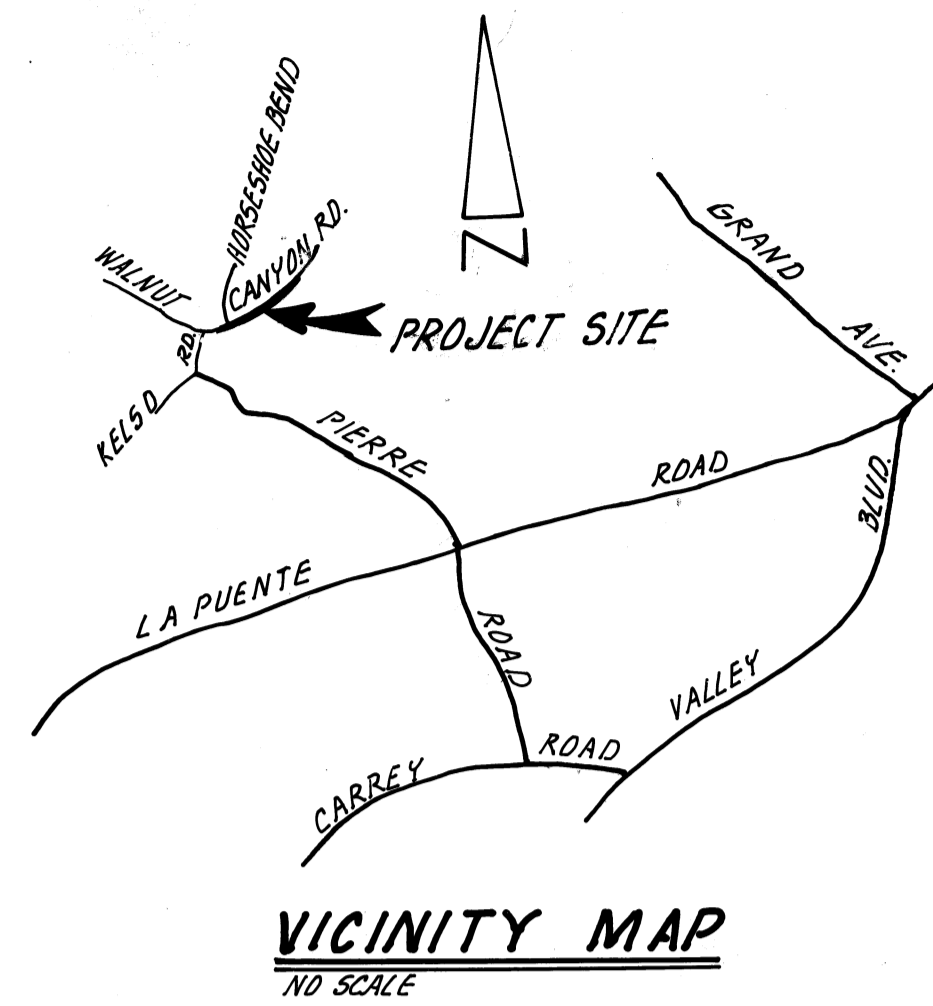
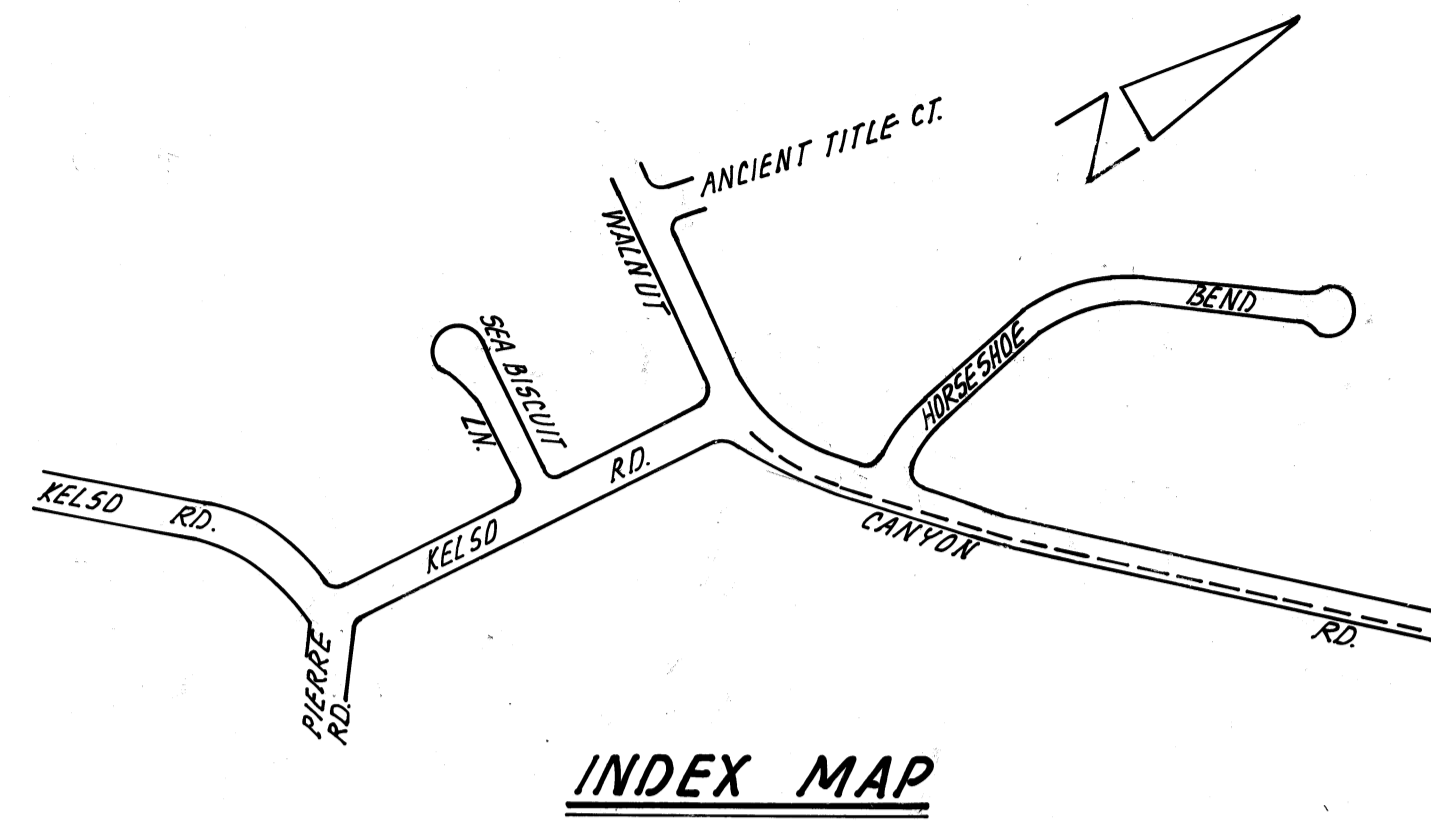


**STORM DRAIN PLANS IN
TRACT No. 37905 P.D. No.**

**BENCH MARK. CG 1774 ELEV. 577.92
LFT IN CONC. HEADWALL @ N.W. COR.
LA PUENTE RD. & PIERRE RD.
25' NORTH & 30' EAST & INT.
MARKED "B.M."**



GENERAL NOTES (Cont'd)

- A SOILS ENGINEER SHALL CERTIFY THAT ALL FILLS AND BACKFILLS OVER UNDERGROUND STORM DRAINS OUTSIDE OF ST. RW HAVE BEEN COMPACTED OR CONSOLIDATED TO A 90% DENSITY. THIS CERTIFICATION SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THE WORK BY THE CITY.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7-10.4.1 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION IN REGARD TO SAFETY ORDERS.
- THE CONTRACTOR SHALL CONFORM TO THE "MINIMUM PUBLIC SAFETY REQUIREMENTS" AS SHOWN ON LOS ANGELES COUNTY ENGINEER STANDARD S-2.
- ALL PIPE SHALL BE PLACED IN A TRENCH IN NATURAL GROUND AND/OR COMPACTED FILL. THE GROUND LEVEL BEFORE THE TRENCHING SHALL BE AT LEAST 3 FEET ABOVE TOP OF PIPE ELEVATION, OR AT FINISH SURFACE ELEVATION, WHICHEVER IS LESS. ALL BACKFILL IN EASEMENTS SHALL BE COMPACTED TO THE DENSITY REQUIRED BY THE GRADING PLAN.
- THE INSPECTOR MAY HAVE THE OPTION TO REQUIRE CONCRETE BACKFILL DURING CONSTRUCTION WHEN THE PIPE HAS LESS THAN ONE FOOT OF COVER AND IS SUBJECTED TO HEAVY EQUIPMENT TRAFFIC. THE CONCRETE BACKFILL SHALL CONSIST OF 1:3:5 MIX CEMENT CONCRETE, POURED FROM WALL TO WALL OF TRENCH AND FROM BOTTOM OF TRENCH TO A MINIMUM DEPTH OF 4 INCHES OVER TOP OF PIPE.
- A PERMIT SHALL BE OBTAINED FROM THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT PRIOR TO COMMENCING ANY CONSTRUCTION WORK UNDER THIS CONTRACT. CONTACT THE DISTRICT BY TELEPHONE AT 226-4208 TO OBTAIN AN INSPECTION AND CONNECTION PERMIT AND TO MAKE DEPOSIT FOR CONSTRUCTION INSPECTION BY THE DISTRICT.
- THE CONTRACTOR SHALL PROVIDE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES UNTIL THIS STORM DRAIN SYSTEM IS OPERABLE.

GENERAL NOTES:

- ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. MEAN SEA LEVEL DATUM OF 1929. ALL WORK SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1982 EDITION," INCLUDING 1993 SUPPLEMENT AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE CITY ENGINEER.
- APPROVAL OF THIS PLAN BY THE CITY OF WALNUT DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION, OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY, PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL SHEETS.
- THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER BY TELEPHONE 594-9702 AT LEAST 48 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT. THE CONTRACTOR SHALL SUBMIT A DEPOSIT FOR CONSTRUCTION INSPECTION TO THE CITY OF WALNUT PRIOR TO APPROVAL OF THESE PLANS.
- ALL CONSTRUCTION JOINTS IN THE FOOTING OF SLABS AND WALLS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED.
- NO CONCRETE SHALL BE PLACED UNTIL THE FORMS AND REINFORCING STEEL HAS BEEN PLACED, INSPECTED AND APPROVED.
- TRANSVERSE REINFORCEMENT AND TRANSVERSE JOINTS SHALL BE PLACED AT RIGHT ANGLES (OR RADIAL) TO CONDUIT CENTERLINE EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS.
- ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH AN ULTIMATE 28 DAYS COMPRESSIVE STRENGTH OF 3000 p.s.i.
- ALL EXPOSED EDGES SHALL BE FINISHED WITH A 3/4" CHAMFER.
- ALL STEEL ADJACENT TO FACE OF CONCRETE SHALL HAVE 2 1/2" CLEARANCE UNLESS OTHERWISE SPECIFIED.
- REINFORCEMENT SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE STEEL AS PER A.S.T.M. A-615-GRADE 60.
- ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "MANUAL OF STANDARD PRACTICE".
- DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE TO CENTERLINE OF STEEL UNLESS OTHERWISE NOTED.
- ALL BACKFILLS AND FILLS TO BE USED AS SUBGRADE SHALL BE COMPACTED TO A RELATIVE DENSITY OF 90% UNLESS OTHERWISE SPECIFIED.
- ALL STEEL THAT IS TO BE CONTINUOUS SHALL HAVE A MINIMUM LAP OF 30 BAR DIAMETERS OR 18", WHICHEVER IS GREATER.
- ALL CATCH BASINS AND CONNECTOR PIPES BETWEEN CATCH BASINS TO BE INSPECTED BY THE CITY OF WALNUT.
- PIPE SHALL BE EMBEDDED 5 INCHES INTO ALL STRUCTURES INCLUDING INLET & HEADWALLS, UNLESS OTHERWISE SPECIFIED.
- WHERE PIPE IS TO BE PLACED IN FILL, THE FILL SHALL BE COMPACTED TO A MINIMUM DEPTH OF 3 FEET ABOVE THE TOP OF PIPE PRIOR TO TRENCHING.
- ALL BACKFILL AND FILL AROUND CLOSED CONDUIT IN STREET RIGHTS OF WAY SHALL BE BROUGHT UP TO SUBGRADE OF THE ROAD OR TO 2 FEET ABOVE THE TOP OF THE CONDUIT, WHICHEVER IS LESS. THE CITY ENGINEER SHALL INSPECT ALL BACKFILL AND FILL ABOVE AFOREMENTIONED LIMITS. APPLICATION FOR AN ENGINEER OR INSPECTOR IN CONNECTION WITH THE WORK SHALL BE MADE BY THE CONTRACTOR AT LEAST 48 HOURS BEFORE HIS SERVICE IS REQUIRED. CALL 594-9702.
- A PERMIT SHALL BE OBTAINED FROM THE CITY OF WALNUT AND SHALL BE SUBMITTED TO THE INSPECTOR PRIOR TO COMMENCING CONSTRUCTION WITHIN THEIR RIGHTS OF WAY.
- ALL REINFORCED CONCRETE PIPE SHALL BE BEDDED IN ACCORDANCE WITH LOS ANGELES COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING 2-D177 UNLESS OTHERWISE NOTED.
- UNLESS OTHERWISE SHOWN, CONCRETE DIMENSIONS SHALL BE MEASURED VERTICALLY OR HORIZONTALLY AND PARALLEL OR AT RIGHT ANGLES (OR RADIAL) TO THE CENTER LINE OF CONSTRUCTION.
- THIS STORM DRAIN WILL NOT BE ACCEPTED FOR MAINTENANCE UNTIL THE STREETS HAVE BEEN PAVED, MANHOLES BROUGHT TO GRADE, AND THE SYSTEM IS CLEANED TO THE SATISFACTION OF THE CITY ENGINEER.

CAST-IN-PLACE CONCRETE PIPE NOTES

- THE THICKNESS OF PIPE SHALL BE 6" MINIMUM.
- THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE 5000 psi AND THE MINIMUM FLEXURAL TENSILE STRENGTH (fr. MODULUS OF RUPTURE) SHALL BE 672 psi.
- 1 FOOT CONCRETE BACKFILL SHALL BE PLACED OVER PIPE WHEN JUNCTION STRUCTURE NO. 2 IS USED.
- AT THE END OF ALL POURS AND THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL INSTALL #4 BOWELS 24" LONG, 12 INCHES INTO THE LAST POUR AT 12 INCH CENTERS AROUND CIRCUMFERENCE OF CAST-IN-PLACE PIPE.
- CAST-IN-PLACE PIPE MAY BE CONSTRUCTED ONLY IN GROUND CAPABLE OF UNSUPPORTED FROM THE BOTTOM OF THE TRENCH TO THE TOP OF THE PIPE WITHOUT SLOUGHING. THE GROUND SHALL NOT CONTAIN TRASH, DEBRIS, OR BITUMINOUS MATERIALS.

RIPRAP NOTES

- ROCKS FOR GROUTED RIPRAP SHALL BE GOOD QUALITY BROKEN CONCRETE AND/OR RIVER RUN ROCK. THE SMALLEST DIMENSION SHALL EXCEED 3 INCHES AND THE LARGEST DIMENSION SHALL NOT EXCEED 16 INCHES. THE LARGEST DIMENSION SHALL NOT EXCEED 4 TIMES THE SMALLEST DIMENSION.
- THERE SHALL BE A GROUT BED OF AT LEAST 2 INCHES BENEATH THE FIRST LAYER OF ROCK. ALL THE VOIDS BETWEEN THE ROCKS SHALL BE FILLED WITH GROUT. MAXIMUM SPACING BETWEEN ROCKS SHALL BE 3 INCHES.
- SURFACE ROCKS SHALL BE IMBEDDED FROM 1/2 TO 2/3 OF THEIR MAXIMUM DIMENSION.

NOTE: CONCRETE MAY BE SUBSTITUTED FOR THE GROUT.

PRIVATE ENGINEERS NOTICE TO CONTRACTORS

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THIS MAP.

THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING.

[Signature]
REGISTERED CIVIL ENGINEER No. 27127 11-5-84 DATE

LOS ANGELES COUNTY FLOOD CONTROL DIST. STANDARD DWGS.

NO.	DESCRIPTION	STD. DWG. NO.
1	TRANSITION STRUCTURE NO. 3	2-D188
2	CATCH BASIN NO. 3	2-D163
3	JUNCTION STRUCTURE NO. 2	2-D112
4	MANHOLE NO. 2	2-D184
5	PIPE BEDDING IN TRENCHES	2-D177
6	TRANSITION STRUCTURE NO. 2	2-D235

LOS ANGELES COUNTY ROAD DEPART. STANDARD DWGS.

NO.	DESCRIPTION	STD. DWG. NO.
1	LOCAL DEPRESSION (L.D.) NO. 2.	GB-02

NO.	REVISION	REVISED BY	APPROVED BY	DATE

SOILS ENGINEER
TRIAD FOUNDATION ENGINEERING, INC.
FOUNDATION ENGINEERING · ENGINEERING GEOLOGY
MATERIAL TESTING · CONSTRUCTION INSPECTION
17231 EAST RAILROAD STREET
CITY OF INDUSTRY, CALIF. 91748
TELEPHONE (818) 964-2313

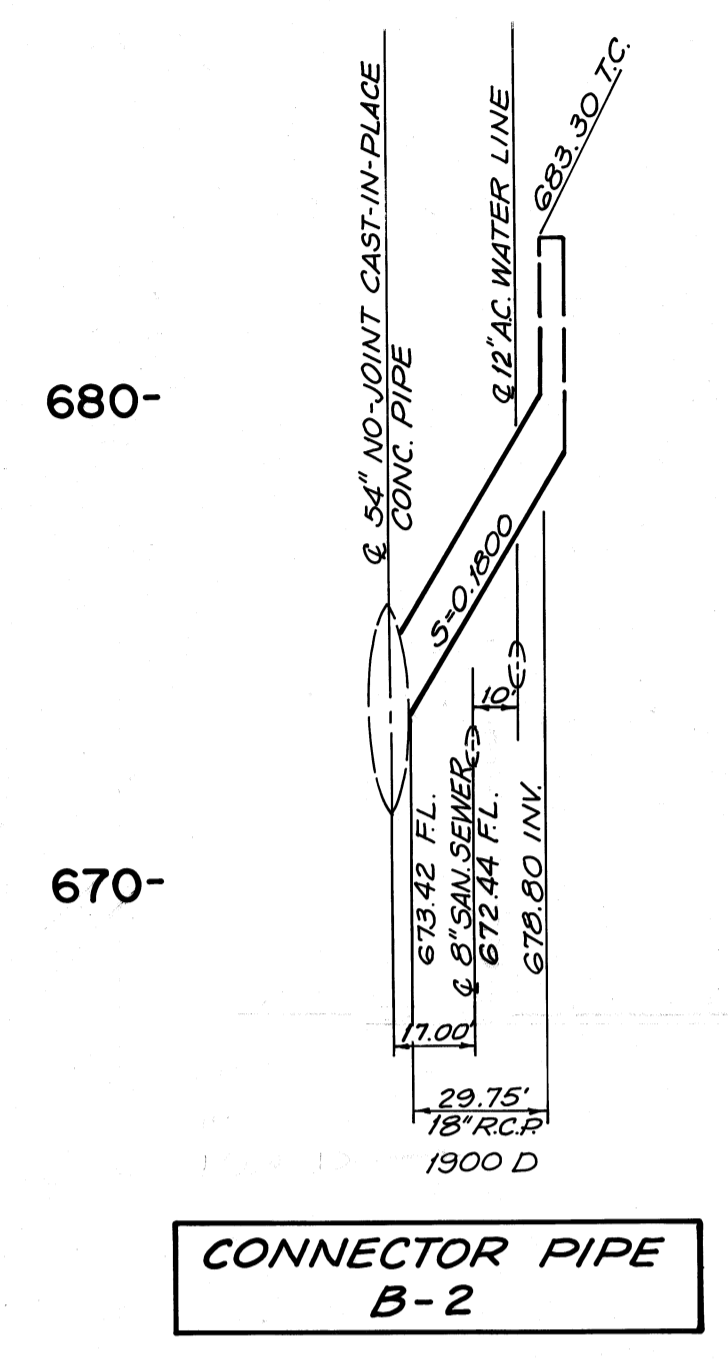
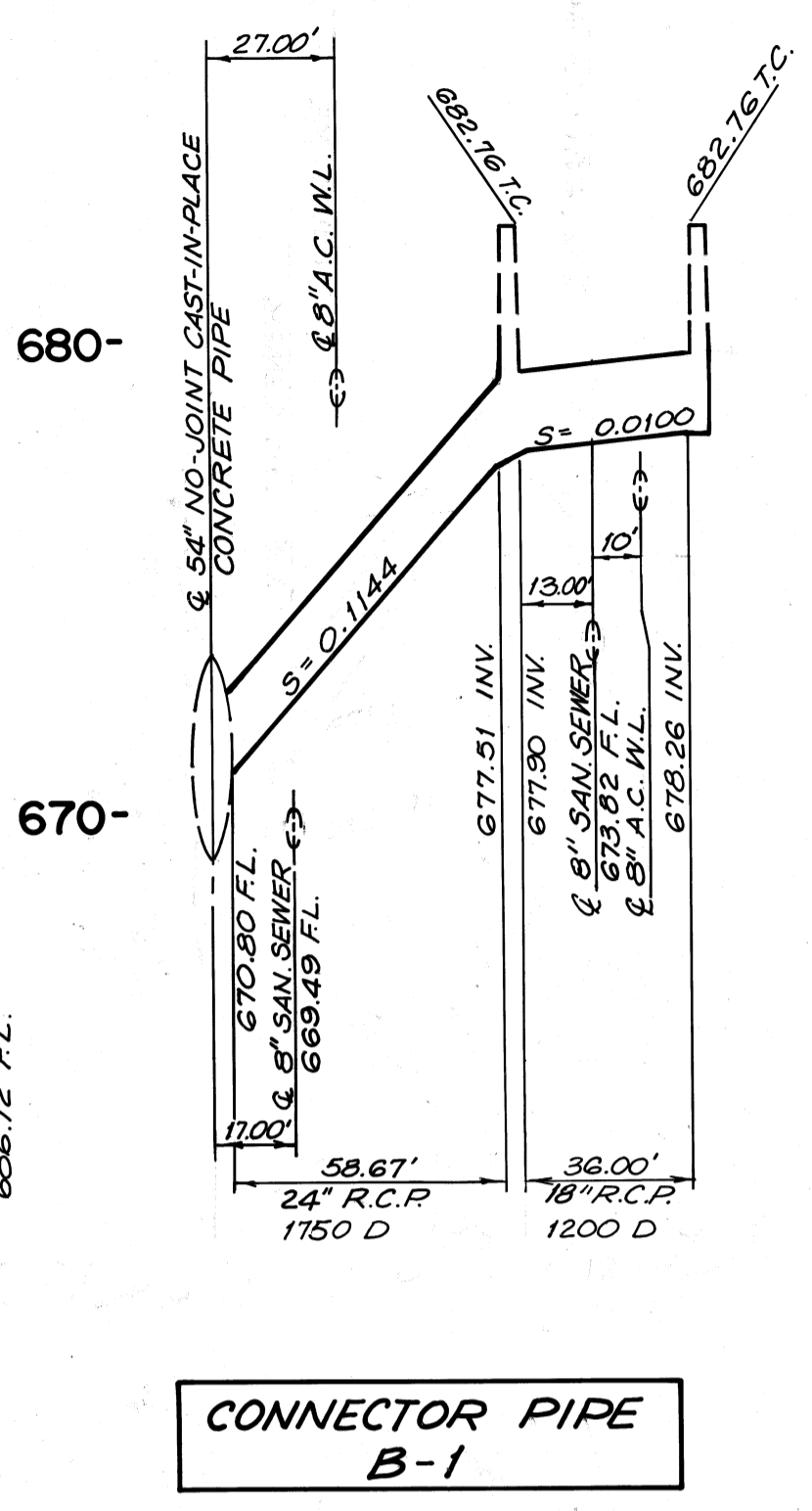
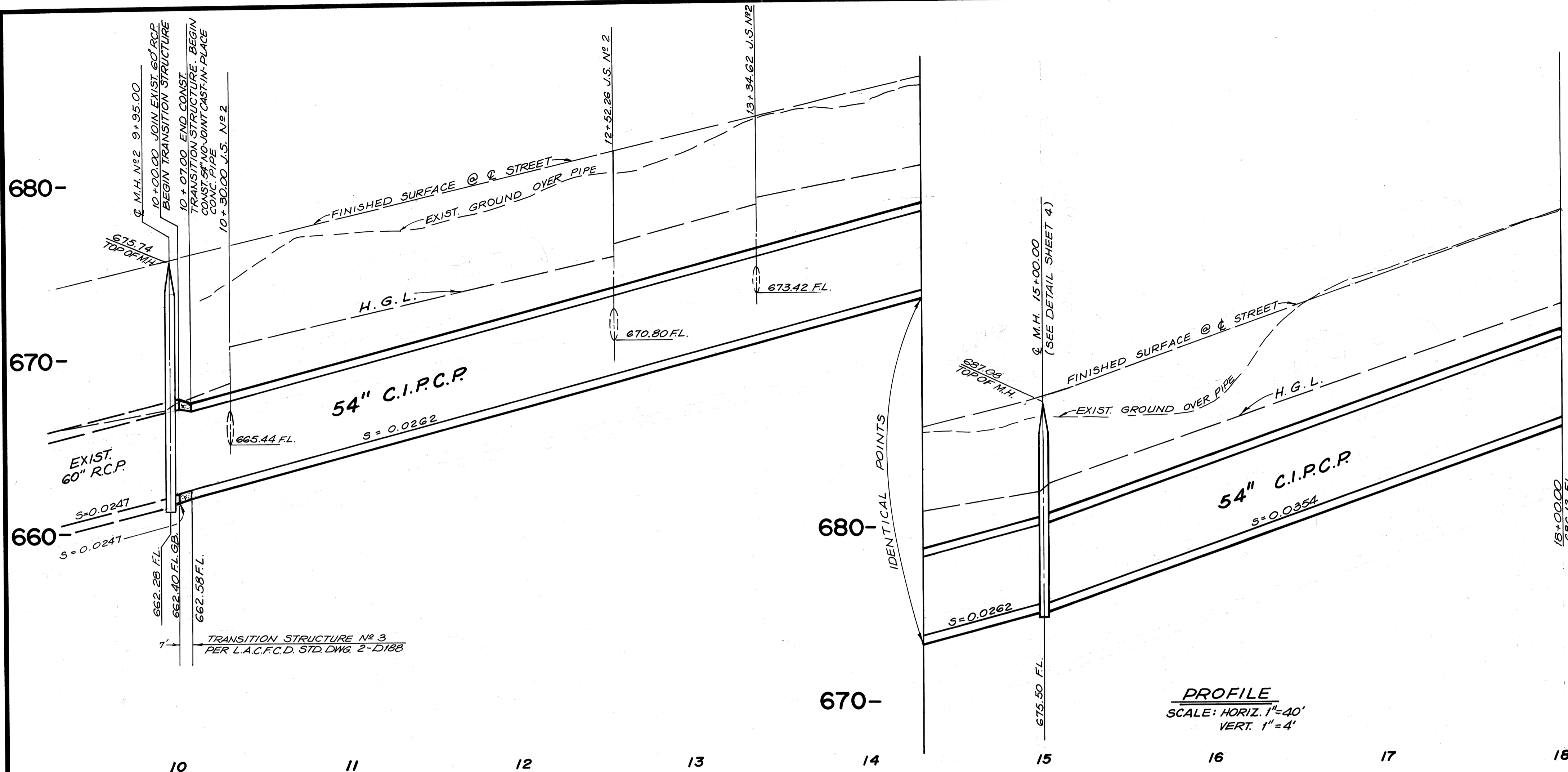
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FRANK C. STILLMAN R.C.E. 16810 10-11-84 DATE

PLANS PREPARED BY:
O'MALLEY ENGINEERING CORPORATION
CONSULTING CIVIL ENGINEERS
AND LAND SURVEYORS
800 WEST HARBINGTON STREET, SUITE A-1
CORONA, CALIF. 92720
(714) 734-0832

[Signature]
JAMES O'MALLEY, P.E. 27217 10-29-84 DATE

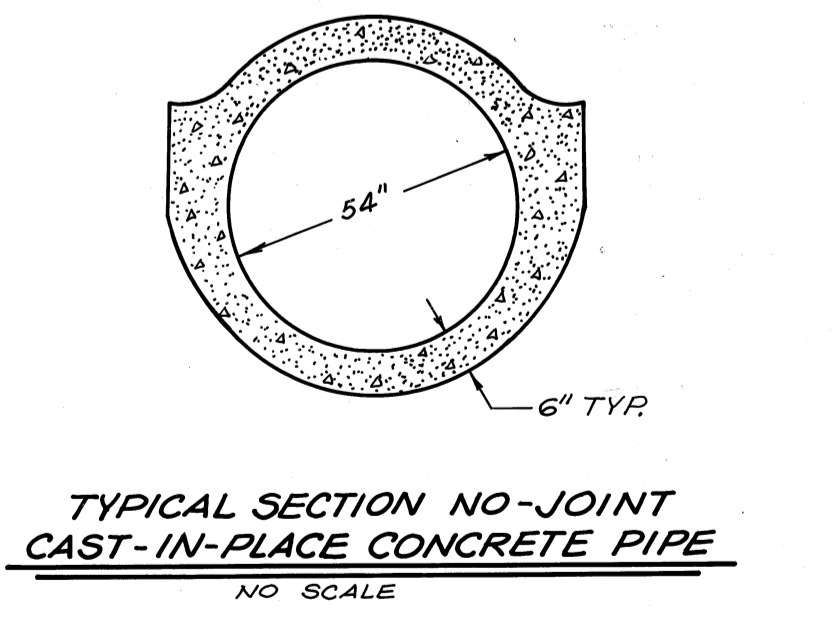
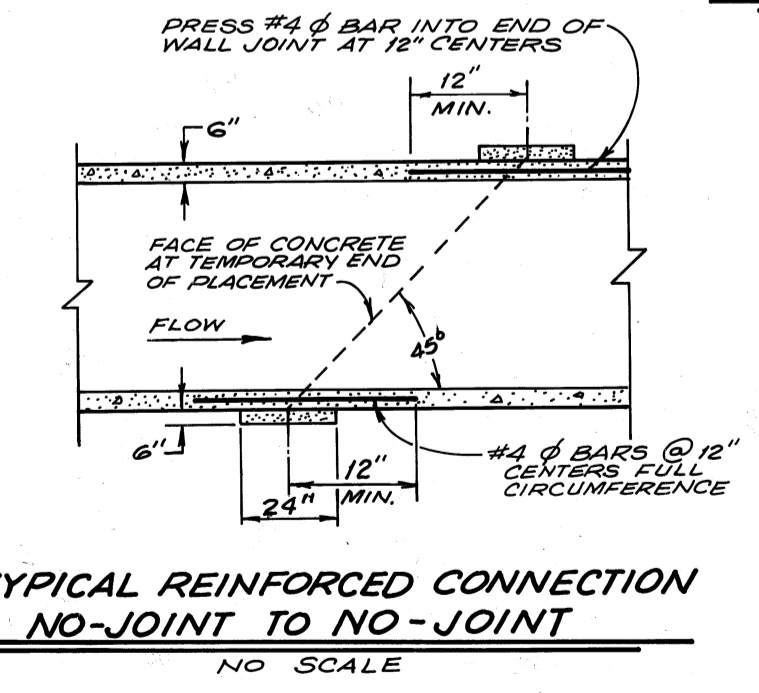
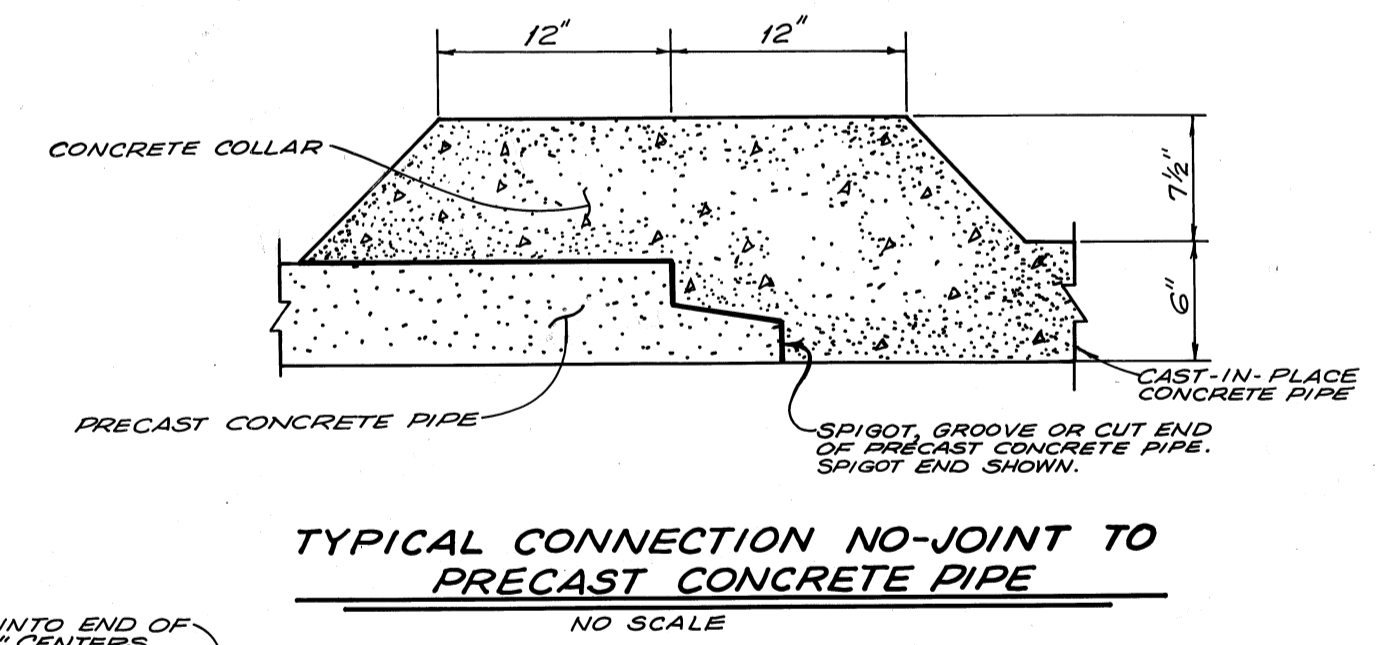
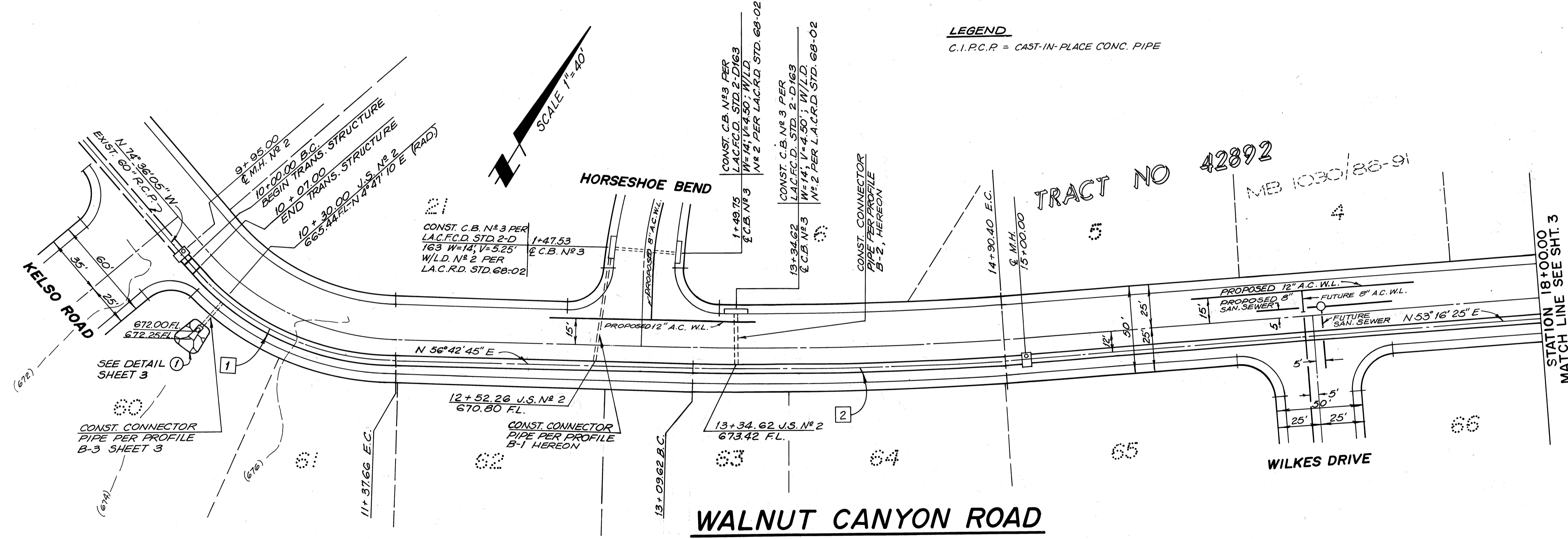
CITY OF WALNUT, CALIFORNIA

APPROVED: *[Signature]*
CITY ENGINEER RONALD L. KRANZLER R.C.E. 18503 11-3-84 DATE



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

LEGEND
C.I.P.C.P. = CAST-IN-PLACE CONC. PIPE



CURVE DATA

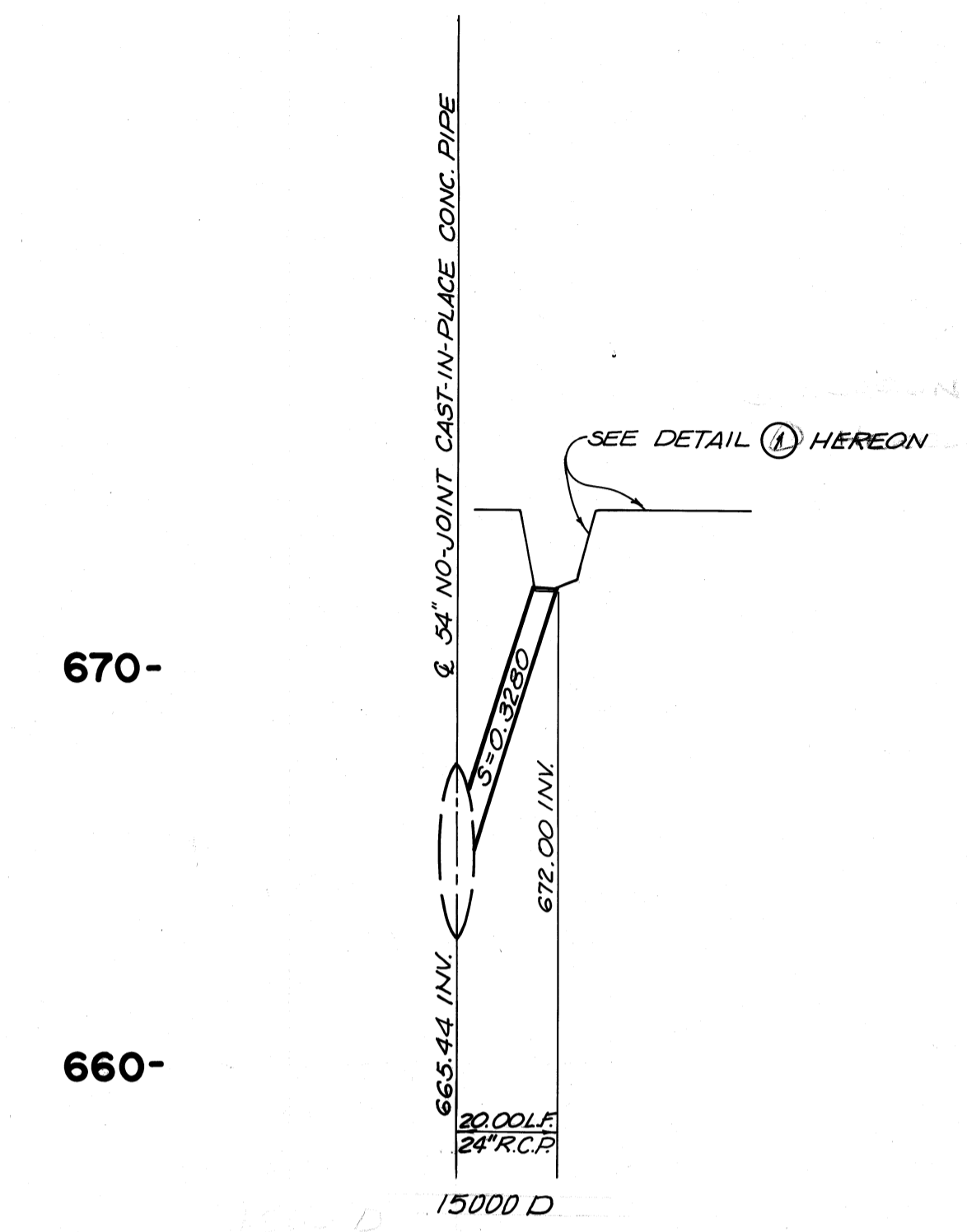
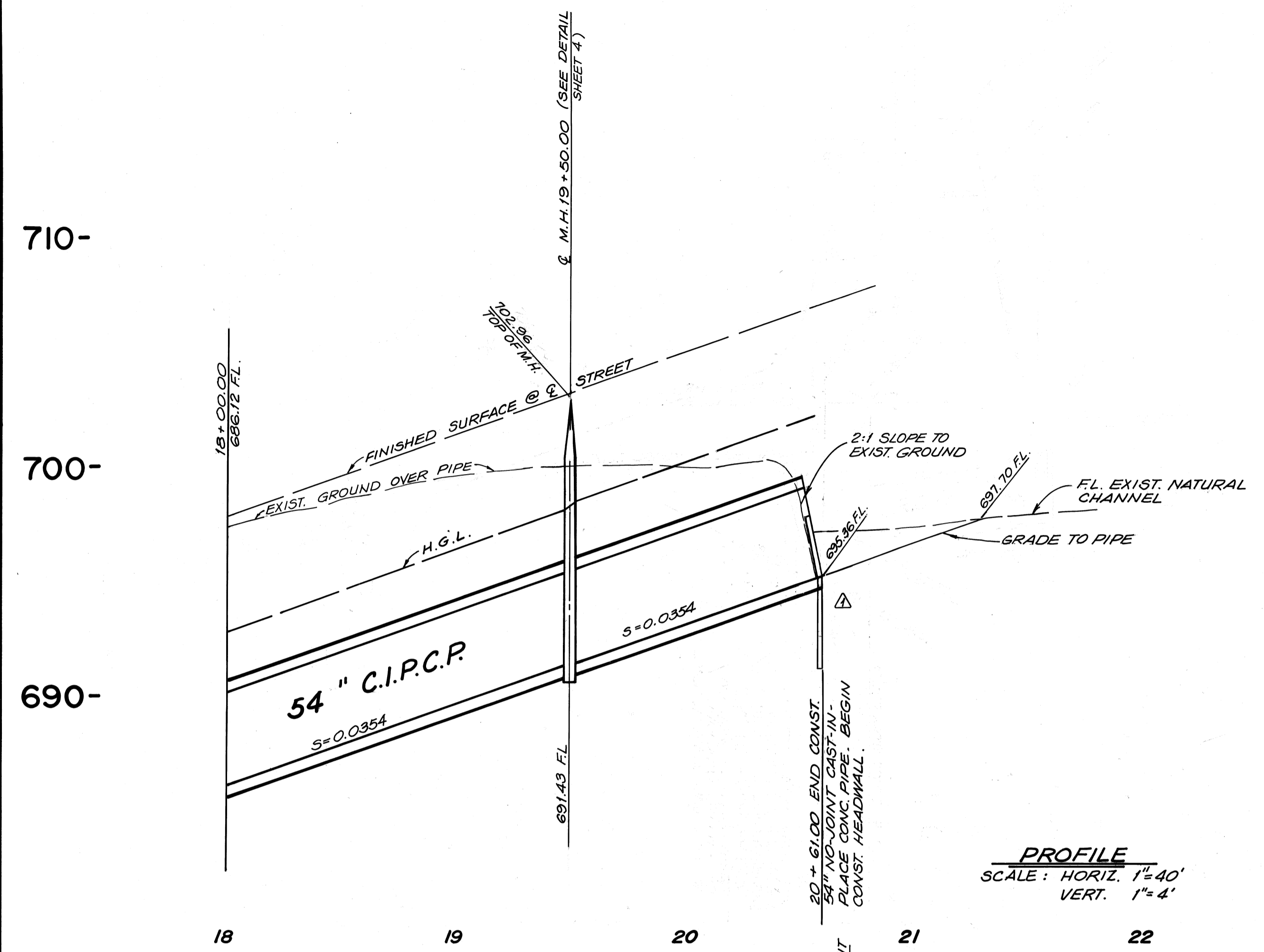
Δ	R	L	T	
1	48°41'10"	162.00'	137.66'	73.29'
2	3°26'20"	3012.00'	180.78'	90.42'

NO.	REVISION	REVISED BY	APPROVED BY	DATE

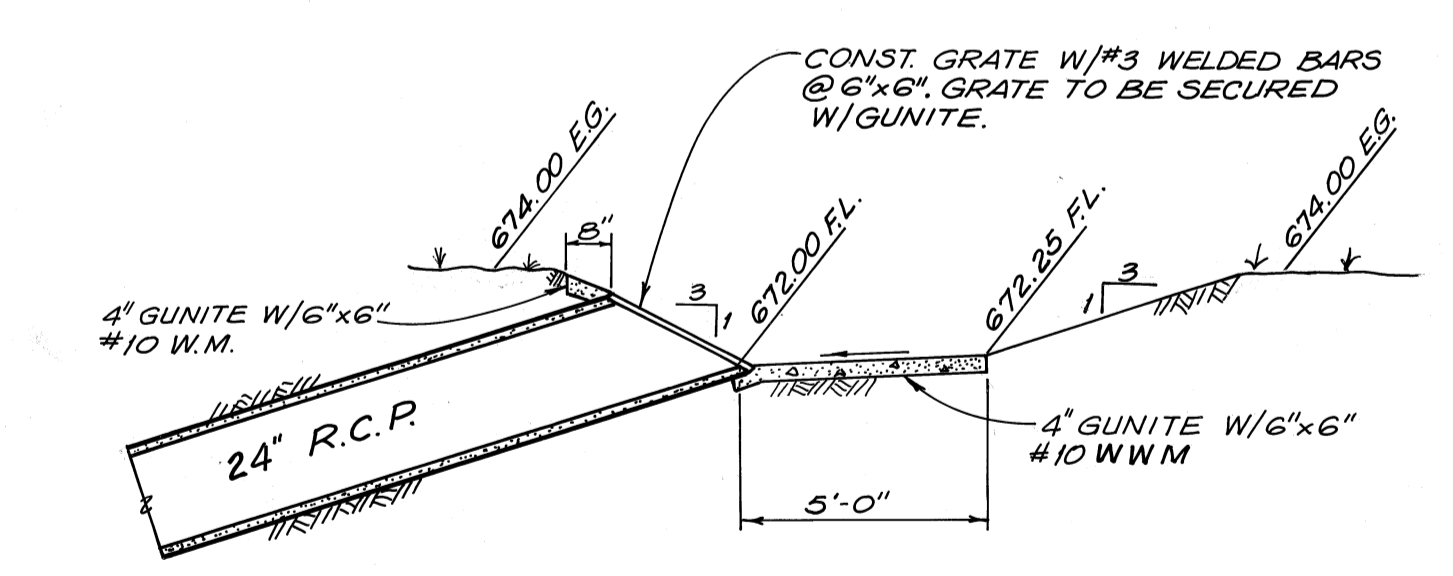
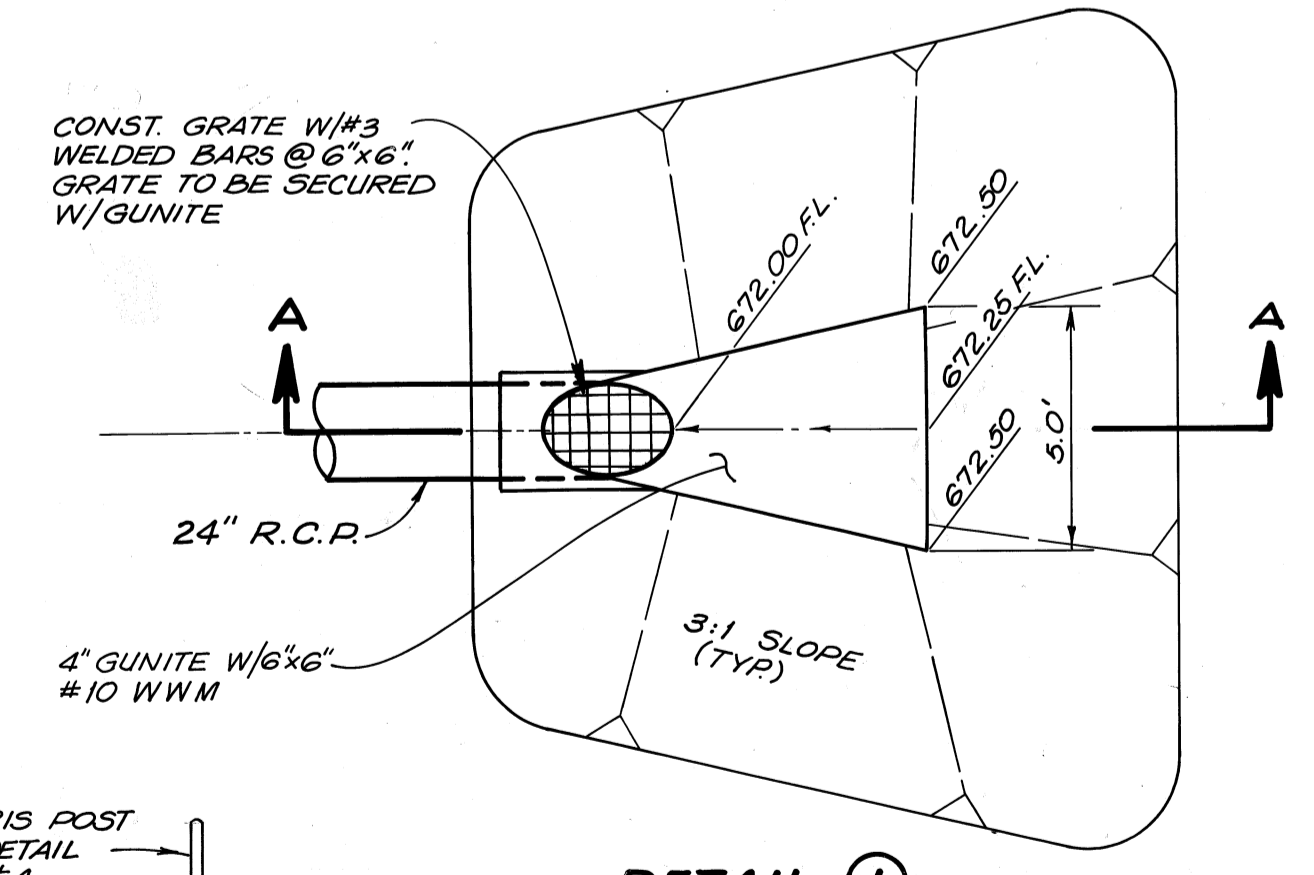
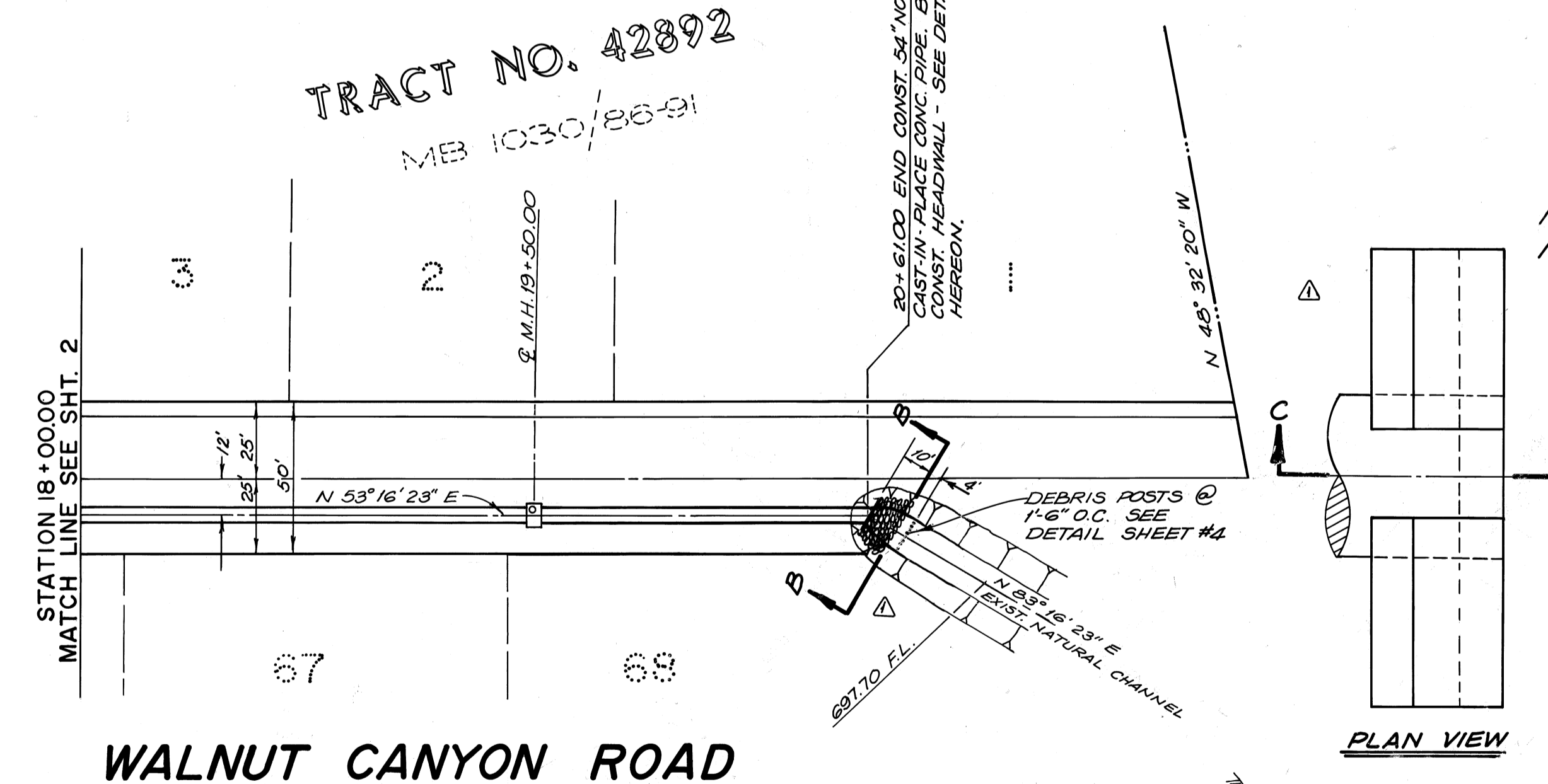
TRACT NO 37905
MB 1012 8-20

PLANS PREPARED BY:
O'MALLEY ENGINEERING CORPORATION
CONSULTING CIVIL ENGINEERS
AND LAND SURVEYORS
500 WEST HARRINGTON STREET, SUITE A-1
CORONA, CALIF. 91720
(714) 734-9533
JAMES O'MALLEY, P.E. 3251

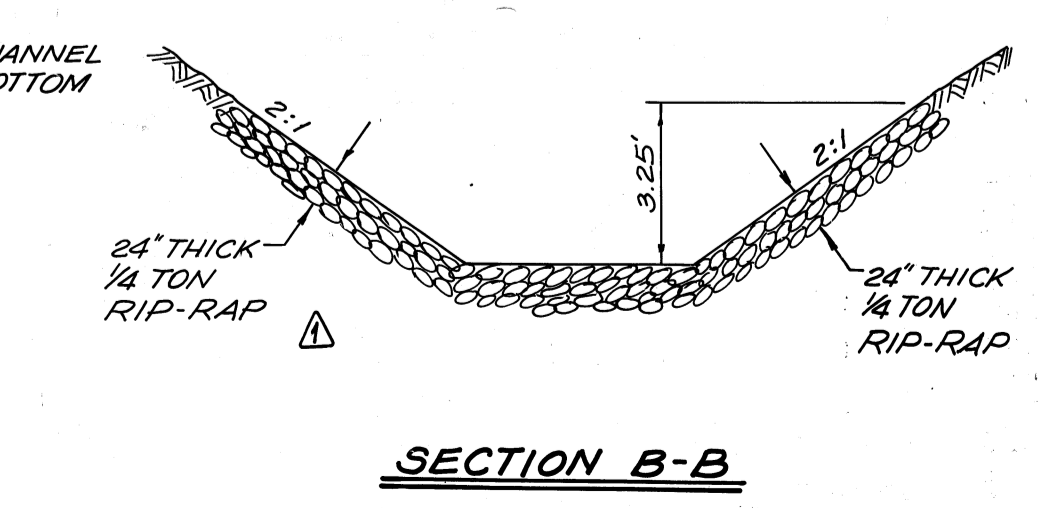
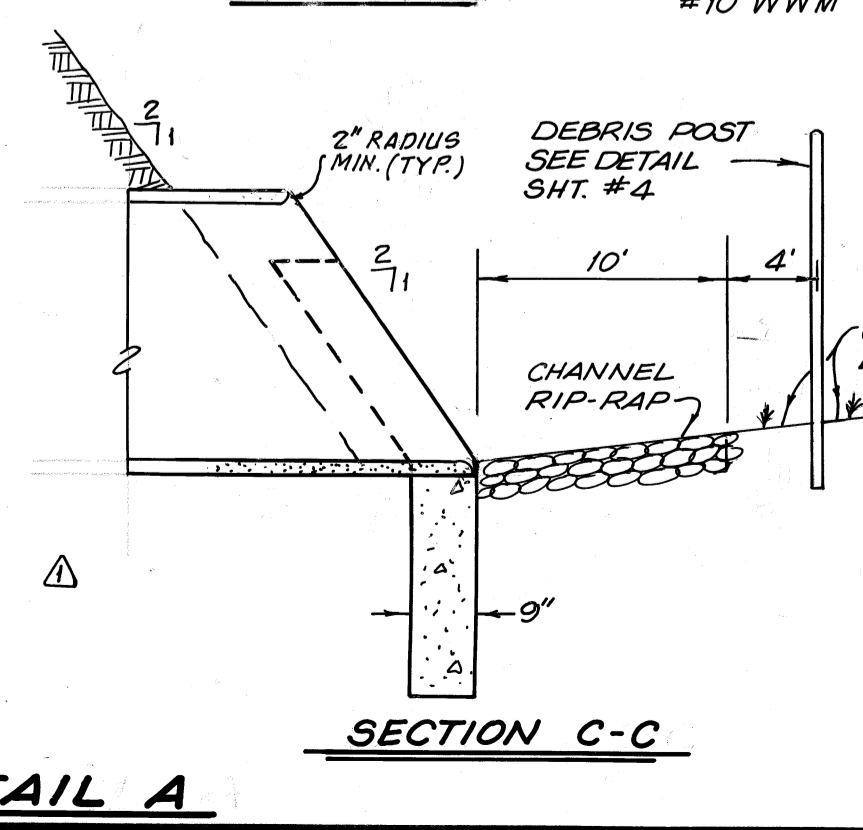
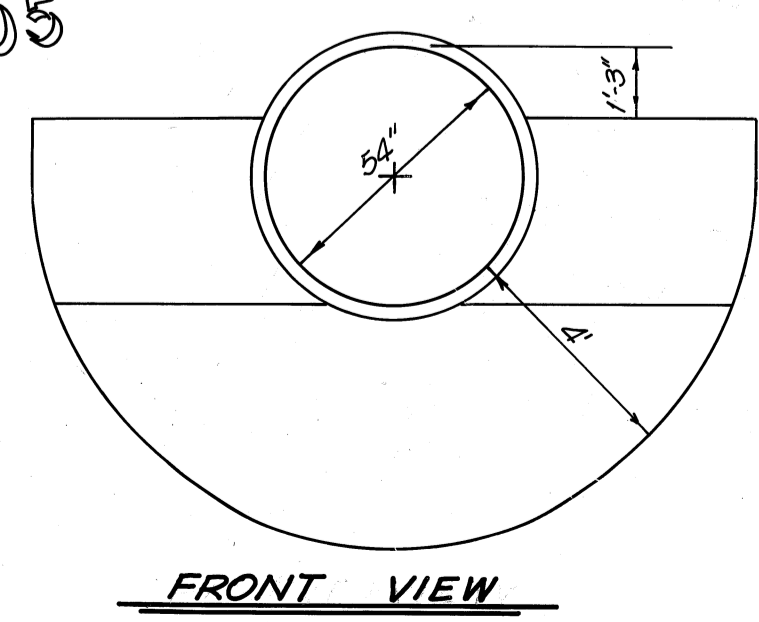
CITY OF WALNUT, CALIFORNIA
APPROVED: *Ronald L. Kranzer*
CITY ENGINEER
RONALD L. KRANZER R.C.E. 18503
DATE: 11-13-84



TRACT NO. 42892
MB 1030/86-91



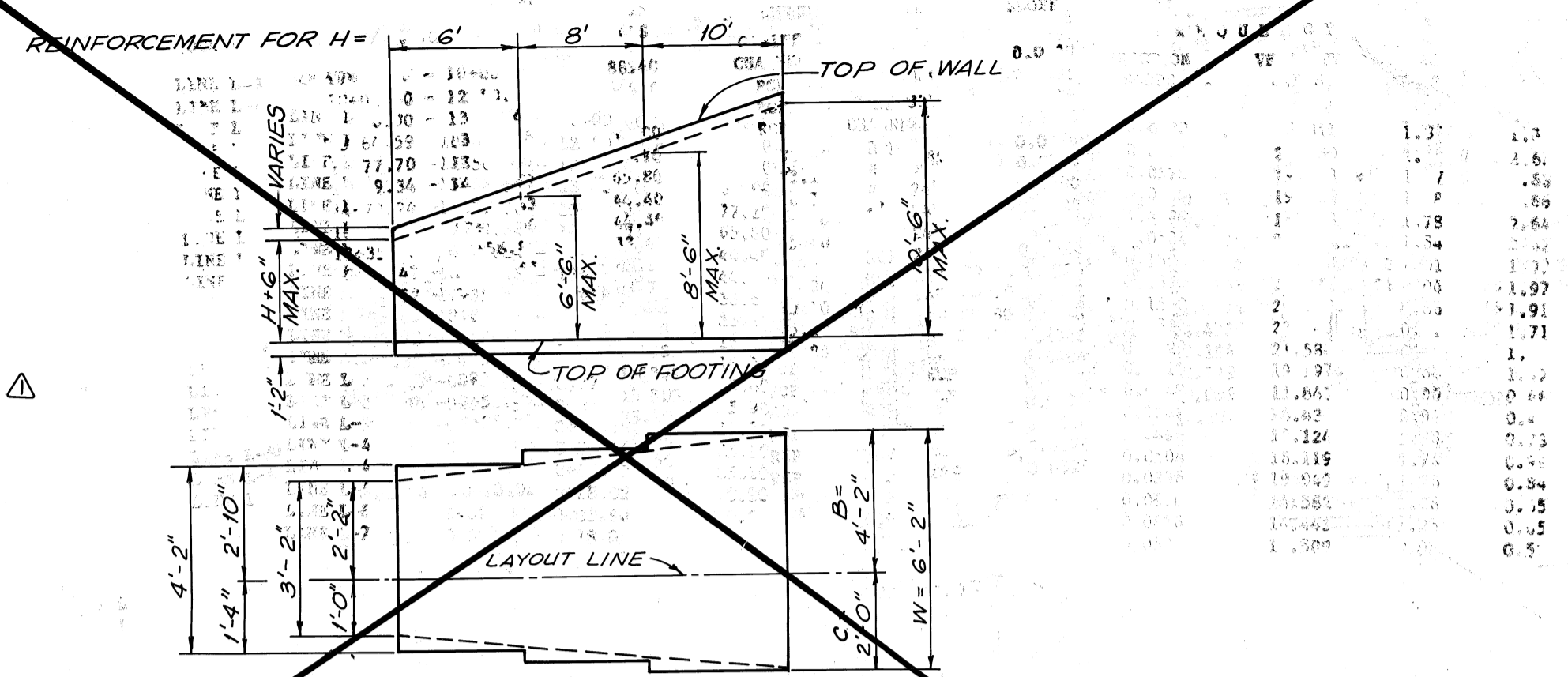
TRACT NO. 37905
MB 1012/8-20



NO.	REVISION	REVISED BY	APPROVED BY	DATE
1	Delete Inlet Structure. Add Headwall & Rip-Rap	C.L.J.	J.C.M.	2/4/85

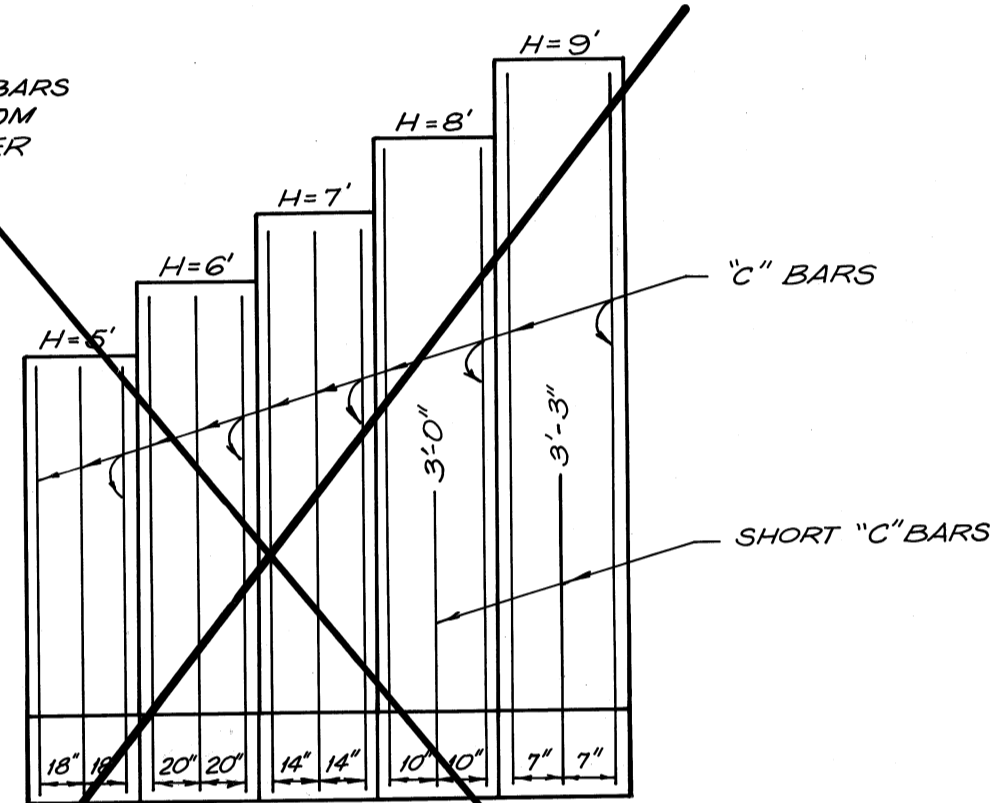
PLANS PREPARED BY:
O'MALLEY ENGINEERING CORPORATION
CONSULTING CIVIL ENGINEERS
AND LAND SURVEYORS
500 WEST HARRINGTON STREET, SUITE A-1
CORONA, CALIF. 92720
(714) 734-9933
DATE: 10-29-84

CITY OF WALNUT, CALIFORNIA
APPROVED: *Ronald L. Kranzer*
CITY ENGINEER
RONALD L. KRANZER R.C.E. 18503
DATE: 11-28-84



TYPICAL LAYOUT EXAMPLE
NO SCALE

FIGURES AT TOP OF "C" BARS INDICATES DISTANCE FROM TOP OF FOOTING TO UPPER END OF "C" BARS.



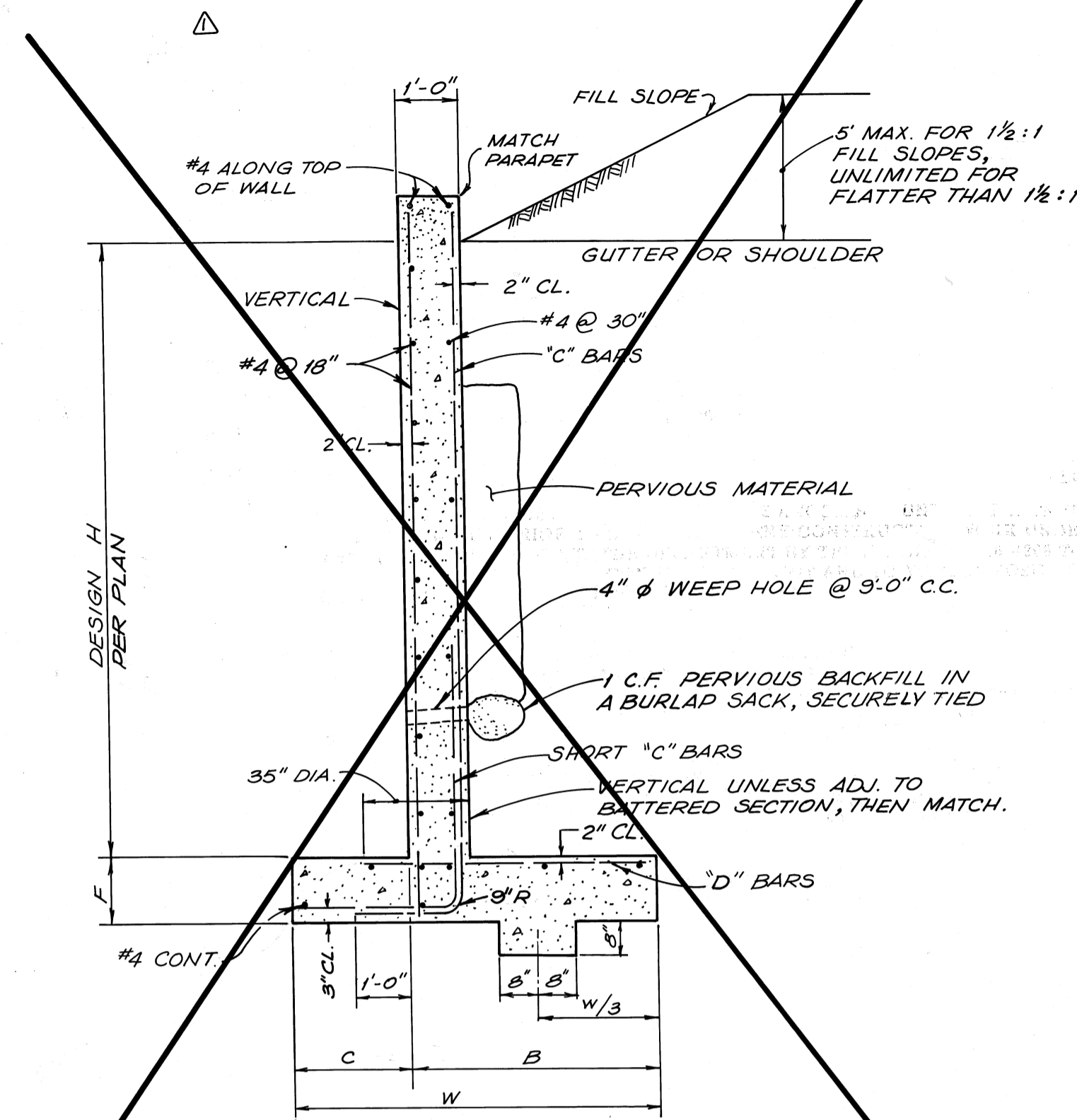
WINGWALL LAYOUT
NO SCALE

REINFORCED CONCRETE WINGWALLS					
H	5'	6'	7'	8'	9'
W	3'-8"	4'-2"	4'-8"	5'-2"	5'-8"
C	1'-0"	1'-4"	1'-6"	1'-8"	1'-10"
B	2'-6"	2'-10"	3'-2"	3'-6"	3'-10"
F	1'-2"				
BATTER	NONE				
S	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
"C" BARS	#4@18	#5@20	#5@14	#5@10	#5@7
"D" BARS	#4@18	#5@20	#5@14	#5@10	#5@7
CONC. W/LF	0.38	0.44	0.49	0.55	0.61
REINF. LBS./LF	16	19	25	30	37

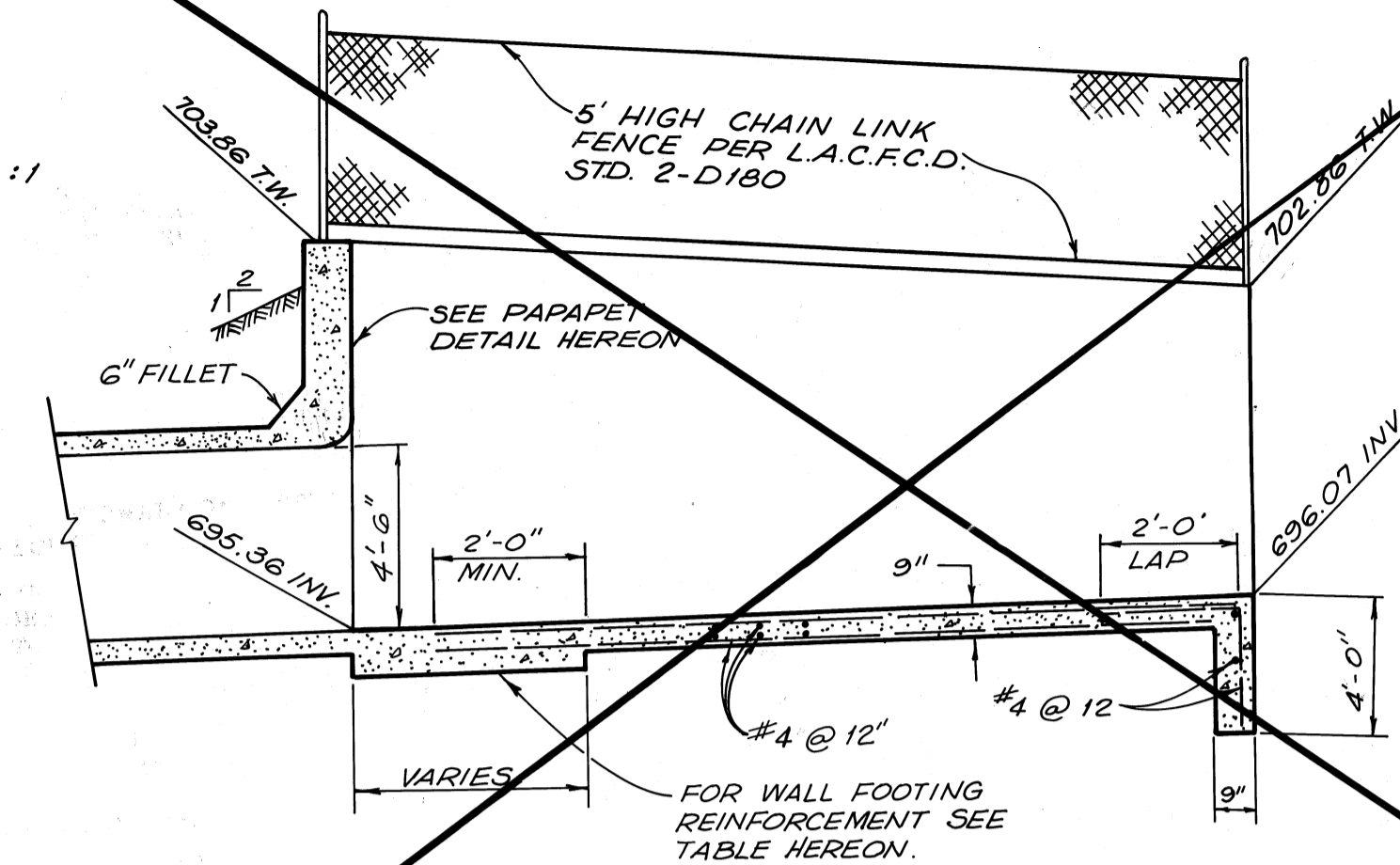
QUANTITIES DO NOT INCLUDE THAT PORTION ABOVE THE DESIGN "H" LIMIT.

WINGWALL DESIGN NOTES

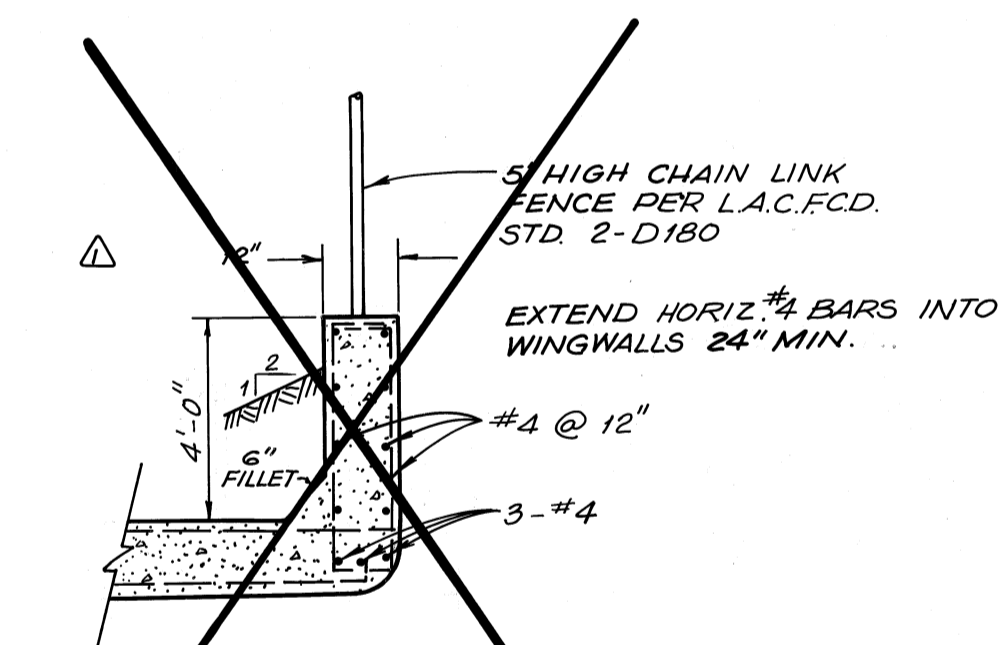
- UNIT STRESSES: $f_s = 24,000$ p.s.i., $f_c = 1300$ p.s.i., $f_c = 10$, $f_c = 3,000$ p.s.i.
- WALL HEIGHT MAY BE EXCEEDED BY 6" BEFORE GOING TO NEXT GREATER "H"



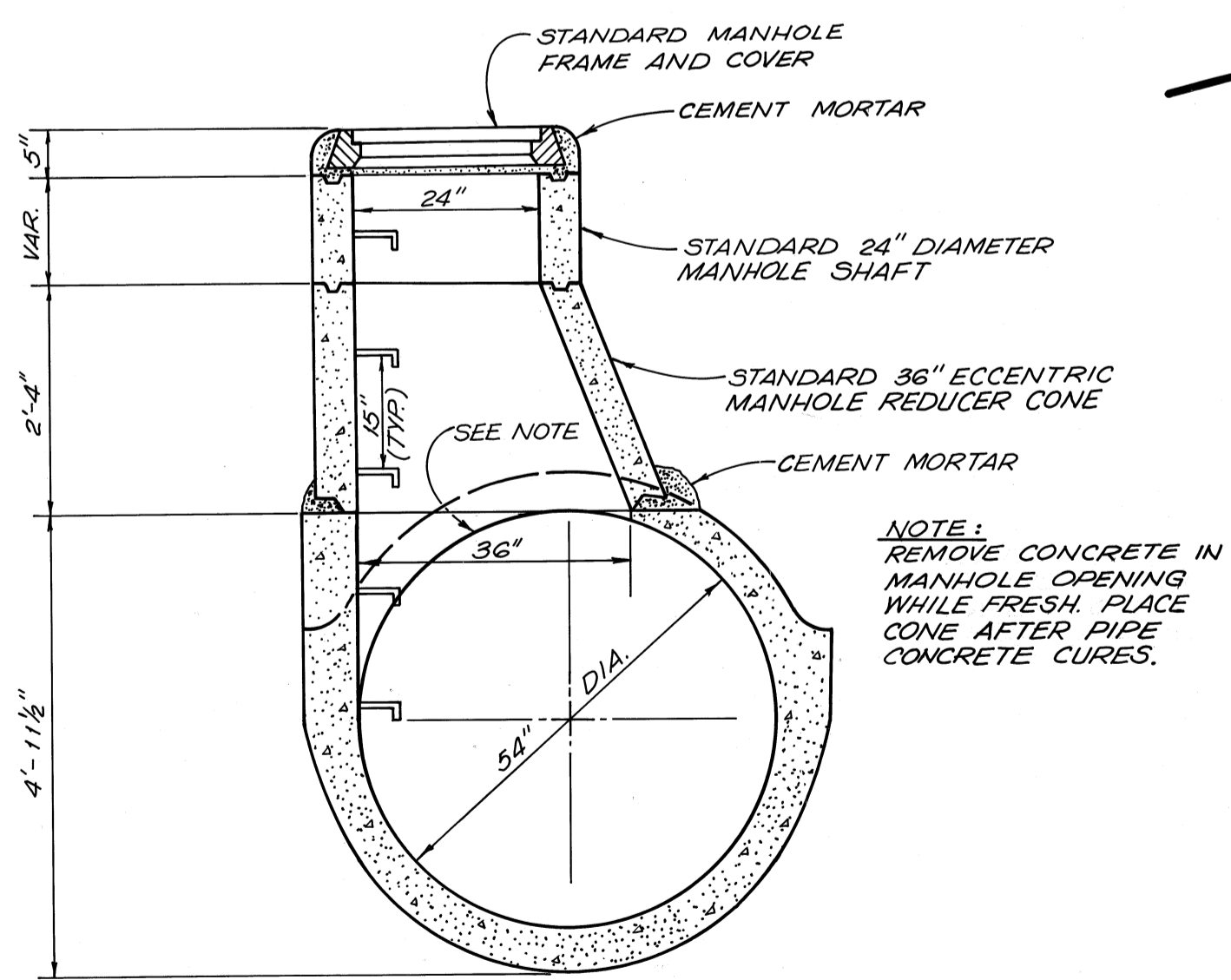
TYPICAL SECTION B-B
NO SCALE



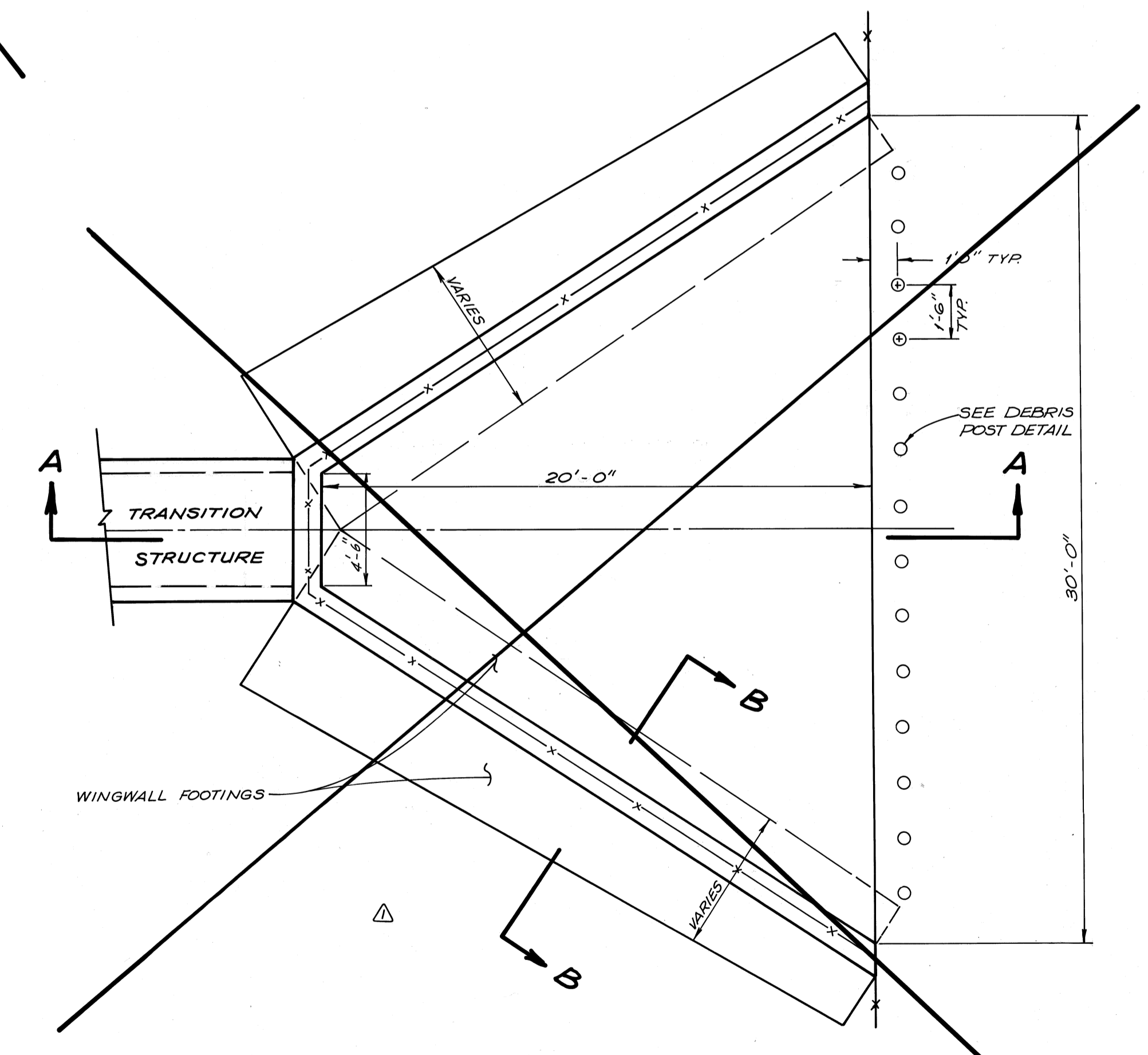
SECTION A-A
NO SCALE



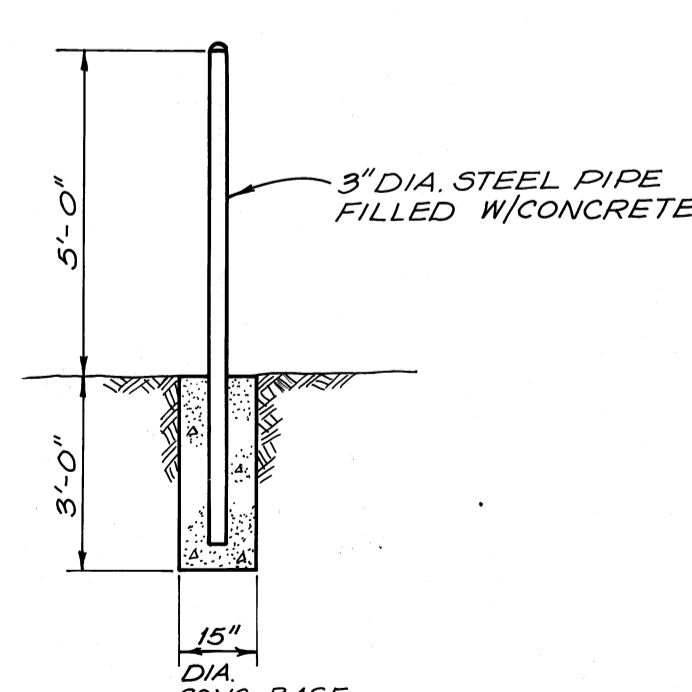
PARAPET DETAIL
NO SCALE



TYPICAL MANHOLE SECTION
NO SCALE



INLET STRUCTURE DETAIL
NO SCALE



DEBRIS POST DETAIL
NO SCALE

NO.	REVISION	REVISED BY	APPROVED BY	DATE
1	Delete Inlet Struct, Parapet Detail & WingWall Detail	C.L.J.	J.O.M.	2/4/85

PLANS PREPARED BY:
O'MALLEY ENGINEERING CORPORATION
CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS
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CORONA, CAL. 91720
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JAMES O'MALLEY, P.E. 27217

CITY OF WALNUT, CALIFORNIA
APPROVED: *Ronald L. Kranzer*
CITY ENGINEER
RONALD L. KRANZER R.C.E. 18503
DATE: 11-13-84