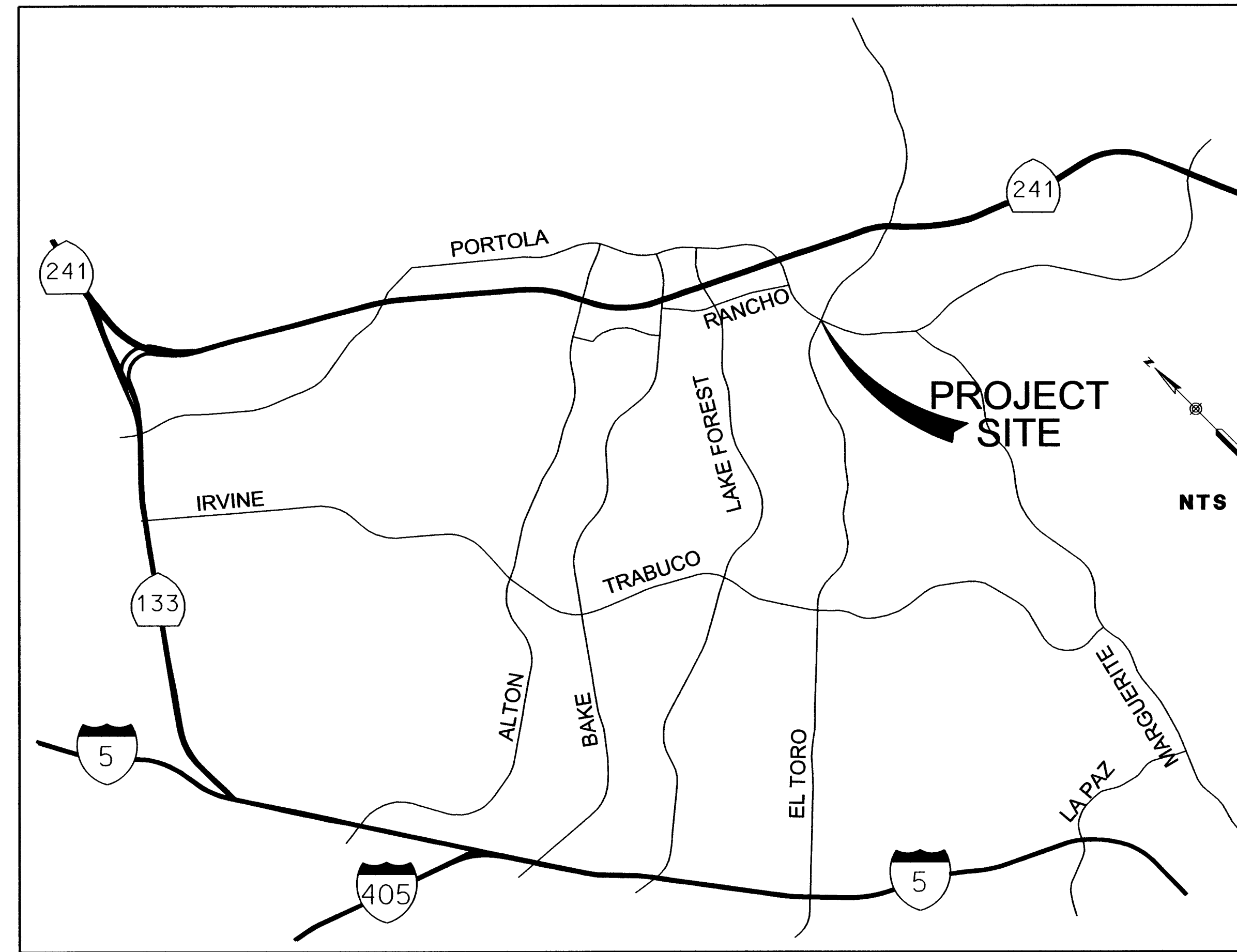


EL TORO ROAD AND PORTOLA PARKWAY STREET IMPROVEMENTS (PW 2018.01)

CITY OF LAKE FOREST GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE MUNICIPAL CODE ADOPTED BY THE CITY OF LAKE FOREST AND ANY SPECIAL REQUIREMENTS OF THE PERMIT.
2. THE CONTRACTOR SHALL KEEP A COPY OF THE CURRENT ORANGE COUNTY PUBLIC WORKS (OCPW), STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SPPWC) AND CITY STANDARD PLANS ON THE CONSTRUCTION SITE AT ALL TIMES.
3. THE CONTRACTOR SHALL NOTIFY THE CITY OF LAKE FOREST'S PUBLIC WORKS OBSERVER AT (949) 461-3494 AT LEAST TWO WORKING DAYS (MINIMUM OF 48 HOURS) PRIOR TO STARTING CONSTRUCTION WORK WHICH REQUIRES PUBLIC WORKS' INSPECTION.
4. A CITY OF LAKE FOREST ENCROACHMENT PERMIT SHALL BE REQUIRED TO PERFORM WORK WITHIN THE PUBLIC RIGHT-OF-WAY. CITY APPROVED PLANS DO NOT RELIEVE THE CONTRACTOR AND/OR DEVELOPER FROM RESPONSIBILITY TO OBTAIN AN ENCROACHMENT PERMIT. A COPY OF THE PERMIT SHALL BE KEPT ON THE CONSTRUCTION SITE AT ALL TIMES.
5. ALL DAMAGED CONCRETE SIDEWALKS OR CURBS SHALL BE SAW-CUT TO THE NEAREST TRANSVERSE SCORE MARK, OR ADJUSTABLE CONTROL JOINT, OR WEAKENED PLANE JOINT AND REPLACED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF OCPW STANDARD PLANS.
6. THE CONTRACTOR SHALL MAINTAIN ADJACENT STREETS IN A NEAT, CLEAN, DUST FREE AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF CITY'S INSPECTOR. THE ADJACENT STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCE BEING CONTROLLED AT ALL TIMES. DEVELOPER SHALL BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREETS AFFECTED BY HIS CONSTRUCTION. METHOD OF STREET CLEANING SHALL BE BY DRY SWEEPING OF ALL PAVED AREAS. NO STOCKPILING OF BUILDING MATERIALS WILL BE ALLOWED WITHIN THE PUBLIC RIGHT-OF-WAY WITHOUT THE PERMISSION OF CITY'S PUBLIC WORKS OBSERVER.
7. TRAFFIC FLOWS SHALL BE MAINTAINED AT ALL TIMES AND PROTECTED WITH ADEQUATE BARRICADES, LIGHTS, SIGNS AND WARNING DEVICES IN ACCORDANCE WITH CURRENT STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, TRAFFIC MANUAL AND TO THE SATISFACTION OF THE CITY'S PUBLIC WORKS OBSERVER.
8. THE OCPW AND SPPCW STANDARD PLANS SHALL TAKE PRECEDENCE OVER ANY STANDARDS EXCEPT FOR STANDARD PLANS AFFECTING UTILITY COMPANIES THAT ARE MORE STRINGENT, AND THEN THE UTILITY COMPANY STANDARD PLANS SHALL TAKE PRECEDENCE.
9. NO CONCENTRATED FLOWS ARE PERMITTED ACROSS ASPHALT PAVEMENT WITHOUT APPROVAL FROM THE CITY'S PUBLIC WORKS OBSERVER.
10. STATE LAW SB 3019 REQUIRES THE CONTRACTOR TO OBTAIN AN IDENTIFICATION NUMBER FROM UNDERGROUND SERVICE ALERT (USA) PRIOR TO THE ISSUANCE OF A CITY ENCROACHMENT PERMIT. THE CONTRACTOR SHALL NOTIFY USA TWO FULL WORKING DAYS (48 HOURS MINIMUM) PRIOR TO ANY CONSTRUCTION ACTIVITIES, INCLUDING PAVEMENT REMOVAL, EXCAVATION AND ASPHALT CONCRETE OVERLAY, WHICH COULD AFFECT ANY UNDERGROUND UTILITY.
11. ANY CONTRACTORS PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE THEMSELVES WITH THE SITE AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM THEIR OPERATIONS, WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THE PLANS.
12. PRIOR TO BEGINNING CONSTRUCTION WORK WHICH COULD DAMAGE OR CONFLICT WITH UNDERGROUND STRUCTURES OR UTILITIES, THE CONTRACTOR SHALL EXCAVATE INSPECTION HOLES TO DETERMINE THE LOCATION AND DEPTH OF SAID STRUCTURES AND UTILITIES.
13. IF EXISTING UTILITIES OR OTHER FACILITIES CONFLICT WITH THE PROPOSED IMPROVEMENTS, WORK SHALL STOP AND THE DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY.
14. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED OR ALTERED EXISTING IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY AS DIRECTED BY THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
15. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL AT ALL TIMES.
16. SURVEY MONUMENTS SHALL BE PROTECTED AND PERPETUATED IN PLACE. DISTURBED OR COVERED MONUMENTS SHALL BE RESET BY A REGISTERED CIVIL ENGINEER, WHO IS AUTHORIZED TO PRACTICE LAND SURVEYING, OR A LICENSED LAND SURVEYOR.
17. 'AS-BUILT' RECORD DRAWINGS SHALL BE FURNISHED TO THE CITY UPON COMPLETION OF CONSTRUCTION.
18. APPROVAL OF THESE PLANS BY THE CITY OR ITS AGENTS SHALL NOT RELIEVE THE CONTRACTOR OR THE APPLICANT FROM THE RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION. UPON REQUEST, THE APPROPRIATE REVISIONS SHALL BE SUBMITTED TO THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER FOR REVIEW AND APPROVAL.



VICINITY MAP
N.T.S.

PUBLIC AGENCIES & UTILITIES:

AT&T - BOB FLEISHER	(714) 618-9129
COX COMMUNICATIONS - REYNALDO CASTRO	(949) 563-8889
EL TORO WATER DISTRICT	(949) 837-7050
CITY OF LAKE FOREST - DOUG ERDMAN	(949) 282-5233
SOUTHERN CALIFORNIA EDISON - JEFF LAMENDOLA	(949) 458-4667
SOUTHERN CALIFORNIA GAS - ANDREW ALDAY	(714) 358-3377
MCI VERIZON - DEAN BOYERS	(469) 886-4238

SHEET INDEX

TITLE SHEET	1
TYPICAL CROSS-SECTIONS	2
PLAN AND PROFILE	3-4
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SIGNAL MODIFICATION PLAN	6
INTERCONNECT PLANS	7-9

CITY OF LAKE FOREST EROSION CONTROL NOTES:

1. SPECIFY ON PLANS:
IN CASE OF EMERGENCY CALL: (NAME)
WORK TELEPHONE NO.: CELL/HOME TELEPHONE NO.:
2. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ONSITE OR STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
3. EROSION CONTROL DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL.
4. ALL REMOVABLE EROSION PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5-DAY RAIN PROBABILITY FORECAST EXCEEDS 40 PERCENT.
5. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREETS, CHECK BERMS, AND BASINS.
6. GRADED AREAS ON THE PERMITTED AREA PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE TO BE DIRECTED TOWARD DESILTING FACILITIES.
7. THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
8. THE UNDERSIGNED CIVIL ENGINEER SHALL INSPECT THE EROSION CONTROL WORK AND ENSURE THAT THE WORK IS IN ACCORDANCE WITH THE APPROVED PLANS.

SIGNATURE: _____ DATE: _____

CITY OF LAKE FOREST ENVIRONMENTAL NOTES:

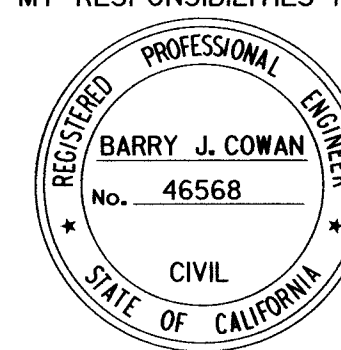
1. THE PERMITTEE SHALL NOTIFY ALL GENERAL CONTRACTORS, SUBCONTRACTORS, MATERIAL SUPPLIERS, LESSEES, AND PROPERTY OWNERS THAT DUMPING OF CHEMICALS INTO THE STORM DRAIN SYSTEM OR THE WATERSHED IS PROHIBITED.
2. PERMITTEE SHALL MAINTAIN CONSTRUCTION SITE IN SUCH CONDITION THAT AN ANTICIPATED STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANT, GLUES, LIMES, PESTICIDES, HERBICIDES, WOOD PRESERVATIVES AND SOLVENTS; ASBESTOS FIBERS, PAINTS FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR, OR BATTERY FLUIDS; FERTILIZERS, VEHICLE/EQUIPMENT WASH WATER AND CONCRETE WASH WATER; CONCRETE, DETERGENT OR FLOATABLE WASTES; WASTES FROM ANY ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; AND SUPERCHLORINATED POTABLE WATER LINE FLUSHINGS.
3. DURING CONSTRUCTION, PERMITTEE SHALL DISPOSE OF SUCH MATERIALS IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON-SITE, PHYSICALLY SEPARATED FROM POTENTIAL STORM WATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
4. PERMITTEE MAY DISCHARGE MATERIAL OTHER THAN STORM WATER ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETION OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD; CAUSE OR THREATEN TO INCREASE POLLUTION, CONTAMINATION, OR NUISANCE; OR CONTAIN A HAZARDOUS SUBSTANCE IN A QUANTITY REPORTABLE UNDER FEDERAL REGULATIONS 40 CFR PARTS 117 AND 302.
5. DEWATERING OF CONTAMINATED GROUNDWATER, OR DISCHARGING CONTAMINATED SOILS VIA SURFACE EROSION IS PROHIBITED. DEWATERING OF NON-CONTAMINATED GROUNDWATER REQUIRES A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE RESPECTIVE STATE REGIONAL WATER QUALITY CONTROL BOARD.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PLANS AND SPECIFICATIONS BY THE CITY OF LAKE FOREST IS CONFINED TO REVIEW ONLY, AND DOES NOT RELIEVE ME AS ENGINEER OF WORK OF MY RESPONSIBILITIES FOR THE PROJECT.

Barry J. Cowan
BARRY J. COWAN RCE 46568



APPROVED FOR CONSTRUCTION
IN PUBLIC RIGHT-OF-WAY ONLY

Thomas Wheeler
DATE: _____

THOMAS WHEELER, PE
PUBLIC WORKS DIRECTOR/
CITY ENGINEER

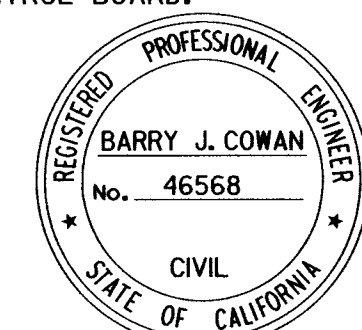
RICK ENGINEERING COMPANY <small>Orange</small>		36 DISCOVERY - SUITE 240 IRVINE, CA 92618 949-588-0707	J-18291C
PREPARED BY <i>Barry J. Cowan</i>	DATE November 18, 2021		
Barry J. Cowan R.C.E. 46568	EXP. DATE: 6-30-23		
DESIGNED BY: _____	DRAWN BY: _____	CHECKED BY: _____	

CITY OF LAKE FOREST

TITLE SHEET FOR:
EL TORO ROAD AND PORTOLA PARKWAY
STREET IMPROVEMENTS

DATE: OCTOBER 29, 2021

SHT. 1 of 9

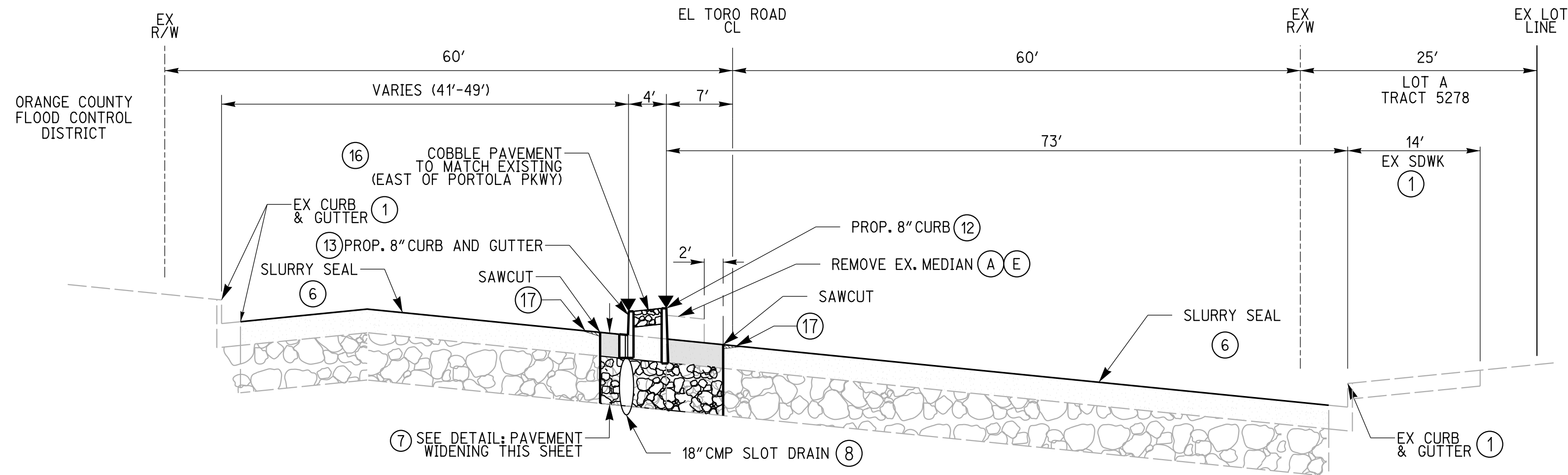


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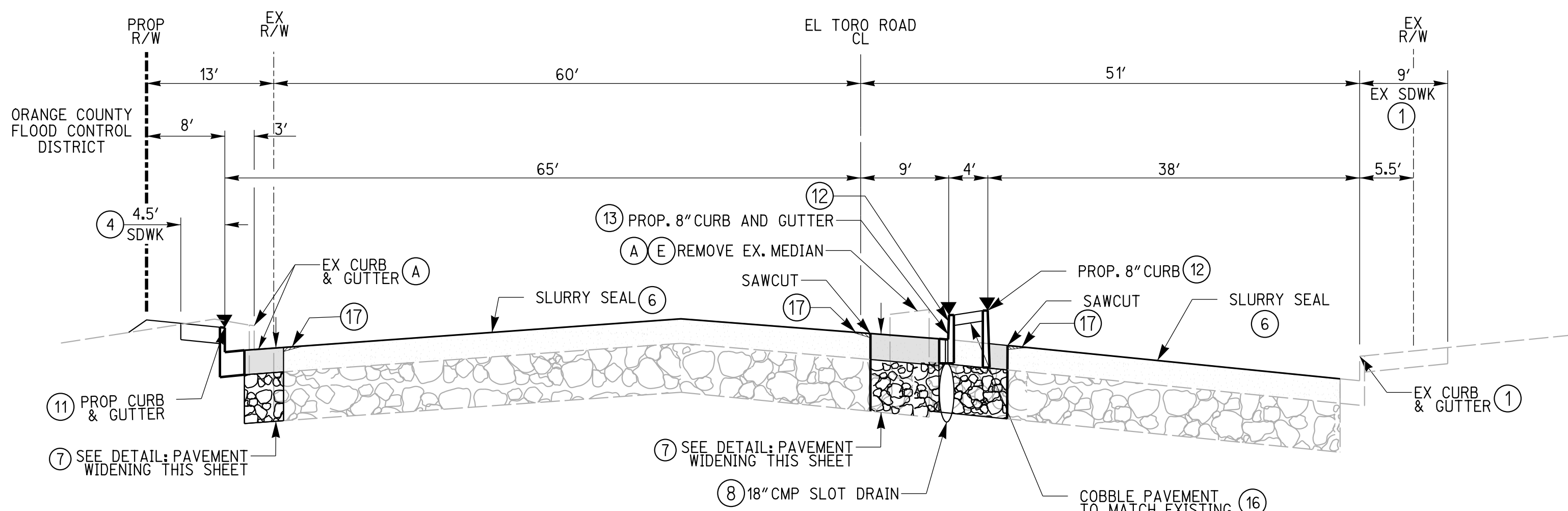
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NOT FOR CONSTRUCTION

100% SUBMITTAL

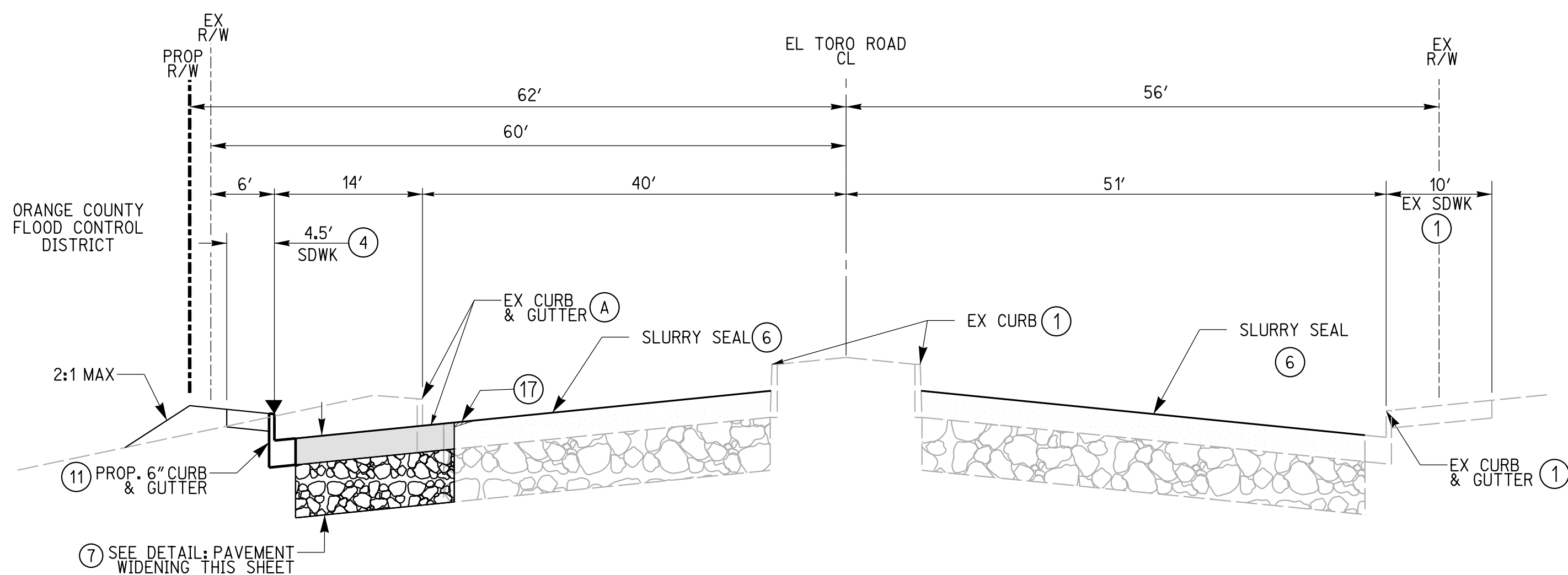
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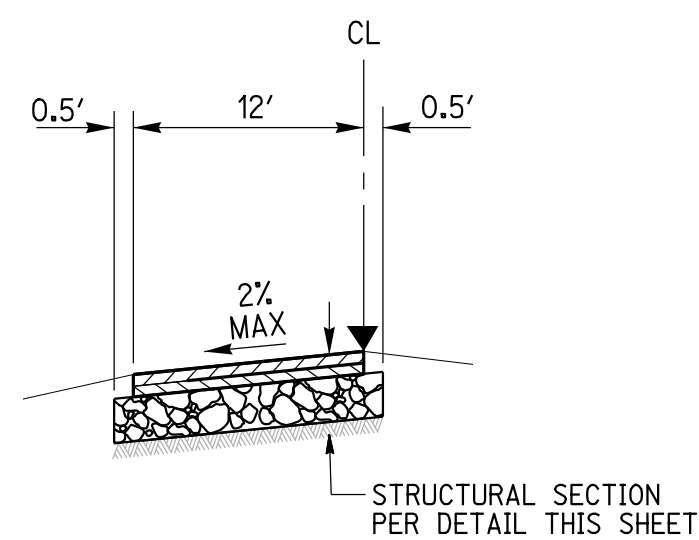
TYPICAL SECTION : A-A
FROM STA 95+26.68 TO 99+10.91
NO SCALE



TYPICAL SECTION : B-B
FROM STA 100+94.66 TO 102+39.24
NO SCALE

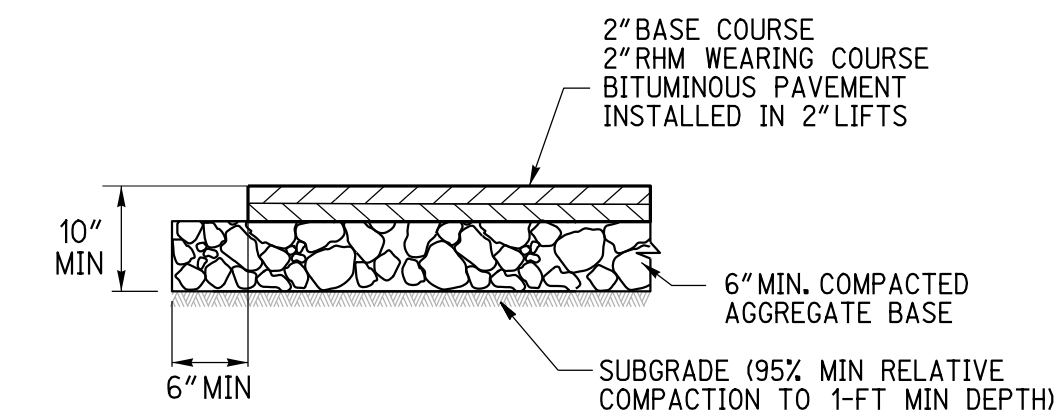


TYPICAL SECTION : C-C
FROM STA 103+81.00 TO 104+75.32
NO SCALE

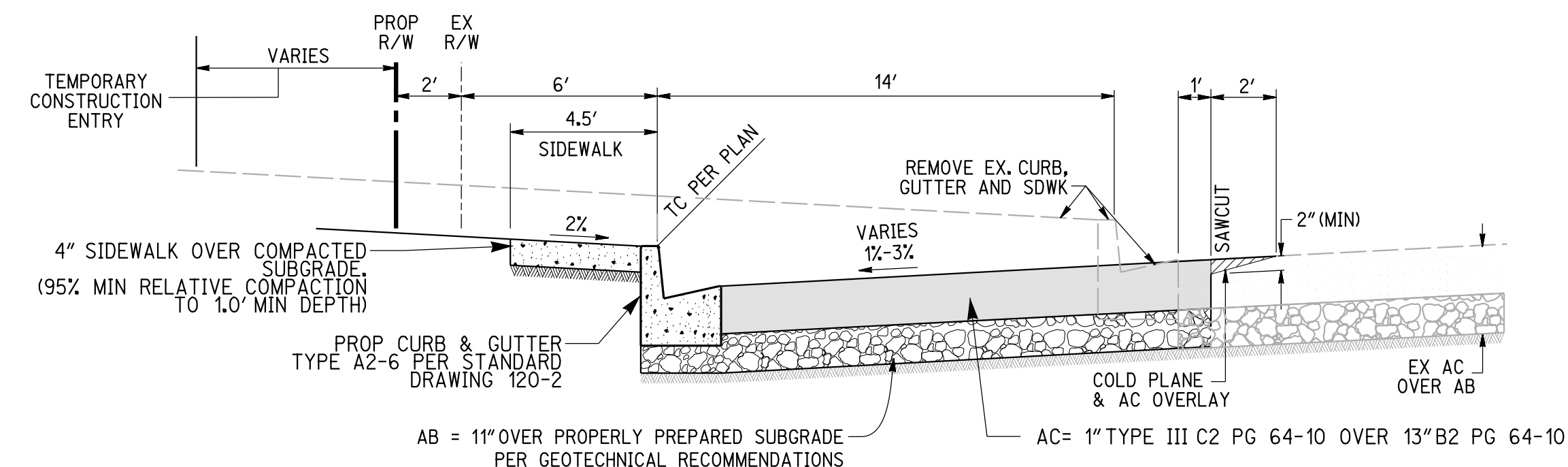


TYPICAL SECTION : BIKE / PEDESTRIAN TRAIL
FROM STA 1+00.00 TO STA 2+90.92
NO SCALE

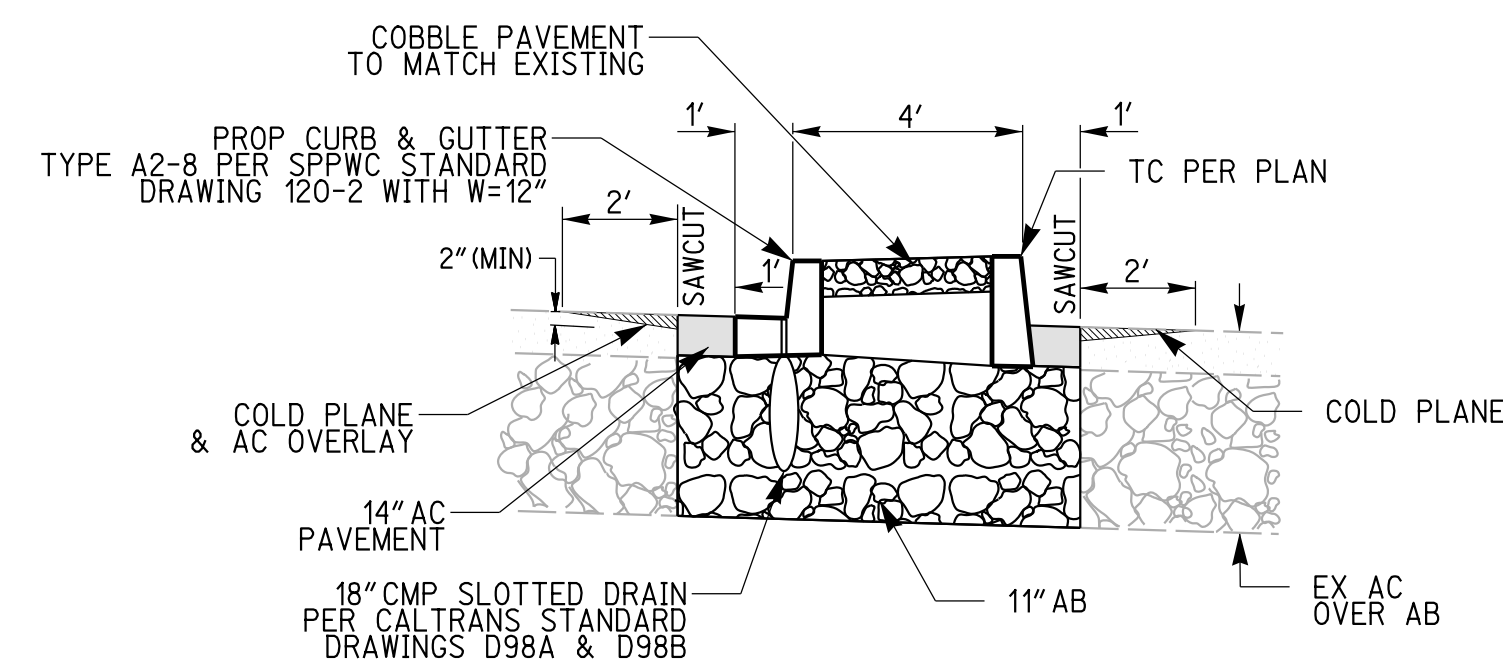
▼ DESIGNATES PROFILE LOCATIONS



BIKE/PEDESTRIAN ACCESS TRAIL STRUCTURAL SECTION
NO SCALE



DETAIL: PAVEMENT WIDENING
NOT TO SCALE



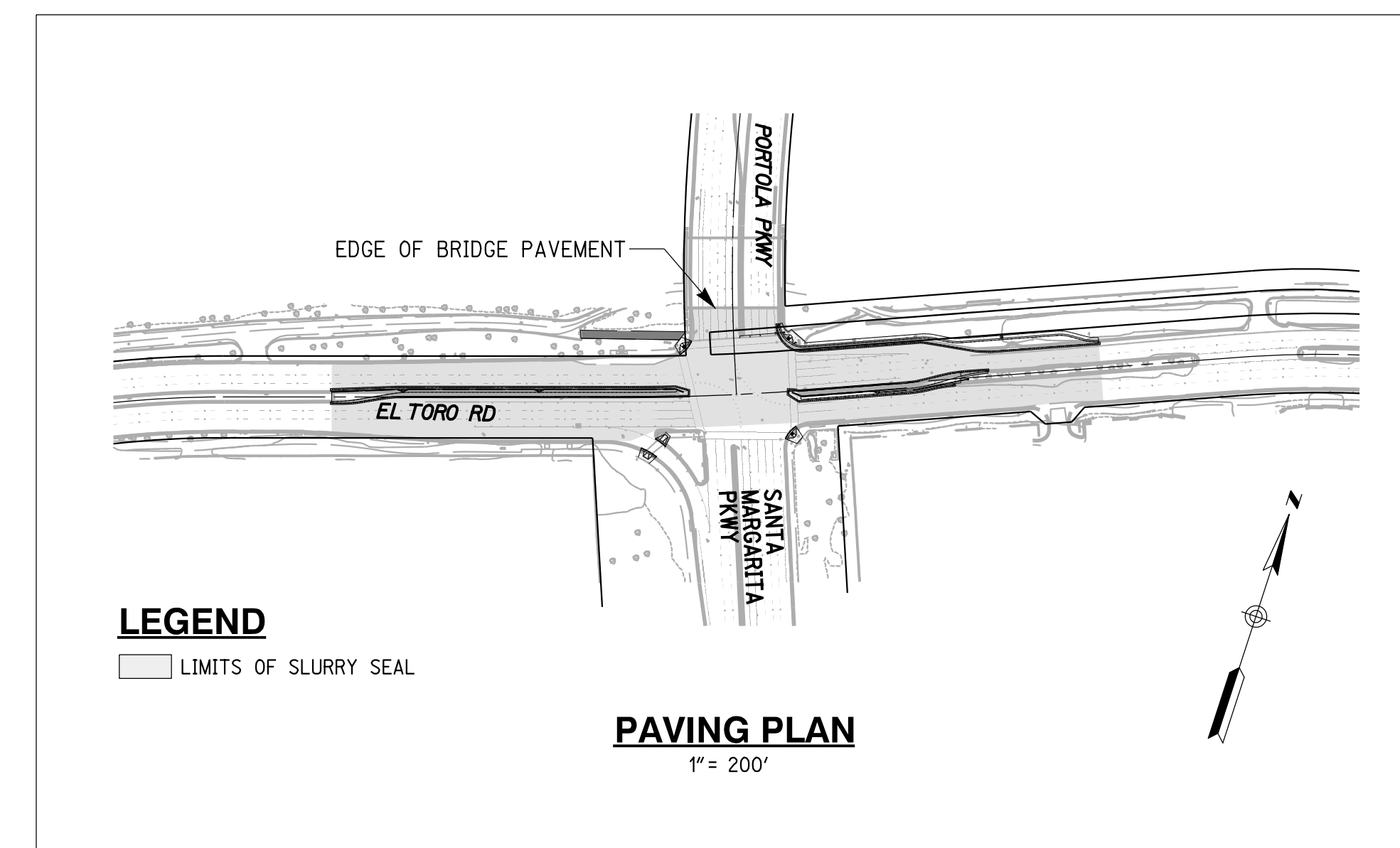
TYPICAL MEDIAN SECTION
NO SCALE

DEMOLITION NOTES AND QUANTITY ESTIMATE

(A)	REMOVE EXISTING PCC CURB AND GUTTER	1959 LF
(B)	REMOVE EXISTING PCC SIDEWALK	N/A
(C)	REMOVE EXISTING CURB RAMP	5 EACH
(D)	REMOVE EXISTING A.C. PAVEMENT	8567 SF
(E)	REMOVE EXISTING MEDIAN PAVING	4216 SF
(F)	REMOVE EXISTING STREET SIGN	2 EACH
(G)	REMOVE EXISTING TREE	2 EACH
(H)	REMOVE EXISTING 18" CMP SLOTTED DRAIN/ STORM DRAIN	764 LF
(I)	REMOVE EXISTING CURB INLET/CATCH BASIN	4 EACH

CONSTRUCTION NOTES AND QUANTITY ESTIMATE

(1)	PROTECT IN PLACE	
(2)	SAWCUT FOR SMOOTH JOIN TO EX IMPROVEMENT	2100 LF
(3)	CONNECT TO EX STORM DRAIN	4 EACH
(4)	CONSTRUCT 4" THICK PCC SIDEWALK PER SPPWC 112-2	1955 SF
(5)	CONSTRUCT CURB RAMP PER SPPWC 111-4 (TYPE 1)	5 EACH
(6)	FULL WIDTH SLURRY SEAL	119,862 SF
(7)	CONSTRUCT AC PAVEMENT AND AGGREGATE BASE PER SOILS ENGINEER RECOMMENDATION. SEE DETAILS ON SHEET 2.	10,687 SF
(8)	CONSTRUCT 18" CMP SLOTTED DRAIN PER CALTRANS STANDARD DRAWINGS D98A & D98B (14 GAUGE)	636 LF
(9)	CONSTRUCT BIKE/PEDESTRIAN ACCESS TRAIL. SEE STRUCTURAL SECTION ON SHEET 2	1786 SF
(10)	CONSTRUCT CURB INLET PER SPPWC 300-3 WITH W=3.5'	3 EACH
(11)	CONSTRUCT TYPE A2-8 CURB AND GUTTER PER SPPWC 120-2	486 LF
(12)	CONSTRUCT TYPE A1-8 CURB PER SPPWC 120-2	863 LF
(13)	CONSTRUCT TYPE A2-8 CURB AND GUTTER PER SPPWC 120-2 WITH W=12"	658 LF
(14)	RELOCATE EX CATCH BASIN	1 EACH
(15)	CONSTRUCT 6" PVC	130 LF
(16)	4" THICK COBBLE PAVEMENT	3817 SF
(17)	2" MIN. GRIND & AC OVERLAY	4262 SF



LEGEND
LIMITS OF SLURRY SEAL

PAVING PLAN
1" = 200'

APPROVED FOR CONSTRUCTION
IN PUBLIC RIGHT-OF-WAY ONLY

THOMAS WHEELER, PE
PUBLIC WORKS DIRECTOR/
CITY ENGINEER

RICK ENGINEERING COMPANY
36 DISCOVERY - SUITE 240
IRVINE, CA 92618
949-588-0707

PREPARED BY: *Barry J. Cowan*
DATE: November 18, 2021
R.C.E. No. 46568
EXP. DATE: 6-30-23

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

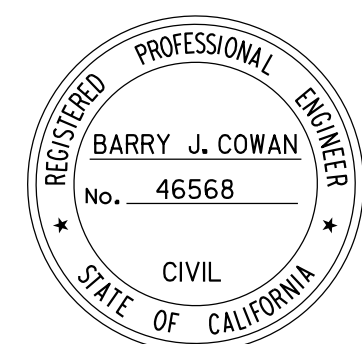
CITY OF LAKE FOREST

TYPICAL CROSS SECTION FOR:
EL TORO ROAD AND PORTOLA PARKWAY
STREET IMPROVEMENTS

DATE: OCTOBER 29, 2021

SHT. 2 OF 9

ENCROACHMENT PERMIT
NOT FOR CONSTRUCTION

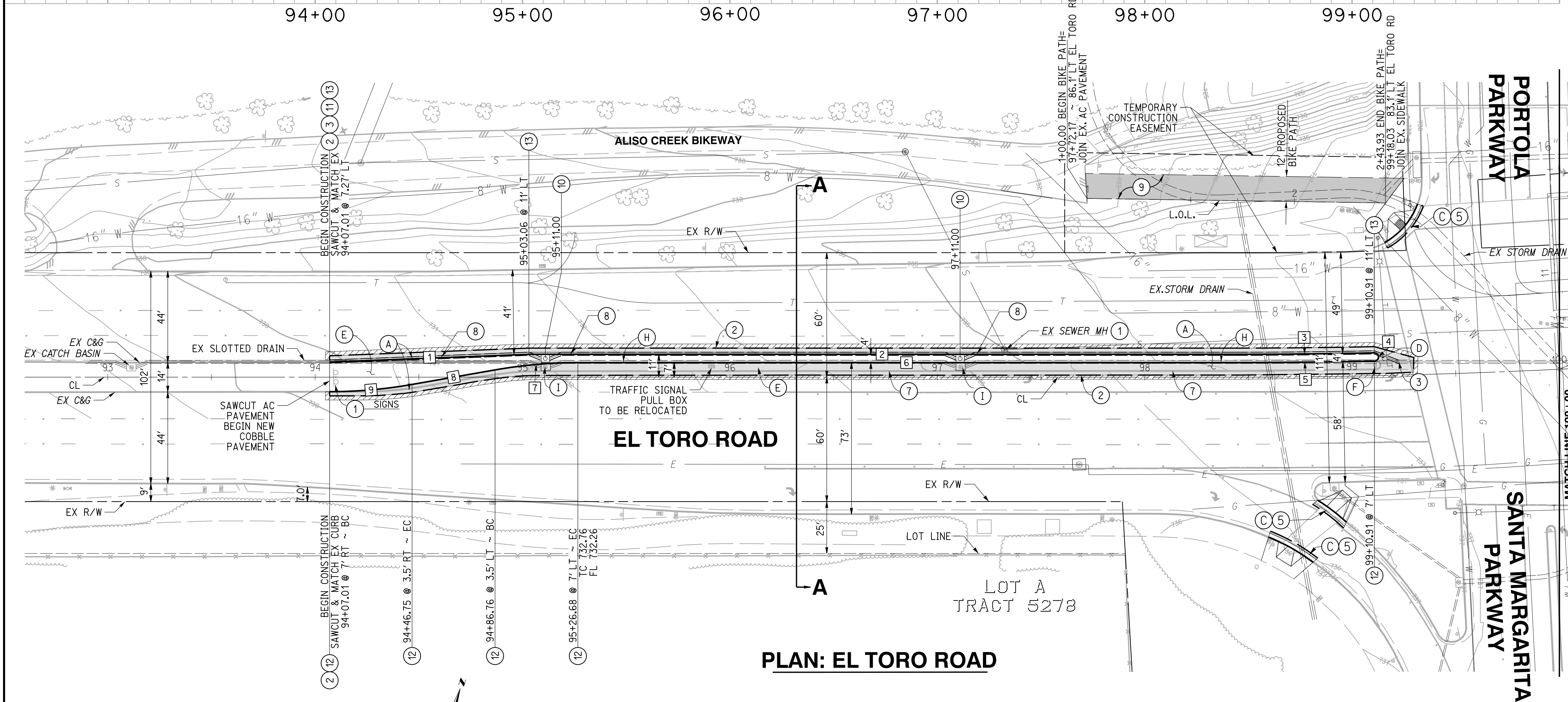
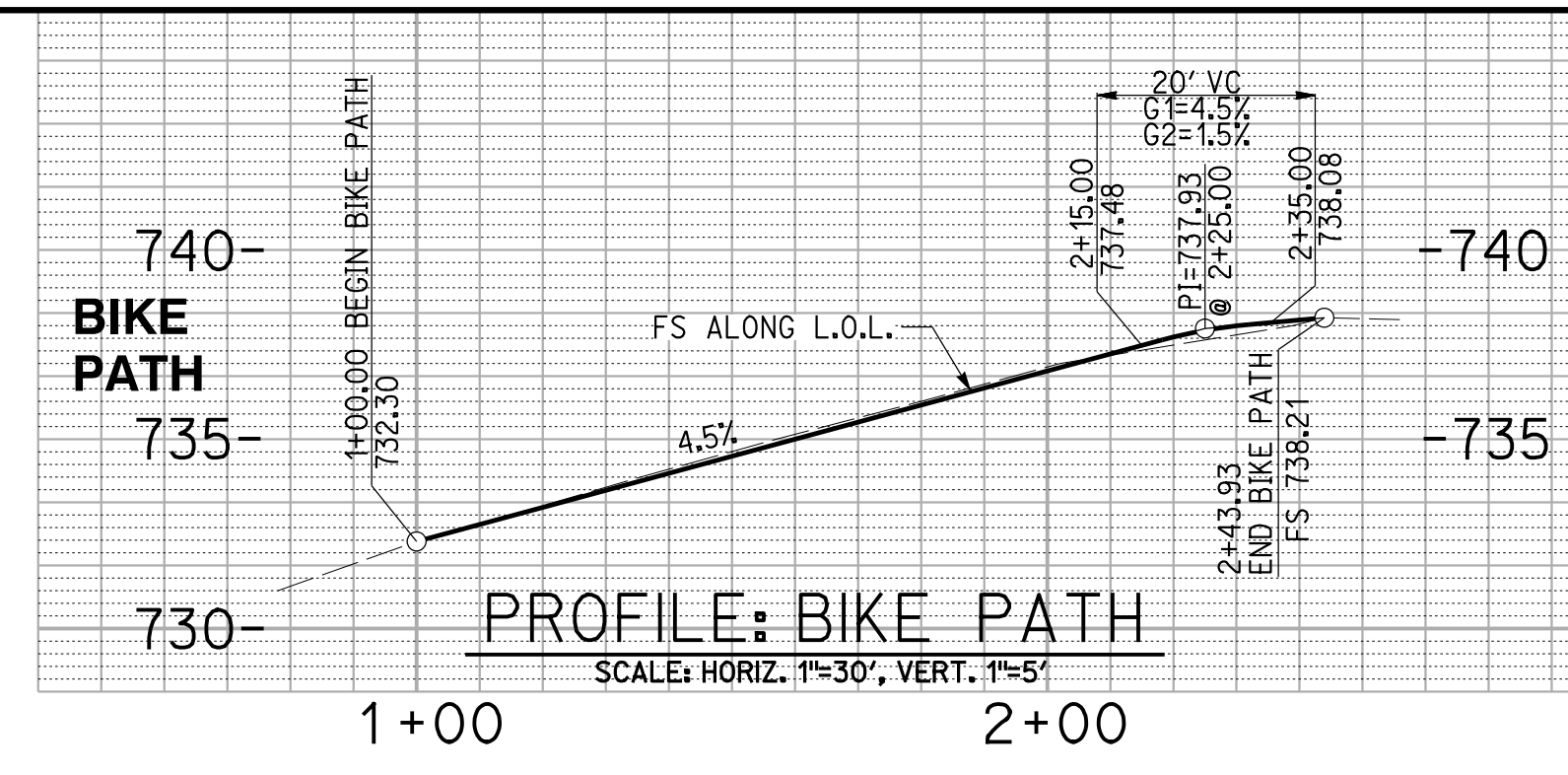
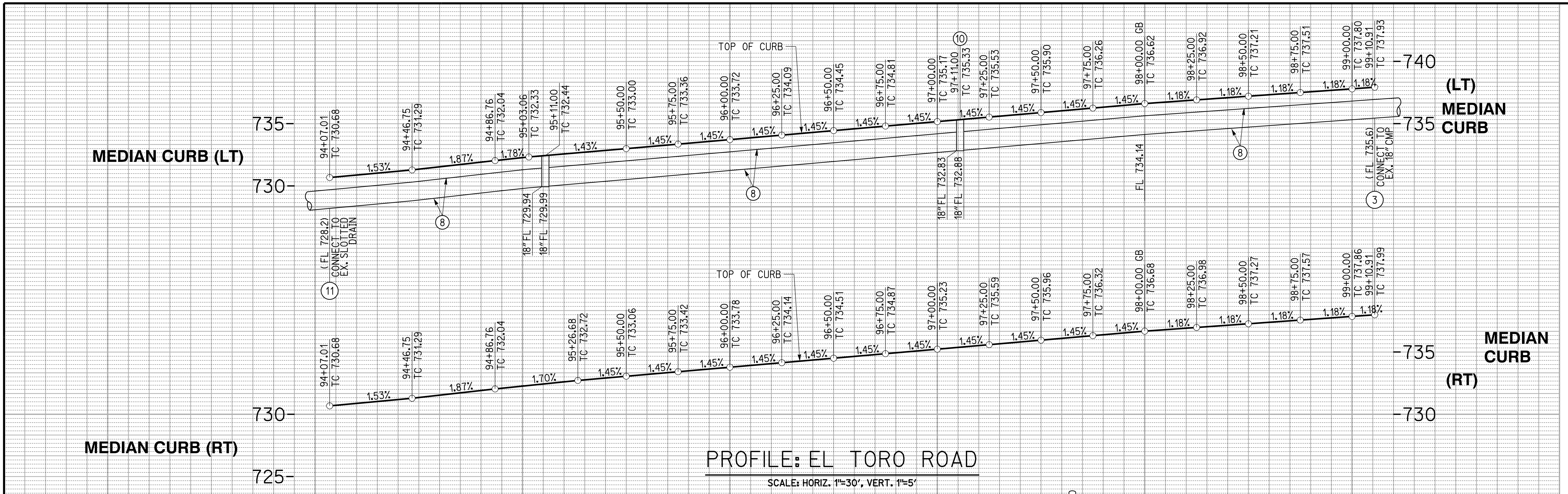


NO.	DATE	REVISIONS	APPROVAL



100% SUBMITTAL

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DEMOLITION NOTES:

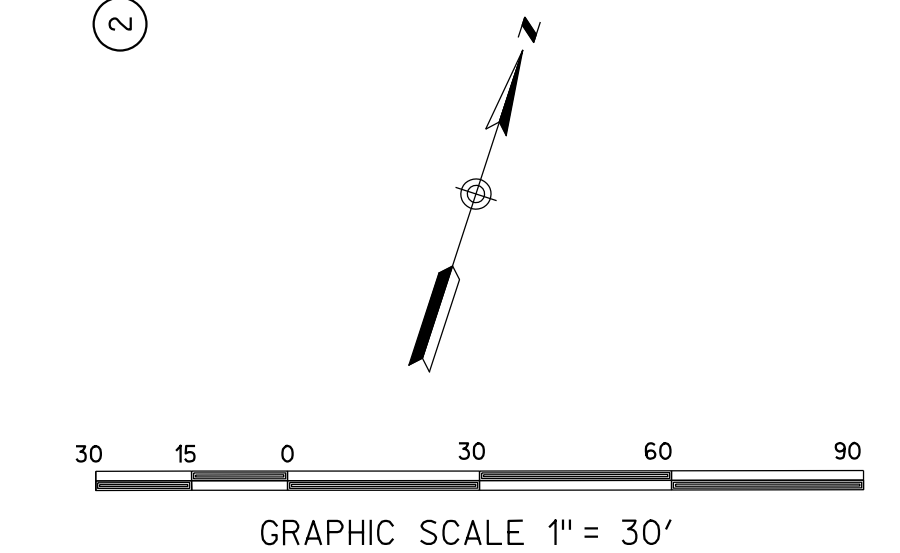
- (A) REMOVE EXISTING PCC CURB AND GUTTER
- (B) REMOVE EXISTING PCC SIDEWALK
- (C) REMOVE EXISTING CURB RAMP
- (D) REMOVE EXISTING A.C. PAVEMENT
- (E) REMOVE EXISTING MEDIAN PAVING
- (F) REMOVE EXISTING STREET SIGN
- (G) REMOVE EXISTING TREE
- (H) REMOVE EXISTING 18" CMP SLOT DRAIN/ STORM DRAIN
- (I) REMOVE EXISTING CURB INLET/CATCH BASIN

CONSTRUCTION NOTES:

- ① PROTECT IN PLACE
- ② SAWCUT FOR SMOOTH JOIN TO EX IMPROVEMENT
- ③ CONNECT TO EX STORM DRAIN
- ④ CONSTRUCT 4" THICK PCC SIDEWALK PER SPPWC 112-2
- ⑤ CONSTRUCT CURB RAMP PER SPPWC 111-4 (TYPE 1)
- ⑥ FULL WIDTH SLURRY SEAL
- ⑦ CONSTRUCT AC PAVEMENT AND AGGREGATE BASE PER SOILS ENGINEER RECOMMENDATION. SEE DETAILS ON SHEET 2.
- ⑧ CONSTRUCT 18" CMP SLOTTED DRAIN PER CALTRANS STANDARD DRAWINGS D98A & D98B (14 GAUGE)
- ⑨ CONSTRUCT BIKE/PEDESTRIAN ACCESS TRAIL. SEE STRUCTURAL SECTION ON SHEET 2
- ⑩ CONSTRUCT CURB INLET PER SPPWC 300-3 WITH W=3.5'
- ⑪ CONSTRUCT TYPE A2-8 CURB AND GUTTER PER SPPWC 120-2
- ⑫ CONSTRUCT TYPE A1-8 CURB PER SPPWC 120-2
- ⑬ CONSTRUCT TYPE A2-8 CURB AND GUTTER PER SPPWC 120-2 WITH W=12"
- ⑭ RELOCATE EX CATCH BASIN
- ⑮ CONSTRUCT 6" PVC
- ⑯ 4" THICK COBBLE PAVEMENT
- ⑰ 2" MIN. GRIND & AC OVERLAY

CURB DATA				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N69° 47' 14" E		96.12'	(13) W=12"
2	N72° 00' 50" E		340.57'	(13) W=12"
3	Δ=01° 12' 16"	3189.00'	67.04'	(13) W=12"
4	Δ=180° 00' 00"	2.00'	6.28'	(12)
5	Δ=01° 12' 16"	3193.00'	67.13'	(12)
6	N72° 00' 50" E		316.95'	(12)
7	Δ=10° 07' 07"	224.95'	39.73'	(12)
8	N62° 02' 34" E		40.63'	(12)
9	Δ=09° 58' 15"	229.51'	39.94'	(12)

Underground Service Alert
 Call: TOLL FREE 1-800-422-4133
 TWO WORKING DAYS BEFORE YOU DIG



REGISTERED PROFESSIONAL ENGINEER
 BARRY J. COWAN
 No. 46568
 CIVIL
 STATE OF CALIFORNIA

NO.	DATE	REVISIONS	APPROVAL

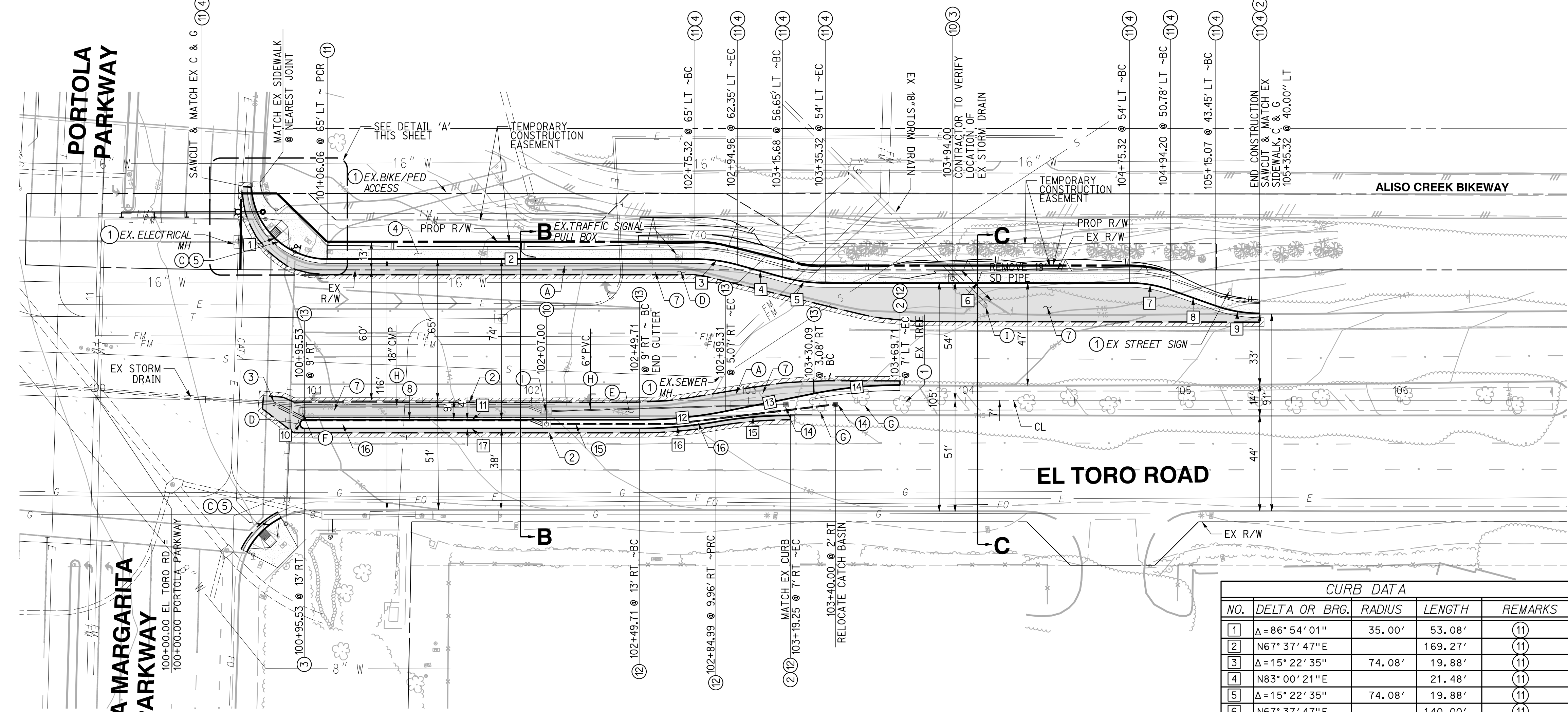
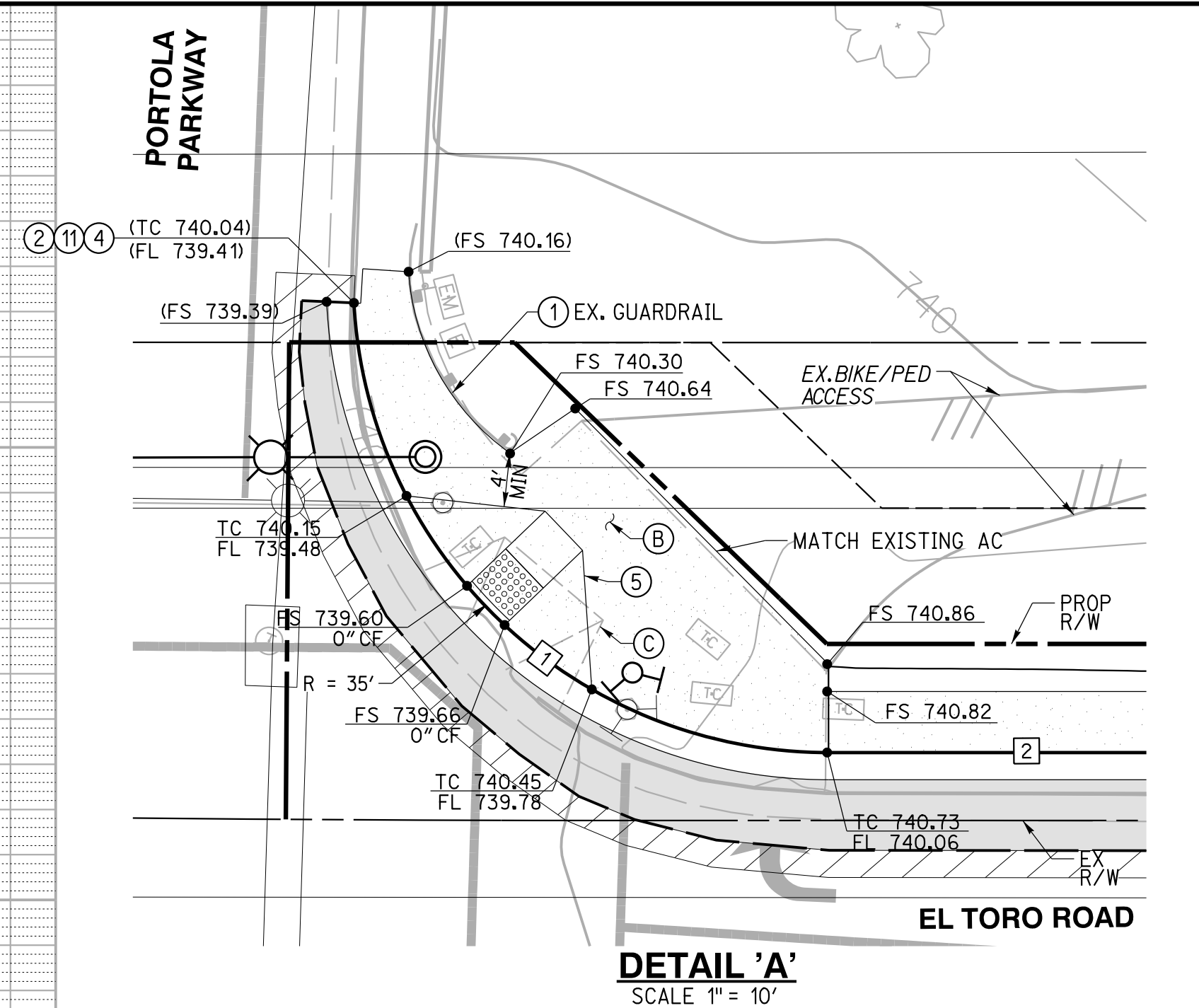
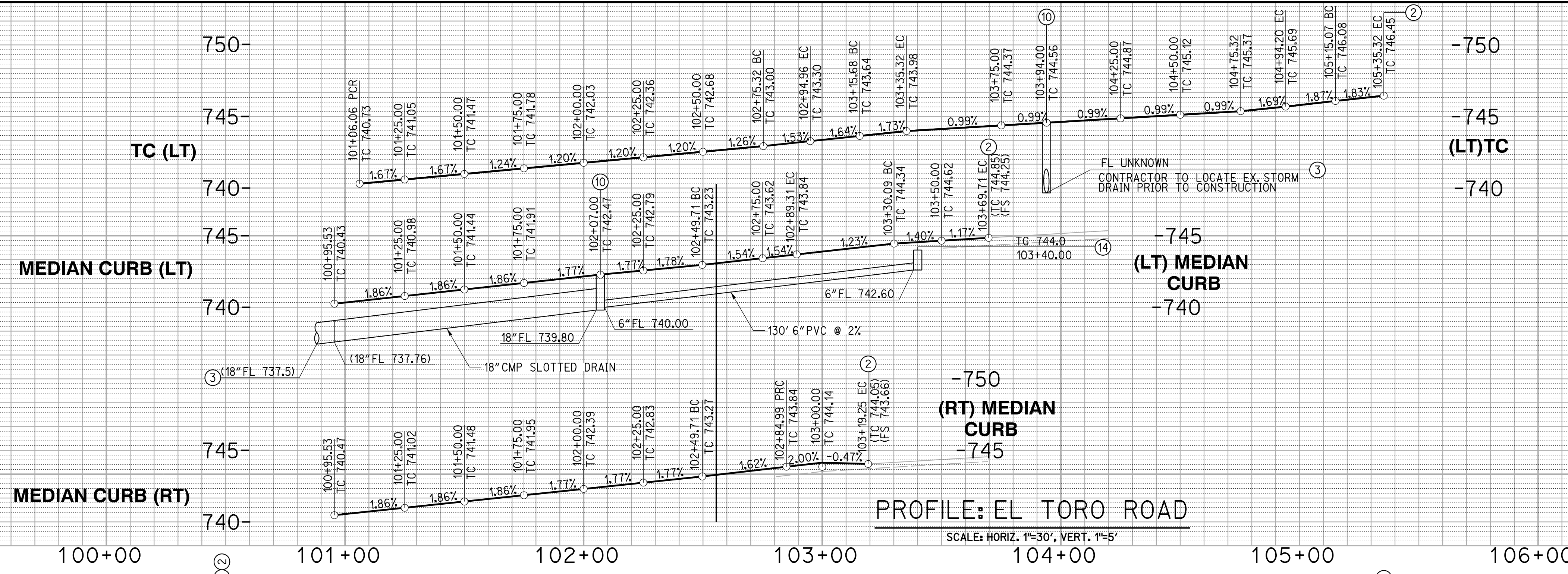
APPROVED FOR CONSTRUCTION IN PUBLIC RIGHT-OF-WAY ONLY
 DATE: _____
 THOMAS WHEELER, PE
 PUBLIC WORKS DIRECTOR/
 CITY ENGINEER

RICK ENGINEERING COMPANY
 36 DISCOVERY - SUITE 240
 IRVINE, CA 92618
 949-588-0707
 J-18291C
 rickengineering.com
 San Diego • Riverside • Sacramento • San Luis Obispo • Phoenix • Tucson • Denver
 PREPARED BY: *Mary G...* DATE: November 18, 2021
 BARRY J. COWAN R.C.E. No. 46568 EXP. DATE: 6-30-23
 DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF LAKE FOREST
 PLAN AND PROFILE PLANS FOR:
 EL TORO ROAD AND PORTOLA PARKWAY
 STREET IMPROVEMENTS
 STA 94+07.01 TO 100+00.00
 DATE: OCTOBER 29, 2021
 SHT. 3 OF 9

ENCROACHMENT PERMIT
 NOT FOR CONSTRUCTION

100% SUBMITTAL



DEMOLITION NOTES:

- (A) REMOVE EXISTING PCC CURB AND GUTTER
- (B) REMOVE EXISTING PCC SIDEWALK
- (C) REMOVE EXISTING CURB RAMP
- (D) REMOVE EXISTING A.C. PAVEMENT
- (E) REMOVE EXISTING MEDIAN PAVING
- (F) REMOVE EXISTING STREET SIGN
- (G) REMOVE EXISTING TREE
- (H) REMOVE EXISTING 18" CMP SLOT DRAIN/ STORM DRAIN
- (I) REMOVE EXISTING CURB INLET/CATCH BASIN

CONSTRUCTION NOTES:

- (1) PROTECT IN PLACE
- (2) SAWCUT FOR SMOOTH JOIN TO EX IMPROVEMENT
- (3) CONNECT TO EX STORM DRAIN
- (4) CONSTRUCT 4" THICK PCC SIDEWALK PER SPPWC 112-2
- (5) CONSTRUCT CURB RAMP PER SPPWC 111-4 (TYPE 1)
- (6) FULL WIDTH SLURRY SEAL
- (7) CONSTRUCT AC PAVEMENT AND AGGREGATE BASE PER SOILS ENGINEER RECOMMENDATION. SEE DETAILS ON SHEET 2.
- (8) CONSTRUCT 18" CMP SLOTTED DRAIN PER CALTRANS STANDARD DRAWINGS D98A & D98B (14 GAUGE)
- (9) CONSTRUCT BIKE/PEDESTRIAN ACCESS TRAIL. SEE STRUCTURAL SECTION ON SHEET 2
- (10) CONSTRUCT CURB INLET PER SPPWC 300-3 WITH W=3.5'
- (11) CONSTRUCT TYPE A2-8 CURB AND GUTTER PER SPPWC 120-2
- (12) CONSTRUCT TYPE A1-8 CURB PER SPPWC 120-2
- (13) CONSTRUCT TYPE A2-8 CURB AND GUTTER PER SPPWC 120-2 WITH W=12"
- (14) RELOCATE EX CATCH BASIN
- (15) CONSTRUCT 6" PVC
- (16) 4" THICK COBBLE PAVEMENT
- (17) 2" MIN. GRIND & AC OVERLAY

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	Δ=86° 54' 01"	35.00'	53.08'	(11)
2	N67° 37' 47"E		169.27'	(11)
3	Δ=15° 22' 35"	74.08'	19.88'	(11)
4	N83° 00' 21"E		21.48'	(11)
5	Δ=15° 22' 35"	74.08'	19.88'	(11)
6	N67° 37' 47"E		140.00'	(11)
7	Δ=20° 38' 22"	56.98'	19.24'	(11)

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
8	N86° 58' 46"E		22.12'	(11)
9	Δ=19° 20' 59"	61.11'	20.64'	(11)
10	Δ=180° 00' 00"	2.00'	6.28'	(12)
11	N67° 37' 47"E		154.17'	(13) W=12"
12	Δ=11° 18' 36"	201.98'	39.87'	(12)
13	N56° 19' 11"E		41.58'	(12)
14	Δ=11° 18' 36"	201.98'	39.87'	(12)
15	Δ=09° 51' 46"	200.00'	34.43'	(12)
16	Δ=09° 51' 46"	205.98'	35.46'	(12)
17	N67° 37' 47"E		154.17'	(12)

APPROVED FOR CONSTRUCTION IN PUBLIC RIGHT-OF-WAY ONLY

DATE: _____

THOMAS WHEELER, PE
PUBLIC WORKS DIRECTOR/
CITY ENGINEER

RICK ENGINEERING COMPANY
36 DISCOVERY - SUITE 240
IRVINE, CA 92618
949-588-0707

PREPARED BY: *Mary Givon* DATE: November 18, 2021

BARRY J. COWAN R.C.E. No. 46568 EXP. DATE: 6-30-23

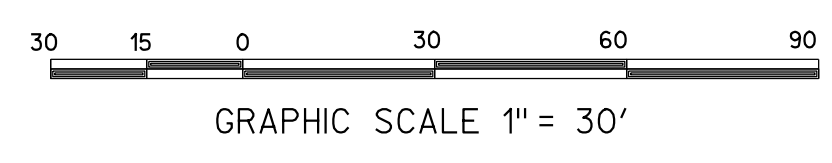
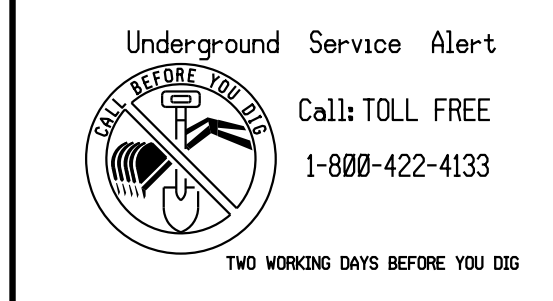
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF LAKE FOREST

PLAN AND PROFILE PLANS FOR:
EL TORO ROAD AND PORTOLA PARKWAY
STREET IMPROVEMENTS
STA 100+00.00 TO 104+38.74

DATE: OCTOBER 29, 2021

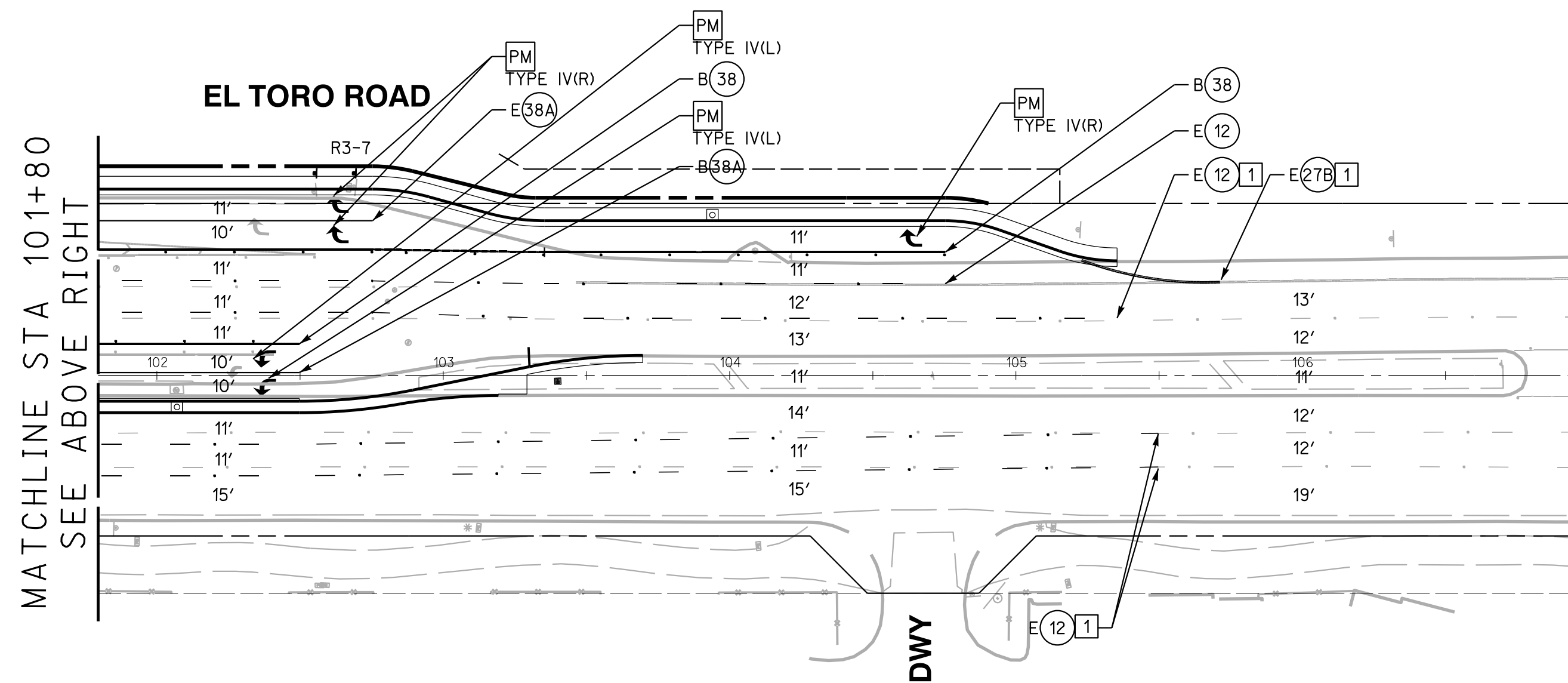
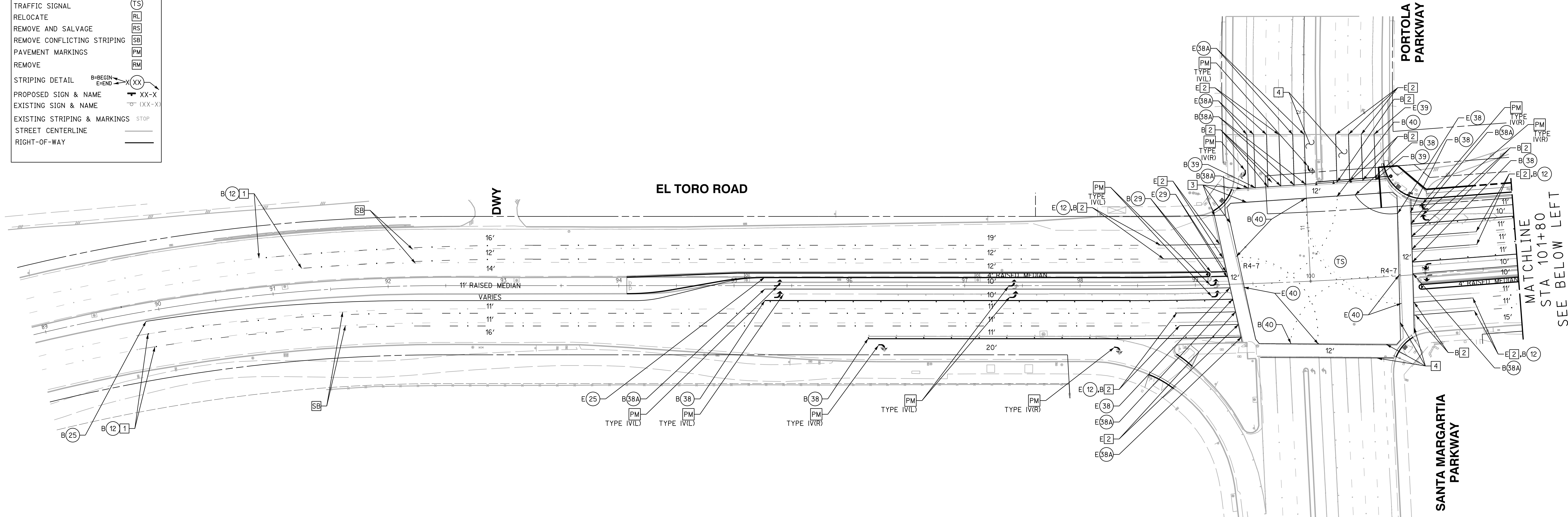
SHT. 4 OF 9



NO.	DATE	REVISIONS	APPROVAL

ENCROACHMENT PERMIT
NOT FOR CONSTRUCTION

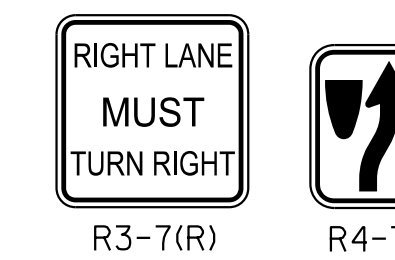
LEGEND	
TRAFFIC SIGNAL	(TS)
RELOCATE	(RL)
REMOVE AND SALVAGE	(RS)
REMOVE CONFLICTING STRIPING	(SB)
PAVEMENT MARKINGS	(PM)
REMOVE	(RM)
STRIPING DETAIL	B-BEGIN E-END (XX)
PROPOSED SIGN & NAME	XX-X
EXISTING SIGN & NAME	(XX-X)
EXISTING STRIPING & MARKINGS	STOP
STREET CENTERLINE	—
RIGHT-OF-WAY	—



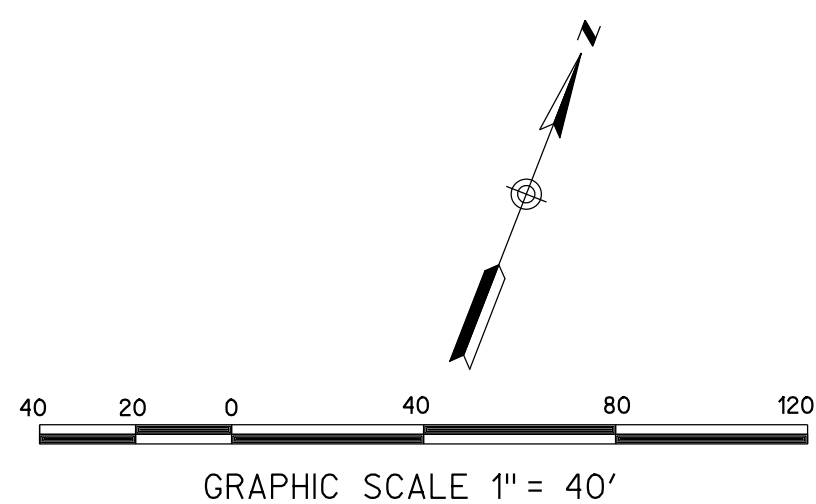
CONSTRUCTION NOTES:

- 1 CONTRACTOR TO MATCH TO EXISTING STRIPING
- 2 INSTALL 6" WIDE, SOLID WHITE STRIPE
- 3 INSTALL CROSSWALK PER CALTRANS STANDARD PLAN A24F.
- 4 CONTRACTOR SHALL REMOVE ANY CONFLICTING STRIPING AND/OR PAVEMENT MARKING.

PROPOSED SIGNS THIS SHEET:



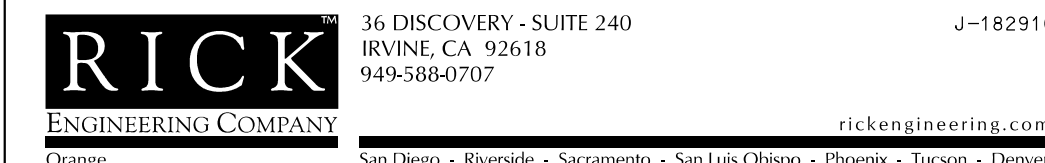
NOTE:
CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING AND PAVEMENT MARKINGS



NO.	DATE	REVISIONS	APPROVAL

APPROVED FOR CONSTRUCTION
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THOMAS WHEELER, PE
PUBLIC WORKS DIRECTOR/
CITY ENGINEER



PREPARED BY: *Brian R. Stephenson* DATE: November 18, 2021
BRIAN R. STEPHENSON R.C.E. No. 69471 EXP. DATE: 6-30-23
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF LAKE FOREST

SIGNING AND STRIPING PLAN FOR:

**EL TORO ROAD AND PORTOLA PARKWAY
STREET IMPROVEMENTS**

DATE: OCTOBER 29, 2021

SHT. 5 OF 9

ENCROACHMENT PERMIT
NOT FOR CONSTRUCTION

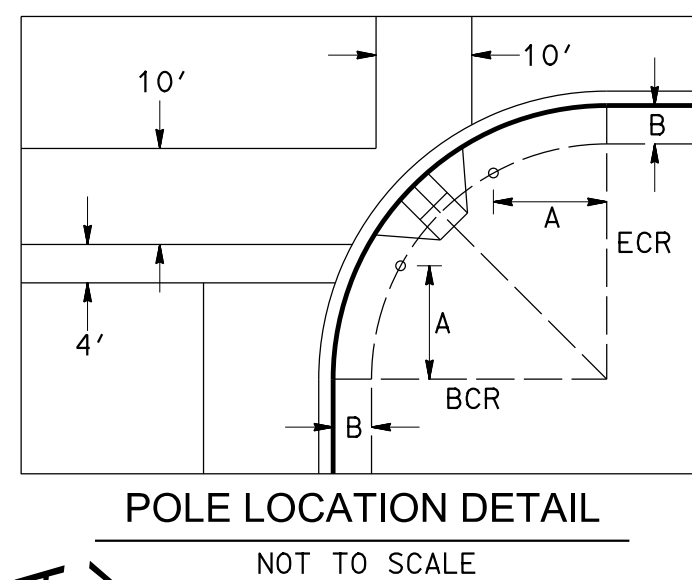
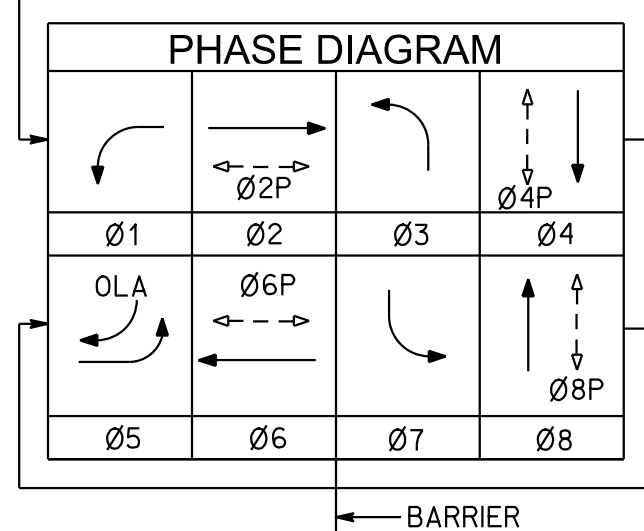
100% SUBMITTAL

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POLE AND EQUIPMENT SCHEDULE

NO.	STANDARD					PLACEMENT		VEHICLE		PEDESTRIAN			SPECIAL REQUIREMENTS	
	TYPE	HGT.	SIG	M.A.	LUM M.A.	LUM L.E.D.	A	B	M.A. MTG.	POLE MTG.	MTG.	PPB		QUAD
A	29-5-70	30'	60'	15'		103W LED	EXISTING		•2-MAS ○1-MAS	•SV-1-T ○SV-1-T	SP-1-T	Ø4	E	TO REMAIN 10 11 Portola
B	1-A	10'					EXISTING		•TV-2-T		SP-1-T	Ø6 Ø4 (BIKE)	S	TO REMAIN
C	29-5-70	30'	65'	15'		250W HPS	EXISTING		•2-MAS ○1-MAS	•SV-1-T	SP-1-T	Ø6	S	RS
C'	61-5-100	30'	65'	15'		103W LED	14.5'	2.5'	•2-MAS ○1-MAS	•SV-1-T	SP-1-T	Ø6	S	F=15', F=15' El Toro Rd
D	1-A	10'					EXISTING		•TV-2-T		SP-1-T	Ø8 Ø6 (BIKE)	W S	RS
D'	1-A	10'					14.4'	2.5'	•TV-2-T		SP-1-T	Ø8 Ø6 (BIKE)	W S	
E	29-5-70	30'	50'	15'		103W LED	EXISTING		•2-MAS ○1-MAS	•SV-1-T	SP-1-T	Ø8	W	TO REMAIN 10 11 Santa Margarita Pkwy
F	1-A	10'					EXISTING		•TV-2-T		SP-1-T	Ø2 Ø8 (BIKE)	N W	TO REMAIN 10 11 El Toro Rd
G	29-5-70	30'	50'	15'		103W LED	EXISTING		•2-MAS ○1-MAS	•SV-1-T	SP-1-T	Ø2	N	TO REMAIN 10 11 El Toro Rd
H	1-A	10'					EXISTING		•TV-2-T		SP-1-T	Ø4 Ø2 (BIKE)	E N	TO REMAIN

•R,Y,G ORA,YA,GA 4R,Y,G,YA,GA XX=EXISTING XX=NEW

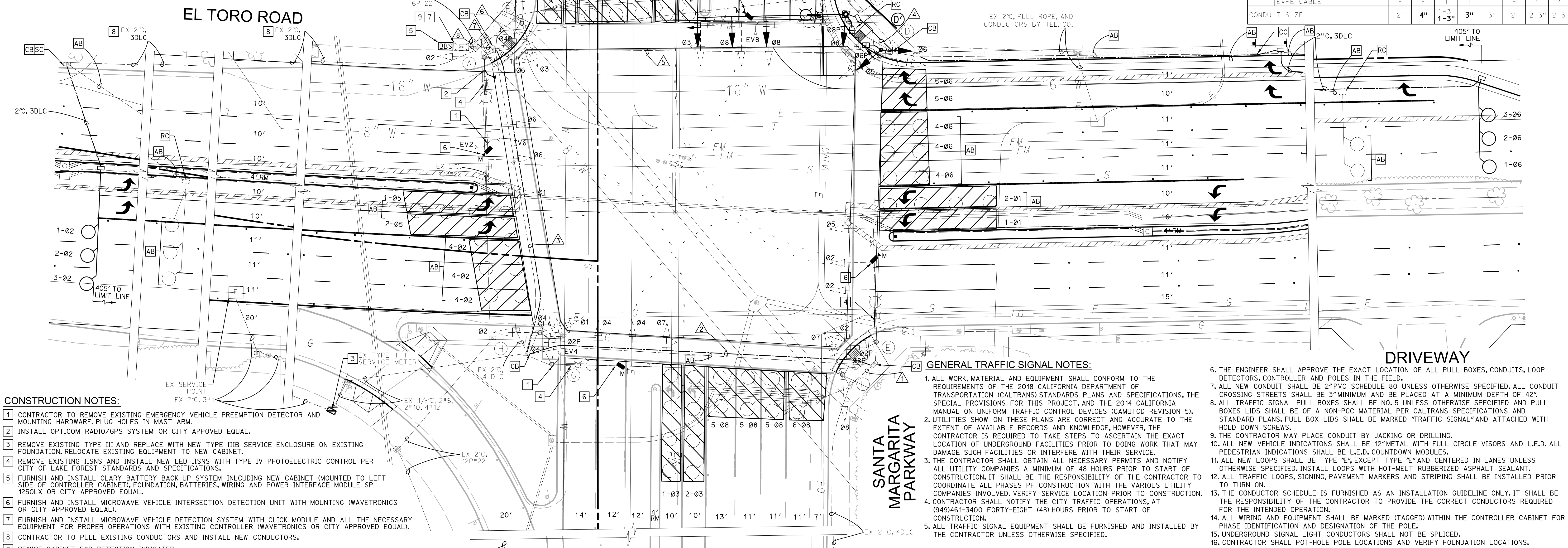


PROPOSED DETECTOR SCHEDULE

SU	CHANNEL	DETECTOR	SU	CHANNEL	DETECTOR	SU	CHANNEL	DETECTOR	SU	CHANNEL	DETECTOR
11	U	1-01	J1	U	1-05	18	U	5-04	J8	U	
	L	2-01		L	2-05		L			L	
12	U	1-02	J2	U	1-06	19	U		J9	U	
	L	2-02		L	2-06		L			L	
13	U	3-02	J3	U	3-06	110	U		J10	U	
	L	4-02		L	4-06		L			L	
14	U		J4	U	5-06	111	U		J11	U	
	L			L			L			L	
15	U	1-03	J5	U	1-07	112	U	Ø2 PED	J12	U	EVA-Ø2
	L	2-03		L	2-07		L	Ø4 PED		L	EVB-Ø6
16	U	1-04	J6	U	1-08	113	U	Ø6 PED	J13	U	EVC-Ø4
	L	2-04		L	2-08		L	Ø8 PED		L	EVD-Ø8
17	U	3-04	J7	U	3-08	114	U		J14	U	FLASH
	L	4-04		L	4-08		L			L	

CONDUCTOR SCHEDULE

AWG	CIRCUIT	1	2	3	4	5	6	7	8
	Ø1	-	-	3	-	-	-	-	6
	Ø2	3	3	6	-	-	-	-	6
	Ø3	-	-	-	3	3	3	3	6
	Ø4	-	-	3	-	-	-	-	7
	Ø5	3	3	3	-	3	-	-	6
	Ø6	-	-	-	-	3	-	-	6
	Ø7	3	3	6	-	-	-	-	6
	Ø8	3	3	3	3	3	-	-	6
	Ø2P	-	2	4	-	-	-	-	4
	Ø4P	-	-	2	-	-	-	2	4
	Ø6P	-	-	-	-	2	-	-	4
	Ø8P	2	2	2	2	2	-	-	4
#14	Ø2 PPB	1	1	2	-	-	-	-	2
	Ø4 PPB	-	-	1	-	-	-	-	2
	Ø6 PPB	-	-	-	1	1	1	2	2
	Ø8 PPB	1	1	1	-	1	-	-	2
	Ø2 BPB	1	1	2	-	-	-	-	2
	Ø4 BPB	-	-	1	-	-	-	-	2
	Ø6 BPB	-	-	-	1	1	1	2	2
	Ø8 BPB	1	1	1	-	1	-	-	2
	PPB & BPB COM	1	1	1	1	1	1	1	1
	SPARES	3	3	3	3	3	3	6	6
	TOTAL	22	24	44	14	24	11	88	88
2 #12	IISNS	2	2	2	2	2	-	-	-
#6	SERVICE	-	-	2	-	-	-	-	2
	SIGNAL COMMON	1	1	1	1	1	1	1	1
#10	LUMINAIRE	2	2	2	2	-	-	-	-
	TOTAL	3	3	3	3	3	1	1	1
	Ø2	-	-	-	-	-	-	-	3
	Ø4	-	-	-	-	-	3	3	3
	Ø6	-	-	-	-	3	-	-	3
	Ø8	3	3	3	-	-	-	-	3
	TOTAL	3	3	3	-	3	3	9	12
	DETECTOR SENSOR CABLE	1	1	3	1	1	-	-	5
	EVPE CABLE	-	-	1	1	1	-	-	4
	CONDUIT SIZE	2"	4"	1-3"	3"	3"	2"	2-3"	2-3"



CONSTRUCTION NOTES:

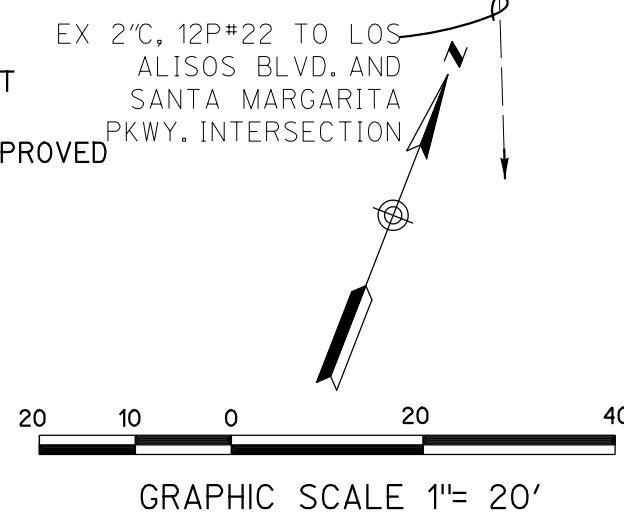
- CONTRACTOR TO REMOVE EXISTING EMERGENCY VEHICLE PREEMPTION DETECTOR AND MOUNTING HARDWARE. PLUG HOLES IN MAST ARM.
- INSTALL OPTICOM RADIO/GPS SYSTEM OR CITY APPROVED EQUAL.
- REMOVE EXISTING TYPE III AND REPLACE WITH NEW TYPE IIIB SERVICE ENCLOSURE ON EXISTING FOUNDATION. RELOCATE EXISTING EQUIPMENT TO NEW CABINET.
- REMOVE EXISTING IISNS AND INSTALL NEW LED IISNS WITH TYPE IV PHOTOELECTRIC CONTROL PER CITY OF LAKE FOREST STANDARDS AND SPECIFICATIONS.
- FURNISH AND INSTALL CLARY BATTERY BACK-UP SYSTEM INCLUDING NEW CABINET (MOUNTED TO LEFT SIDE OF CONTROLLER CABINET), FOUNDATION, BATTERIES, WIRING AND POWER INTERFACE MODULE SP 1250LX OR CITY APPROVED EQUAL.
- FURNISH AND INSTALL MICROWAVE VEHICLE INTERSECTION DETECTION UNIT WITH MOUNTING (WAVETRONICS OR CITY APPROVED EQUAL).
- FURNISH AND INSTALL MICROWAVE VEHICLE DETECTION SYSTEM WITH CLICK MODULE AND ALL THE NECESSARY EQUIPMENT FOR PROPER OPERATIONS WITH EXISTING CONTROLLER (WAVETRONICS OR CITY APPROVED EQUAL).
- CONTRACTOR TO PULL EXISTING CONDUCTORS AND INSTALL NEW CONDUCTORS.
- REWIRE CABINET FOR DETECTION INDICATED.
- CONTRACTOR TO REMOVE AND COLLECT EXISTING LUMINAIRE AND REPLACE WITH CITY OF LAKE FOREST APPROVED LUMINAIRE OF THE L.E.D. TYPE.
- CONTRACTOR TO REMOVE AND COLLECT EXISTING IISNS AND REPLACE WITH CITY OF LAKE FOREST APPROVED IISNS OF THE L.E.D. TYPE.

GENERAL TRAFFIC SIGNAL NOTES:

- ALL WORK, MATERIAL AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE 2018 CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARDS PLANS AND SPECIFICATIONS, THE SPECIAL PROVISIONS FOR THIS PROJECT, AND THE 2014 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD REVISION 5).
- UTILITIES SHOW ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE, HOWEVER, THE CONTRACTOR IS REQUIRED TO TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY ALL UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL PHASES OF CONSTRUCTION WITH THE VARIOUS UTILITY COMPANIES INVOLVED. VERIFY SERVICE LOCATION PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC OPERATIONS, AT (949)461-3400 FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION.
- ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.

- THE ENGINEER SHALL APPROVE THE EXACT LOCATION OF ALL PULL BOXES, CONDUITS, LOOP DETECTORS, CONTROLLER AND POLES IN THE FIELD.
- ALL NEW CONDUIT SHALL BE 2" PVC SCHEDULE 80 UNLESS OTHERWISE SPECIFIED. ALL CONDUIT CROSSING STREETS SHALL BE 3" MINIMUM AND BE PLACED AT A MINIMUM DEPTH OF 42".
- ALL TRAFFIC SIGNAL PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE SPECIFIED AND PULL BOXES LIDS SHALL BE OF A NON-PCC MATERIAL PER CALTRANS SPECIFICATIONS AND STANDARD PLANS. PULL BOX LIDS SHALL BE MARKED "TRAFFIC SIGNAL" AND ATTACHED WITH HOLD DOWN SCREWS.
- THE CONTRACTOR MAY PLACE CONDUIT BY JACKING OR DRILLING.
- ALL NEW VEHICLE INDICATIONS SHALL BE 12" METAL WITH FULL CIRCLE VISORS AND L.E.D. ALL PEDESTRIAN INDICATIONS SHALL BE L.E.D. COUNTDOWN MODULES.
- ALL NEW LOOPS SHALL BE TYPE "E", EXCEPT TYPE "E" AND CENTERED IN LANES UNLESS OTHERWISE SPECIFIED. INSTALL LOOPS WITH HOT-MELT RUBBERIZED ASPHALT SEALANT.
- ALL TRAFFIC LOOPS, SIGNING, PAVEMENT MARKERS AND STRIPING SHALL BE INSTALLED PRIOR TO TURN ON.
- THE CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDELINE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE CORRECT CONDUCTORS REQUIRED FOR THE INTENDED OPERATION.
- ALL WIRING AND EQUIPMENT SHALL BE MARKED (TAGGED) WITHIN THE CONTROLLER CABINET FOR PHASE IDENTIFICATION AND DESIGNATION OF THE POLE.
- UNDERGROUND SIGNAL LIGHT CONDUCTORS SHALL NOT BE SPLICED.
- CONTRACTOR SHALL POT-HOLE POLE LOCATIONS AND VERIFY FOUNDATION LOCATIONS.

Underground Service Alert
Call: TOLL FREE
1-800-422-4133
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REGISTERED PROFESSIONAL ENGINEER
BRIAN R. STEPHENSON
No. 69471
CIVIL
STATE OF CALIFORNIA

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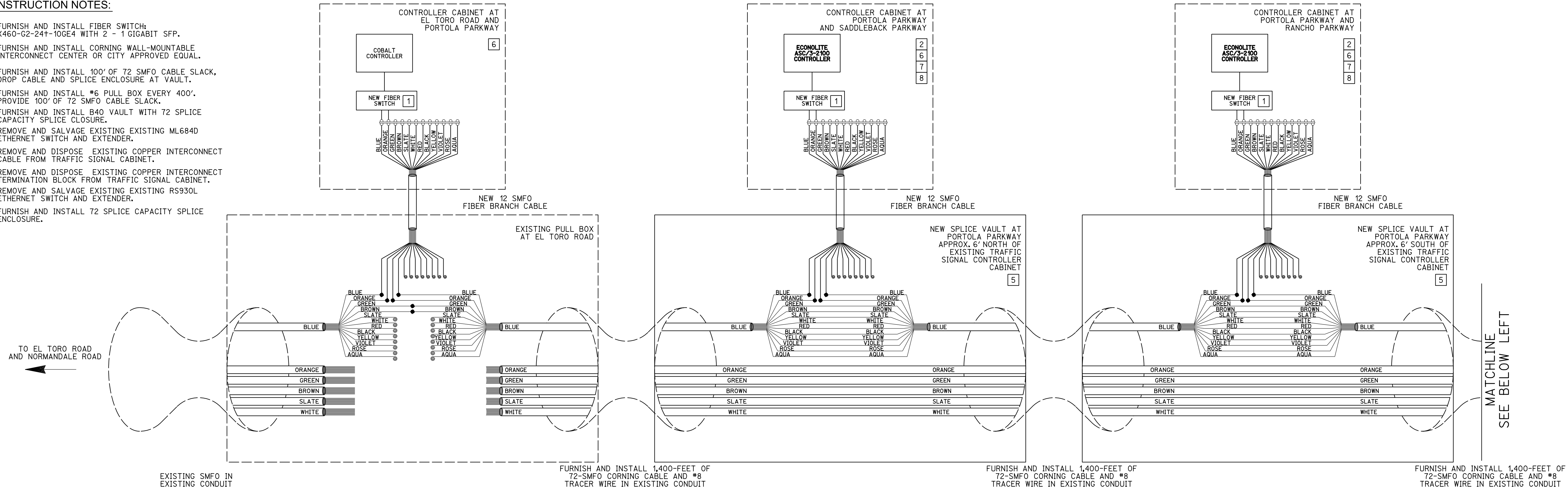
THOMAS WHEELER, PE
PUBLIC WORKS DIRECTOR/
CITY ENGINEER

RICK ENGINEERING COMPANY
36 DISCOVERY - SUITE 240
IRVINE, CA 92618
949-588-0707
J-18291C
rickengineering.com
San Diego - Riverside - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver
Prepared by: *B.R.S.* DATE: November 18, 2021
BRIAN R. STEPHENSON R.C.E. No. 69471 EXP. DATE: 6-30-23
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

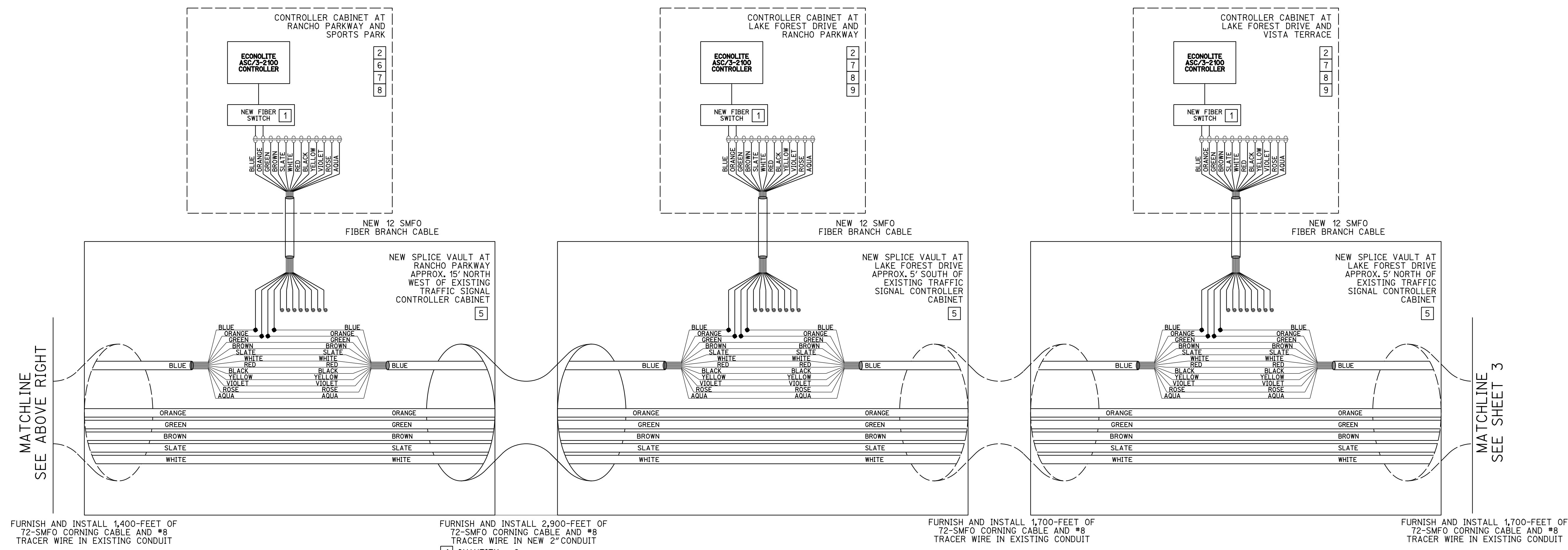
CITY OF LAKE FOREST
SIGNAL MODIFICATION PLAN FOR:
EL TORO ROAD AND PORTOLA PARKWAY STREET IMPROVEMENTS
DATE: OCTOBER 29, 2021 SHT. 6 OF 9

CONSTRUCTION NOTES:

- 1 FURNISH AND INSTALL FIBER SWITCH: X460-G2-24T-10GE4 WITH 2 - 1 GIGABIT SFP.
- 2 FURNISH AND INSTALL CORNING WALL-MOUNTABLE INTERCONNECT CENTER OR CITY APPROVED EQUAL.
- 3 FURNISH AND INSTALL 100' OF 72 SMFO CABLE SLACK, DROP CABLE AND SPLICE ENCLOSURE AT VAULT.
- 4 FURNISH AND INSTALL #6 PULL BOX EVERY 400'. PROVIDE 100' OF 72 SMFO CABLE SLACK.
- 5 FURNISH AND INSTALL B40 VAULT WITH 72 SPLICE CAPACITY SPLICE ENCLOSURE.
- 6 REMOVE AND SALVAGE EXISTING EXISTING ML684D ETHERNET SWITCH AND EXTENDER.
- 7 REMOVE AND DISPOSE EXISTING COPPER INTERCONNECT CABLE FROM TRAFFIC SIGNAL CABINET.
- 8 REMOVE AND DISPOSE EXISTING COPPER INTERCONNECT TERMINATION BLOCK FROM TRAFFIC SIGNAL CABINET.
- 9 REMOVE AND SALVAGE EXISTING EXISTING RS930L ETHERNET SWITCH AND EXTENDER.
- 10 FURNISH AND INSTALL 72 SPLICE CAPACITY SPLICE ENCLOSURE.



EXISTING SMFO IN EXISTING CONDUIT FURNISH AND INSTALL 1,400-FEET OF 72-SMFO CORNING CABLE AND #8 TRACER WIRE IN EXISTING CONDUIT FURNISH AND INSTALL 1,400-FEET OF 72-SMFO CORNING CABLE AND #8 TRACER WIRE IN EXISTING CONDUIT FURNISH AND INSTALL 1,400-FEET OF 72-SMFO CORNING CABLE AND #8 TRACER WIRE IN EXISTING CONDUIT



FURNISH AND INSTALL 1,400-FEET OF 72-SMFO CORNING CABLE AND #8 TRACER WIRE IN EXISTING CONDUIT FURNISH AND INSTALL 2,900-FEET OF 72-SMFO CORNING CABLE AND #8 TRACER WIRE IN NEW 2" CONDUIT QUANTITY = 6 FURNISH AND INSTALL 1,700-FEET OF 72-SMFO CORNING CABLE AND #8 TRACER WIRE IN EXISTING CONDUIT FURNISH AND INSTALL 1,700-FEET OF 72-SMFO CORNING CABLE AND #8 TRACER WIRE IN EXISTING CONDUIT

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NO.	DATE	REVISIONS	APPROVAL

APPROVED FOR CONSTRUCTION IN PUBLIC RIGHT-OF-WAY ONLY
DATE
THOMAS WHEELER, PE
PUBLIC WORKS DIRECTOR/
CITY ENGINEER

RICK ENGINEERING COMPANY
36 DISCOVERY - SUITE 240
IRVINE, CA 92618
949-588-0707
rickengineering.com
San Diego - Riverside - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

Prepared By: *Brian R. Stephenson*
BRIAN R. STEPHENSON
DATE: November 18, 2021
EXP. DATE: 6-30-22

DESIGNED BY: *J.P.* DRAWN BY: *J.P.* CHECKED BY: BRS/CCPM

CITY OF LAKE FOREST
SIGNAL INTERCONNECT PLAN FOR:
EL TORO ROAD AND PORTOLA PARKWAY
STREET IMPROVEMENTS
DATE: SEPTEMBER 12, 2021
SHT. 7 OF 9

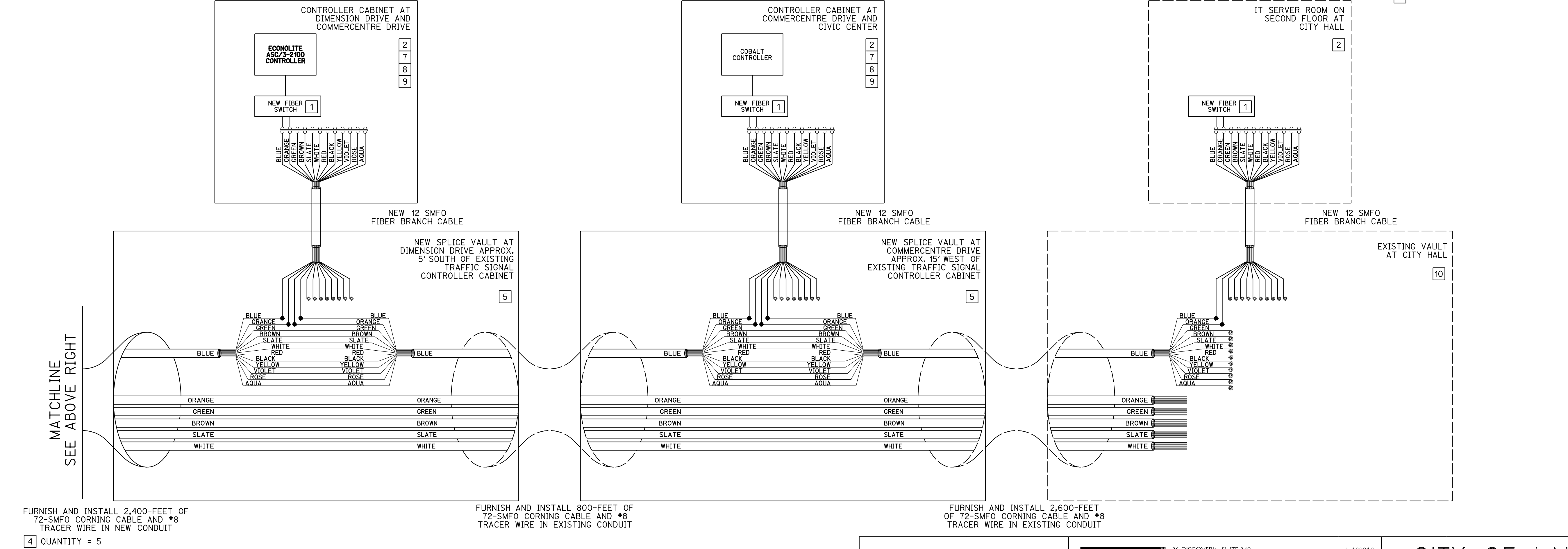
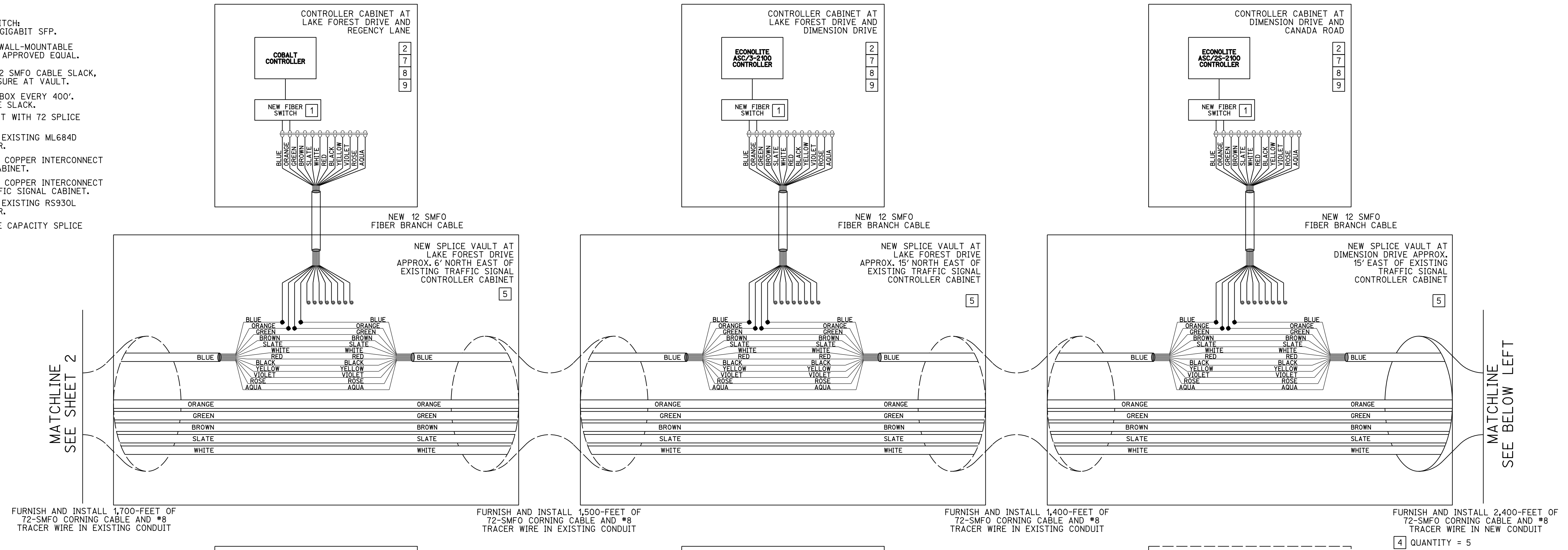
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REVISION DATE: 9/3/20

CONSTRUCTION NOTES:

- 1 FURNISH AND INSTALL FIBER SWITCH: X460-G2-24T-10GE4 WITH 2 - 1 GIGABIT SFP.
- 2 FURNISH AND INSTALL CORNING WALL-MOUNTABLE INTERCONNECT CENTER OR CITY APPROVED EQUAL.
- 3 FURNISH AND INSTALL 100' OF 72 SMFO CABLE SLACK, DROP CABLE AND SPLICE ENCLOSURE AT VAULT.
- 4 FURNISH AND INSTALL #6 PULL BOX EVERY 400'. PROVIDE 100' OF 72 SMFO CABLE SLACK.
- 5 FURNISH AND INSTALL B40 VAULT WITH 72 SPLICE CAPACITY SPLICE CLOSURE.
- 6 REMOVE AND SALVAGE EXISTING EXISTING ML684D ETHERNET SWITCH AND EXTENDER.
- 7 REMOVE AND DISPOSE EXISTING COPPER INTERCONNECT CABLE FROM TRAFFIC SIGNAL CABINET.
- 8 REMOVE AND DISPOSE EXISTING COPPER INTERCONNECT TERMINATION BLOCK FROM TRAFFIC SIGNAL CABINET.
- 9 REMOVE AND SALVAGE EXISTING EXISTING RS930L ETHERNET SWITCH AND EXTENDER.
- 10 FURNISH AND INSTALL 72 SPLICE CAPACITY SPLICE ENCLOSURE.



NO.	DATE	REVISIONS	APPROVAL

APPROVED FOR CONSTRUCTION IN PUBLIC RIGHT-OF-WAY ONLY

DATE

THOMAS WHEELER, PE
PUBLIC WORKS DIRECTOR/
CITY ENGINEER

RICK ENGINEERING COMPANY
36 DISCOVERY - SUITE 240
IRVINE, CA 92618
949-588-0707

Prepared by: *B.R.S.*
BRIAN R. STEPHENSON

DATE: November 18, 2021
EXP. DATE: 6-30-22

DESIGNED BY: JP DRAWN BY: JP CHECKED BY: BRS/CCPM

CITY OF LAKE FOREST

SIGNAL INTERCONNECT PLAN FOR:

EL TORO ROAD AND PORTOLA PARKWAY STREET IMPROVEMENTS

DATE: SEPTEMBER 12, 2021

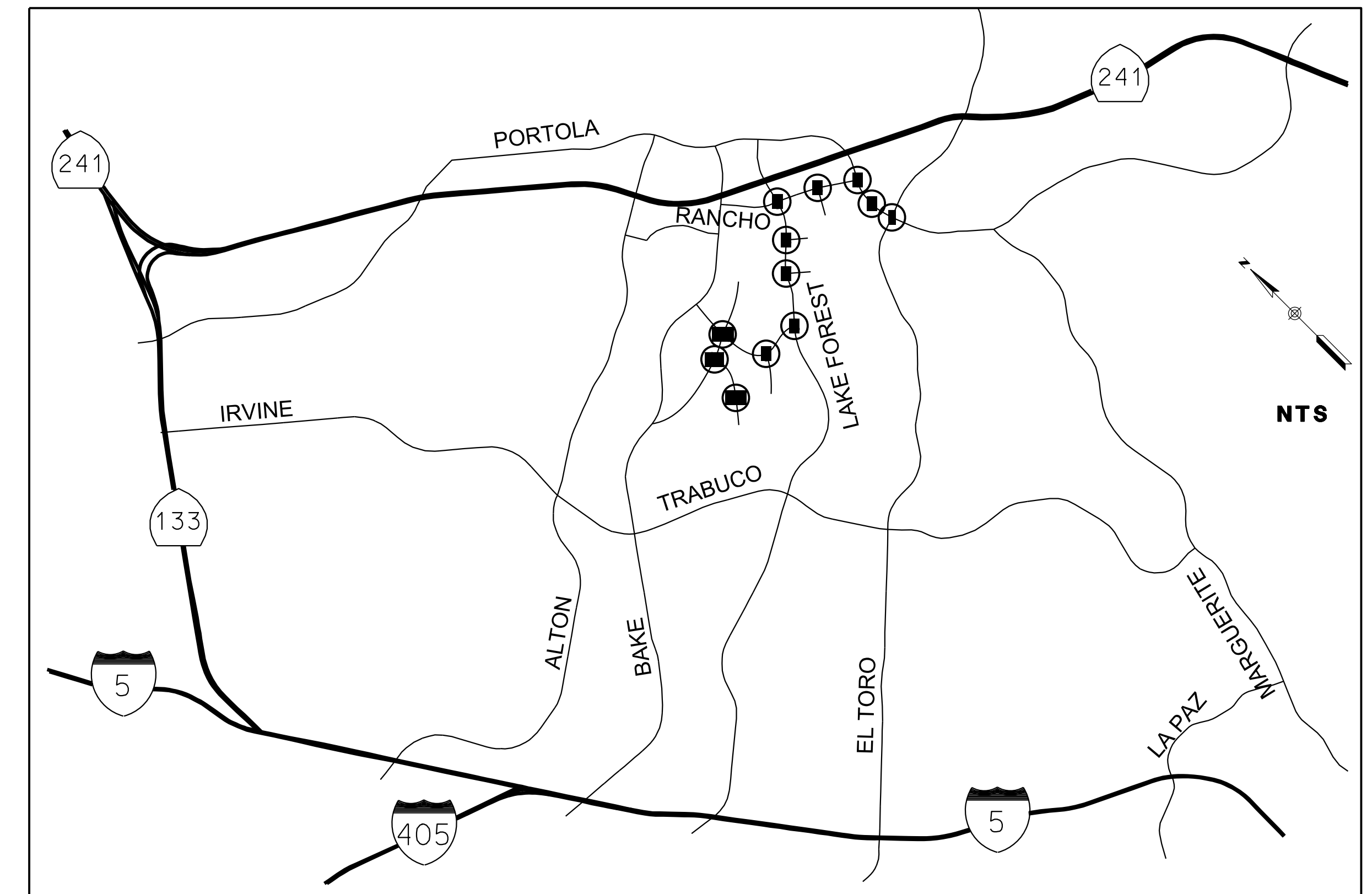
SHT. 8 OF 9

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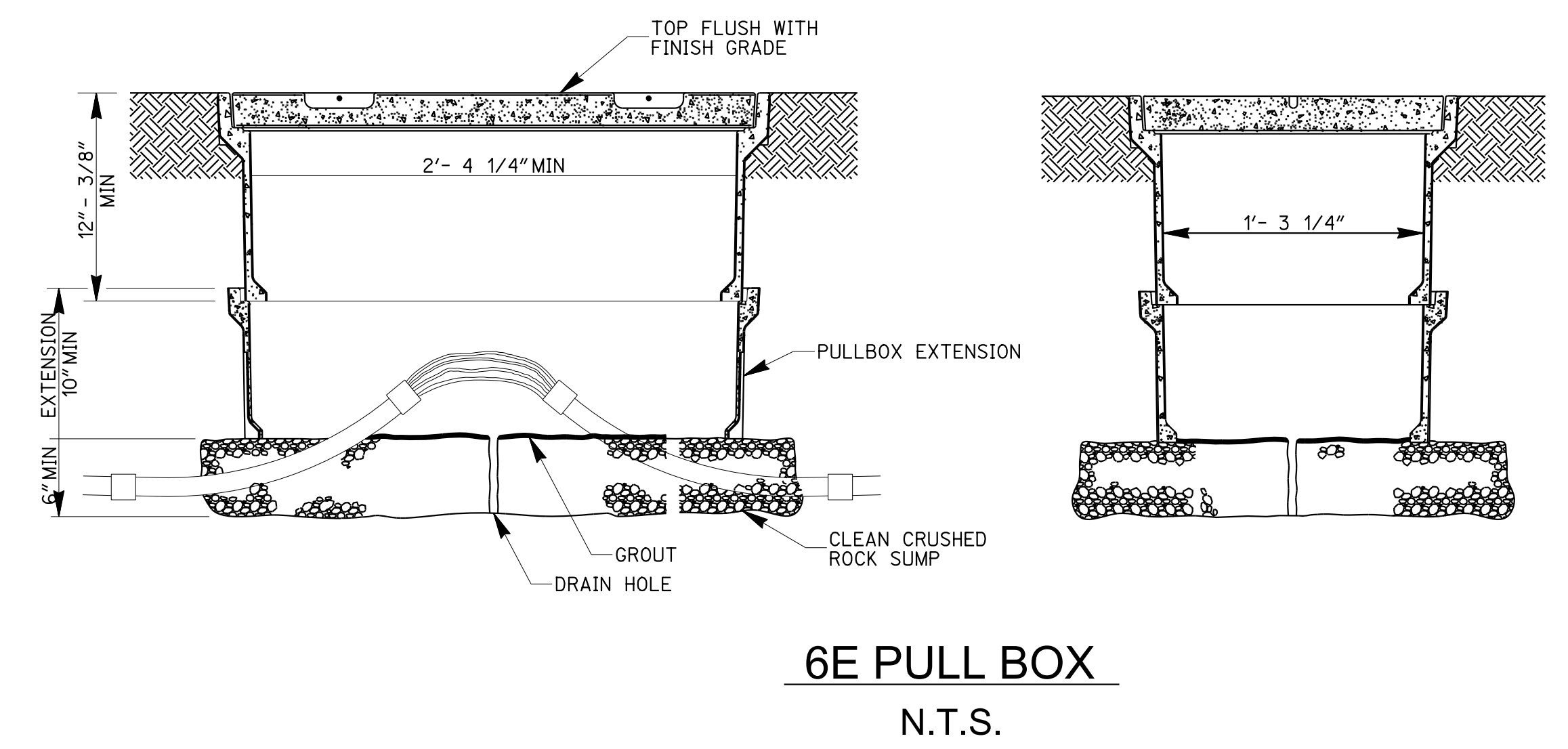
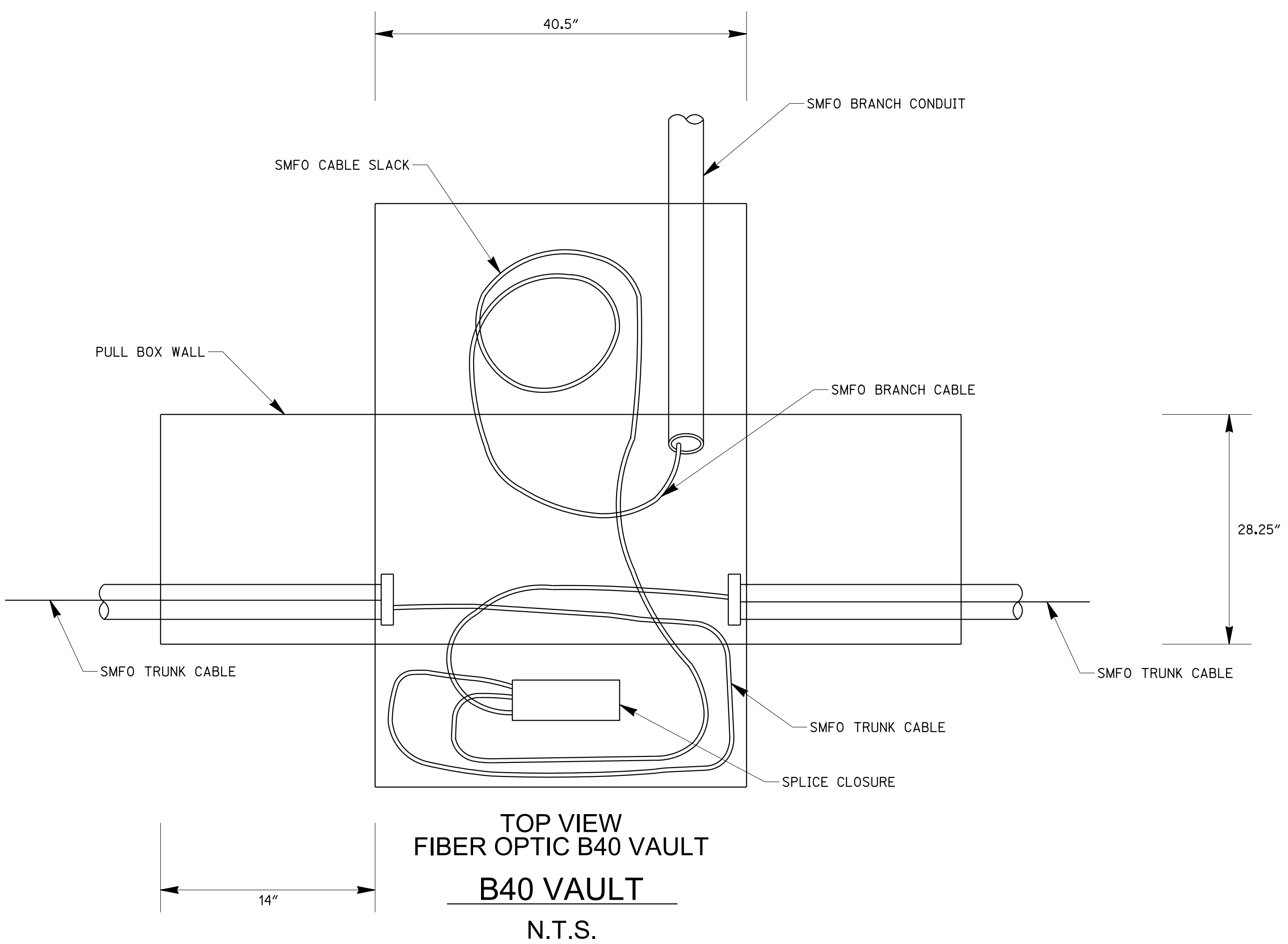
REVISION DATE: 9/3/20

KEY MAP

1. EL TORO ROAD AND PORTOLA PARKWAY
2. PORTOLA PARKWAY AND SADDLEBACK PARKWAY
3. PORTOLA PARKWAY AND RANCHO PARKWAY
4. RANCHO PARKWAY AND SPORTS PARK
5. LAKE FOREST DRIVE AND RANCHO PARKWAY
6. LAKE FOREST DRIVE AND VISTA TERRACE
7. LAKE FOREST DRIVE AND REGENCY LANE
8. LAKE FOREST DRIVE AND DIMENSION DRIVE
9. DIMENSION DRIVE AND CANADA ROAD
10. DIMENSION DRIVE AND COMMERCENTRE DRIVE
11. COMMERCENTRE DRIVE AND CIVIC CENTER DRIVE
12. LAKE FOREST CIVIC CENTER



KEY MAP
N.T.S.



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Underground Service Alert
Call: TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG



NO.	DATE	REVISIONS	APPROVAL

APPROVED FOR CONSTRUCTION
IN PUBLIC RIGHT-OF-WAY ONLY

DATE

THOMAS WHEELER, PE
PUBLIC WORKS DIRECTOR/
CITY ENGINEER

RICK ENGINEERING COMPANY
36 DISCOVERY - SUITE 240
IRVINE, CA 92618
949-588-0707
rickengineering.com
San Diego - Riverside - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

PREPARED BY: *Brian R. Stephenson*
BRIAN R. STEPHENSON
DATE: November 18, 2021
EXP. DATE: 6-30-22

DESIGNED BY: *JP* DRAWN BY: *JP* CHECKED BY: BRS/CCPM

CITY OF LAKE FOREST
SIGNAL INTERCONNECT DETAILS FOR:
EL TORO ROAD AND PORTOLA PARKWAY
STREET IMPROVEMENTS

DATE: SEPTEMBER 12, 2021

SHT. **9** OF **9**

REVISION DATE: 9/3/20