



# Guidelines

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## **GUIDELINES FOR TRAFFIC SIGNAL CONTROLLERS AND INSPECTION**

### **Privately funded projects without a Cooperative Agreement - Project proponent pays costs for Department furnished controller assembly.**

These costs are updated annually, if necessary, after determining the average actual cost for the Department to acquire, test, stock and ship the equipment to the local District. For additional equipment and their associated costs, please see the attached price list.

These costs should be included in the deposit prior to the issuance of the contractor's encroachment permit. In cases where there is a long lead-time before starting work, these costs may be submitted immediately prior to performing work on a signal system.

Districts should determine and charge additional fees covering the actual cost to deliver, install, inspect, and turn on traffic signal controllers.

### **Projects involving Cooperative Agreements - Project proponent pays costs for Department furnished controller assembly**

The traffic signal controllers, and all other actual costs incurred by Caltrans, are charged against the appropriate Cooperative Agreement Expenditure Authorization. When there is Department participation in the project, the Department's share of the actual costs of the project will be reduced by the actual cost of the controllers, which include controller fee, testing costs and any other mandatory charges.

### **Procedures to order controller assemblies from the Department's warehouse**

To allow time for delivery to the District, controller assemblies shall be ordered from the Sacramento warehouse a minimum of 10 working days before a permittee plans to pick up an assembly in the district (controller not included). Caltrans Maintenance or Traffic staff will deliver actual controllers and auxiliary equipment to job sites at the time of a scheduled signal turn on.

### **Charges for Encroachment Permit projects**

As each controller assembly is ordered, the districts shall instruct the Caltrans warehouse in Sacramento to charge the equipment to the Encroachment Permit Expenditure Authorization (EA) 937700, using Subjob 3EPIC and Object Code 118. A Special Designation (SD) of 7CONTROL must also be used if the permittee has paid a fee for the equipment.

### **Charges for Cooperative Agreement projects**

For Cooperative Agreement projects, the district should instruct the warehouse to charge the equipment to the appropriate Cooperative Agreement EA, with any applicable SD identified for the project (do not use an Encroachment Permit EA or SD on these Cooperative Agreement Project

## FEES FOR TRAFFIC SIGNAL CONTROLLERS AND INSPECTION

<b>TYPE OF PROJECT</b>	<b>PROJECT FEE PAYMENTS</b>		
	<b>CONTROLLER</b>	<b>INSPECTION</b>	<b>DELIVERY AND INSTALLATION</b>
<b>PRIVATELY FUNDED</b>	YES	YES	YES
<b>LOCALLY FUNDED W/O AGREEMENT</b>	YES (Paid by Contractor)	YES (Paid by Contractor)	YES (Paid by Contractor)
<b>JOINT FUNDED PROJECTS WITH COOPERATIVE AGREEMENTS</b>	YES (As part of Department's Contribution and Charged to Coop EA)	YES (As part of Department's Contribution and Charged to Coop EA)	YES (As part of Department's Contribution and Charged to Coop EA)
<b>100% SPECIAL FUNDED PROJECTS WITH AGREEMENTS</b>	YES (Charged to Coop EA)	YES (Charged to Coop EA)	YES (Charged to Coop EA)

# State Furnished Materials List

<b>Item Description</b>	<b>Warehouse Stock Number</b>	<b>Manufacturer</b>	<b>Price</b>
Model 170E Traffic Controller	7440-0173-4	Dynatrol	\$1,028
Model 412C Program Module	7440-0576-0	Dynatrol	\$127
EPROM Chip UV Eprom	7440-0581-0	ST Micro Electronics	\$7
Model 400 Modem Card	7440-0130-4	P.D.C.	\$100
C2P Harness	7440-0131-6	Rose Supply	\$37
C2PS Harness	7440-0890-5	Rose Supply	\$51
Model 200 Load Switch	7440-0290-2	Traffic Sensor Corp.	\$15
Model 204-170 Flasher Unit	7440-0560-6	Traffic Sensor Corp.	\$15
Model 222 Two Channel Loop Detector	7440-0350-0	Diablo Eng.	\$49
Model 210 Conflict Monitor	7440-0330-8	Eberle Design Inc.	\$226
Detector Vehicle Magnetic Probe Model 231	7440-0400-7	M-Systems	\$161
Model 232 Dual Magnetic Detector	7440-0430-0	M-Systems	\$442
Model 242 Two Channel DC Isolator	7440-0475-5	P.D.C.	\$22
Model 252 Two Channel AC Isolator	7440-0196-3	P.D.C.	\$44
Model 500 CMS (Left Hand) or (Right Hand)	7440-0175-9	McCain	\$59,545
Model 510 CMS (Left Hand) or (Right Hand)	7440-0181-1	McCain	\$59,304
Model 520 CMS (Left Hand) or (Right Hand)	7440-0188-6	McCain	\$35,676
Harness #4 for CMS500	7440-0613-9	McCain	\$2,240
Harness #5 for CMS500	7440-0614-1	McCain	\$697

<b>Model 334L Cabinet</b>	<b>7440-0075-7</b>	<b>Safetran</b>	<b>\$3,582</b>
<b>Model 332L Cabinet</b>	<b>7440-0070-6</b>	<b>Safetran</b>	<b>\$3,876</b>
<b>Model 206L Power Supply</b>	<b>7440-0065-6</b>	<b>Eberle Design Inc.</b>	<b>\$185</b>
<b>Model 2070E Traffic Controller</b>	<b>7440-0085-8</b>	<b>Intelight Inc.</b>	<b>\$1,523</b>
<b>Model 2070-6A Modem</b>	<b>7440-0136-7</b>	<b>General Devices, Inc.</b>	<b>\$465</b>
<b>Model 2070-6B Modem</b>	<b>7440-0137-9</b>	<b>General Devices, Inc.</b>	<b>\$580</b>
<b>Model 2070-7A Modem</b>	<b>7440-0134-2</b>		<b>\$106</b>
<b>Model FXM-1100 Battery Back-up System</b>	<b>7440-0673-5</b>	<b>Alpha Technologies, Ltd</b>	<b>\$963</b>
<b>CMS Harness #1 - 30' Long</b>	<b>7440-0056-7</b>	<b>McCain, Inc.</b>	<b>\$383</b>
<b>CMS Harness #1 - 15' Long</b>	<b>7440-0055-5</b>	<b>McCain, Inc.</b>	<b>\$325</b>

# DEPUTY DIRECTIVE

Number: DD-23

Refer to  
Director's Policy: 06-Caltrans' Partnerships  
07-Project Delivery  
10-Departmental  
Commitments

Effective Date: 6-28-94

Supersedes: New

Title: Developing Special Funded Projects

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## POLICY

Caltrans strongly supports and works in partnership with cities, counties, local transportation authorities, transit agencies and private developers in the implementation of Special Funded Projects developed and funded by them on the State Highway System.

All projects on the State Highway System, regardless of funding, must adhere to Caltrans' standards, practices and procedures. Specific project roles and responsibilities from start of project development through construction are defined in the Developing Special Funded Projects Guidelines and are covered in the Cooperative Agreements established between the Department and the local entity sponsoring the project, or in a Highway Improvement Agreement with a private project sponsor.

## BACKGROUND

The Department's policy for developing Special Funded Projects on the State Highway System was previously based on Sections 14529.11 through 14529.13 of the Government Code. These sections contained sunset clauses of January 1, 1992. AB 1602, Chapter 383, Statutes 1991 extended the sunset date of Section 14529.11 to January 1, 1994. All three sections have now expired. A Policy Memo (dated December 11, 1991, signed by R. P. Weaver) established that the procedures contained in Sections 14529.12 and 14259.13 were to remain policy with some minor changes. As these State/local/private partnerships continue to evolve, it is essential that all parties maintain a clear understanding of each other's roles and responsibilities. This Deputy Directive replaces and modifies the policy and procedure established in the expired statutes and the 1991 Policy Memo.

## DEFINITION

A Special Funded Project includes: local sales-tax measure projects; locally funded projects; privately funded projects; public toll road facilities (not the privatization toll road projects) located on the State Highway System, that are developed and constructed using local or private funds. Other type of projects that are complementary to the Special Funded Projects include: encroachment permit projects, and jointly funded or cooperative projects.

Detailed definitions of Special Funded Projects, as well as encroachment permit projects and jointly funded or cooperative projects, including Caltrans' roles and responsibilities, are defined in the Developing Special Funded Projects Guidelines and in Chapter 3 "Roles and Responsibilities for Local and Private Entities" of the procedure manual for Special Funded State Highway Projects and other applicable Caltrans manuals.

**RESPONSIBILITIES**

District Directors and Deputy District Directors, in the spirit of partnership:

- Make commitments to Special Funded Project sponsors, based on Caltrans' having the resources available, and ensure the delivery of products, services, and oversight for which Caltrans is responsible as outlined in the policies, procedures, regulations and laws governing Caltrans.
- Assess that the project sponsor is financially able to see their proposed project through construction to completion before starting work on the Project Study Report.
- Provide adequate level of oversight of the special funded projects, and empower project managers and supervisors with the authority and responsibility to deliver products and services for which Caltrans is responsible.
- Ensure that District employees are responsive to the needs of the project sponsor, while keeping the best interest of Caltrans in mind.
- Appoint a project manager as a single point of contact between the project sponsor and Caltrans, and to coordinate with affected Caltrans units.

The Chief, Division of State and Local Project Development:

- Develops policy and procedures for project development of special funded projects.
- Oversees the Districts to ensure that agreements are executed in a timely manner and within the policies, procedures, and laws governing Caltrans.
- Acts as Caltrans' ombudsman for the Special Funded Program as outlined in the Local Programs Dispute Resolution Process.

Project Managers and Supervisors:

- Empower employees with the appropriate tools, resources, time and training to deliver the products and services for which Caltrans is responsible as outlined in all applicable Caltrans manuals and Cooperative Agreements or Highway Improvement Agreements.

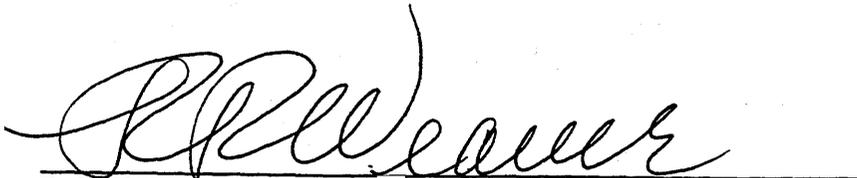
- In partnership with the project sponsor re-prioritize commitments to ensure the successful delivery of both Caltrans' and project sponsor's projects.
- Communicate to their District Director and Deputy District Directors any changes or problems that could delay the successful delivery of a project.

Employees:

- Assist the Department in providing quality and timely products and services to the project sponsors.
- Communicate to their manager and supervisor any changes or problems that could delay the successful delivery of a project.

*APPLICABILITY*

All employees working on Special Funded Projects.

A handwritten signature in cursive script, appearing to read 'R. P. Weaver', is written over a horizontal line.

R. P. WEAVER  
Interim Chief Deputy Director

## DEVELOPING SPECIAL FUNDED PROJECTS GUIDELINES

The roles, responsibilities, and agreement requirements for Special Funded Projects, from start of project development through construction, are outlined below.

- Local Sales-Tax Measure Projects are defined as those State Highway System projects identified in an approved "Sales-Tax Measure Expenditure" and/or "Strategic Plan." The projects are funded 50% or more from local sales-tax revenues with construction costs greater than \$1,000,000 and in an existing and/or future State highway right-of-way that are not in State programming documents (STIP, SHOPP, TSM or Toll Bridge Program). Funds are generated from a voter-approved countywide sales-tax increase for transportation. Local Sales-Tax Measure Projects with construction costs less than \$1,000,000 shall be considered to be Encroachment Permit Projects. Projects funded with less than 50% sales-tax revenues shall be considered "Locally Funded Projects." Sales-tax projects can utilize State/Local Transportation Partnership Program (SLTPP) funds and still be considered Sales-Tax Measure Projects. Typically, Sales-Tax Measure Projects are freeway capacity improvement projects with countywide significance such as new routes, lane additions, and major interchange improvements.

As the owner/operator responsible for the maintenance, operations, and expansion of the State Highway System, Caltrans is responsible for performing and funding all project development work through the Environmental Document (ED) approval. If Caltrans is unable to comply with schedules for the Project Study Report (PSR) and the ED established by the Sales-Tax Measure Authority, the Authority may undertake this work at the Authority's expense, with appropriate oversight provided and funded by Caltrans.

The Sales-Tax Measure Authority is responsible for funding and performing all project development, right-of-way, and construction following ED approval. Caltrans provides oversight at the State's expense. If requested by the Sales-Tax Measure Authority, Caltrans may do some of the services (which the Authority is responsible) on a reimbursed basis if Caltrans has sufficient staffing resources and reimbursed budget authority. One or more cooperative agreements between the State and the Sales-Tax Measure Authority will be required (for Sales-Tax Measure Projects on the State Highway System) to set forth the responsibilities and funding for the various phases of project development and construction.

- Locally Funded Projects are defined as local agency sponsored projects (nonsales-tax measure) on the State Highway System with construction costs greater than \$1,000,000. These projects are in an existing and/or future State highway right-of-way that are not in a State programming document. Funds may be generated from developer fees and contributions, assessment districts, local share of State gas taxes, sales-tax revenues, local property taxes, local Federal aid, nonhighway Federal programs and SLTPP. Locally Funded Projects are typically highway projects with local significance such as interchange and intersection improvements, over crossings, transit, and signalization projects. Local Funded Projects with construction costs less than \$1,000,000 shall be considered to be Encroachment Permit Projects.

As the owner/operator responsible for assessing the impact of improvements on the existing State Highway System, Caltrans is responsible for preparing the PSR at Caltrans' expense. It is the responsibility of the local agency to provide suitable engineering data and technical (and financial) information needed for Caltrans to prepare the PSR. If Caltrans is unable to comply with the schedule desired by the local agency, the local agency may prepare and submit a draft PSR at its own expense. If the Locally Funded Projects result in significant capacity improvement (construction of more than two-lane miles of State highway or construction of an improvement to a major freeway/freeway interchange), Caltrans is responsible for performing and funding all project development work through ED approval. If Caltrans is unable to comply with schedules for PSR and ED

established by the local agency, the local agency may undertake this work at the local agency's expense. All subsequent project development, right-of-way, and construction activities are to be performed and funded by the local agency, with Caltrans providing oversight at the State's expense. If requested by the local agency, Caltrans may do some of the services (which the local agency is responsible) on a reimbursed basis if Caltrans has sufficient staffing resources and reimbursed budget authority.

One or more cooperative agreements between Caltrans and the local agency will be required (for all Locally Funded Projects on the State Highway System) to set forth the responsibilities and funding for the various phases of project development and construction.

In the spirit of "Partnership," local agencies will no longer be required to pay Caltrans oversight costs if the project is not awarded within five years after approval of the PSR. Existing cooperative agreements that have this requirement can be amended to implement this change in policy.

- Privately Funded Projects are defined as projects on the State Highway System sponsored by a nonpublic agency with construction costs greater than \$1,000,000. These projects are in an existing and/or future State highway right-of-way that are not in a State programming document. Once a Privately Funded Project is identified, a decision must be made to designate the project sponsor. Caltrans strongly encourages local agencies to sponsor Privately Funded Projects to demonstrate community acceptance of a project and to improve coordination with other local agencies. If a local agency sponsors a Privately Funded Project, it becomes a Locally Funded Project and is processed as such. Where a local agency will not sponsor the Privately Funded Project, Caltrans will work directly with the private project sponsor.

As the owner/operator responsible for assessing the impact of improvements on the existing State Highway System, Caltrans is responsible for preparing the PSR at Caltrans expense. It is the responsibility of the private project sponsor to provide suitable engineering data and technical (and financial) information needed for Caltrans to prepare the PSR. If Caltrans is unable to comply with the schedule desired by the private project sponsor, the private project sponsor may prepare and submit a draft PSR at its own expense. The private project sponsor is responsible for performing and funding all subsequent project development, right-of-way, and construction activities with Caltrans providing oversight at the private project sponsor's expense. If requested by the private project sponsor, Caltrans may do some of the services (which the private project sponsor is responsible) on a reimbursed basis if Caltrans has sufficient staffing resources and reimbursed budget authority.

A Highway Improvement Agreement (HIA) accompanied by an Escrow Agreement, if applicable, will be required for all Privately Funded Projects.

- Public Toll Road Projects (Not the "Privatization" Toll Road Projects) are defined as those projects authorized under Sections 188.4, 531, 541, & 561 of the Streets and Highways Code. These sections authorized the creation of specific locally funded toll road facilities in Orange County (three new major freeway corridors) to become part of the State Highway System.

As the future owner/operator of the "Public Toll Road Facilities," Caltrans is responsible for providing oversight of the local toll road project development through construction at Caltrans' expense. If requested by the Toll Road Authority, Caltrans may do some of the work (which the Toll Road Authority is responsible) on a reimbursed basis if Caltrans has sufficient staffing resources and reimbursed budget authority. One or more agreements between the State and the Toll Road Authority will be required to cover responsibilities and funding that will include maintenance, operations, and acceptance into the State Highway System.

Listed below are definitions and responsibilities of other types of projects that are complementary to the Special Funded Projects.

- Encroachment Permit Projects are defined as projects on the State Highway System that are 100% funded and constructed by either a local agency, sales-tax measure sponsor, or a private entity with construction costs of \$1,000,000 (or less) within the existing or future State Highway right-of-way. Such projects shall follow established State policies and procedures for encroachment permits that will include preparation of the Permit Engineering Evaluation Report (PEER) and any other appropriate reports if required in Caltrans manuals. An agreement may be required on Encroachment Permit Projects. Types of Encroachment Permit Projects requiring agreements are those involving, but not limited to, signal construction, landscaping, and soundwalls. Refer to the Cooperative Agreement Manual for agreement requirements.

On Encroachment Permit Projects, with construction costs greater than \$300,000 in the existing or future State highway right-of-way, the District Construction office shall continue to provide a State representative who shall be responsible for oversight of the construction of the project.

Utility projects and drainage easement projects shall continue to be considered Encroachment Permit Projects no matter what the construction costs may be.

In those rare instances on Encroachment Permit Projects where a Sales-Tax Measure Authority or a local agency requests Caltrans to do project development, right-of-way, or construction activities (which they are responsible), Caltrans may do some of those activities on a reimbursed basis if Caltrans has sufficient staffing resources and reimbursed budget authority. A cooperative agreement will be required to set forth the responsibilities and funding for the reimbursed activities.

Note: An encroachment permit is also required (in addition to other agreements) on all Special Funded Projects whenever the project sponsor (their consultants or contractors) work within the existing State highway right-of-way.

- Jointly Funded or Cooperative Projects are defined as those projects involving combinations of special funds (sales-tax measure, local, or private) and funding contained in State programming documents. The roles, responsibilities, and funding shall be defined in one or more cooperative agreements, regardless of the amount contributed by either the project sponsor or Caltrans. On those projects that Caltrans is performing project development, right-of-way, and/or construction, the project sponsor shall reimburse Caltrans for their support costs in the same proportion as the project sponsor's share of the total capital costs, unless other equitable arrangements are specified in the agreement.

# Deputy Directive

*Number:* DD-23-R1

*Refer to  
Director's Policy:* 03 - Safety and Health  
06 - Partnerships  
07 - Project Delivery  
08 - Freeway System  
Management  
10 - Commitments  
14 - Quality in Caltrans

*Effective Date:* February 2007

*Supersedes:* DD-23 (6-28-94)

**TITLE** Roles and Responsibilities for Development of Projects on the State Highway System

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**POLICY**

The California Department of Transportation (Department), as owner/operator of the State Highway System (SHS), has the statutory and inherent obligation to ensure that all modifications or additions to the SHS, regardless of project sponsor or funding source, are:

- Safe, operational, maintainable, compatible and of good value.
- Providing for the efficient multimodal movement of people and goods.
- In the best interest of the general public.
- Developed and constructed in compliance with laws and regulations that govern the use of State and Federal transportation funds.
- Developed and constructed in partnership with vested stakeholders.

The Department meets its obligations by:

- Engaging in early and continuous partnerships and ensuring accountability amongst project sponsors, implementing agencies, stakeholders, departmental functional units, local, regional and transit agencies, Tribal Governments, developers and consulting firms employed by the Department or its partners.
- Ensuring that all projects on or proposed for the SHS are planned, developed and constructed efficiently and effectively in accordance with standards and practices defined in various Department policies, procedures, manuals and guidance documents.
- Maintaining ultimate approval authority for all projects on the SHS.
- Keeping the public informed through appropriate community outreach.

*DEFINITIONS/BACKGROUND*

Owner/Operator is that entity ultimately responsible for the operation, maintenance and tort liability of a facility. Per Government Code (GC) 14520.3 (b), the Department is the owner/operator of the SHS.

Project is that temporary endeavor undertaken to plan, develop and construct an improvement, modification, or addition to the SHS.

Project Sponsor secures funding for the project and serves as the project advocate. The project sponsor chooses an Implementing Agency for each project component and is the customer of the Implementing Agency. The Department is the sponsor for all projects funded solely from the State Highway Operation and Protection Program and most projects funded from the Interregional Improvement Program.

The Implementing Agency is that entity charged with successful completion of each project component as defined in GC Section 14529 (b):

1. Project Initiation Document (PID).<sup>1</sup>
2. Completion of all permits and environmental studies.
3. Preparation of plans, specifications, and estimates.
4. Acquisition of rights-of-way, including, but not limited to, support activities.
5. Construction, construction management and engineering, including surveys and inspection.

There could be a different Implementing Agency for each component of a project. To ensure clear lines of responsibility, only one agency can be the Implementing Agency for a single component. Contract advertisement, award and administration shall be completed by the same Implementing Agency.

Deputy Directive (DD) 23, "Developing Special Funded Projects," dated June 28, 1994, established roles and responsibilities for projects on the SHS funded by others. The passage of Senate Bill 45 in 1997 and Proposition 35 in 2000 redefined these roles and responsibilities, necessitating the revision of this DD to be consistent with current statute.

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1. Although the PID is not listed as a project component in GC 14529 (b), it is required in GC 14526 (b) and 14527 (g) before the start of the components in 14529 (b). This implies the PID is an additional component.

## *RESPONSIBILITIES*

### Project Sponsors:

- Identify and prioritize the projects they sponsor.
- Identify the purpose and need for their project relative to the SHS.
- Establish project goals and evaluate project outcomes relative to the established goals.
- Serve as advocates for their projects, and secure funding from the various funding programs or other sources.
- Choose an Implementing Agency or Agencies for project components.
- Secure funding for the preparation and completion of project components as defined in GC Section 14529 (b).
- Secure funding for the preparation and completion of activities at the project team and functional level to perform quality control and quality assurance activities to ensure compliance with Department policies, standards and practices.

### Implementing Agencies:

- Deliver project components on time and within budget.
- Deliver quality project components in accordance with Department policies, standards, and practices to ensure the project is in the best interest of the general public and to preserve the immunities established by law to protect the Department and its employees.
- Implement adequate quality control and quality assurance procedures to ensure project components comply with Department policies, standards, procedures, and best practices.
- Ensure that project component closeout activities are completed, including, but not limited to, survey monumentation, as-built plans, environmental commitments compliance, and right-of-way.

### Deputy Director, Project Delivery:

- Establishes and ensures implementation of Department policies, standards, procedures, and best practices for Project Delivery.
- Establishes a Quality Management System for Project Delivery for use on all projects developed or proposed for the SHS.
- Provides capital outlay support (COS) resources for the timely and quality delivery of products and services.

Deputy Director, Maintenance and Operations:

- Establishes and ensures implementation of Department policies, procedures, and best practices for issuance of encroachment permits.
- Establishes and ensures implementation of Department policies, procedures, and best practices for maintenance and operations of SHS.
- Provides maintenance and operations support resources for the timely and quality delivery of products and services, including encroachment permits and owner-operator activities in support of project delivery.

Deputy Director, Planning and Modal Programs:

- Ensures that implementation of projects on or proposed for the SHS are consistent with the Department's Interregional Transportation Strategic Plan vision.
- Provides resources for the development of PIDs, including quality control and quality assurance or independent quality assurance activities.

Division Chiefs:

For each Division's respective area of responsibility relative to the efficient and timely delivery of quality projects on or proposed for the SHS:

- Develop and implement standards, procedures, and best practices.
- Develop and implement guidance, tools, and training.
- Provide statewide direction and standards for activities required to ensure compliance with Department policies, standards, and best practices.
- Measure and monitor critical project deliverables by Districts.
- Perform process reviews, ensuring the consistent and effective application of Department standards, procedures, best practices, and quality management activities.
- Implement a system of continuous quality improvement using information learned from measuring and monitoring deliverables and from process reviews.

District Directors:

- Assess the feasibility of the project sponsor's ability to obtain funding for the proposed project component(s) through completion before Department begins work on the PID or subsequent project component.
- Assess a project's purpose and need relative to its public benefit and impact to the SHS.
- Appoint a primary point of contact for the Department for each project.

- Determine and provide those activities necessary to fulfill the Department's owner/operator obligations for those projects impacting the SHS, including, but not limited to:
  - Implementation of quality control and quality assurance practices for each project component for which the Department is responsible;
  - Implementation of independent quality assurance (commonly referred to as oversight) for each project component that is the responsibility of others.
- Ensure project decisions are made through public outreach and involvement of stakeholders.
- Enter into cooperative or highway improvement agreements as appropriate with project sponsor prior to expenditure of COS resources.
- Inform stakeholders of the policies, standards, procedures, and best practices required by the Department and Federal Highway Administration.
- Deliver on commitments made to partners and customers, based on statutory authority and available resources, and ensure the timely delivery of quality products and services for which the Department is responsible.
- Ensure that departmental functional support units are properly resourced to deliver timely and quality products and services.
- Determine the appropriate agency to be lead under the California Environmental Quality Act per current Department policy.

Public Information Officers:

- Communicate to the public, specific actions that will be taken to restore or minimize effects of all construction, maintenance, permitting, planned emergency restoration, or other activities on the SHS.

Managers, Project Managers, Functional Managers, and Supervisors:

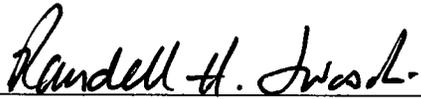
- Empower employees with the tools, resources, time and training to deliver the products and services for which the Department is responsible.
- Participate in the development of work plans defining project scope, cost, schedule, resource, and quality requirements.
- Prioritize commitments to ensure the successful delivery of both the Department's and external project sponsors' projects.
- Ensure that work does not begin without appropriate authorization.
- Notify their District Director and Deputy District Directors, via established chains of command, of any changes or problems that could delay the successful delivery of a project.
- Ensure project compliance with Department policies, standards, procedures, and best practices.
- Engage the appropriate Department public information office early in the project delivery process through project construction completion.

Employees:

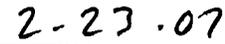
- Provide quality and timely products and services by using the appropriate tools, resources, time, and training.
- Communicate to their project managers, supervisors, and impacted functional units any changes or problems that could impact the timely, efficient delivery of a project or project component.

*APPLICABILITY*

All employees involved with the delivery of modifications or additions to the SHS.



\_\_\_\_\_  
RANDELL H. IWASAKI  
Chief Deputy Director



\_\_\_\_\_  
Date Signed

# Memorandum

*Flex your power!  
Be energy efficient!*

To: DISTRICT DIRECTORS

Date: July 3, 2007

  
From: RICHARD D. LAND  
Deputy Director  
Project Delivery

  
MICHAEL MILES  
Deputy Director  
Maintenance and Operations

Subject: Processing Projects Funded by Others

The Project Development Procedures Manual (PDPM) and the Manual for Encroachment Permits on California State Highways (Encroachment Permits Manual) provide policy and guidance on processing highway improvement projects funded by others and costing less than \$1 million through the Encroachment Permit Process. Projects costing greater than \$1 million have been required to follow the full Project Development Process. Due to cost escalation, the number and type of projects that can be constructed under the \$1 million limit has diminished.

Effective immediately, highway improvement projects funded by others costing between \$1 million and \$3 million can be processed using the Permit Engineering Evaluation Report (PEER) in-lieu of a Project Initiation Document (see Chapter 9 of the PDPM). Concept Approval and Project Approval will be via completion and approval of the PEER. Approval to issue an encroachment permit will be via signature of the oversight engineer on the project plans. Information on the preparation of the PEER can be found in Appendix I of the PDPM and in Chapter 2 of the Encroachment Permits Manual. These projects will continue to be treated as capital projects (see attached Decision Document).

When the project sponsor submits a project to the district for processing, a district representative will be assigned to work with the local entity or developer. The representative will serve as both the Caltrans point of contact and the Caltrans Project Manager (see Chapter 2 of the PDPM). An initial meeting should be scheduled to determine the proper process to follow for each new project (i.e. PEER process, Combined PSR/PR, or PSR and PR). If the PEER process is determined to be the appropriate process, the Coordinator will develop a work plan and will open an Expenditure Authorization (0 Phase) to capture project charges. The need to develop a work plan and secure resources cannot be overemphasized. These projects will be flagged with an "S-E" flag for tracking purposes.

Once the PEER is complete and the oversight engineer has approved the final plans and specifications, the project package is then submitted to the District Permit Engineer for concurrence that the package is complete, and can then issue the encroachment permit. When

DISTRICT DIRECTORS

July 3, 2007

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the District Permits Office receives the completed encroachment permit application, the permit office will issue the permit as expeditiously as possible.

The PEER process is intended to streamline the processing of projects funded by others by reducing the steps in the project development process. It is not intended to relieve the project sponsor from meeting all other Department policies, standards and practices. Requirements such as Stormwater Data Reports, Design Exceptions, and Environmental compliance must still be met.

If you have any questions, please contact Ray Tritt, Chief, Special Projects, Division of Design, at (916) 653-3348 or Dina El Nakhal, State Encroachment Permit Engineer at (916) 654-6232.

Attachment

c: Deputy District Directors Traffic Operations  
Design Management Board  
Project Management Board

# DECISION DOCUMENT

## Processing Projects Funded by Others

**Problem Statement:** In June 2006, the County Engineers Association of California (CEAC) requested the Department to increase the Construction Cost Limit for Encroachment Permits from \$1 million to \$5 million due to the doubling of construction costs since the cost limit was established in 1994.

**Recommendation:** It is proposed that Encroachment Projects and Highway Improvement Projects (Capital Projects) be clearly differentiated. Encroachment projects are those that meet the definition in the Streets and Highway Code, the Encroachment Permits Manual and the Project Development Procedures Manual (PDPM) and that do not become part of the Department's facility. Encroachment Projects as defined would be processed via the Encroachment Permit Process regardless of cost.

Current policy allows Highway Improvement Projects costing \$1 million or less to follow the Encroachment Permit Process. There would be no change to this policy under this proposal.

Highway Improvement Projects costing greater than \$1 million but less than \$3 million would be allowed to follow a streamlined process similar to the Encroachment Permit Process except that Capital Outlay Support staff would take the lead in processing. Concept and project approval would be through completion of a Permit Engineering Evaluation Report (PEER). After approval of the PEER, an encroachment permit would be issued.

Highway Improvement Projects \$3 million or greater would be processed through the normal Project Development Process and would receive an encroachment permit at the end of that process. Exceptions to this policy would require approval of the Chief Engineer.

Existing policy allows the Department to require the full Project Development Process for complex projects (e.g. projects that require California Transportation Commission action). Under this new policy, the Department will retain the right to increase the level of documentation and processing for those projects that are deemed complex.

**Background:** In 1994, Interim Chief Deputy Director R.P. Weaver signed Deputy Directive 23 (DD 23), which set the current policy on Oversight Projects (Special Funded Projects). DD 23 raised the Construction Cost Limit from \$300 thousand to \$1 million and established departmental roles and responsibilities for the development and delivery of Oversight Projects. Projects costing \$1 million or less are processed as Encroachment Permit Projects. Projects greater than \$1 million are to follow the Department's full project development process. Construction was to provide oversight and inspection on all projects greater than \$300 thousand in value.

In recent years, developers and Local Agencies have requested the Department to accept larger and more complex submittals through the Encroachment Permit Process. A project costing \$1 million in 1994 would now cost more than \$2 million, based on an analysis of the Department's Construction Cost Index. The overall perception is that the Encroachment Permit Process is easier, cheaper and faster to obtain approval than the normal Project Development Process.

Authority for the Department to control encroachments within the State Highway right of way is contained in the Streets and Highways Code (Sections 660-695). Encroachments allow temporary or permanent use of the highway right of way by a utility, public entity, or a private party. Encroachments are defined in the Department's Project Development Procedures Manual (PDPM) as "any tower, pole, pole line, pipe, pipe line, fence, billboard, stand or building, or any structure or object of any kind or character which is within the right of way but not a part of the Caltrans facility" which is in, under, or over any portion of the highway. Special events are also considered encroachments.

Projects following the Encroachment Permit Process do not require Project Initiation Documents (e.g. Project Study Reports) or Cooperative Agreements. Project approval for these projects is obtained by development of a Permit Engineering Evaluation Report (PEER) and issuance of an encroachment permit.

A team made up of representatives of the various headquarters divisions involved in encroachment permits (Design, Project Management, Environmental, Engineering Services, Traffic Operations, and Right of Way) was formed to develop a response to this request. The team initially proposed processing projects based on complexity. This proved to be difficult to define in a manner that could be applied consistently statewide. The current proposal was then developed and sent out to the Deputy District Directors of Traffic Operations, the Project Management Board, the Design Management Board, the Project Delivery Advisory Committee and to local agency representatives. While concerns were expressed, there appeared to be no serious opposition to the proposal as long as several key concerns were addressed. A small working group continued work to address the concerns expressed during review.

**Fiscal Impact:** Each project (both encroachments and highway improvements) processed through the Encroachment Permit Process will likely require some level of functional unit oversight as occurs in the normal Project Development Process. These projects are difficult to anticipate because they are dependent on others for funding and scheduling. It is proposed to resource these projects as follows:

Traffic Operations will resource Highway Improvement Projects costing \$1 million or less and for all Encroachment Projects. Traffic Operations will crossover resources for those Encroachment Projects and Highway Improvement Projects costing \$1 million or less that require oversight by other functional units. This is the process currently in place.

Capital Outlay Support will resource Highway Improvement Projects greater than \$1 million but less than \$3 million and following the streamlined process described above. The resources will be provided to the functional units involved in the oversight as

shown in an approved project workplan. It is proposed that a point of contact from Capital Outlay Support staff be assigned to each of these projects to develop the workplan, to ensure that proper independent quality assurance is conducted and to ensure that the project progresses through the approval process.

Resources for Highway Improvement Projects that will follow the Department's normal Project Development Process will be determined by development of workplans, which is the current practice.

**Organizational Impact:**

- **Employee Impact:** This proposal intends to maintain the resource allocation and organizational balance between Traffic Operations and Capital Outlay Support.
- **Stakeholder Impact:** This proposal should simplify the processing of those projects funded by others and costing less than \$3 million. The result should be less cost to the project sponsor.

**Policy Impact:** This policy conforms to other policy for projects funded by others as expressed in Deputy Directives 23 and 90.

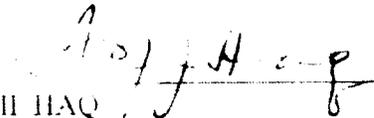
**Risks:** The primary risk is that the project sponsor will not involve the Department early in the concept phase and will be required to perform redesign to meet the Department's requirements. This risk belongs to the project sponsor and can be mitigated by early and frequent communication with the Department.

**Proposed Implementation Schedule:**

Decision Document Approved	May 31, 2007
Guidance Materials updated (Encroachment Permit Manual and PDPM)	July 1, 2007
New process is available for use (requires redirection of resources)	July 1, 2007
Workplans due for Projects processed with PEER	January 9, 2008 (and each January 9 thereafter)
Begin processing eligible projects with PEER	July 1, 2008

**Contact Person:** Raymond Tritt,  
Chief, Office of Special Projects  
Division of Design  
(916) 653-3348  
rtritt@dot.ca.gov.

**APPROVAL RECOMMENDED BY:**

  
ASHI HAQ  
Assistant Chief, Division of Traffic Operations  
Date 5/8/07

  
HOSSEIN ROSTAM  
Coordinator, Division of Project Management  
Date 5/7/07

  
RAYMOND S. TRITT  
Chief, Office of Special Projects  
Date 5/7/07

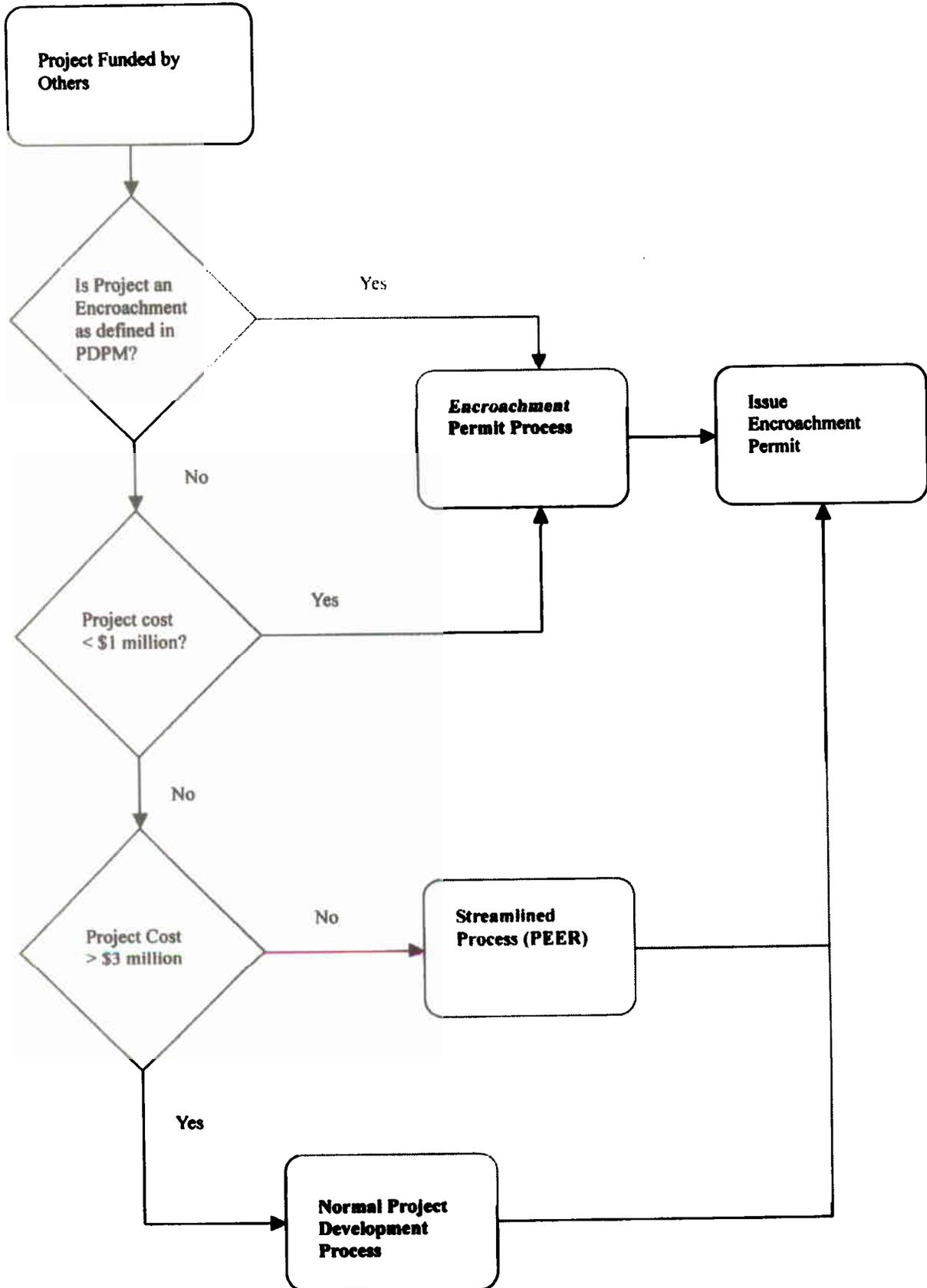
**APPROVED BY:**

  
ROBERT COPP  
Chief, Division of Traffic Operations  
Date 5-15-07

  
KARLA SUTLIFE  
Chief, Division of Project Management  
Division of Engineering Services  
Date 5-11-07

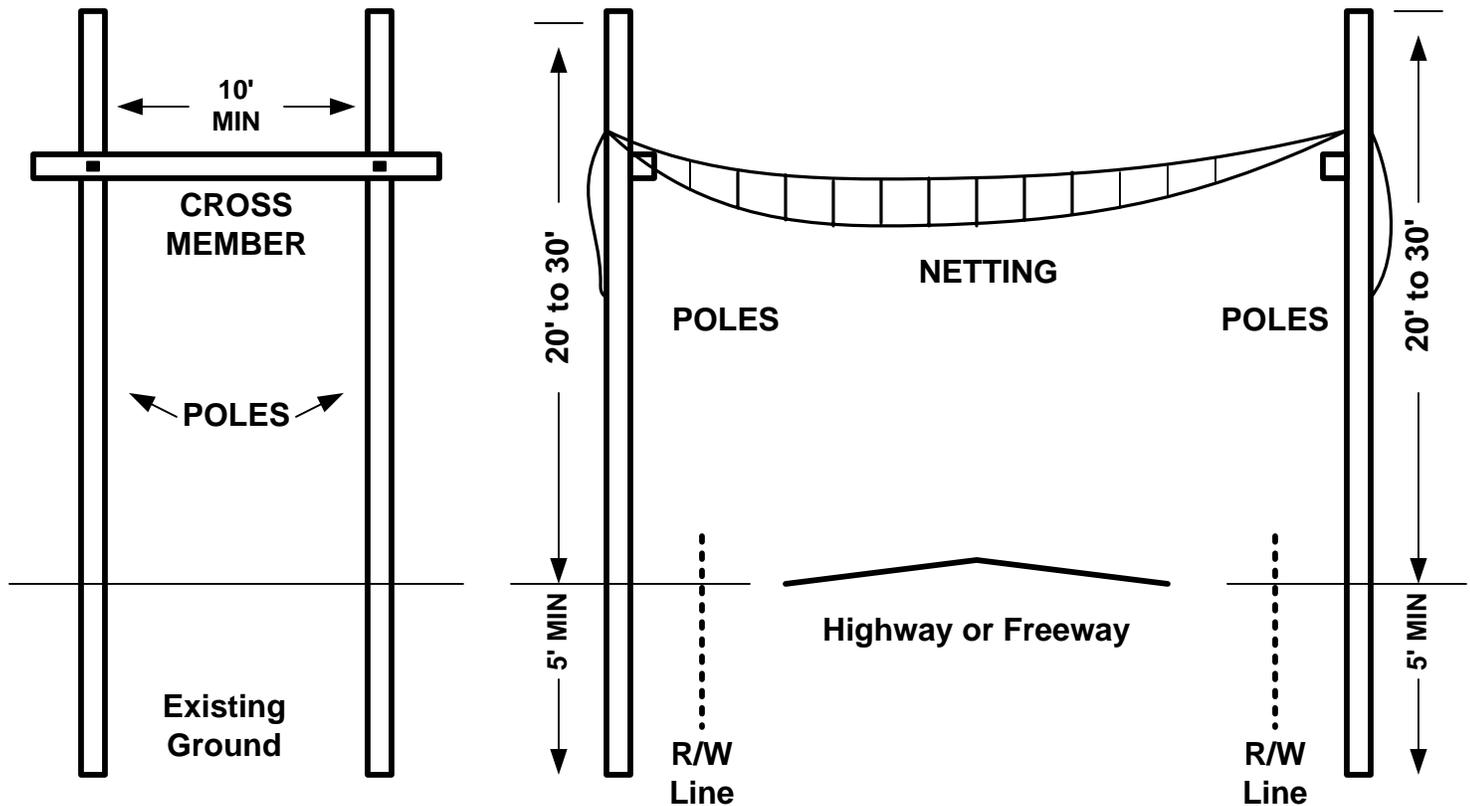
  
MARK LEJA  
Chief, Division of Design  
Date 5/10/07

Attachment: Process Flowchart



**ENCROACHMENT PERMIT H - SUPPORT DIAGRAM FOR AERIAL CROSSINGS**

TR-0108 (REV. 03/2007)

**CONSTRUCTION NOTES:**

A MINIMUM OF 18' SHALL BE MAINTAINED OVER AND ACROSS HIGHWAY OR FREEWAY LANES.

NETTING SHALL BE MAINTAINED OVER AND ACROSS LANES UNTIL AERIAL FACILITIES ARE PROPERLY SECURED IN PLACE.

H - SUPPORTS SHALL BE INSTALLED OUTSIDE OF STATE R/W, UNLESS PERMITTED BY THE STATE'S REPRESENTATIVE.

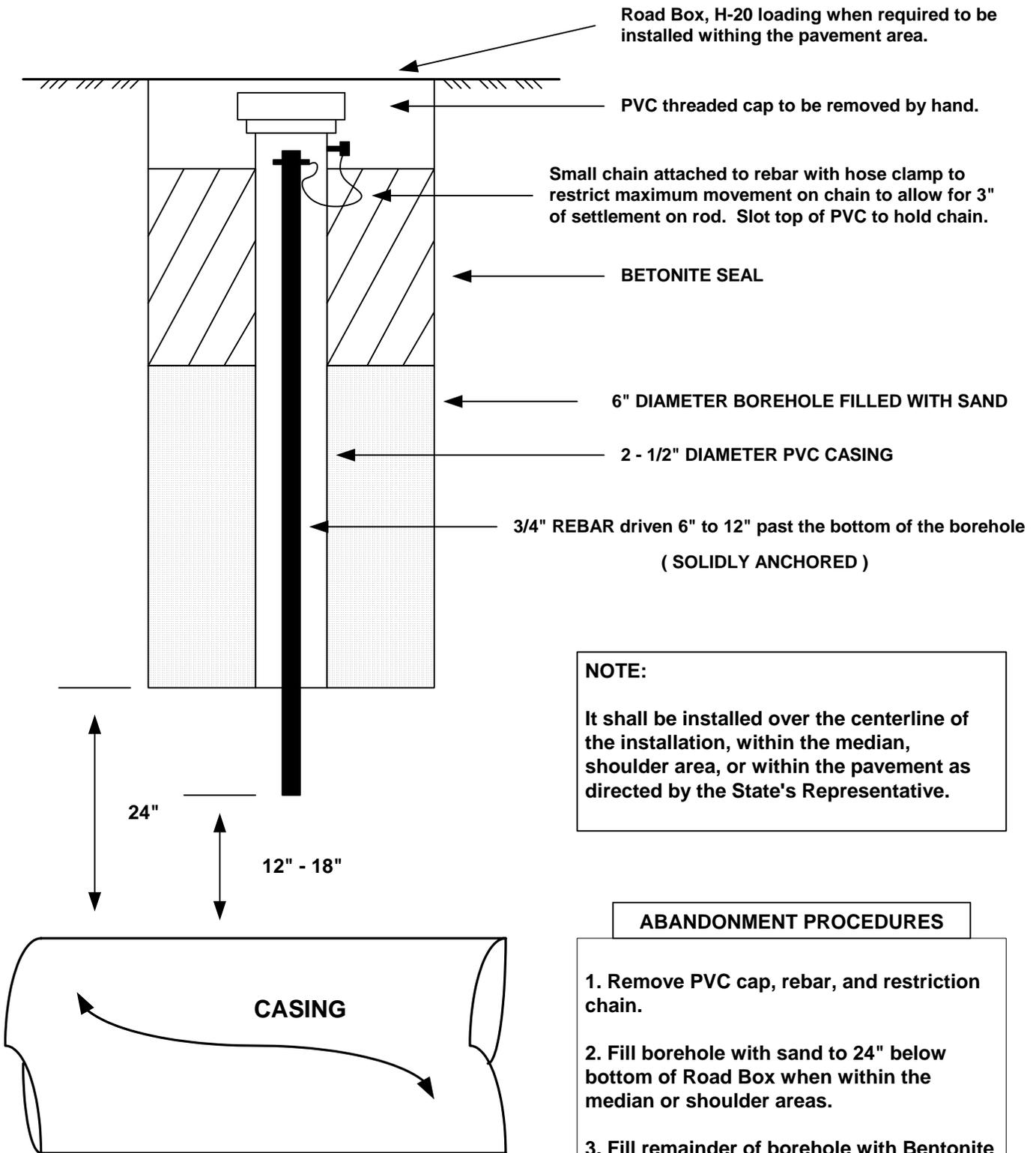
CHP BREAKS SHALL NOT EXCEED 5 MINUTES FOR THE PLACEMENT OF NETTING.

**PLACEMENT OF AERIAL LINES:** Installation or removal of overhead conductors crossing a freeway require traffic control by the California Highway Patrol (CHP) and usually occur on weekend mornings. The CHP can perform a rolling break in traffic on most highways to allow up to a five-minute clearing. These breaks are adequate for simple cable installation. Utility personnel carry the conductors across the freeway lanes and hoist them into place on the opposite side of the freeway.

On larger conductor crossings such as transmission lines, 1" or greater in diameter, districts may determine that safety nets are needed to prevent transmission lines from falling on traffic during cabling installations. Temporary safety-net support poles are placed at protected locations outside shoulders and in medians. If locations for temporary supports are not available, the utility company may use K-rail and sand barrel crash cushions. After rope nets are strung during CHP traffic breaks other work is then allowed to proceed. Placement of the aerial line may be by helicopter.

# ENCROACHMENT PERMIT SETTLEMENT ROD DETAIL

TR-0152 (REV. 09/2006)



# ENCROACHMENT PERMIT SURVEY GRID

TR-0151 (REV. 09/2006)

**LEGEND:**

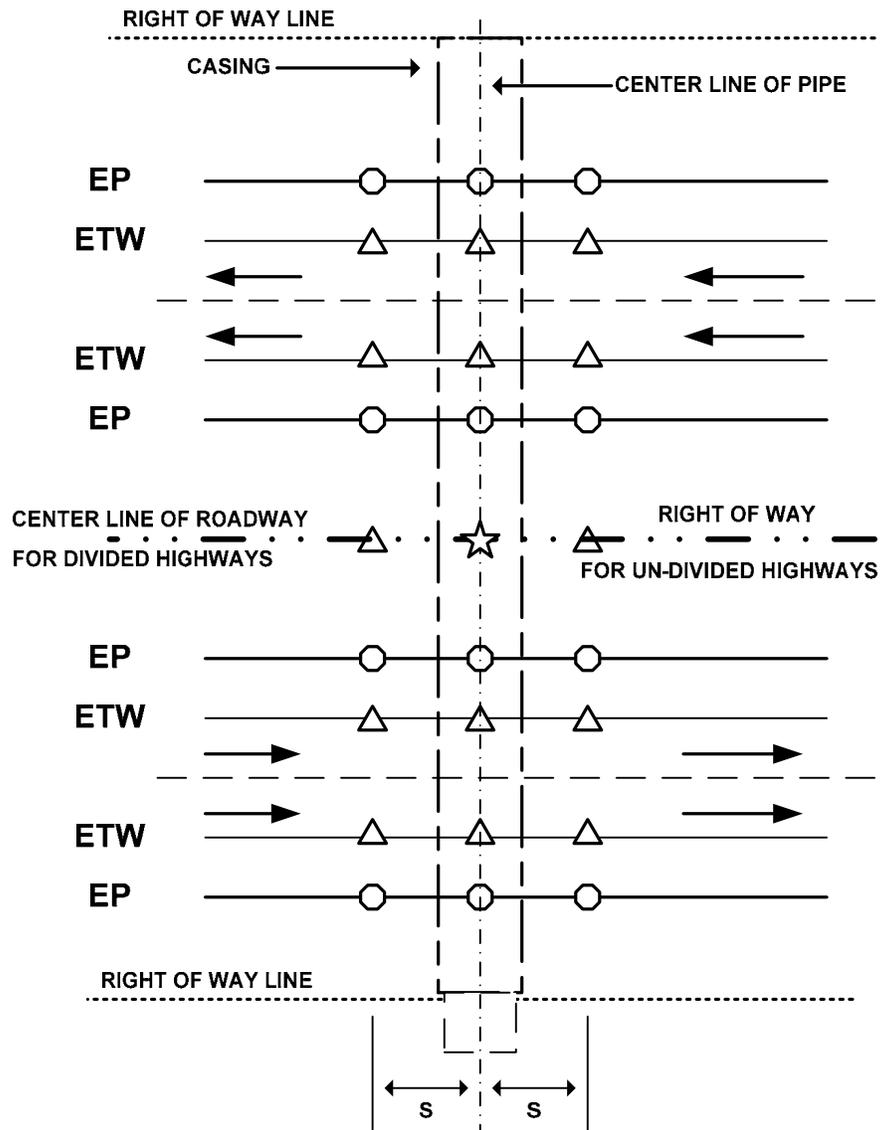
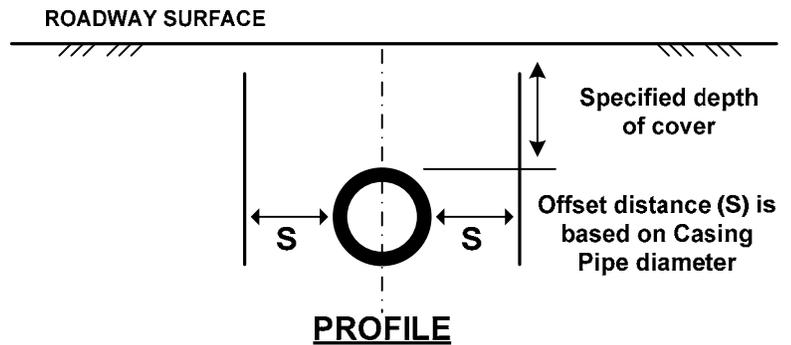
-  Octagon Data Points required when the diameter is < 8'.
-  Octagon & Triangle Data Points required when the diameter is > 8'.
-  Settlement Rod may be required when the diameter is > 5'. (Settlement Rod Detail is located in Appendix E of the Encroachment Permits Manual)

- EP Edge of Pavement
- ETW Edge of Travel Way (Fog line, Yellow Stripe, etc.)
- S Offset Distance away from the pipe alignment, as follows:
  - 3' for casing pipe diameters < 30"
  - 5' for casing pipe diameters 30" - 72"
  - 10' for casing pipe diameters 72" - 108"
  - 15' for casing pipe diameters > 108"

**NOTES:**

Survey data is to be collected at the specific points along the casing alignment at the following times:

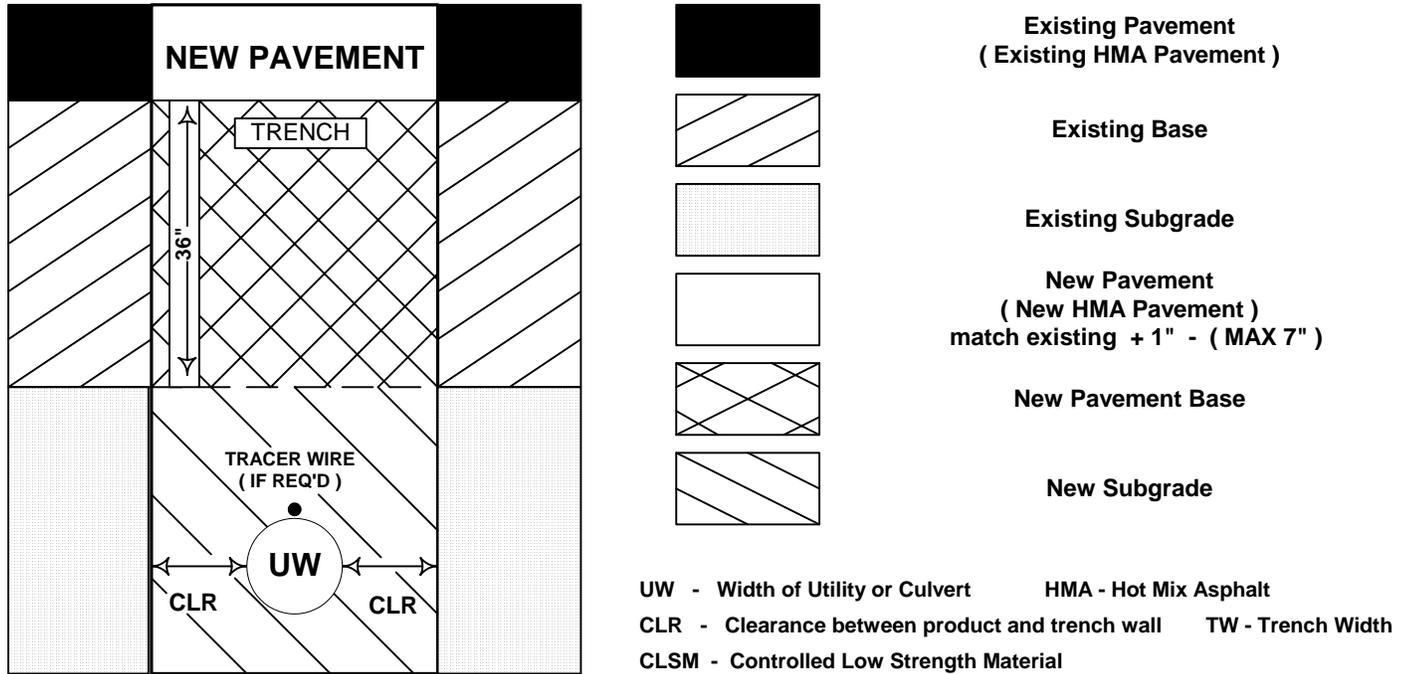
1. Prior to Start of Work.
2. Every two (2) hours continuously throughout the project.
3. Upon completion of the project.
4. Every two (2) months, during a six month period after the date of completion, and or As Required by the Department.



**ENCROACHMENT PERMIT TRENCH DETAIL**

TR-0153 (REV. 09/2006)

**TYPICAL TRENCH DETAIL**



STRUCTURE BACKFILL SHALL CONFORM TO SECTION 19 - 3.06 OF THE STANDARD SPECIFICATIONS

SLURRY CEMENT BACKFILL SHALL CONFORM TO SECTION 19 - 3.062 OF THE STANDARD SPECIFICATIONS

HMA SHALL CONFORM TO SECTION 39 OF THE STANDARD SPECIFICATIONS

ALL METHODS OF COMPACTION SHALL BE BY MECHANICAL MEANS. PONDING, JETTING OR FLOODING SHALL NOT BE ALLOWED.

AGGREGATE BASE SHALL CONFORM TO SECTION 26 OF THE STANDARD SPECIFICATIONS

WHEN CLSM IS UTILIZED THE MIX DESIGN AND TEST RESULTS SHALL BE SUBMITTED TO THE STATE'S REPRESENTATIVE.

ALL WORK SHALL BE AS AUTHORIZED BY THE APPROVED ENCROACHMENT PERMIT PLANS, AND/OR AS DIRECTED BY THE STATE'S REPRESENTATIVE.

WHEN THE UW IS  $\geq 6"$  THEN THE MINIMUM CLR SHALL BE 6"

COLD PLANING AND RE-SURFACING OVERLAY SHALL BE PARALLEL TO THE ROADWAY AND TO THE NEAREST LANE LINE FOR THE ENTIRE LENGTH OF THE TRENCH/DISTURBED AREAS, AND/OR AS DIRECTED BY THE STATE'S REPRESENTATIVE.

WHEN COLD PLANING IS REQUIRED, THE MINIMUM SHALL BE 0.10' OR AS DIRECTED BY THE STATE'S REPRESENTATIVE TO ACCOMODATE FIELD CONDITIONS.

COLD PLANING MAY BE REQUIRED AT THE DIRECTION OF THE STATE'S REPRESENTATIVE TO ACCOMODATE THE PLACEMENT OF STEEL PLATES.

WHEN TRENCH PLACEMENT IS WITHIN 4' OF CURB & GUTTER, ADDITIONAL COLD PLANING MAY BE REQUIRED AT THE DISCRETION OF THE STATE'S REPRESENTATIVE.

ANY PAVEMENT MARKINGS AND/OR STRIPING REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AS DIRECTED BY THE STATE'S REPRESENTATIVE.

A TRACER WIRE SHALL BE PLACED ON TOP OF THE FACILITY, WHEN REQUIRED BY THE STATE'S REPRESENTATIVE.

OTHER TRENCH RELATED DETAILS ARE SHOWN IN FIGURE 6.1, CHAPTER 6 OF THE ENCROACHMENT PERMITS MANUAL.

A PAINT BINDER (TACK COAT) OF ASPHALTIC EMULSION CONFORMING TO SECTION 39-4.02, PRIME COAT & PAINT BINDER (TACK COAT) SHALL BE FURNISHED AND APPLIED.

NEW PAVEMENT BASE SHALL CONSIST OF EITHER CL. II AGGREGATE BASE, 2-SACK SLURRY CEMENT, OR CLSM. WHEN TW IS  $< 24,"$  CL. II AGGREGATE BASE IS NOT RECOMMENDED FOR BACKFILL.

NEW SUBGRADE SHALL CONSIST OF EITHER CL. II AGGREGATE BASE, 2-SACK SLURRY CEMENT, OR CLSM. WHEN TW IS  $< 24,"$  CL. II AGGREGATE BASE IS NOT RECOMMENDED FOR BACKFILL.



**NEWSPAPER  
DISTRIBUTION  
GUIDELINES**

For

Safety Roadside Rest Areas

**HEADQUARTERS  
OFFICE OF ENCROACHMENT PERMITS  
&  
HEADQUARTERS LANDSCAPE ARCHITECTURE PROGRAM**

**MAY 2009**

**NEWSPAPER DISTRIBUTION GUIDELINES**  
**SPECIAL PROVISIONS & PERMIT CONDITIONS**

**APPLICATION SUBMITTAL**

Streets and Highway Codes Section 220.5 authorizes the placement of Newspaper Vending Machines, herein after referred to as “distribution boxes,” at Safety Roadside Rest Areas (SRRA).

- Section 220.5 (c) authorizes the Department the rights of determination in which SRRA are suitable for placement of these facilities.
- Section 220.5 (d) authorizes the Department the right to determine a suitable fee.

Newspaper distribution boxes at Safety Roadside Rest Areas (SRRA) and Vista Points are permissible when a Newspaper Entity has entered into a “Newspaper Distribution Agreement,” hereinafter referred to as “Agreement”, through the District Landscape Architect.

The District Landscape Architect is responsible for all reviews, field studies, and document preparation before sending the completed package, consisting of the Agreement, the required fee/deposit and a completed Encroachment Permit Application to the District Encroachment Permits Office for permit issuance.

The Department retains all rights in determining whether or not the placement of Newspapers and distribution boxes will be allowed within any SRRA and/or Vista Point. When the Department grants permission to allow placement of these facilities, they shall be limited to a total of four units per SRRA location. A copy of the agreement, permit and guidelines shall be provided to the requestor, and a copy forwarded to Headquarters Landscape Architecture Program.

**FEE / DEPOSIT**

A check in the amount of four (4) hours of the encroachment standard hourly rate shall be submitted with the package to the District Permits Office. This deposit/fee will cover processing of the application, review, issuance of the permit and inspection. All permits issued for the placement of a Newspaper within a SRRA shall be issued for a period of one year.

The permittee is responsible for all actual costs of the permitting process. When there are issues of non-conformance that could result in additional time expenditures the permittee shall be required to compensate re-imbusement of that time expended.

**SPECIAL PROVISIONS & CONDITIONS**

Subcontracting under this permit will not be allowed for the placement of the newspapers.

The permittee is required to provide weekly maintenance checks on their distribution facility, to ensure cleanliness of the area surrounding their facility.

Storage of newspapers on State rights-of-way will not be allowed.

A copy of the newspaper is the only item that will be allowed in the window of the door on the distribution box.

The permittee is required to notify the District Landscape Architect prior to start of any work in the States’ right-of-way, to include performing weekly inspections.

**Vehicles shall be parked in the parking lot when filling or re-filling of the distribution boxes.**

Any three violations of the special provisions or permit conditions within the term of the permit will result in revocation of your permitted privileges.

### **INSTALLATIONS & CONDITIONS**

All new installations of distribution facilities shall be installed and maintained by the permittee under the direction of the District Landscape Architect and shall be in compliance with the following criteria:

Within each Safety Roadside Rest Area (SRRA), all distribution facilities (boxes and pedestals) shall all be of the same type, model, manufacturer and color (see Attachment #1 & #2) so that a uniform appearance is maintained as directed by the District Landscape Architect and per the attachments provided.

The distribution facilities shall be located within the SRRA as directed by the District Landscape Architect, in the planted areas wherever practicable, adjacent to walkways and electroliers to reduce the exposure to vandalism and theft.

The distribution facility should be located in an area where it will be unobtrusive and not detract from other elements of the SRRA. It will be located so that it is convenient and easily accessible to the traveling public.

The front of the distribution facility should be parallel with the edge of the walkway.

The distribution boxes are to be securely fastened to square steel pedestal mounts, which are to be set in a concrete footing located within the planted area. The top of the concrete footing is to be covered with soil, mulch or ground cover to restore the area to its previous appearance to as great an extent as possible. Distribution boxes furnished with a pedestal mount equipped with a steel flange base designed to be bolted to concrete surfaces are to be used only where directed by the District Landscape Architect.

All distribution facilities shall be free of any advertisements and shall be maintained in a clean, neat and attractive condition and in good repair at all times. Any facilities (boxes, pedestals) that are damaged, in a state of disrepair, or due to wear and tear which are no longer in a presentable condition (clean, neat and attractive) shall be replaced or repaired by the permittee within (48) hours after discovery or notification by the States' representative to do so.

All distribution facilities which have been lost, stolen or vandalized and facilities that are no longer to be used, shall be removed, replaced or repaired by the permittee within (48) hours after discovery or notification by the District Landscape Architect to do so.

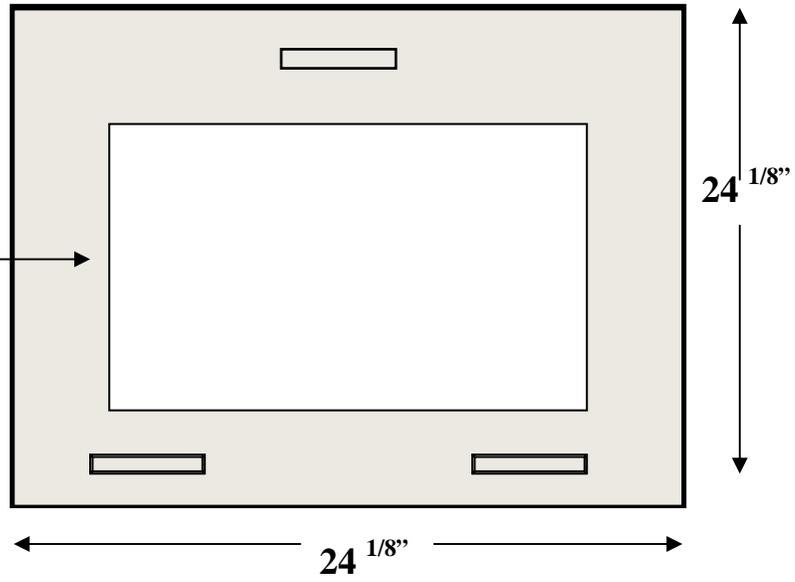
Any distribution facility that is missing, vandalized or unused and is not to be replaced shall be removed, and the site shall be returned to its original condition.

**THESE GUIDELINES ARE SUBJECT TO CHANGE AT THE DISCRETION OF THE HEADQUARTERS OFFICE OF ENCROACHMENT PERMITS. IT IS THE RESPONSIBILITY OF THE PERMITTEE TO REMAIN CURRENT WITH THE SPECIAL PROVISIONS AND PERMIT CONDITIONS OF THESE GUIDELINES.**

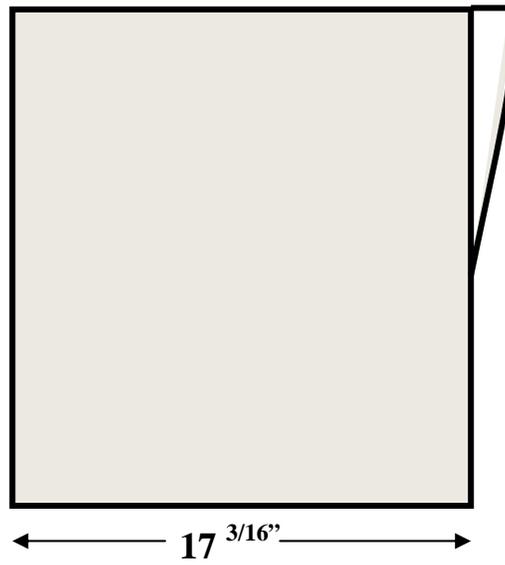
ATTACHMENT #1  
DISTRIBUTION BOXES

FACE VIEW

BEIGE COLOR →

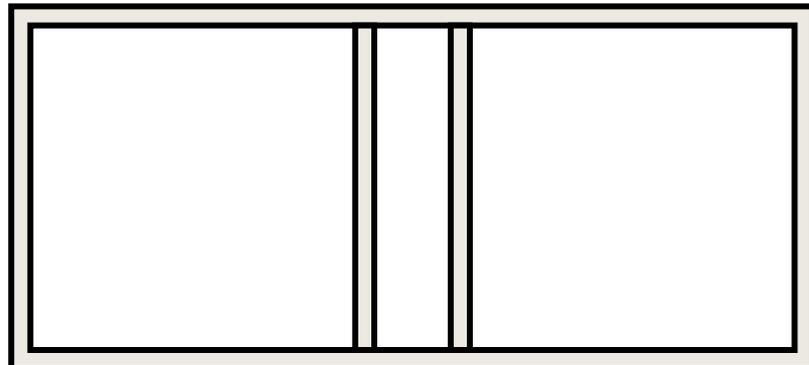


SIDE VIEW



DOUBLE BOX DIAGRAM

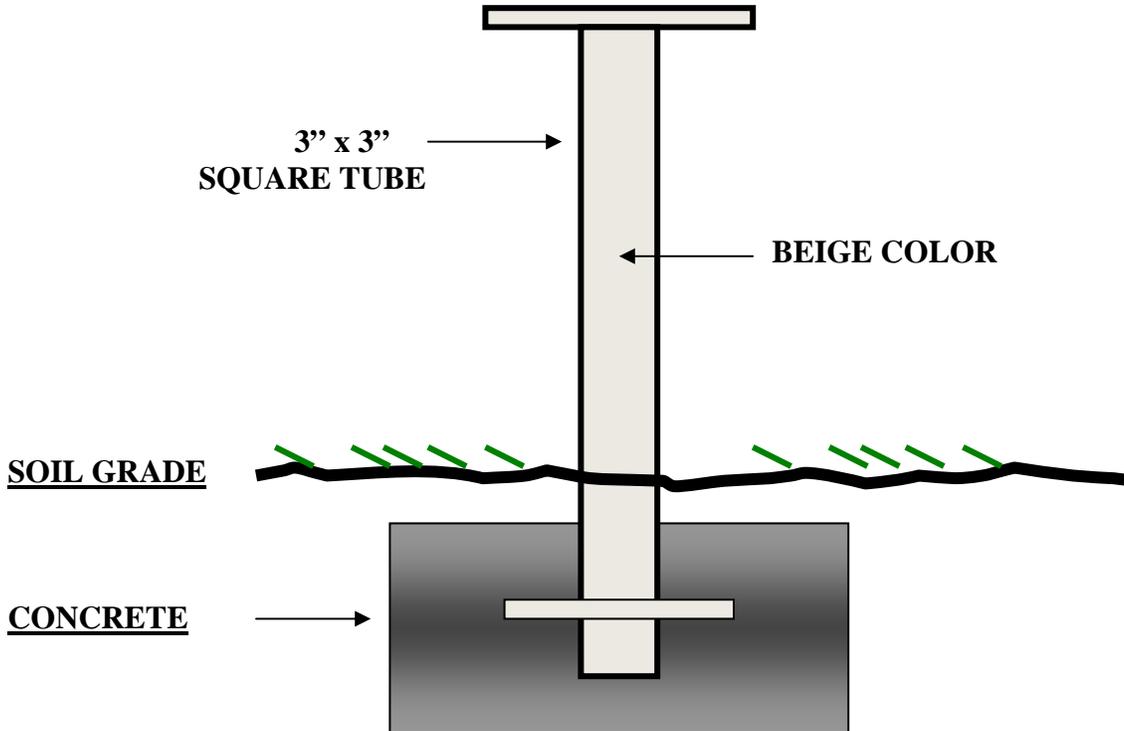
TOP VIEW  
Of  
BASE TRAY



ATTACHMENT #2

PEDESTAL

SINGLE BOX DIAGRAM



The distribution boxes are to be securely fastened to square steel pedestal mounts, which are to be set in a concrete footing located within the planted area. The top of the concrete footing is to be covered with soil, mulch or ground cover to restore the area to its previous appearance to as great an extent as possible. Distribution boxes furnished with a pedestal mount and equipped with a steel flange base that are designed to be bolted to concrete surfaces are to be used only where directed by the Department.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
**NEWSPAPER DISTRIBUTION AGREEMENT**  
 TR-0150 (NEW 05/2009)

The undersigned newspaper distributor, hereinafter referred to as DISTRIBUTOR, desires to place and maintain a **newspaper** and newspaper vending machine, hereinafter referred to as "Machine", at certain identified safety roadside rest areas owned and operated by the State of California, Department of Transportation, hereinafter referred to as STATE. DISTRIBUTOR agrees that the following conditions apply:

1. DISTRIBUTOR shall comply with the applicable provisions of the California Administrative Code and directions from the State's representative as to the location and placement of each Machine and including its associated pedestal.
2. DISTRIBUTOR shall indemnify, protect and hold harmless the STATE, its officers and employees from all claims for injury to persons or damage to property by reason of the presence, location and/or maintenance of the Machine on STATE property, or by reason of claims based on acts of DISTRIBUTOR'S agents, employees or workers.
3. Maintenance of the Machine shall be the sole responsibility of DISTRIBUTOR, including any replacement or repair of Machine stolen or damaged by vandalism. DISTRIBUTOR shall begin to make necessary repairs within 48 hours after receipt of written or oral notification by STATE.
4. In the course of servicing a Machine, DISTRIBUTOR shall not deposit in or about any safety roadside rest area any wrapping paper, tying material or other litter, except to dispose of such material in a receptacle intended for that purpose. Any material that cannot be disposed of in available receptacles shall be immediately removed from the premises by DISTRIBUTOR.
5. If distribution of the newspaper is discontinued for thirty consecutive days, the DISTRIBUTOR shall remove the Machine and restore the site to its original condition.
6. If the Machine to be removed is on a pedestal shared with other machines, the DISTRIBUTOR shall modify the pedestal to properly accommodate the remaining machines.
7. If, after such discontinuance, or if the terms of this Agreement are violated, and DISTRIBUTOR fails to remove the Machine and restore the site within ten days after reasonable notice and demand, the STATE may thereafter remove the Machine and restore the site to its original condition and the DISTRIBUTOR agrees to reimburse the STATE for the reasonable costs of that removal and restoration.
8. The STATE reserves the right to close, temporarily or permanently, the safety roadside rest area for any reason without notification to the DISTRIBUTOR.
9. This Agreement shall commence on \_\_\_\_\_ 20\_\_\_\_, and shall terminate on \_\_\_\_\_ 20\_\_\_\_

The parties agree that only the following newspaper may be distributed:

NAME OF REST AREA(S)	TRAVEL DIRECTION	NEWSPAPER NAME

COMPANY NAME	CONTACT PERSON	PHONE NUMBER
ADDRESS		E-MAIL ADDRESS

DISTRIBUTOR'S SIGNATURE  
 ▶

**DISTRICT USE ONLY**

DISTRICT SRRA COORDINATOR / DISTRICT LANDSCAPE ARCHITECT NAME	PHONE NUMBER
DISTRICT SRRA COORDINATOR / DISTRICT LANDSCAPE ARCHITECT NAME	E-MAIL ADDRESS

▶

DEPARTMENT OF TRANSPORTATION

AND

CALIFORNIA HIGHWAY PATROL

Joint Operational Policy Statements

PLANNED LANE CLOSURES

GENERAL

The California Department of Transportation (Caltrans) and the California Highway Patrol (CHP) share responsibility for operating the state highway system safely and efficiently. Because of the shared responsibilities, planned lane closures impact both Caltrans and CHP. Minimizing motorist delay while maintaining the quality of work and public and worker safety are key goals during planned lane closures.

PLANNED LANE CLOSURE POLICY

Transportation Management Plans (TMPs), including contingency plans, are required for all construction, maintenance, encroachment permit, planned emergency restoration, or other planned activities. TMPs define the actions necessary to ensure a safe workzone that minimizes impacts to motorists. Caltrans District offices will seek input from local CHP personnel for the development of significant TMPs.

When planned lane closures are necessary, some of the techniques or considerations when developing a TMP may include:

1. Consideration of lane closure hour restriction.
2. Use of Construction/Maintenance Zone Enhanced Enforcement Program (COZEEP/MAZEEP).
3. Use of Freeway Service Patrol for workzone.
4. Consideration of predictable heavy congestion, such as commute hours and holidays.
5. Detour routes.
6. Reduced lane widths.
7. Consideration of impact on adjacent roads.

Decisions on how to handle public safety situations should be made collaboratively between Caltrans and CHP at pre-job meetings and/or when they

occur. More information on termination of lane closures is contained under Joint Responsibilities.

#### A. JOINT RESPONSIBILITIES

1. Lane Closure Review Committees. When a planned lane closure-related traffic delay is expected to exceed 30 minutes, a Caltrans District Lane Closure Review Committee (DLCRC) review and approval is required. The DLCRC will include a local designated CHP representative. The DLCRC decides when to submit lane closure requests that are of an interregional, statewide, environmental, or otherwise of a sensitive nature to the Caltrans headquarters Lane Closure Review Committee (HLCRC) for their approval. The HLCRC includes a designated CHP headquarters representative.

2. Contingency Plans. Contingency plans will be developed to address construction process problems, and those for unexpected traffic issues. A contingency plan addresses specific actions that will be taken to restore or minimize effects on traffic when traffic congestion or delay exceeds the original estimates. The contingency plans will prescribe actions for likely problems and provide the criteria “triggers” for initiating the planned actions. The CHP and Caltrans will collaborate in the development of contingency plans and will:

- a. Commit personnel and resources, as available, to ensure the efficient execution of the plan.
- b. Ensure the plan provides that clearly designated responsible personnel, with the authority to act, will be available at all times during closure.
- c. Coordinate and collaborate with other commands and agencies as required.
- d. Ensure local authorities and allied agencies as appropriate are participants in the plan and are willing to act.
- e. Ensure the TMCs are part of the plan, including interregional TMC participation.

3. Termination of Highway Lane Closures. Either department may terminate a lane closure because of safety concerns (e.g., unacceptable smoke or dust that restricts motorist visibility, development of inclement weather, potential for flooding). Whenever possible, a closure should be terminated collaboratively between Caltrans and the CHP.

When a CHP field representative determines a lane closure should be terminated

because of safety concerns or unacceptable traffic congestion, the following protocol should be used:

- a. Notify a CHP supervisor.
- b. Contact the Caltrans person responsible for overseeing field work. If mutual agreement to terminate the closure is not reached, the CHP supervisor should notify the Area commander or designee, who will contact the appropriate Caltrans manager to mutually resolve the issue. If the decision is made to terminate the closure, the CHP and Caltrans representatives shall:
  1. Advise the TMC or Caltrans Maintenance Dispatch as appropriate.
  2. Notify all other applicable entities (e.g., highway contractor).

When a Caltrans field representative or District Traffic Manager (DTM) determines a lane closure should be terminated because of safety concerns or unacceptable traffic congestion on the immediate and/or adjacent highway/roadway system, the following protocol should be used:

- a. Notify the Caltrans person responsible for overseeing field work, Maintenance Dispatch, CHP Communication Center, and TMC.
  - b. Notify all other applicable entities (e.g., highway contractor).
4. Evaluation. For some major TMPs, it is expected that evaluations will be done as a joint CHP/Caltrans activity, and include any other participants such as allied agencies.

## B. CHP'S RESPONSIBILITIES

CHP Division and Area commanders, or their designees, will collaborate and cooperate with responsible Caltrans personnel to minimize traffic congestion (e.g., vehicle queuing, stopping, slow bumper-to-bumper vehicles) resulting from planned lane closures. CHP Division and Area commanders will work with the appropriate Caltrans District Division Chief, DTM, Resident Engineer, Maintenance Region Manager, or person(s) designated by the District Director to ensure the CHP's concerns are adequately addressed in the TMPs and contingency plans.

Area commanders or their designees participating on, and/or reviewing and commenting on project-specific TMPs and contingency plans will:

1. Review the plans in a timely manner to ensure CHP concerns, including motorist and worker safety, are adequately addressed.
2. Provide notification to appropriate CHP commands of all impending planned lane closures and status of associated TMPs.
3. Notify respective CHP Division commanders of agreed upon traffic queues (distance and amount of time for stop-and-go vehicles) during the lane closures and any significant issues concerning traffic control that were not resolved in the TMP.
4. Verify that TMCs have been notified and are part of impending projects, TMPs, and contingency plans.
5. Ensure the commitment of CHP personnel and resources to COZEEP/MAZEEP, directing traffic, and traffic monitoring is clearly and accurately described in TMPs and contingency plans.

#### C. CALTRANS' RESPONSIBILITIES

The Caltrans TMP Coordinator will confer with the respective CHP Area commanders to determine criteria and procedures for notification of planned highway lane closures and changes to TMPs.

Depending on the project and impact on traffic, Caltrans may include CHP in the development and review of TMPs.

1. Caltrans should designate a responsible representative for each lane closure.
2. Caltrans should ensure the contractor is able and prepared to comply with the TMP and contingency plan as they relate to its performance of work.

#### D. SPECIAL EVENTS ON STATE HIGHWAYS

Special events include, but are not limited to, activities such as parades, marathons, bikeathons, walkathons, marches, triathlons, and other activities. Filming operations are covered under separate guidelines.

An encroachment permit for special events is required whenever any activity is conducted within a state highway right-of-way which interferes with the unrestricted movement of traffic, requires special traffic control, and/or cannot be conducted in such a manner as to fall under the permissible uses of a highway as authorized in the California Vehicle Code (CVC). Activities which do not

interfere with traffic and which conform to the CVC do not require a permit.

Preliminary and operational meetings should be held with Caltrans, CHP, and special event representatives for all proposed special events before a permit is issued. When appropriate, other local authorities and law enforcement agencies should be invited to attend the meetings. The purpose of these meetings is to define permit conditions, which generally include:

1. Highway location feasibility.
2. Traffic control and facility needs.
3. CHP and Caltrans personnel required for event.
4. Timing of event.
5. Preventing damage to state property.
6. Safety considerations, which includes preventing traffic hazards and determining the least amount of impact to traffic.

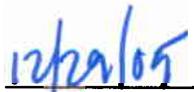
Operational decisions and/or emergency situations may require the roadway to be reopened immediately. This decision should be made by the state representative in charge (Caltrans or CHP). CHP and Caltrans may bill the permit-holder for all costs incurred.



WILL KEMPTON, Director  
Department of Transportation



M. L. BROWN, Commissioner  
Department of California  
Highway Patrol



Date

Date

**In accordance with the:**

PROFESSIONAL ENGINEERS ACT (Business and Professions Code §§ 6700 – 6799),  
CHAPTER 7. PROFESSIONAL ENGINEERS, Article 3. Application of Chapter;

**PUBLIC UTILITY PLANS DESIGNED BY THE OWNING UTILITY COMPANY  
OR BY OTHERS ON BEHALF OF THE PUBLIC UTILITY COMPANY, DO  
NOT REQUIRE THE SIGNATURE OF A PROFESSIONAL REGISTERED  
ENGINEER.**

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6746. Plans, specifications, reports and documents relating to communication lines and equipment prepared by employees of communications companies which come under the jurisdiction of the Public Utilities Commission, and by employees of contractors while engaged in work on communication equipment for communications companies which come under the jurisdiction of the Public Utilities Commission, are not subject to the provisions of this chapter.

6746.1. The provisions of this chapter pertaining to licensure of professional engineers, other than civil engineers, do not apply to employees in the communications industry, nor to the employees of contractors while engaged in work on communications equipment. However, those employees may not use any of the titles listed in Sections 6732, 6736, and 6736.1, unless licensed.

6747. (a) This chapter, except for those provisions that apply to civil engineers and civil engineering, shall not apply to the performance of engineering work by a manufacturing, mining, public utility, research and development, or other industrial corporation, or by employees of that corporation, provided that work is in connection with, or incidental to, the products, systems, or services of that corporation or its affiliates.

(b) For purposes of this section, “employees” also includes consultants, temporary employees, contract employees, and those persons hired pursuant to third-party contracts.



# KIOSK

# ADVERTISING/ DISPLAY

# GUIDELINES

For  
Safety Roadside Rest Areas

**HEADQUARTERS LANDSCAPE**

**ARCHITECTURE PROGRAM**

**MAY 2009**

## **KIOSK ADVERTISING GUIDELINES**

### **SUBMITTAL**

**This program is “optional” at the discretion of the District Office.**

Requests for placement of an advertisement/display within a Traveler/Tourist Information Center, hereinafter referred to as “Kiosk,” shall be submitted by the responsible person (City, County, Chamber of Commerce, Organization or Business Owner) for that activity, service or facility, hereinafter referred to as the “Requestor,” to the District’s Representative.

Kiosk Advertising Guidelines are established from Barclays California Code of Regulations, Title 21-Public Works, Division 2 Department of Transportation, Chapter 20 Permissible Activity and Use of Safety Roadside Rest Areas (SRRA) and Vista Points in and along California State Highways, which authorize the placement of commercial advertisements/displays within kiosks.

- Article 2, Section 2204 (b) authorizes the placement of commercial displays under an agreement within Traveler Information Centers for a cost.
- Article 2, Section 2204 (d) defines Traveler Information Centers as kiosks.
- Article 2, Section 2204 (f) authorizes the Department to place Public Information displays/advertisements determined to be of a specific value, interest or assistance to the traveling public, for a cost.

Streets and Highway Codes Section 220.5 authorizes the placement of kiosks, within Safety Roadside Rest Areas (SRRA), and the following advertisements/displays are allowed for placement at no cost.

- Section 220 authorizes the placement of agricultural displays.
- Section 221 authorizes the placement of information regarding missing children.

Forty-percent (40%) of the kiosk space is devoted to non-commercial public information. The remaining sixty-percent (60%) may be utilized as follows:

Placement of an advertisement/display can be monthly, quarterly or semi-annual.

The format and content of the advertisement/display will be provided for review and consideration. The District SRRA Coordinator or District Landscape Architect is responsible for review, approval and processing of the submitted request.

Upon approval in writing from the Department, the advertisement/display can not be changed or altered in any way without the written consent of the Department.

Displays approved for placement can only provide public information regarding:

- local and state points of interest
- local communities and community service facilities
- location of recreational areas and facilities (campgrounds, etc)
- identification of local automotive service stations

- food
- lodging
- traveler service related facilities

## **FEE**

The entire fee of the agreement, per advertisement/display, is required due upon written approval of the request. Payment of the fee shall be by personal or company check, money order or cashier's check, made out to the Department of Transportation.

Districts will assess the fee for the placement of the "advertising/display" based upon the following criteria:

1. Location of the SRRA
2. Distance of the SRRA in relation to the District Office (round-trip travel time, etc.)
3. Size of the advertising/display
4. Other district resources expended

The assessed advertising fee is subject to change at the end of the existing agreement period entered into by the requestor and the Department, at the discretion of the Department.

## **CONDITIONS OF INSTALLATION**

Installation or removal of the advertisement/display upon any kiosk will solely be the responsibility of the Department. Under no circumstances can the requestor install, replace, repair, alter or remove the advertisement/display.

The Department reserves all rights, as stipulated within Barclays California Code of Regulations:

- to reject or refuse at its sole discretion any advertisement/display which is false or misleading, which may misinform, or which does not qualify as traveler information under the Department's rules and regulations.
- to reject, refuse or remove any advertisement/display which does not conform to the Department's specifications, which is deemed unsightly or in a bad state of repair.
- to cancel the agreement at any time, upon ten-days written notification.
- any delay in the placement of an advertisement/display or interruption of the display time caused by the Department shall not constitute a breach of the agreement. In its discretion, the Department may extend the term of the agreement or provide a pro rata credit equal to the period of delay or interruption. Such extension or credit shall be the only damages recoverable.
- to close the Safety Roadside Rest Area for any reason without notification, temporarily or permanently, or to cancel the agreement. The requestor shall have no claim for damages, or extension of the agreement by reasons of such removal, disruption, discontinuance or termination.

The Requestor is responsible for the production of the advertisement/display at their sole cost and expense.

The Requestor is responsible at their own cost and expense for, the restoration, repair or replacement of any advertisement/display which is lost, stolen, defaced, damaged, or destroyed through no fault of

the Department, or which is deemed by the Department to be in a faded, or deteriorated condition, regardless of the cause.

In this event, if the requestor fails to provide an acceptable replacement of the advertisement/display within thirty-days of notification, the Department may cancel the agreement.

The advertisement/display will be of a professional quality, printed on LEXAN or a comparable material pre-approved by the District SRRA Coordinator or District Landscape Architect, able to withstand adverse conditions, such as direct sunlight, rain or snow and able to endure the length of the agreement. The minimal size of the advertisement/display allowed shall be no less than 10" x 14," and a maximum size of 14" x 20." Advertisements/displays not enclosed within a protective casing shall be durable, and protected with an anti graffiti coating.

### **SPECIAL PROVISIONS**

Sub-contracting or third party agreements **will not be allowed** for the request or placement of an advertisement/display. The requestor is required to be solely responsible for the service or facility, listed within the advertisement/display.

The requestor assumes full and complete responsibility and liability for the content of the advertisement/display, and shall agree to save, defend, indemnify and hold the State, the Department, its officers, agents and employees harmless against any and all demands, claims, liability, damages and causes of action, including attorney's fees and all costs of any legal action occasioned by or resulting from injuries or losses to any person, firm or corporation, however occurring, resulting from their reliance on the person's or company's advertisement/display or from the form, content or representations contained therein.

**THESE GUIDELINES ARE SUBJECT OF CHANGE AT THE DISCRETION OF THE DEPARTMENT. IT IS THE REQUESTOR'S RESPONSIBILITY TO REMAIN CURRENT WITH THESE GUIDELINES.**

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
**KIOSK ADVERTISING/DISPLAY AGREEMENT**  
 TR-0401 (REV. 05/2009)

The undersigned requests to place an advertisement/display within the Traveler/Tourist Information Center, hereinafter referred to as "kiosk" within the Safety Roadside Rest Area, and hereby agrees to the following conditions:

I have read the Kiosk Advertising/Display Guidelines, and conditions contained herein and agree to comply. And, understand that any failure to do so will result in termination of this agreement.

The requestor assumes full and complete responsibility and liability for the content of the advertisement/display, and shall agree to save, defend, indemnify and hold the State, the department, its officers, agents and employees harmless against any and all demands, claims, liability, damages and causes of action, including attorney's fees and all costs of any legal action occasioned by or resulting from injuries or losses to any person, firm or corporation, however occurring, resulting from their reliance on the person's or company's advertisement/display or from the form, content or representations contained therein.

The name on the agreement shall be that of the responsible party for that service or facility. Sub-contracting or third-party agreements **will not be allowed** for the placement of an advertisement/display. The requestor is required to be solely responsible for the service or facility, listed within the advertisement/display.

The advertisement/display shall be of a professional quality, printed on LEXAN or a comparable material pre-approved by the SRRA Coordinator, able to withstand adverse conditions, such as direct sunlight, rain or snow and able to endure the length of the agreement. The minimal size of the advertisement/display allowed shall be no less than 10" x 14," and a maximum size of 14" x 20." Advertisement /displays not enclosed within a protective casing shall be durable, and protected with an anti graffiti coating.

The requestor is responsible for the production of the advertisement/display at their sole cost and expense.

The format and content of the advertisement/display shall be provided for review. Upon approval in writing from the department, the advertisement/display shall not be changed or altered in any way without the written consent of the Department.

The requestor is seeking placement in the following SRRA:

NAME OF BUSINESS OR ORGANIZATION	OWNER OR REPRESENTATIVES NAME	PHONE NUMBER
ADDRESS		E-MAIL ADDRESS
OWNER OR REPRESENTATIVES SIGNATURE ▶		

NAME OF SAFETY ROADSIDE REST AREA	DIRECTION	TYPE OF ADVERTISEMENT/DISPLAY	FEE ASSESSED
			@ SEMI-ANNUALLY <input type="checkbox"/>
			@ ANNUAL <input type="checkbox"/>
			TOTAL: _____

**DISTRICT USE ONLY**

<b>APPROVAL:</b>	YES <input type="checkbox"/>	COMMENTS: _____
	NO <input type="checkbox"/>	_____

**CASHIER**

INITIALS BY _____	DATE _____	<input type="checkbox"/> CASH	<input type="checkbox"/> MONEY ORDER
		<input type="checkbox"/> CHECK	<input type="checkbox"/> OTHER _____

**AGREEMENT PERIOD**

BEGINNING DATE _____	ENDING DATE _____
DISTRICT REPRESENTATIVES NAME	PHONE NUMBER
DISTRICT REPRESENTATIVES SIGNATURE ▶	E-MAIL ADDRESS

**M e m o r a n d u m**

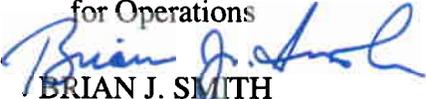
*Flex your power!  
Be energy efficient!*

**To:** DEPUTY DISTRICT DIRECTORS  
for Planning

**Date:** August 2, 2004

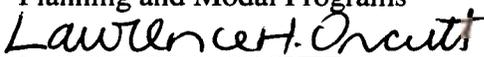
DEPUTY DISTRICT DIRECTORS  
for Operations

**From:**

  
BRIAN J. SMITH

Deputy Director

Planning and Modal Programs

  
LAWRENCE H. ORCUTT

Acting Deputy Director

Maintenance and Operations

**Subject:** Guidelines for Submitting Transportation Information from a Reporting or Monitoring Program to the California Department of Transportation (Department), Revised July 9, 2004

The California Environmental Quality Act (CEQA), (Public Resources Code [PRC] Section 21081.6) requires that public agencies adopt a reporting or monitoring program when they include environmental impact mitigation as a condition of project approval. PRC Section 21081.7 requires that public agencies submit such information to the Department if the project is of statewide, regional or area-wide significance; in addition, 21081.7 requires that the Department adopt guidelines for the submittal of such information.

In February 2003, the Department issued *Guidelines for Submitting Transportation Information From a Reporting or Monitoring Program to the Department* (Guidelines).

We revised the Guidelines, effective July 9, 2004, in response to comments and questions that we received following distribution of the February 2003 edition. The new Guidelines seek to clarify the procedures for the Department and public agencies by providing a bit more detail to the steps that we are asking them to take. In addition, we have modified the Checklist/Certification form to more easily accommodate its purposes.

The revised Guidelines are enclosed, as is a sample cover letter for use in forwarding them from district Intergovernmental Review (IGR) units to local public agencies.

Please direct questions to Tom Neumann, Chief, Office of Community Planning at Calnet 8-461-6882, or Paul Cavanaugh, Chief, Encroachment Permit Branch at Calnet 8-464-6232.

Enclosures: 1. Guidelines, including "Checklist/Certification" form  
2. Sample cover letter.

DEPUTY DISTRICT DIRECTORS, et. al

August 2, 2004

Page 2

c: Joan Sollenberger, DOTP  
Karla Sutliff, DOTO  
District Directors  
Paul Cavanaugh, DOTO, Encroachment Permit Branch  
Maxine Ferguson, Legal Division  
Robert Wiswell, Division of Aeronautics  
District IGR Coordinators  
Tom Neumann, DOTP,OCP  
Terri Pencovic, DOTP, OCP, IGR



Guidelines for Submitting  
Transportation Information from a  
Reporting or Monitoring Program to  
the California Department of  
Transportation

*for a*

**Project of Statewide, Regional, or  
Areawide Significance**

**California Department of Transportation**

**July 9, 2004**

**GUIDELINES FOR SUBMITTING TRANSPORTATION  
INFORMATION FROM A REPORTING OR MONITORING  
PROGRAM TO THE CALIFORNIA DEPARTMENT OF  
TRANSPORTATION (DEPARTMENT)**

---

**INTRODUCTION** The California Environmental Quality Act (CEQA) requires, under Public Resources Code (PRC) Section 21081.6, the adoption of reporting or monitoring programs when public agencies include environmental impact mitigation as a condition of project approval. Reporting or monitoring takes place after project approval to ensure implementation of the project in accordance with mitigation adopted during the CEQA review process.

Assembly Bill 1807 (effective January 1, 2001) amended the PRC in a number of ways. Section 21080.4 was amended to add a requirement that lead agencies submit Notices of Preparation (NOPs) to the Governor's Office of Planning and Research when they determine that an environmental impact report will be required to approve a project.

Section 21081.7 was amended with two additional provisions. The first provision required that transportation information resulting from a reporting or monitoring program adopted by a public agency in accordance with Section 21081.6 be submitted to the Department of Transportation (Department) when a project has impacts that are of statewide, regional, or area-wide significance. The second provision required that the Department adopt guidelines for the submittal of those reporting or monitoring programs.

**PURPOSE** The purpose of these guidelines is to establish clear and consistent statewide procedures to be used by both Department District Intergovernmental Review (IGR) Program Coordinators to identify the scope and timing of transportation information needed from lead agencies, and public agencies when submitting transportation information to the Department, in accordance with Section 21081.7.

**PROCEDURES**      A.      The District IGR Program Managers and/or Coordinators shall:

1. Prior to implementation of mitigation measures:
  - a. Notify the CEQA lead agency by letter during “early consultation,” the Notice of Preparation (NOP) stage, or the Initial Study (IS) phase of the CEQA review process that the transportation information included in the reporting or monitoring program will need to be provided to the Department following project mitigation agreement.
  - b. Provide the name, address, and telephone number of the District IGR contact to the lead agency.
  - c. Provide, as an enclosure to the notification letter, a copy of these “Guidelines” and the Department’s “CEQA Lead Agency Checklist/Certification” form. (Part 1 of the form, *Checklist*, is to be signed by the lead agency following project approval, and a copy submitted to the District along with the transportation reporting or monitoring information. Part 2 of the form, *Certification*, is to be signed by the lead agency and the District upon implementation of all agreed-upon mitigation measures.)
2. Following implementation of mitigation measures as identified in Part 1, *Checklist*, of the CEQA Lead Agency Checklist/Certification form, and certification of implementation by the lead agency in Part 2, *Certification*:

Ensure sign off of Part 2, indicating that the mitigation measures have been implemented.

- 1) If the project required encroachment onto a state highway, obtain the District Permit Engineer’s signature in Part 2.
- 2) If the project did not involve encroachment onto a state highway, the District IGR Coordinator shall sign Part 2.

- 3) The District IGR Coordinator shall: (a) Retain the original document; (b) forward a copy to the District Permit Engineer (if the Permit Engineer signed Part 2); (c) forward a copy to the Department's Headquarters IGR Program Manager; and, (d) send a copy to the lead agency.

B. The CEQA lead agency shall:

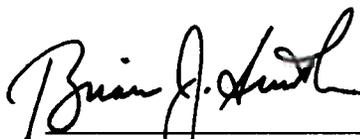
1. Following project approval:

Submit the following information to the Department District IGR contact:

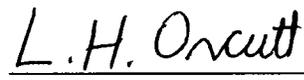
- 1) Name, address, and telephone number of the CEQA lead agency contact responsible for the mitigation reporting or monitoring program.
- 2) Location and custodian of the documents or other material, which constitute the record of proceedings upon which the lead agency's decision to approve the project is based.
- 3) Assurances that the Department can obtain copies of the aforementioned documents and materials, if needed, to clarify details or resolve issues related to the mitigation adopted.
- 4) Detailed information on impact assessment methods, the type of mitigation, specific location, and implementation schedule for each transportation impact mitigation measure included in the reporting or monitoring program.
- 5) A copy of the "CEQA Lead Agency Checklist/Certification" form, with Part 1, *Checklist*, signed and dated, and the reporting or monitoring program transportation information attached or enclosed. The CEQA lead agency, at its discretion, may submit the complete reporting or monitoring program with the required transportation information highlighted.

2. Following implementation of mitigation measures:
  - a. Sign and date Part 2, *Certification*, of the "CEQA Lead Agency Checklist/Certification" form.
  - b. Forward the "CEQA Lead Agency Checklist/Certification" form, with appropriate completion documents attached, to the District IGR contact, certifying that the mitigation measures agreed upon and identified in the reporting or monitoring program have been implemented, and that all other reporting requirements have been adhered to, in accordance with PRC Sections 21081.6 and 21081.7.

**APPROVED:**

  
\_\_\_\_\_  
BRIAN J. SMITH  
Deputy Director  
Planning and Modal Programs

8 July 04  
Date

  
\_\_\_\_\_  
LARRY ORCUTT  
Acting Deputy Director  
Maintenance and Operations

7-9-04  
Date





# GUIDELINES

*for the placement of*

**TRAVELER DISCOUNT BOOKLETS**

In

**AMTRAK-CALIFORNIA STATIONS**

**&**

**SAFETY ROADSIDE REST AREAS**



***OCTOBER 2007***

**COUPON BOOKLET GUIDELINES**  
**SPECIAL PROVISIONS & PERMIT CONDITIONS**

**Definition**

Periodical vendors, herein after referred to as Coupon Booklet Vendors (CBV), offer discount coupons for lodging and entertainment to the traveling public.

**Written Agreement**

The Department's representative for Amtrak-California Stations will be the Chief of the Rail Marketing Branch, Division of Rail.

The Department's representative for Safety Roadside Rest Areas (SRRA) will be the District Rest Area Coordinator.

CBV companies requesting to place their coupon booklet(s) within Amtrak-California Stations and SRRA are first required to enter into a written agreement with the Department, administered by the Headquarters Office of Encroachment Permits.

This written agreement shall stipulate the reserving of four full-pages for departmental campaign advertisements within their respective publications, to be administered by the Statewide Events & Awards Coordinator, in the Headquarters Office of External Affairs.

The Department's advertisements will consist of Slow for the Cone Zone, Amtrak-California, California Highway Information Network (CHIN) and Don't Trash California. These campaign advertisements shall be effectively placed in the booklets upon finalization of the written agreement.

The location of placement of the Department's campaign advertisements within the publications is at the discretion of the CBV, so long as the pages appear either before the first page of lodging coupons or, after the final page of lodging coupons.

The CBV agree to endeavor to place the Department's campaign advertisements together, facing each other whenever the paid composition of the publication permits.

When, and if constraints are imposed upon the CBV by the placement of paid advertising, the CBV shall still be obligated to provide the advertisements at their discretion within the areas of the publications as prescribed above.

The Department retains the right and privilege to prescribe the content of the four full-page advertisements during the course of the written agreement and thereafter.

Each CBV will deliver 2 copies of each new publication printed to the Statewide Events & Awards Coordinator, HQ Office of External Affairs, and 2 copies of each new publication printed to the Chief, Rail Marketing Branch, Division of Rail, 1120 N Street, MS-74, Sacramento, California 95814.

**Application Submittal**

Upon confirmation of the revised agreement, each CBV will only be required to submit one standard encroachment permit application, for the issuance of one statewide biennial permit allowing the continual distribution and maintenance of their facilities. In the box labeled "description of work to be performed", the applicant shall state the intent for the "placement and maintenance of Traveler Discount Coupon Booklets, and/or facilities."

In the event that placement is sought where there are no existing facilities, as a new installation, will require the CBV to submit an exempt encroachment permit rider request, and the CBV shall be responsible for all costs incurred with the installation of new facilities.

### **Permit Fee**

All permits are to be issued “exempt” for periodical distribution, and shall be issued as biennial permits (2-years).

### **Special Provisions**

The Department will allow for the placement of these booklets for each year following as long as the respective parties adhere to the conditions of the written agreement entered into:

District 11 Encroachment Permit Office will issue a statewide biennial “CU” encroachment permit, listing the specific Amtrak-California Stations and SRRA locations statewide, following the permit special provisions, on the following pages of the permit. All respective districts will receive cc: copies of the statewide permits issued.

Require the placement of a laminated placard depicting the cover of the booklet to be placed within the window of the display box.

The CBV booklets will be allowed in the Department's Headquarters building, on the sixth floor outside of the cafeteria area and in Amtrak-California Stations stipulated within their permit, to be placed within facilities provided by the CBV.

### **Permit Conditions**

Subcontracting under this permit will not be allowed for the placement of the coupon booklets.

The CBV is required to provide weekly maintenance checks on all distribution facilities, to ensure cleanliness of the area surrounding their facilities and to ensure that the traveling public is provided with current information at no cost to the public.

Storage of coupon booklets upon State rights-of-way or within the Amtrak-California termini will not be allowed.

The CBV is required to notify the Department’s representative a minimum of two days prior to entry into any of the locations stipulated within their respective permit and/or the States’ rights-of-way.

Any combination of three violations of the special provisions or permit conditions within the term (two-years) of the permit will result in suspension and/or revocation of your permitted privileges.

### **Installation Conditions**

All new installations of distribution facilities shall be installed and maintained by the CBV under the direction of the Department’s representative and shall be in compliance with the following criteria:

Upon completion on the installation of the distribution facilities located within an Amtrak-California Station or SRRA, said facilities inherently become the property of the State of California.

Within each Amtrak-California Station or SRRA, all distribution facilities (boxes and pedestals) shall all be of the same type, model, manufacturer and color (see Attachment #1 & #2) to ensure a uniform appearance is maintained as directed by the Department’s representative and per the attachments provided.

The color for new distribution facilities shall be consistent at a location but may be a color other than Beige, as determined by the Department's representative.

The distribution facility should be located in an area where it will be unobtrusive and not detract from other elements of the SRRA.

The distribution facility should be located within the planted areas wherever practicable, adjacent to walkways and electroliers to reduce the exposure to vandalism and theft, or as directed by the Department's representative.

It will be located so that it is convenient and easily accessible to the traveling public, as directed by the Department's representative.

The front of the distribution facility should be parallel with the edge of the walkway.

The maximum number of distribution boxes shall not exceed four (a double stack of two) in any SRRA.

The distribution boxes located within SRRA are to be securely fastened to square steel pedestal mounts, which are to be set in a concrete footing located within the planted area. The top of the concrete footing is to be covered with soil, mulch or ground cover to restore the area to its previous appearance to as great an extent as possible. Distribution boxes furnished with a pedestal mount equipped with a steel flange base designed to be bolted to concrete surfaces are to be used only where directed by the Department's representative.

All distribution facilities shall be free of any advertisements (see Attachment #3) and shall be maintained in a clean, neat and attractive condition and in good repair at all times. Any facilities (boxes, pedestals, and racks) that are damaged, in a state of disrepair, or due to wear and tear which are no longer in a presentable condition (clean, neat and attractive) shall be replaced or repaired by the CBV as soon as practicable after discovery or notification by the Department's representative to do so.

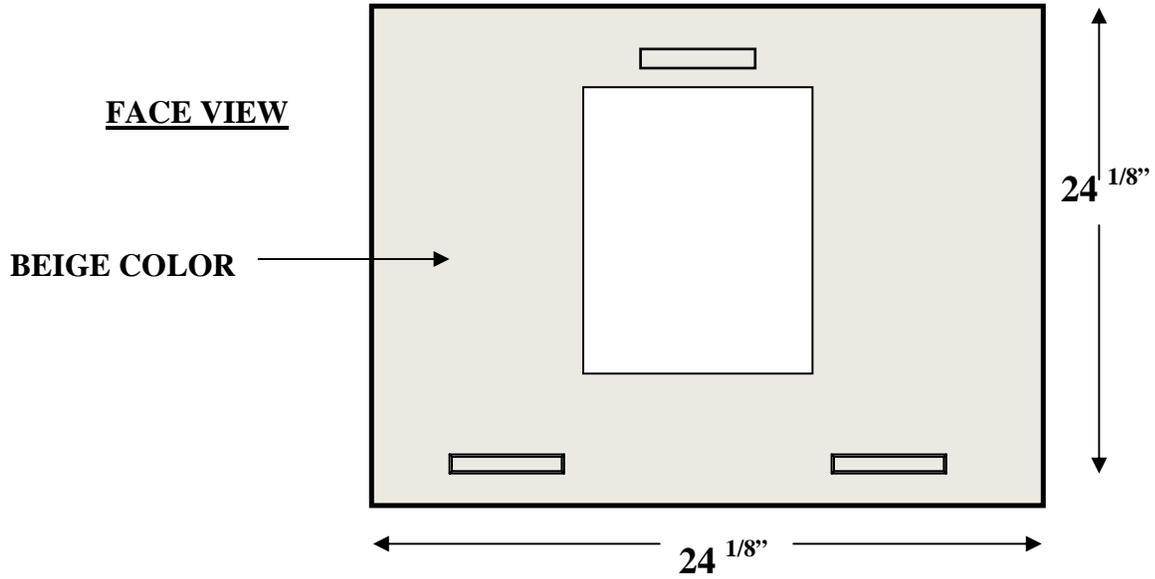
All distribution facilities which have been lost, stolen or vandalized and facilities that are no longer to be used, shall be removed, replaced or repaired by the CBV as soon as practicable after discovery or notification by the Department's representative to do so.

The CBV is responsible for removal of the remaining facilities when any distribution facility is missing, vandalized or unused, and there is not intent to replace it in kind. The site shall be returned to its original condition.

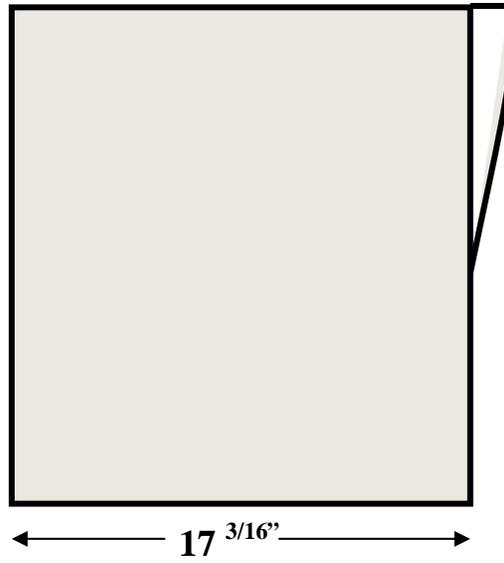
**THESE GUIDELINES ARE SUBJECT TO CHANGE AT THE DISCRETION OF THE HEADQUARTERS OFFICE OF ENCROACHMENT PERMITS. IT IS THE RESPONSIBILITY OF THE PERMITTEE TO REMAIN CURRENT WITH THE SPECIAL PROVISIONS AND PERMIT CONDITIONS OF THESE GUIDELINES.**

**ATTACHMENT #1**

**COUPON BOOK DISTRIBUTION BOXES**

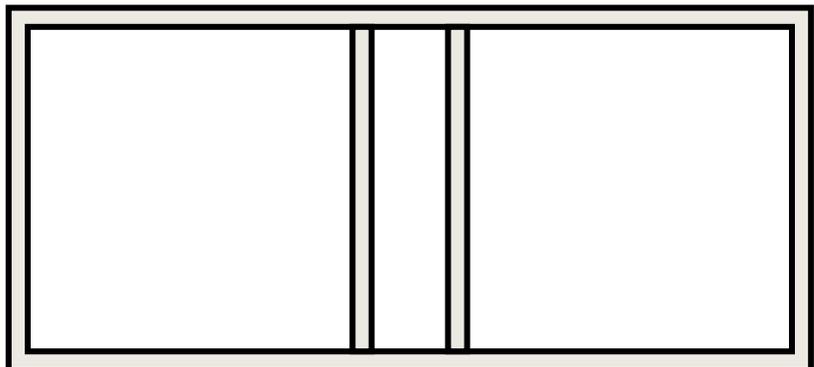


**SIDE VIEW**



**DOUBLE BOX DIAGRAM**

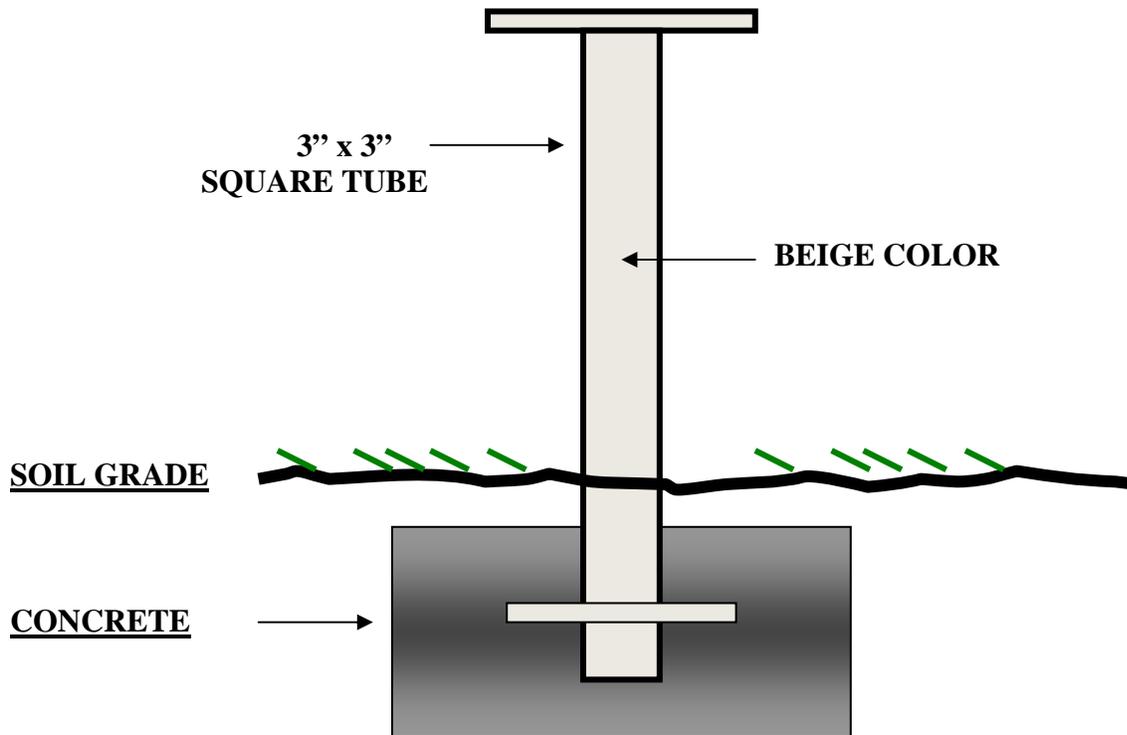
**TOP VIEW  
Of  
BASE TRAY**



**ATTACHMENT #2**

**PEDESTAL**

**SINGLE BOX DIAGRAM**



The distribution boxes are to be securely fastened to square steel pedestal mounts, which are to be set in a concrete footing located within the planted area. The top of the concrete footing is to be covered with soil, mulch or ground cover to restore the area to its previous appearance to as great an extent as possible. Distribution boxes furnished with a pedestal mount and equipped with a steel flange base that are designed to be bolted to concrete surfaces are to be used only where directed by the Department.

### ATTACHMENT #3

This illustration shows the appearance in how the placements of these distribution facilities are to appear in the Safety Roadside Rest Areas. Also shown is what is acceptable for placement in the door window and what is NOT.





**CALTRANS  
ENCROACHMENT PERMITS**

**GUIDELINES AND SPECIFICATIONS  
FOR  
TRENCHLESS TECHNOLOGY PROJECTS**

**JANUARY 2015**

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## PROCEDURAL REQUIREMENTS FOR DESIGN AND CALCULATIONS OF STRUCTURAL AND SUB-STRUCTURAL PROJECTS

All submittals shall be stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five years experience in structural design and preparation of calculations, proof of experience is required by use of Encroachment Permits form “Certification of Structural Experience” (form TR-0133) to be included within the project package submittal.

### STRUCTURAL DESIGN AND CALCULATIONS

All Structural Project submittals (structures and structural falsework) will require review by Structures Maintenance, for construction under an encroachment permit and require the following:

Designed plans and specifications, calculations and details (structural and falsework).

A geotechnical investigation and soil analysis by a licensed geotechnical engineer is required. It shall provide identification of any locations of difficulty, changes in soil formation, or mixed face conditions that could present or create ground loss, exploratory soil corings and logs are required along the alignment of the project.

Construction or Structures Construction may provide oversight.

### SUB-STRUCTURAL DESIGN AND CALCULATIONS

Sub-structural projects may consist of, but are not limited to, drainage boxes & systems, tunneling projects (mechanical or manual tunnel excavations for the placement of tunnel supports), and Trenchless Technologies for the installation of utilities when the diameter is 30” or larger (jack & bore, micro-tunneling, horizontal directional drilling, or pipe-ramming).

When the distance between the tunnel and an existing structure is less than twenty times its diameter, it shall be sent to Structures Maintenance for review of the potential lateral loading effects to the pilings and foundation.

Otherwise, Sub-structural Project submittals, listed below and submitted with the “Certification of Experience” (form TR-0133) **do not** require review by Structures Maintenance or Underground Structures.

- Micro-tunneling projects.
- Bore & Jack, HDD, or Pipe Ramming (hole-diameter is 30” or larger and requiring structural/sub-structural design, investigations and calculations)
- Tunneling for the placement of tunnel support systems (rib & lagging, or steel liner plate requiring structural/sub-structural design, investigations and calculations).
- Drainage boxes and systems.

All Sub-structural Project submittals require the following:

The District Encroachment Permits Office is responsible for verification of the Registered Engineers stamp, validation of the date of expiration against the dated plan set and calculations. The permit office engineer shall validate the RE’s stamp at the web site listed below, by entering the RE’s number. A copy of the results shall be printed and included within the permit file. The encroachment permit may be issued, upon completion of the normal review process (Traffic, Environmental, R/W, etc.).

- Designed plans and specifications, calculations and details (liner plates, rib & lagging, bracing, etc.).
- A geotechnical investigation and soil analysis by a licensed geotechnical engineer is required. It shall provide identification of any locations of difficulty, changes in soil formation, or mixed face conditions that could present or create ground loss, exploratory soil corings and logs are required along the alignment of the project.
- When the length of the tunnel is greater than four hundred feet (> 400'), alignment holes may be required. Alignment holes shall be drilled at a maximum spacing of two-hundred feet (200') and a casing of four to six inches (4" to 6") in diameter installed vertically, to a depth necessary for the installed casing to extend into the tunnel excavation. When alignment holes fall within the pavement area of the roadway, the pavement shall be saw-cut, a cover shall be placed over the end of the casing at grade, and the space around the casing within the roadway filled with concrete (EXCEPT in controlled access right-of-way).

### **PROJECT OWNER'S RESPONSIBILITIES**

On projects deemed by the Department as requiring full time inspection, the project owner is responsible for providing a third-party full time inspector.

A full-time Safety Engineer: A Registered Structural or Civil Engineer, with a minimum of five years experience in design or inspection of Sub-structural Projects (tunnels). Proof of experience shall be submitted on Encroachment Permits form "Certification of Structural Experience" (form TR-0133) **or**

A full-time Safety Representative: State certified by Department of Industrial Relations, Cal/OSHA Mining & Tunnel Unit, proof of certification is required. California Code of Regulations 8406(f), (h)

### **CONTRACTOR'S RESPONSIBILITIES**

Prior to issuance of the "DP" permit the following shall be submitted:

- Proof of experience, as stipulated by the District Office, in respect to diameter and length of proposed project.
- Tunnel support system construction plans and specifications, calculations and details, method of construction, to include the adequacy of the shield and liner material stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five (5) years experience in sub-structural design and preparation of calculations.
- "Notice of Materials to be used" (form CEM-3101).
- Method of construction plan.
- A Licensed Surveyor.
- Proof of rib expanders and/or liner supports.
- Working schedule of the project.
- Contingency plan for dealing with ground loss work.
- Shaft; soil stability at portals and ground improvement plan.
- Dewatering plans for entry and exit shafts/pits, if needed.
- Installation and monitoring of SWPPP or WPCP facilities and conditions.
- Shoring design for entry and exit shafts/pits.
- Survey control plan: lasers, laser mounting, laser checking.
- Ground surface settlement monuments and subsurface settlement monuments monitoring program plan.
  - Buried points

## TUNNELING PROJECTS

All projects will vary in their own characteristics. General similarities are listed below to provide a general understanding of these types of projects.

Establishment of a survey-grid line and existing elevation points shall be over the centerline and wing points of the installation.

Designed plans and specifications, calculations and details (liner plates, rib & lagging, bracing, etc.) shall be stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five (5) years experience in sub-structural design of tunnels. Proof of experience shall be submitted on "Certification of Structural Experience" (form TR-0133) in conjunction with project package submittal.

A geotechnical investigation and soil analysis by a licensed geotechnical engineer/engineering geologist is required. It shall provide identification of any locations of difficulty, changes in soil formation, or mixed face conditions that could present or create ground loss, exploratory soil corings and logs are required along the tunnel alignment at intervals of twenty-five to one-hundred feet {25' to 100' }.

When the length of the tunnel is greater than four hundred feet (> 400'), alignment holes may be required. Alignment holes shall be drilled at a maximum spacing of two-hundred feet (200') and a casing of four to six inches (4" to 6") in diameter installed vertically, to a depth necessary for the installed casing to extend into the tunnel excavation. When alignment holes fall within the pavement area of the roadway, the pavement shall be saw-cut, a cover shall be placed over the end of the casing at grade, and the space around the casing within the roadway filled with concrete (EXCEPT in controlled access right-of-way).

### CAL/OSHA REQUIREMENTS

The California Code of Regulations (CCR) mandates the following requirements for Tunneling Projects.

- The Owner or Local Entity proposing the construction of the tunnel shall make a full submittal to the Department of Industrial Relations, Cal/OSHA, to determine tunnel classification. CCR 8422
- Development of a check-in/check-out procedure to ensure an accurate account of personnel underground in the event of an emergency. CCR 8410
- Development of an Emergency Plan, that outlines duties and responsibilities of all personnel on the project during an emergency. The plan shall include ventilation controls, fire fighting equipment, rescue procedures, evacuation plans and communications. CCR 8426
- Cal/OSHA requires a State of California certified person performing the duties of gas tester or safety representative to be certified by passing a written and an oral examination administered by the Cal/OSHA Mining & Tunneling Unit. CCR 8406(f), (h)
- A certified safety representative shall direct the required safety and health program and must be on-site while employees are engaged in operations during which the Tunnel Safety Orders (TSO) apply. CCR 8406(f)
- The certified safety representative must have knowledge in underground safety, must be able to recognize hazards, and must have the authority to correct unsafe conditions and procedures subject to the TSO. CCR 8406(f)

A State of California certified gas tester is required for the following operations:

- All classifications other than non-gassy
- Projects during which diesel equipment is used underground
- Hazardous underground gas conditions. CCR 8470

## **TUNNEL**

Tunnel construction is accomplished by the method of Hand-mining, or by Mechanical means, and the use of a protective shield.

Continuous monitoring and observation of the ground surface above the tunnel is required. In some cases it may be required to survey and record elevations along the survey grid line, several times a day, or daily.

Generally, when tunneling in good ground, tunnels with a diameter of less than eight-feet (< 8') and less than three-hundred feet to four-hundred feet (300' to 400') in length may be holed-through (excavated completely) before concreting the interior of the tunnel, when placement of pre-fabricated or pre-cast pipe is to be installed. When this is proposed, hole-through (unsupported length) before concreting of the interior of the tunnel, it shall be justified by the original subsurface geotechnical investigation and design.

Tunnel lining and bracing should consist of steel ribs and steel spreaders (dutchmen) with wood, concrete, or steel lagging, or with bolted steel liner plates.

Fireproof materials should be utilized in all construction of plant structures, above ground, within one hundred feet (100') of the shaft or tunnel. The use of flammable materials or wood shoring would require that adequate fire protection be provided.

Ventilation systems shall be established and provide a minimum of two hundred (200) cfm per worker.

- All equipment shall maintain a minimum clearance of twenty-five feet (25') from opening.
- An established contingency plan in the event of ground loss.
- Cranes utilized in operations shall maintain minimum required clearances.

## **TUNNEL SHIELD**

- The face of the shield shall be provided with a hood or an approved grid system.
- The excavation face shall have a sufficient length to allow for the installation of one (1) complete ring of liner plates, or one (1) complete set of ribs and lagging before advancing.
- The contractor shall submit details and design information of the shield.

## **TUNNEL LINING**

Tunnel lining and bracing should consist of steel ribs and steel spreaders with wood lagging and concrete, or steel lagging, or with bolted steel liner plates.

The tunnel liner and bracing shall be designed (calculations provided) of an adequate strength based upon the geotechnical investigation, soil analysis, loading, and the diameter and depth of cover to provide adequate support of the tunnel.

- A ring expander shall be used to expand the rib continuously outward and upward.
- Liner plates shall be designed based on joint strength, minimum stiffness, critical buckling of the liner plate wall, and deflection or flattening of the tunnel section.
- On tunnels with a diameter greater than ten feet (> 10'), the placement of ribs inside of liner plate may be required.
- When the geotechnical investigation has determined that silts and fine sands exist, that may flow under pressure, all liner plates shall include a neoprene gasket adhered to each flange face.

## **LAGGING**

Generally started at spring line and continue upwards towards the crown. Lag spacing consists of three methods:

1. Wedging – done by driving a block of wood between the earth and the lag at each end, or by driving a wedge between the rib and the lag.
2. Stops – by welding small angles to the ribs outer flange to prevent sliding.
3. Clamps – which are applied to wood or steel lags.

If the spacing of lags between ribs is used in tunnel construction, packing between lags with filler may be required.

- Lags are boards or steel plates placed longitudinally against the roof and walls of the tunnel excavation.
- Steel lagging may consist of channel, liner plate or corrugated metal.
- Steel lagging thickness shall be designed on strength based upon the geotechnical investigation, soil analysis, and loading.
- Wood lagging thickness shall be designed on strength based upon the geotechnical investigation, soil analysis, loading. Generally wooden lags common size are three-inches by six-inches (3" x 6"), and the length is cut according to the spacing of the ribs.
- A minimum of one liner plate per ring with a two-inch (2") diameter coupling for grouting is required.

## **CONSTRUCTION OF SHAFTS / PITS**

Shafts / pits should be constructed of a proper size and shape, and equipped as to allow work to be carried on safely.

- Shafts shall be constructed of driven steel sheet pilings, steel bracing and tight wood, or steel lagging or steel liner plates and ribs.
- The removal of spoils should be accomplished by mechanical means (muck box).
- All shafts shall be provided with guardrail and a toeboard.
- When ladders are utilized within the shaft or pit, cages and/or safety devices shall be provided on depths of fifteen to twenty feet (15' to 20'), platforms shall be provided at depths of greater than twenty feet (20'+).
- Ventilation systems shall be established and provide a minimum of two hundred (200) cfm per worker.
- All equipment shall maintain a minimum clearance of twenty-five feet (25') from openings.
- Upon completion of project all shafts, pits and drifts that are not part of the finished product shall be backfilled.

## **PLACEMENT OF SHAFTS / PITS**

- Located a minimum of ten feet (10') measured laterally from the edge of pavement on conventional highways in rural areas.
- Located at least five feet (5') measured laterally beyond the concrete curb or AC dike on conventional highways in urban areas.
- Located at least five feet (5') measured laterally beyond the toe of slope of embankments.
- Located outside of controlled access right-of-way.
- Adequately fenced or have a Type-K barrier placed around them at a 20:1 taper or as otherwise

directed.

- Shored according to Cal-OSHA minimum requirements. Located within fifteen feet (15') of traffic lanes on a State highway shall not extend more than thirty-six inches (36") above the pavement grade unless otherwise authorized by the State representative. Reflectors shall be affixed to the sides facing traffic, and placement around the perimeter of a six-foot (6') chain link fence during non-working hours.
- Are only allowed in controlled access right-of-way for direct freeway crossings that are excessively long or that have restricted space available outside the rights-of-way.
- They shall not Affect State facilities or create a hazard to the traveling public. When placement is approved within controlled access rights-of-way, damaged State facilities shall be replaced or repaired according to State Standard Specifications.
- Shall have crushed-rock and sump areas to clear groundwater and water used to clean. They shall be lined with filter fabric when groundwater is found and pumping is required.

## **EXCAVATION**

In some locations Soil Stabilization may be required. It may become necessary at the direction of the Engineer to either pressure grout or freeze the soil area of the project to control water, to prevent loss of ground, to prevent settlement or displacement of an embankment. When required, a Registered Geotechnical Engineer shall prepare and stamp the plans determining the material and method for use.

In some projects masonry sections are installed, the amount of excavation of the tunnel should not exceed the amount needed for placement of a full masonry section after all lining is in place.

All excavated material shall be considered as unclassified material.

- In the event of any ground movement over or adjacent to construction, all work shall be suspended, except that which will assist in making the construction site secure and prevent any further additional movement of the ground.
- Excavation should not be advanced beyond the edge of the shield, except in rock.
- The geotechnical engineer/engineering geologist shall determine the allowable amount of tunnel length unsupported by bracing, based on the geotechnical investigation and design.
- All voids between the excavation and the liner shall be grouted after setting of ribs and lagging, if not expanded to full contact with the surrounding ground, as determined by the Safety Engineer.
- A log shall be maintained of all surrounding utilities and facilities.

## **DEWATERING**

When ground water is anticipated, pumps of sufficient capacity to handle the flow shall be maintained at the site. Observation shall be maintained to detect any settlement, displacement or washing of fines into the pit, shaft or tunnel.

## **GROUTING**

Grouting should be kept close to the heading (working front of tunnel). It may be required to add pea-gravel and fly ash to the grout. The pea-gravel would assist in consolidation and the filling of the voids, fly-ash works as a lubricant allowing the grout to free-flow.

- The use of grout stops may be utilized if necessary or if required by the Safety Engineer.
- Grouting shall be performed when ordered by the Safety Engineer.
- At no time shall progression of the tunnel exceed six feet (6') beyond the grouting of the exterior void.

- Pressure on the grouting gauge should not exceed the capacity of the lining, sufficient to fill all voids.
- A gauge shall be provided which will accurately indicate working pressure and shall be monitored constantly during grouting procedures.
- Grouting shall start at the lowest point and proceed upwards simultaneously on alternating sides.
- When grouting is complete at that location a threaded plug shall be installed into the coupling.

## **MATERIALS**

“Notice of Materials to be used” (form CEM-3101) is required.

- The manufacturer shall provide a Certificate of Compliance, to ensure tensile and yield strengths.
- Steel lagging may consist of channel, liner plate or corrugated metal.
- Steel lagging thickness shall be designed on strength based upon the geotechnical investigation, soil analysis, and loading.
- Wood lagging thickness shall be designed on strength based upon the geotechnical investigation, soil analysis, loading. Generally wooden lags common size are three-inches by six-inches (3”x 6”), and the length is cut according to the spacing of the ribs.
- When the geotechnical investigation has determined that silts and fine sands exist, that may flow under pressure, all liner plates shall include a neoprene gasket adhered to each flange face.
- Ensure Manufacturer’s Specification Data Sheets (MSDS) are provided stipulating recommended:
  - Specifications of steel spreaders (spacing, tolerances).
  - Specifications of steel rib (section lengths, spacing, etc.)

## **PROJECT OWNER’S/PERMITTEE’S RESPONSIBILITIES**

The project owner/permittee is responsible for providing:

A full-time Safety Engineer or Safety Representative, and proof of certification is required, either by submittal on “Certification of Structural Experience” (form TR-0133) or State Certification.

Cal/OSHA requires persons performing the duties of gas tester or safety representative to be certified by passing a written and an oral examination administered by the M&T Unit. CCR 8406(f), (h)

- Project drawings and specifications, calculations and details stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five (5) years experience in sub-structural design of tunnels.
- An geotechnical investigation by a licensed geotechnical engineer to determine the following;
- Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP).
- De-Watering Plan, if needed.
- Ground water information
- Boring and soil analysis logs, location plan of borings, cross sections, subsurface strata, fill and ground water elevations;
  - Particle size distribution (particularly percent rock and cobble),
  - Cohesion index, internal angle of friction, and soil classification,
  - Plastic and liquid limits (clays), expansion index (clays), soil density, and penetration tests,
  - Rock strength, rock joint fracture and orientation, water table levels, and soil permeability,
  - Areas of suspected and known contamination should also be noted and characterized.
- The soil investigation shall also determine the presence of rock, cobbles, and/or boulders, and the following;
  - Depth and extent of rock

- Rock type
- Rock strength
- Rock joint/fracture spacing
- Hardness
- RQD
- Estimated range of sizes & frequency of occurrence of cobbles and boulders.

### **CONTRACTOR'S RESPONSIBILITIES**

The contractor is responsible for providing:

- Tunnel project construction plans and specifications, calculations and details, method of construction, to include the adequacy of the shield and liner material stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five (5) years experience in sub-structural design of tunnels.
- "Notice of Materials to be used" (form CEM-3101).
- Method of construction plan.
- A Licensed Surveyor.
- Proof of rib expanders and/or liner supports.
- Working schedule of the project.
- Contingency plan for dealing with ground loss work.
- Shaft; soil stability at portals and ground improvement plan.
- Dewatering plans for entry and exit shafts/pits, if needed.
- Installation and monitoring of SWPPP or WPCP facilities and conditions.
- Shoring design for entry and exit shafts/pits.
- Survey control plan: lasers, laser mounting, laser checking.
- Ground surface settlement monuments and subsurface settlement monuments monitoring program plan.
  - Buried points

## ENCASEMENT REQUIREMENTS

1. All transverse crossings, single ducts or pipes 6" or greater in diameter shall be encased. The installation of multiple ducts or pipes, regardless of diameters requires encasement.
2. Encasement requirements are shown in Table 6.8 of the Encroachment Permits Manual. All other exceptions shall obtain an exception to standard by DOD, Chief.
3. The minimum wall thickness required for steel encasements is shown in Table 6.9 of the Encroachment Permits Manual.
4. Encasement ends shall be plugged with ungrouted bricks or other suitable material approved by the Caltrans' representative.
5. The Caltrans' representative may require the permittee to pressure grout, filling any voids generated in the course of the permitted work. Grouting shall be at the expense of the permittee. Grout holes when placed inside the of the pipe, generally on diameters of 36" or greater, shall be on 8' centers, longitudinally and offset 22 degrees from vertical, and staggered to the left and right of the top longitudinal axis of the pipe. Grout pressure shall not exceed five-(5) psig (34.5 kPa) for a duration sufficient to fill all voids.
6. There is a spacing requirement when placement of multiple encasements is requested. The distance between multiple encasements shall be the greater of either 24" or twice that of the diameter of the larger pipe being installed.
7. Wing cutters when used shall only add a maximum of 1" in diameter to the outside diameter of the encasement pipe. Voids in excess of the Standard Specifications shall be grouted.
8. A band welded to the leading edge of the encasement pipe should be placed square to the alignment and not on the bottom edge of pipe. A flared lead section on bores over 100' shall not be permitted.
9. The length of the auger strand shall be equal to that of the section of encasement pipe.
10. Encasements placed within conventional highway right-of-way shall extend 5' beyond the edge of the paved shoulder, back of curb, or to the highway right-of-way line.
11. Encasements placed across controlled access right-of-way shall extend to the highway right-of-way lines.

## **BORE & JACK**

Utility installations placed by Bore & Jack shall be monitored to ensure that the integrity of the existing roadway elevations are maintained. When the encasement is also to serve as the carrier facility for hazardous materials, the use of another trenchless installation is recommended. Potential damage could occur during the jacking process, rendering the use of that facility as the carrier.

### **BORE AND RECEIVING PITS**

Requirements:

1. Shall be located a minimum of 10' from the edge of pavement in rural areas, or at least 5' beyond the concrete curb and gutter or AC dike in urban areas, or at least 5' beyond the toe of slope of embankments.
2. Shall be located outside of controlled access highway right-of-way. EXCEPT, when approved by the district for direct crossings that are excessively long, or there is restricted space available for placement, outside of the right-of-way. Those portions of the installation not placed by Bore & Jack shall be encased by the open trench method.
3. Protected by placement of 6' chain link fence or Type-K barrier around them.
4. Shored in accordance to Cal-OSHA requirements. Shoring of pits located within 15' of lanes within State highway right-of-way shall not extend more than 36" in height above the pavement grade, unless authorized by a Caltrans' representative.
5. Reflectors shall be affixed to the shoring on all sides facing traffic.
6. Pits shall not affect any State facilities, or create a hazard to the traveling public. Damaged State facilities shall be replaced in-kind or repaired to their original state.
7. All pits should have crushed-rock and sump areas to clear groundwater and water used to clean the casings. Pits shall be lined with filter fabric when groundwater is found and pumping is required.
8. Temporary Type-K railing shall be placed at a 20:1 taper or as otherwise directed by the Caltrans' representative to maintain the integrity of the adjacent travel lane.

A tunnel is defined as any installation that is 30" or larger in diameter (see Section 518, and Table 5.29 - Permit Code TN of the Encroachment Permits Manual).

## HORIZONTAL DIRECTIONAL DRILLING GUIDELINES & SPECIFICATIONS

RECOMMENDED MINIMUM DEPTH OF COVER	
DIAMETER	DEPTH OF COVER
2 inches to 6 inches	4 feet
8 inches to 14 inches	6 feet
15 inches to 24 inches	10 feet
25 inches to 48 inches	15 feet

Upon completion of the work, the permittee shall provide an accurate as-built drawing of the installed pipe.

### SOIL INVESTIGATIONS

The District Permit Engineer (DPE) should determine the extensiveness of the Soil Investigation to be performed based on the complexity of the HDD operation, or modify the guideline to fit the respective area.

A soil investigation is required, suitable for the proposed complexity of the installation to confirm ground conditions that will be encountered during the HDD operation. The HDD process is a continual and extensive soil analysis as the pilot bore is made encountering the varying soils and formations.

#### **Projects less than 500' in length, where the product or casing is 8" or less in diameter:**

A field soil sampling investigation to a depth of one foot below the proposed drilling.

- a) Subsurface strata, fill, debris and material

#### **Projects less than 800' in length, where the product or casing is 14" or less in diameter:**

A field soil sampling investigation to a depth of one foot below the proposed drilling.

- a) subsurface strata, fill, debris and material
- b) particle size distribution (particularly percent gravel and cobble)

#### **Projects where the product or casing is 16" or greater in diameter:**

A geotechnical evaluation by a qualified soil engineer to determine the following.

- a) subsurface strata, fill, debris and material,
- b) particle size distribution (particularly percent gravel and cobble),
- c) cohesion index, internal angle of friction, and soil classification,
- d) plastic and liquid limits (clays), expansion index (clays), soil density
- e) water table levels, and soil permeability,

#### **Projects where the product or casing 24" or greater in diameter:**

A geotechnical evaluation by a qualified soil engineer to determine the following.

- a) subsurface strata, fill, debris and material
- b) particle size distribution (particularly percent gravel and cobble)
- c) cohesion index, internal angle of friction, and soil classification
- d) plastic and liquid limits (clays), expansion index (clays), soil density, and penetration tests,
- e) rock strength, rock joint fracture and orientation, water table levels, and soil permeability,
- f) areas of suspected and known contamination should also be noted and characterized.

A borehole or test pit should be undertaken on both sides and in the median when conditions permit. Additional boreholes or test pits should be considered if substantial variations in soil conditions are encountered in the soil analysis (the presence of gravel, cobble, and/or boulders).

Fluid jetting methods used as a means of cutting **should only be considered** where soils have a high cohesion such as stiff clays.

## **PRE-CONSTRUCTION & SITE EVALUATION**

The following steps should be undertaken by the permittee/contractor in order to ensure safe and efficient construction with minimum interruption of normal, everyday activities at the site.

- Notify owners of subsurface utilities along and on either side of the proposed drill path of the impending work through USA alert (the one-call program). All utilities along and on either side of the proposed drill path are to be located.
- Obtain all necessary permits or authorizations to carry construction activities near or across all such buried obstructions.
- All utility crossings should be exposed using a hydro-excavation, hand excavation (potholing) or other approved method to confirm depth.
- Construction schedule should be arranged so as to minimize disruption (e.g. drilling under railroad beds, major highways, and/or river crossings).
- The proposed drill path should be determined and documented, including its horizontal and vertical alignments and the location of buried utilities and substructures along the path.

Walk the area prior to the commencement of the project and visually inspect potential sites. The following should be addressed:

- When on State R/W establish whether or not there is sufficient room at the site for: entrance and exit pits; HDD equipment and its safe unimpeded operation; support vehicles; fusion machines; stringing out the pipe to be pulled back in a single continuous operation.
- Establishing suitability of soil conditions for HDD operations. Subgrade soils consisting of large grain materials like gravel, cobble, and boulders make HDD difficult to use and may contribute to pipe damage.
- Check the site for evidence of substructures such as manhole covers, valve box covers, meter boxes, electrical transformers, conduits or drop lines from utility poles, and pavement patches. HDD may be a suitable method in areas where the substructure density is relatively high.

## **INSTALLATION REQUIREMENTS**

During construction continuous monitoring and plotting of pilot drill progress shall be undertaken to ensure compliance with the proposed installation alignment and allow for appropriate course corrections to be undertaken that would minimize “dog legs” should the bore start to deviate from the intended bore path.

Monitoring shall be accomplished by manual plotting based on location and depth readings provided by the locating/tracking system or by computer generated bore logs which map the bore path based on information provided by the locating/tracking system. Readings or plot points shall be undertaken on every drill rod.

Excess drilling fluids shall be contained at entry and exit points until recycled or removed from the site. Entry and exit pits should be of sufficient size to contain the expected return of drilling fluids and soil cuttings.

The permittee shall ensure that all drilling fluids are disposed of in a manner acceptable to the appropriate local, state, or federal regulatory agencies. When drilling in contaminated ground the drilling fluid shall be tested for contamination and disposed of appropriately. Restoration of damage to any highway or non-highway facility caused by escaping ("fracout") drilling fluid, or the directional drilling operation, shall be the responsibility of the permittee.

To minimize heaving during pullback, the pull back rate shall be determined which maximizes the removal of soil cuttings and minimizes compaction of the ground surrounding the borehole. The pullback rate shall also minimize overcutting of the borehole during the back reaming operation to ensure excessive voids are not created resulting in post installation settlement.

The permittee shall, prior to and upon completion of the directional drill, establish a Survey Grid Line and provide monitoring as outlined in their submitted detailed monitoring plan. Subsurface monitoring points shall be utilized to provide early indications of settlement as large voids may not materialize during drilling due to pavement bridging.

Should pavement heaving or settlement occur, sawcutting and replacement of the asphalt shall be the responsibility of the permittee.

To prevent future settlement should the drilling operation be unsuccessful the permittee shall ensure the backfill of any void(s) with grout or backfilled by other means.

#### **PERMITTEE/CONTRACTOR RESPONSIBILITIES**

The plans set submittal should contain the following information in support of the permit application.

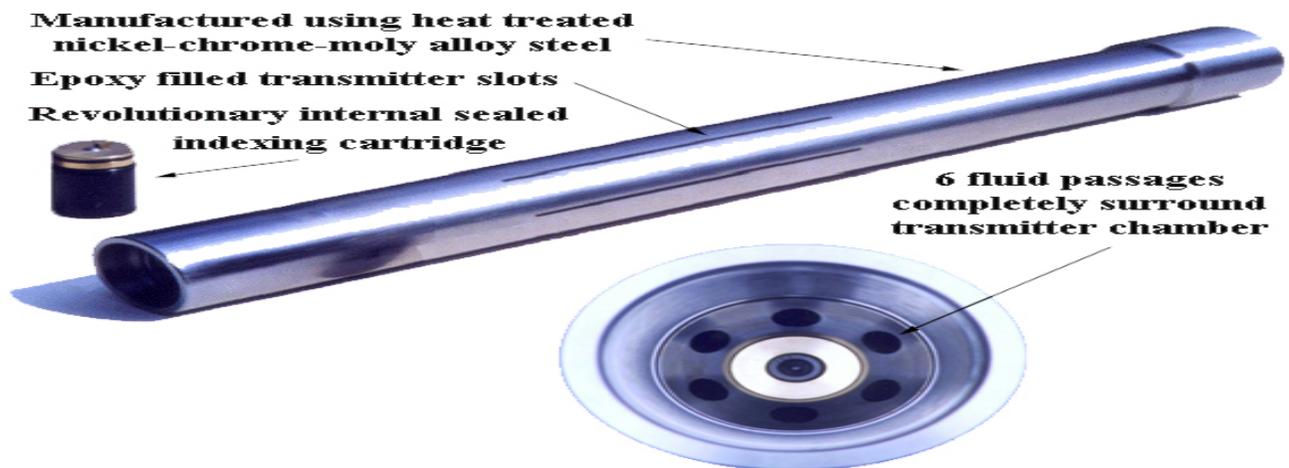
1. Location of entry and exit point.
2. Equipment and pipe layout areas.
3. Proposed drill path alignment (both plan & profile view).
4. Location, elevations and proposed clearances of all utility crossings and structures.
5. Proposed Depth of cover.
6. \*\*Soil analysis.
7. Product material (HDPE/steel), length, diameter-wall thickness, reamer diameter.
8. Detailed pipe calculations, confirming ability of product pipe to withstand installation loads and long term operational loads including H2O.
9. Proposed composition of drilling fluid (based on soil analysis) viscosity and density.
10. Drilling fluid pumping capacity, pressures and flow rates proposed.
11. State right-of-way lines, property, and other utility right-of-way or easement lines.
12. Elevations.
13. Type of tracking method/system.
14. Survey Grid establishment for monitoring ground surface movement (settlement or heave) due to the drilling operation.

Note: \*\* *May be waived by the District Permit Engineer on HDD jobs of less than 6" in diameter and on a transverse crossing less than 150' in length.*

#### **ADDITIONAL PERMIT CONDITIONS SHALL BE SET FORTH IN THE SPECIAL PROVISIONS OF THE PERMIT. LOCATING AND TRACKING**

**EFFECTIVE JANUARY 1, 2000, LOCATING AND TRACKING OF THE REAMER DURING THE BACK-REAMING PROCESS IS REQUIRED.**

The illustration below shows a universal housing that will work with any drill-string on all HDD rigs.



## **DRILLING FLUIDS MANAGEMENT PLAN**

The following information should be provided as part of the drilling fluid management plan:

- Identify source of fresh water for mixing the drilling mud (Necessary approvals and permits are required for sources such as streams, rivers, ponds, or fire hydrants).
- Method of slurry containment.
- Method of recycling drilling fluid and spoils (if applicable).
- Method of transporting drilling fluids and spoils off site.

Drilling fluid pressures should not exceed that which can be supported by the overburden (soil) pressure.

Drilling fluids serve many functions, as follows:

- Removes cuttings from the bottom of the hole and transports them to the surface.
- Holds cuttings and weight material in suspension when circulation is interrupted.
- Releases sands and cuttings at the surface.
- Stabilizes the hole with an impermeable cake.
- Cools and lubricates the drill bit and drill string
- Controls subsurface pressures.
- Transmits hydraulic horsepower.
- Cools the locating transmitter sonde preventing burnout.

## **PREVIOUS EXPERIENCE**

- The permittee's contractor should provide a list of projects completed by his company, location, project environment (e.g., urban work, river crossing), product diameter and length of installation.
- The permittee's contractor should provide a list of key personnel.

## **SAFETY**

- Emergency procedures for inadvertently boring into a natural gas line, live power cable, water main, sewer lines, or a fiber-optic cable, which comply with applicable regulations.
- Emergency evacuation plan in case of an injury.

## **CONTINGENCY PLANS**

The Contingency plan shall address the containment and removal, of an inadvertent return or spill (e.g., drilling fluids, and hydraulic fluids).

## **COMMUNICATION PLAN**

The communication plan should address the following:

- The phone numbers for communication with owner or his representative on the site.
- Identification of all key personnel which will be responsible for ensuring that the communications plan is followed.

## **DRILLING OPERATIONS**

The following paragraphs provide general remarks and rules of thumb related to the directional boring method, as well as specific details regarding various stages of the installation process.

- The drill path alignment should be as straight as possible to minimize the fractional resistance during pullback and maximize the length of the pipe that can be installed during a single pull.
- The radius of curvature is determined by the bending characteristics of the product line, and it is increasing with diameter.
- If a drill hole beneath a road must be abandoned, the hole should be backfilled with grout or bentonite to prevent future subsidence.

## **EQUIPMENT SETUP AND SITE LAYOUT**

- Sufficient space is required on the rig side to safely set up and operate the equipment.
- Sufficient space should be allocated to fabricate the product pipeline into one string, thus enabling the pull back to be conducted in a single continuous operation.

## **DRILLING AND BACK-REAMING**

- Drilling mud shall be used during drilling and back reaming operations. Using exclusively water may cause collapse of the borehole in unconsolidated soils, while in clays, the use of water may cause swelling and subsequent jamming of the product.
- Heaving may occur when attempting to back ream too large of a hole. This can be avoided by using several pre-reams to gradually enlarge the hole to the desired diameter.
- The conduit must be sealed at both ends with a cap or a plug to prevent water, drilling fluids and other foreign materials from entering the pipe as it is being pulled back.
- Pipe rollers, skates or other protective devices should be used to prevent damage to the pipe from the edges of the pit during pullback, eliminate ground drag or reduce pulling force and subsequently reduce the stress on the product.
- The drilling mud in the annular region should not be removed after installation, but permitted to solidify and provide support for the pipe and neighboring soil.

## **BREAK-AWAY PULLING HEAD**

Some utility companies require the use of breakaway swivels to limit the amount of force used when pulling HDPE products.

## **PROTECTIVE COATINGS**

In an HDD installation, the product pipe may be exposed to extra abrasion during pullback. When installing a steel pipe, a form of coating which provides a corrosion barrier as well as an abrasion barrier is recommended during the operation, the coating should be well bonded and have a hard smooth surface to resist soil stresses and reduce friction, respectively. A recommended type of coating for steel pipes is mill applied Fusion Bonded Epoxy.

## **DRILLING FLUID - COLLECTION AND DISPOSAL PRACTICES**

Drilling fluids, additives and their Material Safety Data Sheets (MSDS) shall be identified within the contractor's submittal permit package.

- Excess drilling fluids shall be contained within a lined pit or containment pound, until removed from the site.
- When an area of contaminated ground is encountered, the slurry shall be tested for contamination and disposed of in a manner, which meets Local, State and/or Federal requirements.
- Precautions shall be taken to keep drilling fluids out of the streets, manholes, sanitary and storm sewers, and other drainage systems, including streams and rivers.
- The contractor shall make all diligent efforts to minimize the amount of drilling fluids and cuttings spilled during the drilling operation, and shall provide complete clean-up of all drilling mud overflows or spills.

## **SITE RESTORATION AND POST CONSTRUCTION EVALUATION**

All surfaces affected by the work shall be restored to their pre-existing conditions.

The permittee/contractor shall provide a set of as-built drawings to include both alignment and profile.

Drawings should be constructed from actual field readings. Raw data shall be submitted as part of the "As-Built" document. The contractor shall stipulate the tracking method used to ensure the data was captured.

## MICROTUNNELING

Micro-tunneling is a hybrid of the tunneling industry (miniaturization of tunnel boring machines) and the pipeline industry where pipe jacking has been used for more than 100 years. It is a special construction method suitable for many conditions where open cut construction methods are not cost effective, too disruptive, or not physically possible.

### MICRO-TUNNELING PLAN SET SUBMITTAL

The plan set submittal shall consist of two separate submittals, by the Owner of the installation and by the owner's contractor.

#### **The submittal by the owning agency shall contain the following plans and information:**

1. Drive lengths
2. Proposed depth
3. Shaft; jacking and receiving shafts, manhole construction, shaft backfill, and shoring removal;
  - Type of shaft;
    - a) Sheet Pile
    - b) Beams and Lagging
    - c) Trench Box
    - d) Auger Drilled and Lined
    - e) Caissons
4. Intermediate jacking stations;
  - Number of Stations;
    - a) Required by Specifications
    - b) On site
5. Geotechnical; including ground water information
  - Geotechnical evaluation by a qualified soil engineer to determine the following;
    - a) Boring logs & plan locations of borings and cross sections, Subsurface strata, fill and ground water elevations
    - b) Particle size distribution (particularly percent rock and cobble),
    - c) Cohesion indexes, internal angle of friction, and soil classification,
    - d) Plastic and liquid limits (clays), expansion index (clays), soil density, and penetration tests,
    - e) Rock strength; rock joint fracture and orientation, water table levels, and soil permeability,
    - e) Areas of suspected and known contamination should also be noted and characterized.
  - Should the soil investigation determine the presence of rock, cobbles, and/or boulders, determination of the following information would be required;
    - a) Depth and extent of rock
    - b) Rock type
    - c) Rock strength
    - d) Rock joint/fracture spacing
    - e) Hardness
    - f) RQD
    - g) Estimated range of sizes & frequency of occurrence of cobbles and boulders.

Boreholes or test pits for road crossings shall be undertaken on both sides with one or more additional boreholes or test pits in the median where conditions permit. Additional boreholes or test pits should be considered if substantial variation in soil conditions are encountered. Where a proposed installation parallels an existing road, boreholes or test pits should be undertaken at approximately 250 to 410 feet intervals.

## CONTRACTOR'S SUBMITTAL

### Shall contain the following plans and information:

1. Shaft; soil stability at portals and ground improvement.
2. Dewatering plans for jacking and receiving shafts, if any.
3. Shoring design for jacking and receiving shafts.
4. Survey control plan: lasers, laser mounting, laser checking.
5. Ground surface settlement monuments and subsurface settlement monuments monitoring program plan.
  - Buried points
    - a) Rebar points, or
    - b) MPBX (Multi-point borehole extensometers)
6. Recycling information; slurry mix and polymer additives, slurry separation plant type, and spoils disposal;
  - a) Removal of slurry in dump trucks.
  - b) Removal of slurry in tankers.
  - c) Settlement ponds.
  - d) Muck piles on site.
7. Contingency plan information;
  - a) Ground improvement plans when required at portals and/or behind thrust block/reaction wall due to weak and unstable soil conditions.
  - b) Obstruction removal through emergency (911) shafts or other means.
  - c) Mechanical breakdowns and recovery of the MTBM through 911 shafts or other means.
  - d) Control of hydrofracture and slurry loss.
  - e) Remediation of loss of ground and excessive ground surface settlement.

## **PIPE RAMMING**

**Pipe Ramming pit requirements are identical to those for Bore & Jack.**

**Establishment of a survey-grid line is required.**

Before any project begins, exploration bore-holes and a complete geotechnical investigation shall be conducted to determine possible difficulties in order to determine the drilling trajectory.

The casing shall be rammed open ended, except when the diameter is 6" or smaller. Pipes 6" or smaller may be rammed open ended or closed.

A soil shoe may be installed on the leading edge of the casing, either by fabrication on site or obtained from the manufacturer. A soil shoe shall not be utilized on those installations at depths or 18" or less from the surface.

Lubrication shall only be utilized to reduce friction and increase production. The amount of lubrication directed to the outside of the pipe shall only be of a sufficient amount required to fill the void between the outside of the pipe and soil, as created by the soil shoe.

Lubrication to the inside of the casing shall only be an amount adequate to assist in spoil removal when the ram is completed.

Welding of the casing at joints shall be as per the manufacturer's recommendations.

The use of straps at each joint on pipe diameters of 12" or larger is required as is the use of the manufacturer's specified welding wire or rod.

Spoil removal for rammed encasements of 30" in diameter or less, may utilize pressurized air or water.

Air pressure shall not exceed 150 psi and water pressure shall not exceed 300 psi.

Encasements larger than 30" in diameter shall have the spoils removed by other means than by pressurizing of the pipe, such as, manual, auguring, vacuum, washing or other means.

The Receiving Pit shall be steel plated entirely when the spoils are to be removed from within the encasement by means of air or water pressurized methods.

## PIPE BURSTING

**Pipe Bursting operations generally are only performed by the owning utility when they have exceeded the operating capacity of their existing facilities. In most cases pipe bursting allows the utility owners the advantage of upgrading their existing facilities by up to 50%.**

On installations of diameters 12" or greater it is necessary to establish a survey-grid line and establish the existing elevation points over the existing area of installation.

A soil analysis should be required and review of the information to identify any locations of difficulty, density, water table, changes in soil formation that could present or create greater friction resistance.

Request information of the proposed project as to:

1. The ratio of the proposed upgrade to determine difficulty, generally up to 25% increase in diameter is common. An increase of 25% - 50% is considered challenging, and an increase of 50% or greater is considered experimental.
2. The existing depth of cover, "rule of thumb" depth of cover should be at least 10X the difference in the upgrade of the existing diameter to be burst.
3. Whether or not the existing line has been viewed by video, do not allow line to be burst blind.
4. Is this proposed line straight or are there bends in the line.
5. If bends are existing in the line, the location of the bend will have to be excavated and new pits re-established at those locations.
6. Require that the contractor provide a list of equipment to be on site to handle an emergency, in the event that bypass pumping is required to maintain the existing service in the event of a problem.
7. As to what method will be utilized (static, pneumatic, burst and jack, or hydraulic).