INFORMATION HANDOUT

For Project No. 07-288204
At 07-LA-60-0.3/3.1

As-Built

Fiber Optic As-Built Drawings
Communication System Routing

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5, 10	16.9/18.5, 50.0/31.7	67	159

Teri Parola 9/18/95
REGISTERED ELECTRICAL ENGINEER (Date)

12-30-96
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER TERI J. PAROLA No. 14898 Exp. 6/30/99 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

KAWES AND ASSOCIATES, INC.

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TABLE 1-CCTV WIRING

CONDUCTOR TYPE	FUNCTION	QTY
RG-6A/U	CAMERA VIDEO INTERFACE CABLE	1
9*18 CABLE	PAN/TILT CONTROL CABLE	1
12*E CABLE	LENS CONTROL CABLE	1

ABBREVIATIONS

72SMFO	72 SINGLEMODE FIBER OPTIC CABLE
12SMFO	12 SINGLEMODE FIBER OPTIC CABLE
2SMFO B/O	2 SINGLEMODE FIBER OPTIC BREAKOUT CABLE
36SMFO	36 SINGLEMODE FIBER OPTIC CABLE
50P22	50 PAIR 22 AWG TWISTED PAIR CABLE
12P22	12 PAIR 22 AWG TWISTED PAIR CABLE
6P22	6 PAIR 22 AWG TWISTED PAIR CABLE
ø	DIAMETER
AVC	AUTOMATIC VEHICLE CLASSIFICATION
BB	BASE BAND
B/O	BREAKOUT CABLE
CCR	CAMERA CONTROL RECEIVER
CCT	CAMERA CONTROL TRANSMITTER
CCTV	CLOSED CIRCUIT TELEVISION
CHAN #	CHANNEL NUMBER
CMS	CHANGEABLE MESSAGE SIGN
DCS	DIGITAL CROSS-CONNECT SWITCH
DEMARC	DEMARCATION
DEMUX	DEMULTIPLEXER
DIST	DISTRIBUTION
DLC	DETECTOR LOOP CABLE
DWP	DEPARTMENT OF WATER & POWER
FDF	FIBER DISTRIBUTION FRAME
FDU	FIBER DISTRIBUTION UNIT
FLEX	FLEXIBLE
F/O OR FO	FIBER OPTIC
FRE	FIBERGLASS REINFORCED EPOXY CONDUIT
HAR	HIGHWAY ADVISORY RADIO
INTRFCE	INTERFACE
IRR	IRRIGATION
J-BOX	JUNCTION BOX
MUX	MULTIPLEXER
NOM	NOMINAL
PDA	POWER DISTRIBUTION ASSEMBLY
PR	PAIR
PTZ	PAN, TILT AND ZOOM
REQ'D	REQUIRED
RMS	RAMP METERING SYSTEM OR STATION
RX	RECEIVER
SCE	SOUTHERN CALIFORNIA EDISON
SCHED	SCHEDULE
SH	SHORT HAUL
SM	SINGLEMODE
STC	SCREENED TRANSMISSION CABLE
STL	STEEL
TDM	TIME DIVISON MULTIPLEXER
TELCO	TELEPHONE COMPANY
TMC	TRANSPORTATION MANAGEMENT CENTER
TMS	TRAFFIC MONITORING STATION
TP	TWISTED PAIR
TX	TRANSMITTER
VDX	VIDEO DEMULTIPLEXER
VMX	VIDEO MULTIPLEXER
VR	SINGLE VIDEO RECEIVER
VX	SINGLE VIDEO TRANSMITTER
#X	X AWG CONDUCTOR, 1e #10 MEANS 10 AWG CONDUCTOR
YP	Y PAIRS OF CONDUCTORS, 1e 2P MEANS 2 PAIRS

LEGEND

- CCTV CAMERA
- HIGHWAY ADVISORY RADIO
- SPLICE VAULT
- EXISTING SPLICE VAULT
- FIBER OPTIC PATCH CORD
- COMMUNICATION PULL BOX
- COMMUNICATION CONDUIT(S)
- SERVICE CONDUIT(S)
- CONDUIT LINE DELIMITER FOR CONSTRUCTION NOTES
- TYPE 334-TV CABINET
- EXISTING TELEPHONE BRIDGE
- TELEPHONE BRIDGE
- FIBER OPTIC CABLE
- COAXIAL CABLE

AS-BUILT
Contract No. 07- 120734
Resident Engineer: WARREN YUK
Completion Date: 09/18/2000

CCTV AND COMMUNICATION SYSTEM (LEGEND AND NOTES)

E-1

DESIGN OVERSIGHT	PAT SULLIVAN	CALCULATED/DESIGNED BY	TP 8/95
		CHECKED BY	JZ 8/95
		REVISED BY	DATE REVISED

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DATE PLOTTED => 10-JUN-1997
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CU 0739

EA 120731

GENERAL NOTES:

1. THE LOCATION OF ELECTRICAL HIGHWAY LIGHTING CONDUITS AND PULL BOXES ARE APPROXIMATE AND WERE OBTAINED FROM LIMITED LIGHTING RECORDS. CONTRACTOR SHALL AVOID DAMAGING EXISTING LIGHTING CONDUITS.

2. THE LOCATIONS OF EXISTING DETECTOR LOOPS, EXISTING CONTROLLER CABINETS, EXISTING SERVICE ENCLOSURES, POWER POLES AND EXISTING DEMARCATION BOXES ARE APPROXIMATE.

3. THE CONTRACTOR SHALL VERIFY PROPOSED CCTV POLE LOCATIONS WITH THE ENGINEER PRIOR TO PLACEMENT OF FOUNDATIONS.

4. THE LOCATIONS OF PROPOSED ELEMENTS ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED OR APPROVED BY THE ENGINEER. SEE L-SHEETS FOR EXACT LOCATION OF CCTV CAMERAS.

6. WHEN EXISTING DETECTOR LOOPS AND CONDUITS ARE SHOWN IN THE VICINITY OF PROPOSED CONDUIT TRENCHES THE CONTRACTOR SHALL AVOID DAMAGING THE EXISTING CONDUIT. TRENCHING WITH HAND TOOLS MAY BE REQUIRED.

7. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL OR TELCO FACILITIES, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE 72 HOURS PRIOR TO COMMENCING WORK TO THE ENGINEER AND ALL CONCERNED AGENCIES.

8. A PULL ROPE SHALL BE INSTALLED IN ALL EMPTY CONDUITS.

9. UNLESS OTHERWISE NOTED, ALL COMMUNICATION CONDUIT BENDS SHALL BE 4 FT RADIUS FACTORY BENDS. ALL OTHER CONDUITS SHALL HAVE A MINIMUM BEND RADIUS OF NO LESS THAN 6 TIMES THE CONDUIT DIAMETER.

10. CONDUITS AND CONDUCTORS IN CONDUIT AND CONDUCTOR SCHEDULE TABLES ARE NEW UNLESS MARKED (E) INDICATING EXISTING.

11. PVC, WHERE CALLED OUT IN THESE PLANS, SHALL MEAN RIGID NON-METALLIC CONDUIT AS DEFINED IN THE STANDARD SPECIFICATIONS.

12. CONDUIT(S) SHALL BE INSTALLED WHERE SHOWN ON THE PLANS RELATIVE TO THE EXISTING SHOULDER.

13. IDENTIFICATION FORMAT OF TRAFFIC OPERATION SYSTEM (TOS) ELEMENTS:

FYXXX
- POST MILE (TO NEAREST 10TH)
- FREEWAY NAME SHORT FORM

14. MODEM NUMBERS FOR SOME CONTROLLERS HAVE NOT YET BEEN ASSIGNED, AND THEREFORE SUCH LOCATIONS HAVE BEEN ASSIGNED TO MODEM AC. VERIFY MODEM NUMBERS BEFORE CONSTRUCTION.

15. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

16. ALL DOUBLE LOOPS PLACED IN BUSWAY LANES SHALL BE 20 FEET APART FROM CENTER TO CENTER.

PROJECT NOTES: (MASTER LIST)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. FOR INSTALLATION OF 4" CONDUITS, SEE SHEET E-55 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. FOR INSTALLATION OF 4" CONDUITS, SEE SHEET E-55 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-62 AND E-63 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 4" CONDUITS, SEE SHEET E-57 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-1 TO C-7 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
7. INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-58 AND C-9 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE.
8. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON EXISTING SIGN STRUCTURE. SEE SHEETS E-58 AND C-10 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-65 AND DETAIL 1, SHEET E-67.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
12. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-68 AND DETAIL 3, SHEET E-67.
13. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT AT VIDEO NODE. SEE SHEETS E-68 AND E-69 FOR DETAILS.
14. RC EXIST DLC. INSTALL NEW DLC IN THE EXISTING CONDUIT.
15. TRANSITION CONDUIT UNDER SOUNDWALL. DIG WITH HAND TOOLS AS REQUIRED. SEE SHEET C-8 FOR DETAILS.
16. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-65 AND DETAIL 4, SHEET E-67.
17. INSTALL 30A, 120V, SINGLE PBLE CIRCUIT BREAKER FOR CCTV.
18. INSTALL COMMUNICATION PULL BOX 15 FEET FROM EDGE OF STRUCTURE.
19. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V MAIN CIRCUIT BREAKER.
20. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
21. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-55 AND E-56 FOR DETAILS.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
24. ADD CABLES TO EXISTING CONDUIT.
25. IDENTIFY AND RC DLC CONNECTING TO ABANDONED LOOPS. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
26. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT AT DATA NODE. SEE SHEETS E-68 AND E-69 FOR DETAILS.
27. COIL 25 FEET OF 6P22 TWISTED PAIR CABLE IN 6 PULL BOX FOR PUMP STATION. SPLICE IN/OUT PAIRS TOGETHER USING A TWISTED PAIR SPLICE CLOSURE.
28. COIL 50 FEET OF 6P22 TWISTED PAIR CABLE IN 6 PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS TOGETHER USING A TWISTED PAIR SPLICE CLOSURE.
29. COIL 25 FEET OF 6P22 TWISTED PAIR CABLE IN 6 PULL BOX FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS TOGETHER USING A TWISTED PAIR SPLICE CLOSURE.
30. INSTALL 25 PR & 50 PR TERMINAL BLOCKS IN EXISTING DATA NODE CABINET. SEE SHEET E-69 AND E-78 FOR DETAILS.
31. INSTALL 2 TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE DETAIL 2, SHEET E-67 AND SHEET E-66 FOR DETAILS.
32. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE FDU SEE DETAIL 5, SHEET E-67 FOR DETAILS.
33. REWIRE EXIST TELEPHONE BRIDGE. CONNECT EXISTING CABLE FROM CONTROLLER _____ TO BRIDGE INPUT. CONNECT CONTROLLER _____ TO BRIDGE OUTPUT.
34. INSTALL SPLICE VAULT 15 FEET FROM EDGE OF STRUCTURE. WITHOUT TWISTED PAIR AND FIBER OPTIC SPLICE CLOSURES. FIGURE 8 100 FEET OF ALL CABLES IN THE SPLICE VAULT.
35. INSTALL ONE 30A CIRCUIT BREAKER IN POWER DISTRIBUTION PANEL IN EXISTING HUB BUILDING.
36. INSTALL RIGID STEEL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. CONDUIT(S) SHALL BE INSTALLED AS CLOSE TO THE EDGE OF TRAVELWAY AS POSSIBLE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5, 10	15.9/18.5, 50.0/51.1	68	159

Teri Parola 9/18/95
REGISTERED ELECTRICAL ENGINEER (Date)

12-30-96
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER TERI J. PAROLA No. 14898 Exp. 6/30/99 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

KAWES AND ASSOCIATES, INC.

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AS-BUILT
Contract No. 07- 120734
Resident Engineer: WARREN YUE
Completion Date: 09/18/2000

CCTV AND COMMUNICATION SYSTEM (NOTES)

NO SCALE

E-2

DATE	REVISED BY	DATE	REVISED
TP	9/95	9/95	JZ

CALCULATED/DESIGNED BY: TP
CHECKED BY: JZ

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

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

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CU 07396

EA 120731

FORM DC-OE-92-PM (REV. 3/92)

TIME PLOTTED => 10-JUN-1997
10-00-00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5.10	16.9/18.5, 50.0/31.1	69	159

Teri Parola 9/18/95
REGISTERED ELECTRICAL ENGINEER (Date)

12-30-96
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER TERI J. PAROLA No. 14898 Exp. 6/30/99 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

KAWES AND ASSOCIATES, INC.

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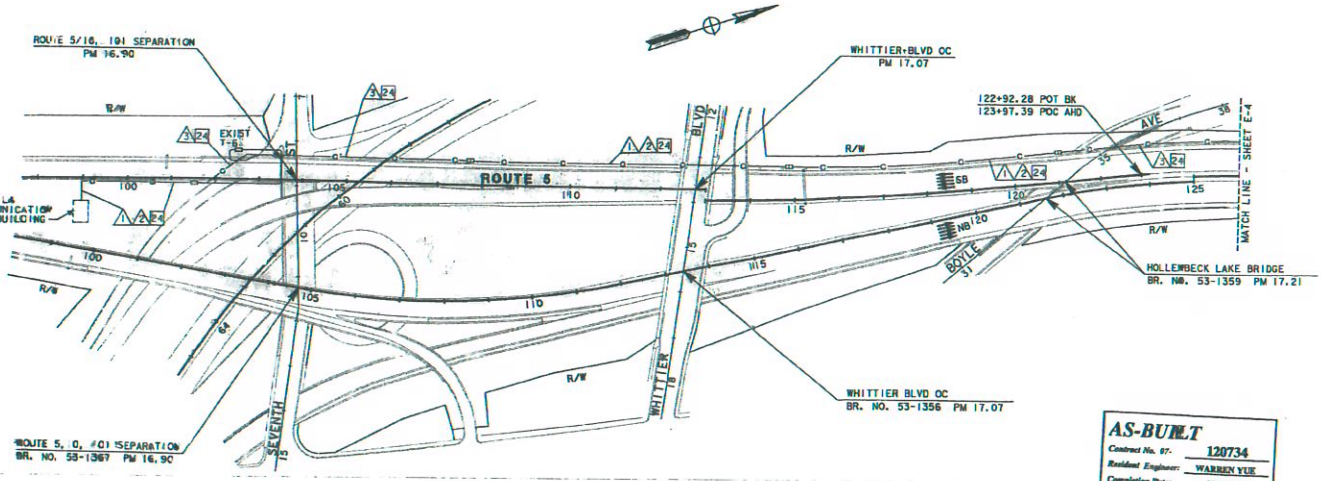
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1		RUN 2		RUN 3	
72SMFO CABLE	VIDEO /DATA			1		1	
48SMFO CABLE	VIDEO /DATA		1 (E)				1 (E)
8MMFO CABLE	SHORT HAUL VIDEO	1 (E)					1 (E)
50P22 CABLE	DATA /PHONE	1 (E)				1 (E)	
	INNERDUCT	1¼" (E)	1¼" (E)	1¼"	1¼"	1¼"	1¼" (E)	1¼" (E)
	CONDUIT SIZE	4" (E)		4" (E)		4" (E)	

(E) - EXISTING CONDUIT OR CONDUCTOR

PROJECT NOTES: (THIS SHEET ONLY)
24 ADD CABLES TO EXISTING CONDUIT.



AS-BUILT
Contract No. 07- 120734
Resident Engineer: WARREN YUE
Completion Date: 09/18/2000

COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

E-3

DESIGNED BY JT 9/95 REVISED BY
CHECKED BY JT 9/95 DATE REVISED
PAT SULLIVAN

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USERNAME => HHuynh

CU 07396

EA 120731

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.1/11.7	87	183

REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

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ABBREVIATIONS

IP	—	I-POLE
2SMFO	—	FIBER OPTIC CABLE, 2 SINGLE-MODE FIBERS
2SMFO B/O	—	FIBER OPTIC BREAKOUT CABLE, 2 SINGLE-MODE FIBERS
12SMFO	—	FIBER OPTIC CABLE, 12 SINGLE-MODE FIBERS
48SMFO	—	FIBER OPTIC CABLE, 48 SINGLE-MODE FIBERS
50PR22	—	TWISTED PAIR CABLE, 50 PAIR 22AWG CONDUCTORS
6PR22	—	TWISTED PAIR CABLE, 6 PAIR 22AWG CONDUCTORS
B/O	—	BREAKOUT
AVC	—	AUTOMATIC VEHICLE CLASSIFICATION STATION
CB	—	CIRCUIT BREAKER
CCR	—	CAMERA CONTROL RECEIVER
CCTV	—	CLOSED CIRCUIT TELEVISION
CIA	—	CONTROLLER INTERFACE ASSEMBLY
CMS	—	CHANGEABLE MESSAGE SIGN
COMM	—	COMMUNICATION
DACCS	—	DIGITAL ACCESS AND CROSS CONNECTION SYSTEM
DEMUX	—	DEMULTIPLEX
(E)	—	EXISTING
EXIST	—	EXISTING
FDF	—	FIBER DISTRIBUTION FRAME
FDU	—	FIBER DISTRIBUTION UNIT
F/O	—	FIBER OPTIC
GRS	—	GALVANIZED RIGID STEEL
ELA	—	EAST LOS ANGELES
JKFD	—	JACKFIELD
MUX	—	MULTIPLEX
OHS	—	OVERHEAD SIGN
OW	—	ORDER WIRE (MULTIPLE VOICE CIRCUIT)
PDA	—	POWER DISTRIBUTION ASSEMBLY
RCVR	—	RECEIVER
RMS	—	RAMP METERING SYSTEM OR STATION
RX	—	RECEIVE
SCE	—	SOUTHERN CALIFORNIA EDISON
SMFO	—	SINGLEMODE FIBER OPTIC
SO CAL EDISON	—	SOUTHERN CALIFORNIA EDISON
TMS	—	TRAFFIC MONITORING STATION
TWP	—	TWISTED WIRE PAIR
TX	—	TRSNSMIT
VMX	—	VIDEO MULTIPLEXER
XMTR	—	TRANSMITTER

GENERAL NOTES

1. THE LOCATIONS OF EXISTING CONTROLLER CABINETS, EXISTING SERVICE ENCLOSURES, POWER POLES AND EXISTING DEMARCATION BOXES ARE APPROXIMATE. THE LOCATIONS OF PROPOSED PULL BOXES AND SPLICE VAULTS CABINETS AND POSITIONING OF DETECTORS ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
2. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL FACILITIES, THE CONTRACTOR SHALL PROVIDE 72 HOUR ADVANCE WRITTEN NOTICE TO ALL AGENCIES CONCERNED.
3. UNLESS OTHERWISE NOTED, ALL CONDUIT BENDS SHALL BE 4 FOOT RADIUS FACTORY BENDS.
4. COMMUNICATION CONDUIT SHALL BE CENTERED IN THE PAVED SHOULDER OR AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.
5. TWISTED PAIR CABLES SHALL BE SPLICED IN A COMMUNICATION PULL BOX, SPLICE VAULT OR CABINET.
6. TRENCHING IN PAVEMENT ALLOWED ONLY WHERE SHOWN ON PLANS.
7. FOR NOTES PERTAINING TO UTILITIES, SEE SHEET U-1.
8. ALL PULL BOXES AND SPLICE VAULTS SHALL BE INSTALLED IN UNPAVED AREA UNLESS NOTED OTHERWISE.
9. ALL IRRIGATION CONTROLLERS ARE EXISTING UNLESS OTHERWISE NOTED ON THE PLANS.
10. PULL BOXES SHALL NOT BE USED TO CHANGE THE ALIGNMENT OF CONDUIT.
11. ALL NEW SERVICE EQUIPMENT ENCLOSURES SHALL ALSO HAVE:
    (1) 1P, 20 A BREAKER (SPARE)
    (1) 1P, 30 A BREAKER (SPARE)
    (1) 2P, (SPACE FOR FUTURE)
12. SIZE 4' CONDUITS TO BE INSTALLED IN PAVEMENT SHALL MAINTAIN 4 FEET MINIMUM DISTANCE FROM EDGE OF TRAVELED WAY UNLESS OTHERWISE NOTED.
13. SERVICE EQUIPMENT ENCLOSURE SHALL BE LOCATED 10 FEET MINIMUM FROM THE POWER POLE OR VAULT.
14. ELECTRICAL SERVICE INSTALLATION SHALL MEET THE REQUIREMENTS OF EITHER SOUTHERN CALIFORNIA EDISON (SCE) OR LOS ANGELES DEPARTMENT OF WATER AND POWER (DWP).
15. CONDUCTOR FROM POWER (OR VAULT) TO SERVICE ENCLOSURE WILL BE INSTALLED BY UTILITY COMPANY.
16. TRENCH FOR CONDUIT INSTALLATION BETWEEN POWER POLE (OR VAULT) AND SERVICE ENCLOSURE SHALL BE LEFT OPEN FOR INSPECTION AND APPROVAL BY SCE OR DWP INSPECTOR BEFORE IT IS BACKFILLED.

LEGEND

T	BUCK-BOOST TRANSFORMER
	LOCATION OF PROPOSED CCTV CAMERA AND POLE
	CMS
	SPLICE VAULT
	COMMUNICATION PULL BOX
	COMMUNICATION TRUNKLINE
	TYPE 334-TV CABINET
	EXISTING CCTV CAMERA AND POLE

EQUIPMENT IDENTIFICATION

P0123
- POST MILE ACCURATE TO 1/10 MILE (WITHOUT DECIMAL)
- FREEWAY ROUTE

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer Paul Wang
Completion Date 01/28/02

CCTV AND COMMUNICATION SYSTEM
(LEGEND AND NOTES)

NO SCALE

E-1

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN

DATE REVISED BY DATE REVISED
CALCULATED/DESIGNED BY
CHECKED BY

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

LU 07396 EA 1209C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.1/11.7	88	183

REGISTERED ELECTRICAL ENGINEER

5-18-98

ELEC. APPROVAL DATE

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CONSTRUCTION NOTES (SHEETS E-3 TO E-24)

1. ADD 6PR22 CABLE IN EXISTING CONDUIT.
2. ADD (2) 6PR22 CABLES IN EXISTING CONDUIT.
3. TERMINATE 6PR22 CABLE IN CABINET AND INSTALL TELEPHONE BRIDGE AND 12 PAIR TERMINAL BLOCK PER SHEET E-67. USE EXISTING CONDUIT FROM PULL BOX INTO CABINET.
4. COIL 25' (UNLESS OTHERWISE INDICATED ON PLAN) OF 6PR22 CABLE FOR FUTURE CONNECTION TO TRAFFIC SIGNAL CONTROLLER.
5. COIL 25' OF 6PR22 CABLE FOR FUTURE CONNECTION TO IRRIGATION CONTROLLER.
6. INSTALL SPARE 4" C. SHARE TRENCH WITH COMMUNICATION CONDUIT.
7. JACK SPARE 4" C ADJACENT TO COMMUNICATION CONDUIT.
8. TRENCH AND INSTALL CONDUIT IN SOIL.
9. TRENCH AND INSTALL CONDUIT IN ASPHALT.
10. JACK CONDUIT BENEATH ROADWAY.
11. ATTACH CONDUIT TO STRUCTURE. SEE SHEET C-6 TO C-9 FOR BRIDGE ATTACHMENT TYPE AND DETAIL.
12. INSTALL CONDUITS IN SAME TRENCH.
13. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO ELECTRICAL SITE DESIGN ON SHEET E-25 THRU E-49.

TABLE 1 -CCTV WIRING

CONDUCTOR TYPE	FUNCTION	QUANTITY
RG-6A/U	CAMERA VIDEO INTERFACE CABLE	1
9 PR #18 CABLE	PAN/TILT CONTROL CABLE	1
12 PR #18 CABLE	LENS CONTROL CABLE	1

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer: Paul Wang
Completion Date: 01/28/02

CCTV AND COMMUNICATION SYSTEM
(NOTES)
NO SCALE

E-2

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CU 07396 EA 1209C1

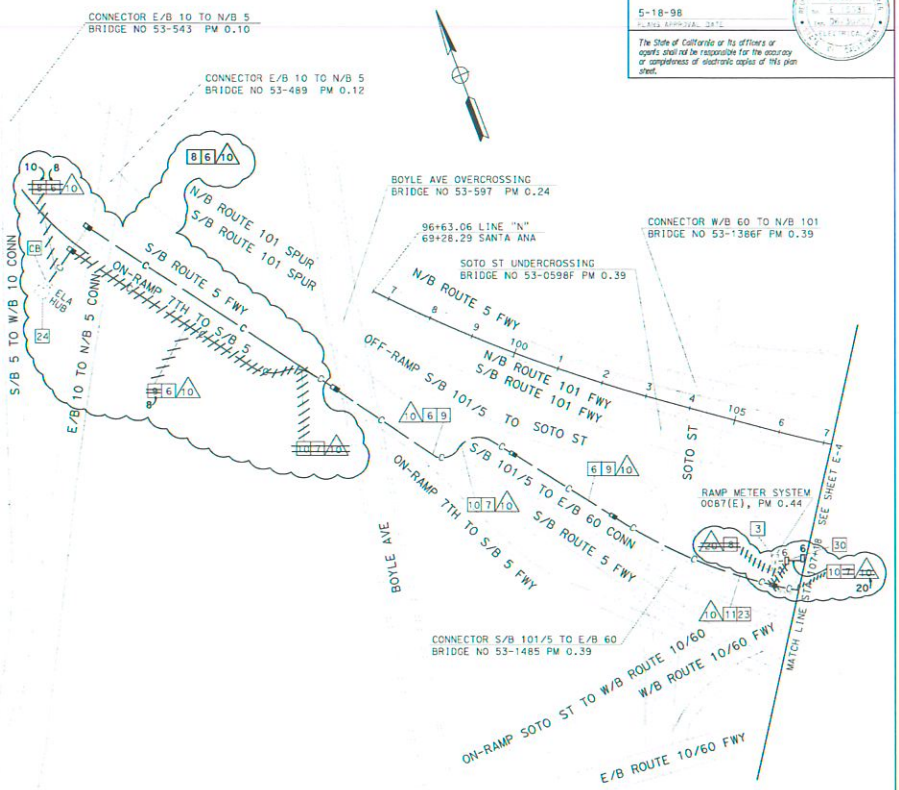
DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	TOTAL SHEETS
07	LA	60	0.1/11.7	89	183

REGISTERED ELECTRICAL ENGINEER

5-18-98

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 10		RUN 20
50PR22 CABLE	COMMUNICATION DATA/VOICE	1		
48SMFO	MULTIPLEXED DATA/VIDEO		1	
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION		1	
6PR22 CABLE	DISTRIBUTION DATA/VOICE			1
	INNERDUCT	1¼"	1¼"	
	CONDUIT SIZE	4"		2"

CONSTRUCTION NOTES THIS SHEET:

23 INSTALL 4" SPARE CONDUIT(FIBERGLASS).

24 TERMINATE 50PR22 AND 48SMFO CABLES INTO EAST LOS ANGELES HUB BUILDING. SEE SHEETS E-89 AND E-90 FOR DETAILS.

30 RC EXISTING PULL BOX. INSTALL NEW PULL BOX.

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer: Paul Wang
Completion Date: 01/28/02

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 AND E-2 FOR LEGEND AND PROJECT NOTES.

COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-3

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CU 07396 EA 1209C1

DIST	COUNTY	ROUTE	POST MILE PREFIX	POST MILE	TOTAL SHEETS
07	LA	60	0.1/11.7	90	183

REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

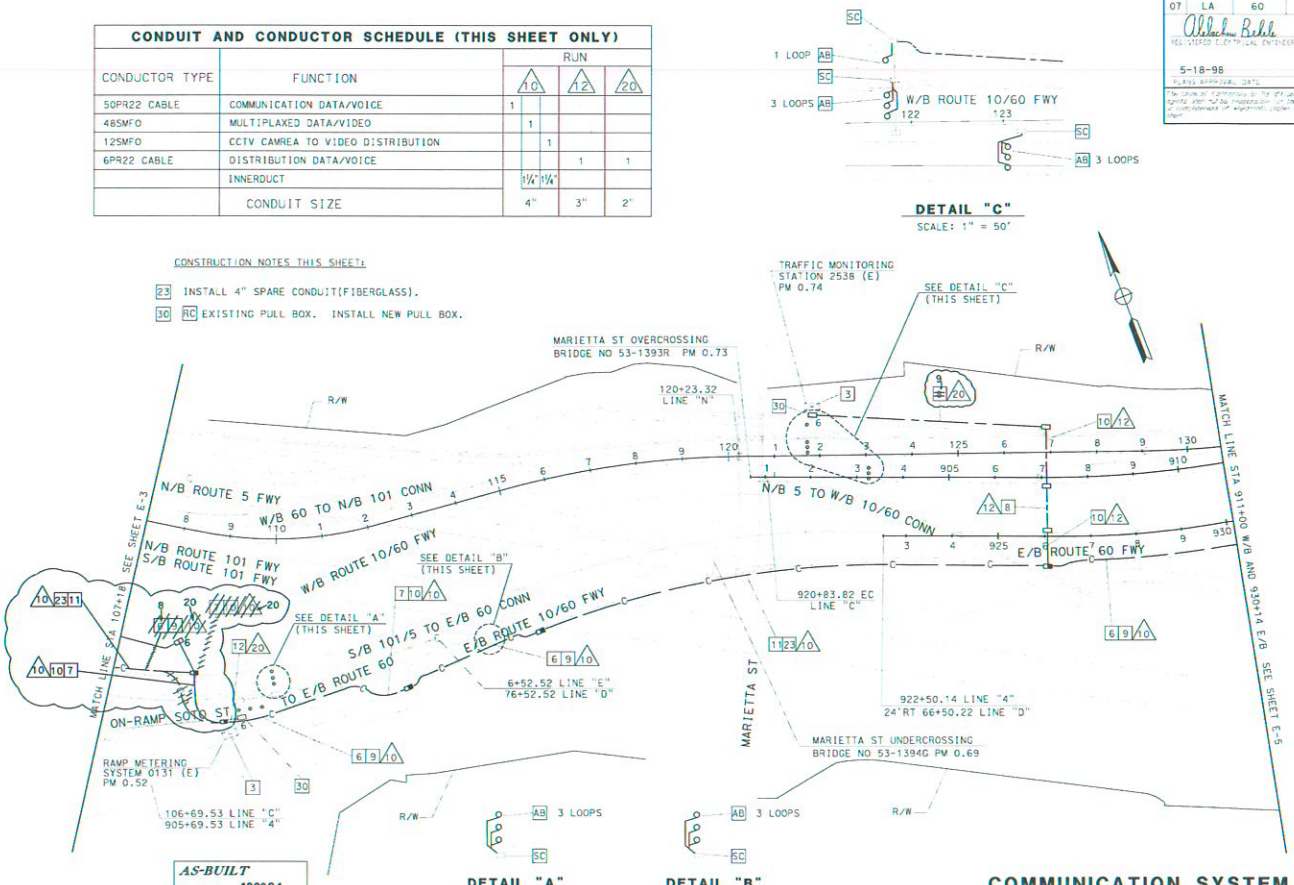
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of alterations, copies of these plans.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUCTOR TYPE	FUNCTION	RUN 10	RUN 12	RUN 20
50PR22 CABLE	COMMUNICATION DATA/VOICE	1		
48SMFO	MULTIPLAXED DATA/VIDEO	1		
12SMFO	CCTV CAMREA TO VIDEO DISTRIBUTION	1		
6PR22 CABLE	DISTRIBUTION DATA/VOICE		1	1
	INNERDUCT	1¼" 1¼"		
	CONDUIT SIZE	4"	3"	2"

CONSTRUCTION NOTES THIS SHEET:

23 INSTALL 4" SPARE CONDUIT(FIBERGLASS).

30 RC EXISTING PULL BOX. INSTALL NEW PULL BOX.



DETAIL "C"
SCALE: 1" = 50'

AS-BUILT
Contract No. 07-
1209C4
Resident Engineer
Paul Wang
Completion Date
01/28/02

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 AND E-2 FOR LEGEND AND PROJECT NOTES.

COMMUNICATION SYSTEM ROUTING AND LOOP DETECTOR

SCALE: 1" = 100'

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN

DATE REVISED BY
DATE REVISED
CABLE FILE/
DETAILED BY
PREPARED BY

LU 07396
EA 1209C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	TOTAL SHEETS	SHEET NO.
07	LA	60	0.1/11.7	91	183

REGISTERED ELECTRICAL ENGINEER

5-18-98

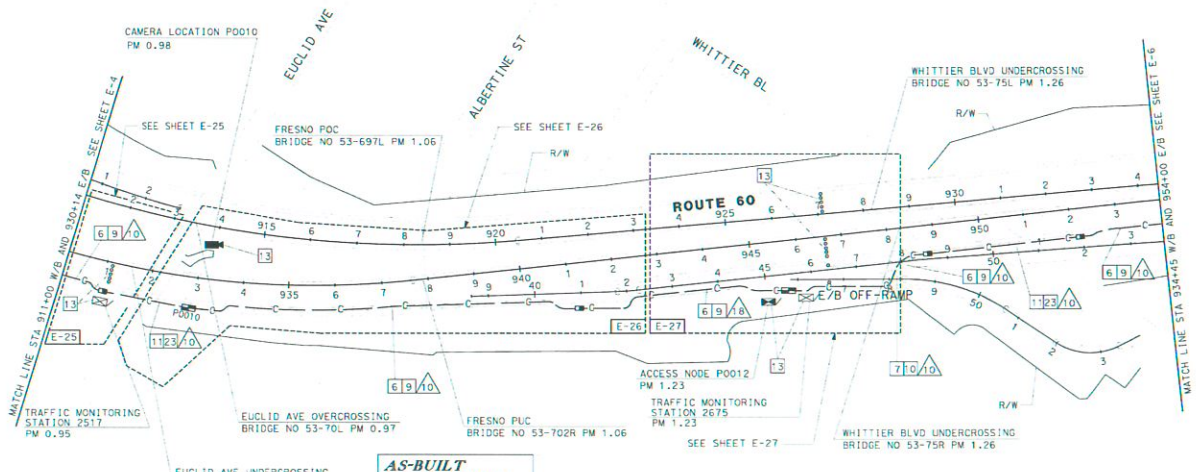
PLANS APPROVAL DATE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 10		
50PR22 CABLE	COMMUNICATION DATA/VOICE	1		
48SMFO	MULTIPLEXED DATA/VIDEO		1	
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION			1
6PR22 CABLE	DISTRIBUTION DATA/VOICE			
2 SMFO B/O CABLE	SHORT HAUL DATA			
	INNERDUCT	1¼"	1¼"	
	CONDUIT SIZE	4"		

CONSTRUCTION NOTES THIS SHEET:

23 INSTALL 4" SPARE CONDUIT(FIBERGLASS).



AS-BUILT
Contract No. 07- 1209C4
Resident Engineer, Paul Wang
Completion Date 01/28/02

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 AND E-2 FOR LEGEND AND PROOJECT NOTES.

COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN

CU 07396 EA 1209C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.1/11.7	92	183

Abbachew Bekele
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 10			12	20	21	24	96
50PR22 CABLE	COMMUNICATION DATA/VOICE	1							
48SMFO	MULTIPLEXED DATA/VIDEO		1						
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION			1					
6PR22 CABLE	DISTRIBUTION DATA/VOICE				2	1	3	1	
DLC	DETECTOR LEAD-IN CABLE								1
	INNERDUCT		1¼"	1¼"					
	CONDUIT SIZE	4"			3"	2"	2"	3"	2"

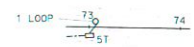
CONSTRUCTION NOTES THIS SHEET:

16 RC PULL BOX COVER. FILL OPENING WITH PCC AND AC TO MATCH EXISTING. (0.1' MIN AC).

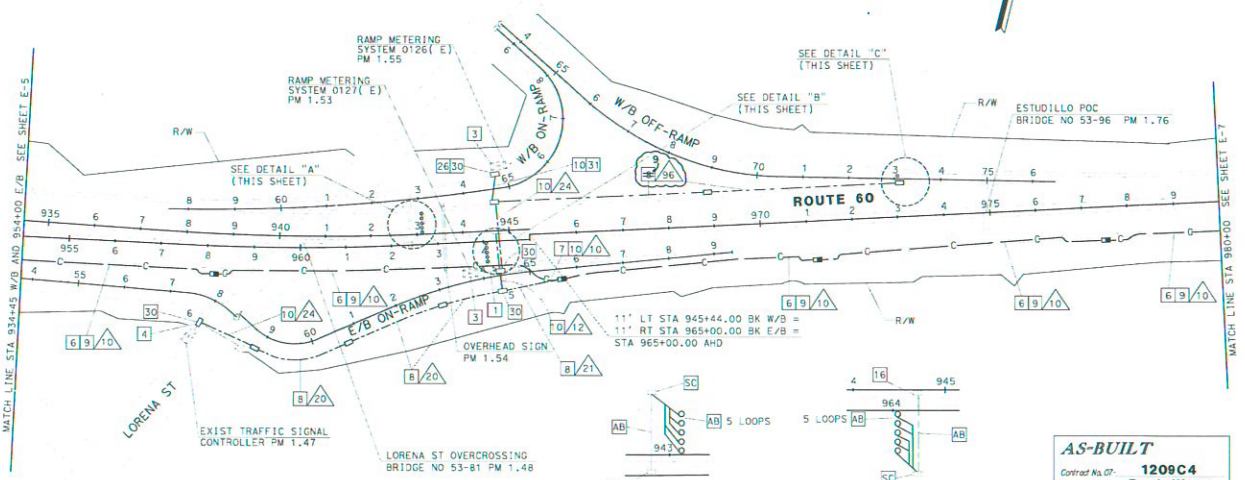
26 INSTALL 1 DLC, USE EXISTING CONDUIT FROM PULL BOX TO CABINET. INSTALL STATE FURNISHED LOOP SENSOR/DC ISOLATION UNIT AND CONNECT DLC CABLE.

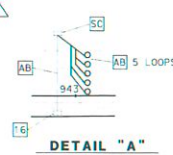
30 RC EXISTING PULL BOX. INSTALL NEW PULL BOX.

31 INSTALL 1 DLC AND 1 6PR22 CABLE IN 3" CONDUIT.

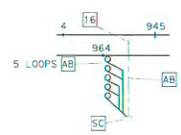


DETAIL "C"
SCALE: 1" = 50'





DETAIL "A"
SCALE: 1" = 50'



DETAIL "B"
SCALE: 1" = 50'

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer: Paul Wang
Completion Date: 01/28/02

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 AND E-2 FOR LEGEND AND PROJECT NOTES.

LOOP DETECTOR AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN
CALCULATED/DESIGNED BY
CHECKED BY
DATE
REVISED BY
DATE REVISED

CU 07396 EA 1209C1

DIST	COUNTY	ROUTE	POST MILES	TOTAL SHEETS
07	LA	60	0.1/11.7	93	183

REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 10			20	47	62	63
50PR22 CABLE	COMMUNICATION DATA/VOICE	1						
48SMFO	MULTIPLEXED DATA/VIDEO		1					
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION			1				
6PR22 CABLE	DISTRIBUTION DATA/VOICE				1			
DLC	DETECTOR LEAD-IN CABLE					5	6	
STC	SCREENED TRANSMISSION CABLE						12	24
	INNERDUCT	1¼"	1¼"					
	CONDUIT SIZE	4"			2"	3"	4"	2"

CONSTRUCTION NOTES THIS SHEET:

15 REPLACE 10 DLC IN EXISTING CONDUIT.

16 RC PULL BOX COVER. FILL OPENING WITH PCC AND AC TO MATCH EXISTING. (0.1' MIN AC).

17 REPLACE 12 DLC IN EXISTING CONDUIT.

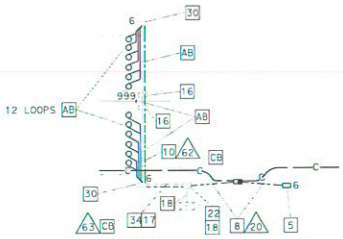
18 INSTALL 24 STC IN EXISTING CONDUIT.

22 COIL 25' OF 6PR22 CABLE FOR FUTURE CONNECTION TO AVC.

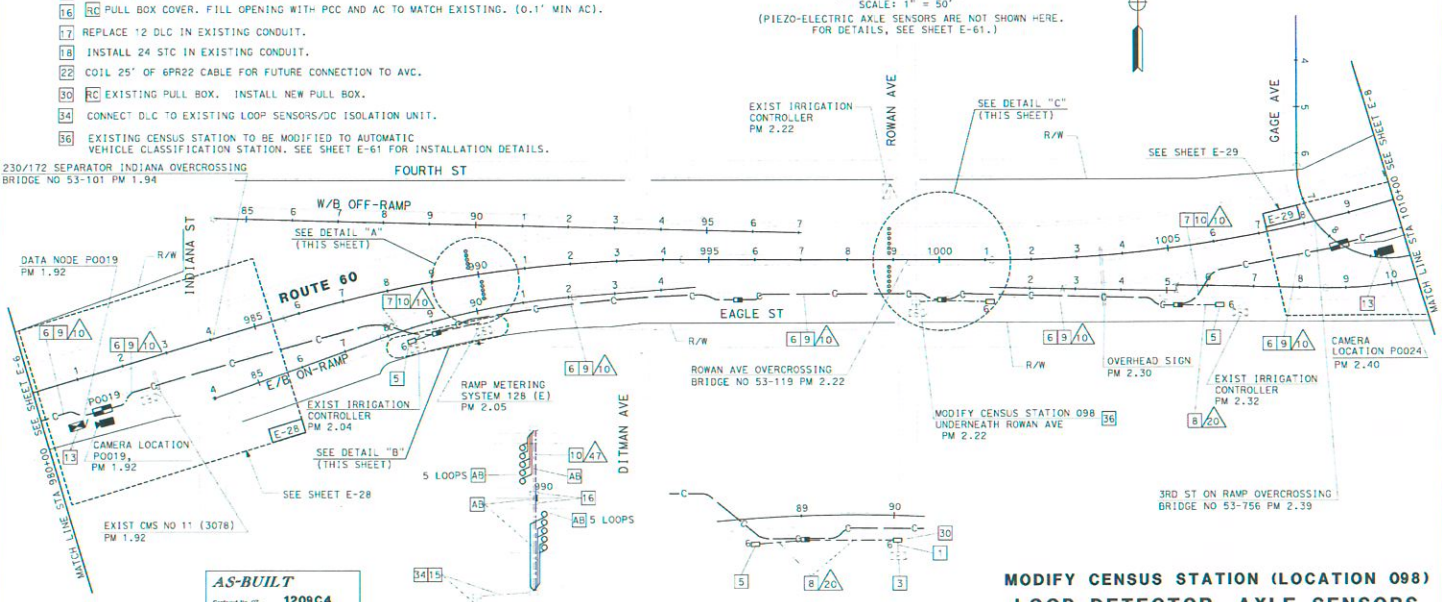
30 RC EXISTING PULL BOX. INSTALL NEW PULL BOX.

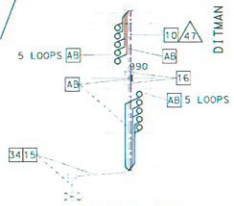
34 CONNECT DLC TO EXISTING LOOP SENSORS/DC ISOLATION UNIT.

36 EXISTING CENSUS STATION TO BE MODIFIED TO AUTOMATIC VEHICLE CLASSIFICATION STATION. SEE SHEET E-61 FOR INSTALLATION DETAILS.



DETAIL "C"
SCALE: 1" = 50'
(PIEZO-ELECTRIC AXLE SENSORS ARE NOT SHOWN HERE. FOR DETAILS, SEE SHEET E-61.)





DETAIL "A"
SCALE: 1" = 50'

DETAIL "B"
SCALE: 1" = 50'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 AND E-2 FOR LEGEND AND PROJECT NOTES.

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer Paul Wang
Completion Date 01/28/02

MODIFY CENSUS STATION (LOCATION 098) LOOP DETECTOR, AXLE SENSORS AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN

CU 07396 EA 1209C1

DIST	COUNTY	ROUTE	POST MILEAGE TOTAL PROJECT	TOTAL SHEETS	TOTAL SHEETS
07	LA	60	0.1/11.7	94	183

REGISTERED ELECTRICAL ENGINEER

5-18-98

PLANS APPROVAL DATE

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CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 10			RUN 20
50PR22 CABLE	COMMUNICATION DATA/VOICE	1			
48SMFO	MULTIPLEXED DATA/VIDEO		1		
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION			1	
6PR22 CABLE	DISTRIBUTION DATA/VOICE				1
	INNERDUCT		1¼"	1¼"	
	CONDUIT SIZE		4"		2"

CONSTRUCTION NOTES THIS SHEET:

16 RC PULL BOX LID. FILL OPENING WITH PCC AND AC TO MATCH EXISTING. (0.1' MIN AC).

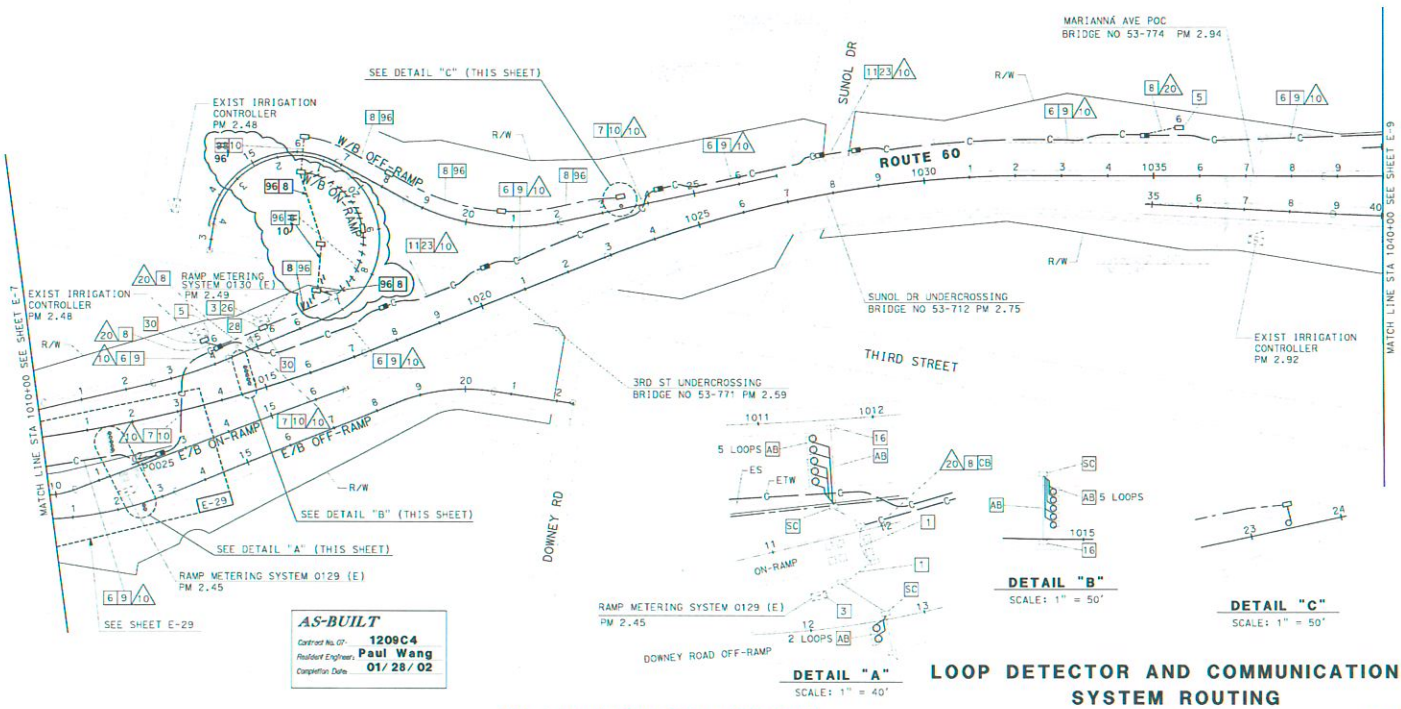
23 INSTALL 4" SPARE CONDUIT(FIBERGLASS).

26 ADD 1 DLC IN EXISTING CONDUIT.

28 INSTALL STATE FURNISHED LOOP SENSOR/DC ISOLATION UNIT AND CONNECT DLC CABLE.

30 RC EXISTING PULL BOX. INSTALL NEW PULL BOX.

96 INSTALL 2" C, 1 DLC.



AS-BUILT
Contract No. 07- 1209C4
Resident Engineer: Paul Wang
Completion Date 01/28/02

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 AND E-2 FOR LEGEND AND PROJECT NOTES.

LOOP DETECTOR AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN

CU 07396 EA 1209C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.1/11.7	95	193

REGISTERED ELECTRICAL ENGINEER

5-13-98

PLANS APPROVAL DATE

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CONDUIT AND CONDUCTOR SCHEDULE(THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 10	63	64	11	12
50PR22 CABLE	COMMUNICATION DATA/VOICE	1				
48SMFO	MULTIPLEXED DATA/VIDEO					
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION		1			
6PR22 CABLE	DISTRIBUTION DATA/VOICE				1	1
DLC	DETECTOR LEAD-IN CABLE			4	2	
	INNERDUCT	1½"	1½"			
	CONDUIT SIZE	4"	3"	3"	3"	2"

CONSTRUCTION NOTES THIS SHEET:

15 COIL 25' OF 6PR22 CABLE FOR FUTURE CONNECTION TO CONNECTOR METER.

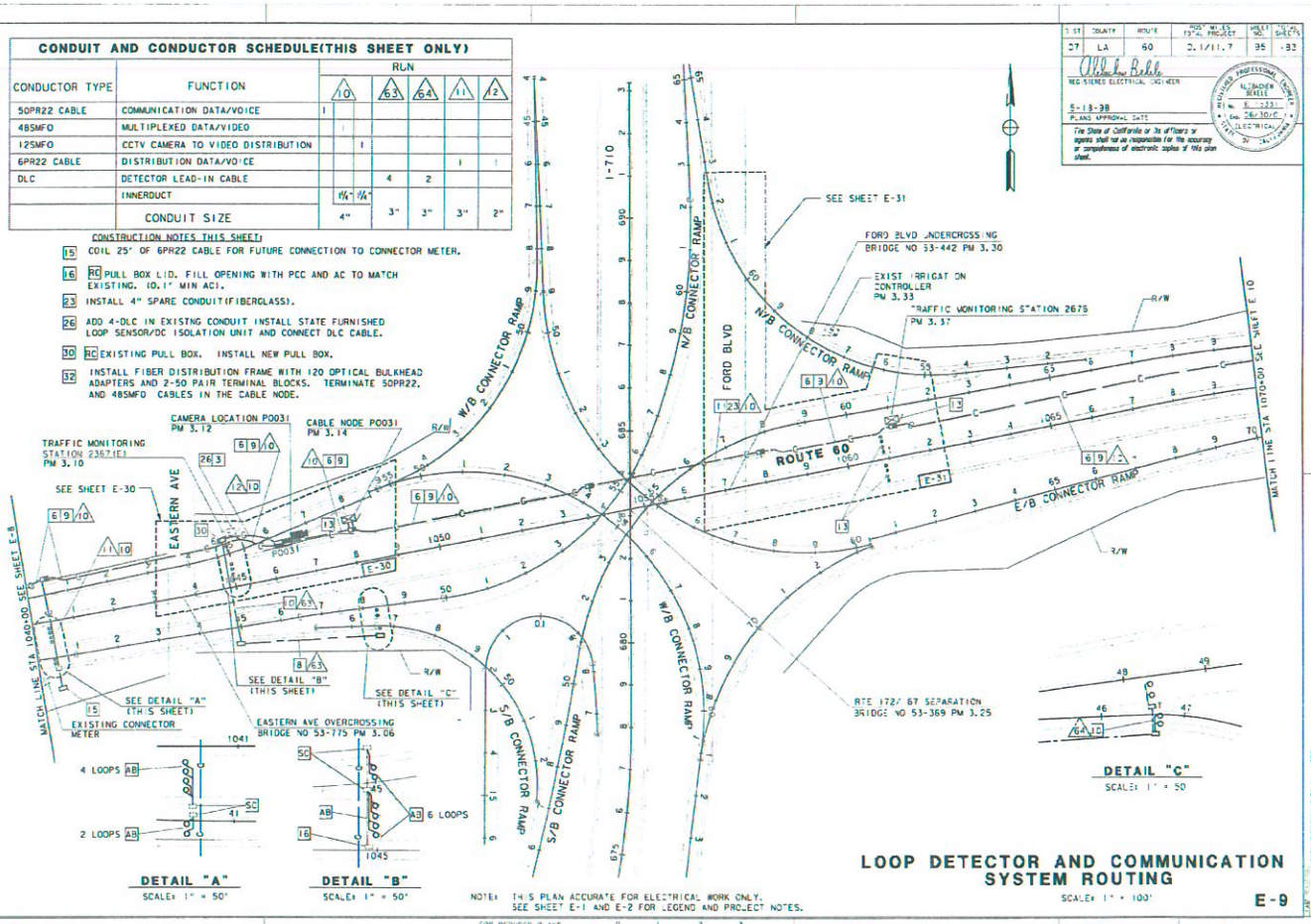
16 RC PULL BOX LID. FILL OPENING WITH PCC AND AC TO MATCH EXISTING. (0.1' MIN AC).

23 INSTALL 4" SPARE CONDUIT(FIBERGLASS).

26 ADD 4-DLC IN EXISTNG CONDUIT INSTALL STATE FURNISHED LOOP SENSOR/DC ISOLATION UNIT AND CONNECT DLC CABLE.

30 RC EXISTING PULL BOX. INSTALL NEW PULL BOX.

32 INSTALL FIBER DISTRIBUTION FRAME WITH 120 OPTICAL BULKHEAD ADAPTERS AND 2-50 PAIR TERMINAL BLOCKS. TERMINATE 50PR22, AND 48SMFO CABLES IN THE CABLE NODE.



NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 AND E-2 FOR LEGEND AND PROJECT NOTES.

LOOP DETECTOR AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN OVERSIGHT: PAT SULLIVAN

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

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

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

USERNAME: 37TEMPOD

DGN FILE: >TERC DET:2096L09.DGN

C: 07396

EA: 12390C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	TOTAL SHEETS	TOTAL SHEETS
07	LA	60	0.1/11.7	111	183

REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

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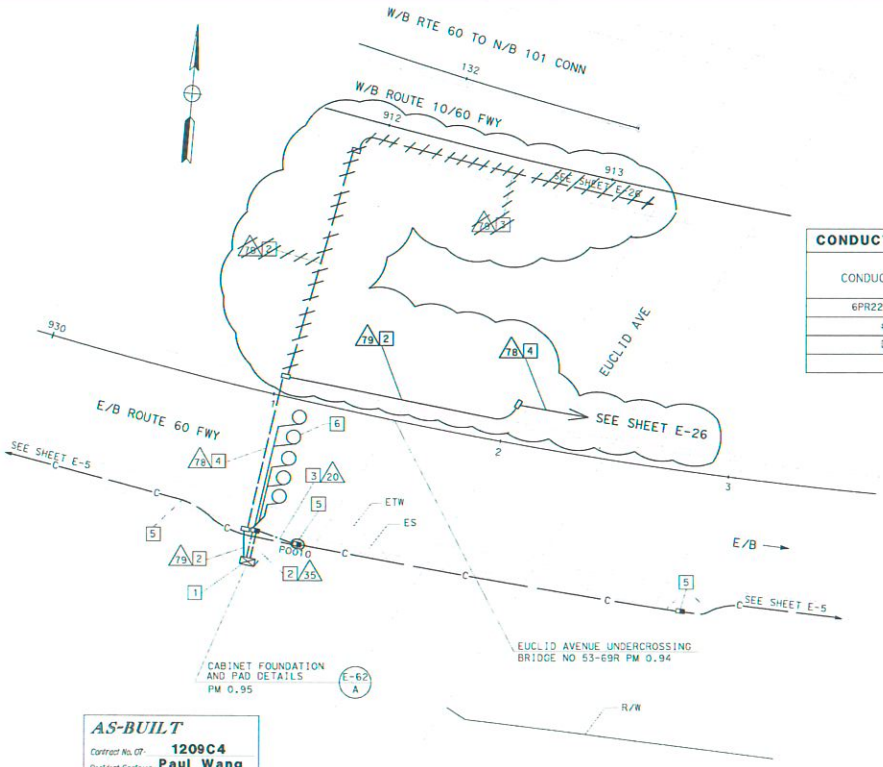

CONDUCTOR AND CONDUIT SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 20	RUN 35	RUN 78	RUN 79
6PR22 CABLE	DISTRIBUTION DATA/VOICE	1	1		
#4	SERVICE			2	2
DLC	DETECTOR LEAD-IN CABLE		5		
	CONDUIT SIZE	2"	2-4"	3"	2"

NOTES: (THIS SHEET ONLY)

1. INSTALL STATE FURNISHED TYPE 334 CABINET ON NEW FOUNDATION CABINET TO INCLUDE STATE FURNISHED 170 CONTROLLER AND LOOP DETECTOR SENSOR UNITS. INSTALL TELEPHONE BRIDGE AND 12 PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-67 FOR DETAILS.
2. TRENCH AND INSTALL CONDUIT IN SOIL AREA.
3. TRENCH AND INSTALL CONDUIT IN ASPHALT.
4. JACK RIGID STEEL CONDUIT BENEATH ROADWAY.
5. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION REFER TO COMMUNICATION SYSTEM ROUTING
6. SEE SHEET E-60 FOR TMS LOOP CONFIGURATION.

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer, Paul Wang
Completion Date 01/28/02

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND AND PROJECT NOTES.

TRAFFIC MONITORING STATION
(LOCATION 2517)

SCALE: 1" = 20'

E-25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN

DATE REVISED BY
DATE REVISED
CALCULATED/DESIGNED BY
CHECKED BY

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

LU 07396
EA 1209C1

NOTES (THIS SHEET ONLY)

SEE SHEET L-1 FOR LAYOUT DETAIL.

1. EXISTING ~~INSTALL~~ 120/240V SINGLE PHASE, INSTALL 200A ~~100A~~ TYPE III-BF SERVICE AND FOUNDATION WITH 200A MAIN CB AND (3) 120V-1P-30A CB FOR 2-TMS AND 1-CCTV. APPROXIMATE SERVICE RUN LENGTHS ARE: 520' FOR TMS 2517; 80' FOR CAMERA (P0010); 1620' FOR TMS 2675.

2. ~~INSTALL 3"C AND TYPE H RISER ON POWER POLE PER UTILITY COMPANY REQUIREMENTS. COORDINATE INSTALLATION OF CONDUCTORS WITH UTILITY COMPANY.~~

3. FURNISH AND INSTALL TYPE 334-TV CABINET, CAMERA CONTROL, RECEIVER AND VIDEO TRANSMITTER PER SHEET E-69.

4. FURNISH AND INSTALL CAMERA POLE AND FOUNDATION AS INDICATED. SEE SHEET E-63 FOR DETAILS.

5. TRENCH AND INSTALL CONDUIT IN SOIL AREA.

6. TRENCH AND INSTALL CONDUIT IN ASPHALT.

7. JACK GRS CONDUIT BENEATH ROADWAY.

8. INSTALL CONDUIT IN COMMUNICATION CONDUIT TRENCH.

9. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION REFER TO COMMUNICATION SYSTEM ROUTING, AND LOOP DETECTOR PLANS.

10. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SEE SHEET E-65 FOR DETAILS.

11. INSTALL CONDUIT UNDER SIDEWALK.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.1/11.7	112	183

Alebachew Bekele
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

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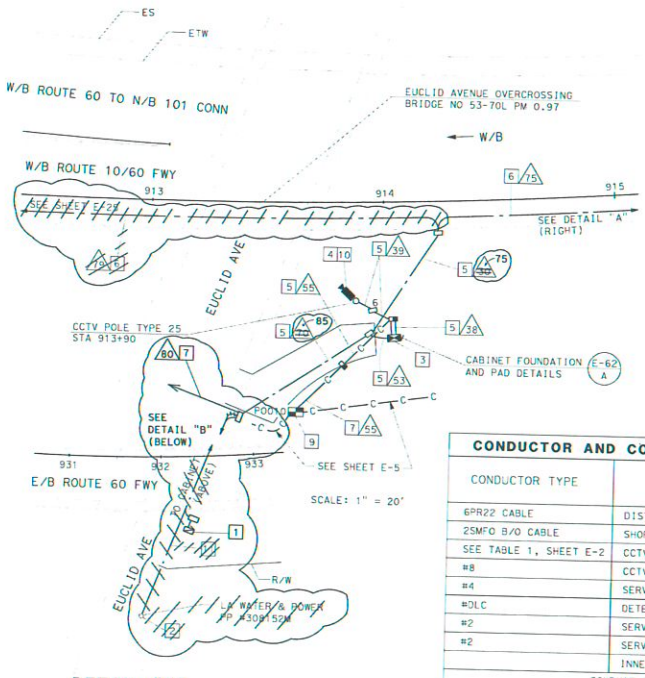
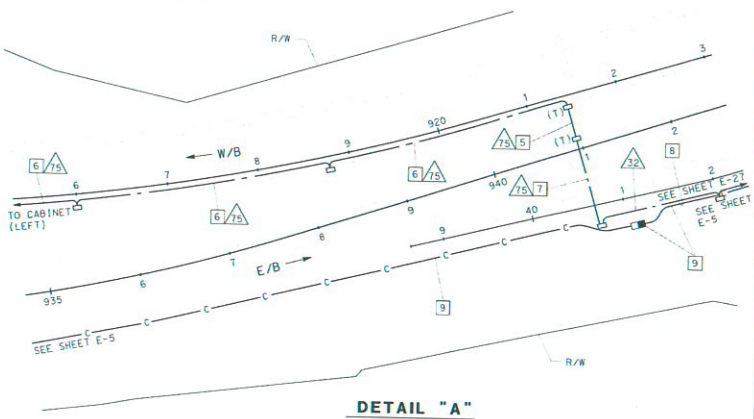


DETAIL "B"

SCALE: 1" = 50'



DETAIL "A"

SCALE: 1" = 50'

CONDUCTOR AND CONDUIT SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 30	32	38	53	55	70	75	79	39	80	85
6PR22 CABLE	DISTRIBUTION DATA/VOICE			1		1						
2SMFO B/O CABLE	SHORT HAUL VIDEO			1			1					
SEE TABLE 1, SHEET E-2	CCTV WIRING			1						1		
#8	CCTV SERVICE				2		2					2
#4	SERVICE	2					2		2		2	
#DLC	DETECTOR LEAD-IN CABLE											
#2	SERVICE	2	2				2	2				2
#2	SERVICE											
	INNERDUCT					1¼						
CONDUIT SIZE		3"	2"	2-4"	2"	3"	2"	3"	2"	2"	2"	2"

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 AND E-2 FOR LEGEND AND PROJECT NOTES.

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer: Paul Wang
Completion Date: 01/28/02

CCTV CAMERA
(LOCATION P0010)

SCALE AS SHOWN

E-26

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN
CALCULATED/DESIGNED BY
CHECKED BY
DATE
REVISED BY
DATE REVISED

CU 07396 EA 1209C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.1/11.7	113	183

Alebachew Bekele
REGISTERED ELECTRICAL ENGINEER (DATE)

5-18-98
PLANS APPROVAL DATE

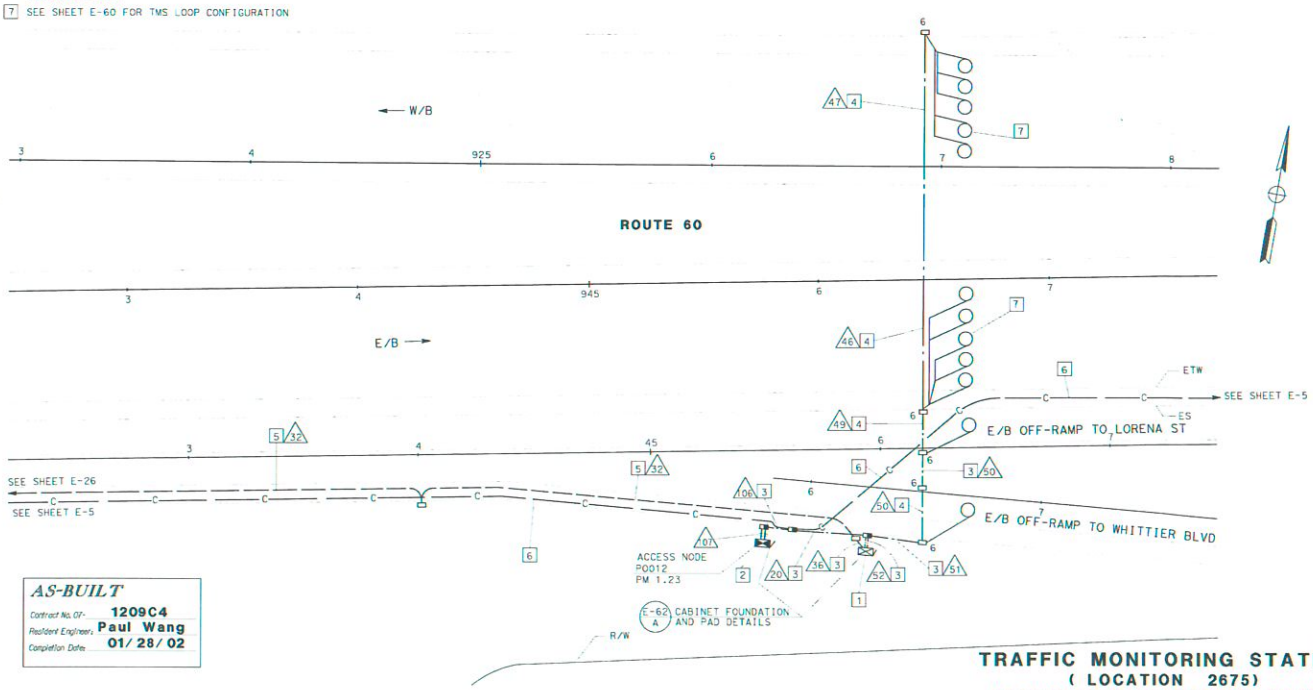
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

NOTES THIS SHEET:

1. INSTALL STATE FURNISHED TYPE 334 CABINET ON A NEW FOUNDATION. CABINET TO INCLUDE STATE FURNISHED 170 CONTROLLER AND LOOP DETECTORS SENSORS UNITS. INSTALL TELEPHONE BRIDGE AND 12 PAIR TERMINAL BLOCK IN CONTROLLER CABINT. SEE SHEET E-67 FOR DETAILS
2. FURNISH AND INSTALL TYPE 334 TV CABINET. FURNISH AND INSTALL 12 PR TERMINAL BLOCK AND CAP FIBERS AND COIL IN CABINET.
3. TRENCH AND INSTALL CONDUIT IN SOIL AREA.
4. JACK GRS CONDUIT BENEATH ROADWAY.
5. INSTALL CONDUIT IN COMMUNICATION CONDUIT TRENCH.
6. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION REFER TO COMMUNICATION SYSTEM ROUTING.
7. SEE SHEET E-60 FOR TMS LOOP CONFIGURATION

CONDUCTOR AND CONDUIT SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 20	32	36	46	47	48	49	50	51	52	106	107
6PR22 CABLE	DISTRIBUTION DATA/VOICE	1									1	1	1
DLC	COUNT LOOPS				3	5	7	10	11	12	12		
#2	SERVICE		2	2									
2 SMFO B/O CABLE	MULTIPLEXED DATA											2	2
	CONDUIT SIZE	2"	2"	2"	3"	3"	3"	3"	3"	3"	2-4"	3"	2-3"



AS-BUILT
Contract No. 07- 1209C4
Resident Engineer: Paul Wang
Completion Date: 01/28/02

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND AND PROJECT NOTES.

TRAFFIC MONITORING STATION
(LOCATION 2675)
ACCESS NODE (LOCATION P0012)

SCALE: 1" = 20'

E-27

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN
CALCULATED/DESIGNED BY
CHECKED BY
DATE
REVISED BY
DATE REVISED

EU 07396 EA 1209C1

NOTES THIS SHEET:

1. EXISTING TYPE III-BF SERVICE CABINET: METER ID #07-53-060-R-002.090. ADD 120V-1P-30A CB FOR DATA NODE CABINET AND 120V-1P-30A CB FOR CCTV. APPROXIMATE SERVICE RUN LENGTHS ARE:250' FOR DATA NODE; 210' FOR CCTV.
2. FURNISH AND INSTALL TYPE 334-TV. FURNISH AND INSTALL CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER PER SHEET E-69.
3. FURNISH AND INSTALL TYPE 334-TV CABINET WITH TWO D-4 CHANNEL BANKS PER SHEET E-70. INSTALL 2-50 PAIR TERMINAL BLOCKS.
4. ADD 4-#8 AWG IN EXISTING CONDUIT FOR DATA NODE CABINET AND CCTV CABINET.
5. TRENCH AND INSTALL CONDUIT IN SOIL AREA.
6. REMOVE AND SALVAGE EXISTING CAMERA ASSEMBLY. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SEE SHEET E-65 FOR DETAILS.
7. REMOVE EXISTING CABLE. INSTALL CCTV WIRING.
8. REMOVE 1-COAX TYPE RG-11/U AND 1-CAMERA CONTROL CABLE. EXISTING CONDUCTORS TO REMAIN.
9. ADD 12 PAIR CABLE IN EXISTING CONDUIT. INSTALL 12 PAIR TERMINAL BLOCK AND TELEPHONE BRIDGE IN EXISTING CABINET SEE SHEET E-66 FOR DETAILS.
10. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION REFER TO COMMUNICATION SYSTEM ROUTING, AND LOOP DETECTOR PLANS.
11. REMOVE EXISTING CONDUCTORS AND ABANDON CONDUIT IN PLACE.
12. RC EXISTING PULL BOX. INSTALL NEW PULL BOX.

CONDUCTOR AND CONDUIT SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN								
		25	26	38	39	53	54	73	74	82
50PR22 CABLE	COMMUNCATION DATA/VOICE			2			2			
6PR22 CABLE	DISTRIBUTION DATA/VOICE		2	3				1		1
25MFO B/O CABLE	SHORT HAUL VIDEO							1	1	
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION									
#8	SERVICE	4				2				
SEE TABLE 1, SHEET E-2	CCTV WIRING				1			1		
25MFO B/O CABLE	MULTIPLEXED DATA			2			2			
	CONDUIT SIZE	2"	2"	2-4"	2"	2"	3"	2-4"	3"	3"

DIST	COUNTY	ROUTE	POST MILEAGE TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.1/11.7	114	183

REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

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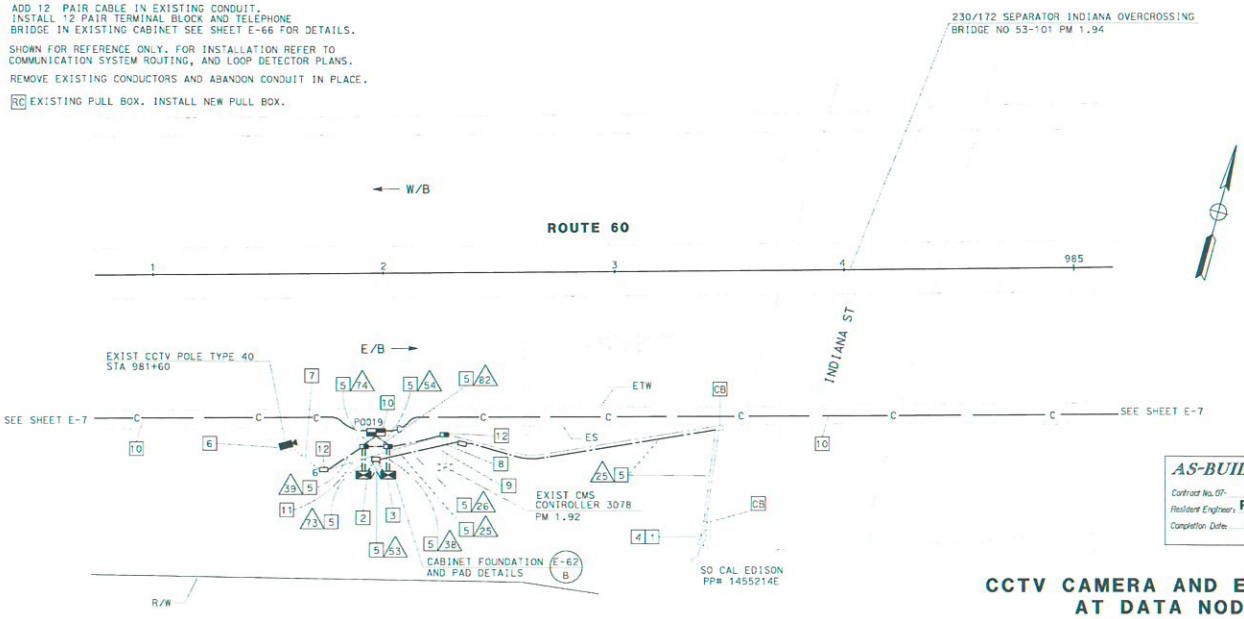

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND AND PROJECT NOTES..

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer, Paul Wang
Completion Date 01/28/02

CCTV CAMERA AND EQUIPMENT AT DATA NODE
(LOCATION PO019)

SCALE: 1" = 20'

E-28

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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PAT SULLIVAN

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.1/11.7	115	183

Alebachew Bekele
REGISTERED ELECTRICAL ENGINEER (DATE)

5-18-98
PLANS APPROVAL DATE

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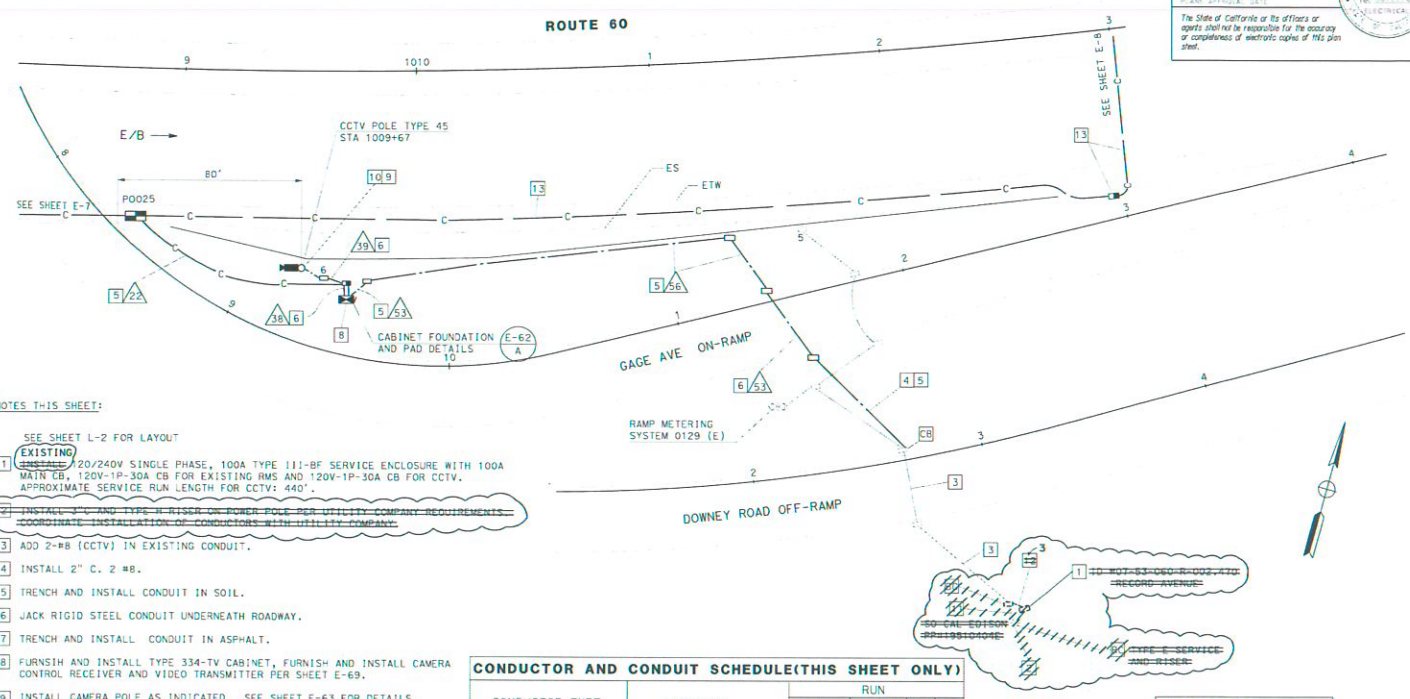

NOTES THIS SHEET:

SEE SHEET L-2 FOR LAYOUT

1. EXISTING ~~INSTALL~~ 120/240V SINGLE PHASE, 100A TYPE III-BF SERVICE ENCLOSURE WITH 100A MAIN CB, 120V-1P-30A CB FOR EXISTING RMS AND 120V-1P-30A CB FOR CCTV. APPROXIMATE SERVICE RUN LENGTH FOR CCTV: 440'.
2. ~~INSTALL 3"C AND TYPE H RISER ON POWER POLE PER UTILITY COMPANY REQUIREMENTS. COORDINATE INSTALLATION OF CONDUCTORS WITH UTILITY COMPANY.~~
3. ADD 2-#8 (CCTV) IN EXISTING CONDUIT.
4. INSTALL 2" C. 2 #8.
5. TRENCH AND INSTALL CONDUIT IN SOIL.
6. JACK RIGID STEEL CONDUIT UNDERNEATH ROADWAY.
7. TRENCH AND INSTALL CONDUIT IN ASPHALT.
8. FURNSIH AND INSTALL TYPE 334-TV CABINET, FURNISH AND INSTALL CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER PER SHEET E-69.
9. INSTALL CAMERA POLE AS INDICATED. SEE SHEET E-63 FOR DETAILS. FOR FOUNDATION, SEE RETAINING WALL PLANS.
10. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SEE SHEET E-65 FOR DETAILS.
11. ~~PULL BACK SERVICE CONDUCTORS FROM POLE MOUNTED TYPE E SERVICE TO NEW PULL BOX AND ABANDON CONDUIT.~~
12. ~~INSTALL 2-3"C, PULL EXISTING SERVICE CONDUCTORS FROM NEW PULL BOX TO NEW TYPE III-BF SERVICE ENCLOSURE.~~
13. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION REFER TO CCTV AND COMMUNICATION SYSTEM ROUTING, AND LOOP DETECTOR PLANS.

CONDUCTOR AND CONDUIT SCHEDULE(THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 22		38	39	53	56
6PR22 CABLE	DISTRIBUTION DATA/VOICE	1		1			
2SMFO B/O CABLE	SHORT HAUL VIDEO		1	1			
SEE TABLE 1, SHEET E-2	CCTV WIRING			1	1		
#8	SERVICE					2	2
	INNERDUCT		1 1/4"				
	CONDUIT SIZE		3"	2-4"	2"	3"	2"

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND AND PROJECT NOTES.

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer: Paul Wang
Completion Date: 01/28/02

CCTV CAMERA
(LOCATION P0024)
SCALE: 1" = 20'

E-29

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT: PAT SULLIVAN
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

CU 07396 | EA 1209C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	TOTAL PROJECT	TOTAL SHEETS
07	LA	60 -	0.1/11.7	116	183

REGISTERED ELECTRICAL ENGINEER — DATE

5-18-98

PLANS APPROVAL DATE

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NOTES THIS SHEET:

1. INSTALL 120/240V SINGLE PHASE, 100A TYPE III-BF SERVICE ENCLOSURE WITH 100A MAIN CB, 120V-1P-30A CB FOR EXISTING TMS AND 120V-1P-30A CB FOR CCTV. APPROXIMATE SERVICE RUN LENGTH FOR CCTV: ~~280'~~ 416'.
2. INSTALL 3"C AND TYPE H RISER ON POWER POLE PER UTILITY COMPANY REQUIREMENTS. COORDINATE INSTALLATION OF CONDUCTORS WITH UTILITY COMPANY.
3. FURNISH AND INSTALL TYPE 334-TV CABINET, CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER PER SHEET E-69.
4. INSTALL CAMERA POLE AS INDICATED. SEE SHEET E-63 FOR DETAILS. FOR FOUNDATION, SEE RETAINING WALL PLANS.
5. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SEE SHEET E-65 FOR DETAILS.
6. ADD 2-#8 (CCTV) IN EXISTING CONDUIT.
7. TRENCH AND INSTALL CONDUIT IN SOIL.
8. JACK GRS CONDUIT UNDERNEATH ROADWAY.
9. FURNISH AND INSTALL TYPE 334-TV CABINET. INSTALL FIBER DISTRIBUTION FRAME WITH 120 OPTICAL BULKHEAD ADAPTERS AND 2-50 PAIR TERMINAL BLOCKS. TERMINATE 50PR22 AND 48SMFO IN THE CABLE NODE.

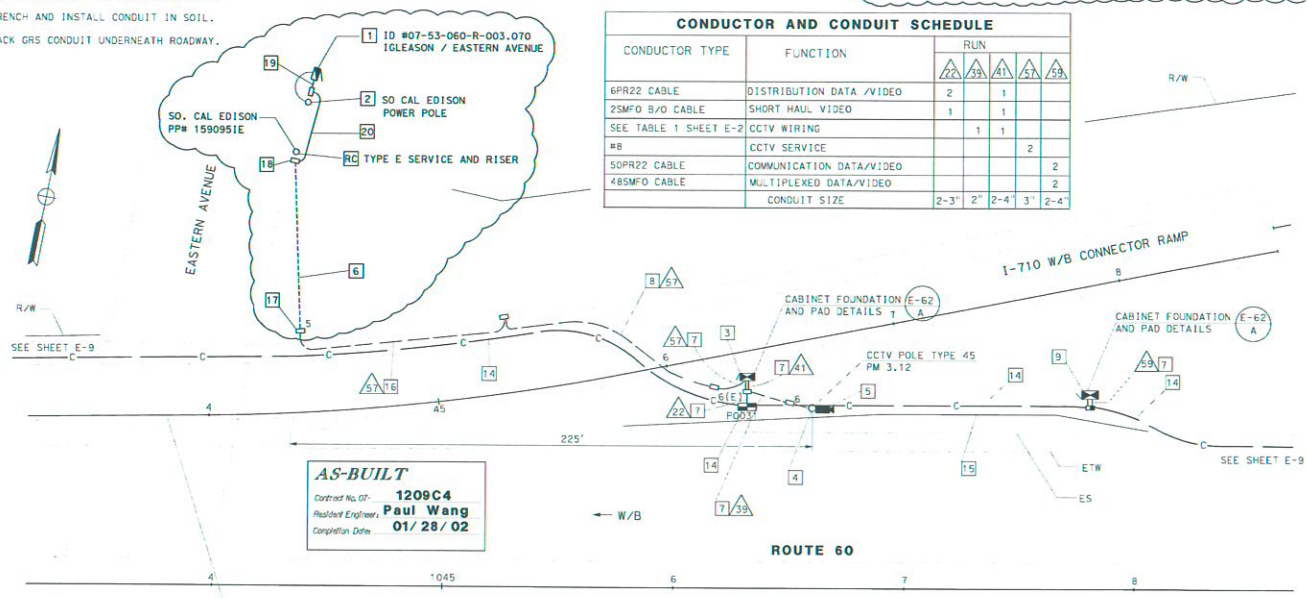
~~11 PULL BACK SERVICE CONDUCTORS FROM POLE MOUNTED TYPE E SERVICE TO NEW PULL BOX AND ABANDON CONDUIT.~~

~~12 INSTALL 2#3 C. PULL EXISTING SERVICE CONDUCTORS FROM NEW PULLBOX TO NEW TYPE III-BF SERVICE ENCLOSURE.~~

14. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION REFER TO LOOP DETECTOR AND COMMUNICATION SYSTEM ROUTING.
15. SEE SHEET L-3 FOR LAYOUT.
16. INSTALL CONDUIT IN COMMUNICATION CONDUIT TRENCH.
17. RC EXISTING PULL BOX. INSTALL NEW PULL BOX.
18. EXISTING PULL BOX. PULL BACK SERVICE CONDUCTORS FROM POLE MOUNTED TYPE E SERVICE TO PULL BOX . SPLICE TO NEW CONDUCTORS
19. 3" C.-4#8 (EXISTING TMS AND NEW CCTV SERVICE)
20. ADD 4#8 INEXISTING CONDUIT

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 22	39	41	57	59
6PR22 CABLE	DISTRIBUTION DATA /VIDEO	2		1		
2SMFO B/O CABLE	SHORT HAUL VIDEO	1		1		
SEE TABLE 1 SHEET E-2	CCTV WIRING		1	1		
#8	CCTV SERVICE				2	
50PR22 CABLE	COMMUNICATION DATA/VIDEO					2
48SMFO CABLE	MULTIPLEXED DATA/VIDEO					2
	CONDUIT SIZE	2-3"	2"	2-4"	3"	2-4"



AS-BUILT
Contract No. 07- 1209C4
Resident Engineer: Paul Wang
Completion Date 01/28/02

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND AND PROJECT NOTES.

CCTV CAMERA CABLE NODE (LOCATION PO031)

SCALE: 1" = 20'

E-30

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.1/11.7	117	183

REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

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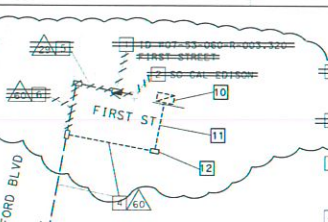
NOTES THIS SHEET (CONTINUED):

10 EXISTING 120/240V, 10/, 100A TYPE III-BF CABINET ADD 120V-1P-30A CB FOR TMS. APPROXIMATE SERVICE RUN LENGTH FOR TMS: 790'.

11 ADD 2# 4 IN EXISTING CONDUIT

12 EXISTING PULL BOX



DETAIL "A"
SCALE: 1" = 50'

NOTES THIS SHEET:

1 ~~INSTALL 120/240V SINGLE PHASE, 100A TYPE III-BF SERVICE ENCLOSURE AND FOUNDATION WITH 100A MAIN CB, 120V-1P-30A CB FOR TMS. APPROXIMATE SERVICE RUN LENGTH FOR TMS: 740'.~~

2 ~~INSTALL 3"C AND TYPE H RISER ON POWER POLE PER UTILITY COMPANY REQUIREMENTS. COORDINATE INSTALLATION OF CONDUCTORS WITH UTILITY COMPANY.~~

3 INSTALL STATE FURNISHED TYPE 334 CABINET ON A NEW FOUNDATION CABINET TO INCLUDE STATE FURNISHED 170 CONTROLLER AND LOOP DETECTORS SENSORS UNITS. INSTALL TELEPHONE BRIDGE AND 12 PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-67 FOR DETAILS.

4 TRENCH AND INSTALL CONDUIT IN SOIL.

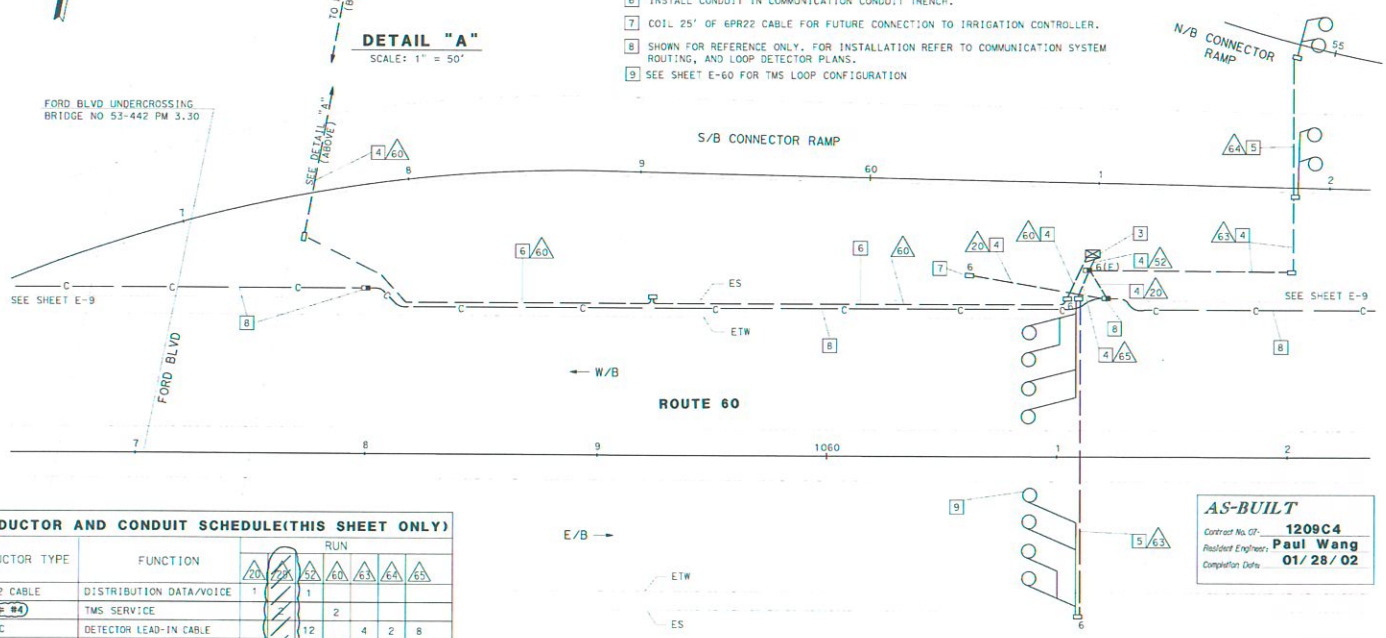
5 JACK GRS CONDUIT BENEATH ROADWAY.

6 INSTALL CONDUIT IN COMMUNICATION CONDUIT TRENCH.

7 COIL 25' OF 6PR22 CABLE FOR FUTURE CONNECTION TO IRRIGATION CONTROLLER.

8 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION REFER TO COMMUNICATION SYSTEM ROUTING, AND LOOP DETECTOR PLANS.

9 SEE SHEET E-60 FOR TMS LOOP CONFIGURATION



CONDUCTOR AND CONDUIT SCHEDULE(THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 20	20	52	60	63	64	65
6PR22 CABLE	DISTRIBUTION DATA/VOICE	1		1				
#4	TMS SERVICE		2		2			
DLC	DETECTOR LEAD-IN CABLE			12		4	2	8
	CONDUIT SIZE	2"	2-3"	2-4"	2"	3"	3"	3"

AS-BUILT
Contract No. 07- 1209C4
Resident Engineer: Paul Wang
Completion Date 01/28/02

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND AND PROJECT NOTES.

TRAFFIC MONITORING STATION
(LOCATION 2676)

SCALE: AS SHOWN

E-31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTION
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CU 07396 EA 1209C1