

WARNING: ALL INDIVIDUALS INTERESTED IN BIDDING ON THIS PROJECT MUST OBTAIN THE FINAL PLANS AND SPECIFICATIONS FROM THE DEPARTMENT MANAGING THE PROJECT OR AS OTHERWISE STATED IN THE ADVERTISEMENT FOR BIDS FOR THE PROJECT. DO NOT USE THE PLANS AND SPECIFICATIONS POSTED ON THE CLERK OF THE BOARD'S WEBSITE FOR BIDDING ON THIS PROJECT.

SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS

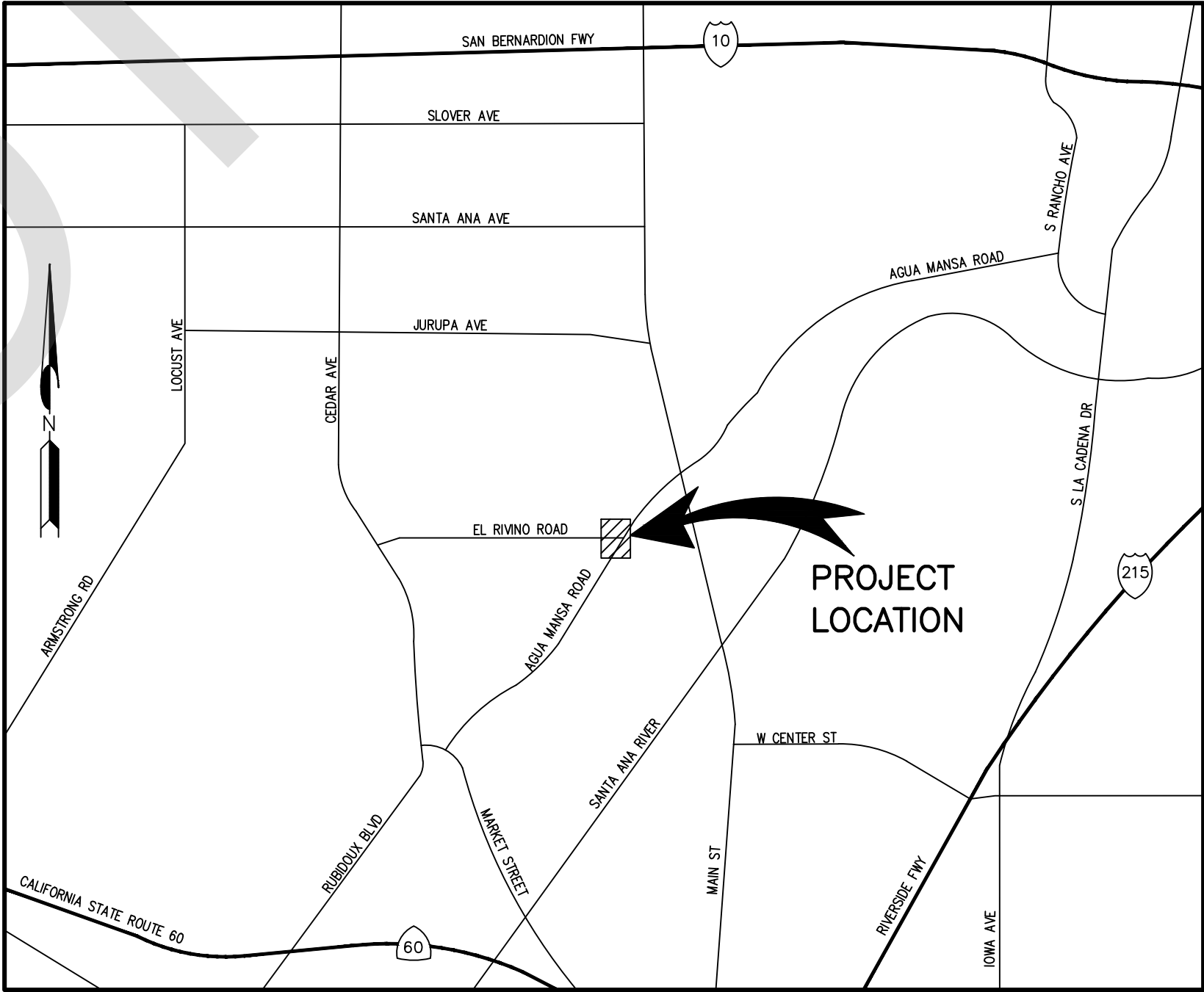


TRANSPORTATION
PLANS FOR CONSTRUCTION ON
EL RIVINO ROAD AND AGUA MANSA ROAD
AT THE INTERSECTION OF
EL RIVINO ROAD AND AGUA MANSA ROAD

WORK ORDER NO. H15166

ROAD NO. 321100-030 107650-010

LENGTH = 0.18 MILES



LOCATION MAP
NOT TO SCALE

SAN BERNARDINO COUNTY

APPROVED BY: 
NOEL CASTILLO, P.E., DIRECTOR OF PUBLIC WORKS R.C.E. 78044

7/3/24
DATE

BKF **BKF ENGINEERS**
4675 MACARTHUR CT.
SUITE 400
NEWPORT BEACH, CA 92660
(949) 526-8460
www.bkf.com

MARK	CHANGES		
	NO CHANGES	RESIDENT ENGINEER	DATE
TITLE SHEET		SHT. NO. 01	TOT. SHT'S. 07

MARK		REVISIONS		APPR.		DATE	

FILE NO. 321100-030 107650-010

INDEX OF SHEETS

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- TITLE SHEET
GENERAL AND CONSTRUCTION NOTES
TYPICAL SECTIONS
IMPROVEMENT PLAN
CONSTRUCTION DETAILS
SIGNING AND STRIPING PLAN
TRAFFIC SIGNAL PLAN

THE FOLLOWING SPECIAL DRAWINGS AND COUNTY STANDARDS ARE ATTACHED TO THE SPECIAL PROVISIONS:

117	303	303B	116
119	203A		

TO BE SUPPLEMENTED BY THE FOLLOWING CALTRANS STANDARD PLANS DATED 2018:

A20A	A20B	A20D	A24A
A24B	A24D	A24E	ES-3B
ES-4E DETAIL B		ES-7N	ES-7P
ES-7R	RSP ES-2E	RSP ES-4B DETAIL B	
RSP ES-7B	RSP ES-8A	RSP ES-8B	RS4

TO BE SUPPLEMENTED BY THE FOLLOWING CALTRANS STANDARD PLANS DATED 2015:

RSP T9	RSP T10	T11	T13
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TO BE SUPPLEMENTED BY THE FOLLOWING CALIFORNIA MUTCD STANDARD PLANS DATED 2014:

FIG 2A-2(CA)	FIG 6H-28	FIG 6H-29	SEC 6D.01
SEC 6D.02	FIG 3B-102(CA)		

THIS PROJECT REQUIRES A CONTRACTOR'S LICENSE CLASS "A"

GENERAL NOTES

U. THE FACT THAT ANY UTILITY FACILITY IS SHOWN OR NOT SHOWN UPON THE PLANS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY UNDER SECTION 5-1.36 C "NON-HIGHWAY FACILITIES" OF THE CALTRANS STANDARD SPECIFICATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY, PURSUANT THERETO, TO ASCERTAIN THE LOCATION OF ANY UTILITY FACILITY WHICH MAY BE SUBJECT TO DAMAGE BY REASON OF THE CONTRACTOR'S OPERATIONS.

1. ALL STATIONING NOTES ON PLAN REFER TO THE CL AS SHOWN ON PLAN.
2. DIMENSIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE CALTRANS STANDARD SPECIFICATIONS.
3. ALL PAVEMENT WIDTH DIMENSIONS SHOWN ON THE PLANS ARE TO THE EDGE OF PAVEMENT OR TO THE TOP OF CURB, UNLESS OTHERWISE NOTED.
4. TRANSITIONS AND WARPING SHALL BE AS SHOWN AND AS DETERMINED BY THE ENGINEER.

BENCHMARK:

ELEVATIONS ARE RELATIVE TO THE NORTH AMERICAN DATUM OF 1988, DERIVED FROM GPS OBSERVATION AND BASED ON NAD83(2011), EPOCH 2017.50, ELLIPSOID HEIGHTS AS PUBLISHED BY THE CALIFORNIA SPATIAL REFERENCE CENTER AND THE NGS GEOID MODEL 18.

BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5, EPOCH 2017.50, IN ACCORDANCE WITH CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819; SAID COORDINATES ARE BASED LOCALLY UPON FIELD-OBSERVED TIES RELATIVE TO CALIFORNIA SPATIAL REFERENCE NETWORK STATION RTHS. DISTANCES ARE GRID BASED. DIVIDE BY A COMBINED SCALE FACTOR OF 0.99996056 TO OBTAIN GROUND DISTANCES. VALUES SHOWN BELOW IN THE TABLE ARE IN ITRF 2014.

STATION	LATITUDE	LONGITUDE	HEIGHT (m)
RTHS	34°05'20.944893"	-117°21'12.014359"	328.6573
SIGMA (mm)	2.184	2.222	6.099

SAN BERNARDINO COUNTY TRAFFIC CONTROL GENERAL NOTES :

1. ALL SIGNING, STRIPING AND PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THE CALIFORNIA MUTCD LATEST EDITION.
2. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE PAINTED IN CONFORMANCE WITH THE CALTRANS 2018 STANDARD PLANS (DATED MAY 31, 2018).
3. ALL STRIPING (LONG LINE) AND PAVEMENT MARKINGS SHALL BE RETROREFLECTIVE PAINT.
4. ALL SIGNS SHALL BE OF HIGH INTENSITY (FHWA TYPE III/IV) RETROREFLECTIVE SHEETING EXCEPT:

A. STOP SIGNS SHALL BE DIAMOND GRADE (FHWA TYPE VII IN RURAL SETTINGS AND TYPE IX IN URBAN SETTINGS) RETROREFLECTIVE SHEETING.

B. "NO PARKING" SIGNS SHALL BE SUPER ENGINEERING GRADE (FHWA TYPE II) RETROREFLECTIVE SHEETING.

C. SCHOOL SIGNS SHALL BE DIAMOND GRADE (FHWA TYPE IX) FLUORESCENT YELLOW-GREEN (FYG) REFLECTIVE SHEETING.

D. STREET NAME MARKERS SHALL BE DIAMOND GRADE (FHWA TYPE IX) REFLECTIVE SHEETING AND CONFORM TO COUNTY STANDARD 303.

E. CONSTRUCTION SIGNS SHALL BE DIAMOND GRADE (FHWA TYPE IX) FLUORESCENT ORANGE REFLECTIVE SHEETING.
5. ALL DELINEATORS, CHANNELIZERS, AND OBJECT MARKERS SHALL BE OF FHWA TYPE VII RETROREFLECTIVE SHEETING.
6. SIGNS SHALL BE MOUNTED ON METAL POSTS SIMILAR TO COUNTY STANDARDS 303(a) AND 303(b).
7. ALL CONFLICTING STRIPING AND PAVEMENT MARKINGS NOT SHOWN ON PLANS SHALL BE REMOVED BY THE CONTRACTOR. REMOVAL SHALL BE ACCOMPLISHED BY SANDBLASTING, GRINDING, OR AS DIRECTED BY COUNTY REPRESENTATIVE.
8. ALL CONFLICTING SIGNS SHALL BE REMOVED, RELOCATED, OR COVERED BY THE CONTRACTOR. RELOCATABLE SIGNS SHALL BE INSTALLED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY COUNTY REPRESENTATIVE.
9. ALL UNPROTECTED LOCATIONS RESULTING IN ISOLATED ABRUPT DEPRESSIONS OR ELEVATED OBJECTS (I.E. CATCH BASINS, HEADWALLS, POWER POLES, END TREATMENT OF ASPHALT DIKES AND CONCRETE CURBS) SHALL BE PROTECTED BY DELINEATORS OR BARRIERS PER THE CALIFORNIA MUTCD LATEST EDITION.
10. ALL EXISTING SIGNING, STRIPING AND PAVEMENT MARKINGS (I.E. CROSS STREET STOP, STOP LIMIT LINE, AND CROSSWALK PAVEMENT MARKINGS) NOT SHOWN ON PLANS, IF REMOVED/OBLITERATED, SHALL BE REPLACED/RESTORED OF SAME KIND, AND IN CONFORMANCE WITH THE CALIFORNIA MUTCD LATEST EDITION.
11. THE CONTRACTOR SHALL NOTIFY COUNTY REPRESENTATIVE TO SCHEDULE A FINAL REVIEW (WALK THROUGH) WITH TRAFFIC DIVISION PERSONNEL FOR APPROVAL OF TRAFFIC CONTROL DEVICES PRIOR TO PROJECT ACCEPTANCE.

ABBREVIATIONS LEGEND:

AB	=	AGGREGATE BASE
AC	=	ASPHALT CONCRETE
AM	=	AGUA MANSA
BC	=	BEGIN CURVE
BDR	=	BEGIN OF DIKE RETURN
BEG	=	BEGINNING
CA	=	CALIFORNIA
C&G	=	CURB AND GUTTER
CONC	=	CONCRETE
CONST	=	CONSTRUCTION
CL	=	CENTER LINE
DWG	=	DRAWING
E	=	EAST
EC	=	END OF CURVE
EDR	=	END OF DIKE RETURN
EG	=	EXISTING GRADE
ELEC	=	ELECTRICAL
ER	=	EL RIVINO
EP	=	EDGE OF PAVEMENT
EX	=	EXISTING
FG	=	FINISHED GRADE
FL	=	FLOWLINE
FS	=	FINISHED SURFACE
HMA	=	HOT MIX ASPHALT
LG	=	LIP OF GUTTER
LT	=	LEFT
N	=	NORTH
NTS	=	NOT TO SCALE
PCC	=	POINT OF COMPOUNDING CURVE
PCC	=	PORTLAND CEMENT CONCRETE
PCR	=	POINT OF REVERSING CURVE
PI	=	POINT OF INTERSECTION
PVMT	=	PAVEMENT
R	=	RADIUS
R&R	=	REMOVE AND REPLACE
REM	=	REMOVE
RD	=	ROAD
RT	=	RIGHT
R/W	=	RIGHT OF WAY
SBC	=	SAN BERNARDINO COUNTY
SC	=	SAW CUT
SCE	=	SOUTHERN CALIFORNIA EDISON
SCG	=	SOUTHERN CALIFORNIA GAS
SDCB	=	STORM DRAIN CATCH BASIN
SDMH	=	STORM DRAIN MANHOLE
SHT	=	SHEET
ST	=	STREET
STA	=	STATION
STD	=	STANDARD
SUR	=	SURVEY
TD	=	TOP OF DIKE
TYP	=	TYPICAL
VAR	=	VARIES
WV	=	WATER VALVE
WWD	=	WEST VALLEY WATER DISTRICT

PAVEMENT LEGEND:

	SLURRY SEAL		FULL DEPTH HMA
	NEW STRUCTURAL PAVEMENT		PCC CONCRETE
	0.2' COLD PLANE & OVERLAY		

EXISTING UNDERGROUND UTILITY LEGEND

COMMUNICATION LINE	_____COM_____
SEWER MAIN LINE	_____SS_____
STORM DRAIN LINE	_____SD_____
WATER LINE	_____W_____
GAS LINE	_____GAS_____

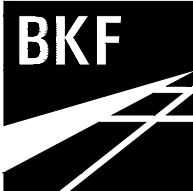
CONSTRUCTION NOTES:

1. PROTECT IN PLACE
2. SAWCUT AND REMOVE AC DIKE (1' OFF EP) INCLUDING THE PAVEMENT PER DETAIL ON THIS SHEET
3. PLACE ASPHALT CONCRETE DIKE PER DETAIL ON THIS SHEET
4. SAWCUT AND REMOVE AC MEDAN (1' OFF EP). EXCAVATE TO A DEPTH OF 1.4' BELOW FG
5. PLACE 6" CURB AND GUTTER PER SBC STD PLAN 116
6. COLD PLANE 0.2' THICK OF EXISTING ASPHALT CONCRETE. PLACE 0.2' HMA TYPE A OVERLAY
7. PLACE 0.75' HMA TYPE A (PG 70-10) OVER 0.65' CLASS II AB (3/4") ROADWAY SECTION
8. SAWCUT AND REMOVE EXISTING AC PAVEMENT SECTION. EXCAVATE TO A DEPTH OF 1.4' BELOW FG
9. PLACE CROSS GUTTER PER SBC STD PLAN 119(MOD)
10. PLACE LOCAL DEPRESSION PER SBC STD PLAN 203A
11. ADJUST TO GRADE
12. APPLY CRACK SEAL AND SLURRY SEAL (TYPE II)

STRIPING & SIGNING CONSTRUCTION NOTES:

50. PAINT 6" DASHED WHITE LANE LINE AND PAVEMENT MARKERS PER 2018 CALTRANS STD PLAN NO. A20A, DETAIL 12.
51. PAINT 6" SOLID WHITE LANE LINE PER 2018 CALTRANS STD PLAN NO. A20B, DETAIL 27B.
52. PAINT 8" WHITE CHANNELIZING LINE PER 2018 CALTRANS STD PLAN NO. A20D, DETAIL 38.
53. PAINT 6" DOUBLE SOLID YELLOW LINES AND PAVEMENT MARKERS PER 2018 CALTRANS STD PLAN NO. A20A, DETAIL 22.
54. PAINT 6" TWO WAY LEFT TURN STRIPE AND PAVEMENT MARKERS PER 2018 CALTRANS STD PLAN NO. A20B, DETAIL 32.
55. PAINT 12" WHITE LIMIT LINE PER 2018 CALTRANS STD PLAN NO. A24E
56. PAINT 12" SOLID WHITE HATCH MARKING @ 45° - 50° SPACING
57. PAINT PAVEMENT MARKING PER 2018 CALTRANS STD PLAN NO. A24D, TYPE PER PLAN.
58. PAINT 6" SOLID WHITE LINE AND PAVEMENT MARKER PER DETAIL A
59. PAINT 6" MEDIAN STRIPE AND PAVEMENT MARKERS PER 2018 CALTRANS STD PLAN NO. A20B, DETAIL 29.
60. PAINT PAVEMENT MARKING ARROW PER 2018 CALTRANS STD PLAN NO. A24A, A24B TYPE PER PLAN.
61. EXISTING SIGN/MARKER TO REMAIN
62. REMOVE AND SALVAGE EXISTING SIGN(S) AND EXISTING POST
63. FURNISH AND INSTALL NEW SIGN(S) ON NEW POST PER SAN BERNARDINO COUNTY STD PLAN NO. 303 AND 303B AND CA MUTCD 2014, FIG 2A-2(CA)
64. RELOCATE SOLAR FLASHING BEACON

PLANS PREPARED BY:



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SHEILA AMPARO, P.E.
SUPERVISING ENGINEER

7/10/24
DATE

MARK CHANGES NO CHANGES RESIDENT ENGINEER DATE

FIELD CHANGES



SAN BERNARDINO COUNTY

DEPARTMENT OF PUBLIC WORKS

DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:
BL	HQ	SA	CHRIS NGUYEN, P.E. ENGINEERING MANAGER

7/3/2024 DATE

APPROVED BY: LEO LI, P.E.
SUPERVISING ENGINEER

7/3/2024 DATE

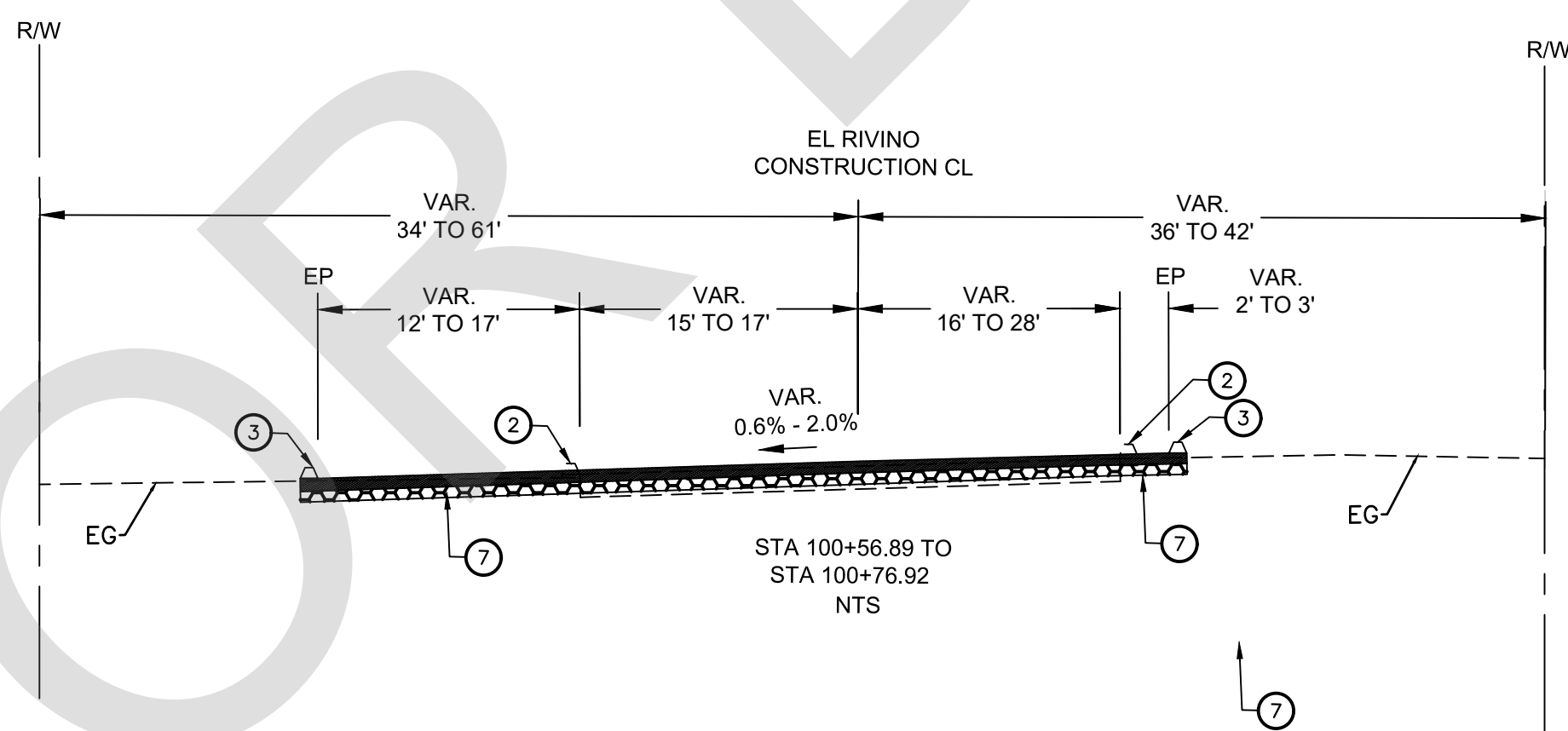
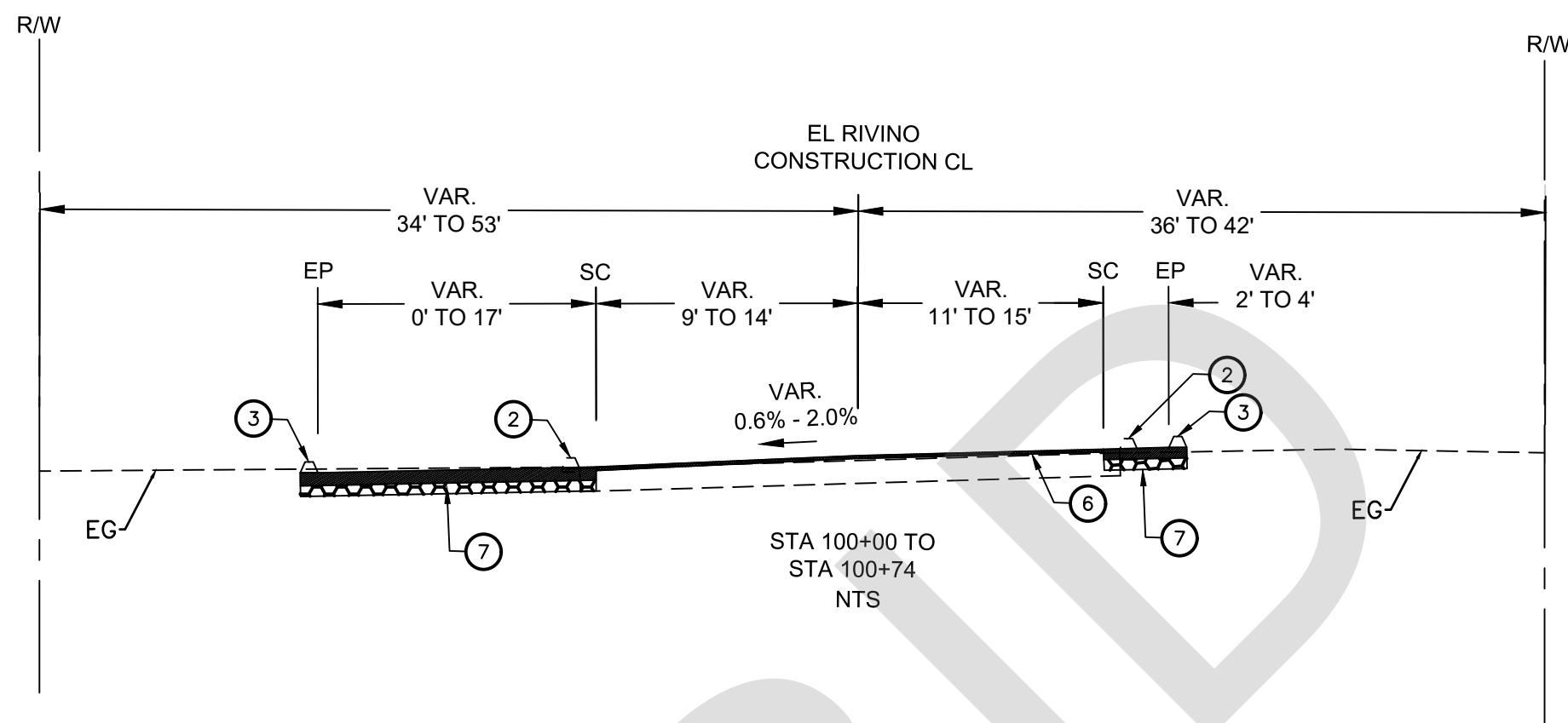
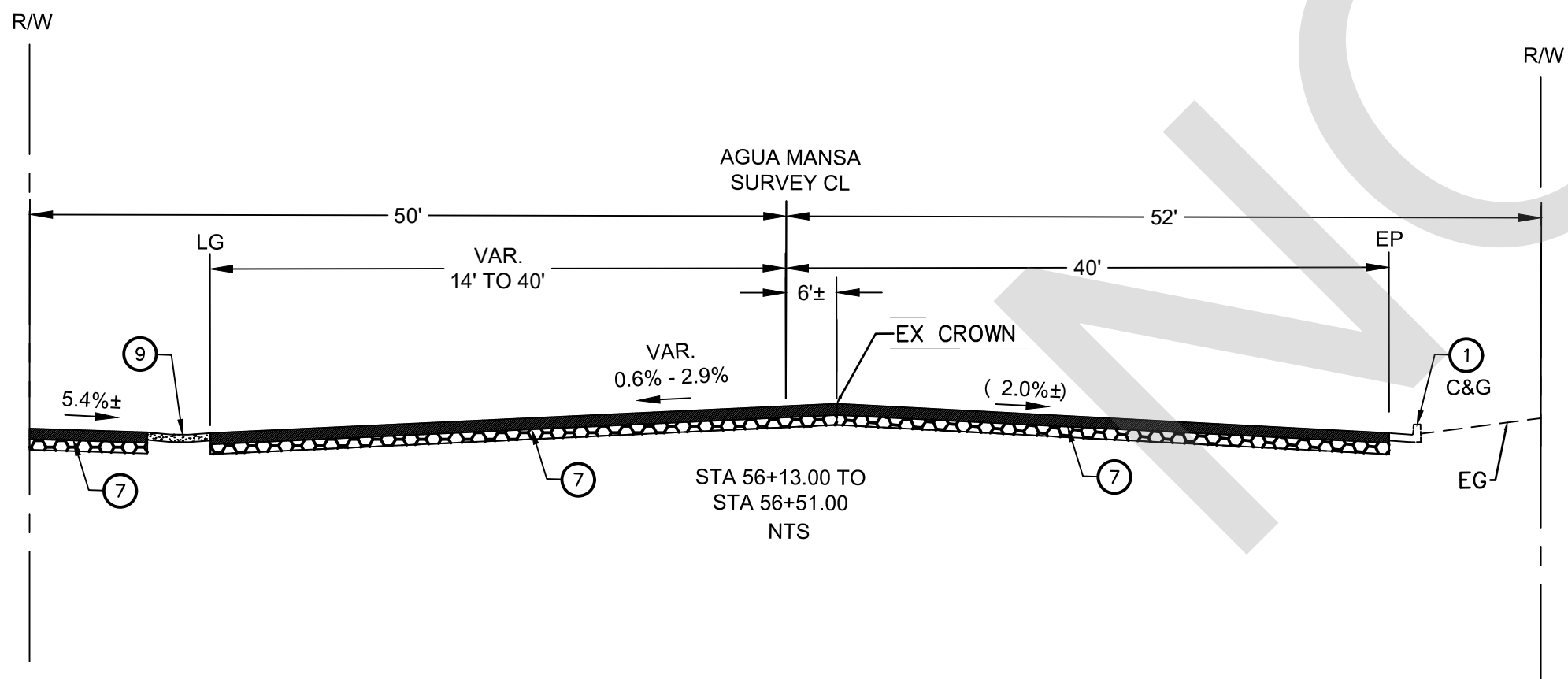
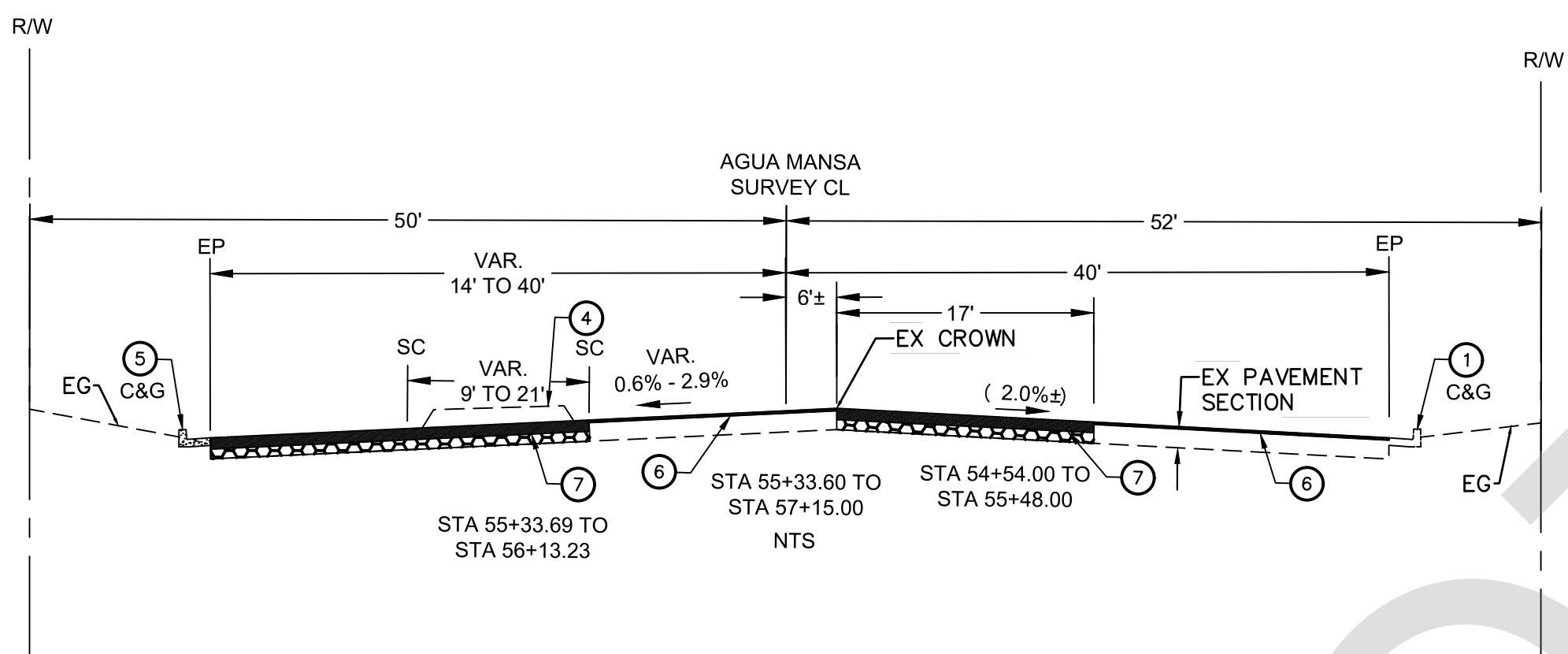
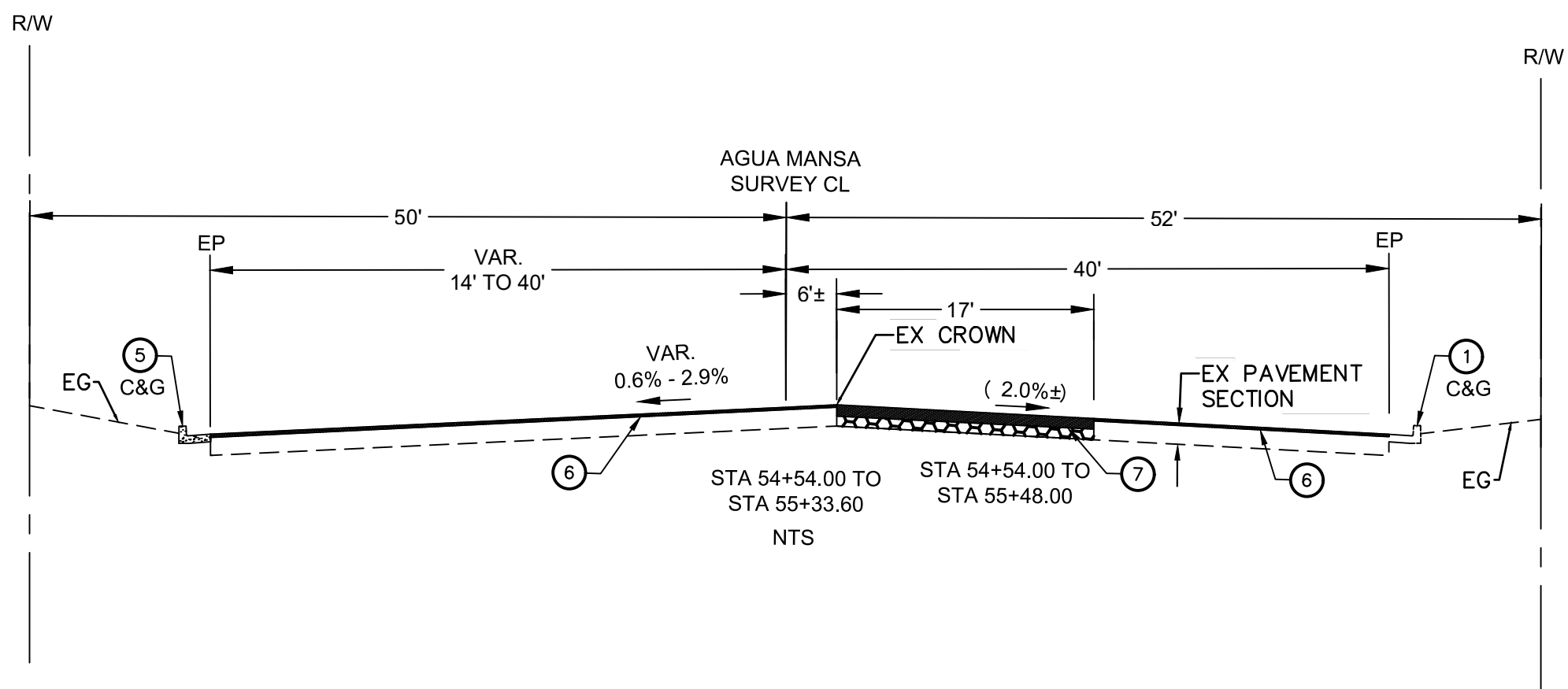
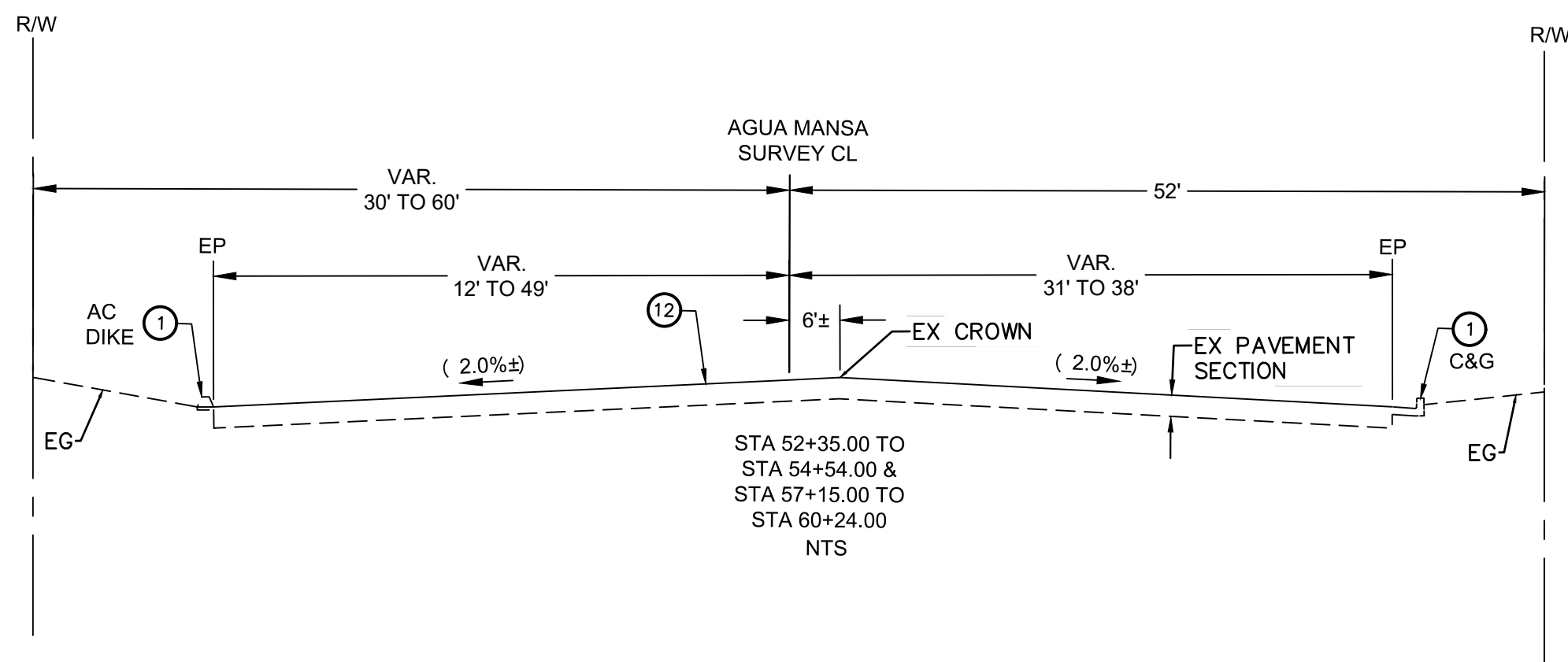
EL RIVINO ROAD AT AGUA MANSA ROAD INTERSECTION IMPROVEMENT

GENERAL AND CONSTRUCTION NOTES

JLL REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
J*****	H15166	AS SHOWN	02	07

FILE NO. 321100-030 107650-010

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TYPICAL SECTION LEGEND:

- ASPHALT CONCRETE PAVEMENT
- AGGREGATE BASE
- ASPHALT CONCRETE COLD PLANE AND OVERLAY
- PCC CONCRETE

TYPICAL SECTION NOTES:

- SEE LIMITS OF PROPOSED WORK ON IMPROVEMENT PLANS

CONSTRUCTION NOTES:

- PROTECT IN PLACE
- SAWCUT AND REMOVE AC DIKE (1' OFF EP) INCLUDING THE PAVEMENT PER DETAIL ON IMPROVEMENT PLAN SHEET
- PLACE ASPHALT CONCRETE DIKE PER DETAIL ON IMPROVEMENT PLAN SHEET
- SAWCUT AND REMOVE AC MEDIAN (1' OFF EP). EXCAVATE TO A DEPTH OF 1.4' BELOW FG
- PLACE 6" CURB AND GUTTER PER SBC STD PLAN 116
- COLD PLANE 0.2' THICK OF EXISTING ASPHALT CONCRETE. PLACE 0.2' HMA TYPE A OVERLAY
- PLACE 0.75' HMA TYPE A OVER 0.65' CLASS II AB ROADWAY SECTION
- SAWCUT AND REMOVE EXISTING AC PAVEMENT SECTION. EXCAVATE TO A DEPTH OF 1.4' BELOW FG
- PLACE CROSS GUTTER PER SBC STD PLAN 119(MOD)
- APPLY CRACK SEAL AND SLURRY SEAL (TYPE II)

MARK	DATE	REVISIONS

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SHEILA AMPARO, P.E.
SUPERVISING ENGINEER

7/10/24
DATE

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		
FIELD CHANGES			



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: BL	DRAWN BY: HQ	CHECKED BY: SA	RECOMMENDED BY: CHRIS NGUYEN, P.E. ENGINEERING MANAGER 7/3/24 DATE
APPROVED BY: LEI LI, P.E. SUPERVISING ENGINEER 7/3/2024 DATE			APPROVED BY: Mervat N. Mikhail, P.E. DEPUTY DIRECTOR 7/3/24 DATE

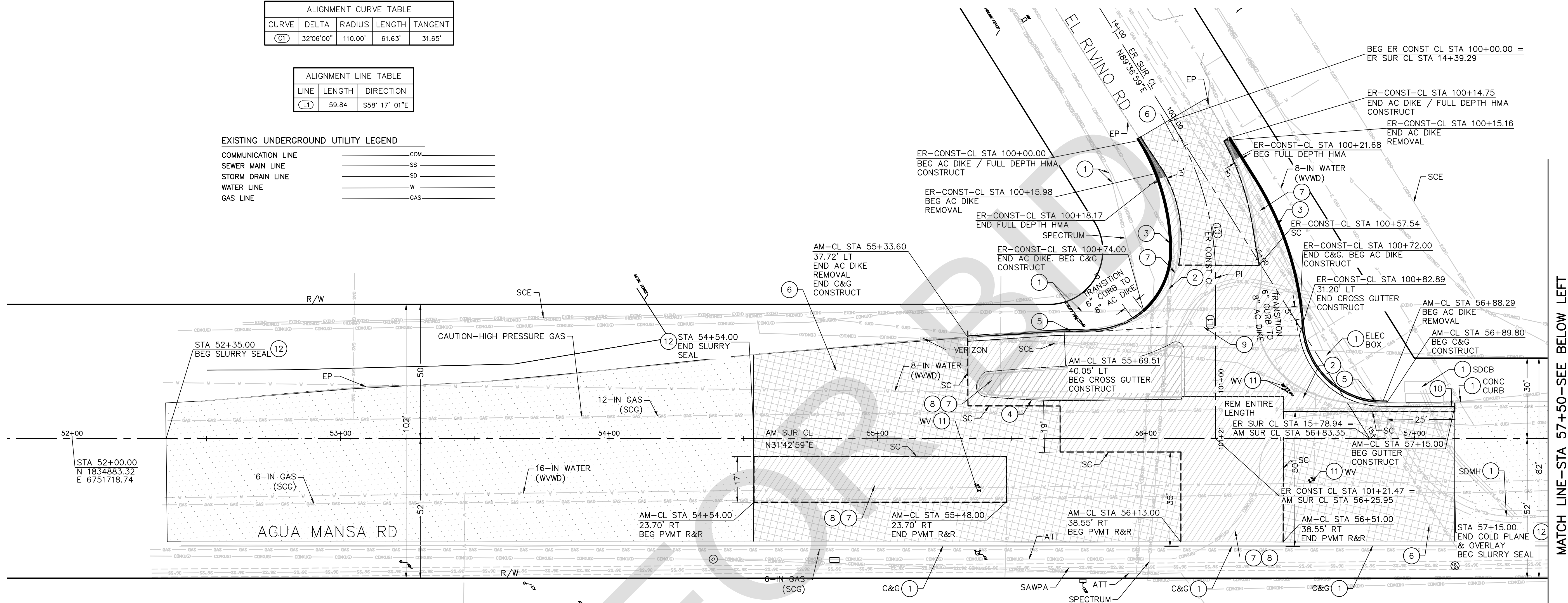
EL RIVINO ROAD AT AGUA MANSA ROAD INTERSECTION IMPROVEMENT				
TYPICAL SECTIONS				
JLL REF. J*****	W.O. NO. H15166	PLAN SCALE AS SHOWN	SHT. NO. 03	TOT. SHT'S. 07

ALIGNMENT CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	TANGENT
(C1)	32°06'00"	110.00'	61.63'	31.65'

ALIGNMENT LINE TABLE		
LINE	LENGTH	DIRECTION
(L1)	59.84	S58° 17' 01"E

EXISTING UNDERGROUND UTILITY LEGEND

COMMUNICATION LINE	COM
SEWER MAIN LINE	SS
STORM DRAIN LINE	SD
WATER LINE	W
GAS LINE	GAS



MATCH LINE-STA 57+50-SEE BELOW LEFT

CONSTRUCTION NOTES:

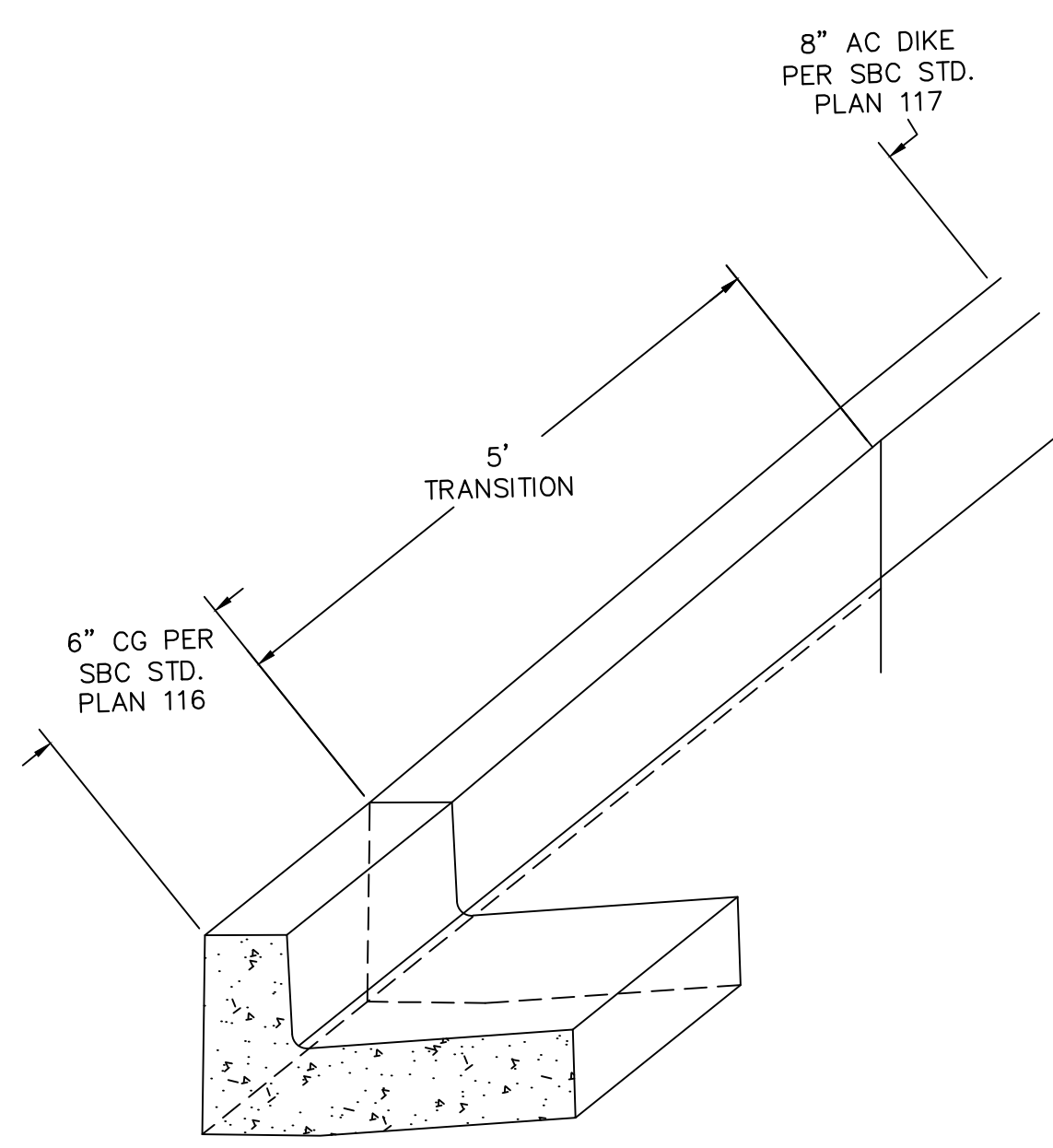
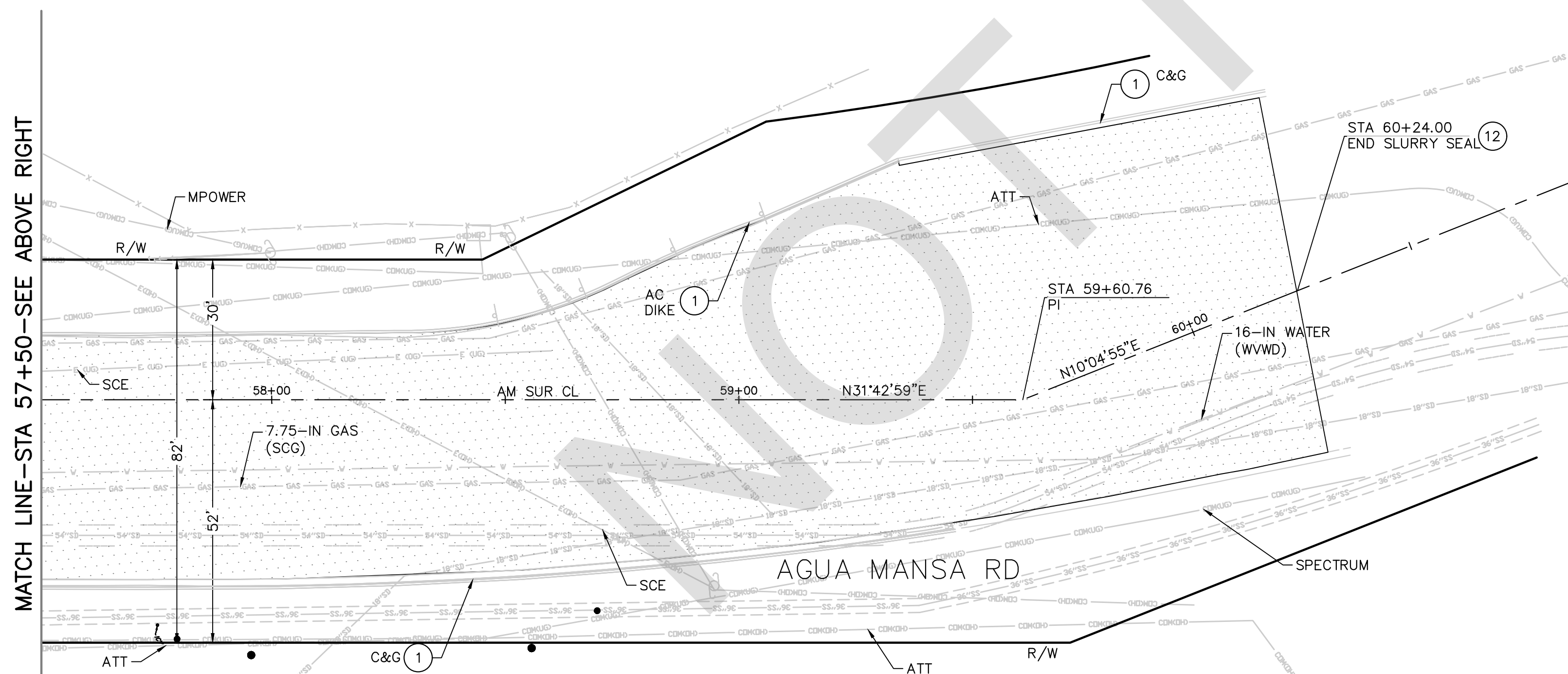
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PAVEMENT LEGEND:

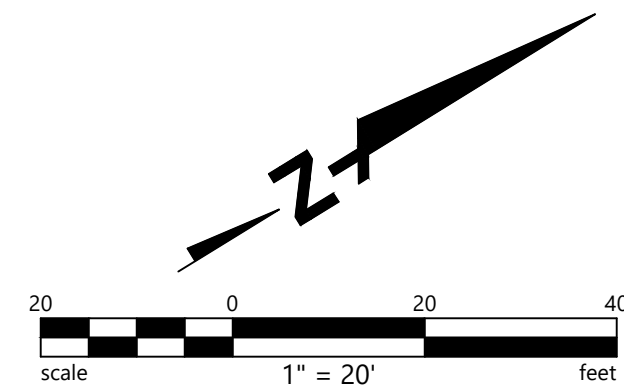
	SLURRY SEAL		FULL DEPTH HMA
	NEW STRUCTURAL PAVEMENT		PCC CONCRETE
	0.2' COLD PLANE & OVERLAY		

IMPROVEMENT PLAN GENERAL NOTES:

1. FOR DISPOSITION OF EXISTING SIGNING AND STRIPING, SEE SIGNING AND STRIPING PLAN
2. SEE CONSTRUCTION DETAILS PLAN FOR AC DIKE AND C&G INFORMATION AND DETAILS



C&G TO AC DIKE TRANSITION DETAIL
NTS



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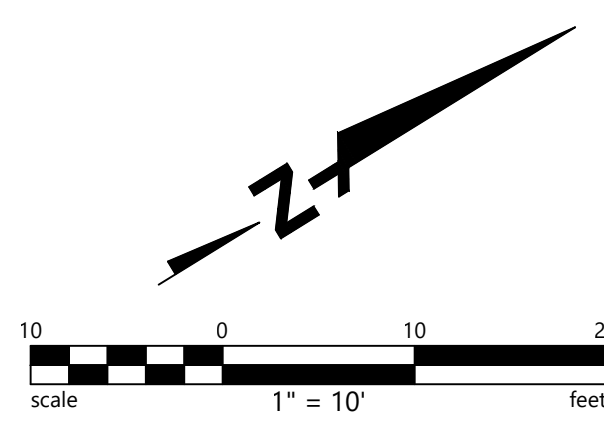
SHEILA AMPARO, P.E.
SUPERVISING ENGINEER

MARK	CHANGES	RESIDENT ENGINEER	DATE
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FIELD CHANGES			



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DESIGNED BY: BL	DRAWN BY: HQ	CHECKED BY: SA	RECOMMENDED BY: 7/3/24 DATE
APPROVED BY: 7/3/2024 DATE			7/3/24 DATE
LEI LI, P.E. SUPERVISING ENGINEER			

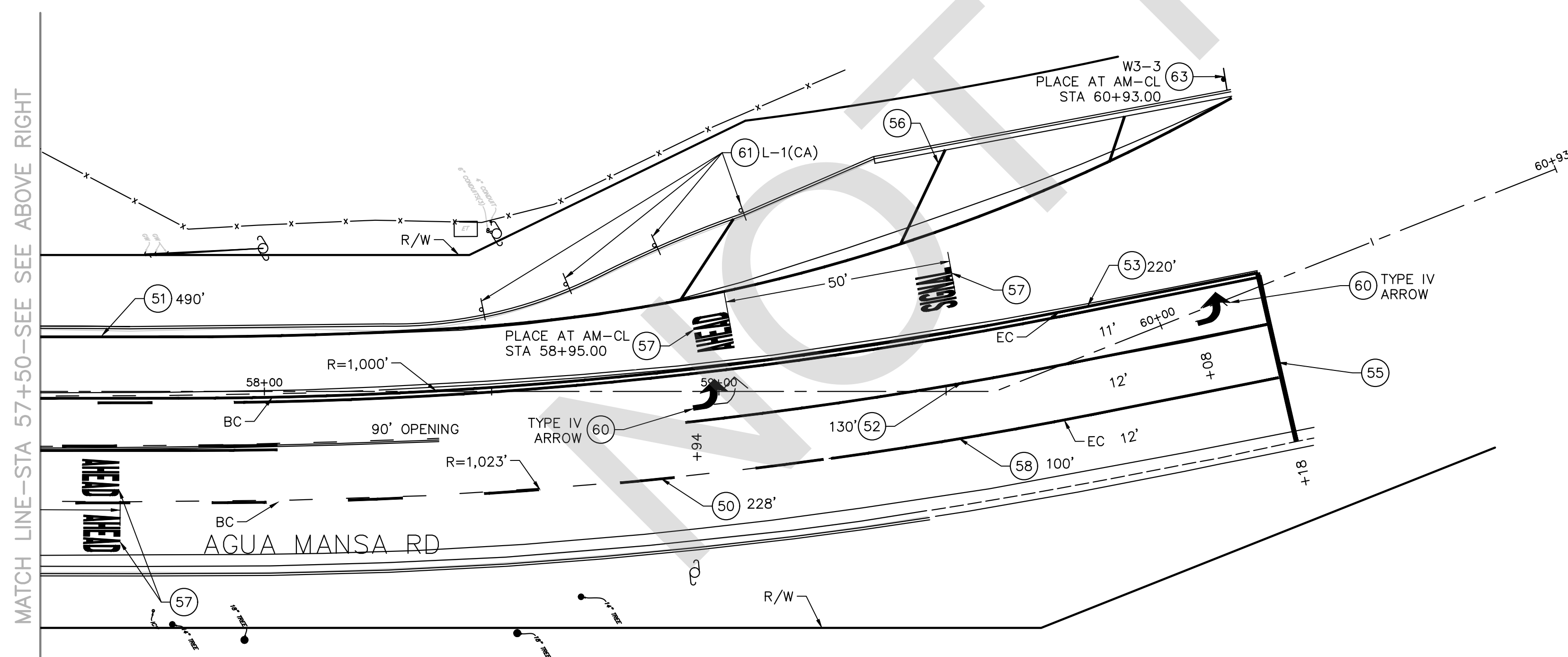
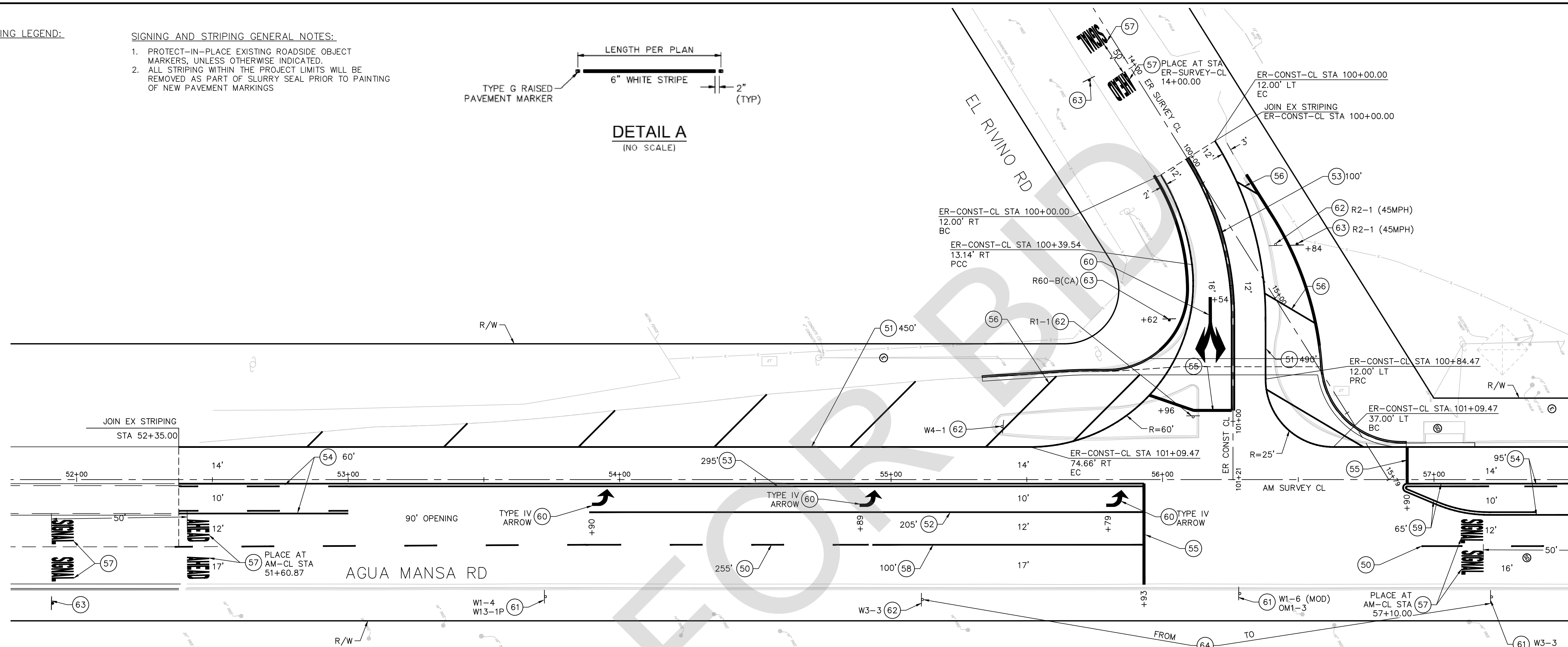
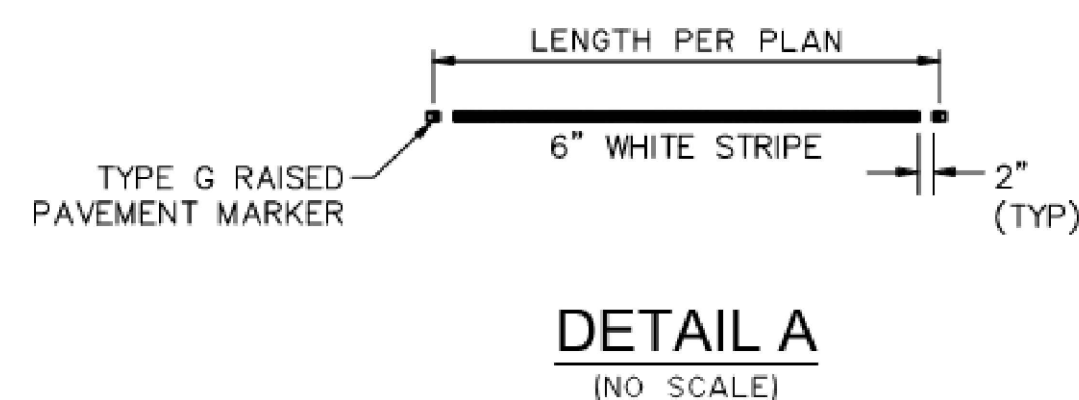
EL RIVINO ROAD AT AGUA MANSA ROAD INTERSECTION IMPROVEMENT				
IMPROVEMENT PLAN				
J.L. REF. J*****	W.O. NO. H15166	PLAN SCALE 1"=20'	SHT. NO. 04	TOT. SHTS. 07



EXISTING SIGN

NEW SIGN

1. PROTECT-IN-PLACE EXISTING ROADSIDE OBJECT MARKERS, UNLESS OTHERWISE INDICATED.
2. ALL STRIPING WITHIN THE PROJECT LIMITS WILL BE REMOVED AS PART OF SLURRY SEAL PRIOR TO PAINTING OF NEW PAVEMENT MARKINGS



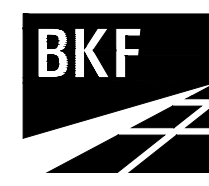
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57. PAINT PAVEMENT MARKING PER 2018 CALTRANS STD PLAN NO. A24D, TYPE PER PLAN.
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64. RELOCATE SOLAR FLASHING BEACON

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7/10/24

SHELIA AMPARO, P.E.
SUPERVISING ENGINEER

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FIELD CHANGES



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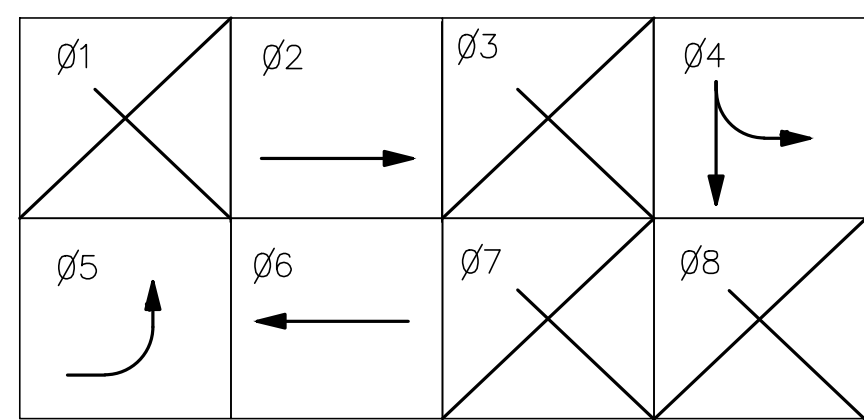
DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:	7/3/2024
BL	HQ	SA	ANTHONY PHAM, P.E. ENGINEERING MANAGER, TRAFFIC DIVISION	DATE
7/3/2024			APPROVED BY:	7/3/2024
LEI U, P.E. SUPERVISING ENGINEER	DATE		GRANT MANN, P.E. SENIOR JUDGE	DATE

EL RIVINO ROAD AT AGUA MANSA
ROAD INTERSECTION IMPROVEMENT

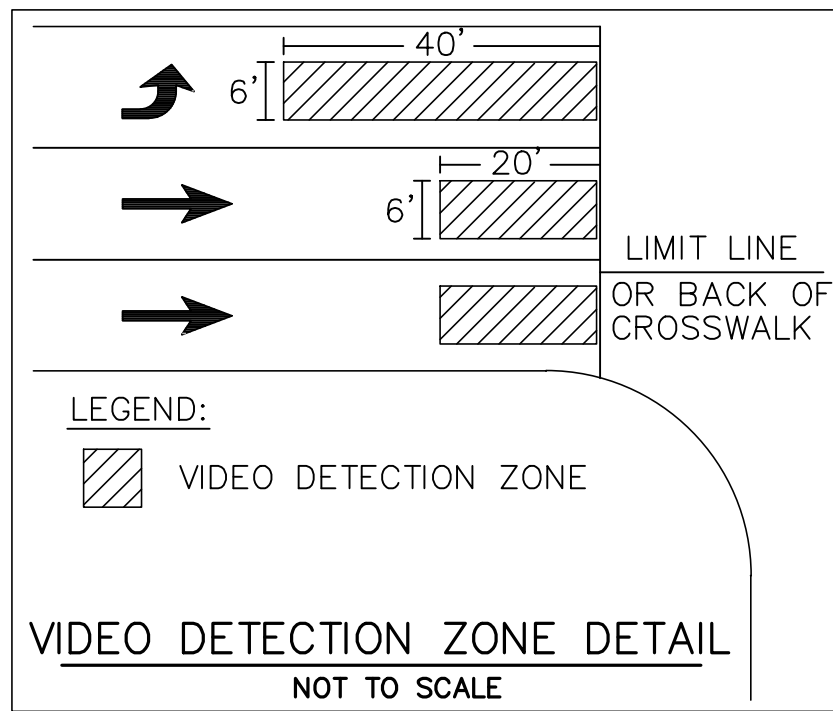
SIGNING AND STRIPING PLAN

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. NO.	TOT. SHT'S.
J*****	H15166	1"=20'	06	07

PROPOSED SIGNAL PHASE DIAGRAM



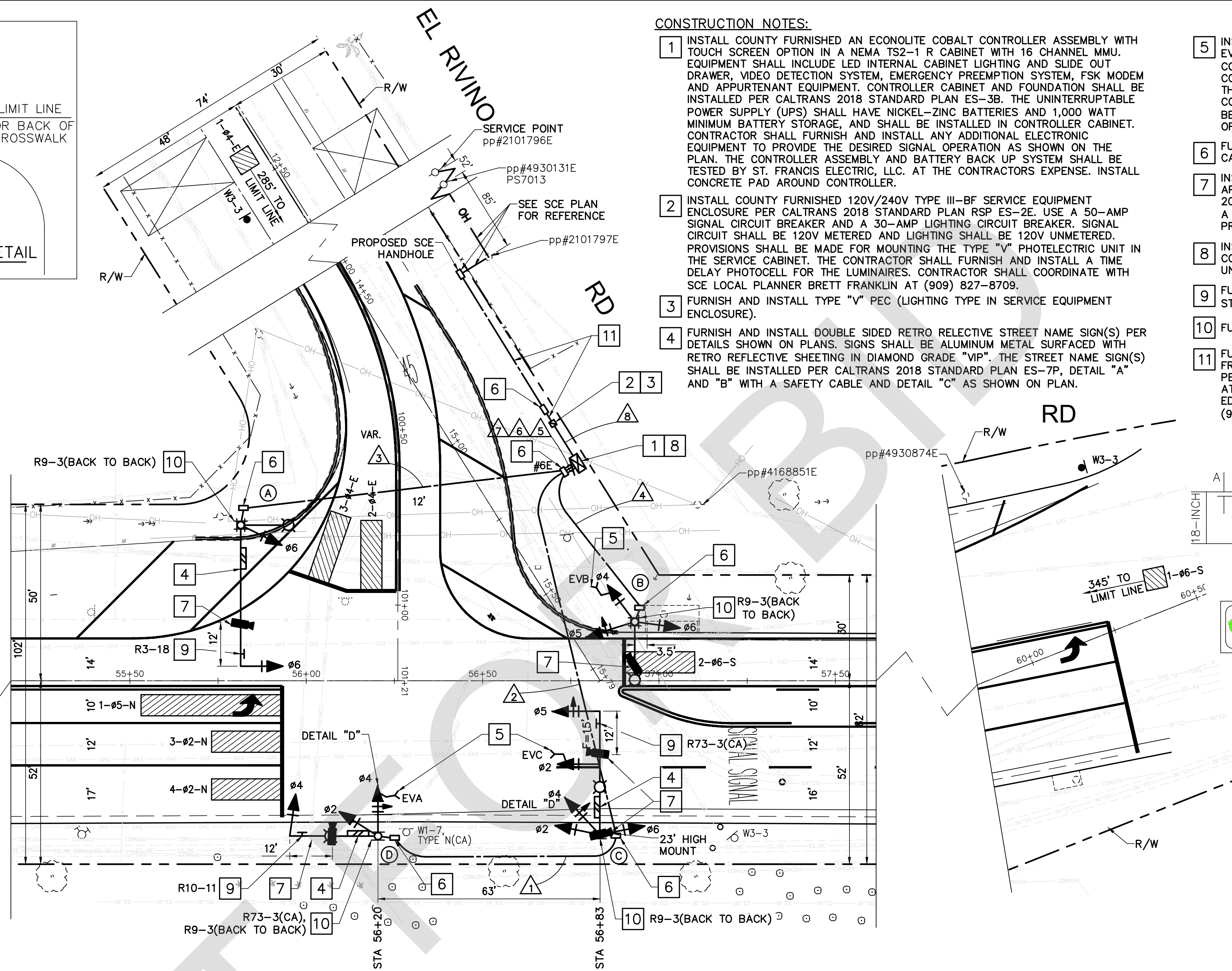
EVA = ø6
EVB = ø4
EVC = ø2 + ø5



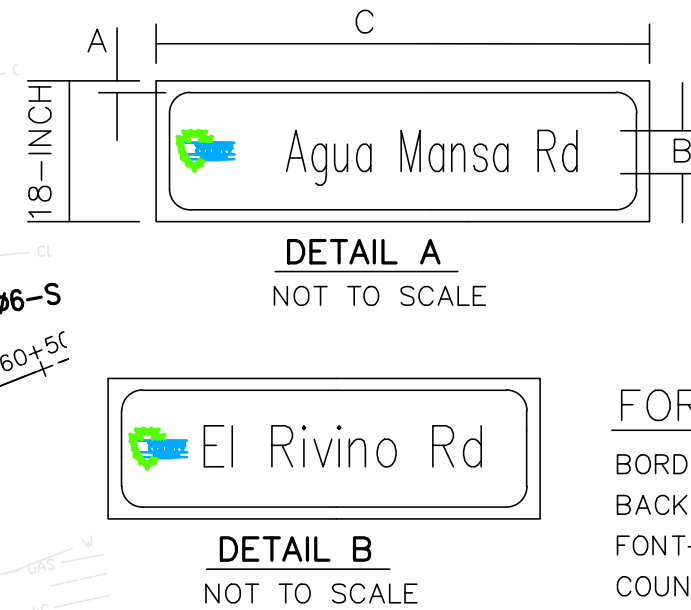
TRAFFIC SIGNAL GENERAL NOTES

- TRAFFIC SIGNAL AND LIGHTING SHALL CONFORM TO THE STATE OF CALIFORNIA 2018 STANDARD SPECIFICATIONS (DATED 2018) SECTIONS 86(ELECTRICAL WORK) AND 87(ELECTRICAL SYSTEMS) AND STANDARD PLANS DATED 2018 INCLUDING LATEST REVISIONS
- ALL VEHICLE SIGNAL INDICATIONS SHALL BE 12-INCH AND SHALL BE INSTALLED WITH "LED" SIGNAL MODULES.
- ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE INSTALLED WITH "LED" PEDESTRIAN MODULES. PEDESTRIAN MODULES SHALL BE EQUIPPED WITH COUNTDOWN TIMERS PER THE CALTRANS 2018 STANDARD PLAN RSP ES-4B DETAIL B.
- SIGNAL POLE LOCATIONS ARE APPROXIMATE.
- ALL BACK PLATES SHALL BE LOUVERED.
- ALL BACK PLATES AND VISORS SHALL BE METAL, NO PLASTIC PARTS WILL BE ALLOWED.
- ALL PULL BOXES SHALL BE NUMBER 6 UNLESS OTHERWISE NOTED. THE TOP OF THE PULL BOXES SHALL BE FLUSH WITH FINISHED GRADE AS SHOWN ON THE CALTRANS 2018 STANDARD PLAN RSP ES-8A.
- PULL BOXES SHALL BE INSTALLED PER THE CALTRANS 2018 STANDARD PLAN RSP ES-8A AND SHALL NOT BE INSTALLED IN OR WITHIN A CURB ACCESS RAMP.
- PULL BOXES LOCATED IN ROADWAYS OR SHOULDER AREAS SUBJECT TO TRAFFIC, SHALL BE TRAFFIC TYPE PER THE CALTRANS 2018 STANDARD PLAN RSP ES-8B.
- COUPLING NUTS SHALL BE USED FOR ALL TYPE 1(A) POLES PER THE CALTRANS 2018 STANDARD PLAN RSP ES-7B.
- ALL SIGNAL AND LIGHTING STANDARD FOUNDATIONS SHALL BE ADJUSTED TO PROPOSED FINISHED GRADE.
- ALL UNUSED TENONS SHALL BE CAPPED.
- ALL WIRING AND CABLES SHALL BE NEW UNLESS OTHERWISE NOTED.
- ALL NEW CONDUIT SHALL BE MINIMUM 4-INCH SCHEDULE 80 ELECTRICAL GRADE PVC AT A MINIMUM 36-INCH DEPTH INCLUDING A 12-INCH SAND ZONE COVERING.
- LOCATION OF ALL UNDERGROUND FACILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL POT HOLE TO DETERMINE THE EXACT LOCATIONS AND VERIFY ALL CONDITIONS ON THE JOB SITE. HAND DIG FOUNDATIONS UNTIL CLEAR OF ANY OBSTRUCTIONS. PHONE THE UNDERGROUND SERVICE ALERT AT (800) 227-2600, TWO WORKING DAYS BEFORE DIGGING.
- THE CONTRACTOR SHALL NOTIFY THE COUNTY REPRESENTATIVE TO SCHEDULE A FIELD REVIEW WITH TRAFFIC DIVISION TO VERIFY THE LOCATION OF SIGNAL POLES, CONTROLLER CABINET, AND SERVICE CABINET.

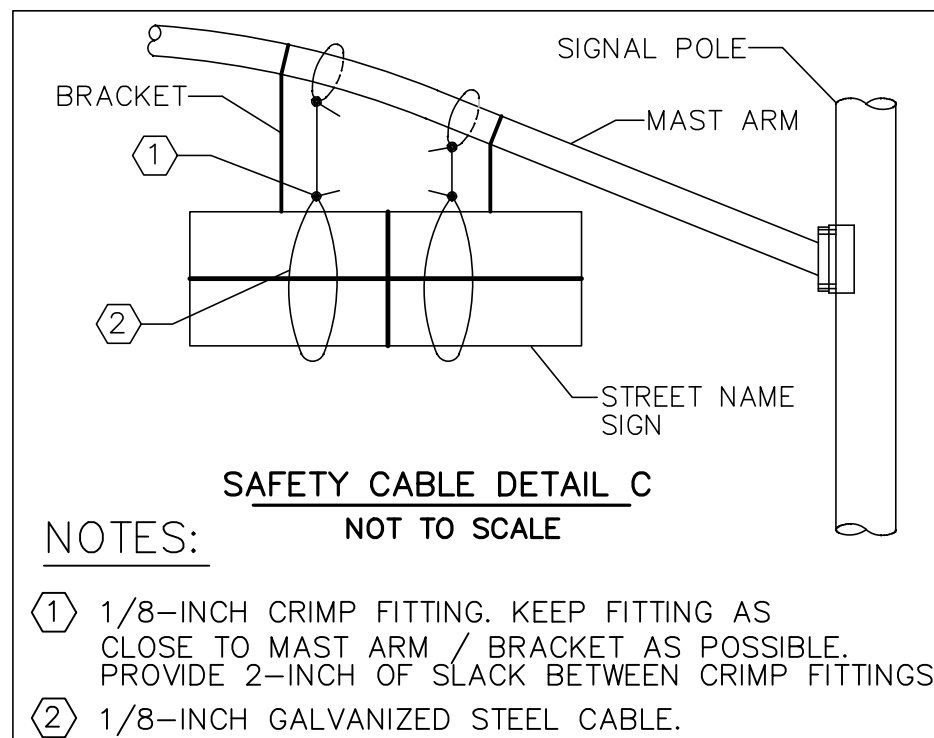
AGUA MANSA



- INSTALL COUNTY FURNISHED EMERGENCY VEHICLE PREEMPTION (E.V.P.) SYSTEM. EVP SHALL BE INFRARED DETECTION AT MINIMUM AND MUST BE FULLY COMPATIBLE WITH GLOBAL TRAFFIC TECHNOLOGIES (OPTICOM) INSTALLED ON COUNTY EMERGENCY VEHICLES INCLUDING FIRE. THE CONTRACTOR SHALL CONTACT THE FIRE CAPTAIN OF THE PROJECT AREA TO ENSURE PROVIDED EVP IS FULLY COMPATIBLE WITH COUNTY FIRE AND EMERGENCY VEHICLES. THE SYSTEM SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS. INSTALL EVP ON TOP OF SIGNAL HEAD PER THE CALTRANS STANDARD PLAN ES-4E, DETAIL B.
- FURNISH AND INSTALL #6 OR #6E AS INDICATED ON PLAN PULLBOX PER CALTRANS 2018 STANDARD PLAN RSP ES-8A.
- INSTALL COUNTY FURNISHED AUTOSCOPE VISION DETECTION CAMERA OR AS APPROVED BY THE TRAFFIC DIVISION ON SIGNAL MAST ARM PER DETAIL A OF THE 2018 CALTRANS STANDARD PLAN ES-7R. THE CAMERA SHALL BE INSTALLED ON A 40" PELCO BRACKET. (CONTRACTOR FURNISHED) VIDEO DETECTION DATA PROCESSING SHALL BE WITHIN THE CAMERA TO MAXIMIZE CABINET SPACE.
- INSTALL COUNTY FURNISHED GPS TIME SOURCE MODULE. THE GPS UNIT SHALL BE COMPATIBLE WITH THE ECONOLITE COBALT OR COUNTY APPROVED CONTROLLER UNIT.
- FURNISH AND INSTALL (36"x36") SIGN ON SIGNAL MAST ARM PER CALTRANS STANDARD PLAN ES-7N, DETAIL 'U'.
- FURNISH AND INSTALL POST MOUNTED SIGN PER CALTRANS STANDARD PLAN RS4.
- FURNISH AND INSTALL 4" CONDUIT WITH PULL ROPE PER SCE REQUIREMENTS FROM SERVICE CABINET TO SCE SERVICE POINT PP#2101796E OR AS INDICATED PER SCE REQUIREMENTS. AT LEAST 2 WEEKS ADVANCE NOTICE SHALL BE GIVEN TO SOUTHERN CALIFORNIA EDISON COMPANY BY CONTACTING THE SCE LOCAL PLANNER BRETT FRANKLIN AT (909) 827-8709. EXACT LOCATIONS SHALL BE DETERMINED BY SCE IN THE FIELD.



LEGEND:
A 1-INCH WHITE RETRO-REFLECTIVE BORDER
B 8-INCH UPPER CASE LETTERS AND LOWER CASE LETTERS
C SIGN LENGTH SHALL BE EITHER 5ft, 6ft, 7ft OR 8ft DEPENDING ON LEGEND
FOR DETAILS A AND B
BORDER AND LEGEND COLOR = RETRO-REFLECTIVE WHITE
BACKGROUND COLOR = RETRO-REFLECTIVE GREEN
FONT-FHWA SERIES D2000EX
COUNTY LOGO=9" HEIGHT RETRO REFLECTIVE WHITE

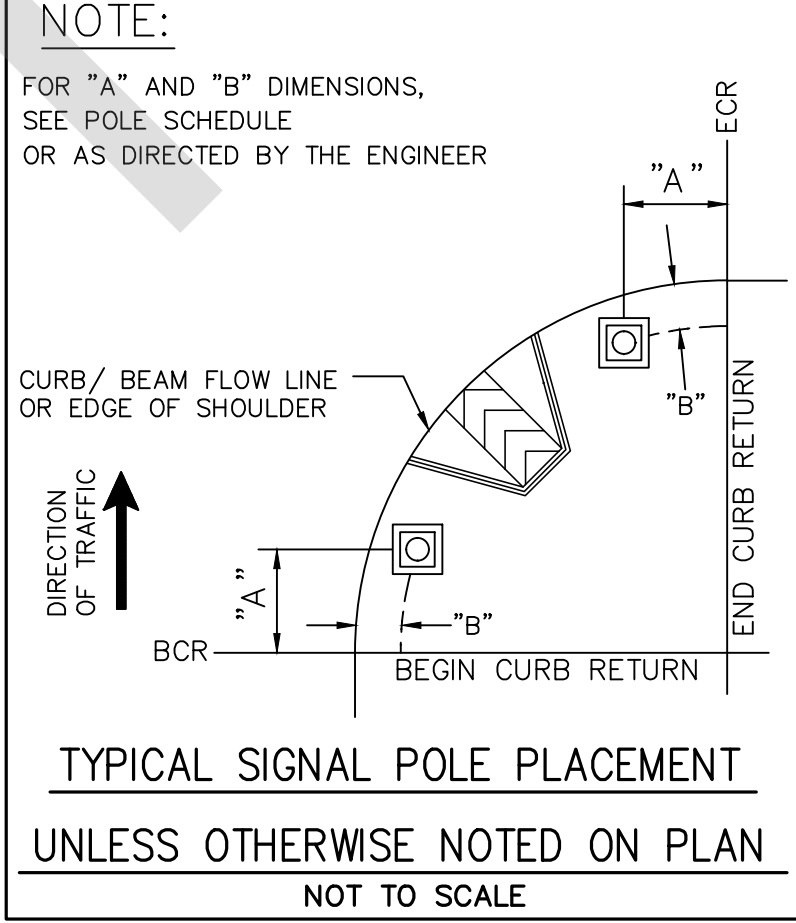


MARK	DATE	REVISIONS

MARK	DATE	REVISIONS

CONDUCTOR		SCHEDULE							
AWG SIZE OR CABLE TYPE	POLE OR CIRCUIT	1	2	3	4	5	6	7	8
3	POLE - (A)								
	POLE - (B)								
	POLE - (C)								
TOTAL 3 CONDUCTOR / 12 CONDUCTOR		1	3	1	1	5	-	-	-
#10 LUMINAIRE		2	2	2	2	-	-	2	2
TOTAL #10		2	2	2	2	-	-	2	2
#8 GROUND		1	1	1	1	-	-	1	1
TOTAL #8		1	1	1	1	-	-	1	1
#6 SIGNAL SERVICE		-	-	-	-	-	-	1	1
TOTAL #6		-	-	-	-	-	-	1	1
VIDEO DETECTION CABLE		1	3	1	1	-	5	-	-
EMERGENCY PREEMPTION CABLE		1	2	-	1	-	3	-	-
CONDUIT SIZE (INCHES)		4"	4"	4"	4"	4"	4"	4"	4"
CONDUIT % FILL		5	13	5	5	15	5	2	2

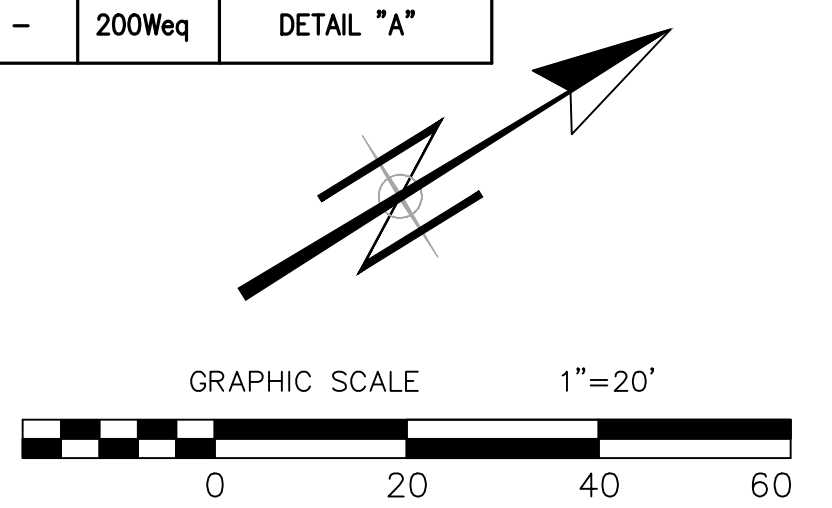
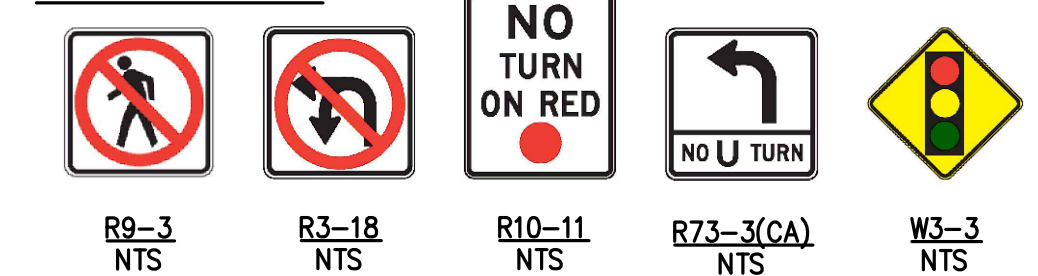
ALL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.
ALL NEW CONDUIT SHALL BE MINIMUM 4 INCH SCHEDULE 80 ELECTRICAL GRADE PVC AT A MINIMUM 36 INCH DEPTH INCLUDING A 12 INCH SAND ZONE COVERING.



POLE AND EQUIPMENT SCHEDULE														
POLE NO.	STANDARD				DETECTION CAMERA COUPLING		POLE LOCATION		VEHICLE SIGNAL MOUNTING		PEDESTRIAN SIGNAL		PEDESTRIAN PUSH BUTTON	
	TYPE	HEIGHT	SIGNAL MAST ARM	"F" SPACING	LUMINAIRE MAST ARM	POLE	SMA	LUMINAIRE	"A"	"B"	MAST ARM	POLE	PHASE MOUNTING	QUADRANT
(A)	26-4-100	30'	40'	-	12**	-	1 (12' FROM EOA)	-	2'	4'	MAS	SV-1-T	-	-
(B)	15TS	30'	-	-	15'	-	-	1	AS SHOWN	3.25'	-	SV-3-T	-	-
(C)	24-4-100	30'	35'	15'	12'	1 (AT 23' HEIGHT)	1 (12' FROM EOA)	-	AS SHOWN	3.5'	2-MAS	SV-3-T	-	-
(D)	19-3-100	30'	25***	-	12'	-	1 (12' FROM EOA)	-	AS SHOWN	4'	MAS	SV-2-T	-	-

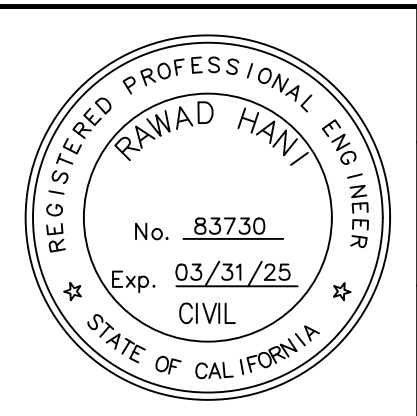
**= LUMINAIRE MAST ARM ROTATED 90 DEGREES
***= REVERSE SIGNAL MAST ARM
ALL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.

SIGN LEGEND



PREPARED BY:
GENERAL TECHNOLOGIES & SOLUTIONS
11900 W Olympic Blvd, Suite 450
Los Angeles, CA 90064 (213) 267-2332
ENGINEER:

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: CG	DRAWN BY: CG	CHECKED BY: RH	RECOMMENDED BY: ANTHONY PHAM, P.E. 7/3/2024
LEI U, P.E. SUPERVISING ENGINEER	7/3/2024 DATE	GRANT MANN, P.E. DEPUTY DIRECTOR	7/3/24 DATE

EL RIVINO ROAD AT AGUA MANSA ROAD INTERSECTION IMPROVEMENT TRAFFIC SIGNAL PLAN				
J.L. REF. -	W.O. NO. H15166	PLAN SCALE 1"=20'	SHT. NO. 7	TOT. SHT'S. 7