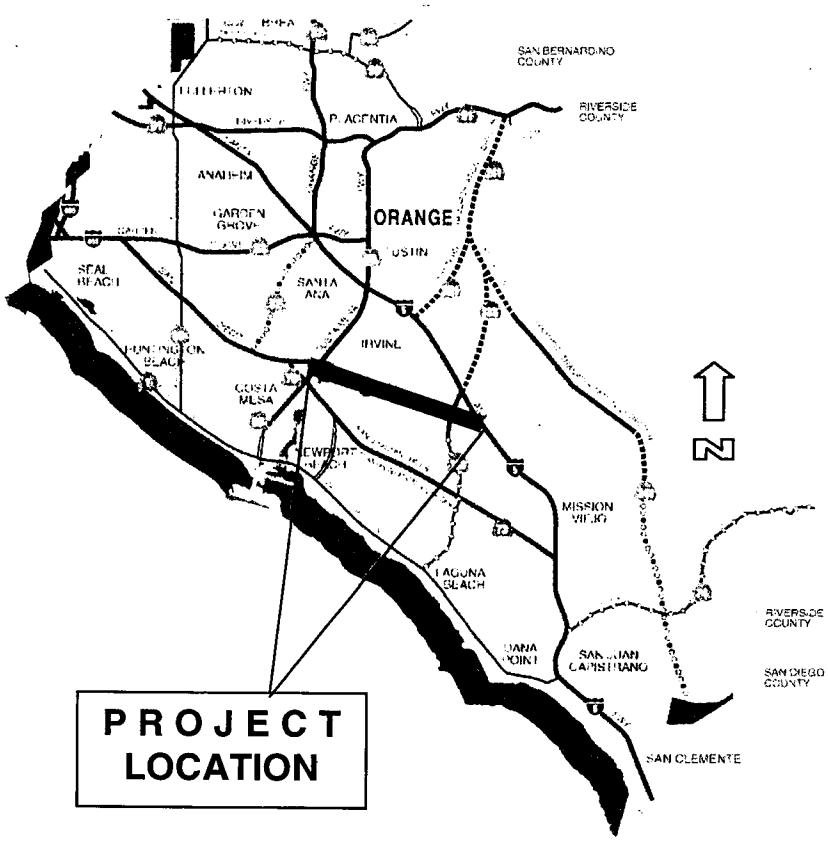
12 - ORA - 405
I-405 Between SR-55 and I-5
PM: 0.2/8.7
EA 0H226K

12-ORA-405
PM:0.2-8.7
0H226K
12391
20.10.201.315

PROJECT STUDY REPORT

August 2005



Install Fiber Optics, Install and Upgrade CCTVs and Communication Equipment On I-405 between SR-55 and I-5 in both Directions at PM 0.2 to 8.7

APPROVAL RECOMMENDED BY:

Gary T. Slater, Chief — 8/31/05 *Date*

Henry Pham, Chief — 8/31/05 *Date*

Vinh Pham, Project Manager
Project Management — 8/31/05 *Date*

APPROVED BY:

Cindy Quon
District Director — 8/31/05 *Date*

UNION LABEL

12 - ORA - 405
I-405 Between SR-55 and I-5
PM: 0.2/8.7
EA 0H226K

This Project Study Report (PSR) has been prepared under the direction of the following Registered Electrical Engineer. The Registered Electrical Engineer attests to the technical information contained therein and the data upon which recommendations, conclusions, and decisions are based.

Alex Kalbasi
Registered Electrical Engineer

8/31/05
Date

REGISTERED PROFESSIONAL ENGINEER
MOHAMMAD KAMAL KALBASI-ISFAHANI
No. E 14276
Exp. 6/30/07
ELECTRICAL
STATE OF CALIFORNIA

PROJECT STUDY REPORT

1. INTRODUCTION

This Project Study Report (PSR) proposes to install additional fiber optic cables in existing conduits, install new electronic equipment, install two new CCTVs, and upgrade existing CCTVs on NB and SB I-405 at various locations between PM 0.2 and PM 8.7 (See Attachments A & B). This proposed improvement will increase the capability to transmit and receive data and video information between the Department's Traffic Management Center (TMC) and field elements, to help monitor and manage traffic information more efficiently, resulting in improving traffic flow and reducing traffic delay.

Two alternatives are examined in this report: no-build alternative (Alternative 1) and a build alternative (Alternative 2). The estimated cost of the project is $0 for Alternative 1 and $4,200,000 (Attachment C) for Alternative 2. Alternative 2 is the preferred alternative for programming. (Attachment B). The project is proposed to be funded in fiscal year 2008/2009 from the State Highway Operation and Protection Program (SHOPP) under program code 20.10.201.315 Transportation Management System improvement project. The project is categorized under the Project Development Procedure Manual as Category 5. The project will be federally funded. This project is on the interstate system but is not an interstate completion nor is considered new or reconstruction. Therefore, this project is exempt from FHWA review and oversight.

2. BACKGROUND

Traffic congestion places a costly impact on our economy, health, and safety. It contributes to accidents, additional delays, and loss of productivity. With limited right of way and reduced funding sources to expand our freeways, the department is limited to build new facilities to address traffic congestion. With Transportation Management Center (TMC) in place in District 12, the Department is inspired to search for more innovative ways of moving people, goods and information along Orange County's congested freeways. The Department's vision for California calls for the development of goods and information services in the region, resulting in increased productivity and financial growth.

The processing of transportation information, which is the primary activity within the TMC, requires collecting large amounts of data from different sources, processing them into useful information and disseminating this data to various stakeholders. District 12 has deployed and relied mainly on fiber optic cables (FO) throughout Orange County to bring traffic information from field elements such as Closed Circuit Television (CCTV), Change Message Sign (CMS), Ramp Metering Station (RMS), Traffic Monitoring Station (TMS), Traffic Signal (TS) and from various cities to TMC. Fiber optic cables and CCTVs on I-405 play a very important role in the

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communication system because they help to monitor traffic incidents on I-405. The existing communication system on I-405 with Fiber Optics, CCTV and related hardware was built more than 16 years ago with the old technology using copper, hybrid and channel bank. Existing TMC has the ability to receive 72 single-mode-fiber-optic cables (SMFO), 8 multi-mode-fiber optic cables (MMFO) installed on I-405 from SR-55 to I-5. The above fiber optic cables are carrying:

1) Data and video signal (CCTV, CMS, RMS, TMS, TS) On I-405 from SR-55 to I-5 to the TMC (through different Hubs).
2) Data and video signal On I-405 from end of SR-55 to I-5 to TMC.

3. NEED AND PURPOSE

Traffic has been continuously increasing over the last several years and this has increased the demand on the fiber optic system. The existing fiber optic is already at maximum capacity with no additional ability for expansion. The proposed project is needed to upgrade the existing fiber optic that has reached capacity, has been damaged, or does not meet the current technology standards and processing speeds to retrieve images and data. The project will improve the system capacity two folds (from 72 to 180 single-mode-fiber-optic cables) and also increase the operative range of the CCTV.

The new fiber optic and CCTV system with new equipment and new features would allow TMC to monitor and manage traffic information more efficiently. This would improve traffic flow and reduce traffic delay by earlier detection and verification of incidents or events. This proposed project would help California Highway Patrol (CHP), who is relying on Caltrans communication system to monitor traffic on freeway, to shorten the response time to incidents on I-405. This proposed project would also simplify maintenance procedure by means of replacing old equipment (copper, hybrid, channel bank) with the new state of the art equipment (time division multiplexer, video multiplexes), eliminating the difficulty of finding the replacements parts.

A. Traffic Volumes

According to Traffic and Vehicle Data Systems Unit, 2004 All Traffic Volumes on California State Highway System, the Annual Average Daily Traffic (AADT) for both directions on I-405 between I-5 and SR-55 is approximately 235,000 vehicles per day and 17,100 vehicles at peak hour. The truck percentage is 5.9% according to 2004 Annual Average Daily Truck Traffic on the California State Highway System.

Table 1. Peak Hour Volumes

I-405 PM	BACK PEAK HR	BACK PEAK MONTH	BACK AADT	AHEAD PEAK HR	AHEAD PEAK MONTH	AHEAD AADT
0.23				13,200.00	179,000.00	174,000.00
0.95	13,200.00	179,000.00	174,000.00	16,500.00	227,000.00	220,000.00

1.8	16,500.00	227,000.00	220,000.00	19,300.00	249,000.00	242,000.00
2.88	19,300.00	249,000.00	242,000.00	18,900.00	258,000.00	252,000.00
3.95	18,900.00	258,000.00	252,000.00	20,600.00	252,000.00	247,000.00
5.62	20,600.00	252,000.00	247,000.00	21,300.00	276,000.00	271,000.00
6.92	21,300.00	276,000.00	271,000.00	20,900.00	291,000.00	285,000.00
7.8	20,900.00	291,000.00	285,000.00	17,600.00	264,000.00	259,000.00
8.74	17,600.00	264,000.00	259,000.00	20,700.00	286,000.00	281,000.00
Averages	**16,477.78**	**221,777.78**	**216,666.67**	**18,777.78**	**253,555.56**	**247,888.89**

Table 2. Truck Percentages and Volume

RTE	DIST	CNTY	POST MILE	LEG	VEHICLE DESCRIPTION	TRUCK AADT TOTAL	TRUCK AADT TOTAL	TRUCK % TOT VEH
405	12	ORA	0.23	A	IRVINE, JCT. RTE. 5	174000	8700	5
405	12	ORA	1.804	B	IRVINE,JCT. RTE. 133 LAGUNA FREEWAY	220000	10780	4.9
405	12	ORA	1.804	A	IRVINE, JCT. RTE. LAGUNA FREEWAY	242000	12584	5.2
405	12	ORA	3.947	A	UNIVERSITY DRIVE	247000	13832	5.6
405	12	ORA	7.803	B	IRVINE, MAC ARTHUR BOULEVARD	285000	14250	5
405	12	ORA	7.803	A	IRVINE, MAC ARTHUR BOULEVARD	259000	11655	4.5
405	12	ORA	8.74	A	COSTA MESA, JCT. RTE. 55 COSTA MESA FREEWAY	281000	8430	3

B. Accident History

Table 3. TASAS Table B 04/01/2001 to 03/31/2004

LOCATION	NO OF ACCIDENTS			ACCIDENT RATE					
				ACTUAL			AVERAGE		
	TOT	FAT	F+I	FAT	F+I	TOT	FAT	F+I	TOT
NB I-405 from PM 0.230 thru PM 8.699 in Orange County	974	1	222	.001	.20	.87	.005	.32	1.04
SB I-405 from PM 0.230 thru PM 8.699 in Orange County	668	4	182	.004	.16	.60	.005	.32	1.04

See Attachment D for **TASAS (Table B)**

4. ALTERNATIVES

The following alternatives are considered for the project:
Alternative 1: No-Build Alternative

This alternative retains the existing Fiber Optic and CCTV communication systems. This NO-Build alternative is not the preferred alternative for programming.

Alternative 2: (Preferred)

This alternative proposes to replace existing fiber optic cable on both NB and I-405 between PM 0.2 and 8.7. The proposed fiber optic will be installed in the existing conduits. The existing conduits are four -inches in diameter and buried three-foot underground on the shoulders. There will be no modification to the existing conduits. Installations of fiber optic inside the existing conduits will be in conformance with the procedures specified by the cable manufacturer for the specific cables being installed.

In addition, this alternative proposes to replace 6 existing CCTVs and equipment on I-405 at the various locations between PM 0.2 and 8.7. The upgraded CCTVs will be installed on existing 45 feet high poles on the existing CIDH foundations. The upgraded CCTVs and equipment will be installed at the same locations where the existing CCTVs are located as shown in table below:

Table 4. Existing CCTV Locations

	CCTV#	DIRECTION	PM	LOCATION
1	242	SB	8.7	RTE SR-55
2	25	SB	7.80	MAC ARTHUR BLVD.
3	26	SB	6.92	JAMBOREE
4	27	SB	5.60	CULVER
5	28	NB	4.00	JEFFREY
6	231	NB	0.91	S/O IRVINE CENTER DRIVE

This proposed project will also install 2 new CCTVs with MVPs on SB I-405 at PM 2.63 near Sand Canyon Ave. and at PM 2.20 near SR-133.

Table 5. New CCTV Locations

	CCTV#	DIRECTION	PM	LOCATION
1	-	SB	2.63	SAND CANYON AVE.
2	-	SB	2.20	SR-133

During construction of this project, no significant maintenance and/or construction issues are anticipated. There are existing Maintenance Vehicle Pullouts (MVP) at Jamboree, Culver, and Jeffrey. However, some CCTV locations were built without the maintenance vehicle pullout at Mac Arthur Blvd. and south of Irvine Center Drive because there are no available R/W to

accommodate it. Therefore the shoulder and possibly the immediate near lane closure is needed at those locations.

There is no drainage work involved in this project. The electrical work involved in this project includes remove and replace fiber optic cables, CCTV and communication equipment. This alternative requires no new state right of way. The proposed project has no non-standard feature. This project is estimated to cost $4,200,000. (Attachment C)

5. SYSTEM PLANNING

Coordination with other improvement projects being proposed on I-405 near this project is required. The other proposed projects within these PM limits are shown in the table below.

Table 6. Proposed Projects

EA	ROUTE	LOCATION	DESCRIPTION
00542	405	6.80 – 7.60	CONST HOV DROP RAMPS 00540K SPL:005410/20/30 AT VON KARMAN AVE OC
06951	405	7.60 – 9.60	"CONSTRUCT ROADWAY, BRIDGES AND WALL" FCO "IN ORANGE COUNTY IN IRVINE, SANTA" ANA AND COSTA MESA ON RTE 405 FROM 0.2 KM N OF MACARTHUR BLVD OC TO 0.4 KM N OF REDHILL AVE UC AND ON RTE 55 FROM 0.3 KM S OF MAIN ST UC
0695U	405	7.60 – 9.60	HOV CONNECTOR AND IMPROVEMENTS "IN ORANGE COUNTY IN IRVINE, SANTA" "ANA, AND COSTA MESA ON RTE 405 FROM" 0.1 KM S OF RTE 405/55 SEP TO BEAR ST OC AND ON RTE 55 FROM RTE 405/55 SEP TO 0.2 KM N OF MACARTHUR BLVD
07570	405	3.70 – 6.40	HWY PLNTG AND RESTORATION IN IRVINE FR JEFFREY/UNIVERSITY AVE TO E OF JAMBOREE RD (KP6.6-10.3)
09260	405	0.40 – 2.00	WIDEN EXISTING FREEWAY IN ORANGE COUNTY IN IRVINE FROM 0.6 KM NORTH OF ROUTE 5 AND 405 SEPARATION TO ROUTE 133 AND 405 SEPARATION
0932U	405	1.50 – 3.70	ADD AUXILIARY LANE IN IRVINE
09670	405	3.70 – 4.20	INTERCHANGE IMPROVEMENTS IN IRVINE JEFFREY ROAD
0A710	405	7.80 – 7.80	CONST NEW STRUCTURE CARRYING LIGHT- RAIL-TRANSIT VEHICLES O/C I-405 AND NEW ALIGNMENT AT ST. LVL U/C SR-55 IN IRVINE AND COSTA MESA AT I-405/ MACARTHUR IC & SR-55/MAIN IC PM 6.4
0C000	405	3.60 – 3.60	COSTRUCT PEDESTRIAN OVERCROSSING IN IRVINE 0.1 M SOUTH OF JEFFREY RD
OC400	405	2.60 – 3.10	INTERCHANGE IMPROVEMENT IN IRVINE AT SAND CANYON
0C540	405	0.80 – 22.80	"UPGRADE MBGR'S,DIFFERENT LOCATIONS" UPGRADE BLUNT ENDS TO COMPLY WITH NCHRP 350 STANDARDS"IN IRVINE, COSTA MESA, FOUNTAIN" "VALLEY, WESTMINSTER AND SEAL BEACH" "IRVINE CENTER DR, AND SEAL BEACH" BLVD
0F550	405	6.40 – 7.40	"HIGHWAY PLANTING, IRRIGATION SYSTEM" AND 3 YEAR PLAN ESTABLISHMENT IN IRVINE FROM SAN DIEGO CREEK TO VON KARMAN OC
0F900	405	1.00 – 10.50	"HIGHWAY PLANTING REHABILITATION," REMOVE & REPLACE DEAD OR ILL EUCALYPTUS"IN IRVINE, COSTA MESA, FOUNTAIN LLE" "VALLEY, HB, WESTMINSTER & VARIOUS" LOCATIONS
0G870	405	3.90 – 5.40	CONSTRUCT SOUNDWALL IN IRVINE FROM JEFFERY ROAD TO

			CULVER DRIVE
0H036	405	2.20 – 0.00	WIDEN LAGUNA CANYON ROAD OVERCROSS IN CITY OF IRVINE AT LAGUNA CANYON
0H224	405	7.70 – 0.00	MODIFY SIGNAL IN IRVINE NB ROUTE 405
10911	405	4.70 – 0.00	WIDEN OC IN IRVINE AT YALE AVE POC

6. HAZARDOUS MATERIALS/ WASTE

Environmental Engineering Branch visited the project site and performed visual site inspection and completed the Initial Site Assessment study. Based on the findings during the site inspection, no evidence of known hazardous waste contamination was observed to be significant enough to impact the project.

Lead Investigation

The soil in unpaved areas next to the traffic lanes or shoulders might be contaminated with the Lead from vehicle emissions. Soil samples will be collected, tested, and analyzed for lead contamination during the PS&E stage. The Lead Investigation will be conducted by the Environmental Engineering Branch (EE) during the early stage of design. Since the typical lead investigation process takes about four to six months, It is essential that at the early stage of PS&E, the Design Branch provides EE with two sets of the plans showing the limits of the excavation for EE to conduct the lead investigation. If lead contamination is found, the results/conclusions will be included in the PS&E package.

7. TRAFFIC MANAGEMENT PLAN (TMP)

During construction of this project no significant traffic delays are anticipated. However, there will be some temporary lane closures as recommended by Traffic Management Team:

- A TMP is needed for this project and will be prepared by Traffic Management Team during PS&E phase.
- Lane closure charts are needed and shall be requested from TMC during PS&E phase.

In addition, a cost for the California Highway Patrol (CHP), Construction Zone Easement Enhancement Program (COZEEP) is also included in the cost estimates. See Attachment C.

8. ENVIRONMENTAL STATUS

As stated in the Preliminary Environmental Analysis Report (PEAR), the anticipated environmental document under CEQA Class 1c and NEPA compliance would be a joint Categorical Exemption / Programmatic Categorical Exclusion document (CE/PCE). Caltrans would be the Lead Agency for CEQA and the Federal Highway Administration (FHWA) as the Lead Agency for NEPA. This analysis is based on the results of a preliminary environmental analysis report (PEAR). Lead investigations may be required for any excavations on unpaved areas. See attachment E for PEAR.

NPDES/ Storm Water Compliance

This project will be covered by the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Storm Water Permit (Order No. 99-06-DWQ, NPDES No. CAS000003), NPDES Permit for Storm Water Discharges Associated with Construction Activities (Order No. 99-08-DWQ, NPDES No. CAS000002), the Caltrans Storm Water Management Plan (SWMP) and any other requirements of the Santa Ana Regional Water Quality Control Board (RWQCB).

This project will result in less than 0.4 Hectares (1 Acre) of Total Disturbed Soil Area, therefore a Water Pollution Control Program (WPCP) will be prepared and implemented to address the temporary Best Management Practices (BMPs).

Refer to Attachment F for the Storm Water Data Report and Evaluation Documentation Form.

9. RIGHT OF WAY

There is no acquisition; railroad or utility involvement as all work is within existing right of way. (Attachment G)

10. STAGE CONSTRUCTION

Installation of the fiber optic cable system adjacent to the shoulder will require shoulder and the outside lane closed for construction. Freeway lane closure charts will be developed and included in the Project Report and PSE. The work is proposed to be constructed during the night hours. Shoulder work and the area beyond the shoulder will occur at the non-peak periods of day.

This project will require a Level 3 Constructibility Review, which includes reviews at PID and 95% design reviews.

11. FUNDING/SCHEDULING

The project is proposed to be funded in fiscal year 2008/2009 from the State Highway Operation and Protection Program (SHOPP) under program code 20.10.201.315 as Transportation Management System improvement project. The tentative schedule of the project is as follows

- Project Report and Environmental Approval 06/2007
- PS&E 04/2008
- Ready to List 07/2008
- Start Construction 11/2008
- Completion of Construction 11/2009

12. DISTRICT CONTACT

Vinh Pham Project Manager Project Management	(949) 724-2097
Alex Kalbasi Project Engineer	(949) 936-3470
Henry Pham Project Advisor Chief, Electrical Systems	(949) 936-3464
Kathy Anderson Right of Way Project Coordinator	(949) 724-2407
James Pinheiro District Division Chief Office of Operation and Maintenance	(949) 724-2982
Gary Slater Branch Chief, Project Studies Unit	(949) 756-7685
Praveen Gupta Branch Chief, Environmental Planning Branch A	(949) 724-2243

13. RECOMMENDED BY:

HENRY PHAM
Branch Chief, Electrical Systems
Program Advisor

DATE: 8/31/05

GARY SLATER
Branch Chief, Project Studies Unit

DATE: 8/31/05

CONCURRENCE:

SYLVIA VEGA
Office Chief, Environmental Planning

DATE: 8/31/05

TAM NGUYEN
Acting Office Chief, Design

DATE: 8/31/05

GALE McINTYRE
Deputy District Director
Planning

DATE: 8/31/05

FRANK LIN
Acting, Deputy District Director
Program/Project Management

DATE: 8/31/05

JAMES PINHEIRO
Deputy District Director
Operations and Maintenance

DATE: 8/31/05

LIST OF ATTACHMENTS

Attachment A	Location/Strip Map.
Attachment B	Layout Plans
Attachment C	Cost Estimate
Attachment D	TASAS (Table B)
Attachment E	Preliminary Environmental Analysis Report (PEAR)
Attachment F	Storm Water Data Report (SWDR)
Attachment G	Right of Way Data Sheet
Attachment H	Project Schedule and Resource Requirement

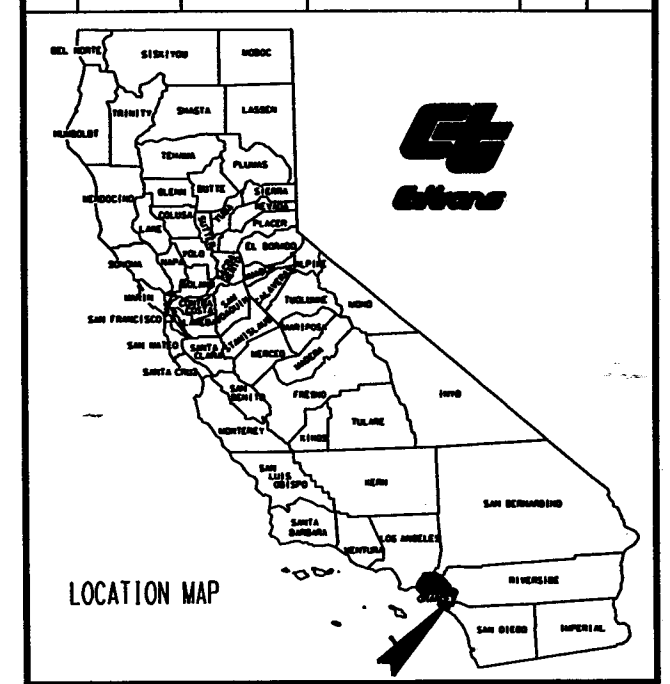
ATTACHMENT A

Location/Strip map

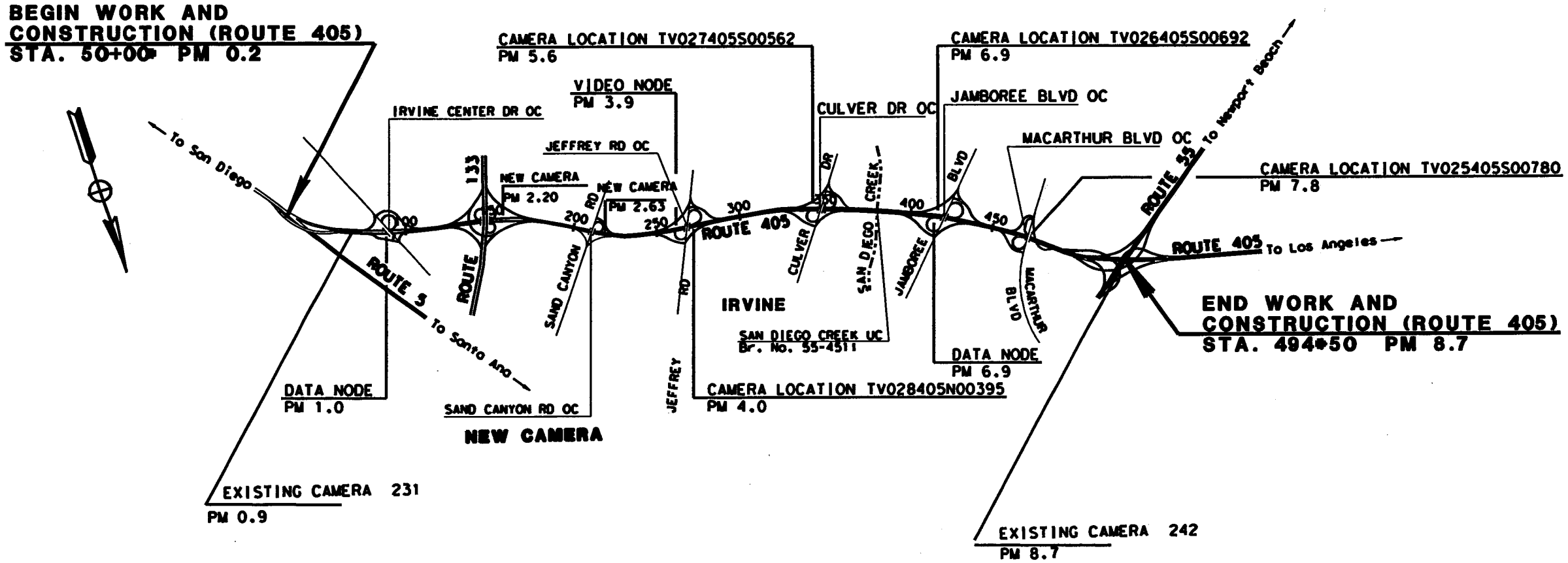
DIST	COUNTY	ROUTE	POST MILE TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.2/8.7		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN ORANGE COUNTY
IN IRVINE ON ROUTE I-405 FROM SR-55 ROUTE TO ROUTE I-5
IN BOTH DIRECTIONS AT PM 0.2 TO 8.7



INSTALL FIBER OPTICS, INSTALL AND UPGRADE CCTVs AND COMMUNICATION EQUIPMENT



PROJECT ENGINEER	DESIGN OVERSIGHT APPROVAL	REGISTRATION NO.	DATE
ALEX RALBASI	ALEX RALBASI	E-14276	06/30/07

C02230A01.DGN EBASCO 4-1-93

FORM DC-OE-93-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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TITLE SHEET

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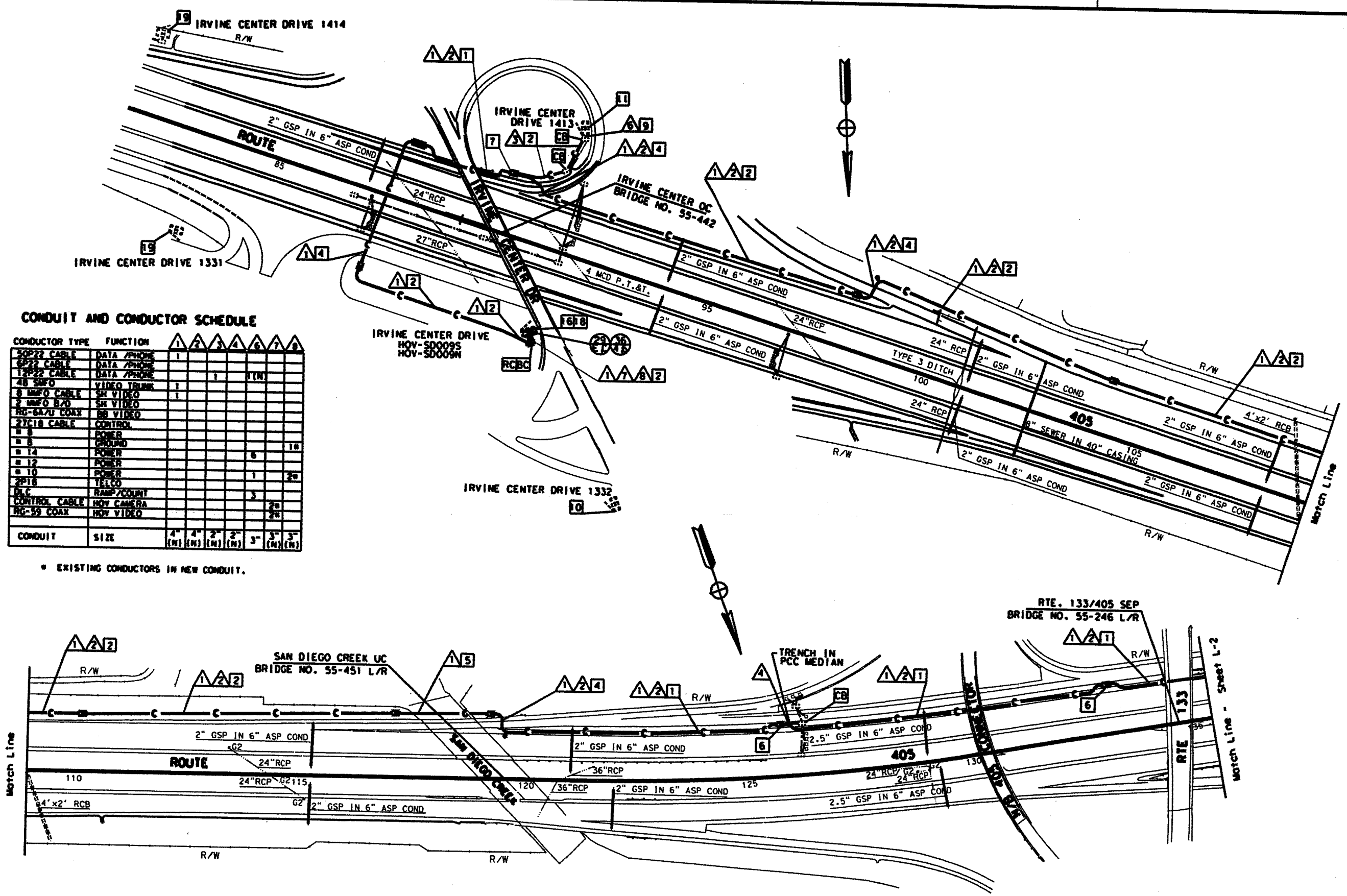
ATTACHMENT B

LAYOUT PLANS



CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	6	7	8
50P22 CABLE	DATA /PHONE	1						
6P22 CABLE	DATA /PHONE							
12P22 CABLE	DATA /PHONE			1		1(N)		
48 SMFO	VIDEO TRUNK	1						
8 MMFO CABLE	SH VIDEO	1						
2 MMFO B/O	SH VIDEO							
RG-6A/U COAX	BB VIDEO							
27C18 CABLE	CONTROL							
# 8	POWER							
# 8	GROUND							1#
# 14	POWER					6		
# 12	POWER							
# 10	POWER					1		2#
2P18	TELCO							
OLC	RAMP/COUNT					3		
CONTROL CABLE	HOV CAMERA						2#	
RG-59 COAX	HOV VIDEO						2#	
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2" (N)	3"	3" (N)	3" (N)

* EXISTING CONDUCTORS IN NEW CONDUIT.

UPGRADE CCTV AND COMMUNICATION SYSTEM

SCALE: 1"=100'

L-1

	DATE	REVISED BY
CALCULATED/DESIGNED BY	BJ 4/93	REVISED BY
CHECKED BY	AP 4/93	DATE REVISED

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SIG. RE TO 135 C02230U4.DGN DATE: 2-26-93

FORM DC-OE-92-PF (REV. 3/88)

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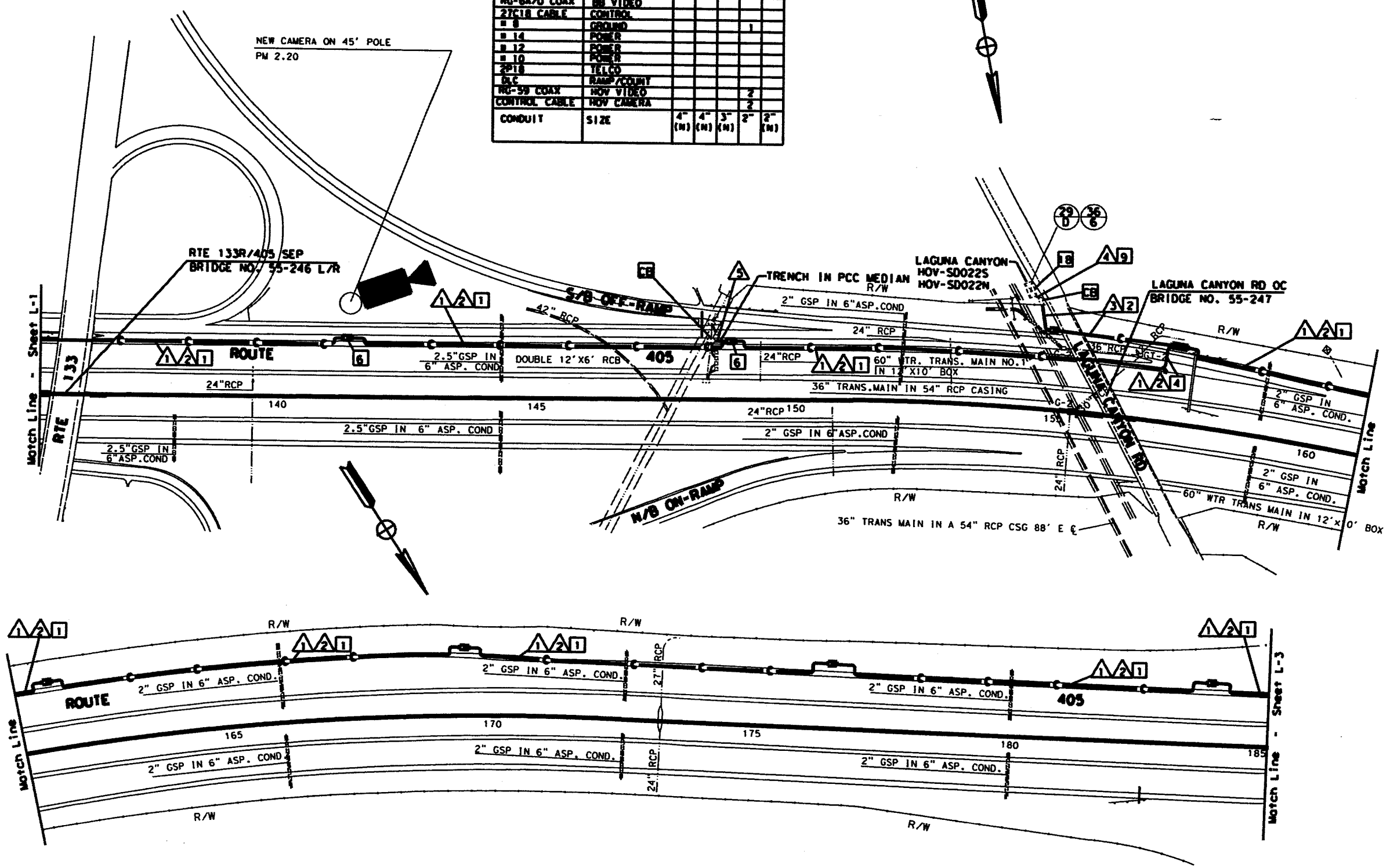
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5
50P22 CABLE	DATA /PHONE	1				
6P22 CABLE	DATA /PHONE			1	1(N)	
12P22 CABLE	DATA /PHONE					
48 SMFO	VIDEO TRUNK	1				
8 MMFO CABLE	SH VIDEO	1				
2 MMFO B/O	SH VIDEO			2	2(N)	
RG-6A/U COAX	BB VIDEO					
27C18 CABLE	CONTROL					
# 8	GROUND				1	
# 14	POWER					
# 12	POWER					
# 10	POWER					
2P18	TELCO					
DLC	RAMP/COUNT					
RG-59 COAX	HOV VIDEO				2	
CONTROL CABLE	HOV CAMERA				2	
CONDUIT	SIZE	4" (N)	4" (N)	3" (N)	2"	2" (N)



UPGRADE CCTV AND COMMUNICATION SYSTEM

SCALE: 1"=100'

L-2

CALCULATED/ DESIGNED BY	BJ	DATE 4/93	REVISED BY
CHECKED BY	AP	4/93	DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN OVERSIGHT

Caltrans

STA. 135 10 188 C02230U5.DGN DATE:03-16-93

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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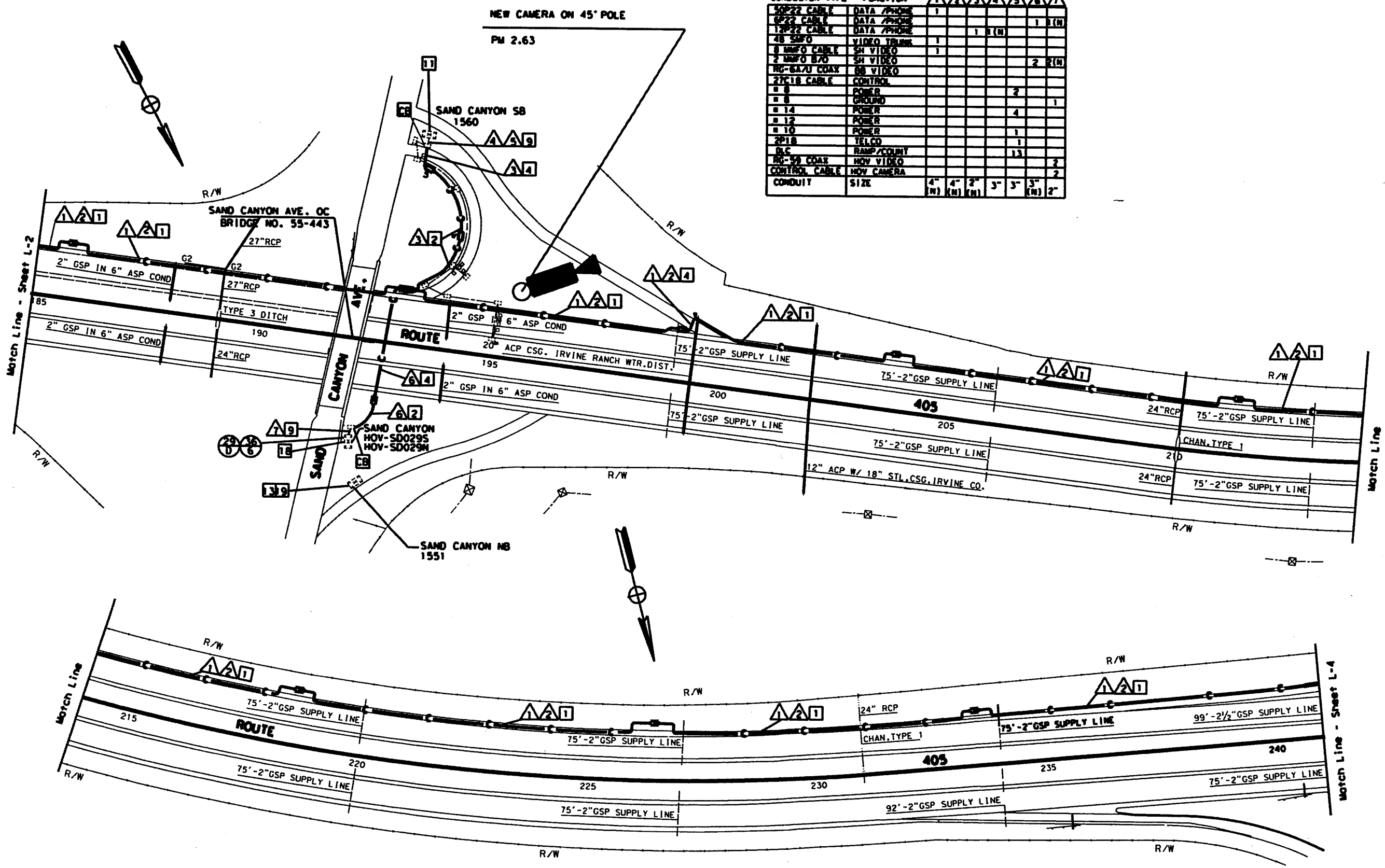
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7
50P22 CABLE	DATA /PHONE	1						
6P22 CABLE	DATA /PHONE						1	1(N)
12P22 CABLE	DATA /PHONE			1	1(N)			
48 SMFO	VIDEO TRUNK	1						
8 MMFO CABLE	SH VIDEO	1						
2 MMFO B/O	SH VIDEO						2	2(N)
RG-6A/U COAX	BB VIDEO							
27C18 CABLE	CONTROL							
# 8	POWER					2		
# 8	GROUND							1
# 14	POWER					4		
# 12	POWER							
# 10	POWER					1		
2P18	TELCO					1		
DLC	RAMP/COUNT					13		
RG-59 COAX	HOV VIDEO							2
CONTROL CABLE	HOV CAMERA							2
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	3"	3"	3" (N)	2"



UPGRADE CCTV AND COMMUNICATION SYSTEM

SCALE: 1"=100'

L-3

CALCULATED/DESIGNED BY	BJ	4/93
CHECKED BY	AP	4/93

DATE	REVISED BY
DATE	REVISED

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SIA. 185 10 241 C022300.006 DATE:03-16-93

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA 0H226K

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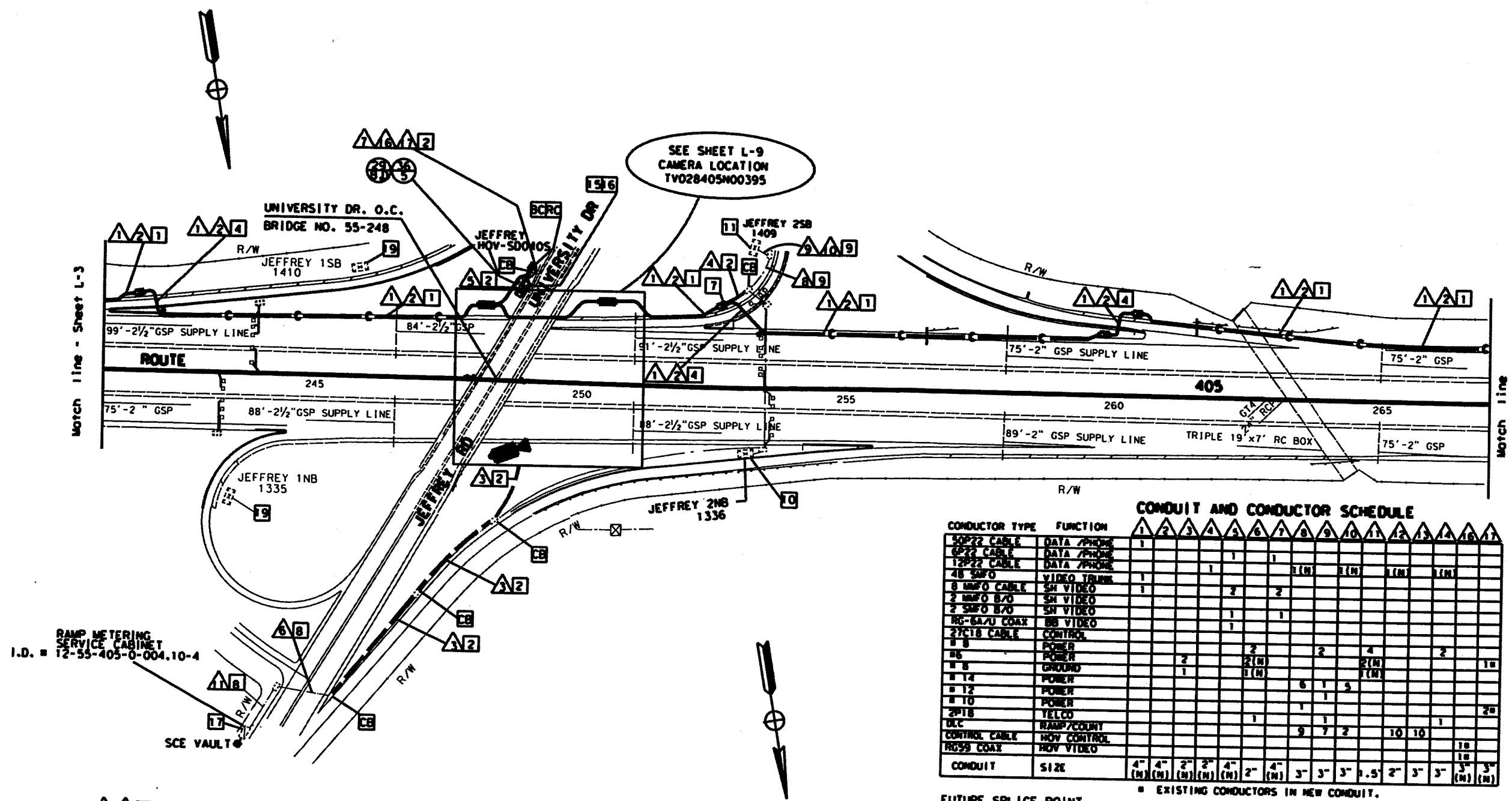

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17
50P22 CABLE	DATA /PHONE	1															
6P22 CABLE	DATA /PHONE					1		1									
12P22 CABLE	DATA /PHONE				1				1(N)		1(N)		1(N)		1(N)		
48 SMFO	VIDEO TRUNK	1															
6 MMFO CABLE	SH VIDEO	1				2		2									
2 MMFO B/O	SH VIDEO																
2 SMFO B/O	SH VIDEO																
RG-6A/U COAX	BB VIDEO					1		1									
27C18 CABLE	CONTROL					1											
# 8	POWER						2										
#6	POWER								2		2		4		2		
# 8	GROUND			2			2(N)						2(N)				1#
# 14	POWER			1			1(N)						1(N)				
# 12	POWER								6	1	5						
# 10	POWER									1							
2P18	TELCO								1								2#
DLC	RAMP/COUNT						1			1					1		
CONTROL CABLE	HOV CONTROL								9	7	2		10	10			
RG59 COAX	HOV VIDEO															1#	
																1#	
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2" (N)	4" (N)	2"	4" (N)	3"	3"	3"	1.5"	2"	3"	3"	3" (N)	3" (N)

EXISTING CONDUCTORS IN NEW CONDUIT.

UPGRADE CCTV AND COMMUNICATION SYSTEM

SCALE: 1"=100'

L-4

EA 0H226K

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN OVERSIGHT

CALCULATED/DESIGNED BY | CHECKED BY | DATE | REVISED BY | DATE REVISED

STA. 241 TO 293 C02230U7.DGN DATE: 3-5-93

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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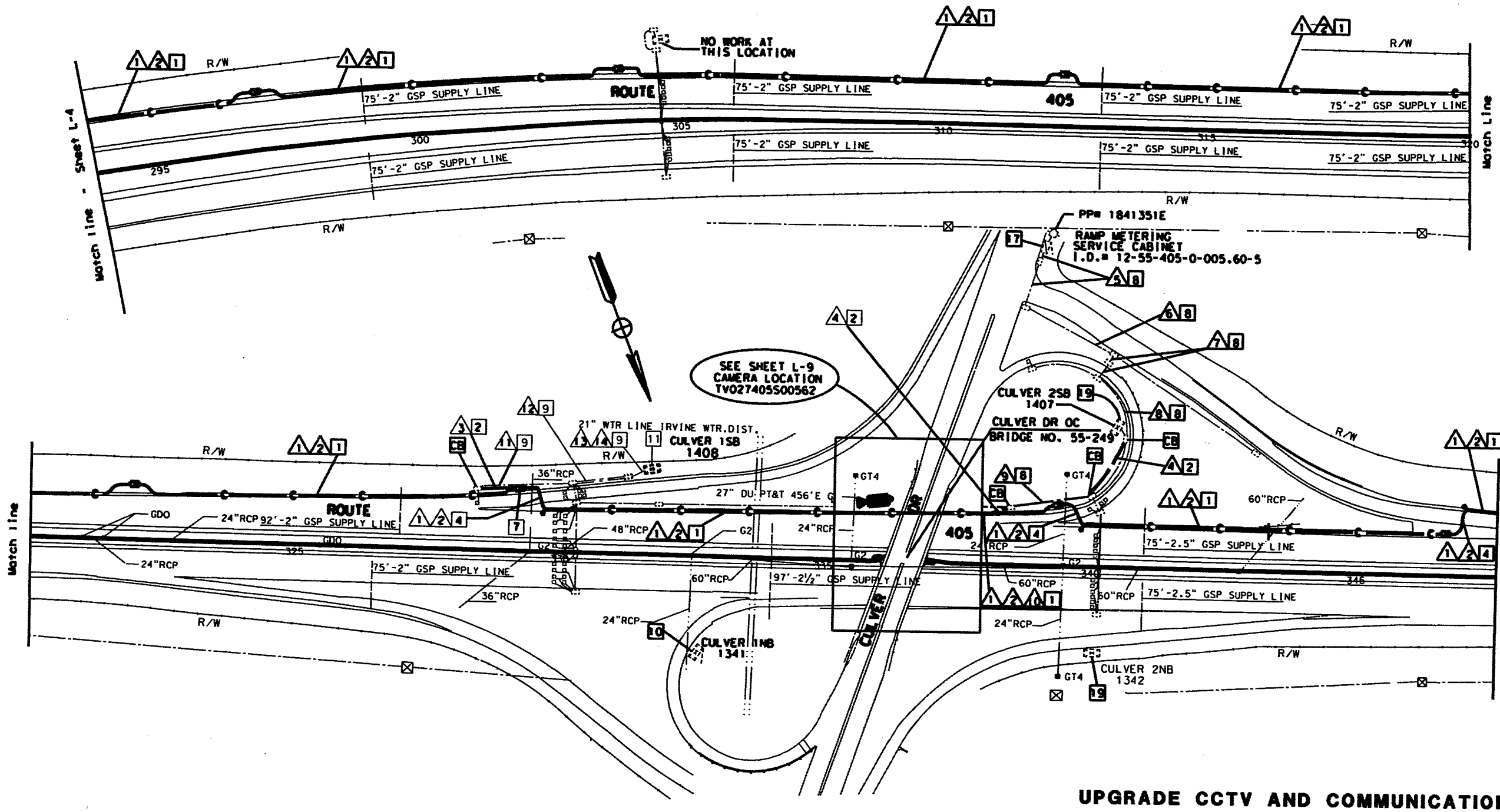
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50P22 CABLE	DATA /PHONE	1													
6P22 CABLE	DATA /PHONE														
12P22 CABLE	DATA /PHONE			1								1(N)	1(N)	1(N)	
48 SMFO	VIDEO TRUNK	1													
6 MMFO CABLE	SH VIDEO	1													
2 MMFO B/O	SH VIDEO														
RG-6A/U COAX	BB VIDEO														
27C18 CABLE	CONTROL														
# 8	POWER					4	4	4	4	2			2	2	
# 8	GROUND				1	1(N)	1(N)	1(N)	1(N)	1(N)	1				
# 14	POWER								4				6	4	5
# 12	POWER														
# 10	POWER														
# 4	POWER				2	2(N)	2(N)	2(N)	2(N)	2(N)	2				
2P18	TELCO						1	1	1	1					
DLC	RAMP/COUNT							1	2			1	5	1	15
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2" (N)	1½"	1½"	1½"	2"	2"	2" (N)	1"	3"	3"	3"



UPGRADE CCTV AND COMMUNICATION SYSTEM

SCALE: 1"=100'

L-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN OVERSIGHT

CALCULATED/DESIGNED BY BJ DATE 4/93 REVISED BY

CHECKED BY AP 4/93 DATE REVISED

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA 0H226K

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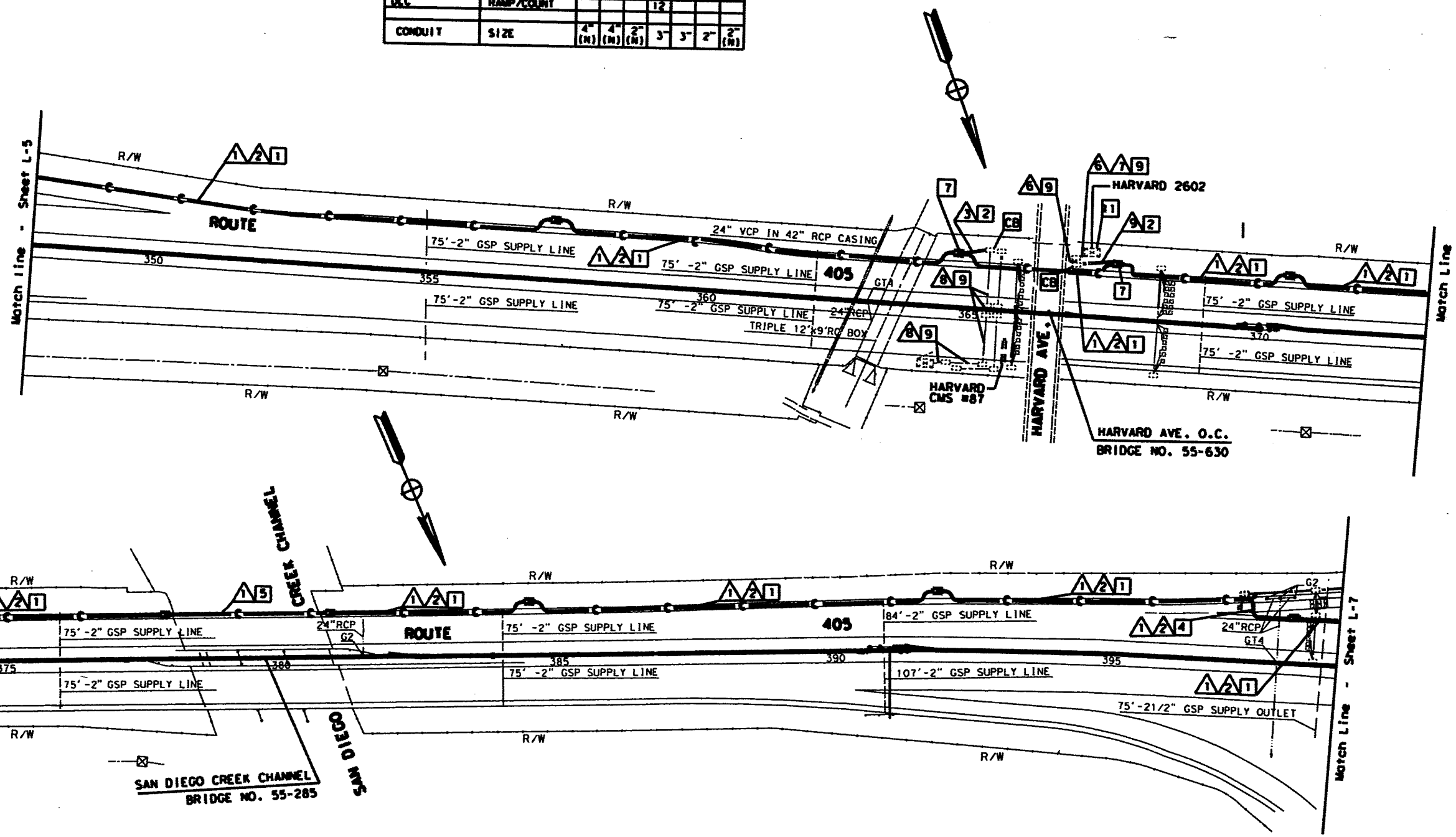
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	6	7	8	9
50PR22 CABLE	DATA /PHONE	1						
6PR22 CABLE	DATA /PHONE			1				
12PR22 CABLE	DATA /PHONE				1(N)		1(N)	1
48 SMFO CABLE	VIDEO TRUNK	1						
8 MMFO CABLE	SH VIDEO	1						
2 MMFO B/O	SH VIDEO							
RG-6A/U COAX	BB VIDEO							
27C18 CABLE	CONTROL							
# 8	POWER					2		
# 8	GROUND							
# 14	POWER							
# 12	POWER							
# 10	POWER							
2P18	TELCO							
DLC	RAMP/COUNT				12			
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	3"	3"	2"	2" (N)



UPGRADE CCTV AND COMMUNICATION SYSTEM

SCALE: 1"=100'

L-6

CALCULATED/DESIGNED BY	BJ	DATE 4/93	REVISED BY
CHECKED BY	AP	4/93	DATE REVISED

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

STA. 346 TO 400 C02230U9.DGN DATE: 03-16-93

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA 0H226K

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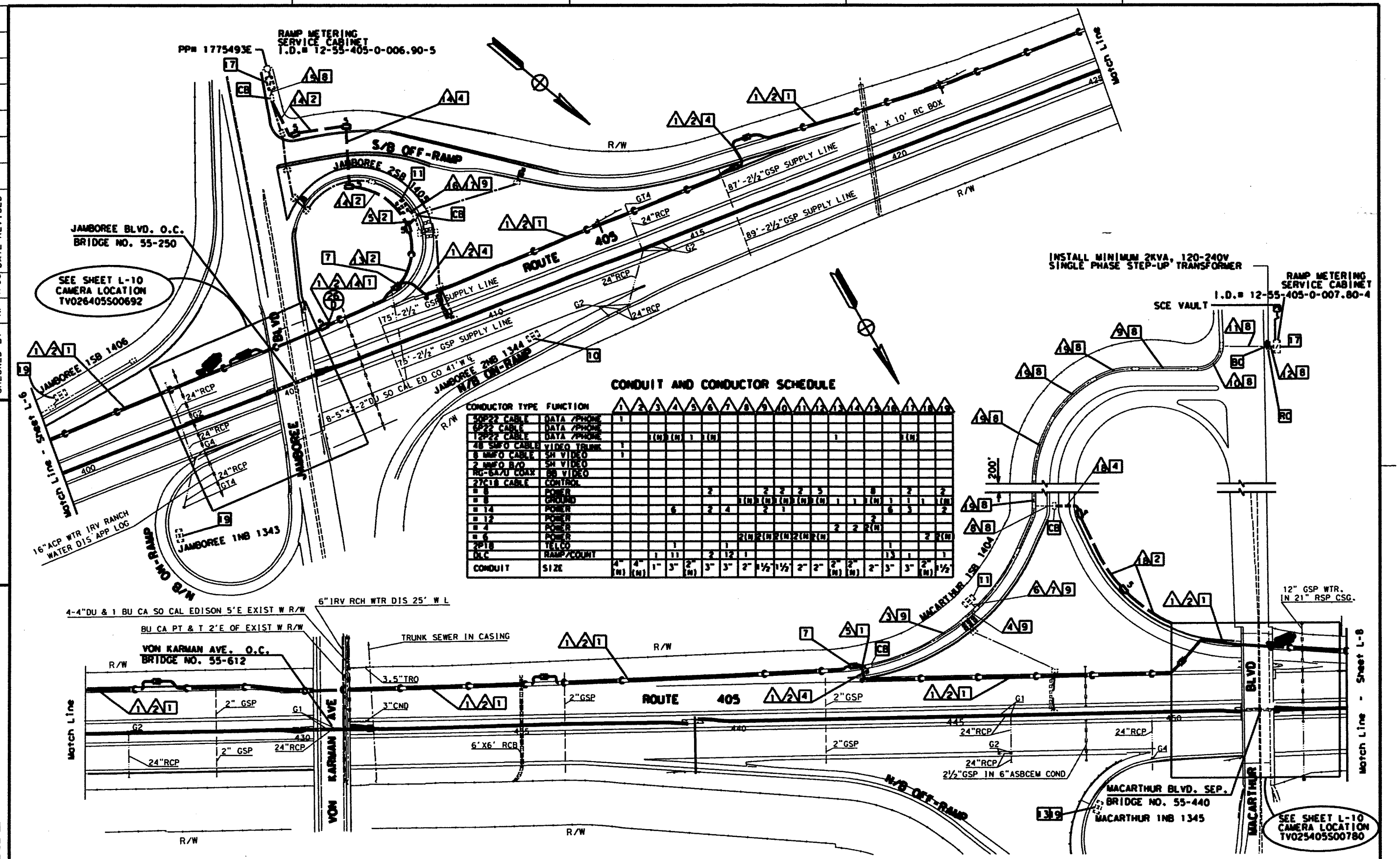

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
50P22 CABLE	DATA /PHONE	1																		
6P22 CABLE	DATA /PHONE																			
12P22 CABLE	DATA /PHONE			1(N)	1(N)	1	1(N)							1				1(N)		
48 SMFO CABLE	VIDEO TRUNK	1																		
6 MMFO CABLE	SH VIDEO	1																		
2 MMFO B/O	SH VIDEO																			
RG-6A/U COAX	BB VIDEO																			
27C18 CABLE	CONTROL																			
# 8	POWER						2			2	2	2	5			8		2		2
# 8	GROUND								1(N)	1(N)	1(N)	1(N)	1(N)	1	1	1(N)	1	1	1	1(N)
# 14	POWER				6		2	4		2	1						6	3		2
# 12	POWER															2				
# 4	POWER													2	2	2(N)				
# 6	POWER								2(N)	2(N)	2(N)	2(N)	2(N)						2	2(N)
2PTB	TELCO				1			1									1			
DLC	RAMP/COUNT			1	11		2	12	1							13	1			1
CONDUIT	SIZE	4" (N)	4" (N)	1"	3"	2" (N)	3"	3"	2"	1½"	1½"	2"	2"	2" (N)	2" (N)	2"	3"	3"	2" (N)	1½"

UPGRADE CCTV AND COMMUNICATION SYSTEM

SCALE: 1"=100'

L-7

DATE	REVISED BY	DATE	REVISED
4/93	BJ	4/93	AP

CALCULATED/DESIGNED BY — CHECKED BY

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

STA. 400 TO 452 — C02230U10.DGN — DATE: 3-16-93

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA OH226K

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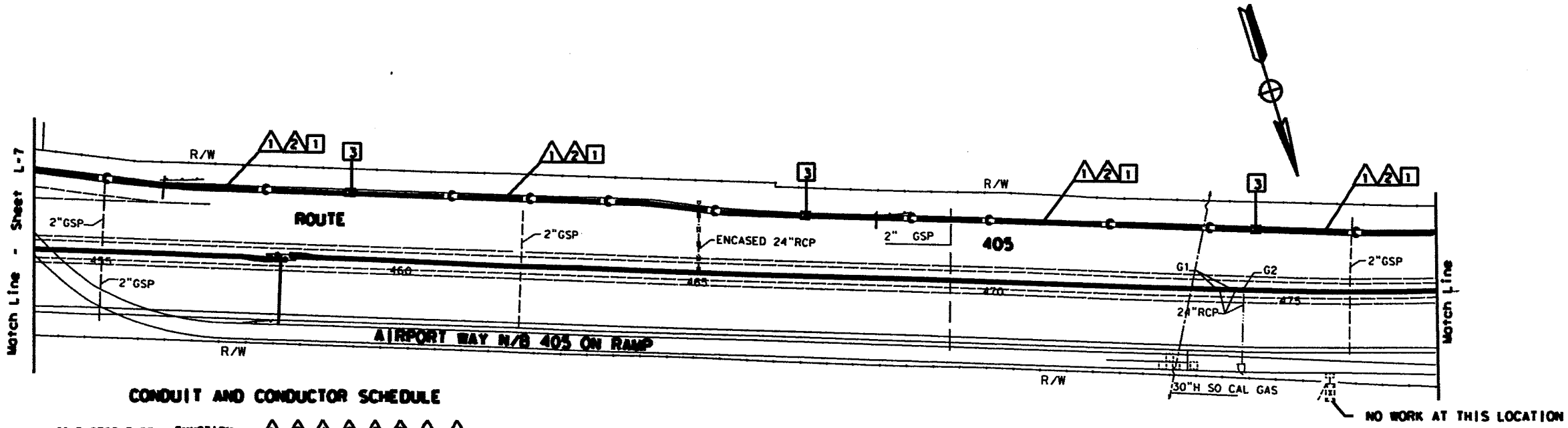
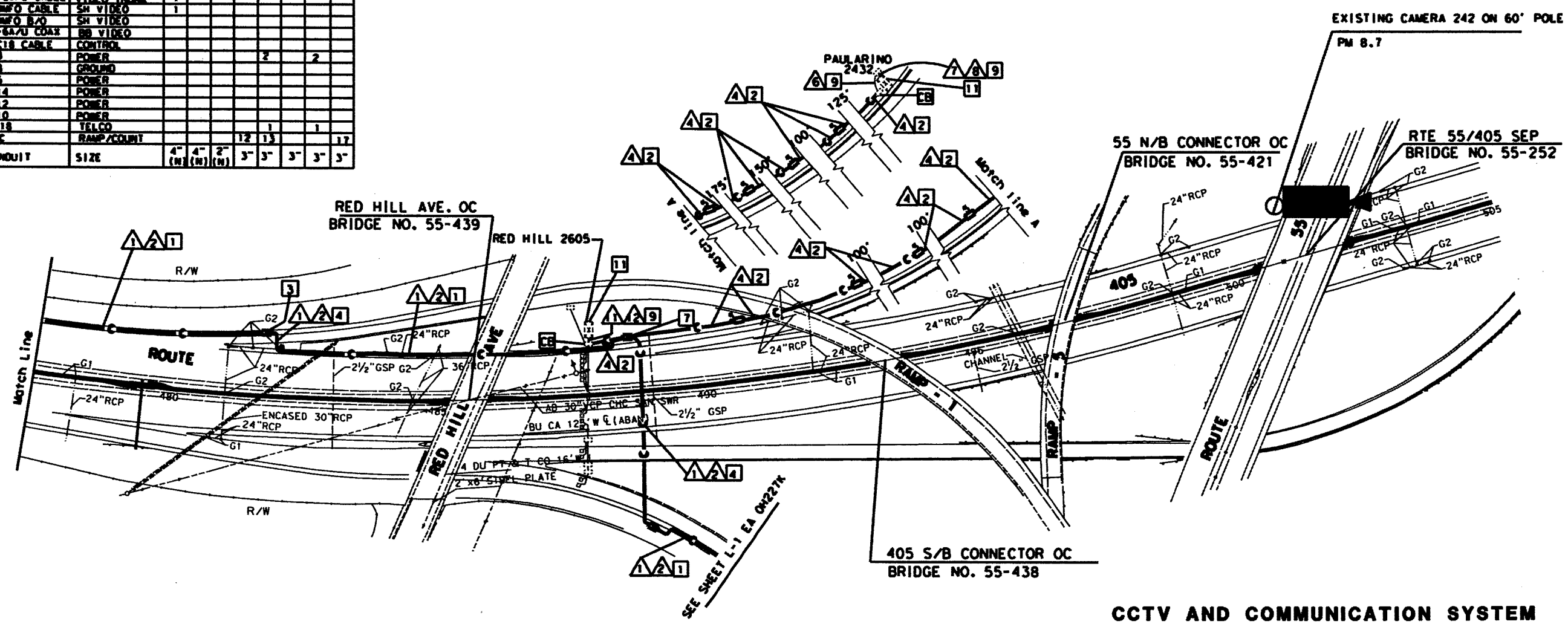


CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	4	6	7	8	11	12
50P22 CABLE	DATA /PHONE	1							
6P22 CABLE	DATA /PHONE								
12P22 CABLE	DATA /PHONE			1	1(N)		1(N)		1(N)
48 SMFO CABLE	VIDEO TRUNK	1							
6 MMFO CABLE	SH VIDEO	1							
2 MMFO B/O	SH VIDEO								
RG-6A/U COAX	BB VIDEO								
27C18 CABLE	CONTROL								
# 8	POWER					2		2	
# 8	GROUND								
# 6	POWER								
# 14	POWER								
# 12	POWER								
# 10	POWER								
2P18	TELCO					1		1	
DLC	RAMP/COUNT				12	13			17
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	3"	3"	3"	3"	3"



CCTV AND COMMUNICATION SYSTEM AND UTILITY

SCALE: 1"=100'

L-8

DATE	REVISED BY	DATE	REVISED
4/93	BJ	4/93	AP

CALCULATED/DESIGNED BY — CHECKED BY

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

S14.453 TO 505 — C02230U11.DGN — DATE 6-16-93

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA 0H226K

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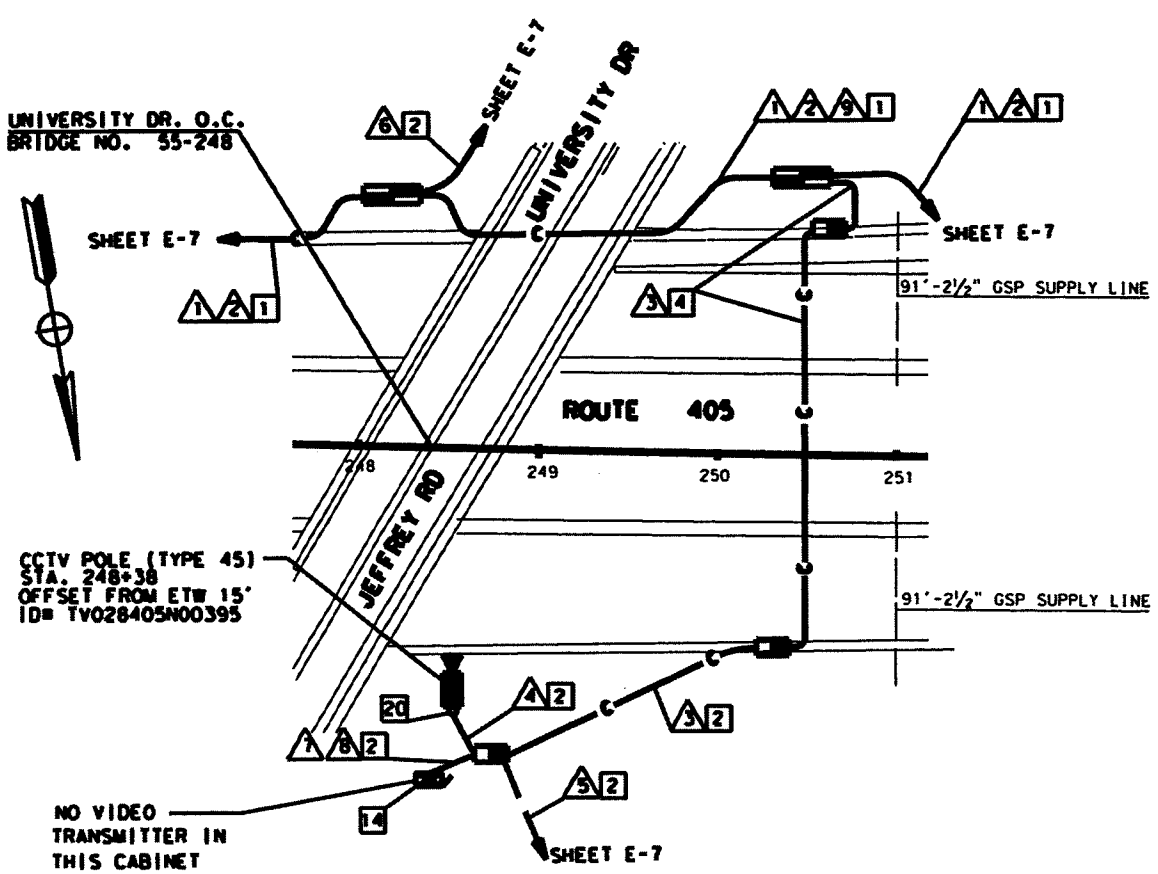
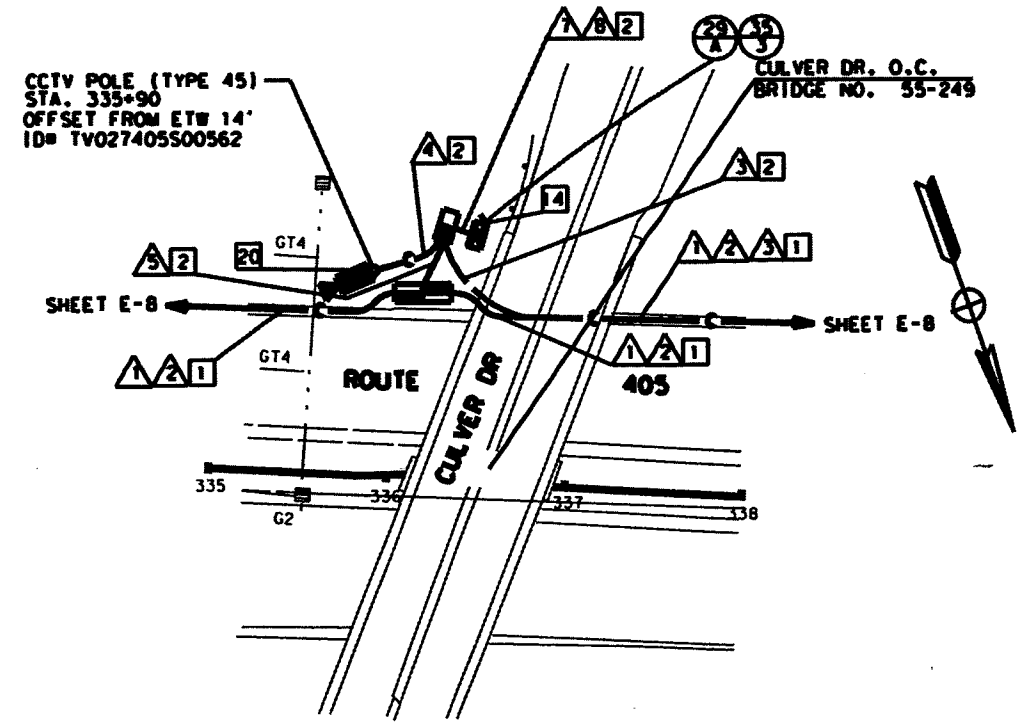


LOCATION TV028405N00395



LOCATION TV027405S00562

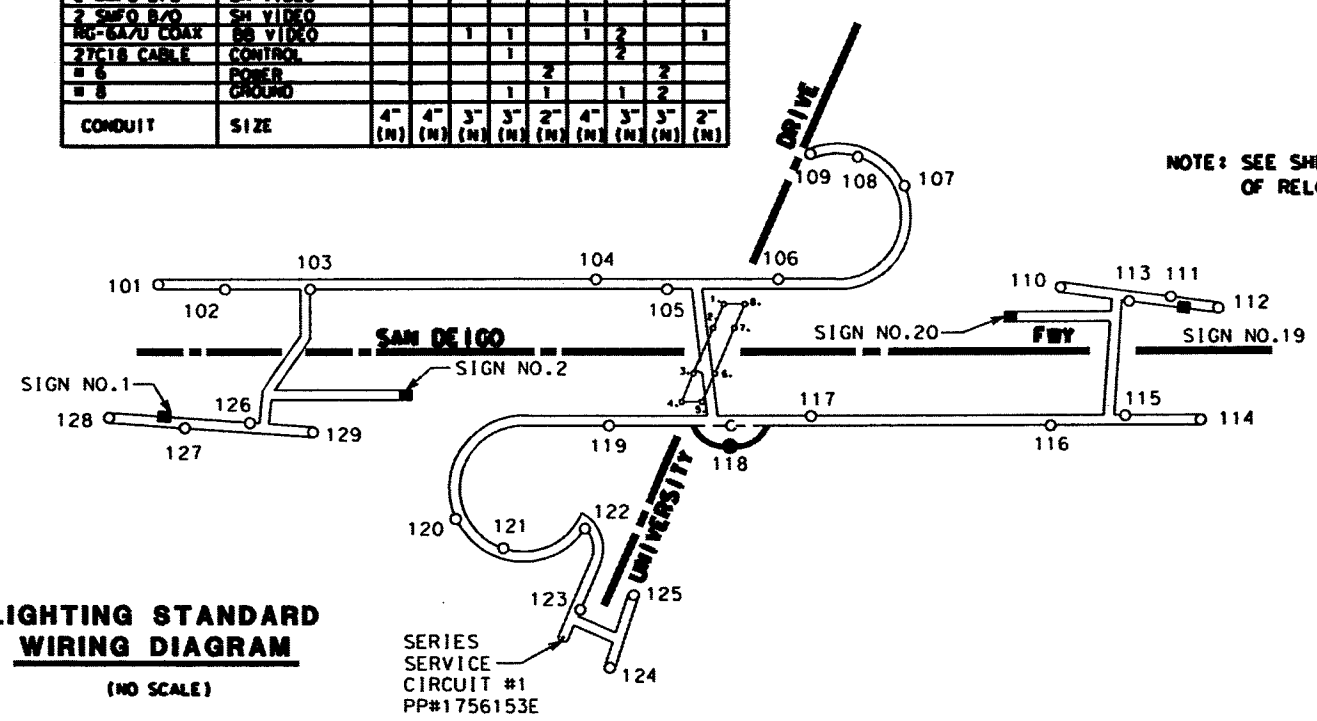
CONDUIT AND CONDUCTOR SCHEDULE (LOCATION TV028405N00395)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9
50P22 CABLE	DATA /PHONE	1								
6P22 CABLE	DATA /PHONE			1			1	1		
12P22 CABLE	DATA /PHONE									
48 SMFO	VIDEO TRUNK	1								
8 MMFO CABLE	SH VIDEO	1					2			
2 MMFO B/O	SH VIDEO									
2 SMFO B/O	SH VIDEO						1			
RG-6A/U COAX	BB VIDEO			1	1		1	2		1
27C18 CABLE	CONTROL				1			2		
# 6	POWER					2			2	
# 8	GROUND				1	1		1	2	
CONDUIT	SIZE	4" (N)	4" (N)	3" (N)	3" (N)	2" (N)	4" (N)	3" (N)	3" (N)	2" (N)

CONDUIT AND CONDUCTOR SCHEDULE (LOCATION TV027405S00562)

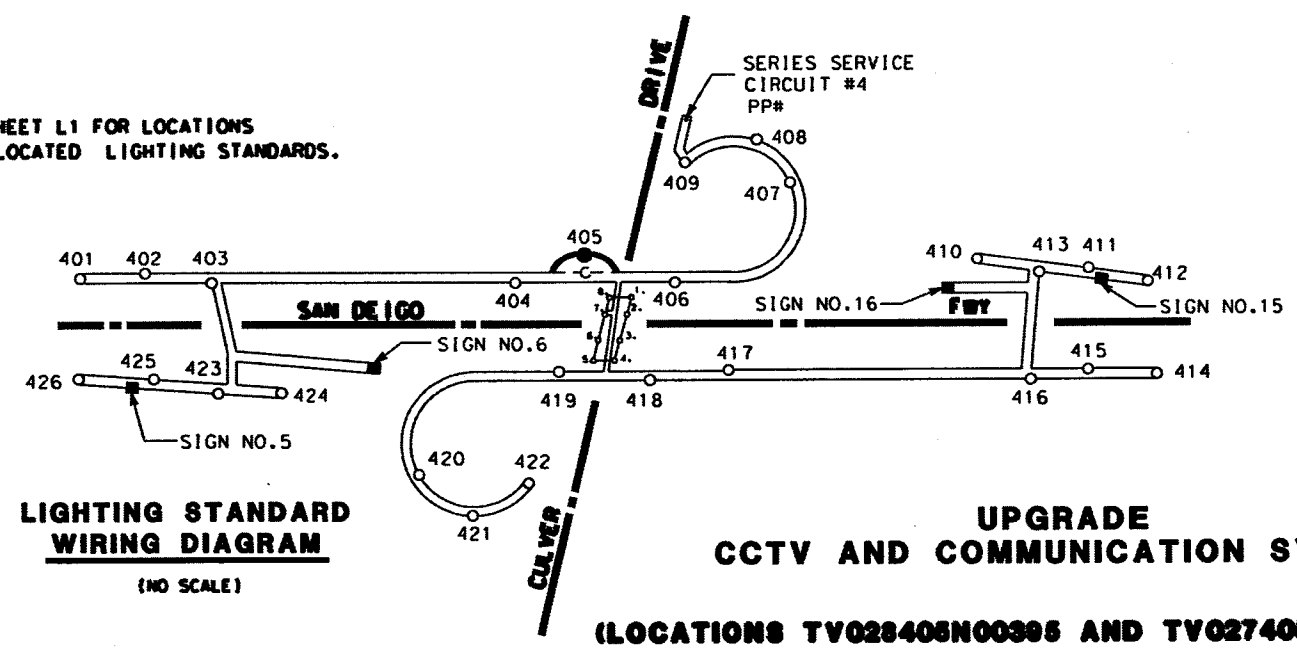
CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	7	8
50P22 CABLE	DATA /PHONE	1						
6P22 CABLE	DATA /PHONE					1	1	
12P22 CABLE	DATA /PHONE							
48 SMFO	VIDEO TRUNK	1						
8 MMFO CABLE	SH VIDEO	1						
2 MMFO B/O	SH VIDEO					1	1	
RG-6A/U COAX	BB VIDEO				1		1	
27C18 CABLE	CONTROL				1		1	
# 4	POWER			2				2
# 8	GROUND			1	1		1	1
	SIZE	4" (N)	4" (N)	2" (N)	3" (N)	3" (N)	3" (N)	3" (N)

NOTE: SEE SHEET L1 FOR LOCATIONS OF RELOCATED LIGHTING STANDARDS.



LIGHTING STANDARD WIRING DIAGRAM

(NO SCALE)



LIGHTING STANDARD WIRING DIAGRAM

(NO SCALE)

UPGRADE CCTV AND COMMUNICATION SYSTEM

(LOCATIONS TV028405N00395 AND TV027405S00562)

SCALE: 1"=50'

L-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN OVERSIGHT

CALCULATED/ DESIGNED BY	BJ	DATE 4/93	REVISED BY	DATE REVISED
CHECKED BY	AP	4/93		

SIA. 10 C02230U16.DGN DATE: 3-15-93

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA 0H226K

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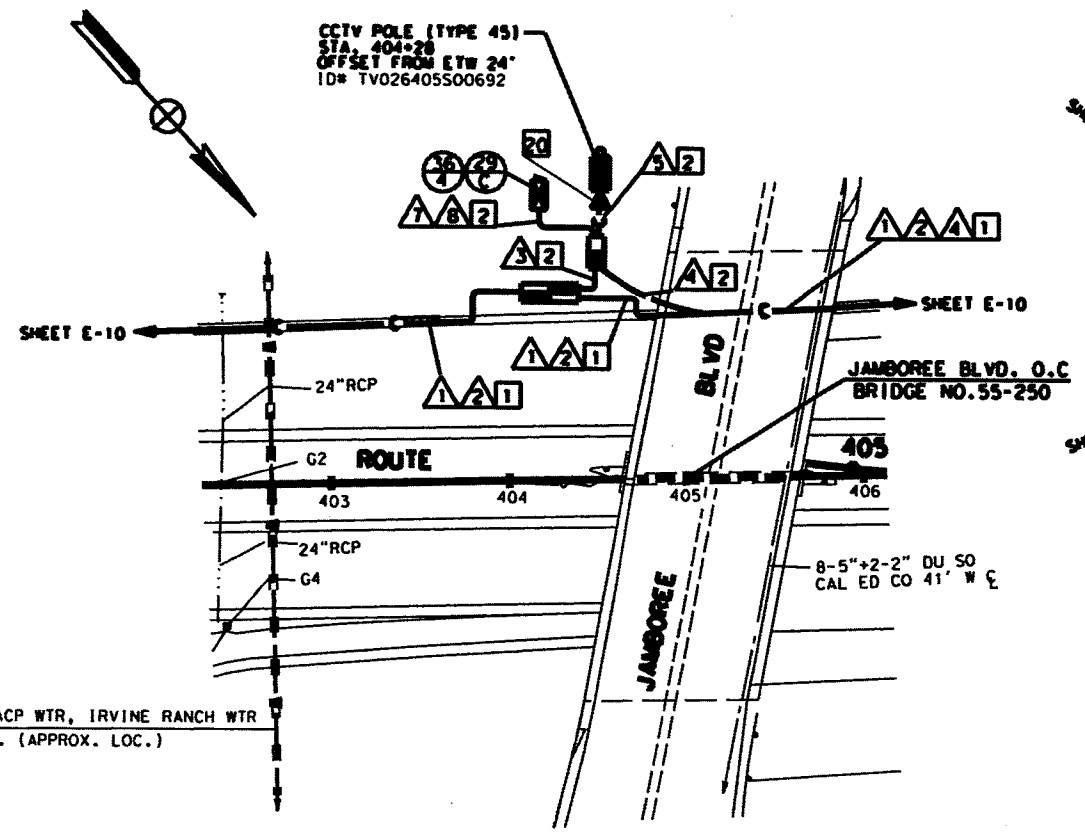
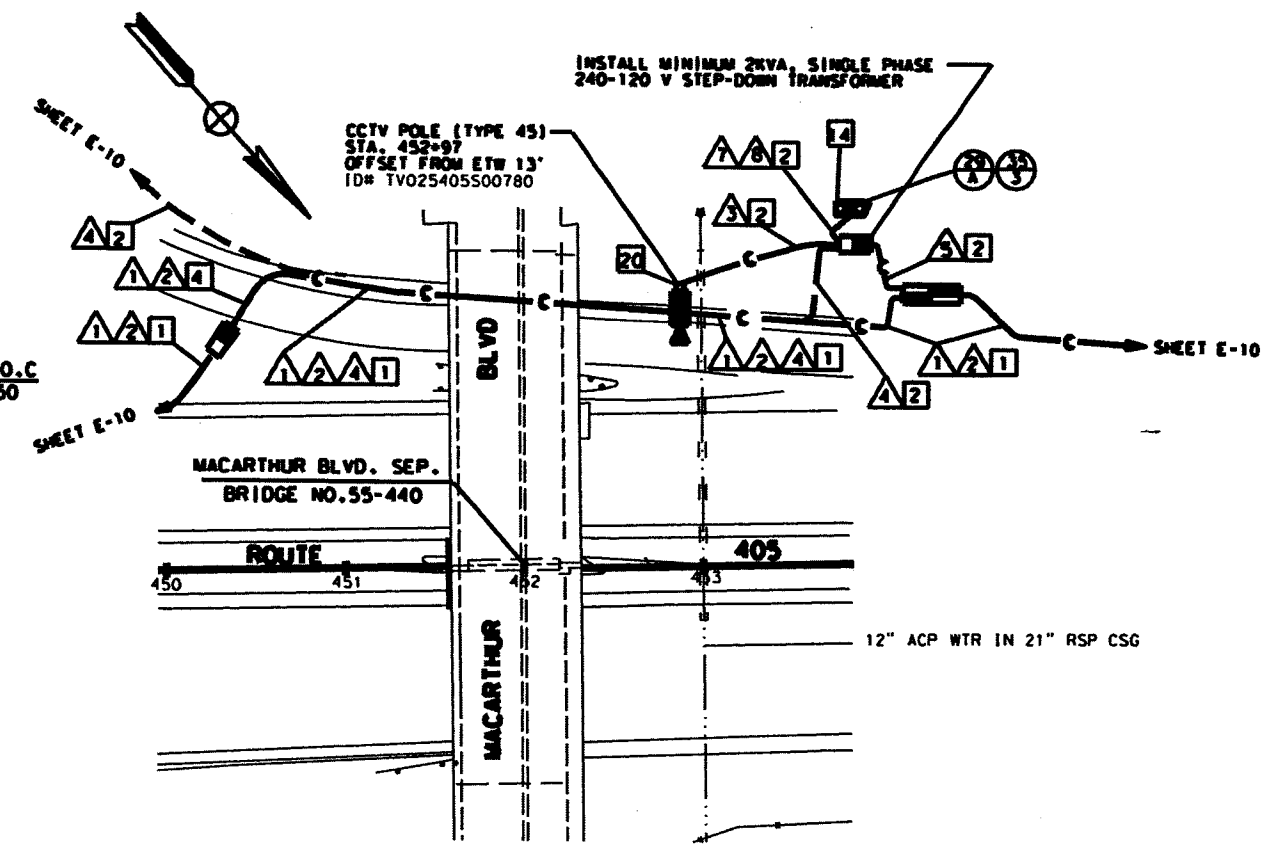


LOCATION TV026405S00692



LOCATION TV025405S00780

CONDUIT AND CONDUCTOR SCHEDULE (LOCATION TV026405S00692)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	7	8
50P22 CABLE	DATA /PHONE	1		2				2
6P22 CABLE	DATA /PHONE							
12P22 CABLE	DATA /PHONE							
48 SMFO	VIDEO TRUNK	1						
2 SMFO B/O	DATA			1				1
8 MMFO CABLE	SH VIDEO	1						
2 MMFO B/O	SH VIDEO			1				1
RG-6A/U COAX	BB VIDEO					1		1
27C18 CABLE	CONTROL					1		1
# 4	POWER				2		2	
# 8	GROUND				1	1	1	1
# 14	POWER							
# 12	POWER							
# 10	POWER							
2 P18	TELCO							
CONDUIT	SIZE	4" (IN)	4" (IN)	3" (IN)	2" (IN)	3" (IN)	3" (IN)	3" (IN)

CONDUIT AND CONDUCTOR SCHEDULE (LOCATION TV025405S00780)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	7	8
50P22 CABLE	DATA /PHONE	1						
6P22 CABLE	DATA /PHONE					1		1
12P22 CABLE	DATA /PHONE							
48 SMFO	VIDEO TRUNK	1						
8 MMFO CABLE	SH VIDEO	1						
2 MMFO B/O	SH VIDEO					1		1
RG-6A/U COAX	BB VIDEO			1				1
27C18 CABLE	CONTROL			1				1
# 6	POWER				2		2	
# 8	GROUND			1	1		1	1
# 14	POWER							
# 12	POWER							
# 10	POWER							
2P18	TELCO							
DLC	RAMP/COUNT							
CONDUIT	SIZE	4" (IN)	4" (IN)	3" (IN)	2" (IN)	3" (IN)	3" (IN)	3" (IN)

UPGRADE CCTV AND COMMUNICATION SYSTEM

(LOCATIONS TV026405S00692 AND TV025405S00780)

SCALE: 1"=50'

L-10

DATE	REVISED BY	DATE	REVISED
CALCULATED/DESIGNED BY	BJ	4/93	DATE REVISED
CHECKED BY	AP	4/93	

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

STA. 10 C02230U17.DGN DATE: 03-15-93

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA 0H226K

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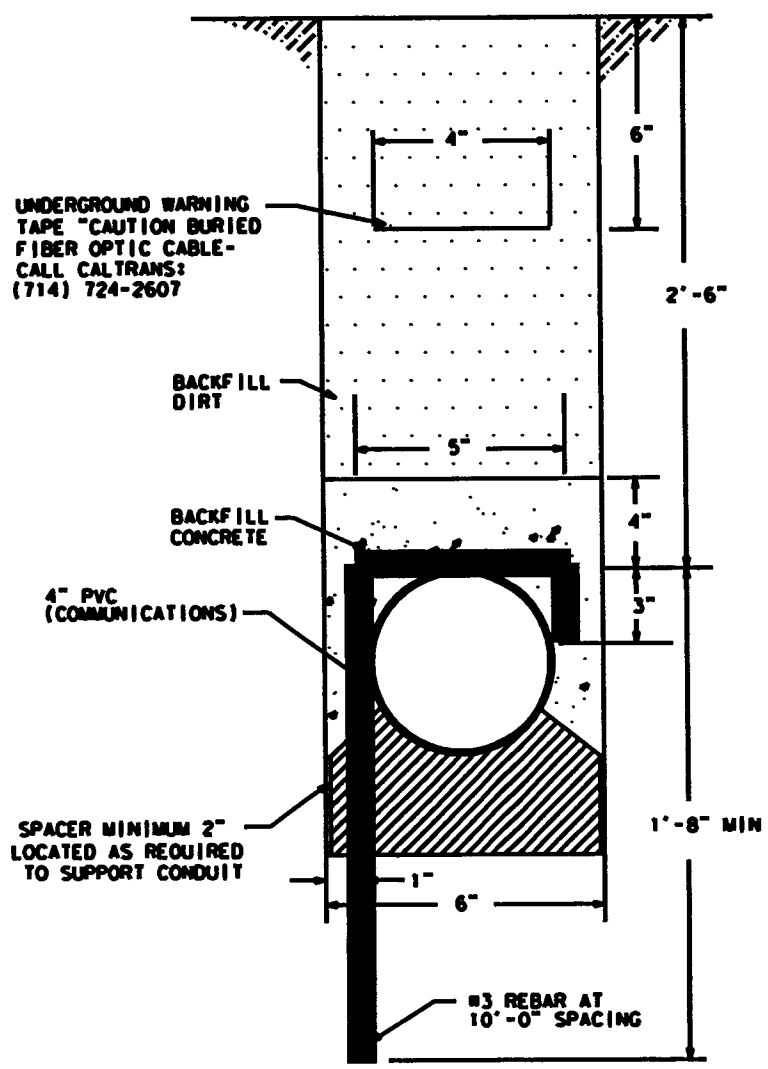

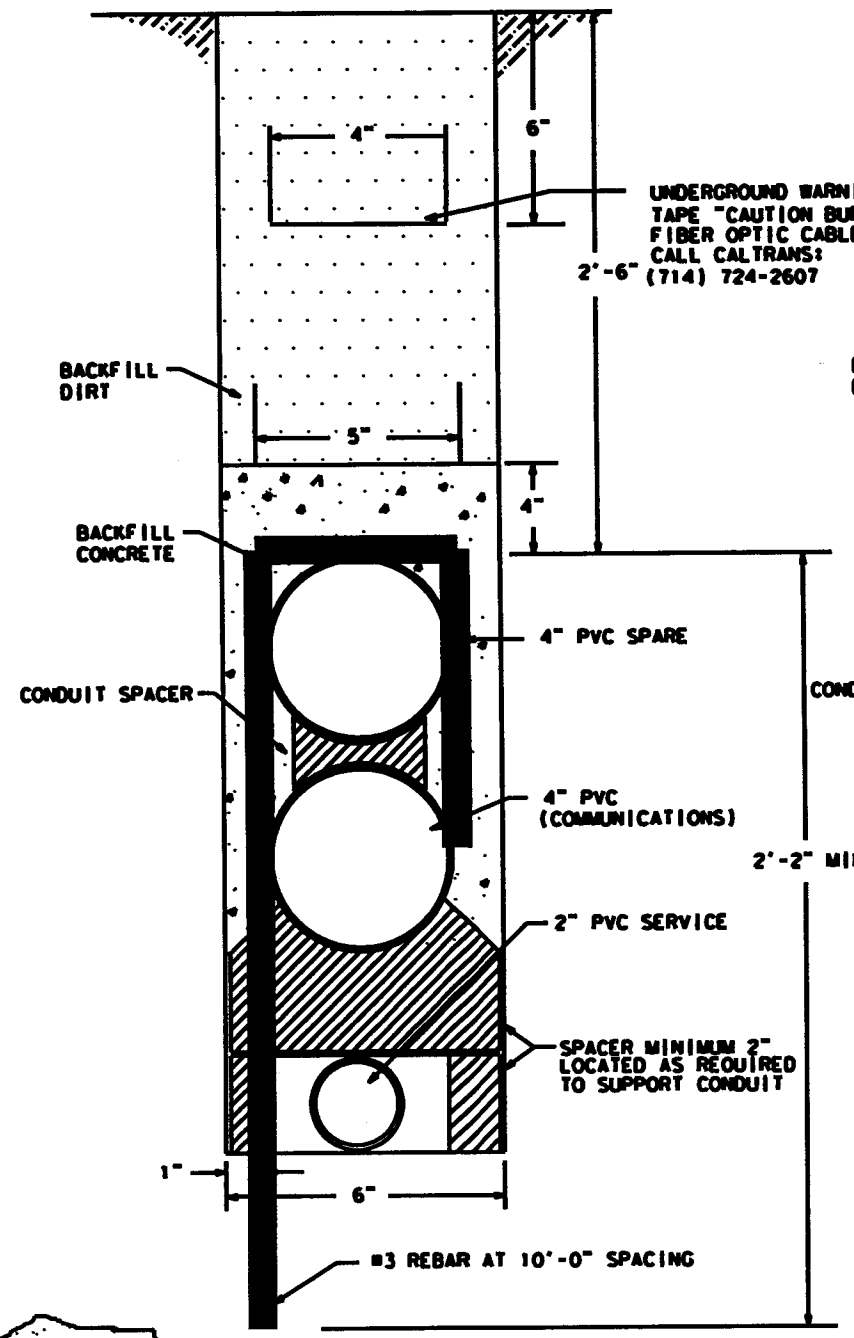

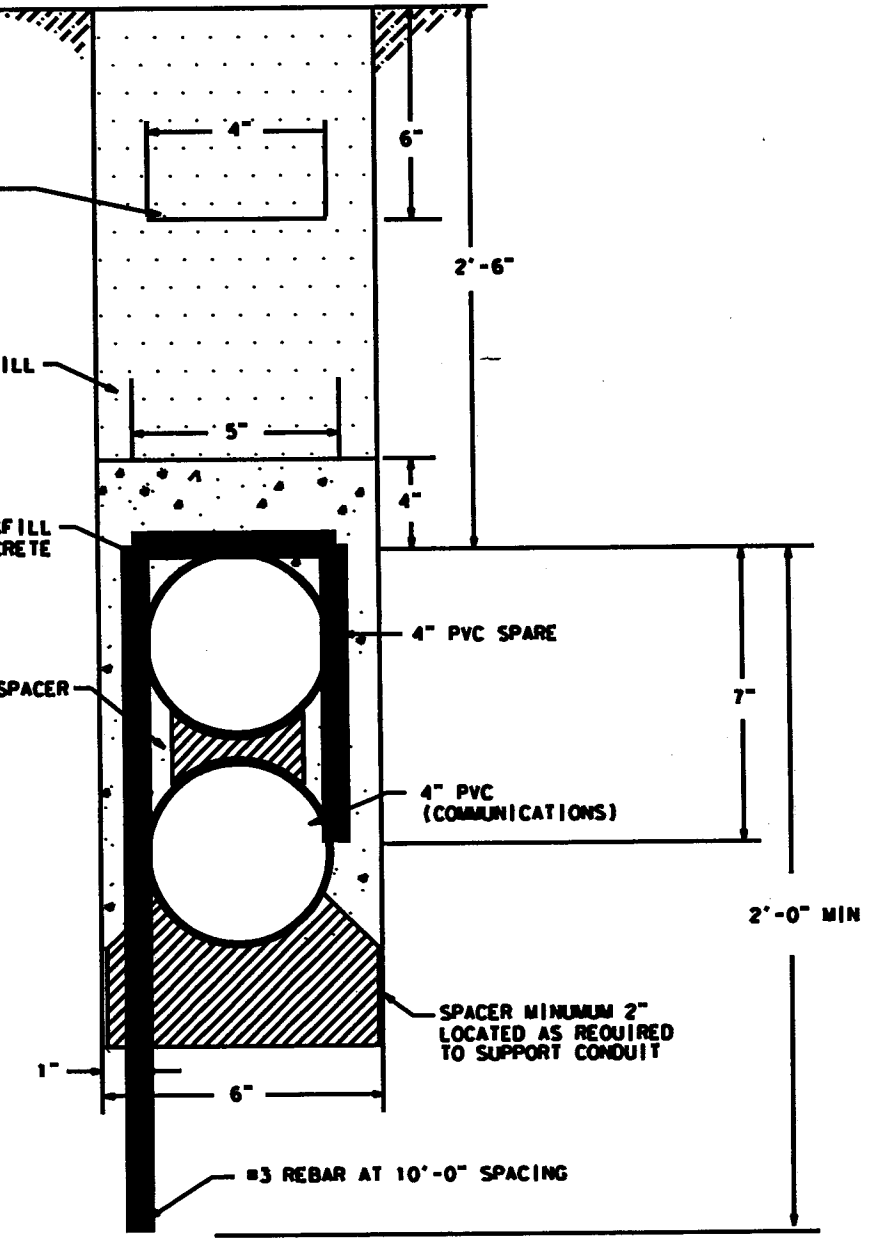

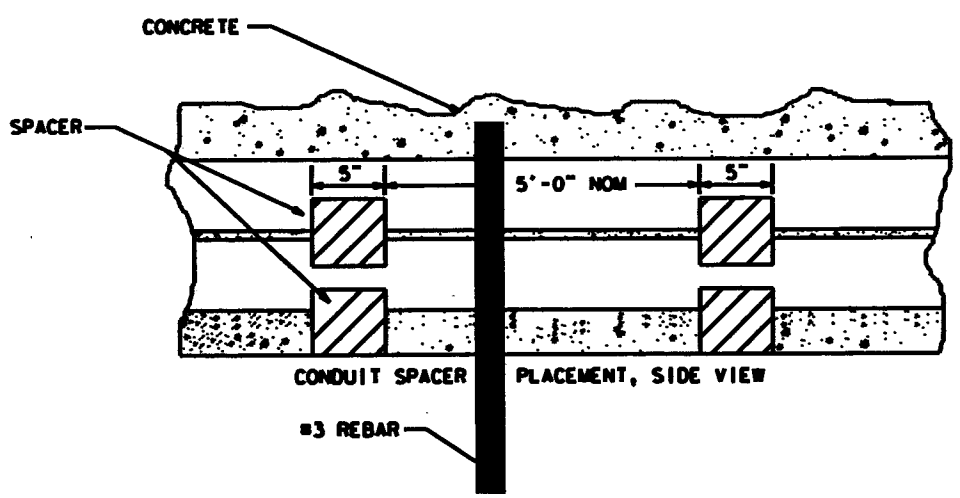

TRENCH IN DIRT DETAILS

NO SCALE

L-11

DATE	REVISED BY	DATE	REVISED
4/93		4/93	

CALCULATED/DESIGNED BY BJ
CHECKED BY AP

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

C02230U22.DGN WET 1/12/93

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA 0H226K

FORM DC-OE-92-PF (REV. 3/88)

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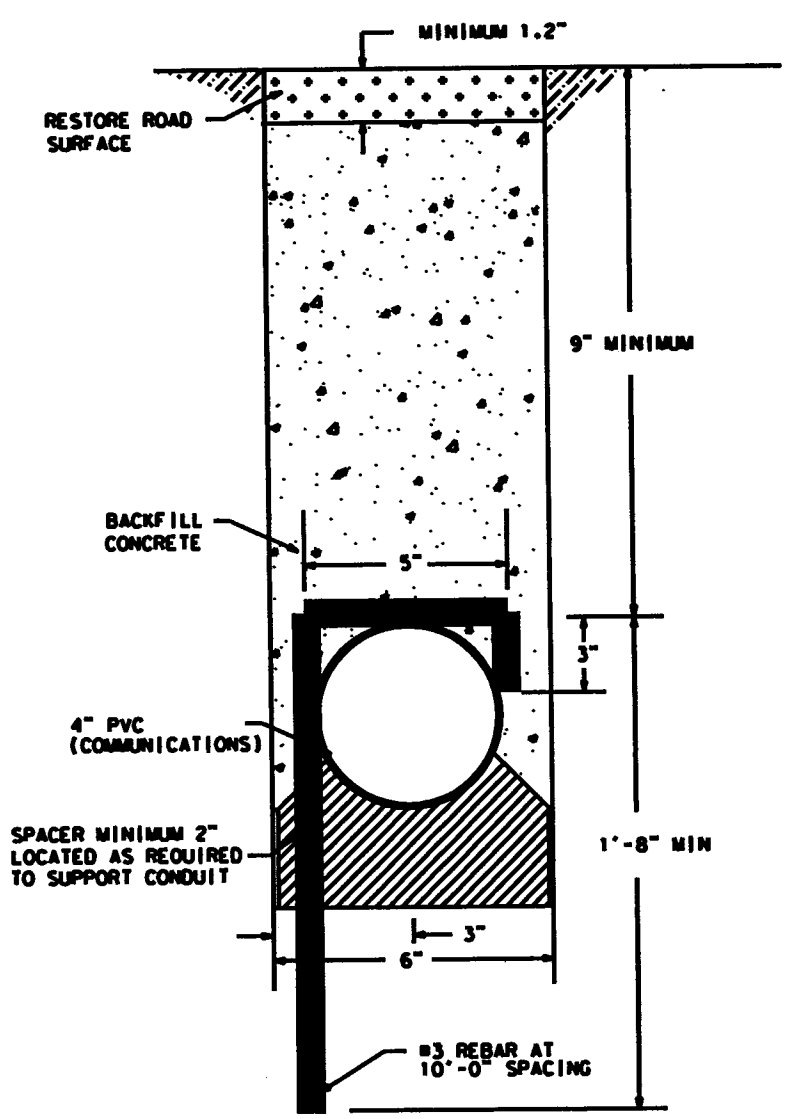

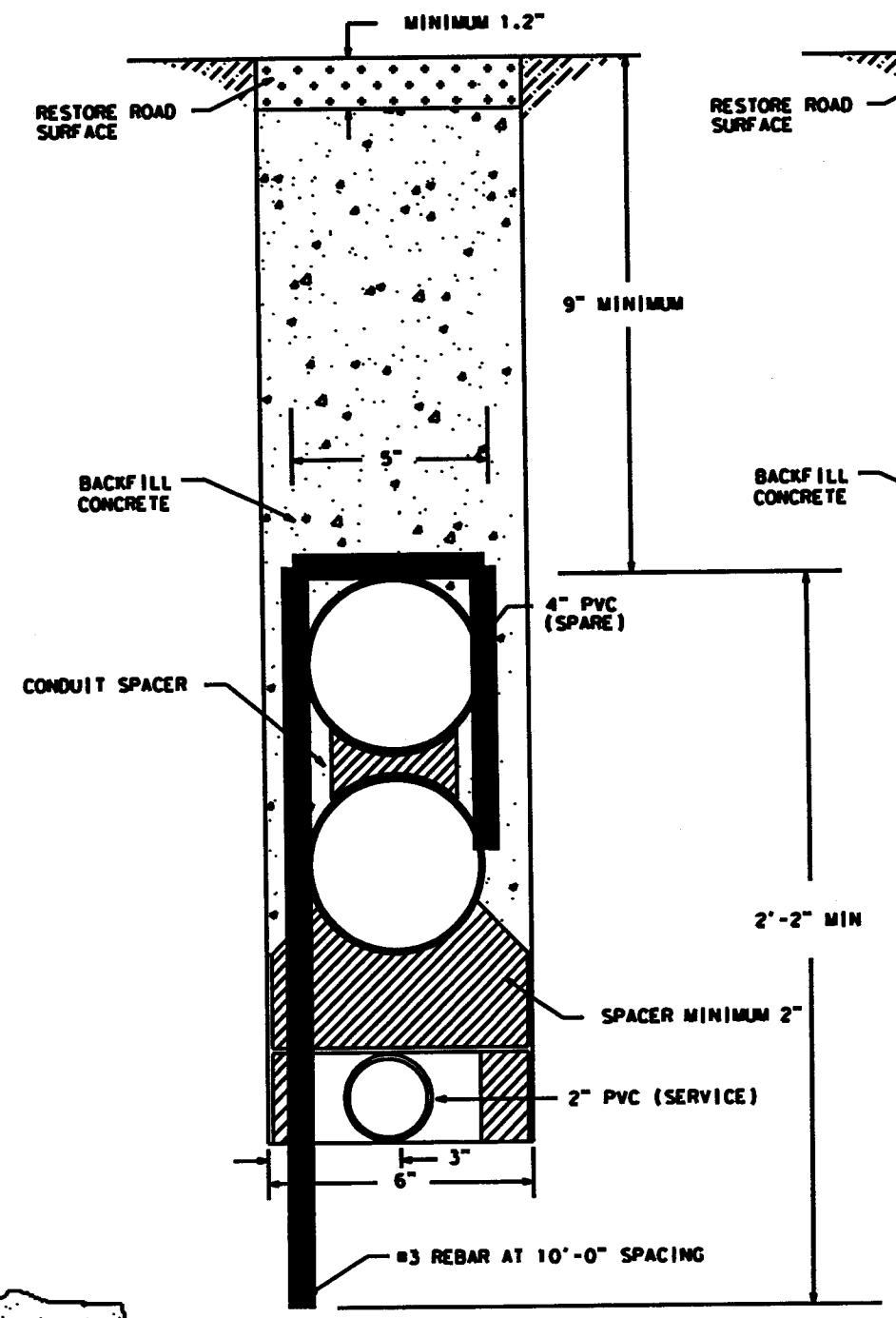

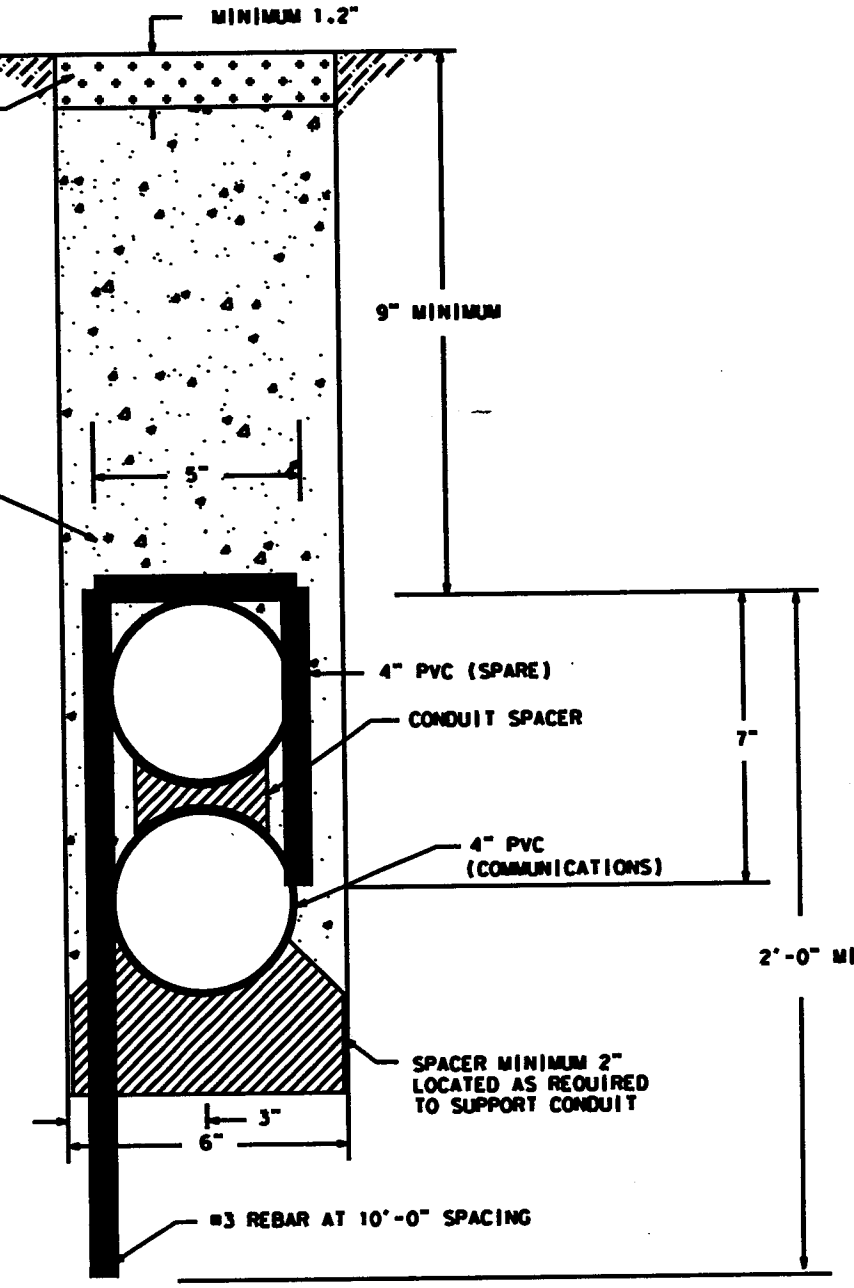

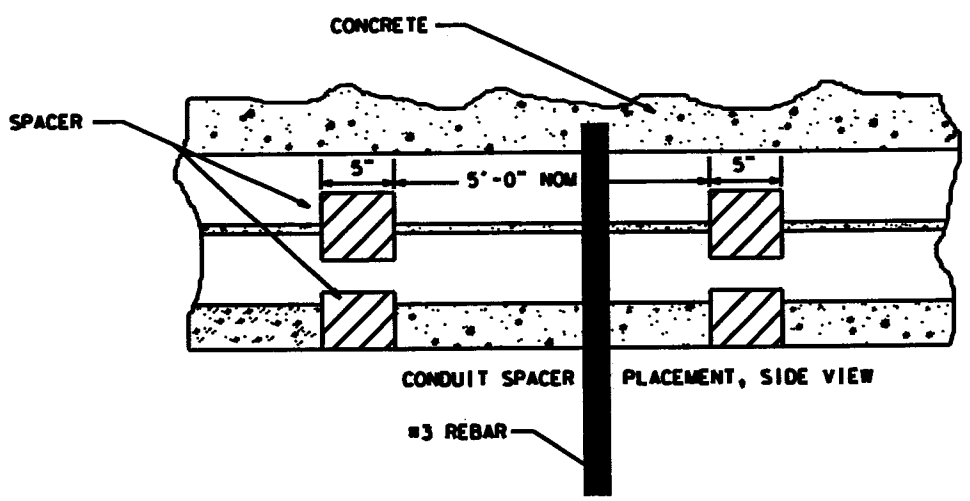

NOTE: WHEN TRENCH TRANSITIONS FROM ASPHALT TO DIRT AREAS, CONDUIT TO GRADUALLY DROP FROM 9" MIN DEPTH TO 2'-6" MIN DEPTH WITHIN ASPHALT AREA.

TRENCH IN PAVEMENT DETAILS

NO SCALE

L-12

DATE	REVISED BY	DATE	REVISED BY
4/93	BJ	4/93	AP

CALCULATED/DESIGNED BY — CHECKED BY

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA 0H226K

FORM DC-OE-93-PF (REV. 3/88)

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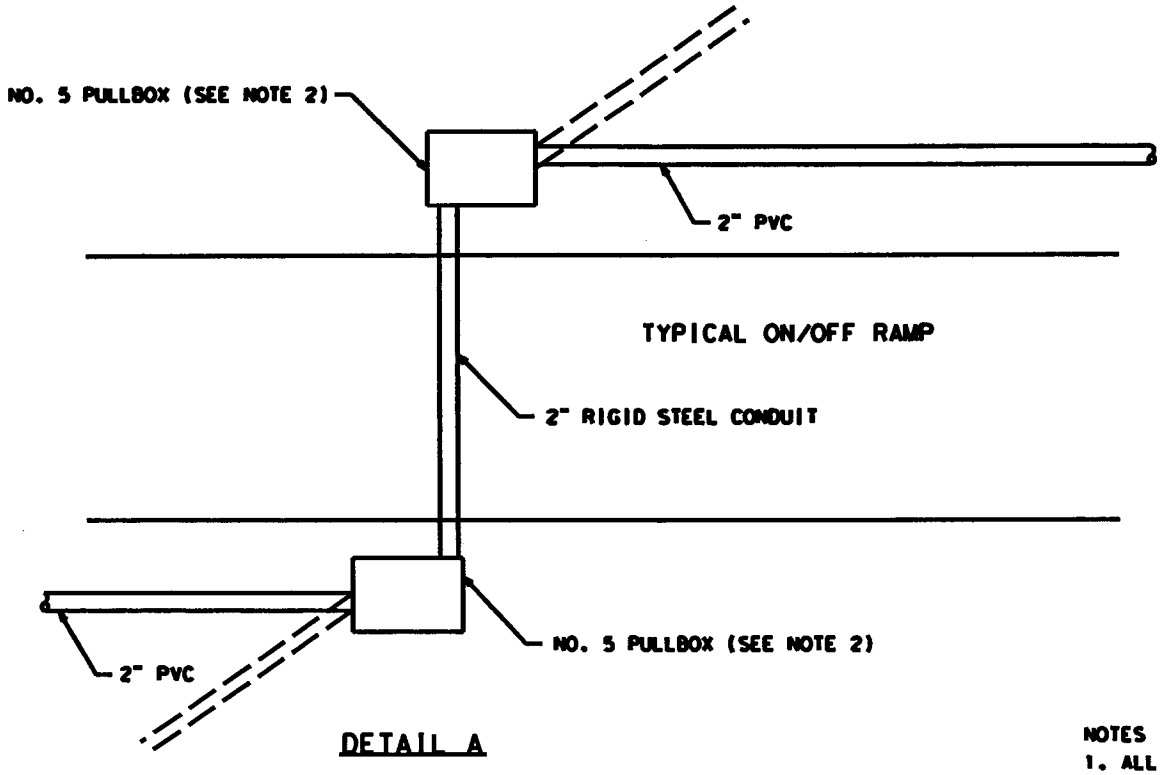

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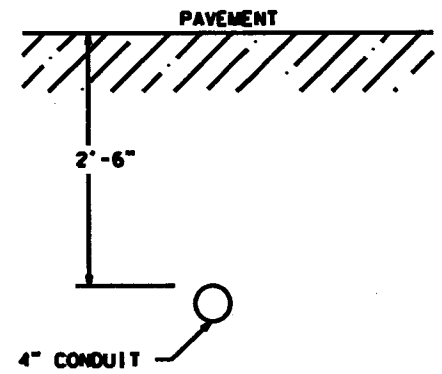
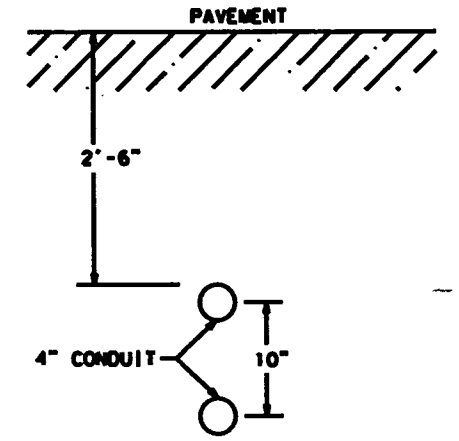
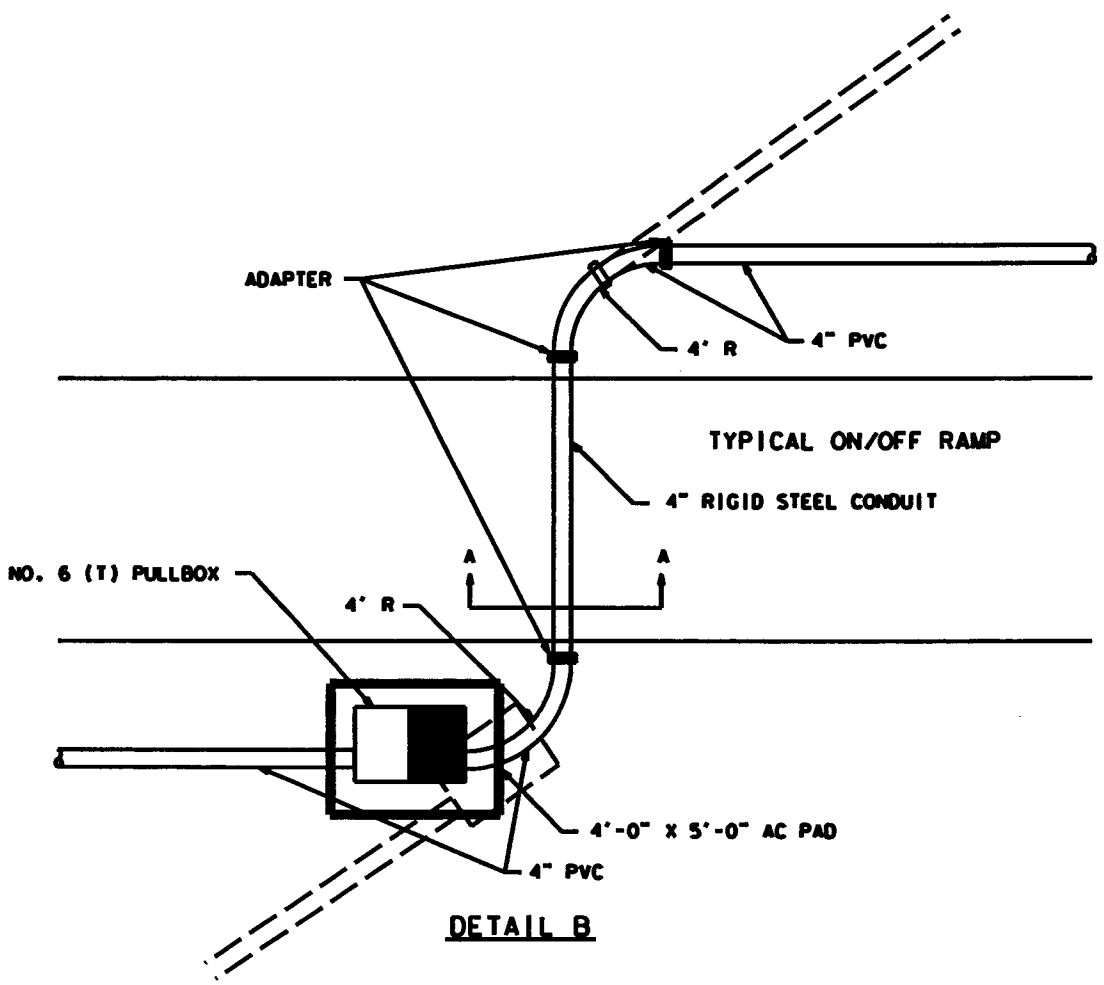


SECTION A-A



SECTION B-B

NOTES (THIS SHEET)
1. ALL CONDUITS SHALL BE 2'-6" BELOW FINISHED GRADE.
2. PLACE PULL BOX AS SHOWN ON THE PLANS.
3. ALL BENDS SHALL BE FACTORY BENDS.
4. BEND ANGLES AND CONDUIT DIRECTION VARY AS SHOWN IN PLANS.



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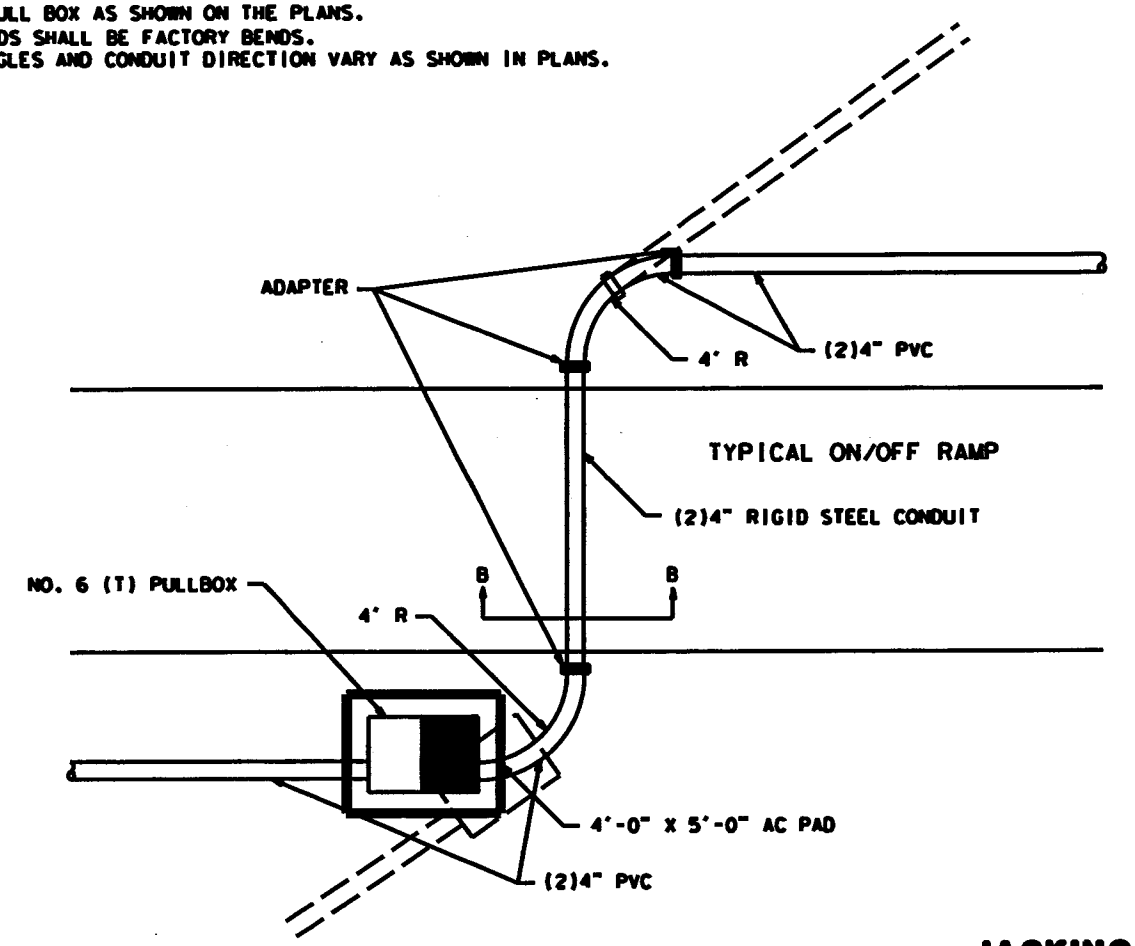

DETAIL C

JACKING DETAILS

NO SCALE

L-13

CALCULATED/DESIGNED BY	BJ	DATE 4/93	REVISED BY
CHECKED BY	AP	4/93	DATE REVISED

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

C02230U24.DGN WEI 1/12/03

FORM DC-OE-92-PF (REV. 3/98)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EA 0H226K

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ATTACHMENT C

PROJECT COST ESTIMATE

PROJECT COST ESTIMATE SUMMARY
ALTERNATIVE II

PROJECT DESCRIPTION:

Limits	**On I405 between SR-55 and I-5 in both Directions at PM 0.2 to 8.7**
Proposed Improvement (Scope)	**Install additional fiber optic cables in existing conduits and new electronic equipment, install two new CCTVs, upgrade existing CCTVs**

ROADWAY ITEMS	**$4,200,000**
STRUCTURE ITEMS	**$0**
SUBTOTAL CONSTRUCTION	**$4,200,000**
RIGHT OF WAY (Current Value)	**$0**
TOTAL PROJECT COST	**$4,200,000**

Reviewed by PSR Branch Chief	Signature Gary Slater	Date 8/31/05
Reviewed by District Program Advisor	Signature Henry Pham	Date 8/31/05
Approved by Project Manager	Signature Vinh Pham	Date 8/31/05

I. ROADWAY ITEMS

Section 1 Earthwork

Item Code	Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
160101	Clearing and Grubbing	1	LS	$30,000	$30,000	
				Total Earthwork		**$30,000**

Section 2 Pavement Structural Section

Total Pavement Structural Section **$0**

Section 3 Drainage

Contingencies

$2,000,000 x (10%) $200,000

Total Drainage **$200,000**

Section 4 Specialty Items

Item Code	Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
867041	Install communication conduits	1	LS	$200,000	$200,000	
860791	Install single mode fiber optic cable	1	LS	500,000	500,000	
017054	Install New CCTV	2	LS	40,000	80,000	
031699	Install communication data equipment	1	LS	300,000	300,000	
038297	Install communication video equipment	1	LS	300,000	300,000	
869039	Pull box	38	EA	500	19,000	
860991	Upgrade CCTV	6	EA	10,000	60,000	
869047	Splice Vault	38	EA	3,000	114,000	
066860	Maintain existing electrical system	1	LS	50,000	50,000	
869075	Testing and Document	1	LS	50,000	50,000	
074020	Water Pollution Control	1	LS	12,000	12,000	
074017	Prepare Water Pollution Control Program	1	LS	5,000	5,000	
066596	Addition Water Pollution Control	1	LS	4,000	4,000	
209801	MVP	8	EA	20,000	160,000	
832003	MBGR	8	EA	5,000	40,000	
	End Treatment for Guard rails	8	LS	20,000	160,000	
	Landscaping	1	LS	110,000	110,000	
				Total Specialty Items		**$2,164,000**

Section 5 Traffic Items

Item Code	Traffic Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
120100	Traffic Control Systems	1	LS	$50,000	50,000	
120090	Construction Area signs	1	LS	$10,000	10,000	
128650	Portable CMS	1	LS	$40,000	40,000	
066063	Traffic Management Plan	1	LS	32,000	32,000	
				Total Traffic Items		**$132,000**

SUBTOTAL SECTIONS 1 thru 5 **$2,526,000**

Section 6 Minor Items

	Item Cost	Section Cost
$2,526,000 x (10%) (Subtotal Sections 1 thru 5)	$252,600	
Total Minor items		**$252,600**

Section 7 Roadway Mobilization

$2,778,600 x (10%) (Subtotal Sections 1 thru 6)	$277,860	
Total Roadway Mobilization		**$277,860**

Section 8 Roadway Additions

Supplemental

$2,778,600 x (10%) (Subtotal Sections 1 thru 6)	$277,860

Contingencies

$2,778,600 x (25%) (Subtotal Sections 1 thru 6)	$694,650

Suplemental Work

Item Code		Quantity	Unit	Unit Price	Item Cost	Section Cost
066105	RE Office	1	LS	$80,000	80,000	
066596	Additional Water Pollution Controls	1	LS	10,000	10,000	
066070	Maintain Traffic/Detour	1	LS	40,000	40,000	
066062	CHP/COZEEP	1	LS	20,000	20,000	
	local Assistance	1	LS	20,000	20,000	

Total Roadway Additions **$170,000**

TOTAL ROADWAY ITEMS **$4,200,000**
(Subtotal Sections 1 thru 8)

II. STRUCTURES ITEMS

TOTAL STRUCTURES ITEMS **$0**

III. RIGHT OF WAY ITEMS

TOTAL RIGHT OF WAY ITEMS **$0**

ATTACHMENT D

TASAS (TABLE B)

LOCATION DESCRIPTION	RA GRP (RUS)	*-NUMBER OF ACCIDENTS/SIGNIFICANCE* TOT	FAT	INJ	F+I	MULTI VEH	WET	DARK	PER KLD INJ	*ADT * MAIN X-ST	TOTAL MV+ OR MVM	*-ACCIDENT RATE ACCS/MV+ OR MVM-* ACTUAL FAT	F+I	TOT	AVERAGE FAT	F+I	TOT
0405 ORA 0.230 THRU ORA 008.699 NORTH	H	974	1	221	222	849	44	226	2	120.0	1113.73	.001	.20	.87	.005	.32	1.04
12-0001 8.470M 01-04-01 04-03-31 36 MO	NA								332								
0405 ORA 0.230 THRU ORA 008.699 SOUTH	H	668	4	178	182	578	28	210	4	120.0	1113.73	.004	.16	.60	.005	.32	1.04
12-0001 8.470M 01-04-01 04-03-31 36 MO	NA								287								

1
AXR251-A 07-22-05

TASAS TABLE B SELECTIVE ACCIDENT RATE CALCULATION
REQUEST ACTIVITY REPORT

PAGE 1

MESSAGE	DT	REQ NO	A S C	L T H	RTE	D I B	TIME PERIOD FROM	TIME PERIOD TO	SELECT LOCATION BEGIN	SELECT LOCATION END	S C I	SEQ 123	R T	A P	AVE RATE	PC IN	PC FA	ADT MAIN	ADT XST	R T	RR UA	PR DT
0* * * * *	12	0001	C	H	405	B	04/01/01	03/31/04 ORA	000.230-ORA	008.700	I											12

ATTACHMENT E

Preliminary Environmental Analysis Report (PEAR)

Caltrans Metric

Preliminary Environmental Analysis Report

Project Information

District 12 County ORA Route I- 405; SR605; SR91; SR73; and SR55

PM I-405 (1.0 –8.7, 8.7-12.6; 20.8-24.2); SR-605 (R0.0 – R1.6); SR-91 (R0.0-R2.8); SR-73 (PM 26.1- 28.0); and SR-55 (R6.0-R9.7)

Eas 0H225K, 0H226, 0H227, 0H242K, and 0H243K

Project Title: Install Fiber Optic Cables and CCTVs

Project Manager Vinh Pham Phone # (949) 724-2097

Project Engineer Peter Ngo; Alex Kalbasi; Pauline Nguyen/ Henry Pham; Phone # (949) 936-3494; 3470

Environmental Branch Chief Praveen Gupta Phone # (949) 724-2243

Environmental Planner Generalist Iffat Qamar Phone # (949) 724-2886

Project Description

Purpose and Need:

For increased productivity and financial growth, there is a need to improve the capability to transmit and receive data and video information between the Department of Transportation's Traffic Management Center (TMC) and field elements along I-405, SR-605, SR-91, SR-73, and SR-55. The TMC in District 12 processes transportation information for these purposes. It requires collecting large amounts of data from different sources, processing them into useful information and disseminating this data to various stakeholders. District 12 uses fiber optic cables (FOC) to bring traffic information from field elements including closed circuit television (CCTV), Change Message Sign (CMS), Ramp Metering Station (RMS), Traffic Monitoring Station (TMS), Traffic Signal (TS) and from various cities to TMC to monitor traffic incidents on various routes.

The purpose of these projects is to replace old FOC system with the new FOC system, and install additional FOCs by re-using the existing conduits and poles, and upgrade CCTVs at various locations on these routes to improve their capacity and increase their operative range. These projects would help California Highway Patrol (CHP) to monitor traffic on freeways, to shorten the response time to incidents on these routes, and to simplify maintenance procedures.

Description of work:

The proposed projects include installing new FOCs in the existing conduits and replacing old CCTV cameras with new cameras on the existing poles. The work will take place on I-405 (PM 1.0 –8.7, 8.7-12.6; 20.8-24.2), SR-605 (PM R0.0-R1.6), SR-91 (PM R0.0-R2.8), SR-73 (PM 26.1- 28.0), and SR-55 (PM R6.0-R9.7) in the cities of Irvine and Santa Ana. The existing conduits are 4-inch in diameter and buried 3-feet underground. The work will not involve any modification to these conduits. However, the work will involve trenching of two 4-inch conduits at Bear Street to connect two existing sections. The work will not involve any drainage, utility, railroad, right of way acquisition, and construction easements.

Alternatives:

Two alternatives have been considered for these projects. The first alternative is the "No Build" alternative which retains the existing FOC and CCTV communication systems. The second alternative is described in the "Description of Work" section listed previously.

Anticipated Environmental Approval

CEQA	NEPA
☒ Categorical/Statutory Exemption	☒ Programmatic Categorical Exclusion
☐ Negative Declaration	☐ Finding of No Significant Impact
☐ Environmental Impact Report	☐ Environmental Impact Statement

The anticipated document for the proposed project is a Categorical Exemption for CEQA and Programmatic Categorical Exclusion for NEPA, which would require a minimum of 90 days for preparation. The proposed project is not anticipated to result in environmental constraints.

PSR Summary Statement (to be included with the Environmental Compliance Section)

The projects would be State/Federal funded projects. The anticipated environmental document under CEQA Class 1c and NEPA compliance would be a joint Categorical Exemption/ Programmatic Categorical Exclusion document (CE/PCE) with Caltrans as the Lead Agency for CEQA and the Federal Highway Administration (FHWA) as the Lead Agency for NEPA. It would require a minimum of 90 days for preparation of CE/PCE.

If the individual projects would require more than 0.4 hectares (one acre) of Disturbed Soil Area (DSA), then a Storm Water Pollution Prevention Plan (SWPPP) will be required. If the individual projects would require less than one acre of DSA, a Water Pollution Control Program (WPCP) must be prepared and implemented. A Storm Water Data Report must be prepared for these projects.

The projects must conform to all applicable water quality regulations as directed by National Pollutant Discharge Elimination System (NPDES) Storm Unit and/or permit requirements of the State Water Resources Control Board (SWRCB), Santa Ana River Water Quality Control Board (SARWQCB), and the Caltrans Storm Water Management Plan (May 2003), and any subsequent revisions and/or additional requirements at the time of construction. The contractor must submit a SWPPP to Caltrans for review and approval within 30 days of award of the contract. The review of a SWPPP generally requires 40 days (15 days for Caltrans review, 15 days to resubmit, and 10 days for final review). In addition, a notice of construction (NOC) must be submitted to the Santa Ana RWQCB at least 30 days prior to any soil-disturbing activites.

Based on the project information/plans provided, it is Environmental Planning's understanding that no work will occur in the East Garden Grove Wintersburg Channel, Ocean View Channel, Greenville Banning Channel, San Diego Creek, San Diego Channel, and the Santa Ana River. If work occurs in these water bodies, Environmental Planning must be notified immediately to reevaluate the impacts on the biological resources.

Appropriate Best Management Practices (BMPs) must be implemented in order to avoid impacting the water quality of the above channels/rivers.

Lead investigations may be required for any excavations on unpaved areas. Any subsequent changes in project scope may require additional environmental review.

Special Considerations

No work should occur in the East Garden Grove Wintersburg Channel, Ocean View Channel, Greenville Banning Channel, San Diego Creek, San Diego Channel, and the Santa Ana River. If the work occurs, it will need permits from the resource agencies which may take six months to one years and may delay the project delivery.

Anticipated Project Mitigation

No mitigation is anticipated.

Disclaimer

This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are approximate and are based on cursory analysis of probable effects related directly to the projects' impacts. This report is to provide a preliminary level of environmental analysis to supplement the Project Study Reports. Changes in project scopes, alternatives, or environmental laws, processes, or permit requirements after the completion of the PEAR would require additional evaluation later in the projects' development process.

Reviewed by:

Environmental Branch Chief — Date: 8/8/05

Project Manager — Date: _____

Environmental Technical Reports or Studies Required

	Study	Document	N/A
Community Impact Study	☐	☐	☒
Farmland	☐	☐	☒
Section 4(f) Evaluation	☐	☐	☒
Visual Resources	☐	☐	☒
Water Quality	☐	☐	☒
Floodplain Evaluation	☐	☐	☒
Noise Study	☐	☐	☒
Air Quality Study	☐	☐	☒
Paleontology	☐	☐	☒
Geology	☐	☐	☒
Wild and Scenic River Consistency	☐	☐	☒
Cumulative Impacts	☐	☐	☒
Cultural			
ASR	☐	☒	☐
HSR	☐	☐	☒
HRER	☐	☐	☒
HPSR	☐	☐	☒
Section 106 / SHPO	☐	☐	☒
Native American Coordination	☐	☐	☒
Other			
Literature Review	☐	☒	☐
Data Recovery Plan	☐	☐	☒
Hazardous Waste			
ISA (Additional)	☐	☒	☐
PSI	☐	☐	☒
Other			
-Lead Investigation	☐	☒	☐
Biological			
Endangered Species (Federal)	☐	☐	☒
Endangered Species (State)	☐	☐	☒
Species of Concern (CNPS, USFS, BLM, S, F)	☐	☐	☒
Biological Assessment (USFWS, NMFS, State)	☐	☐	☒
Wetlands	☐	☐	☒
Invasive Species	☐	☐	☒
Natural Environment Study	☐	☒	☐
NEPA 404 Coordination	☐	☐	☒
Other:			
May require Section 7 consultation	☐	☐	☒
Permits			
401 Permit Coordination	☐	☐	☒
404 Permit Coordination	☐	☐	☒
1601 Permit Coordination	☐	☐	☒
City/County Coastal Permit Coordination	☐	☐	☒
State Coastal Permit Coordination	☐	☐	☒
NPDES Coordination	☐	☒	☐
US Coast Guard (Section 10)	☐	☐	☒

Project Screening:

1. Project Features: **New R/W?** No **Excavation?** No **Railroad Involvement?** No **Structure demolition / modification?** No **Subsurface utility relocation?** No

Project Setting: The projects are located on Interstate Route 405 (PM 1.0 –8.7, 8.7-12.6; 20.8-24.2); SR-605 (PM R0.0 – R1.6); SR-91 (PM R0.0-R2.8); SR-73 (PM 26.1- 28.0); and SR-55 (PM R6.0-R9.7) in the cities of Costa Mesa, Irvine, and Santa Ana.

Rural or Urban: Urbanized area.
Current Land Issues: Transportation
Adjacent land uses: Commercial and residential
Existing landscaping/planting: Native vegetation

Discussion of Technical Review

Socio-Economic and Community Impacts. The projects are not expected to have an adverse impact on the local communities and their economies. The projects' work will remain within the existing Caltrans right of way (ROW). No displacements, relocation, or partial acquisitions will occur as part of the project. There will not be disproportionate impact on any ethnic or minority group. No further study is required.

Farmlands. There are no farmlands present within or near the projects' limits. A site visit and a review of local maps verified this.

Section 4(f) Impacts. This proposed projects would be conducted entirely within State right of way and will have no temporary and permanent "use" of publicly owned parks and recreation areas, wildlife refuge, or historic properties. Therefore, the projects will have no impact on Section 4(f) of the Department of Transportation Act of 1966 resources.

Visual Effects. The projects will not have a measurable visual impact to viewers from the road as well as of the road. A visual impact study is not required for these projects.

Water Quality and Erosion. The projects are covered under the Caltrans Statewide NPDES Permit (Order No. 99-06-DWQ, NPDES No. CAS000002) issued by the State Water Resources Control Board (SWRCB) and are located within the jurisdiction of Santa Ana Regional Water Quality Control Board (SARWQCB). The projects must conform to all applicable water quality regulations and/or permit requirements of the SWRCB, SARWQCB, and the Caltrans Storm Water Management Plan (May 2003), and any subsequent revisions and/or additional requirements at the time of construction.

At this time the amount of Disturbed Soil Area (DSA) required for these projects is not known. If each project will require one or more acres of Disturbed Soil Area (DSA), then a Storm Water Pollution Prevention Plan (SWPPP) must be prepared and implemented. If the projects will require less than one acre each of DSA, a Water Pollution Control Program (WPCP) must be prepared and implemented to mitigate construction site storm and non-storm water discharges.

The proposed projects involve work near the Santa Ana River and the San Diego Creek. The Santa Ana River is listed as an Impaired Water Body under Section 303(d) of the Clean Water Act, for pathogens. Appropriate Best Management Practices (BMPs) must be implemented in

order to avoid impacting the water quality of the above listed water bodies. A Storm Water Data Report must be prepared for this project.

Floodplain: A review of the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map indicates that the project areas are not located within a 100-year floodplain. A floodplain evaluation report will not be needed.

Air Quality: The projects will not increase traffic capacity in the project area. The installation of new fiber optic cables in the existing conduits and replacement of the old closed circuit television cameras with new cameras on the existing poles is required to manage traffic data more effectively. The projects will facilitate better traffic management and will resolve congestion issues equating improved air quality. No further study is required.

Noise Impacts: The projects are determined not to be a Type 1 projects as defined in the Caltrans Traffic Noise Analysis Protocol (CaTNAP). It was concluded that no increase in noise level will occur due to these projects. No noise study is recommended.

Paleontology: Due to the shallow depth of the ground disturbance (3 feet) in previously disturbed soil, this project has no potential to impact paleontological resources.

Geology: A geological investigation is not necessary for projects of this nature. These projects require to dig to a depth of 3 feet below the surface.

Wild and Scenic River: No wild or scenic rivers are located in the project area.

Cumulative Impacts. The projects are not anticipated to result in cumulative impacts. These are basic maintenance projects. No further studies are required.

Cultural Resources: No cultural resources are known to be located within the projects' areas. The projects do not have potential to affect historic properties, and are exempt from further review pursuant to Stipulation VII and Attachment 2 (Class number 21) of the Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act (PA). However, if cultural and human remains are encountered during construction activities, all work must stop until a qualified Caltrans Archaeologist can assess the find.

Native American Coordination. The Native American Heritage Commission (NAHC) has not been consulted with regard to these projects. However, should any human remains be discovered during projects' activities, all work must cease until the Caltrans District Archeologist can assess the find. If the remains are determined to be prehistoric, the Coroner will notify the NAHC who will then notify the Most Likely Descendent (MLD).

Hazardous Waste/Materials. The visual site inspections observed no evidence of hazardous waste contamination. Further studies would be done and appropriate measures would be taken during the PS&E phase of these projects to deal with any excavation of unpaved areas or removal of traffic stripes.

Biological Resources. The proposed projects are not anticipated to impact sensitive biological resources. Formal consultation with the resource agencies for impacts to sensitive species is not anticipated at this time. These conclusions are based on the information provided in site plans, a

windshield survey of the project area, and a search of the Department of Fish and Game's California Natural Diversity Database (CNDDB) for the projects areas. The projects' areas are urbanized; however, they do contain the San Diego Creek, San Diego Creek channel, East Garden Grove Wintersburg Channel, Ocean View Channel, Greenville Banning Channel, and the Santa Ana River. It is the understanding of Environmental Planning that Best Management Practices (BMPs) are to be implemented during projects work in order to ensure that construction debris/fallouts do not enter either these channels or any v-ditches within the projects areas. Projects' information provided to Environmental Planning indicates that drainage work will not occur, work in the channels will not occur, and vegetation will not be removed. Based on these proposed scopes of work, permits from the resource agencies are not anticipated.

Wetlands. According to Executive Order 11990, an avoidance alternative analysis is required for impacts to wetlands unless there is no practicable alternative available. At this time, jurisdictional waters of the U.S. and wetlands are contained within the project limits and have the potential to be impacted by project activities. However, it is anticipated that with BMPs, these channels and/or ditch areas will not be impacted. Impacts include fill material entering the waterways or trenching within the waterways. A delineation of jurisdictional wetlands and waters of the United States is not necessary at this time given the proposed scope of work.

Invasive Plant Species. According to Executive Order 13112, Invasive Species, it is the policy of the Department of Transportation (Caltrans) to limit the use of invasive species within the state right-of-way. Carpobrotus edulis (Hottentot Fig) is located within the project area. Carpobrotus edulis is found on the CalEPPC List of Exotic Pest Plants of Greatest Ecological Concern (List A-1: Most Invasive Wildland Pest Plants) containing species that are not native to California and should not be used for planting on California Department of Transportation right-of-ways due to potential adverse effects on native ecosystems. It is essential that any Carpobrotus edulis removed during clearing and grubbing not be disposed in the existing v-ditches located along I-405. Carpobrotus edulis is known to spread by easily rooted cuttings and also by seeds that can be carried by animals. A nearby creek, drainage channel, or other waterway has the potential to act as a movement corridor, spreading the plant from its original planted location to other areas that may be quite distant, and may be considered to be in a more natural state.

Right-of-Way Relocation or Staging Area. The projects will take place entirely within the Caltrans right-of-way. No new right-of-way or easements are required. Equipment and material staging areas will be determined by the contractor. All staging and storage areas should be evaluated by Environmental Planning prior to projects implementation.

Mitigation (*For standard PSR only*). See Section "Anticipated Project Mitigation" of this PEAR.

Permits. Except for the Caltrans Statewide NPDES permit, no other permits would be required by the project.

Coastal Zone. These projects are not located within the Coastal Zone under the jurisdiction of the California Coastal Commission.

List of Preparers

Name and Area of Review	Date
Biological Review by Arianne Glagola	7/14/05, 8/04/05
Cultural Review by Charles Baker	7/14/05, 7/29/05

ATTACHMENT B – Resources by WBS Code

See attached WBS estimates in excel spreadsheet

Attachment A - PEAR Mitigation and Compliance Cost Estimate*

Dist.-Co.-Rte.-PM: 12-ORA-10.1/16.9; 0.2/8.7; R5.99/10.45
EA: 0H225K, 0H226K, 0H227K, 0H242K, 0H243K

Project Description: The proposed projects include installing new FO cables in the existing conduits and replacing old CCTV cameras with new cameras on the existing poles. The work will take place on I-405 (PM 1.0 –8.7, 8.7-12.6; 20.8-24.2), SR-605 (PM R0.0-R1.6), SR-91 (PM R0.0-R2.8), SR-73 (PM 26.1- 28.0), and SR-55 (PM R6.0-R9.7) in the cities of Irvine and Santa Ana. The existing conduits are 4-inch in diameter and buried 3-feet underground. The work will not involve any modification to these conduits. However, the work will involve trenching of a few 4-inch conduits to connect two existing sections. The work will not involve any drainage, utility, railroad, right of way acquisition, and construction easements.

Person completing form/District Branch: Iffat Qamar, Environmental Planning, Branch A

Project Manager: Vinh Pham **Phone number**: (949) 936-3494 / 3470
Date: August 8, 2005

	Mitigation			Compliance
	Project Feature[1]	Enviro. Obligation[2]	Statutory Require.[3]	Permit & Agreement[4]
Fish & Game 1601 Agreement	N/A	N/A	N/A	N/A
Coastal Development Permit	N/A	N/A	N/A	N/A
State Lands Agreement	N/A	N/A	N/A	N/A
NPDES Permit	1.5-2%of total project cost	N/A	N/A	N/A
COE 404 Permit- Nationwide	N/A	N/A	N/A	N/A
COE 404 Permit- Individual	N/A	N/A	N/A	N/A
COE Section 10 Permit	N/A	N/A	N/A	N/A
COE Section 9 Permit	N/A	N/A	N/A	N/A
RWCQB 401	N/A	N/A	N/A	N/A
Noise attenuation	N/A	N/A		N/A
Special landscaping	N/A	N/A	N/A	N/A
Archaeological	N/A	N/A	N/A	N/A
Biological	N/A	N/A	N/A	N/A
Historical	N/A	N/A	N/A	N/A
Scenic resources	N/A	N/A	N/A	N/A
Wetland/riparian	N/A	N/A	N/A	N/A
Hazardous Waste	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A
TOTAL (Enter zeros if no cost)		---0---	---0---	---0---

- Costs are to be reported in $1,000s.
- Costs are to include all costs to complete the commitment including: capital outlay and staff support; cost of right-of-way or easements; long-term monitoring and reporting, and; any follow-up maintenance.
- **A copy of the completed form shall be included in the project approval report (Project Report/PSSR), and a copy sent to Headquarters Environmental Program, attention: John Hebner**.

[1] Mitigation Caltrans would normally do if not required by a permit or environmental agreement.
[2] Mitigation Caltrans would not normally do but is required by conditions of a permit or environmental agreement.
[3] Mitigation Caltrans would not normally do and is not required by a permit or Enviro. agreement but is required by a law.
[4] Non-mitigation Caltrans would not normally do but is required by conditions of a permit or agreement.

Water Quality & Floodplain Review by Ryan Hansen	7/14/05, 8/04/05
Hazardous Waste Review by Reza Aurasteh	7/14/05, 8/04/05
Environmental Generalist – Iffat Qamar	7/11/05, 8/5/05
Chief Environmental Planning Branch A – Praveen Gupta	7/11/05, 8/8/05

ATTACHMENT F

Storm Water Data Report

APPENDIX E

Short Form - Storm Water Data Report

Dist-County-Route 12-ORA-405
Post Mile Limits: 0.2 to 8.7
Project Type:
EA: 0H226K
RU: TMC
Program Identification: 20.10.201.315
Phases: ✓ PID
❑ PA/ED
❑ PS&E

Regional Water Quality Control Board(s): Santa Ana RWQCB

1. Is the project required to consider incorporating Treatment BMPs? Yes ❑ No ✓
2. Does the project disturb more than 0.1 hectares of soil? Yes ❑ No ✓
3. Is the project part of a Common Plan of Development? Yes ❑ No ✓
4. Does the project potentially create permanent water quality impacts? Yes ❑ No ✓
5. Does the project require a notification of ADL reuse? Yes ❑ No ✓

If the answer to any of the preceding questions is "Yes", prepare a Long Form - Storm Water Data Report.

Estimated Construction Start Date: 1/2009 Construction Completion Date: 12/2009

Separate Dewatering Permit (if yes, permit number) Yes ❑ Permit # _____ No ✓ N/A ❑

This Short Form - Storm Water Data Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Alex Kalbasi 8/04/05
Alex Kalbasi, Project Engineer/Landscape Architect *Date*

I have reviewed the storm water quality design issues and find this report to be complete, current, and accurate:

8/31/05
Grace Pina-Garrett, District/Regional SW Coordinator or Designee

STAMP
[Required for PS&E only]
Date

1. Project Description

This Project Study Report (PSR) proposes to install additional fiber optic cables in existing conduits and new electronic equipment, install two new CCTVs, upgrade CCTVs on I-405 at various locations between PM 0.2 and PM 8.7. The total estimate cost for this project is $4,200,000.

This project will improve the capability to transmit and receive data and video information between the Department's Traffic Management Center (TMC) and field elements, to help monitor and manage traffic information more efficiently, resulting in improving traffic flow and reducing traffic delay.

The proposed FO on I-405 will be installed in the existing conduits on NB & SB I-405. The existing conduits are 4-in in diameter and buried 3-feet underground. No modification of conduits is necessary.

In addition, this alternative proposes to replace existing CCTVs and equipment on NB & SB I-405 at various locations between PM 0.2 and 8.7. The upgraded CCTVs will be installed on existing 45 feet high poles. No lane closure will be necessary for upgrading CCTVs. The upgraded CCTVs and equipment will be installed at the same locations where the existing CCTVs are located.

This proposed project will also install 2 new CCTVs with MVPs on SB I-405 at PM 2.63 near Sand Canyon Ave. and the other one at PM 2.20 near SR-133.

There is no drainage work involved in this project. All work will be done within state right of way.

During construction of this project, no significant construction issues are anticipated.
The disturbed areas (DSA):

1) Foundations for 2 CCTVs on SB I-405 at PM 2.63 near Sand Canyon Ave. and the other one at PM 2.20 near SR-133. Estimated area is 2 X 1m X 1m X 1m (2 cubic meters).
2) Trenching on shoulder of I-405: 0.2m X 0.5km (100 square meters)
3) MVP'S Area of work 2X7mX3m(42 square meters)

The total DSA is approximately 0.03 Hectares (0.05 Acres)

2. Construction Site BMPs

The project requires a WPCP to be implemented and during the design phase of the project, NPDES and construction Storm Water staff will be consulted to develop a strategy for implementing Construction site BMPs.

ATTACHMENT

- Evaluation Documentation Form
- Project Strip Map/ Locations
- Layout plans
- Draft Project Study Report (PSR)

DATE: 8/4/2005
EA: 0H22K

See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPS

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION FOR EXEMPTION
1.	Begin Project Evaluation regarding requirement for consideration of Treatment BMPs	√		Go to 2
2.	Is this an emergency or Safety project?		√	If **Yes**, go to 12. (Safety Projects must be funded from the 010 SHOPP Program). If **No**, continue to 3.
3.	Have TMDLs been established for surface waters within the project limits?		√	If **Yes**, contact the District/Regional NPDES coordinator to discuss the Department's participation in the TMDL (if Applicable), go to 11 or 4 (as determined by the NPDES Coordinator). _____ *(Dist./Reg. SW Coordinator initials)* If **No**, continue to 4.
4.	Is the project within an urban MS4?	√		If **Yes**, continue to 5. *(Irvine & Santa Ana)* If **No**, go to 12.
5.	Is the project directly or indirectly discharging to surface waters?	√		If **Yes**, continue to 6. If **No**, go to 12.
6.	Is it a new facility or major reconstruction?		√	If **Yes**, continue to 8. If **No**, go to 7.
7.	Will there be a change in line/grade or hydraulic capacity?		√	If **Yes**, continue to 8. If **No**, go to 10.
8.	Is the Disturbed Soil Area (DSA) created by the project greater than or equal to 1.2 hectares?			If **Yes**, continue to 11. If **No**, go to 9. _____ *(Total DSA quantity)*
9.	Is the project part of a Common Plan of Development?			If **Yes**, continue to 11. If **No**, go to 10.
10.	Are there any Pollution Control Requirements within the project limits? *(Contact your Dist./Reg. SW Coordinator)*		√ b	If **Yes**, continue to 11. If **No**, go to 12.
11.	Consider approved Treatment BMPs for the project.		See Sections 2.4 and either Section 5.5 or 6.5 for BMP Evaluation and Selection Process. Complete Checklist T-1 in this Appendix E.	
12.	Project is not required to consider Treatment BMPs. _____ *(Dist./Reg. SW Coord. Initials)* _____ *(Project Engineer Initials)* 8/31/05 *(Date)*	√	Document for Project Files by completing this form, and attaching it to the SWDR.	
13	End of checklist	√		

ATTACHMENT G

RIGHT OF WAY DATA SHEET

To: Henry Pham, Chief

Attn: Alex Kalbasi

Date: August 22, 2005
Dist: 12 Co: ORA Route: 405
PM: 0.2/8.7
EA.: 0H226K
Project Description: To install additional fiber optic cables in existing conduits, and new Electronic equipment, and upgrade CCTVs.

From: KATHY J. ANDERSON, Chief
R/W Project Coordination

Subject: CURRENT ESTIMATED RIGHT OF WAY COSTS

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on July 25, 2005, and the following assumptions and limiting conditions:

[ ] 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.

[ ] 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damage to any of the remainder parcels affected by the project.

[ ] 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

[x] 4. As per maps provided.

[ ] 5. We have determined there are no right of way functional involvement's in the proposed project at this time, as designed.

Right of Way Lead-time will require a minimum of 2 months after we begin Regular right of way (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 265), we will require a minimum of 2 months prior to the date of certification of the project.

KATHY J. ANDERSON, Chief
R/W Project Coordination, Local Programs
and Project Control
Irvine Office
Southern Right of Way Region

Attachments:

[x] Right of Way Data Sheet – Page one (always required)
[x] Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
[ ] Utility Information Sheet
[ ] Railroad Information Sheet

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY DATA SHEET

(Form #)

To: Henry Pham, Chief

Attention: Alex Kalbasi

Subject: Right of Way Data Sheet

Date August 22, 2005

Dist 12 Co ORA Rte 405 PM: 0.2/8.7

EA 0H226K

Project Description To install additional fiber optic cables in existing conduits and new electronic equipment, and upgrade CCTVs.

Alternate No. Preferred

This Alternate meets the criteria for a Design/Build project: Yes ☐ No ☒

1. **Right of Way Cost Estimate:** To be entered into PMCS COST RW1-5 Screens.

		Current Value Future Use	Escalation Rate		Escalated Value
A.	**Total Acquisition Cost:** Acquisition, including Excess Lands, Damages, and Goodwill.	$ 0.00		%	$ 0.00
	Project Permit Fees.	$ 0.00			$ 0.00
B.	**Utility Relocation** (State Share)	$ 0.00		%	$ 0.00
C.	**Relocation Assistance**	$ 0.00		%	$ 0.00
D.	**Clearance/Demolition**	$ 0.00		%	$ 0.00
E.	**Title and Escrow**	$ 0.00		%	$ 0.00
F.	**Total Estimated Cost**	$ 0.00			$ 0.00
G.	**Construction Contract Work**	$ 0.00			

2. **Current Date of Right of Way Certification** 3/1/08 T

3. **Parcel Data:** To be entered into PMCS EVNT RW Screen.

Type		Dual/Appr	Utilities	
X			U4-1	0
A			-2	0
B			-3	0
C			-4	0
D			U5-7	0
E	XXXX		-8	0
F	XXXX		-9	0

Total 0

RR Involvements	
None	None
C&M Agrmt	None
Svc Contract	None
Lic/RE/Clauses	None

Misc. R/W Work	
RAP Displ	N/A
Clear/Demo	N/A
Const Permits	N/A
Condemnation	N/A
Excess	0

Areas: R/W 0 No. Excess Parcels 0

Entered PMCS Screens 8/22/05 by SIMIN YAZDAN

Entered AGRE Screen (Railroad data only) ___/___/___ by _____

RIGHT OF WAY DATA SHEET (Cont.)

(Form #)

4. Are there any major items of construction contract work? Yes ☐ No X (If "Yes," explain.)

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.). No right of way required. X

6. Is there an effect on assessed valuation? Yes ☐ Not Significant ☐ No X (If "Yes," explain.)

7. Are utility facilities or rights of way affected?
Yes ☐ No X (If "Yes," attach Utility Information Sheet, Exhibit 4-EX-5.)
The following checked items may seriously impact lead time for utility relocation:
☐ Longitudinal policy conflict(s)
☐ Environmental concerns impacting acquisition of potential easements
☐ Power lines operating in excess of 50 KV and substations
(See attached Exhibit 4-EX-5 for explanation.)

8. Are Railroad facilities or rights of way affected?
Yes ☐ No X (If "Yes," attach Railroad Information Sheet, Exhibit 4-EX-6.)

9. Were any previously unidentified sites with hazardous waste and/or material found?
Yes ☐ None Evident X (If "Yes," attach memorandum per R/W Manual, Chapter 4, Section 4.01.10.00.)

10. Are RAP displacements required? Yes ☐ No X (If "Yes," provide the following information.)

No. of single family _____ No. of business/nonprofit _____

No. of multi-family _____ No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated _____N/A_____, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

11. Are there Material Borrow and/or Disposal Sites required? Yes ☐ No X (If "Yes," explain.)

12. Are there potential relinquishments and/or abandonments? Yes ☐ No X (If "Yes," explain.)

13. Are there any existing and/or potential airspace sites? Yes ☐ No X (If "Yes," explain.)

RIGHT OF WAY DATA SHEET (Cont.)

(Form #)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if district proposes less than PMCS lead-time and/or if significant pressures for project advancement are anticipated.)

Based on the R/W requirements on Page 1 of this Data Sheet, R/W will require a lead-time of ___2___ months from the date regular appraisals can begin to project certification.

In any event, RW Maps will require ___2___ months from Final Maps to project certification.

15. Is it anticipated that Caltrans staff will perform all Right of Way work? Yes X No ☐ (If "No," discuss.)

Evaluation Prepared By:

Right of Way:	Name Tony Pantoja	Date	8-22-05
Railroad:	Name for B. Bobosik	Date	8-22-05
Utilities:	Name	Date	8-22-05

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and I find this Data Sheet complete and current.

KATHY J. ANDERSON, Chief
R/W Project Coordination, Local Programs
and Project Control
Irvine Office
Southern Right of Way Region

8-22-05
Date

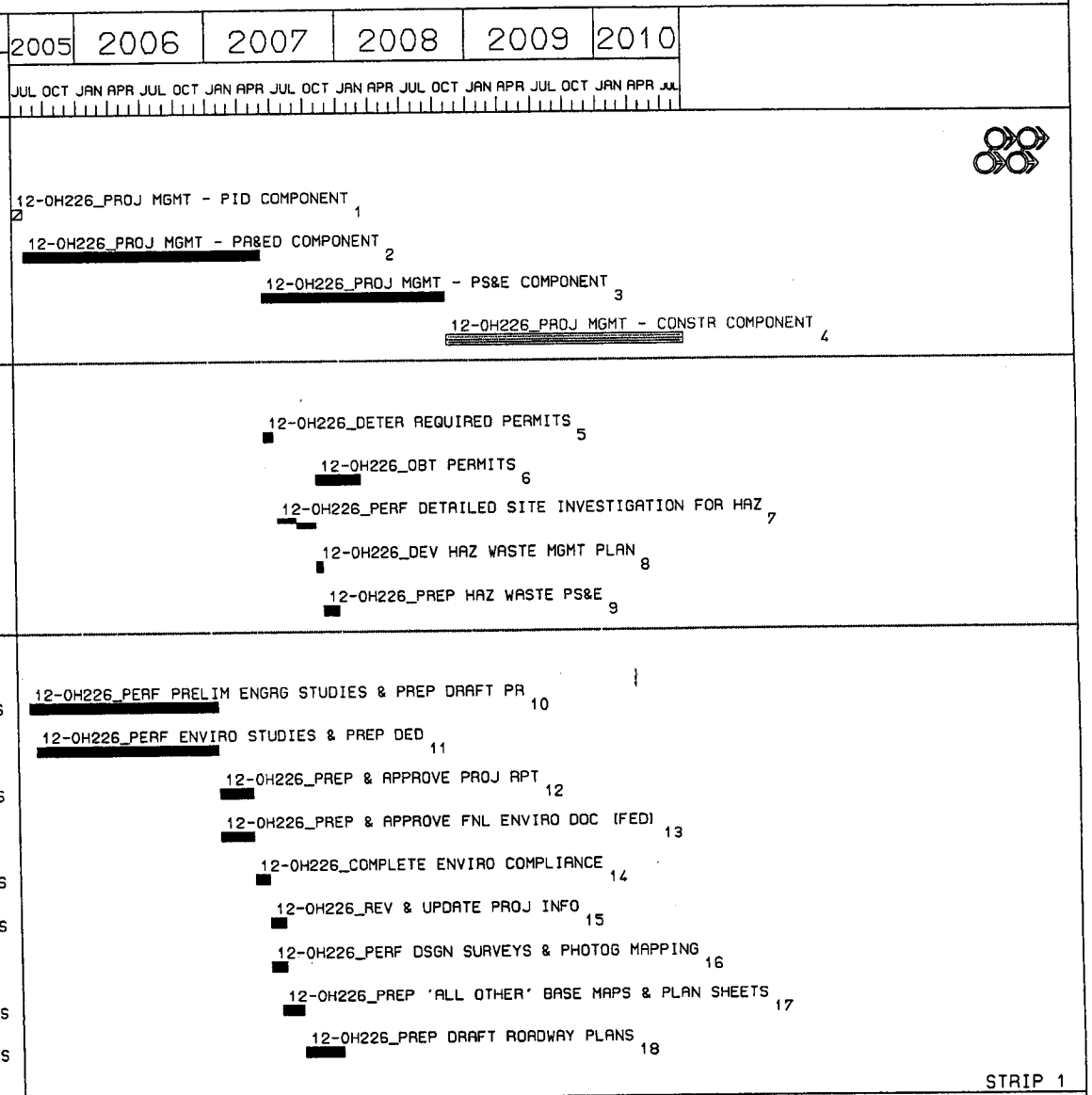
ATTACHMENT H

Project Schedule and Resource Requirement

PROJECT EA : 12-0H226_

GROUPED BY RESP. DIVISION

SER NO.	Task I.D.	Subnet I.D.	(%) Repo	Current Start	Current End	Durati (Days)	Task Manager
	PROJECT MANAGEMENT						
1	CT.12.CO.0H226_.0.100.	05	100	30JUN05	01AUG05	32.00	VPHAM
2	CT.12.CO.0H226_.0.100.	10	0	01AUG05	01JUN07	669.00	VPHAM
3	CT.12.CO.0H226_.0.100.	15	0	01JUN07	01NOV08	519.00	VPHAM
4	CT.12.CO.0H226_.0.100.	20	0	01NOV08	29AUG10	666.00	VPHAM
	PLANNING						
5	CT.12.CO.0H226_.2.205.	05	0	01JUN07	01JUL07	30.00	GUPTA
6	CT.12.CO.0H226_.2.205.	10	0	25OCT07	01MAR08	128.00	GUPTA
7	CT.12.CO.0H226_.3.235.	10	0	07JUL07	31AUG07	55.00	AURASTEH
8	CT.12.CO.0H226_.3.235.	15	0	25OCT07	12NOV07	18.00	AURASTEH
9	CT.12.CO.0H226_.3.235.	20	0	12NOV07	28DEC07	46.00	AURASTEH
	DESIGN						
10	CT.12.CO.0H226_.2.160		0	01AUG05	18JAN07	535.00	ENCINARES
11	CT.12.CO.0H226_.2.165		0	21AUG05	18JAN07	515.00	GUPTA
12	CT.12.CO.0H226_.2.180.	05	0	18JAN07	22APR07	94.00	ENCINARES
13	CT.12.CO.0H226_.2.180.	10	0	18JAN07	22APR07	94.00	GUPTA
14	CT.12.CO.0H226_.2.180.	15	0	21APR07	02JUN07	42.00	ENCINARES
15	CT.12.CO.0H226_.3.185.	05	0	01JUN07	17JUL07	46.00	ENCINARES
16	CT.12.CO.0H226_.3.185.	10	0	01JUN07	17JUL07	46.00	AYER
17	CT.12.CO.0H226_.3.185.	99	0	01JUL07	31AUG07	61.00	ENCINARES
18	CT.12.CO.0H226_.3.230.	05	0	31AUG07	19DEC07	110.00	ENCINARES



STRIP 1

BAR TYPES

current vs original PERCENT COMPLETE
SYMBOL FOR MILESTONE

HIGHLIGHTS

NORMAL
CRITICAL

ANNOTATION

TN

LAYOUT

Grouping on Level 1 by: Division-Tag c

CODES

TN Task Name

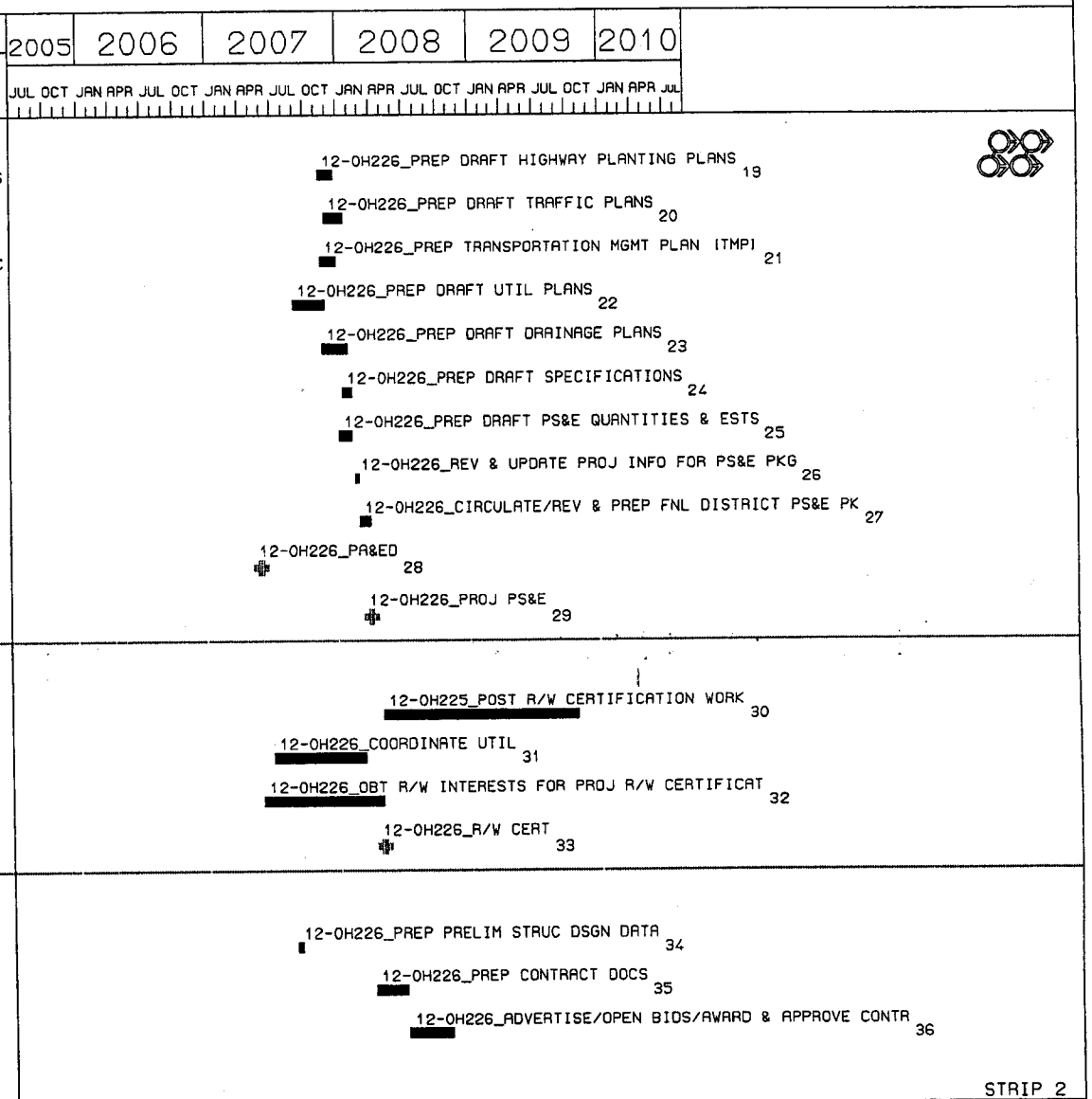
CALTRANS DISTRICT 12
12-0H226_
PROJECT MANAGER: V. PHAM

DATE OF REPORT: 06SEP05
REPORT NAME : BAR_AM_BYDIV

PROJECT EA : 12-0H226_

GROUPED BY RESP. DIVISION

SER NO.	Task I.D.	Subnet I.D.	(%) Repo	Current Start	Current End	Durati (Days)	Task Manager
19	CT.12.CO.0H226_.3.230.	10	0	10NOV07	26DEC07	46.00	ANKHASIRIS
20	CT.12.CO.0H226_.3.230.	15	0	27NOV07	21JAN08	55.00	LE
21	CT.12.CO.0H226_.3.230.	20	0	16NOV07	01JAN08	46.00	ALONSO RIC
22	CT.12.CO.0H226_.3.230.	25	0	31AUG07	30NOV07	91.00	ENCINARES
23	CT.12.CO.0H226_.3.230.	30	0	21NOV07	02FEB08	73.00	KAO
24	CT.12.CO.0H226_.3.230.	35	0	15JAN08	11FEB08	27.00	ENCINARES
25	CT.12.CO.0H226_.3.230.	40	0	06JAN08	12FEB08	37.00	ENCINARES
26	CT.12.CO.0H226_.3.230.	60	0	20FEB08	29FEB08	9.00	ENCINARES
27	CT.12.CO.0H226_.3.255		0	01MAR08	01APR08	31.00	ENCINARES
28	CT.12.CO.0H226_.M200		0	01JUN07	01JUN07	0.00	ENCINARES
29	CT.12.CO.0H226_.M380		0	01APR08	01APR08	0.00	ENCINARES
	RIGHT OF WAY						
30	CT.12.CO.0H225_.4.245		0	01MAY08	01NOV09	549.00	ANDERSON
31	CT.12.CO.0H226_.4.200		0	01JUL07	14MAR08	257.00	ENCINARES
32	CT.12.CO.0H226_.4.225		0	01JUN07	01MAY08	335.00	ANDERSON
33	CT.12.CO.0H226_.M410		0	01MAY08	01MAY08	0.00	ANDERSON
	ENGINEERING SERVICE CENTER						
34	CT.12.CO.0H226_.3.210		0	31AUG07	14SEP07	14.00	ESC
35	CT.12.CO.0H226_.3.260		0	01APR08	01JUL08	91.00	DES
36	CT.12.CO.0H226_.3.265		0	01JUL08	01NOV08	123.00	DES



STRIP 2

BAR TYPES

current vs original PERCENT COMPLETE SYMBOL FOR MILESTONE

HIGHLIGHTS

NORMAL
CRITICAL

ANNOTATION

IN

LAYOUT

Grouping on Level 1 by: Division-Tag c

CODES

TN Task Name

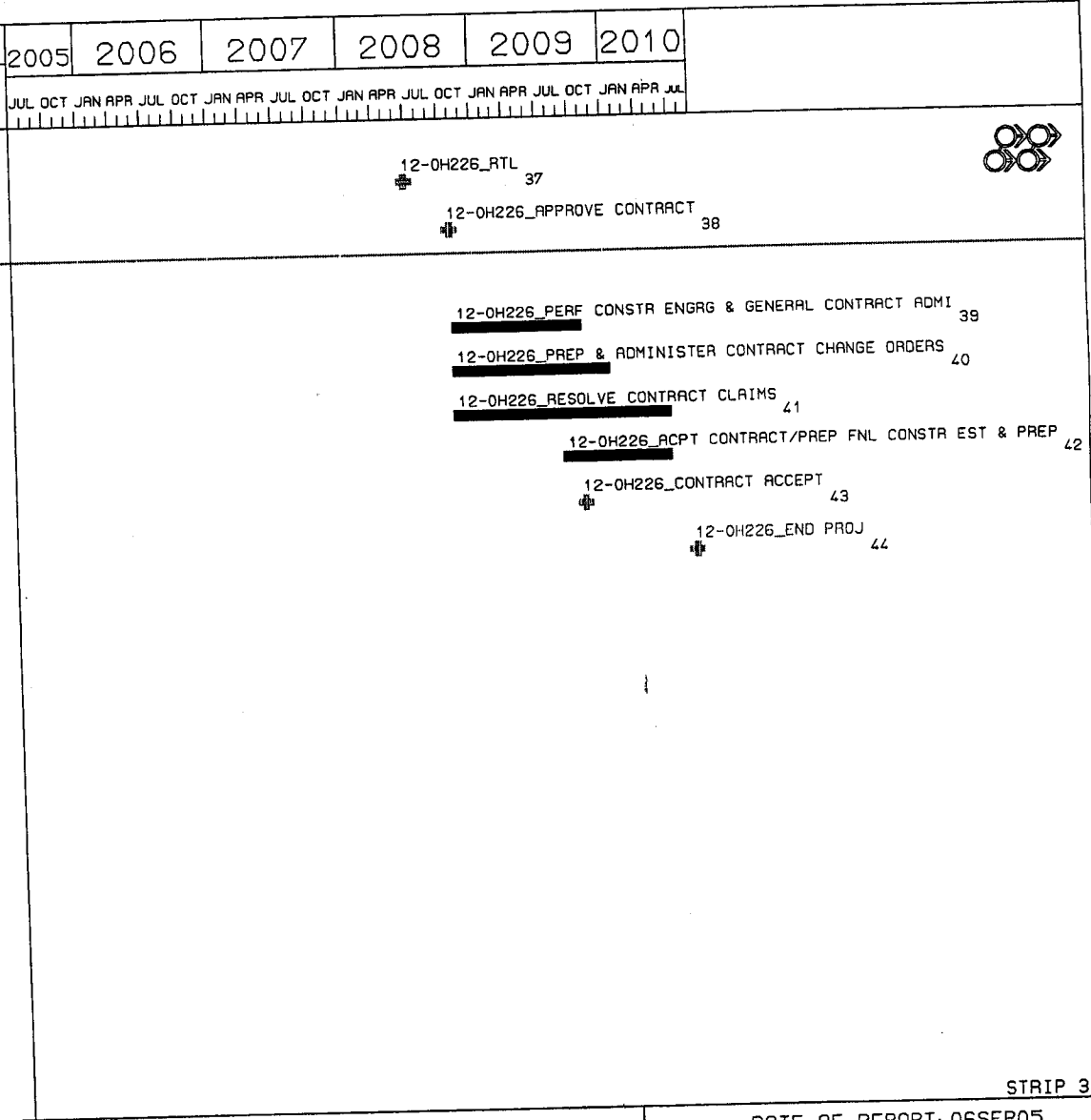
CALTRANS DISTRICT 12
12-0H226_
PROJECT MANAGER: V. PHAM

DATE OF REPORT: 06SEP05
REPORT NAME : BAR_AM_BYDIV

PROJECT EA : 12-0H226_

GROUPED BY RESP. DIVISION

SER NO.	Task I.D.	Subnet I.D.	(%) Repo	Current Start	Current End	Durati (Days)	Task Manager
37	CT. 12. CO. 0H226_. M460		0	01JUL08	01JUL08	0.00	ESC
38	CT. 12. CO. 0H226_. M500		0	01NOV08	01NOV08	0.00	ENCINARES
	CONSTRUCTION						
39	CT. 12. CO. 0H226_. 5. 270		0	01NOV08	01NOV09	365.00	ASGARI
40	CT. 12. CO. 0H226_. 5. 285		0	01NOV08	15JAN10	440.00	ASGARI
41	CT. 12. CO. 0H226_. 5. 290		0	01NOV08	29JUN10	605.00	ASGARI
42	CT. 12. CO. 0H226_. 5. 295		0	01SEP09	29JUN10	301.00	ASGARI
43	CT. 12. CO. 0H226_. M600		0	01NOV09	01NOV09	0.00	ASGARI
44	CT. 12. CO. 0H226_. M800		0	29AUG10	29AUG10	0.00	VPHAM



STRIP 3

BAR TYPES

current vs original PERCENT COMPLETE SYMBOL FOR MILESTONE

HIGHLIGHTS

NORMAL
CRITICAL

ANNOTATION

IN

LAYOUT

Grouping on level 1 by: Division-Tag c

CODES

TN Task Name

CALTRANS DISTRICT 12
12-0H226_
PROJECT MANAGER: V. PHAM

DATE OF REPORT: 06SEP05
REPORT NAME : BAR_AM_BYDIV

RESOURCE REQ.

09/06/2005

TASK NAME	IDENTIFIER	START DATES	END DATES	RESOURCES	DUR DAYS
12.601-MAINT					
12-0H226_PROJ MGMT - PID COMPONENT	CT.12.CO.0H226_.0.100.05	06/30/2005	08/01/2005	16	32.00
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	6	535.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	6	94.00
12-0H226_PREP PRELIM STRUC DSGN DATA	CT.12.CO.0H226_.3.210	08/31/2007	09/14/2007	8	14.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	18	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	12	365.00
Sub-Total				66	
12.510-CONST_OFC					
12-0H226_ADVERTISE/OPEN BIDS/AWARD & APPROVE CONTRAC	CT.12.CO.0H226_.3.265	07/01/2008	11/01/2008	18	123.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	64	365.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	38	440.00
12-0H226_ACPT CONTRACT/PREP FNL CONSTR EST & PREP FN	CT.12.CO.0H226_.5.295	09/01/2009	06/29/2010	1	301.00
Sub-Total				121	
12.511-CONST_OFC					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	3	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	3	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	12	666.00
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	6	535.00
12-0H226_PERF ENVIRO STUDIES & PREP DED	CT.12.CO.0H226_.2.165	08/21/2005	01/18/2007	6	515.00
12-0H226_REV & UPDATE PROJ INFO FOR PS&E PKG	CT.12.CO.0H226_.3.230.60	02/20/2008	02/29/2008	6	9.00
12-0H226_PREP HAZ WASTE PS&E	CT.12.CO.0H226_.3.235.20	11/12/2007	12/28/2007	34	46.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	12	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	36	365.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	12	440.00
12-0H226_RESOLVE CONTRACT CLAIMS	CT.12.CO.0H226_.5.290	11/01/2008	06/29/2010	12	605.00
Sub-Total				142	
12.512-CONST_OFC					
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	42	365.00
12-0H226_ACPT CONTRACT/PREP FNL CONSTR EST & PREP FN	CT.12.CO.0H226_.5.295	09/01/2009	06/29/2010	12	301.00
Sub-Total				54	
12.513-CONST_OFC-CONST_QUALITY_CONTROL					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	6	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	12	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	6	666.00
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	12	535.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	12	94.00
12-0H226_REV & UPDATE PROJ INFO	CT.12.CO.0H226_.3.185.05	06/01/2007	07/17/2007	115	46.00
12-0H226_PREP DRAFT ROADWAY PLANS	CT.12.CO.0H226_.3.230.05	08/31/2007	12/19/2007	24	110.00
12-0H226_PREP TRANSPORTATION MGMT PLAN [TMP]	CT.12.CO.0H226_.3.230.20	11/16/2007	01/01/2008	9	46.00
12-0H226_PREP DRAFT PS&E QUANTITIES & ESTS	CT.12.CO.0H226_.3.230.40	01/06/2008	02/12/2008	12	37.00
12-0H226_REV & UPDATE PROJ INFO FOR PS&E PKG	CT.12.CO.0H226_.3.230.60	02/20/2008	02/29/2008	36	9.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	30	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	27	365.00

12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	24	440.00
12-0H226_ACPT CONTRACT/PREP FNL CONSTR EST & PREP FN	CT.12.CO.0H226_.5.295	09/01/2009	06/29/2010	9	301.00
Sub-Total				335	
12.515-CONST_OFC-PISA_SYSTEM					
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	24	365.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	12	440.00
12-0H226_ACPT CONTRACT/PREP FNL CONSTR EST & PREP FN	CT.12.CO.0H226_.5.295	09/01/2009	06/29/2010	10	301.00
Sub-Total				46	
12.518-FIELD_CONST					
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	108	365.00
Sub-Total				108	
12.519-FIELD_CONST-ELEC					
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	90	365.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	6	440.00
12-0H226_ACPT CONTRACT/PREP FNL CONSTR EST & PREP FN	CT.12.CO.0H226_.5.295	09/01/2009	06/29/2010	9	301.00
Sub-Total				105	
12.540-FIELD_CONST					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	9	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	12	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	12	666.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	24	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	1500	365.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	83	440.00
12-0H226_ACPT CONTRACT/PREP FNL CONSTR EST & PREP FN	CT.12.CO.0H226_.5.295	09/01/2009	06/29/2010	99	301.00
Sub-Total				1739	
12.585-CONST_LAB					
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	9	666.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	90	365.00
Sub-Total				99	
12.586-CONST_LAB					
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	9	666.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	90	365.00
Sub-Total				99	
12.590-CONTRACT_CLAIMS					
12-0H226_RESOLVE CONTRACT CLAIMS	CT.12.CO.0H226_.5.290	11/01/2008	06/29/2010	24	605.00
Sub-Total				24	
12.595-LABOR_COMPLNCE					
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	36	365.00
Sub-Total				36	
12.599-CONST_SAFETY					
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	36	535.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	36	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	108	365.00
Sub-Total				180	
12.365-TRAF_OPS-N					

12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	40	535.00
12-0H226_PERF ENVIRO STUDIES & PREP DED	CT.12.CO.0H226_.2.165	08/21/2005	01/18/2007	40	515.00
12-0H226_PREP 'ALL OTHER' BASE MAPS & PLAN SHEETS	CT.12.CO.0H226_.3.185.99	07/01/2007	08/31/2007	60	61.00
12-0H226_PREP DRAFT TRAFFIC PLANS	CT.12.CO.0H226_.3.230.15	11/27/2007	01/21/2008	30	55.00
12-0H226_PREP TRANSPORTATION MGMT PLAN [TMP]	CT.12.CO.0H226_.3.230.20	11/16/2007	01/01/2008	80	46.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	40	365.00
Sub-Total				290	
12.366-TRAF_OPS-STUDIES					
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	36	535.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	36	94.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	72	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	72	365.00
Sub-Total				216	
12.367-TRAF_OPS-S					
12-0H226_PREP DRAFT SPECIFICATIONS	CT.12.CO.0H226_.3.230.35	01/15/2008	02/11/2008	72	27.00
Sub-Total				72	
12.368-TRAF_OPS-ENGR					
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	2	535.00
12-0H226_PREP DRAFT ROADWAY PLANS	CT.12.CO.0H226_.3.230.05	08/31/2007	12/19/2007	73	110.00
12-0H226_PREP DRAFT TRAFFIC PLANS	CT.12.CO.0H226_.3.230.15	11/27/2007	01/21/2008	73	55.00
12-0H226_PREP DRAFT PS&E QUANTITIES & ESTS	CT.12.CO.0H226_.3.230.40	01/06/2008	02/12/2008	24	37.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	48	31.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	0	440.00
Sub-Total				222	
12.369-TRAF_OPS-MGMT/FLD_OPS					
12-0H226_PREP TRANSPORTATION MGMT PLAN [TMP]	CT.12.CO.0H226_.3.230.20	11/16/2007	01/01/2008	114	46.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	53	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	4	365.00
Sub-Total				170	
12.379-TRAF_OPS					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	4	669.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	8	365.00
Sub-Total				12	
12.382-TRAF_ENGR-TRAF_SYS_DESIGN					
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	12	535.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	0	94.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	15	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	150	365.00
Sub-Total				177	
12.386-TRAF_ENGR-RAMP_METERING					
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	18	535.00
12-0H226_PREP DRAFT TRAFFIC PLANS	CT.12.CO.0H226_.3.230.15	11/27/2007	01/21/2008	20	55.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	20	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	25	365.00
Sub-Total				83	
12.390-ELEC_SYS-ELEC_DESIGN					
12-0H226_PROJ MGMT - PID COMPONENT	CT.12.CO.0H226_.0.100.05	06/30/2005	08/01/2005	20	32.00

12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	45	519.00
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	15	535.00
12-0H226_PERF ENVIRO STUDIES & PREP DED	CT.12.CO.0H226_.2.165	08/21/2005	01/18/2007	5	515.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	0	94.00
12-0H226_REV & UPDATE PROJ INFO	CT.12.CO.0H226_.3.185.05	06/01/2007	07/17/2007	255	46.00
12-0H226_PREP DRAFT TRAFFIC PLANS	CT.12.CO.0H226_.3.230.15	11/27/2007	01/21/2008	900	55.00
12-0H226_PREP DRAFT SPECIFICATIONS	CT.12.CO.0H226_.3.230.35	01/15/2008	02/11/2008	250	27.00
12-0H226_PREP DRAFT PS&E QUANTITIES & ESTS	CT.12.CO.0H226_.3.230.40	01/06/2008	02/12/2008	200	37.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	200	31.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	235	440.00
Sub-Total				2125	
12.391-ELEC_SYS-ELEC_SYS					
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	120	535.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	20	94.00
12-0H226_PREP DRAFT TRAFFIC PLANS	CT.12.CO.0H226_.3.230.15	11/27/2007	01/21/2008	1080	55.00
12-0H226_PREP DRAFT SPECIFICATIONS	CT.12.CO.0H226_.3.230.35	01/15/2008	02/11/2008	160	27.00
12-0H226_PREP DRAFT PS&E QUANTITIES & ESTS	CT.12.CO.0H226_.3.230.40	01/06/2008	02/12/2008	80	37.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	40	31.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	320	365.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	240	440.00
Sub-Total				2060	
12.285-PS&E/OE					
12-0H226_PREP DRAFT ROADWAY PLANS	CT.12.CO.0H226_.3.230.05	08/31/2007	12/19/2007	12	110.00
12-0H226_PREP DRAFT HIGHWAY PLANTING PLANS	CT.12.CO.0H226_.3.230.10	11/10/2007	12/26/2007	12	46.00
12-0H226_PREP DRAFT TRAFFIC PLANS	CT.12.CO.0H226_.3.230.15	11/27/2007	01/21/2008	12	55.00
12-0H226_PREP TRANSPORTATION MGMT PLAN [TMP]	CT.12.CO.0H226_.3.230.20	11/16/2007	01/01/2008	12	46.00
12-0H226_PREP DRAFT DRAINAGE PLANS	CT.12.CO.0H226_.3.230.30	11/21/2007	02/02/2008	12	73.00
12-0H226_PREP DRAFT SPECIFICATIONS	CT.12.CO.0H226_.3.230.35	01/15/2008	02/11/2008	12	27.00
12-0H226_PREP DRAFT PS&E QUANTITIES & ESTS	CT.12.CO.0H226_.3.230.40	01/06/2008	02/12/2008	12	37.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	168	31.00
12-0H226_PREP CONTRACT DOCS	CT.12.CO.0H226_.3.260	04/01/2008	07/01/2008	36	91.00
12-0H226_ADVERTISE/OPEN BIDS/AWARD & APPROVE CONTRAC	CT.12.CO.0H226_.3.265	07/01/2008	11/01/2008	12	123.00
Sub-Total				300	
12.302-DRAFTING_SVCS					
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	24	519.00
12-0H226_PREP DRAFT ROADWAY PLANS	CT.12.CO.0H226_.3.230.05	08/31/2007	12/19/2007	23	110.00
12-0H226_PREP DRAFT TRAFFIC PLANS	CT.12.CO.0H226_.3.230.15	11/27/2007	01/21/2008	25	55.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	225	31.00
12-0H226_ACPT CONTRACT/PREP FNL CONSTR EST & PREP FN	CT.12.CO.0H226_.5.295	09/01/2009	06/29/2010	150	301.00
Sub-Total				447	
12.312-HYDRAULICS					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	12	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	12	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	6	666.00
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	48	535.00
12-0H226_PERF ENVIRO STUDIES & PREP DED	CT.12.CO.0H226_.2.165	08/21/2005	01/18/2007	48	515.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	12	94.00
12-0H226_OBT PERMITS	CT.12.CO.0H226_.2.205.10	10/25/2007	03/01/2008	1	128.00
12-0H226_REV & UPDATE PROJ INFO	CT.12.CO.0H226_.3.185.05	06/01/2007	07/17/2007	24	46.00
12-0H226_PREP 'ALL OTHER' BASE MAPS & PLAN SHEETS	CT.12.CO.0H226_.3.185.99	07/01/2007	08/31/2007	24	61.00
12-0H226_PREP DRAFT DRAINAGE PLANS	CT.12.CO.0H226_.3.230.30	11/21/2007	02/02/2008	180	73.00

12-0H226_PREP DRAFT SPECIFICATIONS	CT.12.CO.0H226_.3.230.35	01/15/2008	02/11/2008	24	27.00
12-0H226_PREP DRAFT PS&E QUANTITIES & ESTS	CT.12.CO.0H226_.3.230.40	01/06/2008	02/12/2008	24	37.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	24	31.00
12-0H226_COORDINATE UTIL	CT.12.CO.0H226_.4.200	07/01/2007	03/14/2008	12	257.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	24	440.00
Sub-Total				475	
12.317-MATLS_LAB					
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	12	535.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	75	31.00
12-0H226_ADVERTISE/OPEN BIDS/AWARD & APPROVE CONTRAC	CT.12.CO.0H226_.3.265	07/01/2008	11/01/2008	60	123.00
Sub-Total				147	
12.326-IND_ASSUR_TSTNG					
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	4	365.00
Sub-Total				4	
12.340-LNDSCP_ARCH					
12-0H226_PREP DRAFT HIGHWAY PLANTING PLANS	CT.12.CO.0H226_.3.230.10	11/10/2007	12/26/2007	179	46.00
12-0H226_PREP DRAFT SPECIFICATIONS	CT.12.CO.0H226_.3.230.35	01/15/2008	02/11/2008	24	27.00
12-0H226_PREP DRAFT PS&E QUANTITIES & ESTS	CT.12.CO.0H226_.3.230.40	01/06/2008	02/12/2008	12	37.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	36	31.00
Sub-Total				251	
12.349-HAZ_WASTE					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	12	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	12	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	10	666.00
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	15	535.00
12-0H226_PERF ENVIRO STUDIES & PREP DED	CT.12.CO.0H226_.2.165	08/21/2005	01/18/2007	36	515.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	10	94.00
12-0H226_PERF DSGN SURVEYS & PHOTOG MAPPING	CT.12.CO.0H226_.3.185.10	06/01/2007	07/17/2007	152	46.00
12-0H226_PERF DETAILED SITE INVESTIGATION FOR HAZ WA	CT.12.CO.0H226_.3.235.10	08/31/2007	10/25/2007	15	55.00
12-0H226_DEV HAZ WASTE MGMT PLAN	CT.12.CO.0H226_.3.235.15	10/25/2007	11/12/2007	15	18.00
12-0H226_PREP HAZ WASTE PS&E	CT.12.CO.0H226_.3.235.20	11/12/2007	12/28/2007	15	46.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	15	31.00
12-0H226_PREP CONTRACT DOCS	CT.12.CO.0H226_.3.260	04/01/2008	07/01/2008	15	91.00
12-0H226_ADVERTISE/OPEN BIDS/AWARD & APPROVE CONTRAC	CT.12.CO.0H226_.3.265	07/01/2008	11/01/2008	6	123.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	40	365.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	24	440.00
Sub-Total				392	
12.221-DESIGN-BR_B					
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	6	535.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	3	94.00
12-0H226_DETER REQUIRED PERMITS	CT.12.CO.0H226_.2.205.05	06/01/2007	07/01/2007	24	30.00
12-0H226_OBT PERMITS	CT.12.CO.0H226_.2.205.10	10/25/2007	03/01/2008	120	128.00
12-0H226_PERF DSGN SURVEYS & PHOTOG MAPPING	CT.12.CO.0H226_.3.185.10	06/01/2007	07/17/2007	48	46.00
12-0H226_PREP 'ALL OTHER' BASE MAPS & PLAN SHEETS	CT.12.CO.0H226_.3.185.99	07/01/2007	08/31/2007	60	61.00
12-0H226_PREP DRAFT ROADWAY PLANS	CT.12.CO.0H226_.3.230.05	08/31/2007	12/19/2007	435	110.00
12-0H226_PREP DRAFT TRAFFIC PLANS	CT.12.CO.0H226_.3.230.15	11/27/2007	01/21/2008	60	55.00
12-0H226_PREP TRANSPORTATION MGMT PLAN [TMP]	CT.12.CO.0H226_.3.230.20	11/16/2007	01/01/2008	30	46.00
12-0H226_PREP DRAFT UTIL PLANS	CT.12.CO.0H226_.3.230.25	08/31/2007	11/30/2007	90	91.00
12-0H226_PREP DRAFT SPECIFICATIONS	CT.12.CO.0H226_.3.230.35	01/15/2008	02/11/2008	60	27.00
12-0H226_PREP DRAFT PS&E QUANTITIES & ESTS	CT.12.CO.0H226_.3.230.40	01/06/2008	02/12/2008	60	37.00

12-0H226_REV & UPDATE PROJ INFO FOR PS&E PKG	CT.12.CO.0H226_.3.230.60	02/20/2008	02/29/2008	60	9.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	180	31.00
12-0H226_ADVERTISE/OPEN BIDS/AWARD & APPROVE CONTRAC	CT.12.CO.0H226_.3.265	07/01/2008	11/01/2008	180	123.00
12-0H226_COORDINATE UTIL	CT.12.CO.0H226_.4.200	07/01/2007	03/14/2008	3	257.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	36	365.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	24	440.00
Sub-Total				1479	
12.169-ENV_PLNG-GENERAL					
12-0H226_PROJ MGMT - PID COMPONENT	CT.12.CO.0H226_.0.100.05	06/30/2005	08/01/2005	6	32.00
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	12	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	12	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	0	666.00
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	12	535.00
12-0H226_PERF ENVIRO STUDIES & PREP DED	CT.12.CO.0H226_.2.165	08/21/2005	01/18/2007	108	515.00
12-0H226_PREP & APPROVE PROJ RPT	CT.12.CO.0H226_.2.180.05	01/18/2007	04/22/2007	24	94.00
12-0H226_PREP & APPROVE FNL ENVIRO DOC [FED]	CT.12.CO.0H226_.2.180.10	01/18/2007	04/22/2007	12	94.00
12-0H226_COMPLETE ENVIRO COMPLIANCE	CT.12.CO.0H226_.2.180.15	04/21/2007	06/02/2007	12	42.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	40	31.00
12-0H226_PREP CONTRACT DOCS	CT.12.CO.0H226_.3.260	04/01/2008	07/01/2008	8	91.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	22	365.00
12-0H226_PREP & ADMINISTER CONTRACT CHANGE ORDERS	CT.12.CO.0H226_.5.285	11/01/2008	01/15/2010	10	440.00
12-0H226_RESOLVE CONTRACT CLAIMS	CT.12.CO.0H226_.5.290	11/01/2008	06/29/2010	11	605.00
12-0H226_ACPT CONTRACT/PREP FNL CONSTR EST & PREP FN	CT.12.CO.0H226_.5.295	09/01/2009	06/29/2010	13	301.00
Sub-Total				302	
12.171-ENV_PLNG-ARCHITECT					
12-0H226_PERF ENVIRO STUDIES & PREP DED	CT.12.CO.0H226_.2.165	08/21/2005	01/18/2007	103	515.00
12-0H226_PREP & APPROVE FNL ENVIRO DOC [FED]	CT.12.CO.0H226_.2.180.10	01/18/2007	04/22/2007	16	94.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	18	31.00
Sub-Total				137	
12.112-PROJ_MGRS					
12-0H226_PROJ MGMT - PID COMPONENT	CT.12.CO.0H226_.0.100.05	06/30/2005	08/01/2005	50	32.00
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	75	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	50	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	75	666.00
Sub-Total				250	
12.140-PROJ_SCHED					
12-0H226_PROJ MGMT - PID COMPONENT	CT.12.CO.0H226_.0.100.05	06/30/2005	08/01/2005	100	32.00
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	100	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	150	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	100	666.00
Sub-Total				450	
12.146-PROG_MGMT					
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	30	31.00
Sub-Total				30	
12.037-PUBLIC_INFO					
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	60	365.00
Sub-Total				60	
59.285-ESC_PS&E/OE-PS&E-OE01.285					

12-0H226_PREP CONTRACT DOCS	CT.12.CO.0H226_.3.260	04/01/2008	07/01/2008	166	91.00
12-0H226_ADVERTISE/OPEN BIDS/AWARD & APPROVE CONTRAC	CT.12.CO.0H226_.3.265	07/01/2008	11/01/2008	18	123.00
Sub-Total				184	
59.286-ESC_PS&E/OE-CONT_PROG_&_SVS-OE02.286					
12-0H226_ADVERTISE/OPEN BIDS/AWARD & APPROVE CONTRAC	CT.12.CO.0H226_.3.265	07/01/2008	11/01/2008	62	123.00
Sub-Total				62	
59.291-ESC_PS&E/OE-PROJECT_CONTROL_&_SUPPT-OE03.291					
12-0H226_PROJ MGMT - PID COMPONENT	CT.12.CO.0H226_.0.100.05	06/30/2005	08/01/2005	4	32.00
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	8	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	8	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	2	666.00
12-0H226_ADVERTISE/OPEN BIDS/AWARD & APPROVE CONTRAC	CT.12.CO.0H226_.3.265	07/01/2008	11/01/2008	43	123.00
Sub-Total				65	
59.302-DRAFTING_SVCS-PROJ_PLANS-OE06.302					
12-0H226_ADVERTISE/OPEN BIDS/AWARD & APPROVE CONTRAC	CT.12.CO.0H226_.3.265	07/01/2008	11/01/2008	48	123.00
Sub-Total				48	
23.412-R/W_TEAMS					
12-0H225_POST R/W CERTIFICATION WORK	CT.12.CO.0H225_.4.245	05/01/2008	11/01/2009	5	549.00
12-0H226_PROJ MGMT - PID COMPONENT	CT.12.CO.0H226_.0.100.05	06/30/2005	08/01/2005	12	32.00
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	12	669.00
12-0H226_PERF PRELIM ENGRG STUDIES & PREP DRAFT PROJ	CT.12.CO.0H226_.2.160	08/01/2005	01/18/2007	8	535.00
12-0H226_CIRCULATE/REV & PREP FNL DISTRICT PS&E PKG	CT.12.CO.0H226_.3.255	03/01/2008	04/01/2008	8	31.00
12-0H226_COORDINATE UTIL	CT.12.CO.0H226_.4.200	07/01/2007	03/14/2008	15	257.00
12-0H226_OBT R/W INTERESTS FOR PROJ R/W CERTIFICATIO	CT.12.CO.0H226_.4.225	06/01/2007	05/01/2008	10	335.00
Sub-Total				70	
59.318-MATLS_LAB-STRUC_MATLS-ES08.318					
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	10	666.00
12-0H226_PREP PRELIM STRUC DSGN DATA	CT.12.CO.0H226_.3.210	08/31/2007	09/14/2007	5	14.00
12-0H226_PERF CONSTR ENGRG & GENERAL CONTRACT ADMIN	CT.12.CO.0H226_.5.270	11/01/2008	11/01/2009	340	365.00
Sub-Total				355	
59.320-MATLS_LAB-FLEXIBLE_PAVEMENT_MATL-ES08.320					
12-0H226_PREP PRELIM STRUC DSGN DATA	CT.12.CO.0H226_.3.210	08/31/2007	09/14/2007	10	14.00
Sub-Total				10	
59.101-ENGR_EXEC_MGMT-PROJECT_MGMT-EM05.101					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	4	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	4	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	4	666.00
Sub-Total				12	
59.110-PROJ_MGRS-PROJ_COORDINATION_ENGR-EM01.110					
12-0H226_PROJ MGMT - PID COMPONENT	CT.12.CO.0H226_.0.100.05	06/30/2005	08/01/2005	3	32.00
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	8	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	24	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	16	666.00
Sub-Total				51	
59.140-PROJ_SCHED-PROJ_MGMT-TOOLS-EM02.140					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	8	669.00

12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	18	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	8	666.00
Sub-Total				34	
59.141-PROJ_SCHED-PROJ_MGMT-SUPPORT-EM02.141					
12-0H226_PROJ MGMT - PID COMPONENT	CT.12.CO.0H226_.0.100.05	06/30/2005	08/01/2005	0	32.00
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	16	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	32	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	24	666.00
Sub-Total				72	
59.142-PROJ_SCHED-PROJ_MGMT-STATUS_TRACK-EM02.142					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	8	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	18	519.00
12-0H226_PROJ MGMT - CONSTR COMPONENT	CT.12.CO.0H226_.0.100.20	11/01/2008	08/29/2010	8	666.00
Sub-Total				34	
59.150-PROG_MGMT-WORKLOAD_MGMT-EM03.150					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	3	669.00
Sub-Total				3	
59.151-PROG_MGMT-RESOURCE_MGMT_SUPPORT-EM03.151					
12-0H226_PROJ MGMT - PA&ED COMPONENT	CT.12.CO.0H226_.0.100.10	08/01/2005	06/01/2007	8	669.00
12-0H226_PROJ MGMT - PS&E COMPONENT	CT.12.CO.0H226_.0.100.15	06/01/2007	11/01/2008	4	519.00
Sub-Total				12	
Total				14316	