow St	I-405 SB Loop Off Ramp	Unsignalized Off Ramp	0.36	--	--	0.49	--	--
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.34	--	--	0.46	--	--
11	I-405 NB Off Ramp	Bellflower Blvd	Existing Traffic Signal	0.57	11.3	B	0.58	12.2	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.56	--	--	0.39	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.32	--	--	0.19	--	--
12	Willow St	Bellflower Blvd	Existing Traffic Signal	1.05	55.0	D	1.25	106.3	F
13	Los Coyotes Diagonal	Bellflower Blvd	Existing Traffic Signal	0.67	27.7	C	1.13	54.2	D
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.08	--	--	0.15	--	--
14	I-405 SB Loop Off Ramp	Bellflower Blvd	Unsignalized On Ramp	0.13	--	--	0.27	--	--
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	Existing Traffic Signal	0.56	11.0	B	0.52	14.8	B
		I-405 SB Loop On Ramp	Unsignalized On Ramp	0.33	--	--	0.21	--	--
16	Willow St	Los Coyotes Diagonal	Existing Traffic Signal	0.99	60.7	E	1.41	101.4	F
17	Willow St	Woodruff Ave	Existing Traffic Signal	1.53	242.2	F	0.95	81.3	F
18	I-405 NB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.47	--	--	0.23	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.31	--	--	0.23	--	--
19	I-405 SB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.55	--	--	0.50	--	--
	I-405 SB Direct On Ramp		Unsignalized On Ramp	0.47	--	--	0.28	--	--
20	I-405 NB Direct Off Ramp	Palo Verde	Existing Traffic Signal	0.82	17.4	B	0.72	13.3	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.11	--	--	0.20	--	--
21	Woodruff Ave	Palo Verde	Existing Traffic Signal	0.89	15.9	B	0.76	12.1	B
22	Stearns St	Palo Verde	Existing Traffic Signal	0.91	20.3	C	0.92	23.9	C
23	Stearns St	I-405 SB Direct On Ramp	Unsignalized On Ramp	0.31	--	--	0.43	--	--
24	I-405 NB Direct On Ramp	Studebaker Rd	Existing Traffic Signal	0.58	3.6	A	0.56	2.8	A
25	I-405 SB Direct Off Ramp	Studebaker Rd	Unsignalized Intersection	1.04	81.3	F	0.83	33.1	D
26	Atherton St	Studebaker Rd	Existing Traffic Signal	0.65	9.5	A	0.86	17.1	B
27	SR-22 WB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.54	13.4	B	0.89	31.8	C
28	SR-22 EB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	1.06	45.2	D	1.09	43.9	D
29	SR-22 WB On/Off Ramp	College Park Dr	Unsignalized Intersection	0.75	38.1	E	1.59	311.8	F
30	7th St	Pacific Coast Highway	Existing Traffic Signal	1.04	70.0	E	1.07	64.9	E
31	7th St	Bellflower Blvd	Existing Traffic Signal	1.18	92.7	F	1.06	60.9	E
32	Pacific Coast Highway	Bellflower Blvd	Existing Traffic Signal	0.55	40.2	D	0.74	31.4	C
33	7th St	Channel Dr	Existing Traffic Signal	0.79	25.4	C	1.04	55.7	E
34	7th St	W. Campus Dr	Existing Traffic Signal	0.89	68.4	E	0.90	66.0	E
35	7th St	E. Campus Dr	Existing Traffic Signal	1.17	68.7	E	0.99	19.0	B

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Table 4.5-4 Alternative 2 (Year 2040) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2040 Alternative 2 Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
1	Carson St	I-605 SB Off Ramp	SBL	300	223	Yes	372	No
			SBT	1,130	139	Yes	201	Yes
			SBR	300	286	Yes	216	Yes
3	Carson St	I-605 NB Off Ramp	NBL	300 (650)	252	Yes	312	Yes
			NBR	300(1175)	245	Yes	167	Yes
4	**Carson St**	**Pioneer Blvd**	NBL	120	348	No	366	No
			SBL	140	60	Yes	78	Yes
			SBR	140	82	Yes	88	Yes
			EBL	250	328	No	405	No
			WBL	80	15	Yes	16	Yes
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	SBL	220 (1240)	289	Yes	161	Yes
			SBR	900	0	Yes	0	Yes
6	Spring St/Cerritos Ave	I-605 NB On Ramp	WBL	260	211	Yes	159	Yes
9	Willow St	Lakewood Blvd	NBL	180	140	Yes	160	Yes
			SBL	150	58	Yes	132	Yes
			EBL	175	65	Yes	85	Yes
			WBL	150	46	Yes	167	No
11	I-405 NB Off Ramp	Bellflower Blvd	WBL	1,870	109	Yes	194	Yes
			WBL/T/R	1,130	70	Yes	209	Yes
			WBR	410	66	Yes	189	Yes
12	Willow St	Bellflower Blvd	NBL	150	314	No	77	Yes
			SBL	120	206	No	268	No
			EBL	140	161	No	144	No
			WBL	110	186	No	329	No
13	Los Coyotes Diagonal	Bellflower Blvd	NBL	160	25	Yes	47	Yes
			NBR	230	50	Yes	185	Yes
			EBL	190	346	No	643	No
			WBL	150	200	No	225	No
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	SBL	1525 (500)	143	Yes	277	Yes
16	Willow St	Los Coyotes Diagonal	SBL	120	193	No	405	No
			EBL	140	169	No	54	Yes
			WBL	160	358	No	762	No
17	**Willow St**	**Woodruff Ave**	NBL	140	1069	No	436	No
			NBR	60	23	Yes	9	Yes
			SBL	120	81	Yes	31	Yes
			SBR	120	239	No	58	Yes
			EBL	200	379	No	455	No
			WBL	180	211	No	116	Yes
20	I-405 NB Direct Off Ramp	Palo Verde	WBL	550	366	Yes	188	Yes
			WBT/R	1,155	89	Yes	285	Yes
21	Woodruff Ave	Palo Verde	EBL	335	304	Yes	228	Yes
			EBR	335	329	Yes	292	Yes
22	Stearns St	Palo Verde	NBL	130	177	No	181	No
			SBL	120	89	Yes	102	Yes
			EBL	90	187	No	185	No
			WBL	80	49	Yes	127	No
24	I-405 NB Direct On Ramp	Studebaker Rd	NBL	100	68	Yes	51	Yes
			SBR	70	18	Yes	17	Yes

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Table 4.5-4 Alternative 2 (Year 2040) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2040 Alternative 2 Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
26	Atherton St	Studebaker Rd	NBL	200	99	Yes	76	Yes
			SBL	260	2	Yes	4	Yes
			SBR	70	18	Yes	21	Yes
			EBL	120	85	Yes	248	No
			WBL	220	31	Yes	27	Yes
27	SR-22 WB On/Off Ramp	Studebaker Rd	NBR	150	15	Yes	24	Yes
			SBL	200	90	Yes	250	No
28	SR-22 EB On/Off Ramp	Studebaker Rd	NBR	300	1396	No	1201	No
			SBL	150	401	No	257	No
			WBR	60	64	No	312	No
30	7th St	Pacific Coast Highway	NBL	330	165	Yes	252	Yes
			SBL	280	324	No	445	No
31	**7th St**	**Bellflower Blvd**	NBR	130	133	No	45	Yes
			SBL	160	203	No	259	No
			SBR	160	90	Yes	448	No
			EBL	200	509	No	366	No
			WBL	200	36	Yes	62	Yes
32	Pacific Coast Highway	Bellflower Blvd	NBL	280	94	Yes	73	Yes
			SBL	240	275	No	203	Yes
			SBR	50	18	Yes	34	Yes
			EBL	110	55	Yes	127	No
			WBL	120	56	Yes	65	Yes
			WBR	200	75	Yes	42	Yes
33	7th St	Channel Dr	EBL	270	108	Yes	24	Yes
			EBR	180	20	Yes	59	Yes
			WBL	280	105	Yes	264	Yes
34	7th St	W. Campus Dr	SBL/R	150	75	Yes	234	No
			EBL	400	79	Yes	24	Yes
35	7th St	E. Campus Dr	SBL	150	84	Yes	213	No
			SBT/R	150	71	Yes	128	Yes
			EBL	150	210	No	99	Yes
			WBL	300	80	Yes	147	Yes

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Table 4.5-5: Alternative 2 (2020) Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline Lanes	Mainline Capacity[1,4]	Alternative 2 (Year 2020) Conditions – AM Peak Hour: Traffic Demand Volume[1]	AM Peak Hour: D/C	AM Peak Hour: Density[2]	AM Peak Hour: LOS[3]	PM Peak Hour: Traffic Demand Volume[1]	PM Peak Hour: D/C	PM Peak Hour: Density[2]	PM Peak Hour: LOS[3]
I-405 Mainline												
Temple Avenue to Lakewood Boulevard/Willow Street	GP	NB	5	9,250	9,600	1.04	42.1	E	10,060	1.09	45.6	E
		SB	5	9,250	9,660	1.04	35.9	E	10,030	1.08	–*	F
	HOV	NB	1	1,850	2,040	1.10	–	–	2,280	1.23	–	–
		SB	1	1,850	1,920	1.04	–	–	1,810	0.98	–	–
Lakewood Boulevard/Willow Street to Bellflower Boulevard	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,980	1.07	–	–	2,240	1.21	–	–
		SB	1	1,850	1,920	1.04	–	–	1,810	0.98	–	–
Bellflower Boulevard to Woodruff Avenue	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,060	1.11	–	–	2,240	1.21	–	–
		SB	1	1,850	1,920	1.04	–	–	1,810	0.98	–	–
Woodruff Avenue to Palo Verde Avenue/Stearns Street	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	4	7,400	8,730	1.18	–*	F	8,920	1.21	–*	F
	HOV	NB	1	1,850	2,050	1.10	–	–	2,050	1.11	–	–
		SB	1	1,850	2,160	1.17	–	–	2,020	1.09	–	–
Palo Verde Avenue/Stearns Street to Studebaker Road	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,030	1.10	–	–	2,340	1.26	–	–
		SB	1	1,850	2,110	1.19	–	–	2,020	1.09	–	–
Studebaker Road to I-605 NB Off Ramp	GP	NB	5	7,400	8,850	1.20	–*	F	10,130	1.37	–*	F
		SB	5	9,250	8,740	0.94	30.7	D	9,150	0.99	38.9	E
	HOV	NB	1	1,850	2,300	1.24	–	–	2,710	1.46	–	–
		SB	1	1,850	2,210	1.19	–	–	2,010	1.09	–	–
I-605 NB Off Ramp to 7th St Off Ramp	GP	NB	4	7,400	7,210	0.99	39.0	E	8,700	1.18	–*	F
		SB	4	7,400	7,480	1.01	34.4	D	8,180	1.10	–*	F
	HOV	NB	1	1,850	2,300	1.24	–	–	2,710	1.46	–	–
		SB	1	1,850	2,210	1.19	–	–	2,360	1.28	–	–
7th St Off Ramp to I-605 SB On Ramp	GP	NB	4	7,400	7,840	0.99	39.0	E	8,700	1.18	–*	F
		SB	4	7,400	7,890	1.00	33.7	D	8,040	1.09	–*	F
	HOV	NB	1	1,850	2,300	1.24	–	–	2,710	1.46	–	–
		SB	1	1,850	2,210	1.19	–	–	2,360	1.28	–	–
I-605 Mainline												
Carson Street to Spring Street	GP	NB	4	7,400	5,510	0.75	14.1	C	6,480	0.88	31.3	D
		SB	4	7,400	8,000	1.08	40.4	F	7,400	1.00	36.0	E
	HOV	NB	1	1,850	1,570	0.85	–	–	2,040	1.10	–	–
		SB	1	1,850	2,020	1.09	–	–	1,800	0.97	–	–
Spring Street to Willow Street/Katella Ave	GP	NB	4	7,400	4,810	0.65	15.5	C	5,430	0.74	22.3	C
		SB	4	7,400	6,960	0.94	30.4	D	5,970	0.81	24.7	C
	HOV	NB	1	1,850	1,850	1.00	–	–	2,430	1.32	–	–
		SB	1	1,850	2,240	1.21	–	–	2,000	1.08	–	–
Willow Street/Katella Ave CD Road On Ramp to I-405	GP	NB	5	9,250	4,810	0.52	13.9	B	5,880	0.63	19.6	C
		SB	4	7,400	5,910	0.80	33.5	C	5,170	0.70	24.8	C
	HOV	NB	1	1,850	1,490	0.81	–	–	2,000	1.08	–	–
		SB	1	1,850	1,770	0.96	–	–	1,580	0.85	–	–
7th Street Mainline												
Pepper Tree Lane to Studebaker Road	GP	EB	2	3,700	3,180	0.86	17.0	B	2,770	0.75	14.8	B
		WB	3	5,550	4,010	0.72	21.5	C	3,080	0.55	16.5	B
Studebaker Road to I-605	GP	EB	2	3,700	4,850	1.31	–*	F	3,530	0.95	33.4	D
		WB	2	3,700	4,200	1.14	43.9	F	4,120	1.11	43.9	F

Notes:
1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane based on density except when demand-to-capacity (D/C) ratios greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single High Occupancy Vehicle (HOV) lane.
5. * Density is in excess of 45 pc/mi/ln; therefore LOS is F.

GL-9 (Continued)

Table 4.5-6: Alternative 2 (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp Capacity[1,4]	AM Peak Ramp: Traffic Volume[1]	AM Peak Ramp: D/C	AM Peak Ramp Junction: Density[2]	AM Peak Ramp Junction: LOS[3,5]	PM Peak Ramp: Traffic Volume[1]	PM Peak Ramp: D/C	PM Peak Ramp Junction: Density[2]	PM Peak Ramp Junction: LOS[3,5]
I-405 Ramp Junctions											
Lakewood Blvd & Willow St	NB Off Direct	2	3,000	970	0.32	13.6	B	960	0.32	15.5	B
	NB On Loop	1	1,500	800	0.53	45.0	F	610	0.41	50.5	F
	NB On Direct	1	1,500	590	0.39	24.9	C	280	0.19	27.3	C
	SB Off (Direct + Loop)	2	3,000	1,120	0.37	17.5	B	1,380	0.46	20.1	F
	SB On Loop	1	1,500	300	0.20	42.5	F	370	0.25	42.9	F
	SB On Direct (from Willow St)	1	1,500	470	0.31	22.0	C	640	0.43	22.3	C
Bellflower Blvd & Los Coyotes Diagonal	NB Off Direct	1	1,500	530	0.35	27.0	C	570	0.38	32.0	D
	NB On (Direct + Loop)	2	3,000	1,220	0.41	14.0	F	810	0.27	13.1	F
	SB Off (Direct + Loop)	2	3,000	1,420	0.47	17.2	B	1,920	0.64	21.5	C
	SB On (Direct + Loop)	1	1,500	930	0.62	35.2	F	1,460	0.97	33.9	F
Woodruff Ave	NB Off Direct	1	1,500	650	0.43	23.9	C	350	0.23	26.4	C
	NB On Direct	1	1,500	440	0.29	34.9	F	310	0.21	41.4	F
	SB Off Direct	1	1,500	750	0.50	29.4	D	620	0.41	29.9	D
	SB On Direct	1	1,500	660	0.44	23.1	F	350	0.23	24.7	F
Palo Verde Ave & Stearns St	NB Off Direct	1	1,500	650	0.43	24.7	C	750	0.50	29.4	F
	NB On Loop	1	1,500	150	0.10	53.6	F	280	0.19	60.7	F
	SB On Direct (from Stearns St)	1	1,500	420	0.28	26.7	F	530	0.35	26.8	F
Studebaker Rd	NB On Direct	1	1,500	350	0.23	55.1	F	270	0.18	63.9	F
	SB Off Direct	1	1,500	420	0.28	35.4	E	300	0.20	35.8	E
7th St	SB Off Direct	1	1,500	90	0.06	34.7	D	120	0.08	37.8	F

GL-9 (Continued)

Table 4.5-6: Alternative 2 (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 2 (Year 2020) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
I-605 Ramp Junctions											
Carson St	NB Off Direct	1	1,500	1,030	0.69	30.9	D	980	0.65	34.7	D
	NB On Loop	1	1,500	490	0.33	19.2	B	540	0.36	22.2	C
	NB On Direct	1	1,500	770	0.51	19.9	B	690	0.46	22.0	C
	SB Off Direct	2	3,000	1,230	0.41	14.1	B	1,480	0.49	15.3	B
	SB On Loop	1	1,500	560	0.37	22.5	C	450	0.30	21.4	C
	SB On Direct	1	1,500	270	0.18	23.2	C	320	0.21	21.7	C
Spring St/Cerritos Ave	NB On Loop	1	1,500	720	0.48	17.9	B	1,040	0.69	19.4	B
	SB Off Direct	1	1,500	1,050	0.70	35.6	E	1,430	0.95	35.6	E
Willow St/Katella Ave	NB Off (Direct + Loop)	1	1,500	1,050	0.71	0.2	A	1,630	1.09	5.1	A
	NB On Direct	1	1,500	1,060	0.71	19.1	B	1,400	0.93	20.8	C
	SB Off Direct	1	1,500	550	0.37	35.0	E	580	0.39	31.0	D
	SB Off Loop	1	1,500	1,120	0.75	35.8	E	1,020	0.68	30.9	D
	SB On Direct (Direct + Loop)	1	1,500	620	0.41	24.6	C	800	0.53	21.7	C
7th Street Ramp Junctions											
Studebaker Rd	EB Off Loop	1	1,500	200	0.13	34.3	D	730	0.49	30.3	D
	EB On Loop	1	1,500	1,280	0.85	39.5	F	1,430	0.95	32.2	D
	WB Off Loop	1	1,500	810	0.54	43.4	F	1,460	0.97	42.6	F
	WB On Loop	1	1,500	630	0.42	30.3	D	510	0.34	22.4	C

GL-9 (Continued)

Table 4.5-6: Alternative 2 (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 2 (Year 2020) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
Freeway - to - Freeway Branch Connectors[7]											
I-405/I-605 Freeway Interchanges	I-605 SB to I-405 NB	1	1,800	790	0.44	--	--	960	0.53	--	--
	I-605 SB/7th St to I-405 NB	2	3,600	1,500	0.42	--	--	1,440	0.40	--	--
	I-405 SB to I-605 NB	2	3,600	1,250	0.35	--	--	980	0.27	--	--
	I-605 SB to 7th St/I-405 SB	2	3,600	5,120	1.42	--	--	4,210	1.17	--	--
	I-605 SB/I-405 SB to 7th St	1	1,800	2,050	1.14	--	--	1,040	0.58	--	--
	7th St to I-605 NB/I-405 NB	2	3,600	1,060	0.29	--	--	1,230	0.34	--	--
	7th St to I-405 NB	1	1,800	720	0.40	--	--	420	0.23	--	--

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); D/C - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. For freeway-to-freeway branch connectors, D/C ratios are provided.

GL-9 (Continued)

Table 4.5-7: Alternative 2 (Year 2020) Weaving Level-of-Service
Freeway and Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Southbound - Lakewood Boulevard/Willow Street to Bellflower Boulevard	45.4	F	70.9	F
I-405 Northbound - Bellflower Boulevard to Lakewood Boulevard/Willow Street	47.7	F	41.3	E
I-405 Southbound - Bellflower Boulevard to Woodruff Avenue	41.2	E	68.0	F
I-405 Northbound - Woodruff Avenue to Bellflower Boulevard	52.4	F	47.8	F
I-405 Northbound - Palo Verde Avenue/Stearns Street to Woodruff Avenue	46.9	F	40.8	E
I-405 Southbound - Palo Verde Avenue/Stearns Street to Studebaker Road	33.1	D	43.9	F
I-405 Northbound - Studebaker Road to Palo Verde Avenue/Stearns Street	45.1	F	45.4	F
Collector-Distributor (C-D) Roads				
Lakewood Boulveard/Willow Street Interchange at I-405				
Southbound C-D Road	16.2	B	22.5	C
Bellflower Boulevard/Los Coyotes Diagonal Interchange at I-405				
Southbound C-D Road	5.0	A	3.8	A

Notes:
1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads.

GL-9 (Continued)

Table 4.5-8: Alternative 2 (Year 2040) Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 2 (Year 2040) Conditions							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[3,4]	Traffic Demand Volume[4]	D/C	Density[2]	LOS[3]	Traffic Demand Volume[4]	D/C	Density[2]	LOS[3]
I-405 Mainline												
Temple Avenue to Lakewood Boulevard/Willow Street	GP	NB	5	9,250	10,570	1.12	--*	F	10,870	1.18	--*	F
		SB	5	9,250	10,440	1.13	43.2	E	10,840	1.17	--*	F
	HOV	NB	1	1,850	2,200	1.19	--	--	2,460	1.33	--	--
		SB	1	1,850	2,070	1.12	--	--	1,960	1.06	--	--
Lakewood Boulevard/Willow Street to Bellflower Boulevard	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,140	1.16	--	--	2,420	1.31	--	--
		SB	1	1,850	2,070	1.12	--	--	1,960	1.06	--	--
Bellflower Boulevard to Woodruff Avenue	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,220	1.20	--	--	2,420	1.31	--	--
		SB	1	1,850	2,070	1.12	--	--	1,960	1.06	--	--
Woodruff Avenue to Palo Verde Avenue/Stearns Street	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	4	7,400	9,440	1.28	--*	F	9,640	1.30	--*	F
	HOV	NB	1	1,850	2,190	1.18	--	--	2,220	1.20	--	--
		SB	1	1,850	2,330	1.26	--	--	2,180	1.18	--	--
Palo Verde Avenue/Stearns Street to Studebaker Road	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,190	1.18	--	--	2,540	1.37	--	--
		SB	1	1,850	2,390	1.29	--	--	2,180	1.18	--	--
Studebaker Road to I-605 NB Off Ramp	GP	NB	4	7,400	9,560	1.29	--*	F	10,950	1.48	--*	F
		SB	5	9,250	9,450	1.02	35.1	E	9,890	1.07	44.7	E
	HOV	NB	1	1,850	2,430	1.31	--	--	2,930	1.58	--	--
		SB	1	1,850	2,380	1.28	--	--	2,170	1.17	--	--
I-605 NB Off Ramp to 7th St Off Ramp	GP	NB	1	7,400	7,940	1.07	45.0	E	9,400	1.27	--*	F
		SB	4	7,400	7,090	1.09	40.5	F	8,590	1.16	--*	F
	HOV	NB	1	1,850	2,490	1.35	--	--	2,930	1.58	--	--
		SB	1	1,850	2,380	1.28	--	--	2,560	1.38	--	--
7th St Off Ramp to I-605 SB On Ramp	GP	NB	4	7,400	7,940	1.07	45.0	E	9,400	1.27	--*	F
		SB	4	7,400	7,990	1.08	39.4	E	8,590	1.17	--*	F
	HOV	NB	1	1,850	2,460	1.33	--	--	2,930	1.58	--	--
		SB	1	1,850	2,380	1.28	--	--	2,560	1.38	--	--
I-605 Mainline												
Carson Street to Spring Street	GP	NB	4	7,400	5,940	0.81	26.2	D	7,000	0.95	34.7	D
		SB	4	7,400	8,650	1.17	--*	F	8,300	1.08	42.2	E
	HOV	NB	1	1,850	1,700	0.92	--	--	2,200	1.19	--	--
		SB	1	1,850	2,180	1.18	--	--	1,950	1.05	--	--
Spring Street to Willow Street/Katella Ave	GP	NB	4	7,400	5,216	0.70	21.2	C	5,900	0.80	34.4	C
		SB	4	7,400	7,520	1.02	34.7	D	6,450	0.87	27.2	D
	HOV	NB	1	1,850	2,000	1.08	--	--	2,850	1.43	--	--
		SB	1	1,850	2,420	1.31	--	--	2,160	1.17	--	--
Willow Street/Katella Ave CD Road On Ramp to I-405	GP	NB	5	9,250	5,100	0.56	17.1	B	6,140	0.66	22.3	C
		SB	4	7,400	6,390	0.86	28.0	D	5,580	0.75	26.5	D
	HOV	NB	1	1,850	1,810	0.87	--	--	2,160	1.17	--	--
		SB	1	1,850	1,910	1.03	--	--	1,710	0.92	--	--
7th Street Mainline												
Pepper Tree Lane to Studebaker Road	GP	EB	2	3,700	5,180	0.66	17.0	B	2,770	0.75	14.8	B
		WB	2	3,550	4,010	0.72	21.5	C	3,080	0.55	16.5	B
Studebaker Road to I-605	GP	EB	3	3,700	4,350	1.18	--*	F	3,530	0.95	30.4	D
		WB	2	3,700	4,200	1.14	42.9	E	4,120	1.11	40.9	E

Notes:
1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane LOS is based on density except when demand-to-capacity (D/C) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single High Occupancy Vehicle (HOV) lane.
5. * Density is in excess of 45 pc/mi/ln; therefore LOS is F.

GL-9 (Continued)

Table 4.5-9: Alternative 2 (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 2 (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
I-405 Ramp Junctions											
Lakewood Blvd & Willow St	NB Off Direct	2	3,000	1,040	0.35	15.7	B	1,040	0.35	17.8	F
	NB On Loop	1	1,500	870	0.58	48.2	F	660	0.44	54.3	F
	NB On Direct	1	1,500	640	0.43	26.7	F	300	0.20	29.6	F
	SB Off (Direct + Loop)	2	3,000	1,210	0.40	19.7	B	1,490	0.50	22.6	F
	SB On Loop	1	1,500	330	0.22	45.8	F	400	0.27	46.2	F
	SB On Direct (from Willow St)	1	1,500	510	0.34	23.5	C	690	0.46	23.7	F
Bellflower Blvd & Los Coyotes Diagonal	NB Off Direct	1	1,500	570	0.38	29.5	D	620	0.41	35.0	F
	NB On (Direct + Loop)	2	3,000	1,320	0.44	16.0	F	870	0.29	15.0	F
	SB Off (Direct + Loop)	2	3,000	1,530	0.51	19.5	B	2,080	0.69	24.2	F
	SB On (Direct + Loop)	1	1,500	1,010	0.67	37.3	F	1,580	1.05	35.4	F
Woodruff Ave	NB Off Direct	1	1,500	710	0.47	26.6	C	380	0.25	29.4	F
	NB On Direct	1	1,500	470	0.31	37.4	F	340	0.23	44.5	F
	SB Off Direct	1	1,500	820	0.55	32.2	D	670	0.45	32.7	F
	SB On Direct	1	1,500	710	0.47	24.1	F	370	0.25	26.1	F
Palo Verde Ave & Stearn St	NB Off Direct	1	1,500	710	0.47	27.5	F	810	0.54	32.6	F
	NB On Loop	1	1,500	160	0.11	58.3	F	300	0.20	65.8	F
	SB On Direct (from Stearn St)	1	1,500	460	0.31	28.1	F	580	0.39	28.1	F
Studebaker Rd	NB On Direct	1	1,500	380	0.25	59.7	F	300	0.20	69.2	F
	SB Off Direct	1	1,500	450	0.30	38.1	E	330	0.22	38.6	F
7th St	SB Off Direct	1	1,500	100	0.07	37.4	E	130	0.09	40.7	F

GL-9 (Continued)

Table 4.5-9: Alternative 2 (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 2 (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
I-605 Ramp Junctions											
Carson St	NB Off Direct	1	1,500	1,110	0.74	33.3	D	1,060	0.71	37.4	E
	NB On Loop	1	1,500	530	0.35	20.4	C	590	0.39	23.6	C
	NB On Direct	1	1,500	830	0.55	20.8	C	740	0.49	23.1	C
	SB Off Direct	2	3,000	1,330	0.44	16.2	B	1,600	0.53	17.5	B
	SB On Loop	1	1,500	600	0.40	23.5	F	490	0.33	22.5	C
	SB On Direct	1	1,500	300	0.20	24.5	F	350	0.23	22.9	C
Spring St/Cerritos Ave	NB On Loop	1	1,500	780	0.52	18.6	B	1,120	0.75	20.0	B
	SB Off Direct	1	1,500	1,130	0.75	38.2	E	1,550	1.03	38.3	E
Willow St/Katella Ave	NB Off (Direct + Loop)	1	1,500	1,140	0.76	0.6	A	1,760	1.17	7.5	A
	NB On Direct	1	1,500	1,150	0.77	20.0	C	1,520	1.01	21.8	C
	SB Off Direct	1	1,500	600	0.40	37.7	E	630	0.42	33.3	D
	SB Off Loop	1	1,500	1,210	0.81	38.5	E	1,110	0.74	33.2	D
	SB On Direct (Direct + Loop)	1	1,500	670	0.45	26.2	C	870	0.58	23.1	C
7th Street Ramp Junctions											
Studebaker Rd	EB Off Loop	1	1,500	210	0.14	34.3	D	790	0.53	30.3	D
	EB On Loop	1	1,500	1,380	0.92	40.3	F	1,540	1.03	33.1	D
	WB Off Loop	1	1,500	870	0.58	43.4	F	1,580	1.05	42.6	F
	WB On Loop	1	1,500	690	0.46	30.8	D	550	0.37	22.7	C

GL-9 (Continued)

Table 4.5-9: Alternative 2 (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 2 (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[2,5]	Traffic Volume[1]	D/C	Density[2]	LOS[2,5]
	Freeway - to - Freeway Branch Connectors[7]										
I-405/I-605 Freeway Interchanges	I-605 SB to I-405 NB	1	1,800	850	0.47	--	--	1,040	0.58	--	--
	I-605 SB/7th St to I-405 NB	2	3,600	1,630	0.45	--	--	1,550	0.43	--	--
	I-405 SB to I-605 NB	2	3,600	1,350	0.38	--	--	1,060	0.29	--	--
	I-605 SB to 7th St/I-405 SB	2	3,600	5,540	1.54	--	--	4,550	1.26	--	--
	I-605 SB/I-405 SB to 7th St	1	1,800	2,050	1.14	--	--	1,040	0.58	--	--
	7th St to I-605 NB/I-405 NB	2	3,600	510	0.14	--	--	380	0.11	--	--
	7th St to I-405 NB	1	1,800	780	0.43	--	--	460	0.26	--	--

Notes:
1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); D/C – demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. For freeway-to-freeway branch connectors, D/C ratios are provided.

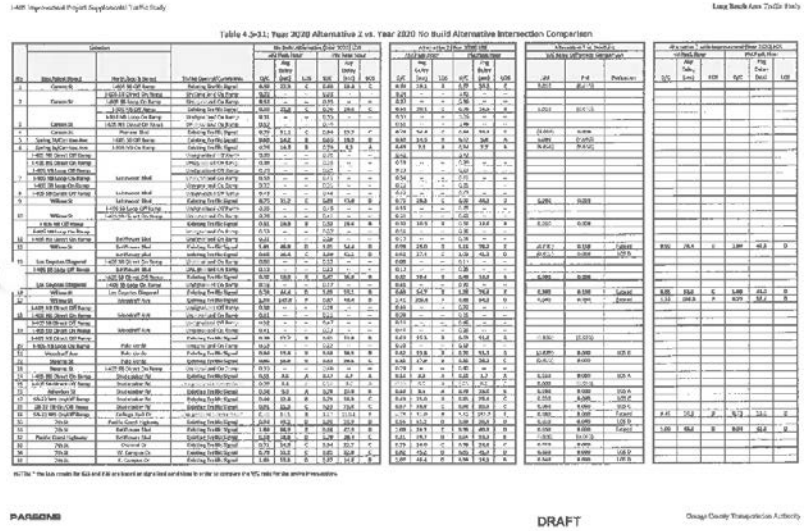
GL-9 (Continued)

Table 4.5-10: Alternative 2 (Year 2040) Weaving Level-of-Service
Freeway and Collector-Distributor Roads

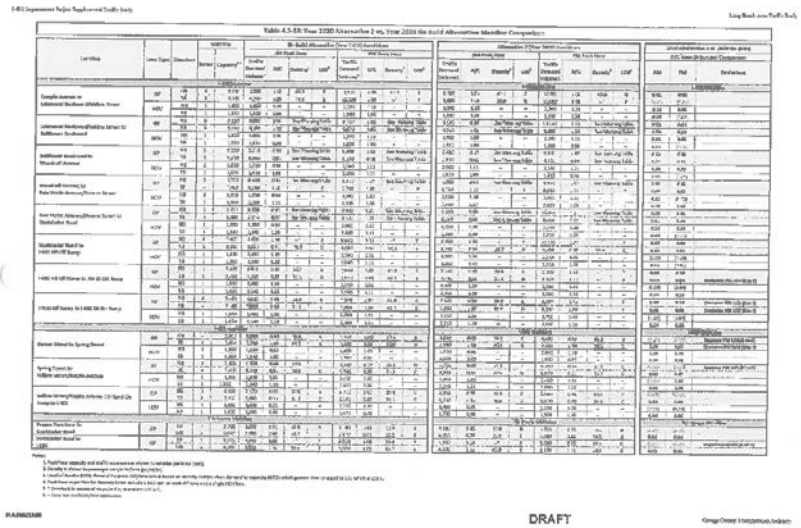
Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Southbound - Lakewood Boulevard/Willow Street to Bellflower Boulevard	50.3	F	78.3	F
I-405 Northbound - Bellflower Boulevard to Lakewood Boulevard/Willow Street	37.2	E	45.2	F
I-405 Southbound - Bellflower Boulevard to Woodruff Avenue	45.8	F	74.9	F
I-405 Northbound - Woodruff Avenue to Bellflower Boulevard	57.9	F	51.5	F
I-405 Northbound - Palo Verde Avenue/Stearns Street to Woodruff Avenue	51.7	F	45.1	F
I-405 Southbound - Palo Verde Avenue/Stearns Street to Studebaker Road	36.2	E	48.0	F
I-405 Northbound - Studebaker Road to Palo Verde Avenue/Stearns Street	49.7	F	50.3	F
Collector-Distributor (C-D) Roads				
Lakewood Boulveard/Willow Street Interchange at I-405				
Southbound C-D Road	16.2	B	22.5	C
Bellflower Boulevard/Los Coyotes Diagonal Interchange at I-405				
Southbound C-D Road	5.0	A	3.8	A

Notes:
1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads.

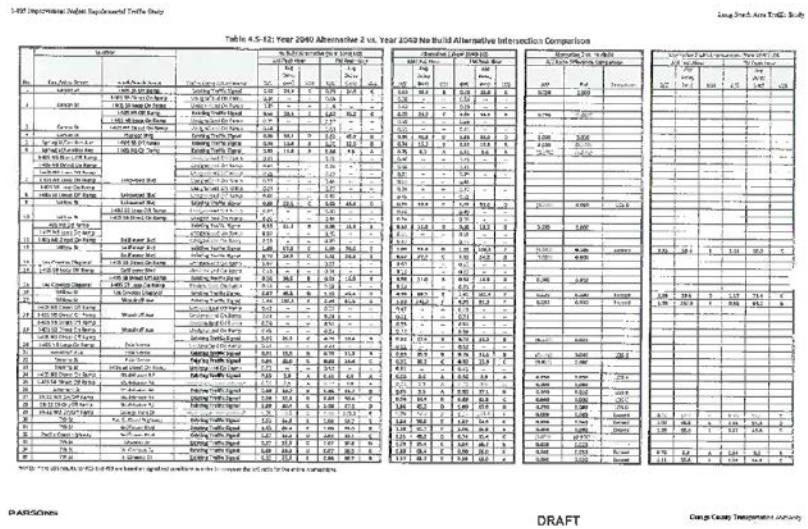
GL-9 (Continued)



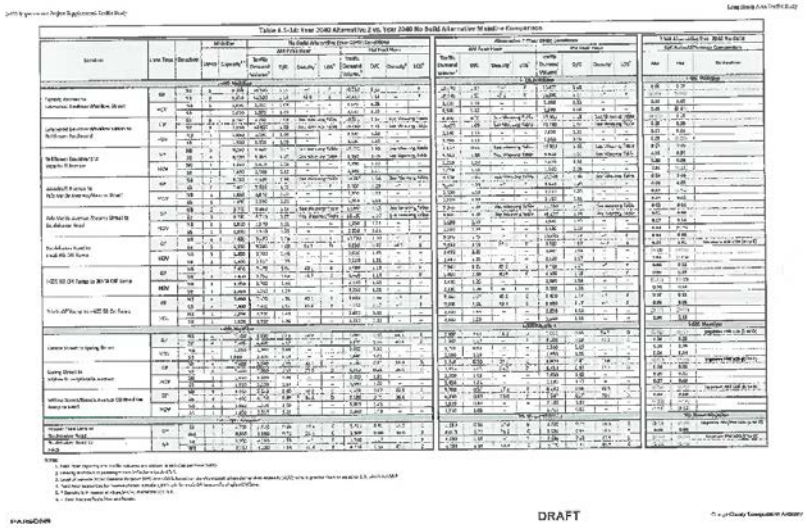
GL-9 (Continued)



GL-9 (Continued)



GL-9 (Continued)



GL-9 (Continued)

I-405 Improvement Project Supplemental Traffic Study

Long Beach Area Traffic Study

Table 4.6-1 Alternative 3 (Year 2020) Intersection Level of Service - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Traffic Control/Comments	Alternative 3 (Year 2020) LOS: AM Peak Hour D/C	AM Peak Hour Avg Delay (sec)	AM Peak Hour LOS	PM Peak Hour D/C	PM Peak Hour Avg Delay (sec)	PM Peak Hour LOS
1	Carson St	I-605 SB Off Ramp	Existing Traffic Signal	0.64	11.1	B	0.74	13.0	B
2	Carson St	I-605 SB Direct On Ramp	Unsignalized On Ramp	0.24	--	--	0.32	--	--
		I-605 SB Loop On Ramp	Unsignalized On Ramp	0.33	--	--	0.37	--	--
3	Carson St	I-605 NB Off Ramp	Existing Traffic Signal	0.61	20.9	C	0.75	17.6	B
		I-605 NB Loop On Ramp	Unsignalized On Ramp	0.28	--	--	0.30	--	--
		I-605 NB Direct On Ramp	Unsignalized On Ramp	0.51	--	--	0.46	--	--
4	Carson St	Pioneer Blvd	Existing Traffic Signal	0.76	31.7	C	0.83	31.8	C
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	Existing Traffic Signal	0.70	14.4	B	0.60	9.8	A
6	Spring St/Cerritos Ave	I-605 NB On Ramp	Existing Traffic Signal	0.74	6.1	A	0.75	4.9	A
7	I-405 NB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.44	--	--	0.43	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.38	--	--	0.23	--	--
	I-405 NB Loop Off Ramp		Unsignalized Off Ramp	0.28	--	--	0.26	--	--
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.52	--	--	0.41	--	--
8	I-405 SB Loop On Ramp	Lakewood Blvd	Unsignalized On Ramp	0.28	--	--	0.27	--	--
	I-405 SB Direct Off Ramp		Unsignalized Off Ramp	0.44	--	--	0.46	--	--
9	Willow St	Lakewood Blvd	Existing Traffic Signal	0.72	31.1	C	0.96	44.3	D
10	Willow St	I-405 SB Loop Off Ramp	Unsignalized Off Ramp	0.36	--	--	0.45	--	--
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.30	--	--	0.43	--	--
11	I-405 NB Off Ramp	Bellflower Blvd	Existing Traffic Signal	0.41	9.1	A	0.53	11.1	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.54	--	--	0.36	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.32	--	--	0.18	--	--
12	Willow St	Bellflower Blvd	Existing Traffic Signal	0.86	32.9	C	1.15	76.5	E
13	Los Coyotes Diagonal	Bellflower Blvd	Existing Traffic Signal	0.64	25.8	C	1.12	50.2	D
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.09	--	--	0.12	--	--
14	I-405 SB Loop Off Ramp	Bellflower Blvd	Unsignalized On Ramp	0.12	--	--	0.37	--	--
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	Existing Traffic Signal	0.53	10.2	B	0.52	9.8	A
		I-405 SB Loop On Ramp	Unsignalized On Ramp	0.32	--	--	0.17	--	--
16	Willow St	Los Coyotes Diagonal	Existing Traffic Signal	0.75	40.9	D	1.26	66.5	E
17	Willow St	Woodruff Ave	Existing Traffic Signal	1.30	137.0	F	0.87	37.1	D
18	I-405 NB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.40	--	--	0.22	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.31	--	--	0.22	--	--
19	I-405 SB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.52	--	--	0.41	--	--
	I-405 SB Direct On Ramp		Unsignalized On Ramp	0.43	--	--	0.24	--	--
20	I-405 NB Direct Off Ramp	Palo Verde	Existing Traffic Signal	0.84	17.0	B	0.69	11.8	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.14	--	--	0.22	--	--
21	Woodruff Ave	Palo Verde	Existing Traffic Signal	0.84	13.8	B	0.69	9.7	A
22	Stearns St	Palo Verde	Existing Traffic Signal	0.94	22.1	C	0.92	22.9	C
23	Stearns St	I-405 SB Direct On Ramp	Unsignalized Intersection	0.35	--	--	0.46	--	--
24	I-405 NB Direct On Ramp	Studebaker Rd	Existing Traffic Signal	0.63	4.1	A	0.52	4.0	A
25	I-405 SB Direct Off Ramp	Studebaker Rd	Unsignalized Intersection	1.04	80.0	F	0.44	20.4	C
26	Atherton St	Studebaker Rd	Existing Traffic Signal	0.57	8.8	A	0.81	14.5	B
27	SR-22 WB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.51	12.8	B	0.87	30.2	C
28	SR-22 EB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.93	25.8	C	0.97	29.0	C
29	SR-22 WB On/Off Ramp	College Park Dr	Unsignalized Intersection	0.12	19.7	C	0.32	92.6	F
30	7th St	Pacific Coast Highway	Existing Traffic Signal	0.92	35.7	D	0.96	36.9	D
31	7th St	Bellflower Blvd	Existing Traffic Signal	1.09	66.4	E	1.01	49.6	D
32	Pacific Coast Highway	Bellflower Blvd	Existing Traffic Signal	0.54	30.2	C	0.75	22.1	C
33	7th St	Channel Dr	Existing Traffic Signal	0.75	8.2	A	0.95	25.4	C
34	7th St	W. Campus Dr	Existing Traffic Signal	0.80	34.6	C	0.86	47.4	D
35	7th St	E. Campus Dr	Existing Traffic Signal	1.05	45.2	D	0.90	16.0	B

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I-405 Improvement Project Supplemental Traffic Study

Long Beach Area Traffic Study

Table 4.6-2 Alternative 3 (Year 2020) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location: East/West Street	Location: North/South Street	Movement	Available Storage (ft)	2020 Alternative 3 Conditions: AM Peak Hour 95th Percentile Queue (ft)	AM Peak Hour Adequate Storage? (Yes or No)	PM Peak Hour 95th Percentile Queue (ft)	PM Peak Hour Adequate Storage? (Yes or No)
1	Carson St	I-605 SB Off Ramp	SBL	300	136	Yes	193	Yes
			SBT	1,130	78	Yes	95	Yes
			SBR	300	170	Yes	107	Yes
3	Carson St	I-605 NB Off Ramp	NBL	300 (650)	229	Yes	280	Yes
			NBR	300(1175)	232	Yes	141	Yes
4	Carson St	Pioneer Blvd	NBL	120	244	No	270	No
			SBL	140	77	Yes	78	Yes
			SBR	140	74	Yes	83	Yes
			EBL	250	284	No	405	No
			WBL	80	17	Yes	18	Yes
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	SBL	220 (1240)	281	Yes	159	Yes
			SBR	900	0	Yes	0	Yes
6	Spring St/Cerritos Ave	I-605 NB On Ramp	WBL	260	217	Yes	109	Yes
9	Willow St	Lakewood Blvd	NBL	180	134	Yes	137	Yes
			SBL	150	43	Yes	119	Yes
			EBL	175	82	Yes	74	Yes
			WBL	150	31	Yes	143	Yes
11	I-405 NB Off Ramp	Bellflower Blvd	WBL	1,870	71	Yes	175	Yes
			WBL/T/R	1,130	56	Yes	179	Yes
			WBR	410	50	Yes	162	Yes
12	Willow St	Bellflower Blvd	NBL	150	362	No	82	Yes
			SBL	120	0	Yes	252	No
			EBL	140	125	Yes	153	No
			WBL	110	246	No	338	No
13	Los Coyotes Diagonal	Bellflower Blvd	NBL	160	27	Yes	37	Yes
			NBR	230	50	Yes	159	Yes
			EBL	190	267	No	630	No
			WBL	150	160	No	163	No
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	SBL	1525 (500)	139	Yes	120	Yes
16	Willow St	Los Coyotes Diagonal	SBL	120	166	No	367	No
			EBL	140	87	Yes	51	Yes
			WBL	160	346	No	673	No
17	Willow St	Woodruff Ave	NBL	140	628	No	207	No
			NBR	60	36	Yes	26	Yes
			SBL	120	140	No	110	Yes
			SBR	120	149	No	70	Yes
			EBL	200	292	No	161	Yes
			WBL	180	241	No	167	Yes
20	I-405 NB Direct Off Ramp	Palo Verde	WBL	550	376	Yes	283	Yes
			WBT/R	1,155	63	Yes	147	Yes
21	Woodruff Ave	Palo Verde	EBL	335	289	Yes	202	Yes
			EBR	335	286	Yes	169	Yes
22	Stearns St	Palo Verde	NBL	130	184	No	179	No
			SBL	120	86	Yes	136	No
			EBL	90	231	No	214	No
			WBL	80	40	Yes	115	No
24	I-405 NB Direct On Ramp	Studebaker Rd	NBL	100	82	Yes	63	Yes
			SBR	70	16	Yes	21	Yes

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I-405 Improvement Project Supplemental Traffic Study

Long Beach Area Traffic Study

Table 4.6-2 Alternative 3 (Year 2020) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2020 Alternative 3 Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
26	Atherton St	Studebaker Rd	NBL	200	44	Yes	58	Yes
			SBL	260	1	Yes	2	Yes
			SBR	70	14	Yes	13	Yes
			EBL	120	79	Yes	223	No
			WBL	220	29	Yes	26	Yes
27	SR-22 WB On/Off Ramp	Studebaker Rd	NBR	150	14	Yes	27	Yes
			SBL	200	66	Yes	131	Yes
28	SR-22 EB On/Off Ramp	Studebaker Rd	NBR	300	1110	No	1004	No
			SBL	150	377	No	271	No
			WBR	60	52	Yes	208	No
30	7th St	Pacific Coast Highway	NBL	330	189	Yes	252	Yes
			SBL	290	323	No	354	No
31	7th St	Bellflower Blvd	NBR	130	81	Yes	27	Yes
			SBL	160	211	No	269	No
			SBR	160	95	Yes	362	No
			EBL	200	498	No	403	No
			WBL	200	39	Yes	58	Yes
32	Pacific Coast Highway	Bellflower Blvd	NBL	280	98	Yes	79	Yes
			SBL	240	267	No	218	Yes
			SBR	60	21	Yes	33	Yes
			EBL	110	33	Yes	131	No
			WBL	120	56	Yes	60	Yes
			WBR	200	65	Yes	41	Yes
33	7th St	Channel Dr	EBL	270	105	Yes	27	Yes
			EBR	180	1	Yes	7	Yes
			WBL	280	85	Yes	204	Yes
34	7th St	W Campus Dr	SBL/R	150	67	Yes	248	No
			EBL	400	109	Yes	48	Yes
35	7th St	E. Campus Dr	SBL	150	76	Yes	183	No
			SBT/R	150	68	Yes	108	Yes
			EBL	150	196	No	94	Yes
			WBL	300	76	Yes	120	Yes

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I-405 Improvement Project Supplemental Traffic Study

Long Beach Area Traffic Study

Table 4.6-3 Alternative 3 (Year 2040) Intersection Level of Service - AM/PM Peak Hours

No.	Location		Traffic Control/Comments	Alternative 3 (Year 2040) LOS					
				AM Peak Hour			PM Peak Hour		
	East/West Street	North/South Street		D/C	Avg Delay (sec)	LOS	D/C	Avg Delay (sec)	LOS
1	Carson St	I-605 SB Off Ramp	Existing Traffic Signal	0.69	11.7	B	0.80	14.1	B
2	Carson St	I-605 SB Direct On Ramp	Unsignalized On Ramp	0.26	--	--	0.34	--	--
		I-605 SB Loop On Ramp	Unsignalized On Ramp	0.36	--	--	0.59	--	--
3	Carson St	I-605 NB Off Ramp	Existing Traffic Signal	0.66	22.9	C	0.81	19.4	B
		I-605 NB Loop On Ramp	Unsignalized On Ramp	0.31	--	--	0.33	--	--
		I-605 NB Direct On Ramp	Unsignalized On Ramp	0.55	--	--	0.49	--	--
4	Carson St	Pioneer Blvd	Existing Traffic Signal	0.84	37.3	D	0.92	44.5	D
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	Existing Traffic Signal	0.75	15.5	B	0.64	10.7	B
6	Spring St/Cerritos Ave	I-605 NB On Ramp	Existing Traffic Signal	0.80	7.1	A	0.81	6.0	A
7	I-405 NB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.47	--	--	0.46	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.41	--	--	0.25	--	--
	I-405 NB Loop Off Ramp		Unsignalized Off Ramp	0.30	--	--	0.28	--	--
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.57	--	--	0.45	--	--
	I-405 SB Loop On Ramp		Unsignalized On Ramp	0.25	--	--	0.29	--	--
8	I-405 SB Direct Off Ramp	Lakewood Blvd	Unsignalized Off Ramp	0.48	--	--	0.50	--	--
9	Willow St	Lakewood Blvd	Existing Traffic Signal	0.77	32.4	C	1.02	52.0	D
10	Willow St	I-405 SB Loop Off Ramp	Unsignalized Off Ramp	0.38	--	--	0.49	--	--
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.33	--	--	0.46	--	--
11	I-405 NB Off Ramp	Bellflower Blvd	Existing Traffic Signal	0.45	9.7	A	0.58	11.7	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.59	--	--	0.39	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.34	--	--	0.19	--	--
12	Willow St	Bellflower Blvd	Existing Traffic Signal	0.93	37.7	D	1.25	105.9	F
13	Los Coyotes Diagonal	Bellflower Blvd	Existing Traffic Signal	0.89	26.0	C	1.22	65.5	E
		I-405 SB Direct On Ramp	Unsignalized On Ramp	0.09	--	--	0.13	--	--
14	I-405 SB Loop Off Ramp	Bellflower Blvd	Unsignalized On Ramp	0.13	--	--	0.40	--	--
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	Existing Traffic Signal	0.58	11.4	B	0.56	10.2	B
		I-405 SB Loop On Ramp	Unsignalized On Ramp	0.35	--	--	0.19	--	--
16	Willow St	Los Coyotes Diagonal	Existing Traffic Signal	0.86	42.0	D	1.41	92.7	F
17	Willow St	Woodruff Ave	Existing Traffic Signal	1.40	166.5	F	0.88	42.2	D
18	I-405 NB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.43	--	--	0.24	--	--
	I-405 NB Direct On Ramp		Unsignalized On Ramp	0.34	--	--	0.23	--	--
19	I-405 SB Direct Off Ramp	Woodruff Ave	Unsignalized Off Ramp	0.56	--	--	0.45	--	--
	I-405 SB Direct On Ramp		Unsignalized On Ramp	0.46	--	--	0.26	--	--
20	I-405 NB Direct Off Ramp	Palo Verde	Existing Traffic Signal	1.02	22.9	C	0.80	14.0	B
	I-405 NB Loop On Ramp		Unsignalized On Ramp	0.15	--	--	0.23	--	--
21	Woodruff Ave	Palo Verde	Existing Traffic Signal	0.92	16.9	B	0.75	10.3	B
22	Stearns St	Palo Verde	Existing Traffic Signal	1.02	30.8	C	1.02	29.9	C
23	Stearns St	I-405 SB Direct On Ramp	Unsignalized Intersection	0.38	--	--	0.50	--	--
24	I-405 NB Direct On Ramp	Studebaker Rd	Existing Traffic Signal	0.68	4.5	A	0.56	3.9	A
25	I-405 SB Direct Off Ramp	Studebaker Rd	Unsignalized Intersection	1.20	116.8	F	0.45	20.1	C
26	Atherton St	Studebaker Rd	Existing Traffic Signal	0.62	9.7	A	0.88	17.1	B
27	SR-22 WB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	0.55	13.2	B	0.94	35.2	D
28	SR-22 EB On/Off Ramp	Studebaker Rd	Existing Traffic Signal	1.02	37.5	D	1.10	44.4	D
29	SR-22 WB On/Off Ramp	College Park Dr	Unsignalized Intersection	0.15	22.8	C	0.45	158.2	F
30	7th St	Pacific Coast Highway	Existing Traffic Signal	1.04	55.9	E	1.04	49.7	D
31	7th St	Bellflower Blvd	Existing Traffic Signal	1.17	72.3	E	1.10	57.0	E
32	Pacific Coast Highway	Bellflower Blvd	Existing Traffic Signal	0.58	26.9	C	0.88	26.8	C
33	7th St	Channel Dr	Existing Traffic Signal	0.77	19.2	B	1.04	39.1	D
34	7th St	W. Campus Dr	Existing Traffic Signal	0.87	60.0	E	0.93	71.3	E
35	7th St	E. Campus Dr	Existing Traffic Signal	1.14	59.3	E	0.99	18.9	B

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I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.6-4 Alternative 3 (Year 2040) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2040 Alternative 3 Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
1	Carson St	I-605 SB Off Ramp	SBL	300	150	Yes	215	Yes
			SBT	1,130	85	Yes	104	Yes
			SBR	300	212	Yes	119	Yes
3	Carson St	I-605 NB Off Ramp	NBL	300 (650)	246	Yes	307	Yes
			NBR	300(1175)	255	Yes	153	Yes
4	Carson St	Pioneer Blvd	NBL	120	277	No	302	No
			SBL	140	82	Yes	84	Yes
			SBR	140	77	Yes	86	Yes
			EBL	250	309	No	453	No
			WBL	80	17	Yes	18	Yes
5	Spring St/Cerritos Ave	I-605 SB Off Ramp	SBL	220 (1140)	310	Yes	174	Yes
			SBR	900	0	Yes	0	Yes
6	Spring St/Cerritos Ave	I-605 NB On Ramp	WBL	260	234	Yes	138	Yes
9	Willow St	Lakewood Blvd	NBL	180	141	Yes	160	Yes
			SBL	150	51	Yes	132	Yes
			EBL	175	90	Yes	85	Yes
			WBL	150	36	Yes	167	No
11	I-405 NB Off Ramp	Bellflower Blvd	WBL	1,870	72	Yes	194	Yes
			WBL/T/R	1,130	60	Yes	209	Yes
			WBR	410	54	Yes	189	Yes
12	Willow St	Bellflower Blvd	NBL	150	416	No	81	Yes
			SBL	120	109	Yes	262	No
			EBL	140	123	Yes	144	No
			WBL	110	265	No	356	No
13	Los Coyotes Diagonal	Bellflower Blvd	NBL	160	28	Yes	41	Yes
			NBR	230	51	Yes	194	Yes
			EBL	190	260	No	701	No
			WBL	150	175	No	158	No
15	Los Coyotes Diagonal	I-405 SB Direct Off Ramp	SBL	1525 (500)	150	Yes	128	Yes
16	Willow St	Los Coyotes Diagonal	SBL	120	197	No	405	No
			EBL	140	116	Yes	94	Yes
			WBL	160	368	No	762	No
17	Willow St	Woodruff Ave	NBL	140	710	No	240	No
			NBR	60	39	Yes	29	Yes
			SBL	120	157	No	116	Yes
			SBR	120	161	No	76	Yes
			EBL	200	328	No	165	Yes
			WBL	180	265	No	199	No
20	I-405 NB Direct Off Ramp	Palo Verde	WBL	550	430	Yes	329	Yes
			WBT/R	1,155	78	Yes	179	Yes
21	Woodruff Ave	Palo Verde	EBL	335	334	Yes	241	Yes
			EBR	335	333	Yes	194	Yes
22	Stearns St	Palo Verde	NBL	130	202	No	197	No
			SBL	120	84	Yes	113	Yes
			EBL	90	250	No	239	No
			WBL	80	42	Yes	132	No
24	I-405 NB Direct On Ramp	Studebaker Rd	NBL	100	83	Yes	66	Yes
			SBR	70	19	Yes	22	Yes

PARSONS — Orange County Transportation Authority — DRAFT

GL-9 (Continued)

I-405 Improvement Project Supplemental Traffic Study — Long Beach Area Traffic Study

Table 4.6-4 Alternative 3 (Year 2040) Intersection Queues vs Storage - AM/PM Peak Hours

No.	Location		Movement	Available Storage (ft)	2040 Alternative 3 Conditions			
					AM Peak Hour		PM Peak Hour	
	East/West Street	North/South Street			95th Percentile Queue (ft)	Adequate Storage? (Yes or No)	95th Percentile Queue (ft)	Adequate Storage? (Yes or No)
26	Atherton St	Studebaker Rd	NBL	200	100	Yes	66	Yes
			SBL	260	1	Yes	2	Yes
			SBR	70	11	Yes	21	Yes
			EBL	120	86	Yes	249	No
			WBL	220	31	Yes	27	Yes
27	SR-22 WB On/Off Ramp	Studebaker Rd	NBR	150	14	Yes	32	Yes
			SBL	200	71	Yes	189	Yes
28	SR-22 EB On/Off Ramp	Studebaker Rd	NBR	300	1288	No	1154	No
			SBL	150	418	No	302	No
			WBR	60	55	Yes	316	No
30	7th St	Pacific Coast Highway	NBL	330	200	Yes	302	Yes
			SBL	290	369	No	406	No
31	7th St	Bellflower Blvd	NBR	130	63	Yes	35	Yes
			SBL	160	220	No	306	No
			SBR	160	126	Yes	302	No
			EBL	200	495	No	421	No
			WBL	200	44	Yes	64	Yes
32	Pacific Coast Highway	Bellflower Blvd	NBL	280	107	Yes	84	Yes
			SBL	240	263	No	81	Yes
			SBR	60	7	Yes	2	Yes
			EBL	110	54	Yes	253	No
			WBL	120	54	Yes	67	Yes
			WBR	200	61	Yes	42	Yes
33	7th St	Channel Dr	EBL	270	116	Yes	28	Yes
			EBR	180	1	Yes	7	Yes
			WBL	280	107	Yes	213	Yes
34	7th St	W. Campus Dr	SBL/R	150	73	Yes	276	No
			EBL	400	90	Yes	5	Yes
35	7th St	E. Campus Dr	SBL	150	82	Yes	213	No
			SBT/R	150	71	Yes	128	Yes
			EBL	150	224	No	99	Yes
			WBL	300	80	Yes	147	Yes

PARSONS — Orange County Transportation Authority — DRAFT

GL-9 (Continued)

Table 4.6-5: Alternative 3 (Year 2020) Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline Lanes	Mainline Capacity[1,4]	Alternative 3 (Year 2020) Conditions – AM Peak Hour Traffic Demand Volume[1]	AM Peak Hour D/C	AM Peak Hour Density[2]	AM Peak Hour LOS[3]	PM Peak Hour Traffic Demand Volume[1]	PM Peak Hour D/C	PM Peak Hour Density[2]	PM Peak Hour LOS[3]
I-405 Mainline												
Temple Avenue to Lakewood Boulevard/Willow Street	GP	NB	5	9,250	9,880	1.07	--*	F	10,550	1.14	--*	F
		SB	5	9,250	9,910	1.07	87.9	E	10,190	1.11	--*	F
	HOV	NB	1	1,850	1,850	1.00	--	--	2,040	1.10	--	--
		SB	1	1,850	1,660	0.90	--	--	1,860	1.06	--	--
Lakewood Boulevard/Willow Street to Bellflower Boulevard	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,820	0.98	--	--	2,060	1.11	--	--
		SB	1	1,850	1,660	0.90	--	--	2,130	1.15	--	--
Bellflower Boulevard to Woodruff Avenue	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,870	1.01	--	--	1,870	1.01	--	--
		SB	1	1,850	1,680	0.91	--	--	2,130	1.15	--	--
Woodruff Avenue to Palo Verde Avenue/Stearns Street	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	4	7,400	8,890	1.20	--*	F	9,110	1.23	--*	F
	HOV	NB	1	1,850	1,820	0.98	--	--	1,850	1.00	--	--
		SB	1	1,850	1,740	0.94	--	--	2,130	1.15	--	--
Palo Verde Avenue/Stearns Street to Studebaker Road	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,660	0.90	--	--	1,850	1.00	--	--
		SB	1	1,850	1,740	0.94	--	--	1,970	1.06	--	--
Studebaker Road to I-605 NB Off Ramp	GP	NB	4	7,400	9,090	1.23	--*	F	10,680	1.42	--*	F
		SB	5	9,250	9,000	0.97	32.2	D	9,470	1.02	42.3	E
	HOV	NB	1	1,850	2,070	1.12	--	--	2,290	1.24	--	--
		SB	1	1,850	1,770	0.96	--	--	1,970	1.06	--	--
I-605 NB Off Ramp to 7th St Off Ramp	GP	NB	1	7,400	9,080	1.23	--*	F	10,480	1.42	--*	F
		SB	4	7,400	7,690	1.04	36.3	E	8,350	1.13	--*	F
	HOV	NB	1	1,850	2,070	1.12	--	--	2,290	1.24	--	--
		SB	1	1,850	1,770	0.96	--	--	1,970	1.06	--	--
7th St Off Ramp to I-605 SB On Ramp	GP	NB	4	7,400	7,640	1.03	43.7	E	9,040	1.22	--*	F
		SB	4	7,400	7,600	1.03	35.5	E	8,190	1.11	--*	F
	HOV	NB	1	1,850	2,070	1.12	--	--	2,290	1.24	--	--
		SB	1	1,850	1,770	0.96	--	--	1,970	1.06	--	--
I-605 Mainline												
Carson Street to Spring Street	GP	NB	4	7,400	5,740	0.78	25.0	C	6,530	0.88	31.5	D
		SB	4	7,400	7,730	1.04	37.4	E	7,600	1.03	37.8	E
	HOV	NB	1	1,850	1,490	0.81	--	--	1,760	0.95	--	--
		SB	1	1,850	1,490	0.81	--	--	1,400	0.76	--	--
Spring Street to Willow Street/Katella Ave	GP	NB	4	7,400	4,960	0.67	20.3	C	5,500	0.74	22.5	C
		SB	4	7,400	6,670	0.90	28.5	D	6,190	0.84	25.8	C
	HOV	NB	1	1,850	1,840	0.99	--	--	1,870	1.01	--	--
		SB	1	1,850	1,490	0.81	--	--	1,400	0.76	--	--
Willow Street/Katella Ave CD Road On Ramp to I-605	GP	NB	5	9,250	5,010	0.54	16.6	B	5,750	0.62	20.9	C
		SB	4	7,400	5,680	0.76	24.3	C	5,500	0.74	26.2	D
	HOV	NB	1	1,850	1,370	0.74	--	--	1,800	0.97	--	--
		SB	1	1,850	1,350	0.74	--	--	1,400	0.76	--	--
7th Street Mainline												
Pepper Tree Lane to Studebaker Road	GP	EB	2	3,700	2,950	0.80	15.8	B	2,730	0.74	14.6	B
		WB	3	5,550	3,960	0.70	20.7	C	3,830	0.69	20.5	C
Studebaker Road to I-605	GP	EB	2	3,700	4,140	1.12	41.3	E	3,660	0.99	29.8	D
		WB	2	3,700	4,120	1.11	40.9	E	6,850	1.83	--*	F

Notes:
1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane based on density except when demand-to-capacity (D/C) ratios greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single High Occupancy Vehicle (HOV) lane.
5. * Density is in excess of 45 pc/mi/ln; therefore LOS is F.

GL-9 (Continued)

Table 4.6-6: Alternative 3 (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[3,4] Capacity	AM Peak Ramp Traffic Volume[1]	AM Peak Ramp D/C	AM Peak Ramp Junction Density[2]	AM Peak Ramp Junction LOS[3,5]	PM Peak Ramp Traffic Volume[1]	PM Peak Ramp D/C	PM Peak Ramp Junction Density[2]	PM Peak Ramp Junction LOS[3,5]
I-405 Ramp Junctions											
Lakewood Blvd & Willow St	NB Off Direct	2	3,000	1,000	0.33	14.7	B	990	0.33	16.7	F
	NB On Loop	1	1,500	790	0.53	46.9	F	620	0.41	52.8	F
	NB On Direct	1	1,500	560	0.37	25.9	C	340	0.23	28.4	F
	SB Off (Direct + Loop)	2	3,000	1,150	0.40	18.5	B	1,370	0.46	20.6	F
	SB On Loop	1	1,500	320	0.21	43.4	F	410	0.27	44.1	F
	SB On Direct (from Willow St)	1	1,500	450	0.30	22.4	C	620	0.41	23.0	C
Bellflower Blvd & Los Coyotes Diagonal	NB Off Direct	1	1,500	520	0.35	28.1	D	570	0.38	33.4	F
	NB On (Direct + Loop)	2	3,000	1,290	0.43	15.2	F	860	0.29	14.3	F
	SB Off (Direct + Loop)	2	3,000	1,450	0.48	17.7	B	1,990	0.66	22.6	F
	SB On (Direct + Loop)	1	1,500	980	0.65	35.6	F	1,410	0.94	34.6	F
Woodruff Ave	NB Off Direct	1	1,500	600	0.40	24.5	C	330	0.22	27.6	C
	NB On Direct	1	1,500	470	0.31	36.0	F	320	0.21	43.0	F
	SB Off Direct	1	1,500	780	0.52	35.6	E	570	0.38	38.8	F
	SB On Direct	1	1,500	640	0.43	23.5	F	300	0.20	25.3	F
Palo Verde Ave & Stearns St	NB Off Direct	1	1,500	660	0.44	25.4	C	800	0.53	30.9	F
	NB On Loop	1	1,500	210	0.14	54.8	F	320	0.21	62.7	F
	SB On Direct (from Stearn St)	1	1,500	530	0.35	26.7	F	630	0.42	26.9	F
Studebaker Rd	NB On Direct	1	1,500	310	0.21	56.8	F	310	0.21	66.0	F
	SB Off Direct	1	1,500	410	0.27	36.2	E	260	0.17	36.5	E
7th St	SB Off Direct	1	1,500	90	0.06	35.6	E	160	0.11	38.8	F

Table 4.6-6: Alternative 3 (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 (Year 2020) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[2,5]	Traffic Volume[1]	D/C	Density[2]	LOS[2,5]
I-605 Ramp Junctions											
Carson St	NB Off Direct	1	1,500	1,020	0.68	31.7	D	940	0.63	34.6	D
	NB On Loop	1	1,500	430	0.29	19.7	B	460	0.31	22.4	C
	NB On Direct	1	1,500	770	0.51	20.2	C	690	0.46	22.0	C
	SB Off Direct	2	3,000	1,220	0.41	13.6	B	1,410	0.47	15.0	B
	SB On Loop	1	1,500	500	0.33	22.1	C	460	0.31	21.8	C
	SB On Direct	1	1,500	280	0.19	22.6	C	320	0.21	22.2	C
Spring St/Cerritos Ave	NB On Loop	1	1,500	760	0.51	18.3	B	1,030	0.69	19.4	B
	SB Off Direct	1	1,500	1,070	0.71	34.8	D	1,410	0.94	36.2	E
Willow St/Katella Ave	NB Off (Direct + Loop)	1	1,500	1,070	0.71	0.4	A	1,660	1.11	5.5	A
	NB On Direct	1	1,500	1,040	0.69	19.4	B	1,420	0.95	20.9	C
	SB Off Direct	1	1,500	530	0.35	33.7	D	500	0.33	31.5	D
	SB Off Loop	1	1,500	1,070	0.71	34.4	D	1,010	0.67	32.1	D
	SB On Direct (Direct + Loop)	1	1,500	590	0.39	23.7	C	810	0.54	22.8	C
7th Street Ramp Junctions											
Studebaker Rd	EB Off Loop	1	1,500	130	0.09	32.0	D	660	0.44	29.9	D
	EB On Loop	1	1,500	1,230	0.82	37.7	F	1,420	0.95	32.3	D
	WB Off Loop	1	1,500	780	0.52	42.6	F	1,430	0.95	49.7	F
	WB On Loop	1	1,500	540	0.36	29.1	D	490	0.33	3.0	A

Table 4.6-6: Alternative 3 (Year 2020) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 (Year 2020) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[2,5]	Traffic Volume[1]	D/C	Density[2]	LOS[2,5]
Freeway - to - Freeway Branch Connectors[7]											
I-405/I-605 Freeway Interchanges	I-605 SB to I-405 NB	1	1,800	790	0.44	--	--	1,000	0.56	--	--
	I-605 SB/7th St to I-405 NB	2	3,600	1,460	0.41	--	--	1,430	0.40	--	--
	I-405 SB to I-605 NB	2	3,600	1,310	0.36	--	--	1,130	0.31	--	--
	I-605 SB to 7th St/I-405 SB	2	3,600	4,860	1.35	--	--	4,500	1.25	--	--
	I-605 SB/I-405 SB to 7th St	1	1,800	2,020	1.12	--	--	1,930	1.07	--	--
	7th St to I-605 NB/I-405 NB	2	3,600	1,340	0.37	--	--	1,170	0.33	--	--
	7th St to I-405 NB	1	1,800	720	0.40	--	--	430	0.24	--	--

Notes:

1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); D/C - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merge/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calulated for areas exceeding 1,500 ft in length.
7. For freeway-to freeway branch connectors, D/C ratios are provided.

GL-9 (Continued)

Table 4.6-7: Alternative 3 (Year 2020) Weaving Level-of-Service
Freeway and Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Southbound - Lakewood Boulevard/Willow Street to Bellflower Boulevard	46.4	F	73.4	F
I-405 Northbound - Bellflower Boulevard to Lakewood Boulevard/Willow Street	50.2	F	43.5	F
I-405 Southbound - Bellflower Boulevard to Woodruff Avenue	42.8	E	68.6	F
I-405 Northbound - Woodruff Avenue to Bellflower Boulevard	55.0	F	50.3	F
I-405 Northbound - Palo Verde Avenue/Stearns Street to Woodruff Avenue	48.6	F	42.8	E
I-405 Southbound - Palo Verde Avenue/Stearns Street to Studebaker Road	34.5	D	45.6	F
I-405 Northbound - Studebaker Road to Palo Verde Avenue/Stearns Street	46.1	F	47.8	F
Collector-Distributor (C-D) Roads				
Lakewood Boulevard/Willow Street Interchange at I-405				
Southbound C-D Road	16.2	B	22.5	C
Bellflower Boulevard/Los Coyotes Diagonal Interchange at I-405				
Southbound C-D Road	5.0	A	3.8	A

Notes:

1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads.

GL-9 (Continued)

Table 4.6-8: Alternative 3 (Year 2040) Mainline Peak Hour Level of Service

Location	Lane Type	Direction	Mainline		Alternative 2 (Year 2040) Conditions							
					AM Peak Hour				PM Peak Hour			
			Lanes	Capacity[1,4]	Traffic Demand Volume[1]	D/C	Density[3]	LOS[5]	Traffic Demand Volume[1]	D/C	Density[3]	LOS[5]
I-405 Mainline												
Temple Avenue to Lakewood Boulevard/Willow Street	GP	NB	5	9,250	10,730	1.16	--*	F	11,410	1.23	--*	F
		SB	5	9,250	10,710	1.16	--*	F	11,130	1.20	--*	F
	HOV	NB	1	1,850	2,000	1.08	--	--	2,200	1.19	--	--
		SB	1	1,850	1,800	0.97		--	2,120	1.15	--	--
Lakewood Boulevard/Willow Street to Bellflower Boulevard	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,970	1.06	--	--	2,220	1.20	--	--
		SB	1	1,850	1,690	0.97	--	--	2,300	1.24	--	--
Bellflower Boulevard to Woodruff Avenue	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	2,020	1.09	--	--	2,020	1.09	--	--
		SB	1	1,850	1,820	0.98	--	--	2,300	1.24	--	--
Woodruff Avenue to Palo Verde Avenue/Stearns Street	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	4	7,400	8,610	1.16	--*	F	9,850	1.33	--*	F
	HOV	NB	1	1,850	2,070	1.09	--	--	2,000	1.08	--	--
		SB	1	1,850	1,885	1.02	--	--	2,300	1.24	--	--
Palo Verde Avenue/Stearns Street to Studebaker Road	GP	NB	5	9,250	Weaving Segment - Refer to Weave Table							
		SB	5	9,250	Weaving Segment - Refer to Weave Table							
	HOV	NB	1	1,850	1,800	0.97	--	--	2,000	1.08	--	--
		SB	1	1,850	1,880	1.02	--	--	2,130	1.15	--	--
Studebaker Road to I-605 NB Off Ramp	GP	NB	4	7,400	9,830	1.33	--	F	11,330	1.53	--*	F
		SB	5	9,250	9,730	1.05	37.2	E	10,240	1.11	--*	F
	HOV	NB	1	1,850	2,345	1.31	--	--	2,480	1.34	--	--
		SB	1	1,850	1,910	1.03	--	--	2,130	1.15	--	--
I-605 NB Off Ramp to 7th St Off Ramp	GP	NB	1	7,400	9,880	1.33	--*	F	11,330	1.53	--*	F
		SB	4	7,400	8,320	1.12	43.4	E	9,040	1.22	--*	F
	HOV	NB	1	1,850	2,240	1.21	--	--	2,480	1.34	--	--
		SB	1	1,850	1,950	1.03	--	--	2,130	1.15	--	--
7th St Off Ramp to I-605 SB On Ramp	GP	NB	4	7,400	8,260	1.12	--*	F	9,780	1.32	--*	F
		SB	4	7,400	8,220	1.11	42.1	E	8,850	1.20	--*	F
	HOV	NB	1	1,850	2,240	1.21	--	--	2,480	1.34	--	--
		SB	1	1,850	1,910	1.03	--	--	2,130	1.15	--	--
I-605 Mainline												
Carson Street to Spring Street	GP	NB	4	7,400	6,210	0.84	27.4	D	7,060	0.95	35.0	D
		SB	4	7,400	8,360	1.13	--*	F	8,220	1.11	--*	F
	HOV	NB	1	1,850	1,620	0.88	--	--	1,900	1.03	--	--
		SB	1	1,850	1,620	0.88	--	--	1,520	0.82	--	--
Spring Street to Willow Street/Katella Ave	GP	NB	4	7,400	5,390	0.73	22.0	C	5,950	0.80	24.6	C
		SB	4	7,400	7,210	0.97	32.2	D	6,690	0.90	28.7	D
	HOV	NB	1	1,850	1,990	1.08	--	--	2,020	1.09	--	--
		SB	1	1,850	1,620	0.88	--	--	1,520	0.82	--	--
Willow Street/Katella Ave CD Road On Ramp to I-405	GP	NB	5	9,250	5,420	0.59	18.9	B	6,210	0.67	22.5	C
		SB	4	7,400	6,120	0.83	26.8	D	5,940	0.80	28.3	D
	HOV	NB	1	1,850	1,490	0.81	--	--	1,950	1.05	--	--
		SB	1	1,850	1,483	0.80	--	--	1,530	0.83	--	--
7th Street Mainline												
Pepper Tree Lane to Studebaker Road	GP	EB	2	3,700	2,930	0.80	15.8	B	2,730	0.74	14.6	B
		WB	3	5,550	3,860	0.70	20.7	C	3,830	0.69	20.5	C
Studebaker Road to I-605	GP	EB	2	3,700	4,140	1.12	41.3	E	3,560	0.96	30.8	D
		WB	2	3,700	4,120	1.11	40.9	E	4,850	1.31	--*	F

Notes:

1. Peak hour capacity and traffic volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS): General Purpose (GP) lane LOS is based on density except when demand-to-capacity (D/C) ratio is greater than or equal to 1.0, which is LOS F.
4. Peak hour capacities for freeway lanes include 1,850 vph for each GP lane and a single High Occupancy Vehicle (HOV) lane.
5. * Density is in excess of 45 pc/mi/ln; therefore LOS is F.

GL-9 (Continued)

Table 4.6-9: Alternative 3 (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
I-405 Ramp Junctions											
Lakewood Blvd & Willow St	NB Off Direct	2	3,000	1,080	0.36	16.8	F	1,070	0.36	19.0	F
	NB On Loop	1	1,500	850	0.57	50.3	F	670	0.45	56.7	F
	NB On Direct	1	1,500	610	0.41	27.8	F	360	0.24	30.8	F
	SB Off (Direct + Loop)	2	3,000	1,290	0.43	20.9	F	1,480	0.49	23.1	F
	SB On Loop	1	1,500	340	0.23	46.7	F	440	0.29	47.5	F
	SB On Direct (from Willow St)	1	1,500	490	0.33	24.0	C	680	0.45	24.4	F
Bellflower Blvd & Los Coyotes Diagonal	NB Off Direct	1	1,500	560	0.37	30.7	D	620	0.41	36.5	F
	NB On (Direct + Loop)	2	3,000	1,390	0.46	17.3	F	930	0.31	16.3	F
	SB Off (Direct + Loop)	2	3,000	1,560	0.52	37.7	F	2,160	0.72	25.5	F
	SB On (Direct + Loop)	1	1,500	1,060	0.71	37.7	F	1,530	1.02	36.3	F
Woodruff Ave	NB Off Direct	1	1,500	650	0.43	27.2	C	360	0.24	30.6	F
	NB On Direct	1	1,500	510	0.34	38.5	F	350	0.23	46.1	F
	SB Off Direct	1	1,500	840	0.56	33.0	D	620	0.41	33.1	F
	SB On Direct	1	1,500	690	0.46	24.5	F	330	0.22	26.7	F
Palo Verde Ave & Stearn St	NB Off Direct	1	1,500	710	0.47	28.3	F	860	0.57	34.2	F
	NB On Loop	1	1,500	220	0.15	59.5	F	350	0.23	67.9	F
	SB On Direct (from Stearn St)	1	1,500	570	0.38	28.1	F	680	0.45	28.1	F
Studebaker Rd	NB On Direct	1	1,500	330	0.22	61.6	F	340	0.23	71.4	F
	SB Off Direct	1	1,500	440	0.29	39.0	E	280	0.19	39.3	F
7th St	SB Off Direct	1	1,500	100	0.07	38.4	E	170	0.11	41.8	F

GL-9 (Continued)

Table 4.6-9: Alternative 3 (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[1]	D/C	Density[2]	LOS[3,5]	Traffic Volume[1]	D/C	Density[2]	LOS[3,5]
I-605 Ramp Junctions											
Carson St	NB Off Direct	1	1,500	1,100	0.73	34.2	D	1,020	0.68	37.3	E
	NB On Loop	1	1,500	460	0.31	20.9	C	490	0.33	23.7	C
	NB On Direct	1	1,500	830	0.55	21.1	C	740	0.49	23.1	C
	SB Off Direct	2	3,000	1,320	0.44	15.6	B	1,530	0.51	17.3	B
	SB On Loop	1	1,500	540	0.36	23.2	C	500	0.33	22.9	C
	SB On Direct	1	1,500	300	0.20	23.8	F	350	0.23	23.3	F
Spring St/Cerritos Ave	NB On Loop	1	1,500	820	0.55	19.0	B	1,110	0.74	20.0	C
	SB Off Direct	1	1,500	1,150	0.77	37.4	E	1,520	1.01	38.9	E
Willow St/Katella Ave	NB Off (Direct + Loop)	1	1,500	1,160	0.77	1.5	A	1,800	1.20	6.6	A
	NB On Direct	1	1,500	1,130	0.75	20.2	C	1,530	1.02	21.9	C
	SB Off Direct	1	1,500	570	0.38	36.2	E	540	0.36	33.8	D
	SB Off Loop	1	1,500	1,150	0.77	36.9	E	1,090	0.73	34.6	D
	SB On Direct (Direct + Loop)	1	1,500	630	0.42	25.3	C	880	0.59	24.3	C
7th Street Ramp Junctions											
Studebaker Rd	EB Off Loop	1	1,500	140	0.09	32.0	D	720	0.48	29.9	D
	EB On Loop	1	1,500	1,330	0.89	38.5	F	1,540	1.03	33.3	D
	WB Off Loop	1	1,500	840	0.56	42.6	F	1,550	1.03	49.7	F
	WB On Loop	1	1,500	590	0.39	29.6	D	540	0.36	29.4	D

GL-9 (Continued)

Table 4.6-9: Alternative 3 (Year 2040) Ramp Junction Peak Hour Level of Service

Interchange	Ramp Type	Ramp Lanes	Ramp[1,4] Capacity	Alternative 3 (Year 2040) Conditions							
				AM Peak				PM Peak			
				Ramp		Ramp Junction		Ramp		Ramp Junction	
				Traffic Volume[4]	D/C	Density[2]	LOS[3,5]	Traffic Volume[4]	D/C	Density[2]	LOS[3,5]
	Freeway - to - Freeway Branch Connectors[7]										
I-405/I-605 Freeway Interchanges	I-605 SB to I-405 NB	1	1,800	860	0.48	--	--	1,080	0.60	--	--
	I-605 SB/7th St to I-405 NB	2	3,600	1,570	0.44	--	--	1,550	0.43	--	--
	I-405 SB to I-605 NB	2	3,600	1,410	0.39	--	--	1,220	0.34	--	--
	I-605 SB to 7th St/I-405 SB	2	3,600	5,260	1.46	--	--	4,870	1.35	--	--
	I-605 SB/I-405 SB to 7th St	1	1,800	2,020	1.12	--	--	1,930	1.07	--	--
	7th St to I-605 NB/I-405 NB	2	3,600	1,450	0.40	--	--	1,260	0.35	--	--
	7th St to I-405 NB	1	1,800	770	0.43	--	--	460	0.26	--	--

Notes:
1. Peak hour capacity and traffic demand forecast volumes are shown in vehicles per hour (vph).
2. Density is shown in passenger cars/mile/lane (pc/mi/ln).
3. Level of Service (LOS) is based on density (pc/mi/ln); D/C - demand-to-capacity ratio.
4. Peak hour capacities for freeway ramps include 1,500 vph for each freeway ramp lane and 1,800 vph for each freeway-to-freeway branch connector lane.
5. LOS F as the total flow of the merged/diverge area exceeds the capacity of the freeway segment; the density is not applicable in this case.
6. * Per Highway Capacity Manual, as the impact area of merge and diverge is primarily focused on an influence area of 1,500 ft, the density was not calculated for areas exceeding 1,500 ft in length.
7. For freeway to freeway branch connectors, D/C ratios are provided.

GL-9 (Continued)

Table 4.6-10: Alternative 3 (Year 2040) Weaving Level-of-Service
Freeway and Collector-Distributor Roads

Weaving Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
Freeway Mainline				
I-405 Southbound - Lakewood Boulevard/Willow Street to Bellflower Boulevard	51.3	F	81.2	F
I-405 Northbound - Bellflower Boulevard to Lakewood Boulevard/Willow Street	55.1	F	47.7	F
I-405 Southbound - Bellflower Boulevard to Woodruff Avenue	47.3	F	75.7	F
I-405 Northbound - Woodruff Avenue to Bellflower Boulevard	60.9	F	56.1	F
I-405 Northbound - Palo Verde Avenue/Stearns Street to Woodruff Avenue	53.4	F	47.3	F
I-405 Southbound - Palo Verde Avenue/Stearns Street to Studebaker Road	37.7	E	49.8	F
I-405 Northbound - Studebaker Road to Palo Verde Avenue/Stearns Street	50.8	F	53.0	F
Collector-Distributor (C-D) Roads				
Lakewood Boulveard/Willow Street Interchange at I-405				
Southbound C-D Road	16.2	B	22.5	C
Bellflower Boulevard/Los Coyotes Diagonal Interchange at I-405				
Southbound C-D Road	5.0	A	3.8	A

Notes:
1. Density is shown in passenger cars/mile/lane (pc/mi/ln).
2. Level of Service (LOS) is based on density (pc/mi/ln). The density LOS thresholds are different for the freeway mainline and collector-distributor roads.

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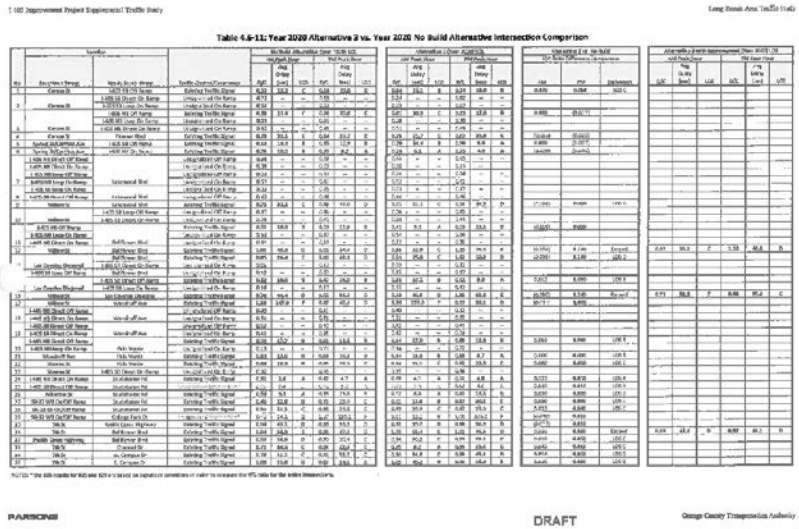

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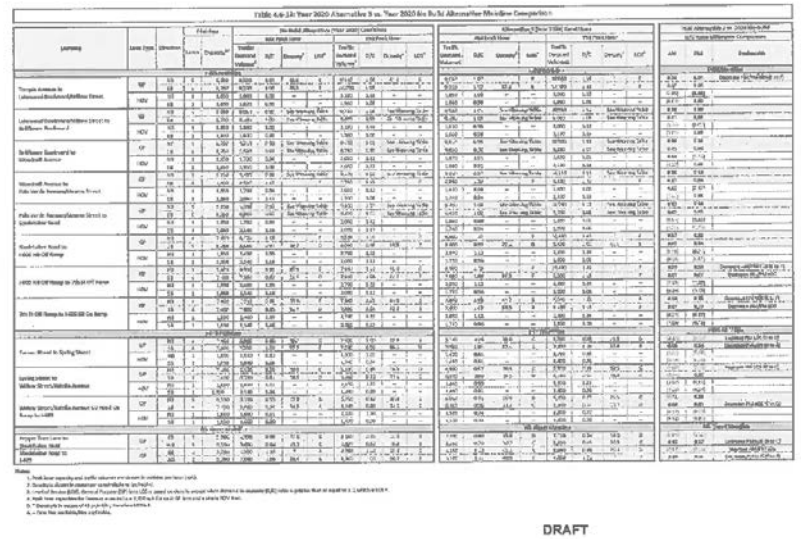

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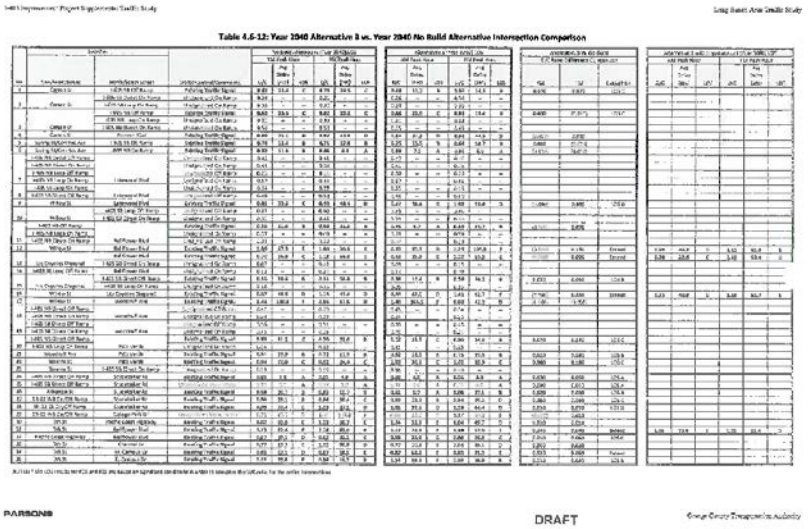

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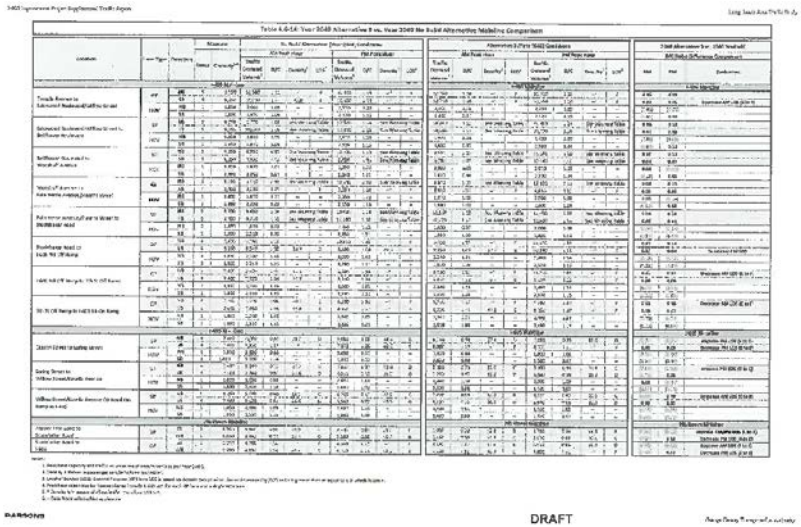

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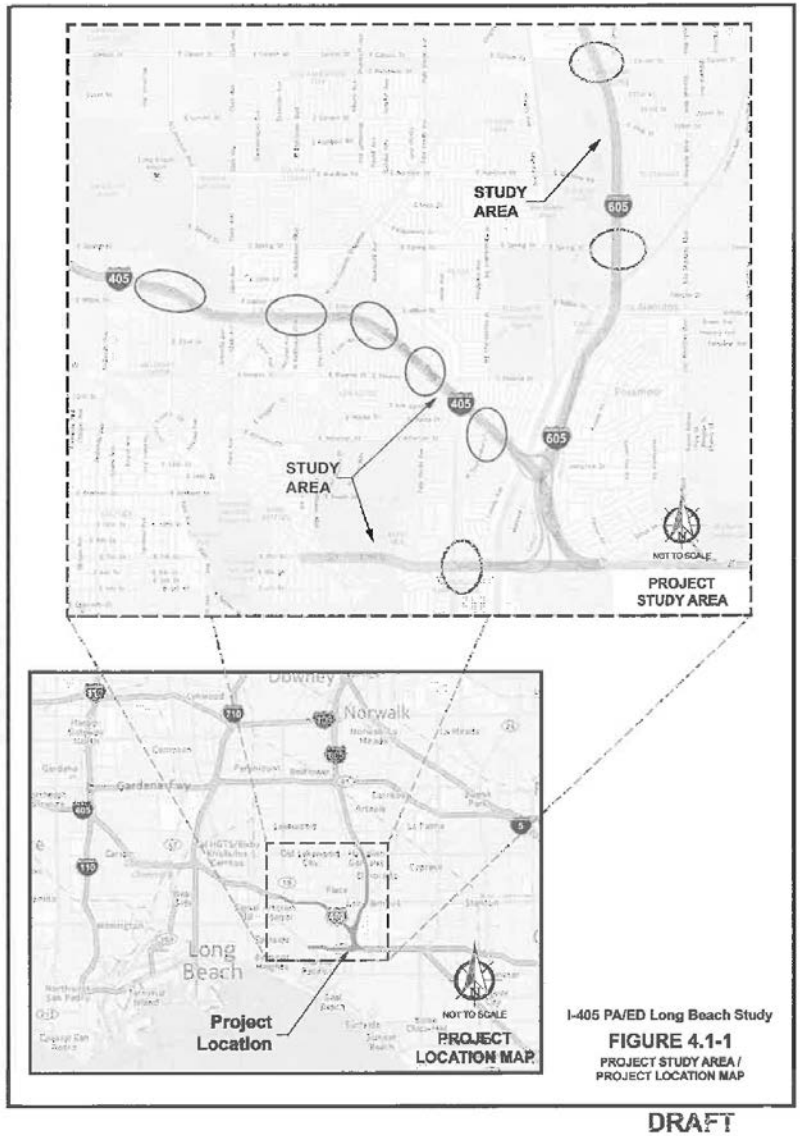

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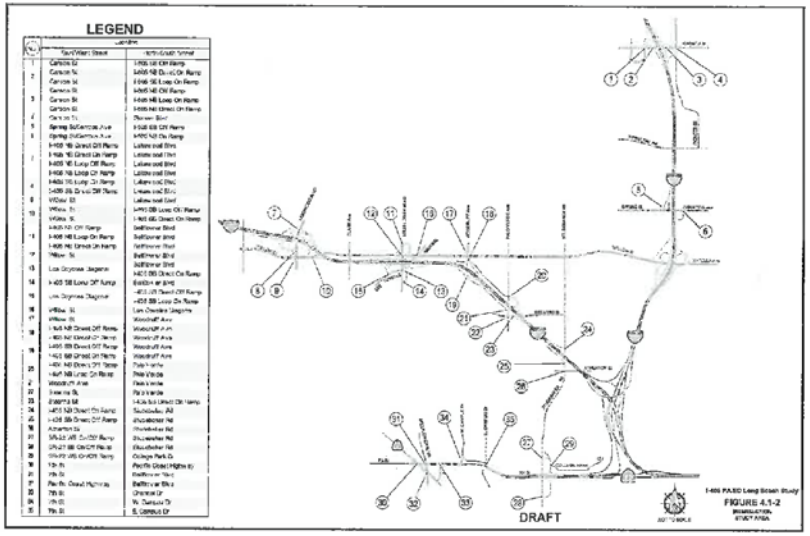

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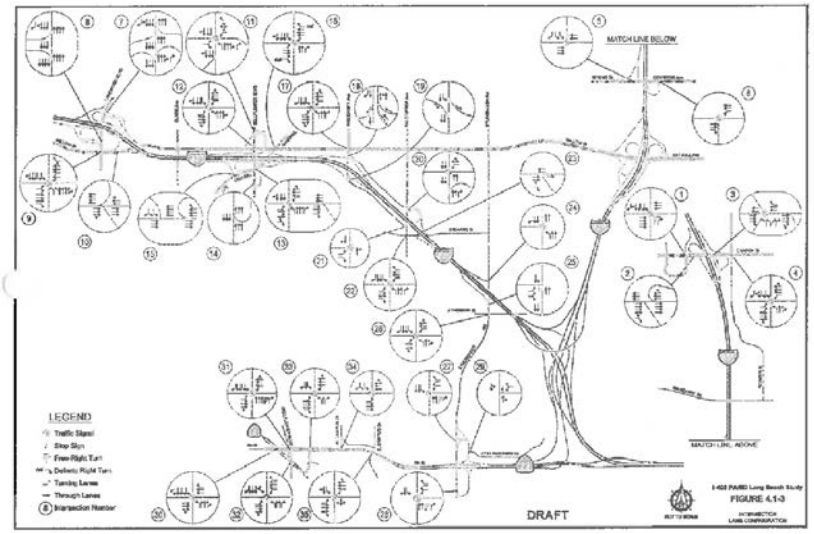

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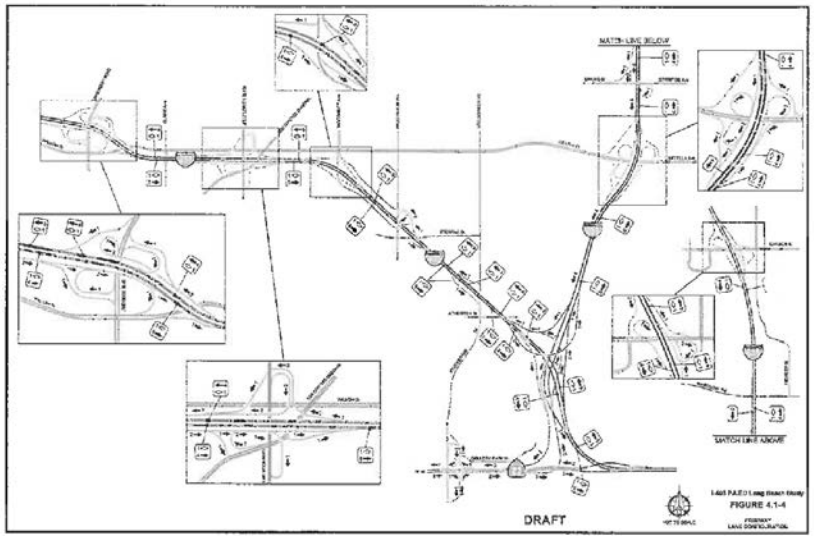

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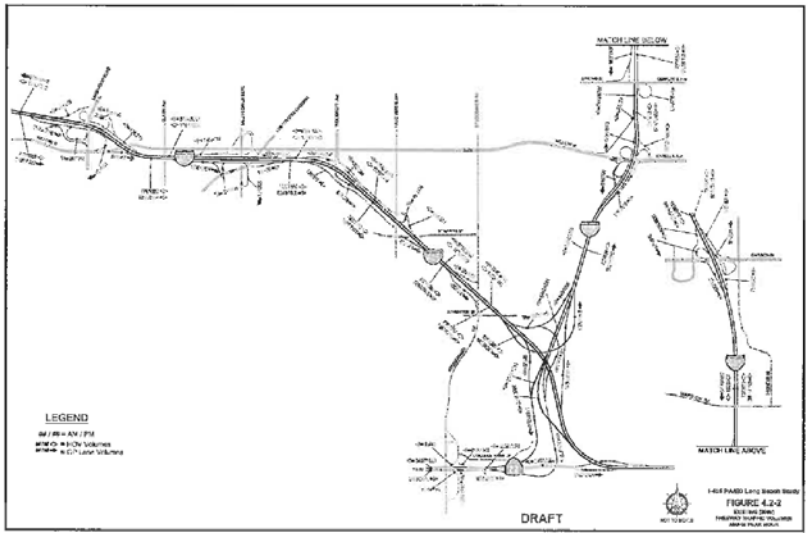

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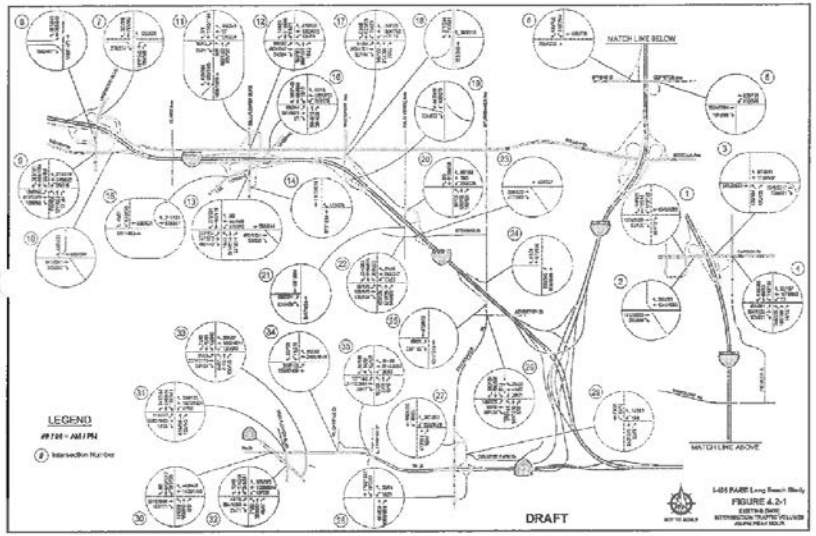

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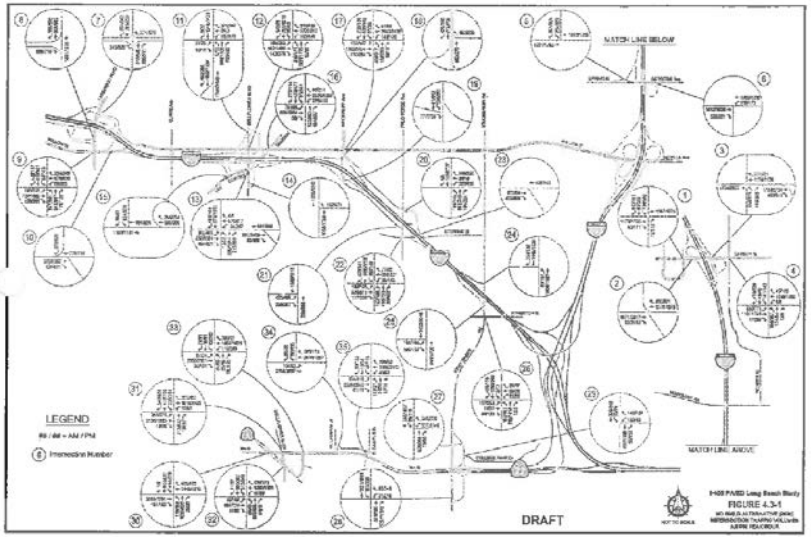

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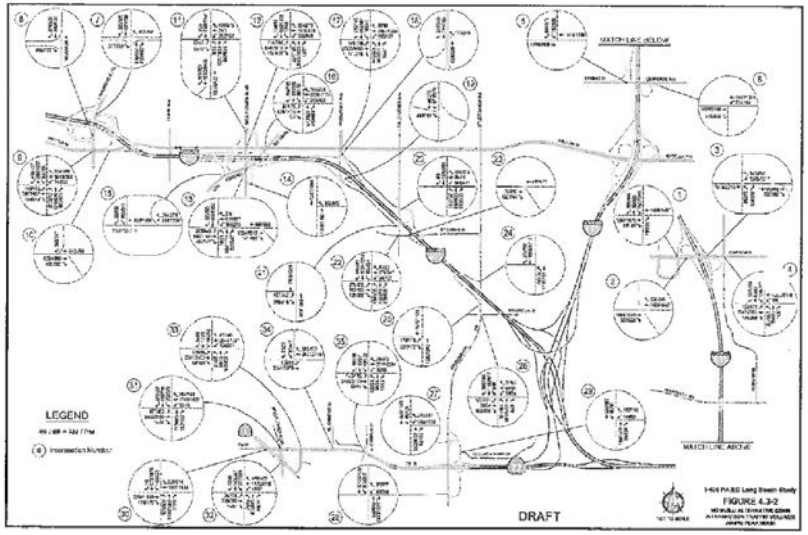

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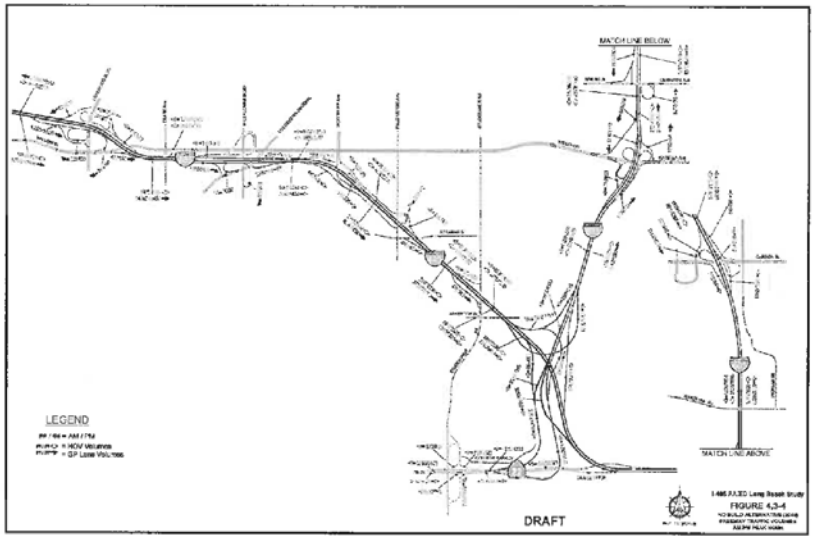

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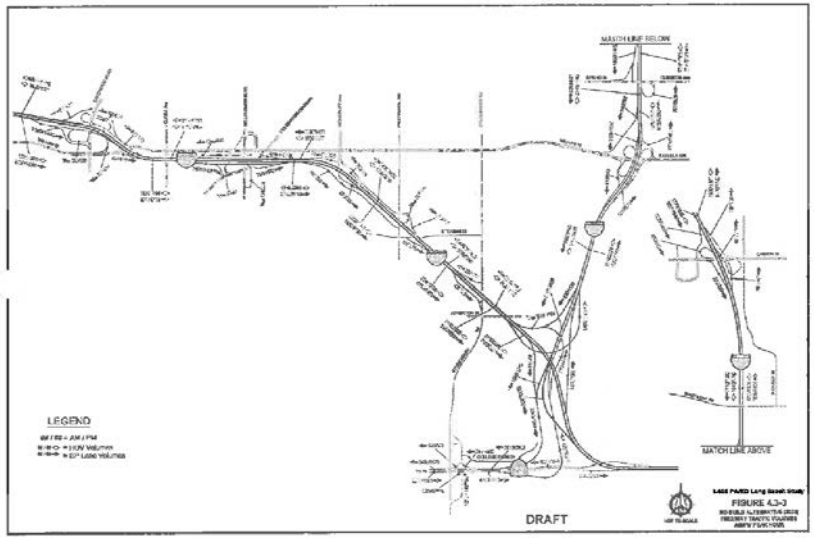

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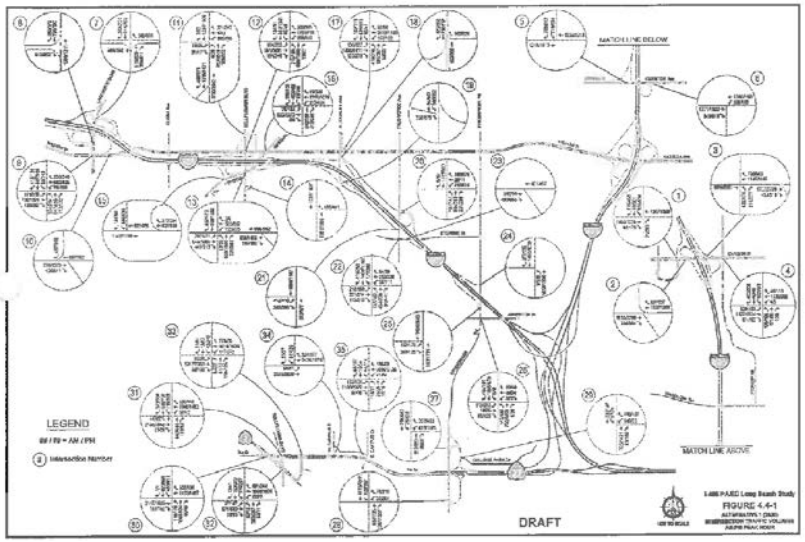

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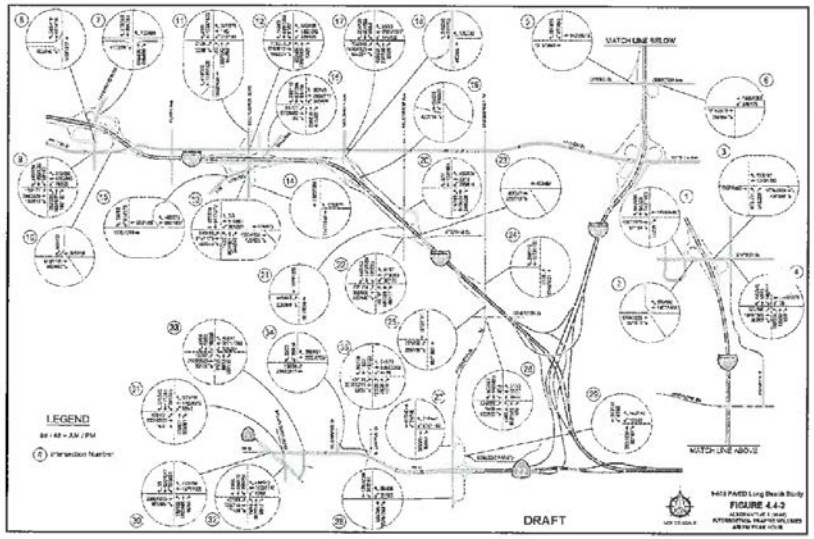

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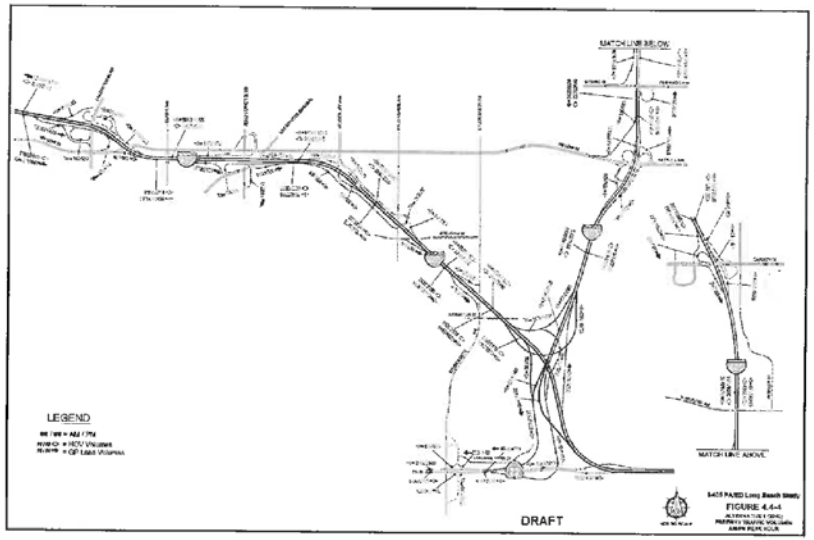

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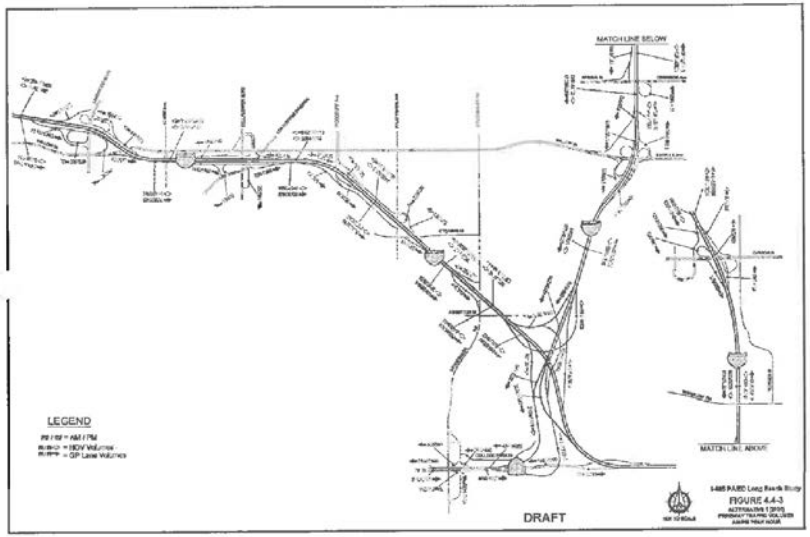

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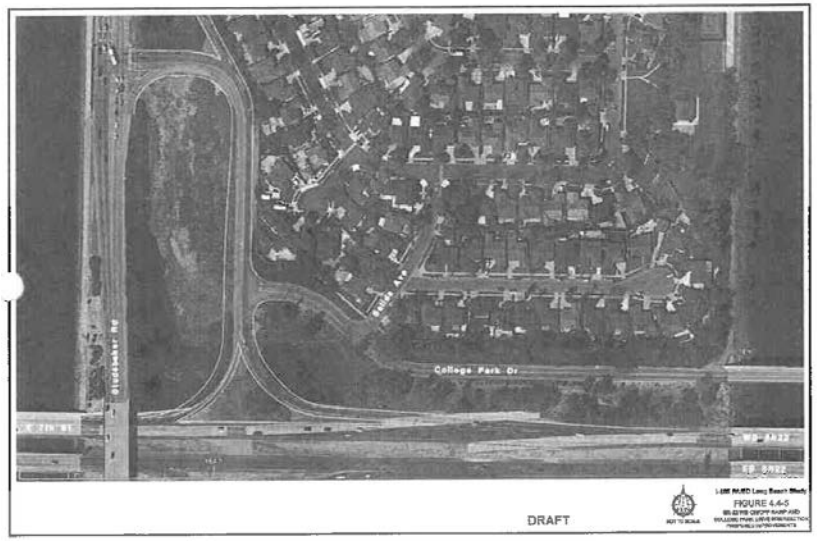

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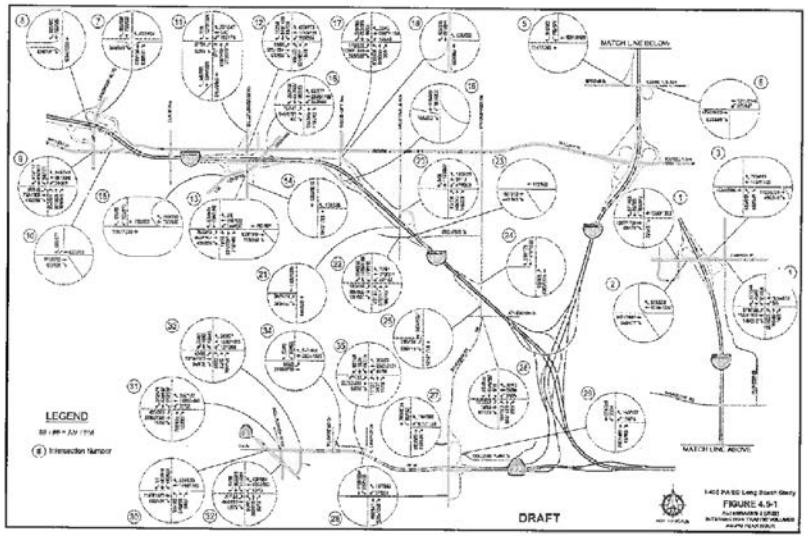

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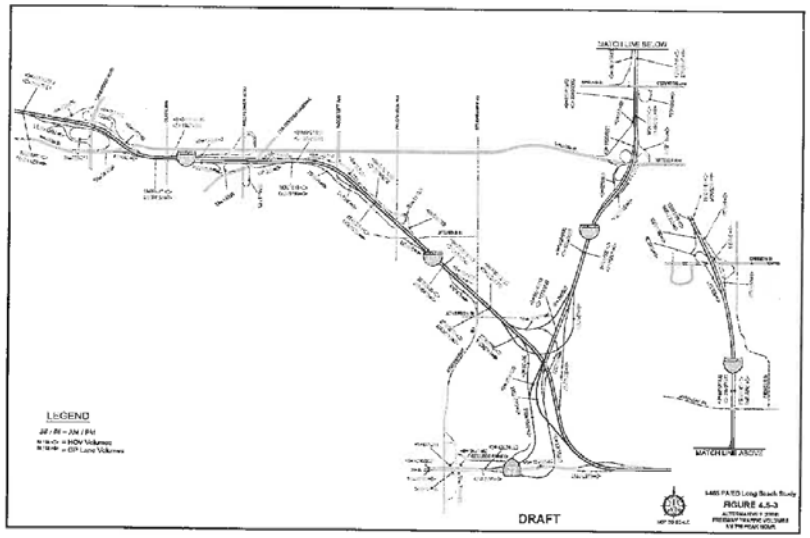

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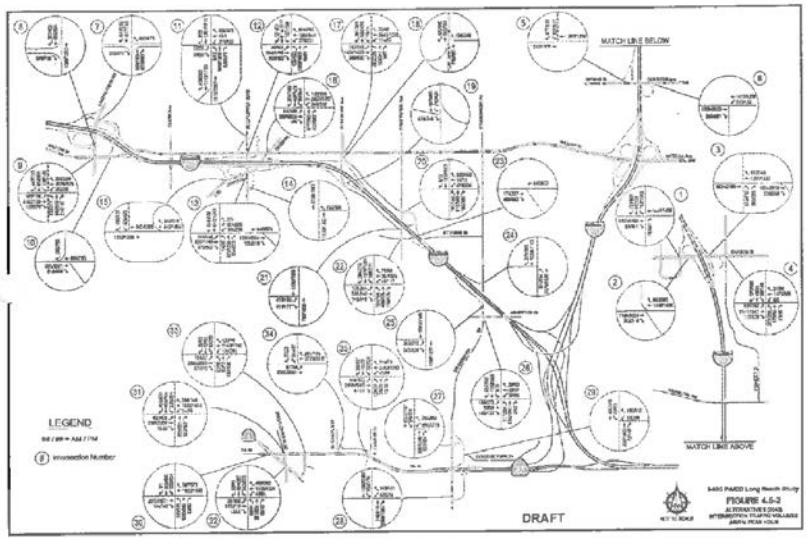

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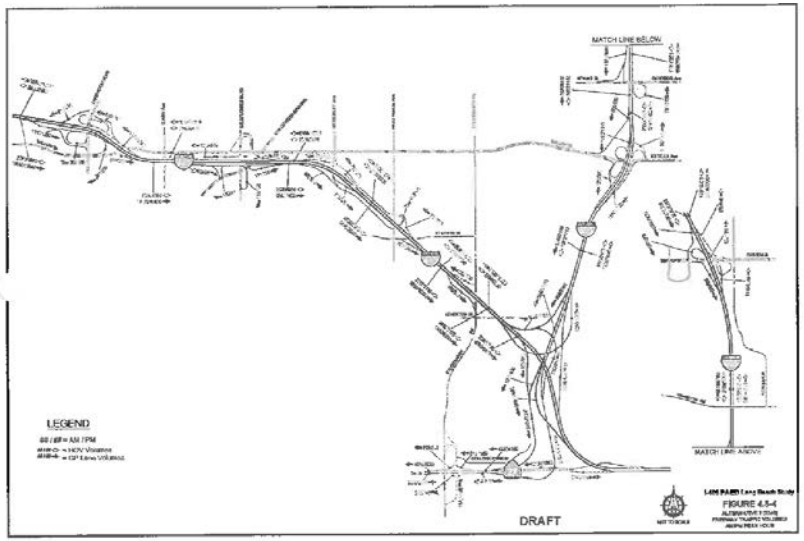

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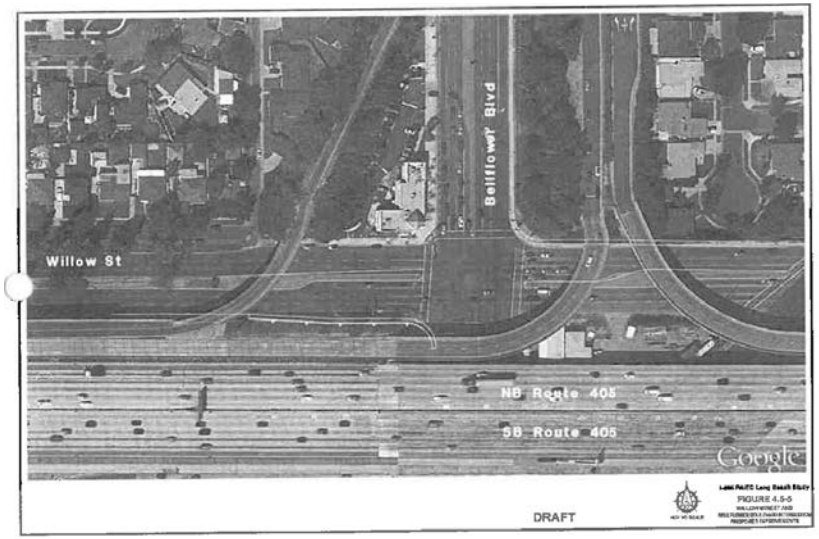

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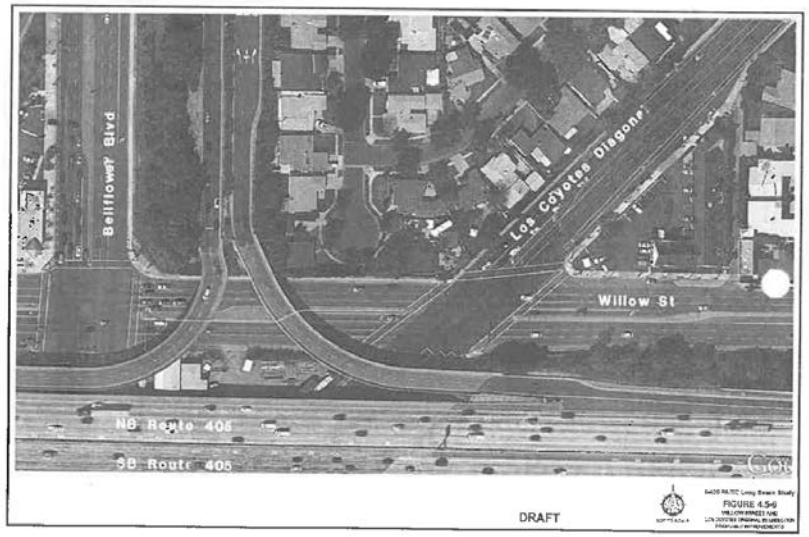

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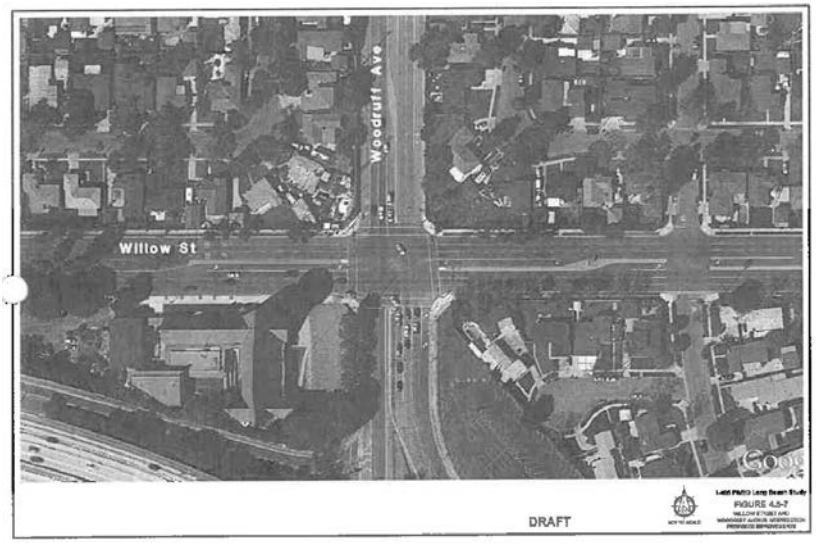

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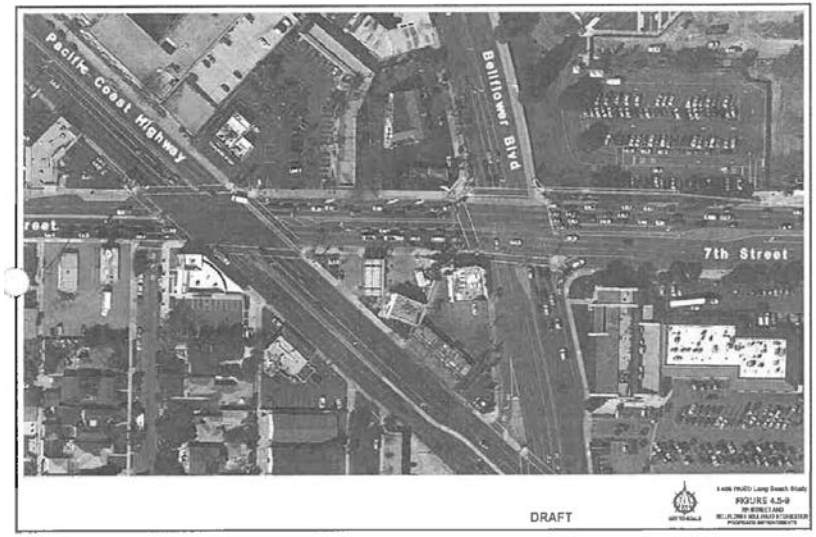

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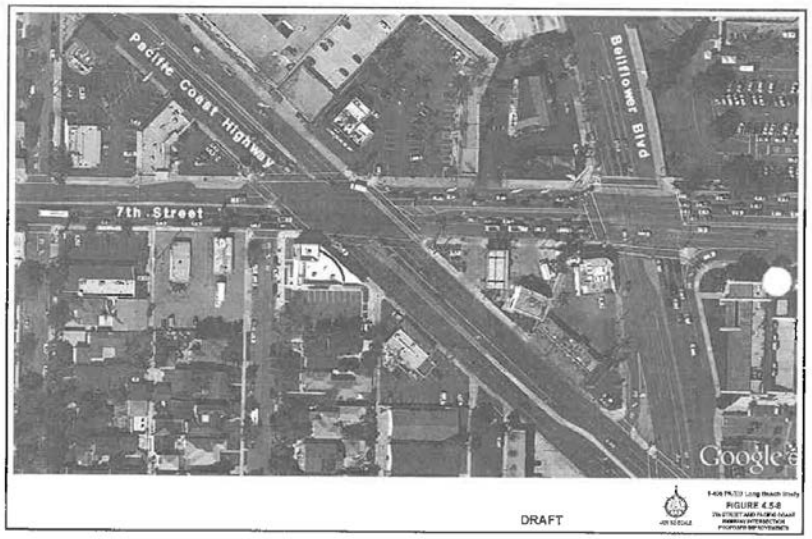

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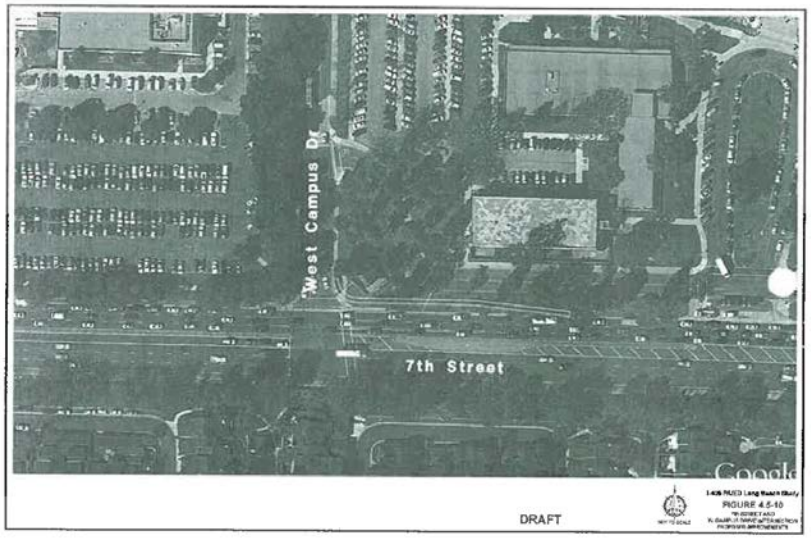

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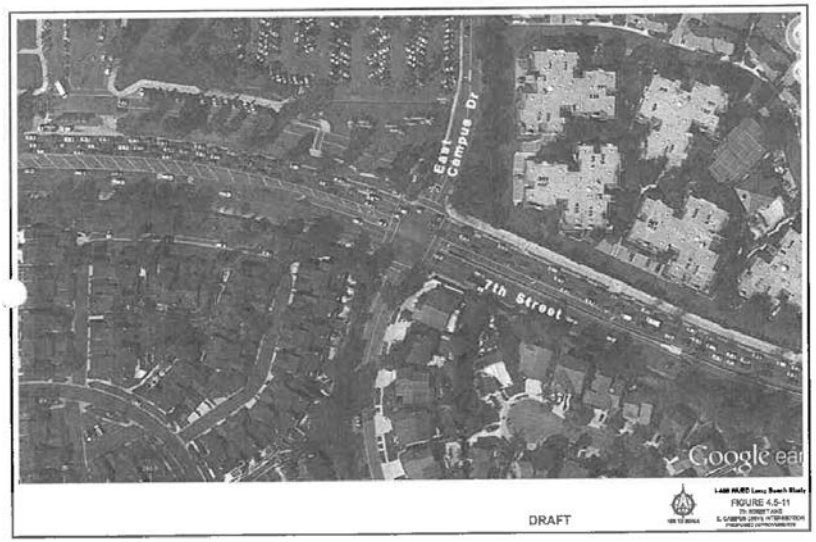

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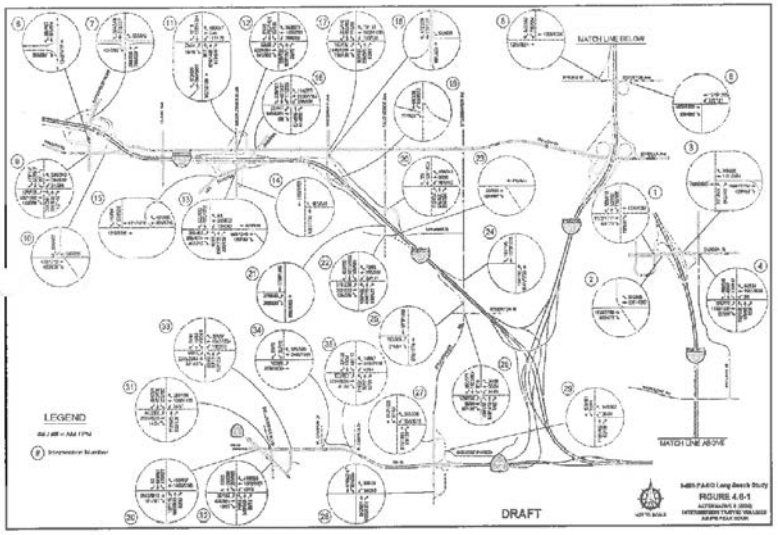

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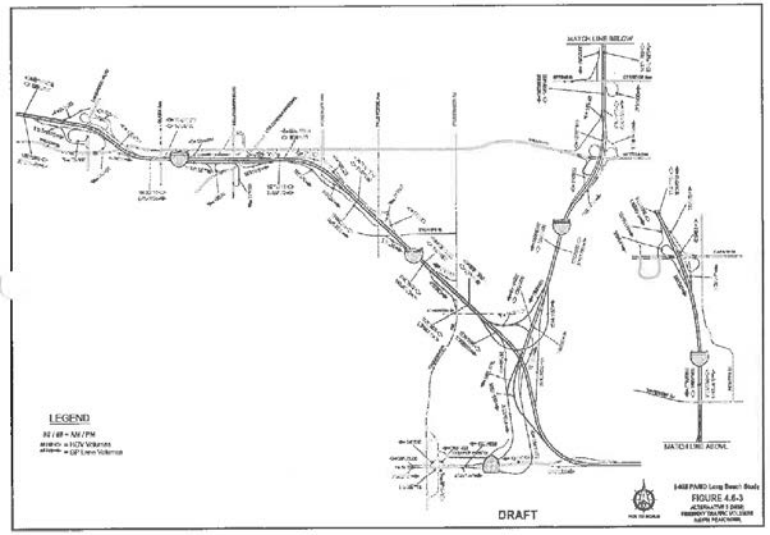

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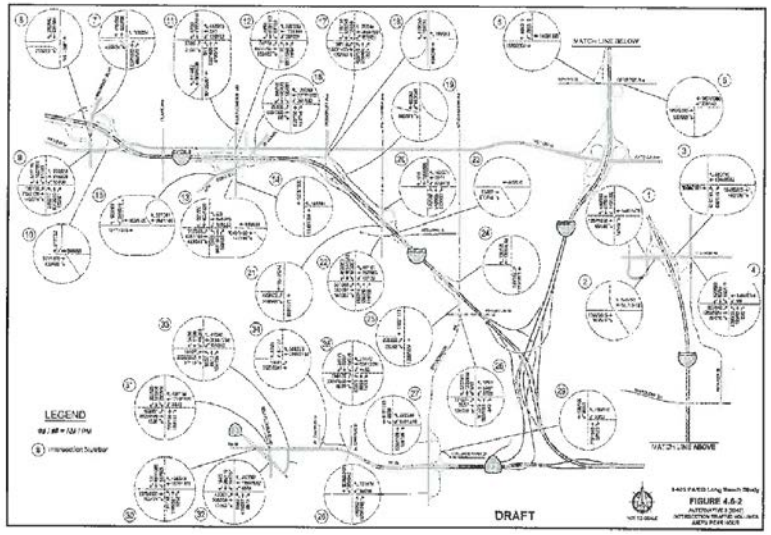

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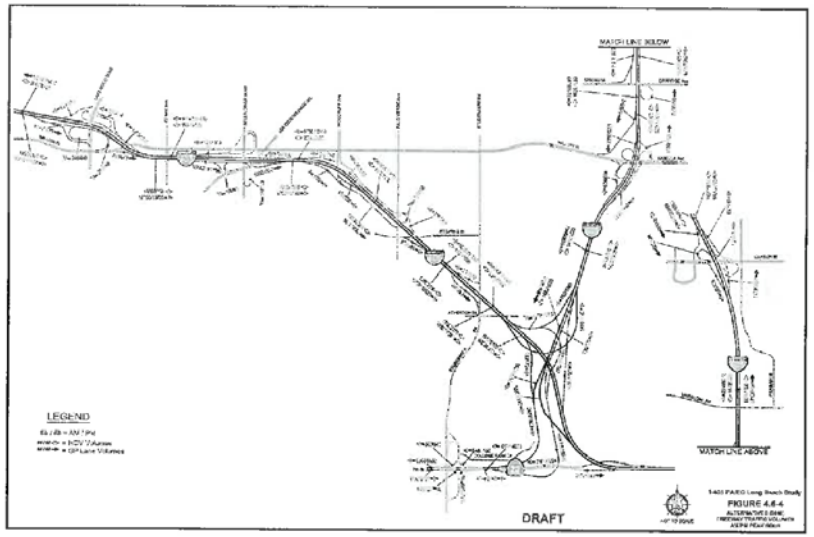

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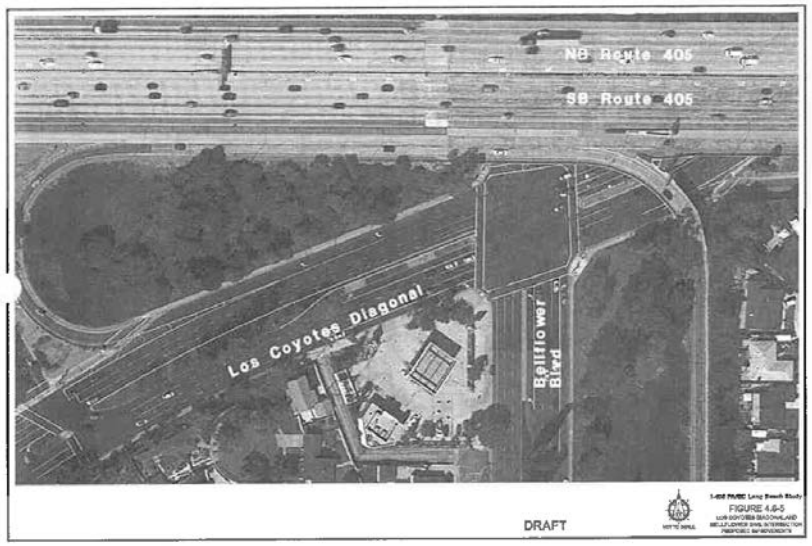

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Attachment 2

Correspondence from Jim Beil
OCTA Executive Director
June 25, 2013

GL-9 (Continued)

OCTA

BOARD OF DIRECTORS

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Chief Executive Officer

June 25, 2013

Mr. Sean Crumby
Director of Public Works
City of Seal Beach
211 Eight Street
Seal Beach, CA 90740

Dear Mr. Crumby:

As the environmental phase of the Interstate 405 (I-405) Improvement Project (Project) moves forward, staff continues to study issues previously raised by the I-405 corridor cities and other stakeholders. One of these issues relates to the existing soundwall along I-405 that parallels Almond Avenue in the City of Seal Beach (City) constructed in the 1970s.

Project plans for the three build alternatives have differing impacts to the soundwall: Project Alternatives 1 and 3 would not necessitate the reconstruction of the soundwall as both alternatives provide just one additional general purpose (GP) lane at this location. Alternative 2, however, does necessitate reconstruction of the existing soundwall as this alternative provides two additional GP lanes on I-405 along Almond Avenue, thus requiring some minimal additional right-of-way to accommodate the second GP lane.

Previously, the City proposed that the Project include non-standard features such as reduced widths for lanes and shoulders in order to reduce the Project footprint and eliminate the need to reconstruct the soundwall. Orange County Transportation Authority (OCTA) staff and consultants have met with the California Department of Transportation (Caltrans), City staff, and consultants to review these proposals.

Based on discussions with Caltrans, there is no justification to substantiate approval for any of the three proposed design exceptions to the mandatory design safety standards that would be required to leave the soundwall in place with Alternative 2.

Approval of the design exceptions must consider the tradeoffs between meeting the mandatory design safety standards on I-405 and the impacts to Almond Avenue. The I-405 in the vicinity of the Almond Avenue soundwall currently carries approximately 370,000 vehicles per day at speeds of up to 65 miles per hour or greater. Almond Avenue carries less than 5,000 vehicles per day at speeds of up to 30 miles per hour. Almond Avenue is 40-feet wide and has one lane in each direction and a parking lane on each side of the street. On-street parking on the north side of Almond Avenue is light to non-existent, and non-existent on the south side of Almond Avenue.

Orange County Transportation Authority
550 South Main Street / P.O. Box 14184 / Orange / California 92863-1584 / (714) 560-OCTA (6282)

GL-9 (Continued)

State approvals of mandatory design safety standard exceptions are contingent upon implications to safety when not meeting standards. There are no safety implications related to the removal of parking on the south side of Almond Avenue. In comparison, this section of I-405 has the highest accident concentrations in Orange County. Maintaining design standards on I-405 significantly outweighs the minimal impacts to Almond Avenue when it comes to safety.

Attachment A provides a summary of the City proposals for Alternative 2 and reasoning why Caltrans has determined there is no justification to accept the proposed design exceptions to mandatory design safety standards.

Almond Avenue is approximately 5,500-feet long from Violet Street to Aster Street, including diversions around Almond Park. Alternative 2 will maintain one lane of traffic in each direction and parking on both sides of the street with the exception of approximately 100 feet where parking will only be feasible on one side of the street. This appears to be in general compliance with the City's Municipal Code. Attachment B is a copy of the City Municipal Code, Title 10, page 43, which provides the required travel lane and parking lane width for Almond Avenue, which is a residential collector street.

OCTA looks forward to working closely with City staff as the Project progresses to address all City concerns. OCTA holds regularly scheduled technical working group meetings, which include representatives from the City, and will work towards amenable solutions with the City and Caltrans.

OCTA and Caltrans staff are preparing the supplemental draft environmental impact report/environmental impact statement that is scheduled to be circulated for public review and comments in summer 2013. We look forward to the City's comments during the public review period.

Please feel free to contact me at (714) 560-5646 if you have any questions.

Sincerely,

Jim Beil, P.E.
Executive Director, Capital Programs

JB:nb
Attachments

c: Ms. Jill Ingram, Seal Beach City Manager

GL-9 (Continued)

I-405 Alternative 2
Proposed Design Exceptions to Mandatory Design Standards To Avoid Relocation of the Almond Avenue Sound Wall

This document summarizes the three Highway Design Manual (HDM) Mandatory Design Standards and the proposed Design Exceptions to an Interstate 405 (I-405) Improvement Project Alternative 2 design to avoid impacting the existing sound wall between the I-405 and Almond Avenue in the City of Seal Beach, as well as safety implications of approval of these design exceptions.

Deviation from the three Mandatory Design Standards requires approval of Design Exceptions by State of California Department of Transportation (Caltrans) District 12 design staff in Irvine, Caltrans Headquarters design staff in Sacramento, and the Federal Highway Administration.

Proposed Design Exceptions to Mandatory Design Standards

Reference / Notes*	Highway Design Manual (HDM) Section & Feature	Location and Description (Length of Exception in Feet)	HDM Standard	Proposed
1	201.1 –Sight Distance	Northbound I-405 @ 4010' radius curve adjacent to west SR-22/North I-405 connector at right-of-way pinch point (615 feet)	750 feet	590 feet
2	301.1 –Traveled Way Width	Northbound I-405 west of SR-22 East (Total 5,565 ft) 11-foot-wide lanes for 2 HOV and 5 general purpose lanes (1,665 ft) 11-foot-wide lanes for 2 HOV and 2 general purpose lanes (3,200 ft) 11-foot-wide lanes for 1 HOV and 2 general purpose lanes (700 ft)	12 feet	11 feet
3	302.1 –Shoulder Width & 309.1(3)(a) - Minimum Horizontal Clearance	NB I-405 Left Median Shoulder (4,300 ft)	10 feet	8 feet

1

GL-9 (Continued)

***Notes**

With respect to the three design exceptions identified in the table above, none of the proposals below are acceptable:

1. **Sight Distance** - Reducing sight distance below the standard has the potential to result in a driver's inability to see an object or stopped vehicle in time to stop or take evasive action before colliding with the object or stopped vehicle, resulting in a higher number of rear-end collisions.
2. **Traveled Way Width** - Proposed nonstandard narrow lanes may increase the potential for sideswipe accidents, since drivers have less room between themselves and vehicles in adjacent lanes.
3. **Shoulder Width / Minimal Horizontal Clearance** - Narrow shoulders decrease the protection of disabled and other stopped vehicles from traffic moving in the travel lanes and reduce the protection of motorists, police officers, service patrol workers, and others who must be outside their vehicles.

City of Seal Beach Municipal Code

The following page is taken from the City of Seal Beach Municipal Code, Title 10, Page 43, Table 10.40.010.A. (the Code) which outlines the Street Design Standards for a Residential Collector street such as Almond Avenue.

For Almond Avenue, the Code calls for a 36 foot minimum street width (curb-to-curb) to accommodate two travel lanes of 10 feet each and two parking lanes of 8 feet each. If the Mandatory Design Standards for lane and shoulder width on the I-405 are met, the sound wall would be relocated narrowing Almond Avenue from its current 40 foot width to approximately 36 feet west of Almond Park, allowing the two existing travel lanes and two existing parking lanes to be retained. East of Almond Park, for approximately 100 feet, Almond Avenue would be narrowed to between 40 and 34 feet. Two travel lanes and one parking lane would be provided along this 100 ft. stretch. As for the remaining 250 feet of impact, Almond Avenue would still provide two travel lanes and two parking lanes.

In summary, Almond Avenue is approximately 5,500 feet from Violet Street to Aster Street, including diversions around Almond Park. Per Table 10.40.010.A. the project will maintain one lane of traffic in each direction and parking on both sides of the street with the exception of approximately 100 feet where parking will only be feasible on one side of the street per the City of Seal Beach's Municipal Code.

2

GL-9 (Continued)

Table 10.40.010.A
Street Design Standards

Street Type	Total ROW (ft)	Curb-to-Curb ROW (ft)	Travel Lane Width	Number of Travel Lanes	Parking Lane Width (ft)	Pedestrian ROW (ft)	Supplemental Regulations
Local Residential Street	56-60	36-40	10	2	8	10	(i)
Residential Collector & Commercial Street	60	36-40	10	2	8	12	(ii)
Commercial Street	64	40	12	2	8	12	(iii)
Light Manufacturing Street	64	44	12	2	10	10	(iii)
Divided Street	100-130	84-106	11	4-6	8	12	(iv), (v)

(i) Narrower parking lanes and bulb outs can be considered on a case-by-case basis.
(ii) On streets fronting commercial districts solid sidewalks and tree grates are required.
(iii) Sidewalk may be eliminated and utilized as additional landscaping based on level of anticipated pedestrian activity, unless required pursuant to federal or State law.
(iv) Where on street parking is not permitted, replace parking lane with additional landscaping and Class 1 bike plan as appropriate.
(v) Center landscaped median to be provided, no greater than 16 feet wide.

B. Intersections. Intersection design shall not compromise public safety or emergency vehicle access. Final intersection design approval shall be by the Director of Public Works/City Engineer.

1. Additional Lanes. Streets should have turn lanes or more than 1 travel lane in each direction only if it can be demonstrated, through modeling or other reliable means, that more than temporary congestion is anticipated (Level of Service E or greater). Where a total of 4 or more travel lanes are planned, a minimum 15-foot wide planted median should be provided to reduce visual impacts of the pavement.

2. Curb-to-Curb Distances. Curb-to-curb distances at intersections should be minimized to reduce vehicular speeds and pedestrian crossing distances. At typical intersections, on-street parking should be replaced by corner bulb outs that minimize curb-to-curb distances and slow traffic. (See Figure 10.40.010.B.2: *Corner Bulb Outs*.)

Title 10 – page 43

City of Seal Beach *Municipal Code* *Ord. No. 1557*
Adopted 2008 - Revised 2011

GL-9 (Continued)

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Attachment 3

Orange County Transportation Commission
High-Occupancy Vehicle Degradation Study Powerpoint
April 8, 2013

GL-9 (Continued)

OCTA

ORANGE COUNTY TRANSPORTATION AUTHORITY

High-Occupancy Vehicle Degradation Study

Powerpoint

GL-9 (Continued)

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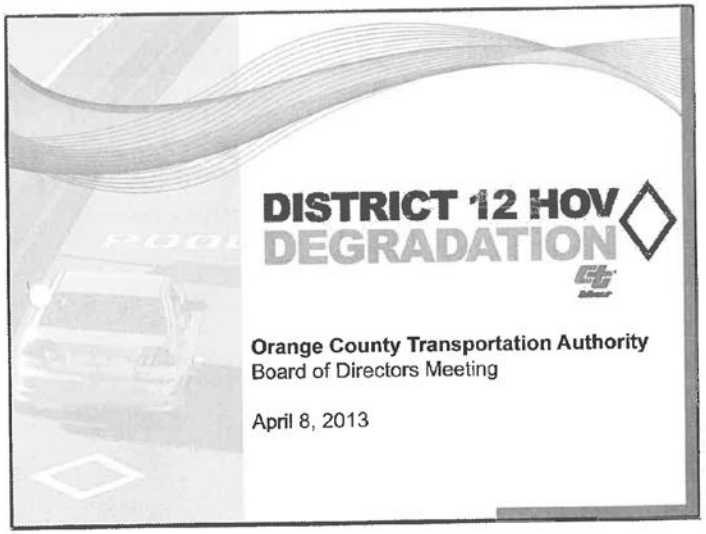
GL-9 (Continued)



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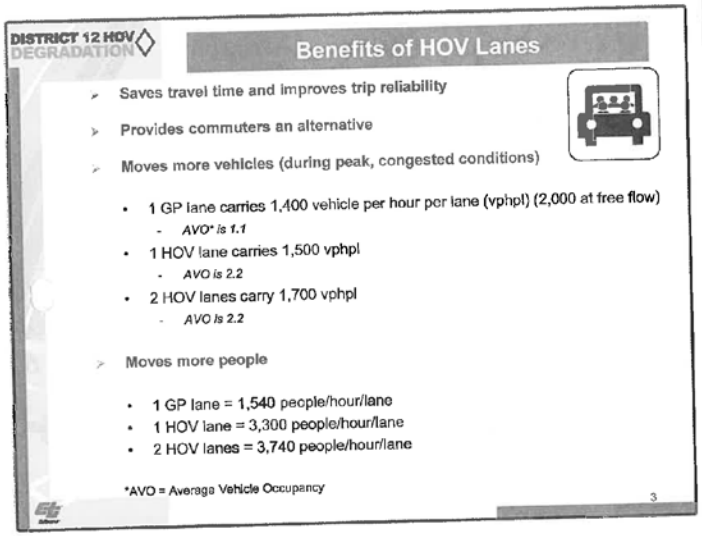

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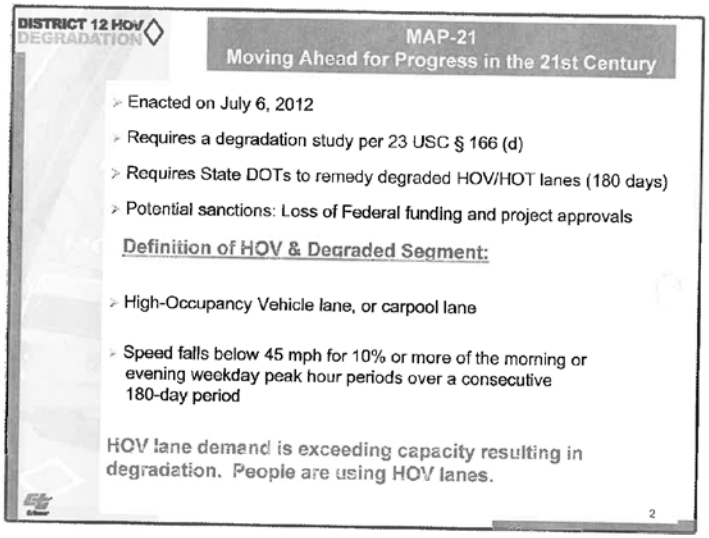

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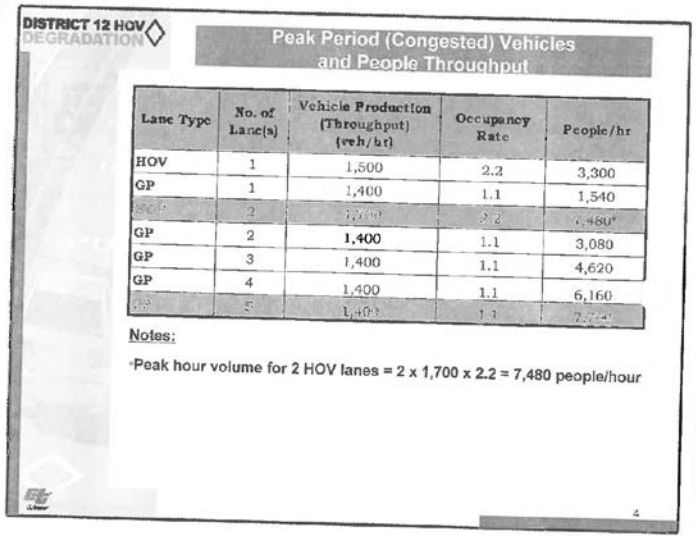
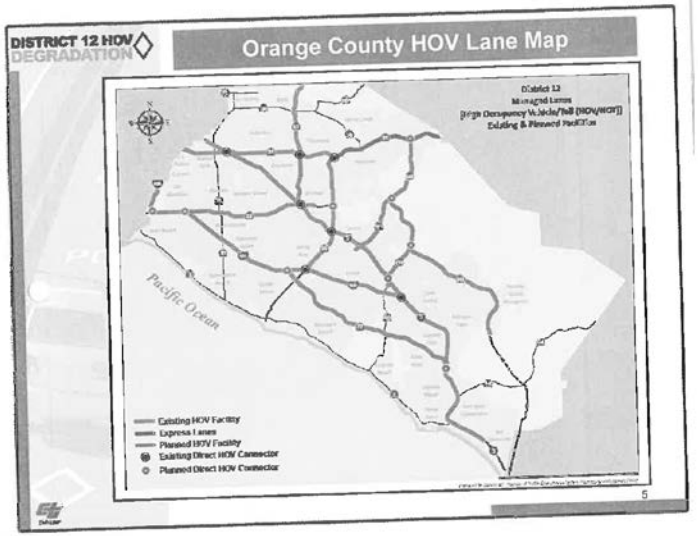


Lane Type	No. of Lane(s)	Vehicle Production (Throughput) (veh/hr)	Occupancy Rate	People/hr
HOV	1	1,500	2.2	3,300
GP	1	1,400	1.1	1,540
HOV	2	1,700	2.2	7,480*
GP	2	1,400	1.1	3,080
GP	3	1,400	1.1	4,620
GP	4	1,400	1.1	6,160
GP	5	1,400	1.1	7,700

GL-9 (Continued)



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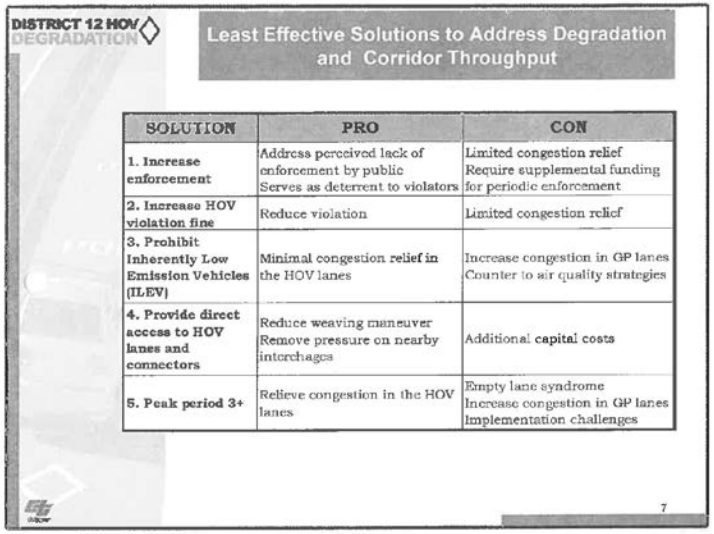
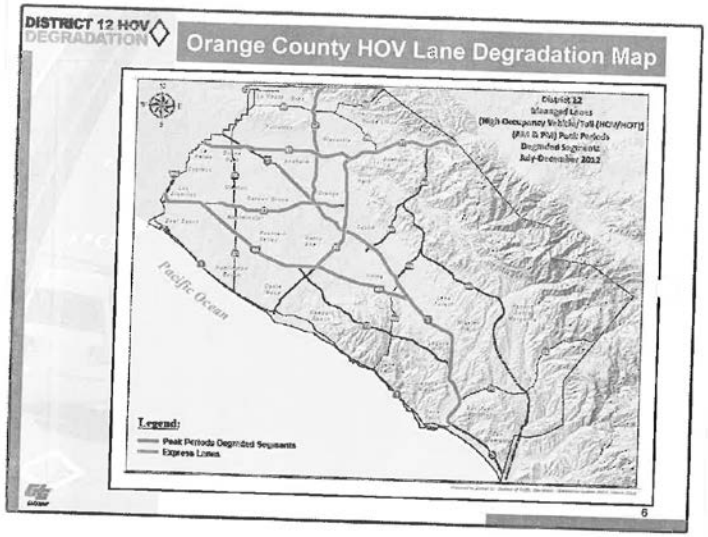


SOLUTION	PRO	CON
1. Increase enforcement	Address perceived lack of enforcement by public Serves as deterrent to violators	Limited congestion relief Require supplemental funding for periodic enforcement
2. Increase HOV violation fine	Reduce violation	Limited congestion relief
3. Prohibit Inherently Low Emission Vehicles (ILEV)	Minimal congestion relief in the HOV lanes	Increase congestion in GP lanes Counter to air quality strategies
4. Provide direct access to HOV lanes and connectors	Reduce weaving maneuver Remove pressure on nearby interchages	Additional capital costs
5. Peak period 3+	Relieve congestion in the HOV lanes	Empty lane syndrome Increase congestion in GP lanes Implementation challenges

GL-9 (Continued)



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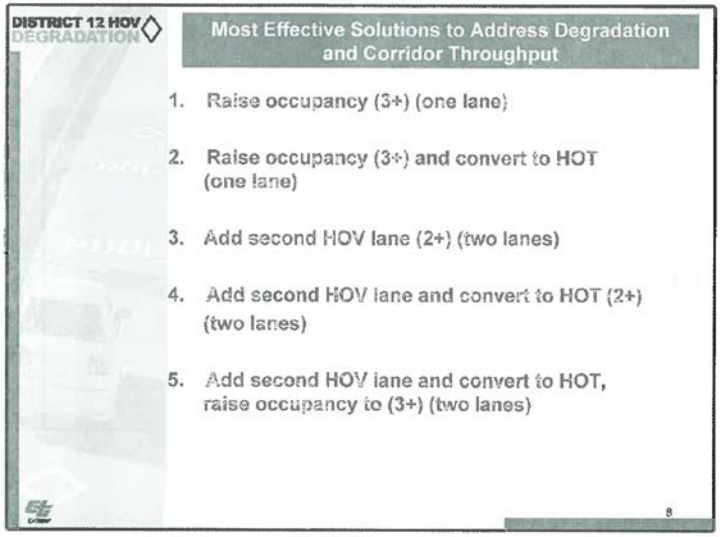

GL-9 (Continued)

DISTRICT 12 HOV DEGRADATION

Most Effective Solutions to Address Degradation and Corridor Throughput

SOLUTION	PRO	CON
1. Raise occupancy (3+) (one lane)	Eliminate degradation	Empty lane syndrome Near-term congestion in GP lanes Perceived take-away
2. Raise occupancy (3+) and convert to HOT (one lane)	Same as (1) Improved travel time reliability Move more vehicles Manages congestion Potential revenue for corridor	Same as (1) May eliminate future ML options Tolling resistance Limited funding
3. Add second HOV lane (2+) (two lanes)	Same as (1) Improved travel time reliability Improved incident response Move more people and vehicles Allows 2+ to stay in lanes	Limited funding Potential right-of-way impact Near-term empty lane sydrome
4. Add second HOV lane and convert to HOT (2+) (two lanes)	Same as (2) and (3) Allows 2+ to stay in HOT lanes	Same as (3) Tolling resistance
5. Add second HOV lane and convert to HOT Raise Occupancy to (3+) (two lanes)	Same as (1) and (2) Improved incident response Move more people Greater options for single occupant vehicles	Same as (1), (3) and (4)

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GL-9 (Continued)

DISTRICT 12 HOV DEGRADATION

THANK YOU

QUESTIONS OR CONCERNS?

James Pinheiro, PE
Deputy District Director, Caltrans District 12
Operations & Maintenance
Email: James_Pinheiro@dot.ca.gov

Additional information:

www.dot.ca.gov/Dist12
facebook.com/CaltransD12
twitter.com/@caltrans12

11

GL-9 (Continued)

DISTRICT 12 HOV DEGRADATION

Recommendations to Address Degradation & Corridor Throughput

Long-Term

- Add HOV lanes or HOT lanes (creating a two-lane system)
  - As project opportunities arise
  - Subject to funding availability

Short-Term

- Convert existing HOV lanes to HOT lanes and increase occupancy from 2+ to 3+
  - Where long term options are not feasible
  - Where GP capacity is added to corridor (ideal)
  - Create a two-lane system when available

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GL-9 (Continued)

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GL-9 (Continued)

OCTA

ORANGE COUNTY TRANSPORTATION AUTHORITY

High-Occupancy Vehicle Degradation Study

Handout

GL-9 (Continued)

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GL-9 (Continued)

California Department of Transportation, District 12
High Occupancy Vehicle Degradation Study
Responses to Committee Comments

At the April 1, 2013 Regional Planning and Highways Committee (Committee) meeting the State of California Department of Transportation (Caltrans) made a presentation on the status of High Occupancy Vehicle Lane (HOV) operations on Orange County freeways. They also outlined possible near–term and long-term solutions to address degraded HOV facilities. The impetus for the effort is related to changes in transportation funding legislation. This presentation also is being provided to the full Board of Directors (Board) on April 8, 2013. A list of Committee questions and preliminary responses are provided below.

Director Donchak

Question: Is there anything that would prohibit HOV violation fines from matching the cost of added enforcement in order to be revenue neutral?

Response: HOV enforcement is typically performed on an overtime basis by the California Highway Patrol and as such there are limited resources. In addition, this approach would only provide a partial solution as it could address no more than five percent of the degradation issues.

Director Miller

Question: Do we have degradation data by freeway segment?

Response: Yes. Caltrans is expected to provide this information within the next several weeks.

Question: By what percentage will the proposed solutions fix degradation?

Response: It is unknown precisely what percentage reduction each proposed solution would provide. However, solutions have been generally characterized as "least effective" and "most effective."

Question: What is the Traffic and Revenue projection for one High Occupancy Toll (HOT) lane?

Response: This analysis has not been completed and would require an amendment to the Parsons Transportation Group agreement. It would take approximately four months to complete.

GL-9 (Continued)

<u>Director Murray</u>

Question: When does the clock start ticking for the 180 days?

Response: Once Caltrans Director, Malcolm Dougherty, signs the HOV Degradation Study report and transmits it to the Federal Highway Administration (FHWA), Caltrans has 180 days to identify a plan and begin implementing solutions to address degradation.

<u>Vice Chairman Nelson</u>

Question: How will the degradation solutions be paid for?

Response: Degradation solutions are subject to funding availability and would be implemented as project opportunities arise.

<u>Director Spitzer</u>

Question: What is the State of California's position on where excess revenues should be spent?

Response: SBx4 indicates excess toll revenues may be paid to the regional transportation agency for use in improving public transportation in and near the project boundaries.

Question: How is Caltrans Headquarters handling the degradation findings statewide?

Response: Caltrans Headquarters is encouraging each district to explore remedies and districts are looking at similar solutions to those presented to the Committee. FHWA would like to see degradation remedies within 180 days, but if not feasible a plan must be submitted within the 180 day timeframe.

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GL-9 (Continued)

Attachment 4

City of Long Beach
I-405 Freeway Improvement Project Letter and Memorandum
July 17-18, 2012

GL-9 (Continued)

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GL-9 (Continued)

City of Long Beach
Working Together to Serve

Memorandum

Date: July 18, 2012

To: Patrick H. West, City Manager

From: Michael P. Conway, Director of Public Works

For: Mayor and City Council

Subject: I-405 Improvement Project

Orange County Transportation Authority (OCTA) and Caltrans are implementing a highway improvement project known as the I-405 Improvement Project. The proposed project will widen the San Diego Freeway (I-405) between the Corona del Mar Freeway (SR-73) and the San Gabriel River Freeway (I-605).

Several build options are under consideration. Options range from addition of one lane at various locations, to addition of two lanes in each direction. The project is currently in the environmental phase. The draft EIR / EIS was released for public review May 18, 2012. The public comment period ended July 17, 2012.

On July 3, 2012, the Long Beach City Council adopted a motion to address potential impacts to the City of Long Beach from this Caltrans project. Staff has reviewed the draft EIR / EIS and has determined the document does not address traffic impacts in City limits, as requested by the City in a letter dated October 22, 2009 in response to the Notice of Preparation. Furthermore, the document fails to demonstrate any inter - county coordination between OCTA and the Metropolitan Transportation Agency, and Caltrans Districts 12 and 7.

The City submitted the attached letter dated July 17, 2012 to Caltrans to describe the City's concerns with the draft EIR / EIS. Staff will continue to work with OCTA and Caltrans staff to assure potential traffic impacts in City limits are identified and mitigated.

Additional information regarding the project may be found at:

http://www.octa.net/I-405/IPO.aspx

If you have any questions about the information contained in this memorandum, please contact Derek Wieske, Assistant City Engineer, at extension 6386.

P/cm/fy12/mayor and city council/I-405 Improvement 7-18-12.doc

GL-9 (Continued)

CITY OF LONG BEACH
DEPARTMENT OF PUBLIC WORKS
333 WEST OCEAN BOULEVARD • LONG BEACH, CA 90802 • (562) 570-6383 • FAX (562) 570-6012

July 17, 2012

Smita Deshpande
Caltrans District 12, Branch Chief
Attn: 405 DEIR - DEIS Comment Period
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Re: Draft Environmental Impact Report / Environmental Impact Statement for the San Diego Freeway (I-405) Improvement Project

Dear Ms. Deshpande:

Thank you for the opportunity to review the Draft Environmental Impact Report / Environmental Impact Statement for the San Diego Freeway (I-405) Improvement Project (Project). On July 3, 2012, the Long Beach City Council adopted a motion to address potential traffic impacts to the City of Long Beach from this Caltrans Project. After careful review of the draft EIR/S, as well as a recent meeting with Caltrans and OCTA staff to discuss the City's concerns, the City of Long Beach respectfully submits the attached comments.

As a Participating Agency of the Project, Long Beach submitted comments in 2009, in response to the original Notice of Preparation. The City is disappointed that many of the issues raised at that time are not addressed in the current draft EIR/S. The 2009 comment letter, dated October 22, is attached for reference, and notes the City's request that regional traffic impact evaluations, including traffic movements at arterial ramps in the City of Long Beach, be included in the draft EIR/S. Since the release of the draft EIR/S, Long Beach sees the document is noticeably silent on traffic impacts immediately north of the project area, and in the City of Long Beach. Given the importance that traffic impact studies immediately north of the project area be included in the EIR/S, Long Beach is reiterating the City's request for Caltrans to conduct and publish traffic impact evaluations consistent with those described in the attached comments.

Additionally, the Project proposes signage and striping changes in the County of Los Angeles, but the draft EIR/S fails to provide evaluation of traffic flow and potential impacts within the City of Long Beach. By not studying traffic flow north of the county-line, this draft EIR/S is inadequate.

The draft EIR/S also does not demonstrate that the proposed Project has been planned in coordination with the Metropolitan Transportation Authority and Caltrans District 7. The draft EIR/S fails to acknowledge previous intercounty planning efforts, including the Orange and Los Angeles Intercounty Transportation Study, which was completed jointly by the

DIRECTOR'S OFFICE
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1951 San Francisco Avenue
Long Beach, CA 90813
Ph. (562) 570-2782
Fax (562) 570-2789

GL-9 (Continued)

Orange County Transportation Authority and the Metropolitan Transportation Agency in 2005. The study proposes several conceptual alternatives, including the addition of one general-purpose lane in each direction to the I-405 freeway from the I-605 freeway to the I-710 freeway.

On behalf of the City, Iteris, Inc. was contracted to conduct a review of the City's 2009 comment letter on the NOP and of the DEIR / EIS document. Iteris' written summary of its technical review, dated July 17, 2012, is attached for reference.

The City of Long Beach recognizes the need for improvements to mitigate congestion along the I-405 freeway, and looks forward to working with Caltrans and OCTA to ensure that potential traffic impacts within Long Beach boundaries are identified and mitigated, and that intercounty planning and coordination can be effectively performed. In the spirit of improving transportation through Southern California, Long Beach respectfully submits the attached comments.

Sincerely,

Mike Conway, Director of Public Works
City of Long Beach

cc: Mayor and Members of the City Council

GL-9 (Continued)

CITY OF LONG BEACH
DEPARTMENT OF PUBLIC WORKS
333 WEST OCEAN BOULEVARD • LONG BEACH, CA 90802 • (562) 570-6383 • FAX (562) 570-6012

October 22, 2009

Smita Deshpande
Branch Chief
Caltrans District 12
Attn: 405 Scoping
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Subject: Notice of Preparation of a Draft EIR for the Caltrans San Diego Freeway (I-405) Improvement Project

Dear Ms. Deshpande:

Thank you for the opportunity to review the Notice of Preparation for the San Diego Freeway (I-405) Improvement Project. The following comments are submitted for your consideration in the preparation of the Draft EIR.

1. The City of Long Beach respectfully requests the Draft EIR evaluate both operational and construction - related impacts to traffic on the freeway system and adjacent arterial streets.

2. It's the City of Long Beach's understanding Caltrans currently does not plan to add lanes to the I-405 freeway north of the I-605 freeway. It's unclear how the proposed additional lanes would integrate thru the interchange with the existing freeway segments that won't be widened. The proposed project could create potential significant traffic flow impacts due to capacity constraints and the creation of a bottleneck thru the interchange.

3. The City of Long Beach respectfully requests that Caltrans consider the combined impacts of the West County Connectors project and the proposed new project, which would result in the addition of up to three lanes in each direction beyond what exists today.

4. The City of Long Beach respectfully requests that Caltrans use regional modeling software to determine the potential diversion of traffic on freeway segments within Los Angeles County resulting from any bottlenecks created by the project alternatives.

5. The City of Long Beach respectfully requests the study area be expanded to include the I-405 corridor from Lakewood Boulevard to the I-605 freeway and the study include evaluation of impacts to traffic movement in the expanded study area, including movements at the Lakewood Boulevard, Bellflower Boulevard, Woodruff Avenue and Palo Verde Avenue ramps.

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GL-9 (Continued)

6. The City of Long Beach respectfully requests the study area be expanded to include CA-22 from the I-405 freeway to CA-1. It's possible that CA-22 into Long Beach could become a diversion around the bottleneck created thru the interchange.

7. The City of Long Beach respectfully requests the study area be expanded on the I-605 freeway from the I-405 to Carson Street. It's possible that traffic currently using the I-405 could divert to the I-605 to avoid the bottleneck created thru the interchange.

8. The proposed project may create a potential significant impact in the form of substantial traffic disruption on streets within Long Beach during construction. Traffic mitigation may be required in Long Beach to accommodate additional traffic on arterial streets and to keep commuter traffic out of neighborhoods during the construction phase. The City of Long Beach respectfully requests that a preliminary Traffic Management Plan be developed as a part of the EIR process.

Thank you again for the opportunity to review the Notice of Preparation for the San Diego Freeway (I-405) Improvement Project. The City of Long Beach looks forward to working with Caltrans and OCTA staff to resolve the outstanding issues identified in this comment letter.

Sincerely,

David Roseman
City Traffic Engineer

cc: Mark Christoffels
Michael Conway

GL-9 (Continued)

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I-405 Improvement Project DEIR/EIS Comments, July 17, 2012

July 17, 2012

David Roseman
City Traffic Engineer
City of Long Beach
333 W. Ocean Boulevard
Long Beach, CA 90802

Re: Review of OCTA San Diego Freeway (I-405) Improvement Project DEIR/EIS and Supporting Documentation

Dear Mr. Roseman,

Iteris, Inc. has completed the review of the Orange County Transportation Authority (OCTA) San Diego (I-405) Freeway Improvement Project Draft Environmental Impact Report/Environmental Impact Statement. Our comments are focused in two sections; 1) how the DEIR/EIS documentation responds or fails to adequately respond to the City of Long Beach's 2009 Notice of Preparation (NOP) comment letter, and 2) other general review of the DEIR/EIS and supporting materials with respect to issues of interest to the City of Long Beach. In this letter we first summarize our review of the comment letter and associated issues, and then we summarize our overall comments on other DEIR/EIS-related issues and analyses.

I-405 Improvement Project DEIR/EIS – 2009 CITY OF LONG BEACH NOTICE OF PREPARATION-COMMENTS

In October of 2009, a comment letter was submitted to Caltrans District 12 by the City of Long Beach in response to the NOP of the Draft EIR for the Caltrans San Diego Freeway (I-405) Improvement Project (herein known as "proposed project"). In that letter, the City of Long Beach expressed several concerns with respect to the limits of the proposed project and its potential impact on the City of Long Beach.

With respect to the City of Long Beach's 2009 NOP comments, Iteris, Inc., on behalf of the City, has reviewed the May 2012 I-405 Improvement Project DEIR/EIS, and has evaluated whether or not the comment was taken into consideration partially or in its entirety. The City's NOP comments from 2009 are listed below, along with a description of how the comment was addressed in the I-405 Improvement Project DEIR/EIS.

1. **The City of Long Beach respectfully request the Draft EIR evaluate both operational and construction-related impacts to traffic on the freeway system and adjacent arterial streets.**

   This comment was only partially addressed in the DEIR/EIS. Additional information regarding how the 2009 City of Long Beach NOP Comment 1 was not adequately addressed is provided below.

   Construction-related impacts associated with the proposed project were not evaluated in detail on the freeway system or on adjacent arterial streets in the proposed project study area or in the City of Long Beach. Rather, a Transportation Management Plan (TMP) was prepared to present the overall framework for traffic management during construction. The TMP includes general topics such as construction staging, closures and lane restrictions, demand management, alternate route strategies, and contingency plans, to name a few. Although the Draft TMP provides a list of ramp/street closures and lane restrictions, it does not evaluate construction-related level of service impacts in the proposed project study area or in the City of Long Beach.

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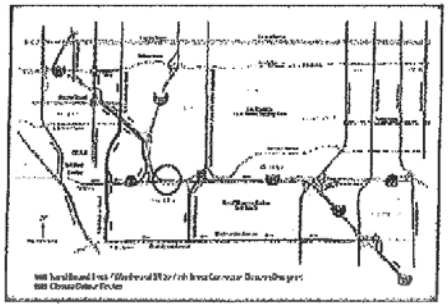
I-405 Improvement Project DEIR/EIS Comments, July 17, 2012

As discussed under Chapter 3.1, Section 3.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities, Comment 9, the I-405 southbound off-ramp at Seal Beach Boulevard is expected to be closed between 10 to 30 days during construction. Closure of the Seal Beach Boulevard off-ramp will likely result in cut-through traffic in the City of Long Beach. The DEIR/EIS for the proposed project states that tentative detours for the ramp closures are identified in the Ramp Closure Study (RCS), but when the RCS was reviewed, detours associated with the Seal Beach Boulevard southbound ramp were not provided. Detour routing analysis is critical to ensure efficient mobility through the City of Long Beach and should have been performed, as previously requested.

It should be noted that before construction of the northbound I-405/Westbound SR-22/7th Street Connector closure associated with the West County Connectors project, OCTA presented information at a neighborhood association meeting related to traffic detours through parts of east Long Beach. During construction of the I-405/7th Street connector bridge, four detours were provided, as shown in **Figure 1** below. In addition, OCTA helped mitigate traffic associated with the detour route via signal synchronization and various improvements to the Stearns Street freeway on-ramp, the 2nd Street and North Studebaker Road intersection, and the southbound I-405 and westbound SR-22 ramps. The DEIR/EIS should, at a minimum, provide preliminary detour routes and projected traffic impacts associated with the I-405 Seal Beach Boulevard southbound off-ramp closure during construction.

Operational impacts on the freeway system and on a limited number of arterial streets were addressed in the DEIR/EIR. However, only a limited number of interchanges and arterial street intersections along I-405 between SR-73 and I-605 were evaluated. No interchanges or arterial intersections were evaluated on I-405 north of I-605 in the City of Long Beach.

Figure 1: West County Connectors Project, Detours and Alternative Routes for I-405/7th Street Connector



2. **It's the City of Long Beach's understanding Caltrans currently does not plan to add lanes to the I-405 freeway north of the I-605 freeway. It's unclear how the proposed additional lanes would integrate thru the interchange with the existing freeway segments that won't be widened. The proposed project could create potential significant traffic flow impacts due to capacity constraints and the creation of a bottleneck thru the interchange.**

   This comment was not taken into consideration in its entirety in the DEIR/EIS. Additional information regarding how the 2009 City of Long Beach NOP Comment 2 was not adequately addressed is provided below.

GL-9 (Continued)

The proposed project extends along I-405 between SR-73 and I-605. The DEIR/EIS did not evaluate the impacts associated with the drop of one to two general purpose lanes (Alternatives 1 or 2), or the drop of two Express Lanes (Alternative 3) on I-405 north of I-605 in the City of Long Beach. It remains unclear how the added lanes will transition beyond the Orange County line into Los Angeles County and the City of Long Beach and the operational impacts associated with the lane transitions. An additional detailed review relating to this comment is provided under the discussion of Chapter 2, Project Alternatives, Comment 1 and Chapter 3.1, Section 3.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities, Comment 4.

3. **The City of Long Beach respectfully requests that Caltrans consider the combined impacts of the West County Connectors project and the proposed new project, which would result in the addition of up to three lanes in each direction beyond what exists today.**

   This comment was addressed in the DEIR/EIS.

   The West County Connectors project was incorporated into the proposed project. The Traffic Study explains that the No Build Alternative represents "baseline" conditions. With this alternative no additional lanes or interchange improvements would be constructed. Two projects were assumed to be complete under all future conditions; the SR-22 Freeway West County Connectors project from SR-22 east to I-605 (will add a second HOV lane in each direction and HOV direct connectors between I-605 and I-405 to/from the south and also between SR-22 east and I-405 to/from the north), and continuous access HOV lanes along I-405 throughout the study area (p.1-8).

4. **The City of Long Beach respectfully requests that Caltrans use regional modeling software to determine the potential diversion of traffic on freeway segments within Los Angeles County resulting from any bottlenecks created by the project alternatives.**

   This comment was not taken into consideration in its entirety in the DEIR/EIS. Additional information regarding how the 2009 City of Long Beach NOP Comment 4 was not adequately addressed is provided below.

   Traffic forecasts for the proposed project were developed using the OCTA Model (OCTAM). However, OCTAM was not used to evaluate the potential diversion of traffic associated with the proposed project in Los Angeles County or in the City of Long Beach. The modeling methodology is also flawed in that it does not include model runs for each alternative. An additional detailed review relating to this comment is provided under the discussion of Chapter 3.1, Section 3.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities, Comment 4.

5. **The City of Long Beach respectfully requests that the study area be expanded to include the I-405 corridor from Lakewood Boulevard to the I-605 freeway and the study include evaluation of impacts to traffic movement in the expanded study area, including movements at the Lakewood Boulevard, Bellflower Boulevard, Woodruff Avenue and Palo Verde Avenue ramps.**

   This comment was not taken into consideration in the DEIR/EIS. Additional information regarding how the 2009 City of Long Beach NOP Comment 5 was not adequately addressed is provided below.

   The study area was not extended west to include the I-405 corridor from Lakewood Boulevard to the I-605 freeway, and movements at Lakewood Boulevard, Bellflower Boulevard, Woodruff Avenue and Palo Verde Avenue ramps were not considered, per the City of Long Beach's request.

GL-9 (Continued)

6. **The City of Long Beach respectfully requests that the study area be expanded to include CA-22 from the I-405 freeway to CA-1. It's possible that CA-22 into Long Beach could become a diversion around the bottleneck created thru the interchange.**

   This comment was not taken into consideration in its entirety in the DEIR/EIS. Additional information regarding how the 2009 City of Long Beach NOP Comment 6 was not adequately addressed is provided below.

   The study area extends to the intersection of the I-405 and I-605 freeway. It was not extended west to include SR-22 from the I-405 freeway to SR-1, per the City of Long Beach's request.

7. **The City of Long Beach respectfully requests that the study area be expanded on the I-605 freeway from the I-405 to Carson Street. It's possible that traffic currently using the I-405 could divert to the I-605 to avoid the bottleneck created thru the interchange.**

   This comment was not taken into consideration in the DEIR/EIS. Additional information regarding how the 2009 City of Long Beach NOP Comment 7 was not adequately addressed is provided below.

   The study area extends along I-605 to Katella Avenue. It was not extended north to Carson Street, per the City of Long Beach's request. Additional comments regarding the lack of appropriate level of analysis in Long Beach is provided in the detailed comments.

8. **The proposed project may create a potential significant impact in the form of substantial traffic disruption on streets within Long Beach during construction. Traffic mitigation may be required in Long Beach to accommodate additional traffic on arterial streets and to keep commuter traffic out of neighborhoods during the construction phase. The City of Long Beach respectfully requests that a preliminary Traffic Management Plan be developed as a part of the EIR process.**

   This comment was only partially addressed in the DEIR/EIS. Additional information regarding how the 2009 City of Long Beach NOP Comment 8 was not adequately addressed is provided below.

   A Draft Traffic Mitigation Plan (TMP) was prepared in accordance with the Caltrans Guidelines Deputy Directive 60 to minimize motorist delays when performing work activities on the State Highway System. The Draft I-405 Improvement Project TMP was prepared to present the overall framework for traffic management during construction. The Draft TMP includes general topics such as construction staging, closures and lane restrictions, demand management, alternate route strategies, and contingency plans, to name a few. Although the Draft TMP was prepared, it does not address traffic mitigation issues in the City of Long Beach.

I-405 Improvement Project DEIR/EIS – TECHNICAL COMMENTS

In addition to a review of the City's 2009 NOP comment letter, Iteris, Inc. also conducted a technical review of the complete environmental document as it pertains to traffic and other issues of interest to the City of Long Beach. The following provides a chapter-by-chapter summary of the technical comments and observations from the DEIR/EIS and its supporting documents. Note, the Traffic Study (Appendix L), the Draft Transportation Management Plan (TMP), and the Ramp Closure Study (RCS) are intermittently referenced throughout the technical review.

GL-9 (Continued)

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I-405 Improvement Project DEIR/EIS Comments, July 17, 2012

I-405 Improvement Project DEIR/EIS: SUMMARY CHAPTER

1. **Project description includes the City of Long Beach, but the DEIR/EIS fails to conduct any technical analysis within the City.** As stated in the Project Description (p.S-2), "The approximately 16-mile-long project corridor is primarily located in Orange County on I-405 and traverses the cities of Cost Mesa, Fountain Valley, Huntington Beach, Westminster, Garden Grove, Seal Beach, Los Alamitos, ***Long Beach*** and the community of Rossmoor." The Project Description also describes the proposed project's limits as "...in Los Angeles County from the county line to 1.4 miles north of I-605 (p.S-2)." The project clearly acknowledges that the northern terminus of the project is located in the City of Long Beach. However, evaluation of the project clearly terminates at the Orange County/Los Angeles County line. The project description states, "Encroachments into Los Angeles County and work on SR-22 are associated with signing and striping (p.S-2)" only, and do not include any analysis in the City of Long Beach. Missing analyses in Long Beach/Los Angeles County must be added to the document.

2. **Project description acknowledges the intra/inter-regional significance of I-405, but the DEIR/EIS fails to conduct any technical analysis of I-405 through the City of Long Beach beyond the Orange County/Los Angeles County line.** As stated in the Project Description, "I-405 is part of the National Highway System and is considered a bypass route to I-5 (the Santa Ana/Golden State Freeway) providing intra-regional and inter-regional access between Orange and Los Angeles Counties. I-405 also serves as a critical goods movement corridor connecting the San Diego and U.S./Mexico border region with the ports of Long Beach and Los Angeles (p.S-3)." Despite these statements concluding the significance of I-405 as an intra/inter-regional corridor between Orange and Los Angeles County, no evaluation of I-405 north of the Orange/Los Angeles County line was conducted. An additional detailed review relating to this comment is provided under the discussion of Chapter 1, Proposed Project, Comment 3. Missing analyses in Long Beach/Los Angeles County must be added to the document.

3. **Project description states the northern terminus of the project (I-605) was chosen "to ensure adequate response to transportation deficiencies", but the "transportation deficiencies" along I-405 clearly don't end at I-605.** As stated in the Project Description, "the north and south termini of the project, at the I-605 and SR-73 respectively, are locations where multiple freeways converge, generating congestion and causing delay. The termini have been logically chosen based on geography and transportation needs to ensure adequate response to transportation deficiencies at and around these points of intersection (p.S-3)." The northern terminus of the proposed project is clearly based on the location of the Orange County/Los Angeles County line. The DEIR/EIS should take into consideration the effect of the proposed project on the adjacent segments of I-405, north of I-605 in Los Angeles County. An additional detailed review relating to this comment is provided under the discussion of Chapter 1, Proposed Project, Comment 5. The statements regarding beneficial effects on neighborhoods, even if correct, only would apply in the Orange County communities since no capacity enhancements are proposed in Long Beach. Within Long beach, the opposite effect could occur, and the possibility of impacts in Long Beach must be investigated. Missing analysis of possible neighborhood impacts within Long Beach must be added.

4. **The DEIR/EIS assumes the proposed project will result in a "beneficial effect on neighborhoods by reducing cut-through traffic" without providing any technical analysis or modeling results.** Table S-1 (Project Impact Summary Table) states under Community Impacts, Alternatives 1, 2 and 3, "Implementation of the proposed project is anticipated to result in a beneficial effect on neighborhoods and community cohesion by reducing cut-through traffic within the adjacent neighborhoods. At present, motorists traveling along I-405 often exit the freeway and seek less-congested alternative routes within the adjacent neighborhoods when freeway conditions deteriorate (p.S-14)." A discussion on how the

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analysis revealed that proposed project will result in a benefit to the community by reducing cut-through traffic in adjacent neighborhoods should be provided. An additional detailed response relating to this comment is provided under the discussion of Chapter 3.1, Section 3.1.4 Community Impacts, Comment 1. Missing analysis of possible neighborhood impacts within Long Beach must be added.

5. **The DEIR/EIS fails to provide a detailed analysis of how the additional anticipated 13 to 25 percent increase in vehicle throughput on I-405 will transition beyond I-605 through the City of Long Beach.** Table S-1 (Project Impact Summary Table) states under Traffic and Transportation/Pedestrian and Bicycle Facilities, Alternatives 1, 2 and 3, the proposed project will result in a permanent increase in vehicle throughput on the freeway by 13 to 25 percent between SR-22 East and I-605 (p.S-19). How will the additional throughput transition beyond the Orange County line into Los Angeles County? An additional detailed review relating to this comment is provided under the discussion of Chapter 2, Project Alternatives, Comment 1 and Chapter 3.1, Section 3.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities, Comment 4. Missing analysis of impacts of added vehicle throughput in the City of Long Beach must be added.

I-405 Improvement Project DEIR/EIS: Chapter 1 – PROPOSED PROJECT

1. **Project map includes portions of the City of Long Beach, but the DEIR/EIS fails to conduct any technical analysis within the City.** According to Figure 1-2 (Project Location map), the proposed project area extends approximately one mile north of the Orange County/Los Angeles County line to Palo Verde Avenue in Los Angeles County and the City of Long Beach (p.1-3). While that study area presented extends into Long Beach, analysis was not performed for the proposed project area north of the Orange County/Los Angeles County line. Interchanges along I-405 north of the Orange County/Los Angeles County line should be evaluated, as well as arterial intersections in the City of Long Beach based on the Project Location map. An additional detailed review relating to this comment is provided under the discussion of Chapter 3.1, Section 3.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities, Comment 1. Missing analysis in Long Beach must be added to the document.

2. **2009 ADT volumes in the I-405 Improvement Project Traffic Study may have been underestimated near the City of Long Beach.** In the Capacity, Transportation Demand, and Safety section of Chapter 1 (p.1-6 to 1-8), 2009 traffic volumes were discussed. As stated in the footnote of Table 2.2.1 of the I-405 Improvement Project Traffic Study conducted by Albert Grover & Associates, existing 2009 ADT volumes were based on 2008 Caltrans published data, *"adjusted down by one percent in accordance with similar measured decreases throughout the area"* (p.2.2-1). However, Caltrans peak hour and AADT data was reviewed (Source: http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm) near the City of Long Beach and the data indicates that when 2008 and 2009 AADT volumes are compared on I-405 near the City of Long Beach, there is no measureable decrease in traffic volume between 2008 and 2009. Conversely, as shown in **Table 1** below, the Caltrans 2008 and 2009 data indicates a slight increase in traffic volumes (between 0.77 and 1.55 percent) during the peak hour, peak month, or for AADT. Adjusting the 2008 traffic volumes down by one percent to calculate existing 2009 traffic volumes may have underestimated the existing 2009 mainline, ramp and weaving level of service near the City of Long Beach. The noted methodology must be reviewed and corrected, if required.

Table 1: 2008 and 2009 Caltrans Traffic Volumes Near the City of Long Beach

District	Route	County	Post Mile	Description	Back Pk Hr	Back Pk Mo	Back AADT	Ahead Pk Hr	Ahead Pk Mo	Ahead AADT
2008										
12	405	ORA	22.643	SEAL BEACH, SEAL BEACH BLVD INTERCHANGE	26,500	283,000	374,000	26,500	392,000	366,000

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12	405	ORA	24.044	SEAL BEACH, JCT. RTE. 605	26,500	392,000	366,000	17,900	262,000	253,000
12	405	ORA	24.178	ORANGE LOS ANGELES COUNTY LINE	17,900	261,000	253,000			
07	405	LA	0.286	ORANGE/LOS ANGELES COUNTY LINE				18,300	258,000	253,000
07	405	LA	0.448	LONG BEACH, STUDEBAKER RD INTERCHANGE	18,300	258,000	253,000	16,900	265,000	261,000
07	405	LA	1.112	LONG BEACH, PALO VERDE AVE INTERCHANGE	16,900	265,000	261,000	17,100	258,000	254,000
2009										
12	405	ORA	22.643	SEAL BEACH, SEAL BEACH BLVD INTERCHANGE	26,500	381,000	374,000	28,500	392,000	386,000
12	405	ORA	24.044	SEAL BEACH, JCT. RTE. 605	26,500	392,000	386,000	18,100	263,000	255,000
12	405	ORA	24.178	ORANGE LOS ANGELES COUNTY LINE	18,100	263,000	255,000			
07	405	LA	0.286	ORANGE/LOS ANGELES COUNTY LINE				18,300	262,000	253,000
07	405	LA	0.448	LONG BEACH, STUDEBAKER RD INTERCHANGE	18,300	262,000	253,000	17,100	260,000	261,000
07	405	LA	1.112	LONG BEACH, PALO VERDE AVE INTERCHANGE	17,100	260,000	261,000	17,100	261,000	254,000
% Change										
12	405	ORA	22.643	SEAL BEACH, SEAL BEACH BLVD INTERCHANGE	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
12	405	ORA	24.044	SEAL BEACH, JCT. RTE. 605	0.00%	0.00%	0.00%	1.12%	0.77%	0.79%
12	405	ORA	24.178	ORANGE LOS ANGELES COUNTY LINE	1.12%	0.77%	0.79%			
07	405	LA	0.286	ORANGE/LOS ANGELES COUNTY LINE				1.09%	1.55%	0.00%
07	405	LA	0.448	LONG BEACH, STUDEBAKER RD INTERCHANGE	1.09%	1.55%	0.00%	1.18%	1.51%	0.00%
07	405	LA	1.112	LONG BEACH, PALO VERDE AVE INTERCHANGE	1.18%	1.52%	0.00%	1.17%	1.16%	0.00%

Source: Caltrans Traffic Volumes, 2008 and 2009.

3. **The DEIR/EIS fails to analyze any freeway segments or report any population/growth/employment projections in the City of Long Beach.** Under Section 1.2.2.5 (Modal Inter-Relationships and System Linkages), the DEIR/EIS states that "I-405 is part of the National Highway System and is considered a bypass route to I-5 (the Santa Ana/Golden State Freeway) providing intra-regional and inter-regional access between Orange and Los Angeles Counties (p.1-19)." The City of Long Beach is also listed as a "significant employment center" along the proposed project corridor (p.1-12), and the "northern segment (of I-405), between Valley View Street and the I-605, is considered one of the heaviest traveled sections of freeway in the nation (p. 1-20)." Despite these statements concluding the significance of I-405 as a heavily traveled regional access route, the DEIR/EIS fails to analyze any freeway segments or report any population/growth/employment projections within the proposed "project area" (theoretically I-405 to Palo Verde Avenue in the City of Long Beach) on I-405 in the City of Long Beach. Examples of tables in the DEIR/EIS that omit the City of Long Beach include:

   a. Table 1-2 and 1-3 (Existing and Projected 2020 and 2040 LOS and V/C Northbound and Southbound General Purpose Lanes);

   b. Table 1-4 (Existing and 2040 No Build Travel Time on I-405 from SR-73 to I-605 for Existing Condition and Year 2040 No Build Alternative);

   c. Table 1-6 Existing and Projected 2020 and 2040 Daily and Peak-Hour Traffic Volumes on I-405 within the Project Limits);

   d. Table 1-7 (Population Projections and Growth Trends), and

   e. Table 1-8 (Employment Projections and Growth Trends).

   Missing information and analysis in the City of Long Beach must be added to the document.

4. **The DEIR/EIS fails to explain how the added lanes associated with the proposed project on I-405 will transition beyond the Orange County line into Los Angeles County and the City of Long Beach.** Section 1.2.2.2, Roadway and Operational Deficiencies, states that "operation problems occur on I-405 primarily because of physical bottlenecks (p.1-14)". However, it remains unclear how the added lanes will transition beyond the Orange County line into Los Angeles County and the City of Long Beach. An additional detailed review relating to this comment is provided under the discussion of Chapter 2, Project Alternatives,

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Comment 1 and Chapter 3.1, Section 3.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities, Comment 4. Missing analysis of impacts in the City of Long Beach, including traffic volumes, added lane transitions, traffic diversion, level of service and all other relevant issues must be added.

5. **The DEIR/EIS fails to provide sufficient evidence supporting the claim that the proposed project would not result in a chokepoint north of I-605 in the City of Long Beach. In addition, the northern terminus of the proposed project does not meet the Logical Termini requirement of the FHWA.** Under the discussion of logical termini, the DEIR/EIS states with respect to the northern terminus, "the proposed additional lanes would enhance lane continuity along I-405 and terminate new lanes into available lanes on these other freeways (p.1-23)." The DEIS/EIS also states, "Carrying lanes north to the I-405/I-605/SR-22 interchange would not result in a chokepoint (p.1-24)." If the proposed project's northern most study interchange is the I-405/I-605/SR-22 interchange, how was it determined that the proposed project alternatives would not result in a chokepoint north of the northern termini? The I-405/I-605/SR-22 interchange does not seem like a "logical termini" for the northern segment of the I-405 Improvement Project. Traffic should be further evaluated after the termination of the proposed project's additional lanes to ensure that a choke point does not occur north of the Orange County/Los Angeles County line in the City of Long Beach. The City of Long Beach does not feel that the northern terminus of the proposed project meets the "logical termini" requirement of the FHWA, as stated in the DEIR/EIS (p.1-24), thus resulting in an issue of "segmentation". The FHWA's discussion on logical termini and segmentation is provided below (The Development of Logical Project Termini, November 1993).

   "In developing a project concept which can be advanced through the stages of planning, environment, design, and construction, the project sponsor needs to consider a "whole" or integrated project. This project should satisfy an identified need, such as safety, rehabilitation, economic development, or capacity improvements, and should be considered in the context of the local area socioeconomics and topography, the future travel demand, and other infrastructure improvements in the area. Without framing a project in this way, proposed improvements may miss the mark by only peripherally satisfying the need or by causing unexpected side effects which require additional corrective action. A problem of "segmentation" may also occur where a transportation need extends throughout an entire corridor but environmental issues and transportation needs are inappropriately discussed for only a segment of the corridor."

   Missing analysis of impacts in the City of Long Beach, including traffic volumes, added lane transitions, traffic diversion, level of service and all other relevant issues must be added.

I-405 Improvement Project DEIR/EIS: Chapter 2 – PROJECT ALTERNATIVES

1. **The DEIR/EIS fails to provide an illustration of how the additional lanes associated with the proposed project on I-405 will transition beyond Orange County into Los Angeles County and the City of Long Beach.** Figures 2-1 and 2-2 (Lane Configurations, Northbound and Southbound) graphically illustrate the proposed lane configurations on I-405 between SR-73 and I-605 (p.2-6 and 2-7), but fail to show how the lanes will transition beyond Orange County into Los Angeles County. Proper evaluation of I-405 north of the Orange County/Los Angeles County line needs to be conducted to ensure that a choke point does not occur north of the Orange County/Los Angeles County line in the City of Long Beach. Missing analysis of impacts in the City of Long Beach, including traffic volumes, added lane transitions, traffic diversion, level of service and all other relevant issues must be added.

2. **Alternative 2 lacks consistency with the current RTP and FTIP.** In the discussion of Alternative 2, the DEIR/EIS states that Alternative 2 is "considered a viable project alternative because it would achieve the

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project's purpose and need (p.2-10)." However, as stated in the Summary section of the DEIR/EIS, one of the proposed project's main purposes is to "be consistent with regional plans (p.S-1)." Table S-1 (Project Impact Summary Table) clearly states that Alternative 2 is "not consistent with the current RTP or FTIP. OCTA is currently pursuing revisions to both documents (p.S-13)." Discussion of the pursuit of Alternative 2's inclusion in the RTP or FTIP amendment should be discussed. Further coordination with regional plans and other regional and local planning agencies is required in order to assess the viability of this alternative.

3. **Alternative 3 lacks consistency with the current RTP and FTIP.** In the discussion of Alternative 3, the DEIR/EIS states that Alternative 3 is "considered a viable project alternative because it would achieve the project's purpose and need (p.2-14)." However, as stated in the Summary section of the DEIR/EIS, one of the proposed project's main purposes is to "be consistent with regional plans (p.S-1)." Table S-1 (Project Impact Summary Table) clearly states that Alternative 3 is "not consistent with the current RTP or FTIP. OCTA is currently pursuing revisions to both documents (p.S-13)." Further coordination with regional plans and other regional and local planning agencies is required in order to assess the viability of this alternative.

4. **The DEIR/EIS lacks consistency between its chapters with respect to anticipated ramp closures.** Table 2-1 (I-405 Improvement Project Alternatives Comparison) indicates that the northern-most ramp to be closed during construction is the Bolsa Chica Road southbound off-ramp (p.2-30). However, in Section 3.1.6, Traffic and Transportation/Pedestrian and Bicycle Facilities, it states that the southbound off-ramp at Seal Beach Boulevard will be closed between 10 and 30 days (p.3.1.6-106). Please confirm as the closure of the I-405 Seal Beach Boulevard southbound off-ramp will likely impact the City of Long Beach. Closure of a ramp for this duration warrants further evaluation of potential traffic impacts associated with detour routes. An additional detailed review relating to this comment is provided under the discussion of Chapter 3.1, Section 3.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities, Comment 9. Missing analysis of the potential ramp closure impacts on Long Beach must be added.

I-405 Improvement Project DEIR/EIS: Chapter 3.1 – Human Environment, Section 3.1.4 – COMMUNITY IMPACTS

1. **The DEIR/EIS assumes the proposed project will result in a "beneficial effect on neighborhoods by reducing cut-through traffic" without providing any technical analysis or modeling results.** Under the discussion of permanent Build Alternative impacts, the DEIR/EIS states that "implementation of the proposed project is anticipated to result in beneficial effects on community cohesion by reducing cut-through traffic within the adjacent neighborhoods. Currently, motorists traveling along I-405 often exit the facility and seek less congested alternative routes within the adjacent neighborhoods when freeway conditions deteriorate. Community members living within the vicinity of the I-405 corridor and people commuting between Los Angeles County and Orange County would benefit from the reduced congestion and the improved freeway operations (p. 3.1.4-19)". How was it determined that the proposed project would reduce cut-through traffic in adjacent neighborhoods? Is there empirical evidence (i.e. OCTAM modeling results, peak hour/AADT LOS, V/C analysis) supporting the reduction in cut-through traffic, specifically through the City of Long Beach? Please provide quantitative support that cut-through traffic exists and the magnitude of the cut-through activity. How will the cut-through activity be reduced through implementation of one of the proposed project alternatives? As future volumes increase through the corridor and level of service degrades, what is the impact on Long Beach due to cut-through traffic under future conditions? Additional explanation and supporting documentation of claims made regarding cut-through traffic must be added. Missing analysis of cut-through impacts in Long Beach must be added.

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I-405 Improvement Project DEIR/EIS: Chapter 3.1 – Human Environment, Section 3.1.6 – TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

1. **Project map includes portions of the City of Long Beach, but the DEIR/EIS fails to conduct any technical analysis within the City.** According to Figure 1-2 (Project Location map) in Chapter 1, Proposed Project, the proposed project area extends approximately one mile north of the Orange County/Los Angeles County line to Palo Verde Avenue in Los Angeles County and the City of Long Beach (p.1-3). However, in Section 3.1.6.2, Affected Environment, the traffic study area is defined as "16 miles along I-405 between SR-73 and I-605 (p.3.1.6-3)." As shown in Figure 3.1.6-1 (Traffic Study Area) (p.3.1.6-5), the study area does not include any interchanges on I-405 within Los Angeles County or the City of Long Beach. In addition, Table 3.1.6-1 lists the study intersections included in the DEIR/EIS (p.3.1.6-7 to 3.1.6-9), and no arterial intersections in the City of Long Beach were included in the analysis. Missing analysis of freeway and arterial intersections in the City of Long Beach must be added.

2. **The DEIR/EIS fails to provide an illustration of how the additional lanes associated with the proposed project on I-405 will transition beyond Orange County into Los Angeles County and the City of Long Beach.** Figures 3.1.6-3 and 3.1.6-4 (I-405 Lane Schematic, Northbound and Southbound) graphically illustrate the proposed lane configurations on I-405 between SR-73 and I-605 (p.3.1.6-16 and 3.1.6-17). Same comment as Chapter 2, Project Alternatives, Comment 1. Missing analysis of impacts in the City of Long Beach, including traffic volumes, added lane transitions, traffic diversion, level of service and all other relevant issues must be added.

3. **2009 ADT volumes in the I-405 Improvement Project Traffic Study may have been underestimated near the City of Long Beach.** The freeway mainline discussion used Caltrans-published traffic data from the Caltrans website to calculate their 2009 freeway volumes (p.3.1.6-21). 2009 traffic volumes are also shown in Table 3.1.6-2 (I-405 Mainline Average Daily Traffic) (p.3.1.6-22). Same comment as Chapter 1, Proposed project, Comment 2. The noted methodology must be reviewed and corrected if required.

4. **The DEIR/EIS fails to provide a detailed analysis of how the additional anticipated increase in vehicle throughput associated with the project alternatives will transition beyond I-605 through the City of Long Beach.** Table 3.1.6-2 (I-405 Mainline Average Daily Traffic) shows that the proposed alternatives have the potential to increase the mainline ADT up to 142,000 additional daily vehicles (28 to 38 percent increase) beyond existing 2009 conditions on I-405 between SR-22 East and I-605 by 2040 (see Table 2A). Similarly, Table 3.1.6-2 also shows that the proposed alternatives have the potential to generate up to 108,000 additional daily vehicles (18 to 27 percent increase) beyond the No Build scenario on I-405 between SR-22 East and I-605 by 2040 (see Table 2B). It is unclear how the increase in vehicle throughput will be addressed north of the Orange County/Los Angeles County line (specifically in the City of Long Beach) after the proposed project ends. Additional impact analyses need to be evaluated in Los Angeles County and in the City of Long Beach to address the increase in throughput associated with the proposed project alternatives, and the potential for chokepoints and traffic diversion onto adjacent freeways and arterials.

Table 2A: 2009 vs. Alternatives

Segment	2009	2020				2040			
		No Build	Alt 1	Alt 2	Alt 3	NB	Alt 1	Alt 2	Alt 3
SR-22 East to I-605 [1]	370,000	404,000	433,000	453,000	455,000	427,000	475,000	509,000	512,000
Increase in ADT over 2009		34,000	63,000	83,000	85,000	57,000	105,000	139,000	142,000
Percent Increase over 2009		9%	17%	22%	23%	15%	28%	38%	38%

[1] Source: Table 3.1.6-2, I-405 Mainline Average Daily Traffic, p. 3.1.6-22

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Table 2B: No Build vs. Alternatives

Segment	2009	2020				2040			
		No Build	Alt 1	Alt 2	Alt 3	NB	Alt 1	Alt 2	Alt 3
SR-22 East to I-605 [1]	370,000	404,000	433,000	453,000	455,000	427,000	475,000	509,000	512,000
Increase in ADT over No Build			29,000	49,000	51,000	23,000	71,000	105,000	108,000
Percent Increase over No Build			7%	12%	13%	6%	18%	26%	27%

[1] Source: Table 3.1.6-2, I-405 Mainline Average Daily Traffic, p. 3.1.6-22

Missing analysis of impacts in the City of Long Beach, including traffic volumes, added lane transitions, traffic diversion, level of service and all other relevant issues must be added.

5. As discussed in the DEIR/EIS Traffic Forecasting Model discussion, "A single demand forecast was prepared for the proposed project area. Freeway mainline forecasts for each of the alternatives utilize the same total traffic volumes on a segment but redistribute volumes among the different lane types, as necessary (p.3.1.6-39)." It also states that, "Because of a very small variation in projected traffic volumes during the peak hours at the freeway interchanges among the three proposed project alternatives, it was jointly agreed by Caltrans, OCTA, and the Project Consulting Team that only one set of future traffic volumes would be used for analyzing the proposed project condition on the arterials (p.3.1.6-39)." The following comments are related to the aforementioned assumptions:

   a. **The DEIR/EIS assumes travel demand is fixed through the corridor, irrespective of actual corridor capacity.** The traffic study indicates that OCTAM was applied to generate future forecast volumes for the corridor. However, it has been noted that one future model run was prepared to generate future corridor forecast volumes and the traffic volumes were distributed across the various lane assumptions for each alternative. This approach is flawed in that it assumes travel demand is fixed through the corridor and irrespective of actual corridor capacity. Which future scenario was run with OCTAM to determine corridor travel demand and how was that determination made?

   b. **The DEIR/EIS should provide further justification for using a single forecast to develop future forecast volumes.** Application of OCTAM for other congested corridors in Orange County has revealed a sensitivity to capacity with traffic demand varying based on the amount (i.e. number of lanes) and type (general purpose, HOV, toll) of capacity provided. For the congested I-405 corridor, Table 3.1.6-12 reveals that every segment of I-405 is significantly over capacity for each proposed project alternative (p.3.1.6-73). With congestion levels of this magnitude, OCTAM would be expected to generate different levels of traffic demand for each proposed project alternative which would result in a more appropriate comparative analysis between the proposed project alternatives. It is not understood, nor explained, how a single forecast model run could generate the demand volumes for the various future project alternatives. Justification for using a single forecast to develop future forecast volumes should be provided. OCTAM has been applied to evaluate various HOV, toll and express lane projects throughout the County; why would it not be applied for each alternative?

   c. **The DEIR/EIS should provide clear documentation of future year model network assumptions.** Future year model assumptions that were applied to generate the future corridor traffic volumes are not clearly defined. The recently adopted Regional Transportation Plan includes Express Lanes on I-405 in Los Angeles County and the traffic study does not clearly define network assumptions incorporated into the model run that was performed to generate the future forecasts. The alternative lane schematics seem to indicate that Express Lanes were not assumed in Los Angeles County. Regional projects could impact traffic demand on I-405 including capacity on I-5 in Orange and Los Angeles County, Express Lanes on I-405 in Los Angeles County, implementation of High Speed Rail and other regional multi-modal projects. It has been noted

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elsewhere in the document that I-405 serves as a bypass route to I-5 (the Santa Ana/Golden State Freeway) providing intra-regional and inter-regional access between Orange and Los Angeles Counties and as such improvements to I-5 would impact I-405 traffic demand. Clear documentation of future year model network assumptions based on the adopted Regional Transportation Plan should be provided to appropriately assess future forecast volumes.

   d. **Clarification should be provided documenting why a 2020 scenario was not modeled directly to generate the opening year volumes.** Year 2020 traffic volumes were interpolated from the 2009 and 2040 forecast volumes. Clarification should be provided as to why a 2020 scenario was not modeled directly to generate the opening year volumes. As noted in the study, the OCTAM horizon year is 2035 and post-processing was applied to generate 2040 forecasts. Since 2040 is a post-processed volume, why would the interpolation not be performed between 2009 and the actual model horizon year of 2035 to generate a more accurate interim year forecast volume if a 2020 scenario is not directly modeled? Interpolating volumes for a corridor of this magnitude may not provide accurate results as interpolation does not appropriately consider network assumptions and timing of those infrastructure improvements that may impact forecast volumes. Consistent with the 2040 forecast volumes, corridor capacity assumptions for the alternatives would likely result in varying levels of demand across alternatives. Forecasts for Alternative 3 are suspect since the Express Lane volumes appear to be rounded to 100's while HOV volumes for all alternatives along with mainline volumes are presented as exact numbers with no rounding. The rounded Express Lane volumes appear inconsistent with the methodology applied to generate the volumes for the other alternatives.

   e. **High future forecast volumes in the City of Long Beach raise concerns regarding future traffic operations. Traffic should be evaluated north of the Orange County/Los Angeles County line.** The magnitude of future forecast volumes approaching the City of Long Beach are very high, thus concerns exist about how the future forecast volumes are generated and ultimately impact traffic operations in and through the City of Long Beach.

A significant amount of information is missing and must be provided in the sections of the EIR/EIS describing the traffic modeling methodology and results. Missing information relating to several key modeling issues must be provided. Much more detailed information describing how one future model run could adequately capture future travel, what would be the differences in corridor travel demand and travel demand in Long Beach if OCTAM was run with the actual alternatives coded in the model, what would be the differences if a 2020 model run was conducted versus "interpolating" model results, what would the resulting travel demand be if Express Lanes were coded into the model within Orange County as well as within Los Angeles County, and other similar issues.

6. The DEIR/EIS lacks a sufficient discussion regarding the travel demand forecasts assumptions under Alternative 3. As discussed under Alternative 3, the travel demand forecasts for Alternative 3 use the same travel demand forecasts as the other alternatives. No discussion is provided regarding the effect that toll lanes may have on the travel demand in the study area, nor outside of the study area into the City of Long Beach and Los Angeles County. Recent work undertaken in the City of Long Beach and the Gateway Cities reveals that tolling assumptions can have a significant impact on travel demand forecasts and allocation of traffic among the types of lanes on the facility. In addition, coordination of assumptions across county lines is critical to this analysis. For example, assumptions such as peak/off-peak tolling rates and the decision to charge or not charge vehicles with various vehicle occupancy thresholds (such as 3+ carpools) can significantly affect the results in terms of Express Lane usage. The amount of demand in the Express Lanes not only affects the corridor under study but also could significantly affect local arterials and the State Highway System in the City of Long Beach. As of now, there is not a consistent policy regarding how to handle Express Lane toll rates and operations across county lines. All of these issues

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are ignored within the traffic study and the resulting travel demand and associated analysis could be significantly affected. Discussion of these issues must be included in the analysis of Alternative 3 along with detailed analysis of the affects that the tolling will have on travel demand and operations into the City of Long Beach on both I-405 and I-605. The following important questions are raised:

a. What happens if the proposed project is built but the Express Lanes are not continued into Los Angeles County?

b. How would the lanes transition and operate in the City of Long Beach if the proposed project is built?

c. Metro is currently considering Express Lanes on I-405 in Los Angeles County. What happens if the proposed project is built and the Express Lanes are carried into the City of Long Beach and Los Angeles County? How would that not only affect freeways in Los Angeles County, but how would that affect the travel forecasts for the proposed project in Orange County as well? With the modeling conducted as described, there is no way to understand the variation in the proposed project area volumes that would occur under these scenarios and thus the EIR does not disclose the true impacts of the proposed project either in the study are nor in the area that should have additionally been studied in the City of Long Beach.

d. What types of coordination would be required and how would the lanes operate, specifically as a result of implementing the proposed project?

e. What are the differences in travel demand in the City of Long Beach for the scenarios with and without Express Lanes carried across the county line?

Significant additional information and analysis is required to understand potential impacts of the alternatives in both Orange County as well as into Long Beach. Model run tests are needed to test impacts of alternative scenarios in the project area as well as in the missing affected areas in Long Beach. It is appropriate to test potential extensions of Express Lanes into Los Angeles County, as well as if Express Lanes were ended at the county line. If Express lanes are not extended into Los Angeles County, significant additional analysis of operational and geometric issues in Long Beach must be included so that there is documentation of potential impacts in Long Beach under all alternatives, with and without Express Lanes.

7. **The DEIR/EIS lacks analysis regarding possible increases the general purpose lanes or diversion to other routes in the City of Long Beach due to increased congestion.** It is known that Express Lanes will likely result in some shifting of traffic from the Express Lanes (prior HOV lanes) to the General Purpose lanes. This could either increase the general purpose lane volume in the City of Long Beach, or result in diversion to other routes in the City of Long Beach due to increased congestion in the general purpose lanes, or both. These possible significant impacts have not been considered or analyzed in the traffic study. Missing information on Express Lane impacts on the freeway system must be added.

8. **The DEIR/EIS fails to provide details regarding the transition area beyond the Orange County line into Los Angeles County and the City of Long Beach.** Table 3.1.G-17 (Transition Area LOS) summarizes the AM and PM LOS in each of the transition areas anticipated in 2020 and 2040 under Alternative 3 and No Build (p.3.1.6-97). However, no transition areas were evaluated on I-405 north of the I-605/I-405/SR-22 intersection in Los Angeles County or the City of Long Beach. Missing information and analysis of impacts in the City of Long Beach must be added.

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9. **The DEIR/EIS lacks consistency between its chapters and associated reports with respect to anticipated ramp closures.** As discussed under Temporary Build Alternative Impacts (p. 3.1.6-106), the I-405 southbound off-ramp at Seal Beach Boulevard is expected to be closed between 10 to 30 days during construction. Closure of the Seal Beach Boulevard off-ramp will likely result in cut-through traffic in the City of Long Beach. The DEIR/EIS for the proposed project states that tentative detours for the ramp closures are identified in the Ramp Closure Study (RCS) (Appendix C of the Community Impact Assessment). When the RCS was reviewed, Table 1 (Local Service Interchange Ramps and Anticipated Closure within the I-405 Improvement Project) indicated that the Seal Beach Boulevard southbound off-ramp has an AADT of 10,500 and will be closed for up to 30 days. However, in the "Description of Prolonged Closure Sites and Proposed Detour Route" section of the RCS, all ramps with anticipated long-term ramp closures (10 or more days) were listed and described in detail, with the exception of the Seal Beach Boulevard southbound ramp. The "Bolsa Chica Road Southbound Off-Ramp" was described where the "Seal Beach Boulevard Southbound Off-Ramp" description should have been. The alternate route maps in the report's attachment also omit the Seal Beach Boulevard Southbound Off-Ramp. This is a noteworthy discrepancy because closure of the Seal Beach Boulevard southbound off-ramp could significantly impact construction-related traffic in and around alternate I-405 ramps and adjacent arterials . in the City of Long Beach.

   a. The "Ramp Closure" list in the Transportation Management Plan (TMP) for the proposed project is also inconsistent with the DEIR/EIS and Table 1 of the RCS. The DEIR/EIS and Table 1 of the RCS indicate that the southbound off-ramp at Seal Beach Boulevard will be closed for up to 30 days and the list of ramp closures from the TMP (p.11) indicates that Bolsa Chica Road southbound off-ramp will be closed.

Missing analysis of potential ramp closures in Long Beach must be added.

I-405 Improvement Project DEIR/EIS: Chapter 3.6 – CUMULATIVE IMPACTS

1. **The DEIR/EIS fails to analyze the cumulative impact of future growth in the City of Long Beach.** As discussed in Section 3.6.2 of the Cumulative Impact section, Methodology, future growth was considered within "the Cities of Costa Mesa, Fountain Valley, Garden Grove, Huntington Beach, Los Alamitos, Westminster, and Seal Beach as well as the County of Orange unincorporated community of Rossmoor (p.3.6-2)." The list of cities and unincorporated areas included in the cumulative analysis includes all of the cities and areas listed in the proposed Project Description (p.S-2) in the DEIR/EIS Summary, with the exception of the City of Long Beach. The growth in City of Long Beach should be included in the proposed project's cumulative analysis. The proposed project description in the DEIR/EIS Summary is as follows:

   "The approximately 16-mile-long project corridor is primarily located in Orange County on I-405 and traverses the cities of Cost Mesa, Fountain Valley, Huntington Beach, Westminster, Garden Grove, Seal Beach, Los Alamitos, Long Beach and the community of Rossmoor."

Missing cumulative analysis must be added.

This concludes our summary of comments on the EIR/EIR documents. There are likely other comments that will be appropriate following receipt of responses. Please let us know if you have any questions or concerns. Iteris, Inc. would be happy to meet with City staff to discuss the results of the review and technical memorandum.

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ITERIS

I-405 Improvement Project DEIR/EIS Comments, July 17, 2012

Sincerely,

Gary Hamrick
Vice President
Transportation Systems
Iteris, Inc.

GL-9 (Continued)

Attachment 5

Kenneth A. Small and Chen Feng Ng
Optimizing Road Capacity and Type
June 1, 2013

GL-9 (Continued)

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GL-9 (Continued)

Optimizing Road Capacity and Type

Kenneth A. Small
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June 1, 2013

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JEL codes: L91, R42

Abstract

We extend the traditional road investment model, with its focus on capacity and congestion as measures of capital and its utilization, to include free-flow speed as another dimension of capital. This has practical importance because one can view free-flow speed as a continuous proxy for road type (e.g. freeway, arterial, urban street). We derive conditions for optimal investment in capacity and free-flow speed, and analyze the optimal balance between the two. We then estimate cost functions for capital and user costs and apply the resulting model using parameters representing large US urban areas. We show that providing high free-flow speed may be quite expensive, and there is sometimes a tradeoff between it and capacity. We find suggestive evidence that representative freeways in most large urban areas provide too high a free-flow speed relative to capacity, thus making the case for reexamination of typical design practice.

GL-9 (Continued)

Optimizing Road Capacity and Type

Kenneth A. Small
Chen Feng Ng

1. Introduction

The economic analysis of congestion and investment in road capacity is well developed. The research literature contains an abundance of optimality conditions, implications for pricing, and policy implications including such practical matters as second-best pricing, investment under conditions of suboptimal pricing, and financial balance between pricing revenues and investment costs.[1] In such analyses, roads are generally taken to be sufficiently characterized by a single dimension, capacity, with other issues such as safety or aesthetic ride quality dealt with as separate side issues.[2] In part, this emphasis is justified by the apparent dominance of congestion among the costs of urban road trips.[3]

Yet some of the most serious practical issues in road policy involve other aspects of roads such as their safety, environmental impacts, aesthetics, and impacts on neighborhoods and other considerations of urban design. As a result, passionate debates arise about not only the amount of road space to provide, but its type. In particular, the penetration of dense urban development by high-speed and high-capacity expressways has always been controversial.

Transportation economists have had less to say about these latter issues, and a major reason is the single capital dimension in the standard economic models of road investment. Yet it is entirely possible to build very different looking urban road networks of equal capacities, one using high-speed freeways and another using well-engineered arterials. These design tradeoffs require other measures of road capital than capacity.

The goal of this paper is to provide an expanded investment model that lends itself to analyzing such issues, by including free-flow speed as an additional design variable describing road capital. While naturally not every issue of interest can be captured with just one additional

[1] Examples include Mohring and Harwitz (1962), Strotz (1965), Keeler and Small (1977), and Jansson (1984). For reviews see Lindsey and Verhoef (2000) and Small and Verhoef (2007, ch. 5).

[2] In two cases, however, these other road characteristics are explicitly modeled either as a type of scale economy (Jansson 1984, ch. 10) or as a quality variable (Larsen 1993).

[3] Small and Verhoef (2007), sect. 3.4.6.

GL-9 (Continued)

variable, the advantages of tractability and transparency make this an attractive way to begin bringing the analysis of road types into mainstream transportation economics.

To implement the model, we use empirical data to estimate both investment costs and user costs as functions of the two design variables (capacity and free-flow speed). We estimate a construction-cost function using data on costs of various road types along with their free-flow speeds and capacities. We estimate a user-cost function from information about speeds and flows of different road types, differentiated by free-flow speed,[4] which we supplement with a queuing analysis to account for situations where input flow exceeds capacity.

The result is a continuous, differentiable total cost function which permits standard investment analysis. The model produces the familiar criterion for incremental investment in capacity, and a new criterion for incremental investment in free-flow speed. We combine these criteria to examine how to recognize under what conditions a given road is well balanced between these two dimensions: i.e., when does a given road design provide too high or low a free-flow speed relative to its capacity? We examine this balance condition for 24 standard road types under hypothetical conditions, and for representative freeways and arterials for 47 US urban areas under actual conditions.

While our goal here is not primarily policy analysis, the model does permit another look at a question considered by Ng and Small (2012). Given that many high-speed urban expressways operate under severe congestion for several hours each day, is the extra expense of providing such high-speed service under more moderate traffic justified? In the extreme case where all traffic occurred during a peak period impacted by queues behind fixed-capacity bottlenecks, there would be no advantage to high free-flow speed. In more realistic cases, there are tradeoffs involving the duration of peak periods and the relative traffic volumes in peak and off-peak periods. Our earlier paper considers this question by comparing a few specific road types chosen to illustrate the tradeoff between free-flow speed and capacity, or between free-flow speed and construction cost. Here, we develop a more general model of road investment where both capital costs and user costs can vary depending on free-flow speed and capacity, each of which lies along a continuum.

[4] Such information is compiled in the Highway Capacity Manual (Transportation Research Board 2000) from decades of engineering research.

GL-9 (Continued)

We do find some evidence that typical freeways in large urban areas are over-designed for free-flow speed at the expense of capacity. This arises largely from the finding that the cost elasticity for increasing free-flow speed is, on average, more than three times that for expanding capacity (roughly 1.4 vs. 0.4); as a result even modest amounts of congestion favor incremental investments in capacity relative to free-flow speed. While the optimal road configuration is very case-specific, we can state a more general policy conclusion: road design needs to allow for variety and flexibility, rather than being constrained to meet a predetermined set of standards such as those for US Interstate Highways. There are probably many situations where urban areas are well served by parkways, high-type arterials, or urban streets with well-engineered intersections as a means of carrying large traffic flows efficiently.

2. Long-run cost functions with two dimensions of infrastructure

Total costs of road travel in our model consist of amortized capital cost and user costs. We adopt simple formulations for each, in order to emphasize what is new in this paper, namely the role of free-flow speed as a design variable. Thus, for example, we ignore road maintenance costs (assuming they would not affect design), accident costs (as there is mixed evidence in the literature regarding the impact of design speed on accident rates),[5] other user costs aside from time (assuming they are proportional to vehicle flow and therefore also do not affect design), and environmental costs (which are best dealt with using other tools).

Annualized capital cost is composed of initial costs of structures and land, each amortized at a constant rate over its lifetime. These costs depend on road design via the variables measuring capacity and free-flow speed:

$$\rho(V_K, S_f) = \frac{r}{1-e^{-r\Lambda}} K(V_K, S_f) + rA(V_K, S_f) \tag{1}$$

where V_K and S_f are design capacity and free-flow design speed, respectively, K is construction cost, A is right-of-way acquisition cost, r is the interest rate, and Λ is the road life in years, i.e.

[5] As discussed in Ng and Small (2012), some of the design features that could result in lower free-flow speeds (like narrower lanes or a lower type of road such as a highway instead of a freeway) do not necessarily lead to higher accident rates, especially if the roads are accompanied by lower speed limits.

GL-9 (Continued)

the time after which the structures and improvements (but not the land) have lost all their value. We assume that K and A are increasing in both V_K and S_f. This formulation assumes the annualized cost is constant over the road's lifetime.

Total user cost U_t during time interval t consists solely of time costs measured at a constant value of time, α. User time depends both on free-flow speed and on congestion, the latter via the volume-capacity ratio:

$$U_t(V_t \mid V_K, S_f) = V_t c_t = V_t \frac{\alpha}{S_t\left(\frac{V_t}{V_K}, S_f\right)} \tag{2}$$

where t is a time interval (of duration q_t), V_t is traffic volume, c_t is average user time cost, and S_t is average speed. The latter is assumed to be increasing in S_f, and to be decreasing and concave in volume-capacity ratio.

The short-run total cost function, including agency costs, is therefore:

$$\begin{aligned} C(V \mid V_K, S_f) &= \rho(V_K, S_f) + \sum_t q_t U_t(V_t \mid V_K, S_f) \\ &= \frac{r}{1-e^{-r\Lambda}} K(V_K, S_f) + rA(V_K, S_f) + \alpha \sum_t \frac{q_t V_t}{S_t\left(\frac{V_t}{V_K}, S_f\right)} \end{aligned} \tag{3}$$

where $V=\{V_t\}$ is the time pattern of vehicle flows.

The long-run cost function is obtained by choosing the design variables so as to minimize short-run total cost:

$$\begin{aligned} \tilde{C}(V) &= \min_{V_K, S_f} C(V \mid V_K, S_f) \\ &= \min_{V_K, S_f} \left[\rho(V_K, S_f) + \alpha \sum_t \frac{q_t V_t}{S_t\left(\frac{V_t}{V_K}, S_f\right)} \right]. \end{aligned}$$

GL-9 (Continued)

The conditions for this minimization constitute the investment rules governing capacity and free-flow speed. Assuming interior solutions, they are:

$$\frac{\partial \rho}{\partial V_K} = -\sum_t q_t V_t \frac{\partial c_t}{\partial V_K} \tag{4a}$$

$$\frac{\partial \rho}{\partial S_f} = -\sum_t q_t V_t \frac{\partial c_t}{\partial S_f} \tag{4b}$$

which state that each type of investment should be undertaken to the point where the resulting marginal saving in user cost equals its incremental annualized capital cost. The first of these investment rules is standard.[6] The second is new to this paper, but obviously follows the same logic.

Equations (4a) and (4b) may be simplified by taking advantage of our assumption that user cost is a function of volume and capacity only through their ratio, an assumption which also underlies the analysis of self-financing by Mohring and Harwitz (1962, pp. 84-87).[7] This assumption implies that

$$V_K \frac{\partial c_t}{\partial V_K} = -V_t \frac{\partial c_t}{\partial V_t}$$

from which we can rewrite (4a) and (4b) in elasticity terms as:

$$\varepsilon_{\rho,VK} = \frac{1}{\rho}\sum_t q_t V_t \cdot (mecc)_t = \frac{\tilde{R}}{\rho} \tag{5a}$$

[6] This investment rule is given in various forms by Mohring and Harwitz (1962, p. 84), Strotz (1965, eq. 1.17), and Keeler and Small (1977), eq (5). See Small and Verhoef (2007, eq. 5.3) for a concise derivation.

[7] This assumption is sometimes described as constant returns to scale in congestion technology: see Small and Verhoef (2007, p. 165).

GL-9 (Continued)

$$\varepsilon_{\rho,Sf} = \frac{1}{\rho}\sum_t q_t V_t c_t \cdot (\varepsilon_{S,Sf})_t \tag{5b}$$

where $(mecc)_t \equiv V_t(\partial c_t/\partial V_t)$ is the marginal external congestion cost of a trip, $\varepsilon_{\rho,VK}$ and $\varepsilon_{\rho,Sf}$ are the elasticities of annualized capital cost with respect to capacity and free-flow speed, respectively, and $\varepsilon_{S,Sf}$ is the elasticity of the function $S(\cdot)$ with respect to S_f. (This last elasticity may vary by time period.) The quantity $\tilde{R}$ is imputed revenues from a hypothetical congestion toll set equal to $mecc_t$ in each period when traffic is given by vector V.[8] Therefore (5a) expresses the self-financing theorem, which states that annual revenues from such a toll would equal annualized capital costs times the cost elasticity of capital cost with respect to V_K. Equation (5b) has no comparable interpretation, since there is no efficiency reason to impose a toll for free-flow speed.

The quantities in equations (5a) and (5b) are likely to be quite case-specific, making it difficult to draw general conclusions from these investment criteria. However, we are more confident in their ratio, which is based on the relative costs of the two kinds of investment and the relative cost savings they provide to users. Therefore, we primarily consider what we call "investment balance," defined by dividing (5a) by (5b):

$$\frac{\varepsilon_{\rho,VK}}{\varepsilon_{\rho,Sf}} = \frac{\tilde{R}}{\sum_t q_t V_t c_t \cdot (\varepsilon_{S,Sf})_t} = \frac{\sum_t q_t V_t \cdot (mecc)_t}{\sum_t q_t V_t c_t \cdot (\varepsilon_{S,Sf})_t}. \tag{5c}$$

This implication of the first-order conditions makes clear that if congestion is large, so that *mecc* exceeds $c \cdot \varepsilon_{S,Sf}$ for a large portion of the time, investment in capacity will be favored relative to that in free-flow speed. On the other hand, if peak traffic congestion is not severe and off-peak travel is extensive, the ratio on the right-hand side will tend to be small, favoring investment in free-flow speed. In what follows, we refer to the left-hand side (LHS) of equation (5c) as the "ratio of construction cost elasticities," and the right-hand side (RHS) as the "ratio of marginal user costs" (i.e., the ratio of incremental user-cost savings from expanding capacity versus

[8] As is well known, such a toll can be derived by maximizing the difference between consumers' valuation of their travel (the area under their inverse demand curve) and total costs. See Keeler and Small (1977).

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increasing free-flow speed). Our measure of "investment balance" is LHS – RHS; a positive number means that marginal investment in S_f is favored relative to that in V_K.

Intuition is aided by an example. First, suppose travel time is given by the free-flow travel time plus a queuing time applicable only if capacity is exceeded:

$$\frac{1}{S} = \frac{1}{S_f} + \max\left[\frac{q_t}{2}\cdot\left(\frac{V_t}{V_K} - 1\right), 0\right]. \tag{6}$$

This piecewise-linear cost function describes the time-averaged user cost for a deterministic bottleneck of constant capacity, assuming there is no queue at the beginning of the time period. We then have $mecc = \alpha\cdot[(1/S)-(1/S_f)]$, $\varepsilon_{S,Sf} = S/S_f$, and the first-order investment conditions are:

$$\varepsilon_{\rho,VK} = \frac{U^g}{\rho}; \qquad \varepsilon_{\rho,Sf} = \frac{U^0}{\rho} \qquad \Rightarrow \qquad \frac{\varepsilon_{\rho,VK}}{\varepsilon_{\rho,Sf}} = \frac{U^g}{U^0} \tag{7}$$

where total user cost U over all time periods has been divided into that due to free-flow travel time, $U^0 \equiv \alpha\sum_t q_t V_t / S_f$, and that due to congestion, $U^g \equiv U - U^0$. This example makes clear that a marginal increase in capacity is valuable when user costs of congestion (U^g) are high, whereas an increase in free-flow speed is valuable when user costs of free-flow travel (U^0) are high.[9]

With more realistic models of speed determination, the more general equations (5) can be used to assess current or proposed planning for road capacity and type. A hypothesis motivating this paper is that current planning guidelines for urban areas may place too much emphasis on free-flow speed relative to capacity. This could take the form either of designing a give type of roadway for unnecessarily high speeds, or of choosing a higher type of roadway than necessary. Empirical measurements suggesting that the cost ratio on the right-hand side of (5c) exceeds the elasticity ratio on its left-hand side would provide evidence for this hypothesis.

[9] Another example is when time spent in congestion is modeled, as is common, as a power function of the volume-capacity ratio with power b. Then $mecc = \alpha b\cdot[(1/S)-(1/S_f)]$ and $\varepsilon_{S,Sf} = 1$; the optimization conditions are $\varepsilon_{\rho,VK} = bU^g/\rho$ and $\varepsilon_{\rho,Sf} = U/\rho$. In this case cost added by congestion is affected by S_f, which is why the numerator of the second equation includes total user cost U and not just the uncongested portion U^0 as it did in the other example.

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Alternatively, one can consider the tradeoff between free-flow speed and capacity inherent in any particular set of incremental plans or planning guidelines by rewriting (5c) as:

$$\left(-\frac{dS_f / S_f}{dV_K / V_K}\right)_\rho = \frac{\tilde{R}}{\sum_t q_t V_t c_t \cdot (\varepsilon_{S,Sf})_t}. \tag{5c'}$$

Suppose, for example, a particular road design could be modified at no change in cost so as to increase free-flow speed 2 percent by sacrificing one percent of capacity. This change would be beneficial if the ratio on the right-hand side of (5c′) (computed with the proposed design in place) is less than 2, whereas a trade in the opposite direction would be beneficial if that ratio is greater than 2. As a reminder, all these types of statements presume that there is a continuum of possible designs and that the resulting costs are smooth functions.

3. Empirical estimation of cost functions

3.1 Data for costs, free-flow speeds, and capacities

We wish to estimate construction costs as a function of capacity and free-flow speed, while holding constant other factors such as terrain, climate, and input prices. Since we are more interested in the relative costs of different types of roads than their absolute costs, we are not too concerned about whether we have representative values for those other factors, but do want detailed differences among road types. Such data are provided by the Specifications and Estimates Office of the Florida Department of Transportation (FDOT). These data contain estimated quantities and prices of inputs needed for various types of roads in urban areas, while holding other factors constant.

The basic data, shown in Table 1, tell us about the tradeoffs among alternative road designs discussed in previous sections. For example, as we shall see shortly, a 4-lane divided urban street has the same free-flow speed as an undivided 5-lane urban street with a center turn lane, but the former costs more and has higher capacity. Meanwhile a 4-lane Interstate offers greater free-flow speed but lower capacity than a 6-lane multilane highway, with only a small

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cost difference. Thus, capacity and free-flow speed show sufficient independent variation that we expect to see some possibilities for substitution of the type highlighted in equation (5c').

Table 1. FDOT cost estimates (in 2011 prices)

Description	No. lanes	Bike lane (width)	Median (width)	Shoulders (inside & outside)	Cost per mile (mill. $)
Undivided arterial	2	4 ft	---	---	4.794
Undivided arterial with center lane	3	4 ft	---	---	4.769
Undivided arterial	4	4 ft	---	---	5.132
Undivided arterial with center lane	5	4 ft	---	---	5.814
Divided arterial	4	4 ft	22 ft	---	7.123
Divided arterial	6	4 ft	22 ft	---	7.986
Divided Interstate, closed median with barrier wall	4	---	22 ft	10 ft	8.875
Divided Interstate, closed median with barrier wall	6	---	22 ft	10 ft	9.858

Source: Statewide cost estimates published in January 2012 by the Specifications and Estimates Office of the Florida Department of Transportation (http://www.dot.state.fl.us/specificationsoffice/).

These cost estimates are even more useful because they contain detailed information on individual components such as embankment, pavement, pipe culverts, lighting, etc. This additional information enables us to double our sample size by estimating, for each road type, the cost of an otherwise identical road but with 11-foot lanes instead of the default lane width of 12 feet. This is done by reducing the relevant costs (embankment, stabilization and pavement costs) proportionately, while keeping other costs (such as the costs of pipe culverts, curbs and gutters, pavement markings, lighting and signage) constant. Since 11-foot lanes are recognized in the Highway Capacity Manual (HCM) (Transportation Research Board 2000), we will be able to measure the deterioration of service quality and capacity that accompanies the lower costs and, as we shall see, these two dimensions are not degraded proportionally.

In order to calculate free-flow speeds and capacities for each road type, we use the 2000 Highway Capacity Manual, supplemented where necessary by the FDOT road descriptions and HCM default values; see Appendix A for other assumptions and the equations.[10] The HCM has separate procedures for freeways, urban streets, and "highways" (which have design standards

[10] Although there is a newer edition of the HCM (the 2010 version), we use the 2000 version so that the results in this paper are consistent with those presented in Ng and Small (2012).

GL-9 (Continued)

between those of freeways and urban streets).[11] We are therefore able to further expand our data set by assuming that FDOT's "arterial" can be either an urban street with traffic signals or a highway (except we assume only an urban street can have a center lane). We assume that highways have grade-separated intersections at all major crossings and there are no signals but like urban streets, there are some at-grade access points (e.g., driveways). It is further assumed that urban streets have one signal per mile while highways and freeways have an interchange with an urban street every two miles. We use the cost estimates for traffic signals and interchanges included in the FDOT dataset and add them to the costs shown in Table 1 (see Appendix B for more detail).

Urban streets require several further assumptions. We assume they have limited parking and little pedestrian activity. We assign speed limits of 45 mi/h and 40 mi/h for the roads with 12-foot lanes and 11-foot lanes, respectively (since free-flow speed depends on, though is not equal to, the speed limit). We also must make assumptions about the number of turn lanes and signal phasing for left-turn lanes (see Appendix A).[12] For each assumed turn-lane and signal configuration, we calculate the saturation flow rate, i.e., the highest flow rate that can pass through a signalized intersection while the light is green, and from that we calculate capacity following the HCM.

The assumptions just described lead to 24 road types, each with its unique cost, capacity, and free-flow speed. From these 24 observations, summarized in Table 2, we fit function $K(V_K, S_f)$ describing initial construction cost.

[11] In deference to this distinction, we use "road" as a general term encompassing all three types, so as to avoid the ambiguity of the term "highway" that exists in the HCM (even in its title) between the general or specific meaning of "highway."

[12] Signal phasing means the types of turns permitted on successive parts of a complete cycle for a traffic signal. The two categories of phasing of primary concern to us are permitted versus protected left turns: "permitted" means left turns are allowed whenever the light is green and there is a gap in oncoming traffic, whereas "protected" means left turns are allowed only with a green arrow during which oncoming traffic is stopped with a red signal.

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Table 2. Road types and construction cost per mile

No. of lanes (two-directional)	Road type	Lane width (feet)	Unimpeded speed (mi/h)	Free-flow speed (mi/h)	Two-directional capacity (veh/h)	Road cost per mile	Signal/ inter-change cost	Total cost per mile
						(thousands of $)		
2 lanes, undivided	Urban street	12	42.1	35.8	1,277.6	4,794	155	4,949
		11	40.2	34.4	1,245.1	4,647	155	4,802
	Two-lane highway	12	52.5	52.5	3,112.4	4,794	6,716	11,510
		11	47.1	47.1	3,112.4	4,647	6,511	11,158
3 lanes, ctr turn lane	Urban street	12	42.1	35.8	1,637.0	4,769	155	4,924
		11	40.2	34.4	1,582.4	4,581	155	4,736
4 lanes, undivided	Urban street	12	43.1	36.5	1,930.2	5,132	195	5,328
		11	41.2	35.1	1,891.9	4,909	195	5,104
	Multilane highway	12	51.8	51.8	7,306.1	5,132	7,190	12,323
		11	49.9	49.9	7,169.7	4,909	6,877	11,786
5 lanes, ctr turn lane	Urban street	12	43.1	36.5	3,273.1	5,814	195	6,009
		11	41.2	35.1	3,164.0	5,537	195	5,732
4 lanes, divided	Urban street	12	43.1	36.5	3,745.7	7,123	195	7,318
		11	41.2	35.1	3,620.9	6,854	195	7,050
	Multilane highway	12	53.4	53.4	7,421.0	7,123	9,979	17,102
		11	51.5	51.5	7,284.6	6,854	9,603	16,457
	Freeway	12	65.5	65.5	8,455.0	8,875	12,433	21,308
		11	63.6	63.6	8,386.8	8,353	11,702	20,055
6 lanes, divided	Urban street	12	43.5	36.8	5,618.6	7,986	236	8,222
		11	41.6	35.4	5,431.3	7,639	236	7,876
	Multilane highway	12	53.4	53.4	11,131.6	7,986	11,189	19,175
		11	51.5	51.5	10,926.9	7,639	10,703	18,342
	Freeway	12	67.0	67.0	12,763.3	9,858	13,811	23,668
		11	65.1	65.1	12,661.0	9,215	12,910	22,125

Note: We use "free-flow speed" to designate the speed at very low traffic levels, as does Schrank et al. (2012b). The HCM defines it the same way for freeways and highways. But for urban streets, the HCM defines free-flow speed to exclude the effects of "control delay", which is the delay caused at intersections by stopping and/or waiting behind other stopped vehicles while they start up and proceed through the intersection; here we call this the "unimpeded speed." Formulas for calculating both unimpeded speed and control delay are provided by Zegeer et al. (2008) and the HCM (see Appendix A), and used here to compute "free-flow speed" as well as, in the next section, speed as a function of traffic volume.

These estimates imply construction costs per lane-mile, for 12-foot lanes, of roughly $4.0–5.3 million for freeways and $1.3–2.5 million for urban streets, with multilane highways in between. As a comparison, Schrank et al. (2012a) estimate that new construction can cost

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between $5-20 million per lane-mile for freeways, and around $1.5 million for "major surface streets," although their numbers likely include land acquisition costs.

3.2 Estimation of capital cost function

We use a translog function to estimate the relationship between construction cost per mile (denoted by K, measured in thousands of dollars), free-flow speed (S_f), and capacity (V_K), with the right-hand-side variables as ratios to their sample means:

$$\ln K = \beta_0 + \beta_1 \ln(S_f / \overline{S_f}) + \beta_2 \ln(V_K / \overline{V_K}) + 0.5\beta_3 \ln(S_f / \overline{S_f})^2 + 0.5\beta_4 \ln(V_K / \overline{V_K})^2 + \beta_5 \ln(S_f / \overline{S_f}) \ln(V_K / \overline{V_K}) + \varepsilon \quad (8)$$

The sample means for free-flow speed and capacity are 45.80 mi/h and 5,589 veh/h, respectively.

The regression results, using ordinary least squares on 24 observations, are shown in Table 3. Although none of the second-order terms are statistically significant (at a five-percent level), we prefer the second specification because it allows for varying elasticities, even though the estimated extent of variation is not large. Using that specification, the implied elasticities of construction cost with respect to free-flow-speed and capacity are

$$\varepsilon_{K,Sf} = \beta_1 + \beta_3 \ln\left(S_0 / \overline{S_f}\right) + \beta_5 \ln\left(V_K / \overline{V_K}\right); \quad \varepsilon_{K,VK} = \beta_2 + \beta_4 \ln\left(V_K / \overline{V_K}\right) + \beta_5 \ln\left(S_f / \overline{S_f}\right).$$

As indicated by the first two coefficients of the right column, these elasticities are 1.36 and 0.40, respectively, when calculated at the sample means. Thus increasing capacity—for example, by building more lanes of a given road type—is subject to strong scale economies, a finding consistent with evidence in Meyer et al. (1965) and Kraus (1981).[13] What is new here, and potentially important, is the finding of scale *dis*economies with respect to free-flow speed. Our estimate suggests that increasing free-flow speed is quite expensive, even holding capacity constant.

[13] Kraus finds scale economies are substantially reduced, though not eliminated, by considering the effects produced by the high cost of enlarging intersections as an entire network of roads is expanded. Such costs are not considered here, at least not explicitly.

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Table 3. Construction cost regression results

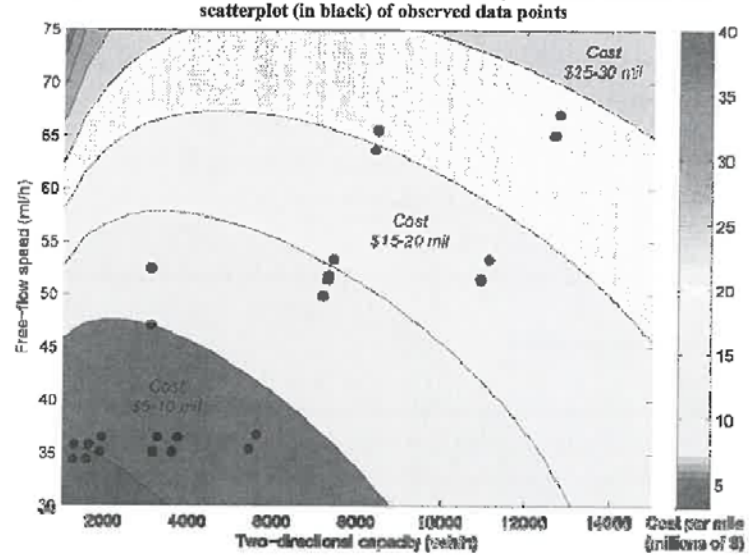
Variables	ln K	ln K
$\ln S_f - \ln \overline{S_f}$	1.4401***	1.3552***
	(0.136)	(0.153)
$\ln V_K - \ln \overline{V_K}$	0.3314***	0.3997***
	(0.044)	(0.068)
$0.5(\ln S_f - \ln \overline{S_f})^2$		0.7975
		(1.797)
$0.5(\ln V_K - \ln \overline{V_K})^2$		0.3800*
		(0.218)
$(\ln S_f - \ln \overline{S_f})(\ln V_K - \ln \overline{V_K})$		-0.8708
		(0.520)
Constant	9.3192***	9.3261***
	(0.021)	(0.038)
Observations	24	24
R-squared	0.976	0.982

Note: Standard errors in parentheses.
***, ** and * indicate statistical significance at the 1, 5 and 10 percent levels, respectively.

The regression results can be used to predict construction costs for a range of free-flow speeds and capacities. Figure 1 shows these predicted costs as well as a scatter plot of the actual 24 data points. It provides an illustration of how construction costs increase as both free-flow speed and capacity increase. An exception occurs at extremely low capacities combined with high free-flow speeds, situations that are unrealistic and for which we neither have observations nor wish to do simulations.

GL-9 (Continued)

Figure 1. Contour plot of predicted costs using translog coefficient estimates and scatterplot (in black) of observed data points



To estimate the annualized capital cost of building a road, we combine the construction costs (K) from equation (8) with some assumptions on right-of-way acquisition cost (A), the interest rate (r), and the road life in years (Λ), in order to calculate equation (1). Based on Ng and Small (2012), variable A typically ranges from about 3 to 6 percent of total capital cost for urban areas with a population of 0.2 to 1 million people, and is about 18.3 percent for urban areas with one million people or more.[14] Denoting these percentages as x (expressed as a decimal), we can express the right-of-way acquisition cost as a fraction of construction cost: $A = K\cdot[x/(1-x)]$. The annualized capital cost per mile from equation (1) can therefore be rewritten as:

$$\rho(V_K, S_f) = \left(\frac{r}{1-e^{-r\Lambda}} + \frac{rx}{1-x}\right) K(V_K, S_f). \tag{9}$$

[14] These statements from Ng and Small (2012) are in turn based on cited figures from Alam and Ye (2003) and Alam and Kall (2005).

GL-9 (Continued)

Given exogenous values of r, A and x, the factor in parentheses on the right-hand side of (9) is a constant, which we denote as κ. Taking the natural logarithm of equation (9) and substituting in equation (8) (without the error term) yields:

$$\ln \rho(V_K, S_f) = \ln \kappa + \beta_0 + \beta_1 \ln(S_f / \overline{S_f}) + \beta_2 \ln(V_K / \overline{V_K}) + 0.5\beta_3 \ln(S_f / \overline{S_f})^2 + 0.5\beta_4 \ln(V_K / \overline{V_K})^2 + \beta_5 \ln(S_f / \overline{S_f}) \cdot \ln(V_K / \overline{V_K}) \quad (10)$$

Therefore the capital cost elasticities are the same as those from the construction cost function.

4. Speeds and travel times

To determine travel times on the road types described in the previous section, we consider four factors: (1) free-flow-speed; (2) slower speeds, based on the HCM speed-flow curves, when traffic flow increases but is still below capacity; (3) control delay due to traffic signals, applicable only to urban streets; and (4) congestion delay from queuing when demand exceeds capacity. The first three components are based on the HCM procedures described in Appendix A.

The fourth component of travel time, congestion delay, is based on the bottleneck queuing model, which with some minor modifications is the same as that in Ng and Small (2012) as well as in the first example in Section 2. We assume that the bottleneck occurs at the entry to the road, and there are two time periods for one-directional traffic: a "peak" period of duration P (in hours) with constant demand V_p, and an "off-peak" period of duration F with constant demand V_o. A queue (assumed to have zero physical length) builds up if demand exceeds capacity V_K. The model of Ng and Small assumes that the queue gradually discharges when demand falls below capacity, and so if $V_o<V_K<V_p$, off-peak travelers typically experience some queuing delay. However, this would be inconsistent with the assumptions of the theoretical model in Section 2 where it is assumed that travelers in one time period do not affect the travel times of travelers in other time periods (i.e., user cost, c_t, depends only on traffic conditions in time period t and not on those in any other time period). Therefore, when calculating travel times

GL-9 (Continued)

in this section we simplify by ignoring the queuing delay experienced by some off-peak travelers; thus off-peak travel times are underestimated when peak volumes exceed capacity.

We assume that the road is 10 miles in length, which is close to the average vehicle trip length of 9.72 miles reported in the National Household Travel Survey (Federal Highway Administration 2009, Table 3). The durations of the time periods are assumed to be $P = 4$ hours and $F = 12$ hours, respectively. (Under our assumptions the value of F does not affect travel time, but it is used later when calculating aggregate travel times for all travelers.)

Average travel times incorporating all four components just described are calculated for each of the 24 road types listed in Table 2 at volume-capacity ratios ranging from 0 to 1.5 (at 0.01 increments). This results in a panel dataset with 3,624 observations of average travel time in minutes, $avgtt_{ij}$, where i indexes road type and j indexes the volume-capacity ratio. We shall refer to these data as the HCM data.

However, these calculations depend explicitly on the road type. Noting that the speed function in equation (3) can be expressed in terms of travel time (T) for a road of length L, $T_f=L/S_f$, we need travel time to depend only on free-flow speed (S_f) and volume-capacity ratio ($v=V/V_K$) in order to apply the theory developed in Section 2. We therefore seek a functional form that can adequately represent the results of our more detailed calculations. The most realistic fit is obtained using a variation of the function proposed by Akçelik (1991) for the purpose of representing both normal flow (volume less than capacity) and queued flow in a single function, as described by Small and Verhoef (2007, eq. 3.11). The original Akçelik travel time function is:

$$T = T_f + 0.25P \cdot \left[(v-1) + \sqrt{(v-1)^2 + \frac{8J_a v}{V_K P}} \right] \quad (11)$$

where $T_f=L/S_f$ is free-flow travel time and J_a is a constant taking on different values depending on the type of road, ranging from 0.1 for freeways to 1.6 for high-friction secondary arterials. The term under the square root provides for a modest increase in travel time with v when $v<1$,

GL-9 (Continued)

and for an increase approaching that from deterministic queuing behind a bottleneck when incoming flow is significantly greater than capacity.[15]

To fit with our theoretical model, however, the function cannot depend on road type except through S_f, nor can it depend on capacity except through the ratio $v=V/V_K$. We therefore estimate a variant, motivated by two facts: (i) in Akçelik's derivation, the first term depends on the length of the road L but the second does not since it represents queuing delay at the a single choke point; and (ii) empirically, S_f is positively correlated with (J_a/V_K). The modified Akçelik function is:

$$T-\frac{L}{S_f}=\gamma_1 P\left[(v-1)+\sqrt{(v-1)^2+(\gamma_2/P)\exp(\gamma_3\cdot S_f)\cdot v}\right]. \qquad (12)$$

We estimate the equation holding constant P=4 hours and L=10 miles, which are the parameters we use to compute the HCM travel times that are the observations in the estimation. Each observation consists of one of our 24 road types and one of 151 values of v distributed evenly between zero and 1.5.

Our estimates, using nonlinear least squares, are given in Table 4. We note that our estimate of γ_1 is close to the value of 0.25 derived by Akçelik on theoretical grounds, as shown in equation (11).

Table 4. Estimates of modified Akçelik function

Parameter	Estimate	Standard error
γ_1	0.2929	0.0010
γ_2	126.3	38.0
γ_3	-0.1726	0.0085

Note: Based on 3,624 observations. R-squared = 0.9866.

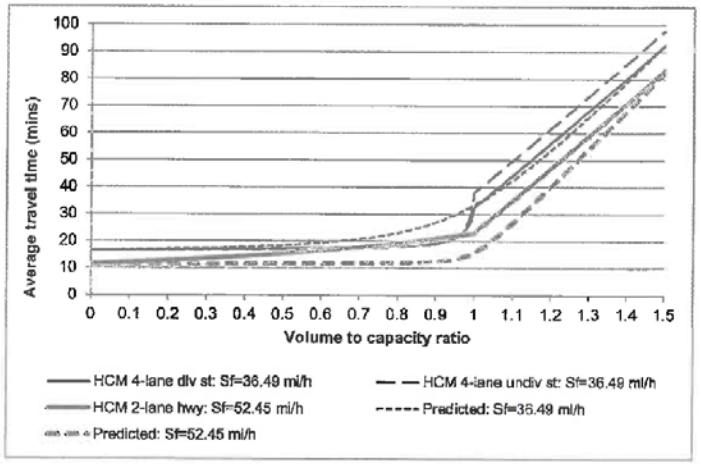
Figures 2 through 4 compare the predicted travel times from equation (12) with those from which it was fitted (what we call "the HCM procedure," which means the HCM supplemented by our queuing model). They do this for a variety of road types with 12-foot lanes.

[15] When the "delay parameter" J_a is zero, this equation simplifies to $T=T_f$ for $v\leq 1$ and $T=T_f+(1/2)P\cdot[v-1]$ for $v>1$.

GL-9 (Continued)

For convenience, travel times are given in minutes. Figures 2 and 3 graph these travel times as a function of volume-capacity ratio v, whereas Figure 4 graphs them as a function of free-flow speed S_f.

Figure 2. Travel times for selected streets and highways



GL-9 (Continued)

Figure 3. Travel times for a four-lane divided highway and freeway

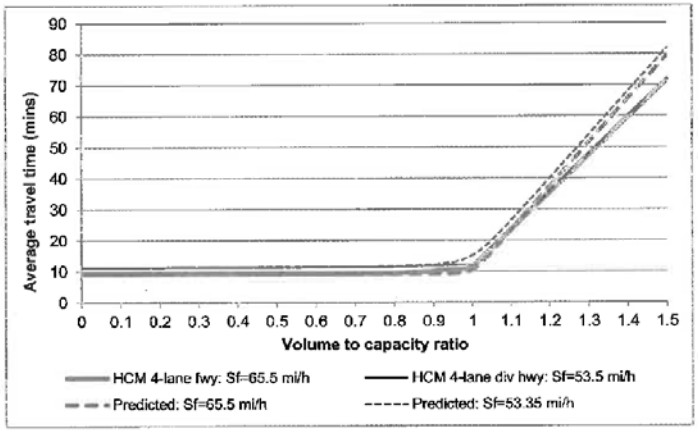
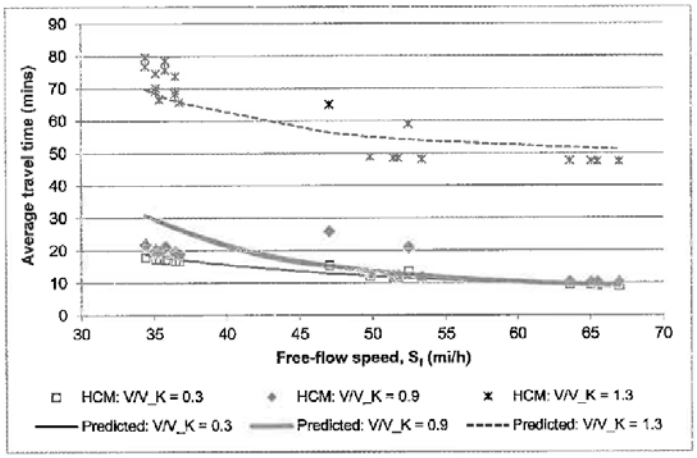


Figure 4. Travel times as a function of free-flow speed, for selected values of volume-capacity ratio



GL-9 (Continued)

In general, the modified Akçelik function reproduces the shapes of the relationships quite well, while eliminating the kinks at v=1 that are an unrealistic artifact of the use of different procedures for v<1 and v>1. Especially helpful is that the modified function eliminates the unrealistic non-convexity at v=1 that occurs in our HCM procedure for urban streets, seen in Figure 2. The modified Akçelik function also captures the feature, arising directly from the HCM, that the travel time function is very flat almost up to v = 1 for higher road types. However, it underestimates travel times for two-lane highways because it interprets their relatively high free-flow speed as indicating a high road type, whereas actually traffic slows noticeably on two-lane highways even for moderate traffic levels. When queuing occurs (e.g., at v =1.3 as seen in Figure 4), predicted travel times are slightly underestimated for urban streets and two-lane highways, and overestimated for multilane highways and freeways.

Figures 2 through 4 show that our modified Akçelik function is convex in both traffic level (v) and free-flow speed (S_f). This guarantees that second-order conditions for cost minimization are met, so we do not need to explicitly derive and calculate values for those conditions.

The derivatives of the modified Akçelik function lead to the following values needed to calculate equations (5c):

$$(L/\alpha)c\varepsilon_{S,Sf} \equiv T\varepsilon_{S,Sf} = \frac{L}{S_f} - \frac{\gamma_1\gamma_2\gamma_3 v S_f \exp(\gamma_3 S_f)}{2z} \tag{13}$$

$$(L/\alpha)mecc = v\frac{\partial T}{\partial v} = \gamma_1 P v\left(1 + \frac{v-1}{z} + \frac{\gamma_2 \exp(\gamma_3 S_f)}{2Pz}\right) \tag{14}$$

where

$$z = \left[(v-1)^2 + \frac{\gamma_2 v}{P}\exp(\gamma_3 S_f)\right]^{1/2}.$$

GL-9 (Continued)

The asymptotic slope of (14) is proportional to P, just as for a simple bottleneck.[16]

5. Numerical results for investment balance

We now apply the model to some examples of roads to see under what conditions these roads embody the optimal balance between S_f and V_K indicated by equations (5c). In Section 5.1 we consider a wide selection of roads and traffic levels, in order to explore the range of conditions when each type of road is appropriate. In Section 5.2 we look at empirical data to see whether representative roads in various cities would better serve their areas with a different type of design. In Section 5.3, we go further and examine the absolute criteria for investing in capacity or free-flow speed, i.e. equations (5a-b), for the same sample of cities and for a hypothetical example illustrating the possibility of trading off free-flow speed against capacity.

5.1 Sampling the universe of urban road conditions

We first consider the investment balance condition for the specific road types we have been analyzing, shown in Table 2. We do so for peak volume-capacity ratios ranging from 0.1 to 1.25, holding constant the peak and off-peak durations (P=4 hours and F=12 hours, respectively), the ratio of peak to off-peak volume (V_p/V_o=1.25), and other assumptions taken from Ng and Small (2012).[17] We believe these assumptions are relatively favorable to investment in free-flow speed; in particular, many congested cities probably have considerably higher values of V_p/V_o.[18]

[16] As $v \to \infty$, the second term in parentheses in (14) approaches 1 while the third term disappears, so that $\partial T/\partial V \to 2\gamma_1 P/V_K$. If γ_1 were equal to 0.25 as in the original Akçelik formula, this would be exactly the asymptotic slope of the average wait through a bottleneck of capacity V_K over period P when that capacity is exceeded, as in equation (6). This is why our predicted travel-time curves rise nearly linearly with traffic at high traffic levels in Figures 2 and 3; their slopes are slightly higher than for the "HCM procedure" because our estimate of γ_1 slightly exceeds 0.25.

[17] These are: Peak period (in a given direction) occurs 310 days per year; off-peak period occurs for 12 hours/day on those same 310 days, and also occurs for 16 hours/day on the other 55 days.

[18] According to Hu and Reuscher (2004), 59 percent of all national person trips occur during the twelve off-peak hours defined by 9 a.m. – 1 p.m. and 4–10 p.m. If it is evenly divided in direction, this amounts to about 5 percent of trips per hour on a one-directional roadway. Another 37 percent, or 6 percent per hour, occur within the six peak hours 6–9 a.m. and 1–4 p.m. This would imply a national average peaking ratio of V_p/V_o =6/5=1.2 if the peak trips

GL-9 (Continued)

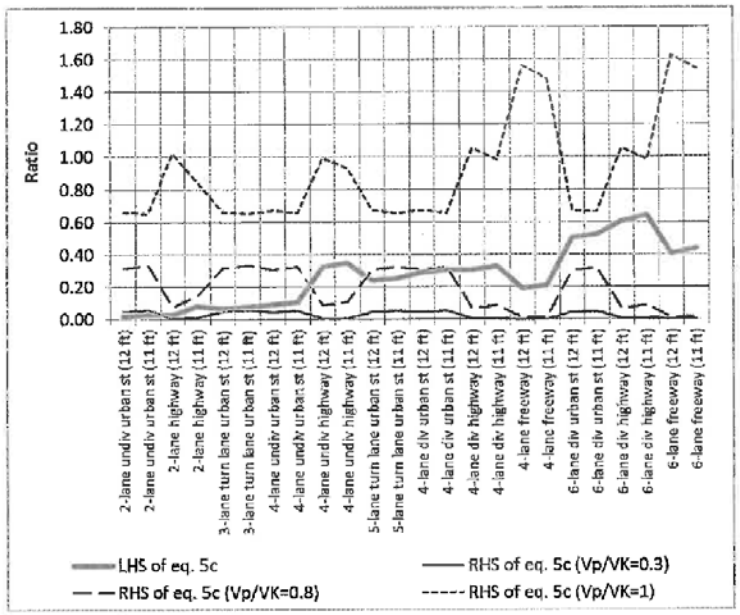
Some results are shown in Figure 5 (Appendix C has further details). The thick line shows the left-hand side of equation (5c) (the ratio of construction cost elasticities); whereas the thin and the dashed lines show the right-hand side (the ratio of marginal user costs) for three values of peak volume-capacity ratio (V_p/V_K). Incremental investment in S_f is more favorable than investment in V_K when the ratio of construction cost elasticities exceeds the ratio of marginal user costs, i.e., when the thick line lies above the thin or dashed line. We can see that when $V_p/V_K = 0.3$, investing in S_f is more beneficial for all types of roads except two-lane urban streets. But under highly congested conditions, as when $V_p/V_K = 1$, investment in S_f is never favored: rather, it is always better at the design stage to sacrifice some free-flow speed in order to increase capacity.

The intermediate case where $V_p/V_K = 0.8$ is illuminating. With this level of peak traffic, all the highways and expressways of four lanes or more offer inefficiently high free-flow speeds relative to their capacity; whereas two-lane highways and two- to five-lane urban streets would benefit relatively more from expanding free-flow speed. A corollary is that if peak traffic congestion is at this level and if capacity is being optimized as called for by (4a), then (4b) indicates that the most highways and expressways exhibit over-investment in free-flow speed under the design standards embedded in the Florida cost data.

are distributed evenly across directions, or 9/5=1.8 if half of the peak trips are concentrated in one direction (inbound in the morning, outbound in the afternoon).

GL-9 (Continued)

Figure 5: The investment balance condition (5c) for 24 road types



Note: Investment in S_f is favored relative to that in V_K when the LHS (ratio of construction cost elasticities: thick line) exceeds the RHS (ratio of marginal user costs: thin and dashed lines).

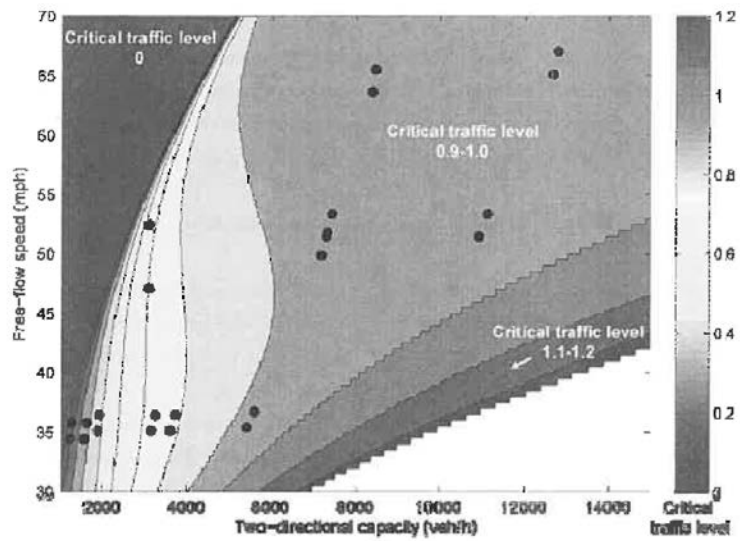
While these results are computed for a particular ratio of peak to off-peak traffic volume (V_p/V_o=1.25), they are quite insensitive to that ratio.[19] As we shall see, however, the analysis of a large discrete change can be more sensitive to this assumed ratio.

[19] This is because, as V_p/V_o increases, both the marginal external congestion cost and the average user cost of peak travelers rise relative to those of off-peak travelers; but since one is in the numerator and the other in the denominator of the ratio of marginal user costs, that ratio, which is the right-hand side of (5c), remains relatively constant. The left-hand side of the equation does not depend on traffic volumes at all; thus, the relationship between the two sides of the equation is relatively unaffected.

GL-9 (Continued)

Figure 6 broadens the computations to a wide range of free-flow speeds and capacities. For each combination of these two investment variables, it displays the "critical traffic level," defined as the maximum value of V_p/V_K for which the ratio of construction cost elasticities exceeds the ratio of marginal user costs (a situation favoring investment in free-flow speed relative to that in capacity). In other words, for any given road type, investment balance is realized when peak traffic congestion is described by the critical traffic level; if congestion is less the road is too slow at low flows, whereas if congestion is greater the road is over-invested in free-flow speed.

Figure 6. Critical traffic levels for various free-flow speeds and capacities, and scatter plot (in black) of FDOT road types



Note: The critical traffic level is the maximum V_p/V_K for which incremental investment in S_f is more favorable than investment in V_K, according to equation (5c). It is calculated for 0.5 mi/h increments of free-flow speed and 20 veh/h increments of two-directional capacity.

GL-9 (Continued)

In the upper left portion of the figure, with high free-flow speed but low capacity, the critical traffic level is zero: investment in capacity instead of free-flow speed is strongly preferred. As free-flow speeds and capacities rise, in general the critical traffic level increases; for many types of roads, it is between 0.9 and 1.0 (just before queuing begins), which is intuitive because queuing causes the marginal external congestion cost to rise significantly, making the case for capacity investment much more compelling. In the unshaded lower right portion of the figure, the critical traffic level is not calculated but is probably greater than 1.25;[20] these are high-capacity roads with low free-flow speed that would strongly benefit from incremental investment in free-flow speed.

For the road types in our sample, shown as black dots in the figure, the critical traffic levels range from 0.1 to 0.5 for urban streets of less than five lanes, and from 0.6 to almost 1.0 for all other road types. Corresponding average peak speeds for these critical traffic levels, shown in Appendix C, range from 28 to 36 mi/h for urban streets and two-lane highways, and from 47 to 56 mi/h for multilane highways and freeways. It is apparent that whenever there is substantial peak congestion, a reconfiguration of these roads to extract more capacity at the expense of free-flow speed would be beneficial if it could be done at the design stage.

5.2 Investment balance for typical urban roads in the United States

We now examine the investment balance condition for some road conditions observed in US urban areas in 2011. We use the average free-flow speed and average peak speed for "freeways" and "arterials", as compiled by the Schrank et al. (2012b), for "very large" and "large" urban areas.[21]

To compute the investment balance condition, we also need to know road capacity and peak volume-capacity ratio. We combine data on road mileage from the Federal Highway Administration's *Highway Statistics* (2013) with lane-miles data from Schrank et al. (2012b) to obtain the average number of lanes for freeways and arterials in each urban area and use this to

[20] The critical values are not calculated explicitly here because this region violates our model's assumption that $V_o/V_K < 1$ (i.e., off-peak volumes do not encounter queuing).

[21] These areas are defined as having population more than 3 million and 1–3 million, respectively. The data are from Schrank et al. (2012b), Appendix A, Exhibit A-8.

GL-9 (Continued)

estimate capacity, assuming that arterials are equivalent to urban streets with signals (see Appendix C for details). Knowing both free-flow speed and peak speed, we can solve (12) iteratively to determine the peak volume-capacity ratio v_p; we then assume v_p/v_o=1.25, as before, to get the off-peak ratio. Thus, for each urban area we have a representative "average" road (either a freeway or arterial) with unique free-flow speed, capacity, and peak/off-peak volume-capacity ratio; we use this information to calculate the two sides of the investment balance condition (equation [5c]). Note that because our calculations are highly non-linear, the investment balance for a representative road does not necessarily apply to the entire urban area.

We present the results of a sample of seven urban areas, chosen to cover most of the range of observed speeds on each road type, in Table 5.

GL-9 (Continued)

Table 5. Investment balance for average road conditions in seven urban areas, 2011

	Very large areas				Large areas		
	Los Angeles	Dallas-Fort Worth	Miami	Boston	Denver	St. Louis	Jackson-ville
Freeways:							
Average no. of lanes	8.7	5.8	6.7	6.4	5.8	6.5	5.8
Free-flow speed, S_f (mi/h)	64.6	64.1	64.0	63.4	62.3	56.0	63.4
Peak speed, S_p (mi/h)	48.6	54	56.7	54.2	50.9	44.4	58.9
Peak volume-capacity ratio, V_p/V_K	1.016	1.003	0.994	0.999	1.004	0.993	0.976
Ratio of construction cost elasticities	0.95	0.43	0.58	0.54	0.48	0.77	0.45
Ratio of marginal user costs	2.55	1.67	1.12	1.42	1.66	0.99	0.46
Imbalance (+ favors investment in S_f)	-1.60	-1.23	-0.54	-0.88	-1.18	-0.21	-0.01
Arterials:							
Average no. of lanes	3.6	3.7	4.6	2.3	3.5	3.2	3.7
Free-flow speed, S_f (mi/h)	43.7	39.1	39.2	36.0	38.0	34.9	43.3
Peak speed, S_p (mi/h)	37.4	33.1	31.7	29.5	32.1	29.8	37.4
Peak volume-capacity ratio, V_p/V_K	0.811	0.695	0.758	0.639	0.662	0.534	0.788
Ratio of construction cost elasticities	0.13	0.20	0.30	0.06	0.20	0.21	0.15
Ratio of marginal user costs	0.20	0.17	0.22	0.17	0.16	0.13	0.19
Imbalance (+ favors investment in S_f)	-0.08	0.04	0.08	-0.12	0.04	0.08	-0.04

Note: The imbalance is calculated as the ratio of construction cost elasticities minus the ratio of marginal user costs.
Sources: Schrank et al. (2012b), FHWA (2013), and authors' calculations; see text and Appendix C for more details.

From Table 5, we can see that the overall picture is that freeways demonstrate an over-investment in free-flow speed relative to capacity, whereas for arterials these two dimensions of investment are quite well-balanced. For example, despite its already high capacity, a representative Los Angeles freeway would benefit more from further capacity expansion than from further investment in free-flow speed, due to heavy congestion (second-lowest peak freeway speed among all urban areas). Peak freeway speed is lowest in St. Louis; but so is its

GL-9 (Continued)

free-flow speed, and as a result its investments are much closer to balance although still favoring capacity expansion. To put it differently, the case for giving up some free-flow speed in exchange for more capacity (for example by restriping for narrower lanes) is less strong in St. Louis than in Los Angeles.[22]

For arterials, the imbalance is generally quite close to zero. The biggest imbalance is in Boston, for which an unusually small average lane width and high congestion imply a relative preference for capacity. In Miami and St. Louis, there is a slightly greater incremental benefit from improving arterial free-flow speeds than for expanding arterial capacity. Increasing free-flow speed for arterials—which here are assumed to be urban streets with signals—need not necessarily imply upgrading to a higher road type, but could involve targeted upgrades to reduce delays from traffic signals. Such upgrades are analyzed by Samuel (2006, ch. 4), who describes a number of innovative intersection designs that improve both free-flow speed and capacity with modest cost and land requirements. Since these improvements also increase capacity, it is unclear without more detailed analysis what their availability implies for investment balance as defined here.

5.3 Absolute investment criteria

In addition to examining the relative investment criterion, we can analyze the absolute investment criterion for either capacity or free-flow speed, each holding the other constant. The criteria are contained in equations (4a) and (4b), respectively, or equivalently (5a) and (5b). We summarize by calculating the benefit-cost ratio as the travel time savings from an incremental increase in free-flow speed divided by the corresponding incremental capital cost. From equation (5a), investment in V_K is warranted if the benefit-cost ratio exceeds one:

[22] We perform a sensitivity analysis by assuming P=2 and F=14 instead and reestimating the travel time function. Since there are now fewer vehicles affected by congestion and for a given value of v_p, there is also less congestion, many road types now have a higher critical traffic level (defined in Section 5.1), i.e., there are now more instances where incremental investment in S_f rather than V_K is beneficial. As a result, in many urban areas, the freeway imbalance becomes positive though very close to zero, in contrast to the case of P=4 where nearly all of the imbalances were negative; whereas the arterial imbalance is still fairly similar (close to zero). We consider the assumption of P=4 for one-way travel to be more realistic and it is in line with Schrank et al.'s (2012b) definition of peak hours as 6-10 a.m. and 3-7 p.m., but it is useful to keep in mind that the "balance" for a real road depends quite sensitively on the peaking characteristics.

GL-9 (Continued)

$$\frac{B}{C} \equiv \frac{\sum_t q_t V_t \cdot (mecc)}{\rho \varepsilon_{\rho,VK}} > 1. \tag{15a}$$

Similarly, equation (5b) yields the investment criterion for free-flow speed:

$$\frac{B}{C} \equiv \frac{\alpha \sum_t q_t V_t T_t \left(\varepsilon_{s,Sf}\right)_t}{\rho L \varepsilon_{\rho,Sf}} > 1. \tag{15b}$$

The components of these equations can be computed using equations (10), (13), and (14) along with assumptions about amortization, land acquisition, value of time, duration of travel periods, capacities, volume-capacity ratios, and trip length.[23]

One can alternately view this calculation as the maximum cost multiplier that could justify the investment under consideration, where by "cost multiplier" we mean the incremental cost of expanding either S_f or V_K for a given hypothetical project, divided by the corresponding incremental cost as observed in our Florida cost data. Even so, this calculation should not be taken too literally, because it does not account for induced traffic: the tendency of greater capacity to attract new users. As a result, it will exaggerate the benefit-cost ratio that could be achieved in reality, as demonstrated by SACTRA (1994). In addition, we reiterate that we have less confidence in the absolute than in the relative calculations.

Table 6 shows the results for the sample of cities already discussed in Section 5.2. Using these figures, the case for investment is strong in both dimensions, in all areas. The variations across cities are not surprising. The case for investment in freeway capacity is extremely strong in Los Angeles, with its low average peak freeway speed, and much less so in relatively uncongested Jacksonville. For arterials, the case for capacity investment is strongest in Boston and weakest in St. Louis. The case for investment in greater free-flow speed is strongest for St.

[23] In addition to the assumptions mentioned in previous sections, we need values for the interest rate (r), lifetime of the road (A) and land acquisition costs as a percentage of total capital cost (x) to calculate ρ using equation (10). Based on Ng and Small (2012), we set r=0.07, A=25 years and x=0.183 (since the urban areas in our sample have populations of 1 million or more). We use the same value of time per vehicle as Schrank et al. (2012b), namely $16.79/hr, who base their figure on McFarland and Chui's (1987) estimate, updated to 2011 dollars, and on assumed average vehicle occupancy of 1.25.

GL-9 (Continued)

Louis freeways and Miami arterials, while weakest for Jacksonville freeways and Boston arterials.

Table 6. Absolute benefit-cost ratios from incremental investments, assuming Florida capital costs and no induced traffic

	Very large areas				Large areas		
	Los Angeles	Dallas-Fort Worth	Miami	Boston	Denver	St. Louis	Jackson-ville
Freeways:							
Free-flow speed, S_f (mi/h)	64.6	64.1	64.0	63.4	62.3	56.0	63.4
Capacity, V_K (veh/h)	18,519	12,307	14,268	13,616	12,382	13,736	12,322
Capital cost, ρ (1000 $ per year per mi)	2,789	2,278	2,426	2,356	2,224	2,147	2,256
B/C: incr. invest. in V_K	49.2	37.0	23.4	30.8	37.8	25.0	9.4
B/C: incr. invest. in S_f	18.3	9.6	12.0	11.7	10.9	19.6	9.2
Arterials:							
Free-flow speed, S_f (mi/h)	43.7	39.1	39.2	36.0	38.0	34.9	43.3
Capacity, V_K (veh/h)	3,216	3,337	4,284	1,589	3,123	2,751	3,393
Capital cost, ρ (1000 $ per year per mi)	879	732	810	522	682	563	877
B/C: incr. invest. in V_K	8.6	5.9	8.4	11.4	5.6	3.9	7.1
B/C: incr. invest. in S_f	5.4	7.2	11.4	3.8	7.0	6.2	5.7

Note: B/C is the benefit cost ratio from incremental investment in capacity (V_K) and free-flow speed (S_f) calculated using equations (15a) and (15b), respectively.

Finally, we present an example of a situation where one can trade off an increase in capacity for a decrease in free-flow speed by choosing among two road types. Here we depart from our incremental analysis using continuous functions, and instead perform straightforward cost-benefit calculations. Each calculation considers replacing plans for a standard six-lane freeway by instead building two undivided four-lane highways with below-standard lane widths. The two highways combined are slightly more expensive to build and provide 12 percent more capacity, but at a cost of 26 percent lower free-flow speed. For this example, we assume the freeway would encounter peak travel time of just under 30 minutes for a 10-mile trip, which is

GL-9 (Continued)

associated with a peak volume-capacity ratio of 1.15. Having the same number of vehicles distributed evenly across the two highways would give each of these roads a peak volume-capacity ratio of 1.02.

Results are shown in Table 7. Using the same peaking assumption as before, that the ratio of peak to off-peak volume is 1.25, building the two highways instead of the freeway saves more than 10 minutes per peak trip, but adds nearly 4 minutes per off-peak trip. Thus, the six-lane freeway is preferred since both its capital cost and total user time cost are lower. However, if we assume instead that V_p/V_o=1.5, i.e., we have the same peak volume as before but there are now fewer vehicles during off-peak hours, then off-peak travel time on the highways increases by just 3.5 minutes relative to that on the freeway and total user time actually decreases. As it happens, the value of this time savings is worth more than the extra capital cost, yielding a benefit-cost ratio of 2.64.

Table 7. Example of tradeoff between free-flow speed and capacity

	V_p/V_o = 1.25		V_p/V_o = 1.50	
	6-lane freeway (12 ft)	Two 4-lane undiv hwys (11 ft)	6-lane freeway (12 ft)	Two 4-lane undiv hwys (11 ft)
Free-flow speed, S_f(mi/h)	67.0	49.9	67.0	49.9
Capacity, V_K(veh/h)	12,763	14,339	12,763	14,339
V_p/V_K	1.15	1.02	1.15	1.02
V_o/V_K	0.92	0.82	0.76	0.68
Average peak travel time, T_p (min)	29.6	19.0	29.6	19.0
Average off-peak travel time, T_o (min)	9.1	12.9	9.0	12.5
Capital cost, ρ (million $ per mi)	2.41	2.78	2.41	2.78
Total user time cost (million $ per mi)	28.66	29.10	26.29	25.30
Total cost (million $ per mi)	31.07	31.88	28.69	28.08
Incremental benefits, B (million $ per mi)		-0.43		0.99
Incremental capital cost, C (million $ per mi)		0.37		0.37
B/C		-1.15		2.64

Note: All benefits and costs are per year, and the incremental benefits/capital cost are calculated based on building two four-lane undivided highways instead of one six-lane freeway.

GL-9 (Continued)

Intuitively, because the two highways offer more total capacity at the expense of free-flow speed, they are beneficial to peak travelers at the expense of off-peak travelers. In general, we would expect that this type of tradeoff would be more favorable to the higher-capacity option when V_p/V_o is high.

This example is motivated in part by Samuel (2006), who argues that most US cities have major roads that are too wide and too sparsely spaced. Samuel argues the point from a different perspective, involving the engineering inefficiencies of intersections between very wide roads. Our approach, which recognizes explicitly the tradeoff between the needs of peak and off-peak travelers, thus complements his. While our earlier analysis of investment balance does not strictly apply to this discrete example, it does give some clues. In this example, the "investment balance" for the freeway (not shown in the table) is -4.5 at the higher ratio of peak- to off-peak traffic; that is, at the margin, the freeway offers too high a free-flow speed relative to capacity. The highway, by contrast, is much closer to balance, with value -1.0. Thus, it is perhaps not surprising that the freeway investment turns out unfavorable in this case.[24]

6. Conclusion

When free-flow speed is distinguished as an additional dimension of road investment, it becomes possible to analyze some important questions about road design within an optimization framework familiar to economists. Specifically, we can analyze criteria for investment not only in road capacity but in free-flow speed, which effectively means choosing among road types and/or specific design criteria such as lane widths. There is sufficient independence between these two dimensions that one can not only analyze each individually, but consider the optimal balance between them.

Empirically, we find that despite the discreteness of road types, it is feasible to approximate the range of possibilities by analytical functions describing capital cost and user time costs as functions of capacity and free-flow speed. Doing so will not answer a specific design question for a specific road, but it is useful for broad-brush analyses of road policy, such as occurs in discussions about what type of road network a city needs. Our empirical analysis

[24] However, the investment balance, an incremental criterion, is not nearly as sensitive to V_p/V_o as is the benefit-cost criterion for this discrete investment example: at V_p/V_o=1.25, the balance is -3.7 for freeways and -0.8 for arterials.

GL-9 (Continued)

provides suggestive evidence that in many large congested cities, standard expressway designs are unbalanced in the sense of providing more free-flow speed than is desirable relative to capacity; whereas the same is not true for urban streets and arterial highways. This observation in turn suggests giving greater attention to the possibilities of more low-footprint roads which offer considerable capacity even though speeds are only moderate even at low traffic levels.

There are numerous factors not considered here that would be beneficial to add to this type of analysis. We mention a few here.

First, as emphasized by Ng and Small (2012), these design features have implications for safety which are potentially important but not well understood empirically. Furthermore, these safety implications could change dramatically as technologies, social customs, and legal environments evolve.

Second, some design features that reduce free-flow speed, such as reduced lane or shoulder widths, would be easier to undertake if large trucks are excluded from the road. Therefore, if one wants to use our analysis to reexamine policy toward road design, it would be a good time to also reexamine policy toward separating trucks and cars onto different roads.

Third, a broad policy analysis is likely to affect networks of roads, not just individual roads, which raises the question of how intersections affect costs. Kraus (1981) finds that accounting for the cost of intersections substantially decreases the measured scale economies with respect to capacity, because intersection costs tend to rise more than proportionally to the capacities of the intersecting roads. Whether any similar conclusion would apply for the elasticity of road costs with respect to free-flow speed would be extremely interesting and potentially important to discover.

Fourth, applications to particular road investments need to distinguish a finer time pattern of demand, to reduce inaccuracies caused by applying nonlinear relationships to averages. Doing so could also necessitate accounting for demand shifts across times of day. Alternatively, one might consider continuous-time models, such as the "bottleneck model" of Vickrey (1969) and Arnott et al. (1991), which deal with both issues simultaneously.

Fifth, our analysis does not include induced demand, i.e., the tendency of a road improvement to attract new traffic. This might well affect investment balance as well as the absolute investment criteria. To analyze this, one would need to have a more microscopic picture

GL-9 (Continued)

of induced demand than is common, relating it specifically to increases in average speed by time period.

Finally, the potential for road pricing to reduce congestion would substantially change the optimal balance analyzed here, probably in favor of less capacity and more free-flow speed. Thus, our model suggests another potentially important long-run implication of road pricing: changing the nature as well as the capacity of a desirable urban road network.

With these and other improvements, we believe our approach to modeling road investment offers the potential for expanding insights and increasingly sophisticated practical analysis, all of which could enhance the efficiency with which roads are provided.

GL-9 (Continued)

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GL-9 (Continued)

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GL-9 (Continued)

GL-9 (Continued)

Notation

t	Index for time periods, $t = 1,2,\ldots,n$
q_t	Duration of time period t
V_t	Traffic volume at time t
V_K	Capacity
v_t	Volume-capacity ratio (V_t/V_K)
S_f	Free-flow speed (including control delay at zero traffic volume for urban streets)
S_t	Average speed
T_t	Average user time (entire trip)
ρ	Annualized road capital cost (per mile)
r	Interest rate
A	Lifetime of road in years
L	Trip length
$K(\cdot)$	Road construction cost (per mile)
$A(\cdot)$	Right-of-way acquisition cost (per mile)
c_t	Average user cost per vehicle-mile at time t
U_t	Total user cost per road-mile per hour at time t
C	Total agency plus user cost (short run) per road-mile
$\tilde{C}$	Total agency plus user cost (long run) per road-mile
α	Value of time

Attachment 6

City of Seal Beach
Studebaker Road/College Park Drive Alternative
Street and Ramp Configuration
July 2013

GL-9 (Continued)

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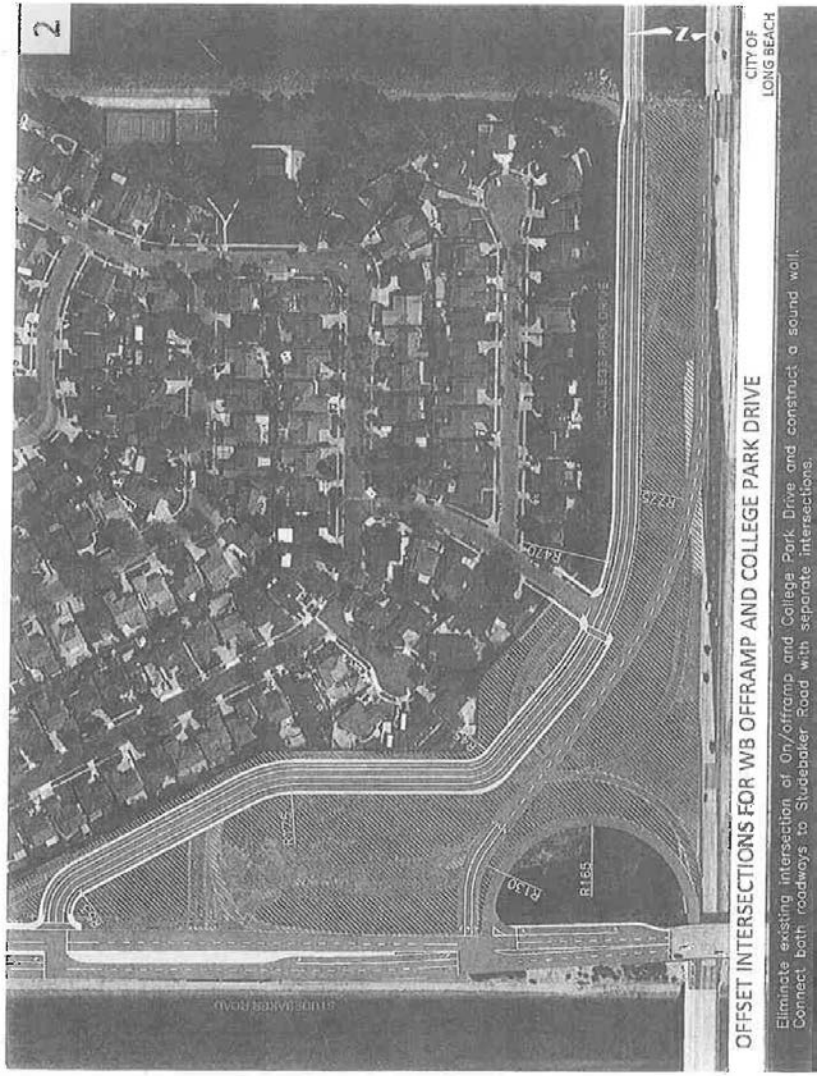
GL-9 (Continued)



GL-9 (Continued)

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RESPONSE TO GOVERNMENT (LOCAL) COMMENTS (GL)

Response to Comment Letter GL1

Comment GL1-1

Caltrans and OCTA thank the City of Fountain Valley for participating in the environmental process for the I-405 Improvement Project. The City's comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, the City's comments were addressed in Appendix R1 (Draft EIR/EIS Response to Comments).

Please see Common Response – Impacts to Businesses, which includes a subsection with the heading Magnolia/Warner Interchange on the Southbound Side of I-405.

Comment GL1-2

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange.

Comment GL1-3

Please see Common Response – Preferred Alternative Identification.

Response to Comment Letter GL2

Comment GL2-1

Caltrans and OCTA thank the City of Long Beach for participating in the environmental process for the I-405 Improvement Project. The City's comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. The City will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Responses to Comments GL2-8 through GL2-15.

Comment GL2-2

Please see Responses to Comments GL2-16 through GL2-19.

Comment GL2-3

The comment period during public circulation of the Supplemental Draft EIR/EIS was identified as the most efficient means to obtain comments on, and reach consensus about, the feasibility of the proposed measures, their funding, and the agency to be responsible for each measure.

Measures T-10 and T-11 include the requirement for OCTA to conclude agreements with the City of Long Beach and Caltrans, respectively, regarding the fair share payments and improvements proposed in each measure. Further coordination among OCTA, Caltrans, the City of Long Beach, Metro, and Gateways COG is anticipated prior to conclusion of those agreements.

Comment GL2-4

Caltrans appreciates that the City of Long Beach has provided options for consideration as measures to address the cumulative adverse effects at some of the intersections along 7th Street in Long Beach. The options are more fully addressed in Response to Comment GL2-20.

Analysis of the proposed improvements at the intersection of College Park Drive and the SR-22 westbound ramps is presented in the Supplemental Draft EIR/EIS. The analysis shows that the queues would not back up onto the SR-22 westbound freeway. The following table presents the anticipated queues; the data are presented in the Supplemental Traffic Study Report – Long Beach Area in Appendices III A-1, III A-2, IV A-1, and IV A-2 for Alternative 1 year 2020, Alternative 1 year 2040, Alternative 2 year 2020, and Alternative 2 year 2040, respectively. The table shows that the 95th percentile queues anticipated approaching the intersection with the proposed signal would not exceed 240 ft during the peak hours in the years 2020 and 2040. The distance from the stop line for the proposed signal at the intersection of the ramp with College Park Drive to the gore point is approximately 850 ft.

Anticipated 95th Percentile Queues on the SR-22 Westbound Exit Ramp Approach to the Proposed Signal at College Park Drive			
		Alternative 1	**Alternative 2**
2020	AM	142	148
	PM	223	240
2040	AM	160	189
	PM	226	240

The improvements proposed at the intersection of 7th Street and Bellflower Boulevard in the Supplemental Draft EIR/EIS do not require any additional ROW, as shown in Figure 4-8 in Appendix B2 of the Supplemental Draft EIR/EIS.

Comment GL2-5

As noted in the comment, 7th Street currently operates at LOS F. A comparison of the volumes at intersections along 7th Street under the existing condition (Figure 3-5 of the Supplemental Draft EIR/EIS) with the forecast volumes for the 2040 No Build Alternative (Figure 3-18 of the

Supplemental Draft EIR/EIS) shows that traffic is anticipated to increase along 7th Street without the proposed I-405 project. Consequently, there is an adverse effect on 7th Street traffic without the project. The additional increment of traffic on 7th Street associated with the proposed project results in cumulative effects of traffic from the project and from other sources that are greater than those solely from the project alone. Consequently, the measures included in the Supplemental Draft EIR/EIS are not intended to address all of the deterioration in traffic service expected between the existing condition and year 2040.

Comment GL2-6

Since, as explained in Response to Comment GL2-5, the measures are not intended to address all traffic operations deterioration regardless of source, projects other than the I-405 Improvement Project and/or other funding sources will be required to obtain the balance of full funding for construction of the proposed improvement measures.

Comment GL2-7

The measures proposed in the Supplemental Draft EIR/EIS fully address adverse traffic effects within Long Beach. As noted in Response to Comment GL2-5, deterioration of traffic service at intersections identified as having significant cumulative project impacts is not solely attributable to the project. Consequently, implementation of the proposed improvements in Measures T-10 and T-11 are not solely the responsibility of the proposed project. Measures T-10 and T-11 include the requirement for OCTA to conclude agreements with the City of Long Beach and Caltrans, respectively, regarding the fair share payments and improvements proposed in each measure. Further coordination among OCTA, Caltrans, the City of Long Beach, Metro, and Gateways COG is anticipated prior to conclusion of those agreements.

Comment GL2-8

The Supplemental Traffic Study and the Supplemental Draft EIR/EIS cover more than ramp terminus intersections. A total of 36 intersections are included in the analysis, of which 14 are not ramp termini. Two intersections were studied on Palo Verde Avenue, and adverse effects were not found near the freeway, so it is unlikely that adverse effects would be found farther away from the freeway. Similarly, 5 intersections were evaluated on Studebaker Road and 1 on Atherton Street, with no finding of adverse effect. One intersection on Bellflower north of I-405 (at the I-405 ramps) was studied and found not to have adverse effects. These findings show that the definition of the study area was accurate for the determination of potential adverse effects of the project in Long Beach.

Comment GL2-9

While the OCTAM traffic demand forecasting model is focused on Orange County, the zone structure and detailed network of arterials in the Long Beach study area is fine grained because of its proximity to Orange County. Network improvements were incorporated into the model used for the forecasting in the Long Beach area. Socioeconomic data used in the forecasting process were the approved SCAG data. Use of a model other than the OCTAM model in the Long Beach area would create forecasting inconsistencies at the boundaries between the two models, as well as inconsistencies in forecasting methods. Given the fine-grained nature of the OCTAM model in the Long Beach study area, the need for consistency between the forecasts in the Orange County and Long Beach areas outweighs the problems associated with the use of different forecasting tools and methods associated with using different models for the two areas.

During preparation of the supplemental traffic study, a traffic volume comparison was conducted to compare traffic volumes generated by the OCTAM model and the Gateway Cities traffic model. The results showed that the OCTAM model results were consistent with the Gateway traffic model for both the freeway system and local roadway network, with minor differences compared to the total volumes projected for the roadway network within the study area that were well within acceptable validation error.

Comment GL2-10

While the City of Long Beach may require the use of the intersection capacity utilization (ICU) method to evaluate traffic for environmental documents for which it is the lead agency, the lead agency for the I-405 Improvement Project is Caltrans, whose standard practices were followed in the preparation of the traffic information and evaluation. Caltrans requires use of the Highway Capacity Manual (HCM) method in the preparation of traffic studies.

Comment GL2-11

Caltrans standard practice for the assessment of effects to traffic as adverse, or of impacts to traffic as significant, does not include prescribed quantitative methods. Caltrans practice is to consider the data available in the determination of whether effects rise to the level of being adverse or impacts to the level of significance. While many communities, such as the City of Long Beach, have prescribed quantitative methods for the determination of an adverse effect or significant impact to traffic, this is not the practice of Caltrans, which is the lead agency for the I-405 Improvement Project. Caltrans' approach avoids the potential for a prescribed quantitative method to fail to consider additional factors that may not be quantitative. The Caltrans approach allows consideration of the total evidence available and thereby provides a more complete approach to determination of significance of impacts. Environmental documents, including this

one, circulated by Caltrans undergo thorough peer reviews so that the judgment of no one professional is responsible for any of the findings or conclusions with respect to the significance of impacts. It should also be noted, that among the local jurisdictions along the project corridor, there are different quantitative methods used to determine the significance of impacts.

Comment GL2-12

The Supplemental Draft EIR/EIS addresses both CEQA and NEPA requirements. The terminology of "effects," "measures," and "adverse" are based on NEPA requirements. Chapter 4 of the Supplemental Draft EIR/EIS addresses CEQA and uses terminology such as "impact" and "significant" with which the commenter is familiar. For example, Table 4-1 in the CEQA chapter (Chapter 4) has columns labeled "Cumulative Significant Impact" and "Project Contribution to Significant Impact"; Section 4.2 in the CEQA chapter is titled "Mitigation Measures for Significant Impacts under CEQA". Measures T-10 and T-11 are project commitments that will be implemented during the design phase of the project.

Comment GL2-13

As noted in Response to Comment GL2-9, the socioeconomic data used to generate trips are the approved SCAG data. Whether distribution and assignment of those trips to the traffic network under the no-build condition includes some "freeway by-pass" traffic is not related to an assessment of the extent to which the I-405 Improvement Project will add an additional increment of traffic to roadways in Long Beach such that those roadways suffer deterioration of traffic operations. The Supplemental Draft EIR/EIS concerns the traffic in Long Beach resulting from the proposed I-405 Improvement Project; it is not required to, nor does it, address "growth, even cumulative growth, [that] is in fact directly related to changes in travel demand on the Caltrans system…." The fair share percentages shown in the Supplemental Draft EIR/EIS reflect the forecast contribution of the I-405 Improvement Project to increases in traffic at their respective intersections.

Comment GL2-14

The use of other models to forecast traffic in the Long Beach area is addressed in Response to Comment GL2-9. Based on the forecasts, the fair share percentages shown in the Supplemental Draft EIR/EIS reflect the forecast contribution of the I-405 Improvement Project to increases in traffic at their respective intersections.

Comment GL2-15

See Response to Comments GL2-5 and GL2-6 for discussion of the fair share topic.

Comment GL2-16

The public was given the opportunity to comment on the Supplemental Draft EIR/EIS during the 45-day comment period from June 28 to August 12, 2013. Comments were received by letter, e-mail, and in person at the public hearing held on July 24, 2013, in Long Beach.

Comment GL2-17

The Supplemental Draft EIR/EIS uses terminology consistent with both NEPA and CEQA. See Response to Comment GL2-12. Implementation of the proposed improvement measures in Long Beach as separate projects is due to the fact that the I-405 Improvement Project is responsible for only an increment of the additional traffic expected at the intersections for which improvements are proposed, as explained in Response to Comment GL2-5.

Comment GL2-18

Circulation of the Supplemental Draft EIR/EIS was determined to be an effective means for receiving comments from the City of Long Beach, the Los Angeles County Metropolitan Transportation Authority, the Gateway Cities Council of Governments, and other parties on the proposed improvement measures on roadways in Long Beach. Measures T-10 and T-11 include the requirement for OCTA to conclude agreements with the City of Long Beach and Caltrans, respectively, regarding the fair share payments and improvements proposed in each measure. Further coordination among OCTA, Caltrans, the City of Long Beach, Metro, and Gateways COG is anticipated prior to conclusion of those agreements.

Comment GL2-19

Measures T-10 and T-11, described in the Supplemental Draft EIR/EIS, are the improvement measures proposed in Long Beach.

Comment GL2-20

Caltrans appreciates the effort the City of Long Beach expended to review and suggest improvements to the measures proposed in the Supplemental Draft EIR/EIS. Additionally, Caltrans appreciates the acceptance as feasible the improvements at the following locations:

a. Los Coyotes Diagonal and Bellflower Boulevard
b. 7th Street and West Campus Drive
c. Willow Street and Bellflower Boulevard
d. Willow Street and Los Coyotes Diagonal
e. Willow Street and Woodruff Avenue

For the intersection of the SR-22 westbound on-/off-ramp and College Park Drive (intersection 2 in the comment), the City of Long Beach proposal to separate the SR-22 westbound ramps from College Park Drive requires substantially more work than is required to address the cumulative adverse effect of the I-405 Improvement Project on the intersection. Because Measure T-11 provides that the I-405 Improvement Project would make a fair share contribution for the improvements included in the measure, that fair share amount would be unaffected and could be used by Caltrans to implement either the improvement included in the Supplemental Draft EIR/EIS, the improvement suggested by the City of Long Beach, or any other improvement that addresses the cumulative adverse effect at the intersection.

For the intersection of 7th Street and Pacific Coast Highway (intersection 3 in the comment), the City of Long Beach proposal would require acquisition of ROW along the south side of 7th Street, including impacts to structures at the gas station in the southeast quadrant of the intersection. The improvements proposed in the Supplemental Draft EIR/EIS would not require any ROW. It would be difficult to justify the ROW acquisition identified in the comment.

For the intersection of 7th Street and Bellflower Boulevard (intersection 5 in the comment), the City of Long Beach proposal would eliminate a northbound through lane and provide dual eastbound and westbound left-turn lanes where single lanes exist currently. The City of Long Beach proposal would require acquisition of ROW along the south side of 7th Street. The improvements proposed in the Supplemental Draft EIR/EIS would require no ROW. It would be difficult to justify the ROW acquisition identified in the comment, because the measure proposed in the Supplemental Draft EIR/EIS does not require additional ROW and addresses the cumulative adverse effect.

For the intersection of 7th Street and East Campus Drive (intersection 9 in the comment), the City of Long Beach proposal would extend the eastbound left-turn lane. That is one of the elements included in Supplemental Draft EIR/EIS Measure T-11, which includes “maximizing eastbound and westbound left-turn pocket lengths.” However, by itself, extending the eastbound left-turn lane is insufficient improvement to address the cumulative adverse effect at the intersection. The additional improvements proposed in Measure T-11 are needed to address the cumulative adverse effect.

For the intersection of 7th Street and Channel Drive (intersection 10 in the comment), the City of Long Beach proposal would provide dual left-turn lanes in both the eastbound and westbound directions along 7th Street. This is more work than is required to address the cumulative adverse effect of the I-405 Improvement Project on the intersection, which can be addressed through provision of dual left-turn lanes in the westbound direction and restriping of the southbound

approach to provide dual exclusive left-turn lanes. Because Measure T-11 provides that the I-405 Improvement Project would make a fair share contribution for the improvements included in the measure, that fair share amount would be unaffected and could be used by Caltrans to implement either the improvement included in the Supplemental Draft EIR/EIS, the improvement suggested by the City of Long Beach, or any other improvement that addresses the cumulative adverse effect at the intersection.

Response to Comment Letter GL3

Comment GL3-1

Caltrans and OCTA thank the City of Los Alamitos for participating in the environmental process for the I-405 Improvement Project. The City's comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. The City will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The limits of the I-405 Improvement Project are based on a lengthy project development process dating back to 2003 when the Major Investment Study for the corridor was started. Improvements to I-605 in Orange County have not been considered during any part of the process except as necessary to accommodate the transition of the Express Lanes in Alternative 3 to the HOV lanes along I-605 north of the I-405 interchange. The Willow/Katella interchange was evaluated in the Draft EIR/EIS for potential significant impacts of the proposed project, but none were found.

Comment GL3-2

OCTA is currently developing Measure M Extension Project M, which the Measure M 2020 Plan says would "Improve freeway access and arterial connection to I-605 at Katella Avenue, which serves the communities of Los Alamitos and Cypress." The Measure M 2020 Plan also says that "The I-605/Katella Avenue interchange project will include both freeway and arterial improvements that will reduce congestion, traffic queuing, and delay within the interchange area."

Comment GL3-3

The Spring/Cerritos interchange is not within the proposed project limits. See Response to Comment GL3-1 for a description of the history of the project limits. The Spring Street interchange was evaluated as part of the Supplemental Draft EIR/EIS for potential significant impacts of the proposed project, but none were found.

Comment GL3-4

If Los Alamitos and/or Katella Avenue in the city of Los Alamitos become detour routes during I-405 construction, an agreement will be required with the City. However, no ramp or bridge closures are anticipated for the I-405 Improvement Project in the area north of Bolsa Chica Road. Consequently, substantial traffic impacts in Los Alamitos are not deemed likely. The off-ramp from I-405 southbound to Bolsa Chica Road is anticipated to be closed from 10 to 30 days, as reported in the Draft EIR/EIS on page 3.1.4-25. The Bolsa Chica Road overcrossing will require replacement as part of the project. A detailed Traffic Management Plan will be prepared to cover the Bolsa Chica Road overcrossing replacement and ramp closure that may include use of Seal Beach Boulevard as an alternative route.

Comment GL3-5

Caltrans and OCTA cannot commit to implement, as part of the I-405 Improvement Project, improvements that are part of other projects.

Comment GL3-6

Responses to all comments received on the Supplemental Draft EIR/EIS will be provided in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Response to Comment Letter GL4

Comment GL4-1

There has been substantial coordination with the City of Long Beach, which is a formal Participating Agency under NEPA. For more details on the extent of coordination with the City of Long Beach, see Common Response – Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach.

Comment GL4-2

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-11 would address cumulative significant impacts to traffic on SR-22 (7th Street), which is a State highway. This fair share would be contributed by the I-405 Improvement Project for the proposed improvements. The remainder of the funding would be the responsibility of the State, not the City of Long Beach.

A comparison of the volumes at intersections along 7th Street under the existing condition (Figure 3-5 of the Supplemental Draft EIR/EIS) with the forecast volumes for the 2040 No Build

Alternative (Figure 3-18 of the Supplemental Draft EIR/EIS) shows that traffic is anticipated to increase along 7th Street without the proposed I-405 Improvement Project. Consequently, there is an adverse effect on 7th Street traffic without the project. The additional increment of traffic on 7th Street associated with the proposed project results in cumulative effects of traffic from the project and from other sources that are greater than those solely from the project alone. Consequently, the measures included in the Supplemental Draft EIR/EIS are not intended to address all of the deterioration in traffic service expected between the existing condition and year 2040.

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-10 would address cumulative significant impacts to traffic on streets owned by the City of Long Beach. The remainder of the funding at these locations would be the responsibility of the City of Long Beach.

Response to Comment Letter GL5

Comment GL5-1

Caltrans and OCTA thank the Rossmoor Community Services District for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Draft EIR/EIS Response to Comments). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The petition by Rossmoor residents is included as Comment PC-PET-1.

The YouTube video referenced in the comment has not been included or addressed. In the "General Information about This Document" behind the cover page, the Supplemental Draft EIR/EIS states: "If you have any comments regarding the information contained in this Supplemental Draft EIR/EIS, please attend the public hearing and/or send your written comments to Caltrans by August 12, 2013." A YouTube video is not a written comment, nor can it be reproduced for inclusion in the Final EIR/EIS.

Response to Comment Letter GL6

Comment GL6-1

Caltrans and OCTA thank the Rossmoor Community Services District for participating in the environmental process for the I-405 Improvement Project. The City will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Comment GL6-2

Please see Appendix R1 Common Response – Preferred Alternative Identification.

Response to Comment Letter GL7

Comment GL7-1

Caltrans and OCTA thank the Rossmoor Community Services District for participating in the environmental process for the I-405 Improvement Project. The Rossmoor Community Services District will be notified at the address provided in your comment when the Final EIR/EIS is available for review. Pursuant to the provisions of the Moving Ahead for Progress in the 21st Century Act (MAP-21), for streamlining purposes, the recommended approach was to keep the public review period within the timeframe specified in the project schedule. Therefore, Caltrans respectfully declined your request to extend the public review period for the Supplemental Draft EIR/EIS for the I-405 Improvement Project.

Response to Comment Letter GL8

Comment GL8-1

Caltrans and OCTA thank the Rossmoor Community Services District for participating in the environmental process for the I-405 Improvement Project. The Rossmoor Community Services District will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Appendix R1 Common Responses – Preferred Alternative Identification and Opposition to Tolling.

Response to Comment Letter GL9

Comment GL9-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Appendix R1 Responses to Comments GL14-1 through GL14-316 for responses to your comments on the Draft EIR/EIS.

Comment GL9-2

The *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, was made available with the Supplemental Draft EIR/EIS on the Caltrans project Web site (http://www.dot.ca.gov/dist12/405/index.htm) on June 28, 2013, and was available for download throughout the comment period.

Comment GL9-3

The Supplemental Traffic Study referenced in the document is the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013.

Comment GL9-4

The Supplemental Draft EIR/EIS was circulated with the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013. The latter document was used as a source document for the former document. Other earlier editions of the Supplemental Traffic Study were preliminary drafts; therefore, they were not circulated.

Comment GL9-5

The documents circulated in conformance with the NEPA and CEQA requirements are the Supplemental Draft EIR/EIS and the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013. Preliminary draft technical studies were not used in the preparation of the Supplemental Draft EIR/EIS; therefore, they were not circulated.

Comment GL9-6

See Response to Comment GL9-5.

Comment GL9-7

The Supplemental Draft EIR/EIS covered new information not previously reported in the Draft EIR/EIS related to traffic in Long Beach proximate to the proposed project. *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, was the source technical document for that new information. Information on the "entire mainline project, interchanges, and intersections" was previously published in the Draft EIR/EIS.

Comment GL9-8

See Response to Comment GL9-1.

Comment GL9-9

The purpose of the Supplemental Draft EIR/EIS was to present new information related to potential traffic impacts in Long Beach associated with the project. Topics related to the Locally Preferred Alternative (LPA), the RTP, and the FTIP are not the subject of the Supplemental Draft EIR/EIS; however, please see Draft EIR/EIS Appendix R1, Draft EIR/EIS Response to Comments, for responses to comments regarding these topics.

Comment GL9-10

The air quality analysis prepared for the project was presented as part of the Draft EIR/EIS. Topics related to air quality are not the subject of the Supplemental Draft EIR/EIS. The air quality analysis (see Section 3.2.6 of the Draft EIR/EIS) used the same source data as traffic speeds reported in the Traffic Study (Tables 2.4.10, 2.5.10, 2.6.10, and 2.7.10) and Draft EIR/EIS (Table 3.1.6-6). There is a range of speeds that occurs within the LOS F designation from a high of 53 mph to a low of zero mph, so speeds under LOS F conditions under different alternatives are not the same. The preliminary results of traffic analysis on I-110 following implementation of the Express Lanes on that freeway are not germane to or indicative of expectations on I-405 for two reasons. First, the results are preliminary for the period immediately following implementation of the Express Lanes and do not represent the conditions anticipated over the long term. Second, the project that implemented Express Lanes on I-110 did not add any additional lanes as is proposed under Alternative 3.

Comment GL9-11

The purpose of the Supplemental Draft EIR/EIS was to present new information related to potential traffic impacts in Long Beach associated with the project. Topics related to transit are not the subject of the Supplemental Draft EIR/EIS. The Draft EIR/EIS does not identify any impacts to public transportation as a result of the proposed project. Public transit vehicles would continue to be eligible to use the HOV lanes in Alternatives 1 and 2, as well as have free use of the Express Lanes in Alternative 3.

Comment GL9-12

The purpose of the Supplemental Draft EIR/EIS was to present new information related to potential traffic impacts in Long Beach associated with the project. Topics related to occupancy requirements in HOV lanes of Alternatives 1 and 2 and in Express Lanes of Alternative 3 are not the subject of the Supplemental Draft EIR/EIS. No change in the HOV occupancy requirement is proposed under Alternatives 1 and 2. Under Alternative 3, HOV3+ vehicles would not pay a toll

to use the Express Lanes, and HOVs with 2 occupants would pay a toll under the preliminary Express Lane operating policies summarized in the Draft EIR/EIS on page 2-18.

Based on the speed and travel time data presented in the Draft EIR/EIS in Tables 3.1.6-6 and 3.1.6-7, the addition of a GP lane in each direction under Alternative 3 will result in increased efficiency in the GP lanes. The addition of a second managed lane in each direction south of SR-22 will increase efficiency in the managed lanes. Current users of the GP lanes who remain in the GP lanes are anticipated to experience an improvement in efficiency. Current users of the HOV lanes who elect to use the Express Lanes will experience an improvement in efficiency. Current users of the HOV lanes who elect to use the GP lanes will experience a reduction in efficiency. Current users of the GP lanes who elect to use the Express Lanes will experience an increase in efficiency. Overall, the average user of I-405 within the project limits will experience greater efficiency under Alternative 3.

Comment GL9-13

Measures proposed in the Supplemental Draft EIR/EIS to address significant cumulative traffic impacts in Long Beach result in those impacts being less than significant. While transportation demand management (TDM), transit, and other measures could have been proposed, the measures proposed directly address the impacts at the site of the impacts. TDM, transit, and other options have a much wider geography and would not be measurably effective at addressing the site-specific significant cumulative traffic impacts in Long Beach.

Comment GL9-14

The purpose of the Supplemental Draft EIR/EIS was to present new information related to potential traffic impacts in Long Beach associated with the project. Topics related to project limits and lane drops of the project alternatives are not the subject of the Supplemental Draft EIR/EIS. The limits of the project impacts were expanded to the north and are presented in the Supplemental Draft EIR/EIS. Those limits extend to Lakewood Boulevard along I-405, to PCH along SR-22 (7th Street), and to Carson Street along I-605 and include all of the interchanges along those routes as well as intersections in the vicinity of those interchanges. The limits of the impacts to the south extend along SR-73 south of I-405 to Bear Street and along I-405 south of SR-73 to Bristol Street. Origin/destination information is inherent in the travel demand forecasting used to forecast future traffic demand. Traffic volumes continuing beyond the project limits in the north along I-405 and I-605, as well as in the south along I-405 and SR-73, clearly justify the need for the improvements proposed in all three of the build alternatives. See also Common Response – Opposition to Tolling.

Comment GL9-15

Measures T-10 and T-11 are fair share contributions to improvements identified in response to cumulative adverse effects. The improvements at the locations in Long Beach are not to be implemented as part of the I-405 Improvement Project but as separate projects by the City of Long Beach and Caltrans, as stated in each of the measures. The preparation of required environmental analyses, such as air quality, water quality, and noise, would be provided as part of development of the projects to be implemented by the City of Long Beach and Caltrans.

Comment GL9-16

Chapter 6 of the Supplemental Draft EIR/EIS and Appendix H of the Draft EIR/EIS provide a complete listing of referenced materials.

Comment GL9-17

The new information is clearly presented in the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, and summarized in the Supplemental Draft EIR/EIS. The report prepared by Iteris is not part of the environmental document and is neither presented nor analyzed as part of the I-405 Improvement Project environmental process.

Comment GL9-18

Concepts A and B are not alternatives in the environmental process of the I-405 Improvement Project for which Caltrans is the lead agency. The Supplemental Draft EIR/EIS includes the three build alternatives that are part of the I-405 Improvement Project environmental process.

Comment GL9-19

Please see Common Response – Traffic Flow at the Orange County/Los Angeles County Line.

Comment GL9-20

Caltrans, the lead agency, determined the limits of the study area included in the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013. The Technical Working Group provided some technical suggestions on the area that were considered by Caltrans in determination of the limits. The findings of the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, included in the Supplemental Draft EIR/EIS were prepared by a consultant and reviewed and approved by Caltrans, the lead agency, which is responsible for the findings.

Comment GL9-21

Based on comments received on the Draft EIR/EIS, there has been discussion regarding the potential elimination of the proposed braided ramps at the Warner Avenue and Magnolia Street interchanges. A decision regarding elimination of these ramps and replacement with at-grade ramps will be made as part of the Preferred Alternative identification.

Comment GL9-22

The information contained in the Supplemental Draft EIR/EIS is new information not included in the Draft EIR/EIS. The environmental impacts of the proposed project on the College Park East neighborhood of the City of Seal Beach are fully documented in the Draft EIR/EIS.

Comment GL9-23

All intersections potentially impacted by the proposed project were evaluated, and information regarding those impacts were presented in the Draft EIR/EIS. Construction detours have not been identified. Tentative detours related to long-term (up to 30 days) freeway ramp closures have been identified and are included in Appendix M of the Draft EIR/EIS. Measure T-1, included in the Draft EIR/EIS, states: "A Final TMP [Traffic Management Plan] will be prepared prior to project construction that identifies methods to avoid and minimize construction-related traffic and circulation effects and minimize impacts to pedestrian and bicycle access, including ADA [Americans with Disabilities Act]-compliant features as a result of the proposed project. During construction, the contractor shall implement the methods identified in the Final TMP."

Comment GL9-24

The SCAG Express/HOT Lane Network is discussed in the Draft EIR/EIS on page 3.1.6-96, where it is noted that I-405 is identified as part of that network.

Comment GL9-25

The Draft EIR/EIS Section 3.1.6, Traffic and Transportation/Pedestrian and Bicycle Facilities, makes it clear that congestion will not be eliminated by any of the proposed alternatives. Tables 3.1.6-4, 3.1.6-5, 3.1.6-12, and 3.1.6-12 of the Draft EIR/EIS show that each of the proposed alternatives result in operational improvements on I-405 within the project limits when compared to the No Build Alternative and address the purpose of the project (as described in the Draft EIR/EIS on page 1-5) to reduce congestion, enhance operations, and increase mobility. Based on the amount of ROW and/or double-decking of roadway necessary to eliminate congestion in the I-405 corridor, no alternative that would eliminate congestion in the corridor is deemed feasible. Draft EIR/EIS Section 2.2.7, Alternatives Considered but Eliminated from Further

Consideration, describes (starting on page 2-37) alternatives considered that included horizontal widening and vertical expansion.

Comment GL9-26

The volumes associated with Alternatives 1, 2, and 3 at the intersection of the SR-22 westbound ramps and College Park Drive are different, as shown in the Supplemental Draft EIR/EIS in Figures 3-15 through 3-17, and 3-19 through 3-21. Because the volumes are different, the potential for effects is different. As shown in Tables 3-1 and 3-10 of the Supplemental Draft EIR/EIS, Alternatives 1 and 2 have a cumulative adverse effect at the intersection. Table 3-12 of the Supplemental Draft EIR/EIS shows that there is no cumulative adverse effect from Alternative 3.

Comment GL9-27

Figure 3-3 of the Supplemental Draft EIR/EIS shows the lane configuration of the intersection of the SR-22 westbound ramps and College Park Drive under the existing conditions in 2009, consistent with the CEQA definition of the existing condition. Analysis of 2020 and 2040 no-build conditions at this location assume the geometrics in place in 2013.

The City of Long Beach proposal to separate the SR-22 westbound ramps from College Park Drive requires substantially more work than is required to address the cumulative adverse effect of the I-405 Improvement Project on the intersection. The Supplemental Draft EIR/EIS includes evaluation of the improvements proposed to address the cumulative adverse effect of the I-405 Improvement Project at the intersection.

Comment GL9-28

The improvement proposed in the Supplemental Draft EIR/EIS at the intersection of the SR-22 westbound ramps and College Park Drive includes widening the off-ramp ramp, which was not included in the previous request by the City of Seal Beach. If Alternative 1 or 2 is identified as the Preferred Alternative, Measure T-11 requires a fair share payment by OCTA to Caltrans for the I-405 Improvement Project's contribution to cumulative adverse effects at the intersection of the SR-22 westbound ramps and College Park Drive. Because the adverse effects are cumulative, Measure T-11 provides, in addition to the fair share payment, that the improvements would be implemented by Caltrans. Caltrans could elect to implement a set of improvements other than those identified in Measure T-11, provided that the improvements implemented address the cumulative adverse effect at the intersection.

Analysis of the proposed improvements at the intersection of College Park Drive and the SR-22 westbound ramps is presented in the Supplemental Draft EIR/EIS. The analysis shows that the queues would not back up onto the SR-22 westbound freeway. The following table presents the anticipated queues; the data are presented in the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, in Appendices III A-1, III A-2, IV A-1, and IV A-2 for Alternative 1 year 2020, Alternative 1 year 2040, Alternative 2 year 2020, and Alternative 2 year 2040, respectively. The table shows that the 95th percentile queues anticipated approaching the intersection with the proposed signal would not exceed 240 ft during the peak hours in the years 2020 and 2040. The distance from the stop line for the proposed signal at the intersection of the ramp with College Park Drive to the gore point is approximately 850 ft.

Anticipated 95th Percentile Queues on the SR-22 Westbound Exit Ramp Approach to the Proposed Signal at College Park Drive			
		Alternative 1	**Alternative 2**
2020	AM	142	148
	PM	223	240
2040	AM	160	189
	PM	226	240

Comment GL9-29

The Supplemental Draft EIR/EIS provides information on I-405 north of the proposed project limits under existing and future conditions with and without the proposed project. This information is included in the text, as well as in Tables 3-6 and 3-7. The *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, contains extensive information on I-405 north of the proposed project limits in Tables 2-3 through 2-5, 3-5 through 3-10, 4-5 through 4-10, 4-13, 4-14, 5-5 through 5-10, 5-13, 5-14, 6-5 through 6-10, 6-13, and 6-14.

The Draft EIR/EIS provides information on I-405 south of the proposed project limits near I-605. This information is included in Tables 3.1.6-4, 3.1.6-5, 3.1.6-12, and 3.1.6-13. The Traffic Study contains extensive information covering I-405 from Bristol Street to I-605, including information focused on the area from Bolsa Chica Road/Valley View Street to Seal Beach Boulevard and from Seal Beach Boulevard to I-605 near the county line in Tables 2.3.1, 2.3.2, 2.4.1 through 2.4.7, 2.5.1 through 2.5.7, 2.6.1 through 2.6.7, and 2.7.1 through 2.7.7.

Comment GL9-30

This Supplemental Draft EIR/EIS provides new information on potential project-related traffic effects within Long Beach. The new information and analysis presented within the Supplemental

Draft EIR/EIS is based on the *Supplemental Traffic Study Report – Long Beach Area*, June 2013. The information and analysis within this Supplemental Draft EIR/EIS was not available during the circulation period for the Draft EIR/EIS. Neither the Supplemental Draft EIR/EIS nor the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, address topics in Seal Beach. Responses to comments made by the City of Seal Beach will be addressed in the Final EIR/EIS.

Comment GL9-31

Details of proposed design exceptions are typically not provided in environmental documents, and they were not provided in the Draft EIR/EIS. Details of design exceptions are provided in the Draft Project Report, which is available from Caltrans.

Comment GL9-32

The Supplemental Draft EIR/EIS was circulated along with the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013. The latter document was used as a source document for the former document. Other earlier editions of the Supplemental Traffic Study were preliminary drafts; therefore, they were not circulated.

Comment GL9-33

See Response to Comments GL9-32 and GL9-29.

Comment GL9-34

Seal Beach is a Participating Agency under NEPA and a Responsible Agency under CEQA.

Comment GL9-35

The *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, was made available with the Supplemental Draft EIR/EIS on the Caltrans project Web site (http://www.dot.ca.gov/dist12/405/index.htm) on June 28, 2013, and was available for download throughout the comment period. A hardcopy of the Supplemental Draft EIR/EIS, along with a CD containing the Supplemental Draft EIR/EIS and *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, was hand delivered at the start of the circulation period to two city officials:

- Sean Crumby, Assistant City Manager and Director of the Department of Public Works
- Michael Ho, City Traffic Engineer

Additionally, CDs containing the Supplemental Draft EIR/EIS and *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013, were hand delivered to the following officials of the City of Seal Beach:

- Michael Leavitt, Mayor
- Gary Miller, Mayor Pro Tem
- Ellery Deaton, City Councilmember
- Gordon Sharnks, City Councilmember
- David Sloan, City Councilmember
- Jill Ingram, City Manager

The CDs for the five members of the City Council were hand delivered to the City Clerk for distribution to the City Council Members.

Comment GL9-36

See Response to Comment GL9-35.

Comment GL9-37

See Response to Comments GL9-35 and GL9-32.

Comment GL9-38

See Response to Comment GL9-20.

Comment GL9-39

See Response to Comment GL9-20. The traffic-related and associated impacts in Seal Beach are accurate as reported in the Draft EIR/EIS. As noted in Response to Comment GL9-56, the purpose of the Technical Working Group was to address topics not in Seal Beach, but in Long Beach. Periodic meetings with representatives of the City of Seal Beach regarding the project have been held since 2009 to address topics in Seal Beach.

Comment GL9-40

See Response to Comment GL9-35.The documents circulated in conformance with the NEPA and CEQA requirements are the Supplemental Draft EIR/EIS and the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013. Preliminary draft technical studies were not used in the preparation of the Supplemental Draft EIR/EIS; therefore, they were not circulated.

Comment GL9-41

See Response to Comments GL9-20 and GL9-40.

Comment GL9-42

Please see Appendix R1 Responses to Comments GL14-1 through GL14-316 for responses to your comments on the Draft EIR/EIS. The request from the City of Long Beach resulted in the preparation of substantial new information not included in the Draft EIR/EIS, including the identification of cumulative adverse effects and cumulative significant impacts of the proposed project not included in the Draft EIR/EIS. None of the comments received from the City of Seal Beach has resulted in the identification of new information about adverse effects or significant impacts that is not already included in the Draft EIR/EIS.

Comment GL9-43

Baseline conditions considered in the Draft EIR/EIS have not changed. The baseline was 2009 in the Draft EIR/EIS and remains so. Improvements to the I-405 corridor in Orange County are included in the 2012 RTP and were also included in the 2008 RTP. Improvements in the corridor are also included in the FTIP. A set of tentative improvements are included in these documents for the corridor; however, that set of tentative improvements does not relieve the lead agency of the requirement to consider a full range of alternatives to address the transportation needs in the corridor.

Comment GL9-43a

HOV lane options were considered in the Draft EIR/EIS. As noted in the comment, dual HOV lanes are included in Alternative M2; this alternative was considered and rejected for many reasons, including the fact that it would result in underutilization of the HOV lanes. Alternative M8 also had dual HOV lanes; it was also considered and rejected in part because of underutilization of the HOV lanes. Alternative M11 also had dual HOV lanes and was rejected for many reasons. The above alternatives are described in the Draft EIR/EIS in Section 2.2.7, Alternatives Considered but Eliminated from Further Discussion. Additionally, Alternative 3 is an HOV alternative; as noted in the Draft EIR/EIS, HOVs meeting the occupancy requirement for use of the Express Lanes would not be required to pay a toll.

Comment GL9-43b

As noted in the comment, the Draft EIR/EIS acknowledges on pages 1-9 and 3.1.6-75 that the HOV lanes in the corridor are operating in a degraded condition. The HOV3+ policy option for addressing that degradation is not rejected in the Draft EIR/EIS. As noted in the comment by

inclusion of a quote from page 3.1.6-82 of the Draft EIR/EIS, an HOV 3+ policy was not considered for the project. Immediately following the quote, and missing from the quote included in the comment, the Draft EIR/EIS provides the reason an HOV 3+ policy was not considered: "An HOV3+ occupancy policy was not considered, and should not have been considered, because it is not reasonable to change the HOV occupancy policy solely for the 12 miles of I-405 from Euclid Street to I-605 along which Alternative 1 proposes improvements. HOV occupancy requirements could reasonably be adopted for a much larger geography covering the entire county or southern California region, but this I-405 project is much more limited." Caltrans can implement an HOV3+ option independent of the proposed project at any time.

An HOV3+ policy is included as an element in the Express Lanes proposed in Alternative 3. Please see the Common Response – Opposition to Tolling for information on the expected low utilization of HOV lanes under an HOV3+ occupancy policy. The Common Response also indicates how the expected low utilization of the HOV lanes under an HOV 3+ requirement is complemented by the Express Lanes in Alternative 3.

Comment GL9-43c

A TSM/TDM alternative was included in the Draft EIR/EIS, as indicated in Section 2.2.3, Transportation System Management/Transportation Demand Management Alternative; in Section 2.2.7 of the Draft EIR/EIS, that alternative is deemed not to satisfy the purpose and need of the project. With respect to the potential of TSM/TDM measures to address corridor deficiencies without capacity improvements, a qualitative analysis was used to conclude that TSM/TDM, by itself, is not sufficient to significantly reduce congestion and that additional capacity would be needed. Traffic growth expected in the corridor is on the order of 30 to 35 percent, as noted on page 1-9 of the Draft EIR/EIS, which was qualitatively concluded to be beyond the potential of the TSM/TDM Alternative. TSM/TDM elements are included in each of the build alternatives, as indicated on page 2-17 of the Draft EIR/EIS.

Comment GL9-44

Section 2.2.7, Alternatives Considered but Eliminated from Further Consideration, of the Draft EIR/EIS identifies numerous alternatives with different modes of transit that were considered for the I-405 corridor. These alternatives included fixed guideway transit and bus rapid transit, as well as additional regular route service. For additional information on this topic, see Appendix R1 Common Response – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Comment GL9-45

The proposed improvements in Long Beach would address the increment of additional traffic anticipated on specific facilities as a result of the proposed I-405 Improvement Project. The proposed improvements would not provide substantial additional roadway capacity beyond what is needed to address that additional increment of traffic. No land use, air quality, noise, or other indirect impacts are anticipated as a result of the proposed improvements in Long Beach.

With implementation of proposed traffic Measures T-10 and T-11 in Long Beach, all project contributions to adverse cumulative effects at all of these intersections would be minimized. As described in Measure T-10, improvements to Long Beach intersections shall be implemented by the City of Long Beach, with the City of Long Beach bearing responsibility for necessary clearances and permits. As described in Measure T-11, proposed improvements to Caltrans intersections shall be implemented by Caltrans, with Caltrans bearing responsibility for necessary clearances and permits. Therefore, the City of Long Beach and Caltrans would be responsible for identifying and addressing any potential environmental impacts of those measures. The improvements identified in Measures T-10 and T-11 would be implemented under separate and independent projects by the City of Long Beach and Caltrans. Each separate and independent project would be required to fulfill the appropriate requirements of NEPA and CEQA. See Response to Comment GL9-15.

Comment GL9-46

See Response to Comment GL9-45.

Comment GL9-47

Based on comments received on the Draft EIR/EIS, there has been discussion regarding the potential elimination of the proposed braided ramps at the Warner Avenue and Magnolia Street interchanges. A decision regarding elimination of these ramps and replacement with at-grade ramps will be made as part of the Preferred Alternative identification.

Based on comments received on the Draft EIR/EIS there has been discussion regarding the potential truncation of Alternative 3 near Euclid Street. A decision regarding truncation will be made as part of the Preferred Alternative identification.

Comment GL9-47a

The apparent inconsistency in study area between the Supplemental Draft EIR/EIS and the Supplemental Traffic Study is due to the fact that the Supplemental Traffic Study referenced in

the comment is a draft edition; the final edition of the Supplemental Traffic Study, dated June 2013, defines the same study area as referenced in the Supplemental Draft EIR/EIS.

Comment GL9-47b

The project study area referenced by the comment in the Draft EIR/EIS on page 3.1.1-2 is in Section 3.1.1, Land Use. That study area is confined to the area of primary potential impact to land use lying along the I-405 corridor where the project proposes to provide additional capacity. That area does not include the city of Long Beach.

Comment GL9-48

Many of the comments provided by the City of Seal Beach are not related to the Supplemental Draft EIR/EIS; however, all of the comments have received a response.

Comment GL9-48a

The intent of the sentence referenced in the comment on page 3-93 of the Supplemental Draft EIR/EIS is to indicate that with implementation of the fair share agreement and payment of related funding prior to construction, as described in proposed traffic measures T-10 and T-11, the project's contribution to adverse cumulative effects within the Supplemental Draft EIR/EIS study area at the affected locations would be minimized.

Comment GL9-48b

The comment refers to the fact that the Lead Agency, Caltrans, has not publicly disclosed its responses to comments received on the Draft EIR/EIS or provided an opportunity for the public to critique those responses as required under Section 21092.5(a) of CEQA. The referenced section of CEQA very clearly states: "At least 10 days prior to certifying an environmental impact report, the lead agency shall provide a written proposed response to a public agency on comments made by that agency which conform with the requirements of this division. Proposed responses shall conform with the legal standards established for responses to comments on draft environmental impact reports. Copies of responses or the environmental document in which they are contained ...may be used to meet the requirements imposed by this section." Responses to comments on both the Draft EIR/EIS and the Supplemental Draft EIR/EIS are included in this Final EIR/EIS and will be available for at least 10 days before certification of the Final EIR/EIS, as required.

Comment GL9-49

Identification of an LPA by the OCTA Board of Directors is a recommendation to Caltrans regarding the Preferred Alternative and does not require recirculation of the Draft EIR/EIS.

Similarly, identification of the Preferred Alternative does not require recirculation of the Draft EIR/EIS. Both will be reported in the Final EIR/EIS.

The need to prepare and circulate a Supplemental Draft EIR/EIS with new information related to traffic in Long Beach is explained in Response to Comment GL9-42.

Comment GL9-49a

Concepts A and B are not new alternatives. They were potential design options to Alternative 2 being considered by the OCTA Board of Directors as a result of comments received on the Draft EIR/EIS. Concept A would change management of the HOV lanes within the project limits to Express Lanes; Concept A was not found to be viable because: (1) the segments of single Express Lanes in each direction would have limited ability to pass, (2) the limited ability to pass would not allow achievement of desired maximum volumes in the Express Lanes, and (3) the revenue potential did not cover the costs of implementation of the Express Lanes. Concept B and the reasons for its rejection as a viable design option are described in the Common Response – Almond Avenue Soundwall. The Supplemental Draft EIR/EIS was limited to addressing comments received on the Draft EIR/EIS with respect to potential traffic impacts in Los Angeles County and the city of Long Beach that were not addressed in the Draft EIR/EIS.

Comment GL9-49b

The logical termini discussion presented in the Draft EIR/EIS on page 1-23 is unaffected by the conclusions of the Supplemental Draft EIR/EIS. The logical termini discussion is limited to a discussion of the termini of the improvements on I-405. Those limits are not changed in any way by the conclusions of the Supplemental Draft EIR/EIS. The conclusions of the Supplemental Draft EIR/EIS indicated the need for some improvements to minimize significant cumulative impacts to other roadways.

Comment GL9-50

Mr. Beil's letter of June 25, 2013, referenced in the comment, appears to be a status report to the City of Seal Beach regarding OCTA's efforts to resolve the City's comments on the impacts of the proposed project presented in the Draft EIR/EIS to Almond Avenue and the Almond Avenue soundwall. Caltrans, the lead agency, has made no final decisions on any design changes or nonstandard features related to Almond Avenue and the soundwall and will not make any decisions until a Preferred Alternative is identified. Decisions on design changes will only be made by Caltrans for the alternative to be constructed, not for alternatives to be eliminated.

Comment GL9-50a

The roles and responsibilities of the two agencies, Caltrans and OCTA, are specified on page 1-1 of the Draft EIR/EIS. Caltrans is identified as the Lead Agency for both CEQA and NEPA. OCTA is identified as the project sponsor.

Comment GL9-50b

The entire Draft EIR/EIS, including Appendices and Technical Studies, was available on Caltrans' Web site at http://www.dot.ca.gov/dist12/405/indexDRAFT.htm during the comment period and remained available as late as March 1, 2014. A link on that page connects to http://www.dot.ca.gov/dist12/405/index.htm where the Supplemental Draft EIR/EIS and Supplemental Traffic Study Report, Long Beach Area were provided. That link also remained available as late as March 1, 2014.

With respect to the consultants preparing the Draft EIR/EIS and the Supplemental Draft EIR/EIS being under contract to OCTA rather than OCTA, it is not at all unusual for project sponsors to contract for the preparation of an environmental document for a Lead Agency. Private developers frequently do this for land development projects, and funding agencies frequently do this for transportation improvement projects.

Comment GL9-51

Tolling authority is still required from the State legislature and from the Federal Highway Administration (FHWA) to operate toll lanes on I-405. MAP-21 removed the requirement for a tolling agreement between FHWA and Caltrans, but it did not remove the necessity to obtain tolling authority. The statements made regarding toll authority in Draft EIR/EIS Section 1.2.2.4 have not changed as a result of the passage of MAP-21.

Comment GL9-52

See Response to Comment GL9-29.

Comment GL9-53

Caltrans, the lead agency, has made no final decisions on any design changes or nonstandard features related to Almond Avenue and the soundwall and will not make any decisions until a Preferred Alternative is identified. Similarly, Caltrans has made no final decisions on nonstandard 11–ft-wide lanes or other nonstandard features on the southbound side of the freeway along the Naval Weapons Station Seal Beach. Decisions on design changes and nonstandard features will only be made by Caltrans for the alternative to be constructed, not for alternatives to be eliminated. Consideration will be given to nonstandard features along both the

northbound and southbound side of the freeway as necessary; because conditions on the two sides of the freeway are not the same, outcomes of consideration for nonstandard features may not be the same.

Comment GL9-54

Section 2 of the Supplemental Draft EIR/EIS is intended to provide a summary of the alternatives. A full discussion of the alternatives is presented in the Draft EIR/EIS. The TSM/TDM Alternative is included in the Draft EIR/EIS in Section 2.2.7, Alternatives Considered but Eliminated from Further Discussion. Additionally, TSM and TDM components are included in each of the build alternatives, as summarized in Section 2.2.1, Common Design Features of the Build Alternatives of the Draft EIR/EIS.

Comment GL9-55

The effects and impacts of the proposed project to traffic in Long Beach are the sole focus of the Supplemental Draft EIR/EIS. Those effects and impacts are summarized in the text of Chapters 3 and 4 and presented in detail in the tables included in those chapters. More extensive data are presented in the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013. After identification of cumulative adverse effects and cumulative significant impacts in Long Beach, measures to address them are also presented in the Supplemental Draft EIR/EIS.

Comment GL9-56

The Technical Working Group was formed to more fully understand the concerns raised by the City of Long Beach, Gateway Cities COG, and Metro that the Draft EIR/EIS failed to assess potential impacts of the project in the City of Long Beach and Los Angeles County and how those concerns could best be addressed. The Supplemental Draft EIR/EIS states on page S-1: "As a result of comments received during circulation of the Draft EIR/EIS on project-related traffic effects within the City of Long Beach, and new information, analysis, and project effects in the Supplemental Traffic Study, Caltrans, as the Lead Agency, made the decision to disclose this new information to the public by preparing and circulating this Supplemental Draft EIR/EIS."

Similar meetings were held with the cities in Orange County, including the City of Seal Beach, starting in 2009 to more fully understand their concerns about the project and how those concerns could be addressed in preparation of the Draft EIR/EIS.

Comment GL9-57

See Response to Comments GL9-56 and GL9-20.

Comment GL9-58

No comments on the Supplemental Draft EIR/EIS were received from the California Air Resources Board (CARB). Comments were received from the SCAQMD and are presented as Comment Letter GR2.

Comment GL9-59

None of the comments received from the City of Seal Beach or any other commenter are considered by Caltrans to be trivial, insignificant, and/or unsubstantial. Caltrans treats all comments as important expressions of interest and concern in improving the proposed project.

The request from the City of Long Beach resulted in the preparation of substantial new information not included in the Draft EIR/EIS, including the identification of cumulative adverse effects and cumulative significant impacts of the proposed project not included in the Draft EIR/EIS. None of the comments received from the City of Seal Beach has resulted in the identification of new information about adverse effects or significant impacts that is not already included in the Draft EIR/EIS.

Please see Appendix R1 Responses to Comments GL14-1 through GL14-316 for responses to your comments on the Draft EIR/EIS.

Comment GL9-60

The purpose of the Supplemental Draft EIR/EIS was to determine if there were potential adverse effects or significant impacts of the proposed project on traffic in Long Beach and Los Angeles County. A geographic area was required in which to make that determination, which expanded the total traffic study area beyond the traffic study area that was included in the Draft EIR/EIS; however, the limits of the improvements proposed on I-405 have not changed, nor has the fact that the proposed termini are logical as presented in the Draft EIR/EIS on page 1-23.

Comment GL9-61

See Response to Comments GL9-42 and GL9-48.

Comment GL9-62

See Response to Comment GL9-35. The information contained in the Supplemental Draft EIR/EIS accurately summarizes the information presented in the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013.

Comment GL9-63

The December 2012 Supplemental Traffic Study, referenced in the comment, was a draft that was not released for public review and that has been superseded by the *Supplemental Traffic Study Report – Long Beach Area*, dated June 2013.

The Draft EIR/EIS discloses traffic operations information on I-405 south of the proposed project limits near I-605. This information is included in Tables 3.1.6-4, 3.1.6-5, 3.1.6-12, and 3.1.6-13. The Traffic Study discloses extensive information covering I-405 from Bristol Street to I-605, including information focused on the area from Bolsa Chica Road/Valley View Street to Seal Beach Boulevard and from Seal Beach Boulevard to I-605 near the County Line, in Tables 2.3.1, 2.3.2, 2.4.1 through 2.4.7, 2.5.1 through 2.5.7, 2.6.1 through 2.6.7, and 2.7.1 through 2.7.7. Please also see Appendix R1 Common Response – Traffic Flow at the Orange County/Los Angeles County Line, which provides a summary of the information contained in the tables noted above for the area near the Los Angeles county line.

Please also see Response to Comment GL9-65.

Comment GL9-64

Caltrans standard practice for the assessment of effects to traffic as adverse, or of impacts to traffic as significant, does not include prescribed quantitative methods. Caltrans practice is to consider all of the available data in the determination of whether effects rise to the level of being adverse or impacts to the level of significance. While many communities, such as the City of Long Beach, have prescribed quantitative methods for the determination of an adverse effect or significant impact to traffic, this is not the practice of Caltrans, which is the lead agency for the I-405 Improvement Project.

Comment GL9-65

See Responses to Comments GL9-62 and GL9-64.

Comment GL9-66

The adverse effects to traffic in Long Beach are cumulative effects, meaning that they only partly result from the proposed project. The cumulative adverse effects to traffic are from both the proposed project and from other sources; that is, the cumulative adverse effects are greater than those solely from the project alone. Consequently, the measures included in the Supplemental Draft EIR/EIS are not intended to address all of the deterioration in traffic service expected between the existing condition and year 2040, but only the increment of deterioration attributable to the project. Because the measures are not intended to address all traffic operations

deterioration regardless of source, projects other than the I-405 Improvement Project and/or other funding sources will be required to obtain the balance of full funding for construction of the proposed improvement measures.

Comment GL9-67

The apparent inconsistency between the two paragraphs of the Supplemental Draft EIR/EIS cited in the comment will be addressed in the Final EIR/EIS. The implementation of the fair share agreement addresses the project's cumulative impacts as stated in the second paragraph cited in the comment. The first paragraph cited in the comment provides for the contingency that the parties to the agreements specified in Measures T-10 and T-11 other than OCTA fail to find the balance of the funding necessary to implement the improvements identified in those measures. In that case, the first paragraph cited in the comment makes it clear that the cumulative impacts could not be addressed and that Findings and a Statement of Overriding Considerations would be included in the Final EIR/EIS documenting why those cumulative impacts could not be addressed.

The reference to 90 days after the publication of the ROD in the second paragraph cited in the comment will not appear in the Final EIR/EIS. Agreements will be reached or a Statement of Overriding Considerations prepared prior to completion of the Final EIR/EIS.

COMMUNITY GROUP COMMENTS (CG)

CG1

Rossmoor Homeowners Association
P.O. Box 5058, Rossmoor, California, 90721
(562) 799-1401 www.Rossmoor-RHA.org

July 16, 2012

Smita Deshponde, Branch Chief
Caltrans-District 12
Attn: I-405 DEIR-DEIS Comment Period
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Re: Rossmoor Homeowners Association Response to DEIR-I-405 Improvement Project

Ms. Deshponde:

Rossmoor Homeowners Association Comments and Recommendations on the EIS for the Proposed 405 Freeway Expansion.

This letter is submitted by the Board of Directors of the Rossmoor Homeowners Association.to repeat our objection to the Cal Trans proposal to expand the the I-405 from the I-605 Freeway to the 73 Freeway and to install toll lanes on the expanded freeway. Our concerns and objections remain unchanged since the revised EIS contains no changes to address our concerns with the previously submitted Cal Trans EIS. We remain greatly concerned with the Cal Trans intransigence on the toll lanes and failure to provide a clear solution to certain traffic congestion problems that the planned configuration will generate.

Further comments on our concerns and objections to the proposed toll lane expansion are contained in the text of the letter we submitted commenting on the first draft of the EIS. We believe that they are of sufficient import to repeat below. 1

If OCTA's expansion project for the I-405 goes forward, the RHA is deeply troubled by the potential for traffic congestion to occur on the northbound I-405 at the Los Angeles County interface, which would cause a direct and heavy impact on the air quality inside Rossmoor. There appears to be the potential for hundreds of idling cars and trucks congested on the freeway adjacent to

CG1 (Continued)

Rossmoor in the late afternoon and early morning, two key periods of the day that could affect residents.

The expanded I-405 proposed by OCTA would have two more lanes inside Orange County than would exist in Los Angeles County with the decrease in capacity occurring within 100 feet or less of our residential neighborhoods'. Moreover, the proposed route lies within 500 feet of Hopkinson Elementary School, a sensitive receptor that was not addressed in the EIR. Section 3.2.6, the air quality analysis for the project, makes no mention of Hopkinson. The EIR identifies other sensitive receptors along the route, but neglects one of west Orange County's largest and most highly regarded schools.

The configuration of Rossmoor has the 405 literally wrapping around the southern tip of the community, exposing residents to one of the greatest environmental impacts anywhere in the project. The OCTA air quality analysis examines carbon monoxide levels in Costa Mesa, but appears to make only estimates near Rossmoor. Similarly, the air toxics analysis did not adequately assess the potential for impacts on Rossmoor, particularly if congestion occurs at the county line.
We believe the air quality impact analysis was inadequate in considering hotspots with elevated levels of particulates, ozone, and other air pollutants that could affect the health and quality of life in Rossmoor.

Rossmoor is a community of both young children and elderly adults, the two most sensitive age groups to air pollution. We are asking that OCTA reexamine the air quality, traffic and noise impacts of the project on Rossmoor, especially its schools, parks and homes, and undertake a thorough and complete consideration of the most effective ways to mitigate those impacts to a level of insignificance.

The RHA requests that OCTA analyze the option of reducing northbound lanes sequentially several miles before the county line. This change would help mitigate the potential for congestion, air quality impacts and the possibility of motorists using surface streets in the Rossmoor-Los Alamitos area to navigate around the chokepoint. If and when Los Angeles County increases the capacity of the I-405 in Long Beach, then the additional lanes of traffic could be opened to the county line.

We are also asking that OCTA conduct a better outreach effort in Rossmoor to elicit input and carry out real dialogue about the project.

The Rossmoor Homeowners Association has represented homeowners living in the unincorporated area of Rossmoor for many decades. Membership in our organization is voluntary, but we have almost 1,200 dues paying homeowners who represent about one-third of the community. The RHA considers satisfactory resolution of traffic and highway issues as one of its important missions in safeguarding the quality of life in Rossmoor. We have long had a traffic committee that works with law enforcement, county public works officials, nearby cities and other agencies to improve safety and transportation in our community.

CG1 (Continued)

We were a key contributor to the redesign of the I-405/I-605 HOV over crossing designs to reduce noise in adjoining residential areas.

The Rossmoor Homeowners Association
Board of Directors
Gary Stewart, President

CG2

Transmitted via email to: 405.Supplemental.Draft.EIR.EIS@parsons.com

August 12, 2013

Ms. Smita Deshpande
Branch Chief – Caltrans District 12
"Attn: 405 SDEIR-DEIS Comment Period"
2201 Dupont Drive, Suite 200
Irvine, CA 92612

RE: I-405 Improvement Project Supplemental Draft Environmental Impact Report/
Environmental Impact Statement

Dear Ms. Deshpande:

Thank you for the opportunity to review the Supplemental Draft EIR/EIS prepared for the proposed I-405 Improvement Project. We appreciate Caltrans and OCTA responding to the City of Long Beach's request that intersections beyond the project area be analyzed for potential impacts as a result of the proposed project.

Los Altos United Methodist Church (LAUMC) is in a unique position, as it is located adjacent to the I-405 and within the Woodruff Avenue Interchange area, as depicted on Figures 3-1 and 5-7 of the SDEIR/EIS. The associated intersection and on- and off-ramps are LOS Worksheets 17, 18 and 19. Given its location, LAUMC is in a position where it could experience significant impacts as a result of the proposed project.

It is worth noting that LAUMC has a past history with Caltrans that dates from the early 1960's, when a portion of LAUMC's property located west of Woodruff Avenue was taken for the construction of the I-405. LAUMC was compensated with a different piece of property located east of Woodruff Avenue. That irregularly shaped, linear parcel could only be used as a parking lot, which is what it continues to function as today.

LAUMC respectfully requests:

- To be a stakeholder in the process as the proposed mitigation measures, as well as any proposed alternatives to those mitigation measures, are considered for the Woodruff Avenue Interchange area as a result of impacts from the proposed project;
- To be a stakeholder in the process for any subsequent Caltrans project that is envisioned and proposed as a result of impacts from the I-405 Improvement Project,

1

5950 East Willow Street • Long Beach, California 90815 • Tel: (562) 598-2451 • Fax: (562) 596-2843 •
Email: office@losaltosumc.org • www.losaltosumc.org

- That Caltrans District 7 be an active participant in considering and weighing the needed solutions that will be identified as a result of impacts from the proposed project;

CG2 (Continued)

- That Caltrans and OCTA bear the cost of the mitigation measures that are necessary for traffic improvements outside of the project area as a result of the proposed project; **1 cont.**

We would like to thank you again for the opportunity to review the Supplemental Draft EIR/EIS for the I-405 Improvement Project. LAUMC looks forward to participating in the process as Caltrans and OCTA identify solutions to the significant impacts resulting from the proposed project.

Sincerely,

Mark Ulrickson
Senior Pastor

cc: Congressman Alan Lowenthal
47th Congressional District

Mayor Bob Foster
City of Long Beach

Councilwoman Gerrie Schipske
District 5, City of Long Beach

David Roseman
City Traffic Engineer, City of Long Beach

Gateway Cities Council of Governments

RESPONSE TO COMMUNITY GROUPS (CG)

Response to Comment Letter CG1

Comment CG1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Please see Appendix R1, Responses to Comments CG4-1 through CG4-6 for responses to your comments on the Draft EIR/EIS.

Response to Comment Letter CG2

Comment CG2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Measure T-10, included in the Supplemental Draft EIR/EIS, indicates that improvements at the intersection of Willow Street and Woodruff Avenue are needed only if Alternative 2 is selected as the Preferred Alternative and that those improvements would be implemented by the City of Long Beach. You have been added to the OCTA database for periodic updates and will be notified by OCTA about progress of the I-405 Improvement Project.

Caltrans District 7 is an active participant in improvements on the State Highway System. The intersection of Willow Street and Woodruff Avenue is a City-owned intersection.

Table 3-10 shows that the intersection of Willow Street and Woodruff Avenue currently operates at Level of Service (LOS) F during the morning peak hour. It is anticipated to continue to operate at LOS F in years 2020 and 2040 during the morning peak hour under the No Build Alternative. Consequently, this intersection is in need of improvement regardless of the I-405 Improvement Project. Under Alternative 2, the I-405 Improvement Project will further deteriorate traffic service at the intersection of Willow Street and Woodruff Avenue, so the I-405 Improvement Project will contribute to the intersection improvements based on its contribution to the traffic growth at the intersection.

INDUSTRY AND BUSINESS GROUP COMMENTS (IBG)

IBG1

1919 S. State College Blvd.
Anaheim, CA 92806-6114

The Gas Company

A Sempra Energy utility™

July 17, 2013

California Dept. of Transportation
District 12
3347 Michelson Dr, Ste. 100
Irvine, CA 92612

Attn: Smita Deshpande

Subject: Environmental Impact Report for Interstate 405 Improvement Project

Thank you for providing the opportunity to respond to this E.I.R. Document. We are pleased to inform you that Southern California Gas Company has facilities in the area where the aforementioned project is proposed. Gas service to the project can be provided from an existing gas main located in various locations. The service will be in accordance with the Company's policies and extension rules on file with the California Public Utilities Commission when the contractual arrangements are made.

This letter is not a contractual commitment to serve the proposed project but is only provided as an informational service. The availability of natural gas service is based upon conditions of gas supply and regulatory agencies. As a Public Utility, Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. Our ability to serve can also be affected by actions of federal regulatory agencies. Should these agencies take any action, which affect gas supply or the conditions under which service is available, gas service will be provided in accordance with the revised conditions.

This letter is also provided without considering any conditions or non-utility laws and regulations (such as environmental regulations), which could affect construction of a main and/or service line extension (i.e., if hazardous wastes were encountered in the process of installing the line). The regulations can only be determined around the time contractual arrangements are made and construction has begun.

Estimates of gas usage for residential and non-residential projects are developed on an individual basis and are obtained from the Commercial-Industrial/Residential Market Services Staff by calling (800) 427-2000 (Commercial/Industrial Customers) (800) 427-2200 (Residential Customers). We have developed several programs, which are available upon request to provide assistance in selecting the most energy efficient appliances or systems for a particular project. If you desire further information on any of our energy conservation programs, please contact this office for assistance.

1

Sincerely,

Armando Torrez
Technical Services Supervisor
Orange Coast Region - Anaheim

AT/ps
EIR.doc

IBG2

ORANGE COUNTY BUSINESS COUNCIL

2 Park Plaza, Suite 100 | Irvine, California 92614-5904
phone: 949.794.2242 | fax: 949.476.0443 | www.ocbc.org

August 8, 2013

Smita Deshpande, Branch Chief
Cal-Trans-District 12
2201 Dupont Drive, Suite 200
Irvine, CA 92612

RE: I-405 SDEIR-DEIS COMMENTS

Dear Ms. Deshpande:

On behalf of Orange County Business Council (OCBC) I write to formally submit comments on the Supplemental Draft Environmental Impact Statement / Environmental Impact Report (I-405 SDEIR-DEIS).

Economic activity and investment is dependent on reliable, adequate infrastructure, not only to move goods and provide services, but also to allow employees to get to and from work efficiently. The path to California's recovery can't be made any clearer - reliable, affordable, and convenient transportation is central to a thriving economy.

OCBC asserts that Orange County's transportation network is superior to other counties in the region as a result of Measures M-1 and 2 coupled with the successful implementation of transportation programs by Orange County Transportation Authority (OCTA). However, it is widely accepted that I-405, in its current state, is failing to achieve the mobility requirements of our region. Even I-405's High Occupancy Vehicle (HOV) lanes are failing to operate at acceptable levels. Federal rules say that traffic in the carpool lanes must be able to achieve 45-mph for 10% or more during peak traffic hours over a consecutive 180-day period. According to a Caltrans District 12 HOV Degradation Study presented to OCTA's Board on April 8, 2013, Orange County's HOV lanes are failing.

In order to maintain a high quality of life for Orange County residents and viability for its business community, OCTA must take action to improve mobility and mange traffic congestion on I-405 immediately. To that end, OCBC strongly supports the proposed preferred alternative that includes one additional General purpose (GP) lane between Euclid Street and I-605 and one tolled Express Lane in each direction between State Route 73 (SR-73) and State Route 22 (SR-22) east of I-405 to be managed jointly as a tolled Express Facility with two lanes in each direction between SR-73 and I-605. The tolled Express Facility would operate so that HOV2s would be tolled and HOV3+ would either be free or receive a discount based on the number of vehicles that maintains a "free flow" commute at all times. The proposed action would improve I-405 in Orange County for approximately 16 miles between 0.2-mile south of Bristol Street and 1.4 miles north of I-605, as well as portions of SR-22, SR-73, and I-605 by reducing congestion and improving lane continuity through the corridor.

1

IBG2 (Continued)

Smita Deshpande, Branch Chief
August 8, 2013
Page 2 of 2

In addition to improving conditions of I-405, inclusion of a tolled express lane will produce much needed revenue for additional congestion reduction efforts and system improvements for Orange County. California is facing a $300 billion shortfall in funding for roads, freeways, bridges, and other critical infrastructure. The gas tax comes nowhere near the funding mark for operation and maintenance, let alone infrastructure improvements. While "self-help" sales tax measures like Measure M help greatly, there is still a significant funding shortfall. By adding toll lanes to I-405, OCTA has the opportunity to reduce congestion and generate revenue to help fill the funding gap.

OCBC strongly urges OCTA to capitalize on this opportunity while it can. The Council is doubly motivated by the fact that Caltrans has telegraphed clearly the fact that they own the system and are actively reviewing their own throughput and tolling strategies, especially in light of the recently published degradation study on the HOV lanes. OCTA must retain control over local transportation dollars generated for the benefit of Orange County.

OCBC is pleased to have a strong working relationship with OCTA and Caltrans District 12 to help deliver a unified voice from business, community and government leaders when advocating for solutions to the transportation challenges in Orange County. We look forward to our continued partnership in working to achieve mutual goals to benefit our region. Thank you for your thoughtful consideration.

1 cont.

Sincerely,

Bryan Starr
Senior Vice President Government Affairs

BS:bb

Cc: Gregory T. Winterbottom, Chairman, OCTA
Darrell Johnson, CEO, OCTA
Ryan Chamberlain, District 12 Director, Caltrans

RESPONSE TO INDUSTRY AND BUSINESS GROUP (IBG)

Response to Comment Letter IBG1

Comment IBG1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Southern California Gas Company is identified in Table 3.1.5-1 of the Draft EIR/EIS as providing utilities serving the I-405 project corridor. A Utility Plan, a Utility Conflict Matrix, and a Utility Protect in Place Matrix are provided in Appendix K of the Draft EIR/EIS and include identification of Southern California Gas Company facilities.

Response to Comment Letter IBG2

Comment IBG2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Caltrans acknowledges your support for Alternative 3. For information on the Preferred Alternative and the process used in its identification see Common Response – Preferred Alternative Identification.

PUBLIC COMMENTS (PC)-A

PC-A1

From: Alley, Dillon [Dillon.Alley@da.ocgov.com]
Sent: Thursday, August 01, 2013 11:11 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: bullshit

1

PC-A2

To whom it may concern,

As a resident of College Park East and an educator that teaches "Environmental Studies" I am opposed to the widening of the freeway (405) as well as the feeder roads.

I would like to know by widening the 405 freeway in Orange County help the LA congestion. I feel that LA County needs to have a plan in place. Expanding the lanes of the 405 in Orange County will be deadlocked when they reach LA County.

Also, Almond Street in College Park East is designated a "Tsunami evacuation and flood route. If you make it one way, how is the evacuation path affected and what is the mitigation being proposed.

Lastly, I feel that the pollution would be a negative impact on the health to the residents of the area. It

1

2

3

PC-A2 (Continued)

would be harmful with noise and air pollution. I feel that many health issues would be bad in a long time basis. We need more independent studies from universities, professors and hospitals and other health experts to deal with this issue and give the residents some feedback.

We do not need more freeway lanes but need alternative "mass transportation" buses & mass regional transportation to Orange County, Riverside and Los Angeles County —

3 cont.

Sincerely,

Bill McFarlane
4556 Cedar Avenue
Seal Beach CA 90740

RESPONSE TO PUBLIC COMMENTS (PC)-A

Response to Comment Letter PC-A1

Comment PC-A1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Response to Comment Letter PC-A2

Comment PC-A2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identification and Opposition to Tolling.

Comment PC-A2-2

Please see Common Responses – Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach; and Traffic Flow at the Orange County/Los Angeles County Line.

Comment PC-A2-3

For a discussion of air and noise pollution topics, please see Common Responses – Health Risks, Air Quality, and Noise. For a discussion of transit alternatives, please see Common Response – Elimination of Light-Rail Transit (LRT) and Bus Rapid (BRT) Transit Alternatives.

PUBLIC COMMENTS (PC)-B

PC-B1

From: Lanran@aol.com
Sent: Wednesday, July 24, 2013 10:18 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: NO TOLL ROAD ON THE 405

Hello,

I am AGAINST a toll road on the 405. 1

Thank you.

Ranko Balog
Irvine 92603

PC-B2

From: Thomas Balutis [mailto:tbalutis@aol.com]
Sent: Friday, August 09, 2013 3:56 PM
To: Christina Byrne
Subject: 405 Improvement project comments

To whom it concerns,

The need for a relief of congestion of the I-405 freeway between CA-22 and CA-73 is apparent. Expansion of the freeway is absolutely necessary. However, the proposal to generate 2 or even one toll lane in each direction is not universally fair. There are a number of local people, and we can define 'local' as those living within a 15 or 20 mile radius of the project, who depend on the freeway for their daily commuting requirements. They are already paying the highest gasoline taxes in the country, and provide Orange County with property tax revenues that are among the highest in the country. It is grossly unfair that they should suffer yet another tax on top of this! If the toll solution cannot be avoid, due consideration should be made for free residential access to the toll lanes. With today's technology, this can be accommodated. 1

Thank you.

Tom Balutis

PC-B3

From: jeanne nrae [jeannenrae@msn.com]
Sent: Monday, August 12, 2013 10:20 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: cbyrne@octa.net; j9parker@socal.rr.com
Subject: 405 Expansion Project

Please do not move forward with the 405 expansion project in proposing a braised on/off ramp on the 405 Northbound side. This will interfere with our neighborhood that has been family oriented for over 40 plus years. I live in the Westmont neighborhood for over 20 plus years and have enjoyed our place and hope to pass along to my child and her family. 1

I oppose this project and please ask that you leave our neighborhood intact.

Thank you,

Jeanne Barragan
16821 Mulberry Circle
Fountain Valley, Ca 92708
(714) 916-0375

PC-B4

From: bcohenmsw@yahoo.com
Sent: Wednesday, July 17, 2013 9:36 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Oppose tolled lanes on405 1

Sent from my iPad
Barbara

PC-B5

From: J L [jlaw144@yahoo.com]
Sent: Friday, August 09, 2013 4:05 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 FWY Expansion

Ms. Smita Deslande,
My name is G. Wesley Barrett. I have been a long time resident of Seal Beach. It has been brought to my attention that you are working on plans for the Fwy Expansion over and above that which we had voted on. Please do not remove or rebuild the Almond sound-wall the width of the street is necessary for the proper flow of emergency vehicles(especially fire trucks). This street is also a thoroughfare for all those who live on the North side of CPE. 1

PC-B6

From: J L [jlaw144@yahoo.com]
Sent: Friday, August 09, 2013 3:33 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Almond Soundwall

Ms. Smita Despande:
I have lived in Seal Beach for 20 years now. We have enjoyed it here. Please do not add any more than one lane in each direction here on the 405 Fwy. We do not need toll roads or anything else that would just over develop our small city. And Please do not touch the sound wall. Oh yes,...Please expedite your work on the Seal Beach bridge it continues to be a night mare. Wasn't that suppose to be completed this last July? 1 2
Sincerely,
Rebecca Barrett
1371 Pelham Rd
Seal Beach, Ca. 90740

PC-B7

From: Emma Benavides [emmpben@gmail.com]
Sent: Sunday, August 11, 2013 10:19 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Expansion

Smita Deshpande
Branch Chielf, Caltrans District 12

Dear Smita Despande:

I am opposed to the expansion of 405 fwy. I live where the 405 and 22 meet. Any expansion of the 405 freeway will not eliminate the congestion in our ever growing population and therefore growing number of cars on the road. Ten years ago, there was only one driver in my household, but now there are three because my children reached that driving age My situation is compounded exponentially to every household all over which means the exponential growth of cars on our street. Unfortunately, we need to have a car to get around.

We need good public transportation. Your job is to figure out how to alleviate the traffic by offering public transportation that is attractive enough so that people will use it

Learn from the other cities of the world how they move people; how they planned their public transportation like San Francisco, Chicago and New York. Think outside the box. More freeways, expansion of freeway will not solve the traffic problem. We need good public transportation. Plan it now and re-route the money to be spent for this expansion to real solution of moving people instead of automobile. 1

Sincerely,
Emma Benavides
12742 Chase Street
Garden Grove, CA 92845

PC-B8

From: Robert Beckers [robnitz@aol.com]
Sent: Monday, August 12, 2013 11:12 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: cbyrne@octa.net
Subject: Braided on ramp for 405 exp in FV

The braided on-ramp proposal in Fountain Valley will ruin the neighborhood nearby. I purchased my house in this neighborhood based on the community values and peacefulness of the area. If OCTA puts an above ground braided on-ramp in this area, it will destroy the area by raising noise levels, causing home values to plummet and cause exhaust smell and exhaust toxins to make it unlivable. Please do not destroy my community. 1

Robert
Fountain Valley resident (Home Owner - Oleander Circle)

PC-B9

From: Kevin Bigelow [bigelow.kevin@gmail.com]
Sent: Thursday, July 04, 2013 1:20 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: editor@gazettes.com
Subject: No More Toll Roads!

I had been concerned about Bird Flu, but now I am thinking that that I should be more worried about the 'Orange Countification' of Long Beach. Having read the description of the four options being considered for the upgrade to the 405, 605, SR22 interchange in the Grunion Gazette, I see the Orange County infection spreading. I admit that I'm not sure which options of new "general purpose" lanes would be best for Long Beach, however, I know that another Toll Road (AKA Express lane) is not the answer.

I lived in Orange County for many years, having only escaped from behind the 'Orange Curtain' about a decade ago. While in Orange County I saw the creation of one Toll Road (the 73), and the extension of another (the Toll Road to and through Rancho Santa Margarita), as well as many serious problems with the 91 Toll Road. Based on my experience, I firmly believe that we DO NOT want any more Toll Roads. 1

Orange County Government (and I know of what I speak having worked for Orange County Government for over 25 years before I retired) seems to be obsessed with selling off highways to Toll companies and along with the sale goes the basic right-of-way for numerous residents. The Toll Roads are always represented as being 'temporary', but none of them have ever gone away. In addition, they start out charging minimal amounts, and then raise their rates thereafter.

I am opposed to any notion of making car pool lanes on the 405 freeway into Toll lanes. Of course they are always called "Express Lanes" because that sounds like they will move so fast, but in reality you're paying significant amounts of money to the companies that the county has sold out to in order just to get home at the end of the day without taking hours to do so.

Has everyone forgotten that the original idea behind the carpool lane was to encourage carpools or alternative fuel vehicle users to keep saving fuel, the reward being that they could bypass some of the traffic? If you're charging for the carpool lane, then who are you reinforcing...only the companies that have bought the highway from a county government representative who has sold them a piece of your life rather than looking out for your best interests as they are supposed to.

There does not seem to be any attention paid to situations like the people who 'bought' the 91 freeway 'express lanes' refusing to pay for necessary repairs or the fact that government and OC businesses forced through the 73 Toll Road despite hundreds of thousands of people signing petitions opposing it. I don't get to the OC very often since I retired, just a few friends still live there, but I have to say that if I have to pay a toll just to drive down the 405 freeway, visiting OC, will probably be at an end. OC may actually be happy about that, but I have to ask, where are all of the taxes that we pay going to that we have to sell out to Toll Road companies? Toll Roads may be a good deal for the politicians, but they definitely aren't for the rest of us.

Very Sincerely,
Kevin Bigelow
Long Beach Resident

PC-B10

From: John Boland [rboland@earthlink.net]
Sent: Saturday, July 06, 2013 12:08 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Toll Lanes on the 405

Dear Dept. of Transportation

I am a homeowner in Rossmoor, the unincorporated residential area bordering the 605 and 405 freeways. I would like to express my opposition to the addition of any toll lanes to the 405 freeway. Toll lanes may be a convenience for commuters who can afford to pay the tolls, but they the effect of forcing drivers who cannot afford tolls either into slower, more congested lanes or off of the freeway entirely. The addition of toll roads in other parts of our state is just one more example of the way options for the economically disadvantged are being sacrificed for the convenience of people of means. 1

John Boland
2812 kempton Drive
Rossmoor, CA 90720

PC-B11

From: Renee Bolanos [reneeb61@earthlink.net]
Sent: Monday, August 12, 2013 1:22 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

As a 12yr resident of Fountain Valley I am appauled at the lack of notice from the OCTA and Caltrans on major changes to the area included in the 405 expansion project. 1

My house backs up to the Magnolia St Offramp of the 405. I am dumbfounded by the changes being made to the offramp and onramp at Magnolia. I seems to make no sense remove the smooth flow onto Magnolia and replace it with a ramp that rises to the higher side of the Magnolia bridge and requires traffic to stop and Make a right or left turn when the Warner exit is a better place for that exit. 2

please advise of any meeting to discuss these issues

Edgardo Bolanos
16635 Daisy Ave
Fountain Valley, Ca 92708
949-289-9338

PC-B12

From: frank boynton [franklbc@verizon.net]
Sent: Thursday, August 01, 2013 8:27 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Great ideas

I think more lanes the better and a toll lane makes sense as well. Good luck. 1
frank boynton
franklbc@verizon.net

PC-B13

From: Steve Brumm [steveb@disciplelink.com]
Sent: Monday, August 12, 2013 8:19 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Expansion project

I am opposed to the braided on/off ramp proposal for the North bound side of the 405 freeway running through Fountain Valley.

The height of the ramps will reduce privacy to those backing to the freeway and pose increased noise and unsightly views to most of the neighboring homes. 1

Steve & Carol Brumm
16786 Willow cir
Fountain Valley, ca 92708

PC-B14

From: Richeeeb [Richeeeb@verizon.net]
Sent: Wednesday, July 24, 2013 12:44 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Opposition to 405 HOT lanes and changes

I am opposed to the changes to the plans of 405/605/22 freeways. This has been settled previously. We don't need to change or make adjustments. This looks like a MONEY grab by the political powers. No person I have talked to wants this to happen. We already have the highest Sales taxes, Personal Taxes, cost of living. Do you people ever wonder why Major Business are LEAVING the state? The opposition for this has to be 95%. 1

Thank you,

Richard Butterfield

RESPONSE TO PUBLIC COMMENTS (PC)-B

Response to Comment Letter PC-B1

Comment PC-B1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-B2

Comment PC-B2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-B3

Comment PC-B3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange.

Response to Comment Letter PC-B4

Comment PC-B4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-B5

Comment PC-B5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Measure M, Opposition to Tolling, Almond Avenue Soundwall, Preferred Alternative Identification.

Response to Comment Letter PC-B6

Comment PC-B6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Comment PC-B6-2

Please see Common Responses – Almond Avenue Soundwall, Preferred Alternative Identification.

Response to Comment Letter PC-B7

Comment PC-B7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Response to Comment Letter PC-B8

Comment PC-B8-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Noise/Noise Analysis, Air Quality, Property Values.

Response to Comment Letter PC-B9

Comment PC-B9-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-B10

Comment PC-B10-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-B11

Comment PC-B11-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Public notice for the Supplemental Draft EIR/EIS and Public Hearing included 4 newspaper ads, 4 e-blasts to 7,700 stakeholders, and 14,000 postcards mailed to stakeholders within 0.25-mile of the project area, as well as notification via OCTA print and social media. Additionally, the Supplemental Draft EIR/EIS was made available for review on the Caltrans and OCTA Web sites, and copies of the document were available for public review at 14 libraries and the Caltrans District 12 Office.

Comment PC-B11-2

Your concerns are related to the northbound braided ramps. Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange in Appendix R1.

Response to Comment Letter PC-B12

Comment PC-B12-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Response to Comment Letter PC-B13

Comment PC-B13-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange.

Response to Comment Letter PC-B14

Comment PC-B14-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Caltrans acknowledges your opposition to improvements along the I-405, SR-22, and I-605 freeways. For a discussion of the Preferred Alternative and the process used in its identification, please see Common Response – Preferred Alternative Identification.

PUBLIC COMMENTS (PC)-C

PC-C1

From: Cheryl Cameron [whitewings1947@yahoo.com]
Sent: Monday, August 12, 2013 8:03 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: cbyrne@octa.net
Subject: the proposed above ground on/off ramp onto the 405 freewa

Re: the proposed above ground on/off ramp onto the 405 freeway at northbound Bushard and Warner Ave, **Fountain Valley area.**

Dear Sir\Madam

I live in the neighborhood bordering Bushard Street, Warner Ave, Magnolia and the 405 freeway. I have lived here on Pine Circle for about 16 years, my family consists of 2 adults who vote and pay taxes.

I strongly oppose this proposed ramp because of the increase in neighborhood traffic and the resulting noise and air pollution that will accompany it for all the surrounding neighborhoods.

When we first moved here the noise from the freeway was slight. As the years have gone on with an increase in lanes and traffic that noise has increased substantially as well as a decrease in air quality. It clearly affects the quality of our lives, we suffer noise and air pollution now, please do not consider raising that pollution with this ill-thought out proposal. We are more in need of you spending our tax dollars to build a more effective wall to buffer the noise and reroute the exhaust fumes this neighborhood experiences.

It is my opinion that any such freeway expansion will substantially lower the quality of our lives that we have in Fountain Valley. 1

Cheryl Cameron

PC-C2

From: diana carey [DLCAREY2@VERIZON.NET]
Sent: Thursday, August 01, 2013 10:18 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: Adolfo Ozaeta; Ernesto Munoz; mark.lewis@fountainvalley.org; Schelly Sustarsic; John Collins; Tri Ta; Sergio Contreras; Margie Rice; Sean Crumby; Michael Ho; Mike Levitt
Subject: Re: I-405 Supplemental Documents

The back up at the NB County line is of critical importance for the surrounding cities of Los Alamitos, Seal Beach, Long Beach, Rosmoor and Westminster. We believe failure to address this issue will cause undue stresses on city streets, as was experienced during the recent closure of the 405/22 connector. Other than discussion points, the MTA has no plan to address this issue North of the County line. It is reckless and dangerous to deliberately create a situation that repeats the years of backlog on the NB I-5 at the County line. We are a self-help County. For Caltrans, an agency that does not have funding, to dictate any solution to us, based on less than 2% of low emmission vehicles using the HOV lanes, is totally unacceptable. 1

Diana Carey
Councilwoman, City of Westminster
Corridor Cities Representative

PC-C3

From: Henrietta Carter [henriettacarter1@verizon.net]
Sent: Wednesday, July 24, 2013 1:46 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: No Toll Road!

It is already very difficult to cross several lanes of freeway to get past the 22 and 605 freeways to get over to the 405 from the northbound onramp that starts at Seal Beach Boulevard. Adding a toll plaza is only going to make matters worse. Please do not put a toll road on the 405 freeway at the 605! 1

Henrietta Carter
2972 Tigertail Drive
Los Alamitos, CA 90720

PC-C4

From: Glen Cauble [drglenchiro@hotmail.com]
Sent: Monday, July 15, 2013 4
To: Parsons, 405.Supplemer ft.EIR.EIS
Subject: 405 Supplemental report ents

Dear OCTA,

Thank you for all you hard work keeping our community moving.

In regards to the 405 Improvement project between Euclid and the 22:

Please, NO TOLL LANES!!! They are a double tax on the taxpayers of Orange County who paid to have the High Occupancy lanes put there years ago. That would be so unethical and wrong that I can't believe it was even proposed in the first place! 1

Build TWO GENERAL PURPOSE LANES IN EACH DIRECTION.
Let's get both lanes in each direction built NOW so we don't have to do this again in 10, 15 or 20 years from now. 2

Thanks again for your hard work.

Dr. Glen R. Cauble, DC
Walk-In Chiropractic
8586 Warner Avenue
Fountain Valley, CA 92708
714-841-4300 phone
714-848-1226 fax
www.drglenchiro.com

PC-C5

From: Kim Clark [mailto:kclark92626@gmail.com]
Sent: Friday, August 09, 2013 11:35 AM
To: Christina Byrne
Subject: Re: Your Feedback Is Needed: 405 Improvement Project Supplemental Draft EIR/EIS

As I have said all along, I don't think this goes far enough. There is a lot of traffic between the 605 and Long Beach. If you really want to help relieve congestion, then work with LA County and get this done. I cannot reply to link you sent because it does not come up. I will not use the toll road on a regular basis. Also need easy access from north Costa Mesa to it so I can use it if I choose to. thanks. 1

PC-C6

From: Arnie Cliffgard [arnielcl@aol.com]
Sent: Sunday, August 11, 2013 3:38 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 expansion project

i object to the new off ramp. It will cause an Invasion of my privacy. It may cause land settling as did the Neeblas school project with a lot of plumbing problems . 1

Arnie
9268 Daisy Avenue

PC-C7

From: Paul Cline [paulatlibertytax@gmail.com]
Sent: Monday, August 12, 2013 9:46 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents - Comment #1

I-405 Improvement Project

Comment Sheet

Please provide your comments regarding the I-405 Improvement Project Supplemental Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS)

Comments must be received by Caltrans no later than Monday, August 12, 2013.

Name: Paul Cline

Organization: N/A

Address: 3811 E. Livingston Dr. #103, Long Beach, CA 90803

Phone Number: 562-310-6937

Email: 15pta@sbceo.org

Comments:

Option 3 proposes to convert the existing HOV lane into HOT lanes where each vehicle is required to obtain and possess a FasTrak transponder device in order to legally be in the HOT lane.

In order for a driver to obtain a FasTrak device, the driver must sign off and agree to an indemnification clause. The indemnification clause basically states that the driver indemnifies the agency issuing the FasTrak device against any and all harm that might come from the possession of the device. Metro in Los Angeles has advised me that such harm might include "transponder flew through air when applied brakes and hit driver causing accident; transponder sparked/caught fire causing accident." Additional possibilities include catching fire due to extreme heat, transponder flying through air during accident and blinding passenger, birth defects caused by off-gassing from the plastic components of the FasTrak device, and lung damage caused by off-gassing of the plastic components of the FasTrak device due to car sitting in sun followed by driver entering and turning on AC with recirculation of air resulting in highly polluted ambient air.

PC-C7 Continued

Q1: Very specifically, what is the risk to the FasTrak issuing agency that justifies the inclusion of an "indemnification" clause in the contract that is signed by the driving public?

Q2: Which laws specifically allow for Caltrans to require the public to indemnify any agency in order to drive on a public highway? Please quote the actual wording in the law that specifically authorizes an indemnification clause.

Q3: With the signing of the indemnification clause by the end users, the FasTrak issuing agency is protected from lawsuit and thus has no reason to protect the public from the dangers presented by the FasTrak device (if the FasTrak device did not present a danger then there would be no need for an indemnification clause). What is Caltrans doing to protect the people of California from the risks associated with the FasTrak device? List specific actions taken, reports written, responses collected, tests conducted, specifications listed in contracts with vendors, etc.

Q4: With the signing of the indemnification clause by the end users, the FasTrak issuing agency is protected from lawsuit and thus has no reason to protect the public from the dangers presented by the FasTrak device (if the FasTrak device did not present a danger then there would be no need for an indemnification clause). What is OCTA doing to protect the people of California from the risks associated with the FasTrak device? List specific actions taken, reports written, responses collected, tests conducted, specifications listed in contracts with vendors, etc.

Q5: With the signing of the indemnification clause by the end users, the FasTrak issuing agency is protected from lawsuit and thus has no reason to protect the public from the dangers presented by the FasTrak device (if the FasTrak device did not present a danger then there would be no need for an indemnification clause). Please provide a list of each and every study of any kind that has examined/looked-at the risks to the public that are presented by the FasTrak device (and other similar devices).

Q6: With the signing of the indemnification clause by the end users, the FasTrak issuing agency is protected from lawsuit and thus has no reason to protect the public from the dangers presented by the FasTrak device (if the FasTrak device did not present a danger then there would be no need for an indemnification clause). Please provide copies of legal advice provided to transit agencies issuing FasTrak transponder devices concerning the risks the device presents to the agency if the agency were to not require an indemnification clause in its contracts.

1

PC-C8

From: Paul Cline [paulatlibertytax@gmail.com]
Sent: Monday, August 12, 2013 9:46 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents - Comment #2

I-405 Improvement Project

Comment Sheet

Please provide your comments regarding the I-405 Improvement Project Supplemental Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS)

Comments must be received by Caltrans no later than Monday, August 12, 2013.

Name: Paul Cline

Organization: N/A

Address: 3811 E. Livingston Dr. #103, Long Beach, CA 90803

Phone Number: 562-310-6937

Email: 15pta@sbceo.org

Comments:

Option 3 proposes to convert the existing HOV lane into HOT lanes where each vehicle is required to obtain and possess a FasTrak transponder device in order to legally be in the HOT lane.

In Los Angeles County, Metro is currently running a demonstration project where existing HOV lanes on the 10 and the 110 freeways have been converted over to HOT lanes where each and every vehicle is required to have a FasTrak device in order to drive in the HOT lanes. For drivers meeting the carpool requirements, there is no fee charged for passage in the HOT lanes.

PC-C8 Continued

In San Diego County, SANDAG has set up Toll Lanes for solo drivers to be able to use the excess capacity of the HOV lanes along a stretch of I-15. In the San Diego design, carpool drivers are not required to possess a FasTrak transponder device in their vehicle.

Q1: Please explain how it came to be that Option 3 specifies that all drivers will be required to possess a FasTrak device as opposed to the San Diego model where only solo drivers are required to possess a FasTrak device?

Q2: Please explain how the model where every driver is required to possess a FasTrak device is superior to the model in San Diego where only solo drivers are required to possess a FasTrak device.

1

Q3:

PC- C9

From: Paul Cline [paulatlibertytax@gmail.com]
Sent: Monday, August 12, 2013 9:46 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents - Comment #3

I-405 Improvement Project

Comment Sheet

Please provide your comments regarding the I-405 Improvement Project Supplemental Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS)

Comments must be received by Caltrans no later than Monday, August 12, 2013.

Name: Paul Cline

Organization: N/A

Address: 3811 E. Livingston Dr. #103, Long Beach, CA 90803

Phone Number: 562-310-6937

Email: 15pta@sbceo.org

Comments:

Option 3 proposes to convert the existing HOV lane into HOT lanes where each vehicle is required to obtain and possess a FasTrak transponder device in order to legally be in the HOT lane.

In Los Angeles County, Metro is currently running a demonstration project where existing HOV lanes on the 10 and the 110 freeways have been converted over to HOT lanes where each and every vehicle is required to have a FasTrak device in order to drive in the HOT lanes. For drivers meeting the carpool requirements, there is no fee charged for passage in the HOT lanes.

PC-9 Continued

In San Diego County, SANDAG has set up Toll Lanes for solo drivers to be able to use the excess capacity of the HOV lanes along a stretch of I-15. In the San Diego design, carpool drivers are not required to possess a FasTrak transponder device in their vehicle.

Q1: Please detail how much money is to be raised annually by collection of the tolls specifying numbers of vehicles, tolls collected, fines collected plus any other relevant information typically considered or utilized.

Q2: Please detail how much money will be spent to operate the FasTrak system.

Q3: Please explain how the HOT lane option DOES NOT promote solo drivers.

Q4: Using the amount of money raised by toll paying drivers in the HOT lanes, please detail what traffic improving measures these monies will pay for. If traffic improvements include additional bus traffic/routes, please include the typical costs for such service (such as: a typical bus route of the type envisioned cost $XXX) so that the public can see how much service the toll money can buy. In providing projection numbers, please also provide a range of values from "optimistic" to "conservative" as experts always make projections with large amounts of subjectiveness.

1

PC-10

From: Paul Cline [paulatlibertytax@gmail.com]
Sent: Monday, August 12, 2013 9:46 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents - Comment #4

I-405 Improvement Project

Comment Sheet

Please provide your comments regarding the I-405 Improvement Project Supplemental Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS)

Comments must be received by Caltrans no later than Monday, August 12, 2013.

Name: Paul Cline

Organization: N/A

Address: 3811 E. Livingston Dr. #103, Long Beach, CA 90803

Phone Number: 562-310-6937

Email: 15pta@sbceo.org

Comments:

Option 3 proposes to convert the existing HOV lane into HOT lanes where each vehicle is required to obtain and possess a FasTrak transponder device in order to legally be in the HOT lane.

In Los Angeles County, Metro is currently running a demonstration project where existing HOV lanes on the 10 and the 110 freeways have been converted over to HOT lanes where each and every vehicle is required to have a FasTrak device in order to drive in the HOT lanes. For drivers meeting the carpool requirements, there is no fee charged for passage in the HOT lanes.

PC-C10 Continued

In San Diego County, SANDAG has set up Toll Lanes for solo drivers to be able to use the excess capacity of the HOV lanes along a stretch of I-15. In the San Diego design, carpool drivers are not required to possess a FasTrak transponder device in their vehicle.

In Metro's February 2013 report on the Express Lanes, they report that 30% of the HOV lane drivers are driving in the HOT lanes. Stated another way, 70% of the HOV lane drivers that existed before the conversion to HOT lanes are gone (in other words "kicked out"). In Metro's July 2013 report on the Express Lanes, they report that a graph of the economic classes of the HOT lane drivers shows a "bell curve" which also means that a large number of poor people in LA County have been kicked out of the HOT lanes because the population of LA County is not a bell curve where the numbers of poor people is comparable to the numbers of rich people but is in fact a situation where the number of poor people greatly exceeds the number of rich people.

Q1: Please explain how the proposed Express Lanes / HOT model proposed in option 3 does not place an undue burden on the poor and the elderly who carpool and currently qualify to drive in the HOV lanes without any additional burden beyond having two or more people in their vehicle.

Q2: Please explain how the proposed Express Lanes / HOT model proposed in option 3 does not place an undue burden on the poor and the elderly who do not have a credit card.

Q3: Please explain how the proposed Express Lanes / HOT model proposed in option 3 does not place an undue burden on the poor and the elderly who do not have an email address.

Q4: Please explain how the proposed Express Lanes / HOT model proposed in option 3 does not place an undue burden on the poor and the elderly who do not have an internet connection.

Q5: Please explain how the proposed Express Lanes / HOT model proposed in option 3 does not place an undue burden on the poor and the elderly who do not have a computer.

Q6: Please explain how the proposed Express Lanes / HOT model proposed in option 3 does not place an undue burden on the poor and the elderly who have more than one vehicle but only qualify for one transponder at an "equity" rate.

Q7. If the answers above are similar to the practices of Metro for their Express Lanes, please explain why the OC plan will work where the Metro plan has not.

1

PC-C11

From: Paul Cline [paulatlibertytax@gmail.com]
Sent: Monday, August 12, 2013 9:46 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents - Comment #5

I-405 Improvement Project

Comment Sheet

Please provide your comments regarding the I-405 Improvement Project Supplemental Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS)

Comments must be received by Caltrans no later than Monday, August 12, 2013.

Name: Paul Cline

Organization: N/A

Address: 3811 E. Livingston Dr. #103, Long Beach, CA 90803

Phone Number: 562-310-6937

Email: 15pta@sbceo.org

Comments:

Option 3 proposes to convert the existing HOV lane into HOT lanes where each vehicle is required to obtain and possess a FasTrak transponder device in order to legally be in the HOT lane.

Q1: In the development of the various options presented to the public in the EIR, Option 3 with the HOT lanes came into existence. Please provide a detailed accounting of the history of option 3 and the HOT lanes including the names and organizations that added the HOT lane idea into the mix of options; the names and organizations that promoted the HOT lanes idea from inception to a spot on the EIR; and any other background information that will help the public to understand who is promoting the creation of HOT lanes that require all carpool drivers to obtain a FasTrak device in order to drive in the carpool/express lanes.

1

PC-C12

From: Manley Cohen [manleycohen@gmail.com] on behalf of Manley Cohen [manleycohen@yahoo.com]
Sent: Friday, July 19, 2013 4:58 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Freeway. Make no toll roads

2 GP lanes preferred in both directions. buT NO TOLL ROADS. 1

PC-C13

From: Mark Cole [MarkC@cardintegrators.com]
Sent: Monday, August 12, 2013 12:00 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: Teri Cole
Subject: RE: Comments on HOV / HOT Lanes

Smita Deshpande, Branch Chief
Caltrans District 12
Attn: 405 DEIR-DEIS Comment Period
2201 Dupont Dr. Suite 200
Irvine, CA 92612

As a long time resident of Rossmoor, I am concerned that auto traffic lane expansion on the Northbound 405, without adequate traffic mitigation of the increased capacity as this traffic enters Los Angeles County, will create bottlenecks with increased slowdowns, delays and substantially higher auto emissions.

I am in favor of creating the lanes for efficient transition to the inevitable expansion that will occur along the initial portion of the 405 that exists in Long Beach / LA County.

This being said, I am strongly against having up to three or four additional lanes added to the northbound 405 as it leaves Orange County, without appropriate transition lanes in place in Los Angeles County. 1

Mark Cole

CI Solutions
Imagine More >
Card Integrators Corporation
Tel (800) 599-7385 Extension 511
Fax (562) 493-2714
www.cisolutions.biz

State of California Certified Small Business - # 28073
California Multiple Awards Schedule - #3-09-67-0016A
US General Services Administration GSA #GS-02F-0147V

Think green
Please consider the environment before printing this e-mail. Thank you.

PC-C14

From: Jane Conover [decbabies@verizon.net]
Sent: Monday, August 12, 2013 12:10 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 16340 Timothy Lane, Westminster

Hello,
My name is Thomas Conover I live next to the proposed 405 project. In speaking to caltrans representatives we have been told our property is not going to be affected, but in reading the impact report there is reference to on/off ramp connections between Beach Blvd and Magnolia. That is where I live. We are holding off on any home improvements until we are sure we will not be affected. 1

PC-C15

From: Dave Corp [davelinda87@gmail.com]
Sent: Wednesday, July 17, 2013 3:32 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

It is absurd to be considering HOT lanes on the 405 freeway again!! People, you are wasting the taxpayer's money!! The project is NOT wanted!! 1

David Corp

PC-C16

From: David Cota [dcota@yamaha.com]
Sent: Monday, July 15, 2013 3:50 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Toll Lanes

My neighborhood has been in shambles for years to build the connectors for the carpool lanes and now you wish to charge us to use it? Are you kidding? Widen the freeway all you want, but toll roads do not help the general public, only those who have the means to use them. 1

PC-C17

From: Melissa Cunningham [shrkluvr76@yahoo.com]
Sent: Monday, August 12, 2013 11:48 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS

I vote NO on the TOLL Roads. I vote for Alternative 1 - ONE more normal lane on both sides on the I405. The fwy is big enough 1

RESPONSE TO PUBLIC COMMENTS (PC)-C

Response to Comment Letter PC-C1

Comment PC-C1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Noise, Air, Northbound Braided Ramps.

Response to Comment Letter PC-C2

Comment PC-C2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Traffic Flow at the Orange County/Los Angeles County Line.

Response to Comment Letter PC-C3

Comment PC-C3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Opposition to Tolling.

Response to Comment Letter PC-C4

Comment PC-C4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis

presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Opposition to Tolling.

Comment PC-C4-2

Please see Common Response – Preferred Alternative Identification.

Response to Comment Letter PC-C5

Comment PC-C5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach, Opposition to Tolling, Replacement of Fairview Road Overcrossing/Truncation of Tolled Express Lanes.

Response to Comment Letter PC-C6

Comment PC-C6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps.

Response to Comment Letter PC-C7

Comment PC-C7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. You will be notified at the address provided in

your comment when the Final EIR/EIS is available for review. See Response to Comment PC-C8.

Response to Comment Letter PC-C8

Comment PC-C8-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review. The Draft EIR/EIS states on page 2-18: "The policies under which the Express Lanes in Alternative 3 would be operated have not been finalized. The policies presented here provide the current plans to operate the Express Lanes. Final decisions on operating policies would be made during final design and prior to opening of the project if Alternative 3 is identified as the alternative to be constructed." The operating policies included in the Draft EIR/EIS were based on operation of the facility by OCTA with policies similar to those currently used by OCTA on SR-91. If Alternative 3 is the Preferred Alternative, more detailed consideration of operating policies would be undertaken. This would include consideration of the requirement for motorists using the Express Lanes to obtain a transponder.

Response to Comment Letter PC-C9

Comment PC-C9-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review. A Phase II Traffic and Revenue Study was prepared to assess the financial feasibility of the Express Lane component of Alternative 3 and is summarized in documents available on the OCTA Web site. The Traffic and Revenue Study is not part of the Draft EIR/EIS. A complete and detailed financial plan that itemizes the costs of each component of the operations (e.g., the cost of operating the FasTrak system if that system is selected for use on the facility) was not prepared for the Express Lanes in Alternative 3 as part of the development of the information included in the Draft EIR/EIS.

The objective is to open the tolled Express Lanes with a HOV2+ occupancy free to encourage rideshare and transit usage. Operational adjustments to the tolled Express Lanes may be implemented based on demand, rates of speed, traffic volumes, and to meet financial covenants,

maintenance and operational obligations. Potential operational adjustments include, but are not limited to:

- adjusting to HOV3+ free with HOV2s discounted tolls
- adjusting to HOV3+ free with HOV2s full tolls
- adjusting to tolling HOV2s on individual tolling segments such as direct connectors to or from other freeways
- periodic adjustments of tolling rates to maintain operations on individual tolling segments

No estimate of potential toll revenue in excess of what is needed to construct and operate the Express Lanes in Alternative 3 was included in the Draft EIR/EIS. Under federal law, any excess revenue must be spent on transportation improvements within the corridor. No projects that depend on excess toll revenue have been identified in the Draft EIR/EIS.

Response to Comment Letter PC-C10

Comment PC-C10-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

For an explanation of the reason why the Express Lane occupancy requirement for free passage would be raised from two-person carpools to three-person carpools, see Appendix R1 Common Response – Opposition to Tolling.

As noted in Response to Comment PC-C8-1, the operating policies for the Express Lanes have not been finalized. Based on the SR-91 model, a variety of payment means and methods would be available to accommodate the diverse population anticipated to choose to use the Express Lanes.

Response to Comment Letter PC-C11

Comment PC-C11-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review. The Express Lane concept was developed by OCTA in response to reductions of Measure M Extension sales tax resulting from

the economic downturn and the desire to consider an alternative that would serve more traffic through more active traffic management.

Response to Comment Letter PC-C12

Comment PC-C12-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identification, Opposition to Tolling.

Response to Comment Letter PC-C13

Comment PC-C13-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach.

Response to Comment Letter PC-C14

Comment PC-C14-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps.

Response to Comment Letter PC-C15

Comment PC-C15-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling.

Response to Comment Letter PC-C16

Comment PC-C16-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Opposition to Tolling.

Response to Comment Letter PC-C17

Comment PC-C17-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

PUBLIC COMMENTS (PC)-D

PC-D1

From: Sandy [shdavidson6@gmail.com]
Sent: Saturday, August 10, 2013 10:50 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

I have reviewed the online supplemental draft. I drive this section of the 405 (605 to 73) at least 4 days a week, it is congested. I live in Long Beach, living through the difficult, 4 year rebuild underway now (seems congestion from this is getting worse by the day).

The plan increases OC/405 freeway lanes to Long Beach and then dumps the traffic on the LB section of the 405 and will create a huge bottleneck. Please do NOT approve this project now. It is short-sighted and selfish. It moves the present traffic jams to the Seal Beach/Long Beach section of the 405 north. 1

Work with LB city and submit a cohesive plan. Please don't force our city to pick up the check for a short-sighted plan.

Sandy Davidson
Long Beach, CA
Sent from my iPad

PC-D2

From: Steve Dees [detlions3@hotmail.com]
Sent: Monday, August 12, 2013 12:28 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: detlions3@hotmail.com
Subject: Re: I-405 Supplemental Documents

I take issue with way this is being handled. First you are NOT being upfront. In your site it states I can go to the F.V. public library to review information. When I was there last Friday and inquired at the "information desk" for data regarding the 405 project, two (2) people stated they had no idea what I was talking about. It is almost as if you are 1
hiding something and sending people on a wild goose chase until after the August 12th date. I further discovered from a neighbor (which I can't confirm) that you have dramatically changed the 405 exit behind my house, because I can't get a simple map showing the current configuration of the Magnolia North off ramp, that runs behind my house and the proposed plan. I am concerned about either losing my house or it losing value with a large off-ramp. It was already stated there was no provision for a sound wall behind my property and I don't know if there will be sufficient landscaping to block the noise. Also on occasion people have been living in the bushes. I fear an area would provide more areas for vagrants to "move in". I would really like to see a simple straight forward layout of what the proposal is and the financial impact study specific to my area. 2

PC-D3

From: Michael DeShazo [shaz@roadrunner.com]
Sent: Monday, August 12, 2013 11:02 PM
To: cbyrne@octa.net; Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: EIR/EIS Comments

Please don't put a raised braided on/off ramp on the 405 north exit on Magnolia – it will ruin the neighborhood. 1

PC-D4

From: Lynn Duncan [duncanetal@aol.com]
Sent: Monday, July 15, 2013 4:17 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: LONG BEACH???? That's so not accessible, shows how much you don't care about OC 1

RESPONSE TO PUBLIC COMMENTS (PC)-D

Response to Comment Letter PC-D1

Comment PC-D1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach.

Response to Comment Letter PC-D2

Comment PC-D2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The Supplemental Draft EIR/S was available for review at Caltrans District 12, 3347 Michelson Drive, Suite 100, Irvine, CA 92612 on weekdays (Monday through Friday) from 8:00 a.m. to 5:00 p.m. Copies of the document were also available at the following public libraries during their regular business hours:

- Costa Mesa/Donald Dungan Branch Library (1855 Park Avenue, Costa Mesa, CA 92627)
- Mesa Verde Branch Library (2969 Mesa Verde Drive, Costa Mesa, CA 92626)
- Garden Grove Regional Library (11200 Stanford Avenue, Garden Grove, CA 92840)
- Huntington Beach Central Library (7111 Talbert Avenue, Huntington Beach, CA 92648-1296)
- Heritage Park Regional Library (14361 Yale Avenue, Irvine, CA 92604)
- Los Alamitos/Rossmoor Library (12700 Montecito, Seal Beach, CA 90740)
- Mary Wilson Library (707 Electric Avenue, Seal Beach, CA 90740)
- Westminster Branch Library (8180 13th Street, Westminster, CA 92683)
- Fountain Valley Library (17635 Los Alamos, Fountain Valley, CA 92708)
- Main Library (101 Pacific Avenue, Long Beach, CA 90822)

- Ruth Bach Neighborhood Library (4055 Bellflower Boulevard, Long Beach, CA 90808)
- Santa Ana Public Library (26 Civic Center Plaza, Santa Ana, CA 92701-4087)
- Main Library & History Center (407 E. Chapman Avenue, Orange, CA 92866)
- Newport Beach Public Library (1000 Avocado Avenue, Newport Beach, CA 92660)

In addition, the document could be reviewed online at www.dot.ca.gov/dist12/405/index.htm, as well as hardcopies and/or electronic copies could be obtained by request.

Comment PC-D2-2

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Compensation for Property Acquisition, Property Values, Noise/Noise Analysis.

Response to Comment Letter PC-D3

Comment PC-D3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange.

Response to Comment Letter PC-D4

Comment PC-D4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

PUBLIC COMMENTS (PC)-E

PC-E1

From: Terri Epps [terriepps@gmail.com]
Sent: Friday, August 09, 2013 11:32 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Expansion of 405

I am a fifth generation Californian and have lived in College Park East for 27 years. I am opposed to any further expansion of the 405. It is time to use money and resources wisely to create a mass transit train through the 405 corridor. Yesterday I was on the freeway for 2 hours and noticed most of the cars had one driver. Round trip to LA and back costs about $25, where as if there was a train, costs to get to work and back would be a great savings to my pocket book as well as a big help to the environment. All of these commuters would love a mass transit system where they could get to work without the worry of driving. The Fast Trak 110 toll lanes are a joke. They may create revenue but they certainly do not improve the traffic situation. As a matter of fact, during the mid-daytime hours, traffic is much worse. The 605/22/405 interchange already has 8-9 lanes in both directions. Making more lanes in this area will not improve the traffic as it eventually goes down to 5 lanes in both directions causing bottleneck problems when cars have to merge suddenly because lanes end. I oppose any toll roads in this area because the effect of increased traffic on our side streets is dangerous and it would "punish" the residents in this area who are surrounded by freeways. Build a train down the middle of the 405 and stop wasting our money and environment by widening the freeway every few years. We are at the maximum width now. We need to think ahead and prepare a better future for our kids. 1 2 3

Terri Epps
College Park East Resident

PC-E2

From: Angie Epstein [aepstein1@socal.rr.com]
Sent: Wednesday, July 17, 2013 3:46 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Toll Road

Dear OCTA,
We as Taxpayers and citizens, do NOT WANT THE TOLL ROAD ON THE 405. We have already spoken and you need to clean up your pension situation and figure out your internal issues without asking the Tax payers who already paid for the construction of this freeway to pay to use it by building a toll road. This is absolutely the wrong thing to do. Every city along the proposed stretch of Hwy is against it. This is not supported by the people and this is not for the people, just your own pockets... It is disgusting to say the least. I am going to have our entire community get involved in this! Do not proceed against the votes of our cities!!!! 1
Sincerely,
Mrs. Angela Epstein
562/431-1594
Angie Epstein
aepstein1@socal.rr.com

PC-E3

From: Steve Erickson [joebruin72@earthlink.net]
Sent: Monday, August 12, 2013 5:50 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Expansion Project

As long standing (30+ years) homeowners in Fountain Valley, we have serious concerns about the currently proposed braided on/off ramps for the northbound 405 expansion. Elevating the on/off ramps will obviously raise sound levels, increase night-time lights shining into our backyards and severely impact our property values, as well as our quality of life. It is our understanding that the southbound 405 expansion in our neighborhood has been rejected because of the impact on local businesses. Fountain Valley is almost entirely a residential community. The currently planned northbound expansion should also be rejected due to the inevitable impact on our homes and families. 1

Thank you for your attention to this serious matter.

Steve & Diane Erickson
9038 Wendy Circle
Fountain Valley, CA 92708

RESPONSE TO PUBLIC COMMENTS (PC)-E

Response to Comment Letter PC-E1

Comment PC-E1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Caltrans acknowledges your opposition to widening I-405. With respect to transit alternatives, please see Common Response – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Comment PC-E1-2

The Express Lanes along I-110 in Los Angeles County are a demonstration program and will be fully evaluated at the end of the demonstration period. The I-110 project is different from Alternative 3 as proposed for the I-405 corridor in that the I-110 project did not add any new lanes to the freeway and Alternative 3 would add two lanes in each direction south of SR-22 and one lane in each direction north of SR-22 to I-605.

Comment PC-E1-3

With respect to a potential bottleneck where the proposed additional lanes on I-405 terminate in the SR-22/7th Street/I-605, please see Common Response – Traffic Flow at the Orange County/Los Angeles County. Caltrans acknowledges your opposition to tolling. Please see Common Response – Opposition to Tolling.

Response to Comment Letter PC-E2

Comment PC-E2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Opposition to Tolling.

Response to Comment Letter PC-E3

Comment PC-E3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange, Noise/Noise Analysis, Property Values.

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PUBLIC COMMENTS (PC)-F

PC-F1

From: Glenda Favilla [JGFavilla@aol.com]
Sent: Monday, August 12, 2013 8:02 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 and 605 expansion

We live one street over from the 405 freeway in College Park East. We feel that adding more lanes that eventually narrow at the 605 freeway will have cars idling right behind our home. More lanes should be added at the same time the 405 freeway in Los Angeles County are added. The wall is the only thing we have to help reduce noise and fumes and should not be changed. The word is that it will be rebuilt, but then we would be closer to the freeway. Please consider our neighborhood and homes when making any changes. 1

Sincerely,

Jim and Glenda Favilla
4688 Candleberry Ave.
Seal Beach, Ca. 90740

Sent from my iPad

PC-F2

From: Matt Filler [matt@mattfiller.com]
Sent: Monday, August 12, 2013 5:32 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Public Comment: Intersection 28 Impacts Underestimated

I believe this study has underestimated the impacts of this project on the Studebaker/WB I-22 interchange.

The numbers seem to reflect an assumption that this is just a local traffic impact. In fact, this is a part of a through route short-cut from downtown Long Beach and the ports. Should traffic flow repeatedly slow as traffic heads into/out of LA County, drivers will use this route down 2nd St/Ocean and other parallel streets (as well as the 7th street and PCH corridors), rather than going north at over half the distance to/from a clogged I-405 in Long Beach.

This intersection has been repeatedly skipped for projects such as this, despite the fact that all traffic from the College Park West area of Seal Beach must use this intersection to go west, and we ARE orange county taxpayers. This intersection should be considered for improvement as part of this project.

Apart from the traffic impact, there is also a severe contstruction impact. Because the infield is used as a construction staging area, the truck traffic on this intersection has trippled. Yet the off-ramp has not been repaved in decades, and the drain at the southwest corner is falling apart. Potholes are frequent, and must be reported by citizens as the operator doesn't seem to care. Even if the WCC project restores this to its pre-existing condition, but it is used by this new project, similar impacts can be expected. This intersection should be repaved and the drains strengthened and repaired. K-rails should replace the City's barricades at the site of the failed culvert barrier as soon as possible, for safety reasons. This failure is most likely explained, by the way, by trucks pulling to the right to make a very sharp corner into the staging area, or waiting on the culvert and shoulder for staging to construction locations as closures are done. 1

Thanks,
-- *Matthew Filler*
233 Harvard Lane
Seal Beach, California 90740-2510
562-862-3411

PC-F3

From: Matt Filler [matt@mattfiller.com]
Sent: Monday, August 12, 2013 8:20 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Public Comment - College Park West Emergency Access

The College Park West area of Seal Beach has only one route in or out. Should the San Gabriel River bridge on this route fail, or the culvert for the Los Alamitos channel just to its east, or the College Park roadway be blocked for any other reason, there is no way for vehicles to get in or out (other than bicycle paths up or down the riverbank, which doesn't work for most residents of this area, who are elderly). Normally, these residents all must go through SR-22 or Studebaker Rd. in Long Beach to get anywhere, including to other parts of the City or Orange County. 1

There is a paved area behind the "College Park" sign that is closed to parking, which includes another Los Alamitos Channel culvert, and appears to have been part of the access to this bridge before the I-605 intersection was built. The city of Seal Beach has had discussions for years with CalTrans about an emergency access gravel or paved roadway to the freeway shoulder, for emergency access only.

Since Seal Beach is in Orange County, and this segment of SR-22 here functions mostly as an on-off-ramp from I-405 and I-605, this improvement should have been included for consideration as part of the original OCTA I-405 corridor planning. In view of this supplemental look that includes this area, I request that this emergency access development be considered for at least some funding by OCTA, and that it be approved and included in this project, or as a supplemental project to be contracted by Seal Beach, as with the proposed Long Beach signal projects. 2

– *Matthew Filler*
233 Harvard Lane
Seal Beach, California 90740-2510
562-862-3411

PC-F4

From: Matt Filler [matt@mattfiller.com]
Sent: Monday, August 12, 2013 8:28 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Public Comment - Intersection 27

The proposed Alternative 1 and 2 changes to Intersection 27, the SR-22 westbound on-/off-ramp and College Park Drive intersection can be improved to keep the rigth turn from College Park Drive as a merge lane. Instead of widening the off-ramp approaching College Park on the right, widen it on the left into what is now the left turn merge from College Park, and will be unnecessary in the new configuration with a traffic signal. It will be necessary to widen the pavement into the infield, or to provide a gravel shoulder to accommodate both the on-ramp thru lane and the turn lane, but there is a wide, paved shoulder now and people who stop tend to go off the pavement anyway, as the pavement to the right of the yellow line seems too narrow for safe parking, even if it is theoretically wide enough. It should be possible to do this with only slight curvature or angling of the thru lane, and without need to reduce the radius of the on-ramp. 1

Otherwise, this right turn will have to wait for the light in many cases, and may become less safe when people coming from College Park attempt to merge into the off-ramp traffic without much room to do so. This would be a difficult and disappointing transtion to go back to having to stop there most of the time.

– *Matthew Filler*
233 Harvard Lane
Seal Beach, California 90740-2510
562-862-3411

PC-F5

From: Matt Filler [matt@mattfiller.com]
Sent: Monday, August 12, 2013 9:18 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Public Comment - Objection to Tollway Option 3 Re-Vivification

All California drivers and taxpayers pay for this project and the original freeway and right of way, and all should enjoy its benefits. THIS OPTION WAS VOTED DOWN in comments to the original EIR, and that should stand. Reopening this option after a public process was followed and then abrogated is a violation of trust by the OCTA Board. A referendum should be required before that process can be negated. KEEP OUR FREEWAYS FREE!

Many cannot afford regular taps into their budgets for additional fees. Many of the people who would occasionally use the HOV lanes will not or can not use the tollway under this proposal as it appears it will be priced. Most of the benefit will go to people coming from the more affluent I-73-served areas that need to go to LA County. I suspect that people along the route will resist buying the transponder, especially given the excessive pricing. A non-peak price of $0.25 or free, and an initial price when traffic in the tollway lanes starts to slow of $1.00 or less, would be the appropriate ways to price this at non-peak periods, with congestion pricing above that. Anything else is PROFITEERING by OCTA.

Also, I again urge a restudy of the claim that travel time with a Tollway for the main lanes would be 29 minutes, just one minute worse than the alternative 2 number. I believe that estimate is highly optimistic, and biased in favor of supporters of Alternative 3 and tollways in general. This is not an affluent area like I-73, and usage of the tollway should discount participation rates for that tollway. I-91 rates are also not as useful, as those users are mostly commuters, and can charge those tolls against their incomes. In this corridor, there are a lot more local trips. 1

You should survey people in the traffic areas affected, including LA County, fully disclosing the likely costs and asking how many would join the transponder system, and for how many of their vehicles? If not, please do so before choosing Alternative 3, and revise the usage statistics and fares based on those results.

The best results would be obtained if the tollway were only a tollway during peak hours, but again that just points out how unfair this is to those who live or work in the area and are impacted by the project.

I attended the Rush Park Meeting June 7, 2012, and the Edison Park Meeting July 27, and I now vote for Alternative 1.

-- Matthew Filler
233 Harvard Lane
Seal Beach, California 90740-2510
562-862-3411

PC-F6

From: Matt Filler [matt@mattfiller.com]
Sent: Monday, August 12, 2013 9:38 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Public Comment - Unfair Share Percentages

The "fair share" formula used in this study seems to be premised on the assumption that the impacts of this project were unavoidable, and Los Angeles County and the City of Long Beach are thus obligated to pay most of the cost of these impacts. Yet without this project, the infrastructure involved would continue to be adequate. It is mainly the increased trips coming in the direction of Long Beach as a result of the widening of both I-405 and I-22 that is leading to the inadequacy of this infrastructure. This could and should have been mitigated by coordinating with Los Angeles County and the corresponding CalTrans District so that this project wouldn't be simply dumping more an more cars into the same freeways in LA County. LA County is currently spending its transit money further up I-405, having added only a carpool lane to most of the Long Beach segment during the last round of widening.

Yet instead of funding and including mitigations, this project seeks to simply offer a tiny portion of the funds needed to mitigate its impact, and to compel LA County and Long Beach to come up with the funds and projects to actually implement this, possibly after the impact has begun. OCTA should reconsider this, as otherwise the best way for LA County and Long Beach to mitigate this project's impacts is to tie it up in court until they can come up with the funds and a project to widen I-405 through Long Beach and up as far as to I-105. In fact, this formula only makes sense in that context. 1

OCTA should find resources for the necessary improvements to mitigate dumping of traffic into a less-developed I-405 segment in Long Beach, to be done as a part of this project, or else work with LA County agencies to coordinate and help find funding for the widening of I-405 through Long Beach and on to LAX in the same time frame as this project, or within a year or two thereafter..

-- Matthew Filler
233 Harvard Lane
Seal Beach, California 90740-2510
562-862-3411

PC-F7

From: Matt Filler [matt@mattfiller.com]
Sent: Monday, August 12, 2013 9:48 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Public Comment - I-405 SB/I-605 SB to 7th Branch Connector, WB SR-22 mainline

The section of SR-22 that connects I-405 with 7th Street is effectively a complex off-ramp for the I-405 to 7th Street and Studebaker, and should have been considered in this project from the start, and been given more consideration in this supplemental study.

The EIR states on pages 3-64, 3-71, and 3-79 that "In no instance would additional lanes on branch connectors be feasible." Yet with regard to the I-605 SB/I-405 SB to 7th Street branch connector, nothing could be further from the truth. In fact, this connector, was restriped to 2 lanes during the WCC connector project to accommodate traffic while the SR-22 overpass was closed for reconstruction. This is the only connector studied that is already at level E and F, and when it gets worse with this project, will still be the only one at level F,

Of course, the real problem is the merge with I-22, which is way too short. This can be mitigated first by using the available width of the existing San Gabriel River WB I-22 bridge, restriping the main roadway closer to the left wall, and making a third lane across the bridge. This lane can then continue into the Studebaker off-ramp, or could just be an extension of the existing merge area if the width of the bridge cannot accommodate 3 full lanes. This improvement would NOT require restriping the ramp as discussed above.

Also, the ramp has a long white line between it and the mainline before the merge area, presumably due to the curve just before that point, which is often violated but nonetheless prevents the merge from being smoother.

Should the projected benefit of this merge extension be insufficient, ultimately a 2-lane ramp as during the WCC SR-22 overpass reconstruction could be accomodated with a widening of this bridge, where the right lane exits to Studebaker and the left lane has to merge before reaching the on-ramp from Studebaker.

Better use of the bridges across the San Gabirel River and Los Cerritos Channel should be feasible, if perhaps requiring variances from current standards, to bring 7th street/SR-22 to 3 lanes in both directions, except westbound between the Studebaker off and on ramps. While the existing Studebaker overpass and river and channel bridges are probably inadequate for this with current lane width and shoulder standards, variances should be considered, and that should allow three lanes in both directions, except in the zone between the on and off ramps to Studebaker, without changes to the bridge structures..

Alternatively, some or all of these bridges would need to be widened, which is feasible, even if expensive. } 1

-- *Matthew Filler*
233 Harvard Lane
Seal Beach, California 90740-2510
562-862-3411

PC-F8

From: Matt Filler [matt@mattfiller.com]
Sent: Monday, August 12, 2013 9:49 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Public Comment - 7th Street to I-405 SB/I-605 NB/I-405 NB

The section of SR-22 that connects 7th Street with I-405 is effectively a complex on-ramp for the 7th Street and Studebaker to the I-405, and should have been considered in this project from the start, and been given more consideration in this supplemental study. This is the only "mainline" that is already way over capacity, with 1.24 V/C shown. } 1

There is an odd discrepancy of the numbers both for SR-22/7th Street Mainline Studebaker Road to I-405/ I-605, and for 7th Street to I-605 NB/ I-405 NB: they show a decline in volume from 2009 to all 2020 cases. Given the planned development at PCH and 2nd street, likely university growth, and other growth and density changes likely in the area, this is hard to fathom. Please explain or recalculate, and redetermine the impacts accordingly. } 2

Also, the key bottleneck in the EB direction is the narrowing to 2 lanes before the Los Cerritos channel bridge, which does not line up well with the Seal Beach overpass. Clearly, solutions to resolve this bottleneck (once the damaged overpass is fixed) are to either widen the channel bridge to accomodate a separate off-ramp lane for Studebaker behind the existing columns, or to simply move the off-ramp closer to those columns to accomodate a third lane by simply restriping. Why isn't the latter possible? Couldn't a variance to current standards be accepted given the density of old structures in the area. If so, please include that in this project. If not, please include estimates and fair share numbers for widening this bridge. } 3

PC-F9

From: Almafisher40 [almafisher40@aol.com]
Sent: Saturday, August 10, 2013 8:39 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS; "<405.Supplemental.Draft.EIR.EIS"@parsons.com
Subject: Opposed Braided Ramp

To Whom It May Concern;
My wife and I have been residents of Fountain Valley for the last 23 years and our home backs up to the off ramp for North Magnolia. For the last 23 years we have enjoyed our backyard and the added amenities without any concern of the existing noise, soot, grime, and potential health hazards etc. While we can appreciate the efforts to minimize congestion on the North 405 we are bewildered by the fact that putting in a "Braided Ramp" similar to the one located at Fairview makes a lot of sense especially when you have residents homes adjacent to this proposed ramp and now we will need to contend with on lookers peering into our backyard since this ramp will be higher than the 12 foot sound wall. How does this support the residents of Fountain Valley? When you examine the braided ramps put in place along the 405 they have been placed in either high rise office retail or commercial areas and not adjacent to residents homes. How can this be healthy? This proposed ramp will definitely have an impact on the quailityof life in addition to driving down property values, which already suffer. There has to be other alternatives or options that have not been looked at and we are demanding that these other options be looked at before any final decisions are made. Our home as it exists today has been our haven and we want to continue to enjoy it for the next 25 - 50 years but with a braided ramp at our back door it will only be seen as an eye soar and not bring value add to the neighborhood. } 1

Please take the time to listen and explore and set aside personal agendas.

Thank you,

Mark & Alma Fisher
16817 Daisy Avenue
Fountain Valley, CA 92708

PC-F10

From: jamesflanagan@gmail.com [mailto:jamesflanagan@gmail.com] **On Behalf Of** jaf997
Sent: Thursday, August 01, 2013 10:41 AM
To: Christina Byrne
Subject: Freeway plan

I'm against the plan to create Toll lanes on the 405. 1

-James Flanagan
Rossmoor homeowner

PC-F11

6/26/2012

I am a resident of Seal Beach Last since 1968. I have been very happy with the standard of living my family and I have enjoyed here.

As you can see none of my neighbors are voting yes for your project. WE DO NOT WANT a new WALL nor DO WE WANT A TOLL ROAD. 1

WOULD YOU WANT the Caltrans to TEAR DOWN THE WALL if you lived here?

My family and I say NO to building a new WALL or TOLL ROAD.

NO, NO, NO!!

Sylvia Flood
3610 Lunnee Dr.
Seal Beach, CA.
90740

PC-F12

From: Luella Forrai [redheadfo@gmail.com]
Sent: Sunday, August 11, 2013 3:49 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

I LIVE NEXT TO THE ON RAMP OF THE N 405. I HIGHLY DISAPPROVE OF THE BRAIDED ROAD THAT IS UP FOR POSSIBLE CONSTRUCTION.
TAKING AWAY MY PRIVACY, LOWERING MY HOME VALUE, MORE NOISE FROM THE ALREADY EXISTING 405 AND CREATING MORE PROBLEMS
ON MY PROPERTY WITH THIS TYPE OF CONSTRUCTION. I TOTALLY OBJECT TO THE CONSTRUCTION SUGGESTED FOR THE 405. WE ARE
ALREADY SUFFERING FROM ALL THE BUILDING OF ALL THE HOMES ON THE NEIBLAS SCHOOL SITE. WE DON'T NEED ANY MORE PROBLEMS.
OWNER OF HOME SINCE 1965. 1

Luella Forrai
9280 Daisy Ave,
Fountain Valley, Ca. 92708

PC-F13

From: Steve Forrai [steveforrai@yahoo.com]
Sent: Sunday, August 11, 2013 8:08 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

I am strongly opposed to the braided on ramp at the northbound Magnolia entrance and plan to take legal action if this part of the project moves forward. My concerns regarding the 405 expansion project to start would be the obvious, loss of property value, increased decibel level and loss of privacy. During the construction of this project I can foresee a good part of the neighborhood experiencing premature underground plumbing issues and structural from all the compaction and pile driving that will occur during the project. This neighborhood is still suffering the effects of the new housing development in the center of this track that replaced the school. 1

PC-F14

To: Mr. Gregory Winterbottom

I-405 Improvement Project
Public Hearing
Comment Sheet

RECEIVED
CEO OFFICE
AUG 09 2013

All Board Members
D. Johnson K. Phipps
J Beil, C Byrne
R Casey Lwade
File

Please provide your comments regarding the I-405 Improvement Project Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS). Comments must be received by Caltrans no later than August 12, 2013.

Name (First and Last): FRED + MIDORI FUJIKAWA
Organization:
Address (Optional): 4541 BIRCHWOOD AVE. SEAL BEACH 90740
Phone Number: 562-431-9515 Email address: dorito.fuj@verizon.net

Comments: Attached is letter addressed to Smith Deshpande on 7/14/12.
We would also like to know if the taxpayers will have to pay for moving the Edison power lines underground if the 405 freeway is widened + the wall along Almond Avenue has to be moved in College Park East. 1

Please use another sheet if you need more space for your comments.

To submit completed response sheets, please return to staff member, place in the comment box or mail by August 12, 2013, to:
Ms. Smita Deshpande
Branch Chief – Caltrans District 12
"Attn: 405 DEIR-DEIS Comment Period"
2201 Dupont Drive, Suite 200

Responses may also be emailed to:
405.dedcomments.parsons@parsons.com
For more information on the I-405 Improvement Project, please contact:
Christina Byrne, Outreach Manager
(714) 560-5717
www.octa.net/405Improvement

PC-F14 Cont.

4541 Birchwood Avenue
Seal Beach, CA 90740

July 14, 2013

Attn: 405 DEIR/DEIS Comment Period

Ms. Smita Deshpande
Branch Chief
CalTrans District 12
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Dear Ms. Deshpande:

We have lived in College Park East in Seal Beach since 1968 and raised our children here. We were here when we fought to have the sound wall built to protect us from the freeway noise and pollution. We now find that CalTrans and OCTA, is looking to expand the freeway and tear down the existing wall in our neighborhood. We are being promised that it will be replaced with like wall but we believe this is a hollow promise. The existing wall is made of solid concrete and is 18 feet high and the ones being put up now are large hollow concrete blocks. There will also be some unknown period where there is no wall while they rebuild.

We do not want the freeway moving closer to our homes and taking away parking along Almond Avenue and two gas lines will have to be moved in College Park. The increased noise, pollution and the related health concerns due to air quality weighs very heavily on our minds. There will still be a bottleneck at the 605 because LA County is not expanding the 405 on their side of the county line.

The funds for this project is coming from Measure M2 which the voters approved in 2006. There is no mention of "tolls", "express lanes", "hot lanes" or "transponders" in Measure M2 but a toll road is one of the alternatives being proposed. The toll road would not alleviate traffic as it would be used only by people who can afford to use them and require car pools to have at least three people per vehicle. This will cause more use of the general purpose lanes which, in turn, will cause more congestion.

Furthermore, the cities of Westminster, Fountain Valley and Costa Mesa are also against the toll road as it will bypass local exits for local shopping areas causing a loss of sales tax revenue.

The following are the Alternatives 1 - 4:
Alternative 1: Adds one General Purpose lane in each direction.
Alternative 2: Adds two General Purpose lanes in each direction.
Alternative 3: Adds one General Purpose and one Express Lane.
Alternative 4: No Project.

We are, therefore, in favor of Alternatives 1 and 4. The other alternatives are too disruptive to the homes and businesses around it. Won't you please take the time to consider the least disruptive alternative so that we can live in harmony?

We respectfully ask that you please consider our proposal. Thank you for your consideration.

Yours very truly,

Fred K. Fujikawa

Midori Fujikawa

2

PC-F15

From: Curt Fulton [curtfulton@gmail.com]
Sent: Tuesday, July 16, 2013 8:25 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: We do NOT need toll roads or toll lanes.

Let all of us use the freeways the same, without extra costs. 1

Thank You,
Larry Fulton
curtfulton@gmail.com

RESPONSE TO PUBLIC COMMENTS (PC)-F

Response to Comment Letter PC-F1

Comment PC-F1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Almond Avenue Soundwall, Noise/Noise Analysis, Air Quality, Health Risks.

Response to Comment Letter PC-F2

Comment PC-F2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Caltrans appreciates your effort reviewing the supplemental traffic study. We concur with your assessment that traffic volumes from 7th Street to northbound I-405 and I-605 will not decrease from year 2009 to 2020. After further investigation of the traffic volumes as presented in the Supplemental Draft EIR/EIS, we have identified a discrepancy related to existing traffic volumes, and we will incorporate the revisions in the Final EIR/EIS.

Response to Comment Letter PC-F3

Comment PC-F3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The Supplemental Draft EIR/EIS covers potential adverse effects and significant impacts of the proposed I-405 Improvement Project and measures to address those adverse effects and significant impacts. The access difficulties related to the College Park West neighborhood of Seal Beach mentioned in the comment exist currently and are not impacted by the proposed I-405 Improvement Project; consequently, they will not be addressed by the project.

Response to Comment Letter PC-F4

Comment PC-F4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The analysis presented in the Supplemental Draft EIR/EIS in Tables 3-9 and 3-11 shows that the proposed signal at the intersection of College Park Drive and the westbound Studebaker ramps will operate at LOS B or C in the peak hours in 2020 and 2040. Based on the configuration for the intersection presented in Appendix B2 of the Supplemental Draft EIR/EIS, right turns from College Park Drive would be made while a red indication is presented to off-ramp traffic, thereby providing a protected right turn without any vehicular conflicts. Because the improvements at this intersection are to be implemented as part of a separate project, alternative designs could be considered by Caltrans when the project implementing improvements at this intersection is advanced through the project development process.

Response to Comment Letter PC-F5

Comment PC-F5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification, Substantiation of Reported Corridor Travel Times for Build Alternatives.

Response to Comment Letter PC-F6

Comment PC-F6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-10 would address cumulative significant impacts to traffic on SR-22 (7th Street), which is a State highway. This fair share would be contributed by the I-405 Improvement Project for the proposed improvements. The remainder of the funding would be the responsibility of the State, not the City of Long Beach.

A comparison of the volumes at intersections along 7th Street under the existing condition (Figure 3-5 of the Supplemental Draft EIR/EIS) with the forecast volumes for the 2040 No Build Alternative (Figure 3-18 of the Supplemental Draft EIR/EIS) shows that traffic is anticipated to increase along 7th Street without the proposed I-405 Improvement Project. Consequently, there is an adverse effect on 7th Street traffic without the project. The additional increment of traffic on 7th Street associated with the proposed project results in cumulative effects of traffic from the project and from other sources that are greater than those solely from the project alone. Consequently, the measures included in the Supplemental Draft EIR/EIS are not intended to address all of the deterioration in traffic service expected between the existing condition and year 2040.

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-11 would address cumulative significant impacts to traffic on streets owned by the City of Long Beach. The remainder of the funding at these locations would be the responsibility of the City of Long Beach.

Response to Comment Letter PC-F7

Comment PC-F7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The Supplemental Draft EIR/EIS covers potential adverse effects and significant impacts of the proposed I-405 Improvement Project and measures to address those adverse effects and significant impacts. Tables 3-2 and 3-6 of the Supplemental Draft EIR/EIS show that in 2020 and 2040 the demand-to-capacity (D/C) ratios along SR-22 in both directions between Studebaker Road and I-405 exceed 1.00 under the No Build Alternative, which means that the area will suffer from heavy congestion. The proposed build alternatives result in changes to the D/C ratios that will not change the anticipated congestion. Consequently, the proposed I-405 Improvement Project will not have a significant impact on traffic in this segment of SR-22. While the congestion anticipated along SR-22 is a problem, it is not created by the I-405 Improvement Project; therefore, it will not be addressed as part of the project.

Response to Comment Letter PC-F8

Comment PC-F8-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

See Response to Comment PC-F7-1.

Comment PC-F8-2

See Response to Comment PC-F2-1.

Comment PC-F8-3

See Response to Comment PC-F7-1.

Response to Comment Letter PC-F9

Comment PC-F9-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Air Quality, Health Risks, Property Values, Preferred Alternative Identification.

Response to Comment Letter PC-F10

Comment PC-F10-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-F11

Comment PC-F11-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-F12

Comment PC-F12-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values, Noise/Noise Analysis, Preferred Alternative Identification.

Response to Comment Letter PC-F13

Comment PC-F13-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values, Noise/Noise Analysis, Preferred Alternative Identification.

Response to Comment Letter PC-F14

Comment PC-F14-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Almond Avenue Soundwall.

Comment PC-F14-2

Please see Appendix R1 (Response to Comments on Draft EIR/EIS) Response to Comments PC-F49-1 through PC-F49-4.

Response to Comment Letter PC-F15

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

PUBLIC COMMENTS (PC)-G

PC-G1

From: Helga Gergens [hgergens@hotmail.com]
Sent: Monday, July 01, 2013 9:13 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS; Dad
Subject: 405 Project-NO TOLLS!!!!

The HOV lanes should not be tolled. WE have paid over and over and over as tax payers for this project. To have the current adminstration put signs along your work "BROUGHT TO YOU BY THE MERICAN RECOVERY ACT" is maddening and makes me want to vomit on the side of the freeway each time I see it.. That statement might be true for future projects but not for this one. WE have paid for this project...no tolls required. 1

We paid for the CURRENT HOV lanes and they should not be tolled regardless of your expansion.

H.

PC-G2

From: William R. Giser [bgiser@verizon.net]
Sent: Friday, August 09, 2013 12:18 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: Councilmember Patrick O'Donnell
Subject: 405 SDEIR –DEIS Comment Period

William R. Giser
1949 N. Britton Dr.
Long Beach, CA 90815-3266
562 – 598 – 0416

Simita Deshpande – Branch Chief
Caltrans – District 12
2201 Dupont r., Suite 200
Irvine, CA 92612

RE: 405 SDEIR –DEIS Comment Period

Dear Ms Deshpande,

The City of Long Beach has had little to no input on the 405 Widening Project and now we are being told that Long Beach will be paying for a portion of the impacts created by this Orange County Project. 1

While, it is my understanding that Long Beach City Officials have been meeting on this project since 2009 and have had little cooperation from the Orange County Transportation Authority.

The City of Long Beach was informed through the Supplemental Draft Environmental Impact Report (DEIR) that we would be held responsible for mitigation costs on our local streets and state owned right-of-ways, including 7th Street.

Long Beach City Traffic Engineer Dave Roseman believes there are millions of dollars worth of improvements to Long Beach intersections, which he believes will fall on Long Beach to pay for. 2

An alteration to any part of our state CALTRANS system automatically affects surrounding areas. I urge you work with our city officials to workout

5

PC-G2 Continued

a mutually acceptable agreement rather than what appears to be an autocratic fiat. 2 cont.

Let me thank you in advance,
William R. Giser
CC: Senator Lou Correa
Assembly Woman Bonnie Lowenthal
Councilmember Patrick O'Donnell

"Facts do not cease to exist because they are ignored."
Aldous Huxley

PC-G3

From: Susan Graham [suegraham024@gmail.com]
Sent: Friday, August 02, 2013 6:53 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

I am very disappointed that Caltrans is once again trying to change the 405 plan. The cities and residents most affected with the changes expressed their concerns last year and were pleased with the decision at that time. I think most of us would have been happy with adding two general purpose lanes in each direction (no toll lanes), but we were OK with the one lane in each direction that you put in place. Now we find that you are reconsidering. Part of what you are planning involves tearing down the Fairview Road bridge that you just several years ago spent millions of dollars to upgrade. We went through many months of the reconstruction of that and we certainly don't want to go through that again. You think nothing of throwing away those millions of dollars that we taxpayers spent. Can you understand why taxpayers are so disgusted with the wasteful spending of our government? 1

What makes you think that any of us have changed our minds about the project? Please keep the addition of one lane in each direction, or changing to the 2 general purpose lanes and may I emphasize NO TOLL LANES and no re-doing the Fairview bridge.

Sue Graham
1106 Redding Ave.
Costa Mesa, CA 92626

PC-G4

From: David Gray [drdj.gray@verizon.net]
Sent: Thursday, August 01, 2013 9:04 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

In reviewing the suggested solution to manage anticipated increased traffic with installation of a traffic signal, I have significant and I would suggest an alternative solution. My concern is that the cueing system with two lanes approaching the traffic signal will not suffice, and traffic will back-up on 7th street and towards the freeway. In addition, we will lose our free right turn out of the track which works very well at this time. Consider expanding the number of lanes, including a College Pk only lane heading West going into College Park Drive from the 7th street exit to Studebaker. Keeping the our right turn lane out of College Pk West also free flowing without a signal. To accommodate this, add one additional lane off 7th street exit to Studebaker. The signal could be kept only for those turning left out of the track, or turning left into the track. This would increase car capacity cuing and reduce the number of cars planning to enter College Park from adding to this cue line. 1

David Gray
176 College Pk Dr
Seal Beach
562-596-3000

PC-G5

6/26/2012

As an original owner I request that CPE be left alone. The wall should be left intact as it serves as a form of protection for residents.

As the freeway has now been expanded it has created more accidents and further expansion would only serve to be more detrimental.

Please consider the residents and air quality of the entire community.

J Green
4356 Dogwood
Seal Beach 90740

1

PC-G6

From: Travis Greene [travisgreene@juno.com]
Sent: Thursday, August 01, 2013 12:17 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

As requested, I'll offer my two cents on this EIR/EIS. Traffic is undoubtedly a major problem for the area. I used to commute from Seal Beach (I live in College Park East) to Irvine for work five days a week, and what takes 25 minutes without traffic could easily take over an hour with typical traffic. Today I work from home and only commute to the airports (typically LAX) for travel (twice a month, on average). Perhaps the future will include more information workers like me working remotely, but there are many jobs that can't be performed remotely, particularly blue-collar, manufacturing and service-sector jobs. For those workers, they need real solutions, not high-cost toll lanes or carpool/HOV lanes, which might feel good from an environmental standpoint but are typically jammed up when you need them and useless when traffic is flowing because there are no open times for those lanes and huge double-yellow line sections that make it inconvenient to exit.

I would urge strong consideration of plans that add general-purpose lanes only. Californians pay far more in gas taxes to support our roads than most other states. We should get a return on that investment that is not intended for elites only.

1

Travis Greene
4356 Dogwood Ave
Seal Beach, CA 90740

PC-G7

From: Steve Grenier [steve14128@earthlink.net]
Sent: Sunday, August 11, 2013 7:32 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

I have major concerns regarding this expansion project. It is very obvious that this will severely impact our property values and our quality of life. Since the southbound widening of the 405 has been rejected because of business closures, it is apparent that the northbound widening should be rejected because of the impact it will have on our homes and families.

1

Thank you for listening and for giving this matter serious consideration.

Steve and Pat Grenier
9066 Wendy Circle
Fountain Valley, CA., 92708

RESPONSE TO PUBLIC COMMENTS (PC)-G

Response to Comment Letter PC-G1

Comment PC-G1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-G2

Comment PC-G2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

There has been substantial coordination with the City of Long Beach, which is a formal Participating Agency under NEPA. For more details on the extent of coordination with the City of Long Beach, see Appendix R1 Common Response – Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach.

Comment PC-G2-2

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-10 would address cumulative significant impacts to traffic on SR-22 (7th Street), which is a State highway. This fair share would be contributed by the I-405 Improvement Project for the proposed improvements. The remainder of the funding would be the responsibility of the State, not the City of Long Beach.

A comparison of the volumes at intersections along 7th Street under the existing condition (Figure 3-5 of the Supplemental Draft EIR/EIS) with the forecast volumes for the 2040 No Build Alternative (Figure 3-18 of the Supplemental Draft EIR/EIS) shows that traffic is anticipated to increase along 7th Street without the proposed I-405 Improvement Project. Consequently, there is

an adverse effect on 7th Street traffic without the project. The additional increment of traffic on 7th Street associated with the proposed project results in cumulative effects of traffic from the project and from other sources that are greater than those solely from the project alone. Consequently, the measures included in the Supplemental Draft EIR/EIS are not intended to address all of the deterioration in traffic service expected between the existing condition and year 2040.

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-11 would address cumulative significant impacts to traffic on streets owned by the City of Long Beach. The remainder of the funding at these locations would be the responsibility of the City of Long Beach.

Response to Comment Letter PC-G3

Comment PC-G3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

As discussed on page S-1 of the Supplemental Draft EIR/EIS, the supplemental document provides new information on potential project-related traffic effects within Long Beach. The new information and analysis presented within the Supplemental Draft EIR/EIS is based on the *Supplemental Traffic Study Report – Long Beach Area* (Supplemental Traffic Study), prepared in March 2013 in response to City of Long Beach comments on the Draft EIR/EIS. The information and analysis within this Supplemental Draft EIR/EIS was not available during the circulation period for the Draft EIR/EIS. The proposed alternatives in the June 2013 Supplemental Draft EIR/EIS are identical to the alternatives in the Draft May 2012 Draft EIR/EIS.

Please see Common Responses – Preferred Alternative Identification, Replacement of Fairview Road Overcrossing/Truncation of Tolled Express Lanes, Opposition to Tolling.

Response to Comment Letter PC-G4

Comment PC-G4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative

as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Analysis of the proposed improvements at the intersection of College Park Drive and the SR-22 westbound ramps is presented in the Supplemental Draft EIR/EIS. The analysis shows that the queues would not back up onto the SR-22 westbound freeway. The following table presents the anticipated queues; the data are presented in the Supplemental Traffic Study Report – Long Beach Area in Appendices III A-1, III A-2, IV A-1, and IV A-2 for Alternative 1 year 2020, Alternative 1 year 2040, Alternative 2 year 2020, and Alternative 2 year 2040, respectively. The table shows that the 95th percentile queues anticipated approaching the intersection with the proposed signal would not exceed 240 feet during the peak hours in the years 2020 and 2040. The distance from the stop line for the proposed signal at the intersection of the ramp with College Park Drive to the gore point is approximately 850 feet.

Anticipated 95th Percentile Queues on the SR-22 Westbound Exit Ramp Approach to the Proposed Signal at College Park Drive			
		Alternative 1	**Alternative 2**
2020	AM	142	148
	PM	223	240
2040	AM	160	189
	PM	226	240

The analysis presented in the Supplemental Draft EIR/EIS in Tables 3-9 and 3-11 shows that the proposed signal will operate at LOS B or C in the peak hours in 2020 and 2040.

Response to Comment Letter PC-G5

Comment PC-G5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Wall, Air Quality, Health Risks.

Response to Comment Letter PC-G6

Comment PC-G6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-G7

Comment PC-G7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Property Values, Northbound Braided Ramps at the Magnolia/Warner Interchange.

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PUBLIC COMMENTS (PC)-H

PC-H1

From: Brian Hale [brianhale7@yahoo.com]
Sent: Sunday, June 30, 2013 7:34 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: San Diego Freeway (I-405) Improvement Project

As a daily commuter of the 405 freeway I would like to see one or two GP lanes added instead of carpool lanes/HOV lanes. The current HOV lanes are already clear on most days, there isn't a need to add more of these types of lanes. This won't help with the traffic flow. There is a huge need to add one or two general purpose lanes. 1

PC-H2

From: janwhovar@aol.com
Sent: Saturday, August 03, 2013 8:10 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

I am totally opposed to having a toll express lane Option 3.

My vote is for option 2 with the adding of 2 GP lanes in each direction and continuous access to HOV lanes. 1

Thanks,
Janet Hoover

PC-H3

From: Walter Horne [wjhorne@yahoo.com]
Sent: Wednesday, July 17, 2013 9:36 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Proposed Toll Lanes

CALTRANS Project Leader,
In recent years we have seen an increase of toll lanes, created using taxes paid by all citizens, for the exclusive use of a limited segment of our population. I submit that this is a GROSS MISUSE of the Taxpayers money as illustrated by 1) the 91 Toll road which is in financial trouble and will not pay for itself until 2053 by which time it will be obsolete, 2) The 73 Toll road which I happened to travel last week - In the 1/2 mile ahead of me the 3 lanes contained only 6 cars and 1 truck for the duration of my ride southbound, from the start just past the 405 Fwy to the merge with the 5 Fwy, 3) The 110 Fwy Toll lane which I have observed with less than 25% utilization. My conclusion is that, if Toll lanes are implemented on the 405 Fwy then, this project will have spent nearly a Billion Dollars and the freeway congestion will not have improved enough to overcome the projected population increase in the first two years. The Toll Road philosophy is not working in California. This is a HUGE WASTE of taxpayer monies!!!!!! 1

Sincerely,
Walter Horne

PC-H4

From: Nancy Hunsaker [mailto:nlh02@yahoo.com]
Sent: Sunday, August 11, 2013 9:53 AM
To: Christina Byrne
Subject: Re: I-405 Comment Deadline is August 12

NO TOLL ROADS PERIOD!!

The best option would be two GP lanes in each direction between Brookhurst/Euclid Streets and I-605. 1

David and Nancy Hunsaker
714) 556-8563

PC-H5

From: lghunting@verizon.net
Sent: Friday, August 02, 2013 6:18 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 south of 605

No toll lanes, no toll lanes. One lane each direction needs to be added. 1

PC-H6

From: lghunting@verizon.net
Sent: Monday, August 12, 2013 9:56 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Please no toll roadways! Max of 2 more lanes each direction of I-405. One additional car pool lane and one general purpose lane for each direction. Thanks. 1

PC-H7

From: lghunting [lghunting@verizon.net]
Sent: Friday, August 02, 2013 6:17 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405

No toll lanes, no toll lanes! One additional lane both directions. LGHunting, Garden Grove 1

RESPONSE TO PUBLIC COMMENTS (PC)-H

Response to Comment Letter PC-H1

Comment PC-H1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Preferred Alternative Identification.

Response to Comment Letter PC-H2

Comment PC-H2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identification, Opposition to Tolling.

Response to Comment Letter PC-H3

Comment PC-H3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-H4

Comment PC-H4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis

presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Preferred Alternative Identification, Opposition to Tolling.

Response to Comment Letter PC-H5

Comment PC-H5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identification, Opposition to Tolling.

Response to Comment Letter PC-H6

Comment PC-H6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identification, Opposition to Tolling.

Response to Comment Letter PC-H7

Comment PC-H7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identification, Opposition to Tolling.

PUBLIC COMMENTS (PC)-I

PC-I1

From: Suzy Ito [pspbito@yahoo.com]
Sent: Monday, August 12, 2013 11:57 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Braided on/off ramp at Magnolia/Warner

This proposed braided on/off ramp at Magnolia/Warner will not aleve traffic on the 405. The braided on/off ramps at Bristol, Fairview, and Harbor create more traffic and traffic already slows down on the southbound 405 from the Brookhurst on/off ramp. The proposed changes will create more noise and air pollution in the neighborhood next to the on/off ramp. And how does this change improve traffic past the Magnolia/Warner ramp? What about further down the freeway? What is the proposal for widening beyond Orange County? Widening the 405 should have been on the agenda 20-30 years ago. We would not be in this situation now had there been some foresight. } 1

Sincerely,
Suzy Ito

RESPONSE TO PUBLIC COMMENTS (PC)-I

Response to Comment Letter PC-I1

Comment PC-I1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Noise/Noise Analysis, Air Quality, Health Risks, Traffic Flow at the Orange County/Los Angeles County Line.

PUBLIC COMMENTS (PC)-J

PC-J1

From: Dr J [dr_j_ok@hotmail.com]
Sent: Thursday, August 01, 2013 12:29 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Light Rail

Please build a light rail line down the center of the 405, as opposed to more lanes of traffic. 1

Thanks,

Jason

PC-J2

From: Richard Jolly [re.jolly@verizon.net]
Sent: Thursday, August 01, 2013 1:50 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Expansion

As I have stated before my tax dollars are going to this project and I DO NOT want any toll lanes that will cost me money because there are only two of us that travel together since we are seniors.
All car pool lanes need to stay as they are.

Transponder cost money for these toll lanes and if you do not use them they deduct funds for non-use. Someone wins but not use. 1

I am getting tired of government ruining our lives as we get older.

It is probably time to leave this state.

Have a great day and enjoy life.

Dick Jolly
714 897-2497 Office/Fax
714 323-1423 Cell

PC-J3

From: Paraskevi June [mamapjune@yahoo.com]
Sent: Monday, August 12, 2013 8:37 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Comments on 405 Improvement Project

To Whom It May Concern:

We live in College Park West Neighborhood of Seal Beach. We are concerned that a traffic light at the intersection of the Studebaker Road and College Park Drive needs a deeper assessment of the potential sudden slow down of traffic of those exiting the 22 West to Studebaker Road when the traffic light should red. As such, I fear an increase in traffic accidents between car entering and exiting College Park Drive with cars exiting the Studebaker Road off ramp from the Westbound 7th Street/22 West. This need for more assessment is based on my observations of this dangerous intersection over the past 10 years as a local resident.

1) Vehicles do not expect such traffic signal lights so soon when immediately exiting a freeway off ramp.

2) It is difficult to see slowing vehicle tail lights when the sun is glaring in the late afternoon during rush hour traffic. Not seeing lit stop tail lights due to glare would lead to rear-end collisions more frequently in the late afternoon.

3) The sharp right curve in the road just prior to the proposed traffic signal light will not give drivers much opportunity to see a red light and therefore stop in time. Some drivers will not see it at all and run the red light.

4) Currently, there are various kinds of vegetation and shrubs that create a blind spot to the right side for exiting drivers that do not allow sufficient time to assess the intersection's traffic situation until very close to the curve of the road. Removal of this vegetation would provide drivers to procure a few more critical seconds to see the intersection whether there is a traffic signal or just maintain the traffic control as it is now. 1

5) Currently, drivers exceed the posted speed limit when exiting the off ramp, sometimes by 10 or more miles per hour. I'm not convinced that such driving behavior will change at all if a traffic signal light is installed, possible leading to a car not stopping in time (or not at all), and thus colliding with vehicles exiting College Park Drive onto the off ramp to Studebaker Road or the on ramp to the 22 West.

Thank you for your consideration

Rodney and Paraskevi June
Resident of College Park West Neighborhood Seal Beach CA 90740 rodjune@yahoo.com
mamapjune@yahoo.com

PC-J4

From: Rod June [rodjune@yahoo.com]
Sent: Monday, August 12, 2013 8:57 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: PUBLIC COMMENT - 22 Freeway/Studebaker Road Improvements

To Whom It May Concern:

This a public comment regarding the improvement proposed for the 22 West/Studebaker Road intersection. We live in College Park West Neighborhood of Seal Beach. We are concerned that a traffic light at the intersection of the Studebaker Road and College Park Drive, while likely favorable, still needs a deeper assessment of whether a traffic light signal placed at that intersection is safe and in the best interests of local residents and those exiting the freeway. The need for a deeper assessment is based on my observations of this dangerous intersection over the past 10 years as a local resident. This intersection has never been safe for any driver entering this intersection.

Our primary concern with the placement of this traffic signal light is the sudden slow down of traffic of those drivers exiting the 22 West to Studebaker Road, especially in the situations where the traffic signal is red for those exiting the 22 West freeway. I fear an increase in traffic accidents between cars entering and exiting College Park Drive with cars exiting the Studebaker Road off ramp from the Westbound 7th Street/22 West. There just isn't an abundant of approach vision for these exiting drivers.

My observations (and recommendations, as applicable) are as follows:

1) Vehicles do not expect such traffic signal lights so soon immediately after exiting a freeway off ramp with so little time to react, especially on the 90 degree curve to the right. The speed limit of vehicles exiting this off-ramp are in excess of the posted speed limit. The speed limit should be monitored more closely but not sure how this could be done other than setting up a radar system. If drivers adhered to the speed limit on the off-ramp, a traffic signal would likely be unnecessary.

2) It is difficult to see slowing vehicle tail lights when the sun is glaring in the late afternoon during rush hour traffic, the time of the day when this intersection is most dangerous. Not seeing stop tail lights while exiting this off-ramp due to glare may lead to rear-end collisions more frequently in the late afternoon as cars come to a sudden stop. This is the current situation even without a traffic signal light in the afternoons Monday through Friday.

3) Currently, there are various kinds of vegetation and shrubs that create a blind spot to the right side for exiting drivers that do not allow sufficient time to assess the intersection's traffic situation until very close to the curve of the road. Removal of this vegetation would provide drivers a few more critical seconds to see the intersection before they arrive at the intersection. This should increase safety.

4) Currently, drivers exceed the posted speed limit when exiting the off ramp, sometimes by 10 or more miles per hour. I'm not convinced that such driving behavior will change at all if a traffic signal light is installed, possible leading to a car not stopping in time (or not at all), and thus colliding with vehicles exiting College Park Drive onto the off ramp to Studebaker Road or the on ramp to the 22 West.

5) One or more overhead street lights along the exit off-ramp as well as placement at the intersection would make the intersection situation safer for all. Currently, the off-ramp is

1

PC-J4 Continued

not lit overhead and so dark that there is no way to adequately see the intersection situation upon approach at night.

6) Placement of several signs warning of an impending traffic signal light ahead will increase driver safety. I would recommend the placement of a yellow warning sign "Traffic Signal Ahead" with a yellow blinking light for those exiting the off-ramp. This would increase safety for all drivers entering this intersection.

Thank you for your consideration

Rodney and Paraskevi June
Resident of College Park West Neighborhood Seal Beach CA 90740 rodjune@yahoo.com

1 cont.

RESPONSE TO PUBLIC COMMENTS (PC)-J

Response to Comment Letter PC-J1

Comment PC-J1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Response to Comment Letter PC-J2

Comment PC-J2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-J3

Comment PC-J3-1

Analysis of the proposed improvements at the intersection of College Park Drive and the SR-22 westbound ramps is presented in the Supplemental Draft EIR/EIS. The analysis shows that the queues would not back up onto the SR-22 westbound freeway. The following table presents the anticipated queues; the data are presented in the Supplemental Traffic Study Report – Long Beach Area in Appendices III A-1, III A-2, IV A-1, and IV A-2 for Alternative 1 year 2020, Alternative 1 year 2040, Alternative 2 year 2020, and Alternative 2 year 2040, respectively. The table shows that the 95th percentile queues anticipated approaching the intersection with the proposed signal would not exceed 240 feet during the peak hours in the years 2020 and 2040. The distance from the stop line for the proposed signal at the intersection of the ramp with College Park Drive to the gore point is approximately 850 feet.

Anticipated 95th Percentile Queues on the SR-22 Westbound Exit Ramp Approach to the Proposed Signal at College Park Drive			
		Alternative 1	**Alternative 2**
2020	AM	142	148
	PM	223	240
2040	AM	160	189
	PM	226	240

The analysis presented in the Supplemental Draft EIR/EIS in Tables 3-9 and 3-11 shows that the proposed signal will operate at LOS B or C in the peak hours in 2020 and 2040.

During project design, placement of signal heads would be considered so that vehicles on the SR-22 westbound off-ramp would have sufficient sight distance to see and react to a red signal indication and prepare to stop.

Response to Comment Letter PC-J4

Comment PC-J4-1

See Response to Comment PC-J3-1. During project design, lighting and appropriate warning devices would be identified.

PUBLIC COMMENTS (PC)-K

PC-K1

From: Jim Kat [katman2013@hotmail.com]
Sent: Saturday, August 10, 2013 9:00 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Freeway

I love it lets get started! 1

Jim Katapodis Sent from my iPad

PC-K2

-----Original Message-----
From: keesgal@aol.com [mailto:keesgal@aol.com]
Sent: Tuesday, August 13, 2013 7:10 PM
To: Christina Byrne
Subject:

Please leave Fairview bridge area alone,the last project under our windows was a nightmare and sleepless without any consideration from workers with language&trash &trucks all night long for us working people the days were so long without sleep due to your construction 1

PC-K3

From: mikekobel@sbcglobal.net
Sent: Thursday, August 01, 2013 2:44 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Why not Alternative 2?

Hi Friends:

I am a resident of the City of Cypress. I am wondering why the OCTA Board recommendation was for Alternative 1 and not Alternative 2?

It seems that adding 2 GP lanes in each direction would reduce congestion much better than only 1 in each direction. According to the report the incremental cost was only $1 million (only an 8% increase).

What was the reason that OCTA only recommended Alternative 1 and not Alternative 2? (I would appreciate a reply).

I would prefer Alternative 2. 1

Thank you for your consideration.

Mike Kobel

PC-K4

From: Candy [ckkoogler@earthlink.net]
Sent: Sunday, August 11, 2013 11:00 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Follow Up Flag: Follow up
Flag Status: Completed

We have lived in our house on Maple Street for 17 years.
We enjoy the quality of life, our friendly neighbors, and especially the quiet neighborhood and well-maintained homes; we left our previous area due to excessive noise and a lack of maintenance of surrounding homes.
The pride of ownership in our neighborhood is a significant part of it's appeal.

If you install a freeway above the back yards of the homes on Daisy, you will immediately diminish this neighborhood.
Homes will lose appeal and thereby value. Current owners of those homes will be inclined to live elsewhere, which will introduce people who don't **mind** having a freeway hovering over their back yard.
If you look at homes adjacent to other undesirable structures, you will typically find a lack of 'pride of ownership'.

In addition, we will all be subject to increased freeway noise, and airborne pollution and debris from auto exhaust and the freeway itself.
I will be embarrassed by my neighborhood, instead of proud of it.
How can you justify irreparably damaging the quality of our lives?

I understand the freeway needs improvement; I am hopeful your engineers can design an alternative that will not unjustly punish people who bought homes based on the location and structure of the freeway at that time. 1

Thank you for you consideration,

Candace K. Koogler
Shelley D. Weir
16764 Maple Street
Fountain Valley, CA 92708
714-702-6737

PC-K5

From: richard krumhauer [krummy003@yahoo.com]
Sent: Wednesday, July 24, 2013 10:22 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Toll Road 605/405

We are strongly opposed to the toll road. We want 2 general use lanes as was already decided upon. Thank you, 1
Richard and Darcy Krumhauer Rossmoor

RESPONSE TO PUBLIC COMMENTS (PC)-K

Response to Comment Letter PC-K1

Comment PC-K1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Response to Comment Letter PC-K2

Comment PC-K2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Although similar types of construction effects could be anticipated, Caltrans and OCTA would work with the contractor to minimize impacts on adjacent properties. Please see Common Responses – Replacement of Fairview Road Overcrossing/Truncation of Tolled Express Lanes, Preferred Alternative Identification.

Response to Comment Letter PC-K3

Comment PC-K3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Preferred Alternative Identification.

Response to Comment Letter PC-K4

Comment PC-K4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis

presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values, Noise/Noise Analysis, Air Quality, Health Risks.

Response to Comment Letter PC-K5

Comment PC-K5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

PUBLIC COMMENTS (PC)-L

PC-L1

From: Diana Lanham [nannerham@socal.rr.com]
Sent: Sunday, August 11, 2013 4:07 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

To Whom It May Concern,

I am opposed to the expansion of the 405 freeway. The solution to our problem of congestion would be to start working on public transportation. It is absolutely ludicrous to think that adding another lane to an already over crowded highway will solve any problem. 1

Thank you, Diana Lanham

PC-L2

August 10, 2013

Ms. Smita Deshpande
Branch Chief – Caltrans District 12
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Attn: 405 SDEIR-DEIS Comment Period

Dear Ms. Deshpande:

I reside in the community of College Park East in the City of Seal Beach. My family and I live on the corner of Almond Avenue and Oleander Street – across from Almond Park. I have attended several community meetings regarding the 405 freeway improvement project, but I have never been given the opportunity to speak publicly. I have several concerns I would like to voice which have not been addressed in any of the public meetings of which I am aware.

My first concern is regarding the footprint of the freeway expansion as it passes by College Park East. The government owns hundreds of acres of land on the south side of the freeway. This land is currently used for growing crops such as cabbage. During harvest time, there are literally dozens of civilian farm workers tending the fields. I have been told the absurd story that the freeway cannot be expanded to the South because of "blast patterns" for the stored munitions. This is not to be believed because there are dozens of farm workers scattered throughout the fields hundreds of yards south of the freeway. All of College Parks East's concerns could be solved by simply moving the projected freeway's expansion fifteen feet into the cabbage fields. To date, I am not aware of any public official making formal requests to use this option. I have not seen any letters directed to our Senators or Congressmen or to the military. 1

My second concern is the proposed removal of the existing sound wall that lines the north side of the freeway as it passes by College Park East. Removal of this sound wall will **significantly diminish** the quality of life for many residents in our community. The Orange County Vector Control Agency has already had an increase of 40% in the amount of service calls since freeway construction began. Disruption of the existing habitat has forced rats, mice, raccoons, etc, into our neighborhood. Removal of the sound wall, even temporally, would only exacerbate this issue. The sound wall also provides noise, pollution, and intruder protection for our community. There is also the element of financial frugality. The project could save millions of dollars in demolition and reconstruction fees by leaving the sound wall in place. This is not to mention the potential loss in property values for many residents because their houses are even closer to a major freeway. 2

My last point of concern is the lack of planning and cooperation with Los Angeles County. Expanding a freeway as it passes through one county, and then leaving the freeway in tact as it passes through the adjacent county is a recipe for disaster. This lack of cooperation with the adjacent county has the high probability of making traffic matters worse by creating a bottleneck. 3

PC-L2 Continued

I should note that I am not the only person who shares the above mentioned issues. I am a past President of the College Park Ease Neighborhood Association, and I have had many people contact me and discuss their concerns with the freeway expansion project. It seems to many of us that our concerns were not addressed in any of the proposals for the project. I welcome your comments to any of the issues that I have raised. Please feel free to contact me.

Sincerely,

Damon Lanier
3510 Oleander Street
Seal Beach, CA 90740
Home (562) 430-8123
Cell (562) 655-6017
dclcop@verizon.net

PC-L3

From: Michelle Larsson [mlarsson@circleporsche.com]
Sent: Friday, August 09, 2013 5:18 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

As a Huntington Beach resident for over 30 years, I understand the need for traffic flow, but object to paying for improving a FREEWAY that will cater to commuters who work in LA. The improvements that OCTA are proposing will end at the county line, which will remain a bottleneck.
We have lived through this construction long enough. Let the freeway be free to drive for all. The HOV lanes are a joke! Our tax dollars pay for tax incentives to single drivers to commute in electric vehicles & use other loopholes that don't apply to us, the normal Joe Blow TAX PAYERS. These lanes were supposed to be for CARPOOLS (more than one person) to ease congestion for the entire freeway. 1
Synchronize the lights on Pacific Coast Highway while you are at it!
Thanks for listening.

Michelle Larsson
I also vote in every election!

PC-L4

From: J L [jlaw144@yahoo.com]
Sent: Friday, August 09, 2013 3:20 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: FWY Expansion Project and CPE Soundwall

Ms. Smita Deshpande or To Whom it May Concern:
Please do not keep bringing up this subject over and over again. We NEVER voted for more than one lane in each direction nor did we vote for moving the Soundwall. PLEASE stop making things so difficult on us. STOP!! Pushing your plans which would devastate our community. Please do not touch our Almond soundwall and leave the FWY between the 605 and the 22 alone....one lane in each direction is enough! 1
Thank you,
Jenea Lawley
3550 Carnation Cir.
SB, 90740

PC-L5

RE STOP THE 405 FREEWAY SOUND WALL REMOVAL IN SEAL BEACH

TO Governor Brown, Seal Beach City Council, Smita Deshpande, Cal Trans, OCTA, Profiting Entities,

My name is L. Le Cou, I am writing to protest the profound effects the constantly changing and newest plans for the 405widening project will have on the already beleaguered College Park East community in Seal Beach CA.
I own a home immediately on the Almond avenue running by the freeway 20 foot high sound wall. My family will be severely affected in regards to health and finances by this newest design for the freeway widening project.

Measure M was voted on and passed by the public. Its intent to add one lane each way to the 405 freeway system. A DOABLE SACRIFICE BY THIS COMMUNITY BECAUSE THE FREEWAY SOUND WALL WAS TO BE LEFT UNTOUCHED!. Caltrans,OCTA and the designing entities have radically altered the construction plans leaving our community without a voice or VOTE. The plans that cal trans, the planners, state of ca and the city have developed now, will have devastating effects on our lives, health and fragile financial statuses. Our homes are already feeling the financial losses with just the planning stages.

As it stands two new lanes in each direction are being presented as the new plans. Possible toll roads have been also presented. We have been told that the freeway sound wall is again being removed and will take away part of our existing roadway on Almond avenue. Narrowing this road and depleting our parking and bringing the freeway that much closer to our homes. We are too expect the wall to not be replaced IN ANY SPECIFIC TIME FRAME. The replacement wall will not be the same height as current standard height will shorten it by two feet. UNACCEPTABLE!

NEXT MAJOR PROBLEM . NOISE. We are already sleepless by the nearby pounding, beeping, crashing, rattling, loud voices, vibrations of the construction taking place . We are already experiencing cracking in our walls of our home. Now imagine this happening with out a sound wall and right on our immediate door steps. I am a critical care registered nurse working 12 hour shifts in a busy trauma unit. I cannot do my job without sleep. The noise factor without the freeway sound wall will not be livable. Sleep deprivation will play a heavy cost in my families life. We need that sound wall to stay where it is and Cal Trans and the state of CA need to sound proof the homes immediately next to the wall with double paned sound proof windows. We certainly can't bear the cost of lost hours on the job or replacing windows to mitigate noise.

Issue regarding our health besides sleep deprivation. The soot, dirt, airborne dust will exponentially increase during construction. Also, as the added lanes to nowhere at the LA county line bring congestion air pollution from idling stopped cars will increase smog. What do we do to protect our lungs? Just on my street we have lost 3 people to early death from cancer and asthma. AND AS WE ALL KNOW LACK OF SLEEP DOES NOT MAKE US NICER PEOPLE OR DRIVERS OR PARENTS, FRIENDS, NEIGHBORS, LOVERS OR ANY OTHER THING!

Did I mention loss of usable property being our homes will become unlivable with the wall down. Cracking of the walls etcetera. Loss of home prices due to undesirable

1

PC-L5 Continued

RE STOP THE 405 FREEWAY SOUND WALL REMOVAL IN SEAL BEACH

location to the construction.

What about our lungs? Look at our cars and the dirt caking them just because of the current freeway construction. What about the additional expense to keep our cars passably clean?

Really, what about our lungs?

Gridlock, no the four new lanes to no where are not going to help me get home, they will delay that. Toll lanes? now really do I have to pay now to get home and do I really have to sit in traffic while they sit empty for the most part? Generating revenue at my expense is really below the belt. Studies have shown these toll roads do not generate enough to pay the cost of building them also they are underutilized. I should be able to VOTE on all these new plans!

What about the businesses that will be bypassed if toll roads are placed. WHAT DOES THE EIR/EIS study say about that? NOT THAT I REALLY CARE. The city over built seal beach bvd against most of our wishes and failed to fix the Seal Beach bridge for the added traffic congestion that RESULTED. Timing how long ambulances take with sirens on seal beach blvd breaks my nurses heart. College park East residents have to cope with those changes brought to our lives. This is an excellent example of how EIR/ EIS STUDIES ARE NEVER CORRECT AND SKEWED TO ACCOMPLISH DESIRED OUTCOMES TO GET PROJECTS APROVED!

I may not have correlated my response to the EIR/EIS in a systematic fashion but come on folks im a mother and a nurse, not a engineer or lawyer… !
The community that I live in is tired of the constant noise, dirt, horrifying traffic, gridlock and bad manners displayed by the drivers in this area. We have been asked to deal with too much with out any help and it looks like we have no choice on how long this will go on or how bad it will be. Where has Cal Trans been to mitigate the traffic and gridlock. We sit in traffic unable to go on a green light because the intersections are constantly blocked Where has traffic control been during this unending freeway and bridge construction.
DO NOT TAKE THE SOUND WALL DOWN PLEEEEESE!!!!!! AND FIX THAT BRIDGE TRAFFIC PROBLEM!

In conclusion, what are the plans to compensate our losses, health , sleep deprivation , real-estate losses, noise and air pollution. What real study shows how our safety , health and finances will be maintained.

We have been told the wall is coming down and the construction is going to happen. We have no voice in this process the meetings are just lip service! AS OUR ELECTED OFFICIALS WHAT DO YOU HAVE TO SAY ABOUT THIS? WHERE IS MY VOTE? THIS IS NOT THE MEASURE M WE VOTED ON!

Please help us!

Sincerely,

8/11/13

Lorrie LeCou
3540 Carnation Circle Seal Beach CA

1 cont.

PC-L6

From: Carl Levine [carllevine@hotmail.com]
Sent: Monday, August 12, 2013 7:56 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents - formal comment

Regarding the proposed 405 Expansion project specifically for the northbound side exits at Ellis, Brookhurst and Magnolia Ave.

We wish to be included in the group opposed to any braided aboveground on/off ramp in this area.

We believe that although the extensive studies completed certainly do cover a variety of topics, most related to traffic and commerce flow in the area, the basic quality of life appears to have been neglected. We live at 9356 Daisy Ave. purchasing our home in 1992. At the time the noise level from the freeway heard at our house was noticeable. Over the years as traffic increased so has the noise level. We can expect the noise level to increase.

It is our understanding that the proposed braided expansions will not include any additional noise suppression that would significantly cut what is to be an expected increase in noise above the tree and current building height. In addition the aboveground braided on/off ramps would decrease the privacy long expected in Fountain Valley, known as a "Nice Place to Live, Work and Play". Resident's homes would be exposed for view by traffic overhead. The neighborhood would most likely be subjected to an increase in dust and debris as a result of traffic flow and turbulence created by the overhead ramp settling on the neighborhood below. The braided on/off ramps will change the feeling of the community losing the highly sought after local community atmosphere. If the expansion was to include the braided overhead ramps it is likely property values will be negatively impacted in the area of the aboveground ramps, and beyond because of the practice of using "comp" values to price a home for sale. 1

It appears there have been public meetings to discuss this matter but my family never received adequate notice allowing us to participate. The supplemental draft was only approved on 6/20/2013. When notified we did attend the meeting years ago when this project was first brought to the community. The meeting included a variety of models and examples of what to expect. We believe there are many residents that have not been made fully aware of the entire impact and notified of an opportunity to speak out. We were notified by a neighbor with in the last several days.

Once again please consider our household opposed to the option of elevated braided on/off ramps in the vicinity of Ellis, Brookhurst and Magnolia Avenues.

Cordially,

Carl & Elena Levine
9356 Daisy Ave.
Fountain Valley, CA 92708

PC-L7

6/22/12

To whom it May Concern,

We the Loneys (John & Van) resident of College Park East - do not wish to have the sound wall move as it will affect the quality of life and the noise impact which we would feel. 1

Thankyou

Van Loney
vanloney@gmail.com

PC-L8

From: Jeremy lounsbury [alounsbury888@gmail.com]
Sent: Friday, July 26, 2013 6:32 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: No Toll Road from Rossmoor Resident

To Whom it May Concern,

As a longtime resident of Rossmoor I want to voice my displeasure this is yet again on the table. I am wholeheartedly against a took road on the 405. 1

Amy Lounsbury

PC-L9

From: lunde@colligated.com
Sent: Saturday, August 10, 2013 12:35 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: lunde@colligated.com
Subject: No Toll Lanes

Residents and auto drivers have strongly recommended: NO TOLL LANES for "freeway" expansions to the 405 and/or the 605 1

Yours Truly,
Greg and Sherryl Lunde
12100-132 Montecito Rd.
Los Alamitos, CA 90720
TEL/FAX: 562-493-2908

Gregory Lunde, CMC-Emeritus, MBA/Ph.D.
www.colligated.com
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PC-L10

-----Original Message-----
From: David R.Lyon [mailto:drlyon4u@verizon.net]
Sent: Friday, August 09, 2013 4:06 PM
To: Christina Byrne
Subject: Re: EIR/EIS Comments

I am in favor of adding two additional lanes on both the Southbound and Northbound sides of I-405 because I believe is a more cost effective and longer-lasting solution to traffic congestion on the designated section of the freeway. However, I am very much OPPOSED to any proposal that would include toll lanes. 1

David Lyon
Seal Beach

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PC-L11

From: David R. Lyon [drlyon4u@verizon.net]
Sent: Friday, August 09, 2013 4:08 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

NO to toll lanes in this project. 1

David Lyon
Seal Beach

RESPONSE TO PUBLIC COMMENTS (PC)-L

Response to Comment Letter PC-L1

Comment PC-L1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives, Preferred Alternative Identification.

Response to Comment Letter PC-L2

Comment PC-L2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Shifting Improvements away from Residential Properties onto NAVWPNSTA Seal Beach Property.

Comment PC-L2-2

Please see Common Response – Almond Avenue Soundwall.

Comment PC-L2-3

Please see Common Response – Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach.

Response to Comment Letter PC-L3

Comment PC-L3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in

Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Opposition to Tolling.

Response to Comment Letter PC-L4

Comment PC-L4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Measure M, Almond Avenue Soundwall, Preferred Alternative Identification.

Response to Comment Letter PC-L5

Comment PC-L5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Appendix R1 (Response to Comments on Draft EIR/EIS) Response to Comments PC-L16-1 through PC-L16-9.

Response to Comment Letter PC-L6

Comment PC-L6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Notice for both availability of the Supplemental Draft EIR/S and the public hearing exceeded minimum State and Federal environmental regulatory requirements. See Response to Comment PC-D2-1.

Please also see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Insufficient Environmental Document/Mitigation Measures, Noise/Noise Analysis, Air Quality, Property Values, Noise/ Noise Analysis, Preferred Alternative Identification.

Response to Comment Letter PC-L7

Comment PC-L7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Noise/Noise Analysis.

Response to Comment Letter PC-L8

Comment PC-L8-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-L9

Comment PC-L9-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-L10

Comment PC-L10-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-L11

Comment PC-L11-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

PUBLIC COMMENTS (PC)-M

PC-M1

Lisa Peskay Malmsten
Attorney at Law
6215 E. Monita St.
Long Beach CA 90803
562-810-4789

August 12, 2013

To Whom It May Concern:

Re: Comments on I-405 Supplemental Draft EIR/EIS

Thank you for the opportunity to comment on the Supplemental Draft EIR/EIS for the I-405 Improvement Project.

I live in University Park Estates and share the concerns expressed at the July 24, 2013 community meeting by other residents who also live adjacent to the extension of 22-West, which we call 7th Street and which, frankly, has always been neglected by Cal Trans, as evidenced by its physical condition, the lack of thoughtful traffic-slowing strategies, the failure to integrate the state highway with the city streets it intersects, and overall unattractive appearance. I object to the City of Long Beach being required to pay its (mislabeled) "fair share" of a project that has essentially been forced upon it *until and unless these issues are addressed in a manner which provides a net benefit to Long Beach and does not merely mitigate conditions back to present levels.* **1**

My reason for writing separately is my special interest in the coordination of highway planning with airport transportation planning. I have followed this subject sporadically for thirty years and attended a SCAG conference in the early '80s at which the percentage of growth at LAX (and resultant impact on regional freeway traffic) that was attributable to Orange County residents was discussed. I could find no information on this in the current DEIR/EIS which I believe is an important omission. (The only reference I found to any airport was the following statement:

> On a regional level, I-405 provides access between cities in Orange and Los Angeles Counties. I-405 is used for commuting and inter-regional travel, along with direct and indirect access to employment centers, recreational attractions, shopping malls, medical centers, universities, airports, and other land uses.

This statement reflects virtually no research whatsoever! The failure to examine these trips results in the further failure to examine whether any portion of this traffic load could be managed by alternative forms of transportation, such as dedicated bus lanes or light-rail transit between major destinations. **2**

PC-M1 (Continued)

Parsons re: 405 / 2

Since the proposed project, even in the most expensive alternative and largest scale, would be inadequate when built (as stated repeatedly at the July 24 public meeting), the reasons for the trips and the application of one or more forms of mass transit as ways to prevent the project from being insufficient as soon as it is built, are essential pieces of information which must be addressed. The DEIR/EIS, as drafted, lacks any of this information. **2 cont.**

As a state agency, Caltrans is uniquely able to coordinate regional travel data, particularly needed if there is to be any reconciliation of different approaches to traffic between adjacent counties. Los Angeles County has devoted at least a portion of its transportation funding to the development of a light rail system, and yet will never be able to ameliorate (or even keep up with) the effects of regional traffic from counties which have chosen to embrace more and bigger freeways.

The Public Resources Code states in pertinent parts:

> **21001.** The Legislature……declares that it is the policy of the state to:
> (a) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.
> . . . .
> (d) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.
> . . . .
> (g) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment.
> **21002.** The Legislature finds and declares that it is the policy of the state that **public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects**, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. ……[I]n the event specific economic, social, or other conditions make infeasible such project

PC-M1 (Continued)

Parsons re: 405 / 3

> alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof. [Emphasis added.]
> **21002.1.** In order to achieve the objectives set forth in Section 21002, the Legislature hereby finds and declares that the following policy shall apply to the use of environmental impact reports prepared pursuant to this division:
> (a) The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided.

Reference to these sections would seem to make it clear: when further revised to provide a more complete picture of regional traffic needs, including the origins and destinations of the trips this EIR/EIS will provide decision-makers with meaningful and necessary information on which to make both short and long-term decisions. Further, such information, and such consideration, is mandated by the Public Resources Code. 3

Thank you for your consideration and anticipated response to these comments.

Sincerely,

/s/

Lisa Peskay Malmsten
Attorney at Law
Board Member, University Park Estates Neighborhood Association
limalms@att.net
6215 E. Monita St.
Long Beach CA 90803

joined by:

Pat Towner
President
University Park Estates Neighborhood Association
Pprmint10@aol.com
6239 E. 6th Street
Long Beach, CA 90803
562-430-7103

PC-M2

From: Luis and Jeannie Martinez [martinez9175@msn.com]
Sent: Monday, August 12, 2013 6:13 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS; cbyrne@octa.net
Subject: 405 Expansion project - Magnolia Off Ramp

We live in the tract where the braided off/on ramp would be located.
We strongly oppose this. It will affect our property values tremendously, not to mention make it even more noisier than it already is. The people's homes that back up to the freeway would lose value and privacy. How could this even be considered? 1

I don't even see why a braided on/off ramp is necessary.

Thank you,
Jeannie & Luis Martinez
9175 Poinsettia Ave.
Fountain Valley, CA 92708

PC-M3

I-405 Improvement Project

Comment Sheet

Please provide your comments regarding the I-405 Improvement Project Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS). Comments must be received by Caltrans no later than July 17, 2012.

Name (First and Last): Michele McLeod
Organization:
Address (Optional): 4264 Cranberry Ave, Seal Beach, CA 90740
Phone Number: 562-879-3949
Email address: michelemcleod@mindspring.com

Comments: Please Use ALT. 1 and Keep the original sound wall. Keep costs down. Please not toll road! 1

Thank you.

(Space for comments continued on reverse)

PC-M4

August 9, 2013

CHRISTINA L. BYRNE
Community Relations Officer
Orange County Transportation Authority
550 South Main Street
Orange, California

Ms. Byrne:

Allow me to document my opposition to the proposed construction of a braided freeway ramp at northbound 405 exit at Magnolia and Warner Avenues.

Although I am not overly disturbed by the fact that vehicles could look directly onto my property (their eyes should be on the road and not on my backyard), we are concerned with other features of the proposed change.

Regardless of the fact that a sound barrier will be constructed, it is just that, a barrier against sound and, given our past experience for the last twenty years, they don't really do that much good. It is bound to be worse with increased traffic in the future, and in Los Angeles generally, and Orange County specifically. You can always count on the fact that there will be more traffic and more noise. Nothing can block it.
Additionally, our son has Asthma. The additional gas and oil fumes from exhaust emissions will be vented directly into our backyard, and may exacerbate his problems. There will be many such persons affected.

A huge concern of our family is safety. We wonder about the risk of a car driving out of control and veering off the on ramp and into the backyard. We play and swim in our backyard on a daily basis.

Further, homeowners being exposed to this flyover ramp are being subjected directly to a financial hit that will translate directly to their pocketbooks when they sell homes with no compensating dollars in return, which would have been the case with eminent domain. I honestly do not know what percentage of home value would be lost; however, even if it were only 10 %, some of these homes have been appraised at $600,000.00 to $800,000.00. Even a 10% value reduction would cost the owner sixty to eighty thousand dollars, and frankly, I feel the percentage would be higher. No one would want to buy a home looking at a flyover ramp unless they are bargain basement prices. This is not right and we would obviously like to avoid that possibility since the money we have invested in our home is our future.

Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found. 1

Kind regards,

James and Lynn Medeiros
16975 Daisy Avenue
Fountain Valley, CA 92708

PC-M5

From: "Meyers, Stephani 074" <StephaniM@newportmeat.com>
Subject: No to moving the soundwall

We live at 3580 Violet Street in College Park East. My cell number is 714-318-8581. My parents owned the home from 1979 until my father passed in January 2012. My husband and I are now renovating and moving back to the home I grew up in and are looking forward to doing so.

We would be adamantly opposed to moving the soundwall further in to College Park East in order to expand the 405 Freeway. Almond is used by many residents of the neighborhood to ride bikes, walk, run, etc. Many children walk Almond from bus stops and to go to and from the neighborhood parks and friends' homes. Traffic is fairly heavy on Almond and people tend to disobey the posted speed limits. I prefer to have more of a shoulder to avoid issues between pedestrians/bicyclists and these cars. I do consider it to be a safety issue in addition to a noise and quality of life issue for the neighborhood. 1

Please do NOT move the sound wall in to College Park East!

Thank you for your consideration.

Stephani Meyers
Director of Credit and Accounting Controls
Newport Meat Company
16691 Hale Avenue, Irvine, CA 92606
direct 949-399-4212
fax 949-477-2322
stephanim@newportmeat.com

PC-M6

From: Roger Michaud [rljmichaud@aol.com]
Sent: Monday, July 15, 2013 3:36 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re:The Interstate 405 (I-405) Improvement Project

Due to repeated high congestion during AM and PM commuting on the 405 thru OC I would prefer to see the 2 lane expansion from Brookhurst/Euclid to 605 plan implemented. 1

Regards,

Roger Michaud

PC-M7

From: miller.sbcc@earthlink.net
Sent: Monday, August 12, 2013 10:01 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Comments Regarding the Supplemental Draft EIR/EIS for the I-405 Improvement Project

Dear Ms. Deshpande:

This email provides comments regarding the Supplemental Draft EIR/EIS for the I-405 Improvement Project.

While the intersections within the City of Long Beach were evaluated and mitigation measures proposed, no mitigation measures were proposed for the I-405 Freeway (Mainline) within the City of Long Beach. Mitigation measures for the I-405 Freeway (Mainline) within the City of Long Beach should be addressed because the Supplemental Draft EIR/EIS indicates that portion of the freeway would be impacted by the Project. 1

A year ago, approximately $600,000.00 was spent to improve the intersection of College Park Drive at the Studebaker Road off-ramp of the 22 Freeway. Should the Supplemental Draft EIR/EIS proposed traffic signal for this intersection not be approved by Caltrans, College Park Drive should be extended to Studebaker Road and no longer intersect with the Studebaker Road off-ramp of the 22 Freeway. 2

Thank you for consideration of my additional comments.

Gary Miller

PC-M8

From: Gregg Millett [greggm92708@yahoo.com]
Sent: Monday, August 12, 2013 2:16 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Opposition to 405 Expansion Project Braided Off-Ramp Near Fountain Valley

Dear Christina Byrne, Community Outreach Director, OCTA,
As a Fountain Valley resident of long-standing, I am opposed to the proposed North 405 fwy braided off-ramp located adjacent to the Westmont home development in Fountain Valley. Unlike off-ramps located near industrial and commercial areas, this braided off-ramp will negatively--and directly--impact Fountain Valley homeowners through reduced quality of life and diminished home values.
Accordingly, I am formally requesting that you do not approve this proposal. 1

Respectfully,

Gregg Millett
16809 Mulberry Circle
Fountain Valley CA 92708
(714) 378-9858

PC-M9

From: Teri [mail4terisa@yahoo.com]
Sent: Saturday, June 29, 2013 12:23 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Project in OC

Hello,

I propose adding two GP lanes in each direction between the 605 and Bristol/Euclid street. I have been driving on this freeway for 30+ years during the heaviest of traffic. Based on my observations over the many years, I can attest that the majority of drivers are the sole occupant in the vehicle. These are the people, myself included, who are jamming up the freeways. Generally, the HOV lanes are clear so I do not see a benefit to the majority of commuters by adding additional HOV/toll lanes, nor do I believe that the number of sole drivers who are willing and or able to pay a toll fee will decrease traffic on the regular lanes. People will continue to drive alone; therefore, the addition of two GP lanes to the freeway will greatly help to ease congestion. **1**

Regards,
Teri Montgomery

PC-M10

From: Jeffrey Moore [jeffreysmoores@gmail.com]
Sent: Monday, August 12, 2013 4:01 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

NO TOLL LANES, PLEASE!! The 110 toll lanes are a huge failure. They have made traffic worse! One GP lane and one additional carpool lane in each direction is the the best option. **1**
Thank you.
Sent from my iPod

PC-M11

From: Thomas Moore [tjmoore99@yahoo.com]
Sent: Saturday, July 27, 2013 10:43 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Regarding Proposed Improvements on westbound on/off ramp and College Park Drive

We just went to the meeting here in Seal Beach at Edison Park today. I saw the proposal to add a traffic light at the end of our street. (College Park Dr. / 7th Street Offramp) We, as a community, met previously and made several requests to not do a light as we think it would be worse than it is now.

As it is now, traffic flows smoothly during busy times and the lanes were redesigned to work well with our community. I believe a traffic light would cause serious backups on the offramp as that offramp is so heavily used and it flows nicely now. With any kind of traffic light, even one that lasts only 10-20 seconds for the stop light, it would cause disastrous slowdowns. **1**

I think the money to change the lanes and add a traffic light would be a waste of money.

Also, in regards to adding a toll lane on the freeway, I strongly oppose that. I think adding ONE GP lane (each way) would be fine. **2**

On another note, I think adding a commuter train in the middle of the freeway from Irvine Spectrum up to Long Beach Train station with several stops along the way would be a good idea since traffic in Los Angeles was built along the freeways, putting a train either on one side or in the middle of the freeway makes sense to me. **3**

Thanks,

Thomas Moore
192 College Park Dr.
Seal Beach, CA

PC-M12

From: Brad & Trisha Morris [somethingobvious@gmail.com]
Sent: Wednesday, July 17, 2013 12:04 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Improvement project

To whom it may concern:

I have spoken to Christina Byrne at OCTA and it seems that our sound wall is not in danger of moving at this time. Just to be certain that our concerns on this issue are heard, please see the note below listing environmental impacts for our home and neighborhood.

We still feel Alternative 1 is the best option for us, but I understand you have new council members who want to be thorough and explore other options as well.

Concerns/Comments re: the proposed expansion of the 405.

Any scenario that involves tearing down and moving the soundwall in Seal Beach along Almond avenue is unacceptable

- Any period of time without any part of the wall is unacceptable in our neighborhood. The noise would be completely intolerable not only from the construction, but from the freeway. Could you sleep with nothing between your home and the 405? How do you expect our children to?
- I am confident that the noise level while there is no wall violates any number of environmental issues in the study that were glossed only looking at the final result. The final result will certainly be bad enough for us, but the rebuild is completely intolerable.
- There is absolutely no way they can build a new wall before tearing down the old (not enough room for the workers and equipment between the two structures we are told).
- No one knows how long the wall be down because "they haven't looked at that closely yet". That answer is completely unacceptable given how long it could potentially be down.
- There will still be a backup as you approach the 605 because LA County is not do any expansion there. THAT BACK UP WILL FURTHER BOTTLENECK OUR EXITS AND CREATES FURTHER POLLUTION IN THE HOMES & COMMUNITIES BORDERING THE 405
- Our property values will likely decrease – almost certainly during the period where the wall is being rebuilt and it is non-existent, and even afterwards because we will lose the landscaping we currently enjoy, not all of the wall will be uniform as not all of it is moving, and because the noise and pollution will be that much closer to our homes. In addition, our exits will be bottlenecked by the narrowing of lanes at the county line so getting to and from our homes will be perceived as more challenging instead of an improvement.

1

PC-M12 (Continued)

- Pollution will only increase in an area that already has more than its fair share of black soot on everything.
- We will lose 1 side of parking on Almond. This may not seem like a big deal at first blush, but our street sweeping does one side of a cul de sac at a time, and several of our cul de sacs have limited to almost no curb parking. What happens when the street sweeper is coming down the side of Almond that has parking – where are those cars supposed to go? Blocks away?
- We have enjoyed that wider street now for several decades and a more narrow street will affect the safety of our children, bicyclists, roller bladers, runners, walkers, dog walkers, and the elderly who prefer to use their walkers on the road instead of the bumpy sidewalk. And that list is not all inclusive as many of our residents use Almond to access our parks.
- Measure M did not approve Alternative 2 and 3, only Alternative 1.
- The new wall will not be as good as our current one – not up to the same earthquake standards as when originally built.
- I lack faith that the builders will truly make rebuilding the wall a priority – what if something happens and we don't get our wall back for a long time or at all!
- Power outages for the entire neighborhood as power lines are relocated is unacceptable
- We are equally concerned for our neighbors in Fountain Valley who will lose jobs and revenue for the city when 4 of their businesses are uprooted. I know there is talk about relocating them, but so much of a business's success is dependent on it's location – it is unlikely to be a move up for them.
- We will lose trees in Almond Park if the wall is moved at all in that area. The plan right now is to not move that part, so why do you have to move the adjacent parts????
- It seems that either Alternative 2 or 3 will create more lanes of traffic outside our neighborhood by just moving the bottleneck to the LA Count/Orange County interface on the 405. The result is we'll have MORE pollution and noise in our neighborhood as the freeway clogs right at the border, and all those extra cars have nowhere to go with no other freeways expanded. The 605 northbound has never been an issue; the majority of the traffic backup is caused by the 405 north of OC, and expanding the freeway to the border not only fails to address the issue it makes the pollution worse in this area as more cars are backed up more hours of the day on the freeway. The added pollution could be significant for all of us, especially children with asthma, and elderly people with emphysema/COPD, bronchitis, or asthma.

Proposals:

- Go with Alternative 1 as approved by the voters in Measure M
- Narrow the shoulder by a few feet where necessary to avoid moving the wall at all – bridges don't have to have a 10' foot shoulder, so having small sections with smaller shoulders should be achievable without having to make changes to the soundwall.
- Start eliminating one of the General Purpose lanes early to avoid moving the wall

1 cont.

PC-M12 (Continued)

- Consider light rail or some other public transportation.
- Lobby the heck out of the Navy to give a few feet where needed on their side – we don't need 10 feet all the way, just occasionally
- **DO WHATEVER IT TAKES NOT TO MOVE THE WALL!!!!!!!!!!!**

1 cont.

PC-M13

From: enettem7@gmail.com
Sent: Thursday, August 01, 2013 3:31 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Toll lanes

I am absolutely opposed to caltrans putting in toll lanes on freeways. The public has already paid for roads in taxes. Futhermore, toll roads impact lower socioeconomic people more than the wealthy. NO TOLL ROADS! Enette Murachver, a voting senior. 1

Sent from Samsung tablet

RESPONSE TO PUBLIC COMMENTS (PC)-M

Response to Comment Letter PC-M1

Comment PC-M1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-10 would address cumulative significant impacts to traffic on SR-22 (7th Street), which is a State highway. This fair share would be contributed by the I-405 Improvement Project for the proposed improvements. The remainder of the funding would be the responsibility of the State, not the City of Long Beach.

Comment PC-M1-2

Please see Common Response – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Comment PC-M1-3

The Draft EIR/EIS and the Supplemental Draft EIR/EIS identify the adverse effects and significant impacts of the proposed project on the environment, based on an examination of a range of topics covered in Chapter 3 of the Draft EIR/EIS and Chapter 3 of the Supplemental Draft EIR/EIS. Section 2.2.7 of the Draft EIR/EIS makes it clear that a range of alternatives were considered during the project development process.

Section 1.2.2.1, Capacity, Transportation Demand, and Safety, of the Draft EIR/EIS makes it clear, under the subheading “Regional Population and Employment Growth Trends,” that I-405 serves population and employment centers along the project corridor. Additionally, Section 1.2.2.5, Modal Inter-Relationships and System Linkages, of the Draft EIR/EIS makes it clear that I-405 provides intra-regional, inter-regional, and local access for both Orange and Los Angeles counties. Under the heading “Traffic Forecasting Model” on page 3.1.6-38 of the Draft EIR/EIS, the traffic forecasts are explained. The Traffic Study (Draft EIR/EIS Technical Appendix L), in Section 2.2.2, Future Years Traffic Volumes (2020 and 2040), contains a more thorough explanation of the forecasting process. That explanation identifies the forecasting model as a regional model and a traditional four-step forecasting process. The third of those four steps is

explained as distributing trips from each origin zone in the regional model to each destination zone. This step of the modeling process provides a complete consideration of the origins and destinations of regional traffic. Taken together, these sections provide decision makers with information regarding the origins and destinations of traffic using the corridor.

Response to Comment Letter PC-M2

Comment PC-M2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values, Noise/Noise Analysis.

Response to Comment Letter PC-M3

Comment PC-M3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identification, Almond Avenue Soundwall, Opposition to Tolling.

Response to Comment Letter PC-M4

Comment PC-M4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Noise/Noise Analysis, Health Risks, Property Values.

Response to Comment Letter PC-M5

Comment PC-M5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Preferred Alternative Identification.

Response to Comment Letter PC-M6

Comment PC-M6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Preferred Alternative Identification.

Response to Comment Letter PC-M7

Comment PC-M7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Tables 3-2 and 3-6 of the Supplemental Draft EIR/EIS show that LOS anticipated in 2020 and 2040 on I-405 north of I-605 to Lakewood Boulevard does not change when comparing alternatives, including the No Build Alternative.

Table 3-6 shows 2040 D/C ratios of 1.00 or more along the I-405 mainline from I-605 to Studebaker Road for all alternatives, including the No Build Alternative. On I-405, between Studebaker Road and Lakewood Boulevard, D/C ratios of 0.97 or more are anticipated. All of these values are indicative of heavy congestion with stop-and-go conditions. While the D/C ratios increase under the build alternatives compared to the No Build Alternative, the fact that heavy congestion is anticipated under the no-build condition indicates that the proposed project would have an impact, but the impact would not be significant. The fact that LOS does not change when comparing the alternatives also indicates impacts would not be significant.

Table 3-2 shows D/C ratios of 0.92 or more along the I-405 mainline from I-605 to Studebaker Road for all alternatives, including the No Build Alternative. On I-405, between Studebaker Road and Lakewood Boulevard, D/C ratios of 0.92 or more are anticipated. All of these values are indicative of congestion with some stop-and-go conditions. While the D/C ratios increase under the build alternatives compared to the No Build Alternative, these increases are not sufficient to change LOS. The fact that LOS does not change when comparing the alternatives indicates impacts would not be significant.

Comment PC-M7-2

Because Measure T-11 provides that the I-405 Improvement Project would make a fair share contribution for the improvements included in the measure, that fair share amount would be unaffected and could be used by Caltrans to implement either the improvement included in the Supplemental Draft EIR/EIS, the improvement suggested in the comment, or any other improvement that addresses the cumulative adverse effect at the intersection.

Response to Comment Letter PC-M8

Comment PC-M8-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values.

Response to Comment Letter PC-M9

Comment PC-M9-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identification, Opposition to Tolling.

Response to Comment Letter PC-M10

Comment PC-M10-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Preferred Alternative Identification, Opposition to Tolling.

Response to Comment Letter PC-M11

Comment PC-M11-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Analysis of the proposed improvements at the intersection of College Park Drive and the SR-22 westbound ramps is presented in the Supplemental Draft EIR/EIS. The analysis shows that the queues would not back up onto the SR-22 westbound freeway. The following table presents the anticipated queues; the data are presented in the Supplemental Traffic Study Report – Long Beach Area in Appendices III A-1, III A-2, IV A-1, and IV A-2 for Alternative 1 year 2020, Alternative 1 year 2040, Alternative 2 year 2020, and Alternative 2 year 2040, respectively. The table shows that the 95th percentile queues anticipated approaching the intersection with the proposed signal would not exceed 240 feet during the peak hours in the years 2020 and 2040. The distance from the stop line for the proposed signal at the intersection of the ramp with College Park Drive to the gore point is approximately 850 feet.

Anticipated 95th Percentile Queues on the SR-22 Westbound Exit Ramp Approach to the Proposed Signal at College Park Drive			
		Alternative 1	**Alternative 2**
2020	AM	142	148
	PM	223	240
2040	AM	160	189
	PM	226	240

The analysis presented in the Supplemental Draft EIR/EIS in Tables 3-9 and 3-11 shows that the proposed signal will operate at LOS B or C in the peak hours in 2020 and 2040.

Comment PC-M11-2

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Comment PC-M11-3

Please see Common Response – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Response to Comment Letter PC-M12

Comment PC-M12-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. You will be notified when the Final EIR/EIS is available for review. Please see Appendix R1 (Response to Comments on Draft EIR/EIS) for Responses to Comments PC-A17-1 through PC-A17-12.

Response to Comment Letter PC-M13

Comment PC-M13-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Preferred Alternative Identification, Opposition to Tolling.

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PUBLIC COMMENTS (PC)-N

PC-N1

From: Neal, Patricia O [Patricia.Neal@va.gov]
Sent: Thursday, August 08, 2013 8:46 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Importance: High

Absolutely not. Not only is this project not wanted or needed, but the project will also displace the coyotes AGAIN, and cause them to venture into the local neighborhoods for food putting residents (especially children) at risk. 1

What is wrong with you people? THINK!

PC-N2

From: JANE NETHERS [4nethers@msn.com]
Sent: Wednesday, July 24, 2013 8:54 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: No toll road

Richard and I are opposed to 405 -605 toll road. 1
Thanks, Jane Nethers

PC-N3

From: HUNG NGUYEN [snguyhun@yahoo.com]
Sent: Sunday, August 11, 2013 9:35 PM
To: cbyrne@OCTA.net; Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Expansin Project

I am opposing a braided on/off ramp on the 405 Northbound side since this will impact our life. 1

Hung Nguyen
9054 Wendy Cir
Fountain Valley, CA 92708
714-809-4153

PC-N4

From: lc_env@yahoo.com
Sent: Monday, August 12, 2013 12:04 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Dear Sir or Madam,
We living on Daisy Avenue in Fountain Valley are greatly concerned about this new project and its affect on our neighborhood. We are living with a constant noise of sirens and officers pulling people over in late evening and very early morning hours already. Even through double paned windows and doors, we can hear traffic. We do not need more traffic and more noise. Not to mention the air pollution with more cars around and we also have a concern for our privacy. 1

Therefore, we are opposed to this expansion project. Please reconsider and cease this plan.

Thank you.

Mrs. Nguyen

Sent from my iPad

PC-N5

From: Christine Nichols [christine.m.nichols@ca.rr.com]
Sent: Sunday, August 11, 2013 11:56 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Feedback

I do not support either of the alternatives suggested. It has been agreed upon to add one general use lane in both directions; I support this. I do not support adding ANY version of toll lanes or the 3 person carpool lane, or truncating any of the freeway near Valley View.

1. I am against toll lanes - if the money is not currently available to add the lanes, they should not be built. California has been under severe budget cuts:

- implemented furlough days for service workers such as at the DMV and some of the court houses
- implemented furlough days for teachers
- is reducing fire fighters and law enforcement
- released prisoners early from state prisons

Again, the State does not have the money - taking on an unpaid endeavor to place the citizens and the state in further debt is irresponsible.

2. Adding additional lanes will only bottleneck the traffic at the Los Angeles County line; this message was clearly communicated during the early stages of the public meetings. Los Angeles County has not agreed to expand the 405 Freeway on their side of the border so truncating this at, Valley View Street, or any exit, will still create a bottleneck.

3. Creating a three or more person carpool lane is confusing and inconsistent with the remaining state of California. What happens when the vehicle carrying two passengers enters the short HOV lane from the Los Angeles County line or further south in Orange County? They exit the carpool lane?

I attended several of the previous public meetings. The public was clear - they are not in support of these measures. By "repackaging" these measures under a different name seems to me like it is being forced onto the taxpayers. My input is the same: **no on these measures.** 1

PC-N6

From: Phyllis Nordstrom [pnord@earthlink.net]
Sent: Friday, August 02, 2013 11:44 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 SDEIR-DEIS Comment Period"

Smita Deshpande, Brand Chief
Caltrans-District 12
"Attn: 405 SDEIR-DEIS Comment Period"
2201 Dupont Drive, Suite 200
Irvine, CA 92612

As a resident of College Park East I urge you to consider Seal Beach Alternate 1, no impact to the Almond Avenue sound wall. Thank you-Phyllis Nordstrom 1

RESPONSE TO PUBLIC COMMENTS (PC)-N

Response to Comment Letter PC-N1

Comment PC-N1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Response to Comment Letter PC-N2

Comment PC-N2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Selection.

Response to Comment Letter PC-N3

Comment PC-N3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange.

Response to Comment Letter PC-N4

Comment PC-N4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in

Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Selection, Noise/Noise Analysis, Air Quality, Northbound Braided Ramps at the Magnolia/Warner Interchange.

Response to Comment Letter PC-N5

Comment PC-N5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. You will be notified when the Final EIR/EIS is available for review. Caltrans acknowledges your support for Alternative 1, adding one GP lane in each direction.

With respect to opposition to tolling, please see Common Response – Opposition to Tolling. With respect to project funding, please see Common Response – Measure M.

With respect to a potential bottleneck at the Los Angeles county line, please see Common Response – Traffic Flow at the Orange County/Los Angeles County Line. With respect to truncating a northbound lane at the Valley View exit, please see Common Response – Almond Avenue Soundwall. With respect to the transition areas and potentially differing occupancy requirements for use of the HOV lane in Los Angeles County and free use of Express Lanes in Orange County, operations analysis of the transition areas are presented in the Draft EIR/EIS on pages 3.1.6-96 and 3.1.6-97. The transitions would be similar to those currently in operation on SR-91 at both the eastern and western ends of the existing Express Lanes.

Response to Comment Letter PC-N6

Comment PC-N6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Preferred Alternative Selection.

PUBLIC COMMENTS (PC)-P

PC-P1

From: janine@paradiseroadcarcare.com
Sent: Wednesday, August 07, 2013 6:39 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

If a braided on and off ramp is put in at magnolia/Warner northbound side I intend on gathering all residence located on Daisy avenue to sue for loss of property value and quality of life. So many residences here on Daisy avenue are original owners, I myself have lived here for 22 years. This proposed change will severely affect our property values and our quality of life. This house is my retirement and I have worked so hard to hold on to it. I would be devastated. My privacy in my own home taken away. All previous proposals I have read have only mentioned a lane addition. This is not a commercial area where the impact is not as great, these are private homes owned by individuals and infringes on our privacy and severely affects us financially. Please reconsider! 1

Janine Parker
16863 Daisy Avenue
Fountain Valley, CA. 92708

Sent from my iPhone

PC-P2

From: Janine [j9parker@socal.rr.com]
Sent: Friday, August 09, 2013 5:35 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Fw: I-405 Comment Deadline is August 12

I strongly object to the plans for the Magnolia/Warner Northbound braided on-ramp, I see no mention of the impact or visuals for the homes that are located on Daisy Avenue in the EIR. I walked my neighborhood last night after hearing from Christina Byrne and everyone I talked to had no idea that this was what was chosen. The EIR only talks about the business on the southbound side. I asked for specifics and was told that the top of the braided on ramp behind my property will be 1 ft above my existing retaining wall, 36 feet from my property line. I was told that there would be no additional noise, no mention of my privacy be taken away, cars will be able to see directly into my back yard and into my living room. This will severely affect my property value, my health, my privacy. Are you able to have a backyard BBQ? Well I wont be without having thousands of people driving by.

Our neighborhood has been ignored, excluded and not informed and we are affected most. That you can see from the EIR, they even dismissed us! I looked and at no other point in our area is this one in a residential area, commercial I can understand people only visit for an hour or two. This is our home, my kids were born and grew up here. This is my biggest source for retirement and you are taking that investment away. I am going to encourage my neighborhood to hire an attorney to save us from you, you who are supposed to be improving our community but in fact you are taking it away. 1

As I told Christina, If you are doing a project it is your responsibility as a business person with integrity to make sure you if your improvements are going to directly impact a homeowner, you should contact them personally not just bury it in a document in the hopes that you will get the path of least resistance. I'm disgusted, upset and angry, all at the same time. If you knew how hard I worked to keep this house for my kids, all by myself you would understand. There is always someone there to knock you right back down.

I have asked Christina if she could arrange a community meeting with my neighborhood, you and OCTA to actually communicate with us so you can hear our feedback, questions and concerns. Maybe you could actually show us visuals instead of engineered drawings that unless we are architects we would not understand.

Janine Parker
16863 Daisy Avenue
Fountain Valley
714-642-3153

PC-P3

From: WILLIAM PETKUS [wpetkus@yahoo.com]
Sent: Thursday, August 01, 2013 6:55 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I405

I oppose toll lanes on the San Diego Freeway. 1

PC-P4

From: Christian Porras [christianporras999@yahoo.com]
Sent: Tuesday, July 30, 2013 12:31 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Comments to the I-405 Supplmental EIR/EIS
Attachments: Supplem EIR questions toSmita Desphpande . 07 17 2013.docx

Smita Deshpande, Branch Chief
Caltrans-District 12
"Attn: 405 SDEIR-DEIS Comment Period"
2201 Dupont Drive, Suite 200
Irvine, CA 92612

PC-P4 (Continued)

I-405 Improvement Project. SUPPLEMENT DRAF EIR/EIS . MY WRITTEN COMMENTS
07.18.2013

Chapter 2: Purpose and Need/Project Description	Questions	Responses
Page 2-1	**Need for the Project** Page 2-1. Under 2.2 Why does the I-405 have a limitation in detecting traffic incidents and providing rapid response and clearance due to lack of capacity and technological infrastructure?	1
	Why lack of capacity has anything to do with detecting traffic incidents? What is technology infrastructure?	2
Page 2-2:	**Project Description - see 10th paragraph** It reads "the project limits extend 0.2 miles south of Bristol Street (I2-ORA-405PM 9.3) What I2 stand for? North of I-605 (0.7-LA-405PM1.2) What 07 stand for? Beach Blvd. undercrossing (I2-ORA-22-PM R3.8) What R 3.8 stands for?	3
	I can be concluded that the writing of the EIR careless about the lay man who do not easy understand this terminology conclusion: lack of environmental justice. Is this correct?	4
Page 2-3:	**After twelfth paragraph** It refers to the no build alternative and three build alternatives: Alternative 1: Add on lane in each direction Alternative 2: Add two lanes in each direction Alternative 3: Express (Toll Road) and add on GP lane in each direction **Questions:** If the OCTA Board of Commission already approved the implementation of alternative 1 in the 2012, eliminating alternative 2 and 3 1. Why to insist in considering again alternative 2 and 3? 2. It has been proved again and again that toll roads are a burden to the tax payers	5
	Only the toll road concessionaries and bond sellers are beneficiaries of toll roads facilities, why to implement a toll road as alternative (3), The toll revenues do not amortize the constructing and operating a toll road. Examples of toll road facilities. Refer to a report prepared the state treasure Bill Lockyer. A toll road operator in Orange County, The Foot Hill, and Eastern Corridor Agency is at risk of defaulting on its payment, if it does not refinance more than 2 billion of outstanding debt. Toll collections are expensive and collections have not been as expected.	6
	There are cases of default in other state such as Virginia (Dulles Greenway), South Carolina (Southern Connector), Indiana Why to insist in a toll road construction in the I 405? **Last Sentence:** Describe the EAOJ440K Project as a separate project. The fact that projects are not integrated at once, causes impact to the communities year after year, communities such as those along the I-405 (Huntington Beach, Westminster, Seal Beach, Los Alamitos, Rose more, Long Beach are sick and tired of continuous disruptions, unhealthy conditions, pollutants, noises, detrimental to business	7

PC-P4 (Continued)

Page 2-4:	**Assuming that Alternative 2 is still under consideration** The fact that adds two GP in each direction of I-405 **Question:** Does the implementation of Alt 2 implies to tear down an existing sound wall located at the I-405 Northbound Right ROW at Almond St. in the community of College Park East, City of Seal Beach? If this is the case, can a design exception be requested for avoiding tearing down the sound wall? Have you taken into consideration the fact that the relocation of the sound wall will result in severe impacts to the community of College Park East, Seal Beach. If this is the case the City of Seal Beach will sue the agencies for requesting stopping the relocation of this sound wall causing delays on these projects Should Almond St. sound wall is relocated the existing 32 feet street ROW, will the narrowed to 22 feet. Correct? Where the EIR addresses the lack of parking for the cull de sac streets neighbors facing Almont St. during sweeping day, the parking of emergency vehicles (fire trucks etc..)?	8
Page 2-6:	**Alternative 3** Explain the HOV2S and HOV3+. What 2 and 3 stand for? **Explain the following:** What R0.7 and R3.8 stands for in SR-22? What R27.8 I2-R and R1.6 stands for in I2-ORA-73 & 605?	9
Page 2-7:	**14th paragraph** Why to add an auxiliary lane between Seal Beach Blvd. on ramp and the SR-22/7th street off ramp considering the fact that this ramp has just been completed?	10
	25th paragraph Why this sentence only highlights the advantage of the toll road but it does not address the extra cost of cost 300 million dollar with respect to alternative 1?	11
Page 2-10: **Page 2-8:**	**Construction Stage** **Paragraph 12.** It lists the improvement which are being taken place (under construction) anticipated to be completed in 2015 Also it states that any of the alternatives 1, 2, & 3 are expected to start construction in 2015 Community of College Park East, Seal Beach is experiencing 2 years plus 2 more years of traffic description noises, unhealthy pollutants from the piles driving machines, heavy earth moving equipment. Should alternatives 2 and 3 are implemented. They will be completed in 2020, meaning that the community of College Park East Seal Beach will experience 7 more years of construction. This is just a non environmental justice. Correct?	12
	The letter from David Rose man City of Long Beach City Engineer and Consultants state that their own studies traffic impacts exceeds the level of service of those obtained in the EIR by OCTA/CALTRANS.Is this correct?	13

RESPONSE TO PUBLIC COMMENTS (PC)-P

Response to Comment Letter PC-P1

Comment PC-P1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values.

Response to Comment Letter PC-P2

Comment PC-P2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values, Noise/Noise Analysis.

Response to Comment Letter PC-P3

Comment PC-P3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-P4

Comment PC-P4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The older technological infrastructure results in a longer lead time before incidents are detected and the appropriate emergency aid dispatched. For example, newer technology can provide computer-assisted identification of potential incidents based on changes in vehicle flow and speed. A small reduction in response time can have a substantially greater reduction in the time it takes to clear the incident and restore the freeway to full operations. The I-405 corridor lacks some of the field infrastructure to provide this type of quick response.

The lack of capacity inhibits the ability of emergency vehicles to access the emergency site quickly. When traffic is heavily congested during peak hours, the response time of emergency vehicles to the site of an incident increases. An increase of a few minutes in the arrival of emergency vehicles at the site of an incident can result in a substantially longer increase in the period during which freeway operations are impacted as traffic congestion increases upstream of the site of the incident. Lack of shoulders on both sides of the freeway also inhibits the ability of emergency vehicles to access the site of an incident. Lack of a left-side shoulder along much of I-405 requires that vehicles involved in an incident in a left lane be cleared to the right shoulder, disrupting operations in those lanes.

Comment PC-P4-2

The lack of capacity does not affect the detection of traffic incidents. The older technological infrastructure results in a longer lead time before incidents are detected and the appropriate emergency aid dispatched. Technological infrastructure includes loops used for speed and volume detection, closed-circuit television, variable message signs, ramp metering equipment, and real-time traveler information about freeway conditions. Please also see Response to Comment PC-P4-1.

Comment PC-P4-3

The text referenced in the comment provides the post mile limits of the proposed project. Standard Caltrans notation for identifying locations along state highways is based on the post mile system. The opening number in the notation indicates the Caltrans District in which the

location is found. After the opening number identifying the Caltrans District, a set of letters identifies the county in which the location is found followed by the number of the highway. The number of the highway is followed by the letters "PM", which is the abbreviation for "post mile". The number following the letters "PM" is the mileage from the start of the highway in the county. For north/south highways, post miles are measured from south to north; for east/west highways, post miles are measured from west to east. An "R" in front of a post mile value indicates that the post mile has been revised, usually as the result of a project that changes the length of the highway.

The "12" in the post mile notation referenced in the comment refers to Caltrans District 12, in which most of the proposed project is located. The "07" in another post mile notation referenced in the comment refers to Caltrans District 7, which includes Los Angeles County; some improvements proposed under Alternative 3 extend into Los Angeles County. The letters "ORA" and "LA" refer to Orange and Los Angeles counties, respectively. The numbers "405," "605," and "22" refer to I-405, I-605, and SR-22, respectively. The "R3.8" identifies the location on SR-22 that is 3.8 miles east of the point at which SR-22 enters Orange County (at the San Gabriel River) plus the distance where I-405 and SR-22 overlap. The post mile designations along SR-22 are suspended (i.e., do not count) in the section where I-405 and SR-22 overlap; the overlap section uses I-405 post miles.

Comment PC-P4-4

The Supplemental Draft EIR/EIS provides technical information about the proposed project that requires use of some technical terminology. However, the document was prepared to provide technical information in a way that can be understood by a lay audience. For example, in the case of the post miles on page 2-2 of the Supplemental Draft EIR/EIS referenced in the comment, the post miles are described both in technical and lay terms. The Supplemental Draft EIR/EIS on page 2-2 states that "[t]he project limits extend from 0.2-mile south of Bristol Street (12-ORA-405 Post Mile [PM] 9.3) to the Orange County/Los Angeles county line (12-ORA-405 PM 24.2) …." This description provides the project limits in terms of both the technical post mile limits and a more lay description referencing commonly known locations such as the county line and Bristol Street.

The use of technical language in the Supplemental Draft EIR/EIS or the Draft EIR/EIS by itself is not an environmental justice issue. Environmental justice is covered in Draft EIR/EIS Section 3.1.4.3, which concludes that "No minority or low-income populations that would be adversely affected by the proposed project have been identified….".

Comment PC-P4-5

The OCTA Board of Directors is not solely responsible for identification of the Preferred Alternative (the alternative to be implemented). For a description of the process followed in selecting the Preferred Alternative, please see Common Response – Preferred Alternative Identification.

Comment PC-P4-6

The potential benefits of Alternative 3 are fully covered in the Draft EIR/EIS. Although there has been extensive media coverage of the potential for the San Jaoquin Toll Road (SR-73) to default, a default has not happened. Alternative 3 is not a toll road, but it includes tolled lanes, as well as free general purpose lanes.

Comment PC-P4-7

Project EA 0J440K would cause little impact to the communities. It would consist principally of changing the striping on the freeway.

Comment PC-P4-8

For a description of the potential impacts of the proposed project on the Almond Avenue soundwall, please see Common Response – Almond Avenue Soundwall.

Comment PC-P4-9

A glossary of terms is provided in the Supplemental Draft EIR/EIS on page v. HOV2 refers to a high-occupany vehicle (HOV) with two occupants; HOV3+ refers to an HOV with three or more occupants.

The text referenced in the comment ("R0.7 and R3.8") provides the post mile limits of the proposed project. See Response to Comment PC-P4-3.

Comment PC-P4-10

The distance between the Seal Beach Boulevard on-ramp and the SR-22/7th Street branch connector is short and would be improved with an auxiliary lane in Alternatives 1 and 3.

Comment PC-P4-11

Page 2-7 of the Supplemental Draft EIR/EIS provides a description of Alternative 3. Project costs are presented in the Draft EIR/EIS on page 1-18.

Comment PC-P4-12

Page 2-10 of the Supplemental Draft EIR/EIS indicates that the construction durations would be 48 months for Alternative 1, 51 months for Alternative 2, and 54 months for Alternative 3. If construction starts in 2015, it would be complete in 2019 or 2020, depending on the alternative. Duration of construction by itself is not an environmental justice issue unless it disproportionately and adversely affects protected populations. Environmental justice is covered in Draft EIR/EIS Section 3.1.4.3, which concludes that "No minority or low-income populations that would be adversely affected by the proposed project have been identified…."

Comment PC-P4-13

The Supplemental Draft EIR/EIS provides accurate and complete information about the potential adverse effects and significant impacts to traffic anticipated to result from the proposed improvements to I-405. A letter from Mr. David Roseman, City of Long Beach Traffic Engineer, in response to circulation of the Supplemental Draft EIR/EIS, is included in Appendix R2 as Comment GL2. A letter from Mr. Roseman in response to circulation of the Draft EIR/EIS is included in Appendix R1 as Comment GL11; another letter from Mr. Roseman is an attachment to comments submitted by Mr. Mike Conway, Director of Public Works, City of Long Beach and is included in Appendix R1 as part of Comment GL12.

PUBLIC COMMENTS (PC)-R

PC-R1

From: Deborah [Deborahr@socal.rr.com]
Sent: Thursday, August 08, 2013 9:29 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Dear 405 Project Committee,

Let me start by telling you that you are driving the long-time residents of Fountain Valley crazy!

First, we were told that our homes, the place where many of our children took their first step, would be taken from us. But we were graced with the good fortune of being able to keep what was rightfully ours. I could not fathom that we would ever have had to fight to keep our own property!

Now, you want to put a high-rise ramp in our backyard! Do you have any idea of what the negative impact on our property value would be? And in addition, our backyard would become useless to us! My family would never enjoy our backyard or our pool again if such an eyesore were constructed! You may have had the "great idea" of proposing a massive sound/ privacy wall to "hide" the ramp. That would be devastating for us. We would be stifled by the heat in the summer months, because it would restrict any southern breezes from the beach from passing through & keeping us cool! We would feel as though we were living in Anaheim, where the temperature is much higher & the property value is mush lower! One more thing that would be extremely damaging to our health would be the fumes from the cars, being inhaled each & every day. The impact on that would be the most horrific. We have residents living here that range in age from the very young to the elderly. Some must use oxygen to breath. Can you imagine what that would do to their lungs within a short amount of time. People on oxygen are not allowed to be near anyone that smokes, let alone take in the vapors of thousands of cars, a stone's throw away, all day long! 1

PC-R1 (Continued)

Once again, I cannot believe that I have to beg & implore you to stop this absurd project. but it appears that I must. So please, I sincerely, with every fiber of my being, BEG & IMPLORE you not to go forward with this project! Do not take away everything that we have worked so hard to upgrade & improve, since 1965. Please don't ruin our lives & our wonderful way of living that we have come to love!

We, the residents of Daisy Avenue have already been discussing this project with an attorney, but we are hoping & praying that you will consider all the negative impact that we would be besieged with, if you allow this ramp to be built. Please give us back our peace of mind. Let our homes stay our homes & not become a fishbowl for the 405 drivers to gawk at during their commute! Save Our Sanity. 1

Sincerely,
Mr. & Mrs. Woody Randolph
16887 Daisy Avenue
Fountain Valley
Original owners of our property since 1965

PC-R2

From: Deborah [Deborahr@socal.rr.com]
Sent: Thursday, August 08, 2013 10:24 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

http://www.youtube.com/watch?feature=player_detailpage&v=35WgpMq6e3o 1

Please review this link. It is our comment for this project!

Sincerely,
The Randolphs
16887 Daisy Ave.
Fountain Valley

PC-R3

From: Deborah [Deborahr@socal.rr.com]
Sent: Thursday, August 08, 2013 10:24 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

A Message From the Residents of Daisy Avenue... 1

http://www.youtube.com/watch?v=aCGvZgDvtkU

PC-R4

From: Deborah [Deborahr@socal.rr.com]
Sent: Friday, August 09, 2013 6:11 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Dear 405 Ramp Project Committee,

Each & every time I travel on a freeway on/off ramp, I take notice if there are backyards that I am able to see into.
Do you know what I say to myself, each & every time? "Poor Bastards...What the hell was Caltrans thinking"?
Please, please PLEASE, do not do this to the homeowners on Daisy Avenue. Please use your better judgment
than others have done in the past! There are many plans that, at times seem right. But we must ask ourselves, if
it would be right for the citizens who would be most impacted by this decision. Just because you have the ability
to do something doesn't always mean it should be done. Please do not give the go-ahead with this project. I have
never minded having the freeway behind our house, but this elevated ramp would take away all of our privacy &
make our property value plummet! Would like allow this to be done to your home? Please do not do this to ours.
Please don't let me be the person that that motorists are staring down at, thinking "Poor Bastard...What the hell
was Caltrans thinking!" 1

Sincerely,
Deborah Randolph

P.S. I didn't even address the noise & dirt that we, including my elderly mother, would have to endure over these many
months of construction. She would surely have a heart attack from the sheer frustration. But she would have very right
to complain! It is not fair or justified to submit us to the hell, that every aspect of this project will bring before, during &
after construction. It is not fair to do this to the hard-working, taxpaying residents who reside along the freeway. 2

PC-R5

From: timdeitra@gmail.com
Sent: Thursday, August 01, 2013 10:06 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

From: Timothy Reed
3182 Bradbury Road
Rossmoor, CA 90720

Regarding the supplemental draft EIR for widening the 405 near the 605 connector:

The proposal to add one lane each direction is my preferred option of those presented. Another acceptable option is adding two lanes each direction, but under no circumstances should a toll road be allowed in this area. The transition from the 405 to the 605 North will benefit as will the reverse of the 605 South to the 405 South. 1

None of this will alleviate the transition from Orange County into Los Angeles County along the 405 North because no plan for improving the 405 in that portion of Los Angeles County exists nor has been approved.

The toll road option should absolutely not be considered. The surface streets near this project are already severely impacted due to the current construction activity. Adding toll lanes will further impact an already bad situation due to those trying to avoid the tolls using surface streets in Los Alamitos, Seal Beach, Garden Grove and south Cypress.

The conversion to toll lanes serves no purpose other than revenue. It does not help traffic flow, improve the surrounding surface street congestion nor improve the bottle neck at the county line, but, rather worsens all these. 2

Sent from Windows Mail

PC-R6

From: Diane Reksc [DReksc@LAUMC.LOCAL]
Sent: Wednesday, August 21, 2013 8:29 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

As a member of Los Altos United Church and a property owner of two properties within ¾ of a mile from the Woodruff /Willow exit ramp and ½ mile from the Palo Verde exit from the 405 I am very concerned about the extra traffic that will be generated by the addition of lanes heading North on the 405 from Orange County. I also live in Seal Beach. 1

I travel across the LA/ OC border everyday and often several times a day. There is no magic line there and should not be treated as such.

Most people in Eastern Long Beach and Seal Beach travel on the 405 constantly and spend money across the borders on a regular basis. Please think of the whole picture for this border crossing and don't discount Long Beach because OCTA has money to invest.

There are many people in the Long Beach area without the means to afford a Toll road and need to travel on the 405 for work and take and pick up children from school, child care and activities. Please do not place another burden on those struggling to make ends meet. 2

I am very concerned about the extra traffic that will flow onto the streets of Eastern Long Beach because of a bottle neck created once entering into LA.

Has mass transit been considered from LA to Orange County? Possibly in the middle of the 405 instead of adding lanes. The more lanes we have the more cars will fill them.

I am also concerned about the affect changes to the 405 will have on our church's property. The church lost a good portion of prime real estate when the 405 was built. If there is a possibility of changes to our property we need to know about it now. 3

I know there are many on and off ramps along the 405 in Long Beach. Perhaps the Woodruff north entrance can be closed and Woodruff closed off to give us the property to connect our parking lot on the south east corner of Willow and Woodruff. This would eliminate less on and off between Palo Verde and Bellflower which is very congested. 4

Our church would like to be notified directly about any changes that would affect our property as soon as possible.

Also, Willow traffic is too fast now. Please do not add to that residential freeway. I ride my bike as so many others and take our lives at risk because of the speed traveled on Willow. There is no shoulder. What was a 2 lane road with a shoulder when we bought our first house is now a 3 lane freeway. We need more east west bicycle lanes to connect to the river bike path to encourage people to ride bikes instead of driving cars.

Thank you for listening and I hope the LA county/ Orange County 405 problems can be decided as one area not 2 separate parcels. The people don't use it separately and it should not be isolated when making changes across the border. 5

Diane Reksc
dianereksc@gmail.com
562 598-2451

PC-R7

From: Kathe Repasi [magnumgranny@gmail.com]
Sent: Thursday, August 01, 2013 9:54 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

The report is pretty confusing, does not report how long this will take and is starting to sound like the FREEways are slowly becoming TOLLways...without the cookies (Tollhouse). Maybe maps with times of completion, FUNCTIONAL alternate routes (with lights timed appropriately) and exactly which routes will be tolled.

I live in Leisure World and my leisure time is being eaten up by taking 45 mins. to cross the Seal Beach Blvd. connector overpass! That is just from Town Center Dr., through the Lampson/Seal Beach Blvd. smash-up over the bridge to Northgate Rd. God help those being taken to the hospital.

Traffic control persons with ticketing ability would make a FORTUNE for the city, or CalTrans or whatever. People don't know how to merge, or are so angry by the time they get to their turn at the light, that they run it or block the intersection for 3 light changes.

No one said it would be easy ...but really!

Love ya' ☺
Kathe
Sent from my iPad

1

PC-R8

From: Robin Ridley [ridleyrobin@gmail.com]
Sent: Sunday, August 11, 2013 9:01 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I405 - Alternative 1

Thank you for writing the environmental document. I vote for Alt - 1, just like I did years ago. I don't think the other alternatives make long term sense, especially the toll road alternatives.

1

PC-R9

Michael Hennessey

To Whom it May Concern,

I am a resident of College Park East in Seal Beach. In fact, my home is located 4 houses away from the sound wall that borders the 405 freeway. It is imperative to my family and community that the sound wall NOT be moved. My reasons are as follows:

1. My son, who is 4 years old and I have very bad allergies to dust and pollution. We are on daily inhalers and a nebulizer to control our asthma. If that sound wall comes down at all and we are within 4 home lengths from the freeway, we will be facing serious medical consequences.
2. The amount of noise that comes over that wall WITH a sound wall is very loud, in fact, I invite you to come hear it around 5pm on a week day. Without a sound wall it will be unbearable. I know that you and your family would not want to live next to an open freeway under construction, and neither do I. My husband, as well as many other residents of College Park East, works from home. I really have no idea how he will be in business meetings during that kind of commotion. There is no alternative to him working from our home. Besides the length of time that the wall will be down, I want to express my concern that it will be moved closer, and will be shorter, thus creating a "forever problem","not a short term problem"
3. My family as well as many others use Almond Ave to walk to the parks in our neighborhood, if it is moved, the street will be narrowed and the path will compromise the safety of the many pedestrians that use that path at all hours of the night and day.
4. Moving the sound wall on Almond Ave would cause the electrical lines to be moved across the street and dangerously close to homes. In the event of an earthquake, the homes along Almond Ave would be compromised, as well as their families.
5. Moving the sound wall would ensure that no one in College Park East would be able to sell their homes for the value that it is now. You would be condemning Seal Beach, Rossmoor and Garden Grove to the already many families who are upside down on their property values.
6. I have paid my taxes and have paid for the right to use my freeways and city streets and so has all the residents of College Park East. There is no reason to add a toll road that will add expenses to our families budgets when we have already paid for the freeway. The only financially successful toll road is the 91 express lanes, there is simply NO NEED for a toll road on this stretch of the 405, thus very few will use it. The sad fact is that even considering putting in toll lanes in this densely populated area will only HURT the many and benefit the few.

1

I was very relieved when the news came down that there was a decision to put one lane in each direction on the 405 stretch between the 605 and 22. I am angry and disappointed that my community has to fight for the very basic right to have you all held to your first decision. I don't care how many times members are replaced, we all went through this already. If you think that we are not willing to fight the second time around, or that we will be tired and silenced, we will not. For me and my family, the number 1 issue is heath. You would never give up a fight for your child's health and neither will I.
I beg you, PLEASE DO NOT move or touch the Almond Soundwall and NOT add more than one lane in each direction on the 405 Fwy between the 605 Fwy and the 22 Fwy!

2

Thank you for your time and consideration,
The Riem Family

PC-R10

From: scott@scottalanrivers.com
Sent: Thursday, July 25, 2013 7:45 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: Mara Rivers
Subject: A public comment regarding 405 SDEIR/EIS

Ms. Smita Deshpande,

This email is to express my opposition to adding toll roads to the 405 in the vicinity of our Rossmoor community.

First, our community has already had to bear the burden of added traffic/congestion due to recent/extensive retail development along Seal Beach Blvd.

Second, we also suffered congestion traffic hazards resulting from the poorly planned design and recently constructed Northbound 22 elevated roadway. I personally risk my life everyday just trying to enter the 405 North from the Seal Beach Blvd ramp. What traffic planner thought it made sense for a car driving about 40 mph to merge and crossover two whole lanes within about 200 feet... **in front of cars accelerating at speeds up to 80mph** heading up the Northbound 22 elevated roadway?! 1

Third, these toll lanes will not benefit our community at all. I'm curious to know what majority of drivers the toll lanes benefit in the first place? In this case, toll lanes just seem to a means to raise capital, not benefit a large number of drivers.

Thank you,

Scott and Mara Rivers

3271 Woodstock Road

Rossmoor, CA. 90720

(562) 431-3436

PC-R11

From: Kevin Robinson [keresq1@yahoo.com]
Sent: Sunday, August 11, 2013 10:08 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: cbyrne@octa.net; j9parker@socal.rr.com
Subject: 405 expansion project fountain valley

Dear Sir\Madam
I live in the neighborhood bordering Bushard Street, Warner Ave, Magnolia and the 405 freeway. I have lived here on Pine Circle for about 20 years, my family consists of 3 adults who vote and pay taxes.

I vehemently oppose any increase in traffic or traffice noise that the new above ground on off ramp onto the 405 freeway. At the northbound bushard and warner ave, fountain valley area. DONT !!!

When we first moved here the noise from the freeway was very very slight. As the years have gone on with an increase in lanes and traffic that noise has increased substantially. It clearly effects the quality of my life, and I consider it noise pollution of the worse kind. What you should be doing is building better, higher and more effective sound barrier walls so that the noise is abated rather than increased. I further opine that any such freeway expansion will substantially effect the property value of my home. This would require just compensation. 1

If you would like any further information please contact me at keresq1@yahoo.com

Sincerely
Kevin E. Robinson

PC-R12

From: Jim Rueff [jimrueff@yahoo.com]
Sent: Sunday, June 30, 2013 3:30 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

1. I still prefer the alternative that adds **two** general purpose lanes in each direction.

2. I still **oppose any toll lanes** of any type. 1

3. I oppose giving any money to the City of Long Beach for any perceived effects of this improvement project on their streets. Instead, LA Metro should make similar improvements to the 405 between the 605 and the 105. Orange County voters reluctantly approved Measure M in order to reduce our traffic congestion due to Caltrans inability to make timely improvements on their own. Los Angeles county needs to clean up its own house; it's not Orange County's fault that Los Angeles County is behind in making much needed improvements to the 405. 2

Jim Rueff
e-mail: jimrueff@yahoo.com
+1 (714) 321-2555

PC-R13

From: Joanne Runge [jorunge1@gmail.com]
Sent: Wednesday, July 17, 2013 8:35 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Meeting July 24,2013

This is a Public Hearing about Orange County, Seal Beach specific. Why is the meeting in Long Beach and not in Seal Beach? It is not conventent as we can travel over the freeway. You close use down all the time. Don't we have first right of refusal in making our lives more misserable than they are now!!! 1
Fed up in Seal Beach.

PC-R14

From: diane rush [rush534@yahoo.com]
Sent: Monday, August 12, 2013 9:52 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Toll lanes--more problems!

Rossmoor residents contribute to Orange County far more in taxes than they use in utilities and other resources. This figure has been quoted as high as 1.5 million annually. Plus, we are involved citizens who care about the quality of life in our community and country. We are constitutionalists.

I am a typical resident of Rossmoor and adamantly oppose toll roads being added to this project. Toll roads will raise taxes, pollution and congestion in our area. Caltrans, OCTA, contractors and politicians stand to benefit from this proposal. Those decision-makers will not suffer inevitable consequences of its implementation. Nonetheless, they expect our residents to pay taxes in order to fund this project that fails to coordinate with Los Angeles and Long Beach. 1

It is an ill-conceived notion with no regard for the spirit of democracy or constitutional law.

Diane Rush
12732 Christy Lane
Rossmoor, CA 90720
(562) 431-8751

RESPONSE TO PUBLIC COMMENTS (PC)-R

Response to Comment Letter PC-R1

Comment PC-R1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values, Air Quality, Health Risks.

Response to Comment Letter PC-R2

Comment PC-R2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The YouTube video referenced in the comment has not been included or addressed. In the "General Information about This Document" behind the cover page, the Supplemental Draft EIR/EIS states: "If you have any comments regarding the information contained in this Supplemental Draft EIR/EIS, please attend the public hearing and/or send your written comments to Caltrans by August 12, 2013." A YouTube video is neither a written comment, nor can it be reproduced for inclusion in the Final EIR/EIS.

Response to Comment Letter PC-R3

Comment PC-R3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Response to Comment PC-R2-1.

Response to Comment Letter PC-R4

Comment PC-R4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values.

Comment PC-R4-2

Please see Common Responses – Noise/Noise Analysis, Air Quality, Health Risks.

Response to Comment Letter PC-R5

Comment PC-R5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identified, Opposition to Tolling.

Comment PC-R5-2

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Opposition to Tolling,

Response to Comment Letter PC-R6

Comment PC-R6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Comment PC-R6-2

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Opposition to Tolling.

Comment PC-R6-3

Please see Common Responses – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives, Property Values.

Comment PC-R6-4

The Supplemental Draft EIR/EIS indicates that an adverse effect of the proposed project is found under Alternative 2 at the intersection of Woodruff Avenue and Willow Street. The Supplemental Draft EIR/EIS proposes to address this adverse effect by providing a second northbound left-turn lane from Woodruff Avenue to westbound Willow Street. This additional left-turn lane would be constructed in the existing median of Woodruff Avenue. No ROW would be required for this improvement. While this adverse effect could be addressed by closing the northbound I-405 exit ramp to Woodruff Avenue, such a closure is not considered commensurate with the extent of the adverse effect. Closure of the ramp could have impacts on other interchanges to which traffic would be diverted. Because addressing the adverse effect at the site of the effect is practical and requires no additional ROW, it represents the best measure to address the effect.

Comment PC-R6-5

Willow Street would not be modified as a result of the proposed I-405 Improvement Project, except for the intersections owned by the City of Long Beach identification in the Supplemental Draft EIR/EIS under Measure T-11. A fair share payment would be made to the City of Long Beach for the additional traffic at the identified intersections resulting from the I-405 Improvement Project. The City of Long Beach is responsible for rectifying existing problems on Willow Street. Please communicate these concerns to the City of Long Beach.

For a discussion of the coordination between OCTA and the City of Long Beach on the I-405 Improvement Project, please see Common Responses – Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach.

Response to Comment Letter PC-R7

Comment PC-R7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Response to Comment Letter PC-R8

Comment PC-R8-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-R9

Comment PC-R9-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on DEIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Air Quality, Noise/Noise Analysis, Property Values, Health Risks, Opposition to Tolling, Preferred Alternative Identification.

Comment PC-R9-2

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-R10

Comment PC-R10-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis

presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Substantiation of Reported Corridor Travel Times for Build Alternatives, Preferred Alternative Identification.

Response to Comment Letter PC-R11

Comment PC-R11-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Noise/Noise Analysis, Property Values.

Response to Comment Letter PC-R12

Comment PC-R12-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Preferred Alternative Identification, Opposition to Tolling, Substantiation of Reported Corridor Travel Times for Build Alternatives.

Comment PC-R12-2

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-10 would address cumulative significant impacts to traffic on SR-22 (7th Street), which is a State highway. This fair share would be contributed by the I-405 Improvement Project for the proposed improvements. The remainder of the funding would be the responsibility of the State, not the City of Long Beach.

A comparison of the volumes at intersections along 7th Street under the existing condition (Figure 3-5 of the Supplemental Draft EIR/EIS) with the forecast volumes for the 2040 No Build Alternative (Figure 3-18 of the Supplemental Draft EIR/EIS) shows that traffic is anticipated to increase along 7th Street without the proposed I-405 Improvement Project. Consequently, there is an adverse effect on 7th Street traffic without the project. The additional increment of traffic on 7th Street associated with the proposed project results in cumulative effects of traffic from the project and from other sources that are greater than those solely from the project alone. Consequently, the measures included in the Supplemental Draft EIR/EIS are not intended to address all of the deterioration in traffic service expected between the existing condition and year 2040.

Similarly, a fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-11 would address cumulative significant impacts to traffic on streets owned by the City of Long Beach. The remainder of the funding at these locations would be the responsibility of the City of Long Beach.

Response to Comment Letter PC-R13

Comment PC-R13-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The Supplemental Draft EIR/EIS provides new information on potential project-related traffic effects within the City of Long Beach and areas under Caltrans – District 7 jurisdiction (Los Angeles County). The new information and analysis presented within the Supplemental Draft EIR/EIS is based on the *Supplemental Traffic Study Report – Long Beach Area* (Supplemental Traffic Study), prepared in April 2013 in response to City of Long Beach comments on the Draft EIR/EIS. The information and analysis within this Supplemental Draft EIR/EIS were not available during the circulation period for the Draft EIR/EIS. The meeting was held in Long Beach, because it is the subject of the Supplemental EIR/EIS. There have been no changes to the alternatives or the information reported in the May 2012 Draft EIR/EIS as it relates to Orange County and Seal Beach.

Response to Comment Letter PC-R14

Comment PC-R14-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification, Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach.

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PUBLIC COMMENTS (PC)-S

PC-S1

From: Michael Sanders [sanders@earthlink.net]
Sent: Wednesday, July 24, 2013 2:35 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Proposed Toll Lanes for 405 Freeway

To Whom It May Concern:

As a resident of Rossmoor, I strongly oppose addition of HOT lanes to the San Diego Freeway. The inclusion of such lanes on the northbound 405 without continuation into Los Angeles will create a bottleneck at the 605 Freeway, creating environmental and related impacts on nearby residents, including the community of Rossmoor. 1

Thank you for your consideration.

Mike Sanders
12132 Christy Lane
Rossmoor, CA 90720

PC-S2

From: Bob Satmary [bob.satmary@gmail.com]
Sent: Saturday, August 10, 2013 3:35 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 toll stupidity

Every taxpaying citizen in the state is opposed to toll roads. Californians already pay the highest taxes in the nation. There's no way we should be asked to pay a penny more--especially for the use of something we're all already paying for. 1

When are you people going to realize that lessening traffic isn't about increasing capacity--it's about empowering people to leave their cars in the garage--it's about putting fewer cars on the road. Build light-rail commuter lines already!!! Wake up!!!!! 2

PC-S3

From: Dan Schechter [profdanschechter@gmail.com]
Sent: Wednesday, July 31, 2013 9:55 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: No toll lanes on the 405 in West Orange County, please!

405.Supplemental.Draft.EIR.EIS@Parsons.com

Dear Caltrans –

We are strongly opposed to the idea of including toll lanes on the 405 project in the Rossmoor/Los Alamitos/Seal Beach area. This is a wholesale switch from the original plan, and it is grossly unfair. Only wealthier people will be able to use these lanes, even though everyone's gasoline taxes have already been spent on the construction project. This is essentially a transfer of wealth from lower income people to upper income people, which makes no sense at all.

The new "non-toll" HOV lanes on the 405 in Los Angeles County are working just fine – note that they have greatly reduced congestion, especially in the West LA area. Why not emulate that model, rather than the dubious "Lexus lanes" being used on the 110 in LA County? 1

And while you're building new lanes, you might save a few bucks by omitting the bas relief "artwork" on the sound walls. For an example of wasteful spending, check out the sound wall on the northbound 605 in the Los Alamitos area. The artwork is ugly, and (ironically) it is now being covered over by foliage. When we are driving, we do not need to be distracted by expensive public "art." 2

Thanks for listening,

Dan Schechter and Felice Sussman
11292 Wallingsford
Los Alamitos, California, 90720
562-430-9406

PC-S4

To Whom it May Concern,

I strongly do NOT want the sound wa
taken down and moved closer to the homes
I live right off of Almond and feel the nois
would greatly increase plus lower the valu
of the homes. 1

Almond needs to be two lanes. It is
major street making access to all the cul des
How will we access our homes?

Linda Scott
3530 Jasmine Ci
Seal Bch

PC-S5

From: Seiff, Kenneth [kseiff@uci.edu]
Sent: Monday, August 12, 2013 3:58 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Comments sent 3:54 PM, 8/12/13

Smita Deshande, Branch Chief

CalTrans District 12

"Attn: 405 SDEIR-DEIS Comment Period"

August 10, 2013

Dear Sirs:

Thank you for this opportunity to submit comments regarding the 405 SDEIR-DEIS (Supplemental Draft Environmental Impact Report/Environmental Impact Statement) with respect to the 405 Improvement Project and impacts upon the greater Long Beach and west Orange County areas. As a resident of College Park West, Seal Beach, I am an Orange County resident but great potential impacts and effects are possible for my area in particular. I am sensitive to and support the environmental, safety, and traffic concerns of the Seal Beach and Long Beach residents who have voiced a great many of these. However with respect to the Study Area, I wish to limit my comments solely to concerns regarding Intersection 27: Westbound SR-22/Studebaker Rd. On/Off Ramps, Intersection 28: Eastbound SR-22/Studebaker Rd. On/Off Ramps, and Intersection 29: Westbound SR-22/College Park Drive On/Off Ramps in this communication. Since College Park Drive is the ONLY ingress and egress for our neighborhood, this obviously has serious significance. But all 3 of these intersections are some of the closest to the planned 405 improvement areas; very close in fact, and will be impacted by the increased traffic flow and volume generated by that project. Also, this greater multi-intersection area is very important not only to all the residents surrounding (Long Beach especially) but also, since 7th Street also passes right through there, a central hub and main freeway access to and from these large neighborhood areas, large business interests (including the AES Energy Plant) and the Belmont Shore and Naples business and beach areas, Cal State Long Beach, and the Long Beach VA, among many others. This by any account is a very important interchange area that is need of more extensive mitigation to handle the added "stress" that will come with the 405 improvement project and, at least for Intersection 28 (Eastbound SR-22/Studebaker On/Off Ramps), seems to have not been examined and dealt with in a manner compatible with the unique circumstances of that specific very essential intersection. I hope to make these points to your satisfaction in the following and hope, and expect, these remarks will be examined and responded to by you in the same very serious manner with which they are being submitted.

Intersection 28: Eastbound SR-22/Studebaker Road On/Off Ramps: COMMENTS

- Even a cursory direct examination of this intersection will reveal to the non-expert that it is in terrible condition; the physical assists and infrastructure components are disintegrating and have been for some time; this is very well known to those of us in the area and in fact even the design is flawed and antiquated, which has been admitted by CalTRANS District 7.
- This intersection has not had even cursory improvements made for many, many years and per check with District 7 CalTRANS, none are planned for future as of now.
- Meantime, the continued deterioration of the pavement decks, shoulders, drainage, lighting (almost none), and etc. is made worse and worse since this intersection has served and continues to serve as a construction staging area for so many major projects up and down the 1

PC-S5 (Continued)

405 Freeway for many, many years. (Perhaps OCTA could make assurances that at least for once at any rate this area will NOT be used as major construction staging area—time for rest!)

- I challenge anyone to walk and drive that area with me personally and refute that this intersection is in the absolute worst physical condition of any of the interchanges listed in the Study Area; the physical structures are deteriorating and the infrastructure is crumbling.
- It is the strong concern of myself and of many others in our area that this intersection specifically will not have the structural integrity to "tolerate"/survive the coming impacts from increased traffic, flow, and service impacts from the WCC and 405 Improvement Projects in the coming years without some mitigation, and major structural failures are inevitable. There are already severe traffic flow and safety issues there now and have been for some time. Further failure will only impede traffic flow and safety at the time and cause need for "urgent" and disruptive repairs—this certainly will not benefit those of us who live, work, and/or commute through the area. Does it not make sense to confront this now; what are the reasonable arguments against this?...it seems so obvious if this unique and particular intersection is really taken for a good hard look at; it does not seem this was done in the Supplemental study and only the "usual" parameters were utilized. Unfortunately, this is not appropriate for this one intersection and it is a sad commentary that this was missed; even a non-expert can see this.
- This intersection, however, was not listed as one that would be entitled to mitigation from the 405 Project under any of the alternatives; this makes no sense. It is listed as potentially impacted as much or almost as much as any other interchange/intersection, yet barely "misses" the arbitrary "thresholds" set for determining need for mitigation in the document.
- These "thresholds" are indeed arbitrary; the second to last page of the document states that "Because Caltrans does not use threshold criteria for the determination of significance of impacts, discussion of threshold criteria was removed from the document at the request of Caltrans environmental staff." This appears to mean that OCTA and CalTRANS District 12 COULD utilize other criteria to evaluate significance with respect to needed mitigation for any particular interchange, including the structural and physical state and integrity of that area currently that will be impacted. Why this was not done for this interchange is really beyond me; fortunately, this is the only intersection that is in such deteriorated condition that such might be required, but it certainly is required for this one and just looking at traffic data in this particular situation truly is "looking at the forest and missing the trees."
- **Further, CEQA actually REQUIRES that the current physical status of an area under evaluation be taken into account as to possible need for mitigation . This was NOT done here apparently and for this specific intersection area which appears to be a major error in my view. (As stipulated under CEQA, "An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant" (14 CCR 15125[a]). It is my opinion that no uniform, inflexible rule is required for determination for "existing conditions baseline" and thus the lead agency (OCTA) could utilize actual physical and structural observation and engineering analysis to measure existing condition and project impacts thereon rather than solely traffic flow and LOS (level of service) data; this intersection requires this even if the others do not due to the unique status of its decaying infrastructure and current state of disrepair that should be apparent to any and all reasonable persons just from observation and without professional expertise. Further, a court ruling in Madera, CA in 2011 indicated that "a baseline...must reflect existing physical conditions."**

1 cont

2

PC-S5 (Continued)

- Actually, perhaps even incremental improvements could make a big difference and help to "allow" this interchange and its physical structure components to "survive" and not completely collapse with the coming increased pressure from the WCC and 405 improvements. There is precedent for this; related to the WCC Project, OCTA was able to see the impacts that would occur at the Westbound SR-22/Studebaker On/Off Ramps (Interchange 29 in this Supplemental Document) and last year a collaborative project between them, City of Long Beach, City of Seal Beach, and CalTRANS District 7 was planned and completed-this was more of an incremental improvement and not a "major" project or cost (I had many discussions with Ken Bui and Ken Oh from OCTA/Cal TRANS District 12 about this back then and would be happy to share some of the insight we gained by working together to try to address concerns; it really was quite amazing and much appreciated). This has made a HUGE positive impact on our area I think all agree. A similar approach would be of great assistance and a very positive approach by OCTA for the Eastbound Ramps ((Intersection 28) I am discussing.

Intersection 28: Eastbound SR-22/Studebaker Road On/Off Ramps: CONCLUSIONS AND REQUESTS:

- Ideally, it is my belief that the 405 Improvement Team should take another much closer look at this specific intersection and conclude that in fact, given all the above, this unique and unusual area, VERY DIFFERENT from all the other intersections studied, should be given "special" evaluation for some form of mitigation even if it otherwise does apparently meet the very arbitrary "thresholds" of traffic flow, volume, LOS and etc. utilized in the Supplemental Document
- If this is not deemed appropriate, then I would most humbly request that a FORMAL structural, physical, and transportation engineering study be applied to this interchange with goals of assessing the serious concerns and issues above. In fact, it is my opinion that this is REQUIRED by CEQA, especially since this had now been brought to your specific attention.
- If even this is not to be addressed, then there has to be some plan for the future to address these issues there; again, I do not see how anyone who really takes the time to "really" look into this issue can disagree that this interchange in the current state is at risk for major disruption with flooding (which has happened regularly), traffic safety, and more acute infrastructure failure. This certainly would serve to negate any greater benefit for our area that might be served by the larger WCC and 405 Improvement Projects, as important as they are.
- Finally, I would say that all modern transportation engineers and professionals are well trained to note that any roadway, corridor, interchange, or intersection is more that "just" the traffic flow, car trips, and etc. that are measure. The area and people surrounding that it serves and the purposes it is utilized for need to be taken into account as much as "car trips", ratios, and "queue" lengths. None of that will matter if the pavement deck and associated infrastructure crumbles and collapses soon. Improving this area with some mitigation for the upcoming projects can only help all these aspects and is required for this specific interchange. I would be happy to personally show anyone what I am discussing if they may be unfamiliar and would want further "proof" of the conditions there now.

2 cont.

Intersections 27 and 29: Westbound SR-22/Studebaker Road On/Off Ramps: CONCLUSIONS AND REQUESTS

- I am very gratified that these 2 interchanges in the study area were deemed eligible for mitigation measures per the arbitrary threshold criteria utilized; this is obviously necessary for traffic flow purposes if not structural aspects (other than how those impact each other obviously). Unlike Intersection 28 per above discussion, the physical infrastructure at these 2 related intersections is in much better shape due to the collaborative project mentioned above that OCTA was a part of—see above (again, a similar approach for Intersection 28 above might be very helpful and should be considered). Given that I am in agreement with the

PC-S5 (Continued)

findings for the most part for Intersections 27 and 29 as noted, an area that directly impacts my neighborhood personally since College Park Drive is our only entry and egress, I would like to make the following suggestions and requests to optimize the mitigations planned.

- **The mitigation plans mentioned appear to be thought necessary for Alternatives 1 and 2 only; again "just missing" the arbitrary thresholds for eligibility for Alternative 3. Close review of the data I maintain should indicate that the mitigation proposed for these interchanges should apply also for Alternative 3 if it in fact is the chosen alternative.** 3
- Since the pavement improvements to the off-ramp is listed as only being for 300 feet, I recommend that a large lighted sign notifying traffic exiting the freeway that a signal is ahead would be very important; we see these in other situations on the freeways. 4
- "Final" improvements at the area are still pending from the incremental collaborative project from last year such as lighting, better drainage, better pavement and shoulders (especially at the ramp portion heading toward north Studebaker Road and ideally with curbing throughout), and landscaping (if can afford), and etc. should be completed as part of the mitigation project. This intersection, after all these years "deserves" to be treated as a "modern" interchange similar to all those up and down the 405 and 22 (and of course, same is to be said for Intersection 28 discussed above) and we, the residents of east Long Beach and Seal Beach, workers, students, and commuters to and through the are certainly "deserve" this, especially after waiting such for so many years while so many other improvement projects go on around us and impact us (WCC, 405 improvement, Seal Beach Blvd. improvement, etc., etc.). These 3 intersections in particular (and I am aware of the reasons for this) have been "forgotten" for a long, long time. It seems it should finally be "our turn" now and OCTA could do a lot to accomplish this, demonstrating much good will, given the years of direct impact we already have had with WCC and etc. at the least it would seem. 5
- Although seems obvious, it was not specifically mentioned in the Supplemental that I could note; a new traffic signal is planned at Intersection 29 (Off-ramp and College Park Drive) and this of course must be carefully synchronized with the existing signal at Studebaker (Intersection 27) to optimize traffic flow, level of service, etc. 6
- Finally, although also not mentioned that I could find (maybe I missed it) related to the new traffic signal at Intersection 29 is the Left Hand Turn Lane. There currently is a dedicated one for left turn from the westbound onramp coming from the north to turn onto College Park Drive; is this planned to continue and will there be Left Turn Only (Green Arrow) during the traffic signal phase? I would recommend that but at any rate, I believe should be studied rigorously to determine if optimally necessary to improve vehicle flow and service there, especially during peak times. 7

Thank you very much again for the opportunity to submit these remarks and requests. I truly hope these will be properly and sincerely addressed and, ideally, even thought reasonable and actually adopted/enacted. I remain available to answer any questions and/or supply any other information that I can regarding these opinions and would welcome the opportunity to further discuss with anyone, especially from OCTA and CalTRANS, including in-person visit and review of the area under question—that would be my pleasure.

Sincerely,

Kenneth Seiff

121 Yale Lane

Seal Beach, CA 90740

Cellular: 714-813-8267

PC-S6

From: alan.shipley63@gmail.com
Sent: Wednesday, July 03, 2013 2:30 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Widening Project

I have lived next to the 405 freeway in Seal Beach since 1968. My home is one of the homes directly effected by your decisions in this matter. Over the years it is true that the traffic has increased and additional lanes are needed to help reduce the impact.

While adding lanes south of I-605 and north of CA73, it does very little to help the congestion that will be caused by the bottleneck you are going to add northbound into Long Beach where no additional lanes are being added. So, on the 405 north at the 605 you are going to reduce the traffic lanes back to 4 GP and 1 CP lane thus causing a backup. Southbound I405 at CA73 has no problems, yet.... but lets add 2 lanes and then take them away and see what happens. 1

Another issues that has come up is that in order to widen the freeway through Seal Beach, you will need to cut into the Collage Park East Development. While the Seal Beach Weapons Station has an excess amount of room to allow realignment of the freeway to happen. The Weapons Stations has said that they need that room as a buffer zone to prevent any damage if they were to have an explosion on site, moving the freeway closer would put it in the debris zone. BULLSHIT! If the Navy was so worried about debris, then move the freeway 20 feet south and build a 20 foot tall debris catch fence. This fence would serve a second purpose of adding additional protection to the base, sounds like a win win solution. 2

Carpool v toll lanes. REALLY! More toll lanes on already paid for "free"ways. Purpose built toll lanes are one thing, no complaints about them. But charging people for using carpool lanes is wrong, maybe you should just start catching and ticketing the single occupant cars using the carpool lanes, that should generate a large chunk of money every single day. On my drive through OC I always count at least 20 cars in the section you are talking about all with one occupant, and at a minimum of $150.00 each! There is money to be made. I also travel I110 and see the toll lanes they added and how few people use them because some just don't have the $5-$10 each day to use them, AND I love watching the cars jumping out of the toll lanes as they come up on one of the overhead readers so not to be caught, only to jump back into the toll lanes right after. 3

This crap has been going on and on for years at HUGE expense to the citizens of California, but then what do you expect from people who sit in big glass offices making decisions for the rest of the State, all while bringing in the big bucks and living in their gated communities.

Have a wonderful day

Alan Shipley
Seal Beach

Sent from Windows Mail

PC-S7

From: Elliott_Singer@ahm.honda.com
Sent: Friday, July 19, 2013 10:39 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Public Comment

Good morning. OK I spent last evening reading much of the SDIR/EIS for the I-405 project. And I think, not positive though, that I understand the major concepts. The area with which I have the most concern is the changes to the original plans for the I-405 to the I-605. It sure seems like we have only two alternatives, although it is written in such as way as to obfuscate the reality. The choices seem to be an addition of (2) or (4) lanes, overlaid with some sort of "toll" option. Your conclusion is that these actions will reduce congestion. 1

I'll try to keep my response concise:

The impact of an additional (4) lanes on the homes along the freeway is out of the question.

The impact of 2 additional lanes, depending on how far they are from the homes is acceptable. 2

A toll that merely adds an expense to the taxes I pay for highway and discriminates against those with lower incomes, is not acceptable.

And a couple of final questions: What if your prediction that congestion will be reduced does not happen? How is the reduced congestion going to be monitored? Is anyone going to take the blame if the predictions do not happen? Will you refund my tax dollars that you used for your project if you are wrong? With the anticipated increases in population have you predicted the time it will take for the congestion to return to current levels? 3

Thank you for your time.

Elliott Singer
Los Alamitos

PC-S8

Please do not expand the freeway by CPE. There are too many good reasons NOT to move our super sound wall already in place. We oppose the increased pollution, decrease in property values, ridiculous costs to create a humongous bottleneck when the freeway merges with L.A. County. 1

Sincerely,

Paulette Smith
4488 Candlebery Ave
Seal Beach, CA 90740

PC-S9

Reasons NOT to tear down
the sound wall

1. Unnecessary
2. won't help eliminate more traffic
3. Disruptive
4. Much too expensive
5. decrease in air quality
6. decline in property value

1

Mary Hettinger
4372 Birchwood Ave.
S. B. 90740
resident since 1972

PC-S10

From: ssteponovich@socal.rr.com
Sent: Wednesday, July 24, 2013 11:47 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: NO TOLL ROADS PLEASE

RPMT, RCSD, RHA, Cities of Seal Beach and Los Alamitos all oppose the building of the proposed toll road for the following reasons:
1. A bottle neck with be created at the I-405/605;
2. Increased air pollution;
3. We have paid for this freeway through our taxes and not for the monetary gain of CalTrans or OCTA.

1

PC-S11

From: Doreen Stevens [doreenstevens@earthlink.net]
Sent: Tuesday, August 13, 2013 11:35 AM
To: wknowles@octa.net
Cc: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: 405 Driving Conditions

August 12, 2013

OCTA Board Members
PO Box 14184
Orange, CA 92863
Attention Wendy Knowles: Please distribute to each board member
wknowles@octa.net
405.Supplemental.Draft.EIR.EIS@parsons.com

OCTA Board Members:

Since the 405 freeway has been widened, I have driven to Long Beach many times. Business meetings, doctor's appointments, hair appointments, grocery shopping, dental appointments, hospital visits, and church attendance are all regular errands that require me to take the 405.

At least a couple of times, I have come within inches of being hit by other people driving/flying 65-75 miles per hour as they exit onto 7th Street or the 605 freeway. I am trying to get on the freeway from the Seal Beach Blvd entrance and match their speed as I try to cross over four lanes to go to downtown Long Beach via the 405 North. This combination is what has almost caused an accident.

These lanes crossing is hazardous and is an accident waiting to happen. They are suicide lanes! On paper this might work but in real life this does not work and is totally unacceptable, scary and dangerous! It is so scary that I back track driving and enter from the Valley View entrance going North on the 405 freeway to Long Beach. How many accidents have already happened because of this poorly constructed freeway section? Please somehow correct this problem before lives are lost.

1

Sincerely,

Doreen Stevens
4880 Candleberry Ave
Seal Beach, CA 90740
doreenstevens@earthlink.net

CC: Ryan Chamberlain
CalTrans District 12
3347 Michelson Drive Suite 100
Irvine, CA 92612

PC-S12

From: Rosie Stewart
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: No On Ramp!
Date: Monday, August 12, 2013 10:01:59 PM

Please stop the proposed on ramp on the 405 freeway on Warner/Magnolia entrance. It will severely impact my friend's home by destroying property values and affect her quality of life. Please do not build this! 1
Thank you!
Rosie Stewart

Sent from my iPhone

PC-S13

From: Harvey Storm (RR) [hstorm@socal.rr.com]
Sent: Sunday, August 11, 2013 9:20 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: cbyrne@octa.net
Subject: I-405 Supplemental Draft Comments
Attachments: I-405 Comments.pdf

Date: August 10, 2013

From: Harvey Storm
9333 Daisy Avenue
Fountain Valley, CA 92708
hstorm@socal.rr.com

To: Smita Deshpande, Branch Chief
Caltrans District 12
Attn: 405 SDEIR-DEIS Comment Period
2201 Dupont Dr., Ste. 200, Irvine, CA 92612
405.Supplemental.Draft.EIR.EIS@parsons.com

CC: Christina Byrne
Community Relations Officer, OCTA
550 S. Main St., Orange, CA
714-560-5717 Direct Line
cbyrne@octa.net

I-405 SUPPLEMENTAL DRAFT COMMENTS

I would like to state my reasons for strongly opposing the proposed braided ramp addition on the Northbound I-405, at the Magnolia-Warner exit/entrance.

1. Quality of Life Damages
Issues involving the destruction of quality of life for the large number of homes adjacent to the proposed braided ramp, along Daisy Ave in Fountain Valley, including:

- The addition of increased noise at all hours from the proposed elevated ramp and unimproved sound wall design causing a more noticeable background disturbance and/or health hazard.
- The exhaust fumes constantly expelled from the proposed elevated ramp will travel further than before causing an increased health hazard to residents along Daisy Ave. and others.
- The negative alteration of the view and beauty of the neighborhood due to the elevated ramps appearance and increased closeness to the homes in the Daisy Ave. area. 1

2. Financial Damage
The financial damage inflicted on the many residents in the Daisy Ave. area by the lowering of property values due to the effects of the proposed ramp. These damages will likely be substantial since a large part of Fountain Valley property values are based on desirable location considerations. 2

3. Lack of Information Provided To Residents
The lack of consideration and timely information provided to Daisy Ave. residents. There are no visuals or other information provided by OCTA relating to the above objections in our area. These appear to have been provided at other improvement point proposals. 3

4. Unnecessary Braided Ramp
The clear lack of actual need for a braided ramp at the I-405 Northbound, Magnolia-Warner entrance/exit location. I have lived on Daisy Ave. many years and constantly use the existing I-405 Northbound, Magnolia-Warner ramps. In thousands of such usages, I have not observed any instance in which the traffic backup was caused by the crossing of the Northbound entrance and exit traffic. All of the backup is caused by the expanding lane and merging traffic confusion required to accommodate accessing the next Northbound exit, (Hwy 39) Beach Blvd. Millions of taxpayers dollars would be wasted, and homeowners lives damaged, in the construction of the braided ramp in question, with little demonstrable gain in traffic flow. In this proposed non-solution, traffic would still be slowed at Beach Blvd. and the Magnolia-Warner Northbound entrances would still be backed up by freeway traffic, merging and metering lights. 4

5. Hopes for Proposal Adjustments
While we, the homeowners on and near Daisy Avenue, are left with no choice but to organize to protect ourselves and redress grievances from the above potential damages, such action is not where our hearts lie. We hope those responsible for the I-405 Expansion Project will give us, belatedly, the consideration we deserve and make necessary adjustments to the present proposal.

Thank you so much for your time and attention,
Harvey Storm

PC-S14

From: Larry Strawther [localsports@earthlink.net]
Sent: Monday, August 12, 2013 11:05 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: 'Don Broun'; 'Elizabeth Deering'; 'Henry Taboada'
Subject: Attention: 405 SDEIR-DEIS Comment Period, 2201 Dupont Drive, Suite 200, Irvine, CA 92612. Ms. Smita Deshpande Branch Chief-Caltrans District 12.

To whom it may concern –

Attention: 405 SDEIR-DEIS Comment Period, 2201 Dupont Drive, Suite 200, Irvine, CA 92612. Ms. Smita Deshpande Branch Chief-Caltrans District 12.

This is a video link to a recording made at the special meeting of the Rossmoor Community Services District held on August 12, 2012 at Rush Park Auditorium in Rossmoor. Please note and file in your list of responses and public comments regarding the Interstate 405 Toll Road . 1

http://youtu.be/aRGrcFkwFNM

Thank you.

Larry Strawther

Rossmoor resident
3251 Orangewood Avenue
Los Alamitos, CA 90720
(562) 522-6670

Larry Strawther
(562) 522-6670 (cell)
(562) 431-7001 (home office)
www.localsports.biz
www.losalhistory.com
www.tasteforlosal.com

PC-S15

August 12, 2013

Smita Deshpande, Branch Chief
Caltrans District 12
"Attn: 405 SDEIR-DEIS Comment Period"
2201 Dupont Drive, Suite 200
Irvine, CA 92612

Dear Ms. Deshpande:

I would like to submit my comments in regard to the I-405 Supplemental DEIR/DEIS. I have issues with traffic congestion, safety, air quality, diversion onto arterials, and tolling.

I feel that the original EIR did not adequately address traffic congestion at the LA/OC County line. While the Supplemental traffic study looked at traffic in Long Beach, much of the congestion will take place on the Orange County side of the border. The SDEIR found traffic impacts in Long Beach at several intersections. The original DEIR also found a significant impact on Valley View/Bolsa Chica, however, no impacts were identified at Seal Beach Blvd. (Table 3.1.6-1). Looking at this table, on the southbound 405 on ramp, the v/c ratios are significantly increased in 2020 (over existing) in both AM and PM for both the no build and build options; however, in 2040, while the no build v/c ratios increase even more, the v/c ratios for the build options remain unchanged in the PM peak and greatly decrease (even below the existing, 2009 v/c) in the AM peak. Please explain what would cause this greatly reduced congestion in the AM peak for the southbound I-405 entrance ramp in 2040. 1

I am very concerned about safety, as are many neighbors who will not use the freeway during our present construction. To enter the northbound I-405 from Seal Beach Blvd in all build alternatives, one will have to cross over 4 lanes (within about 2,000 ft.) to proceed north into Long Beach. At times of high traffic volumes, it is often a challenge to do this now, with only two lanes to cross. I feel this will also be a safety issue for our residents. 2

In Alternative 3, traffic exiting the Express Lanes near the LA County line will be allowed to enter either an HOV lane or the left-hand most general purpose lane. All of the vehicles which are continuing northbound in the mainline general purpose lanes (the majority of traffic) will have to squeeze into the other 3 lanes that lead into LA County. [There is a merging of 2 general purpose lanes at a point just after two general purpose lanes exit to the NB I-605]. This merging will cause a bottleneck to occur. At the same time, 2+ vehicles, which have been traveling in the general purpose lanes, will be merging left, trying to enter the HOV lane in LA County. I believe this addition of weaving will have a negative effect on safety, in an area where exiting and merging already exist. When the 91 Express Lanes were owned by CPTC, the accident rate was 72% above the average. Our accident rate (per DEIR) is lower than average (although it has increased during construction) and I do not want it to increase. Alternatives 1 and Alternatives 2 have HOV lanes that are continuous with those in LA County and would have a much safer, smoother traffic flow. 3

PC-S15 (Continued)

Increased congestion will also result in a decrease in air quality. In the same area that Alternative 3 compresses all the general purpose lanes, Hopkinson Elementary School lies just over 500 ft. to the East (So may not have been identified as a sensitive receptor). However, this increase in congestion will subject the students to increased exposure to air pollutants. New studies have shown that these pollutants may travel up to a mile inland in early morning hours. The EPA has already identified Rossmoor, due to its proximity to two freeways, as having an increased cancer risk. 4

The I-110 toll lane demonstration project in LA County has shown some tolling resistance. This project does not charge 2+ carpools a toll. They also have a lower transponder monthly charge than that proposed in Alternative 3 (or 91 Express Lanes) and have even eliminated this charge for some drivers. Congestion in the general purpose lanes has also resulted. The 91 Express Lanes, the model for Alternative 3, while financially profitable for OCTA has been identified as the 2nd most congested freeway in the nation. I do not want a similar result on the I-405. What if the profits do not live up to expectations for Alternative 3 and we just have to live with the congestion created in the general purpose lanes? The express lanes will be useful for those traveling inter-regionally, but increased congestion in the general purpose lanes will severely impact local drivers' ability to use the freeway to travel to shopping, schools, and local jobs. 5

Alternative 3 will not increase the person-carrying capacity of the freeway, as it will not take cars off the road: 3+carpools are very difficult and there are no real transit options in the nearby area. If 2+ carpool drivers decide not to pay a toll and not to carpool anymore but to drive solo, it will actually increase the number of cars on the freeway (even more VMT and Greenhouse Gases) and also on our side streets. Congestion will also cause spill-over onto our local arterials. Seal Beach Blvd., Seal Beach's only north-south arterial, is easily affected by incidents on the freeway. 6

Population numbers used in the DEIR are pre-recession figures and traffic estimates could be inflated. Would there be a difference in the throughput between Alternatives 2 and 3 if population estimates from the 2012 SCAG RTP were used instead? 7

Sincerely,

Schelly Sustarsic
4288 Candleberry Ave.
Seal Beach, CA 90740

RESPONSE TO PUBLIC COMMENTS (PC)-S

Response to Comment Letter PC-S1

Comment PC-S1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification, Traffic Flow at the Orange County/Los Angeles County Line.

Response to Comment Letter PC-S2

Comment PC-S2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Comment PC-S2-2

Please see Common Response – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Response to Comment Letter PC-S3

Comment PC-S3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Both Alternatives 1 and 2 retain the “non-toll” HOV lanes.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Comment PC-S3-2

Architectural detailing to the proposed soundwalls, retaining walls, and bridges is proposed in the Draft EIR/EIS on page 3.1.7-85 as a mitigation measure in response to the proposed project's visual impacts.

Response to Comment Letter PC-S4

Comment PC-S4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Noise/Noise Analysis, Property Values.

Response to Comment Letter PC-S5

Comment PC-S5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The Supplemental Draft EIR/EIS covers potential adverse effects and significant impacts of the proposed I-405 Improvement Project and measures to address those adverse effects and significant impacts, as required by CEQA and NEPA. The comment refers to a variety of existing problems on the eastbound ramps at Studebaker Road. Existing problems are not the focus of the Supplemental Draft EIR/EIS except to the extent that they may be made worse by the proposed project. The Supplemental Draft EIR/EIS finds that the additional traffic added to the eastbound ramps is insufficient to result in an adverse effect or significant impact.

Caltrans standard practice for the assessment of effects to traffic as adverse, or of impacts to traffic as significant, does not include prescribed quantitative methods. Caltrans practice is to consider the data available in the determination of whether effects rise to the level of being

adverse or impacts to the level of significance. While many communities, such as the City of Long Beach, have prescribed quantitative methods for the determination of an adverse effect or significant impact to traffic, this is not the practice of Caltrans, which is the lead agency for the I-405 Improvement Project.

Comment PC-S5-2

As noted in the comments, CEQA requires a description of the existing conditions in the vicinity of the project. The eastbound SR-22 ramps at Studebaker Road are neither within the project limits nor sufficiently close to the proposed project to require such a description. The study area for the Supplemental Traffic Study, reported in the Supplemental Draft EIR/EIS, includes an area much larger than the project limits. The purpose of larger limits for the Supplemental Traffic Study than for the project is to facilitate a determination of the potential of the proposed project to have adverse effects to traffic beyond the limits of the project. The sole purpose of the inclusion of the intersection of the eastbound SR-22 ramps and Studebaker Road in the Supplemental Draft EIR/EIS was to determine if there were potential significant impacts to traffic at the intersection resulting from the proposed project. Because no adverse traffic effects were identified and the intersection lies outside the project limits, no improvements are contemplated at the intersection. Tables 3-1, 3-10, and 3-12 of the Supplemental Draft EIR/EIS provide details of the operations analysis conducted for the intersection under Alternatives 1, 2, and 3, respectively. The tables show that no adverse effects are anticipated at the intersection. Because intersections are the locations with the highest potential for adverse effects due to the conflicting traffic streams, the lack of adverse effects at the intersection indicates lack of adverse effects along the ramps.

Comment PC-S5-3

The determination that there is no adverse effect at the intersection of College Park Drive and the westbound SR-22 ramps is supported by the data in Tables 3-1, 3-10, and 3-12 of the Supplemental Draft EIR/EIS for Alternatives 1, 2, and 3, respectively. For example, under the unsignalized condition (the intersection is currently unsignalized), Table 3-12 shows that delay on the stop-controlled approach would increase during the afternoon peak hour in 2040 from 152.1 seconds under the No Build Alternative to 158.2 seconds under Alternative 3. This level of increase (6.1 seconds) is not sufficient to support a finding of an adverse effect. The increase from the no-build condition of 152.1 seconds to 184.2 seconds (an increase of 32.1 seconds) under Alternative 1 and to 311.8 seconds (an increase of 158.7 seconds) under Alternative 2 is sufficient to support the finding of an adverse effect. See Response to Comment PC-S5-1 for a response to the topic of thresholds in the determination of whether effects are adverse.

Comment PC-S5-4

During project design, placement of signal heads would be considered so that vehicles on the SR-22 westbound off-ramp would have sufficient sight distance to see and react to a red signal indication and prepare to stop. During project design, a complete signing package would also be prepared.

Comment PC-S5-5

The Supplemental Draft EIR/EIS covers potential adverse effects and significant impacts of the proposed I-405 Improvement Project and measures to address those adverse effects and significant impacts, as required by CEQA and NEPA. The comment refers to a variety of existing problems on the westbound ramps at Studebaker Road. Existing problems are not the focus of the Supplemental Draft EIR/EIS except to the extent that they may be made worse by the proposed project. For Alternatives 1 and 2, the Supplemental Draft EIR/EIS includes Measure T-10, which would address the project's contribution to the cumulative adverse effect at the intersection of College Park Drive and the westbound SR-22 ramps at Studebaker Road.

Comment PC-S5-6

Signal coordination between the proposed new signal and the existing signal at the intersection of Studebaker Road and the SR-22 westbound ramps would be addressed during final project design.

Comment PC-S5-7

The proposed signalization at the intersection of College Park Drive and the westbound SR-22 ramps at Studebaker Road in Measure T-10 includes a protected (arrow) southbound left turn into College Park Drive.

Response to Comment Letter PC-S6

Comment PC-S6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Preferred Alternative Identification.

Comment PC-S6-2

Please see Common Response – Shifting Improvements away from Residential Properties onto NAVWPNSTA Seal Beach Property.

Comment PC-S6-3

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-S7

Comment PC-S7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

All build alternatives reduce travel times within the corridor when compared with the No Build Alternative, thus reducing congestion.

Please see Common Response – Substantiation of Reported Corridor Travel Times for Build Alternatives.

Comment PC-S7-2

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Comment PC-S7-3

Predictions are inherently risk laden. However, given the current levels of congestion and the forecast changes in population and employment, none of the proposed improvements is anticipated to eliminate congestion in the I-405 corridor; congestion is anticipated to be reduced in duration and extent. Congestion on freeways in Orange County is monitored under the Congestion Management Program administered by OCTA. Issues of blame and tax refunds should be addressed in a political forum rather than in an environmental document. A comparison presented in Table 3.1.6-4 of the Draft EIR/EIS shows, in shaded cells, how the existing freeway congestion compares to the congestion expected in 2020. Table 3.1.6-12 of the Draft EIR/EIS provides a similar comparison for 2040.

Response to Comment Letter PC-S8

Comment PC-S8-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Noise/Noise Analysis, Air Quality, Health Risk, Property Values, Traffic Flow at the Orange County/Los Angeles County Line.

Response to Comment Letter PC-S9

Comment PC-S9-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Air Quality, Health Risk, Property Values.

Response to Comment Letter PC-S10

Comment PC-S10-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification, Traffic Flow at the Orange County/Los Angeles County Line, Air Quality, Measure M.

Response to Comment Letter PC-S11

Comment PC-S11-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The current construction along I-405 in the vicinity of SR-22, Seal Beach Boulevard, and I-605 is not part of the I-405 project, which is the subject of the Supplemental Draft EIR/EIS. Lane configurations within the construction zone during construction are temporary.

Response to Comment Letter PC-S12

Comment PC-S12-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Property Values.

Response to Comment Letter PC-S13

Comment PC-S13-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Northbound Braided Ramps at the Magnolia/Warner Interchange, Noise/Noise Analysis, Air Quality, Health Risks.

Comment PC-S13-2

Please see Common Response – Property Values.

Comment PC-S13-3

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange.

Comment PC-S13-4

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange.

Response to Comment Letter PC-S14

Comment PC-S14-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The YouTube video referenced in the comment has not been included or addressed. In the "General Information about This Document" behind the cover page, the Supplemental Draft EIR/EIS states: "If you have any comments regarding the information contained in this Supplemental Draft EIR/EIS, please attend the public hearing and/or send your written comments to Caltrans by August 12, 2013." A YouTube video is neither a written comment nor can it be reproduced for inclusion in the Final EIR/EIS.

Response to Comment Letter PC-S15

Comment PC-S15-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Traffic Flow at the Orange County/Los Angeles County Line.

Caltrans thanks you for your attention to the details of the Draft EIR/EIS. The V/C ratios reported in Table 3.1.6-1 of the Draft EIR/EIS for the Seal Beach Boulevard intersection with the I-405 southbound ramps/Beverly Manor Road in 2040 in the columns labeled "Build Traffic on No Build Geometry" are incorrect and have been corrected in the Final EIR/EIS. The correct values are reported in the Traffic Study. Improvements are included in the I-405 Improvement Project for this intersection. Traffic information with the improvements is reported in Table

3.1.6-16 of the Draft EIR/EIS; that information, which has been verified, shows that with the proposed improvements there is no adverse effect to traffic at the intersection.

Comment PC-S15-2

Under the No Build Alternative, vehicles entering I-405 northbound from Seal Beach Boulevard must merge one lane left to access I-605 and one more lane left to continue on I-405 northbound. Under all of the build alternatives, one lane change plus a lane merge downstream of the SR-22 westbound off-ramp would be required to reach I-605 and two additional lane changes to reach I-405.

Comment PC-S15-3

The design for the transition areas at the end of the Express Lanes in Alternative 3 is preliminary and represents a worst-case condition necessary to make certain that any potential environmental impacts are identified. If Alternative 3 is identified as the preferred alternative, different designs for the transition areas will be considered during final design and optional designs may be used to address safety and operational concerns, such as those raised in the comment. If design changes result in environmental impacts exceeding those identified in the Final EIR/EIS, further environmental documentation may be required. Use of the worst case in preparation of the Draft EIR/EIS limits the potential for further documentation as a result of design changes.

Comment PC-S15-4

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Air Quality.

Comment PC-S15-5

The latest data from the I-110 demonstration project in Los Angeles County presented to the OCTA Board of Directors on May 24, 2013, indicates that there is less congestion in the general purpose lanes and an increase in HOV/Express Lane usage than there was prior to implementation of the demonstration program. During the initial ramp-up period after the demonstration program started, there was an expected increase in general purpose lane congestion as motorists adapted to the new policies related to the HOV/Express Lanes.

The SR-91 Express Lanes are considered successful traffic management. They do not eliminate congestion in the general purpose lanes; they provide an option to that congestion to motorists willing to pay a toll. The tolls are set at the rates necessary to maintain high-speed operations. For an explanation of how this management works, see the Draft EIR/EIS page 2-20. For additional information, see Common Response – Opposition to Tolling.

All of the build alternatives are anticipated to reduce congestion in the I-405 corridor; none are expected to eliminate congestion in the corridor. The benefits to congestion vary among the build alternatives. The benefits to congestion of the build alternatives are summarized in the Draft EIR/EIS in Tables 3.1.6-4 through, 3.1.6-8, and 3.1.6-12, through 3.1.6-14.

Comment PC-S15-6

Alternative 3 will increase the vehicle capacity of the freeway and thereby increase the person-carrying capacity of the freeway. For a discussion of changes in the HOV vehicle occupancy requirement, please see Common Response – Opposition to Tolling.

Comment PC-S15-7

Throughput data cited in Table 3.1.6-14 of the Draft EIR/EIS would not be changed with use of the 2012 SCAG RTP data. The throughput data presented in the table are for peak hours under congested conditions, which are anticipated under any of the alternatives because peak-hour traffic demand will exceed capacity under any reasonable forecast.

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PUBLIC COMMENTS (PC)-T

PC-T1

From: Donald & Diane Thompson [debryce1@verizon.net]
Sent: Sunday, July 07, 2013 4:40 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

The picture that accompanies the I-405 re-do proposal is indeed awesome and obviously documents either "going to work" or "coming home from work". If one looks at the other side of the freeway (traffic in the other direction) there is not the significant congestion which is depicted. Normally I can get from Valley View to Bristol on the 405 in less than 20 minutes, of course not at the two periods of traffic congestion. But lets consider what the significant problems are with widening the 405 from say Valley View to Euclid. There are 16 over-passes of the 405 that will have to be rebuilt because there is no room for addition of a lane either south or north bound (the existing freeway is literally right up to the overpass supports). There are 4 overpasses by the 405 (at Beach, the two shopping centers and a storage facility) that will require significant re-building because there is no land on which to add a lane. The Westminster Mall will have its parking area and perimeter access road impacted because to add a lane a major addition of support structure (dirt mound or bridge supports) would be needed to add a lane. For those sections of the 405 not already addressed (the passes over the 405 or by the 405) there are significant problems literally all the way from Valley View to Euclid. Assuming that freeway standards require a shoulder lane for standing a vehicle in trouble there will be significant impact on existing homes and their noise abatement walls. Addition of a lane and the accompanying shoulder will have traffic literally right outside the residences or perhaps, in some cases, there will be major re-building of the residential areas. There will have to be provisioning, primarily on the north bound 405 for existing drainage ditches. What should also be noted is that not only will the over passing structures need rebuilding but also the supporting on and off ramp provisions which in some cases will impact existing structures, either businesses or residential. 1

What could be investigated would be the addition in the center of the 405 of elevated lanes for south and north bound HOV much like the stretch of the 110 near downtown Los Angeles. Another possibility could be, similar to freeways near San Francisco but inverse, the permitting of any vehicle in the so-called HOV lane during specific times like from 7:00 am to 9:00 am and 5:00 pm to 7:00 pm. Yet another possibility would be banning trucks during those same times noted in the previous sentence (trucks are a real nuisance in heavy traffic periods). Then again, one could just let be what exists, namely traffic congestion at various times of the day. While the rebuilding sounds nice, the fact of the matter is that it is next to impossible and would severely impact not only use of the 405 for decades but additionally those residential roads that connect the public to its homes, shopping areas, schools, and sources of entertainment. The re-building of the 405-22-605 stretch near Garden Grove and Seal Beach has been a major pain but also not a significant reduction in traffic congestion. What should be considered is that frequently the congestion one sees is not so much too many cars as to too many bad drivers.

Don Thompson

PC-T2

From: Donald & Diane Thompson [debryce1@verizon.net]
Sent: Wednesday, August 07, 2013 11:57 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Sadly, I could not attend the July 24 meeting because I was out of town. I have read the reports and I must compliment the task group on an excellent study, however, there are some comments I need to make.

First, the picture that is used as a selling point is obviously either a going to work or coming home from work situation. The picture could even be indicative of an accident in the lanes going away from the picture taker since both directions indicate slow moving congestion and that is a condition that does not consistently occur during the "peak" travel periods. Further, a major contributor to the congestion could be bad drivers. All you need at any time of the day is one or more drivers not maintaining a proper speed for the lanes they are in, or drivers obviously slowing up to observe something, plus indiscriminate lane changing, to induce congestion. I travel the 405 from Valley View to Bristol (events at Segerstrom or South Coast Repertory or the mall) and consistently, other than going home or to work,I can generally make the trip in 10 to 12 minutes, or at about an average speed of 60 mph, or just under the posted limit. 1

If it is deemed necessary that the freeway be modified, one change that was not mentioned should be considered. If you drive north from Bristol, at almost anytime of day, there is congestion and difficult driving until you pass Brookhurst. That condition is caused by the variations in the number of lanes from 6 to 5 then 4 general purpose lanes and the inability of many drivers to cope with the freeway going from 6 to 5 to 4 lanes and having to adjust their lane travel. If the freeway must be changed then one general purpose lane could be added south from Valley View to Brookhurst and then north from Brookhurst to Valley View. A 5th general purpose lane going south already exists at Brookhurst and a 5th general purpose lane going north is presently removed at Brookhurst. As you can tell, I am not too enthusiastic about any changes to the 405 - impact to the neighboring residential and business areas will be tremendous and will exist for many years (lane additions will not only rework the overpasses but also the access to and from them and their nearby neighborhoods). 2

Additionally there are many places on the 405, such as at the Westminster shopping mall, that present significant challenges to the addition of a lane and attendant shoulder. There are at least 4 places where there is no existing land on which to add a lane, hence lane addition will require bridge-like works. Rework of the existing Beach boulevard overpass would be a very significant challenge because any partial blockage of this very important, and heavily used, north-south passage could cause traffic congestion worse than what has been implied on the 405 as a requirement for freeway lane addition. 3

A traffic decongestion possibility that wasn't addressed could be the restriction of truck usage of the 405. Truck usage of the 405 could be banned from 6 am to 8 am and again from 4:30 pm to 6:30 pm. A major contribution to present congestion is the presence of trucks in both the outside lane and the one next to it as they chug away between 55 and 60 mph plus their lane changes and entering and leaving the freeway. 4

One significant omission in the reports is the impact from the rework of the freeway crossovers as well as the exits and entrances to the 405. Not only is access to and from the crossovers impacted by the proposed freeway lane additions but in all probability there will be impact to the residences, businesses, and cross streets that abut surface streets that the crossovers support or are adjacent to. The same impacts will affect the freeway access and exit lanes. These impacts will require construction and rework of existing facilities and will probably add significant cost to the proposal as well as require coordination with the existing business owners/civic governments. 5

A possible solution to this supposed congestion could be the addition of an elevated HOV lane, north and south, similar to the work that was added to the 110 near downtown Los Angeles. It would be a challenge to design and build but it would "add" a general purpose lane by conversion of the existing HOV lanes. And speaking of "conversion" of the existing HOV lanes, they could be opened to usage by all passenger cars during specific periods like those time periods mentioned above for truck banning, which would in effect "add" a general purpose lane. 6

The current re-building of the 405-22-605 stretch has been a major pain and also hasn't resulted in a significant reduction in traffic congestion. I realize the re-build has not been completed, but as I mentioned above, a lot of the current congestion results from poor driving. All you need to see is the late decision of drivers "oh, I need to be over there" as they try to adjust to the lane they should have anticipated earlier. 7

Frankly, I do not consider it worth the cost, inconvenience to the adjacent neighborhoods and other functions, as well as general impact to society, just to partially alleviate the freeway congestion which will continue to exist so long as there are mediocre drivers and short duration high volume traffic periods.

PC-T3

From: Thronson@aol.com
Sent: Saturday, June 29, 2013 11:14 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: quesstion

Sirs....

I live in Long Beach and frequently exit from 605 S onto either 7th street and/or 22W Trying to figure out your email, it doesn't appear my route will be changed. Is this correct?

Also, driving south on 405 and trying to exit onto Seal Beach Blvd. E, which I haven't driven in awhile, is this open? I will be driving to the Ayres Hotel

1

Thank you for your help.

Shirley Thronson

RESPONSE TO PUBLIC COMMENTS (PC)-T

Response to Comment Letter PC-T1

Comment PC-T1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS. You will be notified when the Final EIR/EIS is available for review. Please see Appendix R1 (Response to Comments on Draft EIR/EIS) for Responses to Comments PC-T13-1 through PC-T13-4 and PC-T14-1 and PC-T14-2.

Response to Comment Letter PC-T2

Comment PC-T2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The anticipated performance of the freeway with and without the build alternatives is summarized in the Draft EIR/EIS in Tables 3.1.6-4 through 3.1.6-8, and 3.1.6-12 through 3.1.6-14.

Comment PC-T2-2

Lane continuity is addressed in the Draft EIR/EIS, which states on page 1-23: “Currently, three lanes are added to I-405 northbound from SR-73 as it merges into I-405 approximately 1.5 miles north of SR-55. There are no lane additions from SR-55 that extend to SR-73. The lanes added by SR-73 are subsequently dropped at the next three local interchanges at the Harbor Boulevard, Euclid Street, and Brookhurst Street interchanges, creating a series of bottlenecks. The proposed build alternatives would remove one or more of those lane drops and enhance lane continuity in the corridor. Continuing the project south to SR-55 would further compound rather than address lane continuity problems.”

Comment PC-T2-3

Page 2-15 of the Draft EIR/EIS indicates that widening of the freeway under any of the proposed alternatives would require the replacement of 17 bridges over the freeway. Temporary ramp closures necessary to construct the project are identified in Table S-1 of the Draft EIR/EIS and more fully explained in Section 3.1.4 of the Draft EIR/EIS. Acquisition of right-of-way (ROW)

necessary to construct the project is identified in Table S-1 of the Draft EIR/EIS and fully explained in Section 3.1.1 of the Draft EIR/EIS.

Comment PC-T2-4

Prohibition of trucks on interstate highways is not permitted.

Comment PC-T2-5

See Response to Comment PC-T2-3.

Comment PC-T2-6

Elevated alternatives were considered and rejected. See Section 2.2.7 of the Draft EIR/EIS.

Comment PC-T2-7

The current construction is not part of the proposed I-405 Improvement Project. The improvements currently under construction are assumed to be in place prior to the start of construction of the proposed I-405 Improvement Project.

Response to Comment Letter PC-T3

Comment PC-T3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The I-405 Improvement Project will not change the paths from I-605 southbound to westbound 7th Street. The current construction is not part of the proposed I-405 Improvement Project.

PUBLIC COMMENTS (PC)-U

PC-U1

From: Jill Unze [jill.unze@gmail.com]
Sent: Saturday, August 03, 2013 10:26 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

To whom it may concern,

I concur the congestion on the 405 between 605 and the 73 is an issue and continues to worsen. I also applaud the very well run public outreach campaign.

However, I am perplexed by the solutions proposed. Has a metro-link, train, or above ground subway system been considered? If the only solution is to continually add lanes for traffic without considering how to actually reduce traffic, I think the plan lacks real forward thinking vision. I work in Long Beach and commute 30 miles to Aliso Viejo. My hours are unpredictable and long, so carpooling is not feasible. Currently any public transit option would take well over 2 hours one-way. 1

If a public transit system is not an option, and I must only consider the plans on the table, I do not support the modified Alternative 3. Brookhurst is the bottleneck in either direction. If the HOV drops to one lane at Brookhurst, I think improvement will be marginal. 2

Regards,

Jill Buczkowski Unze

Sent from my iPhone

RESPONSE TO PUBLIC COMMENTS (PC)-U

Response to Comment Letter PC-U1

Comment PC-U1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives

Comment PC-U1-2

A design option (or modification) of Alternative 3 explained in Common Response – Replacement of Fairview Road Overcrossing/Truncation of Tolled Express Lanes would result in two additional travel lanes in each direction north of Euclid Street. Currently, there are seven travel lanes south of Euclid Street in each direction; under the design option there would be seven travel lanes in each direction north of Euclid Street. The lanes south of Euclid Street would be the existing condition and consist of six GP lanes and one HOV lane in each direction; north of Euclid Street under the design option the lanes would include five GP lanes and two Express Lanes.

A transition area in each direction between the lanes north and south of Euclid Street would be provided. Transition areas near the beginning of the Express Lanes would allow traffic in HOV and GP lanes to change lanes to access the GP and Express Lanes within the project limits of Alternative 3. Transition areas at the end of the Express Lanes would allow traffic in the Express and GP lanes to change lanes to access the GP and HOV lanes downstream of the end of the Express Facility.

PUBLIC COMMENTS (PC)-V

PC-V1

From: Jay Vanarsdale [jay@cctow.com]
Sent: Monday, August 12, 2013 11:06 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Cc: Jay Van Arsdale; info_westminsterchamber@bizla.rr.com
Subject: Alternative 1

Alternative 1 is the best option. It allows in and out of HOV lanes without restricting regular lanes. I work on the freeways towing cars and trucks and clearing accidents. Express lanes will not allow us to access accident calls in the regular lanes quickly. In fact it will take longer and **will take away business** from local towing companies because the Express lanes use their own tow trucks. Don't just go for the money, go for what is right and good for all taxpayers. Don't limit the use of carpool lanes to drivers that have to drive miles and miles to exit. That would limit and discourage local use of carpool lanes. 1

Sincerely,

Jay Van Arsdale
President
Country City Towing
Anaheim-Westminster
714 449-2100 714 449-9452 Fax

PC-V2

OCTA BOARD:

PLEASE DO NOT BRING DOWN THE FREEWAY SOUND WALL IN SEAL BEACH.

WE ARE VERY INTERESTED IN KEEPING THE WALL TO PROTECT OUR HOMES AND LIVES FROM THE DANGERS AND NUISANCE OF NOISE, POLLUTION, AND OTHER NEIGHBORHOOD INVASION. 1

THE BENEFITS TO CONGESTION OFFERED BY TOLL LANES IS NOT CLEAR. INGRESS, EGRESS, AND THE TERMINATION OF THE LANE AT THE L.A. COUNTY LINE WILL CREATE ADDITIONAL TRAFFIC RELATED RISK FOR OUR HOMES AND LIVES. 2

SINCERELY,

DICK VINCENT
3540 OLEANDER ST.
SEAL BEACH, CA

PC-V3

my husband and I worked so hard
and saved for 25 years to be
able to afford to live in College
Park east with our Children and
many foster children.
We are deliriously happy there
and we live 3 hases in from
almond park so you can see
how dramatically you will affect
our lives and our children and
our dreams if you take down
our Sound wall.
Please, please dont tuch our
wall please

1

Shannon Vincent
(562) 431-4608

RESPONSE TO PUBLIC COMMENTS (PC)-V

Response to Comment Letter PC-V1

Comment PC-V1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

Response to Comment Letter PC-V2

Comment PC-V2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Noise/Noise Analysis, Air Quality, Health Risks.

Comment PC-V2-2

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification, Traffic Flow at the Orange County/Los Angeles County Line.

Response to Comment Letter PC-V3

Comment PC-V3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Almond Avenue Soundwall.

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PUBLIC COMMENTS (PC)-W

PC-W1

From: melanie and ernie [mwallner@charter.net]
Sent: Thursday, August 01, 2013 1:42 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Please do whatever you can to mitigate the impact on the Long Beach area. We have already suffered through many, many months of extra traffic and freeway closures due to the 22/405 freeway upgrades. We are very concerned that the lane additions in Orange County on the 405 freeway will negatively affect us for many more years. 1

Thank you for your consideration.

Melanie and Ernie Wallner
221 Covina Ave.
Long Beach, CA 90803

PC-W2

6/26/12 City of Seal Beach Community Meeting 7pm -

As a College Park resident for 25 years I am extremely against tearing down the almond tree wall. It is an extremely well built wall with lording earth, footings etc. It is higher than the standard wall that would be replacing the wall. 1

The International Agency for Research on Cancer has published that vehicle emissions, diesel truck exhaust and brake dust ARE Carcinogens that will filter into our beautiful neighborhood and our quality of life will be changed.

The bottleneck of the 605 will create a bottleneck for idling vehicles, increased noise, smells, etc for our residents to include my neighbors presently have their homes for sale and potential buyers get back into their vehicles & state "Too much traffic, noise and blare. Property values will decrease more if that wall is moved further into College Park east. I am on Carnation Circle, too close now to the wall - Do not make it closer PLEASE! 2

Doris E. Wagner
3570 Carnation Circle
Seal Beach, CA 90740

Alternate #1 is the only option! or the No Build. 3

PC-W3

From: J L [jlaw144@yahoo.com]
Sent: Friday, August 09, 2013 3:12 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Soundwall CPE

To Whom It May Concern,

Our family is totally opposed to moving the 22/405 soundwall any further into the College Park East tract of Seal Beach. We feel it would be intrusive and would have a devastating effect on the value of our home. 1

Thank you,
David Kahn and Nancy Weintraub
3570 Violet Street
Seal Beach, CA
562-981-4321

PC-W4

From: Sara Wescott [swescott@ggusd.us]
Sent: Friday, August 09, 2013 4:37 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Hello,

I am very concerned about the impact of this project on the city of Long Beach. As a Long Beach resident, I am aware that improvements will need to be made in our city that are not funded. It isn't fair to expect the tax payers of Long Beach to fund this project. We have been heavily impacted for the past 8 years as various projects have forced traffic through our city and impacted our commute. 1

Please work with the city of Long Beach to come to a satisfactory compromise.

Sara Wescott
Long Beach Homeowner

PC-W5

From: Leslie Widdup [Leslie_Widdup@qscaudio.com]
Sent: Thursday, August 01, 2013 10:03 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

I drive the through the construction zone every day. The progress is visible and impressive. Kudos's to all the hard working men and women who have been working so hard. 1

QSC

Leslie Widdup
Accounts Payable Assistant
ap@qscaudio.com

Toll Free: 800.854.4079
Direct: 714.327.4613
Fax: 714.754.6170

QSC Audio Products, LLC
1675 MacArthur Blvd.
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PC-W6

From: HL Williamson [aquadyn1@roadrunner.com]
Sent: Monday, July 08, 2013 2:37 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: COMMENTS REGARDING 405/ET AL CHANGES AFFECTING RESIDENTS

To Whom It May Concern:

We submitted our comments once before, but perhaps to no avail. I sometimes wonder why we vote for example, when what the majority want or do not want is often ignored or overturned.

HEALTH ISSUE
We live in College Park East. We have lived here for 33 years. We live on a Cul-de-sac. There have been no less than cases of Cancer resulting in 6 deaths on our street alone. We would like to see a health report (something that Erin Brockovich might do)that tells us just how many of these cases (and the many more on every other street the area) ar related to freeway soot, auto emission, and constant work on the freeway. Our homes are filled with dirty air, our patios and backyards and constantly dirty, our vegetation, i.e., trees shrubs, fruit and vegetables that are grown for ou consumption are very dirty. The air we breathe is terribly polluted already. 1

TRAFFIC ON ALMOND ALONG FREEWAY WALL.
There is considerable traffic on Almond, more now during the work that is currently being done on Lampson, Seal Bea Blvd., and Valley View. Widening the freeway which will take more space out of the one lane each way traffic on Almond will impact safety in general; safety for those riding bikes; safety for those walking their dogs, and safety for those who must park on Almond on street sweeping days, days when there are parties and nowhere to park on our ov streets. The impact on residents is considerable and will be more so if you insist on widening the freeway and narrow Almond. Dogs are not allowed to run in the parks, and since the only place to take them legally is on a walk on a leash to the dog park, which has its own hazards; where do you expect residents to walk their dogs without being hit by a passing car once Almond is narrower? 2

IMPACT ON HOME SALES
The value of our homes will decrease due to the impact of your plan and you will see an increase in homes for sale, bu WE will see a decrease in our ability to get a fair market price for our homes that are impacted by narrowing Almond Street. 3

WIDENING THE FREEWAY
It is my understanding that Los Angeles County will not agree to or participate in this plan; therefore the widening effc will start and stop and cause a greater traffic tie up due to lanes merging at the county line. The problem isn't that the are not enough lanes, it is that there are just too many cars and that is only going to get worse over time, not better. : then what will you do then, take away Almond entirely and displace people from their homes? Why? Why can't you leave decent law abiding citizens who love their community alone? 4

OTHER OPTIONS
I was under the impression there were other options that would not impact residents of College Park East as drasticall as what is proposed. What happened to those options?
Why can't you expand using the land on the other side of the freeway which is owned by the Navy Base, but not being used. It is also my understanding you propose taking only ten feet of space from Almond. How much negative impact can there be to ten feet of the Navy Base property that is not being used? 5

TOLL LANES
Why do you want to charge the people who use this freeway to get to and from their residences, to local businesses, nearby beaches, and airports? That is tantamount to adding an extra tax to the residents that you already overtax anc 6

PC-W6 (Continued)

impact with all that is currently being done around here. Many older residents of Leisure World use this freeway and they are on a fixed income. I am against a toll lane altogether.

WHAT IS THE BENEFIT?
I read the paper. I see your press releases, yet I have not seen what benefit this is to the residents. As a taxpayer and long-time resident, I join the thousands of other College Park East residents who are discouraged and upset about the plans that are being considered. If this plan passes, I believe the residents will file a lawsuit to stop it, or halt it for years. 6 cont.

Respectfully
Nancy Williamson
Resident College Park East

PC-W7

From: vanwittbek@mac.com
Sent: Thursday, August 01, 2013 10:04 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Good morning. My suggestion is regarding the Willow Street/Woodruff Avenue intersection.

The left turn lane onto Willow from southbound Woodruff should be lengthened. That lane is constantly cut off by the many cars lined up to go straight through the intersection. I see there is not a lot of room there, but it looks like a couple car lengths might be gained which would make a big difference. 1

Thanks!

Allen Witbeck
5602 E. Mezzanine Way, Long Beach
562-754-6736

PC-W8

From: Woody [Woody@socal.rr.com]
Sent: Thursday, August 08, 2013 10:29 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

Don't it always seem go! 1

http://www.youtube.com/watch?v=2ON7mozb2aY

PC-W9

From: Neal Woolston [nealwoolston@email.com]
Sent: Thursday, August 01, 2013 9:50 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Re: I-405 Supplemental Documents

We attended the meeting at Hill Middle School and a meeting two days earlier called by the Rossmoor H A. We did not speak at the meetings but we STRONGLY support alternate 1. We thought this matter was settled last October when OCTA Board recommended Alternate 1. At that time, the overwhelming preference of the commuities involved was for Alternate 1. We're very disappointed at the current situation. **1**

Neal and Nita Woolston
2742 Oak Knoll Drive
Los Alamitos

RESPONSE TO PUBLIC COMMENTS (PC)-W

Response to Comment Letter PC-W1

Comment PC-W1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Bridge and ramp closures north of Bolsa Chica Road are not anticipated during construction of the I-405 Improvement Project.

Response to Comment Letter PC-W2

Comment PC-W2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Air Quality, Health Risks.

Comment PC-W2-2

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Air Quality, Health Risks, Noise/Noise Analysis.

Comment PC-W2-3

Please see Common Responses – Property Values, Preferred Alternative Identification.

Response to Comment Letter PC-W3

Comment PC-W3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Almond Avenue Soundwall.

Response to Comment Letter PC-W4

Comment PC-W4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-10 would address cumulative significant impacts to traffic on SR-22 (7th Street), which is a State highway. This fair share would be contributed by the I-405 Improvement Project for the proposed improvements. The remainder of the funding would be the responsibility of the State, not the City of Long Beach.

A comparison of the volumes at intersections along 7th Street under the existing condition (Figure 3-5 of the Supplemental Draft EIR/EIS) with the forecast volumes for the 2040 No Build Alternative (Figure 3-18 of the Supplemental Draft EIR/EIS) shows that traffic is anticipated to increase along 7th Street without the proposed I-405 Improvement Project. Consequently, there is an adverse effect on 7th Street traffic without the project. The additional increment of traffic on 7th Street associated with the proposed project results in cumulative effects of traffic from the project and from other sources that are greater than those solely from the project alone. Consequently, the measures included in the Supplemental Draft EIR/EIS are not intended to address all of the deterioration in traffic service expected between the existing condition and year 2040.

A fair share of the costs for the improvements proposed in the Supplemental Draft EIR/EIS under Measure T-11 would address cumulative significant impacts to traffic on streets owned by the City of Long Beach. The remainder of the funding at these locations would be the responsibility of the City of Long Beach.

Response to Comment Letter PC-W5

Comment PC-W5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Response to Comment Letter PC-W6

Comment PC-W6-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Air Quality, Health Risks.

Comment PC-W6-2

Please see Common Response – Almond Avenue Soundwall.

Comment PC-W6-3

Please see Common Response – Property Values.

Comment PC-W6-4

Please see Common Responses – Coordination between Caltrans Districts 7 and 12, OCTA, Los Angeles Metro, Gateway City Council of Governments, and the City of Long Beach, Traffic Flow at the Orange County/Los Angeles County Line.

Comment PC-W6-5

Please see Common Responses – Preferred Alternative Identification, Shifting Improvements away from Residential Properties onto NAVWPNSTA Seal Beach Property.

Comment PC-W6-6

Please see Common Responses – Opposition to Tolling.

Response to Comment Letter PC-W7

Comment PC-W7-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The Supplemental Draft EIR/EIS covers potential adverse effects and significant impacts of the proposed I-405 Improvement Project and measures to address those adverse effects and

significant impacts. Existing problems are not the focus of the Supplemental Draft EIR/EIS. Measure T-10 included in the Supplemental Draft EIR/EIS proposes, under Alternative 2, to add a second left-turn lane to the northbound approach of Woodruff Avenue to Willow Street. This proposed improvement would address adverse effects of Alternative 2 to traffic at the Woodruff/Willow intersection. Adverse effects are not anticipated under Alternatives 1 or 3.

Response to Comment Letter PC-W8

Comment PC-W8-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

The YouTube video referenced in the comment has not been included or addressed. In the "General Information about This Document" behind the cover page, the Supplemental Draft EIR/EIS states: "If you have any comments regarding the information contained in this Supplemental Draft EIR/EIS, please attend the public hearing and/or send your written comments to Caltrans by August 12, 2013." A YouTube video is neither a written comment, nor can it be reproduced for inclusion in the Final EIR/EIS.

Response to Comment Letter PC-W9

Comment PC-W9-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment was considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

PUBLIC COMMENTS (PC)-Z

PC-Z1

From: David Zawolkow [dave@modernsignspress.com]
Sent: Tuesday, July 16, 2013 4:16 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Freeway Expansion

The information included in the Orange County Breeze made the upcoming meeting on July 24 sound pretty much like a previous meeting held in Rossmoor. At that time, it was pretty clear that:
1. the freeway expansion will have a limited life value, and 2. having the added lanes end at the LA County line will impede even short term benefits..

It should be abundantly clear that the only real long term traffic solution is an integrated public transportation system. Of course,since that is never offered it will never happen. 1

For the available proposals, I am absolutely opposed to any toll lane addition. Those who can afford the added cost have a benefit of sorts, and those who cannot sit in unimproved traffic. 2

David Zawolkow

RESPONSE TO PUBLIC COMMENTS (PC)-Z

Response to Comment Letter PC-Z1

Comment PC-Z1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Traffic Flow at the Orange County/Los Angeles County Line, Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Comment PC-Z1-2

Please see Common Responses – Opposition to Tolling, Preferred Alternative Identification.

PUBLIC COMMENTS (PC)-UNIDENTIFIED

PC-UN1

To: Christina Byrne and OCTA and Cal Trans,

I am asking you to consider Option #1 (one lane each direction and **NO** moving the Sound-wall) in regards to the three options available since it is the only option that was authorized by "Measure M". The "No Build", at this point, seems as though it is no longer a consideration....why?
I do believe that we as residents of College Park East have many valid concerns. One of which is intrusion into our neighborhood by removing a necessary portion or lane space needed for safe travel on such a busy street.
Please NOTE: This is the only street that can be traveled to reach specific homes on the cul-de-sacs (South side/ FWY side) of CPE.
There are other valid concerns in regards to our environment. Sound of course is a huge concern and most important of all our "Air Quality". You cannot tell me **honestly** that with the increase of travel expected by Option #3 that our health would not be in jeopardy. We have seen more cancer these days than ever before. Much of which we have come to realize has been due to the environmental impact from over building into residential areas.
Exhaust emitted from automobiles and aircraft collect in the bronchial tubes and travel down our bronchial tubes then rest in the alveoli. When this happens, the lungs have no way to eliminate these foreign black particles in which eventually they turn cancerous or cause COPD. 1
(Chronic Obstructive Pulmonary Disease)
How do I know this my husband has worked in the LAX area for a few years during that time he has been breathing in these same particles he has been diagnosis ed with asthma and other issues. His last X-Rays showed these black particles which had acclumated from the heavy car exhaust and aircraft at LAX. The Pulmonary Specialist said that there is no way to remove these particles and that some day they most likely will become Cancerous.
I was looking up the endangered species list which had prevented certain developments from moving forward, the Spotted Owl, a lizard, a turtle etc. How is it that the importance human life and the quality of human life falls below that of an animal?
I am asking you to review this information and consider not pushing for option #3 but to do what is right and consider the welfare of the residents of CPE ...Could you really do that? I believe you can...but will you?
Please, Do Not move the Sound-wall and No Express lanes or Toll roads either ...No Overbuilding PLEASE!

PC-UN2

I-405 Improvement Project

Comment Sheet

Please provide your comments regarding the I-405 Improvement Project Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS). Comments must be received by Caltrans no later than July 17, 2012.

Name (First and Last):	
Organization:	
Address (Optional):	
Phone Number:	Email address:

Comments:
What about the trucks from the port? Can you consider putting them in a truck only lane (from the port to San Diego and back)

What about giving homeowners house filter, double pained windows etc. to filter our particulates? 1

(Space for comments continued on reverse)

RESPONSE TO PUBLIC COMMENTS (PC)-UNIDENTIFIED

Response to Comment Letter PC-UN1

Comment PC-UN1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Preferred Alternative Identification, Measure M, Almond Avenue Soundwall, Noise/Noise Analysis, Air Quality, Health Risks, Opposition to Tolling.

Response to Comment Letter PC-UN2

Comment PC-UN2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Responses – Almond Avenue Soundwall, Opposition to Tolling, Noise/ Noise Analysis, Air Quality.

PUBLIC COMMENTS (PC)-PET

PC-PET1

From: Nia Hartman [niahartman@earthlink.net]
Sent: Monday, August 12, 2013 12:43 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: Here are the comments and 591 signatures collected from the Rossmoor petition against toll lanes.
Attachments: comments_1376335851.pdf; signatures_1376335871.csv

Dear OCTA and CALTRANS representatives.

Please accept this list of comments and 591 signatures in support of the Change.Org petition created by Rossmoor residents.
The petition shows a very strong opposition to any toll lanes that may be considered for the 405 or other local freeways.
Several people have also voiced problems with the lack of dust and dirt containment during construction.
A desire for landscaping to include real trees that will contain dust, dirt, fumes, light.
There is a rumor that palm trees will be planted instead of willows, sycamores, and other deciduous trees.
It is not understood why the landscaping that could mitigate construction problems can't be expedited rather than being installed at the end of the job. 1

If you wish to follow the continuing comments and added signatures, you can find this petition at https://www.change.org/petitions/caltrans-and-octa-remove-toll-roads-again-from-consideration-in-the-i-405-freeway-improvement-project

Thank you for your openness to our concerns.

Please respond to this email to confirm the comments and signatures have been accepted for the comment period ending today.

Nia Hartman
Concerned Resident
3131 Druid Lane
Rossmoor, CA 90720
(562) 233-4455

PC-PET1 Continued

change.org

Recipient:

Letter: Greetings,

I support the following resolution made by the Board of Directors of the Rossmoor Community Services District to remove all Toll Road options from the I-405 Improvement Project.

RESOLUTION NO. 13-07-22-01

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ROSSMOOR COMMUNITY SERVICES DISTRICT OPPOSING THE SCREENING OF CONCEPT A AND B HOT LANES AS OPTIONS TO THE PREVIOUSLY SELECTED PREFERRED ALTERNATIVE 1 TO THE I-405 IMPROVEMENT PROJECT

WHEREAS, the Rossmoor Community Services District (District) has previously taken an official position in favor of Alternative 1 and opposition to Alternatives 2 and 3.

WHEREAS, the District has had reliance on the vote of the Orange County Transportation Authority (OCTA) in selecting Alternative 1 which excluded High Occupancy Toll (HOT) lanes as the preferred Alternative in October of 2012.

WHEREAS, the District has been informed that a newly constituted Board of Directors of the OCTA voted in April 2013 to reconsider HOT lanes.

WHEREAS, the OCTA Board of Directors and the California Department of Transportation (Caltrans) has issued a Supplemental EIR/EIS which screens Concepts A and B and reintroduce the potential for HOT lanes.

WHEREAS, the District considers any variation to the I-405 Improvement Project other than Alternative 1 as detrimental to the well being of the Rossmoor community due to the impacts of traffic, noise, light, and air pollution.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors of the Rossmoor Community Services District strongly opposes any deviation from the previously selected Alternative 1 which excludes HOT lanes.

PC-PET1 Continued

PASSED, APPROVED AND ADOPTED this 22nd day of July, 2013.
BOARD OF DIRECTORS
ROSSMOOR COMMUNITY SERVICES DISTRICT
By: Michael Maynard, President

PC-PET1 Continued

Comments

Name	Location	Date	Comment
Nia Hartman	Rossmoor, CA	2013-07-23	I am opposed to all toll roads. 1. They hurt tourism with confusion and tickets. 2. Tolls are used to pay for roads in lieu of tax dollars but after the roads are paid off the tolls never leave. 3. Toll lanes have limited access so local drivers can't get on or off near their routes. 4. Toll lanes require more infrastructure, maintenance, signage, and real estate. 5. Toll lanes cause congestion where drivers have to switch lanes to enter or avoid the lane.
Prabha Chand	Arroyo Grande, CA	2013-07-24	My fiance grew up in Rossmoor and has very fond memories. Everything doesn't need to change.
Jody Kay	Rossmoor, CA	2013-07-24	Because I live here! Stop milking my cow!
Helene Halperin	Los Alamitos, CA	2013-07-24	This is not an option that should be considered. General use lanes are better for all travelers, no matter what time of the day or night they may be on the road.
Patricia Buehnerkemper	Los Alamitos, CA	2013-07-24	Too much confusion already
Susan Haggard	Los Alamitos, CA	2013-07-24	Why is this important to you? (
Richard Butterfield	Rossmoor, CA	2013-07-24	Traffic congestion, Air Pollution, Noise Pollution, No body I have talked to wants this. Totally unbelievable!!!!!!
Diana Amirehteshami	Rossmoor, CA	2013-07-24	We pay enough in taxes that are supposed to go to roads, we should not pay for the freeway twice through taxes and a toll.
Philip Saenz	Seal Beach, CA	2013-07-24	Public facilities must not be up for sale.
John Cranmer	Rossmoor, CA	2013-07-24	Our roads are paid for by taxpayers, and we should not have to pay additional to use them.
Steve Steponovich	Rossmoor, CA	2013-07-24	1. Tolls are used to pay for roads in lieu of tax dollars but after the roads are paid off the tolls never leave. 2. Toll lanes have limited access so local drivers can't get on or off near their routes. 3. Toll lanes require more infrastructure, maintenance, signage, and real estate. 4. Toll lanes cause congestion where drivers have to switch lanes to enter or avoid the lane.
Gregory and Sherryl Lunde	Los Alamitos, CA	2013-07-24	Toll lanes were originally excluded.
Angela Epstein	Rossmoor, CA	2013-07-24	When is this ever going to be enough? We, as taxpayers, have already paid for the freeway, now they want us to pay to use it??? Really? And who controls the fees to use it? If this passes, it will go up and up and up. This is NOT private land!!! It belongs to the TAXPAYERS!
Charles Cavenderc	Miramar, FL	2013-07-24	Punishing people who need to get to work is nonsense.
Mary Holzgang	Los Alamitos, CA	2013-07-24	It would add more confusion to an already congested area between two counties

PC-PET1 Continued

Name	Location	Date	Comment
Paul Crockett	Miami, FL	2013-07-24	Quality of life.
Karen Paul	Rossmoor, CA	2013-07-24	Toll lanes will not get the same amount of users as general use lanes, (many will not be able to afford the toll lanes) therefore keeping congestion in the existing lanes or funneling traffic onto the surrounding streets around residences. This option should NOT be in the proposal...it's already been rejected!
Heidi Dicus	Rossmoor, CA	2013-07-24	I believe all freeways should be public access without tolls.
Arthur Julian	Los Alamitos, CA	2013-07-24	I am opposed to all toll roads.
Stan Olin	Los Alamitos, CA	2013-07-24	The need to limit congestion and the opportunities for accidents
Maureen Reid	Los Alamitos, CA	2013-07-24	We pay much in property taxes and should be able to use the roads.
Gary Stewart	Rossmoor, CA	2013-07-24	I do not want a toll lane on a publicly funded freeway. That is one reason why we pay so much in taxes in this state.
Marion Davis	Los Alamitos, CA	2013-07-24	Roads should be free.
orrin hagen	rossmoor, CA	2013-07-24	because it was soundly rejected
Henrietta Carter	Los Alamitos, CA	2013-07-24	I am concerned that toll roads would disrupt the flow of traffic in this stretch which is extremely busy during rush hour.
Lorna Farnum	Rossmoor, CA	2013-07-24	I live next to the 405 & the traffic is bad enough that it shouldn't be made worse by putting toll lanes or roads as part of it. Any improvement should be for ALL Californians; not just for the few who can afford it.
Diana Field	Rossmoor, CA	2013-07-24	It would add confusion to an already very congested area between Orange and LA county. We should not have to pay for the freeways twice; taxes and toll This potential land grab would jeopardize many peoples homes and businesses. Just not a good idea.... and what part of NO do these people not understand
Michael Guttentag	Los Alamitos, CA	2013-07-24	Option 1 is my choice because I do not want a toll road.
April Owen	Tobyhanna, PA	2013-07-24	I want option 1 because I do not want a toll road.
WILLIAM STARMANN	LOS ALAMITOS, CA	2013-07-24	My taxes paid for the road and improvements. I should not have to pay again every time I use the road if you make it a toll road. If you want a toll road pay for it yourself and pocket the tolls.
Christine Teng	Rossmoor, CA	2013-07-24	We pay enough taxes for roads already. Especially for a highly used fwy such as the 405 it's not wise to create toll lanes.Toll lanes will also cause major confusion and create traffic congestion (to and/or to avoid the toll lanes themselves).
Mary Lotts	Los Alamitos, CA	2013-07-24	I can't afford to pay tolls.
Ian Moody	Rossmoor, CA	2013-07-24	Is the objective to assist traffic congestion, or assist government constipation?
Larry Fulton	Los Alamitos, CA	2013-07-24	Stop the bureaucracy. Keep our roads and HWYS easy to use. We are already paying gas taxes, etc., etc.
Candy Marshall	Rossmoor, CA	2013-07-24	Where is the integrity in voting? No Toll lanes!
Eric Hartman	Los Alamitos, CA	2013-07-24	We already paid for this in Measure M. Now they want to have us pay to use it too? This is a scheme put on by the new OCTA board so they can get more money for other pet projects. I want what I paid for.
David and Sharron Thomas	Rossmoor, CA	2013-07-24	After what we have been put through this last year we don't want any toll lanes!
Cheryl Williamsen	Los Alamitos, CA	2013-07-24	The 405 is in my "backyard".
Katherine Livieratos	Rossmoor, CA	2013-07-24	We should not have to pay any toll roads we pay enough in taxes which are suppose to go to roads. Is this becoming another New York???

PC-PET1 Continued

Name	Location	Date	Comment
richard brandt	los alamitos, CA	2013-07-24	Quality of Life!
Nancy Hovey	Los Alamitos, CA	2013-07-24	Unacceptable. We have previously voted no on this measure of a toll road. This board needs to listen to the people they represent
suzan barazani	Los Alamitos, CA	2013-07-24	Don't Don't want to be charged to drive on freeway near my home
Julie Bush	Rossmoor, CA	2013-07-24	These options are too expensive and do not add to the quality of life and they do not improve traffic over time. Cal Trans does not design thoughtfully as if the members know the area.
Ellen Spiller	Rossmoor, CA	2013-07-24	Toll roads, particularly those using FasTrak are losing money every day. It really annoys me to have to buy a FasTrak and then be charged if I don't use it. I don't mind paying tolls, just being forced to purchase the transponder.
Byron Whitten	Westminster, CA	2013-07-24	I travel these roads every day and the addition of toll roads would disrupt traffic even more than it already has been for the last 2 years.
Randall Goddard	Rossmoor, CA	2013-07-24	California has the highest taxes in the nation and the highest gas taxes which go towards highway maintenance and improvement. No more taxes! Tolls are taxes!
Kim Tolen	Los Alamitos, CA	2013-07-24	we need freeway lanes that all motorist can use daily to reduce traffic on our roads
John Tolen	Los Alamitos, CA	2013-07-24	we need freeway lanes that all motorist can use daily to reduce traffic on our rouds(Optional)
Gary Brown	Rossmoor, CA	2013-07-24	Add lanes not tolls
Heather Sickles	Seal Beach, CA	2013-07-24	No toll road!!
Terry Pollock	Los Alamitos, CA	2013-07-24	I oppose the HOT lanes action for several reasons important to me, the most important is all North bound 405 will come to a screeching halt at the LA County line which will then have fewer lanes. The result will be a traffic jam of idling autos dumping their exhaust on Rossmoor. More air pollution!! Thanks for the opportunity to comment. Terry Pollock, Rossmoor
Danny Rivett	Rossmoor, CA	2013-07-24	This is just another ploy for the state of California to fatten the coffers on the backs of the people. They need to live within thier means. Also I understand that the HOT will end at the LA county line, which will create a bottleneck adjacent to our community.
Joseph Benjamin Jenkins	Rossmoor, CA	2013-07-24	We expressed our oppinion once that there is to me no tolls on I-405. What part of NO don't the politicians understand?
Joel Block	Los Alamitos, CA	2013-07-24	I oppose any toll road lanes added to the I-405 Freeway. Toll roads in California and especially in Orange County have been poor investments for the community, the taxpayers and the environment. Even the 2 new general use lane addition to the I-405 will cause massive traffic jams as NB lanes from Orange County narrow to existing lanes in Los Angeles County where the I-405, I-605 and CA-22 freeways converge. This entire freeway widening project was ill-conceived from the beginning.
Julie Ramsey	Rossmoor, CA	2013-07-24	I live in Rossmoor and do not want the increased noise a toll road would cause.
Nina Bao	Los alamitos, CA	2013-07-24	Freeway should be free
Tom Barnes	Los Alamitos, CA	2013-07-24	We already pay enough taxes, we should not have to pay tolls on a road that already exists!
Joan Griffiths	Los Alamitos, CA	2013-07-24	Tax payer money is already being used to widen the 405. Why should we pay more to use it? The best way to reduce congestion is to have toll free lanes accessible to all vehicles. Collecting tolls costs more money.

PC-PET1 Continued

Name	Location	Date	Comment
Michael Botnick	Tujunga, CA	2013-07-24	It is elitist bullshit... other than that no problem. We all pay taxes that go to improvement of infrastructure. Don't charge me for the privilege of using the road I already paid for.
Dewey Carlson	Los Alamitos, CA	2013-07-24	Paid 73 Toll for 5 years. That's enough $ for Pete Wilson, our Navy governor.
David Chaille	Long Beach, CA	2013-07-24	I grew up in New England and despised the toll roads. Californians do not want toll roads. Tolls roads are only used by the affluent and therefore such roads are discriminatory.
Johnny Newnes	Huntington Beach, CA	2013-07-24	I work and socialize in the Seal Beach/Rossmoor area and the inconviences I have already experienced from the construction up in this direction are beyond unbelievable. I can NOT imagine what chaos awaits this area with more construction.
James Tarchione	Rossmoor, CA	2013-07-24	NOISE!! and pollution
Claudia Dunn	Los Alamitos, CA	2013-07-24	I live very close to the freeway this will increase traffic congestion in an already dangerous on ramp/off ramp configuration.
Darcy and Richard Krumhauer	Los Alamitos, CA	2013-07-24	We are strongly opposed to the toll road and want 2 general use lanes as was already decided.
Robert Esposito	Los Alamitos, CA	2013-07-24	We have high value real estate. The quality of life is a factor in maintaining those values and attracting professionals and their families to our community...do the math!
Connie Kuhn	Los Alamitos, CA	2013-07-24	the bottle neck over the past three years has been bad enough. We do not want toll lanes. It was made very clear in the past and our sentiment has not changed.
Mary Cunningham	Los Alamitos, CA	2013-07-24	We pay taxes for this and that would be double dipping
Michael Levin	Rossmoor, CA	2013-07-24	This has already beed discussed and addressed. The community spoke clearly in our opposition to the toll roads. We still feel the same way. Please honor the decision as it was made by the previous board.
Dayna Boe	Long Beach, CA	2013-07-24	This is not what we need and there has been so much construction for so long we don't need any more time added to work on the area. And it would slow down the massive amount of traffic that is in orange county/LA area
Robert Crumby	Rossmoor, CA	2013-07-24	This is just anouther way to tax me and the other users of our roads. Don't approve this motion!
harvey chou	rossmoor, CA	2013-07-24	Why should we have to pay when we've suffered all this time with this traffic nightmare from the construction?
Janet Newnes	Huntington Beach, CA	2013-07-24	It is having a negative effect on the residents, businesses and traffic in this area. It is impossible to get around. Enough already!
Donna Wertz	Los Alamitos, CA	2013-07-24	We have already paid for the improvement in our taxes. We shouldn't have to pay to use the freeway.
Kay Shelton	Rossmoor, CA	2013-07-24	This is important for the health of my husband and me, also this will also reduce the price of the housing in this area.
Katy Chittick	Rossmoor, CA	2013-07-24	We already pay taxes for roads!!
Kay Butterfield	Rossmoor, CA	2013-07-24	I oppose any changes to the project. It was voted on already
Mark Butterfield	Rossmoor, CA	2013-07-24	to much congestion now.
Denise Fiore	Rossmoor, CA	2013-07-24	We live at the junction and often jump from the 22/405 & 605 for daily activities. This is all within a 5 mile range from our home. We've put up with all this construction crap and shouldn't have to be penalized more. Rossmoor, Leisure World are somewhat retirement communities. This isn't fair to us

PC-PET1 Continued

Name	Location	Date	Comment
Stephanie Doucette	Los Alamitos, CA	2013-07-24	Because I live in Rossmoor and the Freeway is too close to our home already, the noise and mostly the emissions are what concern me because I believe they are so unhealthy
Ed Beckwith	Rossmoor, CA	2013-07-24	Quality of life
Harriet Ottaviano	Seal Beach, CA	2013-07-24	The whole project is a waste as northbound traffi. will stop dead at the LACounty line. Don't make a bad situation worse with the addition of toll lanes. More importantly don't go back on your word.
Terry Millsaps	Rossmoor, CA	2013-07-24	I feel we should not have pay twice for using the highways, it is already funded and they want to make money on top of what was agreed upon. Also, this may increase traffic on the freeways as there are many drivers that will not want to pay a toll, since they already paid for the freeways through their taxes, therefore, driving in the regular lanes, causing increased traffic.
Octavio Nuiry	Rossmoor, CA	2013-07-24	Pollution, noise, crime
William Fendley	Los Alamitos, CA	2013-07-24	Additional noise--Air pollution-Years of construction-//Will not help traffic problems
Deborah Miller	Rossmoor, CA	2013-07-24	Against private enterprise making money on roads that we already are paying for through our taxes. Not right!
Jerry levy	rossmoor, CA	2013-07-25	I believe HOV work, but HOToll Roads do not. I am opposed to buying a transponder and PRE-LOADING it with money that goes whether I am a frequent user or as would be my case, a rare user of the tolload option.
Therea Miller	Seal Beach, CA	2013-07-25	no to toll lanes
kurt lieber	huntington bch., CA	2013-07-25	we don't need any more highways built. too much pollution and too many cars will be added if this moves forward.
Lawrence Watson	Los Alamitos, CA	2013-07-25	Yet another money grab? In addition, as a bonus, we can have a new traffic bottleneck, more confusing signs, more rules, and more pollution? Bury this bad idea again, and dig the hole deeper this time!
Cynthia Woods	Los Alamitos, CA	2013-07-25	I live in Rossmoor and do not want to have to pay tolls, or impose them on others, to drive near my home.
Robert Roehm	Los Alamitos, CA	2013-07-25	Already too much paid into freeways. Why charge an elite price? Isn't the Measure M funds enough?
Nancy Luna	os Alamitos, CA	2013-07-25	Keep toll roads oWhys this important to you? (Optional)
Don Hudzietz	Los Alamitos, CA	2013-07-25	Because toll roads descriminate towards the rich.
Timothy Hall	Los Alamitos, CA	2013-07-25	They are called Freeways ! ! !
Constance Giddens	Rossmoor, CA	2013-07-25	Our taxes and fuel prices should be enough to pay for our roadways. I am opposed to adding another toll road to any of our existing FREEways.
Mel Lubman	Los Alamitos, CA	2013-07-25	We paid for the freeway with our taxes, I do not want to pay again to use it .
Lawrence Wisinski	Los Alamitos, CA	2013-07-25	Our taxes already support highways! No Toll roads!
Randy Zaitz	Rossmoor, CA	2013-07-25	Sick and tired of fees, fees and more fees. Stop IT!
Jo Anne Chung	Rossmore, CA	2013-07-25	I live next to I405. The traffic, noise & pollution directly affect my family. Toll roads may generate money but they don't relieve traffic congestion as well as general lanes that are open to everyone.
Cathy Bailey	Los Alamitos, CA	2013-07-25	Besides quality of life, this should be a private enterprise enterprise; not using public funds that our taxes have supported to pay for and we have earned the right to use. We shouldn't be forced to pay for use of it AGAIN. Plus, if the purpose of this is to encourage carpooling, then charging to use it goes against the purpose, especially if allowing single riders to access it.

PC-PET1 Continued

Name	Location	Date	Comment
Patricia M Hay-Alexander	Rossmoor, CA	2013-07-25	I have already paid the taxes for this freeway to be built and I do not want to pay again to use it.
Dale Laube	Rossmoor, CA	2013-07-26	No Toll Roads
Greg Roche	Rossmoor, CA	2013-07-26	This measure directly impacts my commute.
Phillip Roth	Rossmoor, CA	2013-07-26	It's for the rich. The average driver can't afford it. We paid for it with our tax money.
William McKibben	Los Alamitos, CA	2013-07-26	We have paid for these roads through gas tax. Enough is enough
Carol Morgan	Rosmoor, CA	2013-07-26	Because I love here and it will greatly impact all of us who do. Besides I pay taxes for this freeway and do NOT agree with the greed of Caltrans!
PHIL MORSE	ROSSMOOR, CA	2013-07-26	This project is being paid for by the public through taxes, and should be available to all taxpayers. I have seen no proof that toll lanes in SoCal have improved traffic.
Glenn Ducat	Los Alamitos, CA	2013-07-26	Insanity. The STATED reason for the HOV flyover was to eliminate cars having to leave an HOV lane and merge with other traffic before re-entering the HOV lane on the 405 or 605. The three person/toll requirement would effectively reintroduce this safety problem and traffic congestion generator. Insanity and STUPIDITY.
Brian Miller	Los Alamitos, CA	2013-07-26	I do not like to pay for something twice and to help maintain two huge gov. bureaucracy like Caltran & OCTA.
Jason Chung	Los Alamitos, CA	2013-07-27	money. Traffic. One more thing to add the camel's back- just waiting for the straw.
Brian Beal	Rossmoor, CA	2013-07-28	Hot lanes are not the best use of the road. Congestion could increase pollution.
tom curran	los alamitos, CA	2013-07-29	never agreed to and now a change
linda lund	Rossmoor, CA	2013-07-29	We need two lanes! A toll road would make it even more impossible to get to Seal Beach!
daniel lund	Rossmoor, CA	2013-07-29	This would make even more congestion to an already impacted and heavily travelled area.
Barbara Gal	Rossmoor, CA	2013-07-30	We pay taxes for roads and should not have to pay. It is unnecessary and will cause more congestion and confusion.
Jenniter Saunders	Manhattan Beach, CA	2013-07-30	We have already paid for the freeway and carpool lanes AND the creation of a toll road voids the rationale behind the carpool concept and does not reduce traffic, but in fact increases traffic on the "free" lanes of the FREEway.
Michael Gal	rossmoor, CA	2013-07-30	Because I back up to the 405
Lance Schumacher	Rossmoor, CA	2013-07-31	Adding lanes for a select few makes no sense
LaDelle Clark	Rossmoor, CA	2013-07-31	I support Option 1-general use lanes & oppose toll road. OCTA must not revoke it's original plan!
cynthia senteno	rossmoor, CA	2013-08-01	I live with the 405 and 7th street overpass right behind my house the noise and dirt from all the traffic are overwhelming as it is. Please do not add more
Emily Gingras	Long Beach, CA	2013-08-01	Current construction project is a mess and any future objuective adding HOT lanes would cause more congestion and a bottleneck. No more should be completed at this line until an agreement has been reached w/ LA County to improve their area of the freeways at the Los Al/Long Beach/Seal Beach borders.
Sandra Lamoureux	Los Alamitos, CA	2013-08-01	It impacts traffic patterns on already congested freeways near my home.
Barbara Cairns	Rossmoor,, CA	2013-08-01	Our freeways should be just what the name implies---FREEways.

PC-PET1 Continued

Name	Location	Date	Comment
Elizabeth Morse	Los Alamitos, CA	2013-08-01	I feel that taxpayers should support and have built freeways. I don't believe that suddenly tolls should be inflicted on what should be public works projects for the good of all, not just for the rich who pay extra to cut in line or to subvert HOV lanes
Thomas Akashi	Rossmoor, CA	2013-08-01	Why should I pay for driving on freeways that are in my neighborhood!! CALTRANS & OCTA are already polluting the air that our community breathes!
SARAH BARTLETT	LOS ALAMITOS, CA	2013-08-01	We pay our taxes to work on these freeways and make them better. We should NOT have to then pay out of our pocket to drive on the freeway!
Jane Boylan	Los Alamitos, CA	2013-08-01	I think toll lanes will will do less to alleviate traffic congestion than "free" lanes.
Philip Wyels	Los Alamitos, CA	2013-08-01	Adding a HOT lane along side of HOV lane only over the OC middle of the 405 will only create more confusion due to lane changing at both ends. There is not enought right of way to handle two more lanes than already proposed by Option 1.
janet Watts	Los Alamitos, CA	2013-08-01	this runs so close to our housing and toll roads have not proven to pay for themselves. Both the 91 & the 73 are raising prices again!!
Debra Denny	Rossmoor, CA	2013-08-02	Cal Trans is wishing to place PALM TREES beside the freeway which is in no way depletes the additional pollution and toxins that will effect our area. We are concerned for the safety of our children and the elderly in our neighborhood.
Charlene Kozlowski	Garden Grove, CA	2013-08-02	I utilize these roads and DO NOT believe it advantageous to have such lanes!
Robert Kozlowski	Garden Grove, CA	2013-08-02	We pay some the highest gas taxes, highest car registration in the country and still have the worst congestion. Why is that? Building another toll road will not cure the problem, overhauling Cal Trans will.
Maria Messner	Los Alamitos, CA	2013-08-04	Have PAID ENOUGH!
carl Thompson	ROSSMOOR, CA	2013-08-05	THAT WHY I PAY TAXES TO BE ALLOWED TO USE THE FREEWAY note THE WORD FREE IN FREEWAY
Adrienne Kibler	Rossmoor, CA	2013-08-09	The toll road will have a negative effect on our community and quality of life for anyone who uses the freeway.
James McCoy	Seal Beach, CA	2013-08-10	Why should we have to pay more to use a freeway that is suppose to be paid by taxes we already pay
Louis Viestenz	Los Alamitos, CA	2013-08-11	Why should I have to pay a private company to drive on the same lanes that I should already have access to due to the taxes I have previously paid.
Brenda Hemry	Seal Beach, CA	2013-08-11	I want to add my name to the list of people that do not want Hot lanes on the 405 Freeway in the sal Bech/Rossmore area.
Margo Kasdan	Seal Beach, CA	2013-08-11	Since it is not possible to travel in CA except by car -- a decision taken with malice aforethought' since there is no convenient, useful Public Transportation to speak of; it is only right to have FREE highways. Toll roads make for class distinctions -- as does privatizing everything in today's America.
Janet Hoover	Garden Grove, CA	2013-08-11	I don't believe that we should be charged to use our tax payer freeways. We are paying for the improvements we shouldn't have to pay more to use it.
Savvas Roubanis	Los Alamitos, CA	2013-08-11	Revenue generation should be achieved through cost cutting & efficiency improvements, NOT through tolls.
Cynthia Stava	Seal Beach, CA	2013-08-11	We've already voiced are displeasure...it seems ridiculous that we even have to go through this step again.

PC-PET1 Continued

Name	Location	Date	Comment
Anthony Ross	Garden Grove, CA	2013-08-11	I am in oposition to building freeway lanes with taxpayer money then charging the taxpayer to use them. I am infavor of more rapid transit. Once the state starts charging to use the lanes there is no end. The price will continue to rise. The 91 toll road now charges $9.95 to use on Friday afternoon. Punishing my family when we try to go and watch grandchildren in Corona with their endevors.
Dave Sweet	Rossmoor, CA	2013-08-11	No more construction. Create greater mass transit not more access for cars.
Justine Norrbom	Los Alamitos, CA	2013-08-12	The toll lanes cause more congestion. It is ridiculous that you want people to pay to drive the freeway!
Ruth Persson	Seal Beach, CA	2013-08-12	I travel this route daily and could not afford a toll lane.
Richard Jolly	Westminster, CA	2013-08-12	I am a senior and there are only two of us so the carpool lane works for us.
David Harvill	Seal Beach, CA	2013-08-12	A toll road is merely a new tax and will not reduce traffic one bit. As usual, you have another road project that will be obolete when completed.
Jacquelyn Viale	Long Beach, CA	2013-08-12	We use this freeway, it goes through our community, and this is a bad idea, as we have seen on the 110.

PC-PET2

From: Janine Parker [mail@changemail.org]
Sent: Monday, August 12, 2013 11:56 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: New petition to you: OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP

Dear Parsons,

Janine Parker started a petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" targeting you on Change.org that's starting to pick up steam.

Change.org is the world's largest petition platform that gives anyone, anywhere the tools they need to start, join and win campaigns for change. Change.org never starts petitions on our own -- petitions on the website, like "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP", are started by users. 1

While "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" is active, you'll receive an email each time a signer leaves a comment explaining why he or she is signing. You'll also receive periodic updates about the petition's status.

Here's what you can do right now to resolve the petition:

- Review the petition. Here's a link:
  - http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp
- See the 5 signers and their reasons for signing on the petition page.
- Respond to the petition creator by sending a message here:
  - http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

Sincerely,
Change.org

There are now 5 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Ward Kollar [mailto:mail@changemail.org]
Sent: Tuesday, August 13, 2013 4:49 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Ward Kollar HB, California

There are now 26 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Chantal Buslot [mail@changemail.org]
Sent: Thursday, August 15, 2013 1:42 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Chantal Buslot Hasselt, Texas

There are now 27 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Gisela Chang [mail@changemail.org]
Sent: Thursday, August 15, 2013 7:17 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Gisela Chang newport beach, California

There are now 28 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Tina Brose [mail@changemail.org]
Sent: Monday, August 12, 2013 11:19 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Tina Brose Fountain Valley, California

There are now 23 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Jennifer Lourenco [mail@changemail.org]
Sent: Monday, August 12, 2013 9:59 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Jennifer Lourenco Buena Park, California

There are now 16 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: William Ito [mail@changemail.org]
Sent: Monday, August 12, 2013 9:58 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
William Ito Irvine, California

There are now 15 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Alexis Pacholski [mail@changemail.org]
Sent: Monday, August 12, 2013 10:02 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Alexis Pacholski Irvine, California

There are now 17 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: D'Marcel Napier [mail@changemail.org]
Sent: Monday, August 12, 2013 10:03 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
D'Marcel Napier Los Angeles, California

There are now 18 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Matthew Stevens [mail@changemail.org]
Sent: Monday, August 12, 2013 10:03 PM
To: Parsons, 405 Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Matthew Stevens garden grove, California

There are now 19 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Liz Hubbard [mail@changemail.org]
Sent: Monday, August 12, 2013 8:21 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Liz Hubbard Corona Del Mar, California

There are now 10 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
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PC-PET2 Continued

From: Christina Parker [mail@changemail.org]
Sent: Monday, August 12, 2013 8:03 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

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Sincerely,
Christina Parker Buena Park, California

There are now 9 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
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PC-PET2 Continued

From: MaryAnn Cade [mail@changemail.org]
Sent: Monday, August 12, 2013 9:04 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
MaryAnn Cade Big Bear Lake, California

There are now 12 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Pamela Lea [mail@changemail.org]
Sent: Monday, August 12, 2013 9:04 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Pamela Lea Santa Ana, California

There are now 11 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
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PC-PET2 Continued

From: Gayle Hachiya [mail@changemail.org]
Sent: Monday, August 12, 2013 9:51 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Gayle Hachiya huntington beach,

There are now 14 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Julie Webb [mail@changemail.org]
Sent: Monday, August 12, 2013 9:25 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Julie Webb Santa Ana, California

There are now 13 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Norbert Fischer [mail@changemail.org]
Sent: Monday, August 12, 2013 7:50 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Norbert Fischer Fountain Valley, California

There are now 8 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Carrie Piscotty [mail@changemail.org]
Sent: Tuesday, August 13, 2013 10:38 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Carrie Piscotty Irvine, California

There are now 25 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Austin Ford [mail@changemail.org]
Sent: Monday, August 12, 2013 10:26 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Austin Ford Westerville, Ohio

There are now 20 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
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PC-PET2 Continued

From: Cathy Jack [mail@changemail.org]
Sent: Monday, August 12, 2013 10:53 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

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Sincerely,
Cathy Jack Costa Mesa, California

There are now 21 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
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PC-PET2 Continued

From: Timerie Birchmier [mail@changemail.org]
Sent: Monday, August 12, 2013 11:09 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Timerie Birchmier Chula Vista , California

There are now 22 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Cara Olsen [mail@changemail.org]
Sent: Monday, August 12, 2013 11:56 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Cara Olsen Orange, California

There are now 5 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Kathleen Luby [mail@changemail.org]
Sent: Monday, August 12, 2013 12:02 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

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Sincerely,
Kathleen Luby Laguna beach, California

There are now 6 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Jennifer Lourenco [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 9:59 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

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Sincerely,
Jennifer Lourenco Buena Park, California

There are now 16 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Alexis Pacholski [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 10:02 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

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Sincerely,
Alexis Pacholski Irvine, California

There are now 17 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
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PC-PET2 Continued

From: William Ito [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 9:58 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

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Sincerely,
William Ito Irvine, California

There are now 15 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
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PC-PET2 Continued

From: Matthew Stevens [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 10:03 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

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Sincerely,
Matthew Stevens garden grove, California

There are now 19 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
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PC-PET2 Continued

From: Pamela Lea [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 9:04 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

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Sincerely,
Pamela Lea Santa Ana, California

There are now 11 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
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PC-PET2 Continued

From: Julie Webb [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 9:25 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

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Sincerely,
Julie Webb Santa Ana, California

There are now 13 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Gayle Hachiya [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 9:51 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Gayle Hachiya huntington beach,

There are now 14 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: D'Marcel Napier [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 10:03 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
D'Marcel Napier Los Angeles, California

There are now 18 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Timerie Birchmier [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 11:09 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Timerie Birchmier Chula Vista , California

There are now 22 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Austin Ford [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 10:26 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Austin Ford Westerville, Ohio

There are now 20 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Cathy Jack [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 10:53 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Cathy Jack Costa Mesa, California

There are now 21 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Tina Brose [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 11:19 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Tina Brose Fountain Valley, California

There are now 23 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Steve Forrai [mailto:mail@changemail.org]
Sent: Tuesday, August 13, 2013 1:09 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Steve Forrai fountain valley, California

There are now 25 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Carrie Piscotty [mailto:mail@changemail.org]
Sent: Tuesday, August 13, 2013 10:38 AM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Carrie Piscotty Irvine, California

There are now 25 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Ward Kollar [mail@changemail.org]
Sent: Tuesday, August 13, 2013 4:49 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Ward Kollar HB, California

There are now 26 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Steve Forrai [mail@changemail.org]
Sent: Tuesday, August 13, 2013 1:09 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Steve Forrai fountain valley, California

There are now 25 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Christina Parker [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 8:03 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
Christina Parker Buena Park, California

There are now 9 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: MaryAnn Cade [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 9:04 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
MaryAnn Cade Big Bear Lake, California

There are now 12 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Norbert Fischer [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 7:50 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
Norbert Fischer Fountain Valley, California

There are now 8 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Liz Hubbard [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 8:21 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Liz Hubbard Corona Del Mar, California

There are now 10 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Janine Parker [mail@changemail.org]
Sent: Sunday, August 11, 2013 8:45 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
Janine Parker Fountain Valley, California

There are now 1 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Penni Young [mail@changemail.org]
Sent: Sunday, August 11, 2013 9:02 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
Penni Young Mission Viejo, California

There are now 2 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: RJ Shulenberger [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 7:10 AM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
RJ Shulenberger Costa Mesa, California

There are now 3 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Bonnie Lytle [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 7:32 AM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
Bonnie Lytle Huntington Beach, California

There are now 4 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Penni Young [mailto:mail@changemail.org]
Sent: Sunday, August 11, 2013 9:02 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
Penni Young Mission Viejo, California

There are now 2 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

PC-PET2 Continued

From: Robert Jeffrey [mail@changemail.org]
Sent: Monday, August 12, 2013 3:08 PM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
Robert Jeffrey Fountain Valley, California

There are now 7 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: RJ Shulenberger [mail@changemail.org]
Sent: Monday, August 12, 2013 7:10 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
RJ Shulenberger Costa Mesa, California

There are now 3 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Bonnie Lytle [mail@changemail.org]
Sent: Monday, August 12, 2013 7:32 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
Bonnie Lytle Huntington Beach, California

There are now 4 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Kathleen Luby [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 12:02 PM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

9

Sincerely,
Kathleen Luby Laguna beach, California

There are now 6 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: Cara Olsen [mailto:mail@changemail.org]
Sent: Monday, August 12, 2013 11:56 AM
To: Christina Byrne
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Christina Byrne/Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal.

Sincerely,
Cara Olsen Orange, California

There are now 5 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=371408f640ce

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PC-PET2 Continued

From: joseph hall jr [mail@changemail.org]
Sent: Monday, August 19, 2013 12:10 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
joseph hall jr baltimore, Maryland

There are now 29 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

PC-PET2 Continued

From: Pam Boland [mail@changemail.org]
Sent: Monday, August 19, 2013 1:57 AM
To: Parsons, 405.Supplemental.Draft.EIR.EIS
Subject: I just signed "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP"

Dear Parsons,

I just signed Janine Parker's petition "OCTA, CALTRANS: STOP THE PROPOSED BRAIDED NORTHBOUND MAGNOLIA ON/OFF RAMP" on Change.org.

> We have started a petition to stop the braided on-ramp proposed on the Northbound 405 Magnolia onramp. Please hear our communities plea to stop this in our residential area. It is unnecessary and will negatively impact our residential area in several ways, all that have signed this oppose this proposal. Noise pollution, health concerns, safety, home values, these are our concerns and we hope a different solution can be found.

Sincerely,
Pam Boland Grovetown, Georgia

There are now 30 signatures on this petition. Read reasons why people are signing, and respond to Janine Parker by clicking here:
http://www.change.org/petitions/octa-caltrans-stop-the-proposed-braided-northbound-magnolia-on-off-ramp?response=f763155c388d

RESPONSE TO PUBLIC COMMENTS (PC)-PET

Response to Comment Letter PC-PET1

Comment PC-PET1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Response to Comment GL6-2. Please also see Common Responses – Opposition to Tolling, Air Quality, Noise/Noise Analysis, Health Risks, Preferred Alternative Identification, Measure M, Traffic Flow at the Orange County/Los Angeles County Line Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Response to Comment Letter PC-PET2

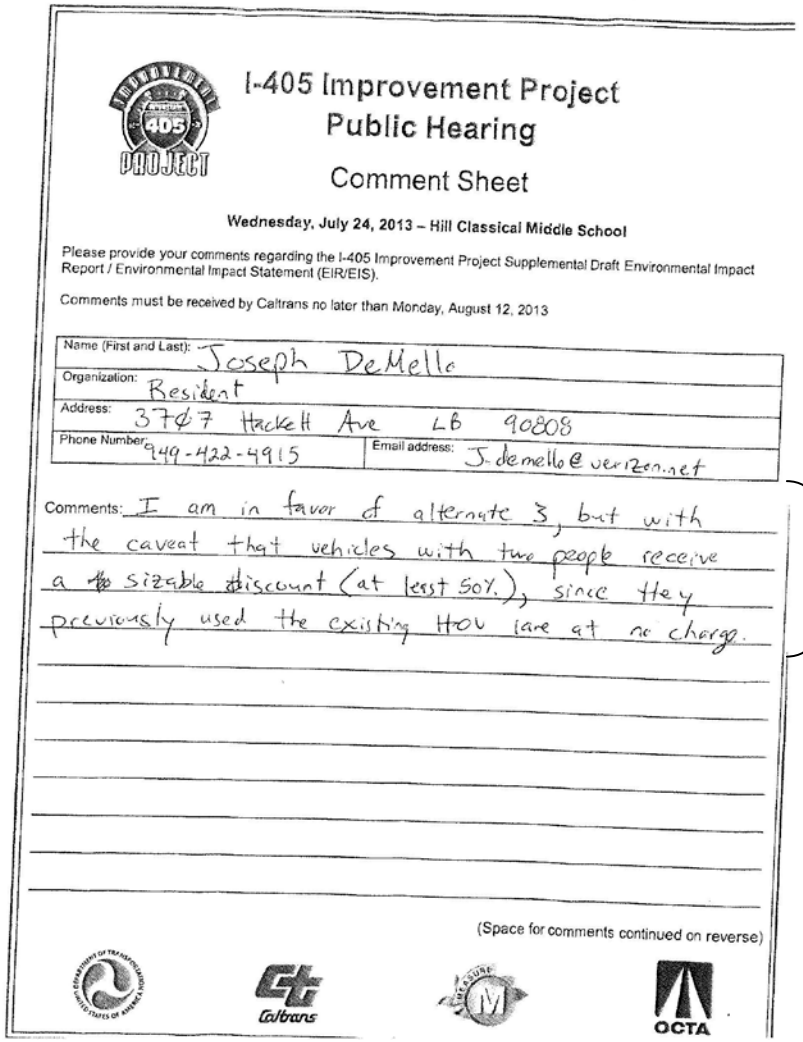
Comment PC-PET2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Northbound Braided Ramps at the Magnolia/Warner Interchange, Noise/Noise Analysis, Health Risks, Air Quality, Property Values.

PUBLIC COMMENTS (PC)-PUBLIC HEARING

PC-LB1



I-405 Improvement Project
Public Hearing

Comment Sheet

Wednesday, July 24, 2013 – Hill Classical Middle School

Please provide your comments regarding the I-405 Improvement Project Supplemental Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS).

Comments must be received by Caltrans no later than Monday, August 12, 2013

Name (First and Last): Joseph DeMello
Organization: Resident
Address: 3767 Hackett Ave LB 90808
Phone Number: 949-422-4915
Email address: J.demello@verizon.net

Comments: I am in favor of alternate 3, but with the caveat that vehicles with two people receive a sizable discount (at least 50%), since they previously used the existing HOV lane at no charge. 1

(Space for comments continued on reverse)

PC-LB2

Public Comments Given to Court Report at Public Hearing in Long Beach, California, Wednesday, July 24, 2013

OPEN HOUSE COMMENTS FROM THE PUBLIC

MR. DEMELLO: My name is Joseph Demello, D-E-M-E-L-L-O. I commute from Long Beach to Irvine, four to five days a week; I have been doing it for 13 years. I have carpooled at least half of that, going out of my way, finding it through the Rideshare website, et cetera. I am very excited to see that improvements are planned. I am in favor of the Alternative 3, which is a toll lane, but only with the caveat that discounts be given to vehicles with two people, at least 50 percent, since we were previously using it direct charge. I feel it's unfair to not give vehicles with two passengers, driver and a passenger, a sizeable discount. 1

THE REPORTER: Your address?

MR. DEMELLO: Long Beach

PC-LB3

change.org

Submitted by Nia Hartman
(562) 233-4455
3131 Druid Lane
Rossmoor CA 90720

Recipient:

Letter: Greetings,

I support the following resolution made by the Board of Directors of the Rossmoor Community Services District to remove all Toll Road options from the I-405 Improvement Project.

RESOLUTION NO. 13-07-22-01

1

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ROSSMOOR COMMUNITY SERVICES DISTRICT OPPOSING THE SCREENING OF CONCEPT A AND B HOT LANES AS OPTIONS TO THE PREVIOUSLY SELECTED PREFERRED ALTERNATIVE 1 TO THE I-405 IMPROVEMENT PROJECT

WHEREAS, the Rossmoor Community Services District (District) has previously taken an official position in favor of Alternative 1 and opposition to Alternatives 2 and 3.

WHEREAS, the District has had reliance on the vote of the Orange County Transportation Authority (OCTA) in selecting Alternative 1 which excluded High Occupancy Toll (HOT) lanes as the preferred Alternative in October of 2012.

WHEREAS, the District has been informed that a newly constituted Board of Directors of the OCTA voted in April 2013 to reconsider HOT lanes.

WHEREAS, the OCTA Board of Directors and the California Department of Transportation (Caltrans) has issued a Supplemental EIR/EIS which screens Concepts A and B and reintroduce the potential for HOT lanes.

WHEREAS, the District considers any variation to the I-405 Improvement Project other than Alternative 1 as detrimental to the well being of the Rossmoor community due to the impacts of traffic, noise, light, and air pollution.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors of the Rossmoor Community Services District strongly opposes any deviation from the previously selected Alternative 1 which excludes HOT lanes.

PC-LB3 Continued

PASSED, APPROVED AND ADOPTED this 22nd day of July, 2013.
BOARD OF DIRECTORS
ROSSMOOR COMMUNITY SERVICES DISTRICT
By: Michael Maynard, President

PC-LB3 Continued

Comments

Name	Location	Date	Comment
Nia Hartman	Rossmoor, CA	2013-07-23	I am opposed to all toll roads. 1. They hurt tourism with confusion and tickets. 2. Tolls are used to pay for roads in lieu of tax dollars but after the roads are paid off the tolls never leave. 3. Toll lanes have limited access so local drivers can't get on or off near their routes. 4. Toll lanes require more infrastructure, maintenance, signage, and real estate. 5. Toll lanes cause congestion where drivers have to switch lanes to enter or avoid the lane.
Prabha Chand	Arroyo Grande, CA	2013-07-24	My fiance grew up in Rossmoor and has very fond memories. Everything doesn't need to change.
Jody Kay	Rossmoor, CA	2013-07-24	Because I live here! Stop milking my cow!
Helene Halperin	Los Alamitos, CA	2013-07-24	This is not an option that should be considered. General use lanes are better for all travelers, no matter what time of the day or night they may be on the road.
Patricia Buehnerkemper	Los Alamitos, CA	2013-07-24	Too much confusion already
Susan Haggard	Los Alamitos, CA	2013-07-24	Why is this important to you? (
Richard Butterfield	Rossmoor, CA	2013-07-24	Traffic congestion, Air Pollution, Noise Pollution, No body I have talked to wants this. Totally unbelievable!!!!!!
Diana Amirehteshami	Rossmoor, CA	2013-07-24	We pay enough in taxes that are supposed to go to roads, we should not pay for the freeway twice through taxes and a toll.
Philip Saenz	Seal Beach, CA	2013-07-24	Public facilities must not be up for sale.
John Cranmer	Rossmoor, CA	2013-07-24	Our roads are paid for by taxpayers, and we should not have to pay additional to use them.
Steve Steponovich	Rossmoor, CA	2013-07-24	1. Tolls are used to pay for roads in lieu of tax dollars but after the roads are paid off the tolls never leave. 2. Toll lanes have limited access so local drivers can't get on or off near their routes. 3. Toll lanes require more infrastructure, maintenance, signage, and real estate. 4. Toll lanes cause congestion where drivers have to switch lanes to enter or avoid the lane.
Gregory and Sherryl Lunde	Los Alamitos, CA	2013-07-24	Toll lanes were originally excluded.

PC-LB3 Continued

Name	Location	Date	Comment
Angela Epstein	Rossmoor, CA	2013-07-24	When is this ever going to be enough? We, as taxpayers, have already paid for the freeway, now they want us to pay to use it??? Really? And who controls the fees to use it? If this passes, it will go up and up and up. This is NOT private land!!! It belongs to the TAXPAYERS!
Charles Cavenderc	Miramar, FL	2013-07-24	Punishing people who need to get to work is nonsense.
Mary Holzgang	Los Alamitos, CA	2013-07-24	It would add more confusion to an already congested area between two counties
Paul Crockett	Miami, FL	2013-07-24	Quality of life.
Karen Paul	Rossmoor, CA	2013-07-24	Toll lanes will not get the same amount of users as general use lanes, (many will not be able to afford the toll lanes) therefore keeping congestion in the existing lanes or funneling traffic onto the surrounding streets around residences. This option should NOT be in the proposal...it's already been rejected!
Heidi Dicus	Rossmoor, CA	2013-07-24	I believe all freeways should be public access without tolls.
Arthur Julian	Los Alamitos, CA	2013-07-24	I am opposed to all toll roads.
Stan Olin	Los Alamitos, CA	2013-07-24	The need to limit congestion and the opportunities for accidents
Maureen Reid	Los Alamitos, CA	2013-07-24	We pay much in property taxes and should be able to use the roads.
Gary Stewart	Rossmoor, CA	2013-07-24	I do not want a toll lane on a publicly funded freeway. That is one reason why we pay so much in taxes in this state.
Marion Davis	Los Alamitos, CA	2013-07-24	Roads should be free.
orrin hagen	rossmoor, CA	2013-07-24	because it was soundly rejected
Henrietta Carter	Los Alamitos, CA	2013-07-24	I am concerned that toll roads would disrupt the flow of traffic in this stretch which is extremely busy during rush hour.
Lorna Farnum	Rossmoor, CA	2013-07-24	I live next to the 405 & the traffic is bad enough that it shouldn't be made worse by putting toll lanes or roads as part of it. Any improvement should be for ALL Californians; not just for the few who can afford it.
Diana Field	Rossmoor, CA	2013-07-24	It would add confusion to an already very congested area between Orange and LA county. We should not have to pay for the freeways twice; taxes and toll This potential land grab would jeopardize many peoples homes and businesses. Just not a good idea.... and what part of NO do these people not understand
Michael Guttentag	Los Alamitos, CA	2013-07-24	Option 1 is my choice because I do not want a toll road.
April Owen	Tobyhanna, PA	2013-07-24	I want option 1 because I do not want a toll road.

PC-LB3 Continued

Name	Location	Date	Comment
WILLIAM STARMANN	LOS ALAMITOS, CA	2013-07-24	My taxes paid for the road and improvements. I should not have to pay again every time I use the road if you make it a toll road. If you want a toll road pay for it yourself and pocket the tolls.
Christine Teng	Rossmoor, CA	2013-07-24	We pay enough taxes for roads already. Especially for a highly used fwy such as the 405 it's not wise to create toll lanes.Toll lanes will also cause major confusion and create traffic congestion (to and/or to avoid the toll lanes themselves).
Mary Lotts	Los Alamitos, CA	2013-07-24	I can't afford to pay tolls.
Ian Moody	Rossmoor, CA	2013-07-24	Is the objective to assist traffic congestion, or assist government constipation?
Larry Fulton	Los Alamitos, CA	2013-07-24	Stop the bureaucracy. Keep our roads and HWYS easy to use. We are already paying gas taxes, etc., etc.
Candy Marshall	Rossmoor, CA	2013-07-24	Where is the integrity in voting? No Toll lanes!
Eric Hartman	Los Alamitos, CA	2013-07-24	We already paid for this in Measure M. Now they want to have us pay to use it too? This is a scheme put on by the new OCTA board so they can get more money for other pet projects. I want what I paid for.
David and Sharron Thomas	Rossmoor, CA	2013-07-24	After what we have been put through this last year we don't want any toll lanes!
Cheryl Williamsen	Los Alamitos, CA	2013-07-24	The 405 is in my "backyard".
Katherine Livieratos	Rossmoor, CA	2013-07-24	We should not have to pay any toll roads we pay enough in taxes which are suppose to go to roads. Is this becoming another New York???
richard brandt	los alamitos, CA	2013-07-24	Quality of Life!
Nancy Hovey	Los Alamitos, CA	2013-07-24	Unacceptable. We have previously voted no on this measure of a toll road. This board needs to listen to the people they represent
suzan barazani	Los Alamitos, CA	2013-07-24	Don't Don't want to be charged to drive on freeway near my home
Julie Bush	Rossmoor, CA	2013-07-24	These options are toc expensive and do not add to the quality of life and they do not improve traffic over time. Cal Trans does not design thoughtfully as if the members know the area.
Ellen Spiller	Rossmoor, CA	2013-07-24	Toll roads, particularly those using FasTrak are losing money every day. It really annoys me to have to buy a FasTrak and then be charged if I don't use it. I don't mind paying tolls, just being forced to purchase the transponder.
Byron Whitten	Westminster, CA	2013-07-24	I travel these roads every day and the addition of toll roads would disrupt traffic even more than it already has been for the last 2 years.
Randall Goddard	Rossmoor, CA	2013-07-24	California has the highest taxes in the nation and the highest gas taxes which go towards highway maintenance and improvement. No more taxes! Tolls are taxes!
Kim Tolen	Los Alamitos, CA	2013-07-24	we need freeway lanes that all motorist can use daily to reduce traffic on our roads

PC-LB3 Continued

Name	Location	Date	Comment
John Tolen	Los Alamitos, CA	2013-07-24	we need freeway lanes that all motorist can use daily to reduce traffic on our rouds(Optional)
Gary Brown	Rossmoor, CA	2013-07-24	Add lanes not tolls
Heather Sickles	Seal Beach, CA	2013-07-24	No toll road!!
Terry Pollock	Los Alamitos, CA	2013-07-24	I oppose the HOT lanes action for several reasons important to me, the most important is all North bound 405 will come to a screeching halt at the LA County line which will then have fewer lanes. The result will be a traffic jam of idling autos dumping their exhaust on Rossmoor. More air pollution!! Thanks for the opportunity to comment. Terry Pollock, Rossmoor
Danny Rivett	Rossmoor, CA	2013-07-24	This is just another ploy for the state of California to fatten the coffers on the backs of the people. They need to live within thier means. Also I understand that the HOT will end at the LA county line, which will create a bottleneck adjacent to our community.
Joseph Benjamin Jenkins	Rossmoor, CA	2013-07-24	We expressed our oppinion once that there is to me no tolls on I-405. What part of NO don't the politicians understand?
Joel Block	Los Alamitos, CA	2013-07-24	I oppose any toll road lanes added to the I-405 Freeway. Toll roads in California and especially in Orange County have been poor investments for the community, the taxpayers and the environment. Even the 2 new general use lane addition to the I-405 will cause massive traffic jams as NB lanes from Orange County narrow to existing lanes in Los Angeles County where the I-405, I-605 and CA-22 freeways converge. This entire freeway widening project was ill-conceived from the beginning.
Julie Ramsey	Rossmoor, CA	2013-07-24	I live in Rossmoor and do not want the increased noise a toll road would cause.
Nina Bao	Los alamitos, CA	2013-07-24	Freeway should be free
Tom Barnes	Los Alamitos, CA	2013-07-24	We already pay enough taxes, we should not have to pay tolls on a road that already exists!
Joan Griffithc	Los Alamitos, CA	2013-07-24	Tax payer money is already being used to widen the 405. Why should we pay more to use it? The best way to reduce congestion is to have toll free lanes accessible to all vehicles. Collecting tolls costs more money.
Michael Botnick	Tujunga, CA	2013-07-24	It is elitist bullshit... other than that no problem. We all pay taxes that go to improvement of infrastructure. Don't charge me for the privilege of using the road I already paid for.
Dewey Carlson	Los Alamitos, CA	2013-07-24	Paid 73 Toll for 5 years. That's enough $ for Pete Wilson, our Navy governor.
David Chaffe	Long Beach, CA	2013-07-24	I grew up in New England and despised the toll roads. Californians do not want toll roads. Tolls roads are only used by the affluent and therefore such roads are discriminatory.

PC-LB3 Continued

Name	Location	Date	Comment
Johnny Newnes	Huntington Beach, CA	2013-07-24	I work and socialize in the Seal Beach/Rossmoor area and the inconviences I have already experienced from the construction up in this direction are beyond unbelievable. I can NOT imagine what chaos awaits this area with more construction.
James Tarchione	Rossmoor, CA	2013-07-24	NOISE!! and pollution
Claudia Dunn	Los Alamitos, CA	2013-07-24	I live very close to the freeway this will increase traffic congestion in an already dangerous on ramp/off ramp configuration.
Darcy and Richard Krumhauer	Los Alamitos, CA	2013-07-24	We are strongly opposed to the toll road and want 2 general use lanes as was already decided.
Robert Esposito	Los Alamitos, CA	2013-07-24	We have high value real estate. The quality of life is a factor in maintaining those values and attracting professionals and their families to our community...do the math!
Connie Kuhn	Los Alamitos, CA	2013-07-24	the bottle neck over the past three years has been bad enough. We do not want toll lanes. It was made very clear in the past and our sentiment has not changed.
Mary Cunningham	Los Alamitos, CA	2013-07-24	We pay taxes for this and that would be double dipping
Michael Levin	Rossmoor, CA	2013-07-24	This has already beed discussed and addressed. The community spoke clearly in our opposition to the toll roads. We still feel the same way. Please honor the decision as it was made by the previous board.
Dayna Boe	Long Beach, CA	2013-07-24	This is not what we need and there has been so much construction for so long we don't need any more time added to work on the area. And it would slow down the massive amount of traffic that is in orange county/LA area
Robert Crumby	Rossmoor, CA	2013-07-24	This is just anouther way to tax me and the other users of our roads. Don't approve this motion!
harvey chou	rossmoor, CA	2013-07-24	Why should we have to pay when we've suffered all this time with this traffic nightmare from the construction?
Janet Newnes	Huntington Beach, CA	2013-07-24	It is having a negative effect on the residents, businesses and traffic in this area. It is impossible to get around. Enough already!
Donna Wertz	Los Alamitos, CA	2013-07-24	We have already paid for the improvement in our taxes. We shouldn't have to pay to use the freeway.
Kay Shelton	Rossmoor, CA	2013-07-24	This is important for the health of my husband and me, also this will also reduce the price of the housing in this area.
Katy Chittick	Rossmoor, CA	2013-07-24	We already pay taxes for roads!!
Kay Butterfield	Rossmoor, CA	2013-07-24	I oppose any changes to the project. It was voted on already
Mark Butterfield	Rossmoor, CA	2013-07-24	to much congestion now.

PC-LB3 Continued

Name	Location	Date	Comment
Denise Flore	Rossmoor, CA	2013-07-24	We live at the junction and often jump from the 22/405 & 605 for daily activities. This is all within a 5 mile range from our home. We've put up with all this construction crap and shouldn't have to be penalized more. Rossmoor, Leisure World are somewhat retirement communities. This isn't fair to us
Stephanie Doucette	Los Alamitos, CA	2013-07-24	Because I live in Rossmoor and the Freeway is too close to our home already, the noise and mostly the emissions are what concern me because I believe they are so unhealthy
Ed Beckwith	Rossmoor, CA	2013-07-24	Quality of life
Harriet Ottaviano	Seal Beach, CA	2013-07-24	The whole project is a waste as northbound traffi. will stop dead at the LACounty line. Don't make a bad situation worse with the addition of toll lanes. More importantly don't go back on your word.
Terry Millsaps	Rossmoor, CA	2013-07-24	I feel we should not have pay twice for using the highways, it is already funded and they want to make money on top of what was agreed upon. Also, this may increase traffic on the freeways as there are many drivers that will not want to pay a toll, since they already paid for the freeways through their taxes, therefore, driving in the regular lanes, causing increased traffic.
Octavio Nuiry	Rossmoor, CA	2013-07-24	Pollution, noise, crime
William Fendley	Los Alamitos, CA	2013-07-24	Additional noise--Air pollution-Years of construction-//Will not help traffic problems
Deborah Miller	Rossmoor, CA	2013-07-24	Against private enterprise making money on roads that we already are paying for through our taxes. Not right!
Jerry levy	rossmoor, CA	2013-07-25	I believe HOV work, but HOToll Roads do not. I am opposed to buying a transponder and PRE-LOADING it with money that goes whether I am a frequent user or as would be my case, a rare user of the tollload option.
Therea Miller	Seal Beach, CA	2013-07-25	no to toll lanes

PC-LB3 Continued

Petition Signatures to remove Toll Rads from consideration in the I-405 Freeway Improvement Project

1	Nia Hartman	Rossmoor	California	90720	2013-07-23
2	kayleigh davis	los alamitos	California	90720	2013-07-23
3	Prabha Chand	Arroyo Grande	California	93420	2013-07-23
4	Gloria Lowen	Los Alamitos	California	90720	2013-07-23
5	Jody Kay	Rossmoor	California	90720	2013-07-23
6	Tamina Jamieson	Rossmoor	California	90720	2013-07-23
7	Helene Halperin	Los Alamitos	California	90720	2013-07-23
8	Erwin Anisman	Rossmoor	California	90720	2013-07-23
9	Ray Gibson	Rossmoor	California	90720	2013-07-23
10	Samuel Peters	Los Alamitos	California	90720	2013-07-23
11	Denise Laube	Rossmoor	California	90720	2013-07-23
12	Arthur Oster	Los Alamitos	California	90720	2013-07-23
13	Patricia Buehnerkemper	Los Alamitos	California	90720	2013-07-23
14	Tony Perez	Rossmoor	California	90720	2013-07-23
15	Thaddeus Sumoba	Rossmoor	California	90720	2013-07-23
16	Margaret Wilson-Cascarano	Los Alamitos	California	90720	2013-07-23
17	Marilee Collier	Rossmoor	California	90720	2013-07-23
18	Thomas Purcell	Los Alamitos	California	90720	2013-07-23
19	Denise Walker	Los Alamitos	California	90720	2013-07-23
20	jodi frankel	rossmoor	California	90720	2013-07-23
21	Susan Haggard	Los Alamitos	California	90720	2013-07-23
22	Mark Knowles	Palmetto	Florida	34221	2013-07-23
23	Donald Broun	Rossmoor	California	90720	2013-07-23
24	Judy Vogt	Rossmoor	California	90720	2013-07-23
25	Richard Butterfield	Rossmoor	California	90720	2013-07-23
26	Stuart Harris	los alamitos	California	90720	2013-07-23
27	David Lara	Rossmoor	California	90720	2013-07-23
28	Diana Amirehteshami	Rossmoor	California	90720	2013-07-23
29	Nancy Jensen	Los Alamitos	California	90720	2013-07-23
30	Alex Saenz	Seal Beach	California	90740	2013-07-23
31	John Cranmer	Rossmoor	California	90720	2013-07-23
32	Arthur Tomura	Rossmoor	California	90720	2013-07-23
33	Victoria Chang	Rossmoor	California	90720	2013-07-23
34	Steve Steponovich	Rossmoor	California	90720	2013-07-23
35	Cynthia Reysbergen	Los Alamitos	California	90720	2013-07-23
36	Thang Ta	Rossmoor	California	90720	2013-07-23
37	Joanne Angstadt	Rossmoor	California	90720	2013-07-23
38	fred farjami	rossmoor	California	90720	2013-07-23
39	Thao Tran	Rossmoor	California	90720	2013-07-23
40	Gregory and Sherryl Lunde	Los Alamitos	California	90720	2013-07-23
41	Darryl Lee	ossmoor	California	90270	2013-07-23
42	Phil Henry	Long Beach	California	90815	2013-07-23
43	Vidmantas Duda	Rossmoor	California	90720	2013-07-23
44	Marita Swanson	Los Alamitos	California	90720	2013-07-23
45	Candice Stacy	Rossmoor	California	90720	2013-07-23
46	Charles Cavender	Miramar	Florida	33025	2013-07-23
47	Robert Hale	Rossmoor	California	90720	2013-07-23
48	John Torii	Rossmoor	California	90720	2013-07-24
49	Mary Holzgang	Los Alamitos	California	90720	2013-07-24
50	Paul Crockett	Miami	Florida	33135	2013-07-24
51	Karen Paul	Rossmoor	California	90720	2013-07-24

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52	John Garr	Los Alamitos	California	90720	2013-07-24
53	Michelle Nystul	Rossmoor	California	90720	2013-07-24
54	Mary Nolan	Pasadena	California	91105	2013-07-24
55	Jennifer Knapp	Rossmoor	California	90720	2013-07-24
56	Heidi Dicus	Rossmoor	California	90720	2013-07-24
57	Arthur Julian	Los Alamitos	California	90720	2013-07-24
58	TIFFANY TA	HUNTINGTON BE	California	92648	2013-07-24
59	Cathryn Karlin	Los Alamitos	California	90720-4764	2013-07-24
60	Quan Ta	Rossmoor	California	90720	2013-07-24
61	Janet Ladd	Los Alamitos	California	90720	2013-07-24
62	Stan Olin	Los Alamitos	California	90720	2013-07-24
63	Laurie Fulton	Rossmoor	California	90720	2013-07-24
64	Barbara Petway	Rossmoor	California	90720	2013-07-24
65	Roberta Rizer	Cypress	California	90630	2013-07-24
66	Maureen Reid	Los Alamitos	California	90720	2013-07-24
67	Maureen Wauters	Los Alamitos	California	90720	2013-07-24
68	Gary Stewart	Rossmoor	California	90720	2013-07-24
69	Susan Stewart	Rossmoor	California	90720	2013-07-24
70	Brian Kibler	Rossmoor	California	90720	2013-07-24
71	Erica Malcolm-Siepker	Rossmoor	California	90720	2013-07-24
72	John Shedd	Rossmoor	California	90720	2013-07-24
73	Sondra Reid	Seal Beach	California	90740	2013-07-24
74	Candice Hamilton	Los Alamitos	California	90720	2013-07-24
75	Thomas Small	Los Alamitos	California	90720	2013-07-24
76	David Magana	Los Alamitos	California	90720	2013-07-24
77	Virginia Fitzsimons	Rossmoor	California	90720	2013-07-24
78	Mary Tromp	Long Beach	California	90808	2013-07-24
79	Dana Soule	Rossmoor	California	90720	2013-07-24
80	Angela Epstein	Rossmoor	California	90720	2013-07-24
81	Betty Innes	Los Alamitos	California	90720	2013-07-24
82	Vicki Toutz	Los Alamitos	California	90720	2013-07-24
83	Karen Sevillano	Los Alamitos	California	90720	2013-07-24
84	James Perham	Los Alamitos	California	90720	2013-07-24
85	tony wissa	Los Alamitos	California	90720	2013-07-24
86	Diane Rush	Rossmoor	California	90720	2013-07-24
87	Marion Davis	Los Alamitos	California	90720	2013-07-24
88	Lance Swallow	Rossmoor	California	90720	2013-07-24
89	Jerry Walker	Garden Grove	California	92845	2013-07-24
90	orrin hagen	rossmoor	California	90720	2013-07-24
91	John Stuart	Rossmoor	California	90720	2013-07-24
92	Shawn Condon	Rossmoor	California	90720	2013-07-24
93	Timothy Reed	Rossmoor	California	90720	2013-07-24
94	Karen Quinn	Los Alamitos	California	90720	2013-07-24
95	Mark Denny	rossmoor	California	90720	2013-07-24
96	Nicole Madison	Los Alamitos	California	90720	2013-07-24
97	Henrietta Carter	Los Alamitos	California	90720	2013-07-24
98	Wesley Tanaka	Rossmoor	California	90720	2013-07-24
99	Grace Yang	Los Alamitos	California	90720	2013-07-24
100	RICHARD CONKLIN	Rossmoor	California	90720	2013-07-24
101	Jonathan Kass	Rossmoor	California	90720	2013-07-24
102	laurie purcell	los alamitos	California	90720	2013-07-24

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103	DEBORAH GIANCASPRO	Rossmoor	California	90720	2013-07-24
104	Linda Nguyen	Los Alamitos	California	90720	2013-07-24
105	Jane Chen	Los Alamitos	California	90720	2013-07-24
106	Loma Famum	Rossmoor	California	90720	2013-07-24
107	Lynn Olmsted	Los Alamitos	California	90720	2013-07-24
108	Diana Field	Rossmoor	California	90720	2013-07-24
109	Barbara Burgess	Los Alamitos	California	90720	2013-07-24
110	Michael Guttentag	Los Alamitos	California	90720	2013-07-24
111	Marsha Guttentag	Los Alamitos	California	90720	2013-07-24
112	WILLIAM STARMANN	LOS ALAMITOS	California	90720	2013-07-24
113	Roger Garland	Rossmoor	California	90720	2013-07-24
114	Andrew Strandquist	Rossmoor	California	90720	2013-07-24
115	George Randolph	Los Alamitos	California	90720	2013-07-24
116	Carole McCormac	Los Alamitos	California	90720	2013-07-24
117	Cristy Leone	Rossmoor	California	90720	2013-07-24
118	Janet Crook	Rossmoor	California	90720	2013-07-24
119	Gary Hopkins	Rossmoor	California	90720	2013-07-24
120	DWAYNE EATMON	ROSSMOOR	California	90720	2013-07-24
121	Deborah Melvin	Rossmoor	California	90720	2013-07-24
122	Robert Mossler	Los Alamitos	California	90720	2013-07-24
123	Lorie Schnebelie	Rossmoor	California	90720	2013-07-24
124	Christine Teng	Rossmoor	California	90720	2013-07-24
125	Gary Melvin	Rossmoor	California	90720	2013-07-24
126	Sheryl Wood	Cypress	California	90630	2013-07-24
127	Christopher Gilbert	Los Alamitos	California	90720	2013-07-24
128	Jenny Stuart	Los Alamitos	California	90720	2013-07-24
129	Randall Ely	Rossmoor	California	90720	2013-07-24
130	Mary Lotts	Los Alamitos	California	90720	2013-07-24
131	Jason Teng	Rossmoor	California	90720	2013-07-24
132	Kevin Reyes	Rossmoor	California	90720	2013-07-24
133	Ian Moody	Rossmoor	California	90720	2013-07-24
134	Josef Jamieson	Billerica	Massachuse	1821	2013-07-24
135	Phil Avalos	Los Alamitos	California	90720	2013-07-24
136	Larry Fulton	Rossmoor	California	90720	2013-07-24
137	Candy Marshall	Rossmoor	California	90720	2013-07-24
138	Robert Kelman	Los Alamitos	California	90720	2013-07-24
139	Eric Hartman	Los Alamitos	California	90720	2013-07-24
140	Donna Locher	Los al	California	90720	2013-07-24
141	Rich Ramsey	Rossmoor	California	90720	2013-07-24
142	Pei-Pei Kelman	Los Alamitos	California	90720	2013-07-24
143	David and Sharron Thomas	Rossmoor	California	90720-5236	2013-07-24
144	Sharon Krieger	Rossmoor	California	90720	2013-07-24
145	Michelle Pierce	Long Beach	California	90814	2013-07-24
146	Jane Willis	Los Alamitos	California	90720-3827	2013-07-24
147	David Spyra	Rossmoor	California	90720	2013-07-24
148	Richard Eckelman	LOS ALAMITOS	California	90720	2013-07-24
149	Patricia Spyra	Rossmoor	California	90720	2013-07-24
150	Lu Alecxih	Chino Hills	California	91709	2013-07-24
151	thomas Needham	Los Alamitos,	California	90720	2013-07-24
152	Cynthia Jacquier	Los Alamitos	California	90720	2013-07-24
153	Jennifer Robbins	Los Alamitos	California	90720	2013-07-24

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154	Cheryl Williamsen	Rossmoor	California	90720	2013-07-24
155	Cindy Lewis	Rossmoor	California	90720	2013-07-24
156	Shirley Chung	Rossmoor	California	90720	2013-07-24
157	Young Phan	Los Alamitos	California	90720	2013-07-24
158	Katherine Livieratos	Rossmoor	California	90720	2013-07-24
159	Gerald Clark	Rossmoor	California	90720	2013-07-24
160	Paul Williamsen	Rossmoor	California	90720	2013-07-24
161	William Quon	Los Alamitos	California	90720	2013-07-24
162	John Boland	Rossmoor	California	90720	2013-07-24
163	Donald Moore	Rossmoor	California	90720	2013-07-24
164	Katheryn Kusmier	Los Alamitos	California	90720	2013-07-24
165	Patricia Ridgeway	Los alamitos	California	90720	2013-07-24
166	Noreen Curry	Los Alamitos	California	90720	2013-07-24
167	E. Waldo	Long Beach	California	90815	2013-07-24
168	Lisa Broder	Rossmoor	California	90720	2013-07-24
169	Jennifer Crans	Long Beach	California	90815	2013-07-24
170	Haley Broder	Rossmoor	California	90720-4416	2013-07-24
171	William Maas	Los Alamitos	California	90720	2013-07-24
172	Tarek Hijazi	Los Alamitis	California	90720	2013-07-24
173	Gilbert Rico	Los Alamitos	California	90720	2013-07-24
174	Michael Mucho	Los Alamitos	California	90720	2013-07-24
175	Nancy Muser	Los Alamitos	California	90720	2013-07-24
176	Colleen Low	Rossmoor	California	90720	2013-07-24
177	Karen Ingram	Los Alamitos	California	90720	2013-07-24
178	Patricia Koteras	Rossmoor	California	90720	2013-07-24
179	Wendy Lorenz	Rossmoor	California	90720	2013-07-24
180	Janice Manis	Los Alamitos	California	90720	2013-07-24
181	Wesley Huang	Los Alamitos	California	90720	2013-07-24
182	david lombard	rossmoor	California	90720	2013-07-24
183	Melinda Thompson	Rossmoor	California	90720	2013-07-24
184	Michael Lau	Rossmoor	California	90720	2013-07-24
185	Gayle POSNER	LOS ALAMITOS	California	90720	2013-07-24
186	John Underwood	Los Alamitos	California	90720	2013-07-24
187	Annette Castagna	Los Alamitos	California	90720	2013-07-24
188	Margaret Perham	Los Alamitos	California	90720	2013-07-24
189	RICHARD BRANDT	LOS ALAMITOS	California	90720	2013-07-24
190	Leslie Bonham	Los Alamitos	California	90720	2013-07-24
191	Darren Mitton	Decatur	Georgia	30002	2013-07-24
192	Peter Lee	Los Alamitos	California	90720	2013-07-24
193	Nancy Hovey	Los Alamitos	California	90720	2013-07-24
194	Randy Hovey	Los Alamitos	California	90720	2013-07-24
195	Oscar Arteaga	Los Alamitos	California	90720	2013-07-24
196	Stuart Moriwaki	Los Alamitos	California	90720	2013-07-24
197	Scott Proffitt	Sarasota	Florida	34230	2013-07-24
198	Cindy Famulare	Rossmoor	California	90720	2013-07-24
199	Blanche Benisek	Los Alamitos	California	90720	2013-07-24
200	Christopher Bell	Los Alamitos	California	90720	2013-07-24
201	Dave Colacino	Rossmoor	California	90720	2013-07-24
202	John Groh	Rossmoor	California	90720	2013-07-24
203	Gordon Andersen	Rossmoor	California	90720	2013-07-24
204	Anna Chan	Rossmoor	California	90720	2013-07-24

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205	Mark Sievert	Rossmoor	California	90720	2013-07-24
206	Nancy Iacono	Rossmoor	California	90720	2013-07-24
207	Carol Grimes	Los Alamitos	California	90720	2013-07-24
208	Eileen Jewell	Los Alamitos	California	90720	2013-07-24
209	suzan barazani	Los Alamitos	California	90720	2013-07-24
210	Robert Randig	Rossmoor	California	90720	2013-07-24
211	Dan Billings	Rossmoor	California	90720	2013-07-24
212	marcy moriwaki	rossmoor	California	90720	2013-07-24
213	Frank Cannova	Los Alamitos	California	90720	2013-07-24
214	Simon Leung	Rossmoor	California	90720	2013-07-24
215	Julie Bush	Rossmoor	California	90720	2013-07-24
216	Meghan Kuhn	Los Alamitos	California	90720	2013-07-24
217	Wai Lam	Rossmoor	California	90720	2013-07-24
218	Karen Swenson	Rossmoor	California	90720	2013-07-24
219	Ellen Spiller	Rossmoor	California	90720	2013-07-24
220	Christine Theodore	Rossmoor	California	90720	2013-07-24
221	Michael Posner	Rossmoor	California	90720	2013-07-24
222	MONNIE ALVARADO	ROSSMOOR	California	90720	2013-07-24
223	Byron Whitten	Westminster	California	92683	2013-07-24
224	Karen Chastain	Rossmoor	California	90720	2013-07-24
225	Deborah Worthington	Rossmoor	California	90720	2013-07-24
226	Dorothy Fitzgerald	Rossmoor	California	90720	2013-07-24
227	Ashley Theodore	Rossmoor	California	90720	2013-07-24
228	Denise Gimenez	Los Alamitos	California	90720	2013-07-24
229	Randall Goddard	Rossmoor	California	90720	2013-07-24
230	Carol Tourkow	Rossmoor	California	90720	2013-07-24
231	Kristina Bowden	Rossmoor	California	90720	2013-07-24
232	Kim Marshall	Rossmoor	California	90720	2013-07-24
233	Rebecca Noblin	Rossoor	California	90720	2013-07-24
234	Robert Lipeles	Rossmoor	California	90720	2013-07-24
235	Arnold Mayans	Rossmoor	California	90720	2013-07-24
236	Kim Tolen	Los Alamitos	California	90720	2013-07-24
237	John Tolen	Los Alamitos	California	90720	2013-07-24
238	Gary Brown	Rossmoor	California	90720	2013-07-24
239	Ricardo Ortiz	Los Alamitos	California	90720-4506	2013-07-24
240	Willard Gekler	Rossmoor	California	30720	2013-07-24
241	Susan Schneider	Los Alamitos	California	90720	2013-07-24
242	Holly Merritt	Los Alamitos	California	90720	2013-07-24
243	Jenny Yew	Rossmoor	California	90720	2013-07-24
244	Heather Sickles	Garden Grove	California	92845	2013-07-24
245	Margaret Ryan	Rossmoor	California	90720	2013-07-24
246	Richard Martin	Rossmoor	California	90720	2013-07-24
247	Mitchell Cohen	Rossmoor	California	90720	2013-07-24
248	Elsa Cynthia cabrera	Rossmoor	California	90720	2013-07-24
249	Danny Rivett	Rossmoor	California	90720	2013-07-24
250	Joseph B Jenkins	Rossmoor	California	90720	2013-07-24
251	Joel Block	Rossmoor	California	90720	2013-07-24
252	James Sartain	Rossmoor	California	90720	2013-07-24
253	Peter Soule	Rossmoor	California	90720	2013-07-24
254	Julie Ramsey	Rossmoor	California	90720	2013-07-24
255	betty thompson	Rossmoor	California	90720	2013-07-24
256	Nina Bao	Los alamitos	California	90720	2013-07-24

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257	hanna mulleary	rossmoor	California	90720	2013-07-24
258	Edwin Goldberg	Los Alamitos	California	90720	2013-07-24
259	Tom Barnes	Los Alamitos	California	90720	2013-07-24
260	Joan Griffiths	Rossmoor	California	90720	2013-07-24
261	Helen Morin	Rossmoor	California	90720	2013-07-24
262	Michael Botnick	Tujunga	California	91042	2013-07-24
263	Jeff Actkinson	Rossmoor	California	90720-5246	2013-07-24
264	Dorothy Martin	Rossmoor	California	90720	2013-07-24
265	Dewey Carlson	Los Alamitos	California	90720	2013-07-24
266	James Palmer	Rossmoor	California	90720	2013-07-24
267	Sandra Futami	Los Alamitos	California	90820	2013-07-24
268	Hap Burnett	Rossmoor	California	90720	2013-07-24
269	David Chaille	Long Beach	California	90815	2013-07-24
270	Johnny Newnes	Huntington Beach	California	92647	2013-07-24
271	Georgia Merchant	Los Alamitos	California	90720	2013-07-24
272	Kim Randazzo	Seal Beach	California	90740	2013-07-24
273	James Tarchione	Rossmoor	California	90720	2013-07-24
274	Janna Kim	Los Alamitos	California	90720	2013-07-24
275	EUGENIO DEARRIBA	ROSSMOOR	California	90720	2013-07-24
276	Nicole Suffel	Rossmoor	California	90720	2013-07-24
277	Blair Carty	Rossmoor	California	90720	2013-07-24
278	Kevin Gustafson	Orange	California	92867	2013-07-24
279	Claudia Dunn	Los Alamitos	California	90720	2013-07-24
280	Ranko Balog	Irvine	California	92603	2013-07-24
281	Darcy and Richard Krumhauer	Los Alamitos	California	90720	2013-07-24
282	AnnMarie Coté	Rossmoor	California	90720	2013-07-24
283	Elizabeth Deering	Rossmoor	California	90720	2013-07-24
284	Diana Mejia-Jones	Los Alamitos	California	90720	2013-07-24
285	Rachael Kogen	Los Alamitos	California	90720	2013-07-24
286	Robert Esposito	Los Alamitos	California	90720	2013-07-24
287	Connie Kuhn	Los Alamitos	California	90720	2013-07-24
288	Mary Cunningham	Los Alamitos	California	90720	2013-07-24
289	TOM SCHMITZ	LOS ALAMITOS	California	90720	2013-07-24
290	Michael Levin	Rossmoor	California	90720	2013-07-24
291	Dayna Boe	Long Beach	California	90808	2013-07-24
292	Steve Duke	Rossmoor	California	90720	2013-07-24
293	William Thompson	Los Alamitos	California	90720	2013-07-24
294	Amanda Zimmer	Irvine	California	92606	2013-07-24
295	Ryan Vega	Long Beach	California	90808	2013-07-24
296	Michele Mitchell	Rossmoor	California	90720	2013-07-24
297	Robert Crumby	Rossmoor	California	90720	2013-07-24
298	harvey chou	rossmoor	California	90720	2013-07-24
299	Luann Canavan	Los Alamitos	California	90720	2013-07-24
300	Kevin Falsken	Rossmoor	California	90720	2013-07-24
301	Michele Menier	Rossmoor	California	90720	2013-07-24
302	Janet Newnes	Huntington Beach	California	92647	2013-07-24
303	Cindi Samuelson	Los Alamitos	California	90720	2013-07-24
304	Donna Wertz	Los Alamitos	California	90720	2013-07-24
305	guillermo alvarez	los alamitos	California	90720	2013-07-24
306	janet & jim wagoner	los alamitos	California	90720	2013-07-24
307	Susan Manzo	Seal Beach	California	90740	2013-07-24

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308	Jennifer PARETI	Los Alamitos	California	90720	2013-07-24
309	Kay Shelton	Rossmoor	California	90720	2013-07-24
310	Kay Asher	Los Alamitos	California	90720	2013-07-24
311	Zack Ghodsi	Los Alamitos	California	90720	2013-07-24
312	Teddy Hopson	Huntington Beach	California	92648	2013-07-24
313	Michael Ungaro	Rossmoor	California	90720	2013-07-24
314	Gary Mucho	Los Alamitos	California	90720	2013-07-24
315	Terry Pollock	Los Alamitos	California	90720	2013-07-24
316	Dianne Jones	Rossmoor	California	90720	2013-07-24
317	John Fitzsimons	Rossmoor	California	90720	2013-07-24
318	Diana Ortiz	Seal Beach	California	90740	2013-07-24
319	Diane Holdaway	Los Alamitos	California	90720	2013-07-24
320	Katy Chittick	Rossmoor	California	90720	2013-07-24
321	Bill Heffern	Los alamitos	California	90720	2013-07-24
322	Scott Rivers	Los Alamitos	California	90720	2013-07-24
323	Kay Butterfield	Rossmoor	California	90720	2013-07-24
324	Mark Butterfield	Rossmoor	California	90720	2013-07-24
325	Denise Fiore	Rossmoor	California	90720	2013-07-24
326	Denise Manning	Rossmoor	California	90720	2013-07-24
327	Tim Manning	Rossmoor	California	90720	2013-07-24
328	Barbara Guest	Los Alamitos	California	90720	2013-07-24
329	Robert Salk	Los Alamitos	California	90720-4215	2013-07-24
330	Lauren Rips	Los Alamitos	California	90720	2013-07-24
331	Daivd Benedict	Los Alamitos	California	90720	2013-07-24
332	Robyn Screen	Seal Beach	California	90740	2013-07-24
333	James Heffron	Rossmoor	California	90720	2013-07-24
334	Grace Holdaway	Seal Beach	California	90740	2013-07-24
335	Kali Moore	Seal Beach	California	90740	2013-07-24
336	Calie Radtke	Rossmoor	California	90720	2013-07-24
337	Christina Zonker	Garden Grove	California	92845	2013-07-24
338	Lorraine Porter	Los Alamitos	California	90720	2013-07-24
339	Stephanie Doucette	Los Alamitos	California	90720	2013-07-24
340	Tom Rosenburg	Long Beach	California	90807	2013-07-24
341	Ed Beckwith	Rossmoor	California	90720	2013-07-24
342	Harriet Ottaviano	Seal Beach	California	90740	2013-07-24
343	Terry Millsaps	Rossmoor	California	90720	2013-07-24
344	pieter westerbeek	rossmoor	California	90720	2013-07-24
345	Octavio Nuiry	Rossmoor	California	90720	2013-07-24
346	claire kibler	rossmoor	California	90720	2013-07-24
347	William Fendley	Los Alamitos	California	90720	2013-07-24
348	Deborah Miller	Rossmoor	California	90720	2013-07-24
349	David Zawolkow	Los Alamitos	California	90720	2013-07-24
350	Terrence Witkowski	Los Alamitos	California	90720	2013-07-24
351	Joanne Levy	Los Alamitos	California	90720	2013-07-24
352	Crystal Brisbane	Cypress	California	90630	2013-07-24
353	GERALD LEVY	LOS ALAMITOS	California	90720	2013-07-24
354	Michael Sanders	Rossmoor	California	90720	2013-07-24
355	laurie dion	seal beach	California	90740	2013-07-24
356	Sue Owen	Rossmoor	California	90720	2013-07-24
357	Helene Miller	Seal Beach	California	90740	2013-07-24
358	Therea Miller	Seal Beach	California	90740	2013-07-24

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Petition Signatures to remove Toll Rads from consideration in the I-405 Freeway Improvement Project

359	Kathy Bell	Rossmoor	California	90720	2013-07-24
360	John Bell	Los Alamitos	California	90720	2013-07-24
361	N Evans	Cypress	California	90630	2013-07-24
362	Barbara Josefsberg	Los Alamitos	California	90720	2013-07-24
363	Kurt Lieber	huntington beach	California	92646	2013-07-24
364	Janis Kleinberg	Los Alamitos	California	90720	2013-07-24
365	Fred Kogen, M.D.	Rossmoor	California	90720	2013-07-24
366	Lisa Guardi	Rossmoor	California	90720	2013-07-24
367	debbie goldade	Fountain Valley	California	92708	2013-07-24
368	Jason Twomey	Cypress	California	90720	2013-07-24
369	Lawrence Watson	Los Alamitos	California	90720	2013-07-24
370	Steven Harrington	Westminster	California	92683	2013-07-24
371	Cynthia Woods	Los Alamitos	California	90720	2013-07-24
372	Suzanne Hoehl	Rossmoor	California	90720	2013-07-24
373	Robert Roehm	Los Alamitos	California	90720	2013-07-24
374	Nancy Luna	os Alamitos	California	90720	2013-07-24
375	Angelique Simpson	Rossmoor	California	90720	2013-07-24
376	Gerald Koppenheffer	Rossmoor	California	90720	2013-07-24
377	Susanne Farjami	Los Alamitos	California	90720	2013-07-24
378	susan rehman	rossmoor	California	90720	2013-07-24

SEAL BEACH CA 90740
Pat Trymer Long Beach CA 90823
Carol Greenberg Long Beach CA 90803

4:00 p.m. 7/23/2013 to 5:00 p.m. 7/24/2013 Page 8

PC-LB4

I-405 Improvement Project
Public Hearing
Comment Sheet

Wednesday, July 24, 2013 – Hill Classical Middle School

Please provide your comments regarding the I-405 Improvement Project Supplemental Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS).

Comments must be received by Caltrans no later than Monday, August 12, 2013

Name (First and Last): Kaylin Roseman
Organization: Cal Poly San Luis Obispo Civil Engineering Student / LBC Resi
Address: 305 Park Ave
Phone Number: (562) 824-2671
Email address: kroseman2@gmail.com

Comments: As a civil engineering student, ~~it is highly~~ in ~~[illegible]~~ pursueing a ~~[illegible]~~ career in Transportation it is highly disturbing to not see a single Alternative involving public/mass transit. Continueing to expand the freeways footprint is only going to work for so long. The only way to build a sustainable community and country is to seriously consider integrating either bus rapid transit or a train network. The majority of your constituents are crawing public transportation. Listen to them. 1

(Space for comments continued on reverse)

Caltrans OCTA

PC-LB5

Public Comments Given to Court Report at Public Hearing in Long Beach, California, Wednesday, July 24, 2013

OPEN HOUSE COMMENTS FROM THE PUBLIC

MR. SITHE: My name is Kent Sithe. I spoke here, too. My issue is the Seal Beach -- I'm sorry -- the 7th Street 22 Studebaker Eastbound Interchange. That interchange comes up as a significant impact on almost all the alternatives, almost as much or more than a lot of the other intersections that are for mitigation if they didn't pick it for mitigation. An interchange or an intersection is more than just car trips. It's the physical attributes and the infrastructure of the site, and that has not been improved upon for 40 years. It's been held together with slurry projects, and other minimal upkeep just to keep it going. It's falling apart, the infrastructure, the crumbling and I don't think it's going to be able to withstand increased traffic and stress that the 405 widening project and the West County Connectors is going to subject it to. It's also -- it's also not safe there. Compared to other intersections around, there are basically no -- basically no shoulders. I mentioned that in my comments tonight. They have been using the infeed there as a construction staging area for every project that has come down including the WCC. Maybe they are going to use it for the 405 for the construction equipment that they store and move in and out of there and the trucks further tearing up the roadway. It's terrible. There is no drainage, no cement like any other intersection interchange around there. There is no lighting. It's very dark at night. It's -- he mentioned that the 405 was designed for another time. That interchange was designed for a time before that. This would be a great opportunity to be looked upon as an opportunity to try to get it improved related to this project. It's possible, because as I mentioned, we had a smaller incremental project on the westbound interchange that's on the other side of the freeway, and that really was incremental and not very expensive and it has 1

PC-LB5 Continued

made a lot of difference. The two interchanges are different. But, you know, when it rains there it floods more than the average interchange, it is dusty, and it's not safe. And I would be happy to take anybody around there who would like to go see it with me and see what they think.
It's amazing to me that the Parsons subcontractor employees who went there to view the intersection did not open their eyes and take a look at the physical infrastructure but, obviously, just looked at the car trips, and the Volume 2 capacity and all the technical **1 (Cont.)**
things. And like I said in my comments, and interchange is more than that, and that's really what they should look at and that's what I think CEQA requires.
And the last thing I'm going to say, they are not bound to utilize the thresholds that they use to study because in their own document -- if I might, this is the last thing -- in their own document in the Supplemental Long Beach Area Traffic Study EIR or DEIR, they even mention -- it's not the last page, it's second to the last page -- I don't know what page to call this; 7.0.
They mention that Cal Trans does not use threshold criteria for determination of significance of impacts and so discussion of the threshold criteria was removed from the document at the request from Cal Trans environmental staff, so they don't really even need to use these thresholds to justify what they are going to do. And, if anything, commence sense dictates improvements to that interchange I think even more so than the other interchange. **2**
(End of proceedings.)
(Certificate of Reporter attached on the following page hereto.)

RESPONSE TO PUBLIC COMMENTS (PC)-LB

Response to Comment Letter PC-LB1

Comment PC-LB1-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

At this time, the Toll Operation Policy for Alternative 3 is undecided, and it is unknown what the occupancy requirement or what discount those users meeting the occupancy requirements would receive.

Please see Common Response – Preferred Alternative Identification.

Response to Comment Letter PC-LB2

Comment PC-LB2-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Response to Comment PC-LB1-1.

Response to Comment Letter PC-LB3

Comment PC-LB3-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Response to Comment Letter PC-LB4

Comment PC-LB4-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comment is not specific to the new information and analysis

presented within the Supplemental Draft EIR/EIS; however, your comments were addressed in Appendix R1 (Response to Comments on Draft EIR/EIS). You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Common Response – Elimination of Light-Rail Transit and Bus Rapid Transit Alternatives.

Response to Comment Letter PC-LB5

Comment PC-LB5-1

Caltrans and OCTA thank you for participating in the environmental process for the I-405 Improvement Project. Your comments on new information and analysis presented within the Supplemental Draft EIR/EIS were considered during identification of the Preferred Alternative as described in the Final EIR/EIS. You will be notified at the address provided in your comment when the Final EIR/EIS is available for review.

Please see Response to Comment PC-S5-1.

Comment PC-LB5-2

Please see Response to Comment PC-S5-2.

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