

STORM DRAIN PLANS IN TRACT No. 31337 M.T.D. No. 611

BENCH MARK:
LOS ANGELES COUNTY BG 1770
ROAD DEPT. B.M. TAG IN WEST HDWL. OF DR. TO H&E NO 20205 LA PUENTE RD 16 FT. N. 4 + 0.25 MI. E OF LEMON AVE. ELEV. 568.841 COVINA 1070

HYDRAULIC CHART (50 Year Frequency)

LOCATION	PIPE STA.	REACH STA.	Q C.F.S.	PIPE SIZE	FRIC. SLOPE	VELOCITY F.P.S.	D _n
LINE "A"	1+21	1+70	37	24"	0.0268	VARIES	1.0±
LINE "A"	1+70	2+24	32	24"	0.0190	VARIES	1.0±
LINE "A"	2+24	3+45	32	24"	0.0190	10.19	2.00
LINE "A"	3+45	3+74	19	24"	0.0070	6.05	2.00
LINE "A"	3+74	4+46	10	24"	0.0019	3.18	2.00
LINE "A"	4+46	4+81	8	24"	0.0012	2.55	2.00
LAT. No. 1.	0+00	0+10	14	18"	0.0178	7.92	1.50
LAT. No. 2.	0+00	0+11	9	18"	0.0073	5.10	1.50
LAT. No. 3.	0+00	0+28	2	18"	0.0004	1.13	1.50

GENERAL NOTES (Cont'd)

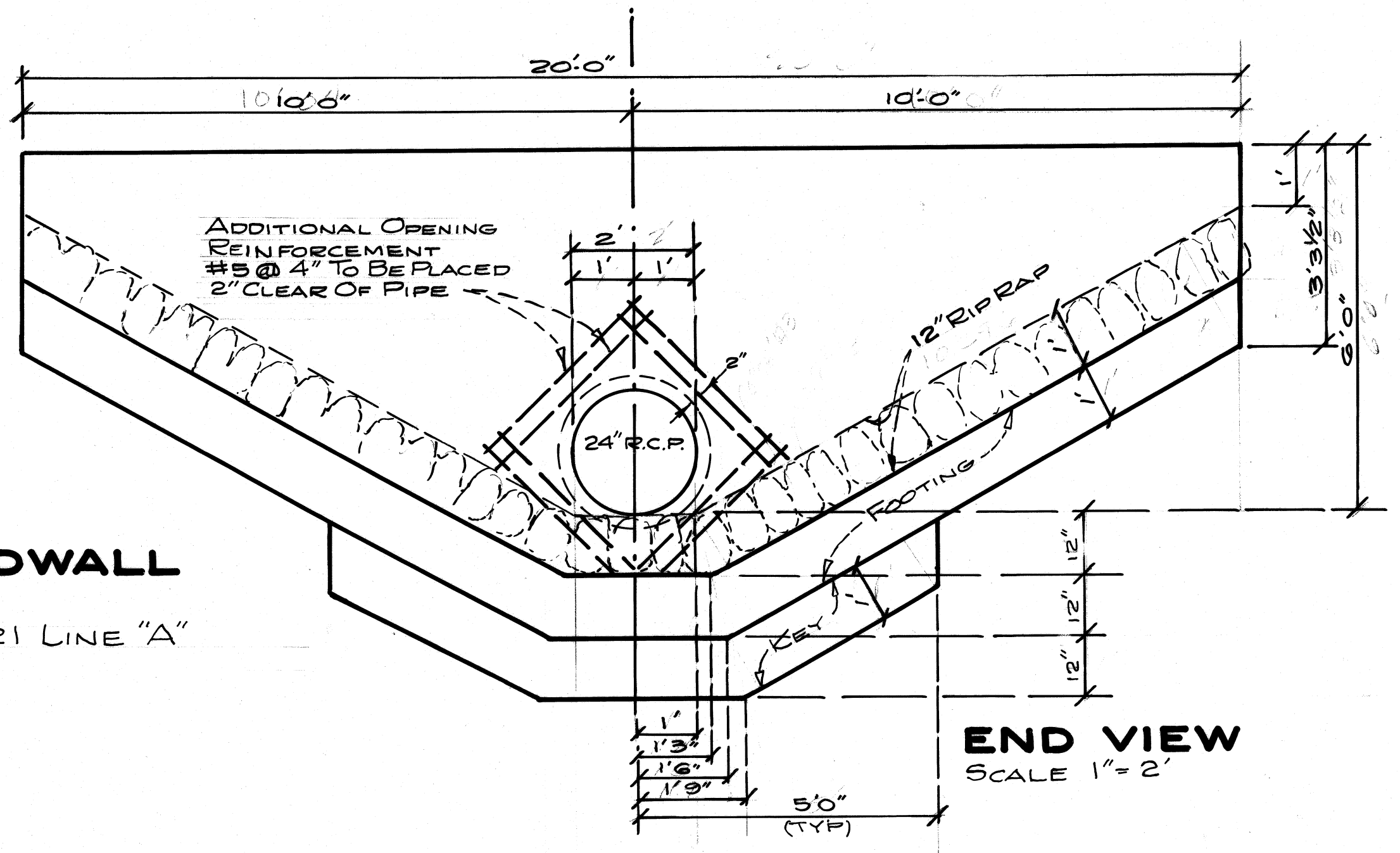
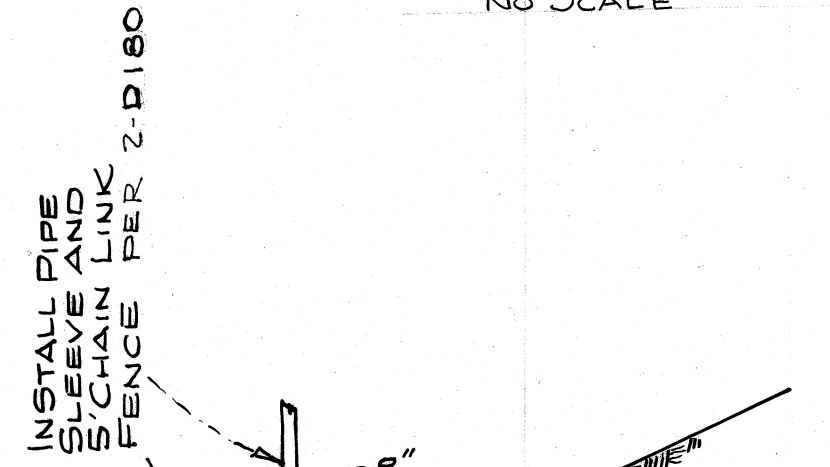
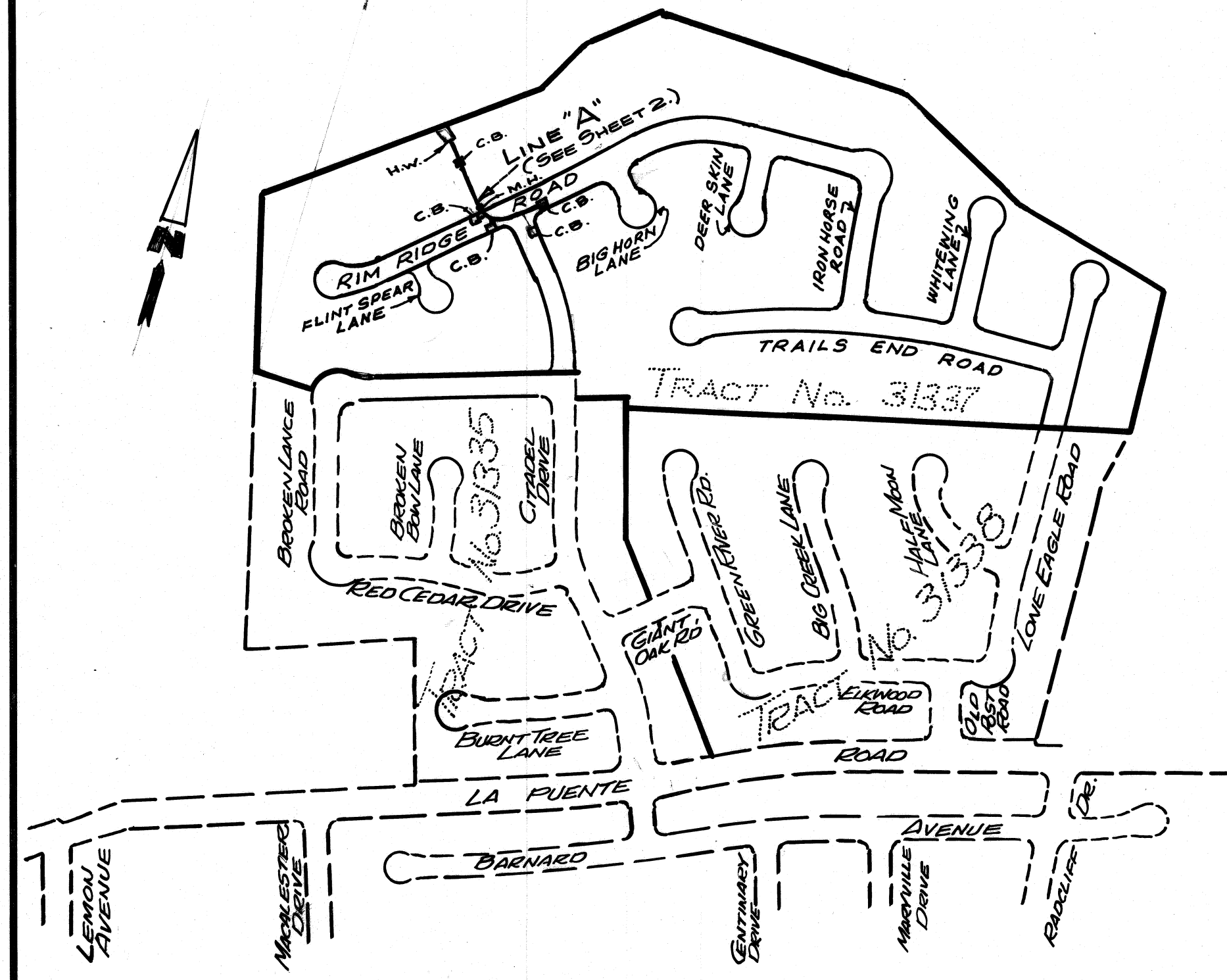
- A SOILS ENGINEER SHALL CERTIFY THAT ALL FILLS AND BACKFILLS OVER UNDERGROUND STORM DRAINS OUTSIDE OF ST. R/W HAVE BEEN COMPACTED OR CONSOLIDATED TO A 90% DENSITY. THIS CERTIFICATION SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THE WORK BY THE CITY OF WALNUT.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 730.41 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 52.
- 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 135 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.

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 1973 EDITION," AND ALL SUPPLEMENTS, 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 OF THE CITY OF WALNUT TELEPHONE, 714 595 2270 AT LEAST 24 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT. THE CONTRACTOR SHALL SUBMIT A DEPOSIT FOR CONSTRUCTION INSPECTION TO THE CITY OF WALNUT, 20550 EAST CARREY RD WALNUT, AT LEAST 24 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT.
- 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., UNLESS OTHERWISE SPECIFIED.
- ALL EXPOSED EDGES SHALL BE FINISHED WITH A 3/4" CHAMFER.
- ALL STEEL ADJACENT TO FACE OF CONCRETE SHALL HAVE 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 2 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 24 HOURS BEFORE HIS SERVICE IS REQUIRED. CALL 714 595 2270.
- LONGITUDINAL STEEL SHALL BE CONTINUOUS AND EXTEND THROUGH ALL CONSTRUCTION JOINTS EXCEPT TRANSVERSE JOINTS IN RECTANGULAR CHANNELS AND AROUND ALL CORNERS UNLESS OTHERWISE SHOWN.
- ALL REINFORCED CONCRETE PIPE SHALL BE BEDDED IN ACCORDANCE WITH LOS ANGELES COUNTY FLOOD CONTROL STD DWG 2-D 177 CASE III (SEE RIPRAP NOTES).
- 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 LOS ANGELES COUNTY FLOOD CONTROL DISTRICT.

LIST OF STANDARD DRAWINGS (LOS ANGELES COUNTY FLOOD CONTROL)

- | | |
|--|---------|
| 1. CATCH BASIN No. 1 | 2-D 160 |
| 2. CATCH BASIN No. 2 | 2-D 162 |
| 3. C.B. OPENING | 2-D 232 |
| 4. CONC. REINFORCING | 2-D 171 |
| 5. CATCH BASIN STEPS | 2-D 066 |
| 6. M.H. FRAME & COVER FOR CATCH BASINS | 2-D 156 |
| 7. C.B. REINF. FOR ROUND M.H.s. | 2-D 157 |
| 8. REMOVABLE PROTECTION BARS FOR CATCH BASINS. | 2-D 175 |
| 9. C.B. REINFORCEMENT TRANS. COVER | 2-D 172 |
| 10. MAN HOLE No. 1. | 2-D 102 |
| 11. CONC. RINGS REDUCER & PIPE FOR MAN HOLE SHAFT. | 2-D 107 |
| 12. J.S. #2 | 2-D 112 |
| 13. LOCAL DEPRESSION No. 2. | 2-D 088 |
| 14. CONNECTIONS TO CATH BASINS FOR PIPES 12" THROUGH 72" | 2-D 224 |
| 15. PIPE BEDDING IN TRENCHES | 2-D 177 |
| 16. CHAIN LINK FENCE | 2-D 180 |
| 17. PROTECTION BAR STIRRUP | 2-D 264 |
| 18. M.H. FRAME & COVER | 2-D 472 |
| 19. J.S. #4 | 2-D 103 |
| (LOS ANGELES COUNTY ENGINEER) | |
| 1. CONC. PIPE ANCHOR. | D-72 |



CONC. HEADWALL DETAILS AT STATION 1+21 LINE "A"

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 18 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 2 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.

Robert A. Baker R.C.E. #18618 7/24/75
REGISTERED CIVIL ENGINEER No. DATE

CITY OF WALNUT, CALIFORNIA
HARVEY T. BRANDT COUNTY ENGINEER

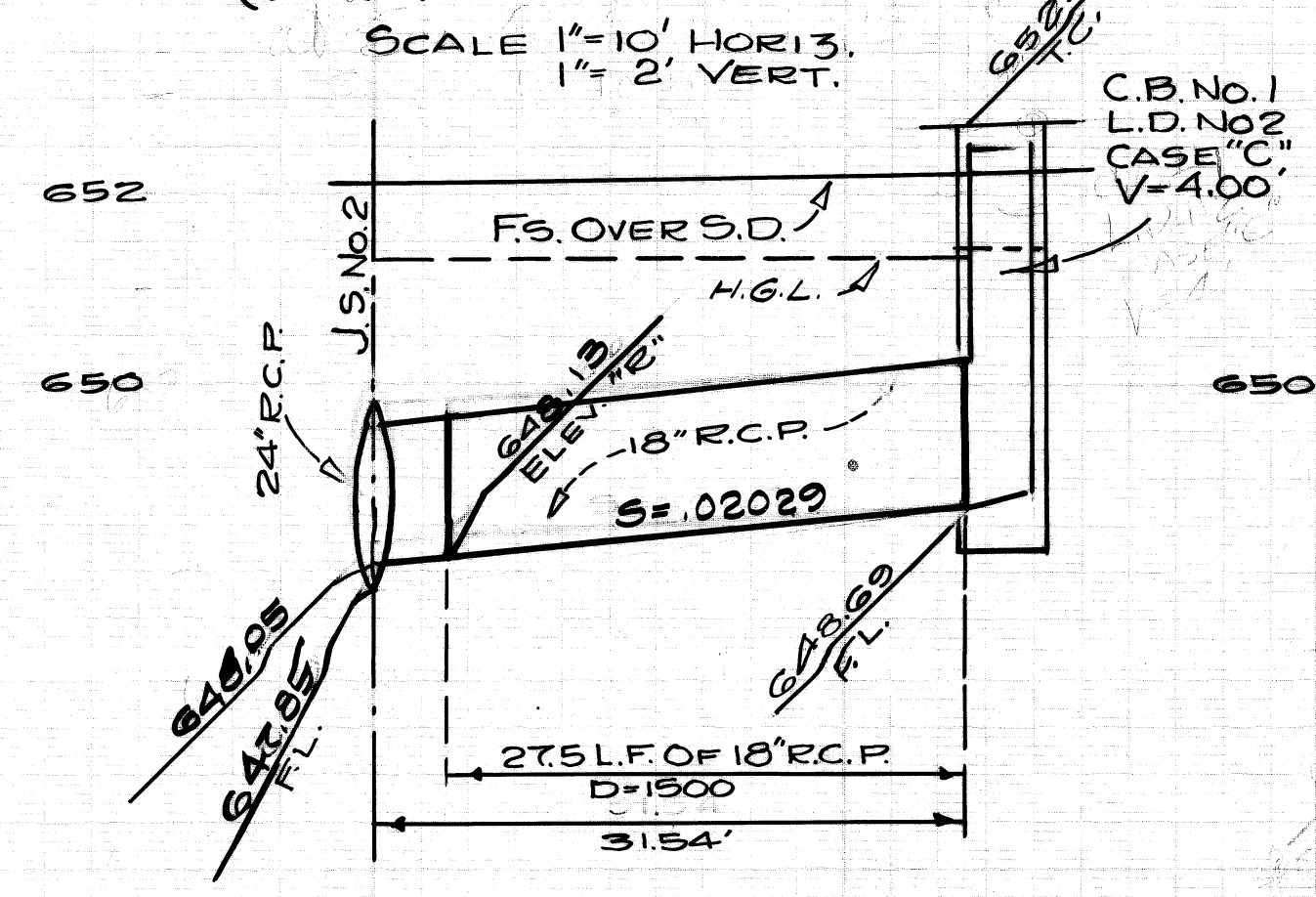
CITY OF WALNUT APPROVAL
DESIGN DIVISION
APPROVED BY: *Frank W. Salyer, Jr.* DATE: 8/25/75
CITY OF WALNUT, CITY ENGINEER

CHECKED BY: _____ R.C.E. NO. _____ DATE: _____
L.A.C.F.C. DIST. ENGINEER

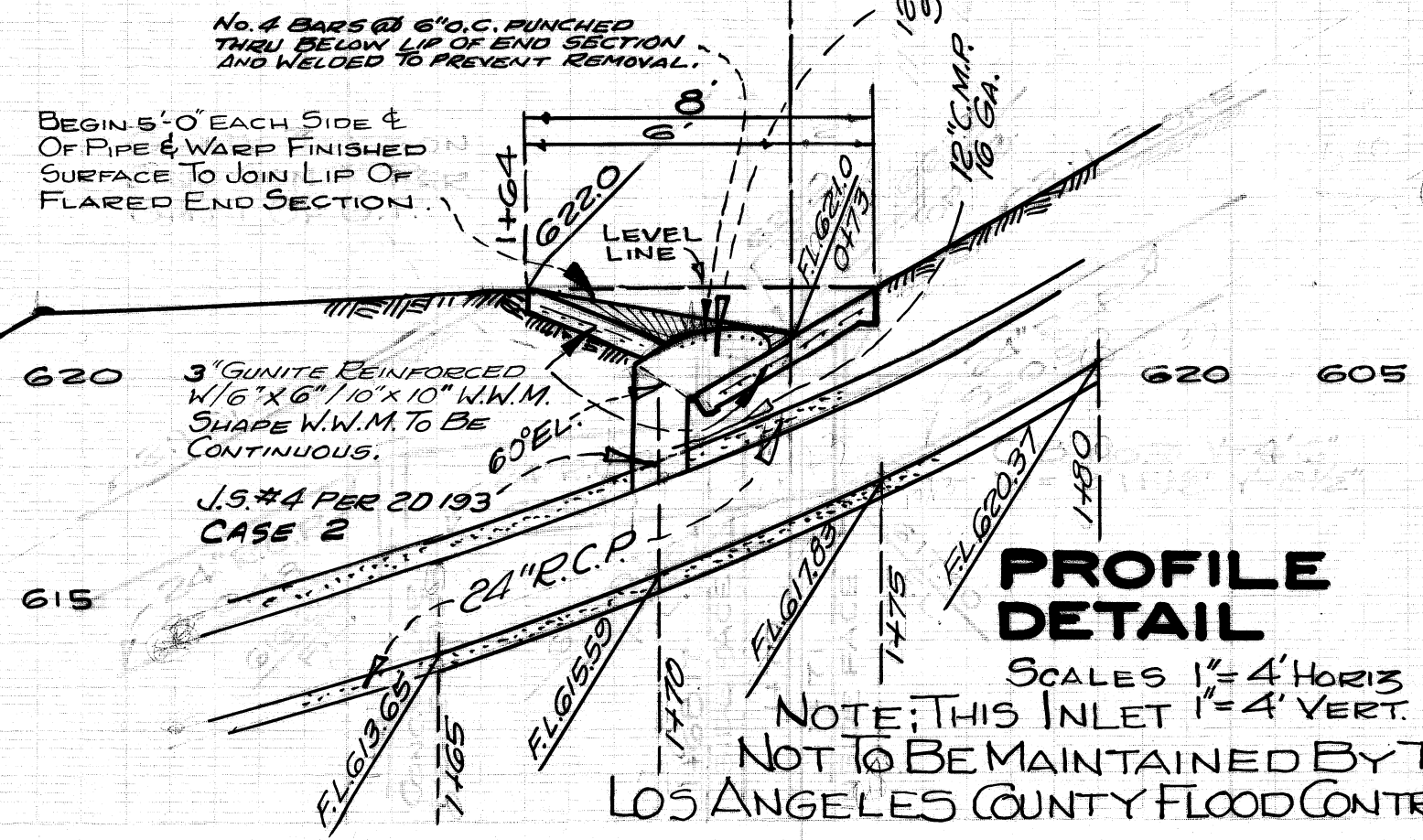
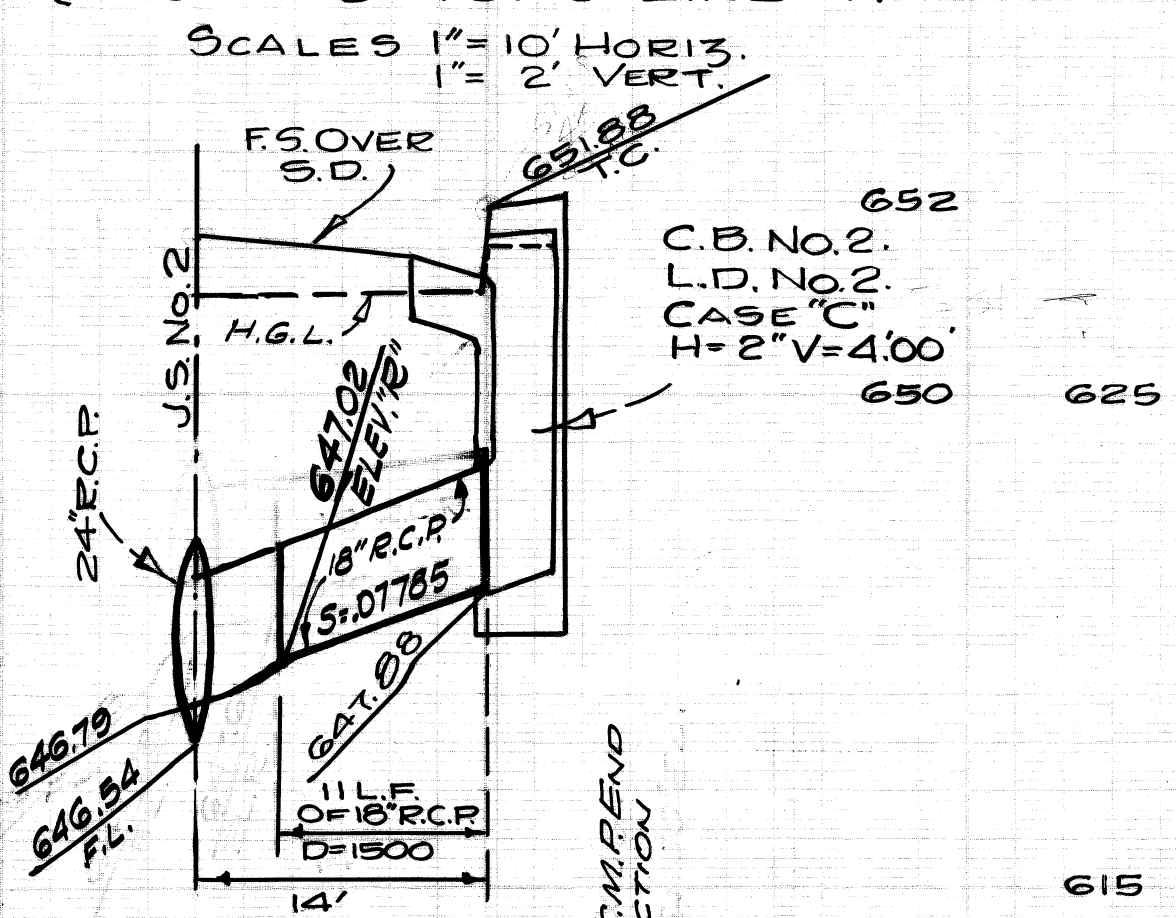
PLANS PREPARED BY
TEI STATE ENGINEERING CO.
215 SOUTH RAYMOND AVENUE
FULLERTON, CALIFORNIA, 92631
PHONE: 714-871-9510

REVIEWED BY THE LOS ANGELES COUNTY ROAD DEPT.
BY: _____ DATE: _____

PROFILE LAT. NO. 3.
@ STA. 4+46.42 LINE "A".
SCALE 1"=10' HORIZ.
1"=2' VERT.



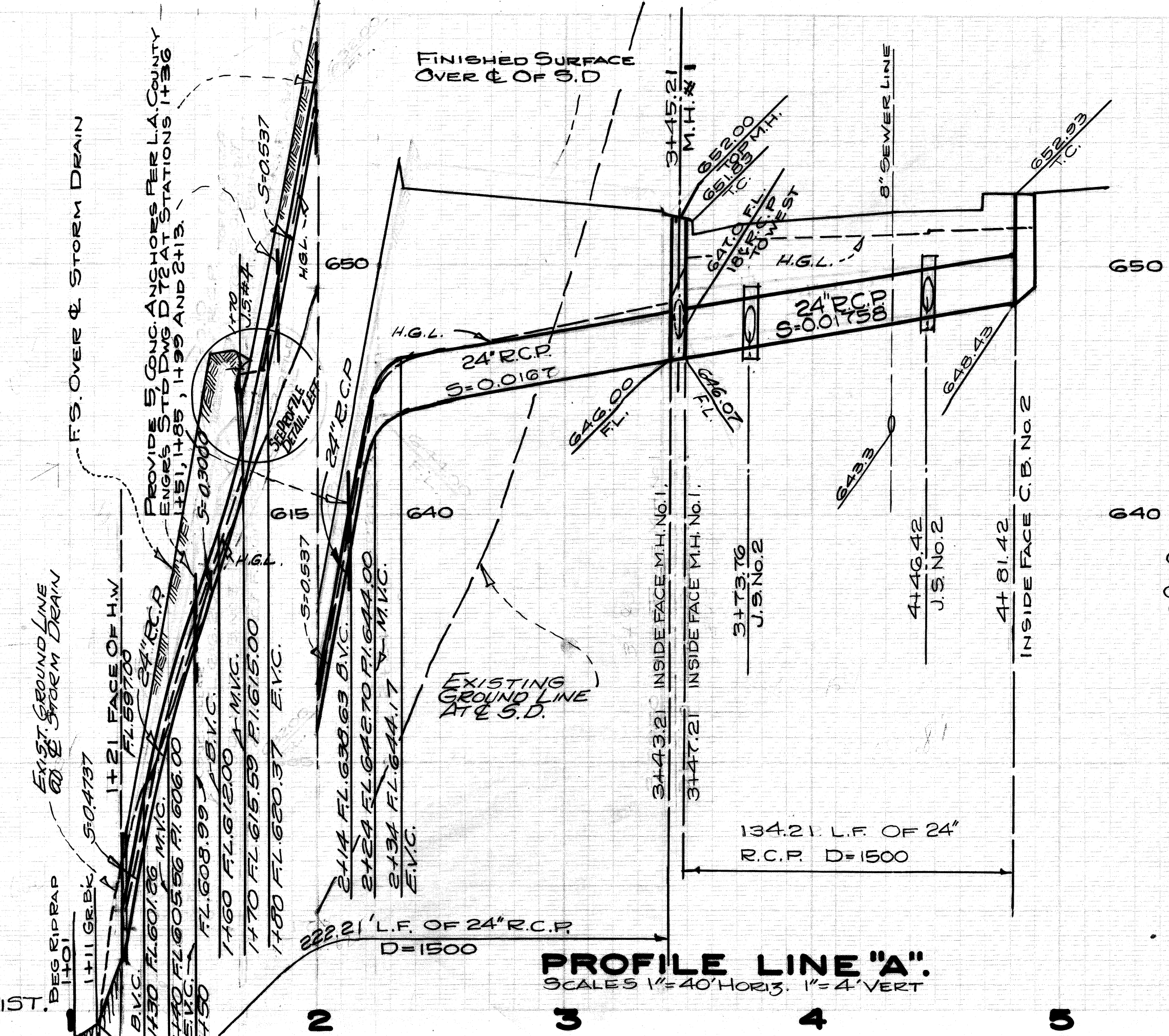
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@ STA. 3+73.76 LINE "A".
SCALE 1"=10' HORIZ.
1"=2' VERT.



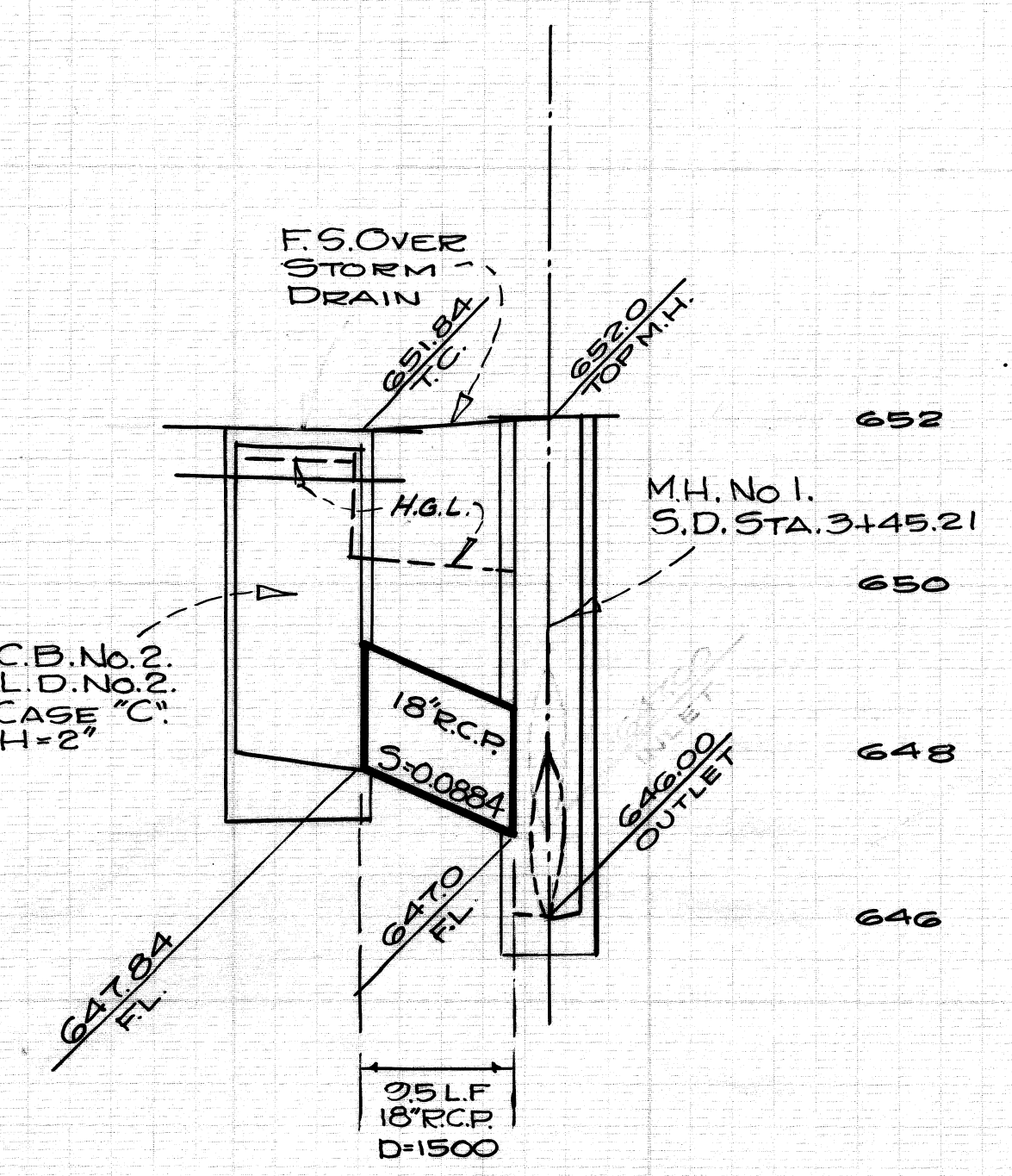
PROFILE DETAIL
SCALE 1"=4' HORIZ.
1"=4' VERT.

NOTE: THIS INLET IS NOT TO BE MAINTAINED BY THE LOS ANGELES COUNTY FLOOD CONTROL DIST.

PROFILE LINE "A".
SCALE 1"=40' HORIZ.
1"=4' VERT.



PROFILE LAT. NO. 1.
@ STA. 3+45.21, LINE "A".
SCALE 1"=10' HORIZ.
1"=2' VERT.



- CONST. NOTES**
- 12" Grouted R.P.P. w/ 12" Rock Embedded 6" in Bottom Section
 - 12" Grouted R.P.P. (MATCH EXISTING GROUND)

CONC. HEADWALL 20' LONG, 8" THICK. SEE DETAILS ON SHEET 1.

INLET AND BENCH DRAIN NOT TO BE MAINTAINED BY THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

EASEMENT TO THE CITY OF WALNUT FOR STORM DRAIN PURPOSES.

DETAIL "A".
SCALE 1"=10'

NOTE: THIS OUTLET STRUCTURE NOT TO BE MAINTAINED BY THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT. FROM STA. 3+45.21 TO OUTLET STRUCTURE.

DETAIL "B".
SCALE 1"=10'

PLANS PREPARED BY TRI-STATE ENGINEERING COMPANY, 615 SOUTH RAYMOND AVE FULLERTON, CALIFORNIA 92631 PHONE 714-871-9510

CITY OF WALNUT, CALIFORNIA
HARVEY T. BRANDT COUNTY ENGINEER

CHECKED BY: *[Signature]* R.C.E. No. 12225 DATE: 8/25/75
WALNUT CITY ENGINEER