ATTENTION! There are a number of items in this appendix that need to be updated—especially in the areas of funding/programming, risks, and FHWA coordination. Until this appendix is updated, please see Appendix K for the discussion of topics in the Microsoft Office Word template associated with this appendix and discuss any issues with the Headquarters SHOPP program manager or advisor.

APPENDIX L – Preparation Guidelines for Project Study Report

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SECTION 1 Introduction

Reference Information

Some of the references found in this appendix have hyperlinks that connect to Caltrans intranet pages which are not displayable to the general public. Until such time that the specific reference becomes available on the internet, the user will have to contact their district liaison, Caltrans project manager, or the appropriate Headquarters division to inquire about the availability of the reference.

Project Initiation Documents

This appendix provides concepts and best practices for the preparation of all project initiation documents (PIDs). This appendix and Chapter 9 of this manual provide the foundational knowledge and understanding to prepare any PID and should be reviewed before the preparation of any PID.

Presented in this appendix is an overview of the preparation of PIDs, a description of the information that should be contained in a PID, scoping forms to collect and organize information during the project initiation phase and the template for a Project Study Report (PSR). The PSR template presented in this appendix is the foundation template for all PIDs. All other PID documents are a variation of the PSR.

PIDs expressed through these guidelines should be as simple, timely, and workable as practical, given that a PID must be prepared at the front end of the project development process, before environmental evaluation and detailed design are completed. All templates can be modified to meet this goal. As an engineering document, the PID is written to provide stakeholders, decisions-makers, and “next-phase” project team members with a broad understanding of the transportation deficiency and the proposed project. The PID informs the reader of the key issues and assumptions regarding the commitments on the scope, schedule, and estimated
cost of the project. The PID must provide a sound basis for commitment of future state funding.

**Project Study Report**

This appendix contains specific guidance for one type of PID, the Project Study Report (PSR). The preparation of Project Study Report-Project Development Support (PSR-PDS), another type of PID used for projects funded through the State Transportation Improvement Program (STIP), projects-funded-by-others, or Long Lead State Highway Operations and Protection Program (SHOPP) projects, can be found in Appendix S.

**Project Scope Summary Report**

Project Scope Summary Report (PSSR) templates have been developed for specific programs of the State Highway Operations Protection Program (SHOPP). These templates have a fill-in-the-blank format. The templates should be modified as necessary for each SHOPP project. See Figure 9-3 in Chapter 9 of this manual for a list of the appropriate templates to use for SHOPP projects.

**Applicability**

These guidelines generally apply to all major State and specially funded projects on the State Highway System (SHS) and any segment of a transit project within the State highway right-of-way. The guidelines are not intended for use on transit projects unrelated to the SHS or on State Transportation Improvement Program (STIP) projects off the State highway system.
SECTION 2 PID Preparation Procedures

This section describes the sequence of key activities and best practices that take place during the project initiation phase. For project teams, the PDWT provides a comprehensive flow of project delivery tasks and can be used as a structured step-by-step guide for project development tasks performed by project engineers. Although the PDWT primarily describes design activities performed by the project engineer, it also provides the framework for the flow of tasks by all the functional units.

The PDWT can be found on Division of Design’s website:
http://www.caltrans.ca.gov/hq/oppd/pdwt/revised/pdwt.htm

Guidance on the content of the PSR is discussed in Section 3 of this appendix.

For an overview of where the project initiation phase fits into the project development process, see Chapter 8 of this manual.

A graphic overview of the project development process can be found at Division of Design’s website: http://www.caltrans.ca.gov/hq/oppd/pdwt/revised/fd1.pdf

1. Pre-PID Meeting

Regardless of who prepares the PID, a meeting with Caltrans and the appropriate local entity (or entities) shall be held. Input from all parties is required at the earliest possible stage and continues throughout the process. The project manager should take the lead in coordination activities.

The purpose of the pre-PID meeting is to communicate a shared view of the project and to establish an understanding of the procedures, roles, and responsibilities before the project initiation process begins:

- Review the PID development process.
- Set the framework for getting consensus of purpose-and-need.
- Set the framework for agreeing on the design concept and scope. Ideally, the design concept and scope will evolve from the transportation system or regional planning process. The engineering specifics of the design scope should be discussed. These include the major features of work such as the number of lanes (current and future), right-of-way requirements, and interchange type and location.
- Agree on the basic design standards. When the project is on an existing facility, consideration must be given to improving existing features to current standards. Where justified, there may be cases where exceptions to other design standards may be considered.
• Identify known design deficiencies. The Design Scoping Index found in Section 5 of this appendix can be used to document known deficiencies and highlight areas requiring further investigation. Examples of deficiencies to consider are: structures with nonstandard vertical or horizontal clearances; inadequate bridge railing; pavement in need of rehabilitation; deteriorated or inadequate drainage systems; narrow or deteriorating shoulders; lack of continuity or the deficiencies of bicycle or pedestrian facilities; replacement landscaping; ramp metering; nonstandard guardrail; maintenance worker safety; and seismic retrofit requirements.

• Identify the funding sources, and if appropriate identify the cooperative features of the project.

2. Authorization for PID Preparation

The project initiation phase begins with the opening of an expenditure authorization. The project manager obtains an expenditure authorization to initiate the project initiation process.

See Task PO1 of the PDWT.

3. Form the Project Development Team

The Caltrans District Director concurs on the members of a Project Development Team (PDT) for each project, regardless of who is preparing the PID.

The PDT is comprised of the PM, a representative of the regional transportation planning agency (if involved), and representatives from district design, environmental, traffic, safety, surveys, construction, and maintenance units, and the right-of-way branch. Representatives from other functional units, local and regional entities are added as needed. See Chapter 8 of this manual.

If the PID is to be prepared by a local entity, the local entity shall furnish Caltrans a list of appropriate PDT members.

See Task P06 PDWT for further guidance on forming a PDT.

4. Develop Consensus on the Project Purpose and Need

It is crucial for the PDT to build PIDs on the project purpose-and-need statement early in the project development process. The PDT must identify the transportation deficiencies and describe underlying transportation need. The PDT must agree on the primary objectives that will be fulfilled by constructing the project and define those objectives as the project purpose.

The project sponsor must concur on the purpose-and-need. Primary stakeholders must have consensus on the project purpose-and-need. Value
Appendix L – Preparation Guidelines for Project Study Report
Section 2 – PID Preparation Procedures

analysis tools may be helpful in developing consensus on purpose-and-need statements for complex projects.


5. **Review of the Project Site in the Field**
It is important that the project team make an initial review of the project in the field. This should be an ongoing activity as needed. Field reviews often identify project features that may otherwise not be noticed. The reviews should focus on factors that could affect the project.

In addition, it is important to consider bicycle and pedestrian travel. Bicycles and pedestrians are permitted on all state highways, except for some freeways (see Chapter 31 of this manual); therefore roadway shoulder and sidewalk geometrics and conditions are a part of the scoping process. The preferred way to assess conditions for bicycling and walking is by conducting a field review while bicycling and walking. See *Highway Design Manual* (HDM) Chapter 1000 – Bicycle Transportation Design, for bicycle geometric and surface quality guidance.

If pedestrian facilities do not exist, consideration should be given to them if land conditions are such that pedestrians could be expected to regularly move along the highway. If the existing paved shoulders are narrow, worn paths can be an indicator of where pedestrian travel is occurring. If pedestrian facilities exist, they need to be upgraded to comply with *Design Information Bulletin* 82 – Pedestrian Accessibility Guidelines for Highway Projects.

See Tasks P25, and P26 of the *PDWT* for further guidance on field reviews.

6. **Obtain and review existing reports, studies, mapping or other information**
To adequately prepare a PID, it is essential to obtain appropriate mapping. Ideally, aerial contour mapping (3-D MicroStation design files) should be used. This mapping will be used for the development of preliminary alternatives, horizontal and vertical alignment, and other studies. If aerial contour maps cannot be provided at this stage, other mapping such as Digital Highway Inventory Photography Program (DHIPP) images, aerial photography mosaics or as-built plans may be appropriate. If proposed structures cannot be accurately plotted or located on the aerial contour maps, more accurate maps (or larger scale drawings) should be used to show the location and limits of the proposed structures.

The Transportation Concept Report or Route Concept Report, District System Management Plan, Regional Transportation Plan, Congestion Management
Appendices
Project Development Initiation and Approval Reports

Program, 10-Year SHOPP, the State Implementation Plan, and local and regional pedestrian and bicycle plans should be reviewed. Appropriate information from these reports can serve to document the need and scope of the project. Further discussion on these documents can be found in Chapter 1 – Introduction, and Chapter 4 – Programming, of this manual.

Important background information can often be obtained in previous related or adjacent studies. A search and review of project history files and previously studied but suspended projects can give a historical perspective to the current proposal.

See Tasks PDWT – P8-P26 for further guidance on additional data and input.

7. Identify additional data requirements for project scoping

Refer to the tools in Section 5 to identify data needs and issues that should be considered or studied to properly scope the project. The use of the Design Scoping Index found in this Appendix L can assist the project team in properly scoping a project. The Design Scoping Index can be used to identify facility deficiencies and the concerns of stakeholders. The Design Scoping Index ties together the Planning Scoping Checklist, the Design Checklist, the Traffic Scoping Checklist, the PEAR, the DES Scoping Checklist, and the Right of Way Data Sheet. The PDT should evaluate which deficiencies can be addressed given the purpose-and-need, program definition, and funding constraints.

The PDT should use risk management processes to establish assumptions that are made until the data is available.

See the PDWT Flow Chart P01-P31 and Flow Chart P32-P62 for further guidance on identifying data requirements.

8. Perform the Initial Engineering Studies

Perform the Initial Engineering Studies – PSR-PDS and Long Lead SHOPP Projects

For PSR-PDS and long lead SHOPP projects, the alternatives may not be well defined. The initial engineering studies may be limited to evaluating the physical characteristics of the project area, major engineering features, and standards. The primary focus of the initial engineering studies for PSR-PDS and long lead SHOPP projects is to establish a reasonable study area for alternative development.

Perform the Initial Engineering Studies – All Other PIDs

The initial studies should focus on the physical characteristics of the project area, engineering features, and standards required to develop a project.
• Floodplain mapping – include an analysis of the potential flood plain impact due to the proposed improvements.

• Traffic Data – existing and forecasted traffic based on up-to-date studies, the level of service, operation analysis based on the up-to-date studies.

• Hazardous material information – analysis needs to be based on well-defined alternatives and preliminary investigations for high-risk alternatives.

• Preliminary material (geotechnical information) – analysis needs to be based on well-defined alternatives and detailed investigations for high-risk alternatives.

See PDWT Flow Chart P01-P31 and Flow Chart P32-P62 for further guidance on engineering studies.

9. Develop Alternatives

Alternatives – General

For alternative development, the perimeter of a study area must be delineated, as well as identifying the major work elements of the alternative.

Develop alternatives that will satisfy the project purpose-and-need, are cost effective, and will avoid or minimize environmental and right-of-way impacts. Involve the community early and use context-sensitive-solution principles to develop project alternatives.

In the development of alternatives in PIDs, several key areas must be analyzed: environmental compliance, structures, materials, landscaping, permits, local and regional input, right-of-way, mandatory and advisory design standards, traffic operations, and alternative transportation modes already in place (i.e., mass transit, rail, bicycle and pedestrian facilities).

If developing alternatives for freeway projects, see Chapter 31 of this manual for Streets and Highways Code requirements regarding impacts on pedestrian and bicycle transportation routes.

The environmental unit prepares a preliminary environmental analysis report (PEAR) for each alternative. The PEAR includes:

• A discussion of environmental resources and a description of the potential project issues or impacts, which could delay the project or affect the viability of any project alternative.

• Description of studies that are needed to complete an environmental evaluation (noting as necessary any seasonal constraints for these studies).
• A recommended environmental determination/documentation and a tentative schedule for its completion. If an environmental document is required, specify the lead agency for its preparation.

• An initial site assessment for hazardous waste, if the project includes the purchase of new right-of-way, excavation, and/or structure demolition or modification.

• Permits or approvals.

Refer to the *Standard Environmental Reference (SER)* for further guidance on the PEAR. The SER includes information that environmental units need to develop the PEAR.

See *PDWT Flow Chart P32-P62* for further guidance on developing alternatives.

**Alternatives – All PIDs except PSR-PDS’**

A. Identify Alternatives

Value analysis can be used to develop well-defined alternatives. Value analysis is the systematic application of recognized analytical techniques to identify a project’s function, identify alternatives, and analyze the alternatives to identify the one that fully meets the project’s function at the lowest overall cost. Other methods for developing alternatives can be found on the *Standard Environmental Reference*.

B. Design Standards

During development of projects, various constraints often require deviation from design standards. Identify and document known mandatory and advisory design exceptions as discussed in *Chapter 21* of this manual.

Design standards are applied equally to all projects on the SHS regardless of the sponsoring agency or the type of funding involved.

See Task *P67* of the PDWT for further guidance on Design Standards.

C. Structures

As soon as conceptual geometrics have been generated, develop Advance Planning Studies (APS) and cost estimates for the various structure alternatives. The APS must show sufficient detail to allow environmental, permit and traffic management costs to be estimated.

The method of providing these preliminary studies shall be discussed with the DES liaison engineer assigned to the district. The liaison engineer will provide recommendations on preparation of the preliminary studies. The
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Section 2 – PID Preparation Procedures

studies will be prepared by DES, or if prepared by others, will be reviewed by DES during the district review process.

See Task P48 of the PDWT for further guidance on Advance Planning Studies.

D. Environmental Compliance

Many agencies require permits before a project can be approved for construction. It is essential to identify potential permit requirements at the earliest stage and to include the cost of these requirements in the cost estimate.

E. Materials

Existing materials information (from old projects, etc.) should be obtained from Caltrans or other sources. If critical areas, such as slides, erosion, poor foundations, etc., are noted during field reviews, a preliminary materials investigation should be conducted.

F. Highway Planting and Irrigation

Some projects require significant amounts of highway planting and irrigation work. At the PID stage, efforts should be made to identify any new or replacement planting. Planting and irrigation provisions must be in compliance with Caltrans current planting and water conservation policies.

G. Roadside Design and Management

Conditions and deficiencies of the roadside should be reviewed and documented, and a cost estimate should be developed at this time for design solutions. This should involve roadside items such as miscellaneous paving, maintenance vehicle pull-outs, etc., requirements at the earliest stage and to include the cost of mitigation in the cost estimate. Identify roadside management issues and permanent vegetation control treatments at this stage. Solutions for vegetation control requirements are available at the Landscape Architecture Program (LAP) toolbox website: http://www.dot.ca.gov/hq/LandArch/roadside/index.htm. These techniques when properly incorporated will improve highway safety for maintenance units, minimize reoccurring maintenance activities, reduce life cycle cost, and improve aesthetics.

H. Traffic

District traffic provides information related to traffic. See traffic scoping list in Section 5. Transportation Management Plans (TMP) will be required if significant construction delays are anticipated. TMPs develop construction traffic handling practices such as lane closures, detours, and mass transit
enhancements, and work-hour restrictions to minimize delays. As appropriate, address how bicycle and pedestrian traffic will be accommodated during construction. Costs associated with TMPs should be included in the PID Estimate.

Identify existing vehicle detections systems (VDS) within the project limits. Additional staging plans to maintain the VDS will be required if the duration for outages is in the order of a few hours for traffic signals and spacing between traffic monitoring stations is more than one mile on the mainline. Costs associated with maintenance of operations of existing VDS should be included in the PID estimate.

I. Right-of-way

The right-of-way estimate should be prepared using aerial mapping, mosaics, or as built plans. The mapping for the right-of-way estimate shall show improvements, property ownership, parcel information, proposed right-of-way lines, access control, easements, utilities, and railroad facilities.

Refer to Tasks P63 - P66 of the PDWT for further information on right-of-way.

J. Local and Regional Input

Local and regional agencies must be given an opportunity to provide input during the preparation of a PID. Local planning (land use) can have a significant effect on the local and regional planning transportation system, which affects the identification of alternatives and project specific features.

If agreement cannot be reached between Caltrans and the local entity on the programmable project alternative, the PID needs to include a cost estimate and supporting information for all alternates.

Alternatives – PSR-PDS and Long Lead SHOPP Projects

For information regarding developing alternatives for PSR-PDS or long lead SHOPP projects, see Appendix S.

10. Develop Cost Estimates

Cost estimates are developed for:

- The resources needed by Caltrans to either implement or provide independent quality assurance for the remaining project phases, and
- The capital costs needed to acquire right-of-way and construct the project.
Develop a cost estimate for each alternative. Estimates for programming, although preliminary, should be as accurate as possible.

Resource estimates will be developed per the *Workplan Standards Guide, Release 11.0 For Capital Outlay Projects* found on the Headquarters Division of Project Management website.

If federal-aid funds are used on any portion of the project and local agency support costs are used as a “soft” match, then the PID or PR must include local agency support costs.

The PDT and project sponsors should identify funding sources for completing the project. If the project is to be programmed into the STIP or use federal funds, the project sponsor is expected to have reasonable plan for fully funding the project before federal programming can occur. If a project is funded-by-others (as defined in *Chapter 9* of this manual), Caltrans must be presented with a reasonable plan for fully funding the project in order to justify expending state resources for independent quality assurance on the project.

Capital costs are to be developed in accordance with Section 4 of this appendix and *Chapter 20 – Project Development Cost Estimates* of this manual.

See Task *P72 of the PDWT* for further information on the development of cost estimates.

11. Develop Schedules
A work plan for the proposed programmed activities shall be developed. To increase confidence in the cost estimate and schedule, perform a risk analysis and develop a risk management plan. The work plan must include a resource cost estimate and schedule for delivery of major components of the project.

12. Complete PID
After developing alternatives and analyzing impacts, prepare the PID in accordance with the outline in Section 3 of this appendix.
SECTION 3 Outline for Project Study Report

General

The purpose of this outline is to identify the key elements to document in the PSR. As decision-making documents; PIDs must identify the key issues of the transportation deficiency, any major elements that should be investigated, and the effort and resources needed to complete the studies and implement the project. The outline is designed so that important information can be easily obtained from the document text. The attachments should contain detailed information that is needed to support or clarify information in the body of the report. Summarize information from detailed studies in the PID. Actual studies with raw data (e.g., traffic volumes) and detailed analyses are part of the project files.

Section 6 this appendix has templates that present a guideline for preparation of the PSR. The report should be similar in organization and may contain similar headings and subheadings, but vary based on project factors.

Outline

Cover Documents

Cover Sheet

The cover sheet provides “at a glance” project identifiers, the primary reason for writing the report, and dated approval signatures.

Project identifiers are the district, county, route, and post miles; as well as the official project description. See the Plans Preparation Manual Section 2-2.2 for examples of project identifiers.

Clearly state the reason for the PID on the title sheet. It may be one or a combination of the following bullets. Use “AND” to separate multiple requirements.

• Request for Programming in the (year) STIP for Capital Support of the Project Approval and Environmental Document.
• Request for Programming in the (year) STIP for Capital Support for:
  ➢ Project Approval and Environmental Document.
  ➢ Plans, Specifications, and Estimate.
  ➢ Right of Way Acquisition.
 Construction Management.
  • Request for Programming in the (year) STIP for Right of Way and Construction Capital.
  • Request for Programming in the (year) SHOPP.
  • Request approval to proceed with the formal studies for a SHOPP project.
  • Authorize a cooperative agreement.
  • Conceptual approval for a project-funded-by-others (as defined in Chapter 9 of this manual).

The following figure shows an example of describing the reason for the PID on the title sheet.

**Figure L-1 Title Sheet Description**

PSRs are to include the endorsement of the PM and “APPROVED BY” District Director (or Deputy District Director if identified in Caltrans Delegation of Authority). Edit the signature block as appropriate.

**Vicinity Map (Separate Sheet)**

The vicinity map is a district, county, or city map showing all State highways and major local roads when pertinent. It should be placed on a separate page and should
include the study limits, major topographic limits listed in the report, and a north arrow.

**Registered Professional Stamp (Separate Sheet)**

The Registered Professional stamp or seal and number with signature shall be placed on a separate sheet, which shall be part of the report. Also included on this sheet shall be a statement indicating that the registered profession is attesting to the technical information contained therein and the engineering data upon which recommendations, conclusions, and decisions are based. This seal does not constitute approval of the project study report.

**Table of Contents (Separate Sheet)**

On a separate sheet, place a table of contents that includes all the elements of the PID.

**Main Body of PID**

1. **INTRODUCTION**

The introduction is a summary of the information presented in the report. The introduction should be no more than two paragraphs or a brief opening sentence with the information summarized in tables. The template includes an optional table that can be expanded or condensed to fit the individual project.

In the introduction, identify:

- The proposal.
- The range of alternatives and costs.
- The Caltrans resources needed to complete the proposed components (e.g., project approval and the environmental document phase).
- The schedule for completion of proposed activities.
- The proposed funding sources.
- The initial project category.
- Type of facility as designated on a current or proposed route adoption map.
- Any known project approvals anticipated for each alternative (See Chapter 12 of this manual).
2. BACKGROUND

The background should briefly describe why this project should go forward at this time.

Information in this section includes:

- A description of the facility.
- Project sponsors and project proponents.
- A discussion on local and regional agency involvement in the development of purpose-and-need.
- A discussion of any actions or commitments that have taken place to date regarding the proposed project.

3. PURPOSE AND NEED

These statements together should succinctly answer the question: why this project and why now? The PDT, in conjunction with the project sponsors and key stakeholders, must develop the purpose and the need statement. Additional information on the development of purpose-and-need statements can be found at http://www.dot.ca.gov/ser/downloads/general/PN_Report.pdf

Purpose

The project purpose is the set of project objectives that will be met, which addresses the transportation deficiency (i.e., the project need). It is important to identify the primary and secondary objectives that are met by this project. While the secondary objectives may be a factor in the scoping of the project (e.g., minimizing impacts to the environment, meeting ADA requirements, etc.), the purpose statement should focus on the primary objectives of the project.

Need

The project need is an identified underlying transportation deficiency that needs correction. While there may be several associated deficiencies identified in the project area, it is important for the PDT to agree on the primary deficiency or deficiencies that create the need for the project. A need is supported by data that indicates, but is not limited to, a safety issue, reduced mobility, limited capacity for the transportation demand, the lack of reliability, gaps in or between transportation systems, or limited life of the facility. The details of this data are discussed in the following section on “Deficiencies.”


4. DEFICIENCIES

This section provides a concise discussion of the data that supports the purpose-and-need of the project as well as identifying data that is important to the scoping of the project.

This section should refer to attached maps, charts, tables, letters, etc. When appropriate, discuss existing and forecasted traffic, level of service, capacity adequacy, and safety data.

This section may have two subsections. A subsection on the primary deficiencies would discuss deficiencies that relate directly to the purpose-and-need statements. A subsection on the secondary deficiencies would identify the deficiencies that should be addressed when scoping the project (this subsection would include, but is not limited to: a review of existing roadside area conditions to identify deficiencies and develop a preliminary cost for each improvement, maintenance vehicle pull-outs, access roads, topsoil reapplication, erosion control, slope rounding, non-standard features, architectural features, landscaping features, maintenance items, etc.), but are not related directly to the stated purpose-and-need for the project.

5. CORRIDOR AND SYSTEM COORDINATION

This section should address the coordination and consistency of the proposed purpose-and-need with statewide, regional, and local planning efforts such as:

- District System Management Plan (DSMP).
- Transportation Concept Reports/Route Concept Reports.
- Regional Transportation Plans (RTP).
- Congestion Management Program (CMP).
- State Implementation Plan (SIP).
- Bicycle and pedestrian master plans.

If applicable, identify regional and program objectives, and the project consistency with fulfilling those objectives.

Provide a summary of the information from the Planning Scoping Checklist obtained from the district transportation planning unit to address other State Highway improvements, local improvements or any development projects within the immediate project vicinity.
Identify the date that the route was adopted, the CTC designation of the route or route denominations, and identify any applicable freeway or controlled access agreements, potential freeway or controlled access agreements, and potential relinquishments.

A project that requires a new public road connection must provide a description of the land-use development to be served by the new connection, describe the relationship to the local agency’s general plan or other specific area plans, and justification per Chapter 27 of this manual that existing interchanges or local road systems cannot be improved to handle the deficiencies.

6. ALTERNATIVES

Alternatives – General

Alternatives that should always be considered, as described in Chapter 9 of this manual, are:

- The “No Build” Alternative.
- The alternative that meets current mandatory and advisory design standards.
- The “Minimum Build Alternative” – this alternative must meet the purpose-and-need for the project. This alternative provides a way of addressing the transportation deficiency if there is a shortage of funding.

The exclusion of any of the above alternatives must be explained. If the alternative that meets current mandatory and advisory design standards is rejected, approval of exceptions to mandatory and advisory design standards must be obtained and referenced. Rejected alternatives and justification for rejection must be discussed.

Summarize information provided in the PEAR. Refer to the Standard Environmental Reference for further guidance on the PEAR or equivalent environmental analysis for each alternative.

Discuss any constructability issues. Summarize the results of the constructability review.

Alternative discussions can refer to attachments including: schematic maps of the study area and typical cross-sections, as appropriate.
Alternatives – All PIDs except PSR-PDS’

Alternatives for other PIDs are developed and refined to a higher degree than the alternatives for the PSR-PDS and long-lead SHOOP projects. See Appendix S for information on PSR-PDS and long-lead SHOOP projects. The alternative section for all other PIDs must include a discussion of the design scope, describe the boundary of the study area, and define the key activities for PA&ED, PS&E, and construction for each alternative. Discuss capital construction and right-of-way costs for each alternative.

As appropriate, consider the following topics for each alternative:

- Discuss alternatives in terms of the design scope that will satisfy the project purpose-and-need.
- Describe the boundary of the study area for the alternatives. During PA&ED functional units will use this information to determine potential impacts in the area. The boundary should not be limited to just the final right-of-way required for each alternative, but should also include a high level estimate of areas that may be required for construction of the alternative (e.g., haul roads, temporary bicycle or pedestrian facilities, detours, material storage, and cut and fill areas).
- The boundary of the study area must be established to include reasonable modification to the alternative. Improper identification of the project study area can result in unanticipated studies and project delays.
- If applicable, discuss whether some or all of the alternatives were developed through the application of the value analysis process and how this process improved the alternative.
- Discuss the type of information needed to evaluate and estimate the scope, cost, and schedule for each alternative. Identify the resources needed to complete the PA&ED, PS&E, Right of Way and Construction. Specific information on right-of-way and environmental issues should be discussed in the section on Environmental Compliance and Right of Way.
- Discuss whether the alternative will require approval of one or more design exceptions. Deviations from mandatory and advisory design standards (see HDM Index 82.2 – Approvals for Nonstandard Design) shall be discussed and any exceptions shall be approved by the appropriate individuals prior to PID approval. Separate documentation and approval(s) will be required as per Chapter 21 of this manual.
- Discuss which studies and actions are required for approval of each alternative (e.g., FHWA, CTC, route matters, etc.)? For further guidance see Chapter 12 and 13 of this manual.
- A summary of the traffic analysis for each alternative is required.
Appendix L – Preparation Guidelines for Project Study Report
Section 3 – Outline for Project Study Report

• A Transportation Management Plan (TMP), as described in Chapter 8 of this manual must be considered during the project initiation phase. A TMP provides strategies and actions for minimizing activity-related traffic delays and accidents. It is important to allow for proper cost, scope and scheduling of TMP activities at this early stage of development, therefore prior to PID approval the TMP Manager must sign-off on the TMP DATA sheet. If a TMP is required, identify the TMP elements that would mitigate these traffic impacts and their associated costs. Discuss the need for a TMP for the programmable project alternative. Summarize the TMP in the PSR. For further discussion on TMP’s see Transportation Management Plan Guidelines.

• Discuss the need for staging plans to maintain VDS during construction for the programmable project alternative. Identify the temporary VDS elements (generally microwave video detection) that would be required to maintain the VDS and the associated costs.

• A storm water data report (SWDR) shall be prepared for every project. The storm water data report is prepared by the project engineer to document storm water decisions for any given project. The storm water data report is also used to help identify potential stormwater quality issues for the project. The Storm Water Quality Handbooks: Project Planning and Design Guide provides guidance on the appropriate forms to use to develop the storm water data report. The design district or regional stormwater coordinator shall confirm the appropriate storm water data report format to use. The PID shall include a summary of key stormwater elements identified in the storm water data report. The signed cover sheet shall be circulated with the PID for district review and attached to the final PID.

• Discuss any constructability issues. Summarize the results of the constructability review.

• Establish a sequence for data needs to manage risks to scope costs and schedule.

• Summarize the right-of-way impacts for each alternative. At a minimum include the number of parcels for acquisition, the number of relocations and the number of easements. Be sure to include any possible commitment and construction right-of-way requirements.

  Identify exiting utilities and potential points of conflict, and any potholing and relocation activities that are anticipated.

  Identify rail lines in the vicinity of the project and indicate needs for any track relocations, service contracts, or construction and maintenance (C&M) agreements.

• Discuss high-risk issues that can affect an alternative (e.g., local opposition, environmental compliance) or could affect the estimated resources and PA&ED delivery milestone dates.
For complex projects, there may be limited information at the PID phase. In these cases, it is very important to complete a risk assessment in order to establish the boundary of the study area. If the risks to the delivery commitment are high, it may be prudent to complete some studies during the PID development to increase the confidence in programmed construction estimates. A summary discussing risk management should be discussed in this section.

- For SHOPP Projects, include a listing of the SHOPP Project Output. Contact the appropriate Headquarters SHOPP Manager for the SHOPP Project Output form and guidance on how to complete the form.

7. COMMUNITY INVOLVEMENT

Discuss the types of public involvement activities that were used to develop the purpose-and-need statement, and to identify the alternatives to be studied. Discuss community concerns and objectives that were identified during the PID phase.

Discuss the CSS approach that will be used to obtain community involvement in the identification and evaluation of alternatives.

8. ENVIRONMENTAL DETERMINATION/DOCUMENT

For the programmable project alternative, describe the type of environmental determination to be obtained for the California Environmental Quality Act (CEQA) and identify who should be the lead agency. Describe the type of environmental determination/document for compliance with the National Environmental Protection Act (NEPA) when involved. If the highway work is to be part of a larger overall local agency development Environmental Impact Report (EIR), discuss the steps that are needed for any required FHWA approvals.

If a local agency EIR or Negative Declaration has been completed, reference should be made to both the environmental document and the Notice of Determination that was filed with the Governor’s Office of Planning and Research.

9. FUNDING

Capital Estimate – General

Identify potential or proposed sources of funding and project funding eligibility (e.g., “Federal aid eligible”) to fully fund the project. Examples of funding sources are a
specific local entity, STIP program, or “future county shares.” If necessary, expand the table to allow for multiple funding sources.

Cooperative features should be summarized in this section. Refer to Chapter 16 – Cooperative Agreements, of this manual for policies on cooperative agreements.

Fill out the funding tables based on the programmable project alternative. Discuss the assumptions and the risk factors for the programmable project alternative cost.

Refer to Chapter 20 – Project Development Cost Estimates for more information on the PSR cost estimating methodologies.

**Capital Support Estimate**

Estimate the Caltrans resources that will be needed to complete future support components.

If federal dollars are used on any portion of the project and local agency support costs are considered a “soft” match for federal reimbursement, identify and discuss the local agency support cost.

Fill out the Capital Support Table for the remaining project components. For projects-funded-by-others (as defined in Chapter 9 of this manual); identify resource needs for Caltrans personnel to perform independent quality assurance or reimbursed work.

**10. SCHEDULE**

Provide a delivery schedule for significant milestones. For practical purposes this schedule shows the amount of time needed to complete the project. At a minimum, provide a tentative delivery schedule for milestones that are designated as Headquarters mandatory milestones in Workplan Standards Guide, Release 11.0 For Capital Outlay Projects. Additional milestones, described as optional, may be listed for any significant deliverables. Identify if the schedule is based on an optimistic or worst-case scenario start date.

Discuss all schedule constraints and assumptions for programmed milestones. A tentative schedule is not complete without documentation of the assumptions and constraints. The assumptions and constraints provide decision-makers with the rationale used to develop the schedule and the factors that could have significant
impact on the schedule. The assumptions and constraints provide stakeholders with an understanding of critical delivery areas. For example, the schedule may be based on starting the environmental studies in March of 20XX. Funding may not become available until July of 20XX. Due to the seasonal constraints for completing a study, beginning environmental studies after funding is secured in July 20XX, may result in a year delay of the project as the environmental studies would not be able to begin until March 20XX+1. Such a constraint should be clearly identified in the PID.

The schedule, the resource needs, and estimate must be consistent with the work plan that is submitted to HQ Program Project Management.

Fill in the month, year, and day for proposed program delivery milestones.

11. FHWA COORDINATION

Discuss coordination with FHWA.

If either federal action or the use of federal funds is anticipated, include the following language:

This Report has been reviewed by (Name and title of the FHWA Liaison Engineer) reviewing on (date). Per (latest federal Transportation Act), this project is eligible for federal-aid funding and is considered to be (STATE-AUTHORIZED or FULL-OVERSIGHT) under current FHWA-Caltrans Stewardship Agreements. (If either no federal-aid funding will be used or no FHWA approval required, delete the above statement and replace with the statement: “No federal-aid funding anticipated or no FHWA action required for this project.”).

Discuss whether or not the project is eligible for funding from the federal Congestion Mitigation and Air Quality (CMAQ) Improvement Program. To determine if a project specific emission analysis needs to be made to qualify for CMAQ funding, consult FHWA CMAQ guidance that can be found at:

http://www.fhwa.dot.gov/environment/air_quality/cmaq/

If Interstate access is being added or modified, discuss the process for obtaining FHWA approval.

- For a PSR, a FHWA “Determination of Engineering and Operational Acceptability” must be obtained prior to approval of the PSR. Give the date that the unsigned draft PSR was transmitted to FHWA and the date of the FHWA “Determination of Engineering and Operational Acceptability.”
12. DISTRICT CONTACT

Give name and phone number of district representative to be contacted concerning questions on the PSR submittal.

13. PROJECT REVIEWS

Include the completion date of major reviews such as the constructability review and the district safety review. Include the signature of the reviewer and, if applicable, attach a list of the attendees.

The templates include a list of suggested reviews. Each district should modify the template to reflect the district’s review procedures.

14. ATTACHMENTS

The following table provides examples of the appropriate attachments and files. Each project should be evaluated as to the appropriate inclusion of specific reports and information. Do not include raw data that is used in the analysis in the report or as an attachment. This information should be part of the project file and kept to support engineering recommendations.
<table>
<thead>
<tr>
<th>Required Attachments</th>
<th>Optional Attachments</th>
<th>Project Files and Supplemental Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location and/or vicinity map.</td>
<td>Environmental Study Check List or Equivalent Document.</td>
<td>Design Scoping Index or Equivalent Document.</td>
</tr>
<tr>
<td>Schematic maps of the Study Area or Alternatives</td>
<td>Traffic Forecasting, Traffic Analysis and Traffic Operations Scoping Checklist or Equivalent Document.</td>
<td>Planning Scoping Checklist</td>
</tr>
<tr>
<td>Other appropriate maps.</td>
<td>Division of Engineering Scoping Checklist</td>
<td>Previous Environmental Determinations/Documents</td>
</tr>
<tr>
<td>Approved estimate using the appropriate format.</td>
<td>Caltrans or County/City Bicycle and Pedestrian Maps.</td>
<td>Biotic Assessment</td>
</tr>
<tr>
<td>Project Support Cost Estimate.</td>
<td>Level of Service Calculations</td>
<td></td>
</tr>
<tr>
<td>PEAR or equivalent report.</td>
<td>Traffic Data, Table B</td>
<td></td>
</tr>
<tr>
<td>Right of Way Data Sheet or equivalent document.</td>
<td>SI Calculation</td>
<td></td>
</tr>
<tr>
<td>If applicable, an executable cooperative agreement.</td>
<td>Complete Traffic Study</td>
<td></td>
</tr>
<tr>
<td>Advance Planning Study</td>
<td>Initial Site Assessment (Hazardous Waste)</td>
<td></td>
</tr>
<tr>
<td>For STIP projects, include a Project Programming Request as an attachment. The instructions and template are at: <a href="http://www.dot.ca.gov/hq/transprog/ocip/2012stip.htm">http://www.dot.ca.gov/hq/transprog/ocip/2012stip.htm</a></td>
<td>Appraisal Report</td>
<td></td>
</tr>
<tr>
<td>Typical X-sections, if appropriate.</td>
<td>Technical Studies</td>
<td></td>
</tr>
<tr>
<td>SHOPP Performance Outputs (Only required for SHOPP Projects).</td>
<td>Detailed Mapping</td>
<td></td>
</tr>
<tr>
<td>Storm Water Data Report-signed cover sheet</td>
<td>Storm Water Data Report</td>
<td></td>
</tr>
<tr>
<td>Life Cycle Cost Analysis</td>
<td>Transportation Management Plan</td>
<td></td>
</tr>
<tr>
<td>Life Cycle Cost Analysis</td>
<td>Rosters of personnel participating in major reviews such as the District Safety Review and the Constructability Review.</td>
<td></td>
</tr>
</tbody>
</table>

Functional scoping checklists are worksheets for collecting pertinent information from specified functional units. Scoping checklists also document reviews by Headquarters’ liaisons.
SECTION 4  PSR Estimates

ARTICLE 1  PSR Capital Estimate Components

General
The PSR Capital Estimate must be as realistic and accurate as possible. The degree of effort and detail in each study is expected to vary depending upon complexity and sensitivity of the issues.

Additional Information
Additional information that must be obtained includes existing and forecasted traffic, existing and planned bicycle or pedestrian facilities, materials information (particularly where foundation and slope stability problems can be anticipated), advance structure estimates for widening existing structures as well as new facilities, hazardous waste assessment, potential issues related to environmental compliance, right-of-way and utilities, and traffic handling, etc.

Because the PSR Estimate is used to make Programming decisions for the STIP, the importance of an accurate estimate cannot be overemphasized.

Contingencies should be 25 percent at this stage; however, a higher or lower percentage may be used if justified. The contingency is expected to cover unanticipated items of work or cost increases.

ARTICLE 2  Project Cost Estimate

The cost estimate should be prepared using the instructions and procedures found in Chapter 20 – Project Development Cost Estimates. This will identify items that need to be considered and included in the project. It is very important that all known items of work be identified and estimated. It is recognized that not all projects will have each and every item listed in the estimate template. In some instances, not all of the items can be identified at this stage and an appropriate contingency factor should therefore be applied to reflect other possible items. It is also necessary to periodically review and update cost estimates as the project proceeds through the project development process. Any substantial increase in cost should be discussed, as appropriate, with the funding sponsor and RTPA.
SECTION 5  Scoping Tools

ARTICLE 1  General

This section contains some of the tools used by various functional areas to aid the project team in scoping the project. The tools not contained in this section can be obtained from the appropriate functional unit.

Upon receiving a request for project information, each functional unit completes the appropriate scoping tool and transmits the information to the unit responsible for developing the PID.

The Design Scoping Index can either capture or reference project information from various functional units.

The tools not contained in this section list can be obtained from the appropriate functional unit.

ARTICLE 2  Design Scoping Index

The index can serve as discussion document to help the design units analyze the highway system and identify design issues and strategies that should be addressed during the project initiation phase.

The index can serve to facilitate discussions with other functional units to identify project issues and stakeholder input needed to properly scope the project.

The Design Scoping Index is used in conjunction with the scoping checklists from other functional units. When filling out the index, use some type of notation to indicate if information on the index is based on assumptions. Project information is dynamic and the information in this index should be revised and dated throughout the project initiation process. As the project progresses, information should be verified, updated, and possibly addressed in a risk analysis.

To aid in engineering decision regarding the development of geometric plans, refer to the HDM and Design Information Bulletin 78 – Design Checklist.

The current Design Scoping Index is available at: http://www.dot.ca.gov/hq/oppd/pdpm/templates/design-scoping-index-template.docx
ARTICLE 3  Transportation Planning Scoping Information Sheet

The majority of the data requested for the transportation planning scoping information sheet is compiled at two separate time periods. The initial information is collected by the Transportation Planning PDT representative at the start of Project Initiation Document (PID) development to ensure appropriate stakeholders are included in the process and all pre-planning efforts and commitments are reviewed before any project decisions are made. Explanations of how the requirements were met will need to be finalized by the end of the PID. Initial information required for each section of the planning information sheet is identified as INITIAL PID INFORMATION and the concluding information is identified as FINAL PID INFORMATION.

Guidance to assist the transportation planner in completing this information sheet is located at: http://www.dot.ca.gov/hq/tpp/offices/opsc/pdpm_scoping_tools.html
Transportation Planning Scoping Information Sheet

PROJECT INFORMATION

<table>
<thead>
<tr>
<th>District</th>
<th>County</th>
<th>Route</th>
<th>Post Miles</th>
<th>Expenditure Authorization No.</th>
<th>Project ID No/</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Project Name and Description:

Prepared by:

<table>
<thead>
<tr>
<th>District Information Sheet</th>
<th>Name:</th>
<th>Functional Unit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point of Contact*:</td>
<td></td>
<td></td>
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</tbody>
</table>

* The District Information Sheet Point of Contact is responsible for completing Project Information, PDT Team and Stakeholder Information, and coordinating the completion of project-related information with the Transportation Planning Stakeholders. Upon completion, provides the Transportation Planning PDT Representative and Project Manager with a copy of the Information Sheet.

Project Development Team (PDT) Information

<table>
<thead>
<tr>
<th>Title</th>
<th>Name</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Engineer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation Planning PDT Representative**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transportation Planning Stakeholder Information

<table>
<thead>
<tr>
<th>Title</th>
<th>Name</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Planner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Planner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Development-Intergovernmental Review (LD-IGR) Planner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Planner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goods Movement Planner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit Planner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle and Pedestrian Coordinator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park and Ride Coordinator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American Liaison</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Coordinators:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix L – Preparation Guidelines for Project Study Report
Section 5 – Scoping Tools

Project Purpose and Need** –

**The Transportation Planning PDT Representative is responsible for providing the PDT with the system-wide and corridor level deficiencies identified by Transportation Planning. The PDT uses the information provided by Transportation Planning to develop the purpose and need with contributions from other Caltrans functional units and external stakeholders at the initiation of the PID and is refined throughout the PID process. As the project moves past the project initiation stage and more data becomes available, the purpose and need is refined. For additional information on purpose and need see: www.dot.ca.gov/hq/env/emo/purpose_need.htm

1. Project Funding:
   a. List all known and potential funding sources and percent splits: (ie. State Transportation Improvement Program (STIP)/State Highway Operations and Protection Program (SHOPP)/Transportation Enhancement (TE)/Environmental Enhancement and Mitigation (EEM)/Safe Routes to School (SR2S)/etc.).
   b. Is this a measure project? Yes__/No___. If yes, name and describe the measure.

2. Regional Planning:
   a. Name of and contact information for Metropolitan Planning Organization (MPO) or Regional Transportation Planning Agency (RTPA).
   b. Name of and contact information for local jurisdiction (City or County)
   c. Provide the page number and project description as identified in the Regional Transportation Plan (RTP) and the date of adoption, or provide an explanation if not in RTP.
   d. Provide nexus between the RTP objectives and the project to establish the basis for the project purpose and need.
   e. Is the project located in an area susceptible to sea-level rise?
   f. Name of Air Quality Management District (AQMD)
   g. If the project is located in a federal non-attainment or attainment-maintenance area is the project:
      • Regionally Significant? (per 40 (Code of Federal Regulations (CFR) 93.101) Y__/N__
      • Exempt from conformity? (per 40 CFR 93.126 and 93.128) Y__/N__
      • Exempt from regional analysis? (per 40 CFR 93.127) Y__/N__
      • Not exempt from conformity (must meet all requirements)? Y__/N__

3. Native American Consultation and Coordination:
   a. If project is within or near an Indian Reservation or Rancheria? If so, provide the name of Tribe.
<table>
<thead>
<tr>
<th>b</th>
<th>Has/have the Tribal Government(s) been consulted? Y___/N___. If no, why not?</th>
</tr>
</thead>
<tbody>
<tr>
<td>c</td>
<td>If the project requires Caltrans to use right-of-way on trust or allotted lands, this information needs to be included as soon as possible as a key topic in the consultation with the Tribe(s). Has the Tribe been consulted on this topic? Y___/N___. If no, why not?</td>
</tr>
<tr>
<td>d</td>
<td>Has the Bureau of Indian Affairs (BIA) been notified? Y__/N__</td>
</tr>
<tr>
<td>e</td>
<td>Have all applicable Tribal laws, ordinances and regulations [Tribal Employment Rights Ordinances (TERO), etc.] been reviewed for required contract language and coordination?</td>
</tr>
<tr>
<td>f</td>
<td>If the Tribe has a TERO, is there a related Memorandum of Understanding between the District and the Tribe?</td>
</tr>
<tr>
<td>g</td>
<td>Has the area surrounding the project been checked for prehistoric, archeological, cultural, spiritual, or ceremonial sites, or areas of potentially high sensitivity? If such areas exist, has the Tribe, Native American Heritage Commission or other applicable persons or entities been consulted?</td>
</tr>
<tr>
<td>h</td>
<td>If a Native American monitor is required for this project, will this cost be reflected in cost estimates?</td>
</tr>
<tr>
<td>i</td>
<td>In the event of project redesign, will the changes impact a Native American community as described above in d, e, or h?</td>
</tr>
</tbody>
</table>

4. **System Planning:**

<table>
<thead>
<tr>
<th>a</th>
<th>Is the project consistent with the DSMP? Y__/N__. If yes document approval date. If no, explain.</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>Is the project identified in the TSDP? Y__/N__? If yes, document approval date____. If no, explain.</td>
</tr>
<tr>
<td>c</td>
<td>Is the project identified in the TCR/RCR or CSMP? Y__/N__. If yes, document approval date____. If no, explain. Is the project consistent with the future route concept? Y__/N__. If no, explain.</td>
</tr>
<tr>
<td>d</td>
<td>Provide the Concept Level of Service (LOS) through project area.</td>
</tr>
<tr>
<td>e</td>
<td>Provide the Concept Facility – include the number of lanes. Does the Concept Facility include High Occupancy Vehicle lanes? Y__/N__.</td>
</tr>
<tr>
<td>f</td>
<td>Provide the Ultimate Transportation Corridor (UTC) – include the number of lanes.</td>
</tr>
</tbody>
</table>
Appendix L – Preparation Guidelines for Project Study Report
Section 5 – Scoping Tools

<table>
<thead>
<tr>
<th>Does the UTC include High Occupancy Vehicle Lanes? Y__/N__.</th>
</tr>
</thead>
<tbody>
<tr>
<td>g Describe the physical characteristics of the corridor through the project area (i.e. flat, rolling or mountainous terrain...).</td>
</tr>
<tr>
<td>h Is the highway in an urban or rural area? Urban__/Rural__. Provide Functional Classification.</td>
</tr>
<tr>
<td>i Is facility a freeway, expressway or conventional highway?</td>
</tr>
<tr>
<td>j Provide Route Designations: (i.e. Interregional Transportation Strategic Plan (ITSP) High Emphasis or Focus Route, Surface Transportation Assistance Act (STAA) Route, Scenic Route...).</td>
</tr>
<tr>
<td>k Describe the land uses adjacent to project limits (i.e. agricultural, industrial...).</td>
</tr>
<tr>
<td>l Describe any park and ride facility needs identified in the TCR/CSMP, local plans, and RTP.</td>
</tr>
<tr>
<td>m Describe the Forecasted 10 and 20-year Vehicle Miles Traveled (VMT), Annual Average Daily Traffic (AADT), and Peak Hour truck data in the TCR. Include the source and year of Forecast, and names and types of traffic and travel demand analysis tools used.</td>
</tr>
<tr>
<td>n Has analysis on Daily Vehicle Hours of Delay (DVHD) from the Highway Congestion Monitoring Program (HICOMP) been completed and included? Y__/N__.</td>
</tr>
</tbody>
</table>

5. **Local Development – Intergovernmental Review (LD-IGR):**

List LD-IGR projects that may directly or indirectly impact the proposed Caltrans project or that the proposed Caltrans project may impact. (Attach additional project information if needed.)

<table>
<thead>
<tr>
<th><strong>LD-IGR Project Information</strong></th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>a County-Route-Postmile &amp; Distance to Development.</td>
<td></td>
</tr>
<tr>
<td>b Development name, type, and size.</td>
<td></td>
</tr>
<tr>
<td>c Local agency and/or private sponsor, and contact information.</td>
<td></td>
</tr>
<tr>
<td>d California Environmental Quality Act (CEQA) status and Implementation Date.</td>
<td></td>
</tr>
<tr>
<td>e If project includes federal funding, National Environmental Policy Act (NEPA) status.</td>
<td></td>
</tr>
<tr>
<td>f All vehicular and non-vehicular unmitigated impacts and planned</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>a</td>
<td>mitigation measures including Transportation Demand Management (TDM) and Transportation System Management (TSM) that would affect Caltrans facilities.</td>
</tr>
<tr>
<td>g</td>
<td>Approved mitigation measures and implementing party.</td>
</tr>
<tr>
<td>h</td>
<td>Value of constructed mitigation and/or amount of funds provided.</td>
</tr>
<tr>
<td>i</td>
<td>Encroachment Permit, Transportation Permit, Traffic Management Plan, or California Transportation Commission (CTC) Access approvals needed.</td>
</tr>
<tr>
<td>j</td>
<td>Describe relationship to Regional Blueprint, General Plans, or County Congestion Management Plans.</td>
</tr>
<tr>
<td>k</td>
<td>Inclusion in a Regional Transportation Plan Sustainable Community Strategy or Alternative Planning Strategy?</td>
</tr>
<tr>
<td>l</td>
<td>Regional or local mitigation fee program in place?</td>
</tr>
<tr>
<td>6. Community Planning:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INITIAL PID INFORMATION</td>
</tr>
<tr>
<td>a</td>
<td>Has lead agency staff worked with any neighborhood/community groups in the area of the proposed improvements? Y__/N__. If yes, summarize the process and its results including any commitments made to the community. If no, why not?</td>
</tr>
<tr>
<td>b</td>
<td>Are any active/completed/proposed Environmental Justice (EJ) or Community-Based Transportation (CBTP) Planning Grants in the project area? Y__/N__. If yes, summarize the project, its location, and whether/how it may interact with the proposed project.</td>
</tr>
<tr>
<td>c</td>
<td>Describe any community participation plans for this PID including how recommendations will be incorporated and/or addressed. Has a context sensitive solutions (CSS) approach been applied? Y__/N__</td>
</tr>
<tr>
<td></td>
<td>FINAL PID INFORMATION</td>
</tr>
<tr>
<td>d</td>
<td>How will the proposed transportation improvements impact the local community? Is the project likely to create or exacerbate existing environmental or other issues, including public health and safety, air quality, water quality, noise, environmental justice or social equity? Y__/N__. Describe issues, concerns, and recommendations (from sources including neighborhood/community groups) and what measures will be taken to reduce existing or potential negative effects.</td>
</tr>
<tr>
<td>e</td>
<td>Does this highway serve as a main street? Y__/N__. If yes, what main street functions and features need to be protected or preserved?</td>
</tr>
</tbody>
</table>
### 7. Freight Planning:

<table>
<thead>
<tr>
<th>INITIAL PID INFORMATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Identify all modal and intermodal facilities that may affect or be affected by the project.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FINAL PID INFORMATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>Describe how the design of this project could facilitate or impede Goods Movement and relieve choke points both locally and statewide through grade separations, lane separations, or other measures (e.g., special features to accommodate truck traffic and at-grade railroad crossings).</td>
</tr>
</tbody>
</table>

<p>| | |</p>
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<thead>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>c.</td>
<td>Describe how the project integrates and interconnects with other modes (rail, maritime, air, etc.). Do possibilities exist for an intermodal facility or other features to improve long-distance hauling, farm-to-market transportation and/or accessibility between warehouses, storage facilities, and terminals?</td>
</tr>
</tbody>
</table>

| d. | Is the project located in a high priority goods movement area, included in the Goods Movement Action Plan (GMAP) or on a Global Gateways Development Program (GGDP) route? Y__/N__. If yes, describe. |

| e. | Is the project on a current and/or projected high truck volume route [e.g., Average Annual Daily Truck Traffic (AADTT) of 5 axle trucks is greater than 3000]? Yes__/N__. If yes, describe how the project addresses this demand. |

| f. | If the project is located near an airport, seaport, or railroad depot, describe how circulation (including truck parking) needs are addressed. |

| g. | Describe any other freight issues. |

### 8. Transit (bus, light rail, commuter rail, intercity rail, high speed rail):

<table>
<thead>
<tr>
<th>INITIAL PID INFORMATION</th>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>List all local transit providers that operate within the corridor.</td>
</tr>
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<thead>
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<th></th>
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<tbody>
<tr>
<td>b.</td>
<td>Have transit agencies been contacted for possible project coordination? Y__/N__. If no, why not?</td>
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<tr>
<td>c.</td>
<td>Describe existing transit services and transit features (bus stops, train crossings, and transit lines) within the corridor.</td>
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<tbody>
<tr>
<td>d.</td>
<td>Describe transit facility needs identified in short- and long-range transit plans and RTP. Describe how these future plans affect the corridor.</td>
</tr>
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</table>
### FINAL PID INFORMATION

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<tbody>
<tr>
<td><strong>e</strong></td>
<td>Describe how the proposed project integrates transit and addresses impacts to transit services and transit facilities.</td>
</tr>
<tr>
<td><strong>f</strong></td>
<td>Have transit alternatives and improvement features been considered in this project? Y__/N__ If yes, describe. If no, why not?</td>
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</table>

### 9. Bicycle:

#### INITIAL PID INFORMATION

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<tbody>
<tr>
<td><strong>a</strong></td>
<td>Does the facility provide for bicyclist safety and mobility needs? If no, please explain.</td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>Are any improvements for bicyclist safety and mobility proposed for this facility by any local agencies or included in bicycle master plans? If yes, describe (including location, time frame, funding, etc.).</td>
</tr>
<tr>
<td><strong>c</strong></td>
<td>Are there any external bicycle advocacy groups and bicycle advisory committees that should be included in the project stakeholder list? If so, provide contact information.</td>
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#### FINAL PID INFORMATION

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<tbody>
<tr>
<td><strong>d</strong></td>
<td>Will bicycle travel deficiencies be corrected? How or why not?</td>
</tr>
<tr>
<td><strong>e</strong></td>
<td>How will this project affect local agency plans for bicycle safety and mobility improvements?</td>
</tr>
<tr>
<td><strong>f</strong></td>
<td>If the project is the construction of a new freeway or modification to an existing freeway, will it sever or destroy existing provisions for bicycle travel? If yes, describe how bicycle travel provisions will be included in this project.</td>
</tr>
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</table>

### 10. Pedestrian including Americans with Disabilities Act (ADA):

#### INITIAL PID INFORMATION

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<tr>
<td><strong>a</strong></td>
<td>Does this facility provide for pedestrian safety and mobility needs? If so, describe pedestrian facilities. Do continuous and well-maintained sidewalks exist? Are pedestrians forced to walk in the roadway at any locations due to lack of adequate pedestrian facilities? Please explain.</td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>Are pedestrian crossings located at reasonable intervals?</td>
</tr>
<tr>
<td><strong>c</strong></td>
<td>Are all pedestrian facilities within the corridor ADA accessible and in compliance with Federal and State ADA laws and regulations?</td>
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#### FINAL PID INFORMATION

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<tbody>
<tr>
<td><strong>d</strong></td>
<td>Will pedestrian travel deficiencies be corrected? How or why not?</td>
</tr>
</tbody>
</table>
### Appendix L – Preparation Guidelines for Project Study Report

#### Section 5 – Scoping Tools

<table>
<thead>
<tr>
<th></th>
<th>How will this project affect local agency plans for pedestrian safety and mobility improvements?</th>
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<tbody>
<tr>
<td>f</td>
<td>If the project is the construction of a new freeway or modification to an existing freeway, will it sever or destroy existing provisions for pedestrian travel? If yes, describe how pedestrian travel provisions will be included in this project.</td>
</tr>
<tr>
<td>g</td>
<td>Are there any external pedestrian advocacy groups and advisory committees that should be included in the project stakeholder list? If so, provide contact information.</td>
</tr>
<tr>
<td>h</td>
<td>Have ADA barriers as noted in the District’s ADA Transition Plan been identified within the project limits? If not included in the project, provide justification and indicate whether District Design coordinator approval was obtained.</td>
</tr>
</tbody>
</table>

#### 11. Equestrian:

**INITIAL PID INFORMATION**

|   | If this corridor accommodates equestrian traffic, describe any project features that are being considered to improve safety for equestrian and vehicular traffic? |

**FINAL PID INFORMATION**

|   | Have features that accommodate equestrian traffic been identified? If so, are they included a part of this project? Describe. If no, why not? |

#### 12. Intelligent Transportation Systems (ITS):

**INITIAL PID INFORMATION**

|   | Have ITS features such as closed-circuit television cameras, signal timing, multi-jurisdictional or multimodal system coordination been considered in the project? Y__/N__/ . If yes, describe. If no, explain. |

**FINAL PID INFORMATION**

|   | Have ITS features been identified? If so, are they included a part of this project? Describe. If no, why not? |

---

### ARTICLE 4  Traffic Forecasting, Analysis and Operations Scoping
Traffic Forecasting, Analysis and Operations Scoping Checklist

Project Information

District _____ County _____ Route _____ Post Mile _____ EA _______

Description (include how project was identified: system planning, safety investigation, highway and freeway surveillance, etc.)

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Project Manager _______________________________________
Phone #___________________

Project Engineer _______________________________________
Phone #___________________

Traffic Forecasting Functional Manager _____________________
Phone #___________________

Traffic Operations Functional Manager _____________________
Phone #___________________

Traffic Forecasting, Traffic Analysis Scoping

Describe and identify in the following sections a general description of the existing traffic and forecasted traffic (using existing data and transportation concept reports). Analyze traffic data and determine what traffic operational conditions are anticipated. Identify any additional studies needed to accurately forecast and fully analyze the traffic operations as part of the preparation of the environmental determination/document. Consult with the District Local Development-Intergovernmental Review Planner for applicable local agency studies of land development proposals.

Under traffic modeling assumptions, traffic models should be validated and calibrated. The general plan buildout should be used to incorporate potential land use changes that are probable in the future. An interim year may be selected to incorporate a significant land use change or development.

At the PSR stage, the traffic forecasting and analysis tasks are intended to utilize readily available information and traffic models. At this stage of the project development process, it is not intended that extensive effort be devoted to the generation of traffic data and to the significant updating of traffic models. If necessary, these tasks will occur at later stages of the process. However, exceptions may be necessary in cases where the traffic data or models are highly suspect.
Traffic Operations Scoping

Based on the traffic analysis, describe and identify in the following sections a general description of the traffic operational improvements required (auxiliary lanes, signalized intersections, etc.) to address the traffic operational conditions and applicable warrants. The traffic operation improvements should be discussed in sufficient detail to identify the project’s major geometric features and operations issues. Also discuss in detail traffic management system improvements (ramp metering, CMS, HOV lanes, etc.) to be incorporated. Discuss any components of the traffic management system that may be controversial during development of the environmental determination/document.

Project Screening

1. Project Features: New R/W? _______ Excavation or fill? _______

2. Project Setting

   Rural or Urban

   Current land uses

   Adjacent land uses
       (industrial, light industry, commercial, agricultural, residential, etc.)

Existing Traffic Operational Conditions and Warrants Supporting the Need for the Improvement

   Mainline highway

   Ramp intersection

   Merge / diverge

   Street intersection
Weaving / merging (spacing)

Describe facilities for pedestrians and bicycles (e.g., marked non-intersection pedestrian crosswalks, intersections with bicycle paths, etc.)

Traffic Study and Analysis Anticipated

Traffic Modeling Assumptions

- Use Local Model
  - Update New Model
    - New Model
- Existing Traffic Counts
  - New Traffic Counts
    - Historical Growth
- General Plan (GP) Buildout
  - Pro-Rate GP Growth
- Existing Year ( )
  - Design Year ( )
    - Interim Year ( )

Other

Traffic Analysis

- Mainline LOS
  - Merge/Diverge LOS
    - Ramp Int. LOS
- Adjacent IC LOS
  - Ramp Metering (open)
    - Ramp Metering (later)
- Left/Right Turn Storage
  - Accident / Safety Analysis
    - Intersection Queues
- Construction Staging
  - Project Staging
  - TMP Staging
  - VDS Staging (temporary microwave monitoring stations)

Other
Appendix L – Preparation Guidelines for Project Study Report

Section 5 – Scoping Tools


Traffic Operations Scoping

Traffic Operational Improvements

Attach the project location map to this checklist to show location of all traffic operations improvements anticipated.

- Auxiliary Lanes
  - Intersection Improvements
    - Truck Climbing Lane
- New Signals
  - Modify Signals
    - Merging Improvements
- Weaving Improvements
  - Deceleration / Acceleration Lanes
- Other

Traffic Management Systems

Attach the project location map to this checklist to show location of all traffic management systems identified.

- Ramp Meters
  - HOV Ramp Bypass
    - Mainline HOV Lanes
- Detector Systems
  - Detector Loops
  - Detector Lead-in-cables
  - VDS Staging (temporary microwave monitoring stations)
- Communication Networks (fiber optics, telephones, etc.)
- Closed Circuit Television
  - Changeable Message Sign
    - Highway Advisory Radio
- Other
Appendices
Project Development Initiation and Approval Reports

Discuss strategies (technical analysis, public outreach, etc.) to secure local agency and public support to implement HOV lanes and ramp metering:

_____________________________________________________________________

_____________________________________________________________________

Preliminary Traffic Forecasting Evaluation provided by:
Traffic Forecasting ___________________________ Date ________

Preliminary Traffic Operations Evaluation provided by:
Traffic Operation Engineer ______________________ Date ________
Traffic Electrical Engineer ______________________ Date ________

Download a copy in Microsoft Word (Word 97) format Traffick.doc
SECTION 6 Template for Project Study Report

This section is a template for the project study report. When using the template, delete any italicized text within the body of the document. The italicized text provides instructions for template users and does not provide any value to the final document.

The template is available at:

http://www.dot.ca.gov/hq/oppd/pdpm/templates/apdx-l-template.docx