

STORM DRAIN PLANS IN TRACT NO. 47708 M.T.D. No. 1335

BENCH MARK:
 L.A.C.R.D. B.M. NO. CG 1777:
 L+T CONC. WK TO H&E NO. 524 @
 NE COR CARTEL DR + BENIK PL 31
 FT N + 30 FT E C/L INT MKD (BM)
 ELEV = 603.763 (COVINA QUAD, 1978)

GENERAL NOTES:

- A PERMIT SHALL BE OBTAINED AND ALL FEES AND DEPOSITS FOR CONSTRUCTION INSPECTION SHALL BE PAID TO THE DEPARTMENT OF PUBLIC WORKS AT THE PERMIT COUNTER, 900 SOUTH FREMONT AVENUE, 8TH FLOOR, PRIOR TO STARTING WORK UNDER THIS CONTRACT. ALSO, ALL OTHER REQUIRED PERMITS, SUCH AS ROAD EXCAVATION PERMITS, MUST BE OBTAINED PRIOR TO STARTING WORK.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT OFFICE LISTED ON THE "APPLICATION FOR STORM DRAIN CONSTRUCTION INSPECTION FORM 1" TO ARRANGE FOR AN ACCEPTABLE CONSTRUCTION START DATE.
- APPROVAL OF THIS PLAN BY THE COUNTY OF LOS ANGELES DOES NOT CONSTITUTE A REPRESENTATION TO THE AGENCY OF THE LOCATION, OR THE EXISTENCE OR NONEXISTENCE OF ANY UNDERGROUND UTILITY, PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL SHEETS.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1988 EDITION," INCLUDING SUPPLEMENTS AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE DIRECTOR OF PUBLIC WORKS.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7-10.41 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION IN REGARD TO SAFETY ORDERS.
- ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. MEAN SEA LEVEL DATUM OF 1929, UNLESS OTHERWISE INDICATED.
- NO CONCRETE SHALL BE PLACED UNTIL THE FORMS AND REINFORCING STEEL HAVE BEEN PLACED, INSPECTED AND APPROVED.
- ALL STRUCTURAL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH AN ULTIMATE 28 DAY COMPRESSIVE STRENGTH OF 3250 P.S.I. UNLESS OTHERWISE NOTED.
- TRANSVERSE REINFORCEMENT AND TRANSVERSE JOINTS SHALL BE PLACED AT RIGHT ANGLES (OR RADIAL) TO THE CONDUIT CENTERLINE EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS.
- 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, PER A.S.T.M. A-615-GRADE 60.
- ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN INSTITUTE "MANUAL OF STANDARD PRACTICE".
- DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE TO CENTER LINE OF STEEL UNLESS OTHERWISE NOTED.
- ALL STEEL THAT IS TO BE CONTINUOUS SHALL HAVE A MINIMUM LAP OF 30 BAR DIAMETERS OR 18" WHICHEVER IS GREATER.
- ALL CONSTRUCTION JOINTS IN THE FOOTING OF SLABS AND WALLS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED.
- ALL EXPOSED EDGES SHALL BE FINISHED WITH A 3/4" CHAMFER.
- UNLESS OTHERWISE SHOWN, CONCRETE DIMENSION SHALL BE MEASURED VERTICALLY OR HORIZONTALLY AND PARALLEL OR AT RIGHT ANGLES (OR RADIAL) TO THE CENTER LINE OF CONSTRUCTION.
- THE INSPECTOR SHALL HAVE THE OPTION TO REQUIRE BACKFILL DURING CONSTRUCTION WHEN THE PIPE HAS LESS THAN ONE FOOT OF COVER. THE CONCRETE BACKFILL SHALL CONSIST OF 3 1/2" MIX. PORTLAND CEMENT CONCRETE FLOURED FROM WALL TO WALL OF TRENCH AND FROM BOTTOM OF TRENCH TO A MINIMUM IF 4 INCHES OVER THE TOP OF THE PIPE.
- ALL PIPES SHALL BE PLACED IN TRENCH IN NATURAL GROUND AND/OR COMPACTED FILL. THE GROUND LEVEL BEFORE THE TRENCHING SHALL BE AT LEAST 3 FEET ABOVE THE TOP OF THE PIPE ELEVATION, OR AT FINISH SURFACE ELEVATION, WHICHEVER IS LESS.
- ALL BACKFILL AND FILLS OUTSIDE OF STREET RIGHT OF WAY SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM SOIL COMPACTION TEST D 1557-78 METHOD "D" UNLESS OTHERWISE SPECIFIED. THIS SHALL BE CERTIFIED BY A GEOTECHNICAL ENGINEER. THIS CERTIFICATION SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THE WORK BY THE COUNTY.

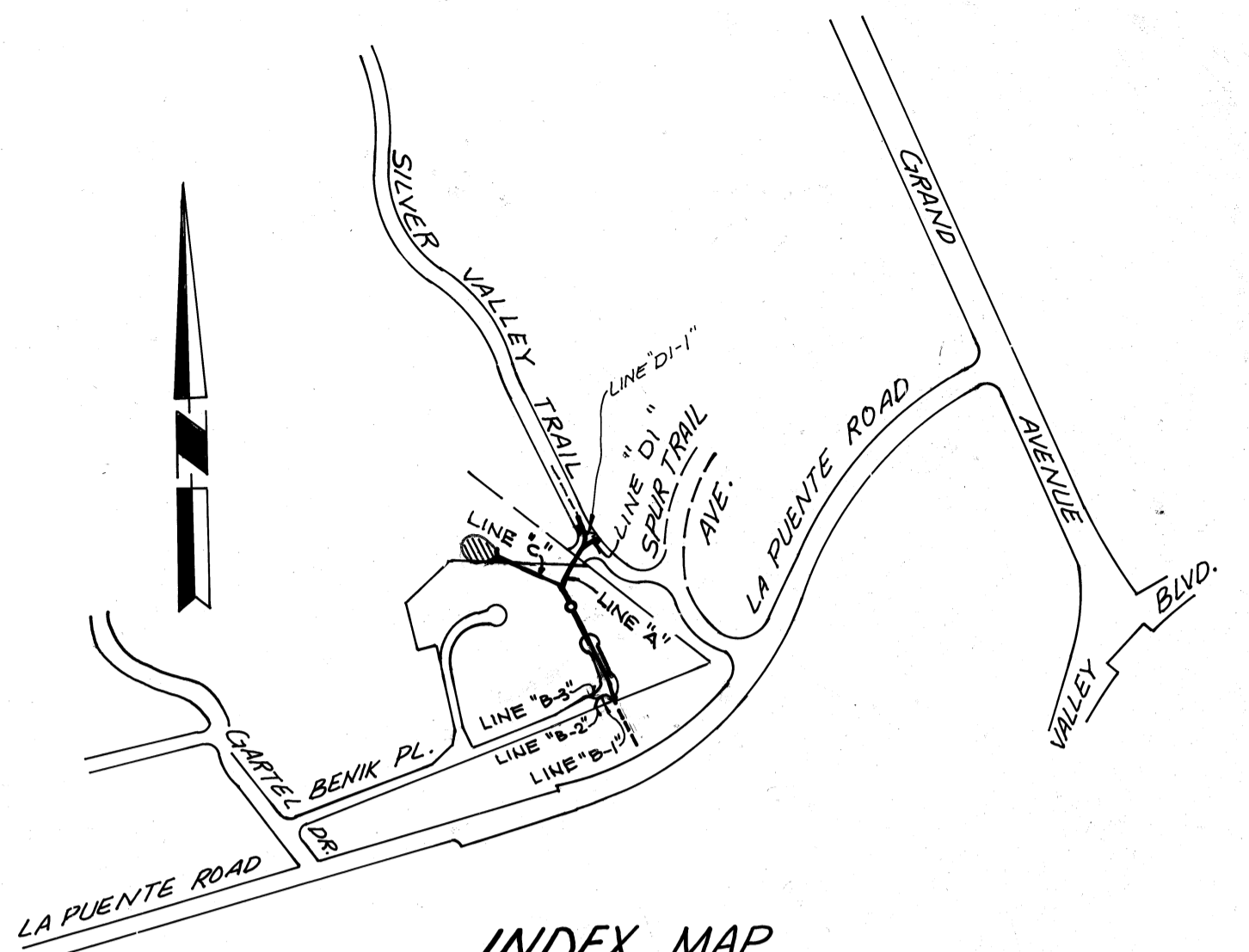
GENERAL NOTES CONT.:

- ALL BACKFILL AND FILLS WITHIN STREET OF WAY SHALL BE COMPACTED IN ACCORDANCE WITH CITY REQUIREMENTS UNLESS OTHERWISE NOTED AND INSPECTED BY THE CITY. THE SOIL COMPACTION SHALL BE CERTIFIED BY A GEOTECHNICAL ENGINEER.
- PIPE BEDDING SHALL BE: IN ACCORDANCE WITH LOS ANGELES COUNTY ENGINEER CASE AD BEDDING PER STANDARD DRAWING D-54 UNLESS OTHERWISE NOTED. THE BEDDING MATERIAL PLACED FROM THE BOTTOM OF THE PIPE TO 1 FOOT OVER THE TOP OF THE PIPE SHALL BE SAND, CRUSHED AGGREGATE, OR NATIVE FREE-DRAINING GRANULAR MATERIAL AND SHALL HAVE A SAND EQUIVALENT OF 20 OR GREATER.
- PIPE SHALL BE EMBEDDED 5 INCHES INTO ALL STRUCTURES INCLUDING INLET AND HEADWALLS. UNLESS OTHERWISE SPECIFIED.
- UNLESS OTHERWISE SPECIFIED IN THE PROFILE OF THESE PLANS, THE PIPE SHALL BE MANUFACTURED WITH A MINIMUM CONCRETE COVER OVER THE STEEL IN THE INVERT OF 0.75 INCHES FOR R.C.P. UP TO 36 INCHES IN DIAMETER.
- ALL CATCH BASINS WITHIN THE DEDICATED STREET RIGHT OF WAY SHALL BE CONSTRUCTED PER LOS ANGELES COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWINGS.
- THE CONTRACTOR SHALL SUBMIT A SUPPLEMENT DRAINAGE PLAN DESIGNED BY A CIVIL ENGINEER AND SHALL PROVIDE TO THE SATISFACTION OF THE CITY ENGINEER A SYSTEM FOR CONTRIBUTORY DRAINAGE TO BE OPERABLE AT ALL TIMES UNTIL THIS STORM DRAIN SYSTEM IS ACCEPTED.
- ALL REFERENCES ON THIS PLAN TO THE COUNTY ENGINEER, ROAD DEPARTMENT, OR FLOOD CONTROL DISTRICT SHALL APPLY TO THE APPROPRIATE ELEMENTS OF THE DEPARTMENT OF PUBLIC WORKS.
- EXISTING UTILITIES SHALL BE MAINTAINED IN PLACED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
- WHERE THE UTILITIES ARE INDICATED ON THE DRAWINGS TO BE SUPPORTED, SAID SUPPORTS SHALL BE IN ACCORDANCE WITH STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION NO. 224-0, UNLESS OTHERWISE INDICATED.
- ALL OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES SHALL BE SEALED WITH 8 INCHES OF BRICK AND MORTAR OR 6 INCHES OF CONCRETE, UNLESS OTHERWISE SHOWN.
- MANHOLES NO. 1, 2, 3, AND 4, SHALL USE THE STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION 630-0 THE "FRAME AND COVER" AND 635-0 FOR THE "STANDARD DROP STEP".
- THIS STORM DRAIN WILL NOT BE ACCEPTED FOR MAINTENANCE UNTIL THE STREETS HAVE BEEN PAVED, MANHOLES BROUGHT TO GRADE AND THE SYSTEM CLEANED TO SATISFACTION OF THE DIRECTOR OF PUBLIC WORKS.
- THIS DRAIN IS NOT TRANSFERABLE TO L.A.C.F.C.D. UNTIL H.T.D. NO. 1122 IS TRANSFERRED TO THE L.A. COUNTY FLOOD CONTROL DISTRICT.

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 RECORDS OR NOT SHOWN ON THIS DRAWING.

Harold M. Zabel
 REGISTERED CIVIL ENGINEER NO. 44560
 12/23/92
 DATE



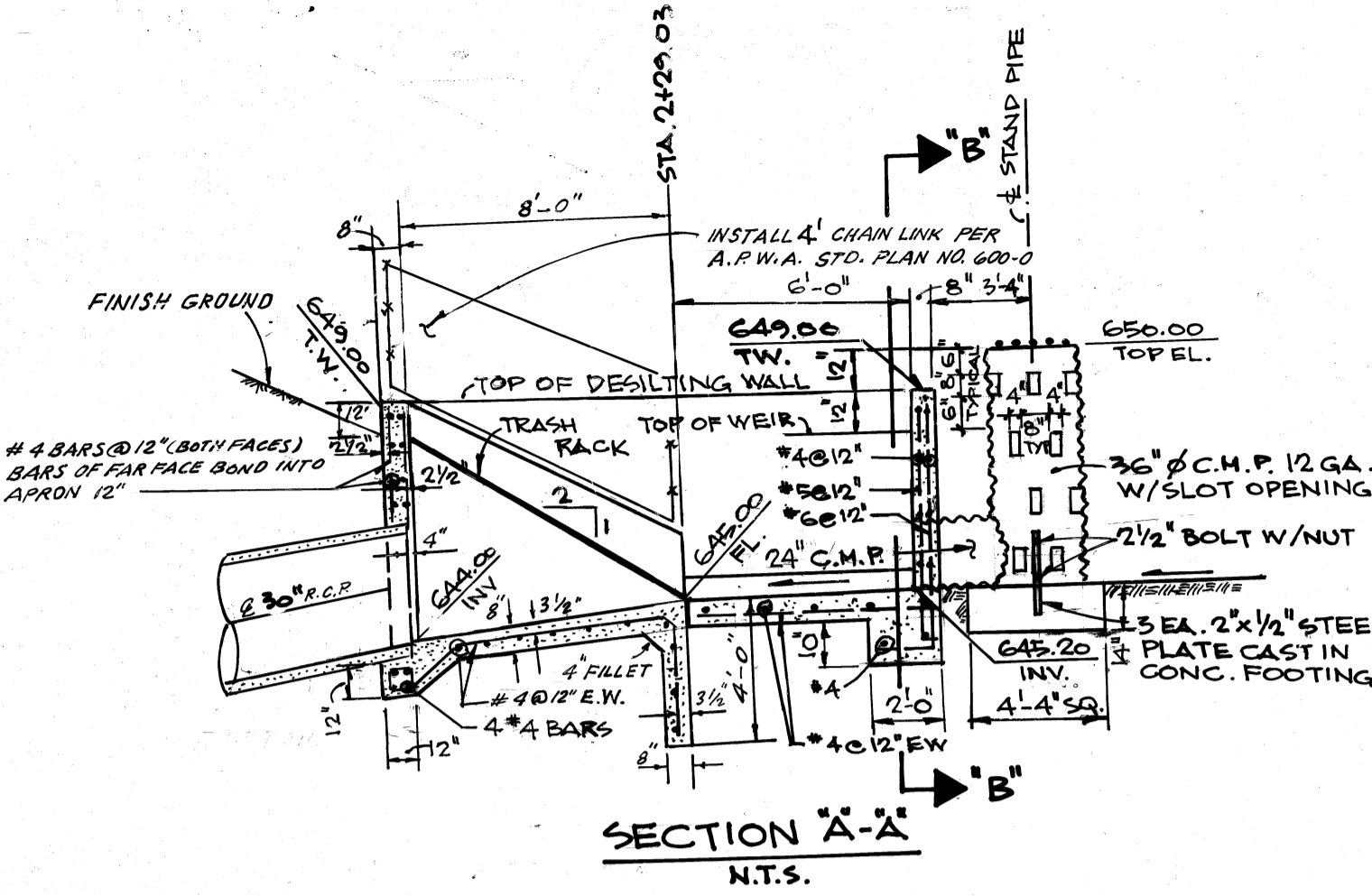
INDEX MAP
 SCALE: 1" = 600'
 CITY OF WALNUT
 TRACT NO. 47708

LIST OF STANDARD PLANS

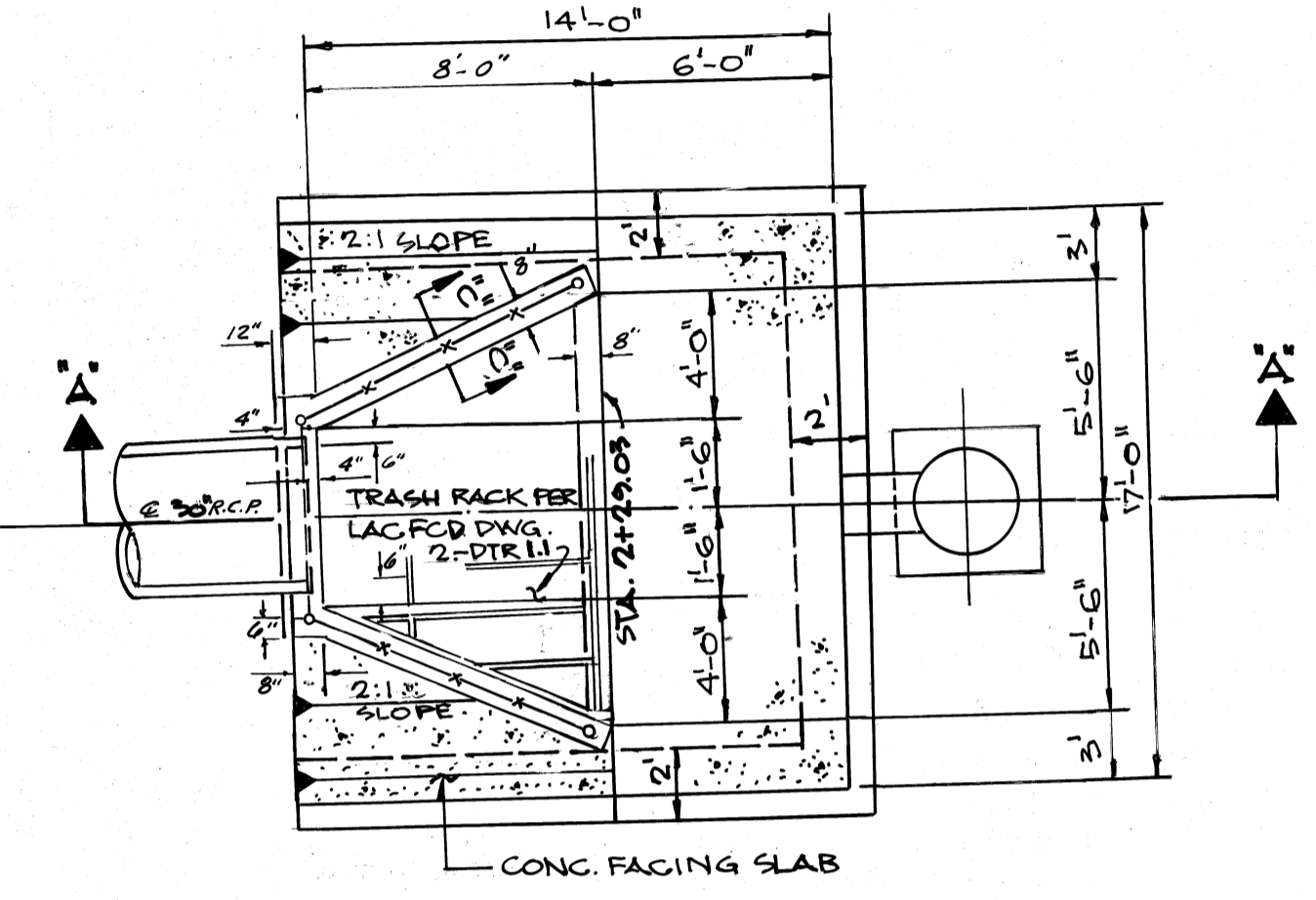
| | |
|--|----------|
| A.P.W.A. | 300-0 |
| CURB OPENING CATCH BASIN | 310-0 |
| MONOLITHIC CATCH BASIN CONNECTION | 310-0 |
| CATCH BASIN FACE PLATE ASSEMBLY AND PROTECTION BAR | 630-1 |
| 24" MANHOLE AND COVER | 630-1 |
| CHAIN LINK FENCE AND GATE | 609-0 |
| CURB OPENING CATCH BASIN | 307-0 |
| LOCAL DEPRESSION | 313-0 |
| | |
| L.A.C.F.C.D. | 2-D102 |
| MANHOLE NO. 1 | 2-D101.1 |
| TRASH RACK | 2-D113 |
| MANHOLE NO. 4 | 2-D107 |
| CONC. RINGS, REDUCER & PIPE FOR MANHOLE SHAFT | 2-D107 |
| CONC. COLLAR | 2-D393 |
| | |
| L.A.C.D. ENGINEER | D-72 |
| CONCRETE PIPE ANCHOR | D-54 |
| PIPE BEDDING | D-54 |

HYDRAULIC ELEMENTS

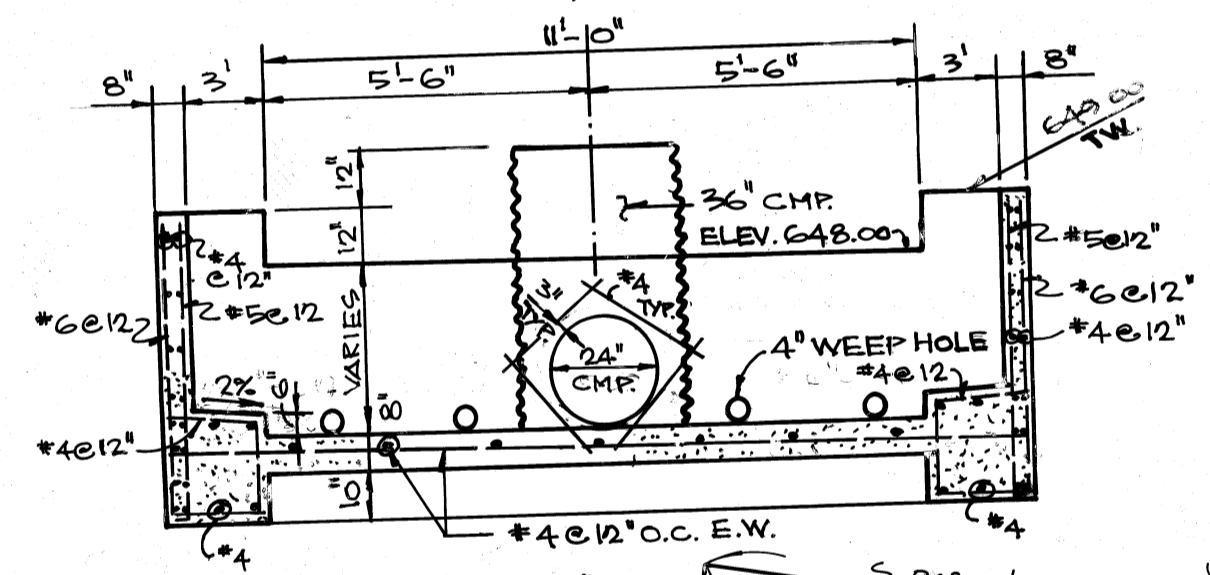
| LINE | STATION FROM | STATION TO | ELEMENT | D (CFS) | MINIMUM DEPTH (FT.) | MAXIMUM VELOCITY (FPS) |
|------|--------------|------------|------------|---------|---------------------|------------------------|
| A | 16+09.50 | 20+81.39 | 48" R.C.P. | 111.8 | 1.76 | 21.82 |
| | 20+81.39 | 22+28.73 | 36" R.C.P. | 82.8 | 1.71 | 19.94 |
| | 22+28.73 | 23+28.56 | 24" R.C.P. | 30.0 | 1.32 | 13.67 |
| B-1 | 0+00.00 | 0+84.01 | 24" R.C.P. | 13.0 | 0.60 | 16.25 |
| C | 0+00.00 | 2+21.03 | 30" R.C.P. | 29.0 | 1.16 | 12.97 |
| D1 | 0+00.00 | 0+29.68 | 24" R.C.P. | 25.8 | 0.90 | 18.78 |
| D1-1 | 0+00.00 | 0+31.83 | 24" R.C.P. | 27.0 | 0.74 | 25.50 |



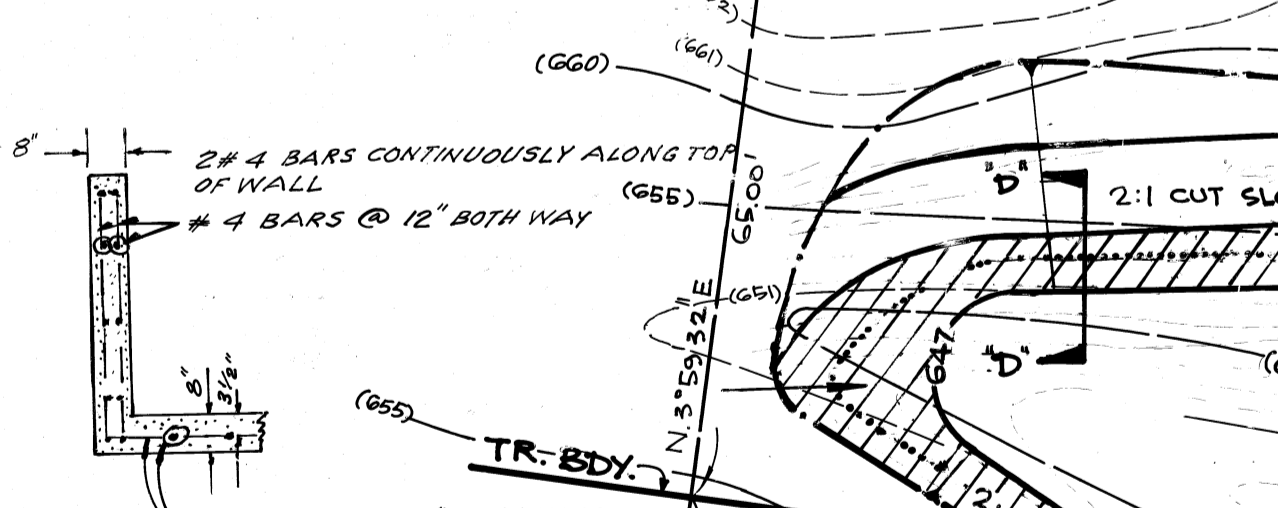
SECTION A-A
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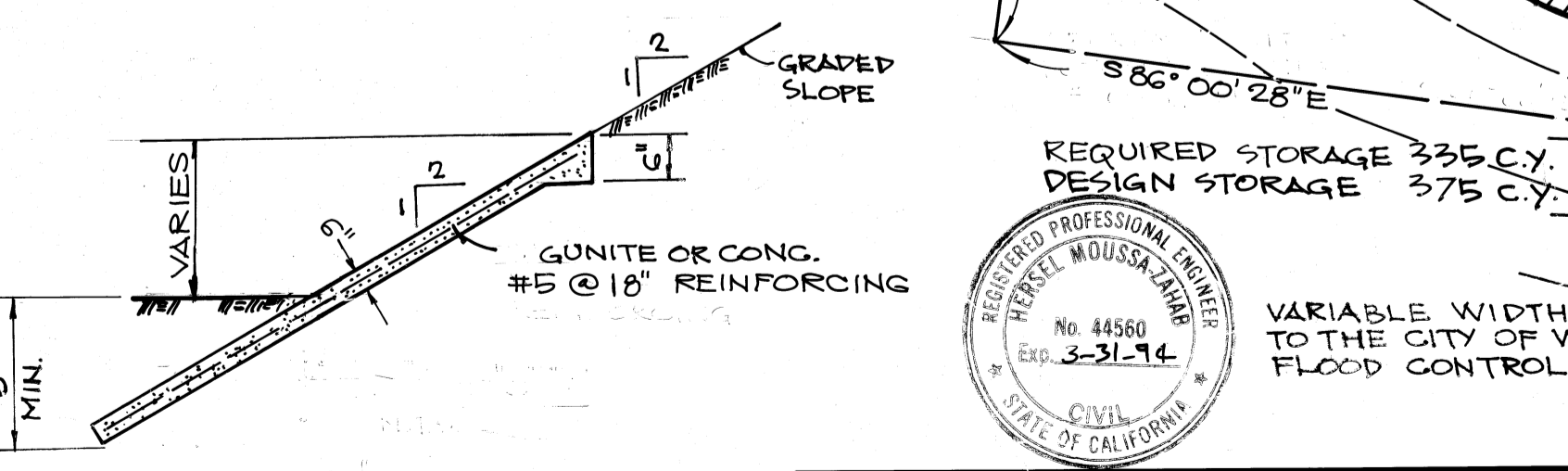
PLAN VIEW
 N.T.S.



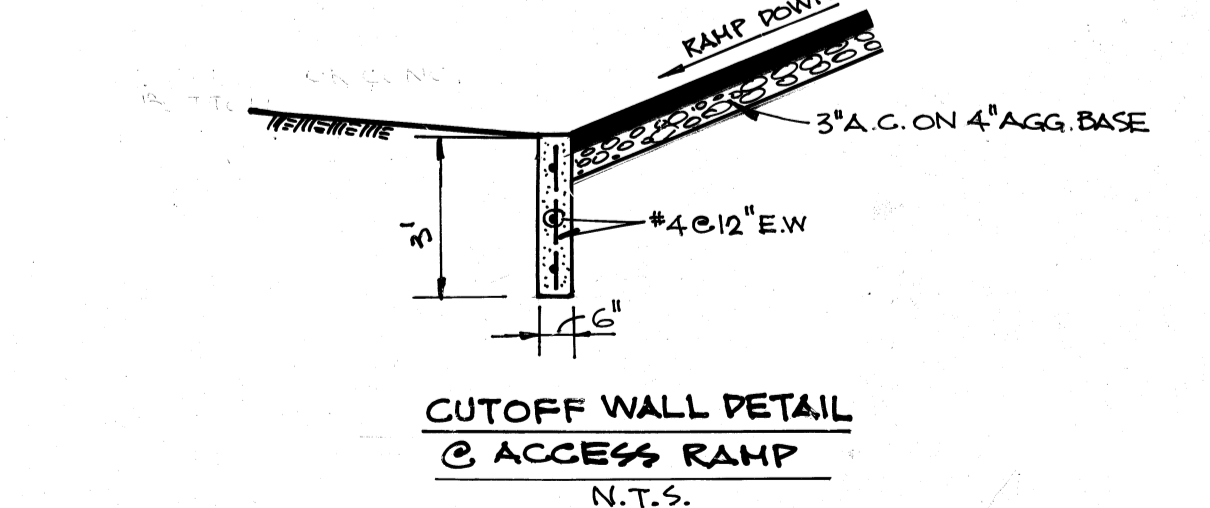
SECTION B-B
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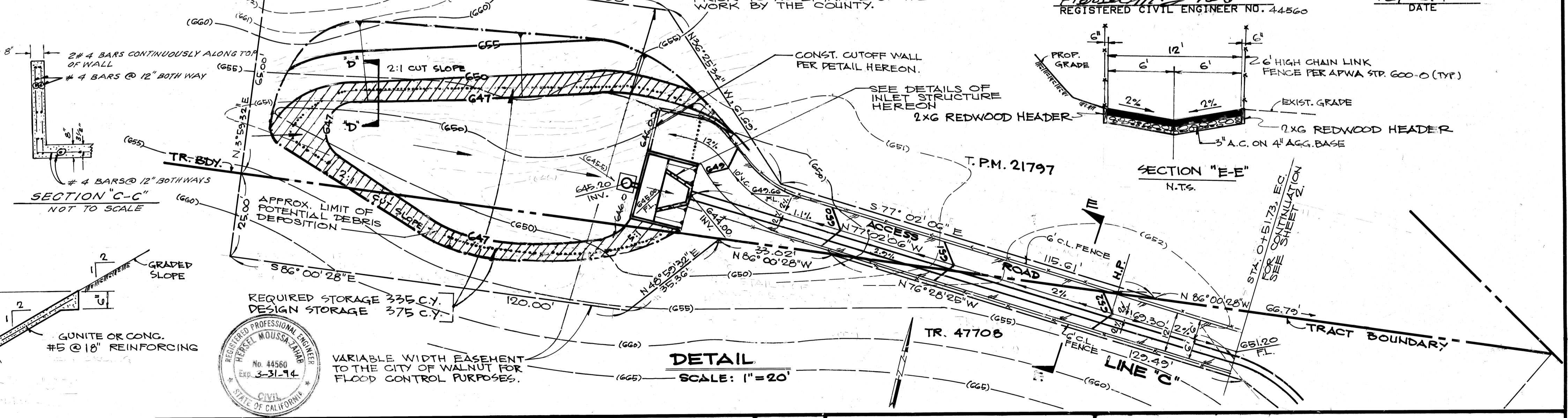
SECTION C-C
 NOT TO SCALE



SECTION D-D
 N.T.S.



CUTOFF WALL DETAIL @ ACCESS RAMP
 N.T.S.



DETAIL
 SCALE: 1" = 20'

PREPARED BY:
SPEIGHT ENGINEERING COMPANY, INC.
 9101 E. SLAUSON AVENUE, SUITE "C"
 PICO RIVERA, CA 90660
 (310) 942-0676
Harold M. Zabel 12/23/92

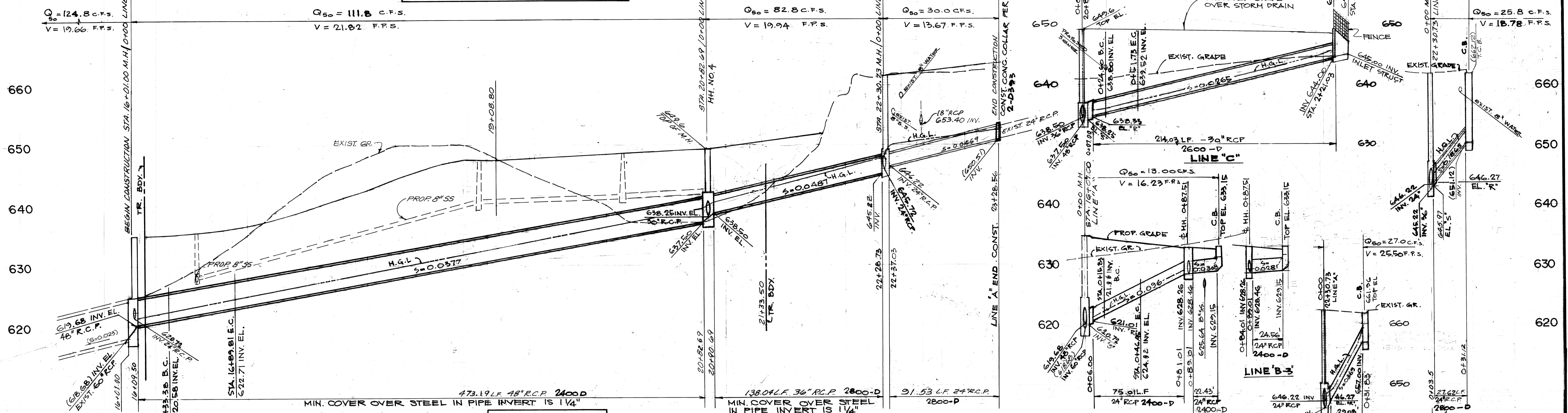
CITY OF WALNUT - APPROVED
 CITY ENGINEER
Jack A. Istik 1-13-93
 JACQ. A. ISTIK
 DEPUTY CITY ENGINEER

CITY OF WALNUT - APPROVED FOR
 PIPE SIZE & D-LOADS ONLY
 DATE: 6/27/89
 DRAWING NO. 40
 VERSION: D05 30
 FILE NO.: 82408
Jack A. Istik 12/21/92
 JACQ. A. ISTIK
 DEPUTY CITY ENGINEER

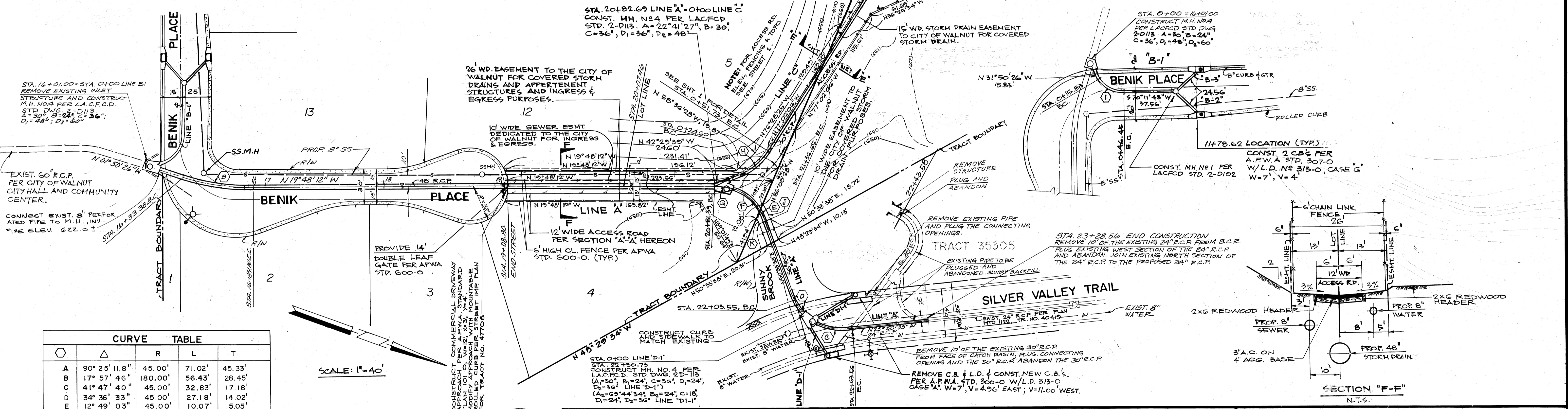
CITY OF WALNUT
COUNTY OF LOS ANGELES
STORM DRAIN PLANS

| NO. | REVISION | REVISED BY | APPROVED BY | DATE |
|-----|----------|------------|-------------|------|
| | | | | |
| | | | | |
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DOUBLE VERTICAL SCALE

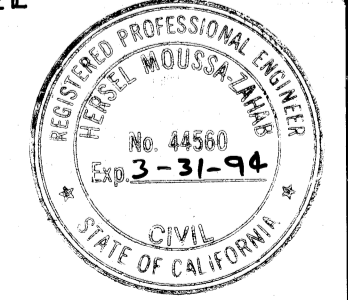


PROFILE SCALE
 HORIZ.: 1"=40'
 VERT.: 1"=8'



CURVE TABLE

| Curve | Δ | R | L | T |
|-------|---------------|---------|--------|--------|
| A | 90° 25' 11.8" | 45.00' | 71.02' | 45.33' |
| B | 17° 57' 46" | 180.00' | 56.43' | 28.45' |
| C | 41° 47' 40" | 45.00' | 32.83' | 17.18' |
| D | 34° 36' 33" | 45.00' | 27.18' | 14.02' |
| E | 12° 49' 03" | 45.00' | 10.07' | 5.05' |
| F | 44° 48' 51" | 45.00' | 35.19' | 18.55' |
| G | 12° 43' 57" | 45.00' | 10.00' | 5.02' |
| H | 34° 32' 27" | 45.00' | 27.13' | 13.99' |
| I | 77° 57' 46" | 22.50' | 30.62' | 18.21' |
| J | 16° 34' 01" | 50.00' | 14.46' | |
| K | 7° 53' 03" | 40.00' | 5.50' | |



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CITY OF WALNUT - APPROVED
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Jack G. Istik 1-13-93
 DEPUTY CITY ENGINEER

CITY OF WALNUT - APPROVED FOR
 PIPE SIZE & D-LOADS ONLY
 JOB NO: 408
 DATE: 6/27/89
 DISK NO: 40
 VERSION: DOS 33
 FILE NO: 89498
 JACK G. ISTIK DEPUTY CITY ENGINEER
 R.C.E. 26558

CITY OF WALNUT
COUNTY OF LOS ANGELES
STORM DRAIN PLANS