



Local Programs Procedures

LPP 06-03 Manual Update

Subject: **Conversion From Metric System to English Units (CMS2EU) and Technical Changes**

Reference: *Local Assistance Procedures Manual*, Chapter 2-Roles and Responsibilities; Chapter 6-Environmental Procedures; Chapter 7-Field Review; Chapter 9-Civil Rights and Disadvantaged Business Enterprises (DBE); Chapter 10-Consultant Selection; Chapter 11-Design Standards; Chapter 12-Plans Specifications & Estimate; Chapter 15-Advertise and Award Project; Chapter 17-Project Completion; Chapter 20-Deficiencies and Sanctions; and *Local Assistance Program Guidelines*, Chapter 6-Highway Bridge Replacement and Rehabilitation and Chapter 11-Disaster Assistance

Effective Date: July 21, 2006

Approved:

Original Signed By

KEVIN POKRAJAC For:
TERRY L. ABBOTT, Chief
Division of Local Assistance

WHAT IS AN LPP?

LPPs are Local Programs Procedures. These documents are used for the rapid deployment of new procedures and policies on updates of Local Assistance manual, guidelines and programs. They are numbered according to calendar year and order in which released. This is the third LPP issued in 2006; hence, it is LPP 06-03.

PURPOSE

As part of the Department's effort to convert Metric System to US Customary (English) system as its standard system of units, this LPP is being issued to update *Local Assistance Procedures Manual* (LAPM) and *Local Assistance Program Guidelines* (LAPG).

All identified metric units in “Chapter 6-Environmental Procedures,” “Chapter 7-Field Review,” “Chapter 11-Design Standards,” “Chapter 12-Plans, Specifications & Estimate,” “Chapter 15-Advertise and Award Project.” “Chapter 17-Project Completion” of the LAPM; and “Chapter 6-Highway Bridge Replacement and Rehabilitation” and “Chapter 11-Disaster Assistance” of the LAPG were converted into the customary English units.

Technical changes were made to previously issued LPP 06-01 and LPP 06-02 and other minor administrative changes have also been made.

BACKGROUND

In 1993, the Caltrans adopted the International System of Units (SI; a.k.a. the Metric System) as its preferred system of weights and measures to comply with federal law (1988 Omnibus Trade and Competitiveness Act) and the Federal Highway Administration (FHWA) Metric Conversion Plan (1991). In 1995, the National Highway System Designation Act contained language that postponed the federal metric mandate required by FHWA Metric Conversion Plan. The law has subsequently been changed making the use of the Metric System optional. The Division of Local Assistance initiated reevaluation of Caltrans metric policy based on its surveys and other communications with our customers, transportation partners and industry. Based on this reevaluation, a decision document was approved on August 20, 2004, committing Department to readopt the U.S. Customary Units (English Units) as its preferred system of weights and measures.

Two units, Metric units and English units and their combination (Dual unit) are used in the current LAPM and LAPG. To comply with the decision document, this LPP identified all metric units from LAPM and LAPG and converted these units into English units. The updated LAPM and LAPG will be in English units only.

USER-FRIENDLY FEATURES

- These new procedures are incorporated in the electronic versions of the LAPM and LAPG that are available at the Division of Local Assistance (DLA) Home page on the Internet at: <http://www.dot.ca.gov/hq/LocalPrograms/>. Once there, click on “Publications” and click on *Local Assistance Procedures Manual* or *Local Assistance Program Guidelines*.
- You may also purchase Publications for Local Assistance CD, which acts as a one-stop shop for information and promotes flexible access to helpful information for local project delivery at: <http://www.dot.ca.gov/hq/LocalPrograms/lam/LApubsCD.htm>

- Additional user-friendly features were developed to make the manual easier to edit and to access on the Division of Local Assistance website. These added features will allow the users to navigate more quickly through the manual. Chapter formatting has been changed to enhance user- friendliness and reduce overall document size. Internal bookmarks allow for direct access to chapters and subheadings from the table of contents. Right justification has been eliminated, resulting in tighter text, more compact paragraphs and an overall reduced chapter size. **Sidebars are used to indicate where the revisions were made on the affected pages.**
- To receive an electronic notification when new information is posted on the DLA web site, please subscribe to the DLA list server at:
<http://www.dot.ca.gov/hq/LocalPrograms/sub.htm>
- Comments and suggestions for improvements to the manual or the processes and procedures are welcome. They may be submitted to:

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Division of Local Assistance, MS 1
Attention: **Cathy Felkins**
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SUMMARY OF CHANGES

LAPM ITEM	CHANGE
Chapter 2 Section 2.8 (Caltrans Responsibilities) page 2-8	Fourth bulleted item under <i>Project Implementation</i> , replaced “...Goal” with “...Anticipated DBE Participation Level.”
Section 2.9 (City, County and Other Local Public Agency Responsibilities) page 2-10	Fourth bulleted item under <i>Project Implementation</i> , replaced “...Goal” with “Availability Advisory percentage.”
Exhibit 2-B page 2-16	Third and fourth listed activities under <i>Civil Rights & Disadvantaged Business Enterprises (Chapter 9)</i> , replaced “Goal” with “Anticipated DBE Participation Level” and “Availability Advisory Percentage” respectively.

LPP 06-03

Conversion from Metric System to English Units (CMS2EU) and Technical Changes

Page 4

Chapter 6 Exhibit 6-A page 6-31	Under <i>Required Attachments for Preliminary Design Information</i> deleted the endnote...(1" =60.96 meters).....
Exhibit 6-F Page 6-55	Under <i>CEQA Compliance for State Projects</i> deleted "...Kilometer Post and"
Chapter 7 Exhibit 7-A page 7-11	Under item list no. 1. <i>Project Limits</i> deleted "...Kilometer or...."
Exhibit 7-B pages 7-13, 14, 14a	Unit for <i>Net Length</i> under item list no. 1 <i>Project Limits</i> deleted "...(<i>km</i>) or" Under item list no. 12 <i>List of Attachments</i> changed "...(<i>if within 3 kilometers</i>)" to ..." <i>(if within 10,000 feet)</i> ." <i>Distribution</i> listing was reformatted.
Exhibit 7-C page 7-15	Under list item no. 1 <i>Traffic Data</i> , changed "Year 19__ to Year 200__." Made changes to unit for Proposed Speed Zone from "... <i>mi or km/h</i> ..." to "... <i>mph</i>" Instruction (<i>Attachment to Field Review</i>) was moved to the bottom left of the page.
Exhibit 7-E page 7-19	Changed speeds " <i>mi/h</i>" to "... <i>mph</i>"
Chapter 9 Table of Contents	DBE was corrected under <i>Exhibit</i> listing.
Section 9.2 (Nondiscrimination: Title VI of the Civil Rights Act) page 9-2	Under <i>Implementing Title VI</i> , added reference to Chapter 13-Right of Way of the LAPM.
Section 9.4 (Equal Employment Opportunity Contractor Compliance) page 9-6	Under <i>Required Federal Contract Provisions</i> , added the word "... <i>shall</i> ..." in the first sentence.
Section 9.5 (Disadvantaged Enterprise) pages 9-8, 10	Under DBE Definitions, redefined <i>Disadvantaged Business Enterprises (DBE)</i> . Under the <i>Division of Local Assistance (DLA) and District Local Assistance Engineers (DLAE)</i> responsibilities added reference to Exhibit 9-B in the 7 th bullet.

<p>Section 9.6 Local Agency Responsibilities Under Caltrans DBE Program Plan) page 9-11</p>	<p>Changed the authorized signatory of the agreement from “...<i>Public Works Director/City Engineers or equivalent level...</i>” to “.... <i>representative who is authorized by the governing body to take such action.</i>”</p>
<p>Section 9.7 (Process for Establishing Annual Anticipated DBE Participation Level [AADPL]) page 9-14</p>	<p>Under the <i>Use of DBE Directories and Census Bureau Data</i>, replaced “<i>Standard Industrial Classification (SIC)</i>”with “<i>North American Industry Classification System (NAICS)</i>.”</p>
<p>Section 9.8 (DBE Availability Advisory for Individual Contracts) pages 9-17 thru 23</p>	<p>Added in the first paragraph “...<i>federal aid dollar...</i>” to the amount on the contract.</p> <p>The heading <i>Construction Contract Requirements</i> was changed to “<i>DBE Contract Requirements.</i>”</p> <p>Under <i>Local Agency Bidder DBE Information</i>, additional information on construction contracts was provided in the enclosed Exhibit 15-G being referenced.</p> <p>Under <i>Final Report</i>, provided clarification of final report requirements for construction and consultant contracts.</p> <p>Under <i>Performed by DBE</i> first bulleted item, deleted...<i>construction...(or other contract not covered by the following bullet)...</i></p> <p>Under <i>DBE Eligibility</i>, corrected the enclosed in parenthesis ... (<i>...contractors to contractor</i>)... Added <i>Caltrans Civil Rights, Business Enterprise Program</i> website for reference.</p>

Exhibit 9-A pages 9-27 thru 34	<p>Corrected the header by adding Exhibit 9-A to all pages of this particular exhibit.</p> <p>Under Figure IV added...<i>Local</i>.... in the first sentence. Item list no. 2 under <i>Prompt Payment of Withheld Funds to Subcontractor</i>; corrected the misspelled ...<i>30 ays to 30 days</i>....</p> <p>Corrected the listing of figures from” <i>Local Assistance Procedures Manual</i>” thru “<i>Confidentiality</i>.”</p> <p>Revised the signatory portion of figure XVI Confidentiality.</p>
Exhibit 9-B pages 9-35, 36	<p>Added the acronym”...<i>AADPL</i>” under Methodology.</p> <p>Changed the signatory portion of this exhibit.</p> <p>Moved the “<i>DBE Annual Submittal Form (05/01/06)</i>” to the bottom right side of the page.</p> <p>Under (<i>Attachment</i>) Corrected <i>California Business Professions Code</i> to <i>California Business and Professions Code</i>.</p>
Chapter 10 Section 10.1 (General) page 10-1	<p>Under <i>Federal Legislation</i> of the second paragraph, rephrased the statement regarding the required exhibits to be included in the Contract Provisions.</p>
Exhibit 10-D page 10-39	<p>Realigned the listed items.</p>
Exhibit 10-E page 10-41	<p>Fixed the numbering of listing.</p>
Exhibit 10-J pages 10-54 thru 57	<p>Corrected the misspelled word (<i>Local</i> ...) and the alphabetical listing.</p> <p>Added this instruction... (<i>Add the following...</i>) to <i>When Reporting DBE Participation, Participation of DBE trucking companies...</i>)</p>
Exhibit 10-O page 10-74	<p>Corrected the header on this page</p>
Chapter 11 Table of Contents	<p>Updated the TOC to reflect the changes made.</p>
Section 11.1 (Definitions) page 11-3	<p>Revised the definition of 3R work based on the definition from the <i>Design Information Bulletin 79-02</i> and added website for reference.</p>

<p>Section 11.2 (Statewide Design Standards for Local Assistance Projects) pages 11-3, 5, 12, 15, 18, 19, 22</p>	<p>Under <i>Geometric Standards for 3 R Projects</i>, made the following changes:</p> <ul style="list-style-type: none"> - added this information (<i>see DIB 79-02 for geometric standards for 3R projects on National Highway System</i>) ---- - Changed ...80 km/h.... to ...50 mph.... <p>Under <i>Vertical Alignment</i>, changed list item no. 3, from ...30 km/h... to ...20 mph....</p> <p>Under <i>Definition of Bridge</i>, changed ...6.1 meters.... to... 20 feet....</p> <p>Under <i>Bridges to Remain in Place</i> made the following changes:</p> <ul style="list-style-type: none"> - First bulleted item, changed (...0.03 meter....) to (... 1 inch....). - Third bulleted item, the following: (...0.03 meter....) to (...1 inch....) ...0.075 meters.... to ...3 inches....; ... 0.03 meter, but less than or equal to 0.075 meter..... to ...1 inch... 3 inches.. ...between 0.03 and 0.075 meter to ...1 and 3 inches. <p>Under definition of <i>Regulatory Floodway</i>, changed (not to exceed 0.3 meters.... to...1 foot...)....</p> <p>Under <i>Bridges of Hydraulic Design Criteria</i>, "... A minimum freeboard of 0.6 meters...." was changed to ...A minimum of freeboard of 2 feet...."</p> <p>Under <i>Roadside Drainage</i>, changed ...Chapter 800 to Chapters 800 to 890....</p> <p>Under <i>General Design Consideration for Bridges and Culverts</i>, made changes to the third paragraph on the required size, height and capacity for a facility to be considered as a dam.</p> <p>Under <i>Documentation</i>, made the following changes to the hydrologic date:</p> <ul style="list-style-type: none"> - For Drainage area ...(square kilometers) to (acre). - For Discharge ...(cubic meters/second) to (cubic feet/second). - For Water Surface at Elevation...(meters) to (feet).
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Section 11.5 (References) pages 11-28, 29	Updated the list of references.
Exhibit 11-A, pages 11-31 thru 35	Revised measurements from... <i>km/h, meter</i> to.. <i>mph and feet</i> respectively. Other changes to figures in the tables were made to be consistent with the preferred system of measurements.
Exhibit 11-B, page 11-37	The outdated <i>AASHTO Publication Order Form</i> was deleted. The order form is available at: https://bookstore.transportation.org/
Exhibit 11-C, pages 11-39, 42	<p>Changed in the second paragraph... <i>Caltrans Standard Class 400 or Class 625 piles using design loads of 400 and 625 kilonewtons</i>.... to... <i>Caltrans Standard Class 45 or Class 70 piles using design loads of 45 and 70 tons</i>....</p> <p>Under listed item no. 1V Seismic Date, item no. 4, changed ...(<i>Vs > 762m/s</i>). to.... (<i>Vs > 2500 ft/s</i>).</p>
Exhibit 11-D, page 11-43	Changed listed item no. 13. ... <i>one kilometer</i> to.. <i>3000 feet</i>
Exhibit 11-E, pages 11-47 thru 50	<p>The following changes were made to:</p> <ul style="list-style-type: none"> - Item no. 4 Field Survey, under 4.e. changed ...<i>150 and 300 meters</i> ...to <i>500 and 1000 feet</i>.... - Item no. 5. Site Map Construction, under a.1. changed...showing <i>0.25 or 0.50 meter</i>.... to... showing <i>one foot and two feet</i>.... - Item no. 6. Hydrologic Analysis, under c.1 changed ... limited to <i>0.3 meter</i>.... to...limited to <i>one foot</i>.... Added... <i>Subpart A</i>..... - Updated <i>Hydraulic References</i>.
Chapter 12 Table of Contents	Updated the Table of Contents to reflect the changes made.
Section 12.6 (History of Metrication) pages 12-7, 8	<p>Changed the Section title from <i>Metrication</i> to <i>History of Metrication</i>.</p> <p>Changed the heading title from <i>Implementation</i> to <i>Transition From Metric System to U.S. Customary (English) Units</i> and made revisions to its content.</p> <p>Changed the heading title from <i>Conversion To Metric Units</i> to <i>Conversion To U.S. Customary (English) Units</i> and rewritten the contents for clarity. Deleted the last sentence on “hard” conversion approach.</p>

Section 12.8 (Standards Specifications) page 12-14	Rewritten for clarity.
Section 12.9 (Required Federal Contract Provisions) page 12-23	Removed from Chapter 12 (requirements are already detailed in Chapter 9 of the LAPM).
Exhibit 12-D pages 12-48, 51 thru 56	Corrected estimated project cost from <\$25 million to <\$20 million. Under Item Letter E. <i>Disadvantaged Business Enterprise (DBE)/Subcontracting</i> rearranged the listed items. Other items were deleted.
Exhibit 12-E page 12-58	Corrected the header.
Exhibit 12-G page 12-111, 112	Deleted Exhibit 12-G Bidder's List of Subcontractors (DBE and Non-DBE)-Part 1 and Part 2.
Exhibit 15-E page 15-27	Deleted “/ <i>Kilometers</i> ” under “Project Length.”
Exhibit 15-M pages 15-43 thru 45	References to authorization dates for Construction, Preliminary Engineering, Right of Way and Utilities were changed from 199__ to 200__. Under Length (10) distances, the (<i>kilometers</i>) was changed to (miles) to comply with the Metric System to US Customary (English) system as its standard system of units.
Chapter 16 Section 16.2 (Definition of Terms) 16-3	Under <i>Definitions of Terms</i> deleted the term “ <i>DVBE.</i> ”
Chapter 17 Exhibit 17-F, page 17-22	Deleted .../Post <i>Kilometers</i> in the first paragraph.
Exhibit 17-K, page 17-34	Attachment #1 under columns of “ <i>Acquired Area</i> ” replaced the “ <i>m²/ha</i> ” with “ <i>SF or acres.</i> ” Under columns for “ <i>Total</i> ” and “ <i>R/W</i> ” replaced “ <i>m²</i> ” with “(<i>SF</i>).” Under listed item no. 2, replaced “... <i>meters or hectares,</i> ” to “... <i>feet or acres.</i> ”
Exhibit 17-O, pages 17-43, 44	Deleted the .../Post <i>Kilometers</i> in the fourth box of the exhibit. Deleted in the first paragraph.../Post <i>kilometers</i>

Chapter 20 Section 20-2 (Deficiencies) pages 20-3-5	<p>Eight bulleted item under “<i>Major Project Deficiency</i>,” added the enclosed explanation regarding contracts affected by the race-conscious DBE goals.</p> <p>Under “Unrecoverable Project Deficiency,” deleted the 12th bulleted item. In the 23rd bulleted item, added the enclosed explanation regarding contracts affected by the race-conscious DBE goals.</p>
LAPG Item	Change
Chapter 6 Exhibit 6-C, page 6-55	<p>Under listed item F3, <i>Inadequate Approach Rail System</i>, replaced ...18.3 meters with 60 feet....</p>
Chapter 11 Exhibit 11-B, page 11-23	<p>Added check boxes for “<i>Non-Urbanized Area</i>” and “<i>Urbanized Area</i>.”</p> <p>Under column “<i>Length</i>,” replaced ... kilometers ....with miles.....</p>
Boiler Plate	Change
Notice to Contractors and Special Provisions	<p>To view the Boiler Plate go to the DLA website at: http://www.dot.ca.gov/hq/LocalPrograms/sam_boil/NCSP.doc Under “<i>Public Safety</i>,” revised from dual units to customary English units.</p> <p>Added sidebars to indicate changes, which resulted from DBE race-neutral revisions. Deleted “Payee Data Record” Form under Section 3 as it does not apply to local agencies.</p>

AUTHORITIES AND REFERENCES

- Design Information Bulletin 79-02
- Decision Document: DDP 15 "Review of Departmental Policy on Metrication," April 26, 2004
- Minimum Standards For Geometric Design of Federal-Aid Resurfacing, Restoration, and Rehabilitation Projects on Local Streets and Roads
- Sample Boiler Plate Contract Documents at:
http://www.dot.ca.gov/hq/LocalPrograms/sam_boil/NCSP.doc
- Division of Design website: <http://www.dot.ca.gov/hq/oppd/>

For projects that are under FHWA “Full Oversight” per stewardship agreement, the FHWA is also responsible for the following activities:

- Authorization to Proceed
- Approval of additional access points on the Interstate
- Final Inspection

OVERSIGHT

Interstate - For Interstate projects on the NHS over \$1 million (except 3R projects), the FHWA has overall responsibility for ensuring compliance with all federal requirements.

For all other projects, FHWA responsibility for ensuring compliance with federal requirements is limited to non-Title 23 activities (environmental, right of way and civil rights).

Major Intelligent Transportation Systems (ITS) Projects (both NHS and non-NHS). An ITS project that implements part of a regional ITS initiative that is multi-jurisdictional, multi-modal, or otherwise affects regional integration of ITS systems.

The local agencies must submit a Systems Engineering Management Plan (SEMP) for all major ITS projects to FHWA for approval prior to authorization (E-76) for final design. See Chapter 12.6, *Intelligent Transportation Systems*, of the LAPG for details.

Minor ITS Projects - These ITS projects do not require System Engineering Review Form (SERF) or SEMP approval by Caltrans or FHWA. However, the SERF still must be filled out as part of the field review package. The procedures for minor ITS will follow the traditional 1- phased federal-aid Preliminary Engineering procedures.

Minor projects include:

- Legacy System Expansion – This includes expansion and/or upgrading of existing systems, which add no new capabilities or interfaces. For example, expansion of existing traffic signal systems with similar equipment and no new software. Another example would be purchase of additional buses using similar specifications as for existing vehicles.
- Commercial Off-The-Shelf (“COTS”) – Example: purchasing new electronic fare boxes that does not interface with other transit ITS packages and do not require any software development. COTS software is often customized for an installation, but only by selecting modules and/or setting parameters – not by writing software.
- Application Service Provider (“ASP”) – Example, contracting for off-site operations and maintenance of a pre-existing “next bus arrival” website, with no new interfaces and no software development. In essence, this involves leasing a pre-existing service rather than buying a product.

Projects that fit one or more of the above definitions are “minor” projects regardless of project cost. It should be recognized that, although there may be no “formal” Systems Engineering (SE) requirements or oversight for such minor projects (beyond filling out the SERF), good procurement practices should still ensure that the solicitation documents contain detailed system requirements and specifications, plus a thorough Acceptance Testing Plan. These items are elements of the SE process; hence, this is one example of scaling down the SE process to fit the needs of a small project.

While it is the FHWA's policy to rely primarily on their Program Review/Product Evaluation Program to carry out these responsibilities, other process review techniques, including project-specific activities may be used when appropriate.

2.8 CALTRANS RESPONSIBILITIES

Caltrans is responsible to the FHWA for administering the successful implementation of federal-aid programs and projects. Caltrans also administers the implementation of state funded programs and projects for the CTC and State Legislature.

These responsibilities are divided into three areas: Policy and Procedures, Program Management, and Project Implementation.

POLICY AND PROCEDURES

Caltrans establishes uniform policies and procedures to assist the local agencies in meeting the program requirements for their projects. Caltrans in collaboration with FHWA interprets federal and state laws, rules and regulations, and provides guidance in the form of manuals, guidebooks, handbooks, reference materials and service, and training to assist the agencies in planning, designing, constructing, and maintaining their transportation systems.

Caltrans' policy and procedure development are achieved in coordination and consultation with the FHWA, representatives of local agencies, MPOs, RTPAs, other affected agencies, and organizations.

PROGRAM MANAGEMENT

Each specific local assistance program provides funding which requires distribution, management, and oversight control to ensure that the funds are expended to meet the program goals and that allocations and budget authority are not exceeded. Caltrans distributes both state and federal fund allocations to the MPOs, RTPAs, cities, counties and others as specified by law.

Once the distributions are established, Caltrans provides program guidance for their expenditure. Some programs may require annual or periodic project application and selection to establish eligibility lists. Caltrans also monitors project implementation to ensure that the projects are implemented in a timely manner to achieve program goals. LAPG manual describes each current program.

PROJECT IMPLEMENTATION

Some major federal-aid project implementation steps delegated by the FHWA to Caltrans cannot be further delegated to the local agency level and remain Caltrans' responsibility. These include:

- Approval of Authorization to Proceed (E-76) for projects that are State-Authorized
- Preparation of agreements
- Decision to hold Field Review for NHS projects
- Approval of Local Agency DBE Program/Annual Anticipated DBE Participation Level
- Pre-award audit review of consultant contracts >\$250,000
- Approval of Utility Relocation Agreements involving federal reimbursement

- Approval of Specific Authorization for Utility Relocation involving federal reimbursement
- Independent Assurance Sampling and Testing (IAST) for NHS projects
- Approval of payments from the State Controller

The individual chapters covering these topics should be consulted for details concerning the responsibilities. Where the FHWA has not delegated final approval, Caltrans monitors local agency activities, reviews or prepares documents, and makes recommendations to FHWA. For example, Caltrans will review all environmental documents for completeness and sufficiency before submitting them to FHWA for approval.

Caltrans also provides assistance to the local agencies in interpreting the regulations, manuals and guidelines, as they apply to specific project conditions. The District Local Assistance Offices and Headquarters Division of Local Assistance personnel are available to aid the local agency through the required process and procedural steps.

Where expertise is not otherwise available, the local agency may also request assistance from Caltrans' technical specialists in solving special technical problems. Environmental issues, right of way concerns, hazardous wastes, labor compliance, equal employment opportunity, Title VI, and Disadvantage Business Enterprise are among these areas where assistance is available. The use of this expertise must be requested early and be well coordinated to assure that Caltrans' limited resources and personnel will be available when needed.

PROCESS REVIEWS

As outlined in Chapter 19 *Process Review*, of this manual, Caltrans will use the process review as the main method to determine if local agencies are in compliance with all federal-aid laws, regulations, and procedures. The process reviews will be used to evaluate all aspects (including Title 23 requirements) of the local agencies federal-aid program and to improve local assistance procedures.

MAINTENANCE REVIEWS

Annually, Caltrans reviews project maintenance for selected agencies using federal-aid funds so that every agency is covered during a four-year cycle. Chapter 18 *Maintenance*, in this manual describes these maintenance review procedures in detail.

2.9 CITY, COUNTY AND OTHER LOCAL PUBLIC AGENCY RESPONSIBILITIES

The cities, counties, joint power authorities, transit agencies and other public agencies have the primary responsibility for implementing the specific projects which carry out the programs described in this manual. Nonprofit entities may also qualify for this. For the purpose of this manual, these agencies/entities are commonly called local agencies.

PROJECT IMPLEMENTATION

The local agency is responsible for the conception, planning, programming, environmental investigation, design, right of way, construction and maintenance of the projects on their local transportation system. It must ensure that its staff members, consultants and contractors comply with the applicable state and federal laws, regulations and procedures in developing, and constructing its projects.

If a local agency has never implemented a federal-aid or state funded project, or does so infrequently; it should review the processes with the DLAE prior to beginning any implementation activity. It may wish to seek the administrative services of another agency, which is more familiar with the process and procedure details.

The local agency is delegated decision-making authority and responsibility for most design and construction-related activities of federal-aid projects. These include:

- Getting the project into the FSTIP
- Preparing the Request for Authorization for each project phase
- Decision to hold field review for projects off the NHS
- Determining/Approving project DBE Availability Advisory percentage
- Selecting consultant and approving consultant contracts
- Approving local design standards for projects off the NHS
- Approving design exceptions for projects “off” the NHS
- Preparing and Certifying PS&E (Caltrans must approve the local agencies’ PS&E procedures for most NHS projects and FHWA for Full Oversight NHS projects)
- Qualifying/selecting right of way consultants
- Certifying right of way
- Right of Way acquisitions and relocation
- Preparing and approving Quality Assurance Programs (non-NHS projects only)
- Advertising and awarding construction project
- Construction contract administration and inspection (Caltrans must approve the local agencies construction administration procedures for high cost, complex, corridor-type NHS projects)
- Construction contract acceptance (FHWA will make final inspection of projects that are Full Oversight)
- Coordinating railroad agreements
- Contract compliance

The individual chapters covering these topics should be consulted for details concerning the responsibilities.

EXHIBIT 2-B FEDERAL-AID LOCAL ASSISTANCE RESPONSIBILITIES			
ACTIVITY	Projects on the National Highway System (NHS) <small>(Excluding Interstate¹)</small>	Projects not on the NHS	COMMENTS
	State-Authorized	State-Authorized	
Project Authorizations (Chapter 3)			
Prepare "Request for Authorization"	Local Agency	Local Agency	
Approve "Authorization to Proceed" (E-76) for each project phase	State	State	Authorization must precede any reimbursable activities.
Obligate Funds	FHWA	FHWA	
Agreements (Chapter 4)			
Prepare Agreements	State		
Execute Master Agreement/Program Supplements	Local Agency/State		
Invoices (Chapter 5)			
Prepare Invoices	Local Agency		
Approve Payment	State		
Environmental Procedures (Chapter 6)			
Conduct preliminary investigations and complete Preliminary Environmental Studies form (PES)	Local Agency		
Review and approve Programmatic CE (if applicable)	State		
Conduct and document appropriate technical studies and prepare NEPA document (CE, EA, EIS)	Local Agency		Complete PES and attend early coordination meeting before starting technical studies.
Review environmental documentation and NEPA document Approve Payment	State		
Approve/Process NEPA document and other required Federal environmental documentation	FHWA		

¹ Projects on or impacting the Interstate regardless of funding will require a project-by-project review by FHWA. For these and all projects on state highways, the local agency should coordinate closely with the DLAE and District Project Development Manager to insure that all required authorizations/obligations and other reviews and approvals are obtained in a timely manner and in accordance with state highway development procedures. Early consultation by Caltrans with FHWA will aid in coordination for necessary involvement and needed approvals, if any.

Federal-Aid Local Assistance Responsibilities

FEDERAL-AID LOCAL ASSISTANCE RESPONSIBILITIES			
ACTIVITY	Projects on the National Highway System (NHS) (Excluding Interstate ¹)	Projects not on the NHS	COMMENTS
	State-Authorized	State-Authorized	
Field Review (Chapter 7)			
Decision to hold Field Review	State (See Comments)	Local Agency	State required Field Reviews limited to high cost, complex, corridor-type NHS projects.
Prepare Field Review Form	Local Agency	Local Agency	
Attend/Sign Field Review Form	Local Agency, State and FHWA	Local Agency	State will (and FHWA may) attend all required NHS Field Reviews, and others when appropriate.
Public Hearings (Chapter 8)			
Decision on Type of Public Hearing	Local Agency		Formal or Open Forum
Approval to circulate EA/EIS	FHWA		Public hearings are held after the EA or Draft EIS has been approved.
Civil Rights & Disadvantaged Business Enterprises (Chapter 9)			
Provide Civil Rights Assurances	Local Agency (In Master Agreement and Program Supplements)		
Complaint Investigations/Contractor Compliance	Local Agency		May be assisted by State
Local Agency Compliance Reviews	State/FHWA		
Approve Local Agency DBE Annual Anticipated DBE Participation Level	State		
Determine/Approve Project DBE Availability Advisory Percentage	Local Agency		
Consultant Selection (Chapter 10)			
Select Consultant and approve contract	Local Agency		
Pre-award audit	State		Limited to Contracts >\$250,000

¹ Projects on or impacting the Interstate regardless of funding will require a project-by-project review by FHWA. For these and all projects on state highways, the local agency should coordinate closely with the DLAE and District Project Development Manager to ensure that all required authorizations/obligations and other reviews and approvals are obtained in a timely manner and in accordance with state highway development procedures. Early consultation by Caltrans with FHWA will aid in coordination for necessary involvement and needed approvals, if any.

EXHIBIT 6-A PRELIMINARY ENVIRONMENTAL STUDIES (PES) FORM

PRELIMINARY ENVIRONMENTAL STUDIES (PES) FORM																																																																																	
TO: (DLAE) (District) (Address)	FEDERAL PROJECT NUMBER: (Federal Prog. Prefix-Proj. No., Agreement No.)																																																																																
FROM: (Local Agency) (Address) (Project Manager's Name & Telephone)	FINAL DESIGN: (Expected Start Date)																																																																																
Is this project "ON" the State Highway System? <input type="checkbox"/> Yes <input type="checkbox"/> No IF YES, STOP HERE and contact the District DLAE regarding the completion of other environmental documentation	FSTIP: (Plan Date) (Page #) FY for which each Project Component is Programmed for delivery in the FSTIP: PE FY ___/___ ROW FY ___/___ CONST FY ___/___																																																																																
PROJECT DESCRIPTION AS SHOWN IN FSTIP:																																																																																	
DETAILED PROJECT DESCRIPTION: (Include scope of work, project limits, purpose and need, logical termini and independent utility)																																																																																	
(Continue description on "Notes" sheet, last page of this Exhibit, if necessary)																																																																																	
PRELIMINARY DESIGN INFORMATION Does the project involve any of the following? Please check the appropriate boxes and delineate on an attached map, plan, or layout including any additional pertinent information																																																																																	
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Maps may be ordered online at http://mapping.usgs.gov/
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Exhibit 6-A, continued

EXAMINE FOR POTENTIAL EFFECTS ON THE ENVIRONMENT, DIRECT OR INDIRECT, AND ANSWER THE FOLLOWING QUESTIONS (Utilize the notes page at the end of the PES Form to document conclusions)

A. The Physical Environment	<u>Yes</u>	<u>To Be Determined</u>	<u>No</u>
1. Is the project a Type I project as defined in 23 CFR 772.5(h); "construction on new location or the physical alteration of an existing highway, which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes"?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are there water resources (rivers, streams, bays, inlets, lakes, drainage sloughs) within or immediately adjacent to the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is project within a designated sole-source aquifer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is project within the State Coastal Zone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the construction area located within a regulatory floodway or within the base floodplain (100-year) elevation of a watercourse or lake?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is the project within or immediately adjacent to a Wild and Scenic River System?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is there a potential for a federally listed, threatened, or endangered species or their critical or sensitive habitat within the construction area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is there a potential for wetlands within the construction area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is there a potential for agricultural wetlands within the construction area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Air Quality			
a. Transportation Conformity (Air) Does Transportation Conformity apply?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Is the project exempt from the requirement to determine conformity (40 CFR 93.126)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Air Quality: Does the project have the potential for adverse emission impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Is there a potential for prime or unique farmlands within or immediately adjacent to the construction area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Is there a potential for hazardous materials (including underground tanks) or hazardous material remains within or immediately adjacent to the construction area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Are there any publicly owned public parks, recreation areas, or wildlife or waterfowl refuges [Section 4(f)] within construction area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Are there any aesthetically visual resources within the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EXHIBIT 6-F INSTRUCTIONS FOR COMPLETING THE CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION/PROGRAMMATIC CATEGORICAL EXCLUSION (CE/CE/PCE) DETERMINATION FORM

This form shall be used to document CEQA Categorical Exemptions (CE) and NEPA Categorical Exclusions (CEs), including Programmatic CE (PCEs) for projects on the State Highway System as well as to document CE and PCEs for federal-aid projects on local streets and roads.

CEQA COMPLIANCE

Local agencies are not required to complete the CEQA COMPLIANCE or CALTRANS CEQA DETERMINATION portions of this form.

For State Projects:

Include the project's District/County/Route, Post Mile information, and the Expense Authorization. The Project Description should be brief but include the information noted in the parentheses. An additional sheet may be attached to the form if necessary.

If the project is exempt from CEQA by statute (See Public Resources Code Section 21080), check the "Exempt by Statute" box in the CALTRANS CEQA DETERMINATION box as documentation.

The conditions listed under CEQA COMPLIANCE are declarations of fact. To be categorically exempt, the project must meet all of the listed conditions. Indicate the CE Class number from the CEQA Guidelines or the general rule exemption [Title 14 CCR 15061(b)(3)]. The Environmental Office Chief's and Project Manager's signatures in the CEQA Determination box attest that the project meets all of the conditions and is properly classified as a Categorical Exemption.

CEQA does not allow mitigation of significant impacts under a Categorical Exemption. If the project requires mitigation to reduce a significant environmental impact below the level of significance, a Mitigated Negative Declaration must be prepared for CEQA compliance. Project features or design conditions, however, may be incorporated into the project to ensure that the requirements of a Categorical Exemption are satisfied. Any such project features or design conditions must be included in the description of the project.

If there is no federal involvement in the project, write "not applicable" in the CALTRANS NEPA DETERMINATION box.

NEPA COMPLIANCE

For All Projects with Federal Involvement:

Compliance with NEPA is required whenever there is federal involvement in the project. Federal involvement may include funding, any type of approvals or permits, changes in access control, or connection to the Interstate system. The following represents the distinction between CE and PCEs). Documentation to support a CE or PCE determination shall be retained in the project file for a minimum of three years and shall be available for periodic FHWA process reviews.

Categorical Exclusions (CE)

State and local agency projects must meet all five declarations of fact listed under NEPA COMPLIANCE on the CE form.

- The Environmental Office Chief (or designee) checks the CE box in the CALTRANS NEPA DETERMINATION box.
- The Environmental Office Chief (or designee) and Project Manager (the District Local Assistance Engineer

**Instructions for Completing the Categorical Exemption/Categorical Exclusion/
Programmatic Categorical Exclusion (CE/CE/PCE) Determination Form**

for local projects off the State Highway System) sign and date the CALTRANS NEPA DETERMINATION box to confirm that the project meets the conditions of a CE.

- The FHWA Project Development Engineer signs and dates in the FHWA DETERMINATION space, validating that the action will not individually or cumulatively have a significant effect and is excluded from the requirement to prepare an EA or EIS.

Programmatic Categorical Exclusions (PCE)

State and local agency projects must meet all five conditions listed under NEPA COMPLIANCE and all conditions included in the November 18, 2003, PCE Agreement (provided on page 5 of these instructions).

For Local Agency Projects (off the State Highway System)

- For local agency projects “OFF” the State Highway System, the DLAE and the District/Region Environmental Office Chief make a determination (consistent with the PCE Agreement), that the PES Form is complete and sufficient and that the project has met all CE criteria and all the conditions of the November 18, 2003, Programmatic CE agreement. The DLAE and the District/Region Environmental Office Chief both sign the PES Form.
- For projects that meet all the criteria as a CE under 23 CFR 771.117(c), the DLAE checks the PCE box in the CALTRANS NEPA DETERMINATION box, and signs and dates the CALTRANS NEPA DETERMINATION box.
- For projects that meet all the criteria as a CE under 23 CFR 771.117(d), the Environmental Office Chief (or designee) reviews the documentation and signs and dates the CALTRANS NEPA DETERMINATION box.
- The FHWA Project Development Engineer does not sign the PCE.
- Upon final environmental approval, the DLAE is to immediately provide notification and a copy of the approved environmental documents to the local agency so the local agency can commence final design.

Projects on the State Highway System:

- The Environmental Office Chief makes the determination that the project has met all CE criteria and all the conditions of the November 18, 2003, Programmatic CE agreement and checks the PCE box in the CALTRANS NEPA DETERMINATION box.
- The Environmental Office Chief and Caltrans Project Manager sign and date the CALTRANS NEPA DETERMINATION box.
- The FHWA Project Development Engineer does not sign the PCE.
- Local agency federal-aid transportation projects “on” the State Highway System are prepared and processed in the same manner as capital projects. Upon final environmental approval, the Caltrans Project Manager is to immediately provide notification and a copy of the approved environmental documents to the local agency so the local agency can commence final design. A copy of the approved environmental documents is to be concurrently provided to the DLAE for information purposes.

Additional Information

Documentation of compliance with other laws or requirements may be necessary to support a CE or PCE. Certain items shall be attached to the CE/CE/PCE Determination Form and others may simply be summarized as follows:

INSTRUCTIONS FOR FIELD REVIEW FORM

The Applicant shall complete the Field Review Form in accordance with Chapter 7, “Field Review” of this manual. The District Local Assistance Engineer (DLAE) should be consulted for clarification. If Caltrans or other interested parties are to be involved in meetings, to assist in completion, the applicant should fill out the form as completely, as possible prior to any meeting(s). The form must be completely filled out prior to submission of the PES Form.

Item 1. PROJECT LIMITS

Briefly describe the physical limits or nature of project. Attach a list, as needed, for multiple or various locations. Indicate length of project to nearest one-tenth of mile. Use 0.1, if a spot location. Include additional sheets, if needed, to clearly define the project location or scope of work.

Item 2. WORK DESCRIPTION

Briefly describe major components of the proposed work, e.g., signals, bridge replacement, ridesharing, pedestrian features, etc.

Item 3. PROGRAMMING DATA

All federal-aid funded projects (except Emergency Relief [ER], unless additional capacity is being added) are required to be on the most current FHWA/FTA approved FSTIP. If project is within an MPO area, indicate the MPO or RTPA’s FTIP¹ that includes project and the fiscal years of FTIP. Also list the page of FTIP or Amendment Project Planning Number (PPNO), if available and FHWA/FTA approval date. For non-MPO areas include same information from FSTIP.

Indicate the federal funds and phases listed in the FTIP/FSTIP. For CMAQ projects name the Air Basin.

Item 4. FUNCTIONAL CLASSIFICATION

For a roadway project, check appropriate functional classification category. See the discussions of specific fund programs in the *Local Assistance Program Guidelines* (LAPG) for system eligibility. Indicate N/A for projects not related to a specific road or street system.

Item 5. STEWARDSHIP CATEGORY

For roadway projects, indicate if project is on the National Highway System (NHS), and whether project is State-Authorized or a FHWA Full Oversight project on the Interstate per stewardship agreement. With some exceptions, projects on the State Highway System are subject to Caltrans Oversight, and on the Interstate are subject to FHWA Full Oversight; otherwise, the project is subject to DLAE oversight. Refer to Figure 2-1, “Required FHWA Oversight Federal-Funded Projects” in Chapter 2 of this manual.

Item 6. CALTRANS ENCROACHMENT PERMIT REQUIRED

An encroachment permit is required for projects encroaching within the state highway right of way. The applicant should contact the District Permit Officer early in the process.

¹ The FTIP must be incorporated into an FHWA approved FSTIP.

Item 7. COST BREAKDOWN ESTIMATE

List estimated breakdown of all project phases and indicate phases for which federal participation will be requested. Include all known costs, but include each cost in only one group. (For structures related projects financed with Highway Bridge Replacement and Rehabilitation [HBRR] funds; the current HBRR operating procedures limit preliminary engineering costs, including environmental costs to 25% of the total construction cost. Any exceptions must be approved in writing by the HBRR program manager.)

Item 8. PROPOSED FUNDING

Fill in total cost of federal-funded project, type, and amount of federal-aid funds, i.e. STP, CMAQ, etc., and the matching-fund breakdown.

If state funds are involved, indicate source such as STIP.

Item 9. PROJECT ADMINISTRATION

Indicate name of agency that will be responsible for administering each project phase. Also indicate the use of a consultant for any phase. Indicate if Caltrans' review of PS&E will be requested. If Yes, begin discussions with DLAE on availability of staff. All PS&E documents to be reviewed must be in Caltrans format.

Item 10. SCHEDULES

The local agency should indicate their proposed advertisement date. This will give the involved parties a date for scheduling. However, the discussion of requirements and time frames may require adjustment of the advertisement date. Critical dates in the schedule should be noted in the remarks.

ITEM 11. PROJECT MANAGER'S CONCURRENCE

The local agency project manager shall sign and date the field review form to signify agreement on the parameters proposed for development of the project. The DLAE and FHWA representative shall sign the document when attending field reviews. This document is then a guidance reference for further development of the project to assure that it adheres to the programmed concept, or that any changes is approved by the manager (and/or DLAE and FHWA, if appropriate).

Item 12. LIST OF ATTACHMENTS

The first two items are appropriate for all reviews. Others to be added depend on the type of project. For required field reviews, all applicable attachments must be submitted. For optional field reviews, see the "[]" notations for attachments required for specific types of projects. All existing federal, state, or local Americans with Disabilities Act (ADA) deficiencies, if not identified on other Attachments, should be listed here

Note: The Federal Damage Assessment Form (DAF) shall be used as the field review document for Emergency Relief projects.

FIELD REVIEW FORM

Local Agency _____ Field Review Date _____
 Project Number _____ Locator _____
 (Dst/Co/Rte/PM/Agncy)
 Project Name _____ Bridge No.(s) _____

1. PROJECT LIMITS (see attached list for various locations) _____

 _____ Net Length _____ (mile)

2. WORK DESCRIPTION _____

ITS project or element: Yes ___ No ___ If yes, is it a Major ITS ___ or a Minor ITS ___
 3. PROGRAMMING DATA FTIP (MPO/RTPA) _____ FY _____ Page _____
 Amendment No. _____ FTIP PPNO _____ FHWA/FTA Approval Date _____
 Federal Funds \$ _____ Phases PE _____ R/W _____ Const _____
 Air Basin: _____ (CMAQ only)

4. FUNCTIONAL CLASSIFICATION:
 URBAN ___ RURAL ___
 Principal Arterial: ___ Principal Arterial: ___
 Minor Arterial: ___ Minor Arterial: ___
 Collector: ___ Major Collector: ___
 Local: ___ Minor Collector: ___
 Rural Local: ___

5. STEWARDSHIP CATEGORY
 FHWA Full Oversight (Stewardship): Yes _ No_
 State-Authorized (Stewardship): Yes _ No_ (a) DLAE oversight: Yes ___ No ___
 (b) District Construction oversight: Yes ___ No ___
 ITS project or element requiring FHWA oversight per stewardship: Yes ___ No ___

6. CALTRANS ENCROACHMENT PERMIT Is it required? Yes ___ No ___

7. COST ESTIMATE BREAKDOWN (Including Structures)	\$1,000's	Fed. Participation
PE Environmental Process	_____	Yes ___ No ___
Design	_____	Yes ___ No ___
System Manager/Integrator	_____	Yes ___ No ___
CONST Const. Contract	_____	Yes ___ No ___
Const. Engineer.	_____	Yes ___ No ___
R/W Preliminary R/W Work	_____	Yes ___ No ___
Acquisition:		Yes ___ No ___
(No. of Parcels _____)	_____	Yes ___ No ___
(Easements _____)	_____	Yes ___ No ___
(Right of Entry _____)	_____	Yes ___ No ___
RAP (No. Families _____)	_____	Yes ___ No ___
RAP (No. Bus. _____)	_____	Yes ___ No ___
Utilities (Exclude if included in contract items)	_____	Yes ___ No ___

TOTAL COST \$ _____

8. PROPOSED FUNDING

Grand Total		Total Cost		Cost Share	
		\$ _____			
Federal Program	#1 _____	\$ _____	Fed.	\$ _____	Reimb. Ratio _____
(Name/App. Code)	#2 _____	\$ _____	Fed.	\$ _____	Reimb. Ratio _____
Matching Funds Breakdown	Local:			\$ _____	_____ %
	State:			\$ _____	_____ %
	Other:			\$ _____	_____ %
State Highway Funds?	Yes _____	Source	_____	No	_____
State CMAQ/RSTP Match Eligible		Yes	_____	No	_____
Is the Project Underfunded? (Fed \$ < Allowed Reimb.)				Partial	_____
				Yes	_____
				No	_____

9. PROJECT ADMINISTRATION

		Agency	Consultant	State
PE	Environ Process	_____	_____	_____
	Design	_____	_____	_____
	System Man./Integ.	_____	_____	_____
R/W	All Work	_____	_____	_____
CONST ENGR	Contract	_____	_____	_____
CONSTRUCTION	Contract	_____	_____	_____
MAINTENANCE		_____	_____	_____

Will Caltrans be requested to review PS&E? Yes _____ No _____

10. SCHEDULES: PROPOSED ADVERTISEMENT DATE _____
 Other critical dates: _____

11. PROJECT MANAGER'S CONCURRENCE

Local Entity _____ Date: _____
 Signature & Title _____ Phone No. _____

Is field review required? Yes _____ No _____

Caltrans (District): _____ Date: _____
 Signature & Title: _____

12. LIST OF ATTACHMENTS (Include all appropriate attachments if field review is required. See the "[]" notation for minimum required attachments for non-NHS projects)

- _____ Field Review Attendance Roster or Contacts Roster
- _____ Vicinity Map (Required for Construction Type Projects)

IF APPLICABLE (Complete as required depending on type of work involved)

- | | |
|--|--|
| _____ Roadway Data Sheets [Req'd for Roadway projects] | _____ Signal Warrants |
| _____ Typical Roadway Geometric Section(s) [Req'd for Roadway projects] | _____ Collision Diagram |
| _____ Major Structure Data Sheet [Req'd for HBRR] | _____ Protection of Wetlands Statement |
| _____ Railroad Grade Crossing Data Sheet | _____ CMAQ/RSTP State STIP Match |
| _____ Airport Data Sheet (if within 10,000 feet) | _____ Systems Engineering Review Form |
| _____ Sketch of Each Proposed Alternate Improvement | (SERF) (Req'd for ITS projects) |
| _____ TE Application Document | |
| _____ Existing federal, state, and local ADA deficiencies not included on other Attachments. | |

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RAILROAD GRADE CROSSING DATA
(Separate Sheet for each crossing)

Project Number /Name: _____

Name of Railroad: _____

Location (Road, City, or County, and Xing No.): _____

Vehicular Traffic: Daily Traffic using crossing _____ No. of Lanes _____ Speeds (mph) _____

No. of Exist. Tracks: Main Line _____ Branch Line _____ Passing _____ Other _____

No. of Future Tracks: _____ No. of Daily Trains; Passenger _____ Freight _____ Total _____

Maximum Speeds: Passenger _____ Freight _____

Protection in Place: _____

Protection Proposed: _____

Skew of Xing _____ Min. Sight Dist. (along track when driver is 100 feet from Xing) _____

Trains at Night? (Y/N) _____ Seasonal Train Traffic? (Y/N) _____

Ten-Year Accident Record Accidents _____ Killed _____ Injured _____

Has local agency requested or received PUC decision concerning:

Crossing Protection required: _____

Protective devices proposed by local agency: _____

Proposed financing of crossing protection: _____

Does local agency propose to finance automatic crossing protection as a "G" (safety) project using 100% Federal funds? _____

NOTE: Attach sketch showing relationship of old and new crossing.

Remarks: _____

Distribution: Original with attachments-Local Agency
Copy with attachments (2 copies if HBRR) - DLAE

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CHAPTER 9 CIVIL RIGHTS AND DISADVANTAGED BUSINESS ENTERPRISES

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CHAPTER 9 CIVIL RIGHTS AND DISADVANTAGED BUSINESS ENTERPRISES

9.1 INTRODUCTION

This chapter provides guidance for the local agency in complying with the Civil Rights requirements (Title VI, Accessibility, Equal Employment Opportunity [EEO] Contractor Compliance) and Disadvantaged Business Enterprise (DBE) requirements for federal-aid transportation projects. Each of these areas is addressed in more detail in the following sections. The information contained in this section has been extracted from other documents and should not be considered as a replacement or substitute for the laws, rules and regulations, agreements, circulars, and other guidance available.

The Division of Local Assistance (DLA) website provides additional information and resources that complement guidance in this chapter at <http://www.dot.ca.gov/hq/LocalPrograms/>

9.2 NONDISCRIMINATION: TITLE VI OF THE CIVIL RIGHTS ACT

Nondiscrimination provisions apply to all programs and activities of federal-aid recipients, sub recipients, and contractors, regardless of tier (49 Code of Federal Regulations, Part 21). The obligation not to discriminate is based on the objective of Congress not to have funds, which were collected in a nondiscriminatory manner, used in ways that subsidize, promote, or perpetuate discrimination based on race, color, national origin, sex, age, or physical or mental disability, sexual orientation, or retaliation.

The reach of Title VI in the areas of Environmental Justice and the needs of Limited English Proficient populations have expanded jurisdiction, clients, and complexity.

Environmental Justice (EJ), Executive Order 12898, amplifies Title VI by identifying and addressing, as appropriate, disproportionately high and adverse human health; or environmental effects of federal-aid projects on minority populations and low-income populations. The order is also intended to promote nondiscrimination in federal programs substantially affecting human health and the environment; and to provide minority communities and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment.

Limited English Proficiency (LEP), Executive Order 13166, clarifies national origin discrimination as it affects persons with limited proficiency in English. The order requires federal-aid recipients to take reasonable steps to ensure that LEP persons have meaningful access to programs, services, and information free of charge.

Language barriers prohibit LEP persons from:

- Obtaining services and information relating to transportation services, programs, and projects.
- Taking advantage of the transit system, which could affect their jobs and social opportunities.
- Understanding the benefits to which they are entitled when their home or business property is acquired through eminent domain.

IMPLEMENTING TITLE VI

The DLA is responsible for developing policies and procedures in order for local agencies to implement Title VI. DLA has included checks and balances throughout its processes including legal review of major agreements and documents.

Title VI Assurances: Local agencies sign this assurance as part of their Master Agreement with Caltrans (see Exhibit 4-C “Master Agreement-Example,” Chapter 4 of the *Local Assistance Procedures Manual* [LAPM]). The Program Supplement Agreement for each project includes the local agency’s reaffirmation of the Nondiscrimination Assurances contained in the Master Agreement.

Environmental: Presidential Executive Order 12898 (EJ) is considered during the preliminary environmental investigation process and completion of the Preliminary Environmental Study (PES) Form. (See Exhibits 6-A “Preliminary Environmental Studies (PES) Form,” and B “Instructions for Completing the Preliminary Environmental Study (PES) Form,” Chapter 6 of the LAPM or refer to this website:

http://www.dot.ca.gov/hq/LocalPrograms/lam/prog_p/p06envrp.pdf)

If a project requires that a Relocation Impact Study and/or Community Impact Assessment be conducted, the local agency follows the guidance set forth in the Standard Environmental Reference (SER). The SER is an on-line electronic reference that sets forth document content and format, as required by law or regulation; and recommended format, if not specified by law or regulation. Chapter 25 of the SER addresses Environmental Justice (EJ) and LEP requirements:

<http://i80.dot.ca.gov/ser/vol1/sec3/community/ch25ej/chap25ej.htm>

Public Hearings and Public Involvement Meetings: The attendance and concerns of LEP persons, persons with disabilities, minority populations and low income populations at public involvement meetings and hearings must be carefully documented to comply with Title VI of the Civil Rights Act of 1964, including statistics of participants by race and gender. Public hearing announcements must be made available in languages understood by the affected population. Public hearings should be held at locations that are both geographically and structurally accessible. Interpreters should be made available for LEP persons and for the hearing impaired. (See Chapter 8, “Public Hearings,” of the LAPM.)

Right of Way: On federal-aid projects, all Right of Way (R/W) activities are conducted in accordance with the *Caltrans Right of Way Manual*, unless the local agency has adopted its own procedures, which Caltrans has approved. The *Caltrans Right of Way Manual* requires that the public be provided with Title VI information and Title VI complaint procedures within each of the following R/W functions: Appraisals, Acquisition, Relocation Assistance Program (RAP) and Property Management. (See Chapter 13, “Right of Way,” of the LAPM.)

IMPLEMENTATION

Assurances: Administering agencies sign this assurance, as part of their Master Agreement with Caltrans (see Exhibit 4-C “Master Agreement-Example,” Chapter 4 of the LAPM). The Program Supplement Agreement for each project includes the administering agency’s reaffirmation of the Nondiscrimination Assurances contained in the “Local Agency-State Agreement for Federal-Aid Projects.”

Design: State and local governments, regardless of whether they receive federal financial assistance, are required to comply with the Federal ADA Accessibility Guidelines (ADAAG), Title 24, or local code, whichever provides the greatest access. Private-funded improvements are required to comply with the ADAAG and with Title 24; whichever code offers the greatest access or protections to individuals with disabilities.

DLA’s role is to help ensure that all new and existing altered pedestrian facilities such as, but not limited to, highway rest area facilities, sidewalks, crosswalks, pedestrian overpasses, underpasses and ramps, shall be made accessible to persons with disabilities in accordance with federal and state accessibility standards on all local agency federal-aid projects. (See Chapter 11, “Design Standards,” of the LAPM.)

MONITORING

Field Reviews: During the field review, agreement is reached among all interested parties (local agency, DLAE, FHWA) on the general design features and exceptions for the project. ADA deficiencies are discussed and agreed upon at this time. (See Chapter 7, “Field Reviews,” of the LAPM.)

Plans Specifications & Estimate (PS&E) Checklist: Local agencies certify that their project’s PS&E complies with all applicable federal and state regulations and codes. A PS&E checklist form helps to ensure local agency compliance. ADA compliance is included in this checklist (See Chapter 12, “Plans, Specification & Estimate,” of the LAPM).

Final Inspection: The local agency conducts the final inspection and certifies on the Final Inspection Form that the project was constructed in accordance with the scope and description of the project authorization document and that all federal and state requirements have been met. The DLAE reviews the job site and verifies completion on the Final Inspection Form. (See Chapter 17, “Project Completion,” of the LAPM.)

COMPLAINTS

Follow the same process and procedures for Title VI complaints detailed above. (Please see 9.2 Nondiscrimination: Title VI of the Civil Rights Act.)

9.4 EQUAL EMPLOYMENT OPPORTUNITY CONTRACTOR COMPLIANCE

Federal-aid Highway Act of 1968 (23 USC 140(a)) and implementing regulations at 23 CFR 230, require that the local agency that receives federal financial assistance shall assure that employment in connection with federal highway construction projects is provided without regard to race, color, creed, national origin or sex.

The local agency is also required to include notification of a federal-aid contractor's EEO responsibilities in the advertised contract specifications. In addition, the local agency shall maintain and make available apprenticeship, skill improvement or other upgrading programs, which provide equal opportunity for training and employment without regard to race, color, creed, national origin or sex.

23 CFR 635.117—Sets forth FHWA policies and procedures relating to federal-aid highway projects from authorization to final acceptance by FHWA. It includes a statement encouraging local agencies to use DBEs. Other sections of the CFR include nondiscriminatory bidding procedures, subcontractor and contractor responsibilities, labor, employment and Indian preference provisions, payroll and statements of wages paid, and contract termination procedures.

Form FHWA 1273 "Required Contract Provisions for Federal-Aid Construction Contracts" is a standard form containing required contract provisions and proposal notices, and is required to be physically inserted in each federal-aid highway construction contract and subcontracts (at any tier) of \$10,000 or more. When a contractor signs a federal-aid contract of \$10,000 or more, the nondiscrimination provisions in the Form FHWA 1273 constitutes the contractor's Equal Employment Opportunity/Affirmative Action Program standards for that contract.

IMPLEMENTATION

Assurances: Local agencies sign assurances as part of their Master Agreement with Caltrans. Appendix A to Exhibit B of the Master Agreement includes nondiscrimination in the selection and retention of subapplicants and the prohibition of discrimination in employment practices. (See Exhibit 4-C "Master Agreement-Example," Chapter 4, of the LAPM.)

Required Federal Contract Provisions: Local agencies shall physically insert the Form FHWA 1273 in the contract document. Local agencies are aware that contractor noncompliance with the EEO specifications in the Form FHWA 1273 may be considered a breach of contract for which payment may be withheld, or the contract terminated. (See Chapter 12 "Plans, Specifications & Estimate," of the LAPM.)

Construction: Federal-aid prime contractors and subcontractors employment practices in the areas of recruitment and selection decisions (hiring, promotions, terminations, training, etc.) are to be conducted without regard to race, color, creed, national origin, age, disability, or sex.

The local agency's resident engineer should be cognizant of the contractual requirement and monitor the contractor for compliance. Specifically, the resident engineer's area of concern should be whether discriminatory practices take place, particularly in the hiring, firing, training, promotion, and utilization of employees. (Section 16,12 "Equal Employment Opportunity," Chapter 16 of the LAPM.)

MONITORING

The three checklists listed above in the Section 9.2 Nondiscrimination: Title VI of the Civil Rights Act, serve to assist local agencies in implementing EEO and as a monitoring tool for DLAEs to ensure that EEO requirements are met. In addition, DLA performs periodic EEO process reviews that include a review of DLAE, local agency, and contractor.

The Caltrans Civil Rights Office includes local agency contracts in their compliance reviews of federal-aid contractors.

REPORTING

The federal-aid contractor on federal-aid construction contracts that are active during the last full pay period in July completes “Form FHWA PR-1391, Federal-Aid Highway Construction Contractors Annual EEO Report,” (see Chapter 16, “Administer Construction Contracts,” of the LAPM).

9.5 DISADVANTAGED BUSINESS ENTERPRISE

Caltrans is required under 49 CFR, Part 26 to administer a DBE Program. The DBE Program is intended to remedy past and current discrimination against DBEs, ensure a level playing field and foster equal opportunity in Caltrans federal-aid contracts.

In this manual, federal-aid contracts refer to U.S.-DOT assisted-contracts which include funding from the FHWA, Federal Transit Administration (FTA) and the Federal Aviation Administration (FAA).

BACKGROUND

For several years, Caltrans through local agencies implemented a DBE Program in accordance with applicable requirements and included race-conscious components in the program. In May 2005 the Ninth Circuit Court of Appeals issued a decision on *Western States Paving, Inc. vs. Washington Department of Transportation et al*, which required the State of Washington to comply with new evidentiary standards necessary to constitutionally support the use of race-conscious DBE goals such as those being used by Caltrans. The decision is binding on the states within its jurisdiction, including California.

Caltrans initiated a public comment period to request submission of evidence and information from the public that would support its current race-conscious DBE program.

After consideration of comments received during the public comment period, Caltrans determined that it is unable to continue with any level of a race-conscious DBE program, and that DBE participation will be achieved solely by race-neutral measures.

On May 1, 2006, Caltrans implemented a race-neutral DBE program, which includes the following changes:

- Local agencies will no longer have their own separate DBE programs unless such programs have been approved directly by a federal agency. Instead, local agencies must complete a “Disadvantaged Business Enterprise Race-Neutral Implementation Agreement,” as discussed in Section 9.6 of this chapter.
- Local agencies may no longer advertise and award contracts with federal-aid funds containing race-conscious DBE goals.
- Local agencies will still collect and report participation and utilization by DBEs on federal-aid contracts.
- All federal-aid procurements shall contain race-neutral DBE contract language. (See “Sample Notice to Contractors and Special Provisions” and “Sample Proposal and Contract” available to download from the DLA website:
http://www.dot.ca.gov/hq/LocalPrograms/sam_boil/sam_boil.htm

Changing from a race-conscious to a race-neutral DBE program is not retroactive, so contracts executed prior to the implementation date (May 1, 2006), and amendments thereto with race-conscious DBE contract participation goals are not affected by the new race neutral DBE program. In terms of contract monitoring, those prime contractors or prime consultants that were awarded contracts with race-conscious DBE participation goals would still be required to meet those goals during performance of the contract. The request for DBE substitution process would also continue for the term of those contracts.

DBE DEFINITIONS

“Annual Anticipated DBE Participation Level (AADPL)” - is the local agency's assessment of the level of DBE participation and utilization that the local agency expects could be attained on federal-aid contracts awarded in its jurisdiction in a given fiscal year. This includes an assessment of the availability for specific items of work, that DBEs could reasonably be expected to compete for subcontracting opportunities on a federal-aid contract and their likely availability for work on federal-aid contracts that will be awarded in a given fiscal year. The AADPL is not a goal that the local agency needs to achieve, but the AADPL will be used by the Department to establish a statewide overall DBE participation goal as required by Title 49, Part 26 of the CFR. The AADPL will be derived from the DBE Availability Advisories for the individual contracts. The local agency must have an approved AADPL on file with the DLAE before federal funds can be authorized on any new federal-aid consultant or construction contract.

“Disadvantaged Business Enterprises (DBE)” - A-for-profit “small business concern” that is at least 51 percent owned and controlled by one or more socially and economically disadvantaged individuals. One or more such individuals must also control the management and daily business operations. These individuals must be citizens (or lawfully admitted permanent resident) of the United States and (1) any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis, or (2) who are either Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, women, or any other group found to be socially and economically disadvantaged by the Small Business Administration.

“DBE Availability Advisory”- This is a level of DBE participation that could reasonably be expected on individual federal-aid contracts. The advisory level is established for individual contracts to assist the prime contractor in ascertaining a reasonable level of DBE participation on any given federal-aid contract. It is not an enforceable goal and compliance with the advisory shall not be a condition of award of any contract.

“Race-conscious measure or program”- is one that is focused specifically on assisting only DBEs. The use of contract goals is the primary example of a race-conscious measure in the DBE program.

“Race-neutral measure or program”- A race-neutral measure or program is one that, while benefiting DBEs, is not solely focused on DBE firms. For example, small business outreach programs, technical assistance programs, and prompt payment clauses can assist a wide variety of small businesses, not just DBEs. For purposes here, race-neutral includes gender neutrality.

“Small Business Concern” - Small Business Concern means, with respect to firms seeking to participate as DBEs in U.S. Department of Transportation (DOT) assisted contracts, a small business concern as defined pursuant to Section 3 of the Small Business Act and Small Business Administration regulations implementing it (13 CFR

Part 121) that also does not exceed the cap on average annual gross receipts specified in Section 26.65(b) of 49 CFR.

“Statewide Overall DBE Goal” - As required by federal law, Caltrans has established a statewide overall DBE goal. This is the level of DBE participation that the Department estimates can be achieved on all federal-aid contracts awarded in the state in a given fiscal year. In order to ascertain whether the Statewide Overall DBE Goal is achieved, the Department will track DBE participation on all Federal-aid contracts.

DBE PROGRAM RESPONSIBILITIES

FHWA RESPONSIBILITIES

The Federal Highway Administration (FHWA) administers the payment of federal-aid highway funds to recipients: states, counties, cities, and other agencies such as transit districts for transportation related projects. The FHWA is responsible for monitoring these agencies for compliance with Title VI and other aspects of the Civil Rights Acts of 1964, 1968, and 1973, all concerning nondiscrimination in administration of federal funds.

CALTRANS RESPONSIBILITIES

Office of Civil Rights

Office of Civil Rights responsibilities include:

- The Disadvantaged Business Enterprise Program in the Office of Civil Rights administers the State of California, Department of Transportation Disadvantaged Business Enterprise (DBE) Program Plan (Caltrans DBE Program Plan).
- Maintains a directory of certified DBE contractors.
- The DBE Program, in the Office of Civil Rights, assists the District Local Assistance Engineer (DLAE) and the DLA in responding to local agencies' requests for assistance with questions/issues relative to DBE matters.
- Assist with training courses for district and local agencies' staff.

Division of Local Assistance (DLA) and District Local Assistance Engineer (DLAE)

Local Assistance responsibilities include:

- DLA will provide assistance to DLAE and district staff with questions/issues relative to DBE matters.
- DLA and the DLAE monitor local agencies' compliance with DBE program requirements by conducting process reviews. The FHWA will be invited to participate in these process reviews.
- DLA assembles statewide local agency DBE final utilization information and provides information for reports for FHWA.
- DLA will monitor districts for procedure compliance.

- DLA and the DLAE assist with training courses for district and local agencies' staff.
- The DLAE ensures that local agencies with federal-aid contracts submit the local agency's "Race-neutral Implementation Agreement" (Exhibit 9-A)
- The DLAE reviews and approves the local agencies' DBE Annual Submittal Form. (See Exhibit 9-B)
- The DLAE is the focal point for advice and assistance to the local agencies on DBE matters.
- The DLAE will ensure that the final DBE Utilization Report (for consultant and construction contractors) is reported to the DLA for inclusion in the Caltrans DBE report to FHWA.
- The DLAE is responsible for DBE oversight of local agencies pursuant to the Local Assistance Procedures Manual (LAPM) regulations.
- The DLAE will review at least one contract per year for each local agency with an active construction project. This will include review of records of DBE and non-DBE subcontractor utilization, substitutions, and DBE complaints, as well as checking if and verification that a DBE Liaison Officer has been designated.
- The DLAE will review at least one complete PS&E package for the required provisions (including DBE requirements) per year. If deficiencies are discovered, more frequent reviews should be conducted and a corrective action plan is to be submitted by the local agency for the DLAE's approval.
- The DLAE will maintain a list of each local agency's designated DBE Liaison Officer, which will be updated annually with the local agency's submittal of their DBE Annual Submittal Form.
- The DLAE will maintain a file with an index of all local agencies' "DBE Race-Neutral Implementation Agreement" and "DBE Annual Submittal Form". Information from these forms will be entered into LP2000.

LOCAL AGENCY RESPONSIBILITIES

Local agency responsibilities are detailed in Section 9.6. These responsibilities include:

- Submitting a "DBE Race-Neutral Implementation Agreement for Local Agencies" to the Caltrans' DLAE. (See Exhibit 9-A.)
- Developing an AADPL and submitting it to the Caltrans' DLAE for review on the "Local Agency DBE Annual Submittal Form." (See Exhibit 9-B.)
- Designating a DBE Liaison Officer, accountable to the Chief Executive Officer of the local agency, to administer the DBE Program.
- Ensuring prompt and full payment to the prime contractor and subcontractor in compliance with the prompt payment clauses of the contract.
- As part of the AADPL, establishing contract specific DBE Availability Advisories for individual contracts. This should be done before submitting a "Request for Authorization" for the engineering and construction phases of a federal-aid project. (See Chapter 3, "Project Authorization" of this manual).

- Including the DBE Availability Advisories and appropriate DBE race-neutral specifications in the PS&E documents.
- Reporting DBE anticipated participation Local Agency Bidder DBE Information (See Exhibit 15-G and Exhibit 10-O.)
- Completing the “Report of Final DBE Utilization” forms (Exhibit 17-F).

9.6 LOCAL AGENCY RESPONSIBILITIES UNDER CALTRANS DBE PROGRAM PLAN

Local agency recipients of federal financial assistance shall comply with all the elements of Title 49, Part 26 of the CFR entitled “Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs.” These provisions apply to all federal-aid transportation projects. Local Agency responsibilities are detailed in the *State of California, Department of Transportation Disadvantaged Business Enterprise (DBE) Program Plan* (Caltrans DBE Program Plan). A copy of this plan is available to download from the DLA website at:

http://www.dot.ca.gov/hq/LocalPrograms/DBE_CRLC/DBE/DBE_CRLC.htm.

As an initial step, each local agency shall submit a “DBE Race-Neutral Implementation Agreement for Local Agencies” (Exhibit 9-A, of this chapter) to formally acknowledge the local agencies’ commitment to implement Caltrans DBE Program Plan, and to comply with all the prescribed responsibilities detailed in the Plan and explained in the LAPM.

Each local agency shall also annually submit a “DBE Annual Submittal Form” (Exhibit 9-B, of this chapter). This form will provide information for the upcoming Federal Fiscal Year (FFY), which will include:

- (1) the local agency's AADPL.
- (2) the methodology for establishing the AADPL.
- (3) identification of the Disadvantaged Business Enterprise Liaison Officer (DBELO)
- (4) prompt pay provision to be used in contracts

DBE RACE-NEUTRAL IMPLEMENTATION AGREEMENT FOR LOCAL AGENCIES

This agreement will need to be completed and submitted to the DLAE by June 1, 2006, by each local agency that currently has a DBE Program, or will be receiving federal financial assistance for their transportation projects. This agreement will need to be signed by a representative who is authorized by the governing body to take such action. Local agencies will not be permitted to continue with their own separate DBE programs, unless such programs have been approved directly by a federal agency.

Some of the elements of the Agreement are highlighted below:

OBJECTIVE/POLICY STATEMENT

Each agreement contains a policy statement expressing a commitment to the Caltrans DBE program, stating its objectives, and outlining responsibilities for its implementation. Each local agency will circulate the statement throughout its organization and to the DBE and non-DBE business communities that perform work on its DOT-assisted contracts.

DBE ANNUAL SUBMITTAL FORM

Each local agency must provide to Caltrans DLAE a completed “DBE Annual Submittal Form for Local Agencies,” (Exhibit 9-B) by June 1 of each year for the following FFY. This form must be received prior to submitting a “Request for Authorization” to proceed with a federal-aid project. This form will include:

1. The amount of AADPL and the methodology for establishing the AADPL that will be used to develop the “DBE Availability Advisories” to advise contractors of DBE availability on the local agency’s FFY individual contracts. The methodology for calculating the “DBE Availability Advisory” is discussed in Section 9.7, “Annual Anticipated DBE Participation Level.”
2. Designated DBE Coordinator information (name, address, phone number, and e-mail address).
3. Local agency’s choice for method of prompt payment of withheld funds to subcontractors.

DBE LIAISON OFFICER

Each local agency must designate a DBE liaison officer (DBELO) who shall have direct independent access to the local agency’s Chief Executive Officer concerning DBE program matters. This person shall be responsible for the duties as described in Exhibit 9-A in this chapter. Annually, the DBELO designation will be reported to Caltrans when the local agency completes its “Local Agency DBE Annual Submittal Form” (Exhibit 9-B in this chapter).

REQUIRED CONTRACT CLAUSES

Contract Assurance

DBE regulations require the following contract assurance statement in every DOT-assisted contract and subcontract.

“The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract, or such other remedy as recipient deems appropriate.”

Prompt Progress Payment to Subcontractors

Attention is directed to Section 7108.5 of the California Business and Professions Code, which requires a prime contractor or subcontractor to pay any subcontractor not later than 10 days of receipt of each progress payment, unless otherwise agreed to in writing. In addition, Federal Regulation (49 CFR 26.29) requires a prime contractor or subcontractor to pay a subcontractor no later than 30 days of receipt of each payment, unless any delay or postponement of payment among the parties takes place only for good cause and with the prior written approval of the agency. Section 7108.5 of the California Business and Professions Code also contains enforcement actions and penalties. These requirements apply to both DBE and non-DBE subcontractors.

Prompt Payment of Withheld Funds to Subcontractors

Federal Regulation (49 CFR 26.29) requires one of the following three methods be used in federal-aid contracts to ensure prompt and full payment of any retainage kept by the prime contractor or subcontractor to a subcontractor:

1. The local agency may decline to hold retainage from prime contractors and prohibit prime contractors and subcontractors from holding retainage from subcontractors.
2. The local agency may decline to hold retainage from prime contractors and include a contract clause, obligating the prime contractor and subcontractors to make prompt and full payment of any retainage kept by the prime contractor or subcontractor to all subcontractors within 30 days after the subcontractor's work is satisfactorily completed.
3. The local agency may hold retainage from the prime contractor and provide for prompt and regular incremental acceptances of portions of the contract, pay retainage to prime contractors based on the acceptances, and include a contract clause obligating the prime contractor and subcontractors to pay all retainage owed to all subcontractors for satisfactory completion of the accepted work within 30 days after receipt of the retainage. This clause must require the prompt release of retainage payments from the prime contractor to the subcontractor within a specified number of days after the subcontractor's work is satisfactorily completed.

In the above methods, a subcontractor's work is satisfactorily completed when all tasks called for in the subcontract have been accomplished and documented as required by the agency. The work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed, when an agency has made an incremental acceptance of a portion of the contract work. Federal Regulation (49 CFR 26.29) also requires that any delay or postponement of payment among the parties may take place only for good cause, must have the prior written approval of the agency, and that appropriate means of enforcement such as those contained in Section 7108.5 of the California Business and Professions Code must be included in the contract.

Annually, the local agencies choose one of the above three methods to ensure prompt pay. The local agency's choice will be reported to Caltrans when it completes the "Annual DBE Submittal Form" (Exhibit 9-B of this chapter).

BIDDERS LIST

Each local agency will be required to create and maintain a bidders list consisting of information about all DBE and non-DBE firms that bid or quote to the local agency on DOT-assisted contracts. The bidders list will include the name, address, DBE/non-DBE status, date established, and annual gross receipts of firms.

9.7 PROCESS FOR ESTABLISHING ANNUAL ANTICIPATED DBE PARTICIPATION LEVEL (AADPL)

As required by federal law, Caltrans annually establishes a statewide overall DBE goal. When establishing the overall DBE goal, Caltrans must include the level of DBE participation that local agencies could contribute. Local agencies shall calculate the level of DBE participation and utilization that the agency expects could be achieved on contracts to be awarded in its jurisdiction in the following federal fiscal year.

This will include an assessment of the subcontracting opportunities for specific items of work and the DBE availability for specific items of work. In other words, that level of subcontracting opportunities that DBEs could reasonably be expected to compete for on a contract, and their likely availability for work on contracts that will be awarded in a given fiscal year. The AADPL is not a goal that the local agency needs to achieve, but the AADPL will be used by Caltrans to establish a statewide DBE participation goal as required by Title 49, CFR Part 26, Section 26.45. The AADPL will also be used to establish DBE Availability Advisories for individual contracts.

The AADPL will be submitted to the Caltrans DLAE, using “Local Agency DBE Annual Submittal Form” (Exhibit 9-B of this chapter), annually by June 1 in advance of the FFY beginning October 1 for federal-aid contracts. FHWA recipients will follow this process. An exception to this would be if FTA or FAA recipients were required by FTA or FAA to submit the annual information to them or a designee by another date.

The local agency is not required to obtain Caltrans' prior concurrence with the proposed AADPL. However, if the DLAE's review concludes that the AADPL has not been correctly calculated, or that the method for calculating AADPL is inadequate, the DLAE may, after consulting with the local agency, adjust the AADPL or require that the local agency do so.

For an FHWA recipient, the AADPL should be expressed as a percentage of all federal-aid highway funds that a local agency will award in FHWA-assisted contracts in the forthcoming fiscal year. If the local agency is also an FTA subrecipient receiving funds through Caltrans, the percentage is determined in a similar way, but it includes FTA assisted contracts—excluding FTA funds used to purchase transit vehicles.

METHODOLOGY—STEP 1

The overall participation availability methodology is a two-step process as described in 49 CFR, Part 26, Section 26.45. The first step is determining a base figure for the relative availability of DBEs that are ready, willing and able to participate in the federal-aid contracting program. Five methods are described to accomplish this first step, although other methods or combinations of methods to determine a base figure may be used subject to review and comments by DLAE.

USE OF DBE DIRECTORIES AND CENSUS BUREAU DATA

Determine the number of ready, willing and able DBEs in your market from your DBE directory. Using the Census Bureau's County Business Pattern (CBP) database, determine the number of all ready, willing and able businesses available in your market that perform work in the same North American Industry Classification System (NAICS) codes. (Information about the CBP database may be obtained from the Census Bureau at their website, www.census.gov/epcd/cbp/view/cbpview.html.) Divide the number of DBEs by the number of all businesses to derive a base figure for the relative availability of DBEs in your market.

USE OF A BIDDERS LIST

By using the required Bidders List, determine the number of DBEs that have bid or quoted on your DOT-assisted prime contracts or subcontracts in the previous year. Determine the number of all contractors and consultants that have bid or quoted on prime or subcontracts in the same time period. Divide the number of DBE bidders and quoters by the number of all contractors and consultants to derive a base figure for the relative availability of DBEs in your market.

TRANSIT VEHICLE MANUFACTURERS

If the local agency is also an FTA recipient, the FTA assistance used in transit vehicle procurements is not used in the base amount from which an overall AADPL is calculated.

TRANSIT VEHICLE MANUFACTURER'S ANNUAL AVAILABILITY GOAL

Transit vehicle manufacturers must establish and submit for FTA's approval an annual overall AADPL. In setting the overall AADPL, transit vehicle manufacturers should be guided to the extent applicable by the principles underlying Section 26.49, Part 26 of Title 49 CFR. The base from which transit vehicle manufacturers calculate this AADPL is the amount of FTA financial assistance included in transit vehicle contracts that will be performed during the fiscal year in question. Transit vehicle manufacturers must exclude from this base funds attributable to work performed outside the United States, and its territories, possessions, and commonwealths.

In lieu of complying with the aforementioned procedures, local agencies may, with FTA approval, establish project-specific availability goals for DBE participation in the procurement of transit vehicles. Transit vehicle manufacturers should contact FTA for applicable procedures.

9.8 DBE AVAILABILITY ADVISORY FOR INDIVIDUAL CONTRACTS

A DBE Availability Advisory is a level of DBE participation expressed as a percentage of the total federal-aid dollar amount on the contract that bidders could reasonably be expected to achieve, by using certified DBE firms. The agency will establish DBE Availability Advisories for individual contracts to assist the bidders in ascertaining what a reasonable level of DBE participation would be for any given contract. The DBE Availability Advisory is not an enforceable goal and compliance with the advisory shall not be a condition of contract award.

To assist in ascertaining DBE availability for specific items of work, the agency advises that it has determined that DBEs could reasonably be expected to compete for subcontracting opportunities on this project; and their likely availability for work on this project is a certain percentage or "level." DBE Availability Advisories will be set in reference to overall DBE availability for the type and location of work involved. Local agencies may use DBE Availability Advisories percentages only on those DOT-assisted contracts that have subcontracting, supplier, or trucking opportunities.

Local agencies are not required to set a DBE Availability Advisory for every DOT-assisted contract. Local agencies are not required to set each individual contract DBE Availability Advisory at the same percentage level as the AADPL. The DBE Availability Advisory for a specific contract may be higher or lower than the AADPL depending on such factors as the type of work involved, the location of the work, and the availability of DBEs for the work of the particular contract. Meeting the DBE Availability Advisory is not a condition for being eligible for award of any contract.

Caltrans approval of each contract DBE Availability Advisory is not necessarily required. However, Caltrans may review and approve or disapprove any contract DBE Availability Advisory that a local agency establishes.

The agency should include a DBE Availability Advisory in each contract wherever the opportunity arises **regardless of whether the agency has achieved its AADPL. DBE participation and utilization achieved throughout the state is included in the evaluation of achievement of the Statewide Overall DBE Goal.**

PARTICIPATION OPPORTUNITIES

The local agency should structure its project development, contract items, and specifications in a manner that provides opportunities for DBE participation. Participation by DBEs is possible at four main points in the process for developing local federal-aid transportation projects. They are:

- Preliminary engineering (PE) and environmental analysis (EA)
- Final design
- Right of way acquisition
- Construction, including construction management

Preliminary engineering studies (PES) and (EA) are the first steps in developing a local transportation project. DBEs may be engaged to perform all of these activities as a prime consultant or some of these activities as a member of a team of consultants.

Completion of final design and preparation of PS&E normally are a continuation of PE activities. However, in some situations the agency employs different consultants and professional teams to perform these final design activities. DBEs may be engaged at this point.

Acquisition of R/W for local transportation projects may be performed by the local agency or by a qualified consulting firm. Qualified DBEs may be considered for performance of R/W activities.

DBEs may participate in bidding for construction contracts for projects developed by local agencies. Other opportunities for participation in construction include work as subcontractors, suppliers, vendors, truckers, etc.

DBE CONTRACT REQUIREMENTS

The local agency must determine the individual project DBE Availability Advisory based on the work performed and the availability of certified DBE contractors in the geographic area (a specific DBE Availability Advisory may not be appropriate for every project). These participation availability advisories must be consistent with the following policies:

- Individual contract participation availability percentages are established in order to encourage fair DBE participation.
- The project analysis starts with the availability and capacity of certified DBE contractors (in the project area) to perform the items of work. The contractible items of work are evaluated by the local agency in light of the project type and size and normal industry contracting practices.
- Meeting the DBE participation availability advisory is not a condition for being eligible for award of the contract.
- The contract participation availability advisories are set to encourage non-disadvantaged as well as DBE subcontractors to compete for contract work.

LOCAL AGENCY BIDDER DBE INFORMATION

A "Local Agency Bidder DBE Information" form (Exhibit 15-G of the LAPM for construction contracts or Exhibit 10-O of the LAPM for Consultant contracts) will be included in the contract documents to be executed by the successful bidder. The purpose of the form is to collect data required under 49 CFR 26. Even if no DBE participation will be reported, the successful bidder must execute and return the form. The completed "Local Agency Bidder DBE Information" form will be submitted to the DLAE at the time of contract execution.

The successful bidder's "Local Agency Bidder DBE Information" form should include the names, addresses and phone numbers of DBE firms that will participate, with a complete description of work or supplies to be provided by each, and the dollar value of each DBE transaction. When 100 percent of a contract item of work is not to be performed or furnished by a DBE, a description of the exact portion of that work to be performed or furnished by that DBE should be included in the DBE information, including the planned location of that work. A bidder certified as a DBE should describe the work it has committed to performing with its own forces, as well as any other work that it has committed to be performed by DBE subcontractors, suppliers, and trucking companies.

The bidder is encouraged to provide written confirmation from each DBE participating in the contract. A copy of a DBE's quote will serve as written confirmation that the DBE is participating in the contract. If a DBE is participating as a joint venture partner, the bidder is encouraged to submit a copy of the joint venture agreement.

FINAL REPORT

Upon completion of the contract, regardless of whether DBE participation is obtained, a summary of the DBE records shall be prepared, certified correct, and submitted on the form "Final Report- Utilization of Disadvantaged Business Enterprise (DBE) First-Tier Subcontractors" (Exhibit 17-F) or equivalent, by the contractor to the local agency showing total dollars paid to each subcontractor and supplier whether DBE or non-DBE. Exhibit 17-F is reviewed by the local agency and certified as complete and accurate.

Consultant Contracts: The local agency must send the original plus one copy of the completed Final Report of Utilization of Disadvantaged Businesses (see Chapter 17, Exhibit 17-F of the LAPM) with the final invoice to the DLAE within 30 days after completion of the contract (see Chapter 10, Consultant Selection of the LAPM).

Construction Contracts: The local agency must send the original plus one copy of the completed Final Report of Utilization of Disadvantaged Businesses (see Chapter 17, Exhibit 17-F of the LAPM) to the DLAE as part of its "Report of Expenditure" package before final payment (see Chapter 17, Project Completion of the LAPM).

COUNTING WORK TOWARD THE CONTRACT AVAILABILITY ADVISORY

Actual payment to subcontractors that are certified DBEs and performing a commercially useful function will be counted as DBE participation. If the prime contractor is a qualified DBE, his/her work is reported and counted toward the contract participation.

"Final Report Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors" is the DBE utilization form to be completed at the completion of a contract and submitted to the DLAE (see Chapter 17 for specific instructions). The information in this report is required by the DBE Program and the FHWA to demonstrate DBE participation on local agency projects.

Specific instances of counting DBE participation are presented in the following sections.

PERFORMED BY DBE

When a DBE participates in a contract, count only the value of the work actually performed by the DBE.

- Count the entire amount of that portion of a contract that is performed by the DBE's own forces. Include the cost of supplies and materials obtained by the DBE for the work of the contract, including supplies purchased or equipment leased by the DBE (except supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate).
- Count the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, provided that the local agency determines the fee to be reasonable and not excessive as compared with fees customarily allowed for similar services.
- When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE participation only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE participation.

JOINT VENTURE

When a DBE performs as a participant in a joint venture, count a portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that the DBE performs with its own forces toward the DBE participation.

COMMERCIALLY USEFUL FUNCTION

Count expenditures to a DBE contractor only if the DBE is performing a commercially useful function on that contract. The following examples explain what is considered to be performing a commercially useful function:

- A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible with respect to materials and supplies used on the contract for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable), and paying for the material itself. To determine whether a DBE is performing a commercially useful function, the local agency must evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.
- A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, the local agency must examine similar transactions, particularly those in which DBEs do not participate.

Some situations may arise where the work to be performed by the DBE is being performed by someone else. The local agency will have to use discretion of when to investigate, or report apparent cases of fraud to Caltrans. Caution is needed because those involved in performing the work may legitimately be doing so. Three areas are highlighted here.

1. Individuals who are not socially and economically disadvantaged may be involved in a DBE firm as owners, managers, employees, stockholders, officers, and/or directors. Such individuals must not; however, possess or exercise the power to control the firm, or be disproportionately responsible for the operation of the firm.
2. The socially and economically disadvantaged owners of the firm may delegate various areas of the management, policymaking, or daily operations of the firm to other participants in the firm, regardless of whether these participants are socially and economically disadvantaged individuals. Such delegations of authority must be revocable, and the socially and economically disadvantaged owners must retain the power to hire and fire any person to whom such authority is delegated. The managerial role of the socially and economically disadvantaged owners in the firm's overall affairs must be, such that the recipient can reasonably conclude that the socially and economically disadvantaged owners actually exercise control over the firm's operations, management, and policy.
3. The socially and economically disadvantaged owners must have an overall understanding of, and managerial and technical competence and experience directly related to, the type of business in which the firm is engaged and the firm's operations. The socially and economically disadvantaged owners are not required to have experience or expertise in every critical area of the firm's operations, or to have greater experience or expertise in a given field than managers or key employees. The socially and economically disadvantaged owners must have the ability to intelligently and critically evaluate information presented by other participants in the firm's activities, and to use this information to make independent decisions concerning the firm's daily operations, management, and policymaking. Generally, expertise limited to office management, administration, or bookkeeping functions unrelated to the principal business activities of the firm is insufficient to demonstrate control.

DBE ELIGIBILITY

Whether a firm (consultant or contractor) is certified as an eligible DBE is a decision that is made by the UCP. The UCP can also remove the eligibility of a firm and issue a written notice of ineligibility. A directory of certified DBE firms is available from the Caltrans Civil Rights, Business Enterprises Program website at:

<http://www.dot.ca.gov/hq/bep>

The Caltrans directory list is available in hard copy from:

Department of Transportation
Central Publications Distribution Unit
1900 Royal Oaks Drive
Sacramento, CA 95815
Phone: (916) 445-3520
Fax (916) 324-8997
E-mail: <http://caltrans-opac.ca.gov/publicat.htm>

An electronic listing of DBEs is also available on the website of the Caltrans Civil Rights Program under the Caltrans Bulletin Board System. For further information, contact the Caltrans Disadvantaged Business Enterprise Program, Systems Support (916) 654-6598 or 654-3496.

CERTIFICATION

A potential DBE may request certification from Caltrans by requesting an application form at:

Department of Transportation
Business Enterprise Program
Office of Certification Analysis
PO Box 942874, MS - 79
Sacramento, CA 94274-0001
Phone: (916) 227-9599

The form may also be downloaded from the internet at:

<http://www.dot.ca.gov/hq/bep/downloads.html>

DECERTIFICATION

Regarding DBE participation on a contract, two different actions can take place depending on when a firm was issued a notice of ineligibility relative to when the contract was executed:

1. When a prime contractor has made a commitment to use a DBE firm, or the local agency has made a commitment to use a DBE prime contractor, but a subcontract or contract has not been executed before the issuance of the decertification notice, the ineligible firm does not count toward contract DBE participation.
2. If a prime contractor has executed a subcontract with a DBE firm before the DBE firm was notified of its ineligibility, the prime contractor may continue to use the firm on the contract and may continue to receive credit toward its DBE participation for the firm's work. In this case, or in a case where the local agency had let a prime contract to a DBE that was later ruled ineligible, the portion of the ineligible firm's performance of the contract remaining after the local agency issued the notice of its ineligibility shall not count toward the local agency's overall participation, but may count toward the contract participation.

EXCEPTION

If the DBE's ineligibility is caused solely by its having exceeded the size standard during the performance of the contract, the local agency may continue to count its participation on that contract toward overall and contract participation.

APPEAL

When the UCP makes an administratively final removal of a firm's eligibility, the firm may appeal the removal to the DOT under Section 26.89 of 49 CFR, Part 26. Caltrans will provide information for an appeal with the removal of eligibility.

**Exhibit 9-A Disadvantaged Business Enterprise Race-Neutral Implementation Agreement for
Local Agencies**

**DISADVANTAGED BUSINESS ENTERPRISE
RACE-NEUTRAL
IMPLEMENTATION AGREEMENT
FOR
LOCAL AGENCIES**

DISADVANTAGED BUSINESS ENTERPRISE RACE-NEUTRAL IMPLEMENTATION AGREEMENT

For the City/County of _____, hereinafter referred to as “RECIPIENT.”

I Definition of Terms

The terms used in this agreement have the meanings defined in 49 CFR § 26.5.

II OBJECTIVE/POLICY STATEMENT (§26/1. 26/23)

The RECIPIENT intends to receive federal financial assistance from the U. S. Department of Transportation (DOT) through the California Department of Transportation (Caltrans), and as a condition of receiving this assistance, the RECIPIENT will sign the California Department of Transportation’s Disadvantaged Business Enterprise Implementation Agreement (hereinafter referred to as Agreement). The RECIPIENT agrees to implement the State of California, Department of Transportation Disadvantaged Business Enterprise (DBE) Program Plan (hereinafter referred to as the DBE Program Plan) as it pertains to local agencies. The DBE Program Plan is based on U.S. Department of Transportation (DOT), 49 CFR, Part 26 requirements.

It is the policy of the RECIPIENT to ensure that DBEs, as defined in Part 26, have an equal opportunity to receive and participate in DOT-assisted contracts. It is also their policy:

- To ensure nondiscrimination in the award and administration of DOT-assisted contracts.
- To create a level playing field on which DBE’s can compete fairly for DOT-assisted contracts.
- To ensure that their annual overall DBE participation percentage is narrowly tailored, in accordance with applicable law.
- To ensure that only firms that fully meet 49 CFR, Part 26 eligibility standards are permitted to participate as DBEs.
- To help remove barriers to the participation of DBEs in DOT-assisted contracts.
- To assist the development of firms that can compete successfully in the market place outside the DBE Program.

III Nondiscrimination (§26.7)

RECIPIENT will never exclude any person from participation in, deny any person the benefits of, or otherwise discriminate against anyone in connection with the award and performance of any contract covered by 49 CFR, Part 26 on the basis of race, color, sex, or national origin. In administering the local agency components of the DBE Program Plan, the RECIPIENT will not, directly, or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing accomplishment of the objectives of the DBE Program Plan with respect to individuals of a particular race, color, sex, or national origin.

IV Annual DBE Submittal Form (§26.21)

The RECIPIENT will provide to the Caltrans' District Local Assistance Engineer (DLAE) a completed *Local Agency DBE Annual Submittal Form* (Exhibit 9-B) by June 1 of each year for the following Federal Fiscal Year (FFY). This form includes an Annual Anticipated DBE Participation Level (AADPL), methodology for establishing the AADPL, the name, phone number, and electronic mailing address of the designated DBELO, and the choice of Prompt Pay Provision to be used by the RECIPIENT for the following FFY.

V Race-Neutral Means of Meeting the Annual DBE Goal (§26.51)

RECIPIENT will assist Caltrans to achieve its Overall Statewide DBE Goal by race neutral means that may include, but are not limited to the following:

1. Advertising solicitations, scheduling bidding periods and opening times, and packaging quantities, specifications, and delivery schedules in ways that facilitate DBE and other small business participation.
2. Providing assistance to DBE and small businesses in overcoming limitations such as inability to obtain bonding or financing (e.g., by such means as simplifying the bonding process, reducing bonding requirements, and providing services to help DBEs and other small businesses obtain bonding and financing).
3. Providing technical assistance and other services to DBE and small businesses.
4. Providing information and communication programs on contracting procedures and specific contract opportunities (e.g., ensuring the inclusion of DBEs and other small businesses on recipient mailing lists of bidders; ensuring the dissemination to bidders on prime contracts of lists of potential subcontractors including DBE's and small businesses; providing the information in languages other than English, where appropriate).
5. Implementing a supportive services program to develop and improve immediate and long-term business management, record keeping, and financial and accounting capability for DBEs and other small businesses.
6. Providing services to help DBEs and other small businesses improve long-term development, increase opportunities to participate in a variety of kinds of work, handle increasingly significant projects, and achieve eventual self-sufficiency.
7. Establishing a program to assist new, start-up firms, particularly in fields in which DBE participation has been historically low.
8. Assisting DBEs and other small businesses to develop their capability to utilize emerging technology and conduct business through electronic media.
9. Implementing or developing a mentor-protégé program.

VI Quotas (§26.43)

RECIPIENT will not use quotas or set-asides in any way in the administration of the local agency component of the DBE Program Plan.

VII DBE Liaison Officer (DBELO) (§26.25)

RECIPIENT has designated a DBE Liaison Officer. The DBELO is responsible for implementing the DBE Program Plan, as it pertains to the RECIPIENT, and ensures that the RECIPIENT is fully and properly advised concerning DBE Program Plan matters. [Specify resources available to the DBELO; e.g., the DBELO has a staff of two professional employees assigned to the DBE program on a full-time basis and two support personnel who devote a portion of their time to the program.] The name, address, telephone number, electronic mail address, and an organization chart displaying the DBELO's position in the organization are found in Attachment _____ to this Agreement. This information will be updated annually and included on the DBE Annual Submittal Form.

The DBELO is responsible for developing, implementing, and monitoring the RECIPIENT's requirements of the DBE Program Plan in coordination with other appropriate officials. Duties and responsibilities include the following:

1. Gathers and reports statistical data and other information as required.
2. Reviews third party contracts and purchase requisitions for compliance with this program.
3. Works with all departments to determine projected Annual Anticipated DBE Participation Level.
4. Ensures that bid notices and requests for proposals are made available to DBEs in a timely manner.
5. Analyzes DBE participation and identifies ways to encourage participation through race-neutral means.
6. Participates in pre-bid meetings.
7. Advises the CEO/governing body on DBE matters and DBE race-neutral issues.
8. Provides DBEs with information and recommends sources to assist in preparing bids, obtaining bonding and insurance.
9. Plans and participates in DBE training seminars.
10. Provides outreach to DBEs and community organizations to fully advise them of contracting opportunities.

VIII Federal Financial Assistance Agreement Assurance (§26.13)

RECIPIENT will sign the following assurance, applicable to and to be included in all DOT-assisted contracts and their administration, as part of the program supplement agreement for each project.

The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract, or in the administration of its DBE Program, or the requirements of 49 CFR Part 26. The recipient shall take all necessary and reasonable steps under 49 CFR, Part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE Program, as required by 49 CFR, Part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.). [Note – this language is to be used verbatim, as it is stated in §26.13(a).]

IX DBE Financial Institutions (§26.27)

It is the policy of the RECIPIENT to investigate the full extent of services offered by financial institutions owned and controlled by socially and economically disadvantaged individuals in the community to make reasonable efforts to use these institutions, and to encourage prime contractors on DOT-assisted contracts to make use of these institutions.

Information on the availability of such institutions can be obtained from the DBELO. The Caltrans' Disadvantaged Business Enterprise Program may offer assistance to the DBELO.

X Directory (§26.31)

RECIPIENT will refer interested persons to the Unified Certification Program DBE directory available from the Caltrans Disadvantaged Business Enterprise Program's website at www.dot.ca.gov/hq/bep.

XI Required Contract Clauses (§§26.13, 26.29)

RECIPIENT ensures that the following clauses or equivalent will be included in each DOT-assisted prime contract:

A. CONTRACT ASSURANCE

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as recipient deems appropriate.

[Note – This language is to be used verbatim, as is stated in §26.13(b). See Caltrans Sample Boiler Plate Contract Documents on the Internet at www.dot.ca.gov/hq/LocalPrograms under "Publications."]

B. PROMPT PAYMENT

Prompt Progress Payment to Subcontractors

A prime contractor or subcontractor shall pay to any subcontractor not later than 10-days of receipt of each progress payment, in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The 10-days is applicable unless a longer period is agreed to in writing. Any delay or postponement of payment over 30 days may take place only for good cause and with the agency's prior written approval. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanctions, and other remedies of that Section. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor, deficient subcontractor performance, and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

Prompt Payment of Withheld Funds to Subcontractors

The local agency shall include either (1), (2), or (3) of the following provisions [local agency equivalent will need Caltrans approval] in their federal-aid contracts to ensure prompt and full payment of retainage [withheld funds] to subcontractors in compliance with 49 CFR 26.29.

1. No retainage will be held by the agency from progress payments due to the prime contractor. Prime contractors and subcontractors are prohibited from holding retainage from subcontractors. Any delay or postponement of payment may take place only for good cause and with the agency's prior written approval. Any violation of these provisions shall subject the violating contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor, deficient subcontractor performance, and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.
2. No retainage will be held by the agency from progress payments due the prime contractor. Any retainage kept by the prime contractor or by a subcontractor must be paid in full to the earning subcontractor in 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment may take place only for good cause and with the agency's prior written approval. Any violation of these provisions shall subject the violating contractor or subcontractor to the penalties, sanctions, and remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor, deficient subcontractor performance, and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

3. The agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the agency of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Any delay or postponement of payment may take place only for good cause and with the agency's prior written approval. Any violation of these provisions shall subject the violating prime contractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of: a dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance; and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

XII Local Assistance Procedures Manual

The RECIPIENT will advertise, award and administer DOT-assisted contracts in accordance with the most current published Local Assistance Procedures Manual (LAPM).

XIII Bidders List (§26.11)

The RECIPIENT will create and maintain a bidders list, consisting of information about all DBE and non-DBE firms that bid or quote on its DOT-assisted contracts. The bidders list will include the name, address, DBE/non-DBE status, age, and annual gross receipts of the firms.

XIV Reporting to the DLAE

RECIPIENT will promptly submit a copy of the Local Agency Bidder-DBE Information (Exhibit 15-G or Exhibit 10-O of the LAPM) to the DLAE at the time of execution of consultant or construction contract award.

RECIPIENT will promptly submit a copy of the Final Utilization of DBE participation to the DLAE using Exhibit 17-F of the LAPM immediately upon completion of the contract for each consultant or construction contract.

XV Certification (§26.83(a))

RECIPIENT ensures that only DBE firms currently certified by the California Unified Certification Program will participate as DBEs on DOT-assisted contracts.

XVI Confidentiality

RECIPIENT will safeguard from disclosure to third parties, information that may reasonably be regarded as confidential business information consistent with federal, state, and local laws.

By _____
(Signature)

Phone Number: _____

(Print Name and Title) ADMINISTERING AGENCY
(Authorized Governing Body Representative)

This California Department of Transportation's Disadvantaged Business Enterprise Program Plan Implementation Agreement is accepted by:

Date: _____

[Signature of DLAE]

[Print Name of DLAE]

Distribution: (1) Original – DLAE
(2) Signed copy by the DLAE – Local Agency

DBE Race-neutral Implementation Agreement for Local Agencies (05/01/06)

Exhibit 9-B Local Agency DBE Annual Submittal Form

TO: CALTRANS DISTRICT _____
District Local Assistance Engineer

The amount of the Annual Anticipated DBE Participation Level (AADPL) and methodology are presented herein, in accordance with Title 49 of the Code of Federal Regulations, Part 26, and the State of California, Department of Transportation Disadvantaged Business Enterprise (DBE) Program Plan.

The City/County/Region of _____,
submits our AADPL information. We have established an AADPL of _____ % for the Federal Fiscal Year
_____/_____, beginning on _____, and ending on _____.

Methodology

[Please attach the methodology used to determine the AADPL. See Chapter 9, Section 9.7 of the Local Assistance Procedures Manual (LAPM) for guidance in developing the AADPL.]

Disadvantaged Business Enterprise Liaison Officer (DBELO)

[Please provide the name, address, phone number, fax number, and electronic mail address of the DBELO for the coming Federal Fiscal Year.]

Prompt Pay

Federal regulation (49 CFR 26.29) requires one of three methods be used in federal-aid contracts to ensure prompt and full payment of any retainage, kept by the prime contractor or subcontractor, to a subcontractor. (Attached is a listing of the three methods. On the attachment, please designate which prompt payment provision the local agency will use.)

(Signature)

Date

(Print Name and Title)
ADMINISTERING AGENCY
(Authorized Governing Body Representative)

Phone Number

(Signature of Caltrans District Local Assistance Engineer [DLAE])

Date

Distribution: (1) Original - DLAE
(2) Signed copy by the DLAE – Local Agency

DBE Annual Submittal Form (05/01/06)

(Attachment)

Prompt Payment of Withheld Funds to Subcontractors

Federal regulation (49 CFR 26.29) requires one of the following three methods be used in federal-aid contracts to ensure prompt and full payment of any retainage kept by the prime contractor or subcontractor to a subcontractor.

Please check the box of the method chosen by the local agency to ensure prompt and full payment of any retainage.

- No retainage will be held by the agency from progress payments due to the prime contractor. Prime contractors and subcontractors are prohibited from holding retainage from subcontractors. Any delay or postponement of payment may take place only for good cause and with the agency's prior written approval. Any violation of these provisions shall subject the violating contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor, deficient subcontractor performance, and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors
- No retainage will be held by the agency from progress payments due the prime contractor. Any retainage kept by the prime contractor or by a subcontractor must be paid in full to the earning subcontractor in 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment may take place only for good cause and with the agency's prior written approval. Any violation of these provisions shall subject the violating contractor or subcontractor to the penalties, sanctions, and remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor, deficient subcontractor performance, and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.
- The agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the agency of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Any delay or postponement of payment may take place only for good cause and with the agency's prior written approval. Any violation of these provisions shall subject the violating prime contractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the contractor or subcontractor in the event of: a dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

CHAPTER 10 CONSULTANT SELECTION

10.1 GENERAL

INTRODUCTION

A local agency may engage consultants to perform architectural, engineering, and related services needed to develop a federal-aid and/or state funded project. Local agencies requesting federal and/or state funds to reimburse Architectural and Engineering (A&E) Consultants must follow the selection and contracting procedures detailed in this chapter.

FEDERAL LEGISLATION

The provisions of the Brooks Act (40 USC 544) require local agencies to award federally funded engineering and design contracts on the basis of fair and open competitive negotiations, demonstrated competence, and professional qualifications (23 CFR, Section 172).

The following are two of the Required Contract Provisions including exhibits:

Disadvantaged Business Enterprise

- *Notice to Bidders/Proposers Disadvantaged Business Enterprise Information* (Exhibit 10-I)
- *Standard Agreement for Subcontractor/DBE Participation* (Exhibit 10-J)
- *Local Agency Proposer DBE (Consultant Contract) Information* (Exhibit 10-O)
- *Final Report-Utilization of DBE, First-Tier Subcontractors* (Chapter 17, Exhibit 17-F)

Federal Lobbying Restrictions, Title 31 U.S.C. Section 1352

- *Nonlobbying Certification for Federal-aid Contracts* (Exhibit 10-Q)
- *Disclosure of Lobbying Activities, Standard Form – LLL and Instructions* (Exhibit 10-R)

STATE LEGISLATION

Architectural and Engineering (A&E) Consultants - Those private consulting firms providing architectural, landscape architectural, engineering, environmental, land surveying, or construction project management services are termed “Architectural and Engineering (A&E) Consultants.” California law requires selection of A&E contract services on the basis of demonstrated competence and professional qualifications. Cost may not be included as criteria for rating such consultants. Negotiations shall begin with the most qualified consultant. Should negotiations result in not a price the local agency considers to be fair and reasonable, negotiations shall be formally terminated and the local agency shall then undertake negotiations with the second most qualified consultant. If the negotiations with the second most qualified firm is not successful, negotiations shall be formally terminated and the local agency shall then undertake negotiations with the third most qualified consultant, etc. until the price is determined to be fair and reasonable by the local agency (*California Government Code*, Chapter 10, Sections 4525 through 4529.5).

Consultants, other than A&E consultants, may be selected using cost as one of, or the sole selection criteria. The procedures outlined in this chapter could be modified for selecting non-A&E consultants, by adding a cost item to the proposal. Similarly in selecting an A&E consultant, a detailed technical proposal or qualifications proposal, and a draft contract would be required.

Depending upon the scope of work, the required contract provisions may need to include the California State Prevailing Wages. Section 1720 of the *State Labor Code* which states in part:

“For purposes of this paragraph, “construction” includes work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work.”

Wage guidelines entitled, *Consultant Guidelines for Prevailing Wage and Labor Compliance on Architectural and Engineering (A&E) Contracts* is used to administer Caltrans Consultant contracts and is available at:

http://www.dot.ca.gov/hq/construc/A&E_Guidelines/A&EGuidelines.pdf

Wage information is available through the Caltrans Division of Local Assistance website at: http://www.dir.ca.gov/dlsr/statistics_research.html

SELECTING THE PROJECT

The local agency is responsible for selecting and initiating a federal-aid and/or state financed highway project. The decision to begin project development is influenced by the project needs, its acceptability, the timing of studies, financing, and construction. The local agency must identify the project’s objectives including the general level of improvement or service, operating standards, and the target date for project completion before commencing any consultant selection process.

SUBCONTRACTED SERVICES

The consultant is responsible for performing the work required under the agreement in a manner acceptable to the local agency. The consultant’s organization and all associated consultants and subcontractors must be identified at the time of the proposal.

If the consultant wishes to use a firm not specified in the proposal, prior written approval must be obtained from the local agency. If a subcontract for work, or services to be performed by such firms exceeds \$25,000, the subcontract shall contain all required provisions of the prime contract.

PRE-AWARD AUDIT

A pre-award audit is required for consultant contracts with state or federal-aid highway funds in the contract as outlined below.

Case 1: Contracts less than \$250,000

For consultant contracts which total less than \$250,000, a pre-award audit is not required unless the consultant has been previously identified as a “high-risk” as described in 49 CFR, Part 18 Section 12.

Part 18 Section 12, 49 CFR, states that a grantee or subgrantee may be considered “high-risk,” if an awarding agency determines that a grantee or subgrantee:

- Has a history of unsatisfactory performance, or
- Is not financially stable, or

n) Subcontractors, Assignment and Transfer

Consultant services are considered to be a personal relationship between client and principal; therefore, agreements in which participating federal and/or state funds are furnished shall contain a clause expressly prohibiting the subcontracting, assignment, or transfer of any of the work except, as otherwise, provided for in the executed agreement. All contracts shall provide that subcontracts exceeding \$25,000 in cost shall contain all required provisions of the prime contract.

o) Consultant's Endorsement on PS&E/Other Data

The responsible consultant/engineer shall sign all plans, specifications, estimates (PS&E) and engineering data furnished by him/her, and where appropriate, indicate his/her California registration number.

p) Disadvantaged Business Enterprise Considerations

Consultants must give consideration to DBE firms as specified in 23 CFR 172.5(b), CFR Part 26, and in Exhibit 10-I "Notice to Bidders/Proposers Disadvantaged Business Enterprise Information."

q) Insurance

The contract should provide for professional liability insurance and vehicle liability insurance limits. The contract should specify the reasonable amounts of such insurance, as required by the local agency. A method of verifying that the insurance is in effect should be included. Also, a method of notifying the local agency, if the specific insurance has been changed or cancelled should also be in the contract.

r) Signature Blocks

A signature block for each of the parties to the agreement should be provided.

C. CONCLUSION

The concluding clause may be any one of the many accepted legal expressions commonly used for that purpose.

D. SIGNATURE**E. CERTIFICATIONS**

Exhibits 10-F *Certification of Consultant, Commissions & Fees* and 10-G, *Certification of Agency* must be included as attachments to the contract and made a part of.

F. COST PRICE PROPOSAL

The consultant's and subconsultant(s) final cost proposal must be attached to the contract. (See Exhibit 10-H)

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Exhibit 10-E Sample Payment Clauses

SAMPLE PAYMENT CLAUSES***COST-PLUS-FIXED FEE**

The basis of payment for the services provided under this agreement shall be cost-plus-a-fixed fee.

1. The local agency shall reimburse the consultant for actual costs (including labor costs, employee benefits, overhead and other direct costs) incurred by the consultant in performance of the work, in an amount not to exceed \$_____ exclusive of any fixed fee. Actual costs shall not exceed the estimated wage rates and other costs set forth in the consultant's proposal.
2. In addition to the costs referred to in paragraph 1 of this article, the local agency shall pay the consultant a fixed fee of \$_____. Said fixed fee shall not be altered, unless there is a significant alteration in the scope, complexity, or character of the work to be performed which is documented as an amendment.
3. The Consultant shall be reimbursed for actual travel expenses incurred in the performance of this work, including the use of private vehicles at the rate of _____ cents per mile, while traveling away from consultant's headquarters, which is hereby designated as _____. In addition, consultant's personnel shall be reimbursed for per diem expenses at a rate not to exceed the currently authorized rates for state employees under State Department of Personnel Administration rules.
4. Total expenditures made under this agreement, including the fixed fee shall not exceed the sum of _____.

LUMP SUM

The basis of payment for the services provided under this agreement shall be lump sum.

1. Pursuant to satisfactory completion of this agreement, a lump sum payment of \$_____, which includes all expenses incurred will be made to the consultant.
2. The above lump sum payment includes: salary, fringe benefits, overhead, profit, and all other expenses incurred by the consultant.

*The other methods of payment are not addressed here.

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EXHIBIT 10-J STANDARD AGREEMENT FOR SUBCONTRACTOR/DBE PARTICIPATION**STANDARD AGREEMENT FOR SUBCONTRACTOR/DBE PARTICIPATION****1. Subcontractors**

- A. Nothing contained in this Agreement or otherwise, shall create any contractual relation between the Agency and any subcontractors, and no subcontract shall relieve the Contractor of his/her responsibilities and obligations hereunder. The Contractor agrees to be as fully responsible to the Agency for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the Contractor. The Contractor's obligation to pay its subcontractors is an independent obligation from the Agency's obligation to make payments to the Contractor.
- B. Any subcontract in excess of \$25,000, entered into as a result of this Agreement, shall contain all the provisions stipulated in this Agreement to be applicable to subcontractors.
- C. Contractor shall pay its subcontractors within ten (10) calendar days from receipt of each payment made to the Contractor by the Agency.
- D. Any substitution of subcontractors must be approved in writing by the Agency's Contract Manager in advance of assigning work to a substitute subcontractor.

(Use 2 or 3 below , delete the other)

2. Disadvantaged Business Enterprise (DBE) Participation (Without Availability Advisory Percentage)

- A. The Agency has not established a DBE Availability Advisory Percentage for this Agreement. This Agreement is subject to Title 49, Part 26 of the Code of Federal Regulations entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." Bidders who obtain DBE participation on this contract will assist Caltrans in meeting its federally mandated statewide overall DBE goal.
- B. DBE and other small businesses (SB), as defined in Title 49 CFR, Part 26 are encouraged to participate in the performance of agreements financed in whole or in part with federal funds. The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The contractor shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of US DOT- assisted agreements. Failure by the contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the recipient deems appropriate.
- C. Any subcontract entered into as a result of this Agreement shall contain all of the provisions of this section.

3. Disadvantaged Business Enterprise Program Availability Advisory

- A. This Agreement is subject to Title 49, Part 26, Code of Federal Regulations (49 CFR 26) entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." In order to ensure Caltrans achieves its federally mandated statewide overall DBE goal, the Agency encourages the participation of Disadvantaged Business Enterprises (DBEs), as defined in 49 CFR 26 in the performance of Agreements financed in whole or in part with federal Funds. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.

- B. As required by federal law, the Caltrans has established a statewide overall DBE goal. In order to ascertain whether that statewide overall DBE goal is being achieved, the Caltrans is tracking DBE participation on all federal-aid contracts.
- C. To assist Contractors in ascertaining DBE availability for specific items of work, the Agency advises that it has determined that DBEs could reasonably be expected to compete for subcontracting opportunities on this project and the likely DBE Availability Advisory Percentage is ___ percent. The Agency also advises that participation of DBEs in the specified percentage is not a condition of award.
- D. Contractor has agreed to carry out applicable requirements of Title 49 CFR 26, in the award and administration of federally assisted Agreements. The regulations in their entirety are incorporated herein and by reference.
- E. The Contractor should notify the Contract Manager in writing, of any changes to its anticipated DBE participation. This notice should be provided prior to the commencement of that portion of the work.
- F. DBE and other small businesses (SB), as defined in Title 49 CFR26 are encouraged to participate in the performance of agreements financed in whole or in part with federal funds. The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The contractor shall carry out applicable requirements of Title 49 CFR 26 in the award and administration of US DOT- assisted agreements. Failure by the contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the recipient deems appropriate.
- G. Any subcontract entered into as a result of this Agreement shall contain all of the provisions of this section.

4. Performance of DBE Contractors, and other DBE Subcontractors/Suppliers

- A. A DBE performs a commercially useful function when it is responsible for execution of the work of the Agreement and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible with respect to materials and supplies used on the Agreement, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, evaluate the amount of work subcontracted, industry practices; whether the amount the firm is to be paid under the Agreement is commensurate with the work it is actually performing, and other relevant factors.
- B. A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, Agreement, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, examine similar transactions, particularly those in which DBEs do not participate.
- C. If a DBE does not perform or exercise responsibility for at least thirty percent of the total cost of its Agreement with its own work force, or the DBE subcontracts a greater portion of the work of the Agreement than would be expected on the basis of normal industry practice for the type of work involved, it will be presumed that it is not performing a commercially useful function.

5. Prompt Payment of Funds Withheld to Subcontractors

(Local agency to use either A,B, or C below; delete the other two.)

- A. No retainage will be withheld by the Agency from progress payments due the prime contractor. Retainage by the prime contractor or subcontractors is prohibited, and no retainage will be held by the prime contractor from progress due subcontractors. Any violation of this provision shall subject the violating prime contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor or deficient subcontract performance, or noncompliance by a subcontractor. This provision applies to both DBE and non-DBE prime contractors and subcontractors.
- B. No retainage will be held by the Agency from progress payments due the prime contractor. Any retainage held by the prime contractors or subcontractors from progress payments due subcontractors shall be promptly paid in full to subcontractors within 30 days after the subcontractor's work is satisfactorily completed. Federal law (49CFR26.29) requires that any delay or postponement of payment over the 30 days may take place only for good cause and with the agency's prior written approval. Any violation of this provision shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise, available to the prime Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor. This provision applies to both DBE and non-DBE prime contractors and subcontractors.
- C. The Agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the agency, of the contract work, and pay retainage to the prime contractor based on these acceptances. The prime contractor, or subcontractor, shall return all monies withheld in retention from a subcontractor within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30-days may take place only for good cause and with the agency's prior written approval. Any violation of this provision shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor. This provision applies to both DBE and non-DBE prime contractors and subcontractors.
- D. Any subcontract entered into as a result of this Agreement shall contain all of the provisions of this section.

6. DBE Records

- A. The Contractor shall maintain records of materials purchased and/or supplied from all subcontracts entered into with certified DBEs. The records shall show the name and business address of each DBE or vendor and the total dollar amount actually paid each DBE or vendor, regardless of tier. The records shall show the date of payment and the total dollar figure paid to all firms. DBE prime Contractors shall also show the date of work performed by their own forces along with the corresponding dollar value of the work.

- B. Upon completion of the Agreement, a summary of these records shall be prepared and submitted on the form entitled, "Final Report-Utilization of Disadvantaged Business Enterprises (DBE)," CEM-2402F (Exhibit 17-F in Chapter 17 of the LAP), certified correct by the Contractor or the Contractor's authorized representative and shall be furnished to the Contract Manager with the final invoice. Failure to provide the summary of DBE payments with the final invoice will result in twenty-five percent (25%) of the dollar value of the invoice being withheld from payment until the form is submitted. The amount will be returned to the Contractor when a satisfactory "Final Report Utilization of Disadvantaged Business Enterprises (DBE)" is submitted to the Contract Manager.
- a. Prior to the fifteenth of each month, the Contractor shall submit documentation to the Agency's Contract Manager showing the amount paid to DBE trucking companies. The Contractor shall also obtain and submit documentation to the Agency's Contract Manager showing the amount paid by DBE trucking companies to all firms, including owner-operators, for the leasing of trucks. If the DBE leases trucks from a non-DBE, the Contractor may count only the fee or commission the DBE receives as a result of the lease arrangement.
- b. The Contractor shall also submit to the Agency's Contract Manager documentation showing the truck number, name of owner, California Highway Patrol CA number, and if applicable, the DBE certification number of the truck owner for all trucks used during that month. This documentation shall be submitted on the Caltrans' Monthly DBE Trucking Verification, CEM-2404(F) form provided to the Contractor by the Agency's Contract Manager.

7. DBE Certification and De-certification Status

If a DBE subcontractor is decertified during the life of the Agreement, the decertified subcontractor shall notify the Contractor in writing with the date of de-certification. If a subcontractor becomes a certified DBE during the life of the Agreement, the subcontractor shall notify the Contractor in writing with the date of certification. Any changes should be reported to the Agency's Contract Manager within 30 days.

When Reporting DBE Participation, Material or Supplies purchased from DBEs may count as follows:

- A. If the materials or supplies are obtained from a DBE manufacturer, 100 % of the cost of the materials or supplies will count toward the DBE participation. A DBE manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises, the materials, supplies, articles, or equipment required under the Agreement and of the general character described by the specifications.
- B. If the materials or supplies purchased from a DBE regular dealer, count 60 % of the cost of the materials or supplies toward DBE goals. A DBE regular dealer is a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the Agreement, are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a DBE regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A person may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating or maintaining a place of business provided in this section.

- C. If the person both owns and operates distribution equipment for the products, any supplementing of regular dealers' own distribution equipment, shall be by a long-term lease agreement and not an ad hoc or Agreement-by-Agreement basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not DBE regular dealers within the meaning of this section.
- D. Materials or supplies purchased from a DBE, which is neither a manufacturer nor a regular dealer, will be limited to the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on the job site, provided the fees are reasonable and not excessive as compared with fees charged for similar services.

(Add the following to contracts which require trucking)

When Reporting DBE Participation, Participation of DBE trucking companies may count as follows:

- A. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible.
- B. The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the Agreement.
- C. The DBE receives credit for the total value of the transportation services it provides on the Agreement using trucks it owns, insures, and operates using drivers it employs.
- D. The DBE may lease trucks from another DBE firm including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Agreement.
- E. The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by the DBE.
- F. For the purposes of this section, a lease must indicate that the DBE has exclusive use and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, as long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

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INSTRUCTIONS - LOCAL AGENCY PROPOSER/BIDDER-DBE (CONSULTANT CONTRACTS) INFORMATION FORM (Revised 10/05)

The form requires specific information regarding the consultant contract: Agency, Location, Project Descriptions, Contract Number (assigned by local agency), Federal Aid Project Number (assigned by Caltrans-Local Assistance), Total Dollar Contract Amount, Proposal/Bid Date, Proposer's/Bidder's Name and Advertised DBE "Availability Advisory Percentage" if any.

The form has a column for the Contract Item Number (or Item No's) and Item of Work and Description or Services to be Subcontracted or Materials to be provided by DBEs. The DBE should provide a certification number to the Contractor. Notify the Contractor in writing with the date of the decertification if their status should change during the course of the contract. The form has a column for the Names of DBE certified contractors to perform the work (include DBE address and phone number).

There is a column for the total DBE dollar amount. Enter the Total Claimed DBE Participation dollars and percentage amount of items of work submitted with your proposal/bid pursuant to the Contract Provisions. (If 100% of item is not to be performed or furnished by the DBE, describe exact portion of time to be performed or furnished by the DBE.)

Exhibit 10-O must be signed and dated by the person proposing/bidding. Also list a phone number in the space provided and print the name of the person to contact.

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The 3R work is generally regarded as heavy, nonroutine maintenance work designed to preserve and extend the roadway service life for at least ten years as well as upgrading to enhance safety where reasonable. It differs from new construction or reconstruction in that it does not contemplate capacity improvements, major realignment or major upgrading of geometric features or standards. However, the work may include selective improvements to highway geometry and other roadway features including safety appurtenances, and still be considered 3R work (please refer to Design Information Bulletin 79-02 available at the following website: <http://www.dot.ca.gov/hq/oppd/dib/dibprg.htm>).

11.2 Statewide Design Standards for Local Assistance Projects

The following statewide design standards are acceptable for design of local federal-aid projects both on and off the NHS.

Locally funded projects on the State Highway System (SHS) must be designed in accordance with SHS standards as defined in various Caltrans manuals.

Roadway and Appurtenances

Geometric Standards for New and Reconstruction Projects

New and reconstruction projects shall be designed in accordance with American Association of State Highway and Transportation Officials (AASHTO) Standards as defined in the current edition of *A Policy on Geometric Design of Highways and Streets* (often referred to as the *AASHTO Green book*).

The Federal Highway Administration (FHWA) has designated twelve (12) geometric controlling criteria with a primary importance for safety in the selection of design standards. These criteria are:

- Design Speed
- Lane Width
- Shoulder Width
- Bridge Width
- Horizontal Alignment
- Vertical Alignment
- Grades
- Stopping Sight Distance
- Cross Slopes
- Superelevation
- Horizontal Clearance
- Vertical Clearance

The FHWA has indicated that any deviations from these geometric controlling criteria requires formal approval. Such deviations from the above criteria requires that a local agency obtains design exception approval in accordance with the procedures described in Section 11.4, “Design Exceptions,” in this chapter.

Geometric Standards for 3R Projects

The minimum standards for geometric design of local federal-aid resurfacing, restoration and rehabilitation (3R) projects, are shown in Tables 1 through 10 of Exhibit 11-A, “Geometric Standards for Local 3R Projects” (see DIB 79-02 for geometric standards for 3R projects on National Highway System). Designs using better than minimum standards should be used when feasible especially in areas of high traffic volume; when design speeds exceed 50 mph; and when significant truck volumes are expected.

The primary purpose of 3R projects is to preserve and extend the service life of existing facilities and enhance highway safety, normally, without major improvements to existing geometric features. However, a reasonable effort should be made to provide uniform geometric standards for a substantial length of roadway. Therefore, the work may include upgrading of geometric features, such as minor roadway widening, flattening curves or improving sight distances and still be considered as 3R work.

Lane and Shoulder Widths-- Tables 1, 2 and 3 of Exhibit 11-A present the minimum 3R standards for widths of traffic lanes and shoulders on roadways classified as arterials, collectors and local roads and streets.

Table 4 presents the minimum 3R standards for traffic, turning, parking, and bicycle lanes for urban streets and roads with curb and gutter.

Wide lanes and shoulders give motorists: 1) increased opportunity for safe recovery when their vehicles run off the road, and 2) increased lateral separation between overtaking and meeting vehicles. Added safety benefits include improved sight distance at critical horizontal curves, reduced interruption from emergency stopping and road maintenance activities, less wear at the lane edge, and better roadway surface drainage.

Traffic volumes influence the cost-effectiveness of lane and shoulder widening, because the number of accidents eliminated by lane and shoulder widening increases almost in proportion to an Average Daily Traffic (ADT), whereas the costs are not affected significantly by ADT. Lane and shoulder widening can also produce timesavings for highway users, which can be an important consideration for highways with an ADT greater than 2,000 vehicles per day.

Bridge Widths -- The minimum bridge width values for 3R projects involving bridges to remain in place on arterial, collectors, and local streets and roads are shown in Tables 5, 6, and 7 of Exhibit 11-A. The 3R projects on such bridges involve mainly roadway resurfacing and improvements to railings. More significant work, such as structural strengthening, or deck replacement is classified as reconstruction and must meet AASHTO standards.

The relationship between bridge width and the width of approach lanes influences bridge safety; roadway constriction at narrow bridges reduces the opportunity for safe recovery by out-of-control vehicles, and may result in collisions with bridge abutments.

Thus, the safety cost-effectiveness of bridge width improvements depends upon the usable width of the bridge, the width of the approach lanes, traffic volumes, and the length of bridge.

Horizontal Clearance – Side slope and clear zone improvements on 3R projects should meet the following criteria:

1. Flatten side slopes of **1(v):4(h)**, or steeper at locations where run-off-the-road accidents are likely to occur, such as on the outside of sharp horizontal curves.
2. Whenever possible, side slopes should not be steepened when widening lanes and shoulders.
3. Remove, relocate, or shield isolated roadside obstacles.

Roadside characteristics are important in determining the overall level of safety provided by a highway. Accident rates are lower, and accidents are less severe on highways with gentle side slopes and fewer obstacles near the roadway.

Removing isolated trees, and relocating utility poles can be more safety cost-effective than widening lanes or flattening horizontal curves.

Horizontal Alignment -- Values for stopping sight distance and horizontal curves for 3R projects are shown in Tables 8, 9 and 10 of Exhibit 11-A.

Safety often can be improved at horizontal curves without costly reconstruction. Local agencies should evaluate other safety measures when reconstruction is unwarranted. Such measures might include widening lanes, widen and paving shoulders, flattening steep side slopes, removing or relocating roadside obstacles, and installing traffic control devices, raised pavement markings and reflective guideposts.

Accidents are more likely to occur on horizontal curves than on straight segments of roadway because increased demands are placed on the driver and vehicle, and centrifugal force tends to cause a vehicle to run-off-the road. The safety effect of an individual curve is influenced not only by the curve's geometric characteristics, but also by the geometry of adjacent highway segments. Safety considerations are important especially when a curve is unexpected, such as when it follows a long straight approach, or when it is hidden from view by a hillcrest.

Depending on site conditions, improvements to curves can be an inexpensive and effective means of reducing the severity and frequency of accidents.

Vertical Alignment -- Values for superelevation, grades and stopping sight distances are included in Tables 8, 9 and 10 of Exhibit 11-A. For sustained downgrades, consideration should be given to increasing the minimum stopping sight distances shown in the above tables.

The Transportation Research Board recommends that local agencies evaluate the option of reconstructing hillcrests when:

1. The hillcrest hides from view such conditions as: intersections, sharp horizontal curves or narrow bridges.
2. The Average Daily Traffic is greater than 1,500 vehicles per day.
3. The design speed of the hillcrest (based upon the minimum sight distance provided) is more than 20 mph below the 85th percentile speeds of vehicles on the crests.

Whether, or not the reconstruction of a hillcrest is necessary, designers should examine the nature or potential hazards hidden by a hillcrest, and consider other options such as removing potential hazards or providing warning signs.

Sight obstructions at hillcrests can be corrected only by changing the vertical alignment to lengthen the existing vertical crest curve.

Generally, to be safety and cost-effective, vertical alignment improvements must correct a substantial sight distance restriction that affects a driver's ability to anticipate difficult situations, such as turning vehicles, sharp curves, or other conditions that demand specific driver responses.

Pavement Crown and Edge Drops -- Local agencies performing resurfacing projects should consider constructing pavement overlays with pavement crowns that match AASHTO standards for new construction.

Resurfacing projects offer opportunities to improve surface drainage and vehicle control in wet weather, by correcting deficient cross slopes at little or no additional cost.

Pavement edge drops result either from resurfacing activity unaccompanied by desirable shoulder improvement, or from wear, or erosion of weak shoulder material. Resurfacing can increase the likelihood that edge drops will develop later and require repeated maintenance to correct.

Consideration should be given to paving shoulders selectively to improve all-weather use and prevent edge drop problems from occurring on either the inside of outside of a short radius curve.

Pavement Structural Section

The design of a pavement structural section is not an exact science. The design guidelines and standards referenced herein are based on a wide range of factors. The final pavement design must be based on a thorough investigation of specific project conditions including materials, environmental conditions, projected traffic, life-cycle economics, and the performance of other like pavement structural sections under similar conditions in the same area.

The structural section of the roadbed should conform to:

- Section 600 of the *Caltrans Highway Design Manual*,
- *Caltrans Flexible Pavement Structural Section Design Manual*, or
- *Flexible Pavement Structural Section Design Guide for California Cities and Counties*, published by Caltrans in cooperation with County Engineers Association of California and the League of California Cities.

Signs and Markings

Guidance, regulatory, warning and temporary traffic control signs, curb and pavement, or other markings, markers, and traffic signals installed, or placed on any project constructed with federal funds shall conform to the *Manual on Uniform Traffic Control Devices* (MUTCD) and *MUTCD California Supplement*.

The FHWA has indicated that school crosswalks and other school markings should conform to the MUTCD in the interest of national uniformity when transverse crosswalk lines are used. The crosswalk markings shall be solid white or yellow; as required by California law and as stated in the *MUTCD California Supplement, Part 7, Traffic Controls for School Areas*. The MUTCD and *MUTCD California Supplement* are respectively available at:

<http://mutcd.fhwa.dot.gov/ser-pubs.htm>

<http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/index.htm>

Deviations from the “Mandatory Standards” for signs markings, and traffic signals as defined and shown in the MUTCD and the *MUTCD California Supplement* are not permitted; unless a proposal to experiment with non-standard devices is submitted to the California Traffic Control Devices Committee and approved for experimental use.

Local agency plans and specifications with pedestrian facilities to be constructed with state funds (federal funds are not considered state funds) must be reviewed and approved by DSA with one exception. The one exception, is local agency plans and specifications of pedestrian facilities within the state highway rights of way, if not for rail and transit systems, can be reviewed and approved (certified) by Caltrans in place of DSA. Approval of the plans and specifications by DSA will require fees be paid directly to DSA. DSA regional offices can be found at this website:

<http://www.dsa.dgs.ca.gov/UniversalDesign/default.htm>

ADAAG Exceptions

The following provisions mentioned in part, are contained in ADAAG, Appendix A of 28 CFR, Part 36 and are available for the use of local agencies:

- *Paragraph 2. General*

2.2. Equivalent Facilitation. *Departures from particular technical and scoping requirements of this guideline by the use of other designs and technologies are permitted where the alternative designs and technologies used will provide substantially equivalent or greater access to and usability of the facility.*

- *Paragraph 4.1.1 Application*

(5) *General Exceptions. (a) In new construction, a person or entity is not required to meet fully the requirements of these guidelines where that person or entity can demonstrate that it is structurally impracticable to do so. Full compliance will be considered structurally impracticable only in those rare circumstances when the unique characteristics of terrain prevents the incorporation of accessibility feature. If full compliance with the requirements of these guidelines is structurally impracticable, a person or entity shall comply with the requirements to the extent it is not structurally impracticable. Any portion of the building or facility which can be made accessible shall comply to the extent that it is not structurally impracticable.*

- *Paragraph 4.1.6 Accessible Buildings: Alterations*

(1) *General. (j) Exception: In alteration work, if compliance with 4.1.6 is technically infeasible, the alteration shall provide accessibility to the maximum extent feasible. Any elements or features of the building or facility that are being altered and can be made accessible, shall be made accessible within the scope of alteration.*

Technically Infeasible means with respect to an alteration of a building, or a facility that has little likelihood of being accomplished, because of existing structural conditions that would require removing or altering a load-bearing member which is an essential part of the structural frame; or because other existing physical or site constraints prohibit modification or addition of elements, space; or features which are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.

Encroachment Permits

Should an encroachment permit from Caltrans be needed by a local agency for a project; ADA compliance of the plans and specifications in accordance with *Caltrans Design Information Bulletin 82-01* will be required before an encroachment permit is issued.

Applicable Facilities

Based on federal and state laws and regulations, all newly constructed facilities must allow full accessibility with few exceptions. Facilities, defined in 28 CFR and 49 CFR Part 28, include but are not limited to all, or any portion of buildings, structures, roads, walks, passages, parking lots, etc. When existing facilities are being reconstructed or modified, the contract must also include work to make these facilities fully accessible. *Title II-6.6000* of the Department of Justice's, *Technical Assistance Manual*, further defines this, by stating that when streets, roads, or highways are newly built or altered; they must have ramps or sloped areas wherever there are curbs or other barriers to entry from a sidewalk or path. Likewise, when new sidewalks or paths are built, or are altered, they must contain curb ramps or sloped areas wherever they intersect with streets, roads, or highways.

ADA Design Assistances

DSA's regulations and building standards generally prescribe a standard of accessibility, or usability equal, or greater than provided by the federal *ADA Standards for Accessible Design* adopted by the United States Department of Justice and the Department of Transportation, to implement the Americans with Disabilities Act of 1990 (Public Law 101-336). DSA's website, including a current version of the "*DSA's California Access Compliance Reference Manual*," is located at:

<http://www.dsa.dgs.ca.gov/universaldesign/default.htm>

The U.S. Department of Justice and the Federal Access Board both have very comprehensive websites committed to accessible design. The websites include ADA design standards and a design guide. The websites are respectively located at:

<http://www.ada.gov/>, and <http://www.access-board.gov/indexes/pubsindex.htm>

Bridges

Definitions

Bridge -- A structure including supports erected over a depression or an obstruction, such as a waterway, highway or railway, and having a track or passageway for carrying traffic, or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between undercroppings of abutments, or spring lines of arches or extreme ends of openings for multiple boxes—may include multiple pipes where the clear distance between openings is less than half of the smallest contiguous opening.

Although the FHWA has not designated bridge railing as a “controlling criteria” for safety (requiring formal approval), nevertheless, all deviations from accepted bridge railing standards and procedures in this publication should be justified and documented in the project files. Project-by-project deviations from the criteria in this publication do not require handling, in accordance with design exception approval procedures discussed in Section 11.4 of this chapter.

However, consideration should be given to the long-term effects as to the bridge traffic safety features. This is part of data to be collected and retained for FHWA’s use per CFR Section 650.311. Specifically, this data is included in the Sufficiency Rating (see the *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation’s Bridges*, published by FHWA), which is used in the HBP Program as a basis for establishing eligibility and priority for replacement and rehabilitation of bridges (CFR 650.409).

Refer to the above section entitled “Safety” for additional references and guidelines on the design of bridge approach guardrail and other safety features.

Bridges to Remain in Place

When local agencies make highway improvements, they must often decide whether or not to upgrade existing bridges. If the structures are otherwise compatible with the proposed work, the following criteria should be used:

- AASHTO’s *A Policy on Geometric Design of Highways and Streets* provides the criteria for minimum structural capacities and minimum roadway widths for bridges to remain in place (refer to the table *Minimum Structural Capacities and Minimum Roadway Widths for Bridges to Remain in Place*). This table is applicable only when no modifications are made to the superstructure (asphalt concrete blankets of 1 inch thickness or less, attachment of guardrails at bridge approaches, and deck seals are not considered superstructure modifications). When changes to the superstructure are required, refer to the table entitled, *Minimum Clear Roadway Widths and Design Loadings for New and Reconstructed Bridges*.
- The structure clear width (traveled way plus shoulders) should be determined in conformance with AASHTO standards.
- Asphalt concrete thin blanket overlay (thickness of 1 inch or less) projects that cross structures without increasing the width of the approach roadway do not affect the geometric or design standards of an existing structure. A “cumulative or total” asphalt concrete overlay thickness of more than 3 inches, or any significant increase in width of pavement of any thickness requires that the structure be reviewed, to comply with all AASHTO design and geometric criteria. A total asphalt concrete thickness of more than 1 inch, but less than or equal to 3 inches, as well as, membrane deck seals should be considered on a case-by-case basis. Bridge rail height is one of design criteria that needs to be checked with overlays between 1 and 3 inches.
- All bridges within project limits or immediately adjacent to the project, shall be provided with standard approach railings.
- Timber structures may not be widened.

Design of Large Culverts

Reinforced concrete cast-in-place box culverts, concrete arch culverts, structural plate vehicular undercrossings, and structural plate arch culverts with cast-in-place footings and inverts require favorable foundation conditions. When the *Caltrans Standard Plans* are used for these culverts, the foundation material must be capable of supporting footing pressures indicated on the plan.

Special culvert designs are required when:

- Fill heights exceed those on the *Caltrans Standard Plans*.
- Fill heights exceed those in the tables of the *Caltrans Highway Design Manual*.
- Corner pressure exceeds values in Tables 854.3E and 854.4C of the *Caltrans Highway Design Manual*.
- Foundation material will not support the design soil pressure in the *Caltrans Standard Plans*.
- Culverts are subjected to unequal lateral pressures.
- Culverts exceed the sizes in the *Caltrans Standard Plans*.

All structures shall be proportioned for loads and forces outlined in the *Caltrans Bridge Design Specifications*, Section 3. "Loads."

The loading conditions outlined in this chapter have been developed for California to provide adequate capacity for all anticipated seismic loading conditions on underground structures. No additional allowances are required.

Foundation Investigation for Design

A foundation investigation and report by an Engineering Geologist or Civil Engineer specializing in soils engineering should be completed for all bridge and large culvert sites. This requirement may be waived, if the engineer in responsible charge of design determines that site conditions clearly indicate the report is unnecessary. This requirement for a foundation investigation and report must be waived on a project-by-project basis. The waiver must be signed by a California registered Civil Engineer and retained in the project files. Federal funds shall not participate in any construction change orders or claims relating to inadequate foundation investigations when such a waiver has been exercised. In addition, federal participation in future repair costs resulting from the inadequate foundation investigation will be made on a project-by-project basis.

All reports shall contain recommendations by the Soils Engineer or Engineering Geologist for specific design considerations for the site (see Exhibit 11-C, "Foundation Investigations," in this chapter).

Where pile support is anticipated in design, specific attention is directed to the *Caltrans Bridge Design Specifications*, Section 4.3.3, "Design Loads." The report should contain the data called for in Section 4.3.5, "Required Subsurface Investigations."

Drainage

General

The goal of hydraulic design for bridges and culverts is to convey surface and stream waters originating upstream of the drainage facility to the downstream side without causing objectionable backwater, excessive flow velocities, excessive scour, or unduly affecting traffic safety. The hydraulic drainage design criteria contained or referenced in this manual have been developed to accomplish this goal. However, state-of-the-art methods and procedures for the hydrologic analysis required to determine the severity and probability of occurrence of flood events are inherently ambiguous. Therefore, the drainage design criteria contained in this manual section is provided for guidance only and is not intended to establish legal design standards, which must be strictly adhered to. The local agency must use discretion in applying the drainage criteria in order to design the most cost-effective drainage facility considering the importance of the transportation facility, safety, legal obligations, ease of maintenance, and aesthetics. For example, the selection of a design flood with a lesser or greater peak discharge may be warranted and justified by economic analysis (except that the approach roadway should not be inundated by the design storm).

An exception to the above discussion is the evaluation of encroachments on the base flood plain. Federal regulations (23 CFR 650.115) state that all such encroachments shall be evaluated to assess the costs and risks associated with the base flood (Q100) or overtopping flood, whichever is greater.

Definitions

Action - Any highway construction, reconstruction, rehabilitation, repair, or improvement.

Backwater - The rise in water surface elevation due to encroachment.

Base Flood - The flood or tide having only a one percent (1%) probability of being equaled or exceeded in any given year. It is also referred to as the 100-year flood (Q100).

Convey - Passage through, or bypass of, the structure without significant damage to encroachments within the flood plain.

Design Flood - The peak discharge (volume if appropriate), stage or wave crest elevation selected for the design of a facility located within a base flood plain. By definition through lanes will not be inundated by the design flood.

Encroachment - A facility and/or appurtenant feature located within the limits of a base flood plain.

Flood of Record - The greatest recorded flood in the drainage basin.

Flood Plain - Any of the following: (1) the valley area adjacent to a stream or river subject to inundation during periods of high water that exceed normal bank flow elevation, (2) an area adjacent to a lake, estuary, ocean or similar body of water subject to inundation by high water, high tides, surges, tsunamis or any combination of these, and (3) an area where the path of the next flood flow is unpredictable, as within the limits of a debris cone, an alluvial deposit, cone, or fan, a debris slope or a talus.

Flood Plain Values - Fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural moderation of floods, water quality maintenance, groundwater recharge, etc.

Freeboard - (1) The vertical distance between the lowest structural member of a bridge superstructure and the water surface elevation of the design flood. (2) The vertical distance between the water surface elevation of the design flood, and the tops of the sides of an open conduit designed to allow for floating debris, or any other condition, or emergency without overtopping the structure.

Overtopping Flood - The magnitude of flood at which the water ceases to be conveyed totally through the drainage structure. Flow may be over the highway through overflow channels, or structures provided for emergency relief, or escape to another flood plain.

Regulatory Floodway - The flood plain area that is reserved in an open manner by federal, state or local requirements (i.e., unconfined or unobstructed either horizontally or vertically), to provide for the discharge of the base flood so that the cumulative increase in water surface elevation is no more than a designated amount (not to exceed 1 foot as established by the Federal Emergency Management Agency [FEMA] for administering the National Flood Insurance Program). The physical limits of the floodway will however, vary based on federal, state, or local definition.

Risk - The consequences associated with the probability of flooding attributable to an encroachment. It shall include the potential for property loss and hazard to life during the service life of the highway.

Risk -Analysis - An economic comparison of design alternatives using expected total costs (construction costs-plus-risk costs), to determine the alternative with the least total expected cost to the public. It shall include probable flood-related costs during the service life of the facility for highway operation, maintenance and repair for highway-aggravated flood damage to other property, and for additional or interrupted highway travel.

Significant Encroachment - A highway encroachment and any direct support of likely base flood plain development that would involve one or more of the following construction or flood related impacts: (1) a facility which provides a community's only evacuation route or one that is needed for emergency vehicles, (2) a facility in an unstable stream bed or other dangerous location, and (3) a facility that might have a significant adverse impact on natural beneficial flood plain values. It is federal policy to discourage any proposal that includes a significant encroachment.

Hydraulic Design Criteria

BRIDGES:

- The basic rule for hydraulic design of bridges is that; they should be designed to pass the two percent (2%) probability flood or tide (Q50) or the flood-of-record, whichever is greater without causing objectionable backwater, excessive flow velocities, or encroaching on through traffic lanes. Sufficient freeboard, the vertical clearance between the lowest structural member, and the water surface elevation of the design flood should be provided. A minimum freeboard of 2 feet is often assumed for preliminary bridge design. An evaluation should be performed to determine, if horizontal and vertical driftway requirements warrant a modified freeboard. The freeboard for controlled flow waterways, such as irrigation canals, shall be required by the regulatory agency having jurisdiction.

- The final design should be able to convey the base flood, Q100.
- The base flood (Q100) or overtopping flood, whichever is greater shall be used to evaluate the costs, risks and impacts associated with encroachments on the 100-year base flood plain.
- The minimum design flood for foundation analysis should be the base flood (Q100). Bridges with scourable beds should withstand the effects of the base flood (Q100) without failure. The top of pier footing should be placed at, or below the calculated total scour condition including anticipated lateral channel migration. Pile extensions and pile shafts should have sufficient embedment depth for the potential scour conditions.
- Consideration should be given to the long-term effects as to the bridge waterway adequacy. This is part of data to be collected and retained for FHWA's use per CFR Section 650.311. Specifically, this data is included in the Sufficiency Rating (see the *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges*, published by FHWA), which is used in the HBRR Program, as a basis for establishing eligibility and priority for replacement, and rehabilitation of bridges (CFR 650.409).

CULVERTS:

There are two primary design frequencies that should be considered in the design of drainage culverts. A culvert should convey:

- The ten percent (10%) probability flood or tide (Q10) without causing the headwater elevation to rise above the inlet top of culvert.
- The one percent (1%) probability flood (Q100) without damage to the facility or adjacent property.

OPEN CHANNELS/CONDUITS:

- Open channels/conduits should be designed according to the above bridge criteria with appropriate freeboard.

ROADSIDE DRAINAGE:

- The spacing of roadway inlets for pavement drainage vary with the desirable limits or water spread, which in turn depend on the type of facility, design storm frequency, traffic volume, design speed, and any local requirements. The recommended limits for water spread on various types of roadway facilities are provided in Chapters 800 to 890 of the *Caltrans Highway Design Manual*.

Additional information on the design of culverts including: hydrologic and hydraulic design considerations; height of fill limitations; protection from abrasion and corrosion; as well as, other economic, construction and maintenance considerations are included in the *Caltrans Highway Design Manual*.

Flood Plain Encroachments

Proposed actions which encroach on a base flood plain or support incompatible flood plain development must be evaluated in a location Hydraulic Study to assess impacts on natural and beneficial flood plain values in accordance with 23 CFR 650A. The location hydraulic study must provide the following information:

- A brief description of the project hydrology
- A description of the types of traffic
- Emergency access data, availability of detours, etc.
- Comments on constraints which influence selection of available alternatives
- The location of property at risk
- An estimate of potential damage to property at risk
- A discussion of the environmental impacts

A summary of the location hydraulic study shall be included in the environmental document. When there is a significant encroachment within the base flood plain, a finding that the project is the only practical alternative (the local agency must assure the opportunity for early public involvement) shall be included in the final environmental "NEPA" document and concurred with by the FHWA.

Encroachments within regulatory floodways are generally not permitted. Local agencies should consult the appropriate federal, state or local regulatory agency for more information.

The design selected for the encroachment must be supported by an analysis of design alternatives, with consideration given to capital costs, risks, and other economic, engineering, social, and environmental concerns. Refer to 23 CFR 650.117 for the required content of the design studies. Upon completion of the environmental process, a hydraulic design study is required as part of the final design process.

The above technical engineering reports shall be prepared by a registered Civil Engineer in the State of California. The reports shall bear the registration seal, signature, license number and registration certificate expiration date of the California Registered Professional Engineer responsible for preparing the report.

When there is a potential for extensive disruption of essential services or incurring losses due to implementation of the proposed action; a comprehensive risk and cost analysis may be advisable during the final design stage. If a risk/cost analysis is anticipated, it is recommended that the results of preliminary studies be reviewed with the FHWA to confirm the need for the analysis.

For additional information on analysis of encroachments onto a flood plain, refer to Chapter 17, "Flood Plains," of the *Standard Environmental Reference* (SER) and at this website: <http://www.dot.ca.gov/ser/vol1/vol1.htm>.

Level of Evaluations

It is the policy of Caltrans and FHWA that the level of evaluation comply with federal and state mandated procedures and be commensurate with the risks and environmental impacts involved. An initial level of evaluation based on preliminary project data, may be established during the Preliminary Environmental Study (PES) (see Chapter 6, *Environmental Procedures*, of the LAPM and at this website:

<http://www.dot.ca.gov/hq/LocalPrograms/lam/lapm.htm>).

Refer to Exhibit 11-D entitled *Preliminary Hydrologic/Hydraulic Summary*, of this chapter for the information to be provided by a local agency “prior to or at” the early coordination meeting. The actual level of evaluation may change due to unforeseen conditions or impacts revealed during the environmental review and detailed design stage of project development. A less comprehensive evaluation is appropriate for encroachments at locations where the risk of property damage or damage to the facility is small. A decision to raise or lower the level of evaluation should be made in consultation with the FHWA.

A rehabilitation project including widening represents a significant financial investment and must be evaluated for compliance with current hydraulic design criteria for the project location. Any deviations must be justified and documented in the project files.

A comprehensive list of items to be considered for inclusion in drainage studies and reports is included in Exhibit 11-E, “Checklist for Drainage Studies and Reports,” in this chapter. This exhibit also includes an excellent list of references for background information.

Scour Evaluations

A scour evaluation should be conducted for all bridges over water. The scour evaluation should include consideration of long-term aggradation/degradation, contraction scour, local scour, and lateral migration. The details of the scour evaluation shall be commensurate with the risk associated with the structure.

The FHWA has developed Hydraulic Engineering Circular (HEC) “#18 Evaluating Scour at Bridges” to aid in proper development of the necessary scour evaluations. Calculations similar to those in HEC #18 may be used for evaluating scour at bridges. The scour evaluation should be done by an interdisciplinary team consisting of hydraulic, geotechnical and structural engineers. Bridges with scourable beds should withstand the effects of the Q_{100} flood without failure. HEC #20 entitled “Stream Stability at Highway Crossings” is another resource for evaluating stream stability at design locations. For existing bridges that are susceptible to scour, refer to HEC “#23, Bridge Scour and Stream Instability Countermeasure,” for suggested preventative measures.

Consideration should be given to the effect of aggregate mining contributing to scour at bridge foundations. Mining without proper monitoring and regulation could jeopardize federal funding for a damaged structure, if a local agency is aware of severe degradation due to mining and does nothing to mitigate the loss of material.

General Design Considerations for Bridges and Culverts

The effect on all permanent flood control structures, either under construction or in place shall be considered in determining the effects of the design flood. Runoff estimates should be based on the land development expected in the watershed twenty years hence.

The effect of bedload, drift, ice, upstream and downstream mining operation, etc., should be considered for all structures, and where appropriate, adequate armor, debris racks, clearance, etc., should be provided.

Typically, proposed construction which is capable of impounding water to the extent that it meets the legal definition of a dam must be approved by the Department of Water Resources (DWR), Division of Safety of Dams. The legal definition of a dam is given in Sections 6002 and 6003 of the *State Water Code*. Generally, any facility 25 feet or more in height, or impound capacity of 50 acre-feet or more, is considered a dam. However, any facility 6 feet or less in height, or storage capacity 15 acre-feet or less, shall not be considered a dam. Additionally, Section 6004 of the *State Water Code* states "... and no road or highway fill or structure ... shall be considered a dam." Therefore, except for large retention or detention facilities, there is rarely a need for involvement by the DWR.

Although most designs will be exempt from DWR approval, caution should always be exercised in the design of high fills that could impound large volumes of water. Even partial plugging of a cross drain could lead to high pressures on the upstream side of the fill, creating seepage throughout the fill and/or an increased potential for piping.

Documentation

Whenever a waterway is involved, hydraulic studies must be performed and documented. The location hydraulic studies, which determine the selection of design alternatives, evaluate favorable or adverse effects of the facility on the stream environment; analyze other economic, engineering, and environmental concerns and detailed design studies; must be documented and retained in the local agency's permanent project design files. Upon request, these studies must be made available to the public, Caltrans, or FHWA. The documentation of the FHWA finding regarding the floodplain also must be retained in the files.

The following hydrologic data shall be shown on the contract plans:

Drainage Area _____ (acre)	Design Flood	Base Flood	Overtopping Flood	Flood of Record
Frequency (years)	_____	_____	_____	_____
Discharge (cubic feet/second)	_____	_____	_____	_____
Water Surface Elevation at Bridge (feet)	_____	_____	_____	_____

The *Design Exception fact Sheet* must be signed, stamped with engineer's seal, and approved by Director of Public Works, or the person whom approval authority has been delegated.

Tracking of Design Exceptions

A tracking system for design exceptions should be implemented by local agencies to retrieve project information quickly and accurately. The data should include:

- Project description.
- Project location
- Nonstandard features approved
- Indication if future commitments have been made
- Brief description of commitments to upgrade the project to design standards at a future date

11.5 References

1. American Association of State Highway and Transportation Officials (AASHTO)

- *A Policy on Geometric Design of Highways and Streets, current edition (2004)*
- *Guide Specifications for Bridge Railings, current edition*
- *Roadside Design Guide, current edition (2002)*
- *Standard Specifications for Highway Bridges, current edition*

2. California Department of Transportation (Caltrans)

- *Bank and Shore Protection, 1970*
- *Bridge Design Aids, current edition*
- *Bridge Design Details, current edition*
- *Bridge Design Details, current edition*
- *Bridge Design Practice Manual, current edition*
- *Bridge Design Specifications, current edition*
- *Bridge Memo to Designers, current edition*
- *Vehicle Crash Tests of Steel Bridge Barrier Rail Systems for Use on Secondary Highways, Final Report # FHWA/CA/TL-93/01, Division of New Technology, Materials and Research*
- *Flexible Pavement Structural Section Design Manual*
- *Flexible Pavement Structural Section Guide for California Cities and Counties*
- *Highway Design Manual*

Chapter 80 - Application of Design Standards

Chapter 200 - Geometric Design and Structure Standards

Chapter 600 - Design of the Pavement Structural Section

Chapters 800 to 890 - Highway Drainage Design

Chapter 1000 - Bikeway Planning and Design

- *Local Assistance Procedures Manual (LAPM)*
- *MUTCD (Manual on Uniform Traffic Control Devices) California Supplement*
- *Standard Environmental Reference (SER)*
- *Project Development Procedures Manual, current edition*
- *Standard Plans*
- *Standard Specifications*
- *Design Information Bulletin (DIB) 79-02*
- *Minimum Standards for Geometric Design of federal-Aid Resurfacing, Restoration, and Rehabilitation Projects on Local Streets and Roads (1988).*

3. FEDERAL OR FEDERAL HIGHWAY ADMINISTRATION (FHWA)

- *FHWA Internet Home Page: <http://www.fhwa.dot.gov>*
- *23 USC Standards*
- *Designing Sidewalks and Trails for Access (Part 2), FHWA-EP-01 027*
- *Federal-Aid Policy Guide, Subchapter G, Engineering and Traffic Operations, Part 625 - Design Standards for Highways*
- *28 CFR Part 36 Nondiscrimination on Basis of Disabilities by Public Accommodations and in Commercial Facilities, Appendix A Standards For Accessible Design*
- *28 CFR Part 35 Nondiscrimination on the Basis of Disability in State and Local Government Services*
- *41 CFR Part 101*
- *23 CFR Part 650 Bridges, Structures and Hydraulics*
- *Hydraulic Engineering Circulars*
 - *Design of Riprap Revetment - Hydraulic Engineering Circular #11,*
 - *Evaluating Scour at Bridges - Hydraulic Engineering Circular #18,*
 - *Stream Stability at Highway Crossings - Hydraulic Engineering Circular #20,*
- *Manual on Uniform Traffic Control Devices (MUTCD), current edition*
- *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridge, Report No. FHWA-ED-89-044*
- *FHWA Contract Administration Core Curriculum, Guide 2001*

4. OTHER

- *Designing Safer Roads - Practices for Resurfacing, Restoration and Rehabilitation, Special Report 214, Transportation Research Board*
- *Roadside Safety, Transportation Research Record 1065, Transportation Research Board*
- *Recommended Procedures for the Safety Performance Evaluation of Highway Appurtenances, National Cooperative Highway Research Program Report 230*
- *Multiple-Service-Level Highway Bridge Railing Selection Procedures, National Cooperative Highway Research Program Report 239*
- *Standard Plans for Public Works Construction, developed and promulgated by the American Public Works Association, Southern California Chapter, and the Associated General Contractors of California, Southern California Districts*
- *Standard Specifications for Public Works Construction, developed and promulgated by the American Public Works Association, Southern California Chapter, and the Associated General Contractors of California, Southern California Districts*
- *Recommended Procedures for the Safety Performance Evaluation of Highway Features, Report 350*

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EXHIBIT 11-A GEOMETRIC DESIGN STANDARDS FOR LOCAL 3R PROJECTS**GEOMETRIC DESIGN STANDARDS FOR LOCAL 3R PROJECTS****Table 11-1: Lane and Shoulder Widths Arterial Roads and Streets**

Design Year Volume (ADT)	Design Speed (mph)	Lane Width (feet)	Shoulder Width [a] (feet)	Total Roadway Width (feet)
Low Volumes:				
1 - 750 ADT	All	10	2	24
High Volumes:				
751 - 2,000 ADT	All	12	2 [b]	28 [c]
Over 2,000 ADT	All	12	6 [b]	36 [c]

[a] All shoulders on rural and urban arterials to be paved.

[b] Reduce by 1 foot for highways on mountainous terrain.

[c] Reduce by 2 feet for highways on mountainous terrain.

TABLE 11-2: LANE AND SHOULDER WIDTHS COLLECTOR ROADS AND STREETS

Design Year Volume (ADT)	Design Speed [a] (mph)	Lane Width (feet)	Shoulder Width [b] (feet)	Total Roadway Width (feet)
Low Volumes:				
1 - 750 ADT	All	10	2	24
High Volumes:				
751 - 2,000 ADT	Under 50	10	2 [c]	24 [d]
	50 and over	12	2 [c]	28 [d]
Over 2,000 ADT	All	12	4 [c]	32 [d]

[a] Highway segments should be classified as “under 50” only if most vehicles have an average speed of less than 50 mph over the length of the segment

[b] All shoulders on collector roads and streets to be paved.

[c] Reduce by 1 foot for highways on mountainous terrain.

[d] Reduce by 2 feet for highways on mountainous terrain.

TABLE 11-3: LANE AND SHOULDER WIDTHS LOCAL ROADS AND STREETS

Design Year Volume (ADT)	Design Speed [a] (mph)	Lane Width (feet)	Shoulder Width (feet)	Total Roadway Width (feet)
Low Volumes:				
1 - 750 ADT	All	10	2	24
High Volumes:				
751 - 2,000 ADT	Under 50	10	2 [b]	24 [c]
	50 and over	12	2 [b]	28 [c]
Over 2,000 ADT	All	12	4 [b]	32 [c]

- [a] Highway segments should be classified as “under 50” only if most vehicles have an average speed of less than 50 mph over the length of the segment
- [b] Reduce by 1 foot for highways on mountainous terrain.
- [c] Reduce by 2 feet for highways on mountainous terrain.

TABLE 11-4: LANE WIDTHS URBAN ROADS AND STREETS

TYPE OF LANE	MINIMUM WIDTH(FEET)
Curb Lane	
No Parking Anytime [a]	11
Part-time Use (peak hour/high volume/low speed)	9
With Parking	19
Interior Lane	10
Lane Adjacent to Median	
Raised Curb	10
Painted Median	10
Left-Turn Lane	
One-Way (one lane only)	10
Two-Way (continuous)	10
Bicycle Lane (Within Roadway)	
One-Way	4
Bicycle Lane and Parking (One-Way)	12

- [a] A 1 foot curb lane, with up to 2 feet wide gutter, may be used at intersections.

TABLE 11-5: BRIDGES ON ARTERIAL ROADS AND STREETS

Design Year Volume (ADT)	Minimum Usable Bridge Width [a]
1 - 750	Width of approach lanes [b]
751 - 2,000	Width of approach lanes plus 2 feet each side
2,001 - 6,000	Width of approach lanes plus 4 feet each side
Over 6,000	Width of approach lanes plus 8 feet each side

[a] If lane widening is planned as part of a 3R project, the usable bridge width should be compared with the planned width of the approaches after they are widened.

[b] Minimum usable bridge width to be 24 feet.

TABLE 11-6: BRIDGES ON COLLECTOR ROADS AND STREETS

Design Year Volume (ADT)	Minimum Usable Bridge Width [a]
1 - 750	Width of approach lanes [b]
751 - 2,000	Width of approach lanes plus 2 feet each side
2,001 - 6,000	Width of approach lanes plus 4 feet each side
Over 6,000	Width of approach lanes plus 8 feet each side

[a] If lane widening is planned as part of a 3R project, the usable bridge width should be compared with the planned width of the approaches after they are widened.

[b] Minimum usable bridge width to be 24 feet.

TABLE 11-7: BRIDGES ON LOCAL ROADS AND STREETS

Design Year Volume (ADT)	Minimum Usable Bridge Width [a]
1 - 750	Width of approach lanes
751 - 2,000	Width of approach lanes plus 2 feet each side
Over 2,000	Width of approach lanes plus 4 feet each side

[a] If lane widening is planned as part of a 3R project, the usable bridge width should be compared with the planned width of the approaches after they are widened.

TABLE 11-8: HORIZONTAL AND VERTICAL ALIGNMENT ARTERIAL ROADS AND STREETS

Design Speed (mph)	Minimum Stopping Sight Distance (feet)	Minimum Radius of Horizontal Curve (feet)		Maximum Grade (%)					
				Rural			Urban		
				Level	Rolling	Mountains	Level	Rolling	Mountains
30	200	230	250	...	...	...	8	9	11
40	275	430	470	...	...	...	7	8	10
50	400	695	765	4	5	7	6	7	9
60	525	1,090	1,205	3	4	6	5	6	8

- [a] Generally, superelevation should not exceed 10 percent.
- [b] Superelevation should not exceed 8 percent where snow and ice conditions prevail.

TABLE 11-9: HORIZONTAL AND VERTICAL ALIGNMENT COLLECTOR ROADS AND STREETS

Design Speed (mph)	Minimum Stopping Sight Distance (feet)	Minimum Radius of Horizontal Curve (feet)		Maximum Grade (%)					
				Rural			Urban		
				Level	Rolling	Mountains	Level	Rolling	Mountains
20	125	100	105	7	10	12	9	12	14
30	200	230	250	7	9	10	9	11	12
40	275	430	470	7	8	10	9	10	12
50	400	695	765	6	7	9	7	8	10
60	525	1,090	1,205	5	6	8	6	7	9

- [a] Generally, superelevation should not exceed 10 percent.
- [b] Superelevation should not exceed 8 percent where snow and ice conditions prevail.

TABLE 11-10: HORIZONTAL AND VERTICAL ALIGNMENT LOCAL ROADS AND STREETS

Design Speed (mph)	Minimum Stopping Sight Distance (feet)	Minimum Radius of Horizontal Curve (feet)		Maximum Grade (%)		
		Super-Elevation 10% (a)	Super-elevation 8% (b)	Level	Rural Rolling	Mountains
20	125	100	105	8	11	16
30	200	230	250	7	10	14
40	275	430	470	7	9	12
50	400	695	765	6	8	10
60	525	1,090	1,205	5	6	...

[a] Generally, superelevation should not exceed 10 percent.

[b] Superelevation should not exceed 8 percent where snow and ice conditions prevail.

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EXHIBIT 11-C FOUNDATION INVESTIGATIONS FOR DESIGN**FOUNDATION INVESTIGATION
FOR DESIGN**

A foundation investigation and report is required for all proposed structure sites. The study and report shall be made by a California licensed Engineering Geologist or Civil Engineer, who specializes in foundations. The report shall, at a minimum, address all “applicable” topics shown in the following Caltrans checklist.

Specific attention is directed to appropriate sections of the *Caltrans Bridge Design Specifications*, Section 4-“FOUNDATIONS.” All driven pile support recommendations shall consider the use of Caltrans Standard Class 45 or Class 70 piles using design loads of 45 and 70 tons, respectively.

A Log of Test Borings sheet shall be drafted and included as part of the foundation report, and as part of the structure plans.

**CHECKLIST FOR STRUCTURE FOUNDATION STUDIES
AND REPORTS****LOG OF TEST BORINGS SHEET**

A log of Test Borings sheet (similar to Caltrans’ sheet) shall be included as part of the Foundation Report. Show the location of each boring or test pit in plan view. Logs of all borings shall be shown in an elevation or profile view on the sheet. Information which should be shown on plots of test borings is as follows:

1. Diameter, type, and date of boring.
2. Location of borings with respect to stationing along survey lines for the proposed project.
3. Elevation of the top of each boring, etc.
4. Description of samplers, sampling methods, and in-situ tests.
5. Test results including Standard Penetration Test. Results of the Standard Penetration Test (ASTM D-1586-84) shall be presented so that quick correlation with the Caltrans data base may be made.
6. Soil or rock descriptions and elevations of strata.
7. Groundwater elevation and date of measurement should be shown adjacent to the boring or test pit where taken.
8. Location, description, and elevation or the benchmark used for determining the top-of-hole elevations shown on the Log of Test Borings.
9. Name and position or title of person conducting the field study.
10. Name and position or title of the registered Engineering Geologist or Civil Engineer approving the “Log of Test Boring Sheet.”

WRITTEN REPORT

A written report shall be prepared, which shall contain an interpretation and analysis of the foundation conditions based upon all available sources of data. Data may come from new or previous exploration programs, laboratory testing, and nearby construction experience, performance of nearby structures, etc. A short description of site topography geology should be included. Emphasis should be placed on slope stability of cuts and excavations, unusual groundwater conditions, springs, etc. All sources of information should be cited. The materials and conditions, which may be encountered during construction, shall be discussed. Problems involving design and construction should be anticipated and recommendations made for their solution. The recommendations shall be brief, concise, and definite. Reasons for recommendations and their supporting data shall always be included. Methods used for calculating pile capacities and soil-bearing capacities should be mentioned for ease of review. Extraneous data, which are of no use to the designer or Resident Engineer, should be omitted.

The written report shall include, but not limited to, information and recommendations regarding applicable items in the following lists:

1. TYPING OF FOUNDATION

A. Pile Support (Driven or Cast-In-Drilled-Hole)

1. Method of support (skin friction and/or end bearing) in rock or soil or both.
2. Suitable pile type(s)-reasons for choice and/or exclusion or types. When appropriate, Caltrans' standard piles should be used.
3. Pile tip elevation
 - a. Specified (use of "indicator piles" is not acceptable.)
 - b. Probable
 - c. Need for pre-drilling or jetting
4. Pile Design Load and Ultimate Capacity in compression and tension. Specify the Safety Factor.
5. Reduction of pile capacity due to negative skin friction.
6. Requirement for load test. Specify which portion of the structures' foundation will be controlled by the test.
7. Effects on adjacent existing structures.
8. Corrosion effects of various soils and waters, and possibility of galvanic reaction from stray currents.
9. Scour depth (elevation) and method of determination.

B. Footing Support

1. Elevation of bottom footing.
2. Allowable and ultimate footing pressure (include Safety Factor). Approximate settlement at uniformly distributed allowable load.
3. Brief Description of materials on which the footing is to be placed.
4. Scour depth (elevation).

C. Drilled Shafts/Pier Columns (Mined Shafts)

1. Geologic description of foundation materials
2. Diameter (or dimensions)
3. Design Load, ultimate loads, and safety factor
4.
 - a. Top of shaft elevation
 - b. Bottom of shaft elevation
 - c. Minimum shaft length into load carrying stratum
 - d. Estimate of shaft wall stability and possible shoring requirements
5. Soil or rock weight and strength parameters for determining end bearing capacity, lateral load capacity, and point of shaft/column fixity.

11. APPROACH FILL REQUIREMENTS

1. Predicted amount of settlement and time delay required prior to beginning foundation construction. Predicted post construction settlement. Possibility of negative friction on pile foundations.
2. Special Requirement:
 - a. Controlled rates of embankment placement.
 - b. Fill height limit on untreated foundation.
 - c. Stripping of unsuitable foundation materials.
 - d. Use of lightweight fills to reduce amount of settlement.
 - e. Use of surcharge, wick drains, or other methods to shorten the required time delay period.
 - f. Specify embankment side slopes.
 - g. Unusual compaction requirements (i.e. 95% relative compaction) where abutments on spread footings are used.

111. CONSTRUCTION CONSIDERATIONS

1. Water table-seasonal or long term fluctuations, data for possible control in excavations (i.e. pumping, well points, trim seals, amounts of groundwater, etc.).
2. Adjacent structures-protection against damage from excavations, pile driving, etc.
3. Pile driving-difficulties, clearance, overhead or underground utilities, other unusual conditions, etc.
4. Excavation-control of earth slopes including shoring, sheet piles, bracing, and safety requirements.

IV SEISMIC DATA

The foundation report should contain the following information, so that an evaluation of seismicity can be made per the Caltrans Bridge Design Specifications.

1. Maximum credible rock acceleration (from CDMG MS-45*)
2. Magnitude of the maximum credible event.

3. Name of the causative fault and distance from the site.
4. Depth to rock or rock-like material ($V_s > 2500$ ft/s). Provide supporting evidence for depth (i.e. boring log or geologic reference)
5. Liquefaction potential.
6. Need for “seismic approach slab.

V. REVIEW OF FINAL STRUCTURE PLANS.

The foundation consultant should review the structure plans to ensure that the foundation recommendations have been followed, and provide revised recommendations, if required by design changes, etc.

***MUALCHIN, LALLIANA (1987) CALIFORNIA DIVISION OF MINES AND GEOLOGY MAP SHEET 45, ROCK ACCELERATION FROM MAXIMUM CREDIBLE EARTHQUAKES IN CALIFORNIA.**

EXHIBIT 11-D PRELIMINARY HYDROLOGIC/HYDRAULIC REVIEW SUMMARY

PRELIMINARY HYDROLOGIC/HYDRAULIC REVIEW SUMMARY

Bridge Name (facility crossed) _____

State Bridge No. _____ **Road Name** _____

Hydrologic and Hydraulic Data

- 1. Size of drainage basin _____
- 2. Design flows and water surface elevations (USGS)
 - a. Q_{10} _____ elevation _____ (culverts only)
 - b. Q_{50} _____ elevation _____
 - c. Q_{100} _____ elevation _____
- 3. High water marks _____ (Elevation/Year)
- 4. Structure opening size _____ Date Constructed _____
 - a. Existing _____
 - b. Upstream _____
 - c. Downstream _____
- 5. Description of property risks _____
- 6. Summary of upstream development _____
- 7. Importance of structure _____
- 8. Description of risks to life _____
- 9. Effects of facility on stream environment _____
- 10. Are there any channel restrictions or controlled flow? _____
- 11. Has this basin been studied before? Date of study? _____ Is the Study recognized by Caltrans? _____
- 12. Is there a potential debris problem? (describe) _____
- 13. Are there any mining operations within 3000 feet upstream and/downstream? _____

Remarks: _____

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d. Alternative sites

1. Locate suitable alternative sites.
2. What are the advantages and disadvantages of the alternative sites?

e. Existing structures (including relief or overflow structures)

1. Locate existing nearby upstream or downstream structures with respect to proposed crossing or encroachment.
2. For each existing nearby structure note the type, number of spans, span lengths, vertical clearance, bent design or pier orientation.
3. For each nearby existing culvert estimate the size and number of cells.

f. Hydraulic data

1. Locate high water marks (give date and elevation).
2. Document both the flood history and source of information.
3. Document the damage to existing structures including abrasion, corrosion, wingwall failure, culvert entrance failure, pier settlement, or excessive aggradations or degradation.
4. Note the use of bank protection, drop structures, or any other sign of corrective work at existing structures.

g. Factors affecting water stage

1. Determine whether flood flow can escape to, or enter from, other watersheds during floods.
2. Determine whether any of the flow can bypass the site.
3. Determine whether backwater or tides affect the flow.
4. Determine what will control an overtopping flood.

3. ECONOMIC ANALYSIS

- a. Make an economic analysis of all the reasonable alternatives based on construction cost, aesthetic cost, ecological cost, flood damage cost, loss of traffic service, etc.
- b. Reject from further considerations those options that are not economically suitable alternatives.

4. FIELD SURVEY

- a. Obtain topographic data for the suitable site alternatives. Extend limits to include overflows where practicable.
- b. Locate, sketch, and record significant features such as buildings, levees, walls, fences, ditches, trees, boulders, etc., and where significant, record elevations.
- c. Record water surface elevation, the elevation of the path of greatest depth as in a stream channel (thalweg elevation), and estimate velocity of flow.
- e. Obtain channel cross-sections 500 and 1000 feet upstream and downstream where necessary.
- f. Obtain data on boat traffic.
- g. Take ample photographs at each site to illustrate the hydraulic and ecological features.
- h. Take physical measurements of the existing structure and/or any other bridge or culvert with similar characteristics either upstream or downstream.
- i. Where possible determine the foundation type (spread footings, piles) and foundation depth of all nearby structures.

5. SITE MAP CONSTRUCTION

- a. Purpose: For use in estimating flood flow distribution; to locate cross section of stream; to show location of proposed encroachment and structures, alignment of piers, skew of crossing, stream controls, existing encroachments, existing highway structures, etc.
 1. A specially prepared site map showing one foot and two feet contours, vegetation, and manmade improvements is normally required. In some cases cross-sections normal to flood flow are acceptable in lieu of the map. A minimum of 3 cross sections is required including one upstream, one at the crossing, and one downstream.
 2. The site map should include the limits of the overtopping flood when practical.
 3. Where there are two or more suitable alignments, a site map must be prepared for each.

6. HYDROLOGIC ANALYSIS

- a. Hydrologic considerations
 1. Determine drainage area above the proposed encroachment. Subdivide where runoff characteristics are or will be significantly different.
 2. List available flood records at the encroachment and/or at nearby hydraulically similar
 3. Calculate the flow at the proposed encroachment for the base flood and the design flood, if different. Include any other flow within the floodplain that affects the design of the project. The flood calculations should be made by using at least two widely used methods. Nearby stream gage data may be used, if the data is adequate to furnish the above.
 4. Plot the flood frequency curve.
 5. Plot the stage discharge curve.
- b. Establish the existing flow conditions
 1. Determine the distribution of flow and velocities for several discharges or stages in the natural channel for existing conditions. USCE, USGS, FEMA, etc., studies may be used as a general case.
 2. Establish the maximum permissible upstream water surface for base flood.
- c. Hydraulic design for bridges
 1. Compute the water surface profile for various trial bridge lengths and discharges at each of the alternative sites. If alternate alignments are proposed, compute the water surface profile for various trial bridge lengths and discharges at each of the alternative sites.

(The Lead Agency should provide a disc with the data used to run the HEC-2 or WSPRO water surface profile computer programs. If a program other than HEC-2 or WSPRO is used that program should be provided on a disc along with the data used.)

(For the base flood, backwater caused by the encroachment together with that caused by all other man-made obstructions is limited to one foot above the water surface of the base flood.) Design must be in accordance with 23 CFR 650 Subpart A. The local agency must comply with FEMA's regulatory floodplain rules or they may lose their federal flood insurance.
 2. Select alignment, grade, bridge type and size waterway openings, etc., on the basis of overall economic calculations and freeboard requirements (see section 10, *Design Standards*).

3. Check “conveyance” of base flood.
 4. Calculate scour depth at piers. (Recommended reference HEC-18 *Evaluating Scour at Bridges*, FHWA)
 5. Design pertinent features such as riprap for bank protection, cross channel stabilizers for streambed control, energy dissipaters to reduce downstream velocities, spur dikes to equalize flow, etc. (Recommended references are HEC - 18 *Evaluating Scour at Bridges* and HEC - 20 *Stream Stability at Highway Structures*).
- d. Hydraulic design for culverts (Recommended reference; Caltrans *Highway Design Manual*)
1. Determine allowable headwater elevation.
 2. Compute and plot performance curves for trial culvert sizes at alternate alignments.
 3. Evaluate erosion, abrasion, and corrosion potentials.
 4. Select alignment, grade, and culvert design on the basis of overall economic calculations related to the design standards appropriate to the project.
- e. Hydraulic design for longitudinal encroachments
1. Determine the effect of the proposed encroachment on water surface profile using various roadway design, alternatives, and the base flood.
 2. Evaluate the effects on scour and deposition in the channel.
 3. Select roadway design on the basis of overall economic calculations.
 4. Design pertinent features such as bank protection, etc. (Recommended reference HEC-11 *Design of Riprap Revetment*, FHWA and/or *Bank and Shore Protection*, Caltrans)

7. CONTRACT PLANS

The following data shall be shown on the contract plans, and may be shown in tabular form. List the frequency, magnitude and pertinent water surface elevations for:

- a. Minimum Design Flood
- c. Base Flood
- d. Overtopping Flood
- e. Flood of Record, if available

The data used for design must be designated and if different from the above, the data must be shown on the plans.

HYDRAULIC REFERENCES

- *Guidelines for Hydraulic Considerations in Highway Planning and Location, Volume I, Highway Drainage Guidelines, AASHTO, 1999.*
- *Guidelines for Hydrology, Volume II, Highway Drainage Guidelines, AASHTO, 1999.*
- *Highway Hydrology, HDS No.2, FHWA-SA-96-067, 1996.*
- Flood-frequency analysis, such as those of U. S. Geological Survey or other water-resources agencies, for the region in which the structure is located.
- *Highways in the River Environment Hydraulic and Environmental Design Considerations, U.S. Department of Transportation, FHWA, 1983*
- *Stream Stability at Highway Structures, HEC-20, FHWA-0IP-90-014, 1991*
- Bradley, J. N., 1979, *Hydraulics of Bridge Waterways, Hydraulic Design Series No. 1, Federal Highway Administration, U.S. Government Printing Office, Washington, DC, 1978, 111 p.*
- *Evaluating Scour at Bridges, Second Edition, HEC-18, FHWA-IP-90-017, 1993.*
- *Highway Research Board, 1979, Scour at Bridge Waterways, National Cooperative Highway Research Program Synthesis 5, Highway Research Board, National Academy of Sciences, 2101 Constitution Avenue, Washington, DC 20418.*
- *Hydraulic Design of Highway Culverts, September 1985, Hydraulic Design Series No.--, Report No. FHWA-1P-85-15.*
- *Circular Memorandum, G. M. Williams, July 21, 1966 Plans for Pipe Culvert Inlet and Outlet Structures, Federal Highway Administration.*
- *Guidelines for Hydraulic Design of Culverts, Volume IV, Highway Drainage Guidelines, AASHTO, 1999.*
- Searcy, J. K., *Design of Roadside Drainage Channels, 1985, Federal Highway Administration, Hydraulic Design Series No. 4, U.S. Government Printing Office, Washington, DC.*
- *Bridge Deck Drainage Systems, HEC-21, FHWA-SA-92-010, 1993*
- *Standard Environmental Reference (SER), Chapter 17 "Flood Plains"*
- *Design of Encroachments on Flood Plains Using Risk Analysis, HEC 17, FHWA-EPD-86-112, 1981*
- For information regarding flood plain delineation studies, write to: Department of Housing and Urban Development, Federal Insurance Administration, Assistant Administrator for Flood Insurance, 451 7th Street, SW, Washington, DC 20410
- *Design of Rip rap Revetment, HEC-11, FHWA-1P-89-016, 1989.*
- *CALTRANS Highway Design Manual*
- *AASHTO Model Drainage Manual*

Instructions: To be used as guide for Hydraulic Studies and Reports

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Under Caltrans' delegation authority, the responsibility of assuring that VE analysis has been performed shall be delegated to the local agency administering their project.

DEFINITIONS

Project - A portion of a highway that a local agency proposes to construct, reconstruct, or improve as described in the preliminary design report or applicable environmental document. A project may consist of several contracts or phases over several years.

Value Engineering - The systematic application of recognized techniques by a multi-disciplined team to identify the function of a product or service, establish a worth for that function, generate alternatives through the use of creative thinking, and provide the needed functions to accomplish the original purpose of the project, reliably, and at the lowest life-cycle cost without sacrificing safety, necessary quality, and environmental attributes of the project.

PROCEDURES

Local agencies must establish programs to assure that VE studies are performed on all federal-aid highway projects on the NHS with an estimated cost of \$25 million or more. This cost is the total cost of the project, from preliminary engineering through construction. Value engineering studies shall follow the widely recognized systematic problem-solving analysis process that is used throughout private industry and governmental agencies. Studies must be performed using multi-disciplined teams of individuals not personally involved in the design of the project. Study teams should consist of a team leader and individuals from different specialty areas, such as design, construction, environmental, planning, maintenance, right of way, and other areas depending upon the type of project being reviewed. Individuals from the public and other agencies may also be included on the team when their inclusion is found to be in the public interest.

For VE Studies of projects on the State Highway System, it is advisable to leave Caltrans' participation on the VE team.

This process concludes with a value analysis report that contains the approved recommendations. A copy of this report shall be forwarded to the District Value Analysis Coordinator (DVAC) in the district that is programming the project. The DVAC will submit this report to the value analysis branch in headquarters, who will then include it in their annual report to FHWA.

As a guide, Chapter 19 "Value Analysis" of the *Project Development Procedures Manual* may be used. The DVAC should be consulted for applicable sections.

12.6 HISTORY OF METRICATION

TRANSITION FROM METRIC UNITS TO U.S. CUSTOMARY UNITS

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) mandated that all PS&Es for federal-aid construction projects use metric units after September 30, 1996.

In 1993, Caltrans adopted the International System of Units (SI:a.k.a. the Metric System) as our preferred system of weights and measures to comply with federal law. The law has subsequently been changed making the use of the Metric System optional. A decision document was approved on August 20, 2004, committing Caltrans to re adopt the U.S. Customary (English) system of units and measures as its preferred system. Caltrans began its transition from metric units to U.S. Customary system in March 2005. Caltrans Standard Plans, Standard Specifications and Standard Special Provisions have been converted to U.S. Customary units.

Beginning April 1, 2006, PS&E for all projects on and off the SHS (including those administered by local agencies) must be in U.S. Customary (English) units. During the transition from metric units to U.S. Customary units, either English or metric units may be used when the local agency, or their consultant, prepares the final PS&E package for bridge retrofit projects. On the other hand, English units must be used when Caltrans' consultants prepare the final PS&E package for seismic retrofit design. Regardless of the units used, both the bridge and roadway units must be the same (see Chapter 7, "Seismic Safety Retrofit Program," of the *Local Assistance Program Guidelines* [LAPG]).

CONVERSION TO U.S. CUSTOMARY (ENGLISH) UNITS

There are two ways to convert from metric units to U.S. Customary units:

- "Soft" conversion - a direct mathematical conversion to an exact or nearly exact English equivalent, for example: a 3.6 meters lane can be "soft converted" to 11.811 feet.
- "Hard" conversion - a rounded, rationalized, English number that is convenient to work with and easy to remember, for example: the old metric standard lane width of 3.6 meters (see Chapter 300 of the Caltrans *Highway Design Manual*, 5th edition) is 12 feet.

CALTRANS SPECIFICATIONS ON THE INTERNET

Electronic files containing Caltrans' standard specifications, standard special provisions, and federal contract "boilerplate" (Form FHWA 1273 and other Required Federal Contract Provisions) are available from the Caltrans Engineering Service Center (ESC). The ESC operates a World Wide Web (WWW) site accessible via the Internet.

- First access the Caltrans Home Page at www.dot.ca.gov
- Then call up the ESC Home Page, and
- Finally, call up the Office of Office Engineer Home Page. Then go to "Master" at <ftp://trescftp.dot.ca.gov/pub/Highway-Specs/SSPs/Boilers/Masters>.

For further assistance in connecting with the Internet, local agencies should contact their Internet service provider.

Caltrans also provides a sample set of highway contract provisions for local assistance projects as explained in "Sample 'Boiler Plate' Contract Documents on the Internet" below.

For local agency projects to be advertised, awarded and administered by Caltrans, Caltrans boilerplate specifications are inserted by Caltrans.

SAMPLE "BOILER PLATE" CONTRACT DOCUMENTS ON THE INTERNET

Microsoft Word versions of a complete sample set of "Boiler Plate" construction contract documents are available on the Internet on the Caltrans Local Assistance home page at: <http://www.dot.ca.gov/hq/LocalPrograms/public.htm> Follow the directions in the home page to "Sample Boiler Plate Contract Documents."

The file can be downloaded and edited. This file includes a sample Notice to Contracts & Special Provisions as well as a Sample Proposal and Contract. These documents are in accordance with the *July 1999 Caltrans Standard Specifications and Standard Plans*. They are edited versions of the *Caltrans Office Engineers Standard Special Provisions* and other contract documents, which are used for Caltrans highway construction contracts.

Contents

The Notice to Contractors & Special Provisions are combined into one document. The Notice to Contractors provides prospective bidders with the bid opening date, time and location where bids will be received and opened; a brief description of the project; the Disadvantaged Business Enterprise (DBE) Availability Advisory (see Chapter 9, Section 9.8) time and location of any pre-bid meetings and notice that the project is subject to Buy America provisions. The Engineer's Estimate and location for the purchase of plans and specifications as well as reference to federal wage and rate information are also included.

The Special Provisions (along with the Caltrans Standard Specifications) specifies to the contractor the terms of the contract including, but not limited to, when the contractor is to start, number of working days, liquidated damages, payment, work operations and items of work.

The Proposal and Contract are also combined into one document. The Proposal is for the bidder to complete. In addition to the name, address, etc., it contains the Engineer's Estimate, list of subcontractors, EEO certification, Public Contract Code requirements, Noncollusion Affidavit, Debarment and Suspension Certification, Nonlobbying Certification, and Bidders Bond. The Contract includes an agreement, Engineer's Estimate, payment bond, performance bond, local agency DBE information, federal wage rates, and Disclosure of Lobbying Activities.

This package is based on the way Caltrans prepares and administers construction contracts. It contains specifications that may not be required on locally administered projects. Therefore, the Home Page will include appropriate disclaimers for the use of this "Boiler Plate."

For local agency projects to be advertised, awarded, and administered by Caltrans, the Caltrans Boiler Plate specifications are inserted by Caltrans.

12.9 REQUIRED FEDERAL CONTRACT PROVISIONS

GENERAL FEDERAL REQUIREMENTS

A general special provision is required to reference FHWA Form 1273, Performance on Previous Contract, Noncollusion Provision, and Participation by Minority Business Enterprises In Subcontracting. Caltrans standard special provision (Section 14) is required or equivalent provision may be used.

FORM FHWA 1273

Form FHWA 1273 (included in Exhibit 12-E) is a package of federally required contract provisions that must be included as special provisions for all federal-aid projects.

I. GENERAL

This section sets forth the general provisions of Form FHWA 1273.

- Records and Reporting Requirements

Contracts shall contain special provisions stating that it is the local agency's policy to comply with Part 26 of Title 49, Code of Federal Regulations (CFR) and specify the contractor's obligation under these regulations.

If Caltrans' standard specifications will be used, appropriate editing of the *Sample Boiler Plate Contract Documents* will be necessary (see "*Sample Boiler Plate Contract Documents on the Internet*" in Section 12.8 of this chapter).

NONCOLLUSION CERTIFICATION

On all federal-aid construction projects, a noncollusion certification protects the integrity of the federal-aid highway program and serves as a tool in prosecuting construction contract bid rigging cases. A noncollusion certification is required from all bidders as part of the bid proposal package (see Exhibit 12-E, Attachment D). Failure to submit the certification will render the bid ineligible for award.

FEDERAL TRAINEES (ON-THE-JOB TRAINING)

On selected federal-aid highway construction projects, "Federal Trainee" or "On-the-Job (OJT) Training" special provisions (included in Exhibit 12-E, Attachment N) must be included in the contract provisions to establish the number of trainees for the construction contract.

The main objectives of the Federal Trainee/OJT Program are to:

- Provide training for women and minorities which will upgrade their job skills, thereby increasing their access to higher-paying trade jobs and journeyman-level positions and
- Ensure that a diverse work force will meet future labor needs in the construction industry.

A majority of training positions on each project must be for women and minorities. If a contractor cannot meet the OJT objectives, direct recruitment efforts must be documented to show an effort at OJT compliance.

The major components of an OJT program include:

- The local agency must include the required federal training special provisions in the PS&E package if the project size and duration warrant an OJT program.
- The local agency should select contracts that contribute to the “Contract Training Goals.” These contracts must show the number of trainees, number of trainees upgraded to journeyman and level of skills.
- The local agency must review the training programs proposed by contractors. Approval or rejection is based on the legitimacy of the job-skill classifications proposed and the number of training hours specified.
- Caltrans must determine if statewide OJT is effective.
- The contractor is responsible for recruitment and selection of trainees.
- The contractor must evaluate training based on an approved training program.
- The contractor shall report the number of trainees and jobs using Form PR1391 “Federal-aid Highway Construction Contractors EEO Report” to the local agency. The local agency shall forward Form PR1391 to the Caltrans District Labor Compliance Officer (see Exhibit 16-O of this manual).
- OJT provision costs are reimbursed by the FHWA in accordance with the Federal Requirement Training Special Provisions” included in selected contracts. Required trainees/apprentices are to be funded on the bidding schedule or by change order at \$0.80/hour; or the training program can be a bid item with the same reimbursement ratio as the construction project. OJT support services include recruiting, counseling, remedial training, and OJT program administration by others.
- If the contractor does not show a good faith effort to provide acceptable training to the trainees specified, a sanction may be applied. Sanctions may include withholding progress payments if effective on-the-job training is not provided.

PS&E CHECKLIST

Agency _____

Federal Project No. _____

This form is to be completed by the local agency and attached to the PS&E Certification. See Exhibit 12-E for instructions and the referenced attachments.

I. HIGHWAY SYSTEM

- On the National Highway System (NHS)
 Off the NHS

II. FUNCTIONAL CLASSIFICATION (Check as many as appropriate)On the Federal-aid System

- | | |
|---|---|
| <input type="checkbox"/> Urban Principal Arterial - Fwy or Expwys | <input type="checkbox"/> Rural Principal Arterial |
| <input type="checkbox"/> Urban Principal Arterial - Other | <input type="checkbox"/> Rural Minor Arterial |
| <input type="checkbox"/> Urban Minor Arterial | <input type="checkbox"/> Rural Major Collector |
| <input type="checkbox"/> Urban Collector | |

Off the Federal-aid System

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Urban Local | <input type="checkbox"/> Rural Minor Collector |
| | <input type="checkbox"/> Rural Local |

III. TYPE OF CONSTRUCTION (Check appropriate box)

- New or Reconstruction
 Resurfacing, Restoration and Rehabilitation (3R)
 Preventive Maintenance

IV. METHOD OF CONSTRUCTION**A. Contracting Method** (Check appropriate box)

- Competitive bidding
 Other than competitive bidding

(If the contracting method is other than competitive bidding, check appropriate box below.)

- The project is State-Authorized. A Public Interest Finding is on file in the contract records justifying the method.
 The project is subject to FHWA Full Oversight. A Public Interest Finding justifying the method has been submitted and approved by Caltrans and FHWA.

B. Force Account (Day Labor) (Check appropriate box)

- The entire work will be constructed by contract as indicated above.
 Some work (incidental to the main purpose of the project) will be constructed by Force Account. A Public Interest Finding is on file in the contract records justifying the work.
 The entire project will be constructed by Force Account (Day Labor).

(If the entire project will be constructed by Force Account (Day Labor)

- The project is State-Authorized and not subject to FHWA oversight. A Public Interest Finding is on file in the contract records justifying the work.
 The project is subject to FHWA Full Oversight. A Public Interest Finding justifying the method has been submitted and approved by Caltrans and FHWA.

V. ENVIRONMENTAL ANALYSIS (Check box if requirement is met)

- The PS&E is fully responsive to the necessary actions called for by the environmental document, permit conditions and other agreements.

VI. VALUE ENGINEERING (VE) ANALYSIS (Check appropriate box if the project is on the NHS)

- VE analysis been performed on this project and a copy of the analysis has been forwarded to the Caltrans District Value Analysis Coordinator).
- VE analysis has not been performed; the estimated project cost is <\$25 million, or < \$20 million for bridge projects.

VII. GEOMETRIC DESIGN STANDARDS (Complete this section if project changes existing geometrics)

A. Geometric Design Standards Used (Check appropriate box)

- Caltrans Design Standards (on State Highway System)
- Current AASHTO Standards
- 3R Projects - Minimum Standards for Geometric Design of Federal-Aid Resurfacing, Restoration, and Rehabilitation Projects on Local Streets and Roads, *Local Assistance Procedures Manual*, State of California Department of Transportation.
- Local Agency Design Standards Date approved _____

B. Deviations from Controlling Criteria (check appropriate box for each controlling criteria)

Criteria Met	Design Criteria Not Met	Design Exception Approval Date	Controlling Criteria
<input type="checkbox"/>	<input type="checkbox"/>	_____	Design Speed
<input type="checkbox"/>	<input type="checkbox"/>	_____	Lane Width
<input type="checkbox"/>	<input type="checkbox"/>	_____	Shoulder Width
<input type="checkbox"/>	<input type="checkbox"/>	_____	Bridge Width
<input type="checkbox"/>	<input type="checkbox"/>	_____	Horizontal Alignment
<input type="checkbox"/>	<input type="checkbox"/>	_____	Vertical Alignment
<input type="checkbox"/>	<input type="checkbox"/>	_____	Grades
<input type="checkbox"/>	<input type="checkbox"/>	_____	Stopping Sight Distance
<input type="checkbox"/>	<input type="checkbox"/>	_____	Cross Slopes
<input type="checkbox"/>	<input type="checkbox"/>	_____	Super elevation
<input type="checkbox"/>	<input type="checkbox"/>	_____	Horizontal Clearance
<input type="checkbox"/>	<input type="checkbox"/>	_____	Vertical Clearance

C. Certification/Disclosure Forms (Check if included and indicate page number) **Page No.**

- EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION* (Exhibit 12-E, Attachment C) _____
- NONCOLLUSION AFFIDAVIT* (Exhibit 12-E, Attachment D) _____
- DEBARMENT AND SUSPENSION CERTIFICATION* (Exhibit 12-E, Attachment E) _____
- NONLOBBYING CERTIFICATION FOR FEDERAL-AID CONTRACTS*
(Exhibit 12-E, Attachment F) _____
- DISCLOSURE OF LOBBYING ACTIVITIES* (Exhibit 12-E, Attachment G)..... _____
- 2-1.015—*FEDERAL LOBBYING RESTRICTIONS* (Exhibit 12-E, Attachment H) _____
- Equivalent provisions (Attach complete listing, including page numbers)

D. Liquidated Damages (Check appropriate box and indicate page number) **Page No.**

- Caltrans SSP *SECTION 4. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES* (Exhibit 12-E, Attachment I) is included in this contract..... _____
- Equivalent provisions are included. _____

E. Disadvantaged Business Enterprise (DBE)/Subcontracting

A. Local Agency "Annual Anticipated DBE Participation Level (AADPL)(the AADPL percentage comprising all contracts) _____

Example:

Local Agency Annual Anticipated DBE Participation Level is 10% (comprised of this contract's availability advisory of 5% and another contract's availability advisory of 15% assuming two contracts of equal value)

B. This Specific Contract DBE Availability Advisory Percentage _____

- This contract has a specific DBE availability advisory percentage to meet the intent of the Caltrans DBE Program Plan and the local agency's Annual Anticipated DBE Participation Level.
- This contract has no specific DBE availability advisory percentage, as it has been determined that one is not appropriate.

For use with all Federal-aid contracts. (Check if included and indicate page number)

a. The following applicable Caltrans Standard Special Provisions (SSPs) to the Caltrans Standard Specifications or their equivalent are included in the contract Special Provisions with page numbers noted (editing may be required)

- | | Page No. |
|--|----------|
| <input type="checkbox"/> 2-1.01 GENERAL Required Listing of Proposed Subcontractors and Required Contract Assurance Statement (Exhibit 12-E, Attachment H) or <i>Equivalent Provisions</i> | _____ |
| <input type="checkbox"/> LISTING OF SUBCONTRACTORS (Form in Sample Proposal and Contract) or <i>Equivalent Form</i> | _____ |
| <input type="checkbox"/> 2-1.015 Federal Lobbying Restrictions (Has been included) or <i>Equivalent Provisions</i> | _____ |
| <input type="checkbox"/> 2-1.02 DISADVANTAGED BUSINESS ENTERPRISE (DBE) (Exhibit 12E, Attachment H) or <i>Equivalent Provisions</i> | _____ |
| <input type="checkbox"/> 2-1.03 DBE AVAILABILITY ADVISORY (Has been included) | _____ |
| Either | |
| <input type="checkbox"/> 2.a Used for Federal-Aid projects with a DBE availability advisory percentage or | _____ |
| <input type="checkbox"/> 2.b Use for Federal-Aid projects without a DBE availability advisory percentage | _____ |
| <input type="checkbox"/> 3- AWARD AND EXECUTION OF CONTRACT (Exhibit 12-E, Attachment I) or <i>Equivalent Provisions</i> | _____ |
| <input type="checkbox"/> Caltrans SSP 5-1.- SUBCONTRACTOR AND DBE RECORDS (Exhibit 12-E, Attachment J) or <i>Equivalent Provisions</i> | _____ |
| <input type="checkbox"/> Caltrans SSP 5-1.- DBE CERTIFICATION STATUS CHANGE (Exhibit 17-O) or <i>Equivalent Provisions</i> | _____ |
| <input type="checkbox"/> Caltrans SSP 5-1.- PERFORMANCE OF SUBCONTRACTORS (Exhibit 12-E, Attachment K) or <i>Equivalent Provisions</i> | _____ |
| <input type="checkbox"/> Caltrans SSP 5-1. SUBCONTRACTING (Exhibit 12-E, Attachment L) or <i>Equivalent Provisions</i> | _____ |
| <input type="checkbox"/> Caltrans SSP 5-1. PROMPT PROGRESS PAYMENTS TO SUBCONTRACTORS or <i>Equivalent Provisions</i> | _____ |
| <input type="checkbox"/> Caltrans SSP 5-1. PROMPT PAYMENT OF WITHHELD FUNDS TO SUBCONTRACTORS. or <i>Equivalent Provisions</i> | _____ |

b. The following forms are applicable with the above SSP's.

- LOCAL AGENCY BIDDER-DBE INFORMATION Form (Exhibit 15-G) or *Equivalent Provisions* _____
- FINAL REPORT UTILIZATION OF DISADVANTAGED BUSINESSES (Exhibit 17-F) or *Equivalent Provisions*..... _____

F. Buy America Specification (Check appropriate box and indicate page number if requirement applies. See Section 12.9 of the *Local Assistance Procedures Manual* for requirement.)

Page No.

- Caltrans SSP 5-1- BUY AMERICA REQUIREMENTS (Exhibit 12-E, Attachment M)..... _____
- Equivalent provisions are included. _____
- Buy America specifications are not included in contract.
- Waiver for the following has been approved by FHWA: _____ Date _____.

G. Federal Trainees (Check appropriate box and indicate page number if requirement applies)

- The project has less than 100 working days. A Federal Trainee goal and special provisions are not required.
- Analysis of the Engineers Estimate has the dollar value under \$200,000. A Federal Trainee goal and special provisions are not required.

Page No.

- Caltrans SSP - *FEDERAL REQUIREMENT TRAINING SPECIAL PROVISIONS* (Exhibit 12-E, Attachment N, FR-15 and FR-16) are included. (The Trainee goal is _____.) _____
- Equivalent provisions are included (The Trainee goal is _____.)..... _____

H. Federal Wage Rates (Check appropriate box and indicate page number if Federal Wages Rates are included)

Page No.

- Federal Wages Rates are physically incorporated in this contract. _____
Note: By checking the above box, the local agency is indicating that they are aware of the Federal-aid "10-day rule" requirement.
- This project is not located on a Federal-aid Route. Federal Wage Rates are not required.

I. Relations with Railroad (Check appropriate box and indicate page number if special provisions are included)

Page No.

- The required provisions are included. _____
- This project does not involve the use of railroad properties or adjustments to railroad facilities.

XIII. RESTRICTED CONTRACT PROVISIONS (CHECK APPROPRIATE BOX)

A. Indian Preferences (Check appropriate box and provide required information)

- Not included
- Included. The project is on or near the _____ Indian Reservation.

B. Bonding and Prequalification (Check box if requirement met)

- Bonding or prequalification, if required, will not be used to restrict competition, prevent submission of a bid by or prohibit consideration of a bid submitted by any responsible contractor, whether a resident or nonresident of the State of California.

C. Price Adjustment Clauses (Check appropriate box)

- Price adjustment clauses are not included.
- Price adjustment clauses are included. The federal conditions restricting the use of these clauses have been met and are documented in the project files

D. Warranty Clauses (Complete this section if project is on the NHS)

- Warranty Clauses are not included.
- Warranty Clauses are included. Documentation of the required conditions on the use of these clauses is in the project files.

E. Proprietary Items (Complete this section if project is on the NHS)

- Proprietary Items are not included.
- Proprietary Items are included. A Public Interest Finding justifying the use has been approved and is documented in the project files.

XIV. MATERIALS & EQUIPMENT (Check appropriate box)

A. Publicly Owned Equipment (for use by Contractor) (Check appropriate box)

- Not included
- Included. A Public Interest Finding justifying this use is in project files and the project specifications meet the requirements for federal participation listed in Chapter 12.

B. Equipment Purchases for Local Ownership (Check appropriate box)

- Not included
- Included. Amount charged to construction engineering will be limited to amortized equipment cost (over its useful life) attributable to the time the equipment is used on the project.

C. Convict Produced Materials

- Not included
- Included. The conditions placed on the use of these materials by the contractor meet federal requirements and are included in the contract specifications.

D. Local Agency Furnished Materials (Check appropriate box)

- Local Agency Furnished Materials are not included.

(If Local Agency Furnished Materials are included check appropriate box.)

- Local Agency Furnished Materials have been acquired on the basis of competitive bidding.
- A Public Interest Finding is on file in the contract records justifying another method of acquisition.

XV. PRELIMINARY ESTIMATE (Check boxes if requirements met)

- Exhibit 12-A, or equivalent has been completed and is attached.
- The estimate is broken down into items sufficient in detail to provide an initial prediction of the financial obligation to be incurred by the local agency, state and FHWA and to permit an effective review and comparison of the bids received.
- Non-participating items of work have been identified and segregated from the estimated cost of work eligible for federal-aid.

(If project is funded with more than one type of federal-aid, check box if requirement met.)

- The estimate has been segregated by fund types for use in preparing the "Request for Authorization for Construction" (Detail Record) and the Finance Letter.

XVI. LOCAL AGENCY SIGNATURE

This Federal Contract Provisions checklist has been prepared in accordance with Chapter 12 "PS&E" of the *Local Assistance Procedures Manual*.

Signature: _____ Date: _____

Title: _____

XVII. CALTRANS ACCEPTANCE:

Check appropriate acceptance statement:

- I have not personally inspected the subject project PS&E package but I am aware of the scope of the project. I have reviewed this "PS&E CHECKLIST" and agree it is complete and appears to have been prepared in accordance Chapter 12 "PS&E" of the *Local Assistance Procedures Manual*.

- I have inspected the specifications portion of the subject project PS&E package and I am aware of the scope of the project. I have reviewed this "PS&E CHECKLIST" and agree it is complete and appears to have been prepared in accordance with Chapter 12 "PS&E" of the *Local Assistance Procedures Manual*. I have also verified that the indicated Required Federal Contract Provisions are included in the specifications.

Signature: _____

Title: _____

Date: _____

Distribution:

- Original with PS&E Certification - DLAE
- Original "Accepted" copy with PS&E Certification - DLAE file
- One "Accepted" copy to be returned to local agency

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NATIONAL HIGHWAY SYSTEM BID TABULATION DATA

TO: Federal Highway Administration Date _____
Interstate & Program Support Branch (HNG-13)
400 Seventh Street, SW
Washington, DC 20590

FROM: _____

SUBJECT: Submission of Bid Tabulation Data

Attached is the following data for the recently awarded Federal-aid highway construction project:

State _____ FIPS County Code(s) _____

Federal-aid Project # (s): _____

Contractor's Name: _____

Contractor's City/State: _____

Low Bid Amount : \$ _____ Award Date (M/D/Y): _____

2nd Low Bid Amount: \$ _____ 3rd Low Bid Amount: \$ _____

Number of Bidders: _____ Engineer's Estimate: \$ _____

Project Length _____ Miles
(Indicate which and report to nearest 0.1)

FMIS Predominant Type Code (s): _____

Estimate Completion Date (Mo./Yr.): _____

Is Contract a Joint Venture (yes/no): _____

If Yes, List Name/City/State of Other Contractor(s)

Local Agency Contact Person: _____ Telephone # : _____

Form FHWA-45 is attached for projects on the NHS greater than \$500,000.

All federal-aid contracts on the National Highway System (including the Interstate System) are to be reported regardless of size or type of federal-aid funding. Projects off the National Highway System are not to be reported. When several projects are combined into a single contract, all data should be combined and reported on a single transmittal sheet. Please direct questions to the Interstate and Program Support Branch (HNG-13), Telephone (202) 366-4636.

Distribution for NHS projects: (1) Original-Caltrans DLAE
(2) Copy - Local Agency Project File

Distribution for Non-NHS projects: Not Required

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DETAIL ESTIMATE

File: _____
 Federal Project No.: _____
 Project Location: _____
 Date: _____

To be used as a basis of agreement for Federal-aid Project #(1) _____
 in the City/County of(2) _____

Construction Authorization Date:(3) _____, 200__

Type: (4)

Preliminary Engineering (Authorization Date:(5) _____, 200__

Right of way (Acquisition Authorization Date:(6) _____, 200__

Acquisition (No. Parcels _____) \$ _____
 RAP
 (number homes _____) \$ _____
 (number businesses _____) \$ _____
 LRH (Parcel No. Name _____) \$ _____
TOTAL COST \$(7) _____

Utilities (Authorization Date:(8) _____, 200__

Total Cost \$ _____

Work Type Code: (9) _____

Length (10) _____ (miles)

Item Estimate (11)

Item No.	Item Description	Unit	Quantity	Unit Price	Amount
1	Item Description	Unit	Quantity	Unit Price	\$
2	Item Description	Unit	Quantity	Unit Price	\$
3	Item Description	Unit	Quantity	Unit Price	\$
”	”	”	”	”	”
”	”	”	”	”	”

Subtotal Contract Items \$ _____
 Agency/State Furnished Materials \$(12) _____
 Force Account (Day Labor) - striping, etc. \$ _____
 Total \$ _____
 Contingencies (Including supplemental work) \$(13) _____

 Contract Total \$ _____
 Construction Engineering \$(14) _____

TOTAL COST \$ _____

Distribution All Projects: (1) Original + 4 copies-Caltrans DLAE
 (2) Copy-Local Agency Project File

**DETAIL ESTIMATE
SUMMARY (15)**

	Total Cost	Participating Cost	Federal Funds	Other Funds
Preliminary Engineering	\$ _____	\$ _____	\$ _____	\$ _____
Right of way	\$ _____	\$ _____	\$ _____	\$ _____
Construction:				
<u>Work type</u>				
Code _____	\$ _____	\$ _____	\$ _____	\$ _____
Code _____	\$ _____	\$ _____	\$ _____	\$ _____
Construction Engineering:	\$ _____	\$ _____	\$ _____	\$ _____
Total Cost	\$ _____	\$ _____	\$ _____	\$ _____

Contract Items Participating	=	\$ (16) _____	=	_____ %
Contract Items nonparticipating	=	\$ _____	=	_____ %
Total	=	\$ _____	=	100.00 %

* Reimbursement Ratio: (17) _____ %

Appropriation Code(s) (18)

Name/Date Prepared _____

* Reimbursement ratios may vary within each phase of work such as Emergency Relief PE for Emergency Repair (100%) and PE for restoration (88.53%). In these cases, the detailed estimate shall include two separate lines of preliminary engineering.

- Not required for “Miscellaneous” codes

11. Item Estimate

- List Each bid item per sample format
- Separate by “work type code” as noted above in item # 9. (should be same as preliminary estimate)
- Place nonparticipation work directly following participating work of similar codes
- Separate as “not part of Federal-aid Project” that work which is beyond project limits of federal participation but is being done under the same contract

12. State/Agency Furnished Materials

- List each item and cost of all items or expenses that are to be furnished by other than contractor
- Should agree with items listed in Special Provisions and Plans

13. Contingencies

- Generally 5% to 10%
- FHWA does not want supplemental work segregated from contingencies
- If large amount of supplemental work, 10% may be exceeded, but contingencies should always be at least 5%
- Separate for each code, etc.

14. Construction Engineering

- Separate for each code, etc.
- Indicate staking, construction trailer, etc., if claimed for reimbursement

15. Detail Estimate Summary

- Summary generally broken down only between P.E., Construction, and Right of way
- Work Type Codes and nonparticipating involved, must be outlined in summary
- Calculate P.E., Construction (by code) and Right of way separately at appropriate reimbursement ratio
- Federal funds share of phase cannot be more than the fund reimbursement ratio times the participating costs. (Always round down to the nearest dollar).

16. Federal Participation Calculation

- Use contract items only

17. Reimbursement Ratio (Federal) (See list in Chapter 3, “Project Authorization”)

- Use current ratio
- Project ratio if under funded

18. Program Code(s) (Federal) NOTE: Formerly known as Appropriation Code(s)

- Program code(s) applicable to the program(s) involved (see list in Chapter 3, “Project Authorization”)

19. Revised Detail Estimate or Modification

- Required when federal funds are to be changed from what was previously under agreement
- Changes can be accomplished by updating item costs, supplemental work, contingencies, etc.
- Change Title to “Revised Detail Estimate.”
- Must remain consistent with FTIP/FSTIP rules
- Wording to be changed in Item 2 by adding “To be used as basis for modification of agreement for federal-aid project.”
- Remaining instructions are unchanged

directly facilitate an effective vehicle weight enforcement program, such as scales (fixed and portable), scale pits, scale installation, and scale houses and also includes costs incurred by the state in performing federal-aid project related audits which directly benefit the federal-aid highway program.

- Contract Claim - A demand for additional compensation, which cannot be resolved between the contractor and the local agency representative in responsible charge of the project.
- Contract Claim Award - A payment made by a local agency to a federal-aid contractor on the basis of an arbitration or mediation proceeding, administrative board determination, court judgment, negotiated settlement, or other contract claim settlement.
- Contract Claim Defense Costs - Local agency costs related to the defense and settlement of contract claims including, but not limited to salaries of employees, consultants, attorney fees, boards of arbitration, appeals boards, courts or similar tribunals.
- CFR - Code of Federal Regulations. Document produced by the federal government implementing the requirements of federal statutes.
- DBE - Disadvantaged Business Enterprise See Chapter 9, Section 9.5.
- Final Invoice - For an example see Chapter 17, *Project Completion*, Exhibit 17-C, and refer to Chapter 5, *Accounting/Invoices*, for instructions.
- Force Account - A basis of payment for the direct performance of highway construction work with payment based on actual cost of labor, equipment, and materials furnished with consideration for overhead and profit.
- Foremen - Men and women in direct charge of crafts workers or laborers performing work on the project.
- “Frequency Tables (Tables)” - See Exhibit 16-R, *Size, Frequency, and Location of Sampling and Testing*.
- Full Oversight – Projects on Interstate that are new or reconstruction (not 3R) greater than \$1 million for which FHWA has Full Oversight.
- Independent Assurance Sampling and Testing (IAST) - Periodic testing by a specially trained tester, to verify that acceptance testing is being performed correctly with accurate test equipment.
- Laborer, Semi-Skilled - All laborers classified by specialized type of work.
- Laborer, Unskilled - Non-classified laborers.
- Local Agency - A California City, County, or other local public agency. In many instances this term is used loosely to include nonprofit organizations.

- Maintenance - As defined in the USC: the preservation of the entire highway, including surface, shoulders, roadsides, structures, and such traffic control devices as are necessary for its safe and efficient utilization.
- “Materials Certificate” - See Chapter 17, *Project Completion*, Exhibit 17-F.
- Mechanics - Equipment service and maintenance personnel
- NHS - National Highway System
- Officials (Managers) - Officers, project engineers, superintendents, etc., having management level responsibilities and authority
- Others - Miscellaneous job classifications are to be incorporated in the most appropriate category listed on the form. All employees on the project should thus be accounted for.
- Progress Invoice - Periodic billing invoice by local/regional agencies for reimbursement of costs on ongoing contracts.
- QAP - Quality Assurance Program
- QC/QA - Quality Control/Quality Assurance - see “Statistical Quality Assurance” in this chapter
- Quality Assurance Program - A sampling and testing program that will provide assurance that the materials and workmanship incorporated in each highway construction project are in conformance with the contract specifications. The main elements of a Quality Assurance Program are acceptance testing and independent assurance sampling and testing.
- RE - Resident Engineer. A registered engineer who is empowered to administer the construction contract.
- SHA - State Highway Agency (Caltrans)
- Source Inspection - Acceptance testing of manufactured and prefabricated materials at locations other than the job site.
- State-Authorized Project - A classification for federal-aid projects, which are not subject to FHWA review and oversight required by *Title 23 Code of Federal Regulations*. For State-Authorized federal-aid projects the FHWA and Caltrans exercises the maximum degree of delegation of authority to local agencies (see Chapter 2, Section 2.4, *Stewardship - Letters of Agreement*, and Figure 2-1, *FHWA Oversight*).
- Supervisors - All levels of project supervision, if any, between management and foreman levels
- TCP - Traffic Control Plan

EXHIBIT 17-F FINAL REPORT UTILIZATION OF DISADVANTAGED BUSINESSES



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
LOCAL ASSISTANCE - FEDERAL - FINAL REPORT - UTILIZATION OF
DISADVANTAGED BUSINESS ENTERPRISES (DBE), FIRST-TIER
SUBCONTRACTORS
Revised 8/04

CONTRACT NUMBER		COUNTY	LOCATION	PROJECT DESCRIPTION	FEDERAL AID PROJECT NO.		ADMINISTERING AGENCY		CONTRACT COMPLETION DATE		
PRIME CONTRACTOR/CONSULTANT				BUSINESS ADDRESS			FEDERAL SHARE (For local agency to complete) \$		FINAL CONTRACT AMOUNT \$		
CONTRACT ITEM No.	DESCRIPTION OF WORK PERFORMED AND MATERIAL PROVIDED	SUBCONTRACTOR NAME AND BUSINESS ADDRESS	DBE CERT. NUMBER & EXP. DATE	CONTRACT PAYMENTS					FEDERAL SHARE \$		
				NON-DBE	DBE	DBE (MINORITY)	DBE (NON- MINORITY WOMEN)	DBE (MINORITY WOMEN)	DATE WORK COMPLETE	DATE OF FINAL PAYMENT	
TOTAL PAYMENTS \$				\$	\$	\$	\$	\$	DBE GOAL ATTAINMENT		
ORIGINAL DBE COMMITMENT		Original DBE %		List all First Tier Subcontractors and all Disadvantaged Business Enterprises (DBEs) regardless of tier, whether or not the firms were originally listed for goal credit. If actual DBE utilization (or item of work) was different than that approved at time of award, provide comments on the back of the form. List actual amount paid to each of the DBE even if different than originally listed for goal credit.							
CONTRACTOR/CONSULTANT REPRESENTATIVE'S SIGNATURE							BUSINESS PHONE NUMBER		DATE		
RESIDENT PROJECT ENGINEERS SIGNATURE							BUSINESS PHONE NUMBER		DATE		
AGENCY											

Distribution: (1) Original plus one copy included in the Report of Expenditures - DLAE
(2) Copy - Local Agency files

Form CP-CEM 2402(F) (Rev. 08/04)

FINAL REPORT – UTILIZATION OF DISADVANTAGED BUSINESS
ENTERPRISES (DBE), FIRST-TIER SUBCONTRACTORS (FEDERALLY FUNDED PROJECTS)

The form requires specific information regarding the construction project: Contract Number, County, Route, Post Miles, a box to check that the project is indeed a Federal Aid Project, the Administering Agency, the Contract Completion Date and the Estimated Contract Amount. It requires the Prime Contractor's name and Business Address. The focus of the form is to describe who did what by contract item numbers and descriptions, asking for specific dollar values of item work completed broken down by subcontractors who performed the work, both DBE and non-DBE work forces. DBE prime contractors are required to show the date of work performed by their own forces along with the corresponding dollar value of work.

The form has a column to enter the Contract Item No (or Item No's) and Description of work performed or Materials provided, as well as a column for the Subcontractor's Name and Business Address. For firms who are DBE, there is a column to enter their DBE Certification No. The DBE should provide their Certification Number to the Contractor and notify the Contractor in writing with the date of the decertification if their status should change during the course of the project.

The form has five columns for the dollar value to be entered for the item work performed by the subcontractor.

The Non-DBE Column is used to enter the dollar value of work performed for firms who are not certified DBE.

The decision of which column to be used for entering the DBE dollar value is based on what Program(s) the firm is Certified. This Program status is determined by the Civil Rights Certification Unit based on ethnicity, gender, ownership and control issues at time of certification. The certified firm is issued a certificate by the Civil Rights Unit that states their program status as well as the firms Expiration Date. DBE Program status may be obtained by accessing the Civil Rights website (www.dot.ca.gov/hq/bep/) and downloading the Calcert Extract or by calling (916) 227 2207. Based on this DBE Program status, the following table depicts which column to be used:

DBE Program Status	Column to be used
If program status shows DBE only with no other programs listed	DBE
If program status shows DBE, SMBE	DBE Minority
If program status shows DBE, SMBE, SWBE	DBE (Minority Women)
If program status shows DBE, SWBE	DBE (Non-Minority Women)

If a contractor performing work as a DBE on the project becomes decertified, and still performs work after their decertification date, enter the total dollar value performed by this contractor on Form 2402(F) under the appropriate DBE Program Status (include all work performed after decertification) and complete and submit Form CEM-2403(F) as appropriate. Any comments to be made on the Form 2402(F) are to be explained on the reverse side of the Form. Indicate in the Comment section that Form CEM 2403(F) is being submitted.

If a contractor performing work as a Non-DBE on the project becomes certified as a DBE enter the dollar value of all work performed as a DBE on CEM-2402(F) and CEM-2403(F). Any comments to be made on the Form 2402(F) are to be explained on the reverse side of the Form. Indicate in the Comment section that Form CEM 2403(F) is being submitted.

There is a space provided on the CEM-2402(F) where the TOTAL is entered for these five columns.

There is a column on the CEM-2402(F) to enter the Date Work Complete as well as a column to enter the Date of Final Payment, which is an indicator of when the Prime Contractor made the "final payment" to the subcontractor for the portion of work listed as being completed.

The Original DBE Commitment area on the CEM-2402(F) is based on information at Award time of the project and is the total dollar value of those subcontractors listed at Award based on the above table.

The CEM-2402(F) has an area at the bottom where the Contractor and the Resident Engineer sign and date that the information provided is complete and correct.

SAMPLE FINAL REPORT OF RIGHT OF WAY EXPENDITURES

CITY OF MORELAND

One Dollar Square, Moreland, CA 90007
(999) 333-3030 Fax # (999) 333-7059

Project Nos.: _____

Federal No: BRM-A751(001)

State No (EA): 13-199129

Local Agency City of Moreland

Agreement No. 00001

I. Project Costs	Participating	Non- Participating	Total
1. Capital Costs			
Acquisition	\$1,028,543	\$20,000	\$1,048,543
RAP	\$15,000		\$15,000
Utility Relocation	\$69,614	\$750	\$70,364
Other			
Total Capital	\$1,113,157	\$20,750	\$1,133,907
2. Incidental	\$179,286	\$64,356	\$243,642
3. Subtotal	\$1,292,443	\$85,106	\$1,377,549
4. Less Rental & Sales Income	\$-12,250		\$-12,250
5. Project Total	\$1,280,193	\$85,106	\$1,365,299
II. RAP: Business			
	\$0		
Family	15,000		

III. A. The acquisition, final tabulation of all appraisals, the costs reported, and the maps submitted are unchanged when compared with the final construction lines.

B. Parcel List: See attached

Attachment #1

Federal Project No. BRM-A751(001)
State Project No. 13-1991229
Map No. F17192

B. PARCEL LIST.

As Acquired					REMARKS	Per Final R/W Map			
PARCEL NO.	TYPE TAKE	Acquired Area (SF or acres)				Map Sheet No.	Acquired Area (SF or acres)		
		TOTAL	R/W	EXCESS			Total	R/W	Excess
41042-1	Part					3,4	49,901(SF)	50,830(SF)	0
-2	S. Ease				207170 0.476 AC. Slope Easement	3,4			
-4	D. Ease				17980 0.041 AC Drainage Easement	4			
-5	D. Ease				8000 0.018 AC. Drainage Easement	4			
41043-1	Part					3	1,714 (SF)	1,714(SF)	0
-2	S. Ease				20150 Slope Easement	3			
-3	D. Ease				4640 Drainage Easement	3			
41044-1	Part					3	19.5(SF)	19.5(SF)	0
-2	S. Ease				0.020 AC. Slope Easement	3			
-3	D. Ease				0.009 AC. Drainage Easement	3			

1. Right of Way lines as claimed on progress claims submitted to Caltrans for reimbursement of acquisition costs (Section 4.1)
2. Area by square feet or acres.
3. Type Take: F = Full P= Partial
4. If change in area is indicated in "Per Final R/W Map" column, the local agency must include the revisions to the final lines on the Final Progress Payment Request to account for the differences between the original amounts claimed through progress invoices and the final amounts as adjusted to reflect the final right of way lines, i.e., acquisition costs, rental income credits.

Form FM 1592A

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

DISADVANTAGED BUSINESS ENTERPRISES (DBE) CERTIFICATION STATUS CHANGE

CP-CEM-2403(F) (New. 10/99)

CONTACT NUMBER	COUNTY	ROUTE	POST MILES	ADMINISTERING AGENCY	CONTRACT COMPETION DATE
PRIME CONTRACTOR			BUSINESS ADDRESS		ESTIMATED CONTRACT AMOUNT

Prime Contractor: List all DBEs with changes in certification status (certified/decertified) while in your employ, whether or not firms were originally listed for good credit. Attach DBE certification/Decertification letter in accordance with the Special Provisions

CONTRACT ITEM NO.	SUBCONTRACT NAME AND BUSINESS ADDRESS	BUSINESS PHONE	CERTIFICATION NUMBER	AMOUNT PAID WHILE CERTIFIED	CERTIFICATION/DECERTIFICATION DATE Letter attached
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	
				\$	

Comments:

I CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND CORRECT

CONTRACTOR REPRESENTATIVE SIGNATURE	TITLE	BUSINESS PHONE NUMBER	DATE
-------------------------------------	-------	-----------------------	------

TO THE BEST OF MY KNOWLEDGE, THE ABOVE INFORMATION IS COMPLETE AND CORRECT

RESIDENT ENGINEER	BUSINESS PHONE NUMBER	DATE
-------------------	-----------------------	------

DISTRIBUTION Original copy -DLAE
Copy -1) Business Enterprise Program 2) Prime Contactor 3) Local Agency 4) Resident Engineer

Form CP-CEM 2403(F) (New 10/99)

DISADVANTAGED BUSINESS ENTERPRISES (DBE) CHANGE IN CERTIFICATION STATUS REPORT

The top of the form requires specific information regarding the construction project: Contract Number, County, Route, Post Miles, the Administering Agency, the Contract Completion Date, and the Estimated Contract Amount. It requires the Prime Contractor's name and Business Address. The focus of the form is to substantiate and verify the actual DBE dollar amount paid to contractors on federally funded projects that had a changed in Certification status during the course of the completion of the contract. The two situations that are being addressed by CP-CEM 2403(F) are, if a firm certified as a DBE and doing work on the contract during the course of the project becomes Decertified, and if a non-DBE firm doing work on the contract during the course of the project becomes Certified as a DBE.

The form has a column to enter the Contract Item No (or Item Nos.) as well as a column for the Subcontractor's Name, Business Address, Business Phone, and contractor's Certification Number.

The column entitled Amount Paid While Certified will be used to enter the actual dollar value of the work performed by those contractors who meet the conditions as outlined above during the time period they are Certified as a DBE. This column on the CP-CEM-2403(F) should only reflect the dollar value of work performed while the firm was Certified as a DBE.

The column called Certification/Decertification Date (Letter attached) will reflect either the date of the Decertification Letter sent out by the Civil Rights Program or the date of the Certification Certificate mailed out by the Civil Rights Program. There is a box to check that support documentation is attached to the CP-CEM-2403 (F) form.

There is a Comments section for any additional information that may need to be provided regarding any of the above transactions.

The CEM-2403(F) has an area at the bottom where the Contractor and the Resident Engineer sign and date that the information provided is complete and correct.

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- In the absence of prior approval documentation, the use of publicly owned equipment, mandatory use of borrow/disposal sites, use of patented/proprietary materials, use of warranty/guaranties, and use of agency-furnished materials, shall make all or part of the construction phase ineligible for reimbursement with federal funds (see Chapter 12, *Plans, Specifications & Estimate*, in this manual).
- Failure to submit a “Material Certificate” shall result in a partial loss of funding for the construction phase. Failure to adequately document and address all exceptions to the certification will result in all or partial loss of reimbursement. Failure to implement an approved materials and testing program for the project will result in the loss of federal funds for the project (see Chapter 16, *Administer Construction Project*, and Chapter 17, *Project Completion*, in this manual).
- Failure to enforce the Contract DBE provisions with regard to utilization, substitution, or good faith determination and documentation will make all, or part of the construction phase ineligible for reimbursement with federal funds (see Chapter 9, *Civil Rights and Disadvantaged Business Enterprises*, in this manual). (*This applies to Contracts executed before May 1, 2006 with race-conscious DBE goals.*)
- Failure to maintain the completed project (roadway and appurtenances constructed with federal funds and/or mitigation sites), or portions of the project shall result in repayment of all or a portion of the federal reimbursement. (See Chapter 18, *Maintenance*, in this manual).

Examples of some of most common (found by Caltrans) Major Project Deficiencies (State) are:

- RTPAs that use Exchange funds for non-Article XIX purposes or for other than projects will have to return the funds given to them (see Chapter 18, *Optional Federal Exchange and State Match Programs*, in the LAPG).
- Counties that use Exchange funds for other the non-Article XIX purposes will have to return the funds given to them (see Chapter 18, *Optional Federal Exchange and State Match Programs*, in the LAPG).
- On Environmental Enhancement and Mitigation (EEM) projects, reimbursable costs must be invoiced for by the end of the first state fiscal year following the fiscal year, during which funds were allocated by the CTC. Failure to comply will result in loss of the federal reimbursement (see Chapter 20, *Environmental Enhancement and Mitigation*, in the LAPG).

UNRECOVERABLE PROJECT DEFICIENCY

An Unrecoverable Project Deficiency is defined as “a deficiency of such magnitude as to create doubt that the policies and objectives of Title 23 of the USC (or other applicable federal codes) will be accomplished by the project,” (quote from “PS&E Certification”) and the project has proceeded to the point that the deficiency cannot be corrected. This level of deficiency shall result in the withdrawal of all, or a portion of the federal and/or state funds from the project.

Examples of some of the most common (found by Caltrans and FHWA) Unrecoverable Project Deficiencies (Federal) are:

- Projects that are not on an approved FTIP/FSTIP are not eligible for reimbursement with federal funds for any project activities prior to approval of the FTIP/FSTIP and project authorization (see Chapter 2, *Financing the Federal-Aid Highway Program*, in the LAPG.)

- Any preliminary engineering, right of way and construction activities done prior to authorization are not eligible for reimbursement (see Chapter 3, *Project Authorization*, in this manual).
 - Violation(s) of permit requirements or conditions obtained as a requirement of the environmental process or failure to secure required permits and environmental approvals will result in a loss of all or part of the federal project funding (see Chapter 6, *Environmental Procedures*, in this manual).
 - No pre-award audit for consultant contracts over \$250,000.
 - Consultant contract awarded, but not through competitive negotiations, when a noncompetitive negotiated contract is not warranted.
 - Design work (over and above what is required for the environmental document) prior to environmental clearance is not eligible for reimbursement with federal funds (see Chapter 3, *Project Authorization*, Chapter 6, *Environmental Procedures*, and Chapter 12, *Plans, Specifications & Estimate*, in this manual).
 - Failure to include required contract provisions, Form FHWA-1273 and other contract provisions - certifications, in the bid documents shall make the construction phase of the project ineligible for federal reimbursement (see Chapter 12, *Plans, Specifications & Estimate*, in this manual).
 - Right of Way Acquisition prior to environmental clearance (except for hardship and protection with FHWA prior approval) is not eligible for federal reimbursement (see Chapter 3, *Project Authorization*, Chapter 6, *Environmental Procedures*, and Chapter 13, *Right of Way*, in this manual).
 - Additional costs resulting from incorrect statements on right of way certification are not eligible for federal reimbursement (see Chapter 13, *Right of Way*, in this manual).
 - Failure to open the bids publicly, failure to read the bids aloud, or failure to discuss reason(s) for not reading bid(s) aloud shall make the construction phase ineligible (see Chapter 15, *Advertise and Award Project*, in this manual).
 - Award of the construction contract to other than the lowest, responsive bidder for bids based on competition shall make the construction phase ineligible for reimbursement with federal funds (see Chapter 15, *Advertise and Award Project*, in this manual).
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- Negotiations with bidder(s) prior to award, except for force account projects, shall make the construction phase ineligible for reimbursement with federal funds (see Chapter 12, *Plans, Specifications & Estimate*, and Chapter 15, *Advertise and Award Project*, in this manual).
 - Award of the contract to a suspended or debarred contractor shall make the construction phase ineligible for reimbursement with federal funds (see Chapter 15, *Advertise and Award Project*, in this manual).

- Failure of a local agency to provide adequate supervision (local agency or local agency's consultant adequately staffed and equipped to provide the construction engineering service required) to ensure the project is constructed in accordance with the plans and specifications, shall make the construction phase ineligible for reimbursement with federal funds (see Chapter 15, *Advertise and Award Project*, in this manual).
- When the local agency hires a consultant to provide construction-engineering services for a project, the local agency is still required to provide a full-time employee of the agency to be in responsible charge of the project. Failure to do so shall make the construction phase ineligible for reimbursement with federal funds (see Chapter 16, *Administer Construction Contracts*, in this manual).
- No public agency shall be permitted to bid in competition or to enter into subcontracts with private contractors (see Chapter 15, *Advertise and Award Project*, in this manual).
- No construction work shall be performed by convict labor at the work site or within the limits of any federal-aid highway construction project from the time of award of the contract or the start of work on force account until final acceptance of the work by the administering agency, unless it is labor performed by convicts who are on parole, supervised release or probation (see Chapter 12, *Plans, Specifications & Estimate*, in this manual).
- Any contract that includes provisions that requires a contractor to give any preference in hiring (with the exception of Indians living on or near a reservation on eligible projects) shall make the contract ineligible for federal reimbursement (see Chapter 12 *Plans, Specifications & Estimate*, in this manual).
- For local agencies that pay for equipment rental above approved equipment rental rates, the local agency will be responsible for the amounts above the approved rates (see Chapter 16, *Administer Construction Project*, in this manual).
- Permanently incorporating steel or iron or coatings thereon from a foreign source in amounts exceeding the minimal use provisions shall make the construction phase not eligible for reimbursement with federal funds (see Chapter 12, *Plans, Specifications & Estimate*, in this manual).
- For maintenance items performed by the contractor as a contract item or under a contract change order, those items shall not be eligible for federal reimbursement (see Chapter 12, *Plans, Specifications & Estimate*, in this manual).
- Payments to a contractor for items of work that was designated for a DBE but performed by others, and there is no documentation for the substitution that was approved, then those items shall not be eligible for reimbursement with federal funds (see Chapter 9, *Civil Rights and Disadvantaged Business Enterprises*, in this manual). (*This applies to Contracts executed before May 1, 2006 with race-conscious DBE goals*).
- Local agencies that do not enforce the requirement that the contractor posts all specified posters, notices, wage determinations, etc. at the job site will lose all or part of their reimbursement (see Chapter 16, *Administer Construction Contracts*, in this manual).

- Local agencies that do not enforce contract requirements, whether express or implied, relating to federal statutes and/or contract provisions pertaining to nondiscrimination, nonsegregated facilities, equal opportunity, health and safety and work site safety, Title VI, Davis-Bacon Act, Copeland Act, Clean Air Act as amended, Federal Water Pollution Control Act, Lobbying Certification, Noncollusion, False Statements, Buy America, On-the Job Training, or incorporating required contract provisions in subcontracts, etc., including reporting shall result in loss of all, or part of the federal reimbursement (see Chapter 12, *Plans, Specifications & Estimate* and Chapter 16, *Administer Construction Contracts*, in this manual).

Some most common examples (found by Caltrans) of Unrecoverable Project Deficiencies (State) are:

- Any capital work (right of way acquisition and construction) done on EEM and projects in advance of CTC's allocation vote is not eligible for reimbursement (see *Financial Guidelines for Local Agency Reimbursement*, in the LAPG).

20.3 SANCTIONS

All Major Project Deficiencies (until they are corrected) and Unrecoverable Project Deficiencies require sanctions by Caltrans. Process Review Committee or DLAE shall impose one of the following sanctions, depending on the severity and circumstances of the deficiency:

- Freeze on all future programming of federal or state funds until corrective action is implemented.
- Freeze progress payments for a federal-aid project until the project's Major Project Deficiency is corrected.
- Percentage of federal or state funds for a project withdrawn.
- All federal or state funds withdrawn from a project.

DLAE will be responsible for notifying the local agency of sanctions imposed.

Whether or not sanctions are imposed against a local agency, the local agency shall be expected to develop an action plan and implement it to correct the deficiencies. Local agencies will be given adequate time to develop and implement their action plan. Failure to correct the deficiencies in a timely manner shall be grounds for imposing additional sanctions.

EXHIBIT 6-C PIN FOR BARRIER RAIL REPLACEMENT PROJECTS

Following is the formula to be used to calculate the priority index number for HBRR Barrier Rail Replacement projects:

Description and Evaluation of Priority Factors

Total Bridge Rail Priority Points = F1 + F2 + F3 + F4 + F5 + F6 + F7

F1: Bridge Rail Type - Among the types of rails where NBI item 36A is coded 0 in the Bridge Inspection Report, some are considered to be less effective than others. Listed below are the assigned points (ten points maximum per project - if one side is good, project applies to bad side only - if project is for two sides with different points, use average):

F1 = 10 points: no bridge rail, or lightweight timber rails;

F1 = 6 points: lightweight concrete post or metal baluster, Tuthill, or equal;

F1 = 3 points: lightweight concrete window (Todd rail), unreinforced masonry; metal beam or lattice, or equal;

F1 = 0 points: all other rail types

F2: Consequence of Penetration

F2 = 6 points: bridges over an area of moderate or heavy public use (i.e., main road, street or railroad, playgrounds, parking lots, etc.);

F2 = 0 points: otherwise.

F3: Inadequate Approach Rail System - Points are given for inadequate approach guardrails, inadequate approach guardrail to bridge rail connections, and inadequate approach guardrail terminals (five points maximum per project - if it varies, use average of rails to be replaced):

F3 = 1 point: inadequate approach guardrail transitions;

F3 = 3 points: inadequate approach guardrail;

F3 = 1 point: inadequate approach guardrail terminal;

(Two-way bridges less than 60 feet wide should have an adequate approach guardrail system at all four corners).

F4: Accidents - All accidents involving the bridge rail, bridge ends and approach guardrails in the last 5 years are counted. One point is given for each Property

Damage Only (PDO) accident while 5 points are given for each fatal or injury accident.

$$F4 = 5 \text{ points: } x \text{ (\# of fatal or injury accidents)} + 1 \text{ point: } x \text{ (\# of PDO accidents)}$$

If replacing rail on only one side, use accidents involving the rail to be replaced.

F5: ADT/Lane - This is a measure of the number of conflicts on the bridge. The most critical case is at a volume/capacity ratio of 0.50, This is equivalent to 4,000 ADT/Lane, (Average Daily Traffic/Lane) on 2-lane, 2-way roads and 8,000 ADT/Lane on multi-lane roads. Points are given as follows (Use the “ADT” information from the Bridge Inspection Report.):

On 2-Lane, 2-Way Roads		On Multi-Lane Roads
F5 Points	(ADT/Lane)=L	(ADT/Lane)=L
0	L < 800	L < 1,600
1	800 ≤ L ≤ 1,600	1,600 ≤ L ≤ 3,200
2	1,600 ≤ L ≤ 2,400	3,200 ≤ L ≤ 4,800
3	2,400 ≤ L ≤ 3,200	4,800 ≤ L ≤ 6,400
4	3,200 ≤ L ≤ 4,000	6,400 ≤ L ≤ 8,000
5	L ≥ 4,000	L ≥ 8,000

F6: Site Conditions - This rating factor is affected by many variables such as vertical alignment, horizontal alignment, bridge width, or access roads being close to the bridge. For each variable that is slightly worse than the design standard, add 1/2 point. For each variable that is significantly worse than the design standard, add 1-1/2 points. The points for F6 shall be as follows:

F6 = 0 points: site conditions are excellent

F6 = 1 point: site conditions are good

F6 = 2 points: site conditions are fair

F6 = 3 points: site conditions are average

F6 = 4 points: site conditions are poor

F6 = 5 points: site conditions are critical

List of Title 23 ER Projects

Note: Program approval shall not constitute an obligation of funds nor shall it establish a date of eligibility for Federal Funding.

District		Project location		Department of Transportation FEDERAL-AID PROGRAM		Sheet _____ of _____		Comments (State)
Class of Federal Funds		<input type="checkbox"/> Non-Urbanized Area <input type="checkbox"/> Urbanized Area				Prepared by _____ Date _____		
						Estimated Cost (\$1,000)		
ITEM NO.	FEDERAL PROJECT NO.	PROJECT DESCRIPTION AND TYPE OF WORK	MPO	LENGTH (miles)	PHASE	TOTAL	FEDERAL FUNDS	
Remarks (Federal)								Phase P=Preliminary Eng C=Construction

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