

ORANGE COUNTY
ENVIRONMENTAL MANAGEMENT AGENCY

SANTA ANA, CALIFORNIA

PLANS FOR CONSTRUCTION OF
TRAFFIC SIGNAL INSTALLATION

AT

ANTONIO PARKWAY & MEANDERING TRAIL

TRACTS 14491 & 14492

FUNDED BY: DEVELOPER DEPOSITS
AGREEMENT #D95-002

BLOCK: 51
MODULE: 89

INDEX OF SHEETS

SHEET	DESCRIPTION
1.	TITLE SHEET
2.	TRAFFIC SIGNAL PLAN ANTONIO PKWY. & MEANDERING TRAIL
3.	DETAIL SHEET

UTILITY	PHONE	CONTACT
1. SO. CAL. EDISON	458-4419	GARY BULLARD
2. PACIFIC BELL	666-5707	BILL LOWING
3. SANTA MARGARITA WATER	582-2330	DIA BADIR
4. U.S.ALERT	1-800-422-4133	
5. SO. CAL. GAS CO.	634-3115	CHARLIE GILBERT
6. COX COMMUNICATION	240-8828	MICKEY MILLER
7. S.D.G.& E.	361-8031	GRACE TURNER

BENCH MARK:

BASIS OF BEARING:

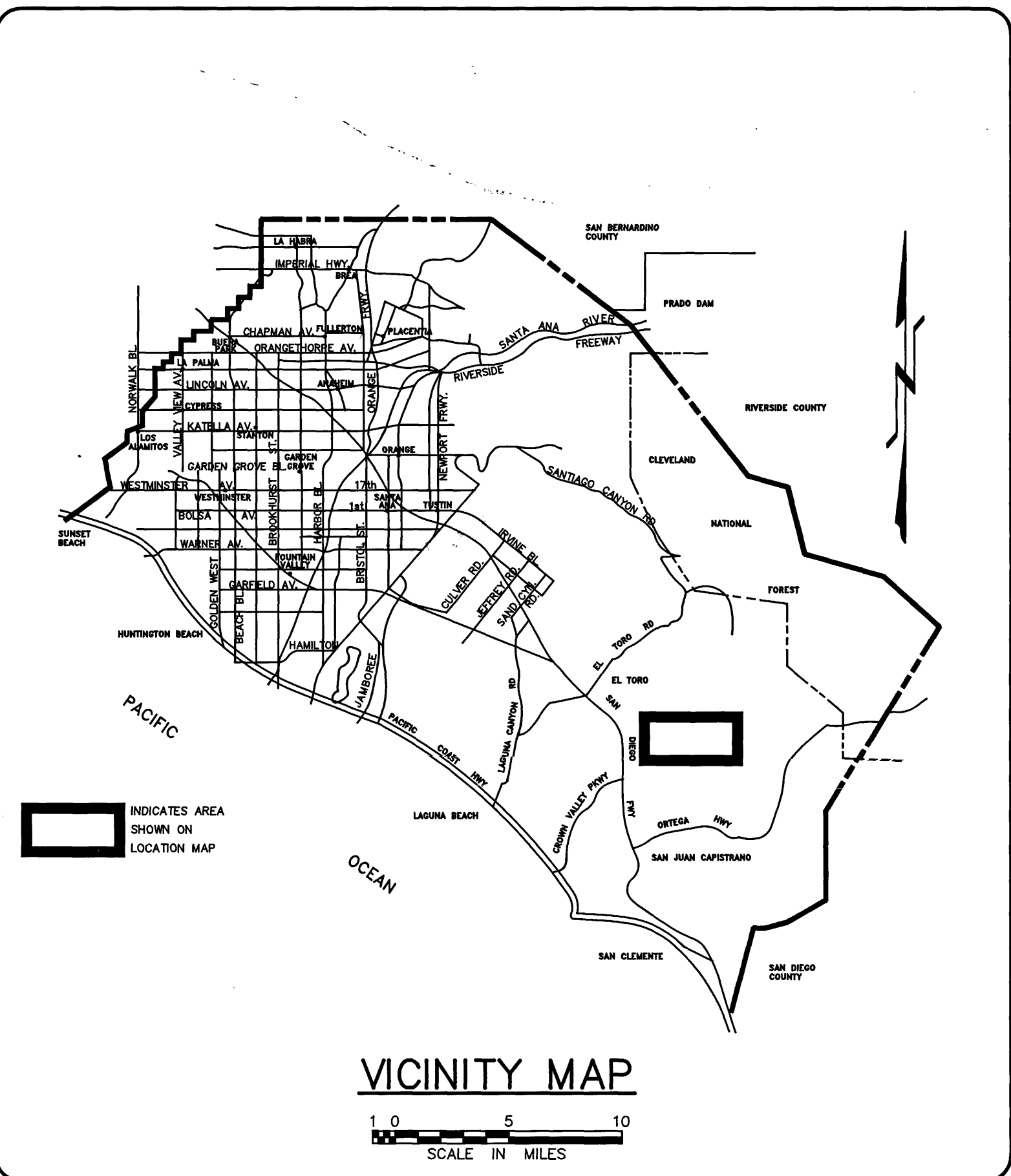
✓	ADDING STRIPING NOTES & REVISED POLE SCHEDULE	2	DL Ouy	5/23/96
✓	DELETED NOTE 13.	2	DL Ouy	7/2/96
✓	AS - BUILT	2		4/23/97
NO.	DESCRIPTION	SHT.	APPROVED	DATE

REVISIONS

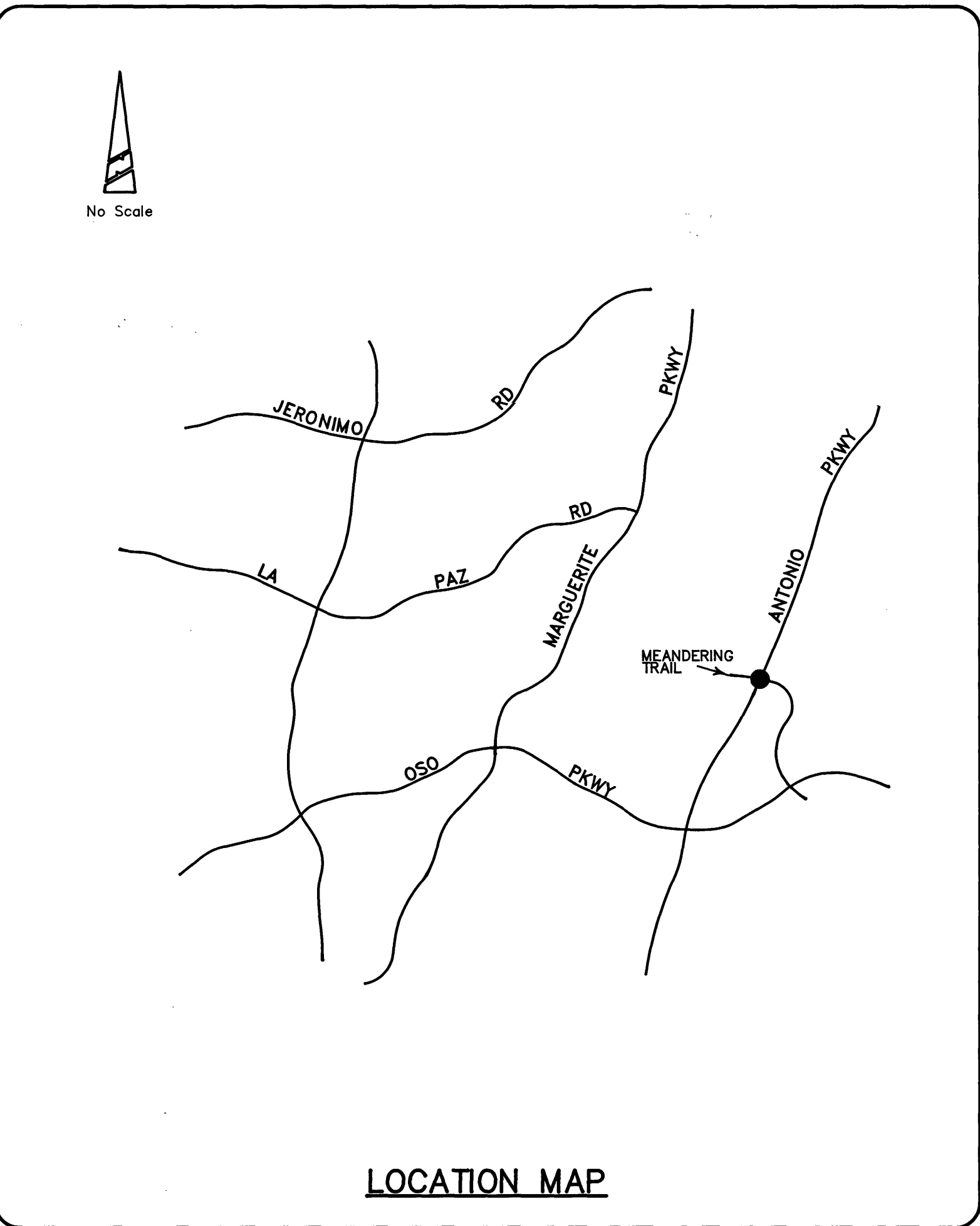
W.O. NO. ERIOI34

DWG. NO.

SHEET 1 OF 3



VICINITY MAP



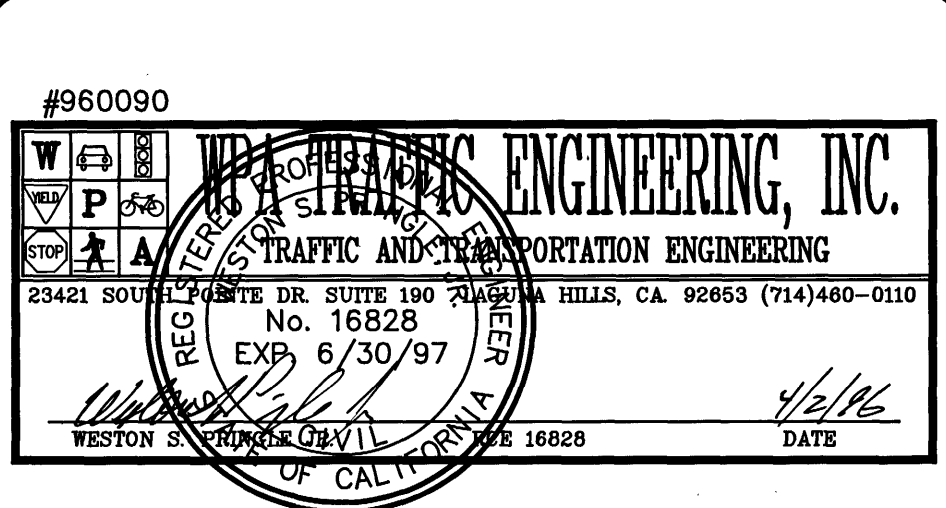
LOCATION MAP

E.M.A. TRANSPORTATION

SUBMITTED: *Donny J. Ouy* 5/23/96
SENIOR CIVIL ENGINEER DATE
RECOMMENDED: *I. G. Ochoa* 5/23/96
TRAFFIC ENGINEER DATE
APPROVED: *Ken R. Smith* 5/23/96
DIRECTOR OF TRANSPORTATION DATE
KEN R. SMITH

AS-BUILTS

INSPECTOR: B.B. HEDRICK
SUPV. INSPECTOR: B. JONES
CONTRACTOR: A.A.A. ELECT. SERVICE
COMPLETE: 12/30/96



NOTES

- REFER TO DETAIL SHEET FOR GENERAL NOTES.
- FURNISH AND INSTALL 8-PHASE SYSTEM CONTROLLER WITH 18 LOOP DETECTOR CHANNELS AND TELEMETRY IN A TYPE "P" ALUMINUM CABINET, INCLUDING FOUNDATION.
- INSTALL TYPE III SERVICE WITH 30A LIGHTING, 50A SIGNAL AND 15A I.S.N.S. BREAKERS, INCLUDING FOUNDATION.
- STREET PAINTING INSTALLATION AND REMOVALS SHALL BE COMPLETED BY OTHERS AND IS EXPECTED TO BE EXISTING (EXCEPT INSTALLATIONS AS SHOWN).
- REMOVE R1 SIGNS AND "STOP" PAVEMENT MARKINGS AT SIGNAL TURN-ON.
- USE EXISTING CONDUIT CROSSINGS. VERIFY LOCATIONS IN FIELD.
- INSTALL #8 COPPER BARE BOND WIRE IN ALL PVC CONDUITS AT INTERSECTION. AND #12 LOCATER WIRE IN I.C. & ADVANCE DETECTION CONDUITS.
- INSTALL BELL-ENDS ON ALL PVC CONDUIT PRIOR TO PULLING WIRE OR CABLE.
- INSTALL INTERCONNECT SPICE CABINET PER DETAIL "F" (SEE DETAIL SHEET), INCLUDING FOUNDATION.
- INSTALL NEMA EVP SENSOR CABLE FROM END OF SIGNAL MAST ARM TO CONTROLLER CABINET. COIL 15' OF CABLE INSIDE OF CABINET.
- INSTALL W41 SIGN AND "SIGNAL AHEAD" MARKING (EA. LANE) 625' TO BCR OR AS SHOWN. SEE TYPICAL LAYOUT.
- INSTALL 1-12PR.#22 INTERCONNECT CABLE TO OSO PARKWAY (STA. 35+21) SPICE CABINET ON N/E CORNER. USE EXISTING 2" CONDUIT LEAVE 20' SLACK AT OAKTREE (STA. 64+87) AND AT SWEETWATER (STA. 51+11).
- REMOVE AND SALVAGE STREET LIGHT. INSTALL PULLBOX AND SPICE CIRCUIT AFTER SIGNAL POLES WITH SAFETY LIGHTING HAVE BEEN INSTALLED.
- REMOVE CONFLICTING MARKINGS BY SANDBLASTING.
- PAINT 12" WHITE
- PAINT 4" DOUBLE YELLOW PER CALTRANS STANDARD AS SHOWN.
- PAINT 8" WHITE
- STENCIL AS SHOWN.

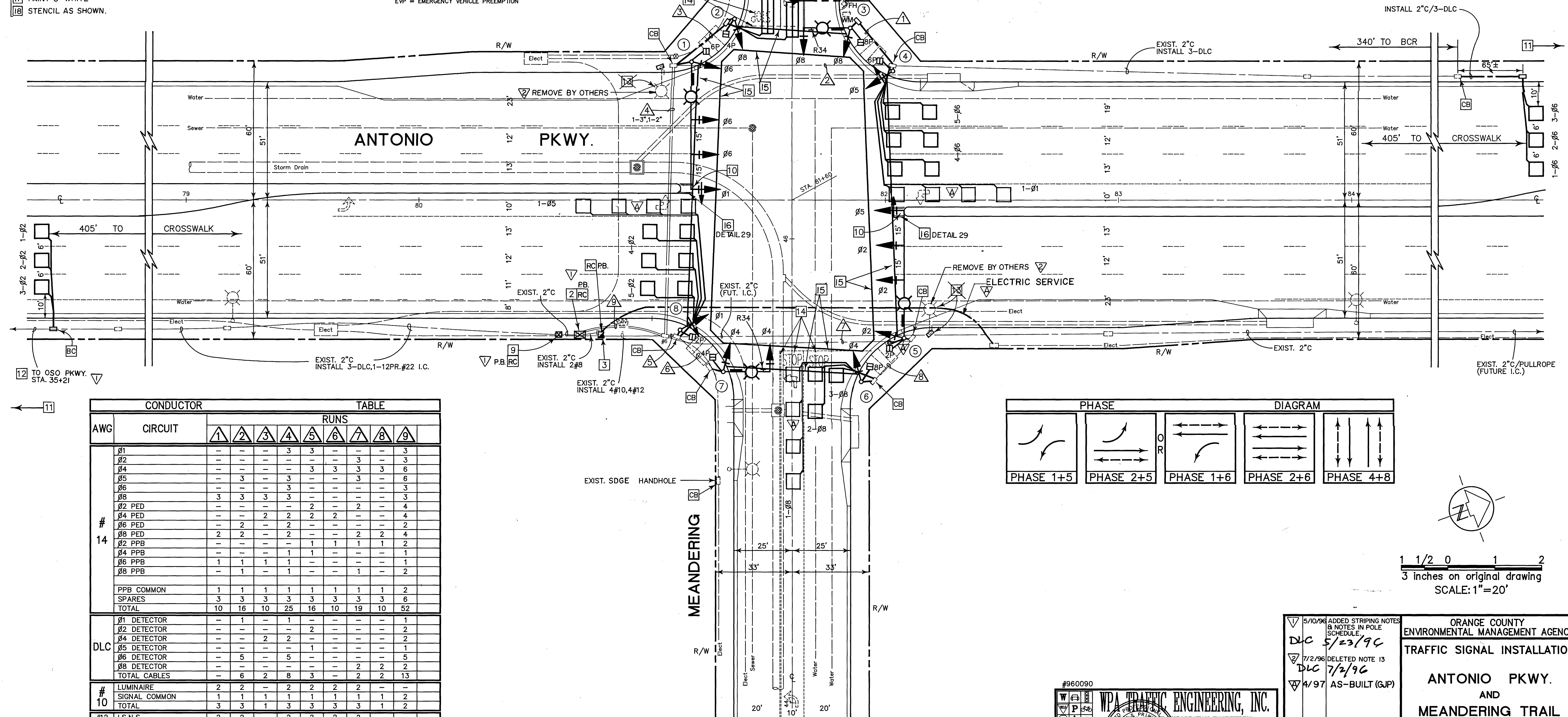
DETECTOR		SCHEDULE	
SENSOR UNIT	CHANN	LOOP DETECTORS	
1	1	1-05	(1)
2	2	1-02	(2)
3	1	2-02	(3)
4	2	4-02	(4)
5	1	5-02	(5)
6	2	1-06	(6)
7	1	2-04	(7)
8	2	3-06	(8)
9	1	4-06	(9)
10	2	5-06	(10)

* ALL SENSORS SHALL HAVE ADJUSTABLE CALL HOLD AND DELAY FEATURE WITH COLOR GATING TO MODIFY TIMING FUNCTIONS. EACH CHANNEL SHALL BE DUAL OUTPUT / OUTPUT "A" TO CONTROLLER INPUT. OUTPUT "B" TO SYSTEM SAMPLER ONLY (PRESENCE MODE). ALL SENSORS SHALL BE RACK MOUNTED.

(#) = SYSTEM SAMPLING No.
[#] = VCS INPUT No.
EVP = EMERGENCY VEHICLE PREEMPTION

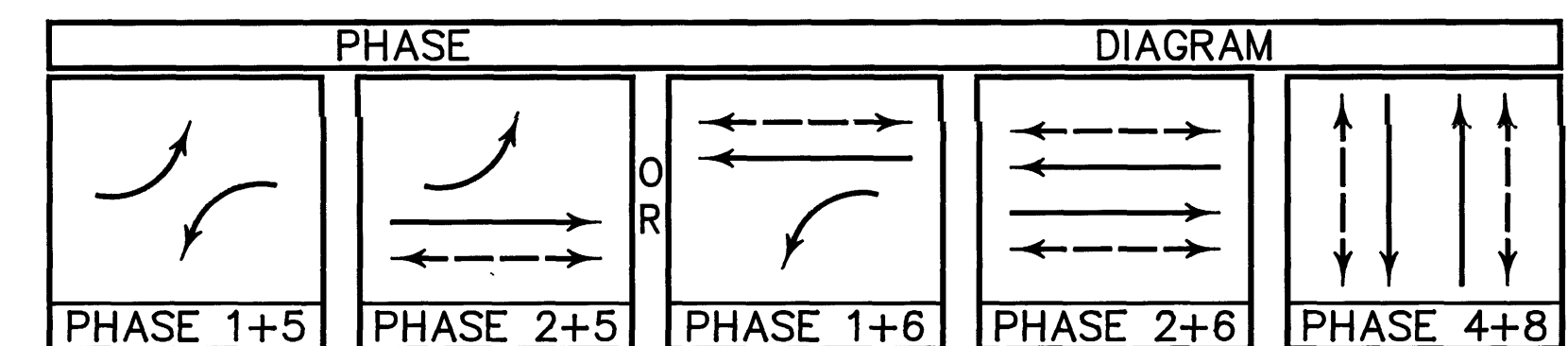
POLE										SCHEDULE				
STANDARD					LUMINAIRE HPSV	I.S.N.S. LEGEND	SIGNAL MOUNTING		PED PUSH BTN		REMARKS			
No.	TYPE	HEIGHT	SIG.M.A.	LUM.M.A.			VEHICLE	PED	PHASE	ARROW				
▽	①	29-5-80	(30')	(55')	(15')	250 W	Meandering Trail	MAS LT	MAS 2ea	SV-1-T	SP-1-CS	4	←	SEE NOTE 10
▽	②	(1-A)	(10')	-	-	-	-	-	-	TV-1-T	SP-1-CS	6	→	
▽	③	17-3-80	(30')	(20')	(12')	200 W	Antonio Pkwy	-	MAS	SV-1-T	SP-1-CS	6	←	MID-TENON NOT REQUIRED
▽	④	(1-A)	(10')	-	-	-	-	-	-	TV-1-T	SP-1-CS	8	→	
▽	⑤	29-5-80	(30')	(55')	(15')	250 W	Meandering Trail	MAS LT	MAS 2ea	SV-1-T	SP-1-CS	8	←	SEE NOTE 10
▽	⑥	(1-A)	(10')	-	-	-	-	-	-	TV-1-T	SP-1-CS	2	→	
▽	⑦	17-3-80	(30')	(20')	(12')	200 W	Antonio Pkwy	-	MAS	SV-1-T	SP-1-CS	2	←	MID-TENON NOT REQUIRED
▽	⑧	(1-A)	(10')	-	-	-	-	-	-	TV-1-T	SP-1-CS	4	→	

- LOCATE POLES 13' TO CURB RETURN $\Delta/2$ MEASURED PARALLEL TO C AND 36" MIN. BACK OF CURB FACE.
 - ALL NEW SIGNAL HEADS SHALL HAVE 12-INCH LENSES.
- () COUNTY FURNISHED EQUIPMENT, STORED AT THE SAN JUAN GROUP YARD LOCATED ON THE NORTHWEST CORNER OF ANTONIO PARKWAY & AVENIDA DE LAS BANDERAS. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING THESE ITEMS TO THE JOB SITE. ALL OTHER ITEMS ARE NEW.

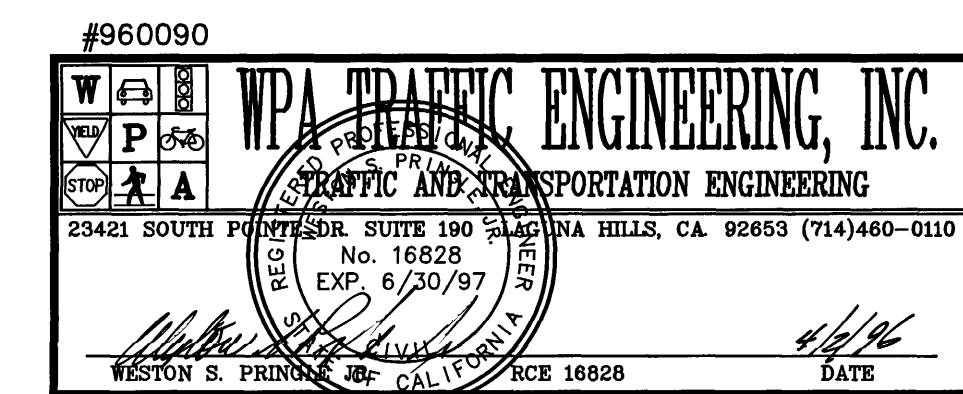


CONDUCTOR		TABLE								
AWG	CIRCUIT	1	2	3	4	5	6	7	8	9
# 14	01	-	-	-	3	3	-	-	-	3
	02	-	-	-	-	-	-	3	-	3
	04	-	-	-	-	3	3	3	3	6
	05	-	3	-	3	-	-	3	-	6
	06	-	-	-	3	-	-	-	-	3
	08	3	3	3	3	-	-	-	-	3
	02 PED	-	-	-	-	2	-	2	-	4
	04 PED	-	-	2	2	2	-	-	-	4
	06 PED	-	2	-	2	-	-	-	-	2
	08 PED	2	2	-	2	-	-	2	2	4
	02 PPB	-	-	-	-	1	1	1	1	2
	04 PPB	-	-	-	1	1	-	-	-	1
	06 PPB	1	1	1	1	-	-	-	-	1
	08 PPB	-	1	-	1	-	-	1	-	2
DLC	PPB COMMON	1	1	1	1	1	1	1	1	2
	SPARES	3	3	3	3	3	3	3	3	6
	TOTAL	10	16	10	25	16	10	19	10	52
# 10	01 DETECTOR	-	1	-	1	-	-	-	-	1
	02 DETECTOR	-	-	-	-	2	-	-	-	2
	04 DETECTOR	-	-	2	2	-	-	-	-	2
	05 DETECTOR	-	-	-	-	1	-	-	-	1
	06 DETECTOR	-	5	-	5	-	-	-	-	5
# 12	08 DETECTOR	-	-	-	-	-	2	2	2	2
	TOTAL CABLES	-	6	2	8	3	-	2	2	13
# 10	LUMINAIRE	2	2	-	2	2	2	2	-	-
	SIGNAL COMMON	1	1	1	1	1	1	1	1	2
	TOTAL	3	3	1	3	3	3	3	1	2
# 12	I.S.N.S.	2	2	-	2	2	2	2	-	-
	3#20 EVP CABLE	-	-	-	1	1	-	1	-	2
CONDUIT SIZE		2"(N) 3"(E) 12"(N) * 2-2"(E) 2"(E) 3"(E) 2"(E) 12-3"(E)								

(N)=NEW, (E)=EXISTING
* = 1-3"(E) & 1-2"(E), 2"C NOT USED

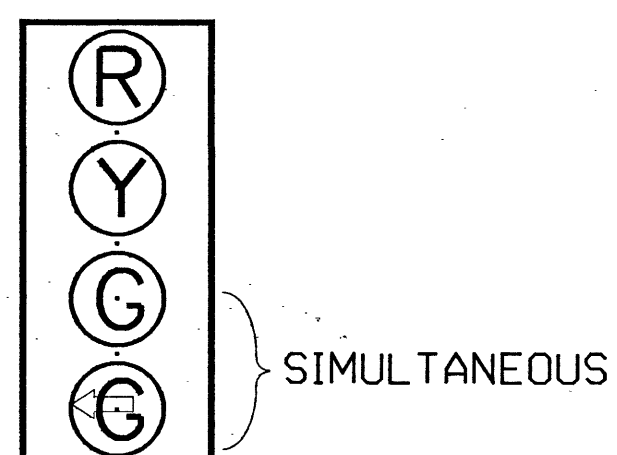


1 1/2 0 1 2
3 inches on original drawing
SCALE: 1"=20'

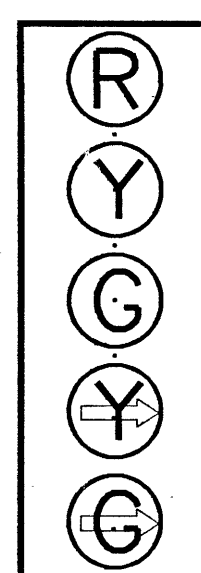


5/10/96 ADDED STRIPING NOTES & NOTES IN POLE SCHEDULE.		ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY	
DLC 5/23/96		TRAFFIC SIGNAL INSTALLATION	
7/2/96 DELETED NOTE 13		ANTONIO PKWY. AND MEANDERING TRAIL	
DLC 7/2/96			
4/97 AS-BUILT (GJP)			
MARK	DATE	DESCRIPTION	PREPARED UNDER SUPERVISION OF
DESIGNED	SOMMERS	SCALE	DATE
DRAWN	P.K.	CHECKED	DWG. No.
			SHEET 2 OF 3

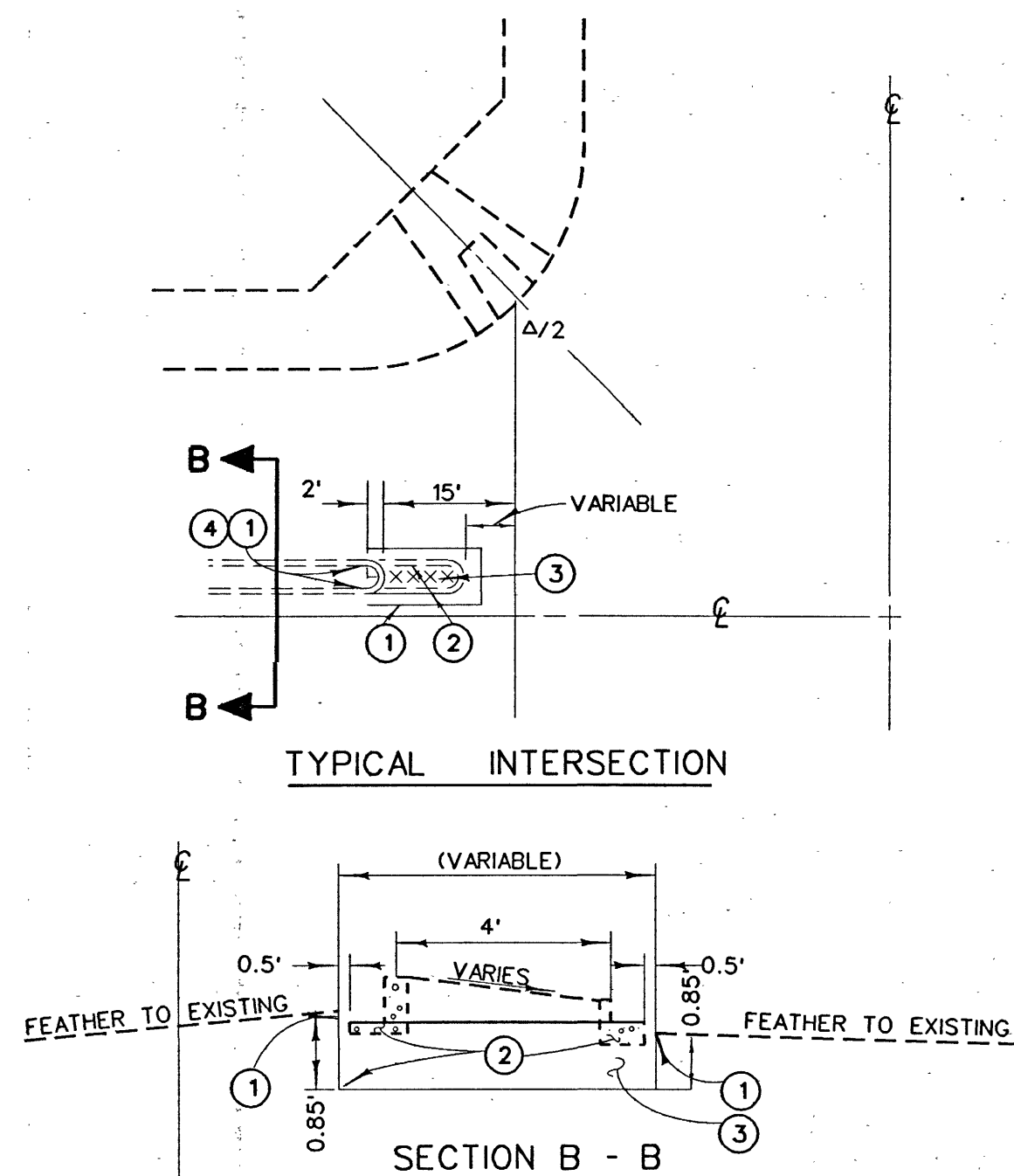
DETAIL A
4-SECTION SIGNAL HEAD
12" LENSES



DETAIL E
5-SECTION SIGNAL HEAD
12" LENSES



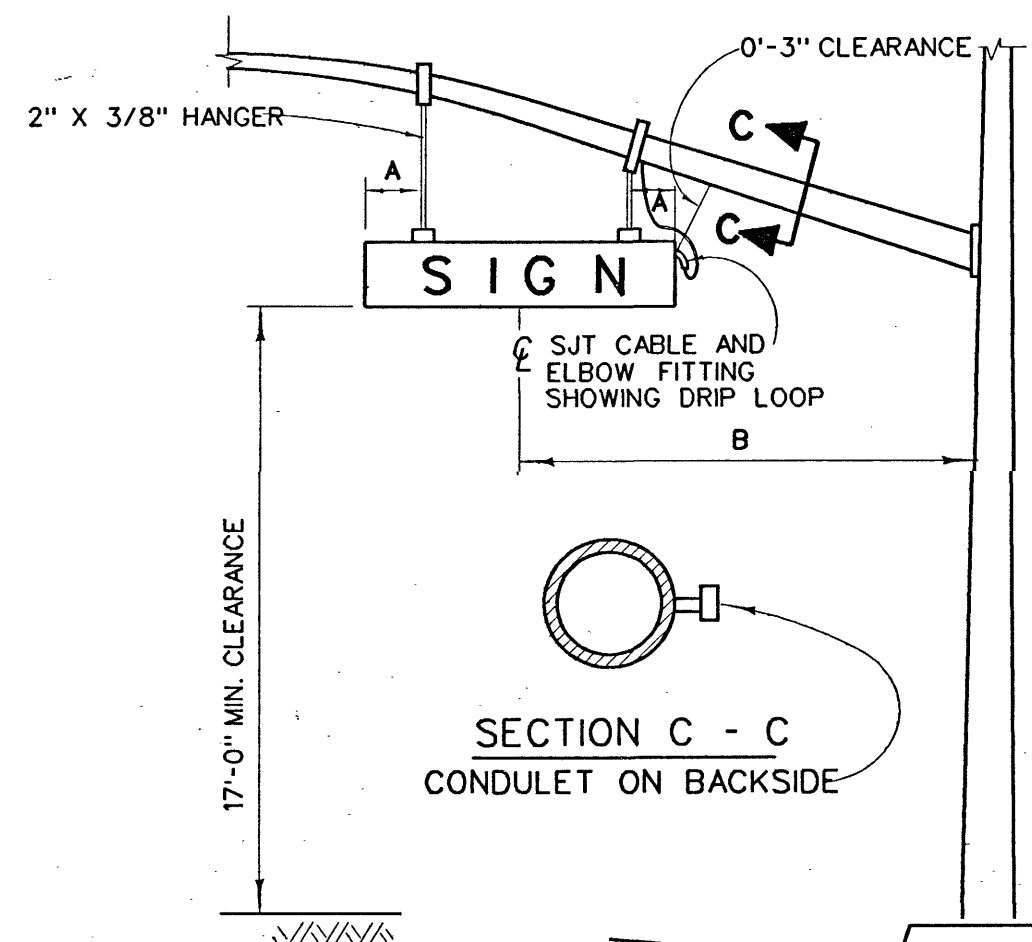
DETAIL B
INTERSECTIONS RAISED MEDIAN



NOTES - DETAILS B

1. SAWCUT AND JOIN EXISTING
2. REMOVE CONCRETE
3. CONSTRUCT 0.85' AC OVER NATIVE SOIL
4. CONSTRUCT TYPE C1-8 CONCRETE CURB PER EMA STD. PLAN 104-0-O.C.

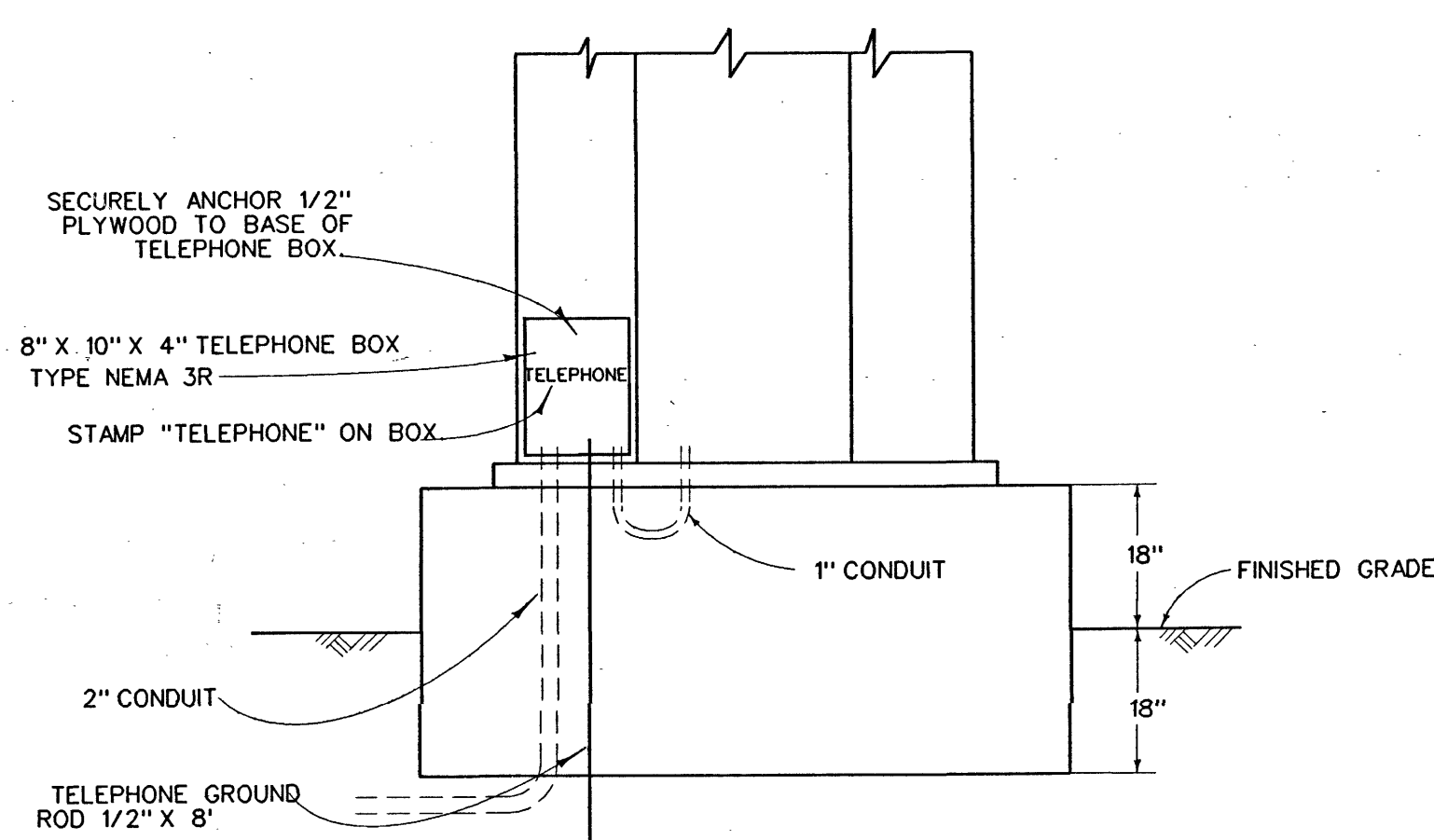
DETAIL C
STREET NAME SIGN COMPONENTS



NOTES - DETAIL C

- A 1'-6" MINIMUM
- B 10'-6" CENTERLINE OF SIGN TO FACE OF POLE

DETAIL D
TELEPHONE SERVICE BOX

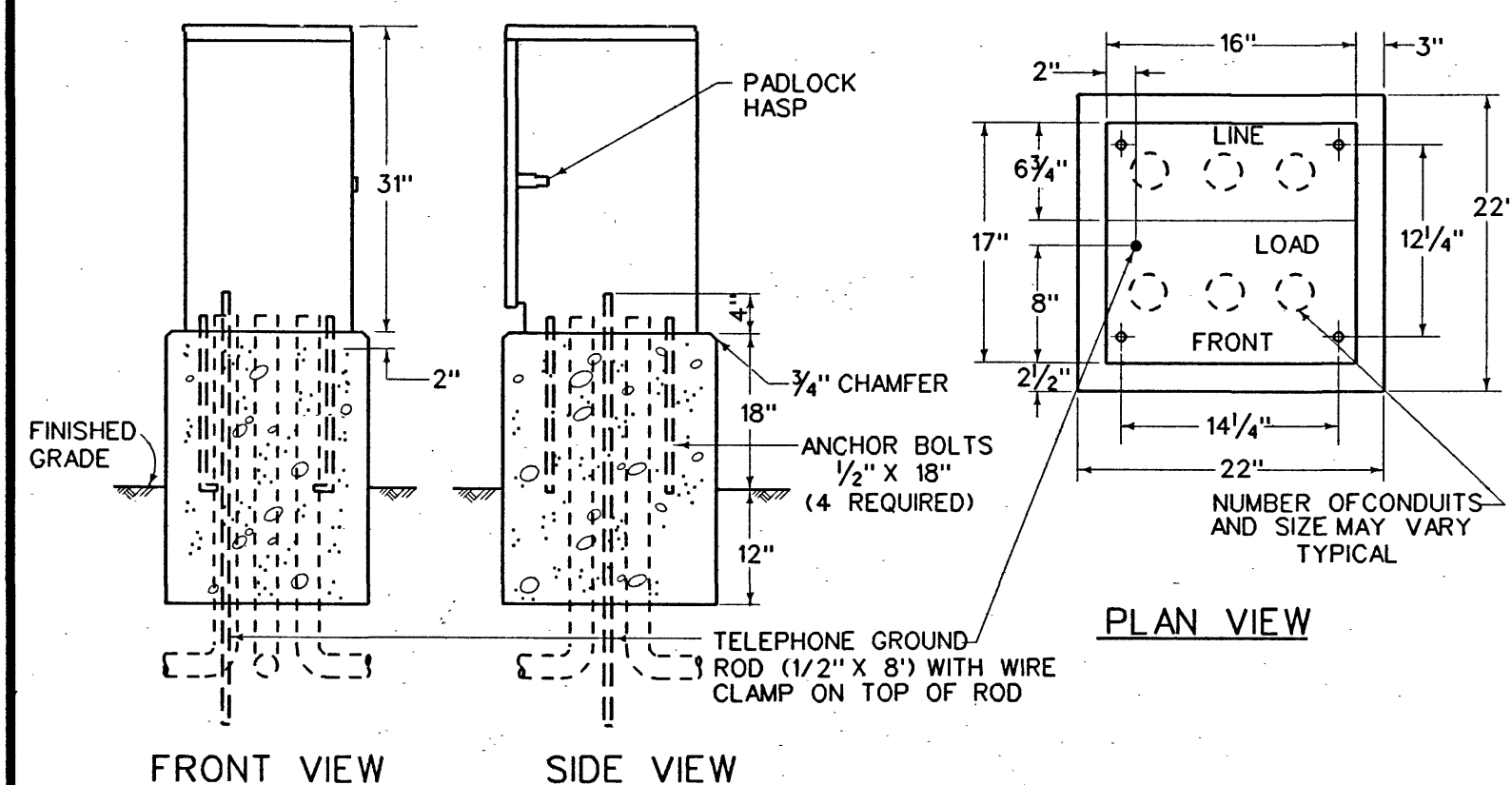


GENERAL NOTES: A

1. ALL WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA, DEPT. OF TRANSPORTATION, STANDARD PLANS AND STANDARD SPECIFICATIONS DATED JULY 1992 AND THE SPECIAL PROVISIONS FOR THIS PROJECT.
2. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER, IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.
3. 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ORANGE COUNTY E.M.A. FOR INSPECTION AT 567-7800.
4. THE ENGINEER SHALL APPROVE POLE AND LOOP DETECTION PLACEMENT IN THE FIELD PRIOR TO INSTALLATION.
5. ALL CONDUIT SHALL BE 2" UNLESS OTHERWISE NOTED.
6. ALL PULL BOXES SHALL BE #5 UNLESS OTHERWISE NOTED.
7. ALL SALVAGED EQUIPMENT SHALL BE DELIVERED BY CONTRACTOR TO ORANGE COUNTY YARD AT 1152 EAST FRUIT ST, SANTA ANA, CA. CONTRACTOR SHALL GIVE A 48-HOUR NOTICE TO THE COUNTY PRIOR TO THE DELIVERY DATE.
8. CONTRACTOR SHALL PROVIDE ALL NECESSARY TELEPHONE AND ELECTRICAL SERVICE LINES AND INTERCONNECT HOOK-UPS BETWEEN THE LOCAL CONTROLLER AND THE SYSTEM MASTER.
9. PEDESTRIAN INDICATION SHALL BE INTERNATIONAL SYMBOL.
10. PEDESTRIAN PUSH BUTTON SHALL BE TYPE B WITH INTERNATIONAL SYMBOL PLATE.
11. ALL VEHICLE INDICATIONS SHALL BE 12" DIAMETER WITH BACKPLATES, GLASS REFLECTORS, AND GLASS LENSES, UNLESS SHOWN OTHERWISE.
12. CONTRACTOR SHALL POTHOLE CONFLICTING UTILITIES AS DIRECTED BY ENGINEER.
13. CONTRACTOR SHALL AVOID DAMAGING EXISTING UTILITIES. (SEE SPECIAL PROVISIONS).
14. INDUCTIVE LOOPS SHALL BE 6' X 6' WITH 9' SPACING IN THE DIRECTION OF TRAVEL UNLESS OTHERWISE NOTED.
15. ALL DETECTOR CABLE HOMERUNS SHALL BE IN THE CROSSWALK AREA.
16. ALL 6' X 6' DETECTOR LOOPS SHALL BE FOUR(4) TURNS.
17. ALL QUADRUPOLE DETECTOR LOOPS SHALL BE TWO (2-4-2) TURNS.
18. TRAFFIC CONTROLLER CABINET FOUNDATION SHALL BE 18" ABOVE AND BELOW FINISHED GRADE (SEE DETAIL D).
19. INSTALL "CABINET DOOR OPEN" CIRCUIT IN CONTROLLER CABINET PER MANUFACTURES SPECIFICATIONS.

DETAIL F A A A

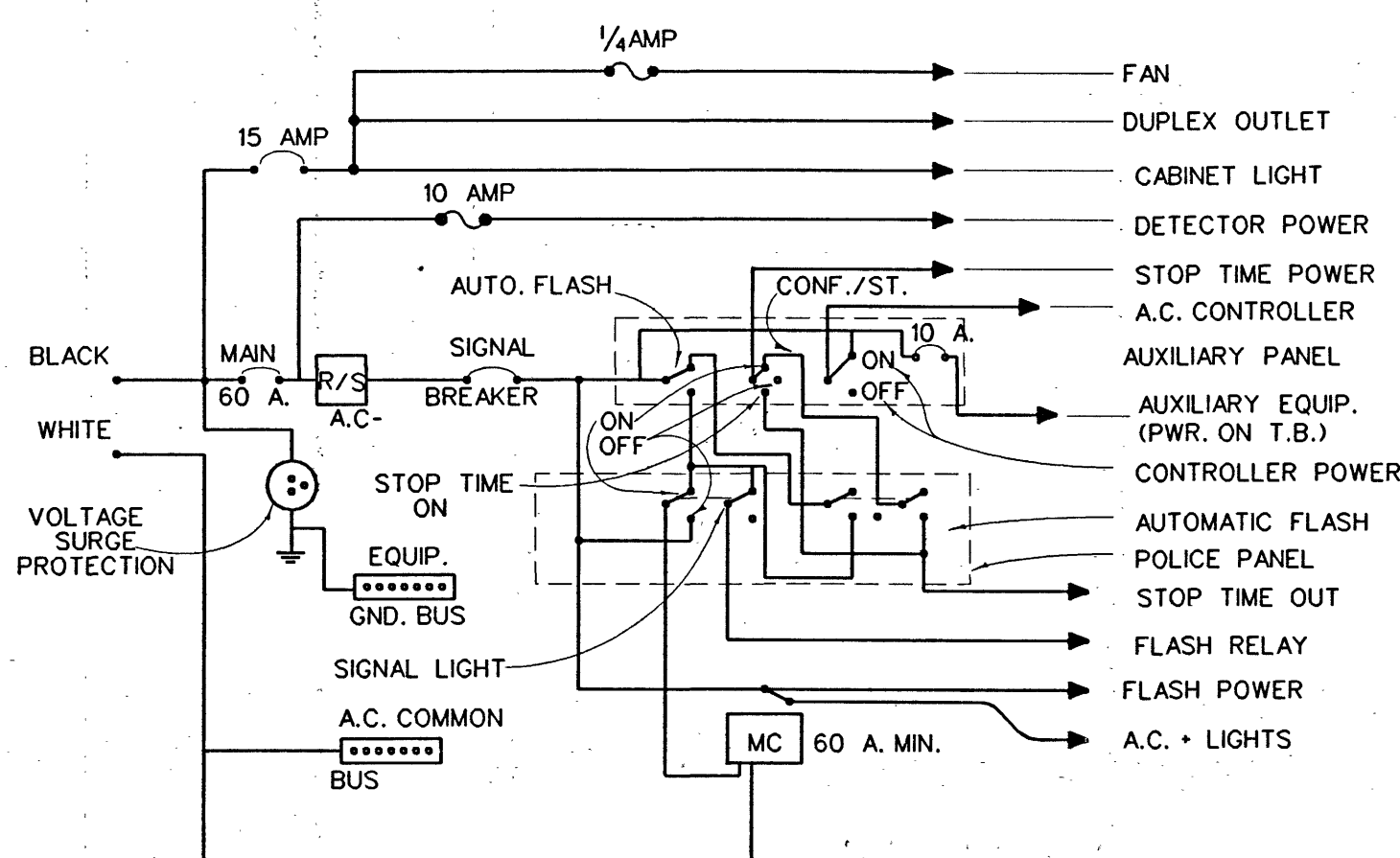
INTERCONNECT SPLICE CABINET



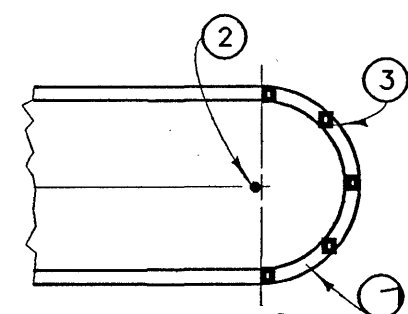
NOTES - DETAIL F

1. FOUNDATION TO BE 22" X 22". ANCHOR BOLT PLACEMENT PER CABINET MFG. TEMPLATE.
2. ENCLOSURE SHALL BE FURNISHED WITH A DETACHABLE MOUNTING BASE.
3. ALL FACTORY INSTALLED COMPONENTS SHALL BE U.L. LISTED OR PER PUBLISHED N.E.C. STANDARDS.
4. A 3/4" CONSTRUCTION GRADE PLYWOOD PANEL SHALL BE FASTENED TO THE REAR WALL. PANEL SHALL BE 12" X 24" AND SHALL HAVE A No. M-25 AND R-841 STANDOFF FASTENED IN THE CENTER OF THE PANEL.
5. ENCLOSURE FINISH SHALL CONFORM TO A.S.T.M. B-117. COLOR SHALL BE PORCELAIN WHITE.
6. PROVIDE 1 1/2" CONDUIT FOR FUTURE 115 VAC SERVICE.
7. PROVIDE GROUND BUS INSIDE SPLICE CABINET.

DETAIL G A
CONTROLLER CABINET WIRING



DETAIL H
RAISED MEDIAN MARKING



NOTES - DETAIL H

- ① PAINT MEDIAN NOSE WITH HIGHLY REFLECTIVE PREMIXED WHITE TRAFFIC PAINT WITH GLASS BEADS.
- ② INSTALL FLEXIBLE VERTICAL TYPE K MARKER, R7, R10 OR TYPE N-1 ON TELESAR POST AS INDICATED ON PLAN.
- ③ INSTALL YELLOW REFLECTIVE PAVEMENT MARKERS ON TOP SURFACE OF MEDIAN CURB NOSE AT 2' C.C. SPACING (MINIMUM 5 MARKERS). PLACE REFLECTIVE SURFACE OF MARKERS PERPENDICULAR TO ℓ OF ROADWAY.

1 1/2 0 1 2
3 inches on original drawing

MARK	DATE	DESCRIPTION	SCALE	DATE	W. O. NO.	SHEET
REVISIONS			AS SHOWN			3
DESIGNED		CHECKED				OF 3
DRAWN						

ORANGE COUNTY
ENVIRONMENTAL MANAGEMENT AGENCY

SIGNAL DETAIL SHEET

SPN 24
A4963
EAST FILE CODE: IRVINE, CA