

# APPENDIX S – Preparation Guidelines for Project Study Report-Project Development Support Project Initiation Document

## Table of Contents

<b>APPENDIX S – Preparation Guidelines for Project Study Report-Project Development Support Project Initiation Document .....</b>	<b>S-3</b>
ARTICLE 1 Introduction .....	S-3
Reference Information .....	S-3
Project Study Report-Project Development Support Project Initiation Document.....	S-3
Purpose of Project Study Report-Project Development Support Project Initiation Document .....	S-4
Applicability .....	S-4
ARTICLE 2 Process .....	S-5
General.....	S-5
Preparation Procedures .....	S-6
ARTICLE 3 Outline .....	S-17
General.....	S-17
Front Matter .....	S-17
Main Body of Report.....	S-19
ARTICLE 4 Cost Estimates .....	S-29
Capital Outlay Project Estimate.....	S-29
Capital Outlay Support Estimate .....	S-30
ARTICLE 5 Scoping Tools .....	S-30
General.....	S-30
Design Scoping Index.....	S-31
Stormwater Documentation .....	S-31
Transportation Planning Scoping Information Sheet .....	S-33
Traffic Engineering Performance Assessment .....	S-34
Preliminary Environmental Analysis Report.....	S-35
Conceptual Cost Estimate Right-of-Way Component.....	S-36
Survey Needs Questionnaire.....	S-37
Quality Management Plan for Locally Implemented Projects on the State Highway System.....	S-37

Risk Register.....	S-38
Headquarters Division of Engineering Services Scoping Checklist.....	S-38
ARTICLE 6 Templates .....	S-39
General.....	S-39
Template for State Transportation Improvement Program Projects and Projects-Funded-by-Others.....	S-40
Template for Long Lead State Highway Operations and Protection Program Projects .....	S-40
Template for Capital Outlay Project Estimates .....	S-40

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# **APPENDIX S – Preparation Guidelines for Project Study Report-Project Development Support Project Initiation Document**

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## **ARTICLE 1 Introduction**

### **Reference Information**

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

### **Project Study Report-Project Development Support Project Initiation Document**

The development of a project study report-project development support (PSR-PDS) project initiation document (PID) provides a key opportunity for Caltrans and involved regional and local agencies to achieve consensus on the purpose-and-need, scope, and schedule of a project.

This appendix provides concepts and best practices for preparing a PSR-PDS for projects funded through the State Transportation Improvement Program (STIP), projects-funded-by-others, and Long Lead State Highway Operations and Protection Program (SHOPP) projects. This appendix also provides a description of the information that should be contained in the PSR-PDS, and scoping tools needed to collect and organize information during the project initiation phase.

To appropriately apply the guidance described in this appendix, review the intent of policies and procedures in [Chapter 9](#) – Project Initiation, along with [Appendix L](#) – Preparation Guidelines for Project Study Report. The PSR-PDS is only one type of PID. While this appendix provides guidance on preparing a PSR-PDS, [Chapter 9](#) – Project Initiation and [Appendix L](#) – Preparation Guidelines for Project Study Report

provide the foundation for the understanding and knowledge necessary to develop any PID.

## **Purpose of Project Study Report-Project Development Support Project Initiation Document**

The purpose for using the PSR-PDS document is to gain approval for the project studies to move into the Project Approval and Environmental Document (PA&ED) phase.

The PSR-PDS is used to estimate and program the capital outlay support cost necessary to complete the studies and work needed during PA&ED. The PSR-PDS does not provide conceptual approval as defined in [Chapter 9](#) – Project Initiation. If conceptual approval is required, the project sponsor should consider using the project study report (PSR) format as defined in [Appendix L](#) – Preparation Guidelines for Project Study Report instead of the PSR-PDS format. The project development team (PDT) should discuss the appropriate format to achieve project sponsor goals during the pre-PID meeting. If appropriate, a local agency may submit a request to the Caltrans District Director for approval to use the PSR in lieu of the PSR-PDS.

The required information is reduced with much of the detail being completed during PA&ED. Because of the reduction in level of effort, specific work which must be completed is listed in this document (for example: pre-PID meeting, risk register, and design standards risk assessment).

### **Applicability**

These guidelines generally apply to all STIP and projects-funded-by-others (specially funded projects) on the State Highway System (SHS) and any segment of a transit project within the State highway right-of-way. These guidelines also apply to Long Lead SHOPP projects to program capital outlay support cost. These guidelines are not intended for use on transit projects unrelated to the SHS or on STIP projects off the SHS.

## ARTICLE 2 Process

### General

#### Project Development Process

The project development process begins with conceptual studies and continues through to the completion of construction. The project development process is tied to legal requirements and melds engineering requirements, a process for stakeholder and community input, and Caltrans approval steps with the environmental process. The principles of context-sensitive-solutions (CSS) including a focus on community involvement, is integrated into the project development process.

#### Timing

A completed PID is required before a project is included into either the STIP or SHOPP or prior to getting an approval to move to PA&ED for a project-funded-by-others, as defined in [Chapter 9](#) – Project Initiation. Any agency preparing a PSR-PDS is responsible for developing a reasonable schedule that is necessary to produce a PSR-PDS.

#### Project Management

A Caltrans project manager is assigned for every capital outlay project including locally implemented projects.

#### Registered Civil Engineer

The PSR-PDS shall be prepared under the direction of a registered civil engineer or depending on the project scope, other appropriate licensed professional such as a landscape architect.

#### Purpose and Need

A project must satisfy a clearly defined purpose-and-need. The project sponsors identify the initial transportation deficiency. The project must meet system strategies as defined in State, regional, and local plans, goals, and objectives. The project should reflect values of the community. Caltrans policy is to evaluate alternative solutions that avoid or reduce environmental impacts and to select the alternative that causes the least overall environmental damage and that satisfies the transportation purpose-and-need.

### Context-Sensitive-Solutions

The PSR-PDS provides an opportunity to consider the implementation of context-sensitive-solutions from planning through construction. Context-sensitive-solutions implementation offers a process that focuses on community involvement and the flexibility to balance transportation needs with community values. The PSR-PDS also provides an opportunity to address the needs of various modes of transportation (for example: vehicles, mass transit, rail, bicycle, and pedestrian).

### Constructability Reviews and Life-Cycle Cost Analyses

Current policy requires constructability reviews and life-cycle cost analyses to be conducted during the development of a PSR-PDS. Project managers should discuss the applicability of these two requirements with their Deputy District Directors for construction and maintenance respectively.

## **Preparation Procedures**

This topic describes the sequence of key activities and best practices that take place during the development of a PSR-PDS.

For an overview of where the PSR-PDS fits into the project development process, see [Chapter 8](#) – Overview of Project Development.

A graphic overview of the project development process is located at: [Project Phase and WBS Level 5 Flow Chart](#).

For the PID phase, the [Project Development Workflow Tasks Manual](#) provides a comprehensive flow of project delivery tasks and can be used by the project teams as a structured step-by-step guide for project development tasks performed by project engineers. Although the [Project Development Workflow Tasks Manual](#) primarily describes work activities performed by the project engineer, it also provides the framework for the flow of tasks by all the functional units.

The PSR-PDS preparation procedures are summarized in the following list. Guidance on the content of the PSR-PDS is discussed in Article 3.

1. Develop Work Programs for PSR-PDS Development
2. Hold Pre-PID Meeting
3. Obtain Authorization for PID Preparation
4. Obtain and Review Existing Reports, Studies, Mapping or Other Information
5. Form the Project Development Team
6. Develop Consensus on the Project Purpose-and-Need
7. Review the Project Site
8. Identify Additional Data Requirements for Project Scoping
9. Perform the Initial Engineering Analysis and Develop Alternatives
10. Develop Cost Estimates
11. Develop Schedule
12. Identify Risks
13. Perform Quality Management
14. Complete PSR-PDS
15. Perform Caltrans District Review and Obtain Approval

#### **1. Develop work programs for PSR-PDS development**

Deputy District Directors for planning develop PID work programs on an annual basis. The work programs are a listing and schedule of proposed projects requiring resources. There is a work program for the STIP (which includes projects-funded-by-others as defined in [Chapter 9](#) – Project Initiation) and SHOPP. Deputy District Directors submit the work programs to the Headquarters Division of Transportation Planning, Office of Program and Project Planning for approval. Office of Program and Project Planning establishes the procedures for opening an expenditure authorization for either the preparation of all PID work to include PSR-PDS PIDs or independent quality assurance (IQA) work. Office of Program and Project Planning monitors the resources and the delivery of all PIDs listed in the work program.

The work program for Long Lead SHOPP projects must be consistent with the [2015 Ten-Year State Highway Operation and Protection Program Plan \(SHOPP Plan\)](#) and is developed with the concurrence of the SHOPP Program Managers.

The work program for STIP projects are developed in partnership with local and regional transportation agencies. Either Caltrans or a local agency may prepare a PSR-PDS for STIP projects. If requested by a local agency, *California Government Code*, Section 65086.5 provides that Caltrans shall have 30 days to determine whether it can complete the requested report in a timely fashion (in time for inclusion in the next STIP). If Caltrans determines it cannot prepare the report in a timely fashion, the requesting entity may prepare the report.

The work program for projects-funded-by-others are developed in partnership with local agencies, regional agencies, or developers. Caltrans is responsible for providing independent quality assurance on all projects-funded-by-others.

## 2. Hold pre-PID meeting

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

The purpose of the pre-PID meeting is to communicate a shared view of the project and to establish an understanding of the procedures, roles, and responsibilities before the project initiation process begins. The following are sample agenda items to be covered during the pre-PID meeting:

- Prepare and finalize the [project charter](#) and cooperative agreement for reimbursable work.
- Review the PSR-PDS and PID development processes.
- Set the framework for getting consensus of purpose-and-need.
- Set the framework for agreeing on the design concept and scope. Ideally, the design concept and scope will evolve from the transportation system or regional planning process. The engineering specifics of the design scope should be discussed. These include the major features of work such as the number of lanes (current and future), right-of-way requirements, and interchange type and location.
- Agree on the basic design criteria.
- Identify known deficiencies. The [Design Scoping Index](#) located in [Appendix L](#) – Preparation Guidelines for Project Study Report can be used to document known deficiencies and highlight areas requiring further investigation. Examples of deficiencies to consider are: structures with nonstandard vertical or horizontal clearances; inadequate bridge railing; pavement in need of rehabilitation; deteriorated or inadequate drainage systems; narrow or deteriorated shoulders; lack of continuity or the deficiencies of bicycle or pedestrian facilities; replacement landscaping; ramp metering; nonstandard guardrail; maintenance worker safety; and seismic retrofit requirements.

Lead Agency - Discuss when Caltrans is the National Environmental Policy Act (NEPA) and/or California Environmental Quality Act (CEQA) lead agency. Pursuant to the current federal transportation act, Caltrans is the NEPA lead agency. Federal Highway Administration (FHWA) assigned, and Caltrans assumed, all of the United States Department of Transportation Secretary's responsibilities under NEPA. For more information, see the [Standard Environmental Reference \(SER\)](#), Volume 1 Chapter 38. NEPA lead cannot be delegated. Caltrans is the CEQA lead

agency for improvements projects on the State Highway System. In limited cases, and only when it is in the best interests of the State, Caltrans may delegate CEQA lead agency status to a local agency. For more information, see the memorandum [Department as CEQA Lead Agency for Projects on State Highway System](#).

### **3. Obtain authorization for PID preparation**

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

See Task P01 of the [Project Development Workflow Tasks Manual](#).

### **4. Obtain and review existing reports, studies, mapping or other information**

To adequately prepare a PSR-PDS, it is essential to obtain the best available and most current maps and plans, including right-of-way maps and as-built plans. Ideally, three dimensional (3-D) digital data; for example: MicroStation design files, digital elevation models (DEMs), digital terrain models (DTMs) should be used. Other resources include Digital Highway Inventory Photography Program (DHIPP) images, aerial photography mosaics, orthophotography, light detection and ranging (LiDAR), and Google Earth™ mapping service. This information serves as the basis for the conceptual design, development of alternatives, quantities and estimates, and exhibits. The use of geographic information system (GIS) and visualization software to collect and view the data is encouraged. Minimal field and office survey activities may be performed to collect new data or transform existing data to the project datum and units. Refer to the Survey Needs Questionnaire discussed in Article 5 for details on datums.

The transportation concept report (TCR) or route concept report (RCR), district system management plan (DSMP), regional transportation plan (RTP), congestion management program (CMP), [2015 Ten-Year State Highway Operation and Protection Program Plan \(SHOPP Plan\)](#), the State Implementation Plan (SIP), local plans, other reports and studies, and complete-streets concepts should be reviewed. Appropriate information from these reports can serve to document the need and scope of the project. Further discussion on these documents can be found in the Transportation Planning Scoping Information Sheet, discussed in Article 5, and [Chapter 1](#) – Introduction, and [Chapter 4](#) – Programming.

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

See Task P08 through Task P26 of the [Project Development Workflow Tasks Manual](#) for further guidance on additional data and input.

## **5. Form the project development team**

The Caltrans District Director concurs on the members of a project development team for each project, regardless of who is preparing the PSR-PDS.

The PDT is comprised of the assigned Caltrans project manager and representatives from the district project delivery, transportation planning, legal, maintenance and traffic operations units, and a regional transportation planning (RTPA) representative. Representatives from other functional units and local and regional entities are added as needed. See [Chapter 8 – Overview of Project Development](#) for a discussion of the project development team.

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

See Task P06 of the [Project Development Workflow Tasks Manual](#) for further guidance on forming a PDT.

## **6. Develop consensus on the project purpose-and-need**

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

The project sponsor must concur on the purpose-and-need. Primary stakeholders must have consensus on the project purpose-and-need.

Consider using one or more of the value analysis tools to develop consensus on purpose-and-need for complex projects.

Additional information on the development of purpose-and-need statements is located in [Chapter 9 – Project Initiation](#). For additional guidance on project purpose-and-need, refer to Task P02 of the [Project Development Workflow Tasks Manual](#).

## **7. Review the project site**

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

In addition, it is important to incorporate complete-streets (See *Deputy Directive DD-64-R2 – Complete Streets - Integrating the Transportation System*). Bicycles and pedestrians are permitted on all state highways, except for some freeways (see [Chapter 31](#) – Nonmotorized Transportation Facilities); therefore roadway shoulder and sidewalk geometrics and conditions are a part of the scoping process. The preferred way to assess conditions for bicycling and walking is by conducting a field review while bicycling and walking. See the [Highway Design Manual](#) for geometric and surface quality guidance.

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

See Task P25 and Task P26 of the [Project Development Workflow Tasks Manual](#) for further guidance on field reviews.

#### **8. Identify additional data requirements for project scoping**

Refer to the tools in Article 5 to identify data needs and issues that should be considered or studied to properly scope the project. The use of the [Design Scoping Index](#) located in [Appendix L](#) – Preparation Guidelines for Project Study Report can assist the project team in properly scoping a project. The Design Scoping Index can be used to identify facility deficiencies and the concerns of stakeholders. The PDT should evaluate which deficiencies can be addressed given the purpose-and-need, program definition, and funding constraints.

See Flow Chart P01-P31 and Flow Chart P32-P62 of the [Project Development Workflow Tasks Manual](#) for further guidance on identifying data requirements.

#### **9. Perform the initial engineering analysis and develop alternatives**

The primary focus of the initial engineering analysis is to establish a reasonable study area for alternative development utilizing existing data.

The alternative development effort should focus on identifying the project factors that must be studied or resolved. A comprehensive list of these factors is essential in estimating the effort (resources and time) required to complete PA&ED including technical studies, continued development and analysis of alternatives, public outreach, and identifying the preferred alternative.

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

Develop alternatives that will satisfy the project purpose-and-need, are cost effective, and will avoid or minimize environmental and right-of-way impacts. Involve stakeholders early and use context-sensitive-solutions principles to develop project alternatives. Using the scoping tools in Article 5 will assist in the development of alternatives that provide for the needs of travelers of all ages and abilities.

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

If developing alternatives for freeway projects, see [Chapter 31](#) – Nonmotorized Transportation Facilities for the *California Streets and Highways Code* requirements regarding impacts on pedestrian and bicycle transportation routes.

#### A. Environmental

The environmental unit prepares a preliminary environmental analysis report (PEAR). For projects sponsored by others, the implementing agency assigns/contracts with an environmental team to complete the preliminary environmental analysis report. The preliminary environmental analysis report includes:

- Discussion of potential impacts related to all alternatives capable of functioning adequately per Caltrans policies.
- A discussion of environmental resources and a description of the potential project issues or impacts, which could delay the project or affect any project alternative.
- Description of studies that are needed to complete an environmental evaluation (noting as necessary any seasonal constraints for these studies).
- A recommended environmental determination/document and a tentative schedule for its completion. If an environmental document is required, specify the lead agency for its preparation.
- An initial site assessment (ISA) for hazardous waste, if the project includes the purchase of new right-of-way, excavation, and/or structure demolition or modification.
- Identification of required or anticipated permits or approvals.

Refer to the [Standard Environmental Reference](#) for further guidance on the preliminary environmental analysis report. See Article 5 for general guidance on the preliminary environmental analysis report scoping tool.

See Flow Chart P32-P62 of the [Project Development Workflow Tasks Manual](#) for further guidance on developing alternatives.

## B. Design Standards

Fact sheets for proposed nonstandard design features are not required for a PSR-PDS. However, there must be a discussion whether the alternative proposes nonstandard design features. Alternatives should be discussed with the Headquarters Project Delivery Coordinator early in the project initiation process to identify potential nonstandard design features. Alternatives with proposed nonstandard design features must go through a design standards risk assessment to indicate a level of risk for conceptual acceptability of the alternative. The design standards risk assessment is a list of design standards that will likely not be met for each alternative and the probability of approval for each proposed exception to a design standard. See the templates in Article 6 for the format of the design standards risk assessment. Refer to Index 82.3 of the Caltrans [Highway Design Manual](#) and [Chapter 21 – Exceptions to Design Standards](#), for further discussion of design standards.

## C. Structures

The method of providing the necessary preliminary studies shall be discussed with the Headquarters Division of Engineering Services technical liaison engineer and project liaison engineer assigned to the district. The technical liaison engineer shall use a streamlined estimating process, such as square-footage costs to develop a “Structure PSR-PDS Cost Estimate” for inclusion into the PSR-PDS document when bridge and/or nonstandard retaining wall work is necessary. The project liaison engineer will provide recommendations on the preparation of the Headquarters Division of Engineering Services PSR-PDS Scoping Checklist discussed in Article 5. The scoping checklist is to be prepared by the district and will be reviewed by Headquarters Division of Engineering Services during the district review process.

The level of detail in the scoping checklist and “Structure PSR-PDS Cost Estimate” is limited to information required to develop accurate work plans for the PA&ED phase.

## D. Traffic Engineering Performance Assessment (TEPA)

The Traffic Engineering Performance Assessment produces technical findings and recommendations that will:

- Help establish the project purpose-and-need.
- Identify major performance deficiencies within and adjacent to the (initial) project limits.

- Determine the scope and magnitude of the traffic analysis study/report that will be performed/produced during the PA&ED phase to:
  - Produce a complete scope of work.
  - Support decision making on the inclusion of critical design features and traffic elements (for example: approval of nonstandard geometric design features).
  - Verify that the proposed infrastructure investment will satisfy the project purpose-and-need.

The Traffic Engineering Performance Assessment will be prepared by the district of traffic operations unit. If the PSR-PDS is prepared by a local or regional agency (or their agent) the Traffic Engineering Performance Assessment will be prepared after one or more consultations with the traffic operations functional managers responsible for:

- Electrical and Intelligent Transportation Systems
- Traffic Control Systems and Devices
- Highway and/or Freeway Operations
- Safety Management
- Traffic Management Systems
- Traffic Safety Systems
- Traffic Management Planning (for the construction phase)

See Article 5 for general guidance on the traffic engineering performance assessment. Detailed traffic engineering analysis will be performed during the PA&ED phase.

#### E. Stormwater

Since a primary purpose of the PSR-PDS is to estimate the resources needed to complete PA&ED, the expected level of stormwater information for a PSR-PDS is going to be much less than a regular project study report. The PSR-PDS evaluation will focus on determining if there will be any significant impacts to the project alternatives, right-of-way needs, or project costs due to the need to incorporate treatment best management practices (BMPs) for compliance with stormwater requirements. See Article 5 for general guidance on the PSR-PDS Stormwater Documentation scoping tool.

#### F. Right-of-Way

Summarize the anticipated right-of-way, utilities, and railroad impacts for each alternative using the Conceptual Cost Estimate Request - Right-of-Way Component discussed in Article 5. Preliminary estimate mapping showing the property boundaries and project limits will help to estimate the number, area, and magnitude of parcels required for acquisition and the likely number of

easements needed. The level of study is intended to develop an order of magnitude cost estimate for potential right-of-way needs to identify additional studies that may be needed during PA&ED.

#### Utilities

Identify existing utilities and potential relocation activities using existing, available information (for example: permit search, as-built drawings, and field review). The level of study is intended to develop an order of magnitude cost estimate and to identify additional studies that may be needed during PA&ED.

#### Railroad

Identify rail lines in the vicinity of the project and indicate possible impacts.

### G. Local and Regional Input

Use of a context-sensitive-solutions approach promotes community involvement in development of alternatives. Local and regional input is necessary in development of alternatives and in the delineation of the study area. Local planning (for example: current and proposed land use) can have a significant effect on the local and regional planning transportation system, which affects the identification of alternatives and project-specific features. District transportation planning units can facilitate an understanding of community objectives. The Transportation Planning Scoping Information Sheet also serves as a tool to gain understanding of community objectives. See Article 5 for general guidance on Transportation Planning Scoping Information Sheet.

## **10. Develop cost estimates**

### A. Capital Outlay Project Estimate

For the PSR-PDS capital outlay project estimate, an order of magnitude cost estimate should be used. For a PSR-PDS prepared by others, the local agency may elect to utilize a more detailed capital outlay project estimate. See the PSR-PDS Cost Estimate information in Article 4 for guidance.

### B. Capital Outlay Support Estimate

Estimate the support costs that will be needed to complete PA&ED. If federal dollars are used on any portion of the project and local agency support cost is considered a “soft” match for federal reimbursement, identify and discuss the local agency support cost.

## **11. Develop schedule**

Develop a schedule for delivery including major milestones of the PA&ED phase and the anticipated funding year for construction.

## **12. Identify risks**

Using the PSR-PDS in lieu of a PSR may cause risks to the scope, cost and schedule of the project. Potential risks shall be evaluated and discussed by the PDT, and ownership of the risks shall be identified. A risk register is a risk assessment for the process and potential impacts to the overall project and needs to be completed to identify, classify, and quantify the risk impacts to the various disciplines. For locally implemented projects, the local agency is responsible for creating and maintaining the risk register. This information needs to be summarized within the PSR-PDS. Refer to Article 5 for general guidance on the risk register.

## **13. Perform quality management**

For projects sponsored by others, Caltrans shall provide independent quality assurance per *Deputy Directive DD-90 – Funding of Quality Management Work on State Highway Projects*. Caltrans' independent quality assurance activities can be described as a cross functional review of the supporting documentation which includes: functional reviews of the sub-products such as the preliminary environmental analysis report, providing advice and consultation during the development of the product, and attendance at PDT and other project meetings as needed.

The project sponsor and/or implementing agency must develop and follow a quality management plan. Refer to Article 5 for general guidance on the quality management plan.

## **14. Complete PSR-PDS**

After developing alternatives and evaluating impacts, prepare the PSR-PDS in accordance with the guidance in Article 3.

If funds that are not included in a state programming document are used, cooperative features should be summarized in the PSR-PDS. An executable cooperative agreement could be deferred, but it shall be completed at the beginning of the PA&ED phase. Refer to [Chapter 16](#) – Cooperative Agreements, for policies on cooperative agreements.

## **15. Perform Caltrans district review and obtain approval**

Statutes require Caltrans to review, and if appropriate, approve all PIDs, including the PSR-PDS, prepared by a local agency within 60 days of submittal of the PID as long as the review does not jeopardize the delivery of projects listed in the approved STIP.

If the PSR-PDS is not approved, notification by the district will include the reasons the PSR-PDS is unacceptable, including reference to any inconsistencies with Caltrans policies or standards.

Caltrans will review and approve the revised PSR-PDS within 30 days. However, in the event that the document does not meet with Caltrans

standards or policies, it may be necessary to return the PSR-PDS to the local entity for further revision. The review and approval cycle will then be repeated.

The Caltrans District Director or Deputy District Director, if delegated, is responsible for approving the PSR-PDS scope, schedule, and cost within these established guidelines and may exercise judgment and flexibility in approving the PSR-PDS document. The PSR-PDS must be approved by the District Director, or Deputy District Director, if delegated, after review by the PDT. Project managers are to endorse the decision by signing an “Approval Recommended.”

## **ARTICLE 3      Outline**

### **General**

The purpose of this outline is to identify the key elements to document in the project study report-project development support (PSR-PDS). As an initial scoping and resourcing document; the PSR-PDS must identify the key issues of the transportation deficiency, any major elements that should be investigated, and the resources needed to complete the Project Approval and Environmental Document (PA&ED) studies. The attachments should contain summary information only needed to support or clarify information in the body of the report. Article 6 has templates that present a guideline for preparation of the PSR-PDS.

### **Front Matter**

#### Cover Sheet

The cover sheet provides the project identifiers, in the header, such as the district, county, route, and post mile range, as well as the expenditure authorization (EA), project number, planning program number (PPNO), program code, program name, and month and year of report approval.

The beginning and ending post miles should be rounded to the nearest 0.1 mile that encompasses all of the proposed construction. The project location should be listed as a spot location to the nearest 0.1 mile if the project is less than 0.2 mile in length. The report limits should use the limits that encompass all viable project alternatives.

The project number is the 10 digit number used for reporting labor charges.

Enter the program code(s) with program name(s). Information on the program codes and names can be found in the [Coding Manual](#), Chapter 7. The program code is typically presented in the format of “20.XX.201.010” where “XX” is entered in the element location to represent both capital outlay support (XX=10) and capital outlay projects (XX=20) when they are funded from the same funding program. Use specific, separate program codes for multiple funding sources.

Modify the purpose(s) of report as needed. Typical entries for the purpose(s) include:

- To Request Programming in the 20XX STIP for Capital Support of the Project Approval and Environmental Document
- To Request Approval to Proceed to the Project Approval and Environmental Document phase for a Locally Funded Project (as defined in [Chapter 9](#) – Project Initiation)
- To Request Approval to Proceed with the Formal Studies for a Long Lead SHOPP Project
- To Request Scope Approval for a Project-Funded-By-Others (as defined in [Chapter 9](#) – Project Initiation)
- To Authorize a Cooperative Agreement

See the [Plans Preparation Manual](#), Section 2-2.2 for guidance in developing the project legal description. The project legal description is the same as the title sheet project description, such as: “In Los Angeles County...”

The cover sheet must include the endorsement of the Caltrans project manager.

For projects sponsored by others, a signature indicating the acceptance of the risks identified in the risk register must be included on the cover sheet.

The District Director or Deputy District Director to whom that authority has been officially delegated approves the recommendations of the report. Edit the signature block as appropriate.

### Vicinity Map

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

### Registered Professional Stamp

The registered professional stamp or seal and number with signature shall be placed on a separate sheet, which shall be part of the report. Also included on this sheet shall be a statement indicating that the registered professional is attesting to the technical information contained therein and the engineering data upon which recommendations, conclusions, and decisions are based. This seal does not constitute approval of the report. Approval of the report is a management decision and is separate from this technical signature of the person in responsible charge.

### Table of Contents

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

## **Main Body of Report**

### **1. INTRODUCTION**

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

In the introduction, identify:

- The problem
- The range of alternatives and magnitude of capital outlay project estimates
- The Caltrans resources needed to complete the proposed components (for example: PA&ED phase and/or independent quality assurance)
- The PA&ED milestone and the anticipated funding year for construction
- The proposed funding sources
- The initial project category
- The type of facility as designated on a current or proposed route adoption map
- Any known project approvals anticipated for each alternative (see [Chapter 12](#) – Project Approvals and Changes to Approved Projects, for more information)
- What work will be completed by non-Caltrans staff, if appropriate

## 2. BACKGROUND

The background should briefly describe:

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

## 3. PURPOSE AND NEED

These statements together should succinctly answer the question: why this project and why now? The PDT, in conjunction with the project sponsors and key stakeholders, must develop the purpose statement and the need statement. The purpose-and-need statement shall remain consistent through the entire project development phase.

Additional information on the development of purpose-and-need statements is located in [Chapter 9](#) – Project Initiation.

### Purpose

The project purpose is the set of project objectives that will be met, which addresses the transportation deficiency (in other words, the project need). It is important to identify the primary and secondary objectives that are met by this project. While the secondary objectives may be a factor in the scoping of the project (for example: minimizing impacts to the environment, meeting *Americans with Disabilities Act of 1990* requirements, complete-streets, and etcetera), the purpose statement should focus on the primary objectives of the project.

### Need

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

#### **4. TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT**

The purpose of the Traffic Engineering Performance Assessment is to produce findings and estimates related to existing performance deficiencies, expected performance benefits and impacts, the scope of work and features needed to meet the project objectives, and the resources needed to produce a complete traffic analysis report that will be necessary during the next phase of the project development process. To meet the purpose of the PSR-PDS, this assessment should rely upon an evaluation and macro-level analysis of readily available information and data.

Summarize key findings, recommendations and the (performance, scope and resource) estimates produced or derived from the traffic engineering performance assessment (see Article 5), especially those which:

- a) Support the purpose-and-need statements in the “Purpose and Need” section of the PSR-PDS
- b) Demonstrate and quantify the items outlined in the “Deficiencies” section of the PSR-PDS
- c) Identify the design features and traffic infrastructure (such as: traffic control, operational, safety and management systems, elements, devices and strategies) to be included in the preliminary project scope of work
- d) Identify the scope and magnitude of the formal traffic engineering studies (including operational, capacity, safety, warrant, and benefit/cost analysis) that will be necessary during the next phase of the project development process in order to:
  - Identify/confirm the complete scope of work (in other words, infrastructure and strategies)
  - Produce the environmental document
  - Obtain project approval

Items c) and d) facilitate the estimation of the project cost, right-of-way requirements, and the traffic engineering resources required to perform the various traffic studies and analysis that may be needed to produce a complete scope of work and support major design decisions (for example: the safety analysis that can justify design and traffic standard applications).

#### **5. DEFICIENCIES**

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

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

This section may have two subsections. A subsection on the primary deficiencies would discuss deficiencies that relate directly to the purpose-and-need statements. A subsection on the secondary deficiencies would identify other deficiencies that should be addressed when scoping the project, but are not related directly to the stated purpose-and-need for the project.

## **6. CORRIDOR AND SYSTEM COORDINATION**

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

- District system management plan
- Transportation concept reports or route concept reports
- Corridor system management plan
- Regional transportation plans
- Congestion Management Program
- State Implementation Plan
- Bicycle and pedestrian master plans
- Short and long-range transit plans
- Local measure programs
- Complete-streets
- Context-sensitive-solutions
- General plan and circulation elements

Provide a summary of the information from the Transportation Planning Scoping Information Sheet which also includes complete-streets and context-sensitive-solutions to address other State Highway improvements, local improvements or any development projects within the immediate project vicinity.

Identify the date that the route was adopted, the California Transportation Commission (CTC) designation of the route or route denominations, and identify any applicable freeway or controlled access agreements, potential freeway or controlled access agreements, and potential relinquishments.

A project that requires a new public road connection must provide a description of the land-use development to be served by the new connection, describe the relationship to the local agency's general plan or other specific area plans, and justification per [Chapter 27](#) – Access Control Modification, that existing interchanges or local road systems cannot be improved to handle the deficiencies.

## 7. ALTERNATIVES

All alternatives that address the purpose-and-need will be carried forward to PA&ED as described in [Chapter 9](#) – Project Initiation. A No Build Alternative should always be considered.

Alternative discussions can refer to attachments which may include: schematic maps of the study area and typical cross-sections, as appropriate.

The alternative section includes a discussion of the design scope, describes the boundary of the study area, and defines the activities for the PA&ED phase for each of the alternatives.

As appropriate, consider the following topics for each alternative:

- Discuss the design scope in terms of how it will satisfy the project purpose-and-need.
- Describe the boundaries of the study area required for formal investigations during the PA&ED phase. The project study area for each alternative must be established to include reasonable modification to the alternative. Improper identification of the project study area can result in unanticipated studies and project delays.
- Identify the resources needed to complete the engineering, environmental, and right-of-way studies for all alternatives to achieve PA&ED. Summarize the information for the right-of-way needs and preliminary environmental analysis report.
- Discuss which studies and actions are required for approval of each alternative (such as Federal Highway Administration, CTC, route matters, and etcetera). For further guidance on approvals and agreements see [Chapter 13](#) – Project Related Permits, Licenses, Agreements, Certifications, and Approvals.
- Discuss whether the alternative proposes nonstandard design features. Include the design standards risk assessment as needed.
- Discuss the order of magnitude of the capital outlay project estimate for each alternative. The estimates are for long-range planning. The estimates should be presented as a range and are not to be used for programming.

- Discuss stormwater best management practices that could affect the estimated project costs for each alternative. Also discuss potential water quality impacts that would entail additional resource needs during PA&ED.
- Discuss context-sensitive-solutions and complete-streets issues that could affect the estimated resources and PA&ED delivery milestone dates.
- Briefly discuss any constructability issues or concerns such as the need for full road closure and staged construction (refer to Traffic Engineering Performance Assessment, Article 5).

## **8. RIGHT-OF-WAY**

Summarize the anticipated right-of-way, utilities, and railroad impacts for each alternative using the Conceptual Cost Estimate Request – Right-of-Way Component discussed in Article 5. Preliminary estimate mapping showing the property boundaries and project limits will help to estimate the number, area, and magnitude of parcels required for acquisition and the likely number of easements needed. The level of study is intended to develop an order of magnitude cost estimate for potential right-of-way needs to identify additional studies that may be needed during PA&ED.

### Utilities

Identify existing utilities and potential relocation activities using existing, available information (such as: permit search, as-built plans, and field review). The level of study is intended to develop an order of magnitude cost estimate and to identify additional studies that may be needed during PA&ED. Positive location is not performed.

### Railroad

Identify all rail lines in the vicinity of the project and thoroughly investigate any possible impacts. Due to potential impacts to project cost and schedule, all possible railroad impacts must be listed in the risk register and summarized in this section.

## **9. STAKEHOLDER INVOLVEMENT**

Discuss the types of stakeholder involvement activities that were used to develop the purpose-and-need statement, and to identify the alternatives to be studied. Discuss stakeholder concerns and objectives that were identified during the project initiation document phase.

Discuss the context-sensitive-solutions approach that will be used to obtain stakeholder involvement in the identification and evaluation of alternatives.

## 10. ENVIRONMENTAL COMPLIANCE

Identify the type of environmental scoping information prepared for the project and what may be anticipated, such as:

A preliminary environmental assessment report (PEAR) was prepared and included with this report. The PEAR indicates that the project will likely receive an environmental determination of a Categorical Exemption (CE) under the California Environmental Quality Act (CEQA) and Categorical Exclusion (CE) under the National Environmental Policy Act (NEPA).

Briefly summarize the requirements and restrictions enumerated in the environmental scoping information. Information about environmental scoping is on the [Preliminary Environmental Assessment Report website](#).

Briefly describe environmental issues that influence the project design, schedule, or cost; include permit requirements, mitigation, and construction work windows. Refer to information in the attached assessment as needed.

Provided for reference:

- California Environmental Quality Act (CEQA)
  - Categorical Exemption (CE) or Statutory Exemption (SE)
  - Initial Study (IS) and Negative Declaration (ND) or Mitigated Negative Declaration (MND)
  - Environmental Impact Report (EIR)
- National Environmental Policy Act (NEPA)
  - Categorical Exclusion (CE)
  - Environmental Assessment (EA) and Finding of No Significant Impact (FONSI)
  - Environmental Impact Statement (EIS)

## 11. FUNDING

### Capital Outlay Project Estimate

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

The capital outlay project estimates are ranges and are not to be used for programming. The order of magnitude estimates are used to estimate future

funding needs. The breadth of the estimate range is project-specific. The estimate should be based on the worst and best-case scenario for high risk factors. For a PSR-PDS prepared by others, the local agency may desire a more comprehensive capital outlay project estimate. Additional information pertaining to the capital outlay project estimate is located in Article 4 and Article 6.

#### Capital Outlay Support Estimate

Estimate the support costs that will be needed to complete PA&ED. Identify sources(s) of funding to fund the PA&ED phase of the project.

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

#### Congestion Mitigation and Air Quality Program Funding

Discuss whether or not the project is eligible for Congestion Mitigation and Air Quality Program funding. Review the current Congestion Mitigation and Air Quality Program guidance to determine if an emission reduction analysis must be completed; the California Air Resources Board and Caltrans’ approved methodologies for completing the emission reduction analysis can be obtained from the Headquarters Transportation Programming website at: [\*Congestion Mitigation and Air Quality website\*](#).

### **12. DELIVERY SCHEDULE**

Provide a delivery schedule for significant PA&ED milestones and major milestones for future project phases. For practical purposes this schedule shows the amount of time needed to complete the project PA&ED.

Discuss all schedule constraints and assumptions for programmed milestones, and include in the risk register. A tentative schedule is not complete without documentation of the assumptions and constraints. The assumptions and constraints provide decision-makers with the rationale used to develop the schedule and the factors that could have significant impact on the schedule. The assumptions and constraints provide stakeholders with an understanding of critical delivery areas. The resource needs, and estimate must be consistent with the work plan that is submitted to Headquarters Division of Project Management.

Provide the month and year for proposed program delivery milestones for PA&ED. Any milestones that are not proposed for programming and are outside of the programming cycle should be identified by fiscal year in the “Delivery Date Column” and a notation made that these dates are for “planning purposes only.” For projects-funded-by-others, local agency should provide critical target dates. The schedule shall be tied to a work plan to assist Caltrans in managing resources for these projects.

### **13. RISKS**

Refer to the [Project Risk Management Handbook: A Scalable Approach](#) for the requirements and procedures. Discuss the risks and include the risk register as an attachment.

### **14. EXTERNAL AGENCY COORDINATION**

See the latest [Stewardship and Oversight Agreement on Project Assumption and Program Oversight](#) between the FHWA, California Division and Caltrans for the project actions assumed by Caltrans and the project actions where FHWA has retained their authority as well as the detail associated with the various oversight responsibilities. Project actions are identified in the “Project Action Responsibility Matrix” within the stewardship agreement.

Discuss if the project has been identified as a “Project of Division Interest” or “Project of Corporate Interest.”

Discuss project actions, as appropriate, assumed by Caltrans and any coordination with the FHWA for review and approval of project actions.

If the project proposes new or modified Interstate access, include a discussion of any issues and the proposed or actual dates for the Determination of Engineering and Operational Acceptability and Final Approval. See [Chapter 27](#) – Access Control Modification, for more information.

Identify potential involvement with outside agencies for necessary coordination, agreements, or permits required for the project. The district environmental division is a resource for determining some of the required permits. The list of agencies and permits in the template is not comprehensive; see [Chapter 13](#) – Project Related Permits, Licenses, Agreements, Certifications, and Approvals for more information.

External agency coordination that causes uncertainty for delivering the project must be included in the risk register.

## **15. PROJECT REVIEWS**

The template includes a list of possible reviews. Modify the list to reflect district review procedures. Include “Completed” or “Not applicable” or the reviewer’s name along with the review completion date. Depending on the project aspects and phase, some of the reviews are mandatory.

## **16. PROJECT PERSONNEL**

To facilitate contacts with the project development team members, include their names and telephone numbers in the following general format of:

Name, Title      Phone number

## **17. ATTACHMENTS**

The following list provides examples of the appropriate attachments and files. Each project should be evaluated as to the appropriate inclusion of specific reports and information. Do not include raw data that is used in the analysis in the report or as an attachment. This information should be part of the project file and kept to support engineering recommendations. List each attachment with the corresponding number of pages in parentheses.

### Required Attachments

- Location and/or vicinity map
- Schematic maps of the study area or alternatives
- Capital outlay project estimate
- Typical cross sections
- Preliminary environmental analysis report
- Transportation planning scoping information sheet
- Right-of-way conceptual cost estimate component
- Life-cycle cost analysis
- Risk register

**Required Supplemental Documents for Project Files:**  
 (This information should only be summarized in the PSR-PDS)

- Quality management plan for locally implemented projects on the State Highway System
- Stormwater documentation
- PSR-PDS survey needs questionnaire
- Traffic engineering performance assessment
- Headquarters Division of Engineering Services PSR-PDS scoping checklist
- For STIP projects, include a project programming request (PPR). See the [project programming request instructions and template](#).
- [Design Scoping Index](#) or equivalent document
- Rosters of personnel participating in major reviews
- Capital outlay support estimate

## ARTICLE 4      Cost Estimates

### Capital Outlay Project Estimate

The level of detail available to develop the right-of-way and construction capital outlay estimate for a project study report-project development support (PSR-PDS) for the State Transportation Improvement Program (STIP), projects-funded-by-others, or a Long Lead State Highway Operations and Protection Program (SHOPP) project is only accurate to within orders of magnitude and is needed for long-range planning purposes only. Examples of ranges that can be considered are “less than \$5M”, “\$5M-\$25M,” \$25M-\$75M” or “\$50M-\$60M.” The breadth of range is based on available information and reasonable assumptions. Therefore, the capital outlay project estimates provided in PSR-PDS are not for programming purposes. In addition, there should be a discussion of a financial plan that identifies existing non-STIP funding sources that are being considered to complete the project.

#### Capital Outlay Project Estimate

	Range of Estimate		STIP Funds		Other Funds	
	Construction	Right-of-Way	Construction	Right-of-Way	Construction	Right-of-Way
Alternative 1						
Alternative 2						
Alternative 3						
Alternative 4						

The level of detail available to develop these capital outlay project estimates is only accurate to within the above ranges and is useful for long-range planning purposes only. The capital outlay project estimates should not be used to program or commit State-programmed funds.

The intent of the table is to provide the following information:

- The capital outlay project estimate range for each alternative
- A list of the main funding sources for each alternative (such as Regional Improvement Program [RIP], Interregional Improvement Program [IIP], or SHOPP for Long Lead SHOPP projects)
- Other potential sources of funds (such as: measure funds and developer funds)

Columns may be added to the table for each non-STIP funding source. A description of any specific funding commitment or constraint should be included in text following the table, for example, if a city may be willing to contribute up to a fixed amount for sidewalk improvements. The city's participation must be discussed. Discuss any cooperative agreements that may be needed for various project components. The PSR-PDS capital outlay project estimate template is located in Article 6.

### **Capital Outlay Support Estimate**

Estimate the support cost that will be needed to complete PA&ED. The support cost should be based on a resource-loaded work plan in either Expert Project Manager (XPM) or Project Resource and Schedule Management (PRSM).

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

## **ARTICLE 5      Scoping Tools**

### **General**

This article contains some of the tools used by various functional areas to aid the project team in scoping the project. The tools not contained in this article can be obtained from the appropriate functional unit. Also see the [Scoping Tools website](#) for the tools developed for use with the PSR-PDS.

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

## **Design Scoping Index**

The [Design Scoping Index](#) can serve as a discussion document to help the design units analyze the highway system and identify design issues that should be addressed during the project initiation phase.

The index can serve to facilitate discussions with other functional units to identify project issues and stakeholder input needed to properly scope the project. It can also facilitate discussions with Headquarter liaisons to identify potential issues and nonstandard design features.

The [Design Scoping Index](#) is used with the scoping checklists from other functional units to determine feasibility of the project alternatives. When filling out the index, indicate if information on the index is based on assumptions. Project information is dynamic and the information in this index should be revised and dated throughout the PSR-PDS process. As the project progresses, information should be verified, updated, and possibly addressed in a risk analysis.

To aid in engineering decisions regarding the development of geometric plans, refer to the [Highway Design Manual](#) and [Design Information Bulletin 78 – Design Checklist](#).

## **Stormwater Documentation**

The Headquarters Division of Design, Office of Storm Water Management Design developed the [Storm Water Quality Handbooks: Project Planning and Design Guide](#) to provide guidance on the process and procedures for evaluating project scope and site conditions to determine the need for and feasibility of incorporating stormwater best management practices into a project for compliance with the National Pollutant Discharge Elimination System (NPDES) permits. Within the *Storm Water Quality Handbooks: Project Planning and Design Guide*, the storm water data report (SWDR) is a standardized format to compile pertinent information necessary to evaluate potential stormwater impacts on a project. The storm water data report has a narrative, multiple checklists and attachments that are used to document the stormwater decisions being made on a project, as well as compiling the necessary background information needed to make those decisions. A storm water data report is

required to be completed at each phase of a project. The intent of this process is to document background information and the stormwater decisions made for a project throughout each phase. As a project proceeds, the storm water data report from the previous phase will be used as the starting point so that efforts are not duplicated.

The level of detail in a PID storm water data report should be commensurate with the level of detail in the PID. Since a primary purpose of the PSR-PDS is to estimate the resources needed to complete PA&ED, the expected level of detail for a PSR-PDS storm water data report will be much less than a regular project study report storm water data report. The PSR-PDS evaluation will focus on determining if there will be any significant impacts to the project alternatives, right-of-way needs, or project costs due to the need to incorporate treatment best management practices for compliance with stormwater requirements. The Evaluation Documentation Form (Appendix E of the [\*Storm Water Quality Handbooks: Project Planning and Design Guide\*](#)) will be used to document the need to incorporate treatment best management practices in a PSR-PDS.

The following topics would be considered to be the minimum information necessary to be able to provide an effective stormwater analysis during the PSR-PDS storm water data report documentation process:

- List the regional water quality control board(s) that is within the project limits.
- Determine if a Clean Water Act, Section 401 - Water Quality Certification be required.
- Identify any location specific requirements.
- Determine if there is a potential for the project to create permanent water quality impacts.
- Determine the total estimated disturbed soil area (nearest acre) for each project alternative.
- Determine if the project will need coverage under the Construction General Permit. If so, and if required, determine the estimated project risk level.
- Determine the estimated net post project impervious area (nearest acre) for each project alternative.
- Determine if the project will require the incorporation of treatment best management practices. Complete the Evaluation Documentation Form.
- If treatment best management practices will be required, describe the considered permanent best management practices and any additional right-of-way needs.
- Determine if steep slopes will be created or disturbed. If so, describe any advanced erosion control needs.

- Determine if the project is going to require a notification of aerial deposited lead (ADL) reuse.
- Include the estimated costs for both permanent and temporary best management practices.

It should be noted that while the storm water data report has a number of checklists and attachments, it is understood that much of the information will be gathered and/or determined during PA&ED. To eliminate the potential of expending resources to gather information that may not be required for the PSR-PDS, the project engineer should coordinate with the district/regional design stormwater coordinator during the pre-PID meeting to come to an agreement of the expected level of documentation and to have a better understanding of the potential stormwater impacts within the project area. During this consultation it will also be determined if additional information, other than the previously listed topics, is warranted.

Pertinent information from the storm water data report should be summarized within a stormwater section in the PSR-PDS.

During PA&ED, the normal stormwater documentation process will be followed.

For Statewide consistency, the template for a PSR-PDS storm water data report will be similar to a regular PID-level storm water data report and is located on the Headquarters Division of Design, Office of Storm Water Management Design website at: [Storm Water website](#).

### **Transportation Planning Scoping Information Sheet**

The PDT should use the Transportation Planning Scoping Information Sheet to verify that the project remains consistent with the planning level purpose-and-need and is consistent with planning concepts, statewide goals, and planning decisions.

The majority of the data requested for the information sheet is compiled at two separate time periods. The initial information is collected by the transportation planning PDT representative at the start of PID development to ensure appropriate stakeholders are included in the process and all pre-planning efforts and commitments are reviewed before any project decisions are made. Explanations of how the requirements were met will need to be finalized by the end of the PID.

The current Transportation Planning Scoping Information Sheet is located at: [Scoping Tools website](#).

## **Traffic Engineering Performance Assessment**

Project related traffic engineering studies produce findings and estimates related to the operational and safety performance of existing and proposed highway infrastructure. The performance related findings and estimates are derived from the:

- analysis of traffic, collision and performance data and forecasted traffic volumes.
- evaluation of existing infrastructure to identify deficiencies and/or omissions.
- evaluation of the proposed infrastructure, including geometric design and traffic features or elements (such as: traffic control, operational, management and safety devices, systems and features).

Performance-related findings and estimates provide the basis for project scoping and design decisions. Ultimately, formal traffic engineering studies inform and advise the PDT as to whether the project scope is complete, and whether the scope will meet the project purpose-and-need.

To meet the purpose of the PSR-PDS, the preliminary traffic engineering studies should be limited to an assessment of readily available information and data, and macro-level analysis and evaluation. This effort will produce preliminary traffic engineering findings and estimates to inform and advise the PDT on:

- the potential scope of work and features (especially the traffic “elements” previously referenced).
- potential performance benefits and deficiencies.
- the scope and magnitude of traffic engineering work (traffic forecasting, modeling, analysis and evaluation) to be performed during the Project Approval and Environmental Document phase.

The traffic engineering effort performed during PA&ED will further define the scope of work and produce reliable estimates of the operational and safety impacts (benefits and disbenefits) of the proposed highway infrastructure.

The information, questions, checklists and report template are intended to guide and advise the engineer and/or traffic analyst who is responsible for the performance and documentation of the traffic engineering assessment.

A summary of the assessment and key findings and estimates should be summarized or incorporated into the PSR-PDS document.

The current Traffic Engineering Performance Assessment is located at: [Scoping Tools website](#).

## **Preliminary Environmental Analysis Report**

The preliminary environmental analysis report provides the initial environmental evaluation of a project and alternatives before it is programmed. It anticipates the environmental constraints that may affect project design, alternatives, cost, schedule, and delivery. It estimates the scope, schedule, and costs associated with the subsequent environmental compliance process and it documents the assumptions and risks used to develop those estimates. When a preliminary environmental analysis report is required, it becomes an attachment to the project initiation document.

Since the PSR-PDS is used to estimate and program the capital outlay support cost necessary to complete the studies and work needed during PA&ED, the preliminary environmental analysis report for a PSR-PDS should only estimate costs through PA&ED. The cost of environmental permits and commitments is programmed as part of the right-of-way and construction costs and therefore should not be included in a preliminary environmental analysis report for a PSR-PDS.

The level of detail in a preliminary environmental analysis report should be commensurate with the level of detail in the PID document. The preliminary environmental analysis report should be a concise (approximately 5 to 15 pages) report used to document the issues that are anticipated to be addressed in the NEPA or CEQA documentation and the assumptions that were used to anticipate those issues. The magnitude and complexity of the proposed project dictates the level of effort expended for the preliminary environmental analysis report documentation, nevertheless, the preliminary environmental analysis report is not an environmental document; it is not the equivalent of the Tier 1 NEPA document; and it is not a report of environmental analysis.

The *PEAR Handbook* makes it clear that a preliminary environmental analysis report should always include documentation of any assumptions that were made and/or any environmental risks, particular those assumptions and risks that could affect the cost, scope, and schedule of the project.

The *PEAR Handbook*, template, and attachment templates are located at: [Preliminary Environmental Assessment Report website](#).

## **Conceptual Cost Estimate Right-of-Way Component**

The conceptual cost estimate for the right-of-way component provides an order-of-magnitude estimate that is intended for planning purposes only. The right-of-way component of the project should not be programmed until a right-of-way data sheet has been completed and approved.

The project engineer completes the Conceptual Cost Estimate Request – Right-of-Way Component and submits it to the district right-of-way office. The district right-of-way office will then complete the Conceptual Cost Estimate – Right-of-Way Component and submit it to the project engineer.

The current Conceptual Cost Estimate Request – Right-of-Way Component is located at: [Scoping Tools website](#).

### Conceptual Cost Estimate – Right-of-Way Component

The conceptual cost estimate for the right-of-way component will include:

#### Scope of the Right-of-Way

- Description of required right-of-way
- Right-of-way required
- Number of parcels
- Project setting
- Right-of-way requirements
- Relocation assistance program (RAP) displacements
- Demolition and clearance
- Railroad involvement
- Utility involvement

#### Cost Estimates

- Capital outlay project cost estimate
- Capital outlay support cost estimate

#### Schedule

The estimated schedule assumes a right-of-way certification #1.

### Areas of Concern

The areas in close proximity to the project, if impacted, could result in major increases to the cost, scope, or schedule of delivering the right-of-way component.

### Assumptions and Limiting Conditions

The assumptions and limiting conditions used in the conceptual cost estimate.

### Contact

The contact information for the person preparing the conceptual cost estimate.

## **Survey Needs Questionnaire**

The project datums, vertical and horizontal, need to be established as soon as possible.

The current Survey Needs Questionnaire is located at: [Scoping Tools website](#).

## **Quality Management Plan for Locally Implemented Projects on the State Highway System**

The purpose of the quality management plan is to facilitate an effective and efficient process for the development, review and approval of PIDs for State Highway System projects sponsored by others. The project sponsor and/or implementing agency must develop and follow a quality management plan that meets the standards of professional practice and satisfies requirements of the project scope and schedule. The project managers from Caltrans and the lead agency shall ensure that all PDT members, including consultants, utilize the quality control/quality assurance (QC/QA) elements as described in this document during the production and review of PIDs. Quality control/quality assurance will be performed before deliverables are submitted to Caltrans for review.

Each team member must understand the project objectives, apply sound engineering principles and is expected to produce quality, accurate, and complete documents within the project schedule and budget. Project documents will be prepared in accordance with current Caltrans regulations, policies, procedures, manuals, and standards including compliance with FHWA requirements.

The information provided in the quality management plan describes the quality procedures that will be implemented for work performed during all phases of development, review and approval of locally sponsored and/or implemented PIDs.

The quality management plan template is to be modified to fit project needs, reporting relationships, and general circumstances.

The current quality management plan for locally implemented projects on the State Highway System is located at: [Scoping Tools website](#).

### **Risk Register**

The PSR-PDS PID requires that the project sponsor complete a risk assessment. The reduced amount of data that is required for the PSR-PDS transfers risks to future phases and it is important to identify the risk, define the probability, define the severity, identify who or what the risk will impact, and identify the ownership of the risk. The project manager, project sponsor, and project team members jointly develop a written plan that enables them to identify, assess, quantify, prepare a response to, monitor, and control capital project risks. Refer to the [Project Risk Management Handbook: A Scalable Approach](#) and use the risk register template in completing the plan.

The risk register template is located at: [Risk Management website](#).

### **Headquarters Division of Engineering Services Scoping Checklist**

The Headquarters Division of Engineering Services developed the PSR-PDS scoping checklist to accurately identify the products and services required from Headquarters Division of Engineering Services functional units for STIP projects.

- The district is responsible for completing all sections of the checklist.
- The Headquarters Division of Engineering Services project liaison engineer will provide assistance to the district project manager to complete the checklist and provide the project manager a workload resource estimate.

Sections of the checklist include general project information, project type, alternative descriptions, project schedule, and estimated cost range. Detailed sections on project scope clarify involvement of the following:

- Structure design
- Geotechnical services
- Structure hydraulics
- Preliminary investigations
- Transportation architecture
- Materials and testing services
- Structures and electrical
- Mechanical
- Water
- Wastewater design

Technical specialist design for culverts, barriers, sign and overhead sign structures are also included on the checklist.

The workload resource estimate is prepared for the district project manager and provides the estimate in personnel years (PYs), required for Headquarters Division of Engineering Services products and services up to work breakdown structure task 180 for the project. The Headquarters Division of Engineering Services PSR-PDS Scoping Checklist is summarized in the PSR-PDS document.

The current Headquarters Division of Engineering Services PSR-PDS Scoping Checklist is located at: [Scoping Tools website](#).

## **ARTICLE 6      Templates**

### **General**

This article contains three templates for the PSR-PDS:

1. Template for STIP projects and projects-funded-by-others, and
2. Template for Long Lead SHOPP projects, and
3. Template for capital outlay project estimate.

These templates should be modified to include or exclude any applicable deficiencies or issues.

## **Template for State Transportation Improvement Program Projects and Projects-Funded-by-Others**

This sub-article is a template for the PSR-PDS for STIP projects and projects-funded-by-others. Guidance for completing this template is located in Article 3.

When using the template, delete any italicized text within the body of the document. The italicized text provides instructions for template users and does not provide any value to the final document.

The template is located at:

<http://www.dot.ca.gov/hq/oppd/pdpm/templates/apdx-s-template1.docx>

## **Template for Long Lead State Highway Operations and Protection Program Projects**

This sub-article is a template for the PSR-PDS for Long Lead SHOPP projects. Guidance for completing this template is located in Article 3.

When using the template, delete any italicized text within the body of the document. The italicized text provides instructions for template users and does not provide any value to the final document.

The template is located at:

<http://www.dot.ca.gov/hq/oppd/pdpm/templates/apdx-s-template2.docx>

## **Template for Capital Outlay Project Estimates**

This sub-article is a template for the PSR-PDS capital outlay project estimate. Guidance for completing this template is located Article 4.

When using the template, delete any italicized text within the body of the document. The italicized text provides instructions for template users and does not provide any value to the final document.

The template is located at:

<http://www.dot.ca.gov/hq/oppd/pdpm/templates/apdx-s-template3.docx>