

# TRANSPORTATION MANAGEMENT PLAN

## EMPIRE/BURBANK AND RAILROAD TRACKS PROJECT

07-LA-05 PM 29.4/31.6



State of California Department of Transportation  
District 7  
Contract Number: EA 1218w1



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## **EXECUTIVE SUMMARY**

### **Project Description**

The project includes the construction of 2.2 miles of High Occupancy Vehicle (HOV) lanes, one lane in each direction of travel along I-5 between Magnolia Avenue and Cohasset Street undercrossing, the modification of the Empire Avenue interchange to a full diamond interchange, the realignment and elevation of the railroad adjacent to the freeway, and a railroad grade separated crossing at Buena Vista Street. In addition, Burbank Blvd overcrossing will be reconstructed with part of the freeway re-aligned and the Burbank Blvd on and off-ramps modified. The project is scheduled to begin in late 2013 and will be completed in 2017.

### **Traffic Impacts and Direct Mitigations**

- New elevated tracks will be constructed within the project limits. To avoid disruption of train service, a shoofly will be constructed to be used as temporary train bypass during the construction of the new elevated tracks.
- The northbound Lincoln Street off-ramp will be permanently closed when roadway construction begins. This off-ramp carries most of the airport traffic. The segment of San Fernando Blvd that crosses under I-5 will be closed and will be realigned to join Empire Avenue. The southbound Lincoln Street on-ramp and the southbound Scott Road/Burbank off-ramp will have long-term closures and will be reconstructed to be part of the Empire Avenue diamond interchange. Airport exit signs will be posted on the freeway to direct airport traffic to use the Hollywood Way and Glenoaks Blvd exits. A portable changeable message sign will be placed at the northbound Lincoln Street off-ramp at least 30 days prior to the closure of the ramp. The Buena Vista Street northbound on-ramp will temporarily be widened and restriped to become two lanes to accommodate the added volume resulting from the closure of the ramps.
- The Buena Vista Street on and off-ramps will be closed on weekends using a 55-hour closure and has been limited to a maximum of three weekends per direction of travel. Detours will be provided for every on-ramp that is closed and signs placed along the detour routes will be monitored and fixed when needed to be able to guide motorists during the closure.
- A segment of Burbank Blvd will be closed to traffic for an estimated period of about 14 months. The bridge overcrossing I-5 will be reconstructed and the bridge widened. Traffic on this local street will be detoured. Ramps will be realigned. The Burbank Blvd southbound off-ramp and the northbound off-ramp to east Burbank Blvd at this location will remain open to traffic during the construction of Burbank Blvd overcrossing. The northbound off-ramp to east Burbank Blvd will have one 55-hour closure and notice will be given in advance to the motorists.

- The mainlines on I-5 between Magnolia Avenue and Cohasset Street undercrossing will be restriped several times during construction staging to maintain four lanes in each direction of travel on all stages of construction thereby minimizing impact to freeway motorists.

### **TMP Elements**

The following TMP elements have been developed for this project:

- Public Information/Public Awareness Campaign
- Motorist Information
- Incident Management
- Construction Strategies
- Demand Management
- Alternate Routes

The cost estimate for the implementation of the TMP elements is \$ 2,546,000 as shown on the TMP Data Sheet attached in this report (See Attachment A).



## **INTRODUCTION**

This report describes the Transportation Management Plan (TMP) for the series of improvements on I-5 between Magnolia Blvd and Cohasset Street undercrossing in the City of Burbank. Most of the TMP elements listed in this report are also applied in the other three I-5 North projects that are currently on-going. A brief description of these projects is provided in this report.

A TMP is developed to minimize impact to the motorists by minimizing delays brought about by closures and/or lane restrictions in a work zone. The developed TMP is applied during the construction period and may be revised to adapt to existing conditions.

## **I-5 CORRIDOR**

I-5, also known as the Golden State Freeway, is one of the state's heavily used corridors. It is a major north-south transportation corridor that runs from Mexico to Canada. Traffic on I-5 has increased as a result of new developments and population growth. As traffic volume continues to increase, congestion worsens. To resolve this issue, Caltrans and its partners have developed a plan to improve I-5 in all of Los Angeles County, from Orange County to Kern County. The I-5 projects have been divided into segments known as the I-5 North and the I-5 South. The Empire/Burbank project is one of the four project segments in the I-5 North. Upon completion of this project, travel to the Bob Hope Airport and shopping centers in the City of Burbank will be more convenient. The addition of the Empire Avenue interchange will relieve congestion on both the freeway and the city streets.

The proposed improvements on I-5 from Magnolia Blvd to Cohasset Street undercrossing are:

- Addition of a High Occupancy Vehicle (HOV) lane in each direction of I-5 between Magnolia Blvd and Cohasset Street undercrossing
- Construction of a new interchange: the Empire Avenue diamond interchange
- Eliminating street level crossing at Buena Vista Street by elevating the railroad tracks
- Realigning and elevating the railroad adjacent to Empire Avenue
- Reconstructing the Burbank Blvd bridge and modifying the on and off ramps
- San Fernando Blvd/Victory Place intersection improvement at Lincoln Street.

## **TRAFFIC DATA**

The Annual Average Daily Traffic (Annual ADT), as taken from the 2011 Traffic Volumes Book, ranges from 177,000 vehicles north of Buena Vista Street to 204,000 vehicles south of Burbank Blvd.

## CONSTRUCTION SCHEDULE AND STAGING

The project consists of seven stages. Below is a description of what work is done at each stage. Ramps to be closed are also shown and the estimated duration of ramp closure. Existing utility lines need to be relocated prior to the construction of the shoofly. The first order of work in this project is to relocate the utilities adjacent to the freeway and the existing railroad tracks. This work is done by others. Utility relocation is estimated to be completed by September 2013. Roadway construction begins upon completion of utility relocation.

Stage	Phase	Activities	Closures	Estimated Duration
1	1	Construct the Railroad Shoofly	Work within railroad right-of-way	6 months
		Temporary widening of Buena Vista Street northbound on-ramp; Buena Vista Street restriped for left turn pockets	Work done behind K-rails; ramp remains open	2 weeks; Nighttime ramp closures
		Close Lincoln Street northbound off-ramp	Ramp closed	Permanent Closure
			Segment of San Fernando Road from San Fernando Blvd northbound on-ramp to Lincoln Street closed	24 months
			Lincoln Street southbound on-ramp closed	18 to 24 months
			Scott Rd/Burbank off-ramp open	
		Construct portion of Empire Avenue	Segment closed	24 months
		Reconstruct I-5 median	Work done behind K-rails	Nighttime mainline closures
		Construct half of Victory Place Bridge	Victory Place open to traffic; work done behind K-rails	
		Empire Ave undercrossing Pumping Plant		3.5 months
		Railroad Construction		18 months
2	1	Southbound I-5 mainline widening	Work done behind K-rails;	Nighttime mainline closures
			Scott Rd/Burbank southbound off-ramp closed	18 months

Stage	Phase	Activities	Closures	Estimated Duration
2	1	Construct Railroad RW and Underpasses continued from Stage 1		
		Construct LACFCD Channel cap and Retaining Wall/Sound Wall	Scott Road on-ramp to North 5 closed;	7.5 months
			Northbound Scott Road off-ramp stays open; work behind K-rails	Nighttime ramp closures
		Construct portion of Empire Avenue undercrossing	Segment closed from Stage 1	
		Construct other half of Victory Place bridge	Victory Place remains open	
		Temporary widening of Buena Vista Street southbound on-ramp	Work behind K-rails; on-ramp remains open	Nighttime ramp closures
2	2	Continue work on Stage 2 Phase 1		
		Reconstruct portions of Buena Vista Street southbound ramps	Work done behind K-rails; ramps open;	Nighttime ramp closures
		Buena Vista Street undercrossing widening	Work done behind K-rails	Nighttime closure of Buena Vista Street
2	3	Continue work on Stage 2 Phases 1 & 2		
		Reconstruct remaining portions of Buena Vista Street southbound on & off-ramps	Most work done behind K-rails	55-hour closure (3 allowed); Nighttime ramp closures
		Slab Replacement on southbound lanes	Mainline closures	Nighttime mainline closures
2	4	Finish work on Stage 2 Phases 1 & 2		
		Southbound I-5 widening at Buena Vista Street southbound ramps	Buena Vista Street ramps remain open; work done behind K-rails	Nighttime ramp closures
		Slab replacement on I-5 south by Buena Vista Street		Nighttime mainline closures
3	1	Remove Railroad Shoofly	Train to use new tracks	
		Widen portions of northbound I-5 mainline and replace freeway slabs		Nighttime mainline closures

Stage	Phase	Activities	Closures	Estimated Duration
3	1		Scott Road northbound on-ramp still closed (Stage 2 Phase 1)	
			Northbound Scott Road off-ramp closed	
		Construct portion of Empire Avenue undercrossing	Segment closed from Stage 1	
		Reconstruct/widen Victory Place	Victory Place open to traffic	Nighttime street closure
		Reconstruct portion of San Fernando Blvd northbound on-ramp	Northbound San Fernando Blvd on-ramp remains open	Nighttime mainline closures
3	2	Construct portion of Empire Avenue undercrossing	Segment closed from Stage 1	
		Reconstruct Victory Place and Lincoln Street intersection	Lincoln Street and Victory Place open	
		Reconstruct Buena Vista Street northbound on & off-ramps	Work done behind K-rails	55-hour closure (3 allowed); Nighttime ramp closures
		Reconstruct remaining portion of San Fernando Blvd northbound on-ramp		One 55-hour closure allowed; Nighttime ramp closures
4	1	Reconstruct I-5 median and replace existing freeway lanes	Scott Road on-ramp to northbound I-5 open to traffic	Nighttime mainline closures
		Reconstruct remaining portion of Empire Avenue UC	All Empire Avenue ramps open (also known as the Scott Road northbound off-ramp, San Fernando Blvd northbound on-ramp, Scott Road /Burbank southbound off-ramp, Lincoln Street southbound on-ramp)	Segment undercrossing the freeway remains closed from Stage 1
5	1	Construct Burbank Blvd OC abutment and bent (Empire Ave interchange open)	Burbank Blvd overcrossing closed; All on-ramps closed; West Burbank Blvd northbound off-ramp closed	14 months

Stage	Phase	Activities	Closures	Estimated Duration
5	1	Construct Burbank Blvd southbound on-ramp	Part of Burbank Blvd segment closed	14 months
		Southbound I-5 widening between Burbank Blvd on and off-ramps	Work done behind K-rails	Nighttime mainline closures
		Construct Channel protection (LAFCD Channel & Stough Canyon Channel)		One month
		Construct portions of southbound Burbank Blvd off-ramp	Work done behind K-rails	Nighttime ramp closures
5	2	Continue work on Stage 5 Phase 1		
		Construct outside portion of Burbank Blvd southbound off-ramp	Work done behind K-rails	Nighttime ramp closures
		Reconstruct portion of I-5 median		Nighttime mainline closures
5	3	Continue work on Stage 5 Phase 1		
		Construct other portion of southbound I-5		Nighttime mainline closures
		Construct remaining inside portion of Burbank Blvd southbound off-ramp	Work done behind K-rails	Nighttime ramp closures
		Construct portion of Burbank Blvd/Front Street		
5	4	Construct remaining portion of SB I-5		Nighttime mainline closures
6	1	Construct portions of I-5 mainline by Burbank Blvd, both directions of freeway	Work done behind K-rails	Nighttime mainline closures
		Construct temporary AC overlays on mainline		Nighttime mainline closures
6	2	Construct remaining portions of I-5 in both directions		Nighttime mainline closures
		Construct portion of Burbank Blvd northbound on-ramp	Scott Road northbound on-ramp closed	1 month
		Construct portion of Burbank Blvd southbound off-ramp		Nighttime ramp closures
		Construct Burbank Blvd overcrossing abutment	Burbank Blvd segment closed from Stage 5	14 months (from Stage 1)

Stage	Phase	Activities	Closures	Estimated Duration
6	2	Construct Stough Canyon Channel protection		
6	3	Continue work on Stage 6 Phase 2		
		Construct portion of Burbank Blvd northbound off-ramp		One 55-hour closure allowed; Nighttime ramp closures
6	4	Construct remaining portion of Burbank Blvd northbound off-ramp	Work done behind K-rails	Nighttime ramp closures
		Construct remaining portion of Burbank Blvd	Burbank Blvd OC closed from Stage 5	Closed from Stage 5
		Continue work on Stage 6 Phase 2		
6	5	Construct portion of northbound I-5 (transition areas)		Nighttime mainline closures
7	1	Construct I-5 median work	Work done behind K-rails	Nighttime mainline closures
		Construct Burbank Blvd overcrossing superstructure	Burbank Blvd segment closed from Stage 5	Segment closed from Stage 5
7	2	Pavement Delineation (Final Striping)		Nighttime full freeway closures

Restriping the full width of the freeway will require a full freeway closure. I-5, within the project limits, will be restriped several times to maintain four lanes in each direction of travel open to traffic at all times during the construction phase.

## POTENTIAL IMPACTS AND MITIGATION MEASURES

I-5 between Magnolia Avenue and Hollywood Way will have partial mainline lane closures, in each direction of travel during nighttime or off-peak hours for the construction of the median barrier, Portland Cement Concrete (PCC) pavement construction, installation and removal of overhead signs and bridge-mounted signs, drainage and electrical works, for pavement restriping, and for the installation and removal of temporary K-rails. Full freeway closure at off-peak hours is allowed for restriping the full width of the freeway segment and for loop installation at various locations.

At the beginning of stage 1, K-rails will be installed to block access to the northbound Lincoln Street off-ramp. This ramp will be closed permanently to traffic. A portable changeable message sign will be placed at the off-ramp 30 days in advance of the closure. The segment of roadway

from the northbound Lincoln Street off-ramp to the Lincoln Street/Victory Place intersection west of I-5 and the Lincoln Street southbound on-ramp will also be closed. Construction of the new Empire Avenue interchange will begin at Stage 1. It will take 24 months to complete the interchange. Work has been staged for Victory Blvd and Lincoln Street to maintain access to the local streets. The Empire Avenue segment west of Victory Blvd will remain open to traffic during construction.

To minimize impact to the motorists, it is in agreement that long-term closure of Burbank Blvd will occur only when the new Empire Avenue interchange becomes fully operational. It will take 14 months to complete the reconstruction of Burbank Blvd overcrossing. The northbound off-ramp to east Burbank Blvd and the southbound Burbank Blvd off-ramp will remain open during the construction of the Burbank Blvd overcrossing. All other ramps will be closed and realigned. The northbound off-ramp to east Burbank Blvd is allowed to have a 55-hour closure. A 55-hour closure is a closure that begins at 10:00 PM Friday and ends at 5:00 AM the following Monday for a total of 55 hours.

The Buena Vista Street on and off-ramps, the Burbank Blvd northbound off-ramp, and the San Fernando Blvd northbound on-ramp will have 55-hour closures, as shown on the construction staging schedule, for the purpose of roadway structural section reconstruction, structure widening, and construction of ramp termini in lieu of long-term closures. The Scott Road northbound on-ramp will be closed in stages 2 and 3. Other ramp closures will be nighttime closures. Detour routes will be provided and will be monitored on a regular basis.

Caltrans will disseminate advance notices to motorists regarding long-term or weekend closures through the use of portable changeable message signs (CMS) and fixed CMS to give them time to plan their trips. The public will be notified within 60 days in advance of the closure. Detour routes will be provided for any full freeway closures or on-ramp closures. Caltrans worked closely with the City of Burbank in developing detour routes for each construction phase. Signs will be posted along the detour route. Caltrans will coordinate with the City of Burbank for signal and timing adjustments on city streets when needed.

Coordination with adjacent construction projects will be done to minimize traffic impact on the community and the motorists brought about by freeway and local street closures.

A traffic analysis will be performed during construction at different stages and reports will be compiled and submitted at the end of the project.

## **INCENTIVES/DISINCENTIVES**

The inclusion of incentive and disincentive clauses to the contract is an approach to reduce the construction time thereby, minimizing traffic delay impacts to the motorists

Incentives and disincentives are applied on this project in three different milestones. This will motivate the Contractor to use additional resources for the project to be completed earlier than the scheduled date of project completion. The milestones are as follows:

1. Completion of the Shoofly
2. Completion of the Empire Avenue diamond interchange
3. Completion of Burbank Blvd

Construction of the proposed elevated tracks will begin upon completion of the shoofly. It is in agreement that long-term closure of Burbank Blvd can only be done when the Empire Avenue interchange becomes fully operational.



## **TRANSPORTATION MANAGEMENT PLAN**

Caltrans' mission is to improve mobility and safety across California. To achieve this mission, Caltrans has developed a policy on TMPs known as Deputy Directive-60-R1 (DD-60-R1). Refer to Attachment A for a copy of DD-60-R1. A TMP is developed and implemented for each Caltrans project. The objective of a TMP is to minimize disruption to traffic brought about by closures due to construction or any activity, taking into primary consideration the safety of the public and the workers, and the quality of work being performed.

There are six element strategies comprising a TMP. Listed below are the different strategies and how they will be executed in the Empire/Burbank project.

### **1. PUBLIC INFORMATION**

Caltrans' Office of Public Affairs has a Public Information Officer (PIO) assigned to each project. The public is provided information in advance of any upcoming closure giving them the opportunity to plan their travel. Obtaining the public's support of the project is made possible by keeping the public aware of the closures and construction activities that will affect them. This is made possible by the PIO through a Public Awareness Campaign (PAC) in various ways as listed below:

- **Brochures and mailers**

Brochures and mailers are printed materials containing information provided by Caltrans' Construction personnel and the Contractor about project issues and updates. These sources of information are then given to the motorists. Information about the project, before it begins, are mailed out to businesses and residents directly affected by the project.

- **Press Releases/Media Alerts**

Caltrans' PIO sends out up-to-date project information to the news media, affected businesses, and other affected or interested parties through e-mail, fax, or by mail.

- **Paid Advertisements**

Major activities that will result to heavy impact to motorists and nearby businesses will be announced through paid advertisements such as television, radio and newspaper.

- **Project Web Site**

A web site containing up-to-date information on all the on-going projects on I-5, to include this project, is provided and may be accessed by anyone at anytime. The web site address is:

<http://i-5info.com>

- **Public Meetings**

Public meetings are being held to inform the community of work that is included in the project and the benefits that will arise upon completion of the project. Videos, slides, and graphical presentations are aids used to provide a clearer picture of the project through an individual's eyes.

- **Information Kiosk**

A kiosk is a small booth where handouts and other information are made available to passersby. There will be a Caltrans Information Booth, in partnership with Metro and the Federal Highway Administration (FHA), at the Burbank Empire Center just outside of Lowe's on Saturday, June 29, 2013 between 11 a.m. and 3:00 p.m. In this booth, anyone can pick up information about local projects on I-5.

## **2. MOTORIST INFORMATION**

Everyone gets frustrated when stuck in traffic for a long period of time. Knowing what is causing the delay and how long it will take before traffic gets back to its normal flow reduces the motorists' stress level. Below are ways of getting information to the motorists.

- **Traffic Radio Announcements**

Radio stations broadcast roadway conditions, mostly traffic-related, usually in the morning and evening peak hour travel times. Listening to the radio on the way to work or elsewhere gives motorists the chance to take an alternate route to get to their destination.

- **Fixed Changeable Message Signs (CMS)**

Fixed CMS located on or near the project limits will be utilized to inform motorists of lane closures, traffic incidents, alternate routes, or delay information. At the start of the I-5 HOV lane project from the Route 134 interchange, the need for a CMS on northbound I-5 has been determined and warranted. A separate contract was created to expedite the construction of CMS # 127 by Los Feliz Blvd. This CMS is now being used to provide information to northbound motorists. CMS #97 on southbound I-5 by Terra Bella Street will be utilized in this project to provide information to southbound motorists. These fixed CMSs will be remotely controlled by the TMC.

- **Portable Changeable Message Signs (PCMS)**

A PCMS, as the name suggests, is portable and can be moved from one location to another. PCMSs will be placed at specified locations to display messages that will notify motorists of lane closures, alternate routes, expected delay, and any upcoming closures. Locations of PCMSs that will be put in place for a longer period of time are shown in the Motorist Information Plan sheets. The use of PCMSs during construction is an effective way of providing real-time traffic information to the motorists.

- **Temporary Motorist Information Signs**  
Temporary signs will be placed along detour routes to guide motorists as shown in the Motorist Information Plan sheets (Attachment B).
- **Caltrans Highway Information Network (CHIN)**  
Motorists can call the toll-free CHIN number at 1-800-427-ROAD (7623) for the latest information on the condition of the California State Highway System such as incidents that cause significant delays, closures, maintenance projects, and emergencies. There is a Caltrans website that may be accessed by anyone for current roadway information. The Caltrans' website address is:  
  
<http://www.dot.ca.gov/cgi-bin/roads.cgi>
- **511 Traveler Information**  
With the use of cellular phones, motorists can dial 511 for traffic and travel information or for travel assistance when on the road.

### **3. INCIDENT MANAGEMENT**

At the occurrence of an incident on a freeway, in or near the work zone, backup begins to build up. TMP's objective is to clear the roadway of all elements or obstructions in the shortest possible time and have traffic flowing at an acceptable level. The Caltrans' Operations Division has pre-developed TMPs for all types of traffic incidents. Any of these TMPs may be used as is, or may need additional strategies dependent on the type of incident to respond to.

- **Los Angeles Regional Traffic Management Center (LARTMC)**  
The TMC is the center of communication for all of its components. The different TMC components of the TMC that will or may be used during construction are the California Highway Patrol (CHP), Freeway Service Patrol (FSP), CMS, Closed-Circuit Television (CCTV) cameras, Call Boxes, Traffic Management Team (TMT), computer-aided dispatch, and the media. TMC controls all Intelligent Transportation System (ITS) elements. It handles the dissemination of traffic information and plays a vital role in traffic management.
- **Intelligent Transportation Systems (ITS)**  
Loops on the freeway mainlines provide information on traffic flow. Traffic on all freeways in the system is being monitored at the TMC. The existing Closed Circuit Television (CCTV) camera near a location where traffic is queuing may be used to detect the cause of the queue. TMC will disseminate the information acquired to its components for immediate response.
- **Freeway Service Patrol (FSP)**

The FSP is a joint program provided by Caltrans, Metro, and the California Highway Patrol (CHP). FSP trucks currently traverse the segment between Hollywood Way and Stadium Way from 6 a.m. to 7 p.m. on weekdays and from 10 a.m. to 6:30 p.m. on weekends as part of the program.

The use of additional tow trucks or FSP during construction, dedicated to serve I-5 within the project limits, is employed in this project. FSP service is required at locations where there are no shoulders available for an extended period of time and where volume of traffic is high. FSP provides assistance to motorists who have a flat tire, run out of gas, needs a jump start or for any other minor mechanical issues. Disabled vehicles will be towed from the freeway to a safe drop-off location. Having tow trucks traversing the segment of freeway will help clear any obstruction on the freeway in the shortest possible time. This will relieve traffic and help avoid the occurrence of a secondary accident due to driver's lack of attention.

- **Construction Zone Enhanced Enforcement Program (COZEEP)**

The presence of CHP on the freeway alerts the motorists that there is something up ahead. CHP is often positioned at the beginning of a closure to slow traffic down as they approach the closure especially at locations where workers are on foot in the work zone. COZEEP may also provide assistance in handling traffic during construction activities upon request. COZEEP will be used a number of times in this project and funding has been set aside solely for this purpose.

- **Traffic Management Team (TMT)**

Caltrans has a Traffic Management Team housed at the LARTMC. The team responds only to major incidents on the freeway and assists in managing traffic and planned lane closures that are expected to result in significant vehicle queuing.

#### **4. CONSTRUCTION**

Construction strategies contribute to reducing congestion on a work zone. Below is a list of strategies that were used in the project.

- **Lane Requirement Chart**

Lane closure charts have been provided restricting the work hours to nighttime hours and off-peak hours on ramps and freeway lanes.

- **Construction Staging**

The Design unit has staged construction of the project into seven stages to avoid the long-term closure of ramps and to keep four travel lanes open in each direction of travel on I-5. Burbank Blvd can only be closed to traffic upon completion of the Empire Avenue diamond interchange. This condition will minimize impact to the public and to the businesses situated within or near the project area.

- **Traffic Handling Plans**

The Traffic Handling Plans included in the project plans provides details on the signs that are to be installed and their placement location through the detour routes and through the work zone.

- **Motorist Information Plans**

The Motorist Information Plans shows the detour routes for each type of closure and the location of detour signs along the detour routes (see Attachment B).

- **Full Facility Closures**

Full freeway closures improve worker safety and can minimize the duration of a project. This type of closure is limited to nighttime closures only where volume of traffic is low. Alternate routes are provided and the detour routes are closely monitored and managed. Full freeway closures that will heavily impact traffic will be reviewed by the District Lane Closure Review Committee (LCRC) or the Headquarters LCRC depending on the extent of impact.

- **Lane Modifications**

Freeway lanes will be restriped during construction in various stages to maintain four lanes of traveled way in each direction. Lane modifications will include reducing lane widths to less than 12 feet and shifting lanes onto the shoulder or median for use by traffic.

- **Ramp Closure**

All ramp closures will be in accordance to the project's stage construction plans and the charts included in the Special Provisions. For any long-term ramp closure, traffic will be detoured and signs placed along the detour routes as shown on the Motorist Information Plans (Appendix B).

- **Night Work**

Most of the work will be during nighttime to minimize impact to surrounding businesses and the public. However, special items of work that will impact the residents at night due to noise or items of work with temperature requirement will be scheduled during daytime hours as the charts allow and as shown in the Stage Construction plans.

- **Extended Weekend Work**

In lieu of a long-term ramp closure, the Design unit has staged work at each ramp so that long-term closure may be limited to a 55-hour closure. A 55-hour closure is a continuous weekend closure that begins at 10:00 p.m. on Friday night and extends to 5:00 a.m. on Monday morning. This type of closure will have less impact to traffic as compared to having the ramp closed for weeks or even months. The Buena Vista Street ramps, The Burbank Blvd northbound off-ramp, and the San Fernando Blvd northbound on-ramp will have 55-hour closures.

- **Maintain Business Access**

The northbound Lincoln Street off-ramp is an off-ramp mostly used by airport traffic. Prior to the permanent closure of the off-ramp, airport exit signs will be mounted on the freeway and detour signs posted along detour routes to guide motorists leading to the airport. Closure of Burbank Blvd will not occur until the Empire Avenue diamond interchange becomes fully operational. This condition will help mitigate traffic during the construction of the Burbank Blvd overcrossing.

- **Incentive/Disincentive Clauses**

Incentive payments and disincentive deductions are included in the project contract and are being offered on three major milestones. This strategy aims to minimize the construction duration thereby minimizing impact to the motorists and the surrounding businesses. The milestones are as listed below:

- a. Construct New Mainline Tracks while train operates temporarily on the shoofly.
- b. All work on Empire Avenue completed as shown on Stages 1, 2, 3 & 4 with all Empire Avenue lanes safely open to traffic including the ramps servicing I-5
- c. All work on Burbank Blvd completed as shown on Stages 5, 6 & 7 with all Burbank Blvd lanes safely open to traffic including ramps servicing I-5.

- **Innovative Construction Techniques**

Special materials, such as the use of rapid set concrete (RSC) to replace damaged PCC slabs, have been used in the project to minimize duration of construction and to allow reopening of lanes in a timely manner.

- **Railroad Crossing Controls**

Safety will be enhanced at railroad crossings to prevent vehicles from getting stopped at the tracks or between the crossing gates when traffic is congested. This is done by placing advance warning signs, railroad crossing signs, pavement markings, flashing beacons, flaggers or law enforcement, or closure of the crossing.

- **Coordination with Adjacent Construction Site**

There are on-going projects on I-5 that can impact the Empire/Burbank project. A list of the on-going projects is provided in this report. Coordination with the Contractors will help mitigate conflicts in closures and proposed detour routes. With proper communication and coordination, conflicts in work zone locations may be resolved in a manner agreed upon by all parties involved. A good example is when one Contractor chooses to work in a different work zone or both Contractors may agree to extend the mainline closure to cover both work zones to resolve the conflicts in closure schedule.

- **Traffic or "Gawk" screens**

Installing traffic screens on top of K-rails blocks the motorist's view of the on-going activities. This strategy discourages gawking or rubber necking and thus enhances safety to the motorists.

## **5. DEMAND MANAGEMENT**

With proposed long-term closure of the Scott Road on-ramp, it is anticipated that there will be an increase in volume at the Buena Vista Street on-ramp. In agreement with the City of Burbank, the Buena Vista Street on-ramp will be widened to two lanes and the Buena Vista Street restriped to accommodate the widening at the on-ramp. Traffic signals on local city streets will be re-timed by the City of Burbank to accommodate the added volume due to long-term ramp closures.

## **6. ALTERNATE ROUTE (DETOURS)**

Motorists are given the opportunity to travel away from the work zone through suggested alternate routes. In this project, portable changeable message signs send a message to the northbound motorists to use West 134 to the North 170 and for southbound motorists to use the South 170 to East 134 to bypass the work zone segment. In addition, detour routes will be provided for selected off-ramp and on-ramp closures.

Metro link has just opened up a station in the City of Burbank and it is highly advised that programs such as lowering the fare on buses and the Metro link be carried out to encourage motorists to take the public transportation and avoid traffic delays.

- **Off-site Detours/Use of Alternate Routes**

Detour routes have been provided for specific closures and these are shown in the Motorist Information Plan sheets. During construction, these detour routes will be monitored making sure all signs are in place and that traffic along the detour route is flowing at an acceptable level.

- **Signal Timing/Coordination Improvements**

Detour on city streets warrants the adjustment of a few traffic signals to accommodate the added volume of traffic during the construction phase. Caltrans have worked closely with the City of Burbank in determining which traffic signals need adjustment and as to who will perform the tasks.

- **Temporary Traffic Signals**

Caltrans, in coordination with the City of Burbank, have taken into consideration which intersections warrant the installation of temporary traffic signals brought about by the increase in volume of traffic flowing through the intersection. Temporary traffic signals will be installed at these locations.

- **Street Improvements**

The segment of Buena Vista Street leading to the on-ramp will be temporarily restriped to accommodate the widening of the Buena Vista Street northbound on-ramp into two lanes.

## ON-GOING CONSTRUCTION PROJECTS

There are four projects on the I-5 North corridor from Route 134 to Route 118. Three of these projects are currently on-going and these are segments 1, 3, and 4. Each of the four projects involves the construction of an HOV lane in each direction of travel, structure widening, repaving/realigning on and off-ramps, slab replacement, and the construction of retaining walls and sound walls at various locations. The Empire/Burbank project is the last segment on I-5 to complete the HOV lane on the I-5 North corridor. Overall coordination and a TMP coordinator would be necessary to address any detour conflicts at any existing ramps and local streets which may occur during construction. Construction operations will be coordinated to maximize the use of each closure and minimize impact to the motorists and surrounding businesses.

Contract No.	Co-Rte-PM	Location	Contractor
07-121844 EFIS 0700000117 Segment 1	LA-5-42.8/47.3	In Los Angeles, I-5/134 Separation to Magnolia Blvd OC	Security Paving Company, Inc.
07-1218W1 EFIS 0700021119 Segment 2	LA-5-29.4/31.6	West Magnolia Blvd OC to 0.30 miles north of Buena Vista Street/Winona Avenue undercrossing	Security Paving Company, Inc.
07-1218V4 EFIS 0700020201 Segment 3	LA-5-31.6/36.0	In Burbank 0.3 km south of Cohasset Street undercrossing to 0.1 km north of Sheldon Street overcrossing	Security Paving Company, Inc.
07-1219U4 EFIS 0700001829 Segment 4	LA-5-58.0/63.4 (PM 36.0/39.4)	In Los Angeles, 0.1 km north of Sheldon Street OC to I-5/118 Separation	Flatiron West, Inc.
	LA-170-R32.3/R33.1	0.1 KM south of Arleta/Sheldon UC to I-5/170 Separation	



**Project: 07-121844 – Route 134 to Magnolia Blvd**

Caltrans' Resident Engineer: Kin W. Kwan

The project segment is located south of the Empire/Burbank project. Construction started in February 2011, is about 42% complete, and expected completion date is August 2015. There are no traffic issues with the other two projects north of the Empire/Burbank project. Most of the work is done behind K-rails. The project has two stages. Current activity is on stage 1 which is roadway paving and bridge widening and is about 80% complete. Stage 2 involves median work and will be done behind K-rails. Some local street work still needs to be done.

The Contractor is permitted to close the ramps listed below for an extended period of time (55 hours) to construct new pavement, as shown on the project's Stage Construction plans. Only one 55-hour closure will be allowed in either direction of travel at one time. Traffic will be detoured during each closure.

- EB Western Avenue on-ramp to SB Route 5
- Vertigo Avenue on-ramp to SB Route 5
- Vertigo Avenue off-ramp from SB Route 5
- Olive Avenue/Orange Grove Avenue on-ramp to NB Route 5
- EB Alameda Avenue on-ramp to SB Route 5
- WB Alameda Avenue on-ramp to SB Route 5
- EB Alameda Avenue on-ramp to NB Route 5
- WB Alameda Avenue on-ramp to NB Route 5

Work at the southbound Alameda Avenue off-ramp is completed and the ramp has been opened to traffic. The southbound Western Avenue off-ramp and the northbound Alameda Avenue off-ramp are closed. CCOs are currently being processed to complete the work at these closed ramps.

The westbound Western Avenue on-ramp to southbound I-5 may be closed for 90 calendar days for Pavement Reconstruction and Bridge Widening. The Western Avenue off-ramp from northbound I-5 may be closed for 60 days for pavement reconstruction.

**Project: 07-1218W4 – Known as the Empire/Burbank Project**

Caltrans' Resident Engineer: Vladimir Gurfinkel

The Empire/Burbank project has been temporarily suspended beginning from the 1st working day. Utility relocation work within the project limits began in March 4, 2013 and is expected to be completed by mid-September of the same year. Utility relocation is considered as work done by others and not part of the scope of work.

The construction schedule and staging shown on page 6 of this report pertains to the Empire/Burbank project.

**Project: 07-1218V4 –Buena Vista Street to Sheldon Street**

Caltrans' Resident Engineer: Rudy Cao

The project is about 78% complete. Construction began in December 2010 and the expected project completion date is in May 2014. The current activity as of the writing of this report is Stage 2 Phase 3 which is median work from south of Cohasset Street to north of Lanark Street which involves Jointed Plain Concrete Pavement, Median Concrete Barrier, and Median Overhead Signs 5A & 6B; Stage 2 Phase 2 which involves southbound Sun Valley OH Bridge widening & Rail Upgrade. The Tuxford Street/Lankershim Blvd southbound on-ramp is currently closed and estimated opening of the ramp will be in March 2014. Stage 2 Phase 3 Median work is performed mostly in the daytime and behind k-rails.

Work that still needs to be done in this project are the Contract Change Orders listed below:

- Contract Change Order Stage 2 Phase 1 – Relocate Median Overhead Signs 22D & 23A – This will require the closure of lanes 1 & 2 during nighttime.
- Contract Change Order Stage 2 Phase 2 – Reconstruct Median Transition Concrete Barrier for Overhead Signs 11A & 12D - This will require the closure of lanes 1 & 2 during nighttime.
- Contract Change Order Sound walls from Roscoe Blvd to Sheldon Street. These sound walls are on top of the slope and will be done during daytime behind K-rails.
- Electrical and Communication System Work & Landscaping – This activity will require nighttime closure of lanes 3 & 4.
- Detectable Warning Devices (ADA) on local streets' curb ramps
- Complete the "Cold Plane existing AC" and overlay along shoulders (approx. from Lanark to Sheldon Street) and ramps from Roscoe Blvd to Laurel Canyon Blvd. The work shall be performed at nighttime; shoulder work requires closure of lanes 3 & 4. Ramps shall be closed at nighttime only when needed.

**Project: 07-1219U4 – Sheldon Street to Route 118**

Caltrans' Resident Engineer: Emile Eid

Construction began in July 2010 and is expected to be completed by fall of 2015. The project is about 68% complete. The northbound Route 170 to northbound I-5 connector has just been completed and was opened to traffic on May 8, 2013. The Contractor is currently working simultaneously in stages 1 and 2. The Branford Street off-ramp, the eastbound Osborne Street on-ramp, and the eastbound Van Nuys Blvd off-ramp on northbound I-5 are closed and is expected to be open to traffic in the Summer of 2013.

The Contractor is currently working on the demolition phase of the existing northbound Route 170 to northbound I-5 connector. Work on the Tujunga Wash Bridge will commence upon completion of the Route 170/I-5 HOV connector. Most of the bridge work will be performed during daytime hours behind K-rails. Falsework installation and removal will be done during night time and will require nighttime mainline closures. Work in the median will require nighttime closures of lanes 1 and 2.

Work remaining in the project is:

Stage 1: Construction of sound walls and work at the Terra Bella northbound off-ramp

Stage 2: Construction of the Route 170/I-5 HOV connector; construction of Tujunga Wash Bridge (left); median construction.

## **TMP COORDINATION AND REVIEW**

Caltrans will work closely with the Contractor on all stages of construction and be able to provide recommendations regarding the closure or opening of mainline lanes and local roadways within the project limits in a timely manner. The Contractor will coordinate with contractors of all on-going projects within the area on issues regarding their proposed closures to avoid conflicts and to mitigate impact to the motorists. The Resident Engineers are notified of any conflicting lane closures in advance of the closure. The Resident Engineers, together with the Contractors, will discuss conflicts in closures. It is, however, the Contractors' responsibility to coordinate their work and resolve the issue regarding closures.

The Empire/Burbank project is currently suspended. The anticipated date to begin construction is sometime at the end of 2013 or early the following year. Considering the timeline of the two on-going projects north of Buena Vista Street, their impact to the Empire/Burbank project will be minimal. The other project south of Magnolia Blvd is about 40% complete. Its impact to the Empire/Burbank project is dependent on when construction at Burbank Blvd will begin.

**APPENDIX A**  
**DEPUTY DIRECTIVE 60-R1**

California Department of Transportation

*Flex your power!  
Be energy efficient!*

## Deputy Directive

Number: DD-60-R1

Refer to  
Director's Policy: DP-03  
Safety and Health  
DP-05  
Multimodal Alternatives  
Analysis  
DP-08  
Freeway System  
Management

Effective Date: September 2007

Supersedes: DD-60 (06-15-00)

**TITLE** Transportation Management Plans

### **POLICY**

The California Department of Transportation (Department) minimizes disruption to the traveling public during construction or other planned activities necessary on the State Highway System. The Department uses innovative means to accelerate completion of highway work activities while taking necessary steps to maintain public and worker safety and the quality of the work being performed.

Transportation Management Plans are required for all planned activities on the State Highway System. Transportation Management Plan measures and associated road user costs and additional construction costs are considered during the project initiation or planning stage to the fullest extent feasible. Transportation Management Plans include strategies that strive to minimize work-related traffic delays while reducing overall duration of work activities where appropriate. Strategies that may result in a net reduction of overall delay for motorists include: full facility closures, extended weekend closures, continuous weekday closures, A+B contract specifications, and performance-based traffic handling specifications.

### **BACKGROUND**

The Department's major emphasis on transportation projects has largely shifted from new construction to reconstruction, operation, and maintenance of existing facilities. With the ever-increasing traffic volumes on California's State Highway System and more complex project corridors, the need to actively manage the State's highway facilities has become critical.

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Deputy Directive  
Number DD-60-R1  
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In order to prevent unreasonable traffic delays resulting from planned work, Transportation Management Plans must be carefully developed and implemented to maintain acceptable levels of service and safety during all work activities on the State Highway System.

The Federal Highway Final Rule, 23 Code of Federal Regulations 630, Subpart J, referred to as "Work Zone Safety and Mobility" requires the Department to adopt a policy that implements Transportation Management Plans on all federally-funded highway projects. Transportation Management Plans are to be consistent with the Final Rule guidelines for developing and implementing that policy.

Transportation Management Plans are to be consistent with Deputy Directive-64, "Accommodating Non-Motorized Travel."

#### **DEFINITIONS**

Transportation Management Plan is a program of activities for alleviating or minimizing work-related traffic delays by the effective application of traditional traffic handling practices and an innovative combination of various strategies. These strategies encompass public awareness campaigns, motorist information, demand management, incident management, system management, construction methods and staging, and alternate route planning. Depending on the complexity of the work or magnitude of anticipated traffic impacts, a Transportation Management Plan may provide lane closure charts, Standard Special Provisions for maintaining traffic, traffic control plans, and for a major project, a separate comprehensive report. The Department's "Transportation Management Plan Guidelines" provide more information on the recommended level of detail for Transportation Management Plans.

Major Lane Closures are those that are expected to result in *significant traffic impacts* despite the implementation of Transportation Management Plans.

Significant Traffic Impact is defined as being an individual traffic delay of 30 minutes or more above normal recurrent travel time on the existing facility. Transportation Management Plan strategies are designed to maintain additional delays below this maximum threshold, i.e. less than 15 or 20 minutes. This 30 minute maximum delay may be exceeded with approval by the District Lane Closure Review Committee.

District Lane Closure Review Committee is comprised of the Deputy District Directors of Construction, Design, Maintenance and Traffic Operations, and the District Public Information Officer (PIO).

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Deputy Directive  
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Headquarters Lane Closure Review Committee is comprised of the Division Chiefs of Construction, Design, Maintenance and Traffic Operations, and the Deputy Director of External Affairs. The California Highway Patrol (CHP) will be called upon to participate as appropriate at the District or Headquarters Level.

#### ***RESPONSIBILITIES***

##### **District Directors:**

- Enforce Transportation Management Plans and lane closure policies to ensure compliance with established procedures, guidelines, and policies.
- Ensure that resources for all Transportation Management Plan activities are provided.

##### **Chief, Division of Traffic Operations:**

- Develops, implements, and maintains statewide policy regarding Transportation Management Plans.
- Provides direction and assistance to District staff on all Transportation Management Plan activities as well as resources for training of District staff involved in Transportation Management Plans.
- Ensures consistency among the Districts on the development and implementation of Transportation Management Plans.

##### **Deputy District Directors, Construction, Design, Project Management, Maintenance and Traffic Operations:**

- Require all staff involved in Transportation Management Plan activities to participate in Transportation Management Plan training.
- Ensure that staff involved in highway work activities consider alternatives that will strike a balance between reducing the overall construction duration and minimizing disruption to the traveling public.

##### **Chief District PIO:**

- Participates in the project development phase of appropriate projects as determined by the Project Development Team to provide input on the cost of public awareness campaigns, which should be included in the construction contract allotment under State Furnished Materials and Expenses.
- Attends preconstruction or planning meetings as needed and prepare a project plan for community outreach strategies.
- Works with the District Project Manager to ensure that Transportation Management Plan funding for community outreach strategies is planned accordingly as well as expended appropriately, and that personnel time is included in the Work Breakdown Structure for the project.
- Assists or be the lead in implementation of a project's public awareness campaign.

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Deputy Directive  
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- Develops and maintains liaisons with the media, affected local jurisdictions and legislators, and other external partners both prior to and during the construction period, as needed.

District Lane Closure Review Committee:

- Reviews proposed work activities and approves or makes recommendations in a timely manner when planned activities are expected to 1) result in significant traffic impacts, or 2) be of an interregional, statewide, or otherwise sensitive nature.
- When the District Lane Closure Review Committee determines that consultation or approval by the Headquarters Lane Closure Review Committee is appropriate, requests through the District Traffic Manager that the Headquarters committee convene to discuss a specific project and its anticipated impacts.

District Transportation Management Plan Managers:

- Act as single focal points for planning and development of Transportation Management Plans. Participate in the evaluation of design, potential traffic impacts and mitigation measures for project alternatives and in the preparation of Project Study Reports, Project Reports, Plans, Specifications, and Estimates. The Transportation Management Plan Manager should involve District Traffic Manager, members of the Planning, Maintenance and Construction Divisions and the Project Development Team in the planning and development of the Transportation Management Plan to address all pertinent issues, including multi-modal strategies, roadway maintenance during temporary closures, and constructability review.
- Work with the District Traffic Manager, District Design, Project Manager, Construction and PIO as appropriate to determine the extent of a Transportation Management Plan and ensure that the Transportation Management Plans are updated during all phases of a project. Facilitate review, approval, modification or disapproval of all Transportation Management Plan measures.
- Consider the cumulative impact of multiple projects as well as other activities that may create or generate an increase in traffic demand within the limits and during the work period. Oversee implementation and coordination of inter-regional Transportation Management Plans between corridors, districts, neighboring states and Mexico.
- Ensure that Transportation Management Plan planning and implementation is coordinated with the CHP and other local and regional transportation stakeholders as appropriate.

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District Project Managers:

- Require Transportation Management Plans to be considered in the earliest stages of development for all projects and activities performed on the State Highway System.
- Identify needed project resources for all Transportation Management Plan measures and activities.
- Schedule projects to combine with other work activities to the extent possible.
- Encourage the use of innovative construction staging and contracting methods to accelerate project completion when appropriate.
- Include the District Transportation Management Plan Manager, the District Traffic Manager, and the PIO as needed on Project Development Teams from project initiation through completion of construction and provide adequate project information for review.
- Coordinate development of Transportation Management Plans with affected local and regional transportation stakeholders as needed.

District Traffic Managers:

- Consult with the Transportation Management Plan Manager during the planning and development of the Transportation Management Plan.
- Responsible with the District Construction Engineers, Resident Engineers, Encroachment Permit Inspectors, Maintenance Supervisors/Superintendents and PIO to ensure implementation of the Transportation Management Plan and make changes to the Transportation Management Plan if needed during conduct of the work.
- Determine when review of work activities by the District Lane Closure Review Committee or Headquarters Lane Closure Review Committee is required or necessary.
- Responsible for the day-to-day traffic decisions pertaining to traffic impacts from planned activities on the State Highway System.
- Coordinate with the Transportation Management Center or District Communication Center staff to respond with appropriate measures when significant travel delays occur on the State Highway System.
- Facilitate review, approval, modification, or disapproval of planned lane closure requests on the State Highway System.
- Recommend termination or modification of active planned lane closure operations without compromising the safety of the public or workers, when traffic impact becomes significant.
- Review construction contingency plans.

District Design, Office Engineer, Maintenance, and Encroachment Permit Engineers:

- Ensure Transportation Management Plan measures are fully incorporated in the development of a project.

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- Coordinate with the District Traffic Manager and the District Transportation Management Plan Manager to consider alternative strategies as appropriate to determine the best alternatives for balancing traffic impact cost, and construction duration and cost.
- Ensure that impacts of Transportation Management Plan options are fully considered during the development of work schedules and cost estimates.
- Coordinate with District Traffic Management and District Transportation Management Plan Manager if changes in Transportation Management Plan strategies are warranted during all phases of the work. Ensure that Transportation Management Plan content is up-to-date by obtaining certification of the Transportation Management Plan by District Traffic Manager and District Transportation Management Plan Manager before submittal to the Office Engineer at Ready-to-List phase.
- Develop project information in consultation with the Project Manager, District Traffic Manager and Transportation Management Plan Manager to present to the District Lane Closure Review Committee or Headquarters Lane Closure Review Committee when deemed appropriate.

District Construction Engineers, Resident Engineers, Encroachment Permit Inspectors, and Maintenance Supervisors/Superintendents:

- Ensure full implementation of approved Transportation Management Plans in close coordination with the District Traffic Manager so that disruption to the traveling public is minimized.
- Work with the District Traffic Manager to ensure that project activities conform to the Transportation Management Plan, contingency plans are implemented if necessary, and disruption to the traveling public is minimized and does not exceed limits established in the Transportation Management Plan.
- Include the District Transportation Management Plan Manager, the District Traffic Manager, and the PIO as appropriate in preconstruction or work planning meetings.
- Determine when a construction contingency plan from the contractor is required.
- Ensure contractor is prepared to comply with Transportation Management Plans as related to work performance.
- Notify District Communication Centers or Transportation Management Centers when unforeseen traffic impacts result from planned work.
- Notify the District Communication Center or Traffic Management Centers to report the status of all lane closures in a timely manner (when closures are put in place and when they are picked up) so that accurate information is provided to the public. When reporting, provide specific details, particularly when a planned lane closure may be picked up late and significant traffic impacts are expected to result.

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- Coordinate work activities with the CHP and other local and regional transportation stakeholders as appropriate.

Traffic Management Center Staff:

- Status lane closures in the statewide Lane Closure System.
- Activate Transportation System Management elements in support of the Transportation Management Plan.
- Inform the District Traffic Manager when notified of potential significant impacts due to planned highway activities.

*APPLICABILITY*

All departmental employees involved in Transportation Management Plan activities.

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

September 28, 2007  
Date Signed

**APPENDIX B**  
**TMP DATA SHEET**

# **TRANSPORTATION MANAGEMENT PLAN DATA SHEET** **(Preliminary TMP Elements and Costs)**

Co/Rte/PM LA / 5 / 29.4-31.6 EA 07-1218W1/0700021119 Alternative No. \_\_\_\_\_

Project Limit Magnolia Blvd to Cohasset St

Project Description Construct HOV lane from Magnolia Blvd to just north of Buena Vista St  
Realignment of freeway between Magnolia Blvd and just south of Empire  
Ave; modification of on and off-ramps at Burbank Blvd and Buena Vista St.  
Interchanges; reconstruction of Burbank Blvd overcrossing; modification of  
the I-5/Empire Avenue interchange.

## 1) Public Information

- |  |                   |
|--|-------------------|
| <input checked="" type="checkbox"/> a. Brochures and Mailers | <u>\$ 36,000</u>  |
| <input checked="" type="checkbox"/> b. Press Release         |                   |
| <input checked="" type="checkbox"/> c. Paid Advertising      | <u>\$ 159,000</u> |
| <input type="checkbox"/> d. Public Information Center/Kiosk  |                   |
| <input type="checkbox"/> e. Public Meeting/Speakers Bureau   |                   |
| <input type="checkbox"/> f. Telephone Hotline                |                   |
| <input type="checkbox"/> g. Internet                         |                   |
| <input type="checkbox"/> h. Others _____                     |                   |

## 2) Motorists Information Strategies

- |   |  |
|---|--|
| <input type="checkbox"/> a. Changeable Message Signs (Fixed)            |  |
| <input type="checkbox"/> b. Changeable Message Signs (Portable)         |  |
| <input type="checkbox"/> c. Ground Mounted Signs                        |  |
| <input type="checkbox"/> d. Highway Advisory Radio                      |  |
| <input type="checkbox"/> e. Caltrans Highway Information Network (CHIN) |  |
| <input type="checkbox"/> f. Others _____                                |  |

## 3) Incident Management

- |  |                     |
|--|---------------------|
| <input checked="" type="checkbox"/> a. Construction Zone Enhanced Enforcement Program (COZEEP) | <u>\$ 1,760,000</u> |
| <input type="checkbox"/> b. Freeway Service Patrol   | <u>591,000</u>      |
| <input type="checkbox"/> c. Traffic Management Team  |                     |
| <input type="checkbox"/> d. Helicopter Surveillance  |                     |
| <input type="checkbox"/> e. Traffic Surveillance Stations (Loop Detector and CCTV)             |                     |
| <input type="checkbox"/> f. Others _____   |                     |

4) Construction Strategies

- ☒ a. Lane Closure Chart
- ☐ b. Reversible Lanes
- ☐ c. Total Facility Closure
- ☐ d. Contra Flow
- ☐ e. Truck Traffic Restrictions
- ☐ f. Reduced Speed Zone
- ☐ g. Connector and Ramp Closures
- ☐ h. Incentive and Disincentive
- ☐ i. Moveable Barrier
- ☐ j. Others \_\_\_\_\_

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\_\_\_\_\_

5) Demand Management

- ☐ a. HOV Lanes/Ramps (New or Convert)
- ☐ b. Park and Ride Lots
- ☐ c. Rideshare Incentives
- ☐ d. Variable Work Hours
- ☐ e. Telecommute
- ☐ f. Ramp Metering (Temporary Installation)
- ☐ g. Ramp Metering (Modify Existing)
- ☐ h. Others \_\_\_\_\_

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6) Alternative Route Strategies

- ☐ a. Add Capacity to Freeway Connector
- ☐ b. Street Improvement (widening, traffic signal... etc)
- ☐ c. Traffic Control Officers
- ☐ d. Parking Restrictions
- ☐ e. Others \_\_\_\_\_

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7) Other Strategies

- ☐ a. Application of New Technology
- ☐ e. Others \_\_\_\_\_

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

**TOTAL ESTIMATED COST OF TMP ELEMENTS =** \$ 2,546,000

Project Notes:

1. The project purpose is to install an HOV lane in each direction of Route 5 between Magnolia Blvd and Cohasset St, just north of Buena Vista St. The project will also include the modification of the Empire Avenue interchange to a full diamond interchange; modification of the on-ramps and off-ramps at the Buena Vista St and Burbank Blvd interchanges; reconstruction of Burbank Blvd overcrossing; realignment of freeway from Magnolia Blvd to just south of Empire Ave; the construction of a railroad grade-separated crossing at Buena Vista St, the widening of I-5 to accommodate the HOV lanes; and the construction of sound walls and retaining walls at various locations along the project route. The northbound Route 5 Lincoln St off-ramp will be closed permanently. Construction of sound walls and retaining walls along the project route will be done behind K rails.
2. The project duration is estimated to be between 3 ½ to 4 years. The estimated cost of the project is \$374,000,000 (includes railroad items and right-of-way costs).
3. The Caltrans Office of Public Relations and Media Affairs provided public Awareness Campaign cost estimate of \$195,000.00.
4. The Caltrans Construction Traffic Advisor provided the COZEEP cost estimate of \$ 1,760,000.00.
5. The calculated Freeway Service Patrol cost estimate is \$591,000.

PREPARED BY

  
Daisy Vergara,  
Transportation Engineer

DATE 9-12-2011

APPROVAL RECOMMENDED BY

  
Martin Oregel,  
Senior Transportation Engineer

DATE 9/12/11

APPROVED BY

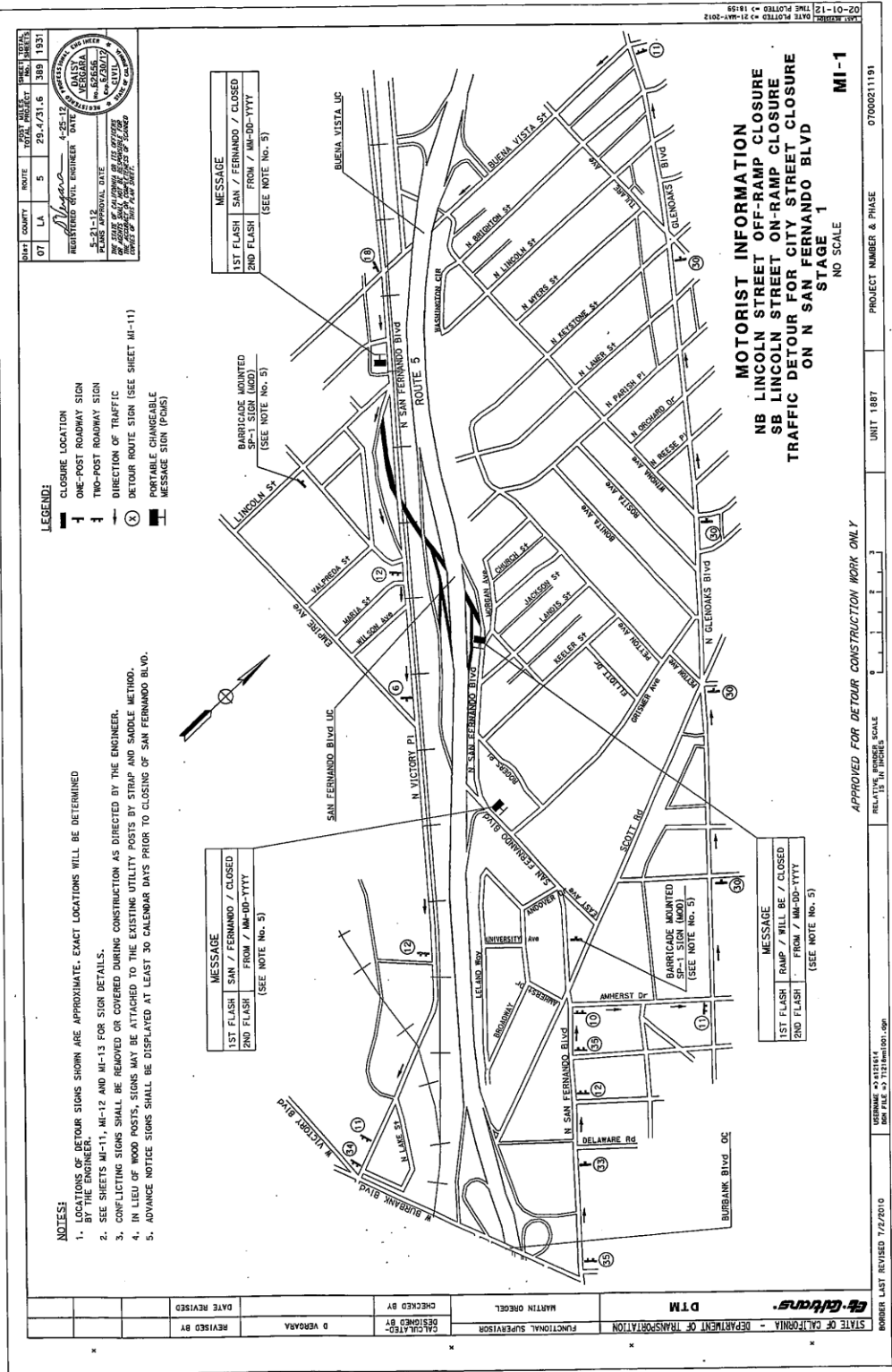
  
John Yang,  
District Traffic Manager

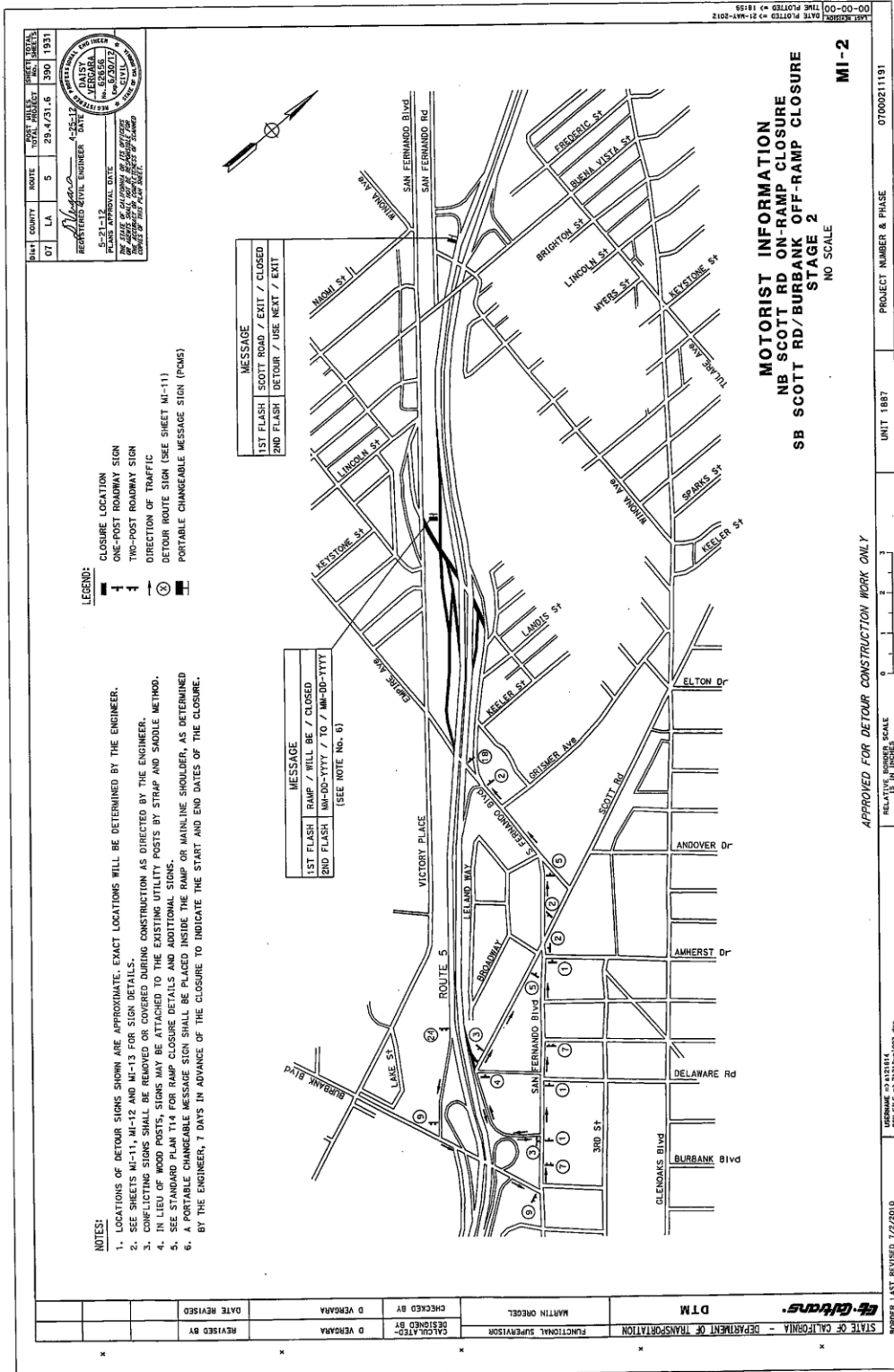
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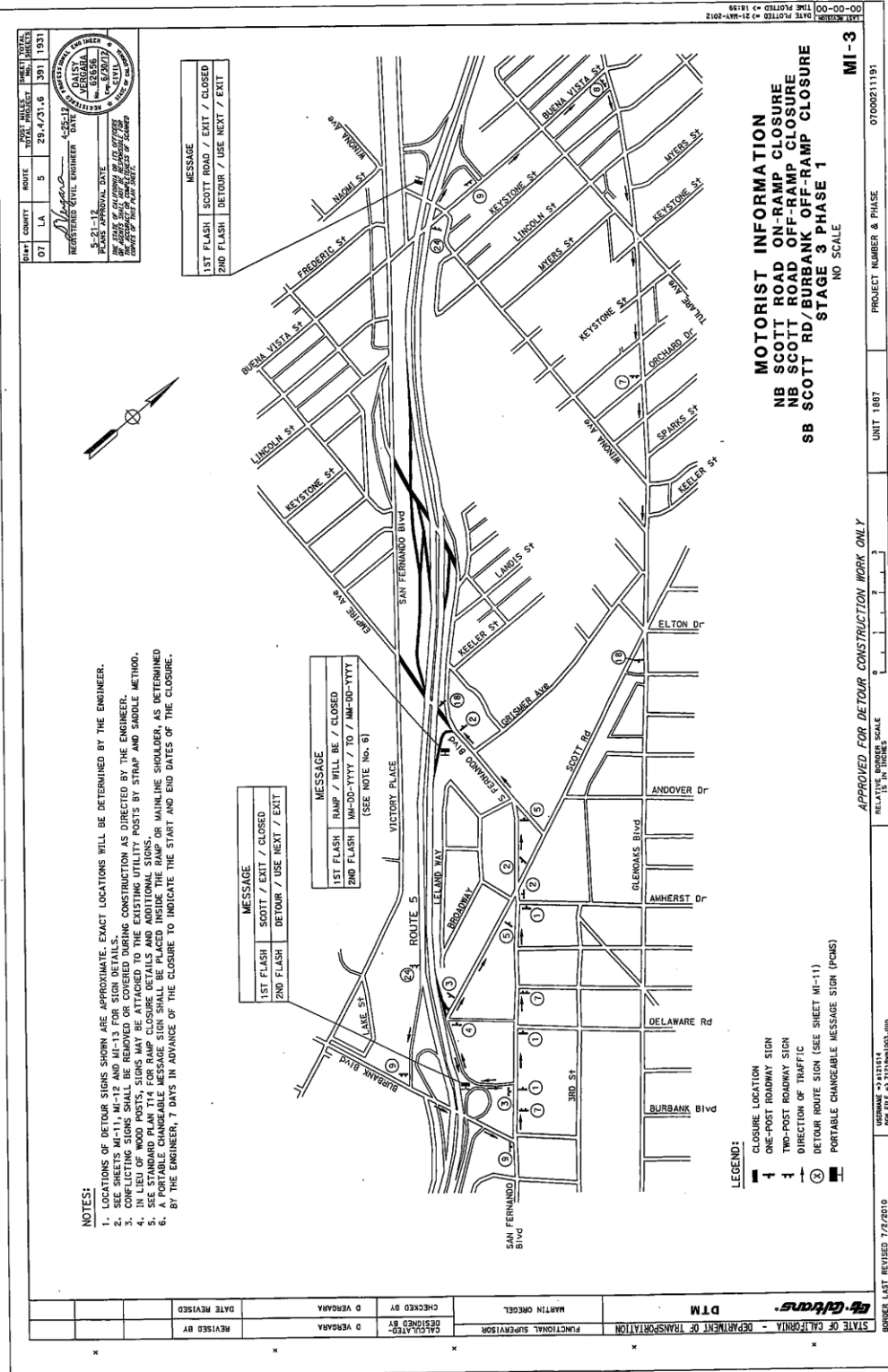
## **APPENDIX C**

### **MOTORIST INFORMATION PLANS**









**NOTES:**

1. LOCATIONS OF DETOUR SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. SEE SHEETS MI-11, MI-12 AND MI-13 FOR SIGN DETAILS.
3. CONFLICTING SIGNS SHALL BE REMOVED OR COVERED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.
4. IN LIEU OF WOOD POSTS, SIGNS MAY BE ATTACHED TO THE EXISTING UTILITY POSTS BY STRAP AND SADDLE METHOD.
5. SEE STANDARD PLAN T14 FOR RAMP CLOSURE DETAILS AND ADDITIONAL SIGNS.

The map shows the NB Scott Rd on-ramp closure area. Key streets include San Fernando Blvd, Empire Ave, Victory Place, and various local streets like Lincoln St, Keystone St, and Elton Dr. Detour routes are marked with numbers 1 through 18. A legend defines symbols for closure location, one-post roadway sign, two-post roadway sign, direction of traffic, detour route sign, and portable changeable message sign (POMS). A north arrow is also present.

**DATE PLOTTED** 21-MAY-2013  
**TIME PLOTTED** 18:59

**STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION**

FUNCTIONAL SUPERVISOR: MARTIN GRIEGL

CALCULATED BY: D. VERGARA

CHECKED BY: D. VERGARA

DATE REVISED: [ ]

REVISED BY: [ ]

**DTM**

**APPROVED FOR DETOUR CONSTRUCTION WORK ONLY**

**UNIT 18BT**

**PROJECT NUMBER & PHASE**

**07000221191**

**DATE PLOTTED** 21-MAY-2013  
**TIME PLOTTED** 18:59

**APPROVED FOR DETOUR CONSTRUCTION WORK ONLY**

**UNIT 18BT**

**PROJECT NUMBER & PHASE**

**07000221191**

**STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION**

FUNCTIONAL SUPERVISOR: MARTIN GRIEGL

CALCULATED BY: D. VERGARA

CHECKED BY: D. VERGARA

DATE REVISED: [ ]

REVISED BY: [ ]

**DTM**

**APPROVED FOR DETOUR CONSTRUCTION WORK ONLY**

**UNIT 18BT**

**PROJECT NUMBER & PHASE**

**07000221191**

**STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION**

FUNCTIONAL SUPERVISOR: MARTIN GRIEGL

CALCULATED BY: D. VERGARA

CHECKED BY: D. VERGARA

DATE REVISED: [ ]

REVISED BY: [ ]

**DTM**

**APPROVED FOR DETOUR CONSTRUCTION WORK ONLY**

**UNIT 18BT**

**PROJECT NUMBER & PHASE**

**07000221191**

**STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION**

FUNCTIONAL SUPERVISOR: MARTIN GRIEGL

CALCULATED BY: D. VERGARA

CHECKED BY: D. VERGARA

DATE REVISED: [ ]

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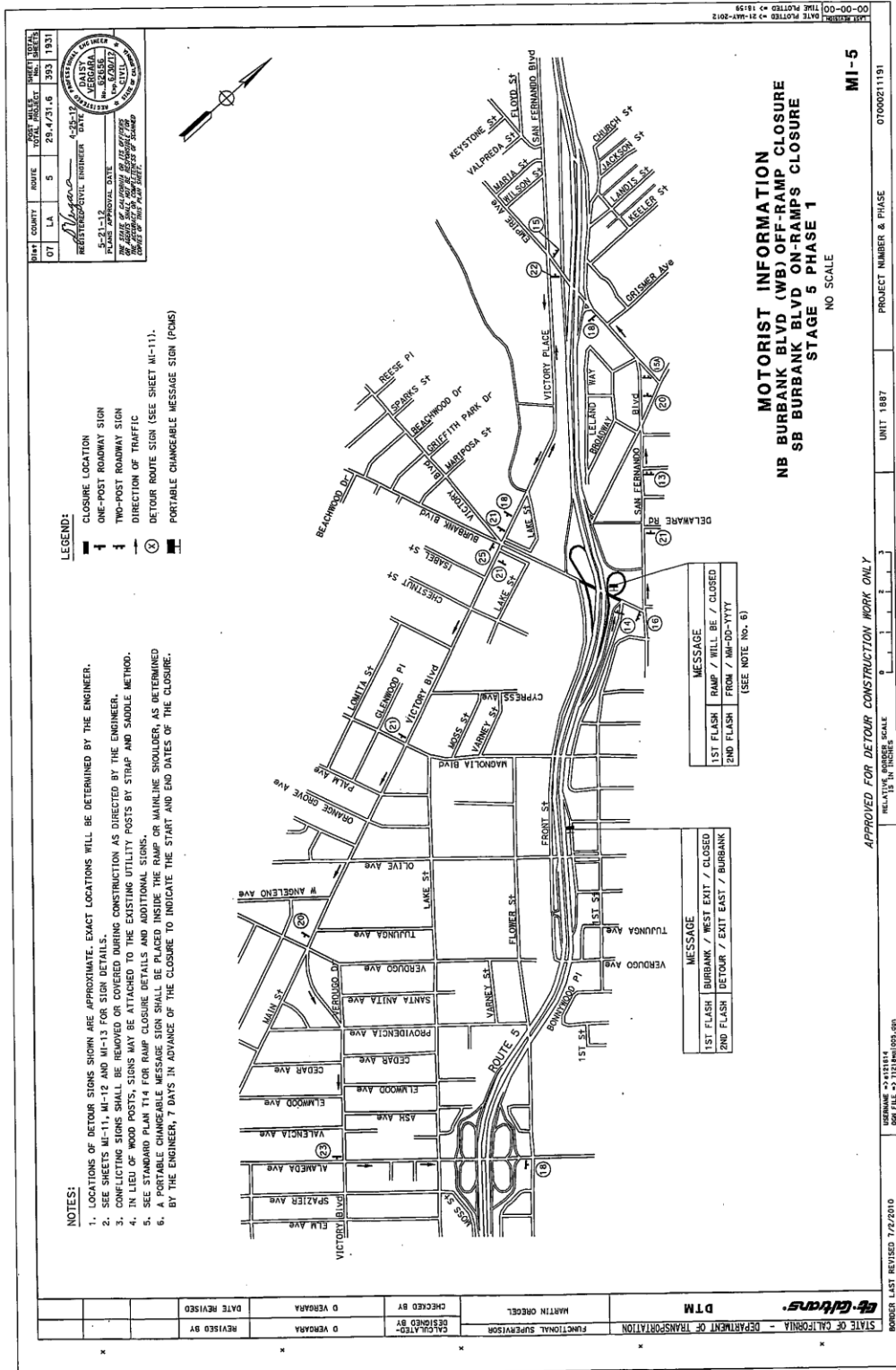
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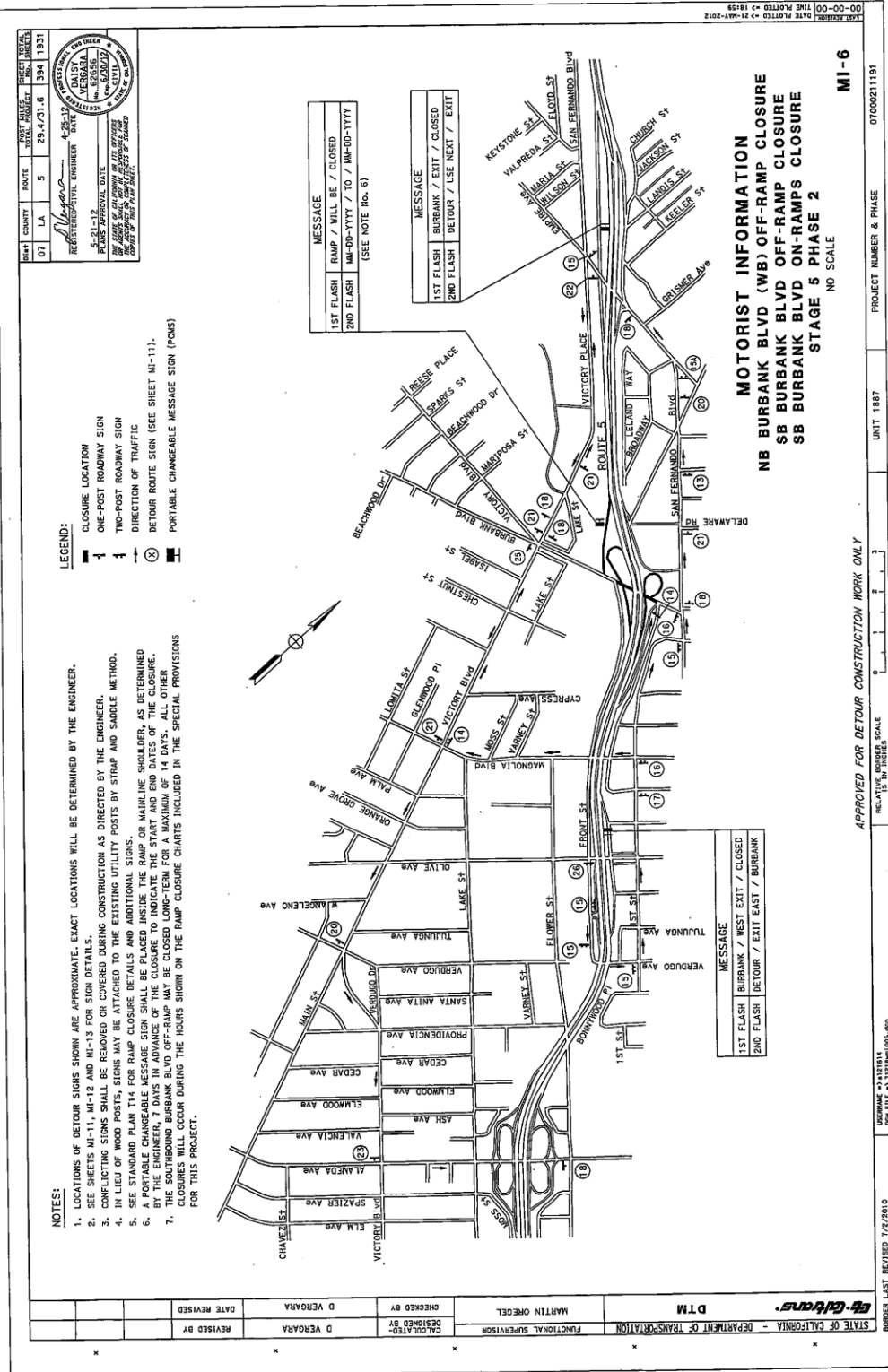
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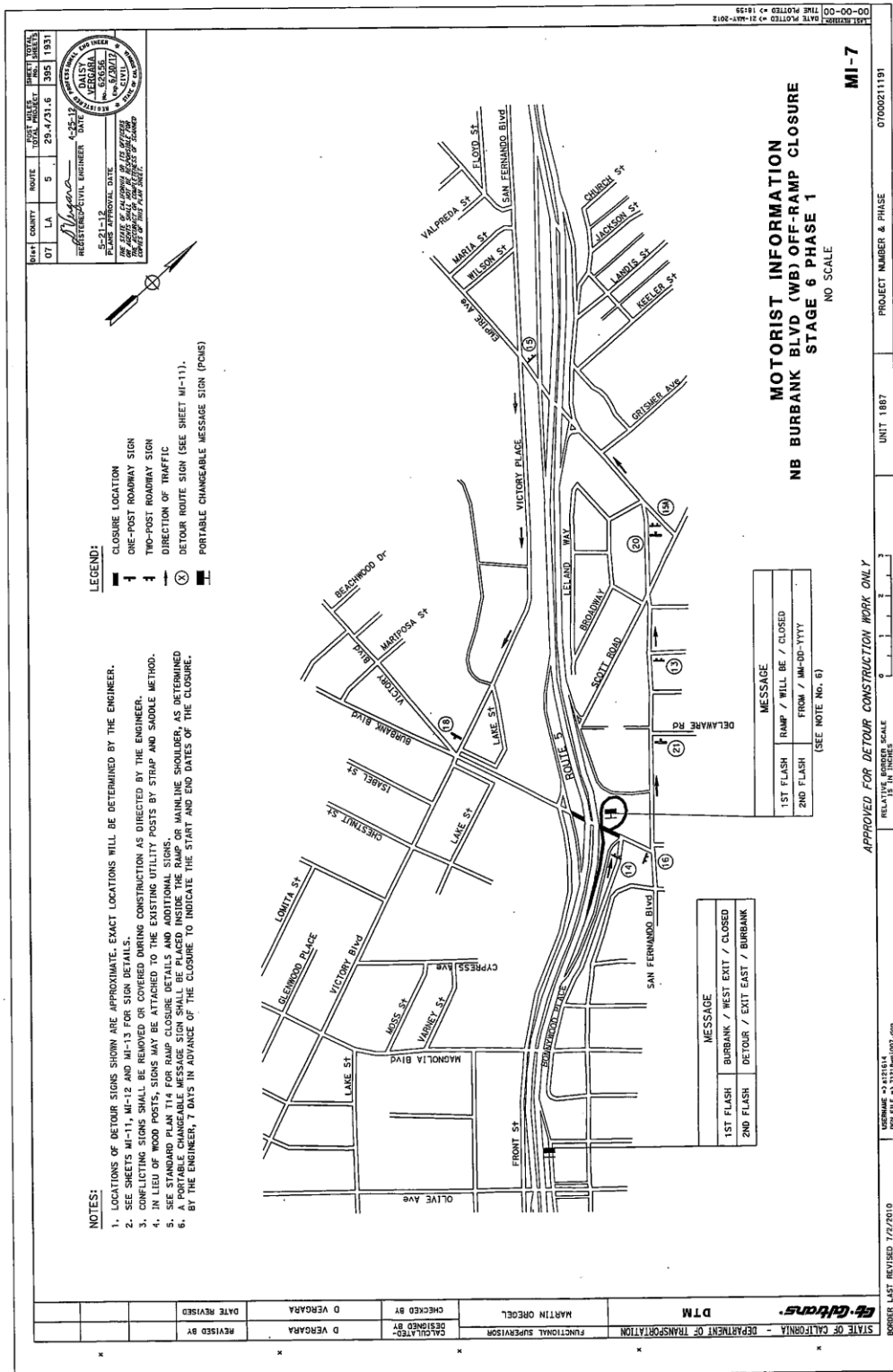
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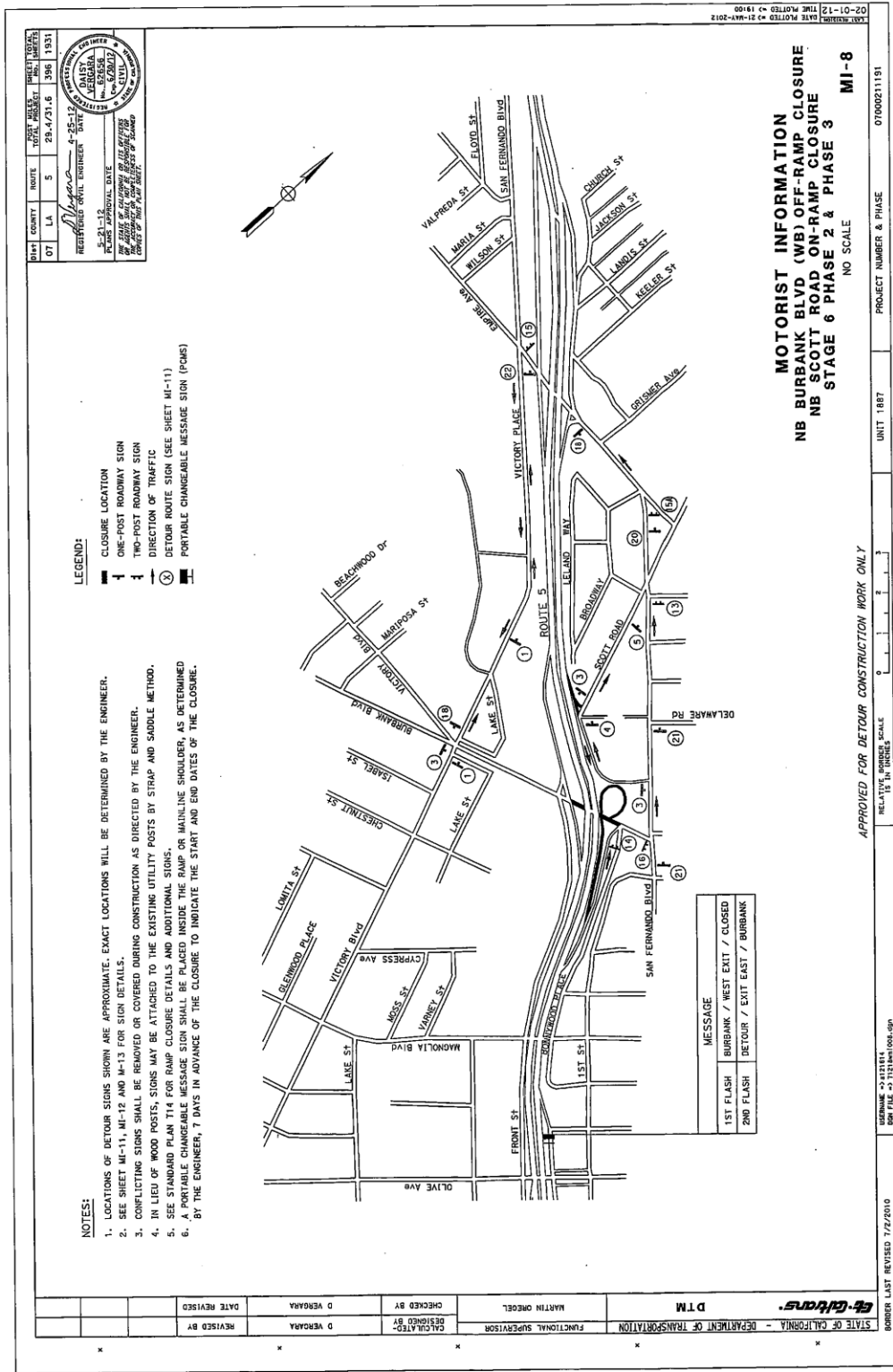
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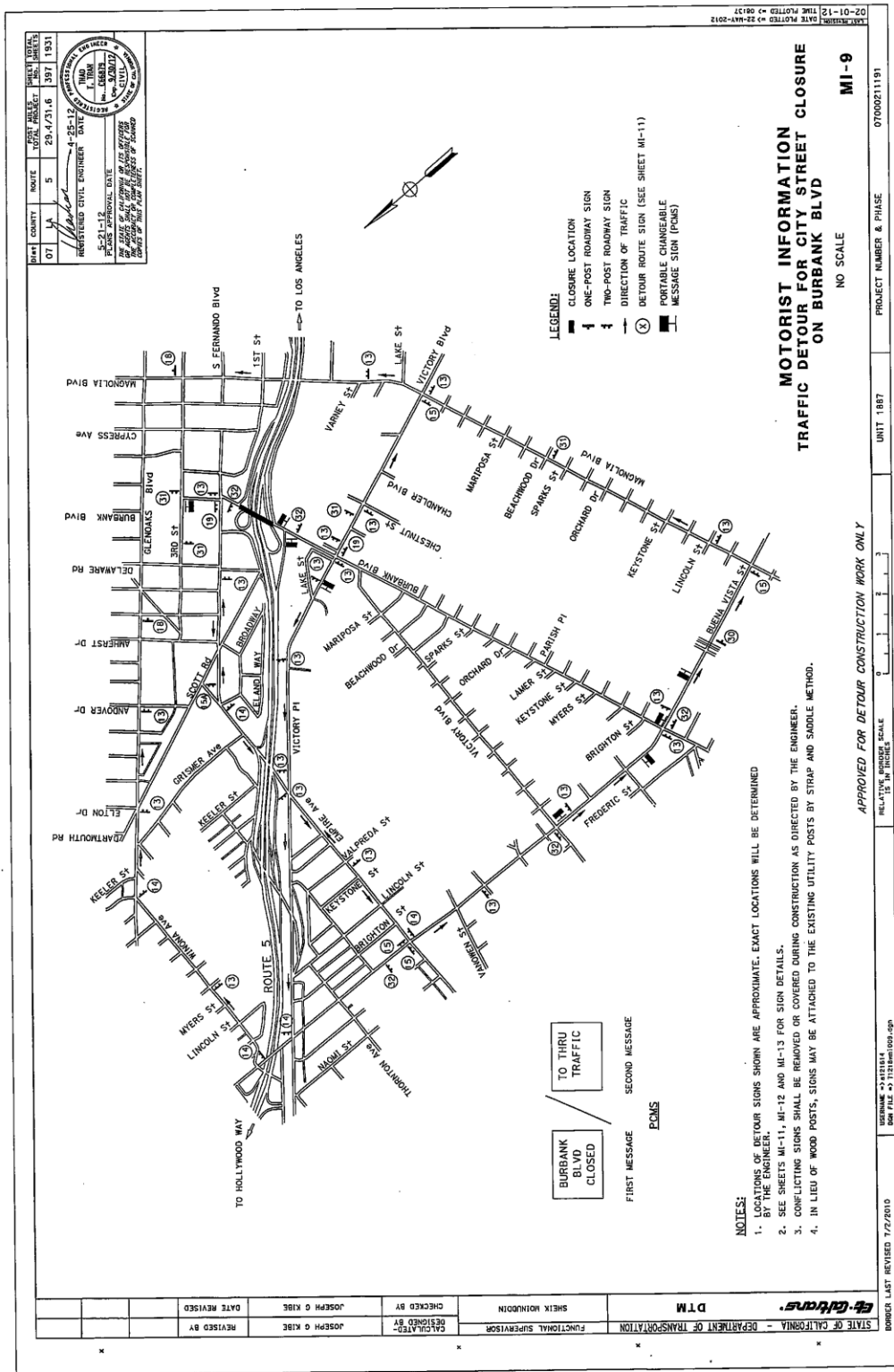


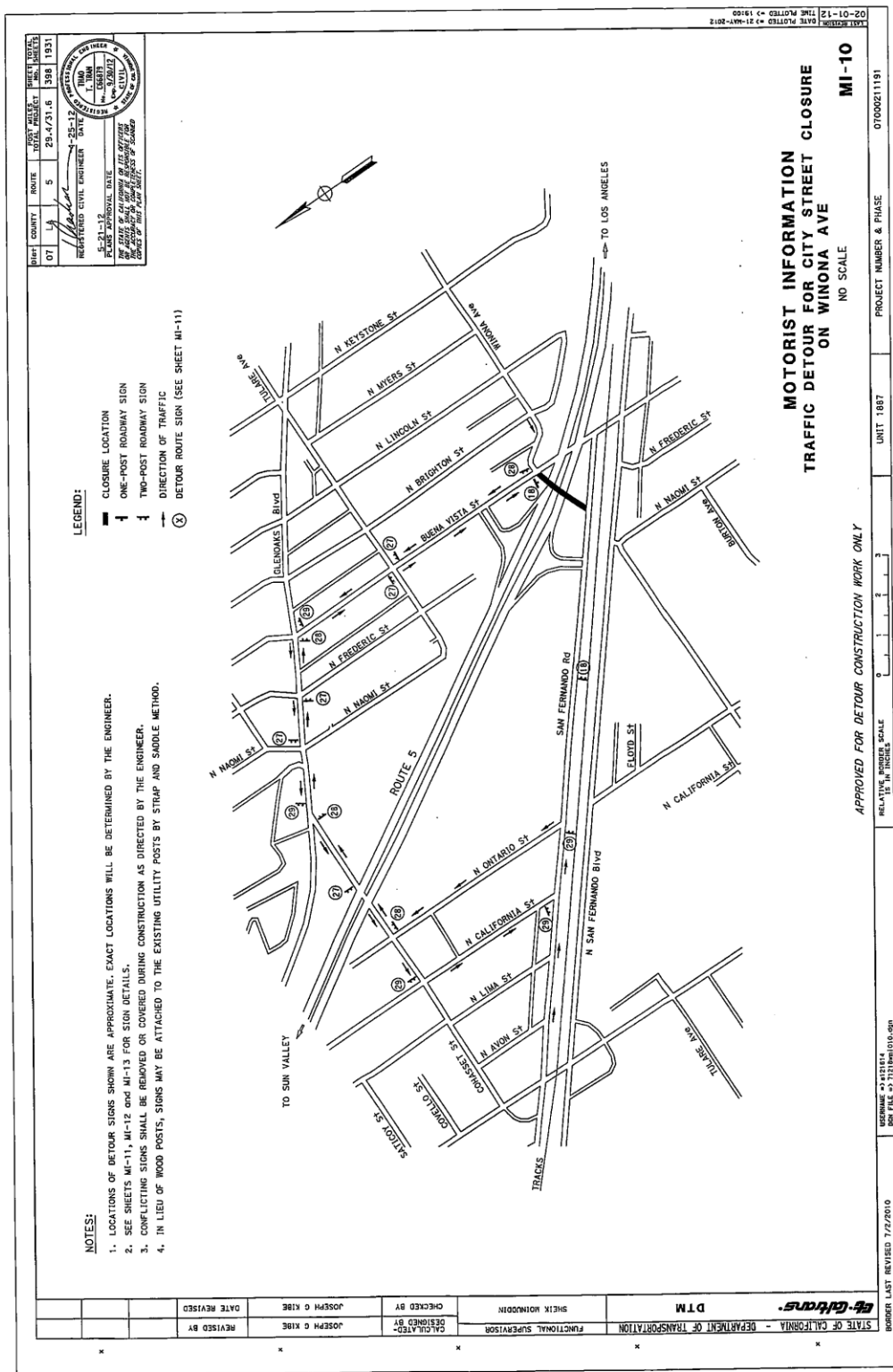












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