Environmental Document Annotated Outline

Introduction

**PLAIN LANGUAGE AND CONCISE ENVIRONMENTAL DOCUMENTS**

Environmental documents should be concise, focusing on important issues and only briefly discussing non-important issues, and should be written in plain language. The environmental document should summarize information from the technical reports. The level of detail provided should be commensurate with the impacts resulting from the project (i.e., if there are minimal impacts to resources, the discussion should be brief).

To keep the documents concise, planners are encouraged to use incorporation by reference of the technical studies by briefly describing what information is being incorporated and then provide a citation to where that information can be found. This will help avoid overly lengthy discussions on non-important information. **NOTE:** Studies incorporated by reference must be reasonably available for review. A link should be provided to the incorporated material or instructions provided on how the public can access the material for review (Federal Highway Administration [FHWA] Technical Advisory, California Environmental Quality Act [CEQA] Guidelines Section 15150). A list of technical studies should be provided (see Appendix J for additional information and instructions for cultural resource studies). For example:

A Community Impacts Assessment was prepared for this document that contains additional details about research performed, data analyzed, and background information. Please see Appendix J for information on where the technical study can be viewed. **[End example]**

**ANNOTATED OUTLINE GUIDANCE**

The guidance in the Annotated Outline must be followed for joint National Environmental Policy Act (NEPA)/CEQA documents or NEPA-only documents prepared for projects receiving FHWA Federal-aid funds. In addition, the guidance in the Annotated Outline must be followed for projects on the State Highway System. The use of the Annotated Outline and corresponding Writing Templates is highly recommended for all other projects.

The Annotated Outline and Writing Templates (see additional information in next section) provide guidance and a consistent document format for the presentation of required content and organize the documents into the following major sections:

1. Summary (optional for Initial Studies and Environmental Assessments)
2. Proposed Project (Purpose and Need, Project Description, and Alternatives)
3. Affected Environment; Environmental Consequences; and Avoidance, Minimization, and/or Mitigation Measures
4. CEQA Evaluation (for joint documents)
5. Comments and Coordination
6. Appendices

As new initiatives emerge regarding environmental document preparation, the Division of Environmental Analysis reviews these initiatives and incorporates them, as appropriate, into the Annotated Outline. In some cases, the Annotated Outline already features the suggestions or techniques contained in these documents. The references below can be used as general guidelines for improving the quality of environmental documents:

* [Improving the Quality of Environmental Documents](https://environment.transportation.org/resources/aashto-publications/improving-the-quality-of-environmental-documents/) (American Association of State Highway and Transportation Officials/American Council of Engineering Companies Committee in Cooperation with the FHWA, May, 2006)
* [Improving the Process for Preparing Efficient and Timely Environmental Review under NEPA](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Improving_NEPA_Efficiencies_06Mar2012.pdf) (Council on Environmental Quality Memorandum, March 6, 2012)
* [FHWA - Every Day Counts – EDC 2012 Initiatives – Implementing Quality Environmental Documentation](https://www.fhwa.dot.gov/innovation/everydaycounts/edc-2/iqed.cfm)
* [Plain Language: Improving Communication from the Federal Government to the Public](https://www.plainlanguage.gov/)
* [Examples of Effective Techniques for Preparing High Quality NEPA Documents (2014)](https://environment.transportation.org/resources/aashto-publications/examples-of-effective-techniques-for-preparing-high-quality-nepa-documents-2014/) (American Association of State Highway and Transportation Officials Center for Environmental Excellence and FHWA)

Guidance for Using the Annotated Outlines

The text provided in this document is guidance and is shown with this blue font color unless otherwise specified. In addition to blue font, black, red, purple, and green font are used as indicated below. Text has also been provided in addition to these colors for those using assistive technology. Headings and hyperlinks are formatted as such. If any additional assistance is needed for Americans with Disabilities Act compliance, please contact [env.webmaster@dot.ca.gov](mailto:env.webmaster@dot.ca.gov).

* Black text = Headings and optional regulatory setting text
* Blue text = Instructions and guidance to be considered and deleted from the final document. Text needing special attention; for example, to distinguish between instructions relating to draft and final environmental document, will contain the word “**NOTE**.”
* Red text = Required boilerplate text to be inserted into document. This text may be deleted if not applicable but may not be edited, unless otherwise specified.
* Purple text = Example text that can be used in the document, as applicable.
* Green text = Special guidance for Local Assistance projects (local roadway projects off the State Highway System using Federal-aid funds).

To jump to desired sections, use the navigation pane shown on the left of the screen. If the navigation pane is not visible, it can be turned on by marking the “navigation pane” box located under the “View” tab in the “Ribbon” at the top of the screen.

This Annotated Outline is intended to provide guidance for the preparation of environmental documents and content required. The [Writing Templates](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates" \l "templates) posted on the Standard Environmental Reference (SER) Forms and Templates page are pre-formatted Word documents that staff can use to write environmental documents. They contain additional formatting guidance and staff are strongly encouraged to use the Writing Templates to create documents that are in compliance with the Americans with Disabilities Act. Prior to publishing, remove any instructional text and notes including items such as the terms “boilerplate” and “example.”

For a final environmental document, describe how changes between the draft and final document are shown. One method is to mark any changes to the document by placing a line in the margin where the changes are made. Do not show strikeout of text in the final document. If using a line in the left-hand margin, ensure a screen reader will recognize this and alert the listener. However, this may require additional tagging in the pdf file which can be time consuming. If the screen reader cannot recognize the line, then an additional or alternate method needs to be used. Changes can be shown using parenthesis or with descriptive text. For example:

* Alternative B will affect 1.98 acres of wetland (revised from 2.06 acres in the draft environmental document).
* Following circulation of the draft environmental document, the alignment for Alternative B was shifted slightly to the west which reduced the amount of wetland impact from 2.06 acres to 1.98 acres. **[End example]**

Changes to entire sections or chapters can also be described if appropriate. Regardless of which method is used, make sure that it follows guidance for Americans with Disabilities Act compliance.

Maps and figures used should (as appropriate):

* Be easy to understand
* Clearly show project location
* Label key features (especially those mentioned in text)
* Use appropriate base such as an aerial photograph
* Have a scale and north arrow
* Have a complete and easy to understand legend
* Have lines showing existing and proposed right of way

Example Cover Sheet

The following page is an example only. See the appropriate [Writing Template](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#templates) for exact language and instructions for each type of document. Do not include Section 4(f) in the title unless an Individual or Programmatic Evaluation was performed (i.e., do not add for de minimis or no use determinations). **The Memorandum of Understanding statement below must be included and cannot be modified**.

**Harmony Safety Project**

GREEN COUNTY, CALIFORNIA

DISTRICT 13 – GRE – 301 (Postmiles 19.4/19.6)

415700/1000021137

**Initial Study with Mitigated Negative Declaration/Environmental Assessment and Final Section 4(f) Evaluation with Finding of No Significant Impact**



**Prepared by the State of California, Department of Transportation**

**and Green County**

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

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**June 2025**

General Information Page Instructions

* Examples for the draft and final documents can be found on the following pages and can be modified for use in any document. Change the project-specific text as needed.
* For **DRAFT** documents include the following four sections: What’s in this document, What you should do, What happens next, and Alternative Formats.
* For **FINAL** documents include general information about the project and:
  + Information about when the document circulated for comments
  + Where responses to comments are located
  + Where the document and related technical studies can be found
  + An “Alternative Formats” section as shown below

**What’s in this document:**

This section should briefly identify the document type and what the document contains.

**What you should do:**

This section should describe what is being asked of the reader. Include the following:

* Where the document and the documents incorporated by reference (e.g., technical studies) can be viewed and how the document can be found in an electronic format.
* Public meeting (hearing, open house, informational) details if applicable. Add date and location if known. For State Highway System projects, see Chapter 11 of the [Project Development Procedures Manual](https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm) for additional information about meeting types. Local Assistance projects should refer to the [Local Assistance Procedures Manual](https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm), Chapter 8, Public Hearings.
* Where comments should be sent. For CEQA documents, the General Information page and public notice shall specify the manner in which comments will be received (e.g., formal written comments, email, social media, etc.). NEPA documents must provide for electronic submission of public comments, with reasonable measures to ensure the comment process is accessible to affected persons.
* When comment period closes.

**What happens next:**

This section should briefly describe the next step in the environmental process.

**Alternative Formats:**

This page must also include a paragraph telling the public how to obtain the document in alternative formats. For Local Assistance projects, specify the formats in which the local agency will make the document available. For projects on the State Highway System, Caltrans will determine the special formats the document should be available in and list them in this section. If available, provide your district’s California Relay Service TTY number and include the following: "or use California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.”

Example General Information Page-DRAFT Document

The following page is an example only. See the appropriate Writing Template for exact language for each type of document.

**General Information about This Document**

**What’s in this document:**

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study/Environmental Assessment, which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Green County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Green County is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

**What you should do:**

* Please read this document.
* Additional copies of this document and the related technical studies are available for review at the Caltrans Headquarters Office located at 1120 N Street, Sacramento, CA, 95814, Monday-Friday from 8:00 a.m. - 4:30 p.m. and at the Green County Public Library, located at 7501 Main Street, River City, CA 55814, Tuesday-Saturday from 10:00 a.m. - 6:00 p.m. Please check https://www.greenlibrary.org for current schedule. This document may be downloaded at the following website: www.genericenvironmentaldocument.com.
* Attend the public open house on Thursday September 5, 2025, from 4:00 - 8:00 p.m. The meeting will be located at the Green County Planning Department building (7285 Main Street, River City, CA 55814) in the Conference Room.
* We’d like to hear what you think. If you have any comments about the proposed project, please attend the open house and/or send your written comments via postal mail or email to Caltrans by the deadline.
* Send comments via postal mail to:  
  Caltrans Environmental Planning  
  1120 N Street, Room 4301  
  Sacramento, CA 95814  
  Attn: Jane Planner
* Send comments via email to: jane\_planner@dot.ca.gov.
* Be sure to send comments by the deadline: October 3, 2025.

**What happens next:**

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the FHWA, may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans or Green County could design and construct all or part of the project.

**Alternative Formats:**

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Jane Planner, 1120 N Street, Sacramento, CA 95814; (916) 555-1111 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

Example General Information Page-FINAL Document

The following page is an example only. See the appropriate Writing Template for exact language for each type of document.

**General Information about This Document**

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact for the proposed project located in Green County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Green County is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. The Initial Study/Environmental Assessment circulated to the public for 30 days between September 3, 2025, and October 2, 2025. Comments received during this period are included in Chapter 4. Changes made to the document since the draft document circulation are shown with a vertical line in the margin. Descriptions have also been added to the text to explain what changes have been made. Minor editorial changes and clarifications are not shown. Additional copies of this document and the related technical studies are available for review at the Caltrans Headquarters Office located at 1120 N Street, Sacramento, CA, 95814, Monday-Friday from 8:00 a.m. - 4:30 p.m. and at the Green County Public Library, located at 7501 Main Street, River City, CA 55814, Tuesday-Saturday from 10:00 a.m. - 6:00 p.m. Please check https://www.greenlibrary.org for current schedule. This document may be downloaded at the following website: www.genericenvironmentaldocument.com.

**Alternative Formats:**

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Jane Planner, 1120 N Street, Sacramento, CA 95814; (916) 555-1111 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

Example Title Sheet

* The following page is an example only. **NOTE:** Environmental Impact Statements require more information than what is shown below. See the appropriate [Writing Template](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#templates) for exact language and instructions for each type of document.
* Do not include Section 4(f) in the title unless an Individual or Programmatic Evaluation was performed (i.e., do not add for de minimis or no use determinations).
* List cooperating and responsible agencies.
* Include the second signature block only if the agency is involved as a joint lead agency under NEPA or lead agency under CEQA, otherwise delete.

State Clearinghouse # 1987062567

03-GRE-301-Postmiles 19.4/19.6

415700/1000021137

Curve Correction on State Route 301 near Harmony Lane in Green County

**Initial Study with Mitigated Negative Declaration/Environmental Assessment and Final Section 4(f) Evaluation with Finding of No Significant Impact**

Submitted Pursuant to: (State) Division 13, California Public Resources Code

(Federal) 42 USC 4332(2)(C)

49 USC 303 and 23 USC 138

THE STATE OF CALIFORNIA

Department of Transportation

and

Green County

Responsible Agencies: California Transportation Commission

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Debra Director Date

District Director

California Department of Transportation

NEPA Lead Agency

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Steve Director Date

Assistant Director

Green County

CEQA Lead Agency

The following persons may be contacted for more information about this document: Caltrans: Jane Planner, 1120 N Street, Sacramento, CA 95814; (916) 555-1111, jane\_planner@dot.ca.gov or Green County: Joe Planner, 7285 Main Street, River City, CA 55814, (916) 888-0000, joe\_planner@greencity.gov.

Proposed Negative Declaration

* Include a Proposed Negative Declaration or Proposed Mitigated Negative Declaration in “draft” Initial Studies.
* **Leave unsigned for Proposed Negative Declaration or Proposed Mitigated Negative Declaration**.
* See the Writing Templates for exact wording and instructions.

Negative Declaration

* Include a signed Negative Declaration or Mitigated Negative Declaration in “final” Initial Studies.
* See the Writing Templates for exact wording and instructions.

Finding of No Significant Impact

* Include a Finding of No Significant Impact in the “final” Environmental Assessment.
* Do not include a blank Finding of No Significant Impact in a “draft” Environmental Assessment.
* The Finding of No Significant Impact is prepared by Caltrans and a template is located on the [SER Forms and Templates page](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#aos).

Record of Decision

* Include a Record of Decision in the Final Environmental Impact Statement unless a stand-alone Record of Decision is being prepared.
* To the maximum extent practicable, a combined Final Environmental Impact Statement and Record of Decision shall be used unless certain conditions exist (23 United States Code [USC] 139[n][2]).
* Notification that the Final Environmental Impact Statement and Record of Decision will be combined is required at the time the Draft Environmental Impact Statement is circulated. Please contact your Headquarters Environmental Coordinator if you are considering a combined Final Environmental Impact Statement/Record of Decision.
* See the [SER Volume 1, Chapter 32](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-32-environmental-impact-statement#combined-feis-rod) for more information.

Summary

The summary is optional for an Initial Study or Environmental Assessment. When considering whether to include a summary, focus on the complexity of the project and its environmental impacts. For small, non-complex projects a summary may not be appropriate. If a summary is included, follow the guidance provided below.

The summary is required for an Environmental Impact Report or Environmental Impact Statement.

NEPA ASSIGNMENT

Include the following boilerplate NEPA Assignment information here:

Since 2007, Caltrans has performed federal responsibilities for environmental decisions and approvals under NEPA for highway projects in California that are funded or otherwise approved by FHWA. These responsibilities have been assigned to Caltrans by FHWA pursuant to Title 23 United States Code (USC) Sections 326 and 327 and two Memoranda of Understanding signed by FHWA. Please see the [Caltrans Standard Environmental Reference (SER) Volume 1, Chapter 38, “NEPA Assignment](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-38-nepa-assignment)” for additional information. **[End boilerplate]**

PROJECT OVERVIEW

Lead Agencies and CEQA/NEPA Documentation

Identify the lead agency under CEQA and the lead agency under NEPA.

Readers are often confused about the roles of Caltrans, FHWA, and the local agency (if applicable) and the use of the term “significance” in joint environmental documents. The boilerplate language in the sections below should be used in the summary to help explain the roles and the differences in the use of the term “significance” in joint CEQA/NEPA documents. There is a more detailed discussion of significance in the CEQA Evaluation chapter of this outline.

Text has been provided for each type of document and should be updated as appropriate for the final environmental document. **NOTE:**

* For Initial Studies, do not add the terms “Draft” or “Final.”
* If a local agency is serving as the CEQA lead agency, you may adjust the lead agency text as appropriate.
* If the project is following the 23 USC 139 Efficient Environment Review process and the local agency is a joint NEPA lead agency, you may adjust the lead agency text. For additional information on 23 USC 139, please see the [SER Volume 1, Chapter 31](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-31-environmental-assessment-finding-of-no-significant-impact#23usc139effenv).

You can jump to each type of document using the links below:

* [JOINT CEQA/NEPA DOCUMENTS (ON THE STATE HIGHWAY SYSTEM)](#CEQA_NEPA_CALTRANS_FHWA)
* [JOINT CEQA/NEPA DOCUMENTS (LOCAL ASSISTANCE PROJECTS)](#CEQA_NEPA_LOCAL_ASSISTANCE)
* [NEPA ONLY DOCUMENTS (ON THE STATE HIGHWAY SYSTEM)](#NEPA_ONLY_ON_STATE_HIGHWAY_SYSTEM)
* [NEPA ONLY DOCUMENTS (LOCAL ASSISTANCE PROJECTS)](#NEPA_ONLY_LOCAL_ASSISTANCE)

**GUIDANCE FOR JOINT CEQA/NEPA DOCUMENTS** **(ON STATE HIGHWAY SYSTEM)**

Use the following boilerplate text if the project is a joint Caltrans/FHWA project on the State Highway System:

The proposed project is a joint project by Caltrans and FHWA and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. Caltrans is the lead agency under CEQA and NEPA.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, often a “lower level” document is prepared for NEPA.

After receiving comments from the public and reviewing agencies, a final environmental document will be prepared. Caltrans may prepare additional environmental and/or engineering studies to address comments. The final environmental document will include responses to comments received on the enter type of document and will identify the preferred alternative.

**GUIDANCE:** For an Initial Study/Environmental Assessment, add the following:

Upon completion of the final environmental document, Caltrans will decide whether to approve the project and issue a Notice of Determination or require an Environmental Impact Report for compliance with CEQA, and whether to issue a Finding of No Significant Impact or require an Environmental Impact Statement for compliance with NEPA. If approved, a Notice of Availability of the Finding of No Significant Impact will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

**GUIDANCE:** For an Environmental Impact Report/Environmental Assessment, add the following:

Upon completion of the final environmental document, Caltrans will decide whether to approve the project and issue a Notice of Determination for compliance with CEQA, and whether to issue a Finding of No Significant Impact or require an Environmental Impact Statement for compliance with NEPA. If approved, a Notice of Availability of the Finding of No Significant Impact will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

**GUIDANCE:** For an Environmental Impact Report/Environmental Impact Statement, add the following:

After the Final Environmental Impact Report/Environmental Impact Statement is circulated, if Caltrans decides to approve the project, a Notice of Determination will be published for compliance with CEQA, and a Record of Decision will be published for compliance with NEPA. **[End boilerplate]**

**GUIDANCE FOR JOINT CEQA/NEPA DOCUMENTS (LOCAL ASSISTANCE)**

Use the following boilerplate text if the project is a joint CEQA/NEPA Local Assistance project:

The project is subject to federal, as well as enter name of local jurisdiction and state environmental review requirements because the enter name of Local Agency proposes the use of federal funds from FHWA and/or the project requires an approval from FHWA. Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. The enter name of Local Agency is the project proponent and the lead agency under CEQA. Caltrans is the lead agency under NEPA.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, often a “lower level” document is prepared for NEPA.

After receiving comments from the public and reviewing agencies, a final environmental document will be prepared. The enter name of Local Agency and Caltrans may prepare additional environmental and/or engineering studies to address comments. The final environmental document will include responses to comments received on the enter type of document and will identify the preferred alternative.

**GUIDANCE:** For an Initial Study/Environmental Assessment, add the following:

Upon completion of the final environmental document, enter name of Local Agency will decide whether to approve the project and issue a Notice of Determination or require an Environmental Impact Report for compliance with CEQA. Caltrans will decide whether to issue a Finding of No Significant Impact or require an Environmental Impact Statement for compliance with NEPA. If approved, a Notice of Availability of the Finding of No Significant Impact will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

**GUIDANCE:** For an Environmental Impact Report/Environmental Assessment, add the following:

Upon completion of the final environmental document, enter name of Local Agency will decide whether to approve the project and issue a Notice of Determination for compliance with CEQA. Caltrans will decide whether to issue a Finding of No Significant Impact or require an Environmental Impact Statement for compliance with NEPA. If approved, a Notice of Availability of the Finding of No Significant Impact will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

**GUIDANCE:** For an Environmental Impact Report/Environmental Impact Statement, add the following:

After the Final Environmental Impact Report/Environmental Impact Statement is circulated, if enter name of Local Agency and Caltrans decide to approve the project, a Notice of Determination will be published for compliance with CEQA, and a Record of Decision will be published for compliance with NEPA. **[End boilerplate]**

**GUIDANCE FOR** **NEPA ONLY DOCUMENTS (ON STATE HIGHWAY SYSTEM)**

For projects on the State Highway System, include the following boilerplate text:

The enter name of Local Agency is the project proponent for this project enter "and the lead agency under CEQA" if applicable. Caltrans is the lead agency under NEPA. Enter information about why the Local Agency is sponsoring this project. If the project is part of a larger development project, describe the project’s relationship to the larger project. Describe the funding source for this project.

While this project is subject to the requirements of both NEPA and CEQA, separate environmental documents have been prepared, one that complies with NEPA and another that complies with CEQA. This enter Environmental Assessment or Environmental Impact Statement complies with the requirements of NEPA and other federal environmental laws. Compliance with CEQA and state environmental laws is provided in enter name of CEQA document which was approved for public circulation by enter approving agency (Caltrans, City Council, County Board of Supervisors) on enter date.

After receiving comments from the public and reviewing agencies, a final environmental document will be prepared. The lead agency may prepare additional environmental and/or engineering studies to address comments. The final environmental document will include responses to comments received on the enter type of document and will identify the preferred alternative.

**GUIDANCE:** For an Environmental Assessment, add the following:

Upon completion of the final environmental document, Caltrans will decide whether to approve the project and issue a Finding of No Significant Impact or require an Environmental Impact Statement for compliance with NEPA. If approved, a Notice of Availability of the Finding of No Significant Impact will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

**GUIDANCE:** For an Environmental Impact Statement, add the following:

After the Final Environmental Impact Statement is circulated, if Caltrans decides to approve the project, a Record of Decision will be published for compliance with NEPA. **[End boilerplate]**

**GUIDANCE FOR NEPA ONLY DOCUMENTS (LOCAL ASSISTANCE)**

For Local Assistance projects (off State Highway System), include the following boilerplate text:

The project is subject to federal, as well as state environmental review requirements because the enter name of Local Agency proposes the use of federal funds from FHWA and/or the project requires an approval from FHWA. Project documentation, therefore, has been prepared in compliance with NEPA. The enter name of Local Agency is the project proponent and the lead agency under CEQA and Caltrans is the lead agency under NEPA.

While this project is subject to the requirements of both NEPA and CEQA, separate environmental documents have been prepared, one that complies with NEPA and another that complies with CEQA. This enter Environmental Assessment or Environmental Impact Statement complies with the requirements of NEPA and other federal environmental laws. Compliance with CEQA and state environmental laws is provided in enter name of CEQA document which was approved for public circulation by the enter approving agency (City Council, County Board of Supervisors) on enter date.

After receiving comments from the public and reviewing agencies, a final environmental document will be prepared. Caltrans may prepare additional environmental and/or engineering studies to address comments. The final environmental document will include responses to comments received on the enter type of document and will identify the preferred alternative.

**GUIDANCE:** For an Environmental Assessment, add the following:

Upon completion of the final environmental document, Caltrans will decide whether to approve the project and issue a Finding of No Significant Impact or require an Environmental Impact Statement for compliance with NEPA. If approved, a Notice of Availability of the Finding of No Significant Impact will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

**GUIDANCE:** For an Environmental Impact Statement, add the following:

After the Final Environmental Impact Statement is circulated, if Caltrans decides to approve the project, a Record of Decision will be published for compliance with NEPA. **[End boilerplate]**

**CEQA SIGNIFICANCE GUIDANCE**

Standard of Review

It is common for a “lower level” document to be prepared for NEPA since some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. This is because NEPA is concerned with the significance of the project as a whole while CEQA considers impacts to each resource. See the [SER Volume 1, Chapter 37, Key Concerns When Preparing Joint NEPA/CEQA Documents](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-37-preparing-joint-nepa-ceqa-documentation#concerns) for more information. Another explanation for the difference in the level of document under CEQA compared to NEPA is the standard of legal review under each law. Under CEQA, an Environmental Impact Report must be prepared whenever substantial evidence in the record supports a fair argument that the project will have a significant effect on the environment. Under NEPA, the decision not to prepare an Environmental Impact Statement will withstand legal challenge as long as the agency’s determination approving the project was not arbitrary and capricious. This makes the decision not to prepare an Environmental Impact Statement under NEPA much easier to defend than the decision not to prepare an Environmental Impact Report under CEQA.

Handling Significance in Joint Environmental Documents

* NEPA versus CEQA
  + Because the determination of significance is different under NEPA and CEQA, writers of joint CEQA/NEPA documents need to pay special attention to the handling of significance in their documents. If CEQA significance is discussed outside of the CEQA Evaluation chapter in the text of the environmental document, a statement or parenthetical reference must be added making it clear the reference to “significance” is being made under CEQA.
  + There are, however, some instances when it is proper to use “significant” or “significance” in a federal analysis. See [Table 2 in Volume 1, Chapter 37 of the SER](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-37-preparing-joint-nepa-ceqa-documentation#handling) for a table of these instances.
* CEQA Thresholds of Significance

Caltrans has not adopted thresholds of significance under CEQA. As a statewide agency covering diverse geographic areas, Caltrans has, as a matter of policy, left the determination of significance to the district Project Development Team members. The use of the term “thresholds of significance” is not to be used for projects on the State Highway System.

Project Area

Provide a brief overview of the project area. Describe any major actions proposed by other government agencies for the same general area as the proposed project.

Purpose and Need

Provide a brief description of the purpose and need.

Proposed Action

* Briefly describe the proposed action. Define the route, the beginning and ending points, and the proposed improvement, including the number of lanes and their length. Don’t forget to mention the county, city, and state.
* Briefly describe all alternatives under consideration, noting the key differences among the alternatives.
* If a preferred alternative has already been identified, tell the reader and explain the reasons for the choice.

PROJECT IMPACTS

* Summarize the major project impacts.
* Use a table or matrix with impacts (and avoidance, minimization, and/or mitigation measures) as part of the summary to help the reader understand the potential impacts of each alternative on the various resources. Ensure quantitative information provided in the summary table is consistent with the information provided in the associated topic section for all alternatives.
* Identify each significant effect under CEQA (if applicable) with proposed mitigation measures and alternatives that would reduce or avoid that effect. Be clear that the significance is for purposes of CEQA only. It may be helpful to include a separate table or matrix with impacts (and mitigation) determined to be significant under CEQA if preparing a joint document.
* It is helpful for the reader if numbers are added to the various measures proposed in the environmental document (e.g., Bio-1, Bio-2). This will assist with the creation of the Environmental Commitments Record and the tracking of measures through the life of the project. Items are then not lost within blocks of text and can be cross-referenced between resources if needed.

COORDINATION WITH PUBLIC AND OTHER AGENCIES

* List needed permits, licenses, agreements, and certifications and their status.
* Discuss any unresolved issues with other agencies.
* Mention any areas of controversy, including issues raised by agencies and the public.

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**GUIDANCE:** Include a Table of Contents, List of Tables, and List of Figures. Make sure to update whenever edits are made to table and figure numbers and before finalizing document.

To aid the public in locating maps, it is recommended to clearly show where mapping can be found, particularly for the preferred alternative (if it has been identified).

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# Proposed Project

## INTRODUCTION

As you write the body of the document, remember who your audience is. Write to the general public and not to professional planners and engineers. Reword difficult terms or concepts or explain them in the body of the text. Only when neither of these is practical should you use footnotes or include these terms in a glossary using common language.

If a summary is not used, include the following boilerplate NEPA Assignment information here:

Since 2007, Caltrans has performed federal responsibilities for environmental decisions and approvals under NEPA for highway projects in California that are funded or otherwise approved by FHWA. These responsibilities have been assigned to Caltrans by FHWA pursuant to Title 23 United States Code (USC) Sections 326 and 327 and two Memoranda of Understanding signed by FHWA. Please see the [Caltrans Standard Environmental Reference (SER) Volume 1, Chapter 38, “NEPA Assignment](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-38-nepa-assignment)” for additional information. **[End boilerplate]**

**GUIDANCE**

Local agencies that propose projects on the State Highway System shall use all applicable Caltrans manuals and guidelines. These describe the processes and procedures for developing State Highway System projects. These also contain discussions of the regional and state planning and programming processes. For more information, please see the [SER, Volume 1, Chapter 5 “Preliminary Environmental Scoping”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-5-preliminary-environmental-scoping) and [Chapter 38, “NEPA Assignment.”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-38-nepa-assignment)

Local agencies that propose federal aid projects off the State Highway System shall follow the Local Assistance Procedures Manual, the Local Assistance Program Guidelines, and the SER. Local agencies must complete the first two pages of the Field Review and a Preliminary Environmental Study form. The development of the Preliminary Environmental Study form will help guide the local agency in the writing of the project description and potential range of alternatives, if needed. In addition, the Preliminary Environmental Study form will help identify the potential impacts and establish the need for additional right of way. For more information, please see Chapter 6 of the [Local Assistance Procedures Manual](https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm).

Identify the lead agency, or joint lead agencies under NEPA and the lead agency under CEQA. See the following example language:

Caltrans, as assigned by the FHWA, is the lead agency under NEPA. Enter Caltrans or name of Local Agency is the lead agency under CEQA. **[End example]**

Begin this chapter with a ***brief*** introduction describing the existing facility, the project background and history (including funding and programming—specifically state the status of the project’s inclusion in the [agency and date] Regional or Metropolitan Transportation Plan and a cost-constrained Transportation Improvement Program). See the [FHWA Clarifying Fiscal Constraint Guidance](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1NEPA1969) for more information. Provide a general description of the proposed action (more detailed information can be provided in the “Alternatives” discussion). Include just enough information so that the reader can understand the general geographic setting of the project and major project features. For Local Assistance projects, the description of the proposed action must be consistent with the project description contained in the Preliminary Environmental Study form. See the example text below.

Caltrans proposes to improve the uphill segment of Route 301 in Green County from west of Orange Road to east of the River Causeway near Interstate 23.

Or for Local Assistance projects: Caltrans, as assigned by FHWA, in cooperation with the County of San Luis Obispo proposes to realign Main Street in the City of San Luis Obispo.

The total length of the project is 2.3 miles. Figures 1 and 2 are project location and vicinity maps.

This project is included in the 2023 Federal Statewide Transportation Improvement Program and is proposed for funding from the System Operational Improvements Program. It is also included in the Metropolitan Transportation Commission’s 2023 Metropolitan Transportation Plan and the 2023 cost-constrained Metropolitan Transportation Improvement Program. **[End example]**

Include maps showing the project location, the project vicinity, and/or the project features. These should clearly identify the limits of the project and the project footprint. The project location map should identify street names and prominent landmarks (e.g., community center, museum, library), especially those mentioned in the text.

**Additional Guidance**

For more information on the project description, go to:

* [SER, Volume 1, Chapter 35, “Initial Study and Negative Declaration/Project Description.”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-35-initial-study-negative-declaration#projdesc)

* [SER, Volume 1, Chapter 36, “Environmental Impact Report/Required Content.”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-36-environmental-impact-report#required)
* [Local Assistance Procedures Manual](https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm), Chapter 6, Exhibit 6-B: Instructions for completing the Preliminary Environmental Study Form, including project description.

## PURPOSE AND NEED

An Environmental Assessment or Environmental Impact Statement must state the purpose and need for the project. CEQA requires that an Environmental Impact Report include a statement of objectives sought by the proposed project, which should include the underlying purpose of the project. Under both NEPA and CEQA, the project purpose and need or objectives serves as the basis for alternatives development. The guidance below is based largely upon the FHWA’s Technical Advisory T 6640.8A (“Guidance for Preparing and Processing Environmental and Section 4(f) Documents”).

The project “purpose” is a set of objectives the project intends to meet. The project “need” is the transportation deficiency that the project is intended to address. All Purpose and Need statements shall be prepared in accordance with guidance and policy set forth in the SER. Tailor this discussion for Local Assistance, as appropriate.

* Make your Purpose and Need statement broad enough to allow you to consider more than one solution, but specific enough that the range of alternatives can be focused. This allows you to consider alternate locations and/or alignments, design variations, and other modes of travel. Resource agencies reviewing the Purpose and Need statement are particularly interested in this; addressing the issue early means you won’t have to go back and do this work later.
* Other departmental documents (see list in guidance below) can be useful sources of information. A project’s purpose and need may broaden or become more focused as the project progresses through the project development process. However, it is important that the project’s basic purpose and need, which is the reason for the project, stays consistent from planning and programming through each phase.  
    
  For State Highway System projects, often, the Transportation Planning Office has already drafted a “regional” or “corridor” document such as a Transportation Concept Report; these documents can provide valuable information about traffic, systems linkages, etc. Also, refer to the Project Initiation Document (Project Study Report, Project Study Report – Project Development Support, Project Initiation Report) for State Highway System projects. For Local Assistance projects, consider using local government planning resources such as county, city, or local general plans and other planning documents. The purpose and need statement should also be consistent with the description of the purpose and need in the signed Preliminary Environmental Study form.

**Format for Purpose and Need Discussion**

Depending on the project, the Purpose and Need statement can range from a few sentences to several pages. In most cases, it should be limited to one or two paragraphs, however the length and complexity will be driven by the complexity of the proposed project. You may also discuss the project benefits in this section.

### Purpose

Each purpose should be no more than two sentences and a bulleted list may be used.

The project purposes are specific objectives of the proposed action. The project purposes are used as the decision factors for comparing alternatives and identifying/selecting the preferred alternative. The purpose is a proposed solution to the problem or deficiency identified in the need statement. Ensure that the purpose is:

* Consistent with transportation goals and objectives (mobility, safety, throughput, connectivity, goods movement, etc.).
* A reasonable expenditure of public funds (benefit: cost).
* Broad enough to allow a reasonable range of alternatives.
* Achievable and unbiased.

Again, do not make the purpose so narrow that only one solution is considered.

If the "need" is based on anticipated inefficiencies in moving people within a travel corridor, don’t write that the purpose is “to widen the highway.” Do write that the purpose is “improve trip reliability” or “improve accessibility.” This would allow the project team to consider transportation system management, transportation demand management, public transit, active transportation options, and access control alternatives. Don’t write that the purpose of the project is “to build a new bridge on State Route 1 due to the piers being undermined by wave action.” Do write that the purpose of the project is “to protect the State Route 1 bridge from being undermined by wave action.” This would allow the project team to consider riprap, breakers, clear span bridge, and/or moving the location of the bridge farther inland. Caltrans has developed [Purpose and Need guidance](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#purpose_need) for projects on the State Highway System of which certain elements can be useful for off-highway system projects.

Some examples of purpose are:

* To encourage motorists passing through the area on their way to another destination to use the regional highway system.
* To improve the ability of people and goods to reach their destination (accessibility).
* To improve intermodal connectivity to allow users to efficiently utilize multiple modes of transportation.
* To offer a different way for people to get to a specific area.
* To remove a known barrier to fish migration.
* To help achieve the goals of the [agency/date] Regional Transportation Plan. NOTE: Caltrans has no approval authority regarding local plans. (This purpose can be used if there is a link between the project and broad policy goals of the Regional Transportation Plan that should be highlighted, such as encouraging more transit use, shortening or reducing single-occupancy vehicle trips, and/or linking transportation and housing.)
* To help reduce emissions from transportation sources.
* To balance the circulation of traffic and reduce the number of motorists who must “double-back” to get to their destinations (out of direction travel).
* To improve the safety and operation of the highway within the project limits. [**NOTE: Do not state that the project will improve safety unless a safety problem has been identified**]
* To be consistent with or meet the goals of the [Local Agency/Date] General Plan.

### Need

The need is the transportation problem or deficiency that Caltrans or the Local Agency is responding to. Be specific and use measurable terms as much as possible. Use terms the general reader will easily understand: For example, “The park and ride lot is generally full and unable to serve existing demand.” The statement of need, together with the purpose, allows the agency to focus the range of alternatives. In developing the statement of need, consider this: alternatives can be thought of as different ways to meet the underlying need.

Discuss the following categories of needs as applicable for your project. For Local Assistance projects, consult applicable local plans and planning studies.

1. Capacity, Transportation Demand, and Safety
   1. Describe existing capacity and level of service.
   2. List regional population/traffic forecasts.
   3. Identify projected capacity needs, queue and delay, and/or level of service.
   4. If the project is specified as a safety improvement project, identify system safety needs.
      * Describe the existing collision rate. Use direct language in this discussion. If collisions are occurring regularly on this stretch of roadway, say so.
      * Compare the existing collision rate to the statewide average.
      * Explain what is needed to improve safety, and how this project will address that need.

For State Highway System projects, coordinate with Caltrans Traffic forecasting staff—for most districts, they are in the Transportation Planning division. They coordinate with the local Metropolitan Planning Organization/Regional Transportation Planning Agency/Council of Governments on traffic modeling. For Local Assistance projects, local agencies should also consult the local general plan circulation element and coordinate with the local Metropolitan Planning Organization/Regional Transportation Planning Agency as needed. Care should be taken to ensure that the traffic forecasts used to support the need discussion are consistent with the local general plan circulation element.

The circulation element of city and county general plans should also contain traffic data. Regional population forecasts are usually done by the Metropolitan Planning Organization/Regional Transportation Planning Agency as well. The U.S. Census Bureau also has some information on [population projections](https://www.census.gov/programs-surveys/popproj.html); however, these projections do not take the place of traffic forecasts.

For State Highway System projects, collision data is available from the Traffic Accident Surveillance and Analysis System. Each district should have a District Traffic Accident Surveillance and Analysis System Highway Database Coordinator within its Traffic Division. The Project Engineer should contact the coordinator to get the needed Traffic Accident Surveillance and Analysis System data, and the traffic or design engineer should provide the interpretation of that data. Be sure to use the most current data in the need statement.

The Project Engineer should be able to provide information about how the project will improve safety. This information should be as specific as possible. For Local Assistance projects, consult the local agency traffic engineer and/or public works department for accident data.

1. Roadway Deficiencies
   1. Describe operational deficiencies (substandard geometrics, inadequate cross sections). This section should also discuss future operational deficiencies related to climate change such as roadway flooding, erosion, wildfire risk, etc. Use language the general reader will understand.
   2. Identify structural limitations (load limits).
   3. Discuss maintenance problems.
   4. Explain what is needed to correct deficiencies.

For State Highway System projects, the information for this section is primarily the responsibility of the Caltrans Project Engineer. The Project Engineer will have information about roadway deficiencies and proposed corrections but may need to coordinate with Caltrans’ Office of Structure Design if bridges or other structures are involved. Information on maintenance problems can be obtained by contacting the maintenance field station in the project area. For Local Assistance projects, the local agency traffic engineer and/or public works department should be consulted for information on roadway deficiencies.

1. Land Use Planning
   1. Discuss existing land use plans within the project area.
   2. Identify projected land use plan changes.
   3. Identify growth management/control ordinances including those related to the reduction of vehicle miles traveled (VMT).

Sources for the above information include city and county planning offices, Metropolitan Planning Organizations and Regional Transportation Planning Agencies (e.g., Sacramento Area Council of Governments, San Diego Association of Governments, Association of Bay Area Governments, Southern California Association of Governments), and the District/Region Intergovernmental Review/CEQA branch. For Local Assistance projects that are being proposed to accommodate projected general plan land uses, projected land uses should be briefly discussed.

1. Legislation

Describe any federal, state, or local government mandates (e.g., demonstration projects, sales tax measure projects) that relate to the project.

The Caltrans Project Manager should have the above information, and it should also be in the Project Initiation Document or (Project Study Report, Project Study Report-Project Development Support, Project Initiation Report, etc.). [California Streets and Highways Code Section 300](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=SHC&division=1.&title=&part=&chapter=2.&article=3.) provides useful language on the Legislature’s intent in establishing the State Highway System.

For Local Assistance, the District Local Assistance Engineer, and/or the local agency project manager should have the above information and it should also be in the Preliminary Environmental Study.

1. Modal Interrelationships and System Linkages
   1. Discuss how the project will interface with airport, rail, port, active transportation, and mass transit facilities.
   2. Indicate whether the project serves as a connecting link between two facilities or systems.
   3. Describe how the project fits into the transportation system.

For State Highway System projects, coordinate with Caltrans’ System Planning Branch. Look at Transportation Concept Reports, Corridor System Management Plans, and District System Management Plans. Contact local agencies for transit information and general plans (circulation elements), and the Metropolitan Transportation Plan/Regional Transportation Plan available from Metropolitan Planning Organizations/Regional Transportation Planning Agencies (the district/region planning office may also have copies and many Regional Transportation Plans are available on-line). For Local Assistance projects, local agencies should coordinate with Metropolitan Planning Organizations/Regional Transportation Planning Agencies, as needed, and consult the local general plan and other pertinent planning documents.

1. Air Quality Improvements
   1. Identify transportation control measures (e.g., High-Occupancy Vehicle lanes, ramp metering, bike lanes, and park and ride facilities).
   2. Identify transportation demand management strategies (e.g., rideshare programs, mass transit subsidies).

Information on active transportation systems, park and ride facilities, ridesharing, and mass transit can be obtained from Caltrans’ Transportation Planning Office or local government planning departments. Information on High-Occupancy Vehicle lanes and ramp metering can be obtained from district Traffic Operations.

Some examples of need are:

* Increased out of direction travel (motorists having to go out of their way to get to their destinations) increasing VMT.
* Increasing single-vehicle occupancy use on the Interstate, leading to increased VMT and declining conditions for the interregional movement of goods and services.
* Gaps in the existing pedestrian/bicycle route/facilities requiring increased vehicle usage.
* Lack of pedestrian/bicycle access or transit service to the passenger train station, requiring that passengers be dropped off in single-occupancy vehicles.
* Extensive existing and approved planned development that generates additional single-occupancy vehicle trips.
* Inadequate regional access to a specified area.

### Independent Utility and Logical Termini

FHWA regulations (23 Code of Federal Regulations [CFR] 771.111 [f]) require that the action evaluated:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope.
2. Have independent utility or independent significance (be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made).
3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

When writing the Purpose and Need statement, ensure that the text addresses independent utility and logical termini. These are two terms that will need to be defined for readers and should be restated with plainer language whenever possible. A problem of segmentation may arise if a transportation need extends throughout an entire corridor, but environmental issues and transportation need are discussed for only a segment of the corridor. Again, be sure to define segmentation for readers. See [FHWA’s guidance on logical termini and independent utility](https://www.environment.fhwa.dot.gov/nepa/trans_decisionmaking.aspx) (under Alternatives tab) for more information.

**Additional Guidance on Purpose and Need**

* [FHWA's "The Importance of Purpose and Need in Environmental Documents"](https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_purpose_need.aspx), Sept. 18, 1990
* [FHWA’s “The Development of Logical Project Termini”](https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_project_termini.aspx), November 5, 1993
* [FHWA Technical Advisory T6640.8A](https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_preparing_env_documents.aspx), Oct. 30, 1987
* [FHWA Guidance on Purpose and Need](https://www.environment.fhwa.dot.gov/Legislation/NEPA/memo_purpose_need.aspx), July 23, 2003
* [Caltrans Project Development Procedures Manual](https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm) (see Chapter 10, Section 4)
* [Caltrans Purpose and Need Team: Final Report and Recommendations](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#purpose_need), July 2003
* Caltrans Deputy Directive #83, Purpose and Need

* [Local Assistance Procedures Manual](https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm), Chapter 6

## PROJECT DESCRIPTION

**NOTE:** For Environmental Impact Statements, the Project Description, Alternatives, and Permits sections are typically in a separate chapter (Chapter 2). If preparing an Environmental Impact Statement, the chapter numbers in this outline will vary from those in the Environmental Impact Statement Writing Templates.

Initial Studies and Environmental Assessments should contain a discussion of one or more build alternatives as well as a discussion of the no-build alternative. Environmental Impact Reports and Environmental Impact Statements must discuss a range of alternatives including the no-build alternative. See the Alternatives section for additional information.

Under NEPA, viable alternatives must be discussed in equal detail. However, the preferred alternative can be developed to a greater level of detail if the project is following the 23 USC 139 Efficient Environmental Review Process (see additional information in the Alternatives section). Also, under NEPA, consideration should be given to transportation system management, transportation demand management, and multi-modal alternatives, such as bike lanes, Active Transportation Program projects, pedestrian walkways, etc.

**NOTE:** If your project includes new or modified access to the Interstate System and requires FHWA approval, include the “Final Determination of Engineering and Operational Acceptability” from FHWA as an appendix in the final document. See the [Project Development Procedures Manual](https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm), Chapter 27, for additional information.

**Additional Guidance**

* [SER, Volume 1, Chapter 1, “Federal Requirements, Development of Project Alternatives”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#devalt)
* [SER, Volume 1, Chapter 31, “Environmental Assessment/Finding of No Significant Impact”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-31-environmental-assessment-finding-of-no-significant-impact)

* [SER, Volume 1, Chapter 32, “Environmental Impact Statement”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-32-environmental-impact-statement)
* [SER, Volume 1, Chapter 35, “Initial Study and Negative Declaration”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-35-initial-study-negative-declaration)

* [SER, Volume 1, Chapter 36, “Environmental Impact Report”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-36-environmental-impact-report)

**Writing the Document**

1. Provide a brief paragraph telling the reader the purpose of this section. For example:

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. The alternatives are Alternative “X,” Alternative “Y,” and the “No-Build Alternative.” **[End example]**

1. Provide a very brief restatement of the description of the existing facility and the purpose and need for the project. For example:

The project is located in Green County on Route 301 from west of Orange Road (postmile 5.0) to east of the River Causeway near Interstate 23 (postmile 7.3). The total length of the project is 2.3 miles. Within the limits of the proposed project, Route 301 is a conventional two-lane, undivided highway with two 12-foot lanes and 2- to 4-foot non-standard shoulders. The purpose of the project is to upgrade the highway to current design standards and to correct operational problems resulting from traffic queues formed by slow-moving vehicles. **[End example]**

1. For projects in the coastal zone, the California Coastal Commission usually requires a more detailed project description than normally provided in order to support findings for coastal permit or Local Coastal Program approval by the California Coastal Commission or local agency. Additional information to include in the project description, to the extent feasible, would include details about all physical development, such as dimensions of proposed structures and facilities, public access components (trails, parking lots, etc.), approximate grading quantity, approximate amount of vegetation removal, construction techniques and timing, etc. It is helpful to include as much detail as possible, acknowledging that the details may change as the project and plans progress.

## PROJECT ALTERNATIVES

**RANGE OF ALTERNATIVES**

Alternatives may be developed to avoid or substantially lessen impacts to resources such as wetlands, floodplains, Section 4(f) properties, endangered species, and cultural sites or to be consistent with federal laws, regulations, and policies. For projects on the State Highway System, the range of alternatives must also follow state and Caltrans directives such as Director’s Policy 37: Complete Streets. If there are no alternatives to impacts on floodplains or wetlands, then an *only practicable alternative finding* must be made for these resources. This section of the document should include a reference to the appropriate sections where further discussion of these avoidance alternatives can be found—wetlands, floodplains, Section 4(f) properties, endangered species, etc., as applicable.

**NOTE:** For projects in the coastal zone, the California Coastal Commission usually requires an alternatives analysis that goes beyond what is typically provided. The alternatives analysis should address the feasibility of potential temporary and permanent resource impact avoidance or minimization alternatives through project design features, siting options and/or construction methods, and clearly identify the proposed avoidance, minimization, and mitigation measures and any potential secondary impacts associated with such implementation. For example, consider alternatives that would reduce native vegetation removal, grading/landform alteration, impacts to sensitive habitat, water quality, public views, cultural resources, public access, etc.

***CEQA***

* Initial Studies do not require a range of alternatives. They must include one build alternative and the no-build alternative.
  + Initial Studies may need to analyze additional alternatives if required by law or guidance. See the Reversible Lanes and Access to Navigable Rivers sections below for additional information.
* Environmental Impact Reports require a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and an evaluation of the comparative merits of the alternatives (CEQA Guidelines Section 15126).
  + The range of alternatives is governed by the “rule of reason” that requires that the Environmental Impact Report set forth only those alternatives that lead to a more informed decision. The range of alternatives must be selected and discussed in a manner that fosters meaningful public participation and informed decision-making.
  + An alternative location should be considered when developing alternatives. If no feasible alternative locations exist, then the Environmental Impact Report must disclose reasoning why.

***NEPA***

* Environmental Assessments do not require a range of alternatives. They must include one build alternative and the no-build alternative.
  + The [FHWA Technical Advisory T6640.8A](https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_preparing_env_documents.aspx) states that an evaluation in detail of all reasonable alternatives for the project is not required for an Environmental Assessment under NEPA. The Environmental Assessment may be prepared for one or more build alternatives.
  + Additional alternatives may be required on projects where a law, Executive Order, or regulation (e.g., Section 4[f], Executive Order 11990, or Executive Order 11988) mandates an evaluation of avoidance alternatives.
  + Transportation system management and transportation demand management alternatives may also need to be analyzed if applicable.
* Environmental Impact Statements require a range of alternatives.
  + All reasonable alternatives must be rigorously explored and objectively evaluated. For alternatives that were eliminated from detailed study, briefly discuss the reasons for their elimination. Devote substantial treatment to each alternative considered in detail. Include reasonable alternatives not within the jurisdiction of the lead agency, and include the no-action (no-build) alternative. Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify those alternatives in the final statement unless another law prohibits the expression of such a preference. Include appropriate mitigation measures not already included in the proposed action or alternatives.
  + The FHWA Technical Advisory T6640.8A requires a discussion of a reasonable range of alternatives. Under NEPA, alternatives must be discussed in equal detail. However, the [23 USC 139 Efficient Environmental Review Process](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-32-environmental-impact-statement#23usc139) allows the preferred alternative to be developed to a greater level of detail to assist in the development of mitigation measures and compliance with other federal environmental laws if all the requirements in the FHWA’s Section 6002 final guidance are met. Also under NEPA, consideration should be given to transportation system management, transportation demand management, and multi-modal alternatives. For more information, see SER, Chapter 32, “Environmental Impact Statements” and the [Council on Environmental Quality’s Forty Most Asked Questions, 1a, Range of Alternatives](https://www.energy.gov/nepa/downloads/forty-most-asked-questions-concerning-ceqs-national-environmental-policy-act).
  + Additional alternatives may be required on projects where a law, Executive Order, or regulation (e.g., Section 4[f], Executive Order 11990, or Executive Order 11988) mandates an evaluation of avoidance alternatives.

**OUTLINE OF ALTERNATIVES SECTION**

1. Project Alternatives
   1. No-Build (No-Action) Alternative—the “no-build” analysis must discuss both the existing conditions and what would reasonably be expected to occur in the foreseeable future if the project was not approved.
   2. Proposed Build Alternatives
      1. Build alternatives should include a range of reasonable alternatives that could meet the purpose and need of the project. **NOTE:** Initial Studies and Environmental Assessments only need one build alternative but may have a range. For Local Assistance projects, use local government planning resources such as local general plans and other planning documents in developing alternatives to the project.
      2. Once a preferred alternative has been identified, it should be listed before the other build alternatives under consideration. List the criteria for alternative selection. Use the headings below (as applicable) to cover the topic.
   3. Common Design Features of the Build Alternatives
   4. Unique Features of Build Alternatives (use separate subheadings for each build alternative)
   5. Transportation System Management, Transportation Demand Management, and Mass Transit alternatives (if applicable):
   6. Reversible Lanes (only required for CEQA documents)
   7. Access to Navigable Rivers (only required for CEQA documents)
2. Comparison of Alternatives
3. Identification of a Preferred Alternative [**NOTE:** include in the final document]
4. Alternatives Considered but Eliminated from Further Discussion [**NOTE:** for final document, change section title to Alternatives Considered but Eliminated from Further Discussion Prior to the Draft Environmental Document]

**Writing the Document**

### No-Build (No-Action) Alternative

The “no-build” analysis must discuss the existing conditions as well as what would be reasonably expected to occur in the foreseeable future if the project was not approved. Environmental review must consider the effects of not implementing the proposed project. The no-build alternative provides a basis for comparing the build alternatives.

Explain the effects of the no-build alternative. Use the Purpose and Need statement to identify these; they might include decreasing trip reliability, worsening air quality, and increasing maintenance costs. Reasonably foreseeable impacts might include impacts to the economic health of a nearby or adjacent community. The no-build alternative may create additional impacts if several smaller fixes are implemented in a piecemeal fashion. For Local Assistance projects, if the no-build alternative is inconsistent with the local general plan, identify this inconsistency.

### Proposed Build Alternatives

1. For projects with only one proposed build alternative, describe the major project features, utility relocations, designated optional borrow/fill sites, staging areas, etc., as applicable to the proposed project. Include a map or maps showing the location and major features of the proposed action. Make sure to label all locations referenced in the text. Include typical cross-sections and typical profiles as appropriate to help the reader understand. Make sure the project description in the environmental document, (Draft) Project Report, and technical studies all match. See the guidance below for any other sections that need to be included in the alternative analysis.
2. Include an introductory paragraph that briefly discusses the criteria used for alternative evaluation (meets purpose and need, avoids environmental impacts, feasibility, etc.). Major features used for comparison may include project cost, level of service and other traffic data, and specific environmental impacts. **NOTE:** Cost should not be used as a primary determining factor for choosing an alternative; rather, it can be one of several considerations in alternative selection. If a specific “avoidance alternative” has been developed for the project, describe the ways in which this alternative is expected to avoid or minimize environmental impacts. If different alternatives have been developed to avoid Section 4(f) resources, wetlands, floodplains, etc., include that information in the “Common Design Features of the Build Alternatives” or the “Unique Features of Build Alternatives” discussions, as applicable.
3. This section of the document should discuss any project features intended to reduce environmental impacts or that could be considered project enhancements. The specific placement of this discussion will depend upon whether or not these features are common to all alternatives or if they vary by project alternative.

Project features can include both design elements and standardized measures that are applied to all, or most, Caltrans projects. These features are considered a part of the project itself and are not subsequent actions proposed to mitigate or offset an adverse environmental impact. For more guidance, please see [Mitigation under CEQA](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#ceqa) on the SER. Include the following boilerplate statement in this section (update chapter number if needed):

This project contains a number of standardized project measures which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2. **[End boilerplate]**

First, consider design elements. A design element is a feature that is an integral component of the project (for example, bike and transit features of a Complete Streets project). Other examples may include alignment shifts/modifications or a reduction in right of way acquisition to avoid sensitive environmental resources; providing pedestrian or bicycle bridges or tunnels; elevated structures to minimize floodplain impacts or low-profile structures to minimize visual impacts; design considerations necessary to address geological or seismic concerns; etc. Some design elements are actually enhancements not intended to address an environmental impact, but rather provide a net benefit to the community (for example, a gateway monument).

Context sensitive solutions should be included here. Explain how these contextual elements such as textured noise barriers, colored concrete or asphalt, highway plantings, etc., help generate public acceptance of the project, reflect the unique character of the community, and provide compatibility with the existing visual resources. Early coordination with Landscape Architecture can ensure that these “good design” elements are incorporated into the project early in the process. For information on context sensitive solutions, please see [FHWA’s Context Sensitive Solutions website](https://www.fhwa.dot.gov/planning/css/) and [FHWA’s Context Sensitive Solutions Primer](https://www.fhwa.dot.gov/planning/css/key_references/css_primer/).

1. This section should also be used to provide a list of the applicable standardized measures that will be applied to the project such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions (see the example text below). Many of these will be especially relevant to the discussion of construction impacts. It may also be desirable to list these measures in the Environmental Commitments Record (or equivalent) as well, with an emphasis on Standard Special Provisions and Non-Standard Special Provisions required for the project, as well as items to be depicted on the project plan sheets (rather than items found in the Standard Specifications). This will also assist in the Plans, Specifications, and Estimates review for the project. If these are included in the Environmental Commitments Record, they should be clearly delineated as standardized measures and not included in the listings of avoidance, minimization, and mitigation measures. It is not necessary to discuss these measures in detail, either here or in the Environmental Commitments Record, as the “Environmental Consequences” section under each resource topic will explain how these measures have reduced the potential environmental impacts of the proposed project.

### Common Design Features of the Build Alternatives

1. **NOTE:** This section is for projects with more than one build alternative. The intent of this section is to streamline the overall discussion of the build alternatives by limiting repetition of alternative descriptions. Use this heading when the build alternatives share many common features. Shared design features (i.e., park-and-ride facilities, ramp metering, interchanges, etc.) discussed here do not have to be repeated under each alternative description. Avoid listing out all of the project features under each build alternative and then repeating here. The use of this separate heading is optional; however, the project information below must be included in the alternatives section as applicable.
2. Include design exceptions (for State Highway System projects), new or revised access, and status of their approval in this discussion.
3. Include those project features (including design elements and standardized measures) intended to reduce environmental impacts that are common to all build alternatives here, as applicable. See the example text below:

Each project alternative includes the following standardized measures that are included as part of the project description. Standardized measures (such as Best Management Practices) are those measures that are generally applied to most or all Caltrans projects. These standardized or pre-existing measures allow little discretion regarding their implementation and are not specific to the circumstances of a particular project. More information on each measure can be found in the applicable sections of Chapter 2.

**TT-1:** A Transportation Management Plan will be prepared for the project.

**CR1:** Standard provisions dealing with the discovery of unanticipated cultural materials or human remains will be included in the project plans and specifications:

**AQ1:** The construction contractor must comply with Caltrans’ Standard Specifications in Section 14. **[End example]**

### Unique Features of Build Alternatives

**NOTE:** This section is for projects with more than one build alternative. The intent of this section is to streamline the overall discussion of the build alternatives by limiting repetition of alternative descriptions. Avoid listing out all of the project features under each build alternative and then repeating here. The use of this separate heading is optional; however, the project information below must be included in the alternatives section as applicable. For each alternative:

1. Discuss right of way requirements, utility relocations, designated optional borrow/fill sites, staging areas, proposed access, etc.
2. Include those project features (including design elements and standardized measures) intended to reduce environmental impacts that are unique to certain build alternatives here, as applicable. See the example text below:

Alternative C was specifically designed to avoid impacts to wetlands by making adjustments to the alignment of the road at the southern end of the project limits. This re-alignment has, however, moved construction activities closer to three elderberry bushes. These bushes will be protected during construction by the establishment of an environmentally sensitive area, which is described in Section 14 of Caltrans’ Standard Specifications and which will be included on the project plan sheets. **[End example]**

1. Describe the rationale for inclusion of the alternative in the document.
2. Make sure the names of the various alternatives are distinct and will not be easily confused. Keep the names of the alternatives consistent throughout the document.
3. Make sure the project description and description of alternatives in the environmental document, (Draft) Project Report, Preliminary Environmental Study form for Local Assistance projects, and technical studies match.
4. Include a map or maps showing the details of the build alternative(s). If a preferred alternative has been identified, make sure the map detailing the preferred alternative can be easily located by the public. Other graphics such as typical cross sections and typical profiles should also be included, especially when needed to illustrate variations in the alternatives.
5. **NOTE:** Environmental Impact Statements must also list the cost of each alternative.

### Transportation System Management and Transportation Demand Management Alternatives

NEPA documents must include a discussion (as applicable for projects on the State Highway System) of viable transportation system management and transportation demand management alternatives.

* Transportation System Management Alternative (usually only relevant in urban areas over 200,000 population)
* Transportation Demand Management Alternative (to be considered on all proposed major highway projects in urban areas over 200,000 population)
* Mass Transit Alternative (to be considered on all proposed major highway projects in urban areas over 200,000 population)

Transportation system management strategies increase the efficiency of existing facilities; they are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Examples of transportation system management strategies include ramp metering, auxiliary lanes, turning lanes, reversible lanes, and traffic signal coordination. Transportation system management also promotes automobile, public and private transit, ridesharing programs, and bicycle and pedestrian improvements as elements of a unified urban transportation system. Modal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and mass transit.

If applicable, include a paragraph for one common conclusion. Example language below:

Although transportation system management measures alone could not satisfy the purpose and need of the project, the following transportation system management measures have been incorporated into the build alternatives for this project: list items here. **[End example]**

Transportation demand management focuses on regional means of reducing the number of vehicle trips and VMT as well as increasing vehicle occupancy. It facilitates higher vehicle occupancy or reduces traffic congestion by expanding the traveler's transportation options in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience. A typical activity would be providing funds to regional agencies that are actively promoting ridesharing, maintaining rideshare databases, and providing limited rideshare services to employers and individuals.

If these alternatives have been withdrawn from consideration, move the discussion of transportation system management and transportation demand management alternatives to the heading “Alternatives Considered but Eliminated from Further Discussion.”

### Reversible Lanes

Assembly Bill 2542 amended California Streets and Highways code to require, effective January 1, 2017, that Caltrans or a regional transportation planning agency demonstrate that reversible lanes were considered when submitting a capacity-increasing project or a major street or highway lane realignment project to the California Transportation Commission for approval (California Streets and Highways Code, Section 100.015). For projects that do not meet the criteria (capacity increasing or a major street or highway lane realignment), this determination can be documented in the Project Initiation Document. Projects that do meet this criteria must be evaluated by District Traffic Operations to determine the feasibility of including reversible lanes in the project scope. If reversible lanes are not feasible, document this in the environmental document in the “Alternatives Considered but Eliminated from Further Discussion” section below. If reversible lanes are feasible, evaluate them as a viable alternative in the environmental document. This requirement applies to projects newly approved for programming after January 1, 2017.

### Access to Navigable Rivers

California Streets and Highways Code Section 84.5 states that during the design hearing process relating to state highway projects that include the construction by Caltrans of a new bridge across a navigable river, there shall be included full consideration of, and a report on, the feasibility of providing a means of public access to the navigable river for public recreational purposes.

If the project will construct a new bridge across a navigable river, provide details on the consideration of providing public access to the navigable river for public recreational purposes. Reference feasibility report as appropriate.

## COMPARISON OF ALTERNATIVES

1. A summary table comparing the alternatives for projects with more than one build alternative is suggested but not required. The discussion and table should focus on the criteria used for evaluating the alternatives. Explain how the criteria were developed and how the criteria will be or have been used to reach a decision. Include the no-build alternative in the comparison discussion.
2. When a preferred alternative has been identified at the draft environmental document stage (all document types), it must be disclosed. Draft Environmental Impact Statements should identify the preferred alternative to the extent practicable. Explain in some detail why Caltrans identified that alternative as the preferred alternative. Use the following example introductory language for the preferred alternative discussion in a draft environmental document:

After comparing and weighing the benefits and impacts of all feasible alternatives, if appropriate, enter: some of which are summarized in enter table number and/or location of benefits and impacts, the Project Development Team has identified Alternative enter alternative as the preferred alternative, subject to public review. Final identification of a preferred alternative will occur after the public review and comment period. **[End example]**

**NOTE:** For larger or more complex projects, the preferred alternative is not typically identified until after the circulation of the draft environmental document. However, if a combined Final Environmental Impact Statement and Record of Decision is being prepared, the preferred alternative should be identified in the draft environmental document. See the [Guidance on the Use of Combined FEIS/ROD [Final Environmental Impact Statement/Record of Decision] and Errata Sheets in NEPA Reviews](https://www.transportation.gov/transportation-policy/permittingcenter/guidance-use-combined-feisrod-and-errata-sheets-nepa-reviews) for more information. If the Draft Environmental Impact Statement does not identify the preferred alternative, Caltrans should provide agencies and the public with an opportunity after the issuance of the Draft Environmental Impact Statement to review the impacts of the preferred alternative.

1. If local governments or organizations have voiced a preference for a particular alternative, state that preference and label that alternative the “Locally Preferred Alternative.” The identification of a “Locally Preferred Alternative” is required if the project is a Federal Transit Administration project. If there is any opposition to the project or any of its alternatives, say so here.
2. Briefly explain the final decision-making process. See the example text below. Note that example text is provided for different document types. Use the most appropriate text.

**All documents**

After the public circulation period, all comments will be considered, and Caltrans enter "in cooperation with [Local Agency]" if applicalbe will select a preferred alternative and make the final determination of the project’s effect on the environment.

**Initial Studies**

Under CEQA, if no unmitigable significant adverse impacts are identified, Caltrans will prepare a Negative Declaration or Mitigated Negative Declaration.

**Environmental Impact Reports**

Under CEQA, Caltrans will certify that the project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify whether the project will have significant impacts, if mitigation measures were included as conditions of project approval, that findings were made, and that a Statement of Overriding Considerations was adopted.

**Environmental Assessments**

If Caltrans, as assigned by the FHWA, determines the NEPA action does not significantly impact the environment, Caltrans will issue a Finding of No Significant Impact. If it is determined that the project is likely to have a significant effect on the environment, an Environmental Impact Statement will be prepared.

**Environmental Impact Statements**

With respect to NEPA, Caltrans, as assigned by FHWA, will document and explain its decision regarding the selected alternative, project impacts, and mitigation measures in a Record of Decision.

**[End example]**

**NOTE:** The above text should be removed or revised to past tense for the final document.

## IDENTIFICATION OF A PREFERRED ALTERNATIVE

**[NOTE: THIS WOULD BE IN THE FINAL DOCUMENT]**

1. Explain the rationale for identifying the preferred alternative. The identification decision must be structured, analytical, and clearly address the specific evaluation criteria developed for the project. It must ensure that the preferred alternative meets the purpose and need of the project (See the [Project Development Procedures Manual](https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm), Chapter 12, Section 2 for projects on the State Highway System. For Local Assistance projects, see the [Local Assistance Procedures Manual](https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm), Chapter 6).
2. Where more than one alternative is equally suitable, the final environmental document can be structured to present such options.

## ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION

**[NOTE: FOR “FINAL” DOCUMENT, CHANGE SECTION TITLE TO ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION PRIOR TO THE DRAFT ENVIRONMENTAL DOCUMENT]**

This section should include all alternatives that were considered during the project development process but were eliminated before the draft environmental document, including reversible lanes and navigable rivers. Alternatives that were considered in the draft environmental document should not be placed in this section; they remain viable alternatives. Caltrans (or the Local Agency for Local Assistance projects) may have identified some of these alternatives, while other alternatives may have been identified by other public agencies or members of the public. Information on alternatives considered but eliminated from further discussion can be found in the environmental and design project files, as well as the Project Initiation Document and other planning documents. This section provides an opportunity to explain to those outside of the Project Development Team when and why alternatives were eliminated from consideration. In addition, the section provides documented reasoning why alternatives identified in early planning documents are not to be carried forward for future consideration. Consider the following when writing this section:

1. Briefly describe the other alternatives that were considered and explain why each was eliminated from further discussion. **NOTE:** Use the criteria for alternative selection as the basis of this discussion (e.g., meets purpose and need, avoids environmental impacts, feasibility, etc.). Compare each alternative to the criteria and explain how the alternative did not meet one or more of the criteria. **NOTE:** Cost should not be used as a primary determining factor for eliminating an alternative; rather, it can be one of several considerations in alternative selection.
2. Among the factors that may be used to eliminate an alternative from detailed consideration in an Initial Study or Environmental Impact Report are (1) failure to meet most of the basic project objectives, (2) infeasibility, or (3) inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6[c]). For further information on factors used to eliminate alternatives, see Volume 1, Chapter 36 of the SER under the subheading “[Narrowing the Range of Alternatives: Feasibility and Other Concerns](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-36-environmental-impact-report#draft).”
3. For projects where transportation system management, transportation demand management, mass transit, and modal alternatives might be considered reasonable alternatives at first glance but are not being considered as viable alternatives in the environmental document, include a brief discussion that they were considered but eliminated and explain why.
4. If an alternative was eliminated due to its potential environmental effects, include that information here. Take credit for good project planning!

## PERMITS AND APPROVALS NEEDED

List all permits, licenses, agreements, and certifications that will be needed, including waters and wetland permits, threatened and endangered species approvals (Biological Opinion, determinations), freeway agreements, etc. **NOTE:** Major projects (>$500 million) require a Draft Financial Plan and Project Management Plan prior to the Record of Decision for Environmental Impact Statements. Include in list below if appropriate. See the [FHWA Major Projects webpage](https://www.fhwa.dot.gov/majorprojects/) and the Caltrans [Project Development Procedures Manual](https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm), Chapter 8 for more information. Also, give the status of each approval as shown in the following example (this table reflects example permits, licenses, agreements, and certifications that the project may need but is not an exhaustive list). **NOTE:** Make sure to update the status of the permits, licenses, agreements, and certifications for the final environmental document.

The following permits, licenses, agreements, and certifications are required for project construction:

| **Agency** | **Permit/License/ Agreement/Certification** | **Status** |
| --- | --- | --- |
| United States (U.S.) Fish and Wildlife Service | * Section 7 Consultation for Threatened and Endangered Species * Review and Comment on 404 Permit | Non-jeopardy Biological Opinion expected from U.S. Fish and Wildlife Service prior to final environmental document/Non-jeopardy Biological Opinion issued on November 18, 2024. U.S. Fish and Wildlife Service has actively participated in NEPA/404 process. |
| U.S. Army Corps of Engineers | Section 404 Permit for filling or dredging waters of the U.S. | Concurrence on the Least Environmentally Damaging Practicable Alternative as part of NEPA/404 received on August 28, 2024. Application for Section 404 permit expected after final environmental document approval. |
| California Coastal Commission | Coastal Development Permit | Application for Coastal Development Permit expected after final environmental document approval. |
| California Coastal Commission | Federal Coastal Consistency Certification | Consistency Certification expected after draft environmental document distribution (prior to Record of Decision for Environmental Impact Statements). |
| California Department of Fish and Wildlife | * 1602 Lake or Streambed Alteration Agreement * Section 2080.1 Agreement for Threatened and Endangered Species | Applications for 1602 permit and Section 2080.1 agreement expected after final environmental document approval. |
| California Water Resources Board | 401 certification/waste discharge requirements | Application for Section 401 certification expected after final environmental document approval. |
| FHWA | Air Quality Conformity Determination | Request for determination to be submitted following selection of a preferred alternative/FHWA found that the project is consistent with the requirements of the Clean Air Act on December 3, 2024. |
| State Historic Preservation Officer | Memorandum of Agreement | Memorandum of Agreement expected following the circulation of the draft environmental document/State Historic Preservation Officer approved Memorandum of Agreement on November 15, 2024. |
| Green County | Cooperative Agreement | Signed by Caltrans and Green County on June 1, 2023. |
| California Transportation Commission | California Transportation Commission vote to approve:   * funds; AND/OR * a new public road connection; AND/OR * a route adoption. | Following the approval of the final environmental document, the California Transportation Commission will be required to vote to approve funding for the project, as well as approve the route adoption for State Route 111. |
| County of San Diego, City of Chula Vista, City of San Diego | Freeway Agreement | Freeway agreement will be completed after the route adoption by the California Transportation Commission. |
| U.S. Coast Guard | Bridge Permit | Application for Bridge Permit submitted October 3, 2024. |

**[End example]**

# Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter contains sections for potential topic areas that may be included in the environmental document. The environmental document only needs a full text discussion of those topics that are relevant to the project. **NOTE: DO NOT AUTOMATICALLY DISCUSS EVERY TOPIC IN THE ANNOTATED OUTLINE.**

For those topics considered but determined not to be relevant for the project, include the following header and a summary statement. Example language is provided below.

## RESOURCE TOPICS DISMISSED FROM ANALYSIS

As part of the scoping and environmental analysis carried out for the project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document. **[End example]**

**GUIDANCE FOR DISMISSED TOPICS**

* For local assistance projects, the content of the environmental document must address all required technical studies identified in the Preliminary Environmental Study or any additional environmental resource issues identified in the scoping meeting. The Preliminary Environmental Study form should be consulted to ensure that all environmental issues and required approvals are addressed in the environmental document, consistent with the information contained in the form.
* List topics and briefly (in one or two sentences) describe why there is no potential for adverse environmental impacts.
* Cite technical studies as appropriate.
* If a lengthy discussion is necessary to explain why there are no adverse impacts, do not include here, provide discussions in the body of the document under the appropriate section. The intent of this section is for resources that are not present or that clearly have no impact.
* For resources with only minor construction-related impacts, you may dismiss those topics here and discuss them in a separate “construction impacts” section. Include any measures or project features intended to minimize those impacts (e.g., dust control, etc.). Resources with potentially significant construction-related impacts should not be dismissed in this section.
* **NOTE:** Guidance is provided for specific resources below, but this is not a full list of topics that may be dismissed.

### Land Use

When placing land use under this section, the project must be consistent with land use plans. At a minimum, provide information on the project’s consistency with land use plans. See the main Land Use section for guidance.

### Coastal Zone

If the project is not located within the coastal zone, simply state that there will be no effects to coastal resources because the project is not located within the coastal zone.

### Cultural Resources

Do not dismiss cultural resources in this section even if it is a Screened Undertaking under the Programmatic Agreement or a No Historic Properties Affected finding was made. Include a brief discussion in the body of the document. See the Cultural Resource section for further instruction.

### Floodplains

If the project is not located within the 100-year base floodplain, state that there will be no effects to the 100-year floodplain because the project is not located within a 100-year base floodplain.

If the project is located within a 100-year base floodplain and a Location Hydraulic Study was prepared for the project, then include a Hydrology and Floodplain section in the body of the document; don’t dismiss Floodplains as an issue here even if the project will not result in a significant encroachment on the 100-year base floodplain.

### Air Quality

If the project is exempt from air quality conformity, explain why the project is exempt per 40 CFR 93.126 or 93.128. Describe the specific project type used in 40 CFR 93.126, and any interagency consultation done as some exemptions need concurrence by interagency consultation.

### Noise

If it is determined that there is no potential for adverse traffic noise impacts and noise is dismissed as a relevant topic to the project, identify whether or not the project is a Type 1 and explain why it is exempt from the traffic noise analysis requirements.

### Threatened and Endangered Species

If a project will have a Section 7 No Effect Finding on all listed threatened and endangered species or critical habitat, that can be stated here including justification for a No Effects Finding as identified in the 2021 [Changes to Species List Requirements](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/policy-memos#npit) policy memo. Ensure finding is repeatable and defensible through clear documentation of methods and findings. When there is no potential or actual impacts to federally endangered or threatened species and/or designated critical habitat, official U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries) species lists are not required for the draft or final environmental document.

Example Language:

This project will result in a Section 7 No Effect Finding on all listed and threatened endangered species and/or critical habitat. All proposed work would result in no effects to endangered or threatened species, their habitat, or designated critical habitat because the project action will not result in auditory, visual, or habitat disturbance to a listed species; does not involve in-water work; is not adjacent to sensitive biological resources; and could not directly or indirectly impact endangered or threatened species and/or critical habitat. This determination is based on the project’s proposed actions and includes the following research, field work and technical assistance: **[End example]**

For projects outside of NOAA Fisheries jurisdiction, where a species list is not required, include an explanation. Example language provided below:

This project is located outside of NOAA Fisheries jurisdiction; therefore, a NOAA Fisheries species list is not required and no effects to NOAA Fisheries species are anticipated. **[End example]**

### Section 4(f)

If there are no potential Section 4(f) properties (i.e., there are no historic sites, parks and recreational resources, or wildlife or waterfowl refuges) within the project vicinity, clearly state that here using the example language below. **NOTE:** If any potential Section 4(f) properties are located within the project vicinity, do not include 4(f) in this section, even if the properties are determined not to meet the definition of a Section 4(f) resource or there is no use; they must be discussed in Appendix A, under the heading “Resources Evaluated Relative to the Requirements of Section 4(f).”

There are no historic sites, parks and recreational resources, wildlife or waterfowl refuges, which meet the definition of a Section 4(f) resource, within the project vicinity. Therefore, this project is not subject to the provisions of Section 4(f) of the Department of Transportation Act of 1966. **[End example]**

The information above can also be summarized in a table format as shown in the example below.

Table 1: Resource Topics Dismissed from Analysis

| **Resource** | **Rationale for Dismissal** |
| --- | --- |
| Coastal Zone | Project is not located within the coastal zone |
| Floodplains | There will be no effects to the 100-year floodplain because the project is not located within a 100-year base floodplain. |
| Air Quality | Green County is designated non-attainment by the U.S. Environmental Protection Agency for ozone. The project will upgrade the highway to current design standards and correct operational problems resulting from traffic queues formed by slow-moving vehicles and there will be no additional travel lanes in State Route 301. The project is exempt per 40 CFR 93.126 (Table 2 - shoulder improvements) from the requirement to determine conformity.  Standard specifications will be followed to minimize the effects of fugitive dust on air quality during construction (see Appendix D). |
| Noise | This project is not a Type 1 project as defined by 23 CFR 772 and no noise impacts are expected. Although the roadway alignment will shift as a result of the curve correction, this alternation is not considered substantial as there are no nearby receptors (i.e., single dwelling unit or equivalent). |
| Section 4(f) | There are no historic sites, parks and recreational resources, wildlife or waterfowl refuges, which meet the definition of a Section 4(f) resource, within the project vicinity. Therefore, this project is not subject to the provisions of Section 4(f) of the Department of Transportation Act of 1966. |

**[End example]**

**GUIDANCE FOR TOPICS WARRANTING FURTHER ANALYSIS**

If a given topic is relevant, the discussion of that topic should include the following subheadings:

1. **Regulatory Setting (if applicable)**

The regulatory setting language explains why we analyze issues the way we do in an environmental document. The regulatory setting is optional. If included, use the regulatory setting language provided in this outline (without edits) that is applicable to the project. **NOTE:** If a Relocations and Real Property Acquisition section is included in the environment document (i.e., that topic is not dismissed from analysis), that regulatory setting must be included. The Regulatory Setting text is shown with black font except for this section, which is shown with red font.

1. **Affected Environment**

Provide a concise description of the existing social, economic, and environmental setting for the area affected by all alternatives presented in the environmental document. Where possible, there should be one description for the general project area rather than a separate description for each alternative.

For Environmental Impact Statements, describe reasonably foreseeable environmental trends, including anticipated climate-related changes. If there is incomplete or unavailable information that affects the determination of reasonably foreseeable significant effects, provide a statement in the environmental document.

Under NEPA, the no-build (no-action) alternative is usually used as the baseline for comparing environmental impacts.

Under CEQA, the baseline for environmental impact analysis usually consists of the existing conditions at the time the environmental studies began or at the time of the Notice of Preparation (for Environmental Impact Reports). However, where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project’s impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, if supported with substantial evidence. See CEQA Guidelines Section 15125 for additional information. If a different baseline is used, ensure that the environmental document clearly explains why. Consult with your Headquarters Environmental Coordinator and the legal office before using a baseline other than the time environmental studies began or the date of the Notice of Preparation. It is important that the baseline is clearly and consistently identified throughout the document.

For projects in the coastal zone, the baseline is not always the existing conditions at the time environmental studies began, the time of the Notice of Preparation, or the no-build alternative. For more information on “baseline conditions” under the Coastal Act, please see Chapter 4, Section 4.3.2, in Volume 5 of the SER.

Limit your discussion to data, information, issues, and values that will have a bearing on possible impacts, environmental commitments, or alternative analysis. The importance of the impact should determine the length and complexity of data and analyses, with less important material summarized or referenced rather than be reproduced. Use photographs, illustrations, and other graphics to give readers a clearer understanding of the area and the important issues. Identify methodologies used and any assumptions made or limitation of the information or the particular model or methodology used. Where appropriate, use projections when evaluating the reasonably foreseeable effects.

1. **Environmental Consequences**

Discuss the reasonably foreseeable impacts of each build alternative and the no-build alternative. This includes effects that have a reasonably close causal relationship to the proposed action or alternatives, including those effects that occur at the same time and place as the proposed action or alternatives and may include effects that are later in time or farther removed in distance from the proposed action or alternatives. Construction-related impacts must be discussed either under each resource or in separate sections at the end of the chapter. Cross-reference between sections as appropriate. When discussing impacts, it is important to take into account project features that have been incorporated into the project that may avoid or minimize impacts. Project features can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions. These features should be considered as elements of the project in the impact analysis, even if these measures are environmentally beneficial.

1. **Avoidance, Minimization, and/or Mitigation Measures**

Discuss any proposed avoidance, minimization, and/or mitigation measures. Do not include standardized measures which are considered to be part of the project or project features in this discussion. These features should have already been taken into account in the “Environmental Consequences” discussion. In other words, the effects of the project should be assessed AFTER consideration of those measures or project features.

Remember to state what the measure would do and why we are proposing it.

When writing the environmental document, limit the use of the terms “mitigation” and “mitigate.” For NEPA, use them to refer to only those impacts that are adverse. Address all other measures as avoidance and/or minimization. Remember the first priority is avoidance, then minimization, and lastly mitigation. If avoidance, minimization, and/or mitigation measures vary between alternatives, discuss which measures are proposed for each alternative.

Follow the same guidance in the CEQA Evaluation chapter, limiting the use of “mitigate” to impacts that are “significant” or “less than significant with mitigation incorporated.” Otherwise, discuss the measures in terms of avoidance, minimization, enhancement, compensation, etc. Keep in mind that for CEQA, you must first identify the impact and explain why it is significant, and then explain how the proposed mitigation will reduce the impact and then state a final significance determination, e.g., less than significant with mitigation incorporated.

If these measures vary for each alternative, discuss what measures are proposed for each alternative.

**GUIDANCE ON MITIGATION**

***NEPA***

FHWA requires the project to incorporate measures to mitigate adverse impacts caused by the action and requires the project applicant to be responsible for the implementation of the mitigation measures (23 CFR 771).

***CEQA***

1. CEQA requires that a Mitigated Negative Declaration include any mitigation measures included in the project to avoid potentially significant effects (CEQA Guidelines Section 15071). **NOTE:** If the impact is identified as “Significant and Unavoidable” on the CEQA checklist, you should not be preparing an Initial Study; you need to prepare an Environmental Impact Report.
2. An Environmental Impact Report must discuss any feasible measure (that is, a measure that can be successfully accomplished in a reasonable amount of time, taking into consideration economic, environmental, legal, social, and technological factors) (CEQA Guidelines Section 15364) that can avoid or substantially reduce each of a project’s significant impacts.
3. The specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project’s environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar process may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (CEQA Guidelines Section 15126.4[a][1][B]).
4. If a mitigation measure cannot be legally imposed, the measure need not be proposed or analyzed. Provide a brief explanation in the environmental document (CEQA Guidelines Section 15126.4[a][5]).
5. Specific limitations exist for historical resources (CEQA Guidelines Section 15126.4[b]), school impacts (California Government Code Section 65995), housing density (California Government Code Section 65589.5), and trip reduction programs (California Health and Safety Code Sections 40929[a], 40717.6).

**Formulating Measures**

1. Formulation of mitigation measures shall not be deferred until some future time. However, the precise details of how the mitigation will be carried out do not need to be specified. For example, measures to revegetate can include replanting ratios, types of vegetation, and contingency plans if the replanting is not successful, but need not specify exact details of the revegetation plan.
2. The mitigation proposed for a project must have a “nexus” and “rough proportionality.”
   * Nexus: A connection between the impact and the mitigation measure.
   * Rough proportionality: The amount of mitigation should roughly correspond in size, degree, or intensity to the project impact.
3. Mitigation measures must be fully enforceable through permits, licenses, agreements, and certifications or other measures (special provisions).
4. Proposed mitigation measures must be biddable and constructible. It is important to discuss the various items with the Project Development Team members and Construction staff to decide whether or not all measures are feasible and can be incorporated in the project’s Plans, Specifications, and Estimates.
5. The mitigation discussion should include the following:
   * Whether the mitigation measure will avoid or substantially reduce the environmental effect.
   * If several measures are available to mitigate an impact, discuss each and why the chosen measure was selected.
   * If the implementation of a mitigation measure results in environmental effects, those effects must be discussed (This discussion does not need to be as detailed as the projects impacts).
   * Who is responsible for implementing, monitoring and/or reporting on the mitigation measures (Resident Engineer, Caltrans Biologist, contract biologist, etc.).
6. The above information will be used to prepare and update the [Environmental Commitments Record](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#cert_compliance) or equivalent during the Project Approval/Environmental Document; Right of Way; Plans, Specifications, and Estimate; and/or the Construction phases of the project.
7. Regulatory agencies may require additional measures beyond those required for compliance with CEQA/NEPA. Any measure required by a permit or other approval should be identified as such.

**Monitoring and Reporting**

***NEPA***

A monitoring and compliance plan are required when the analysis of the reasonably foreseeable effects of a proposed action in an Environmental Assessment or Environmental Impact Statement is based on implementation of mitigation and the mitigation is incorporated into a Finding of No Significant Impact, Record of Decision, or separate document.

The monitoring and compliance plan shall include:

* A basic description of the mitigation measure or measures.
* The parties responsible for monitoring and implementing the mitigation.
* If appropriate, how monitoring information will be made publicly available.
* The anticipated timeframe for implementing and completing mitigation.
* The standards for determining compliance with the mitigation and the consequences of non-compliance.
* How the mitigation will be funded (e.g., federal, state, or local funds).

The project’s Environmental Commitments Record can be used to satisfy this requirement if all of the above information is included.

***CEQA***

1. When an agency adopts a Mitigated Negative Declaration or makes findings in an Environmental Impact Report, the agency must adopt a program for monitoring and/or reporting on the mitigation measures that were adopted or made conditions of project approval. The monitoring and/or reporting program shall be designed to ensure compliance during project implementation. The lead agency is responsible for ensuring that the mitigation measures are implemented (CEQA Guidelines Section 15097).
2. Project permits, licenses, agreements, and certifications often require monitoring and/or reporting and often require the success of the mitigation to be monitored (e.g., requirement of a certain re-growth rate, which if not met will require additional planting).
3. Monitoring is suited to all but the most simple projects and is especially suited to projects with complex mitigation measures, such as wetland restoration or archaeological protection, which may be implemented over a period of time or require careful implementation to assure compliance. Monitoring ensures that project compliance is checked on a regular basis during and, if necessary, after implementation. (CEQA Guidelines Section 15097[c][2-3]).
4. Reporting generally consists of a written compliance review (written reports) and is best suited to projects that have readily measurable or quantitative mitigation measures (CEQA Guidelines Section 15097[c][1]). The reporting requirement can be met by obtaining the required signatures on the individual commitments included in the project’s Environmental Commitments Record (or equivalent) or the completion of the Certificate of Environmental Compliance at Construction Contract Acceptance (Milestone 600) and/or at Project Closeout (Milestone 800). These forms can be found on the SER Forms and Templates page in the [Environmental Commitment Compliance section](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#cert_compliance).

## HUMAN ENVIRONMENT

**Writing the Document**

Many of the topics in this section can use the Community Impact Assessment as an information source. NOTE: the [SER Forms and Templates page](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#cia) has a template for writing Community Impact Assessments. The template, along with the SER Volume 4, contains detailed guidance for addressing Community Impacts.

List applicable technical report(s) along with completion date(s) in each section as appropriate.

### Existing and Future Land Use

This section should be used as an introduction for the context and environmental setting for the project and can be cross referenced in the sections below as appropriate.

1. Describe the existing land use in the project area. Land use types include residential, commercial/industrial, recreational, institutional/public services, transportation, utilities, agriculture, and undeveloped land. Discuss housing prices and job information as relevant.
2. Discuss development trends in the project vicinity and the community at large. Provide a cross-reference to the Growth section as applicable. Include:
   1. Name of each development.
   2. Jurisdiction of development.
   3. Status of each development (built, under construction, or proposed).
   4. Size of each development.

Example table:

Table 2: Existing and Future Land Use

| **Name** | **Jurisdiction** | **Proposed Uses** | **Status** |
| --- | --- | --- | --- |
| Jet Air | River City | 24 industrial lots on 48 acres | Final map being developed. No construction. |
| Telegraph Canyon Estates (St. Claire) | Green County | 345 single-family dwellings, 30 acres open space, and 2 park sites | Construction complete. |
| East Lake Greens Special Planning Area | Blue City | Mixed residential, commercial, schools, park, golf course, open space | Under construction. |
| Salt Creek 1 | Green County | 219 single-family and 331 multiple units and 15 acres open space on 124 acres | Construction complete (now part of Rolling Hills Ranch). |

**[End example]**

1. Provide a map showing existing and planned land use in the project vicinity.
2. Sources for land use information include:
   1. Community Impact Assessment (if one is prepared for the project).
   2. The county or city general plan, local specific area plans, local coastal programs/plans, and local planning department staff. Keep in mind that general plans may be out of date and planned developments may not have happened. In addition, certain state or local jurisdictions (e.g., San Francisco Bay Conservation and Development Commission, Tahoe Regional Planning Agency, Santa Monica Mountains Conservancy, etc.) may have different land use designations and developments standards that apply within their jurisdictions.  
        
      In the coastal zone, a city or county’s certified Local Coastal Program is the standard of review for coastal development permits issued by the local government agency.
   3. Land use maps and aerial maps.
   4. Environmental documents for other types of projects.
   5. Area Chambers of Commerce.
   6. Newspaper articles on growth, housing, land use, or other topics of a similar nature.
   7. District or local agency Right of Way staff members.

### Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs

#### Affected Environment

Provide a subheading for each plan.

The project’s consistency with the following types of plans needs to be considered and discussed under RESOURCE TOPICS DISMISSED FROM ANALYSIS or in this section:

* Transportation plans/programs (Metropolitan Transportation Plans/Regional Transportation Plans and Metropolitan Transportation Improvement Programs/Regional Transportation Improvement Programs).
* Regional growth plans (if proposed or adopted).
* Habitat conservation plans or similar regional conservation plans.
* General and community plans (both city and county).
  + Often, the number of adopted plans and policies for a particular area can be quite large. Care should be given to analyze only those plans or policies that are relevant to the project. When preparing the environmental document, it is typically necessary to analyze only the consistency of the project with the required elements of the General Plan for cities and counties, which include:
    - Land Use
    - Housing
    - Noise
    - Circulation and Transportation
    - Public Services and Facilities
    - Economic Development
    - Conservation and Open Space
* Specific development proposals or specific plans (specific planning area maps, tentative maps, etc.).

#### Environmental Consequences

1. Assess and discuss the consistency of the alternatives with the applicable state, regional, and local land use, transportation, and habitat conservation plans and programs adopted for the area. Analyze each project alternative separately, including the no-build, and consider using a table or matrix to present a comparison of the alternatives for each plan or program. The cells of the table or matrix should contain a conclusion regarding consistency and a brief explanation to justify the findings. Be certain to discuss the relevant project features (including standardized measures) that have been incorporated into the project to avoid or minimize the project’s environmental consequences. If an alternative was modified to achieve consistency with an adopted land use plan, policy, or program, describe that here.

Example tables:

**Consistency with State, Regional, and Local Plans and Programs**

Table 3: Consistency with County General Plan

| **Policy** | **Alternative A** | **Alternative B** | **No-Project Alternative** |
| --- | --- | --- | --- |
| Policy 2.5: To sustain the viability of county agriculture by restraining division and use of land which is harmful to continued agricultural use of non-replaceable land resources. | **Consistent.** Alternative A has been designed to acquire only narrow strips of farmland along the sides of the existing roadway. These acquisitions would not result in the subdivision of agricultural parcels; substantially diminish the size of agricultural parcels; or change the existing use, designation, or zoning of agricultural parcels. | **Not Consistent.** Alternative B would require the acquisition of two agricultural parcels resulting in a permanent conversion of farmland to non-agricultural uses. Alternative B would also require fragmentation of two agricultural parcels leaving small remnants that would not be practical for agriculture. | **Consistent.** The No-Project Alternative would not result in conversion of farmland to non-agricultural uses. |

Table 4: Consistency with City Redevelopment Plan for Project Area

| **Policy** | **Alternative A** | **Alternative B** | **No-Project Alternative** |
| --- | --- | --- | --- |
| Policy 6.1: Designate expeditious routes for freight trucks between industrial and commercial areas and the regional and state freeway system to minimize conflicts with automobile traffic and incompatibility with other land uses. | **Consistent.** Implementation of Alternative A would create an efficient route for freight trucks between the state highway and industrial areas to the south that would reduce conflicts with automobile traffic and reduce truck traffic on residential streets. | **Consistent.** Implementation of Alternative B would create an efficient route for freight trucks between the state highway and industrial areas to the south that would reduce conflicts with automobile traffic and reduce truck traffic on residential streets. | **Not consistent.** Under the No-Project Alternative, no changes to the existing roadways would occur in the project area. This alternative would not provide an efficient route for freight trucks between the state highway and industrial areas that would minimize conflicts with automobile traffic and incompatibility with other land uses. |

**[End example]**

1. If the project is expected to result in growth-related effects, discuss them here only to the extent that those effects are either consistent or inconsistent with state, regional, and local plans. Otherwise, refer the reader to the Growth section below.

#### Avoidance, Minimization, and/or Mitigation Measures

Identify measures that are being proposed to avoid, minimize, and/or mitigate land use impacts. When an alternative is found to be inconsistent with an adopted land use plan, policy, or program, consider modifying the alternative, or developing measures to address the inconsistency. Avoidance measures may include modification of an alignment to achieve consistency with planned development under an applicable land use plan. Another option is to work with local agencies to update existing land use plans. Early collaborative planning between federal, state, and local agencies will tend to increase opportunities to develop measures to avoid, minimize, and/or mitigate land use impacts. [See the SER, Volume 4, Chapter 4, “Land Use, Farmlands, and Growth”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-4-community-impacts-assessment) for more information.

### Coastal Zone

If the proposed project is located within the coastal zone, discuss the location of the project (include maps if available) with respect to the coastal zone and regulatory jurisdiction (statewide and/or local), expected impacts within the coastal zone (summarize and cross-reference other sections as appropriate), consistency of the project with the management program, and any needed permits, licenses, agreements, and certifications.

#### Regulatory Setting

This project has the potential to affect resources protected by the federal Coastal Zone Management Act of 1972. Under the Coastal Zone Management Act, coastal states are encouraged to develop coastal management programs.

California has developed a coastal zone management plan and has enacted its own law—the California Coastal Act of 1976. The policies established by the California Coastal Act are similar to those for the Coastal Zone Management Act and include the protection and expansion of public access and recreation; the protection, enhancement, and restoration of environmentally sensitive areas; the protection of agricultural lands; the protection of scenic beauty; and the protection of property and life from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

**GUIDANCE:** Include the following paragraph if the project will require a coastal development permit (and potentially associated Local Coastal Program Amendment) by the local government agency, approval of a coastal development permit by the California Coastal Commission for projects within their original jurisdiction (e.g., tidelands), or a consolidated coastal development permit processed by the California Coastal Commission (if project crosses California Coastal Commission and local agency jurisdiction).

Just as the federal Coastal Zone Management Act delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments to enact their own Local Coastal Programs. This project is subject to enter name of jurisdiction’s Local Coastal Programs. Local Coastal Programs contain the ground rules for development and protection of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A Federal Consistency Certification will be needed as well.

**GUIDANCE:** Include the following paragraph if the project is in SF Bay Area.

The Bay Conservation and Development Commission, created prior to the California Coastal Act, retains oversight and planning responsibilities for development and conservation of coastal resources in the Bay Area.

**GUIDANCE**

**Writing the document**

For projects in the coastal zone, detailed technical data is often necessary to support Coastal Act/and or Local Coastal Program policy consistency findings and should be prepared during the development of and evaluated to the extent possible within each resource chapter of the environmental document. Further, the following list shows how each resource of this document correlates to Coastal Act resource protection policies:

* Farmlands/Timberlands: These sections provide information to support findings related to the Agricultural Resources policies of the Coastal Act (Sections 30241-30243).
* Visual/Aesthetics: This section provides information necessary to support findings related to the Visual Resources policy of the Coastal Act (Section 30251).
* Cultural Resources: This section provides information necessary to support findings related to the Archaeological and Paleontological Resources policy of the Coastal Act (Section 30244).
* Transportation: This section provides information to support findings related to the Public Access & Recreation policies and New Development policies of the Coastal Act (Sections 30210-30214, 30220-30224, and 30252).
* Water Quality and Stormwater Runoff: This section provides information necessary to support findings related to the Water Quality policies of the Coastal Act (Sections 30230-30232).
* Geology/Soils/Seismic/Topography: This section provides information necessary to support findings related to the Coastal Hazards policies of the Coastal Act (Sections 30235, 30236, and 30253).
* Paleontology: This chapter provides information necessary to support findings related to the Archaeological and Paleontological Resources policy of the Coastal Act (Section 30244).
* Natural Communities/Plant Species/Animal Species/Threatened and Endangered Species/Invasive Species: These chapters provide information necessary to support findings related to the environmentally sensitive habitat area and Special Status Species policies of the Coastal Act (Sections 30240 and 30236).
* Wetlands and Other Waters: This chapter provides information necessary to support findings related to the wetlands policy of the Coastal Act (Section 30233).

Refer to each resource section in this document (Farmlands/Timberlands, Visual/Aesthetics, Cultural Resources, etc.) for additional guidance on the technical studies and analysis often requested to support coastal policy consistency findings.

Early and continuous coordination with the California Coastal Commission, Bay Conservation and Development Commission, and/or local jurisdictions is intended to facilitate project delivery and can reduce undue delays in processing coastal permits, including the potential for the permit to be subject to conditions that affect the feasibility of the project or that the permit will be denied. Emphasis should be placed on early involvement to avoid delays, redesign, additional costs, or permit denials. In addition, if federal funds, permits, and/or approvals are required for a project, a Federal Consistency Certification review will be necessary and therefore early assessment of project consistency with the policies in Chapter 3 of the Coastal Act is warranted. Concurrence in a Federal Consistency Certification should be completed before approval of the final environmental document.

NOTE: For Environmental Impact Statements, the California Coastal Commission and/or other state and local jurisdictions should be invited to be participating agencies under the 23 USC 139 Efficient Environmental Review Process.

#### Affected Environment

Describe known, significant coastal resources, such as lagoons or upland riparian habitats, which may be affected by the project. Identify the coastal zone jurisdiction for the entire project area, including any potential local certified Local Coastal Program areas, areas of original Coastal Commission jurisdiction (e.g., tidelands), or any areas of deferred certification. Consider including a location map identifying the areas of coastal jurisdiction.

#### Environmental Consequences

A Coastal Act Chapter Three Policy Consistency Summary Table should be included here to help the reader understand anticipated impacts to coastal resources. An example of this table can be found at the beginning of Volume 5 of the SER. This table should reflect the coastal resource analysis as written in the Environmental Consequences section for each resource, as applicable. Be certain to discuss the relevant project features (including standardized measures) that have been incorporated into the project to avoid or minimize the project’s environmental consequences.

#### Avoidance, Minimization, and/or Mitigation Measures

In addition to helping the reader to understand impacts to coastal resources, the Coastal Act Chapter Three Policy Consistency Table should also list avoidance, minimization, and/or mitigation measures, and how these measures have been incorporated into the project for consistency with Coastal Act policies.

**NOTE:** Regulatory agencies such as the California Coastal Commission may require additional measures beyond those required for compliance with CEQA/NEPA. Any measure required by a permit, license, agreement, or certification should be identified as such.

**NOTE:** For the final environmental document refer the reader to the Comments and Coordination chapter for information regarding coordination with the appropriate coastal agency. The Federal Coastal Consistency Certification should be obtained prior to the circulation of the final environmental document, must be referenced in the Comments and Coordination chapter, and must be included as an appendix to the final document.

**Additional Guidance**

* [SER, Volume 5, “Coastal Requirements”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-5-coastal-requirements)
* [Coastal Act Resource Policy Information](https://dot.ca.gov/programs/environmental-analysis/coastal-program)

### Wild and Scenic Rivers

#### Regulatory Setting

Projects affecting Wild and Scenic Rivers are subject to the National Wild and Scenic Rivers Act (16 USC 1271) and the California Wild and Scenic Rivers Act (Public Resources Code Section 5093.50 et seq.).

There are three possible Wild and Scenic River Designations:

1. Wild: Undeveloped, with river access by trail only.
2. Scenic: Undeveloped, with occasional river access by road.
3. Recreational: Some development is allowed, with road access.

#### Affected Environment

If the project could affect a Wild and Scenic River or a river under study for designation as a Wild and Scenic River:

1. Describe the river.
2. Identify its designation.
3. Identify which agency manages the river.

#### Environmental Consequences

List expected impacts. Be certain to discuss the relevant project features (including standardized measures) that have been incorporated into the project to avoid or minimize the project’s environmental consequences. Is there a feasible avoidance alternative? Describe it here and in the “Alternatives” section. If the project was modified to avoid impacts to Wild and Scenic Rivers, discuss that here and in the “Alternatives” section.

1. Would the project have an adverse effect on the free-flowing characteristics of the river, alter the setting, or deteriorate water quality?
2. Would the project alter the river segment’s designation of wild, scenic, or recreational?
3. Include coordination efforts to date. Agencies responsible for managing listed or studied rivers include the National Park Service, U.S. Fish and Wildlife Service, Bureau of Land Management, and U.S. Forest Service. Document your coordination with the river’s responsible managing agency and the results of the consultation. For more information, see the SER, Volume 1, Chapter 19, “Wild and Scenic Rivers”. NOTE: Publicly owned waters of designated Wild and Scenic Rivers and public lands next to a Wild and Scenic River may be subject to Section 4(f) or Section 6(f) protection under certain conditions (see notes on Section 4(f) Evaluation in Appendix A).

#### Avoidance, Minimization, and/or Mitigation Measures

List any additional avoidance, minimization, and/or mitigation measures here.

**Additional Guidance**

* [SER, Volume 1, Chapter 19, “Wild and Scenic Rivers”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-19-wild-scenic-rivers)

### Parks and Recreational Facilities

**GUIDANCE**

If there are no parks or recreational facilities within the Section 4(f) study area, you may dismiss parks and recreational facilities under RESOURCE TOPICS DISMISSED FROM ANALYSIS. However, do not dismiss Section 4(f) unless there are also no cultural resources within the Section 106 area of potential effects or wildlife/waterfowl refuges (which may not necessarily be considered recreational) within the Section 4(f) study area.

To define the Section 4(f) study area and Section 4(f) resources for parks and recreational facilities, refer to Appendix A – Section 4(f), and the SER Volume 1, Chapter 20.

#### Regulatory Setting

The Park Preservation Act (Public Resources Code Sections 5400-5409) prohibits local and state agencies from acquiring any property which is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

#### Affected Environment

1. Describe any parks and recreational facilities within the Section 4(f) study area, including wildlife and waterfowl refuges, equestrian trails, recreational bikeways, and other recreational trails in this section of the document. The Section 4(f) study area should include properties within and immediately adjacent to the project limits, and nearby properties to ensure that proximity impacts can be considered.
2. For CEQA documents, identify whether any of the facilities are protected by the Park Preservation Act. As defined by the Park Preservation Act, “public park” means any park operated by a public agency.

#### Environmental Consequences

1. Discuss how each alternative would affect the facilities. If an avoidance alternative was developed to avoid parks and recreational facilities, describe that here.
2. For CEQA documents, if the proposed project will acquire land in use as a public park at the time of acquisition, describe that acquisition here. Right of Way staff will coordinate with the park’s operating agency to provide the required compensation for the acquisition. The following example text may be inserted into the document:

Caltrans’ Division of Right of Way and Land Surveys will coordinate with the enter the name of the public agency operating the park to provide the compensation required under the Park Preservation Act. **[End example]**

1. Analyze all parks, recreational facilities, and wildlife and waterfowl refuges within the Section 4(f) study area to determine if they are protected Section 4(f) resources. Briefly discuss and refer the reader to Appendix A. Example language provided below. Chose the most appropriate text for your project and modify as needed.
   * If the project results in a Section 4(f) use including de minimis, state that here using the following example language and document in Appendix A.

There are parks and recreational facilities within the project vicinity that are protected by Section 4(f) of the Department of Transportation Act of 1966. This project will result in a “use” of those facilities as defined by Section 4(f). Please see Appendix A, Section 4(f), for additional details. **[End example]**

* + If there are Section 4(f) resources within the project vicinity but no use of these resources, clearly state that here using the following example language and document in Appendix A under the heading “Resources Evaluated Relative to the Requirements of Section 4(f).”

There are parks and recreational facilities within the project vicinity that are protected by Section 4(f) of the Department of Transportation Act of 1966. However, this project will not “use” those facilities as defined by Section 4(f). Please see Appendix A under the heading “Resources Evaluated Relative to the Requirements of Section 4(f)” for additional details. **[End example]**

* + If there are potential Section 4(f) resource types within the project vicinity, but they do not meet the definition of a Section 4(f) resource clearly state that here using the following example language and document in Appendix A.

Section 4(f) of the Department of Transportation Act of 1966 provides protection for publicly owned parks and recreational resources. However, it has been determined that the facilities within the project vicinity do not meet the definition of a Section 4(f) resource. Please see Appendix A under the heading “Resources Evaluated Relative to the Requirements of Section 4(f)” for additional details. **[End example]**

#### Avoidance, Minimization, and/or Mitigation Measures

Discuss any proposed measures to avoid, minimize, and/or mitigate impacts. Remember to state what the measure would do and why we are proposing it. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.

**Additional Guidance**

* [Park Preservation Act](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-2-state-requirements#Special)

### Farmlands

#### Regulatory Setting

The Farmland Protection Policy Act (7 USC 4201-4209) requires federal agencies, such as FHWA and Caltrans, as assigned, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland to nonagricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

CEQA requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth.

**GUIDANCE**

The Farmland Protection Policy Act (USC 4201-4209, and its regulations, 7 CFR 658) require the lead (federal) agency to coordinate with the Natural Resources Conservation Service to examine the effects of farmland conversion before approving any federal action. The coordination process is described in the act, and if an adverse effect is found, the agency must consider alternatives to lessen the impacts. Projects where farmland may be adversely affected require close coordination with the Natural Resources Conservation Service and the completion of a “Farmland Conversion Impact Rating for Corridor-Type Projects” Form NRCS-CPA-106 or “Farmland Conversion Impact Rating” (for non-corridor type projects) Form AD-1006. The rating form provides a way to assess the extent of farmland impacts based on federally established criteria.

According to the CEQA Guidelines Section 15206, cancellation of Williamson Act contracts for parcels exceeding 100 acres is considered to be “of statewide, regional, or area wide significance,” and subject to additional noticing and review requirements under CEQA. The Williamson Act of 1965 is the state’s primary law for the preservation of agricultural and open space land. The program encourages landowners to work with local governments to protect important farmland and open space. Landowners can enroll parcels for a minimum of 10 years. This program helps local governments restrict land to agricultural and compatible open space use. In doing so, land is assessed for property taxes at a rate consistent with its actual use, rather than the potential value of the land. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth.

Williamson Act lands are discussed in the Regulatory Setting section above and are classified as prime or non-prime. These lands can also be considered as Open Space of Statewide Significance. For farmland definitions, see the SER, Volume 1, Chapter 23, “Farmlands.”

If the project has the potential to affect coastal agricultural resources, additional technical information may include a coastal agricultural resource impact evaluation for any project located within a site designated and zoned for agricultural use and actively used for agricultural purposes, containing designated prime farmland and/or active agricultural uses, or containing any other prime agricultural land that meets the Coastal Act definition (Coastal Act Section 30113, referencing Section 51201 of the Government Code). The Coastal Act and regulations generally define prime agricultural lands as: 1) lands consisting of Class I or II soils as defined by the Natural Resource Conservation Service, 2) soils with a Storie Index Rating of 80 through 100, 3) lands with the ability to support livestock (at least one animal-unit per acre as defined by the U.S. Department of Agriculture), and/or 4) lands planted with fruit- or nut-bearing trees, vines, bushes, or crops. An agricultural viability analysis may also need to be provided, including, but not limited to consideration of an economic feasibility evaluation containing at least both of the following elements: 1) analysis of the gross revenue from the agricultural products grown in the area for five years, and 2) analysis of the operational expenses, excluding the cost of land, associated with the production of agricultural products grown in the area for five years. This information can be obtained from a variety of sources including, the Natural Resources Conservation Service, general plan land use maps, Department of Conservation land use conversion information, and county farmland or crop reports. It is also recommended that planners check with coastal staff to confirm what information is needed for permit processing.

Additionally, a current map and description of known agricultural lands (as defined by the Coastal Act and Local Coastal Programs) and proposed development location may also need to be provided.

**EARLY AGENCY COORDINATION**

In cases where it is obvious there is no farmland, Caltrans’ District Environmental Branch may complete a memo to file. Otherwise, form [NRCS-CPA-106 or AD-1006](https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/land/cropland/farmland-protection-policy-act) should be completed and submitted (if applicable) to the Natural Resources Conservation Service office that handles the county in which the project is located and requests a determination on whether the project location has farmland that is subject to the Farmland Protection Policy Act. See the [Farmlands Decision Tree](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-23-farmlands#Ch24DecisionTree) for more information. Key issues to discuss with the Natural Resources Conservation Service begin with whether or not there are farmlands in the project area. If there are, then:

1. Will the project convert or affect any farmland?
2. Is the affected farmland considered “prime, unique, statewide or local important farmland”?
3. How much farmland will be converted?
4. Will any agricultural parcels be bisected, making one or more not practical for continued agricultural uses?
5. What is the percentage of the county’s total prime farmland that will be lost or affected by the project?
6. Are there alternatives that will reduce or avoid impacts to farmlands?

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. The Farmlands and Williamson Act (if applicable) sections of the Community Impact Assessment should be summarized here.
3. When a project would result in a substantial amount of farmland conversion, provide a general discussion of the agricultural resources and character of agriculture in the project area. This discussion might include the amount of land under cultivation, the number of acres in Williamson Act contracts, important crops, the value of agricultural production, a description of trends in farmland conversion in the particular county, and a description of applicable general plan elements, ordinances, and other policies related to agriculture in the project area.
4. Provide a map or maps showing the location of all farmlands in the project area, including prime or unique farmlands, coastal agricultural lands, Williamson Act land, and timberland in the project area.

#### Environmental Consequences

1. Be certain to discuss the relevant project features (including standardized measures) that have been incorporated into the project to avoid or minimize the project’s environmental consequences. Discuss any alternatives that were developed to reduce or avoid impacts to farmlands here and in the “Alternatives” section.
2. Compare farmland conversion from the project to farmland conversion locally (in the county or in the region) and statewide. Discuss impacts to agricultural land in general, impacts to farmland by category (prime, unique, coastal, etc.), and impacts to Williamson Act contract land. This information can be shown in a comparison table, which should also include the percentage of the county’s total agricultural land and prime farmland that would be lost or affected by the project. See the example table below.

Table 5: Farmland Conversion by Alternative

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Alternatives** | **Land Converted (acres)** | **Prime and Unique Farmland (acres)** | **Percent of Farmland in County** | **Percent of Farmland in State** | **Farmland Conversion Impact Rating** |
| A | 242 | 131.4 | 0.47 | 0.25 | 153.2 |
| B | 713 | 139.1 | 0.15 | 0.05 | 188.0 |
| C | 226 | 59.0 | 0.20 | 0.05 | 136.4 |

Source: Form NRCS-CPA-106 (Farmland Conversion Impact Rating for Corridor-Type Projects). **[End example]**

1. Discuss any conflicts with existing zoning for agricultural use or Williamson Act contract land.
2. Include the following information in the discussion:
   1. Identification of impacts on agricultural lands and on prime, unique, statewide, or local important farmland in the project area, mentioned above.
   2. Identification of any agricultural parcels that would be bisected, making them not practical for continued agricultural uses.
   3. Completion of a Form NRCS-CPA-106 or AD-1006, if appropriate. See the SER, Volume 4, Chapter 4 for more information about ratings and mitigation. Include the completed NRCS-CPA-106 or AD-1006 form in the environmental document. If the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g., alternative sites, modifications, or mitigation).
   4. Evidence of coordination with local agriculture commissioner and/or the Natural Resources Conservation Service, as appropriate.
   5. If the project has the potential to affect coastal agricultural resources, discuss impacts and discuss consistency with applicable coastal policies and ordinances.
   6. For Local Assistance projects, consistency of the project with local general plan policies related to agricultural lands should also be discussed.

#### Avoidance, Minimization, and/or Mitigation Measures

Identify measures that are being proposed to avoid, minimize, and/or mitigate impacts to farmlands. Measures may include establishing agricultural conservation easements or contributing funds to the California Department of Conservation’s Farmland Conservancy Fund or stockpiling prime soils for other applications in the project area. Other measures could include reconfiguring parcels for resale, and/or leasing the land back to farmers. It is important to consider and disclose the feasibility for each measure that is proposed.

**Additional Guidance**

* [SER, Volume 1, Chapter 23, “Farmlands”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-23-farmlands)
* [Farmland Protection Policy Act](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#community)
* [SER, Volume 4, “Community Impact Assessment](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-4-community-impacts-assessment)”

### Timberlands

**GUIDANCE**

The California Timberland Productivity Act of 1982 (California Government Code Sections 51100 et seq.) was enacted to help preserve forest resources. Similar to the Williamson Act, this program gives landowners tax incentives to keep their land in timber production. Contracts involving Timberland Production Zones are on 10-year cycles.

#### Regulatory Setting

Impacts to timberland are analyzed as required by the California Timberland Productivity Act of 1982 (California Government Code Sections 51100 et seq.), which was enacted to preserve forest resources. Although state highways are exempt from provisions of the Act, the California Secretary of Resources and the local governing body are notified in writing if new or additional right of way from a Timberland Production Zone (as defined by the Act) will be required for a transportation project.

If work is being done on federal land (e.g., Bureau of Land Management or U.S. Forest Service lands) for projects off the State Highway System, those agencies’ regulations and policies regarding protection of timberlands are followed.

#### Affected Environment

Although existing state highways are exempt from the Timberland Productivity Act, if new or additional right of way will be required from a Timberland Production Zone for the project, the California Secretary of Resources and the local governing body should be notified in writing. Coordinate with the California Department of Forestry and the U.S. Forest Service as appropriate. Discuss this coordination in the document.

#### Environmental Consequences

If the project would result in a substantial amount of timberland conversion, evaluate the timberland resources, the number of acres designated as Timberland Production Zone, and describe the trends in timberland conversion as you would for farmland (see Farmlands Affected Environment). Discuss any modifications to the project design to avoid or minimize impacts to timberlands. However, consider that for most, if not all, Caltrans or local assistance projects, there are generally not impacts to timberland resources.

#### Avoidance, Minimization, and/or Mitigation Measures

Identify avoidance, minimization, and/or mitigation measures if there will be an impact to timberland resources.

**Additional Guidance**

* [California Timberland Productivity Act of 1982](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=GOV&division=1.&title=5.&part=1.&chapter=6.7.&article=1.)

### Growth

#### Regulatory Setting

The FHWA Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, states that the “…social, economic, and environmental impacts of any substantial, foreseeable, induced development should be presented for each alternative, including adverse effects on existing communities. Where possible, the distinction between planned and unplanned growth should be identified.”

CEQA requires the analysis of a project’s potential to induce growth. The CEQA Guidelines (Section 15126.2[e]) require that environmental documents “…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…”

The CEQA Guidelines (Section 15358[a][2]) also states in its definition of indirect impacts that “…Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.”

**GUIDANCE**

In 2006, Caltrans, in conjunction with the FHWA and the U.S. Environmental Protection Agency, developed a guidance document entitled [Guidance for Preparers of Growth-Related, Indirect Impact Analyses](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#gri). The guidance, which was prepared to address California’s specific challenges relating to growth-related impacts, focuses on the influence that transportation projects may have on growth and development and provides a phased approach (see “first-cut screening” below).

In the past, there was often uncertainty about whether to characterize growth-related impacts as “inducing growth” or “accommodating growth.” The guidance steers clear of this debate, focusing instead on whether and how transportation projects “influence” growth. The guidance recognizes that some transportation projects will have no influence, others will have a moderate influence, and still others may greatly influence growth. The guidance also describes the possible ways in which a transportation project may influence the location, type, and rate of future growth and development.

Since different transportation projects will influence growth in different ways, the guidance adopts a two-phase approach to the evaluation of growth-related impacts.

**Writing the Document**

The first phase, called “first-cut screening,” is designed to help the environmental planner decide if there is potential for growth-related effects and whether further analysis is necessary. The following process is used to conduct the “first cut screening.” **NOTE:** A flowchart with the same information is also provided following the steps below.

Step 1:

Does the project have the potential to change accessibility?

* **YES/MAYBE:** Go to Step 2
* **NO:** If appropriately certain, you are done. Document the results.

Step 2:

Consider factors such as project type, project location, and growth pressure. Proceed to next step.

Step 3:

Is project-related growth reasonably foreseeable?

* **YES/MAYBE:** Go to Step 4
* **NO:** If appropriately certain, you are done. Document the results.

Step 4:

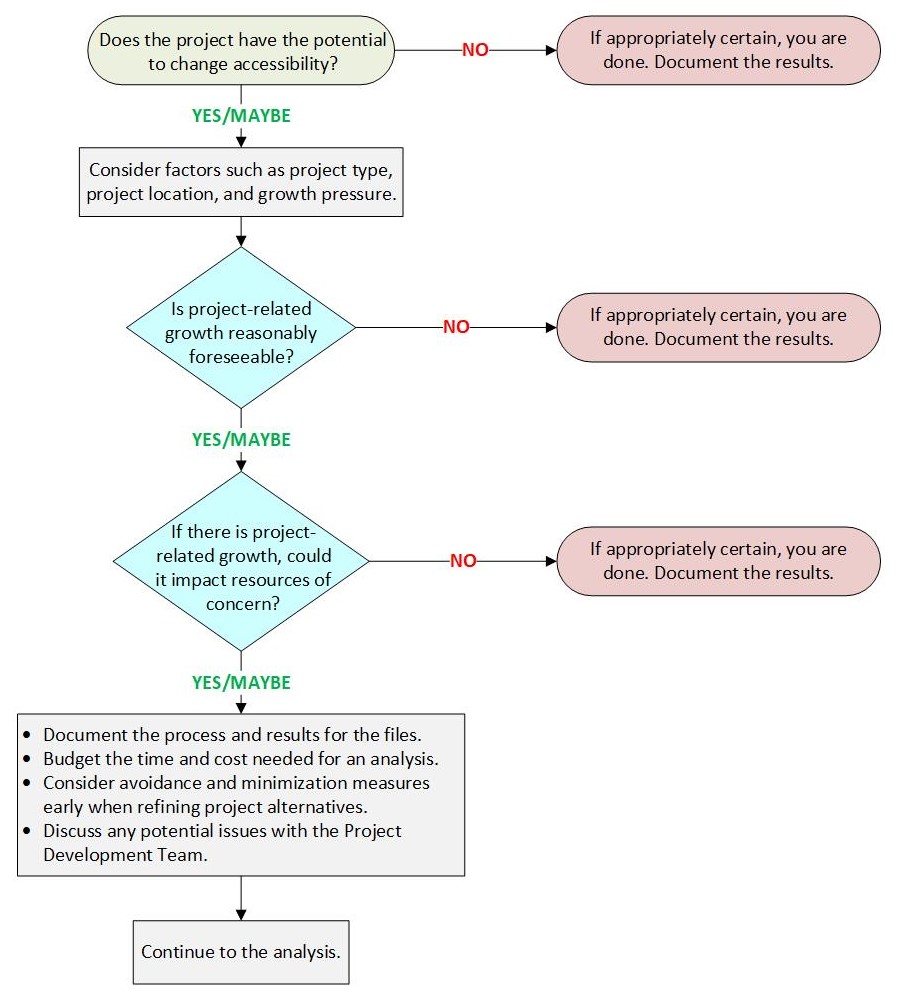
If there is project-related growth, could it impact resources of concern?

* **YES/MAYBE:** Go to Step 5
* **NO:** If appropriately certain, you are done. Document the results.

Step 5:

* Document the process and results for the files.
* Budget the time and cost needed for an analysis.
* Consider avoidance and minimization measures early when refining project alternatives.
* Discuss any potential issues with the Project Development Team.
* Continue to the analysis.

Figure 1: First Cut Screening for Growth



Further guidance on conducting a “first cut screening” may be found in the Guidance for Preparers of Growth-related, Indirect Impact Analyses.

If the first-cut screening demonstrates that further analysis is required, the following six-step process is used to determine whether a transportation project could contribute to growth-related impacts that would affect resources of concern. Its purpose is to more clearly identify the relationship between the No-Build Alternative, the proposed Build Alternative(s), and foreseeable growth (growth that would not have occurred without the project), as well as ways to avoid or minimize impacts to resources should they occur. **NOTE:** A flowchart with the same information is also provided following the steps below.

Step 1:

Review previous project information and “right-size” the analysis. Proceed to next step.

Step 2:

Identify the potential for growth for each alternative — will the project change the location, rate, type, or amount of growth?

* **YES:** Go to Step 3.
* **NO:** Analysis complete. Document the process and findings of the analysis.

Step 3:

Assess the growth-related effects of each alternative to resources of concern — will these resources be affected?

* **YES:** Go to Step 4.
* **NO:** Analysis complete. Document the process and findings of the analysis.

Step 4:

Consider additional opportunities to avoid and minimize growth-related impacts. Proceed to next step.

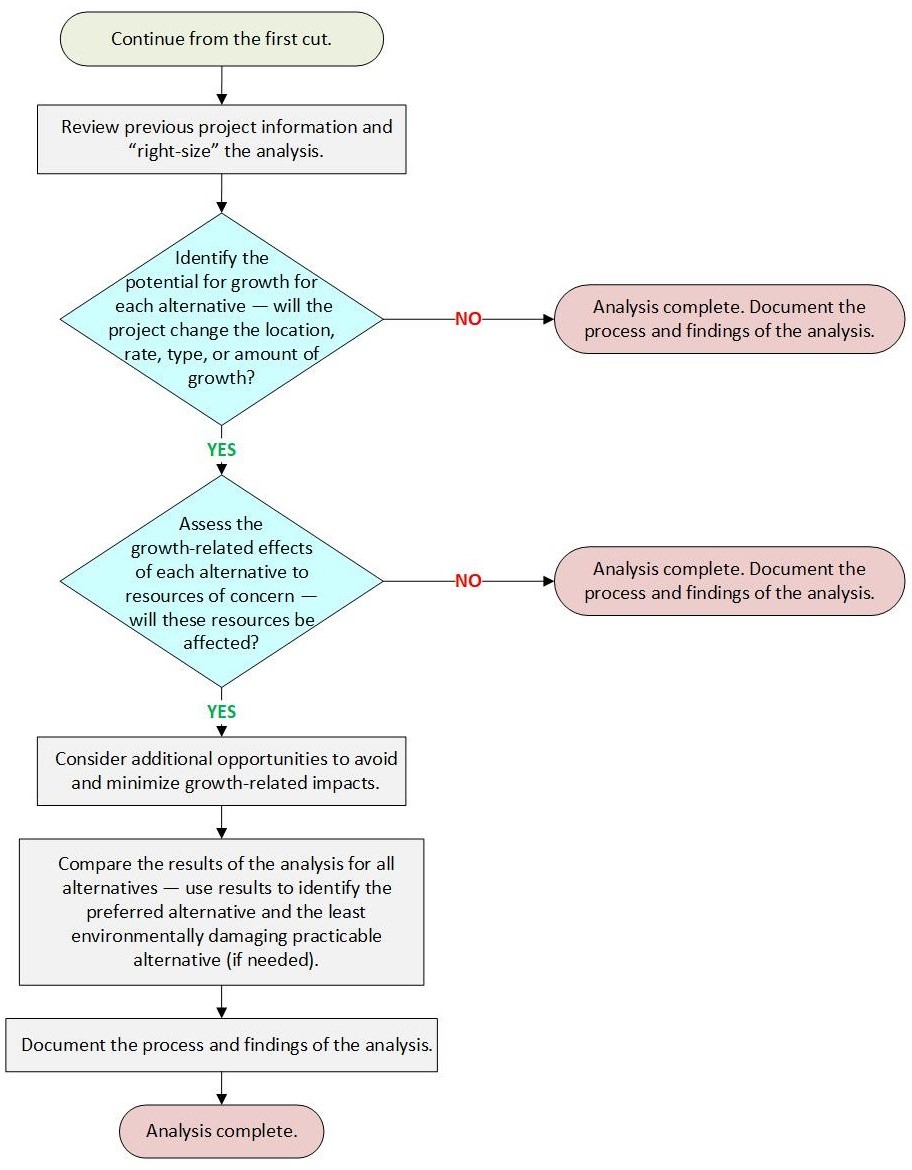
Step 5:

Compare the results of the analysis for all alternatives — use results to identify the preferred alternative and the least environmentally damaging practicable alternative (if needed). Proceed to next step.

Step 6:

Document the process and findings of the analysis. **Analysis complete.**

Figure 2: Analysis for Growth



Further guidance on conducting each of the six steps may be found in the Guidance for Preparers of Growth-related, Indirect Impact Analyses.

The guidance emphasizes that early communication, coordination, and involvement among federal, state, and local agencies helps avoid conflict and delay, and allows for the early consideration of avoidance and minimization opportunities to reduce growth-related effects to resources of concern.

#### Avoidance, Minimization, and/or Mitigation Measures

List any additional avoidance, minimization, and/or mitigation measures.

**Additional Guidance**

There are several valuable publications that can help you complete a growth-related impact analysis. The intent of this annotation is to provide a brief, simple explanation of this type of analysis. For more information, please use any of the following:

* [Guidance for Preparers of Growth-Related Indirect Impact Analysis](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#gri)
* [National Cooperative Highway Research Program Report 466—Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects](http://www.trb.org/Publications/Blurbs/161023.aspx) (2002), prepared for the National Cooperative Highway Research Program by The Louis Berger Group
* [A Review and Synthesis of the Requirements for Indirect and Cumulative Impact Analysis and Mitigation under Major Environmental Laws and Regulations](https://onlinepubs.trb.org/onlinepubs/archive/NotesDocs/25-25(11)_FR.pdf) (2006), prepared for the American Association of State Highway and Transportation Officials by the Transportation Research Board under the National Cooperative Highway Research Program

### Community Character and Cohesion

#### Regulatory Setting

NEPA established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 USC 4331[b][2]). FHWA in its implementation of NEPA (23 USC 109[h]) directs that final decisions on projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under CEQA, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project’s effects.

**GUIDANCE**

Community character and cohesion are subtle, often hard-to-identify qualities, particularly if you are not familiar with the community. First develop a community profile—a summary of the social and economic characteristics of the area where the project will be built (the “affected area”). Information sources may be primary (interviews, field work, and public meetings) or secondary (minutes of public hearings, newspaper articles, etc.). For Local Assistance projects in particular, information contained in the local general plan may be helpful in developing the community profile.

1. Steps to profile a community are:
   1. Define community boundaries and neighborhood or subdivision boundaries. Aerial and road maps from local jurisdictions as well as from Caltrans are good sources for this information.
   2. Locate businesses, homes, and activity centers that may be affected, especially those bordering the highway alternatives and near interchanges.
   3. Determine demographic characteristics, economic base, location of community facilities, and other relevant characteristics. Check the most recent data at the [U.S. Census Bureau](https://www.census.gov/). It may be useful to include a map showing the census tracts in the project area.
   4. Demographic data to describe the project area may come from the U.S. Census—local sources such as Chambers of Commerce and a city’s general and specific plans should also be consulted. Most cities have a web page that can provide helpful information. Useful data on income and other financial matters can be found at the [California Department of Finance website](https://dof.ca.gov/forecasting/demographics/).
   5. Talk to residents and business owners. Invite community leaders (both elected and informal) to scoping meetings or public hearings and ask for their comments and opinions. These are the people in touch with the community. Other good sources may include social service agencies and community websites.
   6. NOTE: California has a very diverse population. Be sure to conduct outreach efforts in other languages (at a minimum, Spanish and any Asian language predominant in the area) and have interpreters available at hearings and meetings.
2. What are some indicators that the community has a high degree of cohesion?
   1. Long average residency tenures: Long-term residents are likely to feel more connected. Both Right of Way staff and the U.S. Census are potential sources for this information.
   2. Households of two or more people: A high percentage of single-person households tends to correlate with lower cohesion.
   3. Although subject to debate and dependent upon the geographic location and other social factors, look at the percentage of home ownership over rentals, and single-family homes over higher density housing.
   4. Frequent personal contact: This would be observed in field reviews or in interviews with residents.
   5. Ethnic homogeneity.
   6. Lots of community activity: Determined primarily through interviews with residents. If there’s a park in the neighborhood, field visits after regular work hours might be helpful. Look for notices and handbills describing activities (neighborhood yard sales, farmer’s markets, etc.).
   7. Stay-at-home parents: Also a possible indicator of community activity, and a resource for finding out the degree of cohesiveness.
   8. Elderly: Like the stay-at-home parents, they’re more active in their community; plus they have the time to become involved.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Describe community boundaries and neighborhood or subdivision boundaries in the study area.
3. Describe businesses, homes, and activity centers of potential impact, especially those bordering the highway alternatives and near interchanges.
4. Describe demographic characteristics, economic base, location of community facilities, and other relevant characteristics.

#### Environmental Consequences

1. Keep the following in mind:
   * The discussion in the environmental document should focus on the effects of each alternative on the community’s character (“setting”) and on the cohesiveness of the community and/or segments within the community.
   * Pay particular attention to areas of the community that have elderly persons, disabled persons, transit-dependent individuals, and minority groups.
   * Increasing or decreasing public access.
   * Dividing neighborhoods.
   * Separating residences from community facilities.
   * Growth.
   * Changes in quality of life.
   * Increasing urbanization or isolation.
2. Include a discussion of any project features that will avoid or minimize community impacts. Examples include providing pedestrian or bicycle overcrossings or cut-and-cover tunnels, reducing the visibility of structures, reducing right of way width, providing street lighting or buffers for noise or visual effects, and/or providing signage.
3. If there are potential economic impacts to the community, these should be addressed where relevant. These impacts may include but are not limited to:
   * Loss of parking
   * Business relocation
   * Loss of employment
   * Loss of tax base
   * Loss or change in access to established businesses (both temporary and permanent)

Under CEQA, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project’s effects. Volume 4 of the SER covers Economic Impacts in detail (Chapter 6).

1. If homeless individuals will need to be relocated from the right of way prior to construction of the proposed project, describe the established procedures that will be followed. These procedures, which are usually carried out by District Maintenance staff accompanied by state or local law enforcement, include providing a “Notice to Vacate” which provides advance notice of the date on which belongings will be removed, information on where belongings will be stored and for how long, and information on community services available.
   * In the case of our projects affecting homeless individuals within third party right of way, please note that the third party usually has responsibility, and local cities and counties have legal responsibility for providing services and assistance for the homeless.

#### Avoidance, Minimization, and/or Mitigation Measures

List any additional avoidance, minimization, and/or mitigation measures such as adding public artwork to the project, setting aside land for a park, or enhanced landscaping.

**Additional Guidance**

* [SER, Volume 4](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-4-community-impacts-assessment) covers community characteristics in greater detail
* See also the [FHWA Community Impact Assessment website](https://www.fhwa.dot.gov/livability/cia/index.cfm)

### Relocations and Real Property Acquisition

**GUIDANCE FOR REGULATORY SETTING**

If the project has relocations or acquisitions, the following regulatory setting must be included in the document.

#### Regulatory Setting

Caltrans’ Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), and 49 CFR 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix C for a summary of the Relocation Assistance Program.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix B for a copy of Caltrans’ Title VI/Non-Discrimination Policy Statement.

**GUIDANCE**

Please refer to Appendix C for information on Caltrans’ Relocation Assistance Program procedures and guidelines and the SER, Volume 4, Chapter 7, Relocation and Displacement. For Local Assistance, additional guidance can be found in the [Local Assistance Procedures Manual](https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm), Chapter 13, Right of Way.

**Writing the Document**

1. If a Draft Relocation Impact Document or Memorandum is prepared for the project, summarize those findings in the draft environmental document and then incorporate the report by reference. For the final environmental document, summarize the findings of the Final Relocation Impact Document or Memorandum.
2. Whenever possible, use tables as they are easier for the reader to absorb. NOTE: Avoid use of the word “take” in describing property to be acquired.

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Describe the study area, focusing on any areas where right of way will need to be acquired for the project.
3. Include a discussion of any affected neighborhoods, public facilities, businesses (including parking), non-profit organizations, and families having special composition (e.g., ethnic, minority, elderly, disabled, or other factors) that may require special relocation considerations.

#### Environmental Consequences

1. Using data from the Relocation Impact Document, list the proposed acquisitions in a table showing an estimate of acquisitions per alternative. Note that Assessor’s Parcel Numbers can be disclosed but property owner’s names should not be included. Differentiate residential and business acquisitions and define each as either full or partial acquisition.

Example table:

Table 6: Estimated Displacements by Alternative

|  |  |  |  |
| --- | --- | --- | --- |
| **Residential Displacements** | **Alt. A** | **Alt. B** | **Alt. C** |
| Owner Occupants of Single-Family Residences | 5 | 7 | 3 |
| Tenant Occupants of Single-Family Residences | 2 | 6 | 0 |
| Owner Occupants of Mobile Homes | 7 | 5 | 3 |
| TOTAL UNITS | 14 | 18 | 6 |
| TOTAL PERSONS | 30 | 44 | 16 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Non-Residential Displacements** | **Alt. A** | **Alt. B** | **Alt. C** |
| Commercial Businesses | 2 | 4 | 2 |
| Industrial/Manufacturing Businesses | 1 | 3 | 0 |
| Agricultural/Farms | 0 | 0 | 1 (partial acquisition) |
| TOTAL UNITS | 3 | 7 | 3 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Residential and Non-Residential Displacements** | **Alt. A** | **Alt. B** | **Alt. C** |
| TOTAL UNITS | 17 | 25 | 9 |

**[End example]**

1. Discuss the characteristics of the displaces:
   1. Include a general discussion of the family characteristics (e.g., minority, ethnic, disabled, elderly, large family, income level, and owner/tenant status). However, where there are very few residents being displaced, information on race, ethnicity, and income levels should not be included in the environmental document to protect the privacy of those affected.
   2. Include descriptions of the businesses and farms to be displaced, types of occupancy (owner/tenant), and sizes (number of employees).
2. Discuss the requirements of Caltrans’ Relocation Assistance Program and refer the reader to Appendix C. Give consideration to the availability of replacement housing, which must be decent, safe, and sanitary.
   1. Compare available (decent, safe, and sanitary) housing in the area with the housing needs of the displacees. The comparison should include: (1) price ranges; (2) sizes (number of bedrooms); and (3) occupancy status (owner/tenant).
   2. Identify: (1) sites available in the area to which the affected businesses may relocate; (2) likelihood of relocation; and (3) potential impacts on individual businesses and farms caused by displacement or proximity of the proposed highway if not displaced.
   3. Propose measures to resolve any special relocation concerns.
   4. Discuss the measures to be taken where the existing housing inventory is insufficient, does not meet relocation standards, or is not within the financial capability of the displacees. Include a commitment to last resort housing when sufficient comparable replacement housing may not be available.

#### Avoidance, Minimization, and/or Mitigation Measures

Include any avoidance, minimization, and/or mitigation measures for relocations and real property acquisitions that go above and beyond what is required by the Uniform Act and/or Caltrans’ Relocation Assistance Program. Work with local government and community organizations to identify other financial and incentive programs or opportunities (beyond those provided by the Uniform Act) that may be available to residential and business relocatees. Discuss the measures to be taken where the existing housing inventory is insufficient, does not meet relocation standards, or is not within the financial capability of the displacees. Include a commitment to last resort housing when sufficient comparable replacement housing may not be available. NOTE: If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.

### Utilities/Emergency Services

#### Regulatory Setting

Not needed.

**GUIDANCE**

For Local Assistance projects, local municipal utility and emergency services staff should be contacted to identify utility systems and emergency services that may be affected.

**Writing the Document**

#### Affected Environment

List applicable technical report(s) along with completion date(s). This section should include a description of all utility systems that could be affected by the project, including water, sewer, electric power, and telecommunication systems.

#### Environmental Consequences

1. Include any transmission lines, pump stations, or other infrastructure facilities that are affected. The Project Engineer and Right of Way staff can help identify impacts.
2. Also, include a brief description of all law enforcement, fire, and other emergency services that could be affected by the project. Describe all temporary and long-term impacts to utilities and emergency services. Include impacts caused by detours and roadway closures. Also include positive impacts, such as improvements to access for emergency services. Scoping the project with the locals can be very helpful.
3. Discuss the relevant project features (including standardized measures) that have been incorporated into the project to avoid or minimize the project’s environmental consequences. One example would be the relocation of a power line to avoid affecting power service. Describe coordination efforts that will be needed to carry out the measures.
4. NOTE: If utility relocations are proposed, then describe (either in this section or in the appropriate resource sections) the impacts that would be caused by relocating the utilities and the proposed measures to lessen those impacts.

#### Avoidance, Minimization, and/or Mitigation Measures

Include a brief statement of any avoidance, minimization, and/or mitigation measures that will be included.

**Additional Guidance**

* [Memorandum Regarding PUC General Order 131-D, Relocation of 50kV or Higher Power Lines](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/policy-memos" \l "LinkTarget_654)

### Transportation

#### Regulatory Setting

This section discusses effects to transportation and circulation resulting from the project, including single-occupancy vehicle traffic, high-occupancy vehicle traffic (if applicable), tolling (if applicable), mass transit, and active transportation opportunities, both during construction (construction impacts) and after completion of the project (long-term or operational impacts).

Effects to transportation are analyzed differently under NEPA and CEQA. This section of the document focuses on travel forecasting required by federal laws related to the general design of Federal-aid highways and interstate facilities (23 USC 109), as well as regulations related to air quality conformity (40 CFR 93). The method of forecasting included in this section relies on travel demand models to predict future traffic data which includes vehicle speed, volume, and mix (i.e., passenger cars vs. light and heavy-duty trucks, etc.), which are then used as inputs to air quality conformity modeling required by the Federal Clean Air Act and FHWA’s Traffic Noise Model for the noise analysis performed under 23 CFR 772.

The Caltrans CEQA analysis, however, may utilize a travel demand model and/or employ the use of the National Center for Sustainable Transportation induced travel calculator, depending upon the specifics of the project. For more information on the CEQA analysis, please see the CEQA Evaluation chapter of this document.

Please note that recreational trails, such as equestrian trails, are covered in the Parks and Recreational Facilities section of the document.

Caltrans, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of Federal-aid highway projects (see 23 USC 217). It further directs that the special needs of the elderly and the disabled must be considered in all Federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Accessibility in federally assisted programs is governed by the U.S. Department of Transportation regulations (49 CFR 27) implementing Section 504 of the Rehabilitation Act (29 USC 794). The FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act, including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the Americans with Disabilities Act requirements to federal-aid projects, including Transportation Enhancement Activities.

**GUIDANCE**

Discuss how the project would affect both single- and high-occupancy vehicle traffic (as applicable for the project type), tolling (if applicable), mass transit and active transportation opportunities, reflecting both existing and design-year (project open-to-traffic year plus 20 years) traffic. Most Metropolitan Planning Organizations, Regional Transportation Planning Agencies, and Councils of Governments have a future year that their documents reflect; adopt theirs. **NOTE:** Be aware that if there is enough lag time between issuing the draft and final environmental documents, it may be necessary to show forecasts for a later date than shown in the draft. Get future estimates from Transportation Planning’s modelers and forecasters. Other sources of information include:

1. Highway Capacity Manual (Special Report 209 from the Transportation Research Board, Washington, D.C.).
2. The circulation element of the local general plan of the jurisdiction(s) in which the project is located. As with other local planning documents, the project must be consistent with the plan(s).
3. The Traffic Accident Surveillance and Analysis System tabulates collision rates for all highways in California, identified by post mile. Data are shown based on the number of lanes, whether the collision occurred on wet or dry pavement, whether it occurred during night or day, and whether the collision resulted in fatalities. The engineer writing the technical study will obtain the Traffic Accident Surveillance and Analysis System data. NOTE: Safety data are also used to support the purpose and need discussion in Chapter 1 for safety projects.
4. Various transportation demand management guidance materials. These are useful when a project involves multi-modal infrastructure, such as for buses, carpools, rail, cycles. These documents can help support projects involving High-Occupancy Vehicle lanes, transit ways (barricade-separated High-Occupancy Vehicle lanes), bicycle lanes, and other work on conventional highways, and even some transportation system management tools such as closed-circuit TV. Check with Transportation Planning for these materials.
5. Regional traffic demand models.
6. Pavement management systems.
7. See the [Highway Design Manual](https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm) for more information.
8. Senate Bill 743. Please see the CEQA Evaluation chapter of this document for an analysis of VMT and induced demand.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) with their completion date(s). Define the study area for the transportation and traffic analysis and describe existing conditions in the study area. As noted above, this section of the document presents the results of the travel demand modeling used to forecast future conditions in order to comply with federal laws and regulations related to design standards for Federal-aid highways, air quality conformity analysis, and the noise analysis required under 23 CFR 772. Members of the community may have an interest in this data as well.
2. Discuss the general transportation system in the area of the project. This discussion should be commensurate with the complexity and scale of the project. Projects that increase highway capacity will require a more thorough discussion of the regional multi-modal transportation system than will a smaller project (such as a short auxiliary lane addition).  
     
   All traffic data should be shown for both directions of travel and for morning and evening peak periods. Show modeled data for all these categories for 20 years beyond the completion of project construction.
3. Coordinate with local jurisdictions to see if there is a master bicycle trails or active transportation plan.
4. If bicycle and pedestrian studies were conducted, discuss the results.
5. Check with transit agencies in the area in order to accurately describe the existing transit system.
6. If the project has the potential to affect coastal access, additional technical information related to coastal public access and/or coastal recreation areas may be needed, such as traffic and parking demand studies, inventories, and maps of existing and planned public access and recreation areas. Projects that may affect coastal access and recreation include projects located along or near the shoreline or coastal recreation area (including beaches, parks, trails, and inland waterbodies) and/or projects that have the potential to temporarily or permanently impact access and recreation opportunities due to physical displacement of land or parking resources used for such uses, public pullouts or viewing areas or changes in traffic patterns along critical access corridors.

#### Environmental Consequences

1. Compare the existing, future no-build, and design-year traffic operations. This data is usually presented as absolute volume and speeds, by segment, and for the total route. Travel time, number of vehicles served, number of persons served, etc., may also be shown. VMT may also be included here, but be sure to note the source of the numbers (i.e., travel demand model, National Center for Sustainable Transportation calculator, both, or another source). Whatever data is utilized for the analysis it should be the based on the best available information. If the project is a safety project, how will it improve safety? Provide a discussion of the project’s overall contribution to travel accessibility and circulation, both during construction (construction impacts) and after completion of the project (long-term or operational impacts). The description of traffic operations may include the following items. NOTE: It is essential to compare single-occupancy vehicle and high-occupancy vehicle/high-occupancy toll numbers if the project includes building high-occupancy vehicle/high-occupancy toll facilities.
   1. **Travel time comparison** (existing and modeled): Usually expressed by comparing VMT and vehicle hours traveled. Compare all build alternatives to the existing and the future no-build or no-project alternative.
   2. **Peak period performance**: Show modeled top speeds during the period(s) of highest demand. Be sure to show all peak periods, including mid-day, if appropriate. A table to show average speeds may also be helpful to the reader. Again, compare all build alternatives to both existing conditions and the future no-build alternative.
   3. **Corridor travel time**: Comparisons between origin and destination pairs are helpful to the lay reader. Transportation planners can help obtain these data.
   4. **Volume/capacity ratio**: Show density of traffic on the freeway or roadway. This is another item that community members may be interested in.
   5. **Measures to lessen traffic/circulation impacts**: If these are proposed, provide a table showing the improved volume/capacity ratios, modeled for the future year, including a comparison of all build alternatives to the no-build alternative.
   6. **Freeway connector volumes**: Compare all build alternatives to the existing and the future no-build or no-project alternative if the project includes connector improvements.
   7. **Arterial impacts and intersection impacts** (existing and modeled): If the project will create any impacts to local streets and intersections, describe them.
2. Describe improvements to circulation (such as installing loop sensors and signals at intersections on conventional highways, or at on-ramps on freeways, adding turning lanes, adding an auxiliary lane to a freeway, building a barrier to impede unsafe turning, etc.).
3. Discuss adverse and/or beneficial impacts to the overall multi-modal transportation system. Will transit be adversely affected or benefit from the project. Does the project include active transportation components or does it adversely affect active transportation? Does the project provide critical connections to transit and/or active transportation facilities that improve overall accessibility in the region? Does the project reduce out of direction travel? Does the project reduce or increase VMT? Does the project improve the movement of critical goods and services? If the project is a safety project, how will it improve safety?
4. Will the project improve or negatively alter multi-modal transportation patterns for residents and businesses?
5. Is there a Transportation Management Plan? Strategies of a Transportation Management Plan include public information, motorist information, incident management, construction, demand management, and alternate routes or detours. NOTE: For projects on the State Highway System, the plan should be written by Traffic Operations staff. Examples of individual Transportation Management Plan elements include:
   1. Public Information – Brochures and mailers, press releases/media alerts, paid advertisements, project website, public meetings/hearings, etc.
   2. Motorist Information – Traffic radio announcements, changeable message signs, temporary motorist signs, etc.
   3. Incident Management – Traffic management teams, Intelligent Transportation Systems, surveillance equipment, tow/freeway service patrol, etc.
   4. Construction – Lane requirement charts, construction staging, traffic handling plans, full facility closures, etc.
   5. Lane Modifications – Reduced lane widths or lane closures, reduced shoulder width or shoulder closures, lane shifts, ramp closures, night work, incentives and disincentives, innovative construction techniques, etc.
   6. Demand Management – Telecommuting, ramp metering, variable work hours, truck/heavy vehicle restrictions, transit service improvements or incentives, ridesharing/carpooling incentives, etc.
   7. Alternate Routes/Detours – Offsite detours and use of alternate routes, signal timing/coordination improvements, temporary traffic signals, turn restrictions, parking restrictions, etc.
6. Transportation Management Plans may also include agreements with local agencies to provide enhanced infrastructure on arterial roads or intersections to deal with detoured traffic. We may also contract with local agencies for traffic personnel, especially for special event traffic through or near the construction zone. The enhancements must be temporary if federal funds are used.
7. Describe the public input process: How has the public been involved in learning about the project, including impacts and proposed measures to minimize harm? The cycling and pedestrian public should also be included as part of the scoping process to ensure the inclusion of bike- and pedestrian-friendly design elements in the project. Note this participation here. Include a summary of public input during the early planning phases of the project.
8. What impacts will occur during construction (accessibility for vehicles, transit, bicycles, and pedestrians)? Be sure that active transportation advocacy groups are included in planning the detour.
9. Discuss compliance with the Americans with Disabilities Act.
10. Discuss impacts to access to coastal resources and/or coastal recreation areas such as beaches, parks, trails (including existing and planned segments of the California Coastal Trail) and inland waterbodies. Evaluate consistency with applicable coastal policies and ordinances. For example, explain how the project facilitates non-motorized modes of transportation and maximizes public access to the shoreline. The status of the Coastal Trail in the vicinity should be discussed, as well as consideration for interconnecting trail systems and for providing safe roadway crossings. This section should characterize unavoidable permanent or temporary access impacts caused directly or indirectly by the project. Describe how public access for pedestrians and bicyclists would be provided under each alternative. Information may also need to address whether there are any impacts to “low-cost visitor and recreational facilities.”

#### Avoidance, Minimization, and/or Mitigation Measures

Describe any additional measures (beyond design elements and standardized measures) that have been identified to lessen adverse impacts. Remember to state what the measure would do and why we are proposing it. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.

### Visual/Aesthetics

#### Regulatory Setting

NEPA establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically (emphasis added) and culturally pleasing surroundings (42 USC 4331[b][2]). FHWA, in its implementation of NEPA (23 USC 109[h]), also directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state “with…enjoyment of aesthetic, natural, scenic and historic environmental qualities” (Public Resources Code Section 21001[b]).

California Streets and Highways Code Section 92.3 directs Caltrans to use drought resistant landscaping and recycled water when feasible and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

**GUIDANCE**

A Visual Impact Assessment should be prepared for every project to consider any change to the visual environment, for example by removing vegetation, or constructing cut and fill slopes or structures such as bridges and walls, or installing signs or lighting, etc. The Visual Impact Assessment will be prepared by, or under the direction of, a licensed Landscape Architect. The level of Visual Impact Assessment to be prepared is determined using the [Visual Impact Assessment Questionnaire](https://dot.ca.gov/programs/design/lap-visual-impact-assessment/lap-via-questionnaire). For detailed information about visual analysis, see the SER, Volume 1, Chapter 27, “Visual and Aesthetics Review.”

The FHWA [Guidelines for the Visual Impact Assessment for Highway Projects](https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx) provides detailed guidance on how to conduct a visual assessment for federal or Federal-aid highway projects. NOTE: The process outlined in the guidance does not address CEQA specific requirements for determining potential impacts to scenic resources within scenic highways and those impacts caused by light and glare. In the environmental document, summarize the steps and results of the FHWA visual impact assessment.

The basic steps in the process are:

1. Define the project location and setting.
2. Identify landscape units and key views and define these terms for the reader.
3. Analyze existing visual resources, changes to those resources, and viewer response (attributes such as form, line, color, texture, dominance, scale, diversity, and continuity that are used to describe visual character—and vividness, intactness, and unity that are used to describe visual quality—should be defined for the reader).
4. Depict or describe the visual appearance of project alternatives.
5. Assess the visual impacts of project alternatives.
6. Propose measures to offset visual impacts. The purpose of these measures is to avoid, minimize, and/or mitigate adverse visual impacts.
7. For CEQA documents, the measures proposed for replanting must follow the guidance in Section 92.3 of the Streets and Highways Code.
   1. Landscaping shall be drought resistant whenever feasible.
   2. Caltrans shall use recycled water for irrigation when practicable.
   3. When appropriate and consistent with integrated pest management strategies as defined in subdivision (d) of Section 14717 of the Government Code, landscaping shall include California native wildflowers and native and climate-appropriate vegetation as an integral and permanent part of the planting design, with priority given to those species of wildflowers and native and climate-appropriate vegetation that will help rebuild pollinator populations.

**Writing the Document**

#### Affected Environment

1. List all applicable technical report(s) along with completion date(s). Using the information in the Visual Impact Assessment, describe the project’s visual setting, and identify landscape units, key views, and viewers in the study area. Discuss the visual resources, including the visual character and visual quality.
2. Indicate whether any portion of the project is within an officially designated scenic highway or a highway eligible for designation and if this segment includes scenic resources (e.g., a tree that displays outstanding features of form or age; a unique or massive rock formation; a historic building that is a rare example of its period, style, or design). Refer to the scenic resource evaluation in the Visual Impact Assessment for this information.

NOTE: The Caltrans Landscape Architect may also be called on to help determine whether the proposed project would affect the setting of a historic and/or Section 4(f) resource. Include this in the Cultural Resources and/or Section 4(f) sections of the document. The discussions can be cross-referenced in the Visual/Aesthetics section.

#### Environmental Consequences

1. Using information from the Visual Impact Assessment, describe the visual appearance of the project alternatives and how the project would affect the landscape units and key views. Discuss the resource change, viewer response, and visual impact. Include visual simulations, if applicable, in the environmental document to show the before and after conditions.
2. Discuss temporary construction impacts.
3. If context sensitive solutions have been included in the proposed project, describe those here. Explain how these contextual elements such as textured noise barriers, colored concrete or asphalt, highway plantings, etc., help generate public acceptance of the project, reflect the unique character of the community, and provide compatibility with the existing visual resources (see “good design” elements provided in the Project Description section of the Visual Impact Assessment). For information on context sensitive solutions, please see [FHWA’s Context Sensitive Solutions website](https://www.fhwa.dot.gov/planning/css/) and [FHWA’s Context Sensitive Solutions Primer](https://www.fhwa.dot.gov/planning/css/key_references/css_primer/).
4. Discuss whether the project has the potential to affect any identified scenic resources within an officially designated scenic highway or a highway eligible for designation. The scenic highway program protects and enhances California’s natural scenic beauty by allowing county and city governments to apply to Caltrans to establish a scenic corridor protection program. If the project is within the boundaries of a scenic corridor protection program, the environmental document must discuss whether the project is consistent with that program. For more information about scenic highways, please see Caltrans’ [Scenic Highway Program website](https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways).
5. Discuss potential visual effects of public views to shoreline and inland coastal resources, if applicable, and discuss consistency with applicable coastal policies and ordinances. For projects that may affect coastal resources or that are in the coastal zone, additional technical information may be necessary to evaluate potential effects on public views to and along the shoreline, recreation and open spaces areas, significant landforms, waterbodies, and inland mountains, as well as changes in visual character of the project area. Information necessary may include a visual impact assessment, including but not limited to, line-of-site analyses, visual simulations, sketches and photographic examples of project features including signage, bridge sections, railings, retaining walls, sound walls, and landscaping. In some instances, changes in visual character and/ or views to developed areas that consist of special communities, usually designated as such in Local Coastal Programs, must also be considered. A visual assessment, along with visual simulations of the proposed project, is typically prepared by a landscape architect and required for any project located in a visual protection overlay area as identified in a certified Local Coastal Program, or for a project located within an area adjacent to the shoreline or parkland, areas consisting of steep terrain and/or significant vegetation, or for projects that have the potential to block public views to shoreline or inland scenic resources. The visual assessment should include public views both to and from the proposed project. For example, the evaluation may include a discussion of impacts of bluewater views, loss of views to open space areas and inland hillsides and mountains, substantial change in the visual character of the area, etc.
6. For Local Assistance projects, the consistency of the project with applicable visual quality and/or design policies contained in the local general plan should be discussed.

#### Avoidance, Minimization, and/or Mitigation Measures

Consistent with the guidance, propose methods to avoid, minimize, and/or mitigate adverse visual impacts. State how the proposed measure would avoid, minimize, and/or mitigate each visual impact that has been identified. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.

**Additional Guidance**

* [SER, Volume 1, Chapter 27, “Visual and Aesthetics Review”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-27-visual-aesthetics-review)

### Cultural Resources

**GUIDANCE FOR REGULATORY SETTING**

* If a Regulatory Setting is included in the document, use the paragraphs below that are applicable to the project.
* Other federal and state laws and regulations also apply to cultural resources. See the [SER, Volume 2, Chapter 1, “General Information,”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-2-cultural-resources) for a more complete listing and descriptions. Include those other laws and regulations as applicable to the project.
* Generally, Public Resources Code Section 5024 does not apply to Local Assistance projects unless a project includes state-owned historical resources.

#### Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal law, cultural resources that meet certain criteria of significance are referred to as “historic properties,” and “traditional cultural properties.” Under state laws cultural resources that meet certain criteria of significance are referred to as “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources are described below.

The National Historic Preservation Act of 1966, as amended, sets forth national policy and procedures for historic properties that are, included in or eligible for listing in the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). Caltrans has entered into a Programmatic Agreement with FHWA, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the U.S. Army Corps of Engineers’ Sacramento District, San Francisco District, and Los Angeles District which streamlines and delegates certain responsibilities for Section 106 compliance to Caltrans for projects with FHWA involvement. FHWA’s responsibilities under the Programmatic Agreement have been further delegated to Caltrans under the NEPA Assignment Program.

As the project is enter partially if applicable located on lands enter administered or owned as appropriate by the enter name of tribe/federal agency, the Caltrans Section 106 Programmatic Agreement enter does not apply/was requested not to be used by the federal agency and consultation will occur under the National Historic Preservation Act implementing regulations.

The Archaeological Resources Protection Act applies when a project may involve archaeological resources located on federal or tribal land. The Archaeological Resources Protection Act requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

CEQA requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. Public Resources Code Section 5024.1 established the California Register of Historical Resources and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the California Register of Historical Resources and, therefore, a historical resource. In 2014, Assembly Bill 52 added the term “tribal cultural resources” to CEQA, and Assembly Bill 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources. Defined in Public Resources Code Section 21074(a), a tribal cultural resource is a California Register of Historical Resources or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource.

Public Resources Code Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the National Register of Historic Places listing criteria. It further requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register of Historic Places or are registered or eligible for registration as California Historical Landmarks. Caltrans has entered into a Memorandum of Understanding with the California State Historic Preservation Officer which streamlines and delegates certain responsibilities for Public Resources Code 5024 compliance to Caltrans for projects involving state-owned resources.

**GUIDANCE**

This section of the environmental document discloses the project’s effects, or impacts, on cultural resources listed in or eligible for listing in the National Register of Historic Places and/or the California Register of Historical Resources, how those impacts were determined, and whether and how impacts can be avoided or lessened.

Not all information about cultural resources can be fully disclosed to the public. The location of archaeological sites and confidential information provided by California Native American tribes are exempt from disclosure to the public by law in part, to protect sites from looters. Prior written consent to disclose information provided by a California Native American tribe during the environmental review process is necessary before some or all of that information can be disclosed to the public. A tribally-approved confidential appendix or summary may be included in the document.

**Writing the Document**

If a proposed project involves several different types of cultural resources, the clarity of the document may be improved if the discussion is divided by resource type— built environment, archaeological sites—or those with cultural or traditional values—although these types may overlap.

#### Affected Environment

1. Briefly list cultural resources studies completed for the project along with completion dates— Screened Undertaking, Historic Property Survey Report, Finding of Effect, etc.
2. Briefly discuss the methods used to support studies—records searches, field surveys, testing, Native American consultation, etc.—and describe the area of potential effects.
3. Using the Historic Property Survey Report and other cultural resources technical studies, discuss the cultural resources (historic properties, historic sites, historical resources, and/or tribal cultural resources) evaluated within the area of potential effects (omitting confidential information provided by California Native American tribes and specific location information for archaeological sites as discussed above). **If there are no cultural resources within the area of potential effects, there’s no need to write a lengthy Cultural Resources section, briefly describe the studies completed, methods used, and the finding.** In Section 106 language, if no historic properties are present, there is a finding of “No Historic Properties Affected.”
4. Discuss the significance of each evaluated cultural resource within the area of potential effects (i.e., whether it is listed in or eligible for listing in the National Register of Historic Places or the California Register of Historical Resources (including tribal cultural resources), and whether it is a significant resource for the purposes of CEQA). Note that a cultural resource determined eligible for listing in the National Register of Historic Places or California Register of Historical Resources is considered to have the same status as a listed resource for purposes of the project or undertaking.

#### Environmental Consequences

1. Using information from the cultural resources technical reports (Historic Property Survey Report, Finding of Effect, etc.), discuss the anticipated effects finding for each resource and for the project as a whole. There are four possible findings when cultural resources are present within the project limits:
   1. No Historic Properties Affected
   2. Finding of No Adverse Effect with standard conditions
   3. Finding of No Adverse Effect
   4. Finding of Adverse Effect

If the area of potential effects contains more than one historic property, it is possible that the project may have no adverse effect on some historic properties, but an adverse effect on others. Discuss the potential effects of each alternative on each identified significant cultural resource. For each resource listed in or eligible for listing in the National Register of Historic Places, discuss whether the project would alter the characteristics that make the resource eligible, and whether or not the project will have an effect on the resource.

In addition to discussing the effects on each resource, clearly state the Section 106 finding for the project (undertaking) as a whole. The finding for the undertaking will be at the highest level of effect found for any one historic property within the area of potential effects. For example, if the project would have “no adverse effect” to one resource but have an “adverse effect” to another, then the Section 106 finding for the project (undertaking) as a whole would be “adverse effect.” See example text below:

Within the project area of potential effects, there are three cultural resources that have been determined eligible for inclusion to the National Register of Historic Places. Two of the historic properties are prehistoric archaeological sites and the third is a 1920s residence. The two prehistoric archaeological sites will be avoided and protected by using an environmentally sensitive area for each. Thus, the project has a “no adverse effect with standard conditions” finding for the two prehistoric historic properties. The original stamped sidewalks and wrought iron fencing at the 1920s residence, which are contributing elements to the overall eligibility of the historic property, will be removed, therefore altering and removing characteristics that helped to qualify the historic property for the National Register. The project has an “adverse effect” on the 1920s residence/historic property, and a Memorandum of Agreement has been prepared, outlining the mitigation agreed to by Caltrans and the State Historic Preservation Officer. Overall, the project (undertaking) as whole has an adverse effect on historic properties. **[End example]**

1. Regardless of the determinations of eligibility, the following boilerplate statement dealing with the discovery of cultural materials or human remains **must** be included:

If archaeological resources are discovered within or near construction limits, do not disturb the resources and immediately:

1. Stop all work within a 60-foot radius of the discovery
2. Secure the area
3. Notify the Engineer

Caltrans investigates the discovery. Do not move archaeological resources or take them from the job site. Do not resume work within the radius of discovery until authorized.

If ordered, furnish resources to assist in the investigation or recovery of archaeological resources. This work is change order work.

If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission, who, pursuant to Public Resources Code Section 5097.98, will then notify the most likely descendent. At this time, the person who discovered the remains will contact enter the project contact, e.g., District Environmental Branch so that they may work with the most likely descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable. **[End boilerplate]**

1. Discuss the results of consultation with State Historic Preservation Officer and/or if applicable (i.e., if project is partially or entirely on tribal lands), the Tribal Historic Preservation Officer and any other consulting parties (e.g., Native American tribes and interested parties [U.S. Army Corps of Engineers, historical societies, etc.]). Discuss the status of State Historic Preservation Officer and/or Tribal Historic Preservation Officer concurrence with the findings under Section 106. Include concurrence documentation in either a separate appendix or in the Comments and Coordination chapter. Include confidential information obtained from California Native American Indian Tribes in a Confidential Appendix or in the document itself as agreed to in writing by the California Native American Tribe.
2. Within the project vicinity, analyze all historic properties within the Section 106 area of potential effects to determine whether they are protected Section 4(f) resources. Briefly discuss and refer the reader to Appendix A. Chose the most appropriate example language provided below for your project and modify as needed.
   * If the project results in a Section 4(f) use, state that here using the following example language and document it in Appendix A.

There are historic properties protected by Section 4(f) of the Department of Transportation Act of 1966 within the project vicinity. The proposed project would result in a “use” of those properties as defined by Section 4(f). Please see additional details in Appendix A. **[End example]**

* + If there are Section 4(f) resources within the project vicinity but no use of these resources, clearly state that here using the following example language and document in Appendix A under the heading “Resources Evaluated Relative to the Requirements of Section 4(f).”

There are historic properties protected by Section 4(f) of the Department of Transportation Act of 1966 within the project vicinity. However, this project will not “use” those properties as defined by Section 4(f). Please see Appendix A under the heading “Resources Evaluated Relative to the Requirements of Section 4(f)” for additional details. **[End example]**

* + If there are potential Section 4(f) resource types within the project vicinity, but they do not meet the definition of a Section 4(f) resource clearly state that here using the following example language and document in Appendix A.

Section 4(f) of the Department of Transportation Act of 1966 provides protection for historic properties. However, it has been determined that the properties within the project vicinity do not meet the definition of a Section 4(f) resource. Please see Appendix A under the heading “Resources Evaluated Relative to the Requirements of Section 4(f)” for additional details. **[End example]**

* + If no historic properties are present state that here using the following example language:

Section 4(f) of the Department of Transportation Act of 1966 provides protection for historic properties. There are no historic properties present within the area of potential effects; therefore, there are no Section 4(f) historic sites affected by the proposed project. **[End example]**

1. If the project has the potential to affect cultural resources in the coastal zone, discuss impacts and discuss consistency with applicable coastal policies and ordinances.

#### Avoidance, Minimization, and/or Mitigation Measures

1. Discuss proposed avoidance, minimization, and/or mitigation measures for each identified significant cultural resource. Remember to state what the measures would do and why we are proposing them. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.
2. If the project would result in a Finding of Adverse Effect, then an approved signed Memorandum of Agreement is required before circulation of the final environmental document. A Memorandum of Agreement stipulates the responsibilities of FHWA, the State Historic Preservation Officer, Caltrans (as assigned by FHWA), and, if participating, the Advisory Council on Historic Preservation, the Tribal Historic Preservation Officer, or other consulting parties on measures that will be taken to avoid, minimize, and/or mitigate the effects of the undertaking on historic properties. Summarize those measures here.

**NOTE:** A signed Finding of Effect is required for the final environmental document unless there are limiting factors (e.g., a large project with several different alternatives or difficulties accessing private property for the necessary studies). If the project is to be phased in order to achieve Section 106 compliance, as agreed to by the Cultural Studies Office, then a project-level Programmatic Agreement must be executed before circulation of the final environmental document (just like the Memorandum of Agreement) and included in the final environmental document.

The Memorandum of Agreement process is described at the [Advisory Council on Historic Preservation’s Guidance on Agreement Documents website](https://www.achp.gov/initiatives/guidance-agreement-documents).

**NOTE:** For the final environmental document, documentation of the State Historic Preservation Officer or Tribal Historic Preservation Officer concurrence or the signed Memorandum of Agreement must be included as an appendix or in the Comments and Coordination chapter.

## PHYSICAL ENVIRONMENT

### Hydrology and Floodplain

#### Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. FHWA requirements for compliance are outlined in 23 CFR 650 Subpart A.

To comply, the following must be analyzed:

* The practicability of alternatives to any longitudinal encroachments.
* Risks of the action.
* Impacts on natural and beneficial floodplain values.
* Support of incompatible floodplain development.
  + Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

**GUIDANCE**

Hydraulic information for the environmental document is provided in the Location Hydraulic Study, Summary Floodplain Encroachment Report, and/or a Floodplain Evaluation Report. A Location Hydraulic Study is prepared by a registered engineer who has hydraulics expertise. If, based on the results of the Location Hydraulic Study, either: (1) a significant encroachment on a floodplain, or (2) an inconsistency with existing watershed and floodplain management programs, or (3) uncertainty exists about what impacts will occur, then a Floodplain Evaluation Report must be prepared. If no encroachment or impacts to the floodplain will occur, then a Summary Floodplain Encroachment Report will be prepared. NOTE: For local agency transportation projects off the State Highway System, the Location Hydraulic Study, the Summary Floodplain Encroachment Report, and the Floodplain Caltrans Reviewers Checklist are available for use on the [Local Assistance Resources and Forms page](https://dot.ca.gov/programs/local-assistance/environmental/local-environmental-issues) with appropriate local agency signature approval forms. For Local Assistance projects, the Summary Floodplain Encroachment Form is jointly approved by the District Local Assistance Engineer and the District Environmental Office Chief (or designee).

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s). Where applicable, the Affected Environment section should include a description of the existing floodplain; its natural and beneficial values and policies; and procedures and orders relating to hydraulics.
2. The base 100-year floodplain can be shown using Federal Emergency Management Agency maps, National Flood Insurance Program maps, or other maps developed by the highway agency. The maps **must** be included in the document. If the National Flood Insurance Program maps do not exist, the agency must develop the needed maps so the floodplain can be identified.
3. If the project is not located within a 100-year base floodplain, state this in the RESOURCE TOPICS DISMISSED FROM ANALYSIS section.

#### Environmental Consequences

If an increase in the base floodplain elevation is expected, a hydraulic computer model must be run to establish the amount of increase to determine the floodplain encroachment impacts.

A “significant encroachment” as defined in 23 CFR 650.105 is a highway encroachment and any direct support of likely base floodplain development that would involve one or more of the following construction or flood-related impacts:

* A significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route;
* A significant risk (to life or property); or
* A significant adverse impact on natural and beneficial floodplain values.

**NOTE: The document MUST state whether or not there is a significant floodplain encroachment.**

Include a summary of any coordination with local, state, and/or federal water resources and floodplain management agencies (especially the Federal Emergency Management Agency) because of an encroachment on a regulatory floodway, increase in the base flood elevation, and any subsequent actions such as the need for a floodplain map revision. When there is a significant encroachment and an “Only Practicable Alternative Finding” is required (see below), FHWA must approve the significant floodplain encroachment, even under NEPA Assignment. For the final environmental document, this concurrence must be included in the Comments and Coordination chapter or included as an appendix.

Be certain to discuss the relevant project features (including selection of alternate sites for improvements, elevated structures, etc.) that have been incorporated into the project to avoid or minimize the project’s environmental consequences. Additional measures may include basins and the number of drainage inlets.

NOTE: [Executive Order 11988](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1EO11988) requires that when a floodplain risk assessment (Floodplain Evaluation Report) is prepared, the public must be given the opportunity for early review and comment. It also requires that the risk assessment be filed with the State Clearinghouse. A reference to encroachments on the base floodplain must be included in public notices, and any encroachments must be identified at public hearings.

#### Avoidance, Minimization, and/or Mitigation Measures

List any avoidance, minimization, and/or mitigation measures here. Refer to the Water Quality section, which may provide measures to lessen impacts on natural and beneficial floodplain values.

#### Only Practicable Alternative Finding

**NOTE:** This section is required in the final environmental document only when there is a significant encroachment into the base or 100-year floodplain.

If the preferred alternative causes significant encroachment in the floodplain, then a finding must be made that it is the only practicable alternative as required by [23 CFR 650](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1EO11988), Subpart A. The finding should refer to Executive Order 11988 and 23 CFR 650, Subpart A. It should be included in a separate subsection entitled "Only Practicable Alternative Finding" and must be supported by the following information:

1. The reasons the proposed action must be located in the floodplain.
2. The alternatives considered and why they were not practicable.
3. A statement indicating whether the action conforms to applicable state or local floodplain protection standards. Standard boilerplate language is provided below.

Based on studies carried out by enter "Caltrans" or "the [Local Agency], in accordance with guidance prescribed by Caltrans" as appropriate, as assigned by FHWA, no practicable alternative to the proposed alternative exists (23 CFR 650, Subpart A) and FHWA has concurred with this finding. All other potential alternatives are not possible within reasonable natural, social, and economic constraints. In addition, all measures to minimize potential harm within the floodplain, consistent with regulations issued under Section 2(d) of Executive Order 11988, have been taken. Further, a public notice, as required by Executive Order 11988, has been circulated containing an explanation of why the action is proposed to be located in the floodplain. **[End boilerplate]**

For Local Assistance projects, the District Local Assistance Engineer makes the "Only Practicable Alternative Finding" for significant floodplain encroachments and is responsible for coordinating with FHWA to obtain the “Only Practicable Alternative Finding” concurrence.

**Additional Guidance**

* [SER, Volume 1, Chapter 17, “Floodplains”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-17-floodplains)
* [Revised Guidance on Cooperating Agencies (March 1992)](https://flh.fhwa.dot.gov/resources/design/pddm/extras/CooperatingAgencies199203.pdf)
* [Technical Advisory T6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, October 30, 1987 (FHWA)](https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_preparing_env_documents.aspx)
* [National Flood Insurance Act of 1968 (42 USC Sections 4001 et seq.)](https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter50&edition=prelim)

### Water Quality and Stormwater Runoff

**GUIDANCE FOR REGULATORY SETTING:** For Local Assistance projects, if a regulatory setting is included for this section, it should be updated to reflect the laws and regulations the local agency must follow. Additional information regarding requirements for local assistance projects is included in the guidance section below.

#### Regulatory Setting

##### Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the U.S. from any point source (a discrete conveyance such as a pipe or a man-made ditch) unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System permit. This act and its amendments are known today as the Clean Water Act. The goal of the Clean Water Act is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The following are important Clean Water Act sections:

* Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
* Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request.
* Section 402 establishes the National Pollutant Discharge Elimination System, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. The State Water Resources Control Board and the Regional Water Quality Control Boards administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems.
* Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers. For more information, please see the Wetlands and Other Waters section.

##### State Requirements: Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. It predates the Clean Water Act and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” the definition of which is broader than the Clean Water Act definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by waste discharge requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act.

The State Water Resources Control Board and Regional Water Quality Control Boards are responsible for establishing the water quality standards (objectives and beneficial uses) required by the Clean Water Act and regulating discharges to ensure compliance with the water quality standards. In California, Regional Water Quality Control Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. In addition, the State Water Resources Control Board identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with the Clean Water Act Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (National Pollutant Discharge Elimination System permits or waste discharge requirements), the Clean Water Act requires the establishment of Total Maximum Daily Loads. Total Maximum Daily Loads specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

##### State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board administers water rights, sets water pollution control policy, issues water board orders on matters of statewide application, oversees water quality functions throughout the state by approving Basin Plans, Total Maximum Daily Loads, National Pollutant Discharge Elimination System permits, and regulates projects spanning more than one water board region. Regional Water Quality Control Boards are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

* **National Pollutant Discharge Elimination System Program**

*Municipal Separate Storm Sewer Systems*

Section 402(p) of the Clean Water Act requires the issuance of National Pollutant Discharge Elimination System permits for five categories of stormwater discharges, including municipal separate storm sewer systems. A municipal separate storm sewer system is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying stormwater.” The State Water Resources Control Board has identified Caltrans as an owner/operator of a municipal separate storm sewer systems under federal regulations.

To comply with the permit, Caltrans developed a statewide Stormwater Management Plan to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California.

*Construction General Permit*

The State Water Board has also issued a statewide Construction General Permit that regulates stormwater discharges from construction sites that result in a disturbed soil area of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the Construction General Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the Regional Water Quality Control Board. Operators of regulated construction sites are required to develop Stormwater Pollution Prevention Plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit. In accordance with Caltrans’ Stormwater Management Plan and Standard Specifications, a Water Pollution Control Program is necessary for projects with a disturbed soil area less than one acre.

**GUIDANCE**

The Water Quality section of the environmental document will rely heavily on input from District Environmental Engineering staff and other functional units, including Hydraulics, Biology, Design, and Geotechnical.

For local assistance projects off the State Highway System, local agencies may follow their local design standards, if they meet American Association of State Highway and Transportation Officials standards.

The local agency will determine whether or not its project has the potential to impact water resources (rivers, streams, bays, inlets, lakes, drainage sloughs) within or immediately adjacent to the project area. If the project has potential to impact water resources, the local agency prepares a “Water Quality Assessment Report.”

Because local agencies are the owner of the land where the construction activity is occurring, they are responsible for obtaining all permits and for signing certification statements (when necessary). Local agencies contact the U.S. Army Corps of Engineers, U.S. Coast Guard, California Department of Fish and Wildlife, Regional Water Quality Control Board, etc., to determine which permits are required for their construction activity.

The local agency is responsible for:

1. Obtaining all necessary permits, agreements, and approvals (National Pollutant Discharge Elimination System, 401/404, Encroachment, U.S. Coast Guard Bridge permit, etc.) from resource and regulatory agencies before advertisement for construction.
2. Fully complying with the conditions of permits.
3. Achieving all performance standards.
4. Preparing all required reports.
5. Providing a copy of each permit to the Caltrans District Local Assistance office for recording in LP2000.

Permits are typically applied for following NEPA approval and when the design is far enough along to determine and calculate specific impacts. Since two to three months are normally required to process a routine permit application involving a public notice, local agencies are strongly encouraged to apply for permits as early as possible to allow enough time to obtain all necessary approvals before beginning construction.

For large and complex projects, local agencies should request a “pre-application consultation” or informal meeting with the U.S. Army Corps of Engineers during the early planning phase of their project, and coordinate with the Caltrans District Local Assistance liaison to minimize the potential for delays later.

For capital and locally sponsored projects on the State Highway System during the Project Initiation Document phase, a decision will be made on whether or not a more detailed technical study of stormwater quality issues is necessary. If so, a water quality assessment report will be prepared by qualified staff (usually Environmental Engineering). The report will identify water quality concerns such as applicable stormwater regulations, receiving water bodies and their beneficial uses, existing water quality, project-related discharges, including stormwater, and potential water quality and stormwater impacts. The assessment should be conducted for each reasonable alternative to determine if there are any potential water quality impacts. The report would reference and generally describe both construction and permanent post-construction Best Management Practices, other mitigation measures, and implementation procedures included in the Stormwater Management Plan as the appropriate measures to avoid or minimize project-related storm and non-stormwater impacts to water quality. Specific Best Management Practices will be selected during later phases of project development but should be determined well in advance for projects requiring a Section 401 Water Quality Certification from the Regional Water Quality Control Board or a permit from the U.S. Coast Guard under the Rivers and Harbors Act.

For projects that will apply for a 404 Standard permit from the U.S. Army Corps of Engineers, the Section 404 (b)(1) Guidelines require that the Project Development Team provide an alternative analysis to illustrate that the least environmentally damaging practicable alternative has been selected. For local assistance projects off the State Highway System, the local agency or its consultant will provide an alternatives analysis. If impacts of the proposed project fall under the NEPA/404 Memorandum of Understanding Integration process for Environmental Impact Statement projects with five or more acres of permanent impact, the Memorandum of Understanding requires coordination by the signatory agencies, Caltrans, FHWA, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service at three checkpoints: (1) purpose and need; (2) identification of range of alternatives; and (3) preliminary determination of the least environmentally damaging practicable alternative and conceptual mitigation plan. For more information, see the [SER, Volume 1, Chapter 15, “Waters of the U.S. and the State”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-15-waters-of-the-us-and-state) and [Volume 3, Chapter 3, “Waters of the U.S. and the State.”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-3-biological-resources/ch-3-waters-of-the-us-and-state)

For local assistance projects off the State Highway System, the local agency is responsible for preparing the Stormwater Management Plan (if required by the Regional Water Quality Control Board). For capital and locally sponsored projects on the State Highway System, Caltrans has a Stormwater Management Plan to control, reduce, or eliminate pollutants from stormwater runoff from entering Caltrans’ drainage conveyances. The Stormwater Management Plan is the framework for developing and implementing stormwater permit requirements for Caltrans’ stormwater discharges. The Stormwater Management Plan addresses not only temporary impacts to water quality from construction activities, but long-term water quality impacts from new construction and major reconstruction. Some of the long-term water quality impacts may result from adding new net impervious surface to the project or changes in grade or hydraulics. While many of these issues may be addressed later in project development by Design (through use of the Project Planning Design Guide), the environmental document should address the reasonably foreseeable impacts to water quality from construction as well as permanent impacts from the finished project.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. The Affected Environment section discusses the project setting as it relates to water quality. The section should include a discussion of watersheds and receiving waters that are potentially affected by the project. A description of the watersheds and receiving waters for a project is included in the water quality assessment report. See the [Water Quality Assessment Report](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#water-quality) Recommended Content and Format guidelines.

#### Environmental Consequences

1. Information in the Environmental Consequences section will also be drawn from the project water quality assessment report. The majority of the discussion on impacts relating to water quality will be qualitative in nature. However, some projects located in watersheds with established Total Maximum Daily Loads, or identified by the Regional Water Quality Control Board or the State Water Resources Control Board as high quality waters (sources of municipal or domestic water supplies) or projects located in the Lake Tahoe Hydrologic Unit, the Mono Lake Hydrologic Unit, or projects with discharges into an Area of Special Biological Significance will probably require a quantitative analysis as well. Potential water quality impacts include increased concentrations of pollutants such as suspended solids, nutrients, pesticides, metals, pathogens, litter, biochemical oxygen demand, and total dissolved solids. Environmental consequences may include short-term and long-term impacts to aquatic life. This section should provide a simple discussion of the effects of water quality impacts to aquatic organisms and how impacts are recognized through aquatic bioassessments.
2. If the project has the potential to impact coastal water quality, discuss potential impacts and consistency with applicable coastal policies and ordinances. This analysis may need to include information such as the amount of existing versus new impervious surface and opportunities to treat runoff from both existing and new impervious surfaces.
3. Be certain to discuss the relevant project features and standardized measures, including best practices that have avoided or minimized the project’s environmental consequences.

#### Avoidance, Minimization, and/or Mitigation Measures

For projects requiring a 404 permit, the District Biologist must document that a sequence of avoidance, minimization, and/or compensation measures have been followed, in that order.

**Additional Guidance**

* [FHWA Environmental Review Toolkit: Stormwater Management and Water Quality](https://www.environment.fhwa.dot.gov/env_topics/water/stormwater.aspx)
* [Caltrans Environmental Stormwater website and Stormwater Management Plan](https://dot.ca.gov/programs/environmental-analysis/stormwater-management-program)
* [Caltrans Construction Stormwater website](https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control)
* [Caltrans Design Hydraulics and Stormwater website and Project Planning and Design Guide](https://dot.ca.gov/programs/design/hydraulics-stormwater)
* [Caltrans Local Assistance Procedures Manual](https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm), Chapter 6, “Environmental Procedures,” Exhibits 6-A and 6-B, Question #10.
* [SER, Volume 1, Chapter 4, “Environmental Considerations During Transportation Planning”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-4-environmental-considerations-during-transportation-planning)
* [SER, Volume 1, Chapter 15, “Waters of the U.S. and the State”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-15-waters-of-the-us-and-state)
* [SER, Volume 3, Biological Resources, Chapter 1, “General Information”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-3-biological-resources/ch-1-general-information)
* [SER, Volume 3, Biological Resources, Chapter 3, “Waters of the U.S. and the State”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-3-biological-resources/ch-3-waters-of-the-us-and-state)
* [33 CFR 320-330 & 40 CFR 230](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#CWA)
* [Section 404(b)(1) Guidelines](https://www.epa.gov/cwa-404/cwa-section-404b1-guidelines-40-cfr-230)
* [State Water Resources Control Board website](https://www.waterboards.ca.gov/)
* [Regional Water Quality Control Board websites and Basin Plans](https://www.waterboards.ca.gov/plans_policies/#plans)
* [State Water Resources Control Board Resolution 68-16](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1968/rs68_016.pdf)
* [33 USC 401](https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title33-section401&num=0&edition=prelim) (Rivers and Harbors Act)
* [33 USC 1341](https://uscode.house.gov/view.xhtml?path=/prelim@title33/chapter26/subchapter4&edition=prelim) (Clean Water Act Section 404)

### Geology/Soils/Seismic/Topography

#### Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using Caltrans’ Seismic Design Criteria. The Seismic Design Criteria provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities.

NOTE: Local regulations may apply as well. The general plan of the jurisdiction(s) affected should include references to local standards on this topic area and identification of hazards.

**GUIDANCE**

A preliminary geotechnical report is prepared by Geotechnical staff and should be the basis for this section.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Describe the geologic setting, physiography and topography, surface and groundwater, rock/soils, and geologic hazards including seismic hazards (strong ground shaking, liquefaction, fault rupture, tsunami, seismically-induced landslides, rock falls, settlement, and subsidence), non-seismically induced earth movement, volcanic hazards, and economical resources/mineral hazards.
3. If the project is in the coastal zone, additional technical information may be necessary such as wave run-up studies, evaluation of potential sea level rise impacts, assessment of potential shoreline erosion issues during the useful life of the project, and analysis of structural and non-structural alternatives for responding to these potential shoreline hazard issues. Not all projects will require these additional studies, so early coordination with the California Coastal Commission is critical to determine when such studies are appropriate and to avoid lengthy project delays.

#### Environmental Consequences

1. The more susceptible the project area is to erosion and geologic hazards, the greater the degree of impact from hazards such as earthquakes and liquefaction. Your evaluation should include the potential exposure of workers to these hazards during construction as well as the exposure of the traveling public once the project is completed.
2. Discuss design elements or measures needed to address geologic or topographic features as they relate to the structural integrity of the facility. Appropriate measures to protect structures from liquefaction include avoidance where possible, and soil and structural improvements where avoidance is not possible. Soil improvements may include mixing soils, vibro-compacting, and/or adding drainage to an area. Structural measures may include driving piles below liquefiable layers. The soil and structural improvements may be more suitably placed in the Project Description section of the document.
3. Refer to Best Management Practices related to erosion control identified in the Water Quality section of the document.
4. Discuss measures to limit damage from seismic hazards such as improvements to structures for earthquake protection. These would include designing structures that are able to withstand a defined level of ground acceleration and fault offset, where applicable.
5. Discuss briefly and/or reference design elements intended to reduce visual impacts to geologic or topographic features.
6. For CEQA documents, identify whether the project would result in the loss of a known mineral resource that would be or value to the region and the residents of the state; or result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.
7. Identify and discuss potential impacts to natural landmarks and landforms. Refer to the Visual/Aesthetics section of the document as appropriate.
8. If the project is in the coastal zone, discuss impacts from potential coastal hazards and discuss consistency with applicable coastal policies and ordinances.

#### Avoidance, Minimization, and/or Mitigation Measures

Discuss any avoidance, minimization, and/or mitigation measures here.

**Additional Guidance**

* [SER, Volume 1, Chapter 7, “Topography/Geology/Soils/Seismic”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-7-topography-geology-soils-seismic)
* [42 USC Section 7704 National Earthquake Hazards Reduction Program](https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title42-section7704&num=0&edition=prelim)
* [Historic Sites and Building Act of 1935](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1HSBA1935)
* [36 CFR 62 National Natural Landmarks Program](https://www.ecfr.gov/current/title-36/chapter-I/part-62)
* [Division of Engineering Services](https://dot.ca.gov/programs/engineering-services)

### Paleontology

#### Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils.

A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects.

**GUIDANCE FOR REGULATORY SETTING:** Include the following paragraphs as applicable.

54 USC 320301-320303 (Monuments, Ruins, Sites, and Objects of Antiquity) prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered “objects of antiquity” by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.

36 CFR 62 (National Natural Landmarks Program). Under this program property owners agree to protect biological and geological resources such as paleontological features. Federal agencies and their agents must consider the existence and location of designated national natural landmarks, and of areas found to meet the criteria for national significance, in assessing the effects of their activities on the environment under NEPA.

16 USC 470aaa (Paleontological Resources Preservation Act) prohibits the excavation, removal, or damage of any paleontological resources located on federal land under the jurisdiction of the Secretaries of the Interior or Agriculture without first obtaining an appropriate permit. The statute establishes criminal and civil penalties for fossil theft and vandalism on federal lands.

23 USC 305 (Archeological and Paleontological Salvage) authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 54 USC 320301-320303 above and state law.

Under California law, paleontological resources are protected by CEQA.

**GUIDANCE**

Projects that involve ground disturbance (e.g., excavating, scraping, grading, digging, drilling, blasting) have the potential to impact paleontological resources if these resources are located within the project area. A Paleontological Identification Report is prepared to determine whether there is the potential for resources to be affected by the project. If the Paleontological Identification Report indicated that the potential does exist and ground disturbance is an aspect of the project, a Paleontological Evaluation Report should be prepared by qualified personnel concurrent with the preparation of the environmental document. In some cases, the Paleontological Identification Report and Paleontological Evaluation Report are combined into one document. The Paleontological Evaluation Report should include a brief outline of the Paleontological Mitigation Plan if one will be needed. In many cases, once paleontological resources are identified on a project, the assessment work is contracted out. Please see the SER, Volume 1, Chapter 8, “Paleontology” for more details about these reports.

The Paleontological Identification Report and Paleontological Evaluation Report are not required for Local Assistance projects and are optional formats that may be used.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Identify the geologic units in the project area and discuss any geologic formations or features that may indicate the presence of paleontological resources. NOTE: It is Caltrans’ policy not to include the exact location of specific fossil localities on project maps, but a general geologic map that shows the formations and rock units described in the document or a generalized paleontological sensitivity map must be included in the document.
3. Discuss the scientific value and sensitivity of the geologic formations in the project area.

#### Environmental Consequences

1. Identify and discuss the potential for disturbing scientifically important paleontological resources. Be as specific as possible about the anticipated location, depth, and lateral extent of subsurface disturbances and the expected depth of sensitive formations. Will “original ground” be disturbed? Will the construction activities extend to a great enough depth to encounter the formations defined as paleontological resources? Are there areas of fill where original ground will not be disturbed?
2. Compare the alternatives. Explain whether each alternative is more or less likely to impact paleontological resources than the other alternatives considered.
3. If the project has the potential to affect paleontological resources in the coastal zone, discuss impacts and consistency with applicable coastal policies and ordinances.
4. If the project was modified to avoid impacts to paleontological resources, discuss that here and in the “Alternatives” section. Be certain to discuss the relevant project features (including standardized measures) that have been incorporated into the project to avoid or minimize the project’s environmental consequences.

#### Avoidance, Minimization, and/or Mitigation Measures

1. Indicate whether avoidance, minimization, and/or mitigation measures for paleontological resources are warranted.
2. Discuss the specific avoidance, minimization, and/or mitigation measures for paleontological resources appropriate for the project. Include cost estimates for the different alternatives. Remember to state what the measure would do and why we are proposing it. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter. Mitigation is the most common response since true avoidance or impact minimization measures are often difficult to implement because geologic formations extend for large distances and large enough design changes cannot be made. In most cases, mitigation measures are implemented when action must be taken to protect a paleontological resource. However, if there is a specific resource area limited in size and currently being studied by scientists or used for public education, design changes should be considered to avoid or minimize impacts to this specific area. The Paleontological Evaluation Report should include an outline of the Paleontological Mitigation Plan with mitigation measures that are appropriate for the project. Some examples of mitigation measures include:
   1. A project-specific Paleontological Mitigation Plan will be prepared by a qualified principal paleontologist (MS or PhD in paleontology) once adequate project design information regarding subsurface disturbance location, depth, and lateral extent is available.
   2. The qualified principal paleontologist will be present at pre-construction meetings to confer with contractors who will be performing ground-disturbing activities.
   3. Paleontological monitors, under the direction of the qualified principal paleontologist, will be on site to inspect cuts for fossils at all times during original ground disturbance involving sensitive geologic formations.
   4. When fossils are discovered, the paleontologist (or paleontological monitor) will recover them. Construction work in these areas may be halted or diverted by the Resident Engineer to allow the prompt recovery of fossils.
   5. Fossils collected during the monitoring and salvage portion of the mitigation program will be prepared to the point of identification, sorted, and cataloged.
   6. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited in a scientific institution with paleontological collections.
   7. A Paleontological Mitigation Report will be completed that outlines the results of the mitigation program.
   8. Where feasible, selected road cuts or large finished slopes in areas with critically interesting paleontological features may be left exposed to serve as important educational and scientific features. This may be possible if no substantial adverse visual or safety impacts result.
3. Specify whether permits will be necessary if paleontological mitigation is required. Permits are required when the transportation project involves property under the jurisdiction of certain governmental agencies such as the U.S. Department of Agriculture, the U.S. Department of Interior, the California Department of Parks and Recreation, and the California Coastal Commission.

**Additional Guidance**

* [SER, Volume 1, Chapter 8, “Paleontology”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-8-paleontology)
* [Omnibus Public Land Management Act of 2009 (16 USC 470aaa)](https://www.govinfo.gov/content/pkg/PLAW-111publ11/pdf/PLAW-111publ11.pdf)

### Hazardous Waste/Materials

#### Regulatory Setting

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 and the Resource Conservation and Recovery Act of 1976. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as “Superfund,” is to identify and cleanup abandoned contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include:

* Community Environmental Response Facilitation Act of 1992
* Clean Water Act
* Clean Air Act
* Safe Drinking Water Act
* Occupational Safety and Health Act
* Atomic Energy Act
* Toxic Substances Control Act
* Federal Insecticide, Fungicide, and Rodenticide Act
* Executive Order 12088 *Federal Compliance with Pollution Control Standards*

Section 121(d) of the Comprehensive Environmental Response, Compensation and Liability Act requires that remedial action plans include consideration of more stringent state environmental “Applicable or Relevant and Appropriate Requirements.” The 1990 National Oil and Hazardous Substances Pollution Contingency Plan also requires compliance with Applicable or Relevant and Appropriate Requirements during remedial actions and during removal actions to the extent practicable. As a result, state laws pertaining to hazardous waste management and cleanup of contamination are also pertinent.

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement the Resource Conservation and Recovery Act in the state. The Porter-Cologne Water Quality Control Act restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

**GUIDANCE**

Under federal and state environmental laws, acquisition of contaminated property creates permanent liability for the new property owner. Project proponents must exercise due diligence to prevent acquisition of contaminated property that may create long-term liability or detrimentally affect project cost, scope, or schedule.

An Initial Site Assessment must first be prepared to identify any potential sources of hazardous materials, waste, and substances in, and adjacent to, the project area. Sources of hazardous materials, waste, and substances that must be identified include, but are not limited to, active, inactive or abandoned gas stations, repair shops, dry cleaners, sites of industrial activity, vehicle dismantlers and recyclers, landfills of any type (whether permitted or unpermitted), and certain geologic formations that can contain naturally occurring asbestos. The Initial Site Assessment must also investigate past land uses on all alternatives to determine if there were activities on or adjacent to the project area that could result in contamination that would affect the project or cause long-term liability for the state. The Initial Site Assessment should also address asbestos or lead paint that may be found in older bridge structures and buildings and the potential presence of aerially deposited lead in roadside soils. Finally, the Initial Site Assessment should state whether or not treated wood is expected to be encountered.

The Initial Site Assessment typically begins with an electronic regulatory record search, often conducted by a contractor, that identifies possible land uses or environmental conditions that may be of concern. The hazardous waste technical specialist must conduct a field inspection of the parcels in and adjacent to the project area to look for and document land use, disturbance, materials, or facilities that may indicate past or current releases or activities that may release or use hazardous materials. The specialist should evaluate old maps (Sanborn maps, topographic maps, etc.), aerial photographs and as-built plans to identify facilities or sites that may potentially contain hazardous materials. The specialist must also review regulatory files for any reports of hazardous materials releases, cleanup, or use permits. The specialist may also interview current and past property owners, occupants, or users to determine if hazardous materials were used or released. Consult with the historian working on the project to determine past businesses and land uses on the parcel(s) in question. All of this information is compiled into the Initial Site Assessment document for your use.

The Initial Site Assessment has a shelf life and an Initial Site Assessment older than one year is considered out-of-date by federal regulations. If the ISA “expires” a short project/field review to determine if site conditions have changed is appropriate and generally all that is necessary to update the document.

If hazardous materials are suspected to have been released within the footprint of the project and they have not been adequately investigated by the property owner or a regulatory agency, invasive testing is necessary. A Preliminary Site Investigation must be completed to create a report confirming the presence of any suspected hazardous materials. If hazardous materials are known to be present, or found to be present by the Preliminary Site Investigation, a Detailed Site Investigation may be required to further define the lateral and vertical extent of the contamination, the physical state of the contamination, and the volume and concentration of hazardous materials. If contaminants are present in the construction zone, a Remedial Actions Options Report may be necessary to address its proper handling, cleanup, and disposal. The Initial Site Assessment, Preliminary Site Investigation, Detailed Site Investigation, and Remedial Actions Options Report support the environmental document by generating adequate information to estimate hazardous material effects to project cost, scope, and schedule. For information about the scheduling of the development of these reports, see the SER, Volume 1, Chapter 10, “Hazardous Materials, Hazardous Waste, and Contamination.”

When preparing the Hazardous Waste/Materials section of the environmental document, the Initial Site Assessment, Preliminary Site Investigation, Detailed Site Investigation, and/or Remedial Actions Options Report will provide the information you need to complete the Affected Environment section. The impacts and avoidance, minimization, and/or mitigation measures, if present and needed, will be explained in the detailed site investigation report. Information about the type (and level) of contamination and location (extent) of any hazardous materials and how it will be affected by each alternative (including avoidance, minimization, and/or mitigation measures and their costs) must be placed in the environmental document along with maps showing the location of the contaminated sites relative to each alternative. In addition, information about the proper handling of the materials, safety for workers, cleanup of the site, and disposal must be included in the Environmental Consequences and the Avoidance, Minimization, and/or Mitigation sections of the document.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Describe the type and scope of site assessments and investigations conducted.
3. Disclose any limitations of the site assessments or investigations.
4. Summarize the findings of the site assessments or investigations for each alternative considered. Include the types of contaminants, their concentration(s), and the level and extent of contamination in relationship to the project. (NOTE: The summary must address all alternatives considered.)
5. Document coordination or consultation with regulatory agencies, local entities, or property owners that was conducted during preparation of the reports, or that will be needed to address the contamination. Agencies may include the U.S. Environmental Protection Agency and/or state agencies such as the Department of Toxic Substances Control and Regional Water Quality Control Boards, and local agencies such as county environmental health departments. Regulatory oversight can have huge impacts to a transportation project schedule as well as to the project scope and cost. These issues must be addressed in the document.

#### Environmental Consequences

1. Disclose the presence of known or suspected hazardous materials, contamination, and contaminant concentrations that may be found during construction of each alternative and explain how it may impact project scope, schedule, and costs for each alternative. Include maps identifying the properties with known or suspected contamination and cross-sections identifying the extent of contamination of these properties. Include summary tables identifying contaminants and concentrations on each parcel, regulatory agencies involved, and the magnitude of expected impacts to project scope, schedule, and cost.
2. Discuss justification for avoiding or not avoiding known or suspected hazardous materials contamination within the preferred alternative or corridor alignment. Justify, in detail, any need for acquisition of contaminated parcels. Please note that any acquisition of contaminated property must comply with the approval process defined in [Project Delivery Directive 02-R1](https://dot.ca.gov/-/media/dot-media/programs/project-delivery/documents/pd-02-r1-2020-07-15-mdk-scb-07-24-20-a11y.pdf).
3. State whether further investigation or monitoring is needed, and who will do it (a property owner, the project proponent, etc.). Further investigation may be necessary to develop contract special provisions addressing the contamination before and/or during construction, and to satisfy environmental or worker health and safety requirements, or both. Discuss the expected scope of that investigation or monitoring, plus the timing and duration of any needed work.
4. Justify any postponement or elimination of further identified investigations.
5. Discuss the relevant project features and standardized measures, including best practices that have avoided or minimized the project’s environmental consequences. Examples include standard specifications for addressing hazardous waste and contamination, solid waste disposal, material containing aerially deposited lead, removal of yellow traffic stripe, etc.
6. For projects on the State Highway System, include a paragraph that defines aerially deposited lead, explains that Caltrans must follow the Aerially Deposited Lead Agreement with the Department of Toxic Substances Control, and states that soil containing aerially deposited lead can be reused on the project. After consultation with the Hazardous Waste Technical Specialist choose one of the following paragraphs for this purpose:

Use this boilerplate paragraph for urban projects and all projects expected to involve aerially deposited lead over the action levels (80 milligrams per kilogram total lead or 5 milligrams per liter soluble lead):

Aerially deposited lead from the historical use of leaded gasoline, exists along roadways throughout California. There is the likely presence of soils with elevated concentrations of lead as a result of aerially deposited lead on the state highway system right of way within the limits of the project alternatives. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, Aerially Deposited Lead Agreement (Agreement) between Caltrans and the California Department of Toxic Substances Control. This Agreement allows such soils to be safely reused within the project limits as long as all requirements of the Agreement are met. **[End boilerplate]**

OR

Use this boilerplate paragraph for extremely rural projects where it is less likely to encounter aerially deposited lead exceeding action levels:

Aerially deposited lead from the historical use of leaded gasoline, exists along roadways throughout California. If encountered, soil with elevated concentrations of lead as a result of aerially deposited lead on the state highway system right of way within the limits of the project will be managed under the July 1, 2016, Aerially Deposited Lead Agreement (Agreement) between Caltrans and the California Department of Toxic Substances Control. This Agreement allows such soils to be safely reused within the project limits as long as all requirements of the Agreement are met. **[End boilerplate]**

#### Avoidance, Minimization, and/or Mitigation Measures

1. List any avoidance, minimization, and/or mitigation measures here including any special considerations, contingencies, or provisions needed to handle known or suspected hazardous material contamination during right of way negotiation and acquisition, property management, design, and/or construction. Note that property owners are legally responsible to cleanup regulated contamination on their properties. For projects on the State Highway System, in accordance with Caltrans policy, these responsibilities must not be accepted by Caltrans as these are not transportation project costs.
2. Include a rough estimate of the added costs of avoiding, minimizing, and/or mitigating hazardous materials impacts (in terms of both dollars and time).
3. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter. Remember to state what the measures would do and why we are proposing them.
4. Describe any required further coordination, approvals, permits, and site closure negotiations needed with regulatory agencies. Define what efforts or submittals will be necessary, and estimate the duration needed to develop and submit these materials, and to obtain regulatory approvals.
5. Justify any postponement of coordination with regulatory agencies.

Reminder: The Notice of Availability (under CEQA) for the Initial Study or Environmental Impact Report must clearly document the presence of any contaminated properties listed under Section 65962.5 of the California Government Code (a.k.a. Cortese list) including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, and hazardous waste disposal sites. It must also include the information in the Hazardous Waste and Substances Statement required under subsection (f) of Section 65962.5. The Cortese “list” constitutes a set of lists identifying contaminated properties. The technical report should identify whether or not there is a Cortese site within the project area, but this information can also be found by doing a general property search on EnviroStor and Geotracker. This should provide the needed information but you can also review all the lists on the California EPA’s [Cortese List Data Resources website](https://calepa.ca.gov/SiteCleanup/CorteseList/) to ensure the property is not misclassified.

**Additional Guidance**

* [SER, Volume 1, Chapter 1, “Federal Requirements”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements)
* [SER, Volume 1, Chapter 10, “Hazardous Materials, Hazardous Waste, and Contamination.”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-10-hazardous-materials-hazardous-waste-contamination)
* [Hazardous Waste Management website](https://dot.ca.gov/programs/environmental-analysis/hazardous-waste)

### Air Quality

#### Regulatory Setting

The Federal Clean Air Act, as amended, is the primary federal law that governs air quality while the California Clean Air Act is its companion state law. These laws, and related regulations by the U.S. Environmental Protection Agency and the California Air Resources Board, set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards. The National Ambient Air Quality Standards and state standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA. In addition to this environmental analysis, a parallel “Conformity” requirement under the Federal Clean Air Act also applies.

##### Conformity

The conformity requirement is based on the Federal Clean Air Act Section 176(c), which prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan for attaining the National Ambient Air Quality Standards. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the National Ambient Air Quality Standards, and only for the specific National Ambient Air Quality Standards that are or were violated. Conformity requirements do not apply in unclassifiable/attainment areas for National Ambient Air Quality Standards and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the National Ambient Air Quality Standards. In California this includes carbon monoxide, nitrogen dioxide, ozone, and particulate matter (PM10 and PM2.5). Regional conformity is based on emission analysis of Regional Transportation Plans and Federal Transportation Improvement Programs that include all transportation projects planned for a region over a period of at least 20 years (for the Regional Transportation Plan) and 4 years (for the Federal Transportation Improvement Program). Regional Transportation Plan and Federal Transportation Improvement Program conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the Federal Clean Air Act and the State Implementation Plan are met. If the conformity analysis is successful, the Metropolitan Planning Organization, FHWA, and Federal Transit Administration make the determinations that the Regional Transportation Plan and Federal Transportation Improvement Program are in conformity with the State Implementation Plan for achieving the goals of the Federal Clean Air Act. Otherwise, the projects in the Regional Transportation Plan and/or Federal Transportation Improvement Program must be modified until conformity is attained.

Project-level conformity is achieved by demonstrating that:

* The project comes from a conforming Regional Transportation Plan and Transportation Improvement Program.
* The project has a design concept and scope that has not changed significantly from those in the Regional Transportation Plan and Transportation Improvement Program. "Design concept" means the type of facility that is proposed, such as a freeway or arterial highway. "Design scope" refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.
* Project analyses have used the latest planning assumptions and U.S. Environmental Protection Agency-approved emissions models.
* In PM areas, the project complies with any control measures in the State Implementation Plan.

Additional analyses (known as hot-spot analyses) may be required for projects located in carbon monoxide and PM nonattainment or maintenance areas to examine localized air quality impacts.

**GUIDANCE**

**Writing the Environmental Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Discuss the general climatic and meteorological conditions in the study area. Include prevailing winds, inland/coastal influences, prevalence of stagnant conditions or low inversions, geographic effects, etc. from the air quality technical report.
3. Document the air quality attainment and nonattainment status of the study area for all criteria pollutants and document the status of the State Implementation Plan and the state-level Air Quality Attainment Plan. The status should be documented in a table in most cases. State Implementation Plan status information can be obtained from the U.S. Environmental Protection Agency’s web page – [Status of State Implementation Plan Requirements for Designated Areas](https://www.epa.gov/air-quality-implementation-plans/sip-status-reports). In designated nonattainment areas for the criteria pollutants, the [U.S. Environmental Protection Agency Green Book](https://www.epa.gov/green-book) provides detailed information about area National Ambient Air Quality Standard designations, classifications and nonattainment/maintenance status. Attainment and nonattainment information for all national and state standards can be found at the [California Air Resources Board’s Air Quality Standards and Area Designations web page](https://ww2.arb.ca.gov/our-work/programs/state-and-federal-area-designations) and mapping for the national standards is available at the [U.S. Environmental Protection Agency’s Region 9 website](https://www.epa.gov/aboutepa/epa-region-9-pacific-southwest). Status information should be available in the air quality technical report.
4. The [Air Pollution Standards Table](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#aq), found on the Forms and Templates page of the SER, can be inserted into the environmental document to summarize air quality standards, the effects and typical sources of pollutants, and the attainment/nonattainment status of the project area. It may be most useful for areas that are nonattainment for a large number of pollutants but could also be used to ensure that all applicable pollutants are identified. Summarizing this information in a table reduces the need for extensive narrative discussion of health effects and sources.

**TABLE ##: STATE AND FEDERAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES**

**Insert the current “Air Pollution Standards Table” from the SER Forms and Templates page.**

Always check the [California Air Resources Board’s “State and National Air Ambient Quality Standards”](https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards) table and the [U.S. Environmental Protection Agency’s National Ambient Air Quality Standards web page](https://www.epa.gov/criteria-air-pollutants/naaqs-table) and update the information contained in the table used in the environmental document as needed before the circulation of the draft or final document and prior to the final NEPA decision, as well as reevaluations. Changes affecting the environmental document and/or conformity analysis can occur at any time.

#### Environmental Consequences

This section is broken down into four sections:

* Regional Conformity
* Project Level Conformity
* Additional Environmental Analysis
* Construction Impacts

##### Regional Conformity

For federal or joint projects, the air quality analysis and technical report must show compliance with the Federal Clean Air Act and NEPA (see the [SER, Volume 1, Chapter 11](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-11-air-quality) for general air quality information and [Volume 1, Chapter 38](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-38-nepa-assignment) for NEPA Assignment requirements), and the environmental document must also include a regional and a project level conformity statement, unless the project is exempt. NOTE: Unless located in an attainment/unclassified area, most projects requiring an Environmental Impact Statement or Environmental Assessment will not be fully exempt (see [40 CFR 93](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1LawFCAA), 126 and 128), and exemption from any more than regional analysis (40 CFR 93.127) is rare for projects processed with a Finding of No Significant Impact. Exemption from conformity requirements (regional and/or project-level) generally indicates that the project has a neutral effect on air quality.

Unless exempt, the proposed project, in an area subject to conformity requirements, must be consistent with the design, concept, and scope of the project as described in the most recent Regional Transportation Plan and Federal Transportation Improvement Program. Include a copy of the applicable pages from these plans in an appendix. The “open-to-traffic” delivery date must be within the same conformity analysis time period that the project is listed in for the Regional Transportation Plan and Federal Transportation Improvement Program conformity analysis.

If the project is in an “isolated rural” nonattainment area – where there is no Metropolitan Planning Organization in the nonattainment area – there will be no Regional Transportation Plan and Transportation Improvement Program conformity to which to refer. In this case for **regionally significant projects**, regional analysis must be done and documented for the project itself using procedures (including interagency consultation and public involvement) and criteria similar to those used by a Metropolitan Planning Organization. These projects must be included in the regional emission analysis for isolated rural nonattainment and maintenance areas, which are subsets of statewide transportation plans and included in the Federal Statewide Transportation Improvement Program, and must still demonstrate conformity according to the requirements of 40 CFR 93.118 and 93.119. See 40 CFR 93.109(g) for more information.

**NOTE: The final document must include FHWA’s Conformity Determination in** **the Required Consultation/Concurrence Documentation appendix or in the Comments and Coordination chapter.**

**Follow the steps below to determine which regional conformity language to put in your document.** **NOTE: A flowchart with the same information is also provided following the steps below.**

Step 1:

Is the project in an area that is subject to conformity? If area is non-attainment or maintenance for ozone, carbon monoxide, nitrogen dioxide, PM2.5, or PM10, then conformity applies. Check the [U.S. Environmental Protection Agency’s website](https://www3.epa.gov/airquality/greenbook/anayo_ca.html) for status.

* **YES:** Go to Step 2
* **NO:** Insert the following boilerplate text into the environmental document:

The project is located in an attainment/unclassified area for all current National Ambient Air Quality Standards. Therefore, transportation conformity requirements do not apply. **[End boilerplate]**

Step 2:

Is the project exempt from conformity (40 CFR 93.126 or 40 CFR 93.128 - signal synchronization)?

* **YES:** Briefly state in the document that the project is exempt per 40 CFR 93.126 or 93.128 and why it is exempt. Describe the specific category used in 40 CFR 93.126, and any interagency consultation done.
* **NO:** Go to Step 3

Step 3:

Is the project exempt from regional conformity requirements (40 CFR 93.127)?

* **YES:** Insert the following boilerplate text in the environmental document:

This project is exempt from regional (40 CFR 93.127) conformity requirements. Separate listing of the project in the Regional Transportation Plan and Transportation Improvement Program, and their regional conformity analyses, is not necessary. The project will not interfere with timely implementation of Transportation Control Measures identified in the applicable State Implementation Plan and regional conformity analysis. **[End boilerplate]**

* **NO:** Go to Step 4

Step 4:

Is the project in an area that has a Metropolitan Planning Organization?

* **YES:** Insert the following boilerplate text in environmental document:

The proposed project is listed in the enter title and year financially constrained Regional Transportation Plan enter amendment number if applicable which was found to conform by enter Metropolitan Planning Organization or Regional Transportation Planning Agency on enter date, and FHWA and the Federal Transit Administration made a regional conformity determination finding on enter date. The project is also included in enter Metropolitan Planning Organization or Regional Transportation Planning Agency financially constrained enter year Regional Transportation Improvement Program enter amendment number if applicable, pages enter number. See Appendix enter letter for copies of project listing. The enter Metropolitan Planning Organization or Regional Transportation Planning Agency and year Regional Transportation Improvement Program was determined to conform by FHWA and the Federal Transit Administration on enter date. The design concept and scope of the proposed project is consistent with the project description in the enter year Regional Transportation Plan, enter year Regional Transportation Improvement Program, and the “open to traffic” assumptions of the enter Metropolitan Planning Organization's or Regional Transportation Planning Agency's regional emissions analysis. **[End boilerplate]**

* **NO:** Insert the following boilerplate text in the environmental document:

A regional conformity analysis covering the enter name of nonattainment area for enter pollutant(s) – ozone, PM2.5, and PM10 are the only pollutants in these areas in California as of January 2018 was carried out that includes this project, and all reasonably foreseeable and financially constrained regionally significant projects for at least 20 years from the date that the analysis was started. The analysis used the latest planning assumptions, and the most recent emission models and appropriate analysis methods, as determined by Interagency Consultation on enter date of meeting. Based on this analysis, the region will be in conformity with the State Implementation Plan, including this project, based on the enter emission budget, project/no project, and/or project/baseline conformity test(s) and analysis procedures, as described in 40 CFR 93.109(l) or enter the most recent section number. The design concept and scope of the proposed project is consistent with the project design concept and scope used in the regional conformity analysis. Transportation Control Measures Timely Implementation evaluation was reviewed and concurred with by Interagency Consultation on enter date of meeting. **[End boilerplate]**

**Regional Conformity Language Flowchart**

Is the project exempt from conformity (40 CFR 93.126 or 40 CFR 93.128 - signal synchronization)?

Briefly state in the document that the project is exempt per 40 CFR 93.126 or 93.128 and why it is exempt. Describe the specific category used in 40 CFR 93.126, and any interagency consultation done.

Is the project exempt from regional conformity requirements (40 CFR 93.127)?

Insert the following boilerplate text in the environmental document: This project is exempt from regional (40 CFR 93.127) conformity requirements. Separate listing of the project in the Regional Transportation Plan and Transportation Improvement Program, and their regional conformity analyses, is not necessary. The project will not interfere with timely implementation of Transportation Control Measures identified in the applicable State Implementation Plan and regional conformity analysis. **[End boilerplate]**

Is the project in an area that has a Metropolitan Planning Organization?

Insert the following boilerplate text in environmental document: The proposed project is listed in the [enter title and year] financially constrained Regional Transportation Plan [enter amendment number if applicable] which was found to conform by [enter Metropolitan Planning Organization or Regional Transportation Planning Agency] on [enter date], and FHWA and the Federal Transit Administration made a regional conformity determination finding on [enter date]. The project is also included in [enter Metropolitan Planning Organization or Regional Transportation Planning Agency] financially constrained [enter year] Regional Transportation Improvement Program [enter amendment number if applicable], pages [enter number]. See Appendix [enter letter] for copies of project listing. The [enter Metropolitan Planning Organization or Regional Transportation Planning Agency and year] Regional Transportation Improvement Program was determined to conform by FHWA and the Federal Transit Administration on [enter date]. The design concept and scope of the proposed project is consistent with the project description in the [enter year] Regional Transportation Plan, [enter year] Regional Transportation Improvement Program, and the “open to traffic” assumptions of the [enter Metropolitan Planning Organization's or Regional Transportation Planning Agency's] regional emissions analysis. **[End boilerplate]**

Insert the following boilerplate text in the environmental document: A regional conformity analysis covering the [enter name of nonattainment area] for [enter pollutant(s) – ozone, PM2.5, and PM10 are the only pollutants in these areas in California as of January 2018] was carried out that includes this project, and all reasonably foreseeable and financially constrained regionally significant projects for at least 20 years from the date that the analysis was started. The analysis used the latest planning assumptions, and the most recent emission models and appropriate analysis methods, as determined by Interagency Consultation on [enter date of meeting]. Based on this analysis, the region will be in conformity with the State Implementation Plan, including this project, based on the [enter emission budget, project/no project, and/or project/baseline] conformity test(s) and analysis procedures, as described in 40 CFR 93.109(l) [or enter the most recent section number]. The design concept and scope of the proposed project is consistent with the project design concept and scope used in the regional conformity analysis. Transportation Control Measures Timely Implementation evaluation was reviewed and concurred with by Interagency Consultation on [enter date of meeting]. **[End boilerplate]**

**Yes**

**Yes**

**Yes**

**Yes**

**No**

**No**

**No**

Is the project in an area that is subject to conformity? If area is non-attainment or maintenance for ozone, carbon monoxide, nitrogen dioxide, PM2.5, or PM10, then conformity applies. Check the [U.S. Environmental Protection Agency’s website](https://www3.epa.gov/airquality/greenbook/anayo_ca.html) for status.

Insert the following boilerplate text into the environmental document: The project is located in an attainment/unclassified area for all current National Ambient Air Quality Standards. Therefore, transportation conformity requirements do not apply. **[End boilerplate]**

**No**

##### Project Level Conformity

1. On June 1, 2018, Transportation Conformity requirements under the Federal Clean Air Act section 176 (c)(5) ended for specified carbon monoxide maintenance areas (Refer to: U.S. Environmental Protection Agency’s Carbon Monoxide Maintenance Letter). This date marks 20 years after the effective date of the U.S. Environmental Protection Agency’s approval of the first 10-year maintenance plan and re-designation of areas from maintenance to attainment/unclassified for carbon monoxide (National Ambient Air Quality Standards). Under 40 CFR 93.102(b)(4) of the U.S. U.S. Environmental Protection Agency’s regulations, transportation conformity applies to maintenance areas through the 20-year maintenance planning period, unless the maintenance plan specifies that the transportation conformity requirements apply for a longer time period. Pursuant to the Federal Clean Air Act’s section 176(c)(5) and as explained in the preamble of the 1993 final rule, conformity applies to areas that are designated nonattainment or are subject to a maintenance plan approved under the Federal Clean Air Act section 175A.
2. If a project does not meet the June 1, 2018, Transportation Conformity requirements and is located in a nonattainment or maintenance area for carbon monoxide and/or particulate matter (PM2.5 and/or PM10), then additional hot-spot analysis and possible emission reduction measures for that pollutant may be required. Refer to the [Carbon Monoxide Protocol](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-11-air-quality) and the [U.S. Environmental Protection Agency PM Hot-Spot Analysis Guidance](https://www.epa.gov/state-and-local-transportation/project-level-conformity-and-hot-spot-analyses) documents for full details of hot-spot data and analysis needs; the following is only a summary.
   1. Include a map and table showing the project alternatives and receptor sites or grids used for any quantitative carbon monoxide or PM hot-spot analysis. Qualitative analysis may consider land uses rather than specific receptors; if that is done include a map showing the sensitive land uses considered in relation to the project. Also show (this may be on a separate map) the location of the monitoring stations used to establish background pollutant concentrations.
   2. For each “non-attainment” or “maintenance” pollutant, the environmental document must summarize the following information from the air quality technical report:
      1. Briefly describe the analysis process. For both carbon monoxide and PM, there is first a screening process and then a detailed analysis process.
      2. State any assumptions made for the purposes of doing the analysis.
      3. Provide results of the screening process, or of the detailed analysis with a comparison of the impacts and the proposed avoidance, minimization, and/or mitigation measures for each alternative.
      4. State conclusions on whether the project will cause (or, in a nonattainment area, worsen) any violations.
   3. Discuss whether or not the project is a project of air quality concern.

**NOTE:**

* Analysis for carbon monoxide is based on the Caltrans/University of California, Davis *Carbon Monoxide Protocol*, which includes both a screening procedure and a quantitative analysis method. Analysis for PM10 and PM2.5 is governed by the U.S. Environmental Protection Agency Hot-Spot Analysis Guidance. The hot-spot analysis requirements in the conformity process for both pollutants are outlined in 40 CFR 93.116 and 40 CFR 93.123. Details of the technical analysis, interagency consultation if required (for PM10 and PM2.5), and public notice must be documented in an Air Quality Conformity Analysis that supports this summary. [Example conformity language](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#aq) required in certain public notices under NEPA can be found in on the SER Forms and Templates page.
* Please see the Construction Conformity section below for construction conformity considerations.
* **For the final environmental document, include the date of the FHWA Conformity Determination and direct the reader to the letter, which must be included in the Comments and Coordination chapter or as an appendix.**

##### Additional Environmental Analysis

1. CEQA and NEPA Studies: Environmental documents need to consider more than just conformity analysis. The primary factors for determining whether a project has substantial air quality impacts under NEPA are the National Ambient Air Quality Standards. State standards, however, are important when determining impacts under CEQA. Long-term (operational) environmental analysis should include regional (indirect or cumulative) pollutant analysis (for ozone, especially); this may be based on the regional conformity analysis, if available, or a separate regional analysis if conformity requirements do not apply for ozone in a particular area. Comparative criteria pollutant emissions analyses are recommended in all areas, not just nonattainment/maintenance areas, to ensure for NEPA and CEQA purposes that the project would not create a violation that could put the area into nonattainment.
2. Asbestos Containing Material: If the project will demolish or rehabilitate a structure, in compliance with 40 CFR 61.145 under the National Emission Standards for Hazardous Air Pollutants, the project will provide written notification of the activities to the following:
   * If a project is located in a non-delegated district, a signed copy of the notification form must be submitted to the U.S. Environmental Protection Agency, address below. A copy of the notification may also be submitted to the California Air Resources Board (asbestos@arb.ca.gov).

U.S. Environmental Protection Agency Pacific Southwest, Region 9

75 Hawthorne Street

San Francisco, CA 94105

* + If a project is located in a delegated district, the air district has their own asbestos program and rules. Contact the air district for notification compliance requirements.

A list of non-delegated and delegated districts can be found on the [California Air Resources Board Renovation or Demolition Locations website](https://ww2.arb.ca.gov/our-work/programs/asbestos-neshap-program/renovation-or-demolition-locations).

Asbestos is not a criteria pollutant and hazardous waste asbestos reports will be included as a reference in the air quality report. For more information please see the U.S. Environmental Protection Agency’s “National Emission Standards for Hazardous Air Pollutants” regulations for asbestos ([40 CFR 61](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1LawFCAA) Subpart M), and the [California Air Resources Board’s Naturally Occurring Asbestos website](https://ww2.arb.ca.gov/resources/documents/naturally-occurring-asbestos-publications-maps).

1. Lead is normally not an air quality issue for transportation projects and only Los Angeles County (South Coast Air Basin) is in nonattainment for lead. No additional statewide control measures or programs are needed to comply with the national ambient air quality standard for lead (federal lead standard). However, control measures aimed at reducing lead emissions from large lead processing facilities in the South Coast Air Basin is part of the South Coast Air Quality Management District’s (South Coast District) lead nonattainment [State Implementation Plan (June 2012)](https://ww2.arb.ca.gov/sites/default/files/2022-12/lead_infsip.pdf)

Hazardous waste lead reports will be included as references in the air quality report.

1. Mobile Source Air Toxics (MSATs). NEPA analysis may also need to consider MSATs and other specific health-related issues. The U.S. Environmental Protection Agency has assessed an expansive list in their latest rule on the Control of Hazardous Air Pollutants from mobile sources and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System. In addition, the U.S. Environmental Protection Agency identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment. For projects warranting MSAT analysis, these 9 priority MSATs (Diesel PM, 1,3 Butadiene, Benzene, Formaldehyde, Acrolein [2-propenal], Naphthalene, Acetaldehyde, Ethylbenzene, and Polycyclic Organic Matter) should be considered. While FHWA considers these the priority MSATs, the list is subject to change and may be adjusted in consideration of future U.S. Environmental Protection Agency rules. For guidance on how to address MSATs in an environmental document, please refer to the [FHWA Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents (January 18, 2023)](https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/).

Clearly state which FHWA MSAT category listed below relates to the proposed project. Provide a description of the project category.

* + Category 1: Projects with No Meaningful Potential MSAT Effects, or Exempt Projects
  + Category 2: Projects with Low Potential MSAT Effects
  + Category 3: Projects with Higher Potential MSAT Effects

The following is example text that can be used to indicate the project category:

According to the FHWA’s Interim Guidance this project is classified as a category 2 project (Projects with Low Potential MSAT Effects). This project is expected to meet this category for the following reasons: enter reasons. **[End example]**

See the following steps for determining the appropriate MSAT category and additional information needed. **NOTE: A flowchart with the same information is also provided following the steps below.**

**NOTE:** California’s vehicle emissions control and fuel standards are more stringent than federal standards, and are effective sooner, so the effect on air toxics of combined state and federal regulations is expected to result in greater emission reductions, more quickly, than the FHWA analysis shows. The FHWA analysis, with modifications related to use of the California-specific EMFAC model rather than MOVES, would be conservative.

The appendices referenced below are from FHWA’s Updated Interim Guidance on MSAT Analysis in NEPA Documents (link above).

MSAT analysis differs for CEQA.

Step 1:

Does the project have the potential to produce meaningful MSAT effects?

* **YES:** Go to Step 2
* **NO:** No MSAT analysis is required, regardless of the class of NEPA environmental document. However, the project record should document the basis for the determination of “no meaningful potential impacts” with a brief description of the factors considered. Prototype language that could be included in the record is found in Appendix A of the FHWA Interim MSAT Guidance.

Step 2:

Does the project serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase emissions or exposure to MSAT emissions of sensitive populations or land uses?

* **YES:** **Projects with Low Potential MSAT Effects**:  
  For these projects, a qualitative assessment of emissions projections should be conducted. This qualitative assessment would compare the expected effect of the project on traffic volumes, vehicle mix, or routing of traffic, and the associated changes in MSATs for the project alternatives, based on VMT, vehicle mix, and speed. Appendix B of the FHWA Interim MSAT Guidance includes prototype language for a qualitative assessment. It would also discuss national trend data projecting substantial overall reductions in emissions due to stricter engine and fuel regulations issued by the U.S. Environmental Protection Agency. In addition, quantitative emissions analysis of these types of projects will not yield credible results that are useful to project-level decision-making due to the limited capabilities of the transportation and emissions forecasting tools. In addition to the qualitative assessment, a NEPA document for this category of projects must include a discussion of information that is incomplete or unavailable for a project specific assessment of MSAT impacts. This discussion would explain how air toxics analysis is an emerging field and current scientific techniques, tools, and data are not sufficient to accurately estimate human health impacts that would result from a transportation project in a way that would be useful to decision-makers. Also, it should contain a summary of current studies regarding the health impacts of MSATs. Prototype language for this discussion is contained in Appendix C of the FHWA Interim MSAT Guidance.

**NOTE:** California does not use the U.S. Environmental Protection Agency’s MOVES emissions model, but instead uses the latest version of the EMFAC model issued by the California Air Resources Board. Use of EMFAC for MSAT analysis requires “off-model” application of air toxic speciation factors and other information, or use of tools like CT-EMFAC (maintained by Caltrans).

* **NO:** Go to Step 3

Step 3:

**Projects with Higher Potential MSAT Effects**

Does your project create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location, or does your project create new or add significant capacity to urban highways, such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the annual average daily traffic is projected to be 140,000-150,000 or greater in any analysis year through the design year, and also proposed to be located in proximity to populated areas or in rural areas, in proximity to concentrations of vulnerable populations?

**NOTE:** The California Air Resources Board “[Air Quality and Land Use Handbook](https://ww2.arb.ca.gov/sites/default/files/2023-05/Land%20Use%20Handbook_0.pdf)” identifies the following land uses as particularly sensitive to MSATs: residential areas, schools, hospitals and other health care facilities, day care and other child care facilities, and parks and playgrounds.

* **YES:** You should contact your Headquarters Environmental Coordinator for assistance in developing a specific approach for assessing impacts.

This approach would include a quantitative analysis that would attempt to measure the level of emissions for the U.S. Environmental Protection Agency’s priority MSATs for each alternative, to use as a basis of comparison.

The NEPA document for this project would also include relevant prototype language on unavailable information included in Appendix C of the FHWA Interim MSAT Guidance.

**NOTE:**

* + MSATs listed by the U.S. Environmental Protection Agency are also listed as toxic air contaminants by the California Air Resources Board. The particulate matter fraction of diesel exhaust (Diesel PM) has also been identified by the California Air Resources Board as a toxic air contaminant.
  + California does not use the U.S. Environmental Protection Agency’s MOVES emission model, but instead uses the EMFAC model issued by the California Air Resources Board. Use of EMFAC for MSAT analysis requires “off-model” application of air toxic speciation factors and other information, or use of tools like CT-EMFAC (maintained by Caltrans).
  + If the analysis for a project in this category indicates meaningful differences in levels of MSAT emissions, mitigation options should be identified and considered. See Appendix E of the FHWA Interim MSAT Guidance for information on mitigation strategies.
* **NO:** Go to Step 4

Step 4:

Does your project not fall within any of these categories, but you think it has the potential to substantially increase future MSAT emissions?

* **YES:** Contact your Headquarters Environmental Coordinator for assistance in developing a specific approach for assessing impacts. Although not required, projects with high potential for litigation on air toxics issues may also benefit from a more rigorous quantitative analysis to enhance their defensibility in court.

**Analyzing MSATs in the NEPA Process for Highways**

**NOTE:** California’s vehicle emissions control and fuel standards are more stringent than federal standards, and are effective sooner, so the effect on air toxics of combined state and federal regulations is expected to result in greater emission reductions, more quickly, than the FHWA analysis shows. The FHWA analysis, with modifications related to use of the California-specific EMFAC model rather than MOVES, would be conservative.

The appendices referenced below are from [FHWA’s Updated Interim Guidance on MSAT Analysis in NEPA Documents](https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/).

MSAT analysis differs for CEQA.

**Projects with Low Potential MSAT Effects**

For these projects, a qualitative assessment of emissions projections should be conducted. This qualitative assessment would compare the expected effect of the project on traffic volumes, vehicle mix, or routing of traffic, and the associated changes in MSATs for the project alternatives, based on VMT, vehicle mix, and speed. Appendix B of the FHWA Interim MSAT Guidance includes prototype language for a qualitative assessment. It would also discuss national trend data projecting substantial overall reductions in emissions due to stricter engine and fuel regulations issued by the U.S. Environmental Protection Agency. In addition, quantitative emissions analysis of these types of projects will not yield credible results that are useful to project-level decision-making due to the limited capabilities of the transportation and emissions forecasting tools. In addition to the qualitative assessment, a NEPA document for this category of projects must include a discussion of information that is incomplete or unavailable for a project specific assessment of MSAT impacts. This discussion would explain how air toxics analysis is an emerging field and current scientific techniques, tools, and data are not sufficient to accurately estimate human health impacts that would result from a transportation project in a way that would be useful to decision-makers. Also, it should contain a summary of current studies regarding the health impacts of MSATs. Prototype language for this discussion is contained in Appendix C of the FHWA Interim MSAT Guidance.

**NOTE:** California does not use the U.S. Environmental Protection Agency’s MOVES emissions model, but instead uses the latest version of the EMFAC model issued by the California Air Resources Board. Use of EMFAC for MSAT analysis requires “off-model” application of air toxic speciation factors and other information, or use of tools like CT-EMFAC (maintained by Caltrans).

Does the project have the potential to produce meaningful MSAT effects?

No MSAT analysis is required, regardless of the class of NEPA environmental document. However, the project record should document the basis for the determination of “no meaningful potential impacts” with a brief description of the factors considered. Prototype language that could be included in the record is found in Appendix A of the FHWA Interim MSAT Guidance.

Does the project serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase emissions or exposure to MSAT emissions of sensitive populations or land uses?

**No**

**Yes**

**No**

**Yes**

**Projects with Higher Potential MSAT Effects**

Does your project create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location, or does your project create new or add significant capacity to urban highways, such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the annual average daily traffic is projected to be 140,000-150,000 or greater in any analysis year through the design year, and also proposed to be located in proximity to populated areas or in rural areas, in proximity to concentrations of vulnerable populations?

**NOTE:** The California Air Resources Board “[Air Quality and Land Use Handbook](https://ww3.arb.ca.gov/ch/landuse.htm)” identifies the following land uses as particularly sensitive to MSATs: residential areas, schools, hospitals and other health care facilities, day care and other child care facilities, and parks and playgrounds.

You should contact your Headquarters Environmental Coordinator for assistance in developing a specific approach for assessing impacts.

This approach would include a quantitative analysis that would attempt to measure the level of emissions for the U.S. Environmental Protection Agency’s priority MSATs for each alternative, to use as a basis of comparison.

The NEPA document for this project would also include relevant prototype language on unavailable information included in Appendix C of the FHWA Interim MSAT Guidance.

**NOTE:**

* MSATs listed by the U.S. Environmental Protection Agency are also listed as toxic air contaminants by the California Air Resources Board. The particulate matter fraction of diesel exhaust (Diesel PM) has also been identified by the California Air Resources Board as a toxic air contaminant.
* California does not use the U.S. Environmental Protection Agency’s MOVES emission model, but instead uses the EMFAC model issued by the California Air Resources Board. Use of EMFAC for MSAT analysis requires “off-model” application of air toxic speciation factors and other information, or use of tools like CT-EMFAC (maintained by Caltrans).
* If the analysis for a project in this category indicates meaningful differences in levels of MSAT emissions, mitigation options should be identified and considered. See Appendix E of the FHWA Interim MSAT Guidance for information on mitigation strategies.

Does your project not fall within any of these categories, but you think it has the potential to substantially increase future MSAT emissions?

Contact your Headquarters Environmental Coordinator for assistance in developing a specific approach for assessing impacts. Although not required, projects with high potential for litigation on air toxics issues may also benefit from a more rigorous quantitative analysis to enhance their defensibility in court.

**No**

**Yes**

**Yes**

1. Toxic Air Contaminants: Under CEQA, toxic air contaminants do not currently have guidance for analysis like MSATs. The Air Resources Board has found that there is no sufficient available scientific evidence to support the identification of a threshold exposure level for substances identified as toxic air contaminants (per California Code of Regulations, Title 17, Section, 93000), including diesel particulate matter. However, the California Air Resources Board had issued regulations to reduce emissions from mobile and stationary sources, collectively called Airborne Toxic Control Measures. Local air districts also developed rules to reduce risk from toxic air contaminants emissions. The project will comply with the law including local air district rules, if applicable, through the contract specifications during construction.  
     
   The California Air Resources Board made amendments to the in-use off-road regulation to reduce statewide emissions from off-road diesel fueled vehicles. The Off‑Road Regulation requires fleets to reduce their emissions by retiring older vehicles and replacing the retired vehicles with newer vehicles, repowering older engines, or installing verified diesel emission control strategies in older engines; and by restricting the addition of older vehicles to fleets (California Air Resources Board). The November 2022 amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation required in the California Code of Regulations, Title 13, Sections 2449(i)(1) – (4), state that beginning in January 1, 2024, no prime contractor or public works awarding body shall enter into a contract with a fleet or their listed subcontractors for which it does not have a valid Certificate of Reported Compliance (on use of renewable diesel) prior to entering into a contract with that fleet.  
     
   Local air districts also developed CEQA significance thresholds for certain pollutants such as nitrogen oxides, volatile organic compounds, PM10, PM2.5, sulfur oxides, carbon monoxide and lead, including toxic air contaminants and greenhouse gas (GHG), but these are not mandatory at this time.

For more information, see the following California Air Resources Board websites:

* [Airborne Toxic Control Measures](https://ww2.arb.ca.gov/resources/documents/airborne-toxic-control-measures)
* [Identified Toxic Air Contaminants](https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants)
* [Overview of Amendments to the In‑Use Off‑Road Diesel‑Fueled Fleets Regulation](https://ww2.arb.ca.gov/resources/fact-sheets/overview-amendments-use-road-diesel-fueled-fleets-regulation)
* [Final Regulation Order Attachment A-1](https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/off-roaddiesel/froa-1.pdf)

##### Construction Impacts

Short-term Impacts

If construction impacts are discussed under each resource heading instead of in a separate section, then temporary air quality impacts from construction activities need to be discussed here. While construction emissions need not be considered in conformity analysis where construction will last for less than five years, they may need to be considered for a wider variety of projects and shorter construction periods for both NEPA and CEQA. Construction impacts of a proposed project should be considered under CEQA guidelines; all construction-related air quality impacts should be considered, including GHG emissions estimation requirement to address Executive Order B-30-15 regardless of length of construction period. If construction will last longer than three years and/or will substantially impact traffic due to detours, road closures, and temporary terminations, then impacts of the resulting traffic flow changes may need to be analyzed. Changes in fleet mix, vehicle speed, and traffic volumes may be needed from design and traffic operations staff to assess changes from baseline during construction.

The primary construction emission impacts will usually be associated with dust and equipment exhaust emissions. Caltrans’ Standard Specifications (Section 14) require compliance by the contractor with all applicable air quality laws and regulations, and also include a fugitive dust control specification. Watering and general dust control efforts will be adequate to meet typical “nuisance” and “visible emissions” rules. In the [San Joaquin Valley](https://www.valleyair.org/), [South Coast Air Basin, Coachella Valley](http://www.aqmd.gov/home/rules-compliance/rules), [Imperial County](https://apcd.imperialcounty.org/), and some other areas, more specific rules that require certain procedures and recordkeeping practices are in place. In those areas, the rules should be reviewed and discussed in the environmental document as applicable.

**NOTE: For NEPA compliance and for projects on the** **State Highway System, use of locally adopted CEQA thresholds of significance for construction emissions IS NOT MANDATORY. Local air district CEQA guidelines may be used as guidance for scoping air quality studies. For more information, consult with the** **Headquarters Environmental Coordinator.**

Applicable laws and regulations in effect at the time the environmental document is prepared should be identified in the air quality technical study and environmental document. Some typical measures that may be related to local air districts and other regulations are included in the example text below. Other examples include truck idling limitations (but with exemptions per the California Air Resources Board’s idling policy depending on the construction activities) near schools, California Air Resources Board’s portable equipment regulations, and applicable public and private fleet regulations (such as South Coast Air Quality Management District’s and California Air Resources Board’s requirements for diesel-powered sweepers and other public fleet vehicles, and California Air Resources Board’s in-use off-road regulation).

Assembly Bill 617 is a bill for nonvehicular air pollution that required reporting of emissions of criteria pollutants and toxic air contaminants for stationary sources, community air monitoring system and community emission reduction plan in disadvantage communities with high pollutant burden, resulted in the creation of Assembly Bill 617 communities (formally approved by the California Air Resources Board) and more recently “Consistently Nominated Communities.” These communities have known to require health risk assessment and pollution control measures for projects within or partly within their communities. **Projects located in or partly in these communities are recommended to require tier 4 diesel equipment (or the latest engine tier standard) during construction.**

For more information see the following:

* [California Air Resources Board Community Air Protection Program Blueprint 2.0](https://ww2.arb.ca.gov/capp/mdc/bp2/community-air-protection-program-blueprint-20)

If an air district permit is likely to be needed for some part of the work, or for the use of certain types of equipment that appear likely to be used (such as crushers or batch plants installed at the project site, or portable equipment like generators that will be used for more than six months at one location), the need for a permit should be documented. If an air district permit is needed, use of local air district CEQA Guidelines may be considered (though it is **not mandatory**, unless the local air districts have adopted Rules for these pollutants) to minimize effort by the contractor and reduce the potential for delay when the permit must be obtained.

The following is example text that shows a qualitative assessment of construction emissions:

**Environmental Consequences**

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include carbon monoxide, nitrogen oxides, volatile organic compounds, directly-emitted particulate matter (PM10 and PM2.5), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from nitrogen oxides and volatile organic compounds in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut-and-fill activities, grading, removing or improving existing roadways, building bridges, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM10, PM2.5, and small amounts of carbon monoxide, sulfur dioxide, nitrogen oxides, and volatile organic compounds to be of concern. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries. PM10 emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM10 emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the U.S. Environmental Protection Agency to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. Caltrans’ Standard Specifications (Section 14) on dust minimization require use of water or dust palliative compounds and will reduce potential fugitive dust emissions during construction.

In addition to dust related PM10 emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate carbon monoxide, sulfur dioxide, nitrogen oxides, volatile organic compounds and some soot particulate (PM10 and PM2.5) in exhaust emissions. If construction activities were to increase traffic congestion in the area, carbon monoxide and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

[NOTE: Consider specifying areas within 500 feet of California Air Resources Board-defined sensitive land uses as no-idle areas where material storage/transfer and equipment maintenance activities are not to occur. If this is done, mention it here as a control measure for equipment emissions related to diesel exhaust.]

[NOTE 2: Limitations to idling may not be feasible during construction because of the nature of work. Idling limitations should be to prevent unnecessary idling, not to limit the functions of a vehicle or equipment or construction activities. The Off-Road Regulation explicitly grants exemptions to the idling limit for the following cases, and will consider other circumstances on a case-by-case basis:

* + When it is necessary to complete work for which the vehicle was designed (e.g., concrete agitation, or for hydraulic power to a crane or fuel pump).
  + When it is necessary for servicing, repairing, testing, or maintenance.
  + When idling is required for safe operation of the vehicle, or for verifying that the vehicle is in safe operating condition.
  + When warming a vehicle up to operating temperatures, as specified by the equipment manufacturer.
  + When queuing, such as when a line of off-road trucks forms to receive materials from an excavator.

For more information refer to the [California Air Resources Board’s idling policy](https://ww2.arb.ca.gov/sites/default/files/classic/msprog/ordiesel/faq/idlepolicyfaq.pdf).]

Sulfur dioxide is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Under California law and California Air Resources Board regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 ppm sulfur), so sulfur dioxide-related issues due to diesel exhaust will be minimal.

Some phases of construction, particularly asphalt paving, may result in short-term odors in the immediate area of each paving site(s). Such odors would quickly disperse to below detectable levels as distance from the site(s) increases.

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in long-term adverse conditions. Implementation of the following standardized measures, some of which may also be required for other purposes such as stormwater pollution control, will reduce any air quality impacts resulting from construction activities:

* The construction contractor must comply with Caltrans’ Standard Specifications in Section 14.
  + Section 14 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
  + Section 14 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are described in Section 18.
* Water or dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a “no visible dust” criterion either at the point of emissions or at the right of way line, depending on local regulations.
* Soil binder will be spread on any unpaved roads used for construction purposes, and on all project construction parking areas.
* Trucks will be washed as they leave the right of way as necessary to control fugitive dust emissions and must be consistent with the requirements of Section 13.
* Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by California Code of Regulations Title 17, Section 93114.
* A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
* Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly.
* Environmentally sensitive area-like areas or their equivalent will be established near sensitive air receptors. Within these areas, construction activities involving the extended idling of diesel equipment or vehicles will be prohibited, to the extent feasible.
* Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.
* All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) will be provided to minimize emission of dust (particulate matter) during transportation.
* Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be promptly and regularly removed to decrease particulate matter.
* To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
* Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown particulate in the area. [NOTE: Be aware that certain methods of mulch placement, such as straw blowing, may themselves cause dust and visible emission issues and may need to use controls such as dampened straw.]

**[End example]**

Construction Conformity

Discuss whether or not construction will last for more than 5 years at one location. If not, include the following boilerplate statement:

Construction activities will not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123[c][5]). **[End boilerplate]**

If construction will last for more than 5 years, include construction emissions in the project-level conformity analysis above, verify that they are included in the regional conformity analysis, and include the following boilerplate statement:

Construction activities will last for more than 5 years. Construction-related emissions have been included in the project-level conformity analysis performed for conformity purposes and have been included in the regional conformity analysis (40 CFR 93.123[c][5]). **[End boilerplate]**

#### Avoidance, Minimization, and/or Mitigation Measures

List any avoidance, minimization, and/or mitigation measures here.

### Noise enter and Vibration if applicable

#### Regulatory Setting

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

##### CEQA

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/23 CFR 772 noise analysis; please see the CEQA Evaluation chapter of this document for further information on noise analysis under CEQA.

##### NEPA and 23 CFR 772

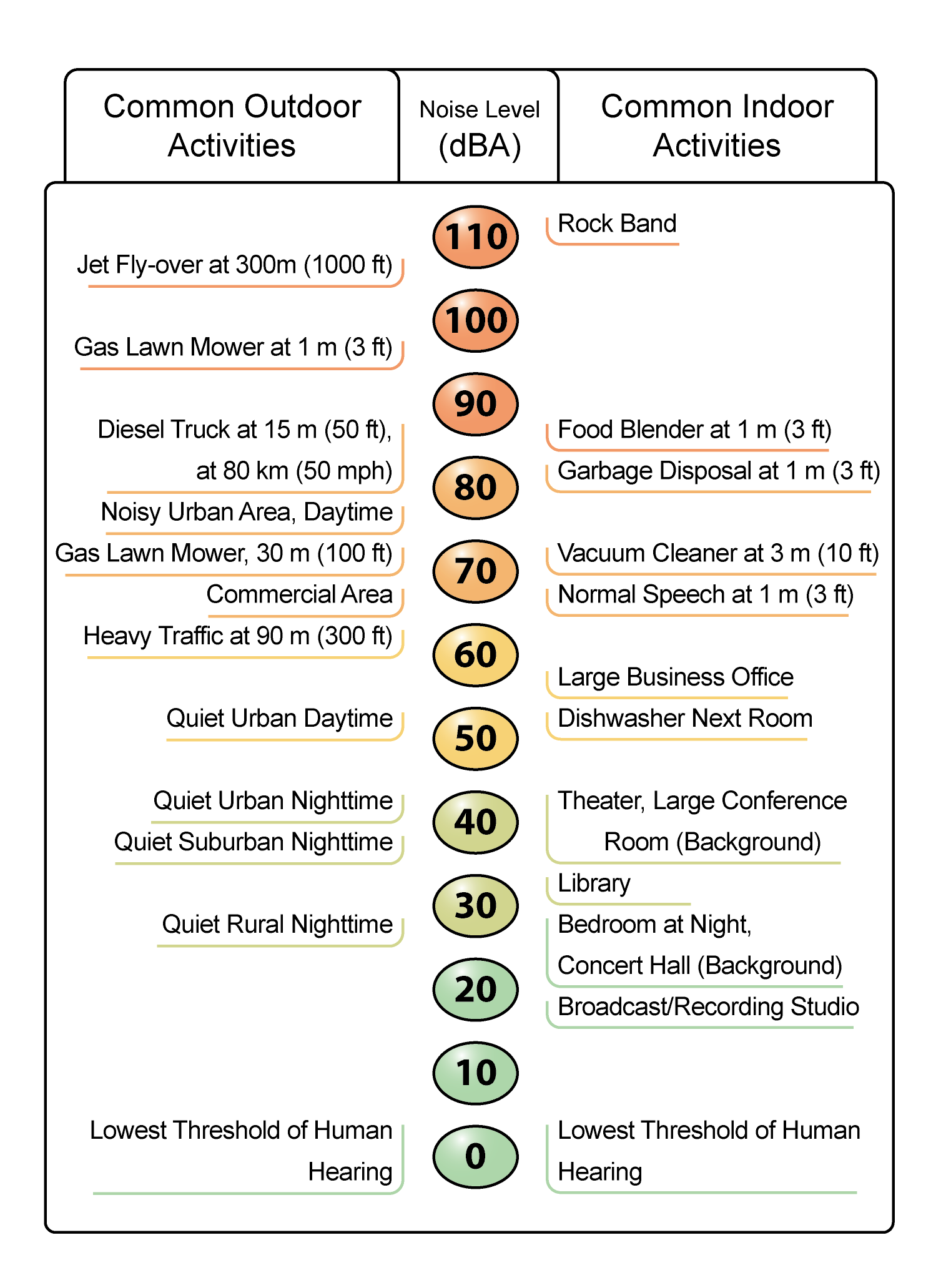
For highway transportation projects with FHWA involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the noise abatement criteria for residences (67 decibels [dBA]) is lower than the noise abatement criteria for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Table 7: Noise Abatement Criteria

| **Activity Category** | **Noise abatement criteria, Hourly A- Weighted Noise Level, Leq(h)** | **Description of activity category** |
| --- | --- | --- |
| A | 57 (Exterior) | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. |
| B | 67 (Exterior) | Residential. (Includes undeveloped lands permitted for this activity category) |
| C | 67 (Exterior) | Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings. (Includes undeveloped lands permitted for this activity category) |
| D | 52 (Interior) | Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios. |
| E | 72 (Exterior) | Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F. |
| F | No noise abatement criteria—reporting only | Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing. |
| G | No noise abatement criteria—reporting only | Undeveloped lands that are not permitted. |

The following figure lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Figure 3: Noise Levels of Common Activities



According to [Caltrans’ *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*](https://dot.ca.gov/programs/environmental-analysis/noise-vibration)*,* a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more) or when the future noise level with the project approaches or exceeds the noise abatement criteria. A noise level is considered to approach the noise abatement criteria if it is within 1 dBA of the noise abatement criteria.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans’ *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 dB at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

**GUIDANCE**

**Writing the Document**

#### Affected Environment

1. For Local Assistance projects, a reference should be provided stating that the project’s CEQA document analyzes noise impacts relative to the local general plan noise policies.
2. List applicable technical report(s) along with completion date(s). This includes the Noise Study Report and the Noise Abatement Decision Report.
3. Summarize the information in the Noise Study Report and the Noise Abatement Decision Report, identifying land uses and sensitive noise receptors, particularly areas of frequent human use that would benefit from reduced noise levels.
4. Include a map showing the locations of receptors and proposed barrier locations.

#### Environmental Consequences

1. Identify whether the project is a Type 1 project.
2. Identify whether the project will result in noise impacts that require the consideration of noise abatement. Document the following information:
   1. Measure and model existing noise levels at receptors during worst traffic noise hour.
   2. Model future noise levels for each alternative and the no-build using traffic from the design year, typically 20 years from the project opening date.
   3. If there is a substantial increase (12 dBA) in noise with the project and/or if the noise approaches (within 1 dBA) or exceeds the noise abatement criteria, then there is a noise impact that requires consideration of noise abatement. Include a table summarizing the results of the noise impact analysis for the project. An example table is provided below:

Table 8: Noise Impact Summary

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Receptor # and Location** | **Existing Noise Level (dBA)** | **Predicted Noise Level without Project (dBA)** | **Predicted Noise Level with Project (dBA)** | **Noise Impact Requiring Abatement Consideration** | **Predicted Noise Level with Abatement (dBA):**  **6-foot Wall** | **Predicted Noise Level with Abatement (dBA):**  **9-foot Wall** | **Predicted Noise Level with Abatement (dBA)**  **12-foot Wall** | **Reasonable and Feasible** |
| 1: A Street | 62 | 64 | 79 | Yes | 74 | 64 | 66 | Yes |

**[End example]**

#### Avoidance, Minimization, and/or Abatement Measures

1. Consider noise abatement (include barriers of different heights and types). Determine and discuss whether proposed abatement is reasonable and feasible. Refer to the [Noise Abatement Decision Report](https://dot.ca.gov/programs/environmental-analysis/noise-vibration) during the environmental process to document the following:
   1. Acoustic feasibility of noise abatement.
   2. Locations and dimensions of evaluated noise barriers.
   3. Noise abatement reasonableness allowances.
   4. Engineering estimates for acoustically feasible noise abatement.
   5. Other construction considerations related to noise barriers—i.e., known utilities, etc.

Example text:

Receptor 1 represents 10 homes located on A Street in the City of Alphabet. Measurements taken at Receptor 1 show that the existing noise level at that location is 62 dBA. The future noise level at Receptor 1 with the project is predicted to be 80 dBA. Because the predicted future noise level exceeds the noise abatement criteria for residential uses (67dBA), the 10 homes represented by Receptor 1 would be exposed to traffic noise impacts. To achieve a 5 dBA reduction at one or more receptors, a 6-foot high noise wall would be needed. An 8-foot wall would be needed to achieve the design goal of 7 dBA. If the total cost of the wall at this location is less than the total cost allowance, then the wall is considered reasonable from a cost perspective and would likely be incorporated into the project. The total cost allowance, calculated as directed by Caltrans’ Traffic Noise Analysis Protocol, is $enter amount. The current estimated cost of the wall is $enter amount. **[End example]**

Where noise abatement may be included in the project, include the appropriate statement below:

Include this boilerplate statement in the **draft** environmental document:

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of (a) barrier(s) at: enter location(s), with respective lengths and average heights of enter amounts. Calculations based on preliminary design data show that the barrier(s) will reduce noise levels by 5 to enter amount dBA for enter number residences at a cost of enter amount. These measures may change based on input received from the public. If conditions have substantially changed during final design, noise abatement may not be constructed. The final decision on noise abatement will be made upon completion of the project design. **[End boilerplate]**

Include this boilerplate statement in the **final** environmental document:

Based on the studies completed to date and input from the public, Caltrans intends to incorporate noise abatement in the form of (a) barrier(s) at: enter location(s), with respective lengths and average heights of enter amounts. Calculations based on preliminary design data show that the barrier(s) will reduce noise levels by 5 to enter amount dBA for enter number residences at a cost of enter amount. If conditions have substantially changed during final design, noise abatement may not be constructed. The final decision on noise abatement will be made upon completion of the project design. **[End boilerplate]**

1. Include a map showing receptors and proposed wall/berm locations.
2. **Do not use the words “mitigate” or “mitigation.”** For NEPA, use the terms “abate” or “abatement” or “attenuate” or “attenuation” in the Noise section of environmental documents. If mitigation for noise is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter (see [Special Note About Noise](#Special_Note_About_Noise) for guidance). Do not discuss the CEQA conclusions in this section.

**Additional Guidance**

* [23 CFR 772](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1NoiseAct1972)
* For more guidance on noise, please see the [SER, Volume 1, Chapter 12, “Noise.”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-12-noise)
* For detailed information on noise analysis, see the [Caltrans Traffic Noise Analysis Protocol and the Technical Noise Supplement](https://dot.ca.gov/programs/environmental-analysis/noise-vibration).
* [Highway Traffic Noise: Analysis and Abatement Guidance](https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/), U.S. Department of Transportation, FHWA, Office of Environment and Planning, Noise and Air Quality Branch, Washington, D.C., December 2011, Document Number FHWA-HEP-10-025.

### Energy

**GUIDANCE-NEPA**

For NEPA, an Energy Analysis Report with a quantitative energy analysis will only be required when an Environmental Impact Statement is prepared, and the project is a large-scale project with potentially substantial energy impacts. For an Environmental Impact Statement that is not a large-scale project with potentially substantial energy impacts, an Energy Analysis Report with a combination of qualitative and quantitative analysis or a Technical Memo is sufficient. If an Energy Analysis Report has been prepared to comply with CEQA, the results of that study can be included in an Environmental Assessment or Environmental Impact Statement prepared for NEPA.

The SER, Volume 1, Chapter 13, “Energy” provides guidance on performing an energy analysis, including when an energy quantitative analysis is required for a proposed project.

This guidance on energy starts with a decision tree that helps you decide if a quantitative analysis of construction and qualitative operational energy uses is sufficient, or if a more detailed quantitative study would be called for. There are detailed directions for conducting quantitative studies/technical reports.

**GUIDANCE-CEQA**

An Environmental Impact Report must include an analysis of energy use and must provide mitigation for significant effects if the project has the potential for a significant effect related to energy (CEQA Guidelines Section 21100[b][3]). An energy analysis can be quantitative, qualitative, or both. An Initial Study, however, must examine energy impacts in order to determine if a potentially significant impact may occur that requires the preparation of Environmental Impact Report.

Transportation energy is generally described in terms of direct and indirect energy, defined as follows:

**Direct Energy:** In the context of transportation, direct energy involves all energy consumed by vehicle propulsion (e.g., automobiles, trains, airplanes). This energy consumption is a function of traffic characteristics such as VMT (volume X distance traveled), speed, vehicle mix, and thermal value of the fuel being used.

**Indirect energy** is all the remaining energy needed to construct, operate, and maintain the roadway; and manufacture and maintain the vehicles using the roadway. Some projects may also include features such as new or replacement roadway lighting or other features requiring electricity which is an ongoing and permanent source of indirect energy consumption. The one-time energy expenditure involved in constructing a project is also considered indirect energy.

Project-level analyses of energy and GHG emissions use similar data to derive project emissions or energy consumption. However, energy and GHG emissions are distinct resource areas accounting for different types of environmental impacts. Energy in a resource context generally pertains to the use or conservation of fossil fuels, which are a finite resource, while GHG studies describe the potential of a project to contribute to climate change. Because each of these resource areas address different environmental concerns, both are studied in evaluation of overall environmental effects.

**Writing the Document**

#### Regulatory Setting

The Energy Policy and Conservation Act of 1975 established fuel economy standards for on-road motor vehicles sold in the United States. Subsequent federal Energy Policy Acts (e.g., 1992, 2005) have been passed since the original act of 1975. The National Highway Traffic Safety Administration and U.S. Environmental Protection Agency set Corporate Average Fuel Economy standards for passenger cars and for light trucks (collectively, light-duty vehicles) and separately set fuel consumption standards for medium- and heavy-duty trucks and engines.

NEPA (42 USC 4332) requires the identification of all potentially significant impacts on the environment, including impacts on energy resources. Guidance for evaluating energy impacts of transportation projects subject to NEPA is outlined in FHWA's Technical Advisory T 6640.8A.

CEQA Guidelines require environmental documents include an analysis of a project's potential for significant environmental effects resulting from wasteful, inefficient, or unnecessary use of energy; or wasteful use of energy resources (Guidelines Section 15126.2[b]). The document must also describe feasible measures which could minimize inefficient and unnecessary consumption of energy (Guidelines Section 15126.4).

#### Affected Environment

This section should include a description of existing conditions in the project area that affect energy usage. For example, what are the existing traffic conditions? What mix of vehicles is currently using the facility (particularly if the project is expected to substantially change the vehicle mix)? Are there existing transportation management system elements in place? What is the condition of the existing pavement surface? A poor driving surface can contribute to an increase in fuel consumption. Is there existing highway lighting and what type is it? A clear description of the setting helps to explain the context and intensity of project-level energy consumption.

#### Environmental Consequences

Environmental Consequences should describe the energy analysis methods and results for the proposed project, including project consistency with applicable federal, state, and local energy regulations, policies, and legislation. The energy analysis is based on the methodology described in the SER, Volume 1, Chapter 13, Energy. The analysis addresses direct and indirect energy consumption, which in the context of project-level transportation planning, are defined as follows:

* Direct energy involves all energy consumed by vehicle propulsion (e.g., automobiles, trains, airplanes). This energy consumption is a function of traffic characteristics such as VMT (volume X distance traveled), speed, vehicle mix, and thermal value of the fuel being used.
* Indirect energy is all the remaining energy needed to construct, operate, and maintain the roadway.

This section should also include any energy-saving or conservation measures specifically incorporated into the design of the project. This could include reduction in grades and curvatures, and use of renewable energy sources in construction and operation of the project. Other examples might include the use of recycled materials, LED (light-emitting diodes) lighting, solar power, or the installation of transportation management system elements.

***Congestion Relief and Capacity-Increasing Projects***

A quantitative analysis may be required for congestion relief and capacity increasing projects. Examples of congestion relief and capacity-increasing projects include the following:

* New Roadway or Facility: Bypass, new or extended highway, new interchange.
* Additional Lanes: high-occupancy vehicle lanes, general purpose/mixed flow lanes, managed, express, and toll lanes.
* Interchange Reconfiguration: ramp widening or increased through lanes on bridges.
* Auxiliary lanes one mile or more in length.

The scope of the energy analysis for long-term impacts should be based on the anticipated impact the project will have on energy use. The degree to which a project impacts energy is often heavily influenced by its potential to reduce congestion or increase capacity. Projects that increase capacity or reduce congestion are more likely to result in material or continuing changes to energy use when compared to non-capacity-increasing and non-congestion-relief projects.

***Non-Congestion Relief and Non-Capacity-Increasing Projects***

A combination of quantitative analysis (construction) and qualitative analysis (operation) will generally be sufficient for non-congestion relief and non-capacity increasing. Examples of non-congestion-relief and non-capacity-increasing projects include the following:

* Ramp metering or signalization.
* Auxiliary lanes less than one mile in length and independent from other auxiliary lanes.
* Increase shoulder width.
* Pavement rehabilitation.

Refer to the [Energy Analysis Report Decision Tree](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-13-energy#need-scope) for additional information.

**Direct Energy**

**QUALITATIVE ANALYSIS**

Non-capacity-increasing and non-congestion-relief projects are likely to have a low potential or beneficial impact on direct energy. Complete a qualitative discussion of direct energy for non-capacity-increasing and non-congestion-relief projects, considering and including the following, as applicable and as data are available:

* Compare vehicle delay, level of service, volume-to-capacity ratios, and idling time among the alternatives to qualitatively assess how efficiently vehicles would travel through the transportation system.
* Compare average vehicle speeds among the alternatives. Projects that improve traffic flow during peak travel demand periods or reduce stop-and-go conditions would improve vehicle fuel economy and thus reduce direct energy.
* Discuss the impact of newer and more fuel-efficient vehicles that will enter the future vehicle fleet.
* Discuss any project elements that would reduce VMT and associated direct energy, such as transit improvements or providing facilities for pedestrians and bicyclists.
* Discuss any project elements that directly support the use of electric vehicles, such as the installation of charging stations.

The following is an example analysis:

Neither build alternative would increase the capacity of the transportation facility or materially change vehicle speeds. Both alternatives would expand existing bicycle and pedestrian networks within the project footprint. New bike lanes would be constructed to improve connections within neighborhoods and to the Central Business District. Pedestrian facilities would also be upgraded, and new sidewalks would be installed to close existing gaps and meet Americans with Disabilities Act compliance standards. Improvements to bicycle and pedestrian networks encourage walking and bicycling within the project footprint. Increased walking and biking would help reduce local automobile traffic, support mode shift, and reduce direct energy consumption compared to the No-Build Alternative. Three traffic signals would be installed under the project. These signals would be coordinated to promote the efficient flow of traffic, resulting in a more efficient use of direct energy, relative to the No-Build Alternative.

Compared to existing (2023) conditions, direct energy consumption in the project area under opening (2025) and design (2045) year conditions is expected to increase with or without the project. This is due to background growth in regional VMT, which is external to the project. While direct energy in the project area is likely to increase in the future, the amount of increase is expected to be less than the rate of VMT growth. This is because of future improvements in vehicle fuel economy and penetration of more efficient electric vehicles stemming from various energy policies and legislation. The project design features (e.g., new bike lanes) would also contribute to more efficient use of direct energy, as noted above. **[End example]**

**QUANTITATIVE ANALYSIS**

Congestion relief and capacity-increasing projects affect the ability of a transportation facility to accommodate existing and future traffic demand. This results in changes to direct energy by vehicles using the facilities.

Complete a quantitative direct energy analysis for congestion relief and capacity-increasing projects. At a minimum, analyses must cover the baseline year, the year of opening (can be multiple years if construction is phased), and the design year (often 20 years after opening when traffic volumes are typically highest).

The primary data source for the analysis will be VMT, which can likely be obtained from the project Traffic Operations Analysis Report. VMT data must be specific to the project study limits and include VMT from traffic traveling on both the affected roadway as well as other roadways within the project limits. The basic procedure for quantifying direct energy is to model fuel consumption using CT-EMFAC. CT-EMFAC is an emissions tool developed by Caltrans that calculates project-level emissions and fuel consumption using data from the California Air Resources Board’s EMFAC model. The latest version of CT-EMFAC reports fuel consumption for gasoline, diesel, natural gas, and electricity. Gasoline and diesel consumption are given in terms of gallons, whereas natural gas is reported as diesel equivalent gallon. A diesel equivalent gallon has an equivalent energy content to a gallon of diesel fuel. A diesel equivalent gallon of natural gas can be converted to standard cubic foot using a conversion factor of 144 standard cubic foot per diesel equivalent gallon. Electricity consumption is reported in units of kilowatt-hour. Project fuel consumption can also be quantified by multiplying project VMT data by vehicle fuel consumption factors obtained from EMFAC. For projects with an Air Quality Report, it is likely that emissions have been quantified using CT-EMFAC or EMFAC.

Convert the quantified fuel consumption into equivalent British thermal unit.

Describe the approach used to quantify vehicle fuel consumption and direct energy. Document the fuel consumption and direct energy in summary tables. Model outputs should be provided in the Energy Analysis Report or Technical Memo. Compare direct energy among the build alternative(s) and analysis conditions. Discuss direct energy consumption changes attributable to the project. Discuss energy-saving or conservation measures that have been incorporated into the project design.

The following is an example analysis. Note that example numeric results are provided in the tables but not in the narrative text. The text uses [value] to indicate where project-specific results would be given.

Direct energy calculations for transportation projects are informed by VMT and traffic operating conditions (e.g., travel speeds). Table 9 summarizes annual VMT for the project study area under existing (2023), opening (2025), and design (2045) year conditions. As shown in the table, VMT under existing conditions are lower than projected for future year conditions with or without the build alternatives. The increase in VMT can be attributed to expected population growth and increased employment in the region.

Table 9: Operational VMT by Alternative and Study Year

| **Alternative and Study Year** | **Annual VMT** | **VMT Change from 2023 Existing  (% Change)** | **VMT Change from No-Build (% Change)** |
| --- | --- | --- | --- |
| 2023 Existing Conditions | 285,315,442 | N/A | N/A |
| 2025 No-Build Alternative | 308,140,677 | 22,825,235 (8%) | N/A |
| 2025 Alternative 1 | 308,140,677 | 22,825,235 (8%) | 0 (0%) |
| 2025 Alternative 2 | 308,140,677 | 22,825,235 (8%) | 0 (0%) |
| 2045 No-Build Alternative | 363,605,999 | 78,290,557 (27%) | N/A |
| 2045 Alternative 1 | 363,605,999 | 78,290,557 (27%) | 0 (0%) |
| 2045 Alternative 2 | 363,605,999 | 78,290,557 (27%) | 0 (0%) |

Source: Traffic Consultants 2023

Note: Refer to Energy Analysis Report Appendix A for VMT data by 5 mph speed increments; N/A = comparison not applicable.

Vehicle fuel consumption for the analysis conditions was estimated based on vehicle types (e.g., automobiles, light-duty trucks) traveling within the project area using the CT-EMFAC2021 model, which relies on emission factors from the EMFAC2021 model. Annual gallons of gasoline and diesel fuel and annual kilowatt-hour of electricity consumption were directly obtained from the CT-EMFAC2021 model output. CT-EMFAC2021 reports natural gas in terms of diesel equivalent gallon. A diesel equivalent gallon has an equivalent energy content to a gallon of diesel fuel. The CT-EMFAC2021 reported annual diesel equivalent gallon of natural gas was converted to standard cubic foot using a conversion factor of 144 standard cubic foot per diesel equivalent gallon. Table 10 presents the estimated direct fuel consumption for the analysis conditions. Refer to Energy Analysis Report Appendix B for the CT-EMFAC2021 model output.

Table 10: Annual Vehicle Fuel and Electricity Consumption by Alternative and Study Year

| **Alternative and Study Year** | **Gasoline (million gallons)** | **Diesel (million gallons)** | **Natural Gas (million standard cubic foot)** | **Electricity (million kilowatt-hour)** |
| --- | --- | --- | --- | --- |
| 2023 Existing Conditions | 13 | 33 | 8,144 | 79 |
| 2025 No-Build Alternative | 13 | 34 | 8,330 | 97 |
| 2025 Alternative 1 | 13 | 33 | 8,247 | 96 |
| 2025 Alternative 2 | 13 | 33 | 8,246 | 96 |
| 2045 No-Build Alternative | 12 | 39 | 8,994 | 169 |
| 2045 Alternative 1 | 12 | 38 | 8,904 | 167 |
| 2045 Alternative 2 | 12 | 38 | 8,903 | 167 |

Source: CT-EMFAC2021

Note: Refer to Energy Analysis Report Appendix B for the CT-EMFAC2021 model output.

Direct energy can be represented in terms of thermal value, known as British thermal unit. Gasoline, diesel, natural gas, and electricity consumption reported in Table 10 is converted to British thermal unit in Table 11. Table 11 summarizes the annual direct energy for each of the analysis conditions.

Table 11: Annual Direct Energy Use by Alternative and Study Year

| **Alternative and Study Year** | **Direct Energy (million British thermal unit)** | **Direct Energy Change from 2023 Existing (% Change)** | **Direct Energy Change from No-Build (% Change)** |
| --- | --- | --- | --- |
| 2023 Existing Conditions | 14,890,545 | N/A | N/A |
| 2025 No-Build Alternative | 15,157,291 | 266,746 (2%) | N/A |
| 2025 Alternative 1 | 15,005,718 | 115,173 (1%) | -151,573 (-1%) |
| 2025 Alternative 2 | 15,004,202 | 113,657 (1%) | -153,089 (-1%) |
| 2045 No-Build Alternative | 16,682,615 | 1,792,070 (12%) | N/A |
| 2045 Alternative 1 | 16,515,789 | 1,625,244 (11%) | -166,826 (-1%) |
| 2045 Alternative 2 | 16,514,121 | 1,623,576 (11%) | -168,494 (-1%) |

Source: CT-EMFAC2021; U.S. Energy Information Administration 2023c

Note: N/A = comparison not applicable.

Compared to existing (2023) conditions, operation of either build alternative or the No-Build Alternative under both future year conditions would increase direct energy. These results are exclusively due to factors external to the project. The increase in direct energy is due to background growth in VMT, as shown in Table 9. However, while direct energy is expected to increase in both future year conditions, the amount of increase is less than the growth in VMT. The growth in opening (2025) year VMT over existing conditions VMT is [value], whereas the growth in direct energy is [value] to [value], depending on the alternative. The growth in design (2045) year VMT over existing conditions is [value], whereas the growth in direct energy is only [value] to [value], depending on the alternative. These trends are attributed to future improvements in vehicle fuel economy and penetration of more efficient electric vehicles stemming from various energy policies and legislation.

As shown in Table 9, neither build alternative would increase capacity or materially change regional annual VMT compared to the No-Build Alternative. However, implementation of either build alternative would improve traffic flow during peak travel demand periods and reduce stop-and-go conditions. Vehicles traveling at free-flow speeds are more fuel efficient. Therefore, operational improvements that smooth traffic flow and decrease traffic congestion, such as those proposed for this project, improve vehicle fuel economies. This in turn results in a more efficient use of energy, which is reflected in Table 11. As shown in the table, direct energy use by either build alternative under both future year conditions is expected to decrease slightly compared to the No-Build Alternative. The amount of direct energy consumed by Alternative 2 is slightly less than Alternative 1, although the quantities are comparable. Ultimately, the travel time improvements achieved by reduced congestion under either build alternative will enhance systemwide operational productivity and associated energy efficiency.

The build alternatives also include several transportation system management elements. Existing bicycle and pedestrian networks would both be expanded within the project footprint. New bike lanes would be constructed on Roadway C and Roadway D to improve connections within neighborhoods and to the Central Business District. Pedestrian facilities on Roadway C and Roadway D would also be upgraded, and new sidewalks would be installed to close existing gaps and meet Americans with Disabilities Act compliance standards. Improvements to bicycle and pedestrian networks encourage walking and bicycling within the project footprint. Increased walking and biking would help reduce local automobile traffic, support mode shift, and further reduce direct energy consumption. Finally, three traffic signals would be installed under either build alternative. These signals would be coordinated to promote the efficient flow of traffic, resulting in less vehicle fuel consumption and direct energy.

**[End example]**

**Indirect Energy**

This section should evaluate the following three types of indirect energy:

* Construction: Energy consumed by construction equipment and vehicles.
* Maintenance: Energy consumed by equipment and vehicles required to maintain the project facility(ies), including landscaping equipment.
* Operations: Energy consumed by traffic lights, street lights, or changeable message signs; operation of buildings (e.g., rest areas, maintenance buildings), if any.

Begin with the following boilerplate text:

Indirect energy includes fuel consumed during construction and for maintenance and operation of project elements. The following sections analyze each of these types of indirect energy. **[End boilerplate]**

**Indirect Energy, Construction**

All projects must quantify indirect construction energy. The basic procedure for analyzing indirect energy consumption from construction activities is to obtain fuel consumption projections in gallons and electricity used in kilowatt-hour from the Caltrans Construction Emission Tool (CAL-CET). CAL-CET outputs both emissions and energy consumption based on project-specific construction information. Because all Caltrans projects must quantify construction GHG emissions, CAL-CET outputs may be obtained from the modeling conducted for the project GHG analysis.

Convert the quantified fuel consumption into equivalent British thermal unit.

Describe the approach used to quantify construction fuel consumption and indirect construction energy. Document the fuel consumption and indirect energy in summary tables. Model outputs should be provided in an appendix. Compare indirect energy among the build alternative(s). Discuss energy-saving or conservation measures that have been incorporated into the project design.

The following is an example analysis. Note that example numeric results are provided in the tables but not in the narrative text.

The No-Build Alternative does not include construction of any of the improvements associated with the build alternatives. Therefore, it would not have the one-time consumption of indirect energy that would occur under either build alternative.

Construction of either build alternative would require equipment and vehicles that consume diesel and gasoline. Fuel consumption during construction was calculated by converting carbon dioxide emissions predicted by the California Emissions Estimator Model (CalEEMod), version 2022, using the rate of emissions emitted per gallon of combusted gasoline (19.37 pounds carbon dioxide per gallon) and diesel (22.45 pounds carbon dioxide per gallon) (U.S. EPA 2023). Temporary construction trailers and site lighting would also consume electricity (kilowatt-hour).

Gasoline, diesel, and electricity consumption during construction were converted to British thermal unit. Table 12 summarizes the fuel consumption estimates and indirect energy required for construction of the build alternatives. Refer to Energy Analysis Report Appendix C for the CalEEMod output.

Table 12: Construction Fuel and Electricity Consumption and Indirect Energy by Alternative and Year

| **Alternative and Construction Year** | **Gasoline (gallons)** | **Diesel (gallons)** | **Electricity (kWh)** | **Indirect Energy (million British thermal unit)** |
| --- | --- | --- | --- | --- |
| 2023 Alternative 1 | 10,977 | 1,776 | 4,000 | 1,735 |
| 2024 Alternative 1 | 43,090 | 3,224 | 8,000 | 6,335 |
| **Total Alternative 1** | **54,607** | **4,999** | **12,000** | **8,070** |
| 2023 Alternative 2 | 10,977 | 1,775 | 4,000 | 1,735 |
| 2024 Alternative 2 | 35,565 | 3,224 | 10,000 | 5,308 |
| **Total Alternative 2** | **46,542** | **4,999** | **14,000** | **7,043** |

Source: CalEEMod2022, U.S. Energy Information Administration 2023c

Note: Refer to Energy Analysis Report Appendix C for the CalEEMod output.

The indirect energy consumed during construction of either build alternative would be temporary or would not result in a permanent increase in statewide annual energy consumption. Moreover, construction design features would help conserve energy. A Transportation Management Plan would be developed and implemented in accordance with the 2024 Caltrans *Standard Specifications* and must comply with the *California Manual on Uniform Traffic Control Devices*, Part 6, *Temporary Traffic* Control. An effective Transportation Management Plan would reduce gasoline consumption by limiting traffic congestion and reducing the length of detours. In addition, implementation of Standard Specifications 6-1.03, 14-9, and 14-10 will reduce diesel fuel consumption. Construction contractors would also be required to comply with state regulations, which require use of renewable diesel fuel beginning in 2024. **[End example]**

**Indirect Energy, Maintenance**

Generally, indirect energy from maintenance activities can be discussed qualitatively. If information on project-specific maintenance activities (e.g., types of equipment, operating hours) is available, indirect energy may be quantified.

**Indirect Energy, Operations**

Generally, indirect energy from project operations can be discussed qualitatively. If operational energy consumption is available or can be calculated, indirect energy may be quantified.

For "Indirect Energy, Maintenance” and “Indirect Energy, Operations” examples, refer to the Energy Analysis Report Annotated Outline for additional information.

***For All Projects***

The Environmental Consequences section should specifically address whether the project may result in wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources.

The discussion of environmental consequences must also describe the applicable Regional Transportation Plan and other planning documents to demonstrate that the project does not obstruct or conflict with a state or local plan for renewable energy or energy efficiency.

Many projects will result in energy savings. As noted above, projects that make roadway improvements or that smooth existing traffic flow may result in reduced energy consumption. Projects that reduce VMT or incorporate active transportation elements may also lower or partially offset energy consumption. Replacing older highway lighting with newer energy efficiency lighting can result in energy savings over the long term. Projects that substantially reduce out-of-direction travel can also lessen energy consumption. Indirect energy savings through reduced maintenance needs (roadway, culverts, etc.) should also be discussed.

The guidance in section 15126.2(b) and Appendix F of the CEQA Guidelines, Energy Conservation, should be considered. Note that there is a focus on energy efficiency, savings, and conservation in the CEQA guidance. This is a good place to demonstrate a project’s long-term potential for energy savings and to document conservation measures to be employed during the construction, operation, and maintenance phases.

The following are some example conclusions that can be used as applicable:

* The proposed project does not add roadway capacity. It will improve the flow of traffic entering the highway due to the installation of ramp metering. As such, it is unlikely to increase direct energy consumption through increased fuel usage.
* The proposed project includes the installation of stormwater culverts that are designed to more efficiently channel overflow water during storm events, and is being implemented through the State Highway Operation and Protection Program. The selection process for State Highway Operation and Protection Program projects is specified in the Transportation Asset Management Plan created by Caltrans, in consultation with the California Transportation Commission, pursuant to Senate Bill 486. The Transportation Asset Management Plan assesses the health and condition of the state highway system with which Caltrans is able to determine the most effective way to apply state’s limited resources. The goals and objectives established in the Transportation Asset Management Plan for the State Highway Operation and Protection Program includes conserving natural resources and reducing GHG and other pollutants. As the proposed project is a part of the State Highway Operation and Protection Program, it has been identified by Caltrans, and approved by the California Transportation Commission, as necessary to preserve and protect the assets of the state highway system. It will not result in a wasteful, inefficient, or unnecessary consumption of energy.
* The added Bus/Carpool lanes proposed as Alternative A would affect traffic operations and increase vehicle capacity along State Route 26 in the project area. Annual fuel consumption was estimated using CT-EMFAC. Although annual fuel consumption for Alternative A is higher than both existing conditions and the no-build scenario for the 2040 design year due to the increase in VMT, the difference between Alternative A and the no-build in 2040 is only 61,686 gallons. The proposed project is expected to increase both carpooling as well as transit use. Overall, the project is expected to increase travel speed for carpools, vanpools, and express bus services, which in turn is expected to cause some level of mode shift to carpools or transit. As such the proposed project would not result in a wasteful, inefficient, or unnecessary consumption of energy.
* Proposed project construction would primarily consume diesel and gasoline through operation of heavy-duty construction equipment, material deliveries, and debris hauling. As indicated above, energy use associated with proposed project construction is estimated to result in the short-term consumption of 638,863 gallons from diesel-powered equipment and 49,460 gallons from gasoline-powered equipment. This represents a small demand on local and regional fuel supplies that would be easily accommodated, and this demand would cease once construction is complete. Moreover, construction-related energy consumption would be temporary and not a permanent new source of energy demand, and demand for fuel would have no noticeable effect on peak or baseline demands for energy. While construction would result in a short-term increase in energy use, construction design features would help conserve energy. For example, recycled materials will be used where feasible. Recycled products typically have lower manufacturing and transport energy costs since they do not utilize raw materials, which must be mined and transported to a processing facility. The new pedestrian-scale lighting fixtures would also be designed to provide low-level lighting and minimize energy consumption. Specifically, the project would install high efficiency LEDs (light-emitting diodes), which consume about 75 percent less electricity than typical incandescent bulbs (U.S. Department of Energy 2014b). These energy conservation features are consistent with State and local policies to reduce energy. Therefore, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy. **[End examples]**

#### Avoidance, Minimization, and/or Mitigation Measures

Discuss any avoidance, minimization, and/or mitigation measures here. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.

**Direct Energy**

Describe measures to reduce direct energy consumption, if applicable. Measures proposed to reduce operational GHG emissions and traffic impacts can often reduce direct energy. Consult the Energy Analysis Report or Technical Memo for potential measures. All measures must be approved by the Project Development Team and worded for inclusion in the contract specifications for the project.

**Indirect Energy**

Describe measures to reduce indirect energy consumption, if applicable. Measures proposed to reduce construction GHG emissions can often reduce indirect energy impacts. Consult the Energy Analysis Report or Technical Memo for potential measures. All measures must be approved by the Project Development Team and worded for inclusion in the contract specifications for the project.

## BIOLOGICAL ENVIRONMENT

**GUIDANCE**

The Biological Environment section of the environmental document is divided into the following subsections:

* Natural Communities
* Wetlands and Other Waters
* Plant Species
* Animal Species
* Threatened and Endangered Species
* Invasive Species

### Natural Communities

**Writing the Document**

This section of the environmental document focuses on the issues covered in Chapter 3 and Chapter 4 of the [Natural Environment Study](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#bio).

Include an introduction (see example text and guidance below):

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors, enter fish passage if appropriate, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species section. Wetlands and other waters are also discussed below. **[End example]**

**GUIDANCE FOR INTRODUCTION:**

* The emphasis of the section should be on the ecological function of the natural communities within the area.
* Include any regulations relevant to the natural communities discussed (i.e., Oak Woodland protection, California Fish and Game Code, Streets and Highways Code, etc.).
* Fish passage should be included under the Threatened and Endangered Species section if part of the federal consultation.

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Discuss habitat not listed as critical habitat under the Federal Endangered Species Act or not discussed under the Wetlands and Other Waters section. Examples of habitat types that could be discussed here include grasslands, oak woodlands, riparian forest, riparian scrub, and maritime succulent scrub. Include in the assessment, as applicable, the presence and condition of existing wildlife and fish passage barriers or corridors.
3. Describe any special resource protection areas, as identified in a certified Local Coastal Program, or if the project is located within 100 feet of a potential environmentally sensitive habitat area as defined by the Coastal Act. Discuss whether the habitat is especially valuable in terms of sustaining a special–status species, providing habitat connectivity, wildlife movement corridors, etc. Also note if the area could be easily disturbed or degraded by human activities and development.

#### Environmental Consequences

1. For each habitat type, discuss the potential direct and indirect impacts. Discuss, as needed, habitat fragmentation, potential impacts to wildlife corridors and/or fish passage, potential impacts to the natural communities related to the distribution of this community in the region or statewide, and function of the community in terms of services it provides for water quality, habitat, breeding, etc.
2. This is a good place to reference any regional conservation plans, such as habitat conservation plans, multiple species conservation plans, or coastal plans. Such plans are usually developed to lessen habitat loss and fragmentation and to maintain wildlife corridors.
3. The Natural Environment Study discusses issues such as migration routes, fish passage, wildlife corridors, concentrations of animal strikes on the roadway, and habitat fragmentation. Regulatory agencies are likely to raise concerns over these issues, so discuss them in the environmental document as applicable.
4. If the project is in the coastal zone and has the potential to affect an environmentally sensitive habitat area, discuss potential impacts and consistency with applicable coastal policies and ordinances.
5. Discuss the relevant project features and standardized measures, including best practices that have avoided or minimized the project’s environmental consequences. Examples might include standard revegetation efforts performed by the Contractor (and not required as mitigation or as a permit condition), fish passage or wildlife crossings included as part of the project design, and the establishment of environmentally sensitive areas.

#### Avoidance, Minimization, and/or Mitigation Measures

Discuss any proposed avoidance, minimization, and/or mitigation measures. Remember to state what the measure would do and why we are proposing it. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.

**Additional Guidance**

* [SER, Volume 1, Chapter 14, “Biological Resources”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-14-biological-resources)
* [SER, Volume 1, Chapter 15, “Waters of the U.S. and State”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-15-waters-of-the-us-and-state)

### Wetlands and Other Waters

#### Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (33 USC 1344), is the primary law regulating wetlands and surface waters. One purpose of the Clean Water Act is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce.

Section 404 of the Clean Water Act establishes a regulatory program which is run by the U.S. Army Corps of Engineers with oversight by the U.S. Environmental Protection Agency. Certain permits require the identification of a “least environmentally damaging practicable alternative” to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

**GUIDANCE:** If impacts of the proposed project fall under the NEPA/404 Memorandum of Understanding Integration Process, then include the following paragraph about the process here:

Caltrans, FHWA, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and U.S. Fish and Wildlife Service entered into a Memorandum of Understanding to integrate NEPA and the Clean Water Act for Environmental Impact Statement projects that have five or more acres of permanent impact to waters of the U.S. Under this Memorandum of Understanding, the signatory agencies agree to coordinate at three checkpoints: (1) purpose and need, (2) identification of range of alternatives, and (3) preliminary determination of the least environmentally damaging practicable alternative and conceptual mitigation plan. The goal of the Memorandum of Understanding process is to allow the U.S. Army Corps of Engineers to adopt Caltrans’ Environmental Impact Statement more efficiently for their Section 404 permit action. **[End NEPA/404 paragraph]**

The Executive Order for the Protection of Wetlands (11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, Executive Order 11990 states that a federal agency, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board, the Regional Water Quality Control Boards and the California Department of Fish and Wildlife. Water Board definitions of Waters of the State are also outlined in the State Water Resources Control Board Procedures for Discharges of Dredge or Fill Material to Waters of the State. Waters of the U.S. are a subset of waters of the state. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Wildlife before beginning construction. If the California Department of Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required.

The Regional Water Quality Control Boards were established under the porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by waste discharge requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act. In compliance with Section 401 of the Clean Water Act, the State Water Resources Control Board (for projects that span more than one Water Board region) and Regional Water Quality Control Boards also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request.

**GUIDANCE**

The information needed to write this section of the environmental document can be pulled from Chapters 4 and 5 of the Natural Environment Study and other technical documents, such as the Biological Assessment and the Wetland Delineation Report/Aquatic Resources Delineation. Reference these studies and their completion dates in the environmental document.

Aquatic resources identification must address both federal and state jurisdictional requirements whether that information is included in a U.S. Army Corps of Engineers Aquatic Resources Delineation Report or not. Under both federal and state law a Wetland Delineation Report/Aquatic Resources Delineation is prepared according to the [1987 Corps of Engineers Wetlands Delineation Manual](https://www.spl.usace.army.mil/Missions/Regulatory/Jurisdictional-Determination/Wetland-Delineations/) and the appropriate [Regional supplement](https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/reg_supp/) to identify wetlands and waters under U.S. Army Corps of Engineers jurisdiction for the purposes of compliance with Section 404 of the Clean Water Act, and/or Sections 9 and 10 of the Rivers and Harbors Act. The Water Board relies on any aquatic delineation report verified by the U.S. Army Corps of Engineers for analysis and mitigation of impacts to waters of the state. However, all aquatic resources that fall outside of the federal jurisdiction definition that have not been included in a U.S. Army Corps of Engineers verified delineation report, must be delineated using the same manual and supplements listed above and guidance in Section III (Wetland Delineation) of the [State Water Resources Control Board Procedures](https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html).

The Wetland Delineation Report/Aquatic Resources Delineation is submitted to the U.S. Army Corps of Engineers requesting verification. The U.S. Army Corps of Engineers will make a jurisdictional determination based on the Wetland Delineation Report/Aquatic Resources Delineation. [U.S. Army Corps of Engineers Regulatory Guidance Letter 16-01 issued October 2016, which supersedes Regulatory Guidance Letter 08-02](https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Guidance-Letters/), explains the differences between approved jurisdictional determinations and preliminary jurisdictional determinations, and explains when an approved jurisdictional determination is required, and when a preliminary jurisdictional determination can be prepared instead. An approved jurisdictional determination should be used for projects that will require a Standard (Individual) Permit or are likely to be contested in court for issues related to the delineation. Because of the 2023 Revised Definition of Waters of the U.S., approved jurisdictional determinations may also be advised when there is substantive presence of and impacts to both federal and non-federal aquatic resources. Given the extended and uncertain timeline for approved jurisdictional determinations that must be signed by U.S. Army Corps of Engineers Headquarters and the U.S. Environmental Protection Agency, it is recommended that both the Water Board and U.S. Army Corps of Engineers be consulted conjointly before moving forward with an approved jurisdictional determination and that the Project Development Team be notified when it is anticipated that the timeline will be lengthy and uncertain. A preliminary jurisdictional determination may be used for all other projects. **NOTE:** For projects that require an approved jurisdictional determination, a verified jurisdictional determination is required for the final environmental document. For all other projects, a verified jurisdictional determination is recommended, but not required, for the final environmental document. The final environmental document should document project coordination with the U.S. Army Corps of Engineers. Note that per Regulatory Guidance Letter 16-01, approved jurisdictional determinations are valid for five (5) years, subject to limited exceptions specified in [Regulatory Guidance Letter 05-02](https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Guidance-Letters/). See [SER, Volume 1, Chapter 15, “Waters of the U.S. and the State,”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-15-waters-of-the-us-and-state) [SER, Volume 3, Chapter 3, “Waters of the U.S. and the State,”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-3-biological-resources/ch-3-waters-of-the-us-and-state) Regulatory Guidance Letter 05-02, and Regulatory Guidance Letter 05-05 for further information.

Within the coastal zone, the [California Code of Regulations](https://oal.ca.gov/publications/ccr/) (Title 14, Division 5.5, Chapter 8, Subchapter 1, Article 18, Section 13577) establishes a “one parameter definition” that only requires evidence of a single parameter to establish wetland conditions.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s) and specify if the report is for an approved jurisdictional determination or preliminary jurisdictional determination, and the date of approval by the U.S. Army Corps of Engineers.
2. Describe the study area for wetlands and other waters.
3. If there are no waters of the U.S. in the project area, clearly state that and provide information in the discussion that supports this conclusion.
4. If there are waters of the U.S. in the project area, the discussion should include the following:
   1. Copies of letters from the U.S. Army Corps of Engineers and other appropriate agencies (NEPA/404 Memorandum of Understanding signatory agencies if applicable) related to the Purpose and Need statement and the alternatives that were evaluated in the environmental document (not required for wetlands assumed to be covered by nationwide permits).
   2. A concise description, including exhibits depicting the waters of the U.S. in the project area relative to the alternatives under consideration, and the location(s) of any associated sensitive species habitat or special aquatic sites.
5. If there are non-federal waters of the state (including ground water and isolated water bodies); rivers, streams, or lakes; and/or coastal wetland resources, be sure to describe as well. NOTE: The Natural Environment Study may refer to “non-federal waters of the state” as “waters of the state.”
6. If the project has the potential to affect coastal wetlands, additional technical information necessary for this section may include jurisdictional wetland delineations conducted consistent with California Coastal Commission guidelines. These should include a current (typically less than 2 years old), detailed, temporary and permanent project feature impact analysis. Wetland delineations are commonly required for any project located within 100 feet of a potential wetland resource, including isolated wetlands. Note that in many instances, wetland delineation criteria as identified in California Code of Regulations Section 13577(b) of Title 14, Division 5.5, Article 18 will differ from criteria utilized by other resource agencies (e.g., U.S. Army Corps of Engineers) for identifying wetlands.

#### Environmental Consequences

1. The alternatives discussion and comparison are the key component of this section of the document. Refer reader to the discussion of alternatives considered but withdrawn in Chapter 1, which describes why alternatives were withdrawn and not carried forward for analysis in the environmental document.
2. Document wetland avoidance alternatives here and in the “Alternatives” section. If the avoidance alternatives are not practicable, justify in detail as it relates to project purpose and need how the cost, performance, socioeconomic impacts, or other factors, such as existing technology, logistics, or other adverse environmental consequences, would make these alternatives impracticable.
3. Discuss how all practicable measures to minimize harm to the affected wetland have been included in the proposed alternative(s). If a given minimization measure is not practicable, justify in detail how the cost, performance, socioeconomic impacts, or other factors would make the measure impracticable.
4. For alternatives that would affect non-federal state waters and wetlands:
   1. Include maps or other drawings that show both federally jurisdictional, if present, and non-federal state waters/wetlands, clearly indicate under which jurisdiction they fall and quantify how the project or alternatives would affect them.
   2. Describe the quality and functions of the affected non-federal state waters/wetlands and any associated habitats. Include a quantitative assessment of the impacts and discuss how the project will affect the function and value of the non-federal state waters/wetlands.
5. Discuss the relevant project features and standardized measures, including best practices that have avoided or minimized the project’s environmental consequences such as the establishment of environmentally sensitive areas, standard erosion control measures, and the use of temporary wetland protection mats (when approved by the applicable regulatory agencies).
6. A table summarizing the impacts on wetlands and other waters of the U.S./state by drainage location and impact type (permanent, temporary, direct, indirect) should be included to aid reviewers. Distinguish impacts to U.S. Army Corps of Engineers jurisdictional waters (wetlands and other waters of the U.S.) from impacts to State Water Resources Control Board or Regional Water Quality Control Board waters (waters of the state) from coastal wetland resources. For CEQA documents, also include any impacts to rivers, streams, or lakes which may require a California Department of Fish and Wildlife Lake or Streambed Alteration Agreement. Summarize this information for each alternative discussed in the document so comparisons can be readily made. A text discussion should also be provided.
7. **NOTE:** For a final environmental document, identify the least environmentally damaging practicable alternative and support its selection. NOTE: The least environmentally damaging practicable alternative may not always be the “biologically preferred alternative.” In determining the least environmentally damaging practicable alternative, other environmental impacts, such as socioeconomic impacts, may be taken into account.
8. Document agency coordination. Briefly list all waters and wetlands permits needed for the proposed project and describe coordination with the relevant resource agencies. Refer the reader to the Comments and Coordination chapter for a more detailed discussion of coordination and copies of correspondence with the agencies. Chapter 5 of the Natural Environment Study should include a coordination summary.
9. Remember that public notice must be given if wetlands would be affected by the proposed project. See the [Project Development and Procedures Manual](https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm), Appendix HH, for more information.
10. If the project has the potential to affect coastal wetlands, discuss potential impacts and consistency with applicable coastal policies and ordinances.

#### Avoidance, Minimization, and/or Mitigation Measures

1. Include avoidance, minimization, and/or mitigation measures here. For alternatives that would affect wetlands and other waters, discuss compensatory measures, including location, functions, plants, cost estimates, and success criteria.
2. Remember to state what the measure would do and why we are proposing it. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.
3. Define which measures apply to each jurisdictional water (waters of the U.S. vs. non-federal waters of the state, etc.) to avoid providing duplicative protection or compensation measures.

#### Wetlands Only Practicable Alternative Finding

**NOTE:** For a final environmental document, include the following information under a separate “Wetlands Only Practicable Alternative Finding” subheading if the preferred alternative will impact wetlands:

* 1. A reference to Executive Order 11990.
  2. An explanation of why there are no practicable alternatives to the proposed action.
  3. An explanation about the inclusion of all practicable measures to minimize harm to wetlands.
  4. A concluding statement **[Do not modify boilerplate statement below]**:

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use. **[End boilerplate]**

NOTE: For Local Assistance projects, the District Local Assistance Engineer and the District Environmental Office Chief or designee makes the “only practicable alternative finding” for wetlands.

**Additional Guidance**

* [SER, Volume 3, Chapter 3, “Waters of the U.S. and the State”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-3-biological-resources/ch-3-waters-of-the-us-and-state)
* [SER, Volume 1, Chapter 15, “Waters of the U.S. and the State”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-15-waters-of-the-us-and-state)
* [Environmental Protection Agency Fact Sheet for the 2023 Final Revised Definition of Waters of the U.S. Conforming.](https://www.epa.gov/system/files/documents/2023-08/FINAL_WOTUSPublicFactSheet08292023.pdf)
* [U.S. Army Corps of Engineers Regulatory Guidance Letter No. 16-01](https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Guidance-Letters/) – Jurisdictional Determinations
* [U.S. Army Corps of Engineers Regulatory Guidance Letter No. 05-02](https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Guidance-Letters/) – Expiration of Geographic Jurisdictional Determinations of Waters of the U.S.
* [U.S. Army Corps of Engineers Regional Supplement to the Corps of Engineers Delineation Manual: Arid West Region (Version 2.0)](https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/reg_supp/)
* [U.S. Army Corps of Engineers Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)](https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/reg_supp/)
* [1987 Corps Wetlands Delineation Manual](https://www.spl.usace.army.mil/Missions/Regulatory/Jurisdictional-Determination/Wetland-Delineations/)
* [Standard Operating Procedure for Determination of Mitigation Ratios](https://www.spd.usace.army.mil/Portals/13/docs/regulatory/qmsref/ratio/12501-SPD.pdf)
* [U.S. Army Corps of Engineers RG L05-05 – Ordinary High Water Mark](https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Guidance-Letters/)
* [U.S. Army Corps of Engineers South Pacific Division Mitigation and Monitoring Plan Guidance](https://www.spd.usace.army.mil/Portals/13/docs/regulatory/mitigation/MitMon.pdf)
* [State Water Resource Control Board State Policy of Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State](https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf)

### Plant Species

#### Regulatory Setting

The U.S. Fish and Wildlife Service has regulatory responsibility for the protection of federally listed special-status plant species. “Special status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act.

At the state level, the California Department of Fish and Wildlife has regulatory responsibility for special-status plant species protected by the California Endangered Species Act.

Please see the Threatened and Endangered Species section in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including U.S. Fish and Wildlife Service candidate species, California Department of Fish and Wildlife species of special concern, and California Native Plant Society rare plants.

**GUIDANCE**

Chapter 4 of the Natural Environment Study should provide all the necessary information on plant species for the preparation of the environmental document, including affected environment, environmental consequences, and avoidance, minimization, and/or mitigation measures. When writing the environmental document, summarize the information and incorporate the Natural Environment Study by reference as needed.

This section of the document presents a broader view of special-status plant species than the more focused discussion found in the Threatened and Endangered Species section. In this section, describe the dominant plant species in the biological study area.

Keep in mind that some local governments, special districts, and other land-management agencies may identify certain species of plants as important, although they may not be protected by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. These plants should be discussed in this section along with avoidance, minimization, and/or mitigation measures proposed for impacts to these species.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s). Remember to discuss/describe species that occur or have the potential to occur in the project area and the studies done to determine their presence or absence.
2. Present each species individually. Describe the dominant plant species, followed by the lesser dominant species, in the biological study area.
3. Include a discussion of the habitat conditions that were found and the species that would be supported.
4. Describe any special resource protection areas, as identified in a certified Local Coastal Program, or if the project is located within 100 feet of a potential environmentally sensitive habitat area as defined by the Coastal Act, and/or where special-status species potentially occur.

#### Environmental Consequences

1. Discuss and quantify the potential direct and indirect, permanent and temporary, impacts of each of the project alternatives on the plants identified in the Affected Environment section using the environmental consequences documented in the Natural Environment Study. These should be discussed in detail here as they pertain to federally protected plant species (i.e., U.S. Forest Service) other than those listed under Federal Endangered Species Act, which are discussed in the Threatened and Endangered Species section. If work is being done on federal land (e.g., Bureau of Land Management or U.S. Forest Service), then those agencies’ regulations, policies, and Habitat Conservation Plans are followed.
2. If the project has the potential to affect an environmentally sensitive habitat area or special-status species, discuss potential impacts and consistency with applicable coastal policies and ordinances.
3. Be certain that this discussion incorporates any relevant project features and standardized measures, including best practices that have avoided or minimized the project’s environmental consequences. Examples might include standard revegetation efforts performed by the Contractor (and not required as mitigation or as a permit condition), pre-construction surveys, standard erosion control measures, and the establishment of environmentally sensitive areas.

#### Avoidance, Minimization, and/or Mitigation Measures

Identify applicable proposed avoidance, minimization, and/or mitigation measures as documented in the Natural Environment Study to address impacts on species identified in the Environmental Consequences section. Remember to state what the measure would do and why we are proposing it.

Potential measures can include but are not limited to:

* Purchasing conservation easements.
* Purchasing credits from established mitigation banks.
* Mitigating directly on-site.

If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.

### Animal Species

**GUIDANCE FOR REGULATORY SETTING**

Include the information below and discuss, as applicable, other federal and state laws such as the Marine Mammal Protection Act. In addition to federal and state laws regulating impacts to wildlife, there are often local regulations (county or city) that should be considered when developing projects. If work is being done on federal land (e.g., Bureau of Land Management or U.S. Forest Service), then those agencies’ regulations, policies, and Habitat Conservation Plans are followed.

#### Regulatory Setting

Federal laws and regulations relevant to wildlife include the following:

* NEPA
* Migratory Bird Treaty Act
* Fish and Wildlife Coordination Act

The U.S. Fish and Wildlife Service and NOAA Fisheries are responsible for implementing these laws.

State laws and regulations relevant to wildlife include the following:

* CEQA
* Sections 1600 – 1603 of the California Fish and Game Code
* Sections 4150 and 4152 of the California Fish and Game Code

The California Department of Fish and Wildlife are responsible for implementing these laws.

This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the Federal Endangered Species Act or the California Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section. All other special-status animal species are discussed here, including U.S. Fish and Wildlife Service or NOAA Fisheries candidate species and California Department of Fish and Wildlife fully protected species and species of special concern.

**GUIDANCE**

Chapters 3 and 4 of the Natural Environment Study should provide all the necessary information on federally protected animal species for the preparation of the environmental document, including affected environment, environmental consequences, and avoidance, minimization, and/or mitigation measures. When writing the environmental document, summarize the information on federally protected species and incorporate the Natural Environment Study by reference as needed.

This section presents a broader view of special-status animal species than the more focused discussion found in the Threatened and Endangered Species section.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Discuss the special status of each species included in this section. Describe any special resource protection areas, as identified in a certified Local Coastal Program, or if the project is located within 100 feet of a potential environmentally sensitive habitat area as defined by the Coastal Act.
3. Discuss the common animal species that are described in Chapter 3 of the Natural Environment Study.
4. Discuss any survey results that will inform the Environmental Consequences section; quantify or use visuals where possible.

#### Environmental Consequences

1. Discuss the potential impacts to each species included in this section. Be certain that this discussion incorporates any relevant project features and standardized measures, including best practices that have avoided or minimized the project’s environmental consequences. Examples might include standard revegetation efforts performed by the Contractor (and not required as mitigation or as a permit condition), pre-construction surveys, bird protection measures, fish protection measures, and the establishment of environmentally sensitive areas.
2. Where applicable, differentiate between temporary and permanent impacts and between alternatives.
3. Discuss possible effects to species covered by the Migratory Bird Treaty Act.
4. If the project has the potential to affect an environmentally sensitive habitat area or special-status species, discuss potential impacts and consistency with applicable coastal policies and ordinances.

#### Avoidance, Minimization, and/or Mitigation Measures

Describe the proposed avoidance, minimization, and/or mitigation measures for each impact and each alternative. Highlight the important avoidance, minimization, and/or mitigation efforts taken by the Project Development Team. Remember to state what the measure would do and why we are proposing it.

Potential measures can include but are not limited to:

* Purchasing conservation easements.
* Purchasing credits from established mitigation banks.
* Mitigating directly on-site.

If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.

### Threatened and Endangered Species

#### Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies are required to consult with the U.S. Fish and Wildlife Service and NOAA Fisheries to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species.

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the U.S.

**GUIDANCE**

Threatened or endangered species are species of plants and animals that are formally listed as endangered under the Federal Endangered Species Act or California Endangered Species Act. Caltrans is required to determine if the proposed projects will involve—and possibly affect—proposed or listed species and/or their critical habitat.

As noted above, federally protected special-status animals are provided varying levels of regulatory protection. If a species is listed or proposed for listing, formal consultation must be initiated with the U.S. Fish and Wildlife Service and/or NOAA Fisheries. Informal consultation should be conducted when animals are considered U.S. Fish and Wildlife Service candidate species. Informal consultation is especially important because non-listed species can sometimes become listed as a project is being planned, designed, or constructed, and the regulatory agencies may impose new requirements on the project.

This section on threatened and endangered species should be focused on only Federal Endangered Species Act and California Endangered Species Act issues. A more general discussion of special-status species should be included in the Animal and Plant sections above.

Consult with the project biologist throughout the documentation and consultation processes. Together, develop and outline a tentative schedule of the processes. This is especially important as threatened and endangered species consultation is often a critical path item for the project approval and environmental document phase of the project development process.

Remember that for projects with a federal nexus such as those requiring a federal permit or other approval, involving federal land, or with federal funding, Section 7 consultation may be required. Remember also that consultation under Section 10 of Federal Endangered Species Act is not an acceptable substitute when there is a federal nexus. If there is no federal nexus and there is potential for impacts to a threatened or endangered species Section 10 Consultation may be required. (Section 10 consultation results in a Habitat Conservation Plan).

The [SER, Volume 3, Biological Resources](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-3-biological-resources), includes a section on Federal Endangered Species Act and California Endangered Species Act documentation and consultation requirements. Space does not permit a detailed overview here. However, you should be aware of the basic steps.

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies, such as the FHWA (and Caltrans, as assigned), to consult with the Secretary of Commerce on any action or proposed action authorized, funded, or undertaken by that agency may adversely affect essential fish habitat as identified under the Magnuson-Stevens Fishery Conservation and Management Act. Federal agencies and their delegates may use existing consultation/environmental review procedures, such as biological assessments, to satisfy the Magnuson-Stevens Fishery Conservation and Management Act consultation requirements.

The biologist will complete a Biological Assessment where a “may affect” determination has been made. The Biological Assessment is written under the direction of the federal agency having jurisdiction over the species, usually U.S. Fish and Wildlife Service or NOAA Fisheries. The Biological Assessment should provide all the necessary information on federal endangered species for the preparation of the environmental document, including affected environment, environmental consequences, and avoidance, minimization, and/or mitigation measures. Summarize the information and incorporate the Biological Assessment by reference as needed. Remember that many of the terms used by technical specialists are not in the vocabularies of most general readers. Reword or explain difficult terms in the body of the document so the general reader can easily understand the information.

For state-only listed species, the Natural Environment Study (Chapter 4) will include the information necessary to write this section of the document.

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Summarize the federal consultation process (Section 7 consultation). For CEQA documents, include information on any incidental take permit, under California Fish and Game Code Section 2081, or consistency determination, under California Fish and Game Code Section 2080.1, on the state level. Include a summary of the status of consultation to date. See Chapter 5 of the Natural Environment Study for this information.

Reference any correspondence with the resource agencies, which must be included in the Comments and Coordination chapter or as a separate appendix. A copy of an official and recent (no more than 180 days old) species list(s) requested for the proposed project must also be included in the Comments and Coordination chapter or as a separate appendix. If the species list(s) are older than 180 days, request a new list, or the U.S. Fish and Wildlife Service must verify, in writing, that the list(s) is valid. A separate species list must also be requested from NOAA Fisheries. Include copies of emails as needed to verify the date of lists obtained. **NOTE:** Species lists are not required if a “no effect finding” is made for all species in the RESOURCE TOPICS DISMISSED FROM ANALYSIS section. If the project is outside NOAA Fisheries’ jurisdiction, state that either here or in the RESOURCE TOPICS DISMISSED FROM ANALYSIS section.

For the final environmental document, include the Biological Opinion and/or any concurrence with “May Affect, Not Likely to Adversely Affect.” If consultation with the Services will not be completed by the final environmental document or it is determined by the Project Development Team that it would be more beneficial to complete consultation in the Plans, Specifications, and Estimates phase, delaying the completion of consultation to the Plans, Specifications, and Estimates phase may be an option. Use of the flexible consultation process should be identified as early as possible, meet certain criteria, be approved by management per the [Flexibility in Timing of Obtaining Biological Approvals Under FESA Section 7](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/policy-memos#npit) policy memo (July 2024), and be documented in the final environmental document to make it clear completion of consultation is pending as of time of NEPA approval. If available, copies of the 2081 Incidental Take Permit and the 2080.1 Consistency Determination, as applicable, should also be included.

1. Identify species within the project area and any survey results.

#### Environmental Consequences

1. Be certain that this discussion incorporates any relevant project features and standardized measures, including best practices that have avoided or minimized the project’s environmental consequences. Examples might include standard revegetation efforts performed by the Contractor (and not required as mitigation or as a permit condition), standard erosion control measures, pre-construction surveys, bird protection measures, fish protection measures, wetland protection measures, biological monitoring during construction, the inclusion of a natural resource protection plan as a contract bid item, and the establishment of environmentally sensitive areas.
2. In this section, discuss the potential impacts to each species and/or critical habitat on the valid species list received from U.S. Fish and Wildlife Service. Include all effect findings (No Effect; May Affect, Not Likely to Adversely Affect; May Affect, Likely to Adversely Affect) where they have been made. **NOTE: The final environmental document must include an effect finding for all listed/proposed species and designated or proposed critical habitat on both of the U.S. Fish and Wildlife Service and NOAA Fisheries species lists. At the draft environmental document stage, you should at a minimum be able to clearly state anticipated effects (No Effect or May Affect) related to listed/proposed species and/or critical habitat.** Summarize the consultation process and provide the date of the Biological Opinion and/or letter of concurrence. A table (see examples below) can be used to summarize effect findings or provide a statement that clearly identifies the species and effect finings (e.g., The project has no effect on all species listed in Appendix X, except for the San Joaquin Kit Fox. The project may affect, but is not likely to adversely affect the San Joaquin Kit Fox). **NOTE: if a different table format is used (for example, one that includes threatened and endangered species under the California Endangered Species Act as well), there MUST be a column which shows the Federal Endangered Species Act effect findings (or preliminary effect findings for the draft environmental document).**

**NOTE:** For listed species where there is no designated critical habitat present, put N/A in the table.

**Federal Endangered Species Act Effect Findings [or Preliminary Effect Findings for draft environmental document]**

Table 13: Federal Endangered Species Act Effect Findings for Plants

| **Common Name** | **Scientific Name** | **Status** | **Effect Finding** | **Effect Finding for Critical Habitat (if applicable).** |
| --- | --- | --- | --- | --- |
| Butte County Meadowfoam | Limnanthes floccosa ssp. Californica | Federal Endangered | No Effect | N/A |
| Sacramento Orcutt Grass | Orcuttia viscida | Federal Endangered | No Effect | N/A |

Table 14: Federal Endangered Species Act Effect Findings for Invertebrates

| **Common Name** | **Scientific Name** | **Status** | **Effect Finding** | **Effect Finding for Critical Habitat (if applicable).** |
| --- | --- | --- | --- | --- |
| Vernal Pool Fairy Shrimp | Branchinecta lynchi | Federal Threatened | May Affect, Likely to Adversely Affect | May Affect, Likely to Adversely Affect |
| Conservancy Fairy Shrimp | Branchinecta conservatio | Federal Endangered | May Affect, Likely to Adversely Affect | May Affect, Likely to Adversely Affect |

Table 15: Federal Endangered Species Act Effect Findings for Amphibians and Reptiles

| **Common Name** | **Scientific Name** | **Status** | **Effect Finding** | **Effect Finding for Critical Habitat (if applicable).** |
| --- | --- | --- | --- | --- |
| California Red-Legged Frog | Rana draytonii | Federal Threatened | May Affect, Not Likely to Adversely Affect | No Effect |
| Giant Garter Snake | Thamnophis gigas | Federal Threatened | May Affect, Not Likely to Adversely Affect | No Effect |

Table 16: Federal Endangered Species Act Effect Findings for Mammals

| **Common Name** | **Scientific Name** | **Status** | **Effect Finding** | **Effect Finding for Critical Habitat (if applicable).** |
| --- | --- | --- | --- | --- |
| Riparian Brush Rabbit | Sylvilagus bachmani riparius | Federal Endangered | No Effect | N/A |

**[End examples]**

1. Clearly state the environmental consequences in terms of the California Endangered Species Act regarding “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”, and describe the consequences for each species under this definition of take.

#### Avoidance, Minimization, and/or Mitigation Measures

Describe the proposed avoidance, minimization, and/or mitigation measures for each impact (**NOTE:** reference the project description in the Biological Assessment during the draft document and the Biological Opinion terms and conditions in the final). Remember to state what the measure would do and why we are proposing it, and note where the measure was the outcome of consultation. If mitigation is determined to be necessary under CEQA, discuss the significance of the impact and the proposed mitigation measures in the CEQA Evaluation chapter.

**Additional Guidance**

* [Changes to Species List Requirements, Phil Stolarski and Dee Lam, August 17, 2021](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/policy-memos#npit)
* [50 CFR 402.12 (Biological Assessments)](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1ESA1973)
* [SER, Volume 3, Biological Resources](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-3-biological-resources)
* [U.S. Fish and Wildlife Service and NMFS Biological Assessment Checklists](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#faqs)
* [Flexibility in Timing of Obtaining Biological Approvals Under FESA Section 7 policy memo Jeremy Ketchum and Dee Lam July 19, 2024](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/policy-memos#npit)

### Invasive Species

#### Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the U.S. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999, directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the NEPA analysis for a proposed project.

**GUIDANCE**

**Writing the Document**

#### Affected Environment

1. List applicable technical report(s) along with completion date(s).
2. Identify and quantify any existing invasive species within the project area. NOTE: Invasive species include animals (invertebrates and vertebrates) as well as plants.

#### Environmental Consequences

Discuss the potential of the project to promote or inhibit the spread of invasive species. State that invasive species will not be used in any landscaping needed for the project. Discuss any additional measures that will be used to combat invasive species. See example text below:

In compliance with Executive Order 13112 on Invasive Species and guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as invasive. None of the species on the California list of invasive species is used by Caltrans for erosion control or landscaping in XYZ. All equipment and materials will be inspected for the presence of invasive species and cleaned if necessary. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur. **[End example]**

#### Avoidance, Minimization, and/or Mitigation Measures

Discuss any required avoidance, minimization, and/or mitigation measures.

**Additional Guidance**

* [FHWA Guidance on Invasive Species](http://www.environment.fhwa.dot.gov/ecosystems/wildlife/inv_guid.asp)
* [National Invasive Species Council](https://www.doi.gov/invasivespecies)
* [California Invasive Species Council](http://www.iscc.ca.gov/)

## RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

**NOTE:** Include this section for Environmental Impact Statements.

Discuss in general terms the proposed action's relationship between local short-term impacts and use of resources, and the maintenance and enhancement of long-term productivity. This general discussion might recognize that the build alternatives would have similar impacts. The discussion should point out that transportation improvements are based on state and/or local comprehensive planning that consider(s) the need for present and future traffic requirements within the context of present and future land use development. In such a situation, one might conclude that the local short-term impacts and use of resources by the proposed action are consistent with the maintenance and enhancement of long-term productivity for the local area, region, or state. See example text below.

Project implementation will result in attainment of short-term and long-term transportation and economic goals at the expense of some long-term social, aesthetic, biological, noise, parkland, and other land use impacts.

**Build Alternatives**

The build alternatives would have similar impacts.

**Short-term losses would include:** economic losses experienced by businesses that relocate; construction impacts such as noise, motorized and non-motorized traffic delays or detours; and recreational impacts such as access inconveniences to the Little League fields and/or the regional park, and trail detours or closures.

**Short-term benefits would include:** increased jobs and revenue generated during construction.

**Long-term losses would include:** permanent loss of plant and wildlife resources, loss of open space, visual impacts, community character and cohesion impacts, noise increases, use of construction materials and energy, trail impacts, homes and stables displaced from the community, loss of regional park lands, and archaeological site values lost.

**Long-term gains include:** improvement of the transportation network in the region and the project vicinity, increased access to the region or project vicinity, reduction of congestion on local streets and highways, use of private funds to construct a public facility (for the tollway), faster project delivery (tollway) through use of private funds, increased jobs and revenue through creation of new toll operation industry, and support of approved development.

**No-Project**

This alternative would offer none of the gains or have any of the losses listed above. It would, however, do nothing to resolve worsening congestion on local streets and highways. Private funding to provide public transportation facilities would not be available. **[End example]**

## IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF FEDERAL RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED PROJECT

**NOTE:** Include this section for Environmental Impact Statements.

Discuss in general terms the proposed action's irreversible and irretrievable commitment of resources. This general discussion might recognize that the build alternatives would require a similar commitment of natural, physical, human, and fiscal resources. An example discussion would be as follows:

The proposed action involves a commitment of a range of natural, physical, human, and fiscal resources. Land used in the construction of the proposed facility is considered an irreversible commitment during the period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion would ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material are used. Additionally, large amounts of labor and natural resources are used in the making of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use would not have an adverse effect upon continued availability of these resources. Any construction would also require a substantial one-time use of both state and federal funds, which are not retrievable; savings in energy, time, and a reduction in collisions would offset this. In addition to the costs of construction and right of way would be costs for roadway maintenance, including pavement, roadside, litter/sweeping, signs and markers, electrical and storm maintenance.

The commitment of these resources is based on the concept that residents in the immediate area, region, and state would benefit from the improved quality of the transportation system. These benefits would consist of improved accessibility and safety, which are expected to outweigh the commitment of these resources. **[End example]**

## CONSTRUCTION IMPACTS

This is an optional placement for Construction Impacts. If construction impacts have not been discussed above and/or the project is likely to have many construction impacts, consider adding a separate Construction Impacts section. Potential subjects include: construction phasing/schedule/work hours, noise, air quality (dust), access issues (pedestrian, cyclists, equestrians, etc.), utilities, detours, traffic delays, and emergency vehicle access. Be certain to discuss how standardized measures, including best practices will minimize these impacts. Remember to discuss proposed borrow/fill and optional disposal sites (see Design Information Bulletin 85). Also, identify and assess impacts associated with the staging and storage of equipment. List applicable technical report(s) along with completion date(s).

**Additional Guidance**

* [Design Information Bulletin 85: Guidance for the Consideration of Material Disposal, Staging, and Borrow Sites, May 13, 2007](https://dot.ca.gov/programs/design/design-information-bulletins-dibs)
* [Disposal Site Quality Team Final Report](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#disposal). This report addresses Caltrans and FHWA policies on disposal, staging, and borrow areas, including plant sites, contractor yards, and access roads.

# CEQA Evaluation

This chapter is not required for NEPA only documents. It is used to document and discuss Caltrans’ significance determinations under CEQA and to analyze those topics not included in the NEPA analysis (i.e., CEQA only topics). According to CEQA Guidelines, Section 15064(b), “the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area.”

The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the Project Development Team, based to the extent possible on the results of field surveys and technical studies. Because the significance of an effect may vary depending on the environmental setting, the context within which the impact takes place is critical and set rules for determining significance in every case have not been established. Some public agencies have established thresholds of significance for CEQA. Because Caltrans has statewide jurisdiction and the setting for projects varies so extensively across the state, Caltrans has not developed statewide thresholds of significance for CEQA and does not intend to. The determination of significance under CEQA is left to the internal Project Development Team, with particular deference paid to the expertise of environmental staff and other specialists.

This chapter is largely organized around the CEQA Checklist and includes guidance to ensure consistency with Caltrans’ posted guidance on [Mitigation under CEQA](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#ceqa).

## DETERMINING SIGNIFICANCE UNDER CEQA

If the project is a local assistance project, insert the following boilerplate text at the beginning of this section:

The project is subject to federal, as well as enter name of local jurisdiction and state environmental review requirements because the enter name of Local Agency proposes the use of federal funds from FHWA and/or the project requires an approval from FHWA. Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. The enter name of Local Agency is the project proponent and the lead agency under CEQA. FHWA’s responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement, or a lower level of documentation, will be required. NEPA requires that an Environmental Impact Statement be prepared when the proposed federal action (project) as a whole has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Each and every significant effect on the environment must be disclosed in the Environmental Impact Report and mitigated if feasible. In addition, the CEQA Guidelines list a number of “mandatory findings of significance,” which also require the preparation of an Environmental Impact Report. See the [SER, Volume 1, Chapter 36, “Environmental Impact Reports”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-36-environmental-impact-report#definition) for more information. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance. **[End boilerplate]**

If the project is a joint Caltrans/FHWA project, insert the following boilerplate text at the beginning of this section:

The proposed project is a joint project by Caltrans and the FHWA and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. FHWA’s responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans. Caltrans is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement, or a lower level of documentation, will be required. NEPA requires that an Environmental Impact Statement be prepared when the proposed federal action (project) as a whole has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Each and every significant effect on the environment must be disclosed in the Environmental Impact Report and mitigated if feasible. In addition, the CEQA Guidelines list a number of “mandatory findings of significance,” which also require the preparation of an Environmental Impact Report. See the [SER, Volume 1, Chapter 36, “Environmental Impact Reports”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-36-environmental-impact-report#definition) for more information. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance. **[End boilerplate]**

**Mitigation Measures for Significant Impacts under CEQA**

In the discussion areas below each resource in the CEQA checklist, list/discuss the proposed mitigation measures for each significant impact under CEQA. Mitigation measures listed here should be the same as those found on the Environmental Commitments Record under “Mitigation Measures for Significant Impacts under CEQA.” Remember to be careful not to use the term “mitigation” when the effect has been determined not to be significant. See the guidance on [Mitigation under CEQA](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#ceqa) for additional information.

The mitigation discussion should include the following (CEQA Guidelines Section 15126.4[a]):

1. Whether the mitigation measure will avoid or substantially reduce the environmental effect.
2. If a project proponent other than the lead agency (responsible agency, trustee agency, etc.) proposed the mitigation measure, discuss who proposed the mitigation.
3. If several measures are available to mitigate an impact, discuss each and why the chosen measure was selected.
4. If the implementation of a mitigation measure results in environmental effects, those effects must be discussed in the environmental document (this discussion does not need to be as detailed as the projects impacts).
5. Relevant energy conservation measures.
6. Who is responsible for implementing, monitoring and/or reporting on the mitigation measures (Resident Engineer, Caltrans Biologist, contract biologist, etc.).
7. The above information will be used for the completion and update of the [Environmental Commitments Record](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#cert_compliance) during the Project Approval and Environmental Document; Right of Way; Plans, Specifications, and Estimates; and/or Construction phases of the project.

## ENVIRONMENTALLY SUPERIOR ALTERNATIVE

For Environmental Impact Reports, if the environmentally superior alternative is the “no project” alternative (i.e., no-build), the Environmental Impact Report shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines 15126.6[e][2]). You may cross reference the Environmentally Preferable Alternative section if applicable.

## CLIMATE CHANGE

**GUIDANCE:** This section is required for all CEQA documents. Please use the latest information in the appropriate Climate Change Annotated Outline (capacity increasing or non-capacity increasing) located on the [SER Forms and Templates page](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#aos).

## SENATE BILL 743/INDUCED DEMAND ANALYSIS

#### Regulatory Setting

Senate Bill 743 (2013) amended CEQA to allow the Governor’s Office of Planning and Research to develop new guidelines under CEQA establishing alternative metrics to levels of service for the analysis of transportation impacts. On December 28th, 2018, the Office of Administrative Law approved the amendments to the CEQA Guidelines including changes related to Senate Bill 743. The amended CEQA Guidelines add a new section on determining the significance of transportation impacts, and generally specify VMT as the most appropriate measure of transportation impacts. In 2020, Caltrans prepared guidance documents for the implementation of Senate Bill 743 and adopted VMT as the CEQA transportation metric. These documents, the “Transportation Analysis Framework” and “Transportation Analysis under CEQA,” along with other information can be found on the [Caltrans Senate Bill 743 website](https://dot.ca.gov/programs/esta/sb-743/resources).

**GUIDANCE**

This section of the document discusses the induced demand analysis required by Senate Bill 743 and the subsequent changes to the CEQA statue and guidelines. For a thorough discussion of how this analysis should be conducted, please see the “Transportation Analysis Framework” and “Transportation Analysis under CEQA.” Keep in mind that if using the National Center for Sustainable Transportation induced travel calculator, the VMT numbers generated are to be used only for the transportation analysis. Air quality, noise, and GHG emissions will continue to rely on the travel demand model, as the National Center for Sustainable Transportation cannot provide the necessary inputs to CT-EMFAC such as speed, volume, fleet mix, etc. If truck numbers are subtracted from the transportation analysis (as the focus of Senate Bill 743 was passenger vehicles) do not make these same adjustments for air quality, noise, GHG emissions, etc. In other words, these other analyses should fully account for any potential increases in truck traffic.

First, following the guidance in the “Transportation Analysis under CEQA,” determine if the project requires an analysis for VMT. If the project is a type of project that is not likely to lead to a measurable and substantial increase in vehicle travel, then the project may be “screened” and will not require an induced travel analysis. In this case, simply add a sentence or two explaining why the project does not require an induced travel analysis, ensuring that the “Transportation Analysis under CEQA” is cited. For example:

This project (pavement rehabilitation) is a type of project identified by the “Transportation Analysis under CEQA” as a project not likely to lead to a measurable and substantial increase in VMT. This project consists of pavement rehabilitation only and will not make any changes to traffic speed or volume. Therefore, an induced demand analysis is not required. **[End example]**

For projects that could result in very minor changes to traffic speed and/or volume, such as auxiliary lanes approaching one mile in length, interchange improvements that do not add capacity, etc., further justification for screening the project should be provided.

For projects that cannot be screened and require an analysis, please follow the guidance below.

#### Affected Environment

List applicable technical report(s) with their completion date(s). Define the study area for the VMT/induced demand analysis and describe existing conditions in the study area. Refer to the “Transportation” section of the document as appropriate, but it is not necessary to duplicate the entire “Affected Environment” discussion from that section of the document. Discuss planning documents relevant to the project and any VMT-reduction goals, including any relevant statewide documents.

#### Environmental Consequences

This section of the document should focus on the project’s potential to increase VMT. This section of the document should describe the methodology used to calculate induced travel (i.e., travel demand model, National Center for Sustainable Transportation calculator, etc.), any benefits or shortcomings of the methodology used, the anticipated increase in VMT resulting from the project, and whether the impact is expected to be significant under CEQA, following the guidance in the “Transportation Analysis under CEQA.”

#### Avoidance, Minimization, and/or Mitigation Measures

Be certain to discuss the relevant project features (including standardized measures) that have been incorporated into the project to reduce VMT. This may include active transportation elements, connectivity improvements, intelligent transportation systems and transportation demand management features, etc.

Include mitigation measures for impacts found to be significant under CEQA. Remember that VMT mitigation may be counted towards GHG emissions mitigation, but not vice versa, due to the other effects that worsened with increased VMT including brake and tire wear emissions, noise, wildlife collisions, etc.

## WILDFIRE

#### Regulatory Setting

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the “CEQA Checklist” for the inclusion of questions related to fire hazard impacts for projects located on lands classified as very high fire hazard severity zones. The 2018 updates to the CEQA Guidelines expanded this to include projects “near” these very high fire hazard severity zones.

**GUIDANCE**

Most transportation projects, particularly those on existing alignments, will be unlikely to exacerbate wildfire risks or post-fire flooding/landslides. A primary consideration for work on existing alignments will be the potential to disrupt emergency response or evacuation routes during construction.

**Writing the Document**

#### Affected Environment

Determine if the project is located in or near a state responsibility area or land classified as very high fire hazard severity zone. The [CAL FIRE Office of the State Fire Marshall website](https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps) includes a list of California counties.

Choose the county your project is located in and the “State Responsibility Area” map and the “Local Responsibility Area” maps will be available to download. If the project is located in a very high fire hazard area, include a figure showing the project location on the fire hazard severity map.

If the project is not located within or near a very high fire hazard severity zone, state that in the RESOURCE TOPICS DISMISSED FROM ANALYSIS section.

#### Environmental Consequences

If the project is located within or near a very high fire hazard severity zone, consider the following:

1. Will the project impair an emergency response plan or emergency evacuation plan? Many cities and counties have web pages dedicated to emergency preparedness which will include that jurisdiction’s emergency response plan and/or emergency evacuation plan. If the information cannot be obtained online, contact the local city or county. Also consider contacting the California Highway Patrol and CalFire.
2. Would the project have the potential to exacerbate wildfire risks? Projects on new alignments in very high fire hazard severity zones will need to examine the impacts of facilitating the entry of automotive and truck traffic as well as an increased human presence in these areas as the majority of fires are human caused. The project development team should consider ways to reduce these risks which could include providing paved shoulders and/or the use of fire-resistant plants for landscaping.
3. Would the project require the installation of associated infrastructure that could exacerbate wildfire risks? Most transportation projects do not include associated infrastructure (such as power lines or other utilities) that could worsen fire risks. However, more analysis would be warranted if the project will install electrical systems where there is not currently one in place; for example, the installation of new lighting, conduits, and associated utility cabinet(s). Any environmental effects resulting from required fire setbacks should also be discussed in the appropriate section of the document.
4. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? A transportation project on a new alignment or that creates a large area of new cut slope has the potential to contribute to increased runoff resulting from new or increased areas of impervious surface area. This, along with any changes to drainage patters, will need to be evaluated to determine if this could result in an increased risk of post-fire flooding or mudslides.
5. Also consider the potential benefits the project may have in terms of lessening or mitigating wildfire risk:
   * Projects to pave and/or widen median and shoulder areas which can increase the width of the road as a firebreak, reduce vegetation adjacent to the roadside, and provide additional areas for emergency response vehicle staging.
   * Park and Ride lots can provide areas for emergency vehicle staging during wildfires and other emergencies.
   * Projects that improve travel time can decrease emergency response time.
   * Bioswales and detention basins can provide firebreaks.
   * Changeable Message Signs can provide critical information during an emergency and can be used to alert the public during times of high fire danger.

#### Avoidance, Minimization, and/or Mitigation Measures

Include a brief statement of any avoidance, minimization, and/or mitigation measures that will be included.

## CUMULATIVE IMPACTS

#### Regulatory Setting

Under CEQA (Guidelines Section 15355), “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts.

**GUIDANCE**

**Writing the Document**

**NOTE:** Please see the “Change to Effect Analysis under NEPA and Instructions on Cumulative Impact Analysis under CEQA” on the [Guidance for Preparers of Cumulative Impact Analysis website](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/cumulative-impact-analysis) for definitions and full instructions.

#### Resources Considered for Cumulative Impact Analysis

* List which environmental resources **have not been** carried forward for a detailed cumulative impact analysis and include a brief explanation why.
* List which environmental resources **are being** carried forward for a detailed cumulative impact analysis and a brief explanation why.

#### Resource-by-Resource Cumulative Impact Analysis

* Create a subheading for each resource being carried forward for a detailed analysis.
* For each resource, describe the resource study area.
* For each resource, describe the existing cumulative condition.
* For each resource, discuss whether the project’s impacts are cumulatively considerable.
  + Discuss whether the project’s impacts have the potential to be cumulatively considerable using the following considerations:
    - How acute is the existing cumulative condition?
    - How resilient or vulnerable is the resource or how sensitive is the population?
    - How intense is the project’s incremental impact?
  + Remember the mitigation that was originally proposed to address impacts to the resource can be taken into account when determining whether the project’s impact is cumulatively considerable.
* If the impacts are cumulatively considerable, discuss any additional proposed mitigation.
* State post-mitigation conclusion (if additional mitigation was added to address cumulative impacts).
  + For each resource included in the cumulative analysis, provide clear text stating the overall conclusion for the resource’s cumulative condition.
  + This statement would identify whether the additional mitigation would reduce the project’s cumulative impact to the resource, or if the cumulative condition for the resource remains significant even with any additional mitigation.
  + For example:

The project’s incremental contribution to particulate matter emissions has been determined to be cumulatively considerable and potentially significant. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce the significant cumulative impacts identified, it is probable that such cumulative impacts will remain significant and unavoidable. **[End example]**

Note that for this particular example, question b) under the “Mandatory Findings of Significance” section of the CEQA Checklist would be marked “Significant and Unavoidable Impact.”

## SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

A discussion of irreversible environmental changes, if any, is required for an Environmental Impact Report only when the project also requires an Environmental Impact Statement under NEPA (see CEQA Guidelines Section 15127). Discussions in the Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures chapter (Chapter 2) should be cross-referenced as much as possible to avoid repeating information.

## CEQA ENVIRONMENTAL CHECKLIST

Include the following boilerplate language (update chapter references if needed):

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2. **[End boilerplate]**

Remember: if you check the box “Less than Significant with Mitigation,” you cannot prepare a Negative Declaration. You must prepare a Mitigated Negative Declaration or an Environmental Impact Report.

**NOTE:** Example language has been provided following some of the checklist questions on the following pages. The examples given are not meant to represent any type of thresholds. Each project is unique and impacts must be analyzed on a case-by-case basis. Make sure to include discussions about the baseline environmental setting and compare the impacts to that baseline.

In the checklist tables, click on “Choose an item” under the CEQA Determination column to select the appropriate significance determination from the drop-down list. If discussions will be included after each resource table, follow the guidance provided.

### Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Have a substantial adverse effect on a scenic vista? | Choose an item. |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | Choose an item. |
| c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | Choose an item. |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | Choose an item. |

#### CEQA Significance Determinations for Aesthetics

Use this section to discuss and clarify the significance determinations for each question under Aesthetics. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined. See the example text below:

**a) No Impact**

The proposed project would not have a substantial adverse impact on a scenic vista because the project area does not include any scenic vistas.

**b, c) Less Than Significant**

As discussed in the Visual/Aesthetics section in Chapter 2, the proposed project would remove 10 trees including Douglas firs and ponderosa pines. The project would also include the construction of several retaining walls along the project limits. The portion of State Route 34 within the project limits is eligible for designation as a scenic highway due to its views of rolling hills and mature trees. Viewer sensitivity in the area is considered high.

The proposed project includes context-sensitive design solutions, including replanting trees at a ratio of 2:1 within the project area, and also the use of earth tones and other aesthetic treatments on the retaining walls. These project features would result in no net loss of trees along the project site and would blend the retaining walls into the project setting. The retaining walls have also been designed to be as low in profile as possible.

The proposed project would not diminish the views that make the highway eligible for scenic status. Therefore, the project as designed would not substantially degrade the visual character and quality of the site and would have less than significant impacts to scenic resources and visual character. No mitigation is required.

**d) No Impact**

The proposed project would not include new lighting elements in an area in which there is currently no lighting. **[End example]**

### Agriculture and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | Choose an item. |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | Choose an item. |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g])? | Choose an item. |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | Choose an item. |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | Choose an item. |

#### CEQA Significance Determinations for Agriculture and Forestry Resources

Use this section to discuss and clarify the significance determinations for each question under Agriculture and Forestry Resources. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined. See the example text below:

**a) Less Than Significant**

As discussed in the Farmland section in Chapter 2, the proposed project would convert unique farmland to non-agricultural land due to the curve realignment near Stonehill Road. The roadway alignment was shifted west to minimize the impacts to the farmland. With this modification to the project design, the amount of farmland needed for acquisition was reduced from 4.75 acres to 1.17 acres. There are approximately 249,000 acres of farmland in Stevens County. The 1.17 acres of farmland proposed for acquisition represents 0.00047% of the farmland in the county. In addition, this land is adjacent to the roadway and the acquisition would not affect the ability of the remaining portions of the parcel to be used for farming. These impacts are considered less than significant. No mitigation is required.

**b) No Impact**

There are no parcels under a Williamson Act contract within the project limits.

**c, d) No Impact**

There are no forest or timberlands within the project limits.

**e) No Impact**

There are no other changes anticipated to farmland or forest land. **[End example]**

### Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | Choose an item. |
| b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard? | Choose an item. |
| c) Expose sensitive receptors to substantial pollutant concentrations? | Choose an item. |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | Choose an item. |

#### CEQA Significance Determinations for Air Quality

Use this section to discuss and clarify the significance determinations for each question under Air Quality. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined. See the example text below:

**a, b, c) Less Than Significant**

The proposed project is located in the South Coast Air Basin and is within the jurisdiction of the South Coast Air Quality Management District and the California Air Resources Board. The South Coast Air Quality Management District is the primary agency responsible for writing the Air Quality Management Plan in cooperation with the Southern California Association of Governments, local governments, and the private sector. The Air Quality Management Plan provides the blueprint for meeting state and federal ambient air quality standards. This project is not a capacity-increasing transportation project. It will have no impact on traffic volumes and would generate a less than significant amount of pollutants during construction due to the very short duration of project construction. The proposed project in included in Southern California Association of Governments’ most recent Regional Transportation Plan and Regional Transportation Improvement Program both of which were found to be conforming (see Air Quality section of Chapter 2). Therefore, the proposed project will not conflict with the Air Quality Management Plan, violate any air quality standard, result in a net increase of any criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations. Impacts will be less than significant. No mitigation is required.

**d) Less Than Significant**

Temporary construction activities could generate fugitive dust from the operation of construction equipment. The project will comply with construction standards adopted by the South Coast Air Quality Management District as well as Caltrans standardized procedures for minimizing air pollutants during construction. Impacts will be less than significant. No mitigation is required. **[End example]**

### Biological Resources

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries? | Choose an item. |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | Choose an item. |
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | Choose an item. |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | Choose an item. |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | Choose an item. |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | Choose an item. |

#### CEQA Significance Determinations for Biological Resources

Use this section to discuss and clarify the significance determinations for each question under Biological Resources. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined. See the example text below:

**a) Less Than Significant with Mitigation Incorporated**

The proposed project would impact 0.38 acres of vernal pool habitat. Of this, 0.12 acres supports vernal pool fairy shrimp, which is a federally-listed threatened species. In addition, the federally- and state-endangered hairy Orcutt grass was also observed during field surveys. Because the affected habitat is of high quality and vernal pools within the project area have been on the decline, these impacts would be potentially significant. The following mitigation measures have been included (see the Threatened and Endangered Species section in Chapter 2 for a detailed discussion). With implementation of the measures below, the impacts to vernal pool habitat, vernal pool fairy shrimp, and hairy Orcutt grass would be less than significant with mitigation incorporated.

* T and E-1: Purchase mitigation credits for 0.12 vernal pool fairy shrimp habitat at a U.S. Fish and Wildlife Service-approved conservation bank at a 5:1 ratio
* T and E-2: Salvage topsoil and transplant hairy Orcutt grass specimens prior to construction

**b) No Impact**

This project would not affect riparian habitat or other sensitive natural communities.

**c) Less Than Significant with Mitigation Incorporated**

As detailed in the Wetlands section in Chapter 2, the proposed project would impact 0.63 acres of wetlands, which includes the 0.38 acres of vernal pools (a seasonal wetland) discussed in question “a” above. This is a potentially significant impact due to the high quality of wetlands and the declining health of wetlands remaining in Stevens County. With implementation of the measures below, the impacts to federally-protected wetlands are less than significant with mitigation incorporated.

* Wetland-1: Purchase mitigation credits for 0.38 acres of vernal pool wetlands at a U.S. Army Corps of Engineers approved conservation bank at a 3:1 ratio
* Wetland-2: Purchase mitigation credits for 0.25 acres of wetlands at a U.S. Army Corps of Engineers approved conservation bank at a 1:1 ratio

**d) No Impact**

This project will not affect any migratory wildlife corridors or the movement of any native resident or migratory fish or wildlife species. This project will not impede the use of native wildlife nursery sites.

**e) No Impact**

This project will not conflict with any local policies or ordinances protecting biological resources.

**f) No Impact**

This project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **[End example]**

### Cultural Resources

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5? | Choose an item. |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | Choose an item. |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries? | Choose an item. |

#### CEQA Significance Determinations for Cultural Resources

Use this section to discuss and clarify the significance determinations for each question under Cultural Resources. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined. See the example text below:

**a)** **No Impact**

There are no historic resources within the project’s area of potential effects, therefore, there would be no impact.

**b) Less Than Significant with Mitigation Incorporated**

There is an archaeological resource (STE-175) that will be affected by the cut/fill of the proposed project. STE-175 was determined a unique archaeological resource because of its potential to yield important information. Impacts to this site are potentially significant and the following mitigation measures are proposed:

* Cultural-3: Perform data recovery, analysis, and documentation as outlined in the Memorandum of Agreement prior to construction.
* Cultural-4: Identify, analyze, catalog, and prepare recovered artifacts for delivery to Stevens County Historic Museum for curation.

With implementation of the above measures, the impacts to archeological resources are less than significant with mitigation incorporated.

**c) No Impact**

Human remains have been previously identified at an archaeological site within the project area, however, the establishment of an environmentally sensitive area with fencing will be shown on the project’s plans and specifications, and used during construction to ensure that the area with remains is not disturbed. An Environmentally Sensitive Area Action Plan has been developed and will be followed. **[End example]**

### Energy

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | Choose an item. |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | Choose an item. |

#### CEQA Significance Determinations for Energy

Use this section to discuss and clarify the significance determinations for each question under Energy. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Geology and Soils

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:  i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | Choose an item. |
| ii) Strong seismic ground shaking? | Choose an item. |
| iii) Seismic-related ground failure, including liquefaction? | Choose an item. |
| iv) Landslides? | Choose an item. |
| b) Result in substantial soil erosion or the loss of topsoil? | Choose an item. |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | Choose an item. |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? | Choose an item. |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | Choose an item. |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | Choose an item. |

#### CEQA Significance Determinations for Geology and Soils

Use this section to discuss and clarify the significance determinations for each question under Geology and Soils. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### GHG Emissions

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? | Choose an item. |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs? | Choose an item. |

#### CEQA Significance Determinations for GHG Emissions

Use this section to briefly describe the level of analysis that was completed in the Climate Change section and clarify the significance determinations for each question under GHG Emissions. Remember that the determination of significance may vary with the setting of the impact; use relevant facts from the analysis to support and explain the significance determinations. Briefly summarize and cross-reference the key facts from the Climate Change section in this chapter rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Hazards and Hazardous Materials

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | Choose an item. |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | Choose an item. |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | Choose an item. |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | Choose an item. |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two nautical miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | Choose an item. |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | Choose an item. |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | Choose an item. |

#### CEQA Significance Determinations for Hazards and Hazardous Materials

Use this section to discuss and clarify the significance determinations for each question under Hazards and Hazardous Materials. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Hydrology and Water Quality

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | Choose an item. |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | Choose an item. |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:  (i) result in substantial erosion or siltation on- or off-site; | Choose an item. |
| (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | Choose an item. |
| (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | Choose an item. |
| (iv) impede or redirect flood flows? | Choose an item. |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | Choose an item. |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | Choose an item. |

#### CEQA Significance Determinations for Hydrology and Water Quality

Use this section to discuss and clarify the significance determinations for each question under Hydrology and Water Quality. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Land Use and Planning

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Physically divide an established community? | Choose an item. |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | Choose an item. |

#### CEQA Significance Determinations for Land Use and Planning

Use this section to discuss and clarify the significance determinations for each question under Land Use and Planning. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Mineral Resources

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state? | Choose an item. |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | Choose an item. |

#### CEQA Significance Determinations for Mineral Resources

Use this section to discuss and clarify the significance determinations for each question under Mineral Resources. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Noise

Would the project result in:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | Choose an item. |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | Choose an item. |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two nautical miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | Choose an item. |

**Special Note About Noise**

When determining whether a noise impact is significant under CEQA, compare the baseline noise level and the build noise level. The CEQA noise analysis is completely independent of the NEPA/23 CFR 772 analysis discussed in Chapter 2, which is centered on noise abatement criteria. Under CEQA, the assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitivity of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level. You may use this paragraph as boilerplate in the environmental document. To illustrate the differences between CEQA and NEPA/23 CFR 772 analyses, consider the following example:

The existing noise level at residential site 1 is 67 dBA; the predicted noise level under build alternative 2 is 70 dBA. This 3 dBA increase between existing noise levels and the build alternative would be barely perceptible to the human ear. Therefore, under CEQA, no significant noise impact would occur as a result of the project and no mitigation is required. However, under NEPA/23 CFR 772, because the noise levels at this receptor already approaches or exceeds the noise abatement criteria of 67 dBA, noise abatement would need to be considered. **[End example]**

For more information, see the [Traffic Noise Analysis Protocol](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-12-noise#guidance) Section 7.

#### CEQA Significance Determinations for Noise

Use this section to discuss and clarify the significance determinations for each question under Noise. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

Remember that under CEQA, unlike NEPA, if the noise impact is identified as significant and “mitigation” is proposed and feasible, that mitigation must be built or the environmental document may need to be re-circulated.

### Population and Housing

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | Choose an item. |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | Choose an item. |

#### CEQA Significance Determinations for Population and Housing

Use this section to discuss and clarify the significance determinations for each question under Population and Housing. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Fire protection? | Choose an item. |
| b) Police protection? | Choose an item. |
| c) Schools? | Choose an item. |
| d) Parks? | Choose an item. |
| e) Other public facilities? | Choose an item. |

#### CEQA Significance Determinations for Public Services

Use this section to discuss and clarify the significance determinations for each question under Public Services. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Recreation

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | Choose an item. |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | Choose an item. |

#### CEQA Significance Determinations for Recreation

Use this section to discuss and clarify the significance determinations for each question under Recreation. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Transportation

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? | Choose an item. |
| b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | Choose an item. |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | Choose an item. |
| d) Result in inadequate emergency access? | Choose an item. |

#### CEQA Significance Determinations for Transportation

Use this section to discuss and clarify the significance determinations for each question under Transportation. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or | Choose an item. |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | Choose an item. |

#### CEQA Significance Determinations for Tribal Cultural Resources

Use this section to discuss and clarify the significance determinations for each question under Tribal Cultural Resources. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

At the beginning of this section, provide details regarding compliance with Assembly Bill 52, including:

* Which tribes requested consultation
* Details of any noticing, including which tribes were consulted and when
* Summary of responses by the tribes
* Whether or not any tribal cultural resources were identified during the AB52 process
* If tribal cultural resources were identified, what were they and what was the result in terms of eligibility for the California Register of Historical Resources
* Measures to avoid, minimize or mitigate impacts to the tribal cultural resource(s)

Cross-reference the Comments and Coordination chapter as appropriate.

### Utilities and Service Systems

Would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | Choose an item. |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | Choose an item. |
| c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments? | Choose an item. |
| d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | Choose an item. |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | Choose an item. |

#### CEQA Significance Determinations for Utilities and Service Systems

Use this section to discuss and clarify the significance determinations for each question under Utilities and Service Systems. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | Choose an item. |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | Choose an item. |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | Choose an item. |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | Choose an item. |

#### CEQA Significance Determinations for Wildfire

Use this section to discuss and clarify the significance determinations for each wildfire question in the checklist above. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from the Wildfire section above rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

### Mandatory Findings of Significance

| **Question** | **CEQA Determination** |
| --- | --- |
| a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | Choose an item. |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) **NOTE:** See guidance below. | Choose an item. |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | Choose an item. |

#### CEQA Significance Determinations for Mandatory Findings of Significance

For question “b” above, the CEQA Determination in the Checklist should be based on the resource with the highest significance determination. Please see the “Change to Effect Analysis under NEPA and Instructions on Cumulative Impact Analysis under CEQA” on the [Guidance for Preparers of Cumulative Impact Analysis website](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/cumulative-impact-analysis) for more information. In addition, cumulative impacts for each resource should be discussed in the Cumulative section at the beginning of this chapter.

Use this section to discuss and clarify the significance determinations for each question under Mandatory Findings of Significance. Remember that the determination of significance may vary with the setting of the impact; use relevant facts about the project setting and magnitude of the project’s impacts to support and explain the significance determinations. Summarize and cross-reference the key facts from Chapter 2 rather than simply repeating text. If the impact is significant, state that and then apply mitigation measures; then explain in this section if the impact remains “significant and unavoidable” or if the mitigation has reduced the impact to “less-than-significant with mitigation incorporated.” If the same facts support the significance determinations for more than one question above, then the discussion of those questions can be combined.

# Comments and Coordination

**GUIDANCE**

**Writing the Document**

1. Documenting Coordination
   1. Provide a brief introduction to this chapter (example text below).

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, Project Development Team meetings, enter additional items as needed. This chapter summarizes the results of Caltrans’ efforts to fully identify, address, and resolve project-related issues through early and continuing coordination. **[End example]**

* 1. For Environmental Impact Statements: Describe the 23 USC 139 coordination plan prepared for the project for participating agency and public input and comment during the 23 USC 139 environmental review process. Please note that with the passage of the Fast Act, projects with a Notice of Intent published after December 4, 2015 must establish a coordination plan no later than 90 days after the Notice of Intent has been published. In addition, a schedule is now required and must be concurred upon by the participating agencies and included as part of the coordination plan. The summary of the coordination plan must include the following:
     1. Schedule.
     2. Notice of initiation.
     3. List of lead, cooperating, and participating agencies.
     4. Process for inviting participating agencies. Note: Participating agencies must be identified, and invitations sent no later than 45 days after the publication of the Notice of Intent.
        + Which agencies have accepted participating agency status.
     5. How and when opportunities for involvement were given on:
        + Purpose and need.
        + Range of alternatives.
        + Preferred alternative.
        + Methodology for analyzing alternatives.
     6. Process for early identification of issues.
     7. If the preferred alternative was developed to a greater level of detail, a summary of the decision to do so by lead agencies and their justification under 23 USC 139.
     8. Status of permits and approvals.
  2. Discuss the scoping process (informal and/or formal). For Environmental Impact Reports, include the date the Notice of Preparation was published. For Environmental Impact Statements, include the date the Notice of Intent was published. The Notice of Preparation and Notice of Intent must be included in this chapter or as an appendix.
     1. Describe the process, including meeting dates, attendees, issues raised, and comments received.
     2. For Draft Environmental Impact Statements, include a summary of information, including alternatives and analyses, submitted by commenters during the scoping process for consideration during the development of the Environmental Impact Statement. Also include all comments received during the scoping process in an appendix. If there is an exceptionally voluminous number of comments, they may be summarized.
  3. Describe consultation and coordination with public agencies and tribal governments.
     1. State which public agencies and tribal governments were contacted during the project’s development. For each entity, do the following:
        + Provide a chronology of all meetings, workshops, hearings, etc. that the agency participated in. If this is an extensive list, it can be a combined list for all agencies and be moved to the back of the chapter.
        + Describe the results of the coordination to date; in other words, document critical decisions. If the agency has taken a position on the project or an issue associated with the project, state the agency’s position.
        + Describe the status of any needed approvals or permits from the agencies.

NOTE: The level of detail provided for each item above should be commensurate with the controversy and complexity of the project.

* + 1. Include correspondence with agencies (e.g., concurrence letters) at the end of this chapter. Larger approval documents such as the Biological Opinion, the Memorandum of Agreement for cultural resources, Federal Coastal Consistency Certification, and others should be included in the back of the document as appendices.
  1. Discuss public participation, including participation by Native American individuals.
     1. Describe the public participation methods used for the proposed project. Methods could include Project Development Team participation, citizen advisory committees, mailing lists, newsletters, newspaper notices/articles, public meetings/workshops, and web-based information. Include dates when applicable. Include a copy of the Notice of Preparation and Notice of Intent.
     2. Describe the results of the public participation process—number of attendees, comments received, issues raised, and any other pertinent facts. For CEQA documents/Assembly Bill 52, include the number of letters sent and received, issues identified, and solutions/resolutions.
     3. If a public hearing or public open house/informational meeting was held, provide the following information:
        + Date, time and location of hearing
        + Type of hearing
        + Number of attendees
        + Number of written comments
        + Number of comments taken by court reporter
        + Summary of meeting outcome, issues raised, etc.

1. Comments and Responding to Comments

If comments are received on the draft environmental document during the public availability period and/or at the public hearing, the final environmental document must be modified to reflect all substantive comments and responses to those comments. Substantive comments are those comments that are related to the facts of the project, environmental document, or studies—comments that are purely just expressing support or opposition to the project without any factual substantiation may be acknowledged but do not generally require a response. Comments and responses to comments can either be included in this chapter or as an appendix in the back of the document.

* 1. A response must be made to all substantive comments received on the draft environmental document. Options for responding include:
     1. Modifying the design of the proposed project and reflecting the modifications in the document.
     2. Supplementing, improving, or modifying the analysis in the final environmental document.
     3. Making factual corrections.
     4. Explaining why the comments do not require modification to the document and/or proposed project. If this is the case, the response should cite sources, authorities, or reasons that support Caltrans’ position.
  2. If changes are made to the text of the final environmental document as a result of comments received, those changes must be marked with a line in the margin or within the text of the document (see the GUIDANCE FOR USING THE ANNOTATED OUTLINES section for more information) and the responses to comments should include a reference to the document change.
  3. To improve readability, it is recommended that the comment letter and corresponding response(s) be side by side on the same page.
  4. “Comment noted” is typically not an appropriate response to a substantive issue. Do not use this as a way to avoid difficult issues. “Comment noted,” is only appropriate when someone has expressed an opinion, such as “I don’t think this project is needed,” or “I support alternative XYZ,” or when there is simply no other response possible. Consider responding “Your support of project ‘X,’ Alternatives 1, 2, and 3 is acknowledged and included in the project record.”

Responses to comments should address the issue or concern of the person who commented and should be based on facts and/or reasoned judgment. In responding to comments, it is often necessary to engage other members of the internal Project Development Team.

* 1. Remember to deal sensitively with public comments. When responding to comments, keep in mind that the person cared enough about the issue to make a comment, so a good response requires at least as much care.
  2. If a comment includes inappropriate language (e.g., curse words), those words may be blacked out prior to publishing in the document.
  3. If many comments are received, the comments and responses may be summarized; however, comment letters from elected officials and local, state, and federal agencies and planning groups should always be included in their entirety in the document, along with the responses.
  4. For purposes of an Environmental Assessment or Environmental Impact Statement, comments received after the public availability period and up until the final NEPA decision document (Finding of No Significant Impact or Record of Decision) should also be addressed and considered.

**Additional Guidance**

* [American Association of State Highway and Transportation Officials Practitioners Handbook Responding to Comments](https://environment.transportation.org/resources/practitioners-handbooks/responding-to-comments-on-an-environmental-impact-statement/)
* [SER, Volume 1, Chapter 32, “Environmental Impact Statement/23 USC 139 Efficient Environmental Review Process”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-32-environmental-impact-statement#23usc139)

# List of Preparers

The list of preparers should include a list of state and local agency personnel, including consultants, who were primarily responsible for preparing the environmental document and technical studies. Legal counsel who reviewed the document should NOT be included on this list. It is typical to list Caltrans staff first, followed by local agency personnel, and then consultant staff. If the project is not assigned, FHWA personnel would also be included. For more information on the requirements for a List of Preparers, please see [FHWA Technical Advisory T 6640.8A – Guidance for Preparing and Processing Environmental and Section 4(f) Documents, October 30, 1987](http://environment.fhwa.dot.gov/projdev/impta6640.asp).

The following provides an example format that can be used. Typically, staff members are listed alphabetically by last name:

The following Caltrans staff and consultants contributed to the preparation of this environmental document.

Paul Alfa, Transportation Engineer (National Pollutant Discharge Elimination System Coordinator). M.S. Civil and Environmental  
Engineering, University of California at Davis. 5 years of experience working in the water resources sector; 3 years with Caltrans as a National Pollutant Discharge Elimination System Coordinator. Contribution: Water Quality Report.

Sandy Beta, Associate Environmental Scientist. B.A. Anthropology, California State  
University at Sacramento; M.A. Anthropology University of Oklahoma at Norman. 13 years experience in environmental surveys and document preparation. Contribution: Community Impact Assessment, Cumulative Impacts Analysis, and environmental document preparation.

Julia Charlie, Senior Environmental Scientist. B.S. Environmental Policy Analysis and  
Planning, University of California at Berkeley; M.S. Transportation Management, San Jose State University. 22 years experience performing environmental studies and document preparation. Contribution: Environmental document preparation.

Robert Delta, Associate Environmental Scientist (Natural Sciences). B.A, Environmental  
Studies, California State University at Sacramento. 15 years experience with Caltrans conducting wildlife biology and botany studies and surveys. Contribution: Natural Environment Study, Biological Assessment, and Wetland Delineation.

John Echo, Associate Environmental Scientist. M.A. Anthropology, California State  
University at Chico. Professionally Qualified Staff: Principal Investigator, Prehistoric Archaeology. 25 years archaeological experience including 9 years with Caltrans. Contribution: Cultural resource compliance documents.

**[End example]**

When a document is primarily prepared by consultant staff, Caltrans staff should include their oversight role. See example below:

**Caltrans Staff**

Julia Charlie, Senior Environmental Scientist. B.S. Environmental Policy Analysis and  
Planning, University of California at Berkeley; M.S. Transportation Management, San Jose State University. 22 years experience performing environmental studies and document preparation. Contribution: Environmental document preparation.

Robert Delta, Associate Environmental Scientist (Natural Sciences). B.A, Environmental  
Studies, California State University at Sacramento. 15 years experience with Caltrans conducting wildlife biology and botany studies and surveys. Contribution: Natural Environment Study, Biological Assessment, and Wetland Delineation oversight.

**ABC Consulting Firm, Inc.**

Diana Foxtrot, Senior Project Coordinator. B.S. Environmental Planning, University of  
California at Santa Barbara. 5 years experience in environmental planning and permitting. Contribution: Environmental document preparation.

Jackie Golf, Project Biologist. B.S. Biological Sciences, California State University at  
Humboldt. 9 years experience in conducting wildlife surveys and wetland delineations. Contribution: Natural Environment Study, Biological Assessment, and Wetland Delineation.

**[End example]**

# Distribution List

Include the [distribution list](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#aos) for the environmental document.

1. Section 4(f)

Use this appendix if applicable. Additional information regarding the guidance in this appendix can be found in the [SER, Volume 1, Chapter 1, “Federal Requirements”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#4fguidance) and [Chapter 20, “Section 4(f) and Related Requirements”](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-20-section-4f) of the SER. If it is determined that one or more properties trigger the provisions of Section 4(f), coordinate early with your Headquarters Environmental Coordinator to determine the need for and the content of a Section 4(f) analysis.

**Determining the appropriate level of Section 4(f) analysis and documentation**

Analyze all archaeological and historic sites within the Section 106 area of potential effects and all parks, recreational facilities, and wildlife and waterfowl refuges within the Section 4(f) study area to determine whether they are protected Section 4(f) properties. The Section 4(f) study area should include properties within and immediately adjacent to the project limits, and nearby properties to ensure that proximity impacts can be considered.

* If there are no potential Section 4(f) properties within the project vicinity, clearly state that in the RESOURCE TOPICS DISMISSED FROM ANALYSIS section and the Parks and Recreational Facilities and/or Cultural Resources section(s) of the environmental document and omit this appendix.
* If there are potential Section 4(f) properties within the project vicinity, there are four possible outcomes for EACH property, each of which should be clearly and briefly stated in the appropriate section of the environmental document (Parks and Recreational Facilities and/or Cultural Resources) AND addressed in this appendix under one of the following headings:
  + Individual Section 4(f) Evaluation
  + Programmatic Section 4(f) Evaluation
  + Section 4(f) De Minimis Determination
  + Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determination (this includes properties for which it is has been determined that Section 4(f) does not apply AND properties for which Section 4(f) does apply but there is no use).
* While each property can have only one finding or determination, the project as a whole may have many different findings or determinations. For example, a single project might have six potential Section 4(f) properties. Following the analysis, it may be determined that one is not eligible for protection under Section 4(f), one will have no use, two will have de minimis impacts, one property qualifies for a Programmatic evaluation, and one property requires an Individual evaluation. In another example, a single project could have five potential Section 4(f) properties. Following the analysis it is determined that three of these properties will have de minimis impacts, while the other two properties quality for two different Programmatic evaluations.

**NOTE: USE THE SECTIONS OF THIS APPENDIX THAT ARE APPLICABLE TO YOUR PROJECT. THERE IS NO NEED FOR A SEPARATE TECHNICAL REPORT IF SECTION 4(F) IS ADDRESSED AS PART OF THE ENVIRONMENTAL DOCUMENT THAT WILL BE CIRCULATED TO THE PUBLIC. SEE CHAPTER 20 OF THE SER FOR DOCUMENTATION AND CIRCULATION REQUIREMENTS IF A CATEGORICAL EXCLUSION IS BEING PREPARED FOR THE PROJECT.**

**The Basic Section 4(f) Analysis**

There are five basic steps involved in the Section 4(f) analysis. Caltrans must determine: (1) if Section 4(f) applies to the project, (2) if there are Section 4(f) properties within the project vicinity, (3), if there is a “use” of the Section 4(f) property, (4) if there is an exception to the “use,” and (5) the level of approval required for the “use.” Caltrans must then document the analysis.

Step 1: Determine if Section 4(f) applies to the project

Is there U.S. Department of Transportation (usually FHWA or the Federal Transit Administration for Caltrans projects) involvement (funding, right of way, action) in the project?

* + If not, Section 4(f) does not apply.

Step 2: Determine if there are Section 4(f) properties within the project vicinity

1. Are there any publicly owned lands of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance within the project area?
   1. If the land is not publicly owned or is not open to the public, it is not protected by Section 4(f), unless it is a significant historic site (see number 2 below). Some publicly owned wildlife refuges may have restrictions on public access but are still protected by Section 4(f).
   2. The determination of significance is made by the federal, state, or local officials having jurisdiction over the land. If a determination cannot be obtained, the land is presumed to be significant. Caltrans, as assigned, will make an independent evaluation to assure that the official’s finding of significance or non-significance is reasonable.
2. Are there any lands of a historic site of national, state, or local significance within the project area?
   1. For historic sites, the land does not have to be publicly owned or open to the public for Section 4(f) to be triggered.
   2. In most cases, significance for historic sites under Section 4(f) means the site is listed in or eligible for listing in the National Register of Historic Places. If the historic site is not significant, then it is not protected by Section 4(f).
   3. Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery and have minimal value for preservation in place (23 CFR 774.13[b][1]). In other words, Section 4(f) applies to archaeological sites that are in or eligible for listing in the National Register AND that warrant preservation in place. Caltrans determines this through coordination with the State Historic Preservation Officer and the Advisory Council on Historic Preservation.

Step 3: Determine if there is a “use” of the Section 4(f) property

1. If it is determined that one or more properties trigger the provisions of Section 4(f), determine whether the project would “use” those properties (23 CFR 774.17 use definition).

Use occurs when:

* 1. land is permanently incorporated into a transportation facility [permanent acquisition or permanent easement], or
  2. there is a temporary occupancy of land that is adverse in terms of the statute’s preservationist purpose, or
  3. there is (are) proximity impact(s) that substantially impair(s) the purpose of the land (this is called constructive use). An example of constructive use would be excessive noise near an amphitheater. Constructive uses are very rare. **NOTE:** if you believe that there may be a constructive use, contact your Headquarters Environmental Coordinator as soon as possible for assistance. Your Headquarters Environmental Coordinator will contact FHWA for approval of any constructive use determinations (this is required even under NEPA Assignment).

Step 4: Determine if there is an exception to the “use” of the Section 4(f) property

There are seven exceptions to the “use” of Section 4(f) properties (23 CFR 774.13). The most common exception that Caltrans applies is the temporary occupancy exception.

For the purposes of Section 4(f), temporary construction easements do not normally constitute “use” if **ALL** of the following five conditions are met for temporary occupancy (23 CFR 774.13[d]):

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions. This documentation must be included in the final environmental document in either the Comments and Coordination chapter or as a separate appendix.

If all of the five conditions are met for temporary occupancy, then a “use” did not occur under Section 4(f). Document why a use did not occur in the project file by explaining how all five conditions are met and the exception for temporary occupancy applies. Include this analysis below under the heading “Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determination.”

If the project cannot meet the above five conditions, then there is a “use” for purposes of Section 4(f). See 23 CFR 774.13(d), 23 CFR 774.17 and the FHWA website, including the Section 4(f) Policy Paper, for more details regarding temporary occupancy and “use.”

Step 5: Determine the level of approval required for the “use.”

There are three types of approval to the “use” of a Section 4(f) property: (1) de minimis, (2) programmatic, and (3) individual.

1. If it is determined that there would be a “use” of a property or properties protected by Section 4(f), could that use be approved by a de minimis impact finding?
   1. De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not adversely affect the activities, features, and attributes of the 4(f) property. The de minimis impact finding considers avoidance, minimization, compensation, or enhancement measures. Following an opportunity for public review and comment, the official(s) with jurisdiction over the property must provide written concurrence; only then can Caltrans (as assigned by the FHWA) make the final determination on the de minimis impact finding.
   2. De minimis impacts on historic sites are defined as the determination of either “no adverse effect” or “no historic properties affected” in compliance with Section 106 regulations, including the State Historic Preservation Officer’s written concurrence, and the Advisory Council on Historic Preservation’s written concurrence, when applicable. [**NOTE:** Any finding under Section 106 other than “no adverse effect” or “no historic properties affected” will require either a Programmatic evaluation or an Individual evaluation.] Under Caltrans’ First Amended Programmatic Agreement for Section 106, Caltrans must inform the State Historic Preservation Officer in writing that a non-response for the purposes of a “no adverse effect” or a “no historic properties affected” determination will be treated as the written concurrence for the de minimis impact finding. Caltrans (as assigned by the FHWA) makes the final determination on the de minimis impact finding.
   3. If the Section 4(f) “use” qualifies for a de minimis impact, see the “Section 4(f) De Minimis Determination” section below, which highlights the major points needed to properly document the de minimis impact finding.
   4. In addition to documenting the analysis below in the “Section 4(f) De Minimis Determination” section, briefly summarize the de minimis impact finding under the appropriate section of the environmental document (Parks and Recreational Facilities and/or Cultural Resources). The information does not need to be repeated verbatim in the environmental document; present the Section 4(f) use in a few sentences and direct the reader to the Section 4(f) appendix for more information.
2. If it is determined that there would be a “use” of a property or properties protected by Section 4(f) and the use is not de minimis, then a Programmatic or Individual evaluation will be needed.

NOTE: If there is an Individual Section 4(f) evaluation, then it should include, as sub-sections:

* Programmatic Section 4(f) Evaluation(s)
* Section 4(f) De Minimis Determination(s)
* Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determination(s)

**Multiple Protected Section 4(f) Properties.**

If the proposed project has multiple protected Section 4(f) properties, it may be easier for the reader if the evaluation is organized so that each property is discussed separately. In other words, describe each property, then discuss the use of that property, then ascertain if there is a feasible and prudent avoidance alternative that avoids the use of the Section 4(f) property by considering the six factors specified in 23 CFR 774.3(c), discuss measures to minimize harm to that property, then document the coordination for that property, and lastly add the concluding statement for that property. Then move on and do the same for each additional Section 4(f) property. Using this approach, the overall organization would look as follows:

1. Introduction
2. Description of proposed project (include all alternatives)
3. List and describe the Section 4(f) properties
   1. Describe the use of [insert name of first property] (discuss the degree of use caused by each alternative)
      1. Avoidance alternatives for all Section 4(f) properties (i.e., any avoidance alternatives must avoid each and every Section 4(f) property, not just the property being discussed).
      2. Measures to minimize harm to [insert name of first property]
      3. Coordination conducted for [insert name of first property]
      4. Concluding statement for [insert name of first property]
   2. Describe the use of [insert name of second property] (discuss the degree of use caused by each alternative)
      1. Avoidance alternatives for all Section 4(f) properties (i.e., any avoidance alternatives must avoid each and every Section 4(f) property, not just the property being discussed).
      2. Measures to minimize harm to [insert name of second property]
      3. Coordination conducted for [insert name of second property]
      4. Concluding statement for [insert name of second property]
4. Sub-sections, as applicable, describing Programmatic evaluation(s), de minimis determinations, and No-Use determinations. Follow the directions provided below for each of these situations, but there is no need to repeat any regulatory language that has already been used.
5. Letters and other correspondence

**Section 6(f) Consideration**

State and local governments often obtain grants through the Land and Water Conservation Fund Act to acquire or make improvements to parks and recreational areas. Section 6(f) of this act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of Interior’s National Park Service. If Land and Water Conservation Fund Act funds were used for acquisition or improvement, certain requirements must be met before the land can be acquired (see SER, Volume 1, Chapter 20, “Section 4(f) and Related Requirements”). Section 6(f) properties should be identified and discussed in the Section 4(f) evaluation.

**Documenting the Analysis**

**INCLUDE THE APPROPRIATE SECTIONS BELOW IN YOUR DOCUMENT AS APPLICABLE:**

* Individual Section 4(f) Evaluation
* Programmatic Section 4(f) Determination(s)
* Section 4(f) De Minimis Determination(s)
* Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determination(s)
* Section 6(f)

INDIVIDUAL SECTION 4(F) EVALUATION

The purpose of an Individual Section 4(f) evaluation is to analyze the alternatives that avoid the Section 4(f) property(ies), determine if these alternatives are prudent and feasible, and identify all possible planning to minimize harm. Please note that under NEPA Assignment, all Individual Section 4(f) evaluations must undergo the same 5-step review process that is done for Environmental Impact Statements, including a legal sufficiency review.

1. If a cover page is being used for the Section 4(f) report, insert the following boilerplate statement on the cover:

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans. **[End boilerplate]**

1. Organize the Section 4(f) evaluation as follows:
   * Introduction
   * Description of proposed project (include all alternatives)
   * Describe the Section 4(f) property
   * Assess the use of the Section 4(f) property (discuss the degree of use caused by each alternative)
   * Avoidance alternatives
   * Measures to minimize harm
   * Coordination
   * Concluding statement
   * Sub-sections, as applicable, describing Programmatic evaluation(s), de minimis determinations, and No-Use determinations. Follow the directions provided below for each of these situations, but there is no need to repeat any regulatory language that has already been used.
   * Letters and other correspondence
   * Reference technical reports (Historic Property Survey Report, Community Impact Assessment, etc. as appropriate)

Introduction

Include the following boilerplate language in the introduction for an Individual Section 4(f) evaluation:

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC 303, declares that “it is the policy of the U.S. Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project . . . “requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

There is no prudent and feasible alternative to using that land; and

The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

Section 4(f) further requires coordination with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action. **[End boilerplate]**

Description of the Proposed Project

Discuss the proposed project, including each build alternative and the no-build alternative. Give enough detail so that the reader can understand the proposed project and alternatives; then refer the reader to Chapter 1, “Proposed Project,” for more detailed information.

Briefly discuss the purpose and need for the project. Refer the reader to the “Purpose and Need” section in Chapter 1 for more information.

Section 4(f) Properties

Analyze all archaeological and historic sites within the Section 106 area of potential effects and all public and private parks, recreational facilities, and wildlife refuges within the Section 4(f) study area to determine whether they are protected Section 4(f) properties.

If protected Section 4(f) properties have been identified in the project vicinity, any of which would be used by any alternative under consideration, then include the following for each property affected. Provide:

* Detailed map(s) showing relationship of the property to the alternative(s). Note: some historic sites may not be appropriate to include on the map due to the sensitive nature of the resource, consult with the cultural resource specialist.
* Size and location of property
* Ownership (publicly or privately owned) and type of Section 4(f) property, e.g., County of XYZ Park
* Lease, easements, covenants, and/or restrictions that affect ownership
* Function of, or available activities on, the property
* Description and location of all existing and planned facilities (baseball fields, playgrounds, etc.)
* Access (pedestrian, bicycle, car) and usage (approximate number of visitors)
* Relationship to other similarly used lands in the vicinity (what other parks, recreational facilities or historical structures exist in the area?)
* Unusual characteristics of the property that either enhance or reduce its value

Use of the Section 4(f) Property

1. For each alternative, discuss the use on the property. The Section 4(f) regulation explicitly defines when a use of a Section 4(f) property occurs; therefore, the term has very specific meaning within the regulation. A use occurs one of three ways: (1) land is permanently incorporated into a transportation facility (i.e., through the purchase of right of way or permanent easement); (2) one of the five criteria cannot be met for the temporary occupancy exception (See instructions under “The Basic Section 4(f) Analysis” above and 23 CFR 774.13[d]); or (3) constructive use (23 CFR 774.15).

Assess the use of the Section 4(f) property in terms that are consistent with the language of the regulation: permanent incorporation; does not meet the criteria of temporary occupancy; or constructive use. The term constructive use can only be used when prior approval from FHWA is received by the Headquarters Environmental Coordinator. Otherwise, the term should not appear in the text to describe a use of the 4(f) property. Refer to FHWA’s Section 4(f) Policy Paper for additional guidance on how to assess the use of Section 4(f) properties.

1. Discuss the degree of use that each alternative causes to the Section 4(f) property. First, identify the property’s major activities, features, or attributes. Second, explain how these are affected. For example, identify the amount of land to be acquired, explain what park facilities are affected, or which contributing elements are modified in a historic district, or if there are any perceptible noise differences. If the alternative causes temporary impacts during construction, discuss those as well.
2. If an alternative acquires land from more than one Section 4(f) property, it may be helpful to develop a summary table that compares the various uses. Be sure to quantify measurable impacts, such as noise, whenever possible. Visual intrusions or changes to accessibility, which cannot be quantified, should be described. Cross-reference other sections of the environmental document as appropriate.

Avoidance Alternatives

A Section 4(f) evaluation must contain sufficient supporting information to make the finding that there is no feasible and prudent avoidance alternative and that the project includes all possible planning to minimize harm. Section 4(f) requires the development of one or more “avoidance” alternatives that avoid each and every Section 4(f) property. In this section, identify any avoidance alternatives that have been developed, including the no-build alternative, which avoid the use of the Section 4(f) property. The analysis for avoidance alternatives can be broken into a series of three steps.

1. Identify and develop a reasonable range of alternatives that completely avoid the Section 4(f) property or properties. One of the avoidance alternatives must be the no-build alternative. Other potential alternatives to avoid the use of the Section 4(f) property may include one or more of the following:
   * Location alternatives (re-routing the entire project along a different alignment)
   * Alternative actions (this could be a different mode of transportation such as rail or bus, or some other action that does not involve construction such as the implementation of transportation management systems or similar measures)
   * Alignment shifts (re-routing a portion of the project to a different alignment to avoid a specific property)
   * Design changes (modifying the proposed design in a manner that will avoid impacts such as reducing median width, building a retaining wall, incorporating design exceptions, etc.)
2. Once the potential avoidance alternative(s) have been identified, evaluate whether it is feasible and prudent to avoid the Section 4(f) property. Alternatives that do not avoid the use of each and every Section 4(f) property are not analyzed. Only the avoidance alternatives go through the feasible and prudent analysis. The regulations state that an avoidance alternative is not feasible if it cannot be built as a matter of sound engineering judgment (23 CFR 774.17). The prudence evaluation involves applying each of the following six factors to each avoidance alternative. Does the alternative:
   1. Compromise the project so that it is unreasonable given the purpose and need?
   2. Result in unacceptable safety or operational problems?
   3. After reasonable mitigation, still causes:
      * Severe social, economic, or environmental impacts;
      * Severe disruption to established communities;
      * Severe disproportionate impacts to minority or low income populations; or
      * Severe impacts to other federally protected resources
   4. Result in additional construction, maintenance, or operational costs of an extraordinary magnitude?
      * Consider factors such as: the percentage difference in the costs of the alternatives; how the cost difference relates to the total cost of similar transportation projects in the applicant’s annual budget; and the extent to which the increased cost for the project would adversely impact that applicants’ ability to fund other transportation projects. (FHWA Final Rule, “Section-by-Section Analysis of the Notice of Proposed Rulemaking Comments and the Administration’s Response,” Federal Register Volume 73, No. 49, March 12, 2008).
   5. Cause other unique problems or unusual factors?
   6. Involve multiple factors listed above that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude?

Evaluate each avoidance alternative against the factors for feasibility and prudence. Document the consideration of the six factors above for each avoidance alternative and remember that this analysis puts a “thumb on the scale” in favor of protecting the Section 4(f) property. If a factor is not applicable, simply note that in the analysis. Do not state that the avoidance alternatives are not feasible and prudent in the draft document. The purpose of the draft Individual Section 4(f) evaluation is to discuss the information that will ultimately support a decision made in the final evaluation. However, you may discuss your preliminary findings (see example language below and make sure to update for final document).

Based on the discussions above, it appears that there is no feasible and prudent avoidance alternative. However, a final decision will not be made until after the draft document has been circulated for public review. **[End example]**

1. The third and final step is to develop the supporting facts that will help eliminate the avoidance alternatives that do not meet the standards for “feasible and prudent.” In the final Individual Section 4(f) evaluation, discuss the reasons for concluding there are no feasible and prudent avoidance alternatives.

Remember that the feasible and prudent standard applies only to avoidance alternatives. It does not apply when choosing among alternatives that use a Section 4(f) property.

If no feasible and prudent avoidance alternatives exist, then there are two options:

* + If only one alternative that uses a Section 4(f) property remains under consideration, document all possible planning to minimize harm.
  + If two or more alternatives that both use one or more Section 4(f) properties remain under consideration, document the least harm analysis.

Measures to Minimize Harm to the Section 4(f) Property

Discuss all possible planning for measures that are available to minimize the impacts on the property. Document all efforts undertaken even if they seem relatively minor. Summarize and refer readers to the main body of the environmental document as appropriate. All possible planning means all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project (23 CFR 774.17 All Possible Planning definition).

In evaluating the reasonableness of measures to minimize harm, consider and document the preservation purpose of the statute and all of the following:

* The views of the officials with jurisdiction over the Section 4(f) property
* Whether the cost of the measures is a reasonable public expenditure in light of the adverse impacts of the project on the Section 4(f) property and the benefits of the measure to the property
* Any impacts or benefits of the measures to communities or environmental resources outside of the Section 4(f) property

Measures should be developed in consultation with the official of the agency having jurisdiction over the land, and usually involve replacement land, replacement facilities, or monetary compensation to enhance the remaining land.

Least Harm Analysis and Concluding Statement [NOTE: include for final environmental document]

This section must be included in the final environmental document if the analysis in the preceding section concludes that there is no feasible and prudent avoidance alternative, and there are two or more alternatives that use a Section 4(f) property. In the draft environmental document, some preliminary information about the least harm analysis may be included, but no conclusion or final analysis is to be included until the final environmental document. Least harm analysis is required when multiple alternatives that use the Section 4(f) property remain under consideration.

If there is no prudent and feasible alternative to avoid harm to the Section 4(f) property, then only the alternative that causes the least overall harm in light of the statute’s preservation purpose can be chosen. To determine which of the alternatives cause the least overall harm, compare and consider the following seven factors. These factors involve balancing competing and conflicting considerations—some of the factors may weigh in favor of an alternative while other factors may weigh against it (23 CFR 774.3[c][1]).

1. Ability to mitigate adverse impacts to each Section 4(f) property
2. Relative severity of the remaining harm, after mitigation, to the protected activities and attributes or features (document even if harm is substantially equal)
3. Relative significance of each Section 4(f) property
4. Views of the officials with jurisdiction over each Section 4(f) property.
5. Degree to which each alternative meets the purpose and need
6. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)
7. Substantial differences in costs among alternatives

The purpose of the balancing test is to identify an alternative that would cause the least overall harm. Document the process and the results of the balancing. A summary table may be helpful to differentiate the balancing of each factor for the alternatives. Consider the views of each official with jurisdiction and make an independent judgment about the relative value of each Section 4(f) property. Not all Section 4(f) properties are equal. Consider the function of each Section 4(f) resource, compare impacts, and apply reasonable minimization approaches to help minimize harm in light of the balancing factors to determine which alternative is considered the most appropriate.

**NOTE:** The identification of the alternative that has the least overall harm must be documented in the final Section 4(f) analysis.

Use the following concluding boilerplate statement in the final environmental document only **[Do not modify]:**

Based on the above considerations, there is no feasible and prudent alternative to the use of land from enter name of the Section 4(f) property(ies). The proposed action includes all possible planning to minimize harm to enter name of the Section 4(f) property(ies) resulting from such use and causes the least overall harm in light of the statute’s preservation purpose. **[End boilerplate]**

Coordination

1. Document coordination with the agency having jurisdiction over the property—the Department of the Interior, and, as appropriate, the U.S. Department of Agriculture (for National Forest System Lands) and the Department of Housing and Urban Development (property for which Department of Housing and Urban Development funding was used). (NOTE: The Department of Interior has 30 days to respond; if they don’t reply within 30 days, then you must wait another 15 days before proceeding without their comments.)
2. The focus of this section is on coordination with these agencies regarding Section 4(f), not coordination with them in general (see a through d below). Coordination with these agencies is the responsibility of Caltrans as assigned by the FHWA. The FHWA Section 4(f) Policy Paper recommends that preliminary coordination with these agencies should occur before the circulation of the draft Section 4(f) evaluation and that follow-up coordination must occur to address issues that are raised during review of the draft evaluation. Coordination must occur and be documented before the Final Section 4(f) evaluation can be approved.
3. Document coordination on:
   1. Significance of the property
   2. Primary purpose of the land
   3. Proposed use and impacts
   4. Proposed measures to avoid and /or minimize harm

PROGRAMMATIC SECTION 4(F) DETERMINATION(S)

A separate annotated outline has been developed for use in preparing a Programmatic Section 4(f) evaluation; it can be found in the [Annotated Outline section of the Forms and Templates page of the SER](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/forms-templates#aos). Programmatic Section 4(f) evaluations eliminate only the coordination process with the Department of Interior and, as appropriate, the Department of Agriculture and the Department of Housing and Urban Development, and the requirement for a legal sufficiency review. Interagency coordination is still required with the agency having jurisdiction over the property. A Programmatic Section 4(f) evaluation and an Individual Section 4(f) evaluation require the same amount of intense analysis and effort to prepare.

There are five Programmatic Section 4(f) evaluations. Each of the five programmatic evaluations has unique requirements or applicability criteria. Project-specific details must fit the applicability criteria in order to apply the programmatic evaluation. The applicability criteria are found within each of the linked Programmatic Section 4(f) evaluations under the heading “Applicability.” If the project details do not fall within the applicability criteria, or the specific conditions within that programmatic category are not met, then an Individual Section 4(f) evaluation is required. The five Programmatic Section 4(f) evaluations are:

* [Independent Walkway and Bikeways Construction Projects](https://www.environment.fhwa.dot.gov/legislation/section4f/4fbikeways.aspx)
* [Historic Bridges](https://www.environment.fhwa.dot.gov/legislation/section4f/4f_bridges.aspx)
* [Minor Involvements with Historic Sites](https://www.environment.fhwa.dot.gov/legislation/section4f/4f_minor_hist.aspx)
* [Minor Involvements with Parks, Recreation Areas and Waterfowl and Wildlife Refuges](https://www.environment.fhwa.dot.gov/legislation/section4f/4f_minor_parks.aspx)
* [Net Benefit](https://www.environment.fhwa.dot.gov/legislation/section4f/4f_netbenefits.aspx)

SECTION 4(F) DE MINIMIS DETERMINATION(S)

Include the following boilerplate language at the beginning of this section:

This section of the document discusses de minimis impact determinations under Section 4(f). The Section 4(f) statue and regulations allow for a simplified approval process for projects that have only de minimis impacts on lands protected by Section 4(f). Once it is determined that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. FHWA’s final rule on Section 4(f) de minimis findings is codified in 23 CFR 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including de minimis impact determinations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action. **[End boilerplate]**

Analyze all public and private parks, recreational facilities, and wildlife refuges within the Section 4(f) study area to determine whether they are protected Section 4(f) properties. De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not adversely affect the activities, features, and attributes of the 4(f) property.

If the proposed project results in a de minimis impact finding for a publicly owned park, recreation area, or wildlife and waterfowl refuge, describe and document the following for each property:

* List the activities, features, attributes of the 4(f) property.
* Describe the use.
* Explain why the use is de minimis.
* Define the public notice process.
* List any avoidance, minimization, and/or mitigation, measures needed to make a de minimis finding.
* **NOTE: For the draft document, do not make a definitive finding for de minimis.** State that Caltrans anticipates making a de minimis finding following public review (see note below).
* **NOTE:** In the final environmental document, include the written concurrence from the official with jurisdiction that the project will not adversely affect the activities, features, and attributes of the Section 4(f) property. **Written concurrence can only be requested after the public notice period and after the public has had a chance to comment on the de minimis impact finding.**

Analyze all archaeological and historic sites within the Section 106 area of potential effects to determine whether they are protected Section 4(f) properties.

If the proposed project results in a de minimis finding for a historic property under 23 CFR 774.17, describe and document the following (remember that de minimis can only be used for archaeological and historic sites when there is a Section 106 finding of “no adverse effect” or “no historic properties affected.”):

* Describe the use
* Explain why the use is de minimis
* List any avoidance, minimization, and/or mitigation measures needed to make a de minimis finding
* Section 106 Programmatic Agreement documentation with de minimis notice sent to the State Historic Preservation Officer, if applicable, and the Advisory Council on Historic Preservation, if applicable.

When a Programmatic Agreement for Section 106 is in place between Caltrans, the State Historic Preservation Officer, and FHWA, the State Historic Preservation Officer must be informed in writing that a non-response for the purposes of a “no adverse effect” or a “no historic properties affected” determination will be treated as the written concurrence for the de minimis determination.

RESOURCES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(F): NO-USE DETERMINATION(S)

**NOTE:** The appendix titled “Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determination” is intended to document the rationale for why a “use” did not occur to Section 4(f) properties within the Section 4(f) study area. Do not include an appendix titled “Section 4(f) Analysis” unless there is a use to one or more Section 4(f) properties.

Include the following boilerplate language at the beginning of this section:

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the project area that do not trigger Section 4(f) protection because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, or 4) the project does not permanently use the property and does not hinder the preservation of the property. **[End boilerplate]**

Analyze all archaeological and historic sites within the Section 106 area of potential effects and all public and private parks, recreational facilities, and wildlife refuges within the Section 4(f) study area to determine whether they are protected Section 4(f) properties and whether the project would “use” the properties. If there are potential Section 4(f) properties in the project vicinity, but they are not eligible for protection under Section 4(f) and/or the project does not “use” them, clearly state that in the appropriate section of the environmental document (Parks and Recreational Facilities and/or Cultural Resources). Then, follow the guidance below:

1. First, list each property that is not protected by Section 4(f) and explain why each property is not protected. If the reason a particular property is not protected by Section 4(f) is not explained in the regulations, but is discussed in the Section 4(f) Policy Paper, then incorporate the language from the policy paper as the basis of your discussion and demonstrate how the project meets the requirements of the policy paper. Provide details.
2. Then, list each property that is protected by Section 4(f) but for which there is no “use.” When doing so, refer to the Section 4(f) regulations at 23 CFR 774 and discuss how the facts of this project either meet or do not meet the requirements found in the regulations. For each property discussed in this section, include one of the following concluding remarks:
   * If the property is not a Section 4(f) property, state:
     + The property is not a Section 4(f) property; therefore, the provisions of Section 4(f) do not apply.
   * If the property is a Section 4(f) property but a “use” did not occur, state:
     + The property is a Section 4(f) property, but no “use” will occur. Therefore, the provisions of Section 4(f) do not apply.

SECTION 6(F)

Include the following boilerplate language at the beginning of this section:

The Land and Water Conservation Fund Act was established by Congress in 1964 to fulfill a bipartisan commitment to safeguard natural areas, water resources and cultural heritage, and to provide recreation opportunities to all Americans. The Land and Water Conservation Fund Act program provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities. Section 6(f) of this Act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of Interior’s National Park Service. **[End boilerplate]**

If Land and Water Conservation Fund Act funds were used for acquisition or improvement, certain requirements must be met before the land can be acquired (see SER, Volume 1, Chapter 20, “Section 4(f) and Related Requirements” and Chapter 8 of the [National Park Service Land and Water Conservation Fund State Assistance Program Manual](https://www.nps.gov/subjects/lwcf/lwcf-manual.htm)).

1. Discuss properties that were acquired or improved using funds from the Land and Water Conservation Fund Act. Define the boundaries of the 6(f) grant (note, these boundaries are not always the same as the entire park boundary). A map is preferred.
2. Discuss how the prerequisites for replacement of the 6(f) property are satisfied.
3. Identify replacement parcel and request conversion approval from State Parks (they will work with the National Park Service as appropriate). **NOTE:** Include the approval letter in the final environmental document.
4. Document approval of 6(f) conversion/replacement property.

**Additional References**

* [23 CFR 774: Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4(f))](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1Section4f)
* [Technical Advisory T6640.8A, Oct. 30, 1987](https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_preparing_env_documents.aspx)
* [Section 4(f) Policy Paper, July 20, 2012](https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx)
* [FHWA Section 4(f) Legislation, Regulations, and Guidance](https://www.environment.fhwa.dot.gov/legislation/section4f.aspx)

1. Title VI/Non-Discrimination Policy Statement

Include the most recent Title VI/Non-Discrimination Policy Statement which can be found on the [Caltrans Civil Rights Title VI webpage](https://dot.ca.gov/programs/civil-rights/title-vi).

1. Summary of Relocation Benefits

CALIFORNIA DEPARTMENT OF TRANSPORTATION RELOCATION ASSISTANCE PROGRAM

**GUIDANCE:** Include this appendix if the proposed project involves any relocations.

This appendix is general in nature and is not intended to be a complete statement of federal and state relocation laws and regulations. Any questions about relocation should be addressed to Caltrans’ Division of Right of Way and Land Surveys. This section provides some general descriptive information on Public Law 91-646, the [Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended](https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter61&edition=prelim). This is often referred to simply as the “Uniform Act.” The information in this appendix is provided only as background and is not intended as a complete statement of all the state or federal laws and regulations; for specific details the environmental planner should contact Caltrans’ District or Regional Right of Way Relocation Branch. After presenting an outline of the basic legal foundation for relocation policy, the appendix looks at important relocation assistance information, including advisory services and the financial benefit program. Refer to the [Caltrans Right of Way Manual](https://dot.ca.gov/programs/right-of-way/right-of-way-manual), Chapter 10, for more detailed and specific information on relocation and housing programs.

Include the following boilerplate text in the document:

Declaration of Policy

“The purpose of this title is to establish a **uniform policy for fair and equitable treatment** of persons displaced as a result of federal and federally assisted programs in order that such persons **shall not suffer disproportionate injuries** as a result of programs designed for the benefit of the public as a whole.”

The Fifth Amendment to the U.S. Constitution states, “No Person shall…be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation.” The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 CFR 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and financial benefits, as discussed below.

Fair Housing

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the U.S. to provide, within constitutional limitations, for fair housing. This act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require Caltrans to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully utilized and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state’s relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and also are given a detailed explanation of the Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor.

Relocation Assistance Advisory Services

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the U.S. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are “decent, safe, and sanitary.” Nonresidential displacees will receive information on comparable properties for lease or purchase (for business, farm, and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal and state assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable “decent, safe, and sanitary” replacement dwelling, available on the market, is offered to them by Caltrans.

Residential Relocation Financial Benefits

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

Moving Costs

Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until Caltrans obtains control of the property in order to be eligible for relocation payments.

Purchase Differential

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 90 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property), may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate.

Rent Differential

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by Caltrans prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when Caltrans determines that the cost to rent a comparable “decent, safe, and sanitary” replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the Down Payment section below. To receive any relocation benefits, the displaced person must buy or rent and occupy a “decent, safe and sanitary” replacement dwelling within one year from the date Caltrans takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

Down Payment

The down payment option has been designed to aid owner-occupants of less than 90 days and tenants in legal occupancy prior to Caltrans’ initiation of negotiations. The one-year eligibility period in which to purchase and occupy a “decent, safe and sanitary” replacement dwelling will apply.

Last Resort Housing

Federal regulations (49 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on Federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, Caltrans will within a reasonable length of time, personally contact the displacees to gather important information, including the following:

* Number of people to be displaced.
* Specific arrangements needed to accommodate any family member(s) with special needs.
* Financial ability to relocate into comparable replacement dwelling which will adequately house all members of the family.
* Preferences in area of relocation.
* Location of employment or school.

Nonresidential Relocation Assistance

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business’s specific relocation needs. The types of payments available to eligible businesses, farms, and nonprofit organizations are: searching and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses. The payment types can be summarized as follows:

Moving Expenses

Moving expenses may include the following actual, reasonable costs:

* The moving of inventory, machinery, equipment and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items identified as real property may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
* Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
* Expenses related to searching for a new business site, up to $2,500, for reasonable expenses actually incurred.

Reestablishment Expenses

Reestablishment expenses related to the operation of the business at the new location, up to $25,000 for reasonable expenses actually incurred.

Fixed In Lieu Payment

A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses that meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than $1,000 nor more than $40,000.

Additional Information

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, except for any federal law providing local “Section 8” Housing Programs.

Any person, business, farm or nonprofit organization that has been refused a relocation payment by the Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from Caltrans’ Division of Right of Way and Land Surveys. California’s law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

Additional information can be found on the Caltrans Division of Right of Way’s [Relocation Assistance Program](https://dot.ca.gov/programs/right-of-way/relocation-assistance-program).

**[End boilerplate]**

1. Avoidance, Minimization, and/or Mitigation Summary

Include a copy of the project’s Environmental Commitments Record or equivalent to serve as this Appendix. The Environmental Commitments Record can be used to fulfill the requirements of the monitoring and compliance plan required by NEPA and the monitoring and/or reporting program required by CEQA.

All avoidance, minimization, and/or mitigation measures as well as conditions required by agreements with the resource agencies must be included in the Environmental Commitments Record. If mitigation was required for NEPA, explain how the mitigation will be funded (e.g., federal, state, or local funds).

Be certain that the Environmental Commitments Record separates out measures for significant impacts under CEQA (i.e., those measures used to lessen a significant impact under CEQA) versus other measures intended to avoid or minimize other less-than-significant impacts. Use the terms “mitigate” and “mitigation” only in reference to impacts that will be identified in the CEQA checklist as “significant” or “less than significant with mitigation incorporated.”

**NOTE:** If the impact is identified as “significant and unavoidable” on the CEQA checklist, you cannot prepare an Initial Study; you need to prepare an Environmental Impact Report.

Numbering the measures in the Environmental Commitments Record and using those same numbers throughout the environmental document may be helpful for the reader. It may be desirable to include project features intended to avoid and/or minimize impacts in the Environmental Commitments Record for tracking purposes and to assist with the Plans, Specifications, and Estimates review for the project. If these are included, be certain to identify them as such. It is also recommended to remove staff names and phone numbers from the Environmental Commitments Record prior to including in the environmental document.

Include an introductory statement in the Environmental Commitments Record. Example language below:

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record which follows) would be implemented. During project design, avoidance, minimization, and /or mitigation measures will be incorporated into the project’s final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in this Environmental Commitments Record are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. As the following Environmental Commitments Record is a draft, some fields have not been completed, and will be filled out as each of the measures is implemented. NOTE: Some measures may apply to more than one resource area. Duplicative or redundant measures have not been included in this Environmental Commitments Record. **[End example]**

For local assistance projects, the local agency is responsible for providing the District Local Assistance Engineer with the Environmental Commitments Record.

1. Notice of Preparation and Notice of Intent

Include a copy of the Notice of Preparation for Environmental Impact Reports and the Notice of Intent for Environmental Impact Statements here if these were not included in the Comments and Coordination chapter.

1. Required Consultation/ Concurrence Documentation

This is for the final environmental document only. The following required consultation/concurrence documentation can be included here or in the Comments and Coordination chapter.

* Memorandum of Agreement for any Finding of Adverse Effect
* Biological Opinion and/or concurrence with “Not Likely to Adversely Affect” Determination, as applicable
* If applicable and if they have been obtained by the time of the FED, the 2080 Incidental Take Permit, and/or the 2080.1 Consistency Determination
* Section 4(f) concurrence for de minimis (23 CFR 774.5[b]), temporary occupancies (23 CFR 774.13[d]), or transportation enhancement activities (23 CFR 774.13[g])
* FHWA Significant floodplain encroachment concurrence

1. Air Quality Conformity Documentation

If the project is subject to air quality conformity, include documentation in this appendix, including but not limited to the following:

* A copy of the applicable pages from the most recent Regional or Metropolitan Transportation Plan and Transportation Improvement Program.
* Correspondence
* Public notice related to interagency consultation
* Documented results of interagency consultation
* FHWA Air Quality Conformity Determination

1. Comment Letters and Responses

This appendix is typically for the final document and should be used if comment letters and responses are not included in the Comments and Coordination chapter. Public comments include comments from the general public, agency comment letters, and any other comments received during the public comment period for the environmental document.

For Draft Environmental Impact Statements, the comments received during the scoping process can be included here.

1. Final Determination of Engineering and Operational Acceptability

Include this appendix in the final document if applicable (i.e., the project includes Federal Highway approval of access modification). Include a copy of the project’s "Final Determination of Engineering and Operational Acceptability" from FHWA to serve as this appendix. For additional information, see the “Updates on FHWA’s ‘Policy on Access to the Interstate System’” letter located on the [SER Policy Memo page](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/policy-memos#LinkTarget_545).

1. List of Technical Studies

Include a list of the studies and/or technical analyses that have been prepared and are incorporated by reference into the environmental document. Provide location where the technical studies may be accessed. You may use the following example language:

The studies listed below support the environmental analyses and determinations made in this document. They are hereby incorporated by reference into this environmental document and are publicly available at enter place(s) where public can access the studies. **[End example]**

**NOTE:** Include the following information with the cultural study reference:

Please note, many state and federal laws limit the disclosure of sensitive cultural and tribal resource information to the public. Additional information regarding confidentiality of these resources can be found in the [SER, Volume 2, Cultural Resources](https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-2-cultural-resources), in Section 3.4.13 and Section 5.3.6.

1. Glossary of Technical Terms

This appendix is optional but recommended for higher level documents. A glossary of common technical terms used in environmental documents can be found on the SER homepage and can be customized for use in your document.

1. List of Acronyms and Abbreviations

This appendix is optional but recommended for higher level documents. The following list may be edited for use in your document. NOTE: Acronyms should be used sparingly and only if the acronym is used numerous times. Otherwise, it is recommended to spell out the term each time to improve the readability for the public who may not be familiar with the acronyms and for those using screen readers. If used, make sure the term is spelled out the first time the acronym is introduced.

CEQA: California Environmental Quality Act

CFR: Code of Federal Regulations

dBA: decibels (weighted)

FHWA: Federal Highway Administration

GHG: greenhouse gas

MSAT: Mobile Source Air Toxics

NEPA: National Environmental Policy Act

NOAA Fisheries: National Oceanic and Atmospheric Administration’s National Marine Fisheries Service

PM: particulate matter

SER: Standard Environmental Reference

U.S.: United States

USC: United States Code

VMT: vehicle miles traveled