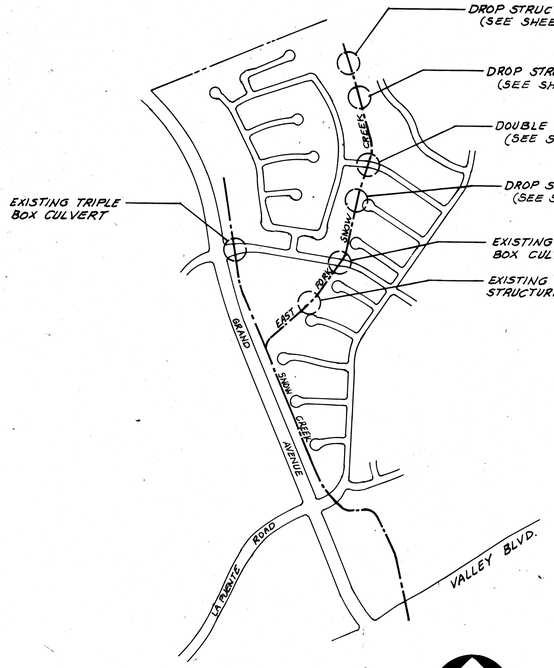


KEY PLAN

SCALE: 1" = 600'

DESIGN CRITERIA FOR CONCRETE STRUCTURES

1. Concrete
   (Working stress design per ACI 318-63)
   f'_c = 4,000 psi
   f_c = 1,800 psi
   v_c = 70 psi
   n = 8
2. Reinforcing steel
   f_y = 60,000 psi (60 grade)
   f_s = 24,000 psi
3. Soils and Foundation
   See report by Leighton and Associates entitled "Design Parameters for Reinforced Concrete Box Culverts Parent Tract 32158 Stearns Ranch, City of Walnut, California, " dated July 6, 1981.
4. Live Load
   AASHTO HS 20-44

STANDARD DRAWINGS

THE FOLLOWING STANDARD DRAWINGS TAKEN FROM THE LOS ANGELES COUNTY FLOOD CONTROL "DESIGN MANUAL" HAVE BEEN REFERENCED ON THIS PROJECT.

1. DWG. No. 2-D191, JUNCTION STRUCTURE No. 3, PLAN AND SECTIONS.
2. DWG. No. 2-D171, STANDARD A-615 REINFORCING BARS.
3. DWG. NO. 2-D189 JUNCTION STRUCTURE NO.1 PLAN AND SECTIONS.

BENCH MARK:

C.G. 1781 ELEV. 617.011

R.D.B.M. TAG NR CTR OF CONG. HEADWALL 24 FT. N. ℄ LA PUENTE RD. + 0.2 MI. W/O GRAND AVE.

BASIS OF BEARINGS

N22°58'05"W FOR THE CENTERLINE OF GRAND AVENUE AS SHOWN ON TRACT NO. 40715, M.B. 998/80-84 WAS USED AS BASIS OF BEARINGS FOR THIS TRACT.

MISCELLANEOUS TRANSFER DRAIN PLANS FOR TRACT No. 32158 M.T.D. No.

STRUCTURAL NOTES:

1. All concrete shall be Portland Cement Concrete with an ultimate 28 days compressive strength of 4000 p.s.i. Cement shall conform to ASTM C 150, Type II.
2. Concrete dimensions shall be measured horizontally or vertically on the profile and parallel to or at right angles (or radially) to centerline of conduit on the plan except as otherwise shown.
3. No concrete shall be placed until the forms and reinforcing steel has been placed, and then inspected and approved by the City Engineer.
4. Exposed edges of concrete members shall be chambered 3/4".
5. Dimensions from face of concrete to steel are to face of bar and shall be 2½inches unless otherwise shown.
6. All reinforcing bars shall conform to ASTM A615, Grade 60, deformed bars.
7. All bar bends and hooks shall conform to the American Concrete Institute's "Building Code Requirements For Reinforced Concrete" Chapter 7 (ACI 318-77).
8. No splices in transverse steel reinforcement will be permitted other than shown on the drawings without approval of the Engineer. No more than two splices will be permitted in any longitudinal bar between transverse joints. Splices shall be staggered.
9. Longitudinal steel shall be lapped 40 bar diameters at splices. Transverse steel shall be lapped as shown on drawings.
10. Placing of reinforcement shall conform to the American Concrete Institute's "Building Code Requirements For Reinforced Concrete" Chapter 7 (AC 318-77).
11. Unless otherwise shown on the details, in curved sections transverse bars shall be placed radially. Straight transverse bars in top and bottom slabs shall be spaced as shown on the typical sections. Spacing shall be at the centerline of construction for single-barrel boxes. Straight bars and L-bars in walls shall be spaced as shown on the typical sections with the spacing measured between the vertical legs of bars.
12. The transverse reinforcing steel shall terminate one and one-half inches from the concrete surfaces unless otherwise shown on the structural details.
13. All keyed and roughened construction joints shall be thoroughly sandblasted to expose the coarse aggregate.
14. Unless otherwise shown on the drawings, transverse joint keyways (in both slabs and walls) as detailed on the drawings shall be placed at the end of each pour, but the spacing thereof shall not exceed 40 feet or be less than 10 feet. All construction joints in bottom slab, top slab and side walls shall be in the same plane. No staggering of joints will be permitted.
15. Transverse construction joints in walls and slabs shall be in the same plane. No staggering of joints will be permitted. Transverse construction joints shall be normal or radial to the centerline of construction.
16. Transverse joints shall be placed at the junction of inlet and outlet sections with closed conduit sections.
17. Transverse construction joints shall not be placed within 30 inches of manhole or junction structure openings.
18. Transverse construction joints shall be placed at all locations where there is a transition from cut to fill at the subgrade for the structure.

GENERAL NOTES:

1. All work shall conform to the requirements of the Standard Specifications for Public Works Construction and 1982-83 supplement.
2. 48 hours prior to construction, the contractor shall notify the City Engineer (714)594-9702. All work shall be prosecuted in the presence of the City Engineer and County Engineer.
3. Elevations are in feet above U.S.C. and G.S. mean sea level datum of 1929.
4. All state and local trench safety rules will be rigidly enforced.
5. The Engineer, VTN, has investigated all available records of the city and of the utility companies involved, and all known structures are shown hereon. It shall be the responsibility of the contractor to locate all substructures, whether or not shown hereon, and to protect them from damage. The contractor shall bear the total expense of repair or replacement of said substructures damaged by his operations in connection with the prosecution of said work.
6. 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 and County Engineer.
7. The contractor must maintain all traffic signs in an erect, readily discernible position and free from obstructions to motorists vision and shall reset same in the proper position upon completion of construction.
8. All fills and backfills shall be compacted to relative density of 90% or greater per ASTM D1557, unless otherwise specified by the soils engineer and approved by the County Engineer and City Engineer during construction.
9. The soils engineer, Leighton & Associates, shall certify that all fills and backfills have been properly compacted.
10. The soils engineer, Leighton & Associates, shall inspect and approve the bottom of all excavations prior to placing fill material or concrete, as the case may be.
11. Backfill structures may consist of native soils in 6-inch to 8-inch lifts if the space is sufficient to permit use of motorized equipment. If not, imported granular material with sand equivalent of 30 should be used. Thorough water densification of the granular soils by jetting should be required.
12. Care should be taken by the contractor when backfilling adjacent to structure. The contractor shall be responsible for any damage to the structures resulting from inappropriate compacting techniques and equipment.
13. Structures shall not be backfilled until they have been inspected and approved by the County Engineer and the City Engineer, and until the concrete has reached a compressive strength of at least 4,000 psi as determined by appropriate tests.
14. The backfill shall be brought up uniformly on all sides of the structure.
15. For soil properties and foundation design criteria, refer to the report entitled "Design Parameters for Reinforced Concrete Box Culverts, Parent Tract 32158, Stearns Ranch, City of Walnut, California" by Leighton & Associates, Inc. dated July 6, 1981, Project No. 2770113-18.
16. Elevation of the top of manholes shall be at finished grade elevation, unless otherwise shown.

ADDITIONAL NOTES:

Approval of this plan by the City of Walnut does not constitute a representation as to the accuracy of the location, or existence or nonexistence of any underground utility, pipe or structure within the limits of this project.

The Contractor shall notify the City Engineer, City of Walnut by telephone (714)594-9702, at least 48 hours before starting any work under this contract.

No revisions shall be made in these plans without the approval of the City Engineer.

Before work can be started, the Contractor must obtain all necessary permits from the City of Walnut.

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.

UTILITY COMPANIES

Rowland Heights Co. Water District
3021 S. Fullerton St.
Rowland Heights, CA
213-697-1726

Walnut Valley Water District
271 S. Brea Canyon Rd
Walnut, CA 91789
714-595-7554

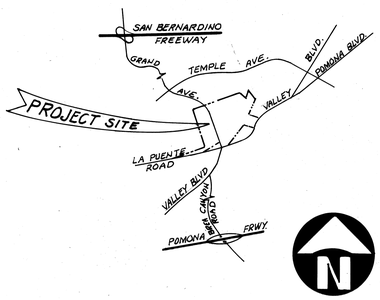
Sewers-City of Walnut
21201 La Puente Rd
Walnut, CA 91789
714-595-7543

So. Calif Gas Co.
708 N. Vincent
Covina, CA 91722
714-981-5795

General Telephone Co.
235 W. Mission
Pomona, CA 91766
714-629-5105

So. Calif. Edison Co.
800 W. Cienega
San Dimas, CA 91773
714-592-3725

Metropolitan Water District
1111 Sunset Blvd.
Los Angeles, CA 90012
213-626-4282



VICINITY MAP

REFERENCES:

TOPOGRAPHY: DON READ CORP., AUG. 1978.
SURVEY FIELD NOTES: VTN

DRAWING LIST

DWG. No.	TITLE
1.	TITLE SHEET, NOTES, VICINITY MAP AND KEY PLAN.
2.	EAST FORK SNOW CREEK DROP STRUCTURE No. 2, PLAN AND SECTION.
3.	EAST FORK SNOW CREEK DOUBLE BOX CULVERT No. 2 , PLAN AND SECTION.
4.	EAST FORK SNOW CREEK DROP STRUCTURE No. 3, PLAN AND SECTION.
5.	EAST FORK SNOW CREEK DROP STRUCTURE No. 4, SECTIONS AND DETAILS.
6.	EAST FORK SNOW CREEK DOUBLE BOX CULVERT No. 2 , SECTIONS AND DETAILS.
7.	TYPICAL CONSTRUCTION JOINT DETAILS.
8.	MISCELLANEOUS DETAILS.
9.	TYPICAL EARTHWORK DETAILS.

NO	DATE	REVISIONS	APP.	DATE
1	9-20-84	CHANGED INLET PIPE SIZE FROM 48"RCP TO 60"RCP (LINE "F") ON SHT. NO. 3	J.L.	10/4/84

STRUCTURE DESIGN UNDER SUPERVISION OF EARL ROY BECKER

Signature Earl Roy Becker SE 11405 4-27-84 Date

NOTE: IF CONSTRUCTION OF IMPROVEMENTS AS SHOWN HEREON ARE NOT COMPLETED WITHIN 18 MONTHS OF APPROVAL DATE, THESE PLANS ARE SUBJECT TO REVIEW BY THE CITY.

APPROVED BY:
CITY OF WALNUT, CITY ENGINEER

Jack G. Istik RCE 21008 7/6/84 DATE

PREPARED BY:
VTN CONSOLIDATED, INC.
ENGINEERS ARCHITECTS PLANNERS SURVEYORS
2301 CAMPUS DRIVE, IRVINE, CALIFORNIA, 92713 (714) 851-5200

SIGNATURE James J. McCarthy R.C.E. 17069 4-27-84 DATE

CITY OF WALNUT
MISC. TRANSFER DRAIN NO.

TITLE SHEET, NOTES, VICINITY MAP & KEY PLAN 137A

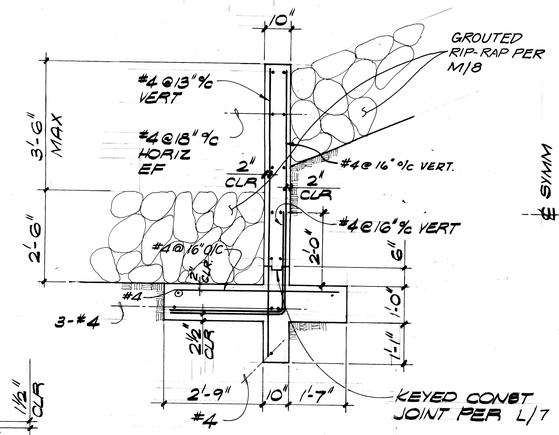
TENTATIVE TRACT No. 32158

DESIGNED BY: P.L.
DRAWN BY: J.M.
CHECKED BY: E.R.B./P.L.

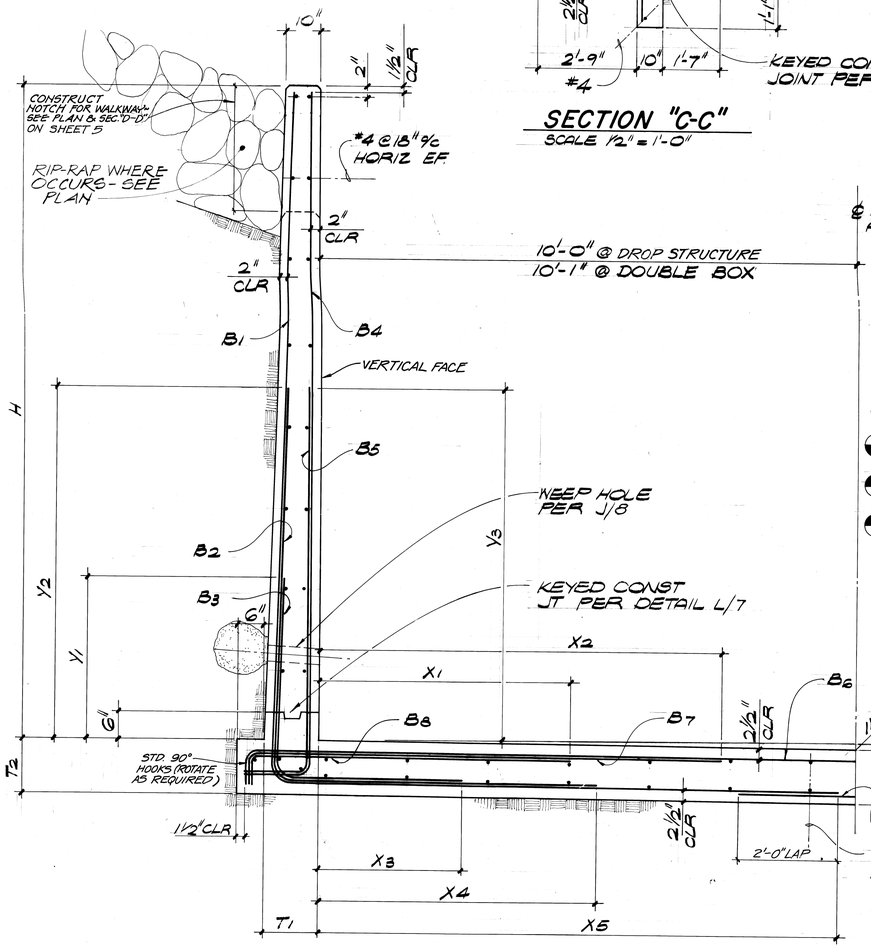
SHEET 1 OF 9

CHANNEL SCHEDULE

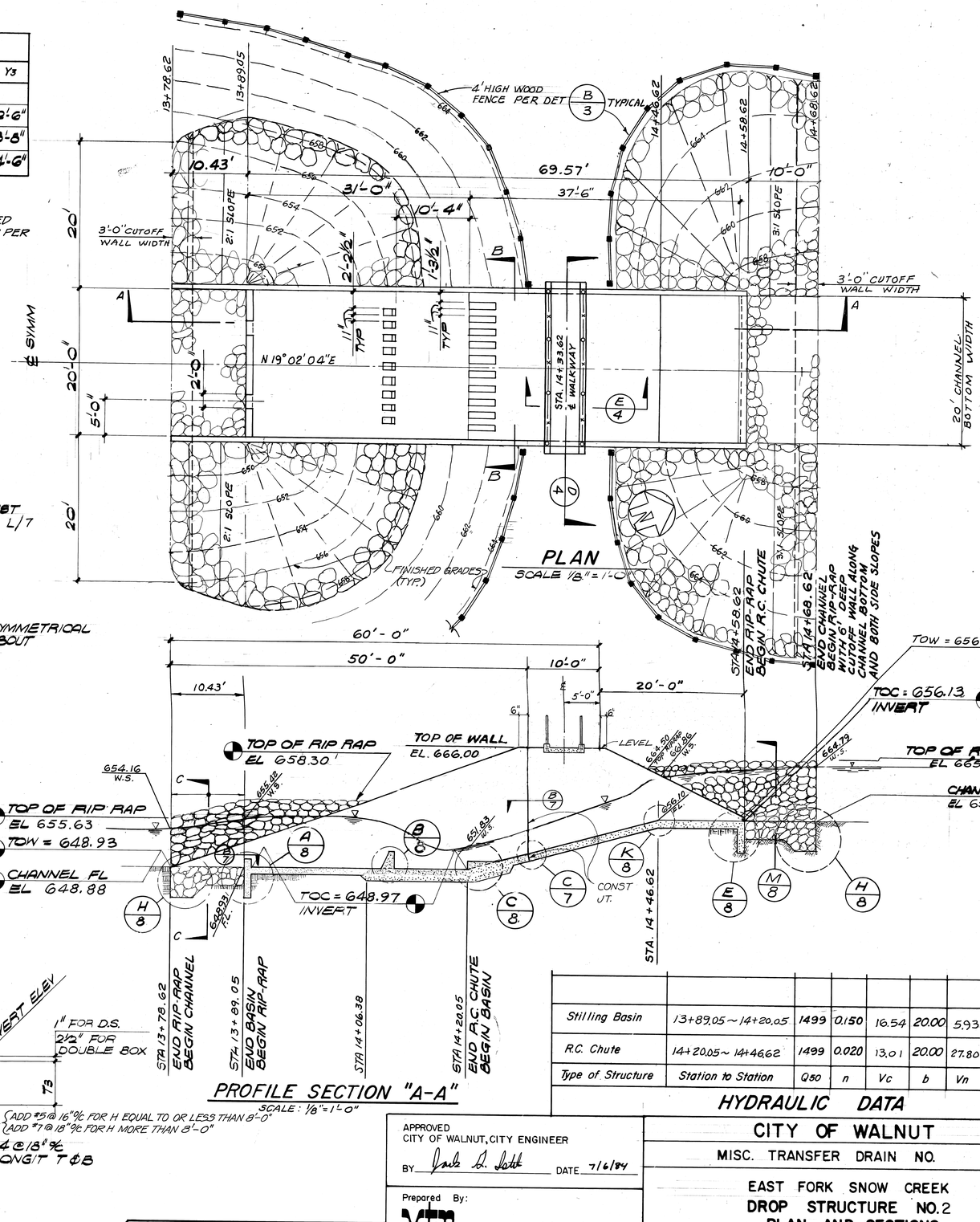
H	T1	T2	T3	B1	B2	B3	B4	B5	B6	B7	B8		X1	X2	X3	X4	X5	Y1	Y2	Y3
8'-0" & LESS	11"	11"	10"	#5@16"	#5@16"	—	#4@16"	#4@16"	#4@16"	#4@16"	—		—	4'-6"	—	2'-2"	6'-4"	—	2'-6"	2'-6"
8'-1" TO 12'-0"	1'-0"	1'-0"	11"	#7@18"	#7@18"	#7@18"	#7@18"	#7@18"	#6@18"	#6@18"	#6@18"		3'-0"	5'-9"	2'-6"	4'-3"	8'-0"	2'-3"	4'-9"	3'-8"
12'-1" TO 14'-0"	1'-2"	1'-2"	1'-1"	#8@18"	#8@18"	#8@18"	#7@16"	#7@16"	#7@16"	#7@15"	#7@15"	—	—	5'-0"	2'-4"	4'-6"	9'-8"	2'-6"	5'-6"	4'-6"



SECTION "C-C"
SCALE 1/2" = 1'-0"



TYPICAL CHANNEL SECTION "B-B" (A/2)
SCALE 3/4" = 1'-0"



PROFILE SECTION "A-A"
SCALE: 1/8" = 1'-0"

PLAN
SCALE 1/8" = 1'-0"

Stilling Basin	13+89.05 ~ 14+20.05	1499	0.150	16.54	20.00	5.93	6.49	4.53
R.C. Chute	14+20.05 ~ 14+46.62	1499	0.020	13.01	20.00	27.80	2.86	5.76
Type of Structure	Station to Station	Q50	n	Vc	b	Vn	Dn	Dc

HYDRAULIC DATA

APPROVED
CITY OF WALNUT, CITY ENGINEER
BY Jack D. Stith DATE 7/6/84

STRUCTURE DESIGN UNDER SUPERVISION OF EARL ROY BECKER
Signature Earl Roy Becker 4-27-84
SE 1405 Date

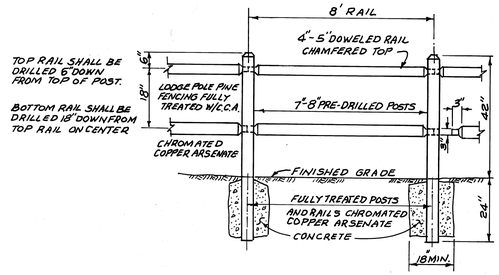
Prepared By:
VTN Consolidated, Inc.
ENGINEERS ARCHITECTS PLANNERS
2301 Campus Drive, Irvine, California 92713 (714) 851-5200
Signature James P. McCarthy 4-27-84
RCE 17069 Date

CITY OF WALNUT
MISC. TRANSFER DRAIN NO.
EAST FORK SNOW CREEK
DROP STRUCTURE NO. 2
PLAN AND SECTIONS 137B
(DOWNSTREAM OF BRIDGEWATER LANE)

TENTATIVE TRACT No. 32158

Designed By: P.L.
Drawn By: G.V.
Checked By E.R.B./P.L.

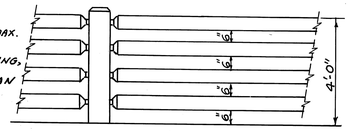
sheet no. 2 of 9



EQUESTRIAN FENCE-STANDARD (A/3)

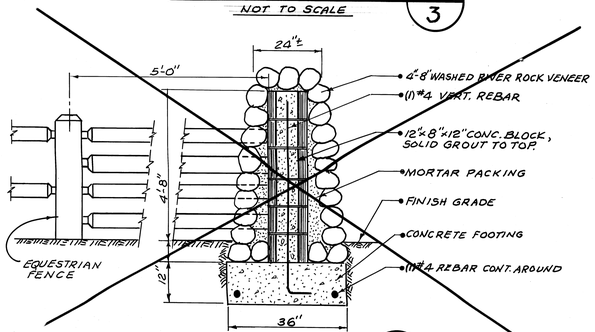
(CITY OF WALNUT) NOT TO SCALE

NOTES:
- 8"ϕ POSTS @ 10' O.C. MAX.
- 6"ϕ RAILS
- WOOD SPECS, FOOTING, ETC. PER CITY OF WALNUT EQUESTRIAN TRAIL STANDARDS PER (A/3) HEREON



4' HIGH WOOD FENCE (B/3)

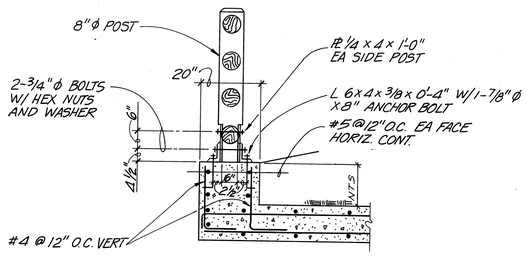
NOT TO SCALE



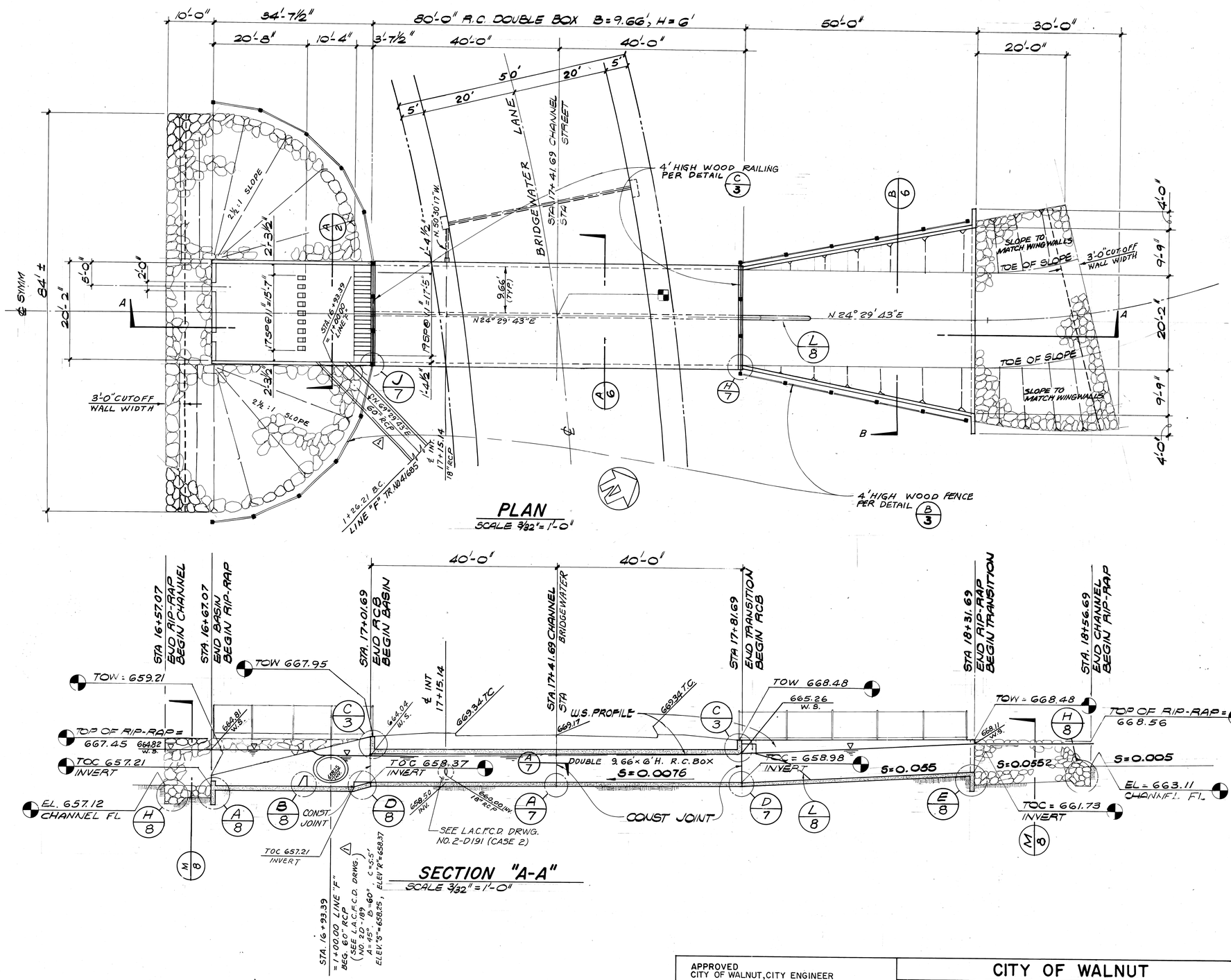
STONE PILASTER (C/3)

NOT TO SCALE

NOTE:
ALL METAL ITEMS SHALL BE HOT-DIPPED GALVANIZED



RAILING DETAIL (C/3)



NO	DATE	REVISIONS	APP.	DATE
1	9-20-84	CHANGED INLET PIPE SIZE FROM 48"RCP TO 60"RCP (LINE "F")		

STRUCTURE DESIGN UNDER SUPERVISION OF EARL ROY BECKER

Signature Earl Roy Becker 4-27-84
SE 14405 Date

HYDRAULIC DATA

Type of Structure	Station to Station	Qso	n	So	b	Vn	Dn	Dc
Stilling Basin	16+67.07~17+01.69	1499	0.025	—	20'-2"	—	—	—
R.C Double Box B=9.66', H=6'	17+01.69~17+18.39	1499	0.015	0.0076	20'-2"	14.09	5.67	5.89
	17+18.39~17+81.69	1452				12.94	6.28	5.76
Transition	17+81.69~18+31.69	1452	0.025	0.0055	20'-2"	—	—	—

APPROVED
CITY OF WALNUT, CITY ENGINEER
BY Jack D. Sotak DATE 7/6 84

Prepared By:
VTN Consolidated, Inc.
ENGINEERS ARCHITECTS PLANNERS
2301 Campus Drive, Irvine, California 92715 (714) 851-5200
Signature James J. McCarthy RCE 17069 4-27-84 Date

CITY OF WALNUT

MISC. TRANSFER DRAIN NO.

EAST FORK SNOW CREEK
DOUBLE BOX CULVERT No. 2
PLAN AND SECTION
(AT BRIDGEWATER LANE)

TENTATIVE TRACT No. 32158

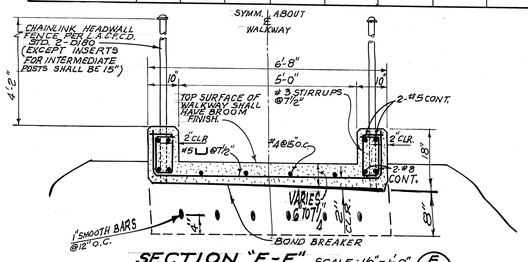
Designed By: P.L.
Drawn By: G.V.
Checked By: E.R.B. / P.L.

sheet no. 3 of 9

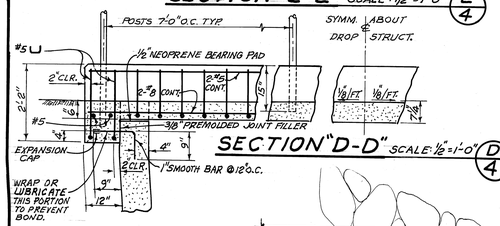
137C

CHANNEL SCHEDULE

H	T1	T2	T3	B1	B2	B3	B4	B5	B6	B7	B8		X1	X2	X3	X4	X5	Y1	Y2	Y3
8'-0" & LESS	11"	11"	10"	#5@16"	#5@16"	—	#4@16"	#4@16"	#4@16"	#4@16"	—		—	4'-6"	—	2'-2"	6'-4"	—	2'-6"	2'-6"
8'-1" TO 12'-0"	1'-0"	1'-0"	11"	#7@18"	#7@18"	#7@18"	#7@15"	#7@15"	#6@18"	#6@18"	#6@18"		3'-0"	5'-9"	2'-6"	4'-3"	8'-0"	2'3"	4'-9"	3'-8"
12'-1" TO 14'-0"	1'-2"	1'-2"	1'-1"	#8@18"	#8@18"	#8@18"	#7@16"	#7@16"	#7@15"	#7@15"	—		—	5'-0"	2'-4"	4'-6"	9'-8"	2'-6"	5'-6"	4'-6"



SECTION "E-E" SCALE: 1/2"=1'-0" (E/4)



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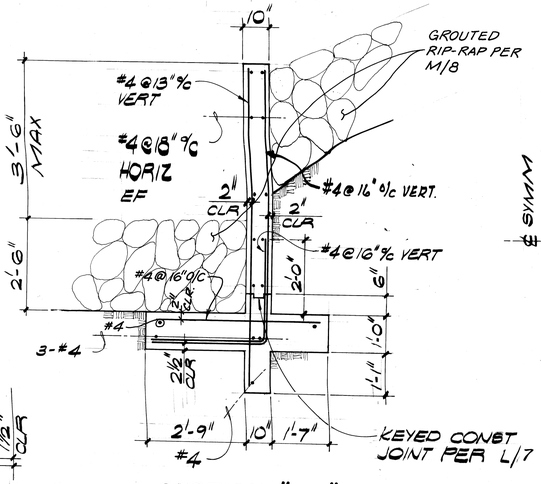
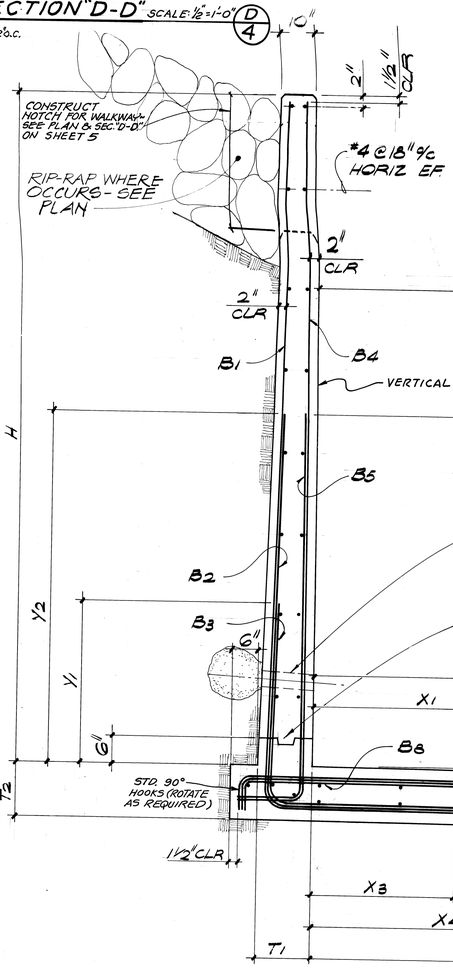
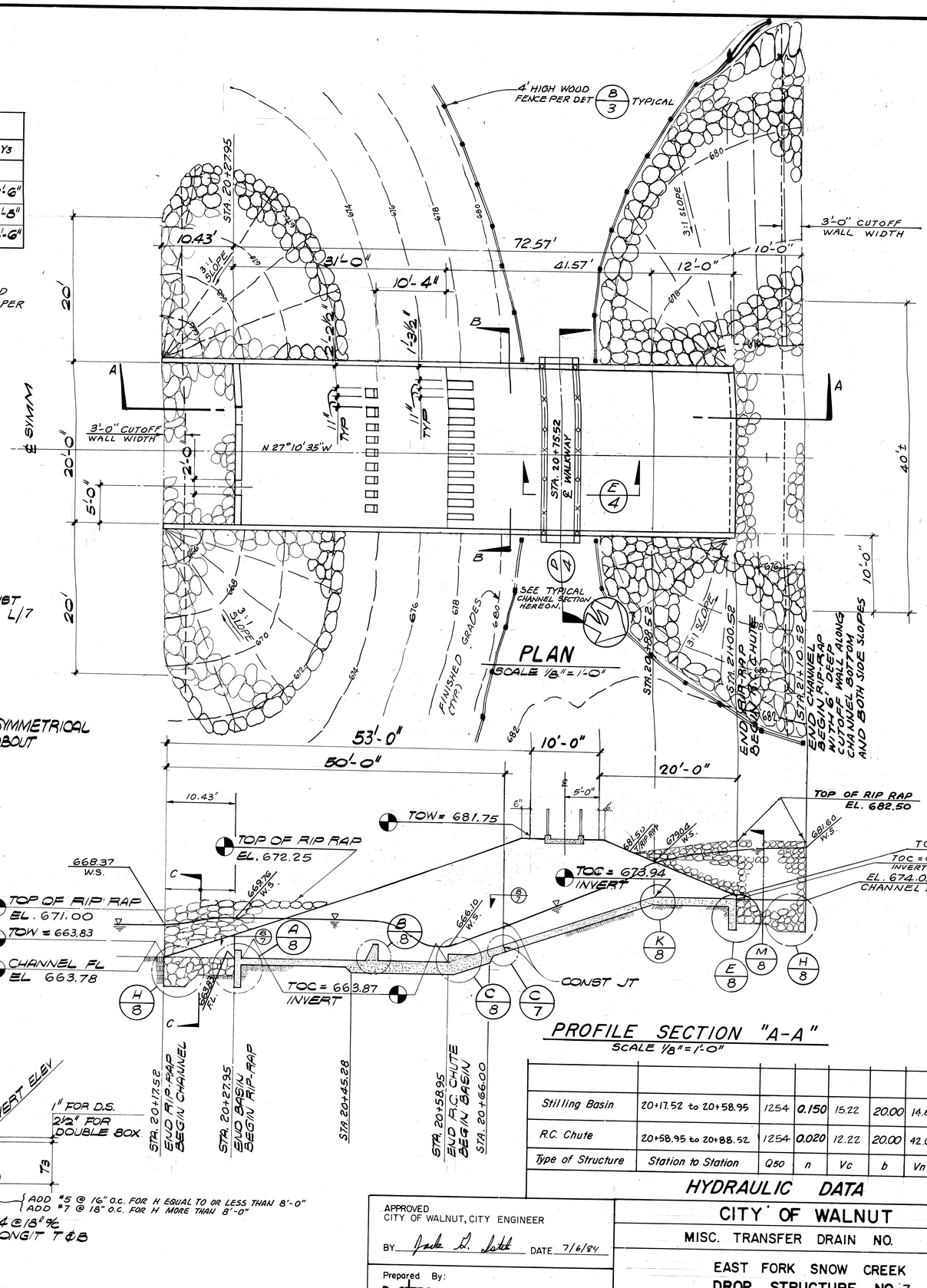


SECTION "C-C"
SCALE 1/2" = 1'-0"



TYPICAL CHANNEL SECTION "B-B" (A/4)
SCALE 3/4" = 1'-0"



PROFILE SECTION "A-A"
SCALE 1/8" = 1'-0"

Stilling Basin	20+17.52 to 20+58.95	1254	0.150	15.22	20.00	14.03	4.47	4.12
R.C. Chute	20+58.95 to 20+88.52	1254	0.020	12.22	20.00	42.08	1.49	5.13
Type of Structure	Station to Station	Q50	n	Vc	b	Vn	Dn	Dc

HYDRAULIC DATA

STRUCTURE DESIGN UNDER SUPERVISION OF EARL ROY BECKER
Signature Earl Roy Becker SE 1405 Date 4-27-84

APPROVED
CITY OF WALNUT, CITY ENGINEER
BY Jack D. Sabek DATE 7/6/84

Prepared By:
VTN Consolidated, Inc.
ENGINEERS ARCHITECTS PLANNERS
2301 Campus Drive, Irvine, California 92713 (714) 851-5200
Signature James Lee Corley RCE 17069 Date 4-27-84

CITY OF WALNUT
MISC. TRANSFER DRAIN NO.
EAST FORK SNOW CREEK
DROP STRUCTURE NO. 3
PLAN AND SECTIONS 137D
(UPSTREAM OF BRIDGEWATER LANE)

TENTATIVE TRACT No. 32158

Designed By: P.L.
Drawn By: G.V.
Checked By: E.R.B. / P.L.

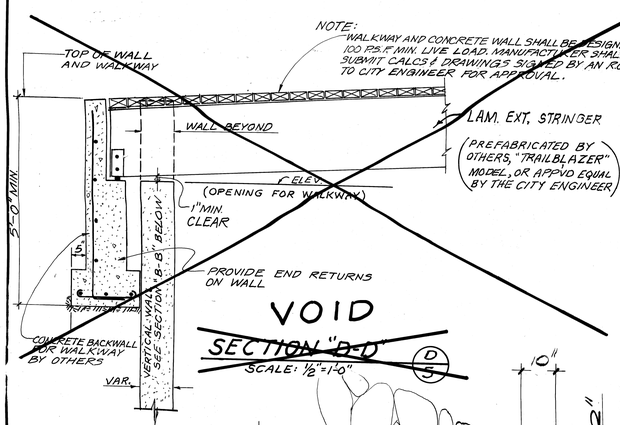
sheet no. 4 of 9

PLN 4/25/84

CHANNEL SCHEDULE

H	T1	T2	T3	B1	B2	B3	B4	B5	B6	B7	B8		X1	X2	X3	X4	X5	Y1	Y2	Y3
8'-0" & LESS	11"	11"	10"	#5@16"	#5@16"	—	#4@16"	#4@16"	#4@16"	#4@16"	—		—	4'-6"	—	2'-2"	6'-4"	—	2'-6"	2'-6"
8'-1" TO 12'-0"	1'-0"	1'-0"	11"	#7@18"	#7@18"	#7@18"	#7@18"	#7@18"	#6@18"	#6@18"	#6@18"		3'-0"	5'-9"	2'-6"	4'-3"	8'-0"	2'-3"	4'-9"	3'-8"
12'-1" TO 14'-0"	1'-2"	1'-2"	1'-1"	#8@18"	#8@18"	#8@18"	#7@16"	#7@16"	#7@15"	#7@15"	—		—	5'-0"	2'-4"	4'-6"	9'-8"	2'-6"	5'-6"	4'-6"

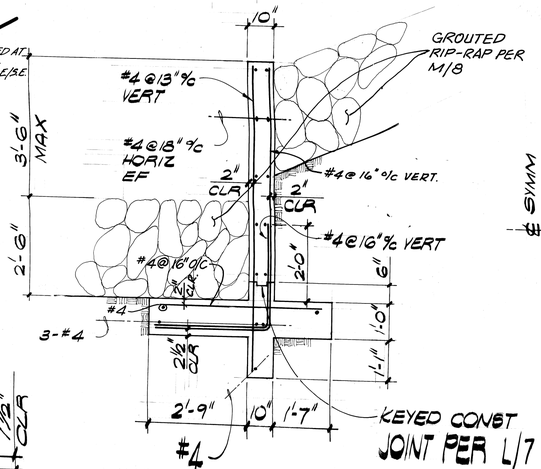
NOTE: WALKWAY AND CONCRETE WALL SHALL BE DESIGNED AT 100 PS.F MIN. LIVE LOAD. MANUFACTURER SHALL SUBMIT CALCS & DRAWINGS SIGNED BY AN RCE/SE TO CITY ENGINEER FOR APPROVAL.



VOID

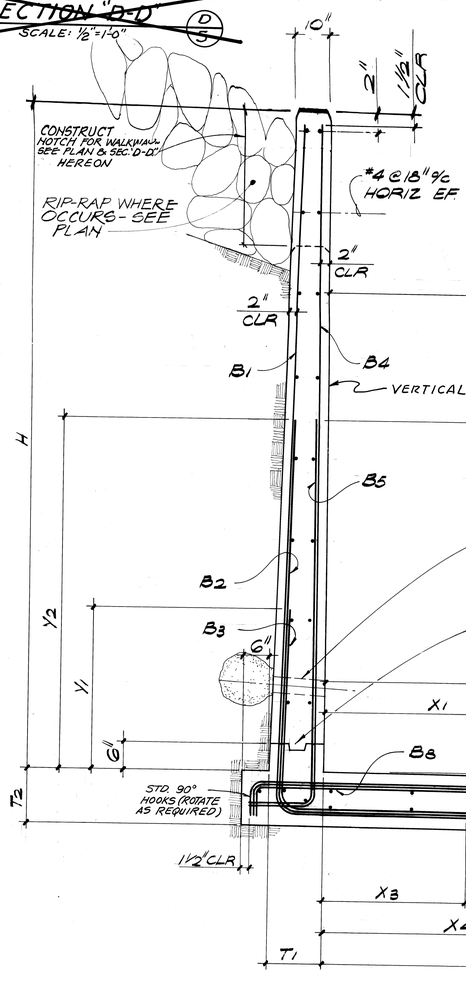
~~SECTION "B-B"~~ (D/5)

~~SCALE: 1/2"=1'-0"~~



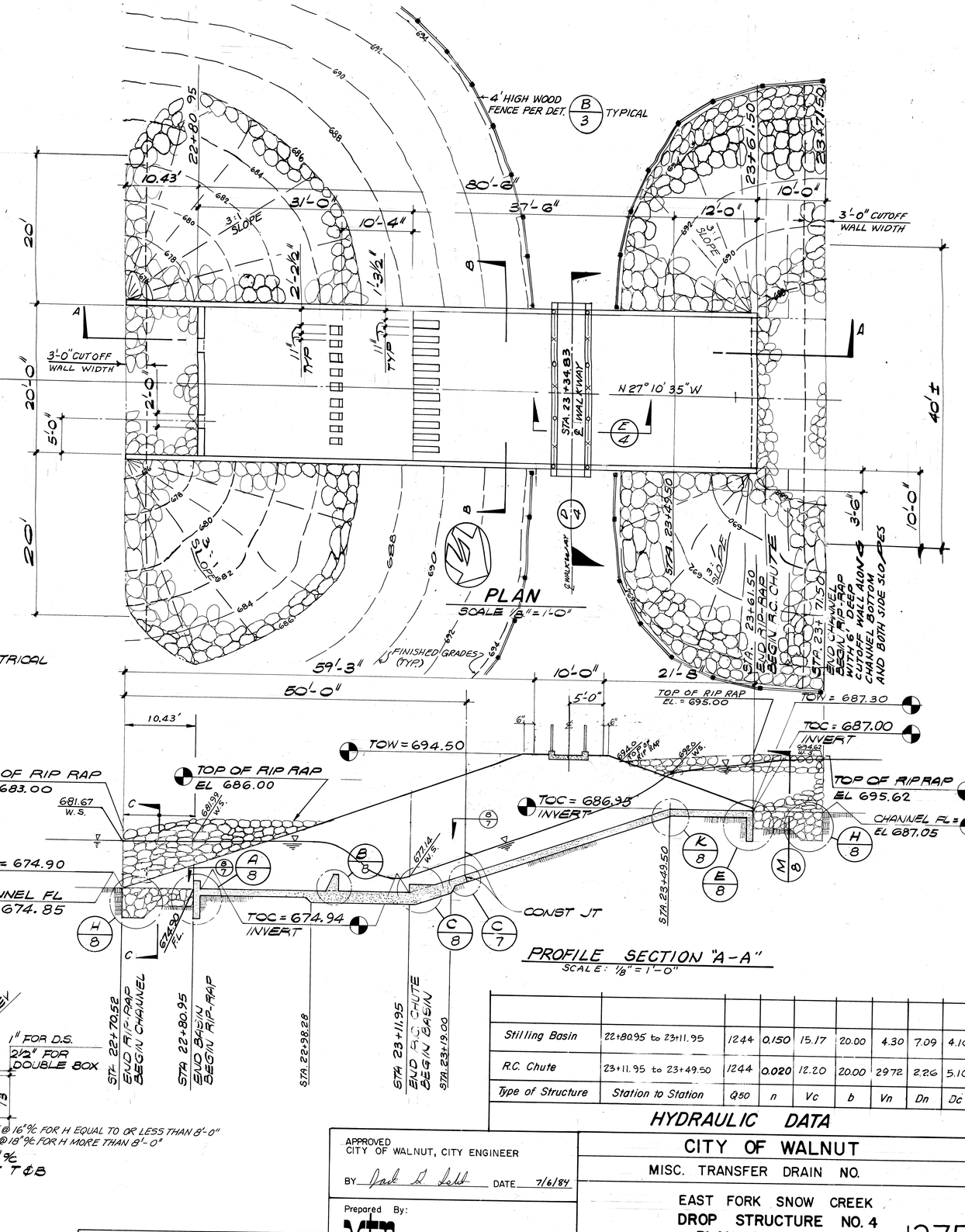
SECTION "C-C"

SCALE 1/2" = 1'-0"



TYPICAL CHANNEL SECTION "B-B" (A/5)

SCALE 3/4" = 1'-0"



PROFILE SECTION "A-A"

SCALE: 1/8" = 1'-0"

Stilling Basin	22+80.95 to 23+11.95	1244	0.150	15.17	20.00	4.30	7.09	4.10
R.C. Chute	23+11.95 to 23+49.50	1244	0.020	12.20	20.00	29.72	2.26	5.10
Type of Structure	Station to Station	Q50	n	Vc	b	Vn	Dn	Dc

HYDRAULIC DATA

STRUCTURE DESIGN UNDER SUPERVISION OF EARL ROY BECKER

Signature Earl Roy Becker SE 11705 Date 4-27-84

APPROVED CITY OF WALNUT, CITY ENGINEER

BY Jack D. Lobb DATE 7/6/84

Prepared By:

VTN Consolidated, Inc. ENGINEERS ARCHITECTS PLANNERS 7301 Campus Drive, Irvine, California 92713 (714) 851-5200

Signature James J. McCarthy RCE 17069 Date 4-27-84

CITY OF WALNUT

MISC. TRANSFER DRAIN NO.

EAST FORK SNOW CREEK

DROP STRUCTURE NO. 4

PLAN AND SECTIONS

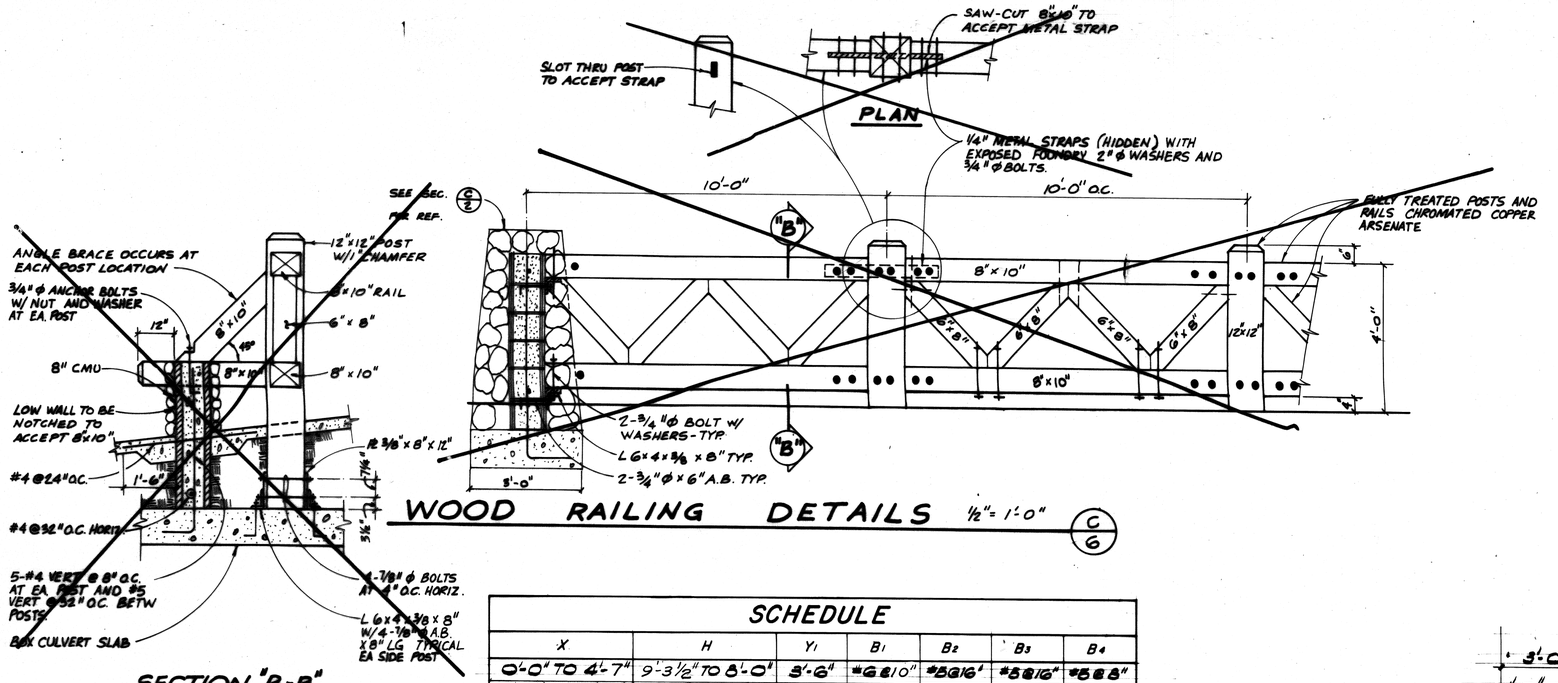
(AT NORTHERLY PORTION OF THE PROPERTY)

137E

TENTATIVE TRACT No. 32158

Designed By: P.L.
Drawn By: G.V.
Checked By: E.R.B. / P.L.

sheet no. 5 of 9



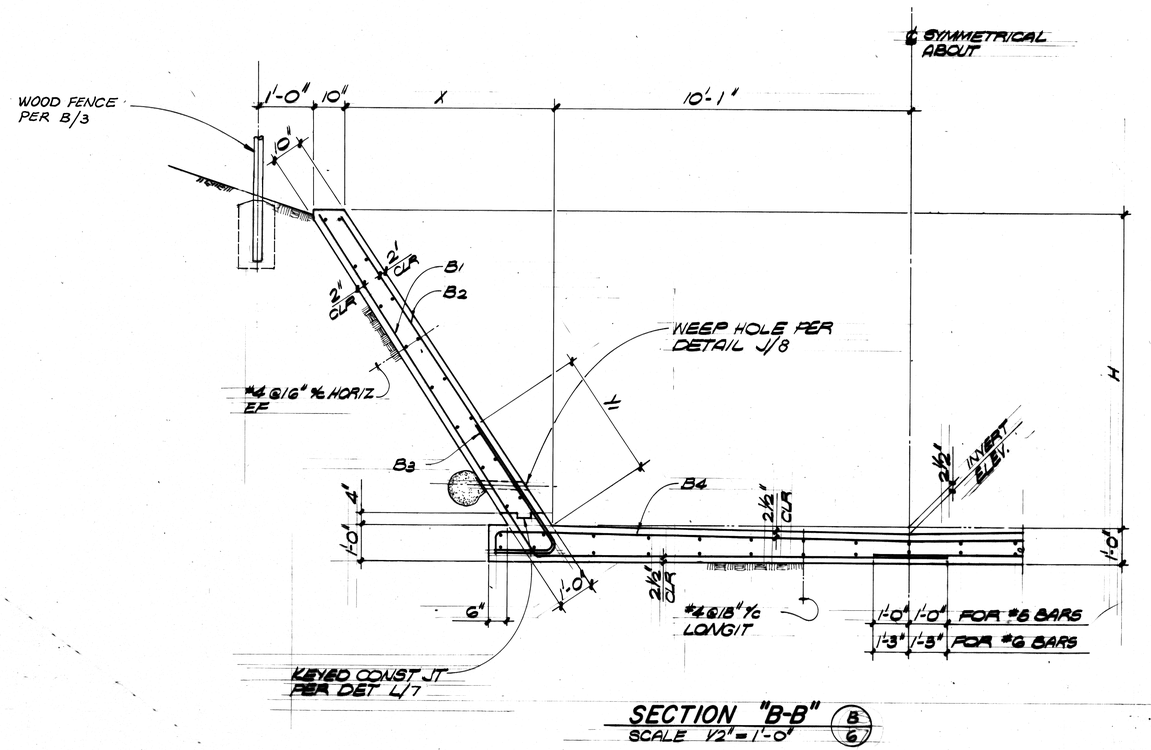
WOOD RAILING DETAILS

1/2"= 1'-0" (C/6)

SECTION "B-B"

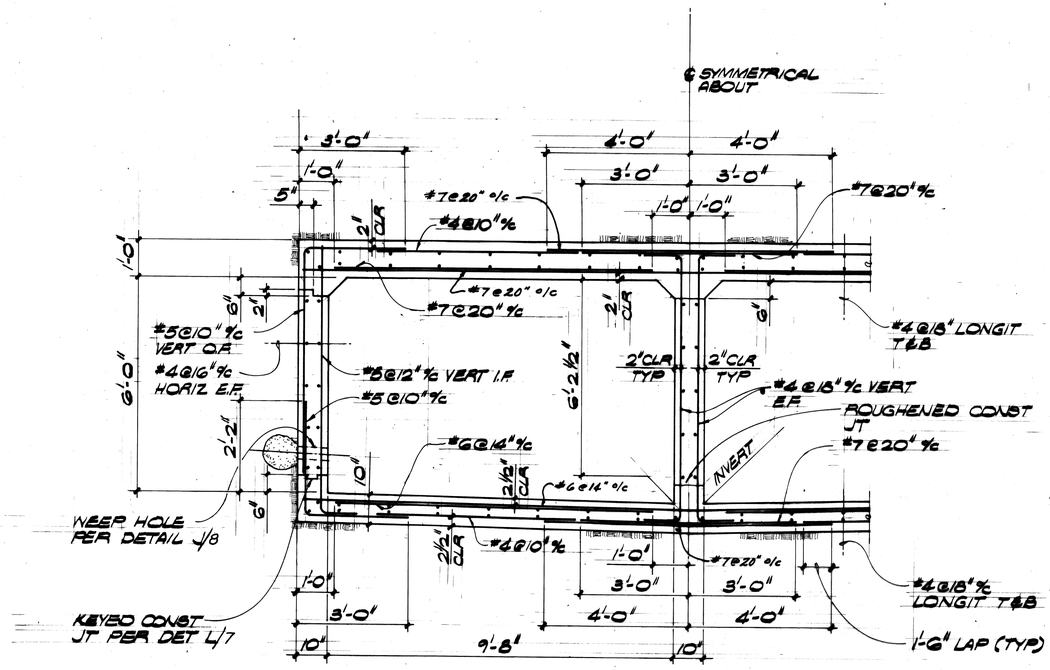
SCALE 1/2" = 1'-0"

SCHEDULE						
X	H	Y1	B1	B2	B3	B4
0'-0" TO 4'-7"	9'-3 1/2" TO 8'-0"	3'-6"	#6@10"	#5@16"	#5@16"	#5@8"
4'-10" TO 7'-3"	7'-11" TO 7'-3"	4'-0"	#6@10"	#6@16"	#6@16"	#6@8"
7'-6" TO 9'-9"	7'-2" TO 6'-6 1/2"	4'-6"	#5@12"	#7@14"	#7@14"	#7@7"



SECTION "B-B"

SCALE 1/2" = 1'-0" (B/6)



SECTION "A-A"

SCALE 1/2" = 1'-0" (A/6)

STRUCTURE DESIGN UNDER SUPERVISION OF EARL ROY BECKER

Signature SE 1405 4-27-84 Date

APPROVED
CITY OF WALNUT, CITY ENGINEER

BY _____ DATE 7/6/84

Prepared By:

VTN Consolidated, Inc.
ENGINEERS ARCHITECTS PLANNERS
2301 Campus Drive, Irvine, California 92713 (714) 851-5200

Signature _____ RCE 17069 4-27-84 Date

CITY OF WALNUT

MISC. TRANSFER DRAIN NO.

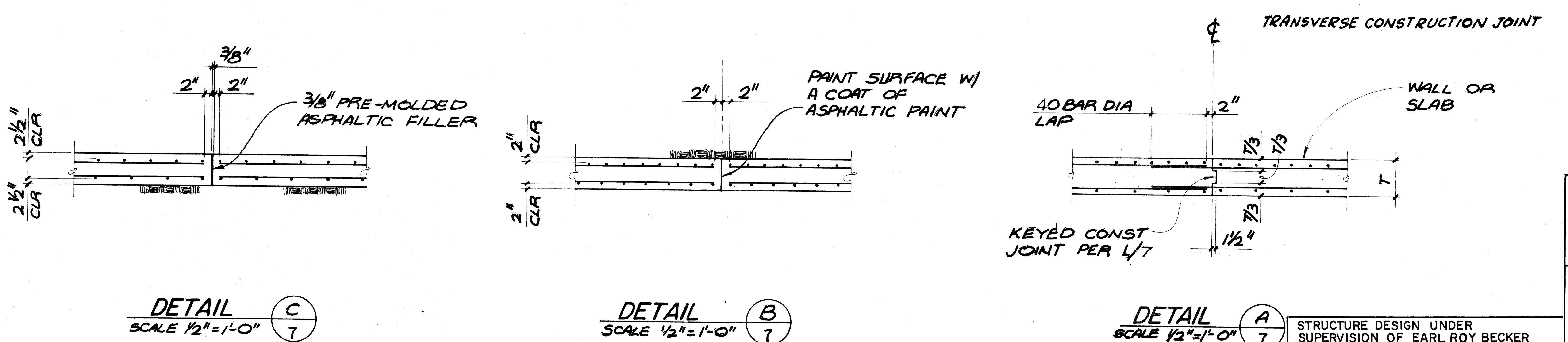
SNOW CREEK
DOUBLE BOX CULVERT NO. 2
SECTIONS AND DETAILS

137E

TENTATIVE TRACT No. 32158

Designed By: R.L.
Drawn By: J.M.
Checked By: E.R.B. / R.L.

sheet no. 6 of 9
6



STRUCTURE DESIGN UNDER SUPERVISION OF EARL ROY BECKER

Signature *Earl Roy Becker* 4-27-84 — SE 1905 — Date

APPROVED
CITY OF WALNUT, CITY ENGINEER

BY *[signature]* DATE 7/6/84

Prepared By:

VTN Consolidated, Inc.
ENGINEERS ARCHITECTS PLANNERS
2301 Campus Drive, Irvine, California 92713 (714) 833-2200

Signature *James J. McCarthy* 4-27-84 — RCE 10069 — Date

CITY OF WALNUT

MISC. TRANSFER DRAIN NO.

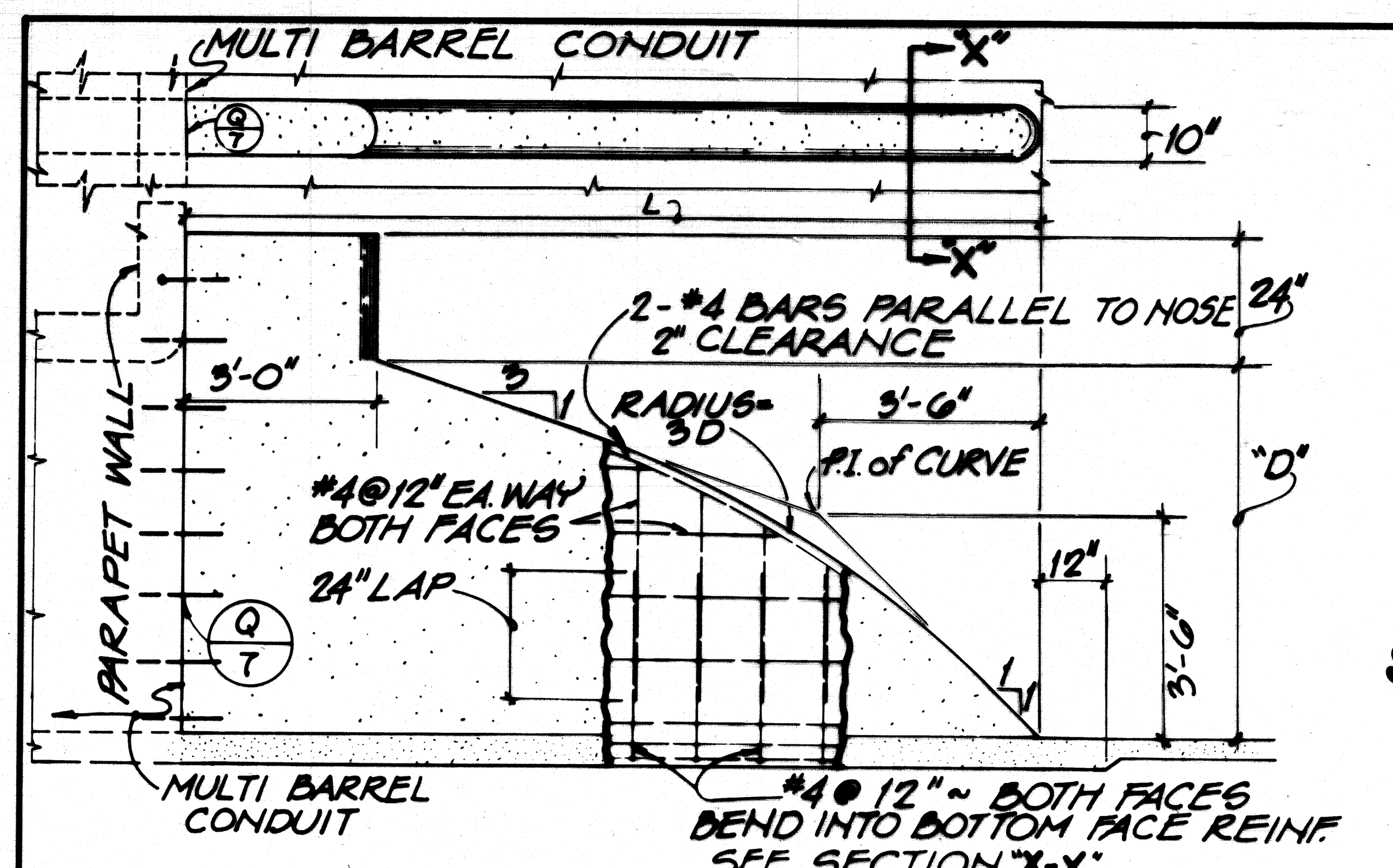
TYPICAL CONSTRUCTION JOINT DETAILS

137G

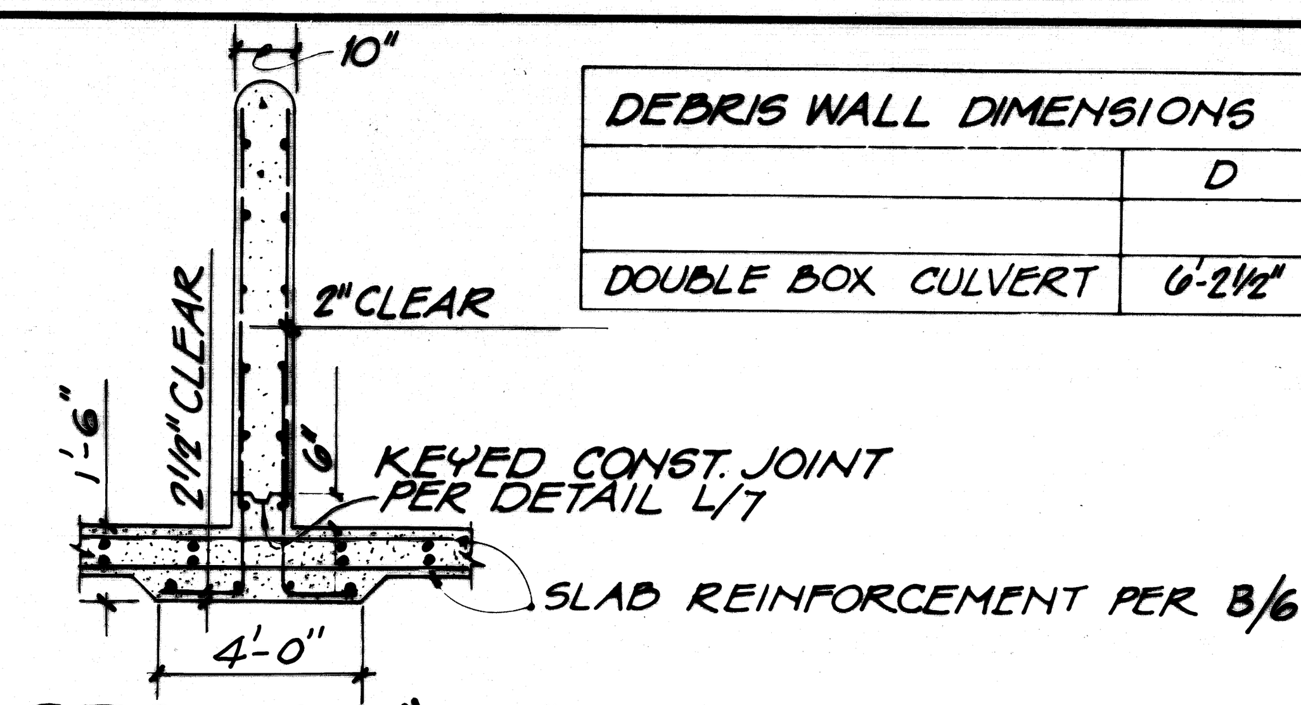
TENTATIVE TRACT No. 32158

Designed By	P.L.
Drawn By	J.M.
Checked By	E.R.B. / P.L.

sheet no. 7 of 9



DEBRIS WALL (L/8)
NO SCALE



SECTION "X-X"

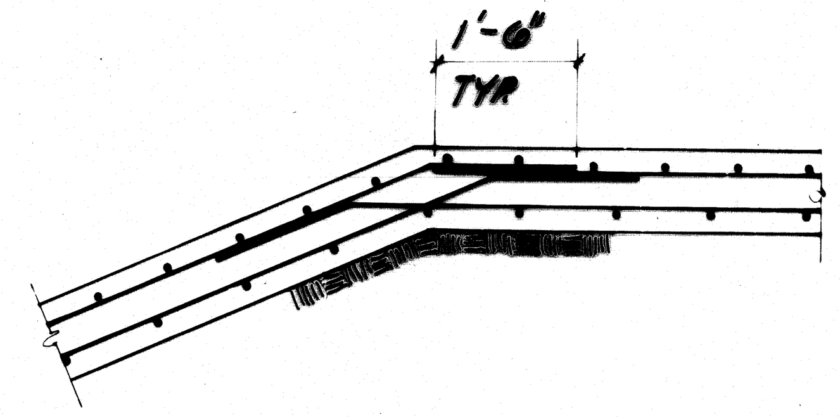
DEBRIS WALL DIMENSIONS	D	L
DOUBLE BOX CULVERT	6'-2½"	14'-7½"

RIPRAP NOTES (TYPICAL)

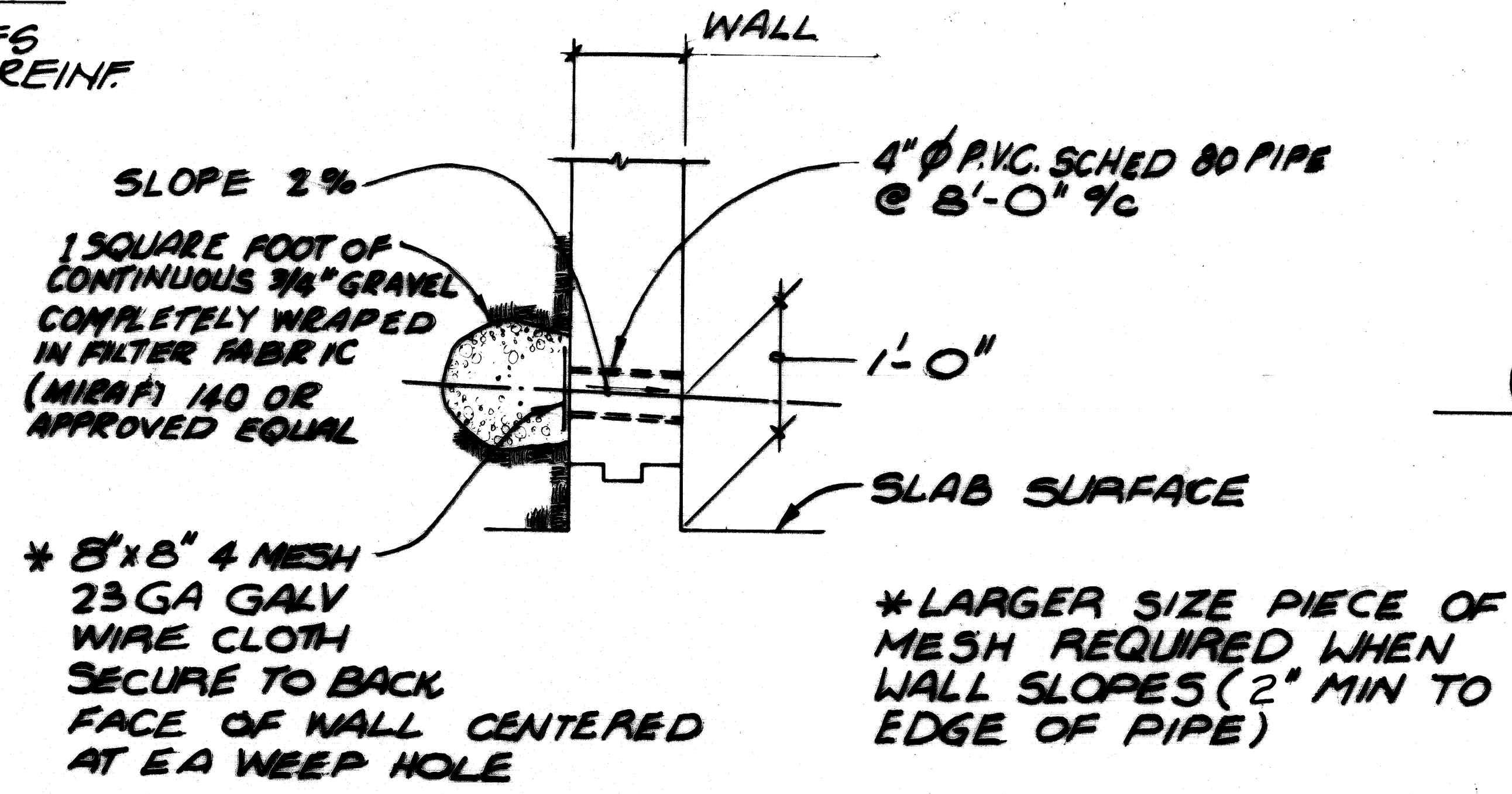
1. Rocks for grouted riprap shall be good quality rock meeting the requirements of the standard specifications. The smallest dimension shall exceed 3 inches and the largest dimension shall not exceed 18 inches. The gradation of rocks shall be as shown on Table "A" hereon.
2. There shall be a grout bed 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.
3. Surface rocks shall be imbedded from 1/2 to 2/3 of their maximum dimension.

TABLE "A"
GRADATION OF RIPRAP

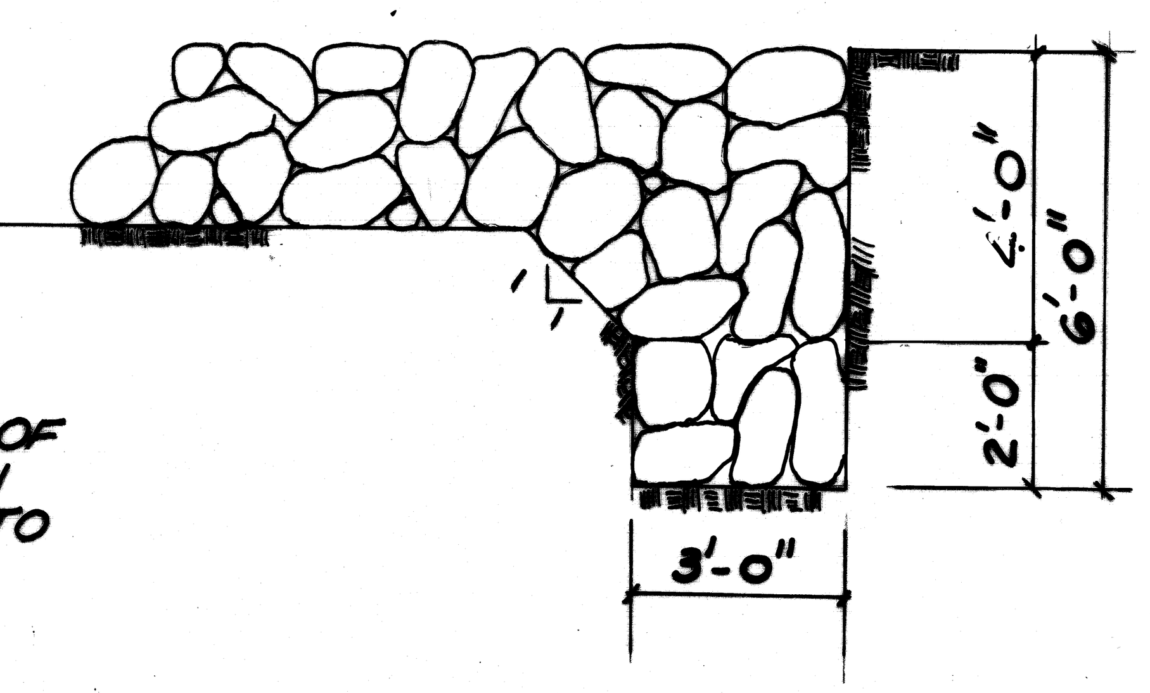
ROCK SIZE	PERCENTAGE IN WEIGHT
18"	15 %
12"	65 %
6"	15 %
3"	5 %



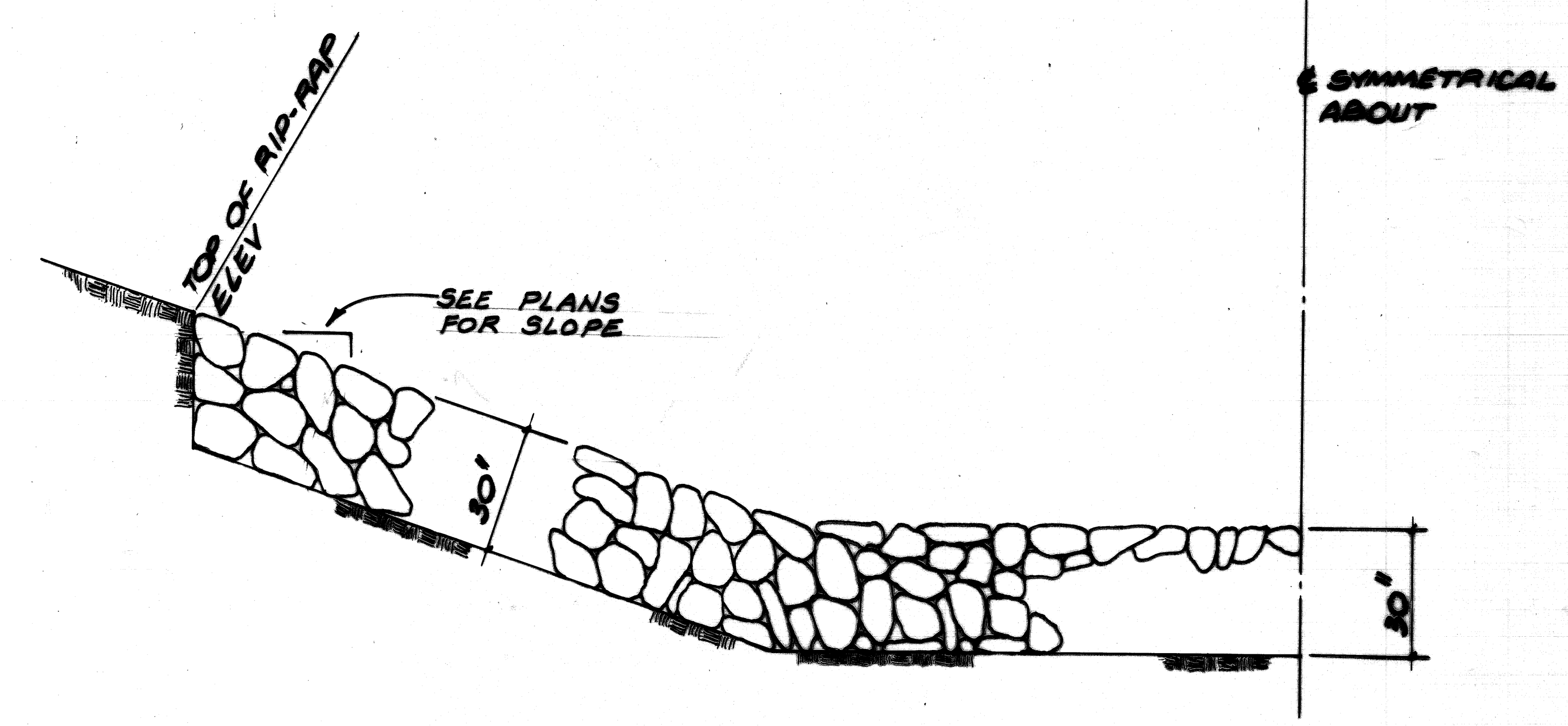
DETAIL (K/8)
SCALE 1/2" = 1'-0"



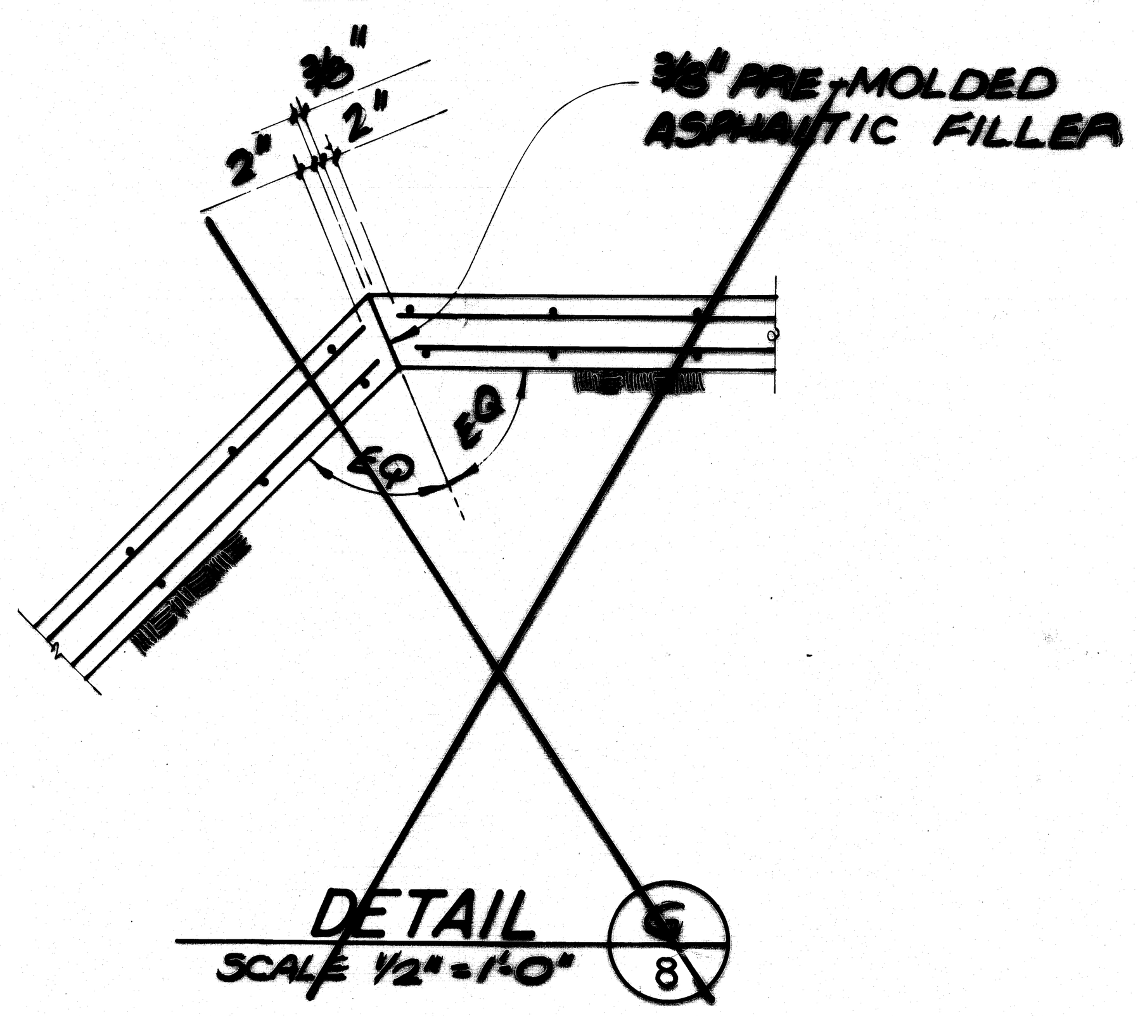
DETAIL (J/8)
NO SCALE



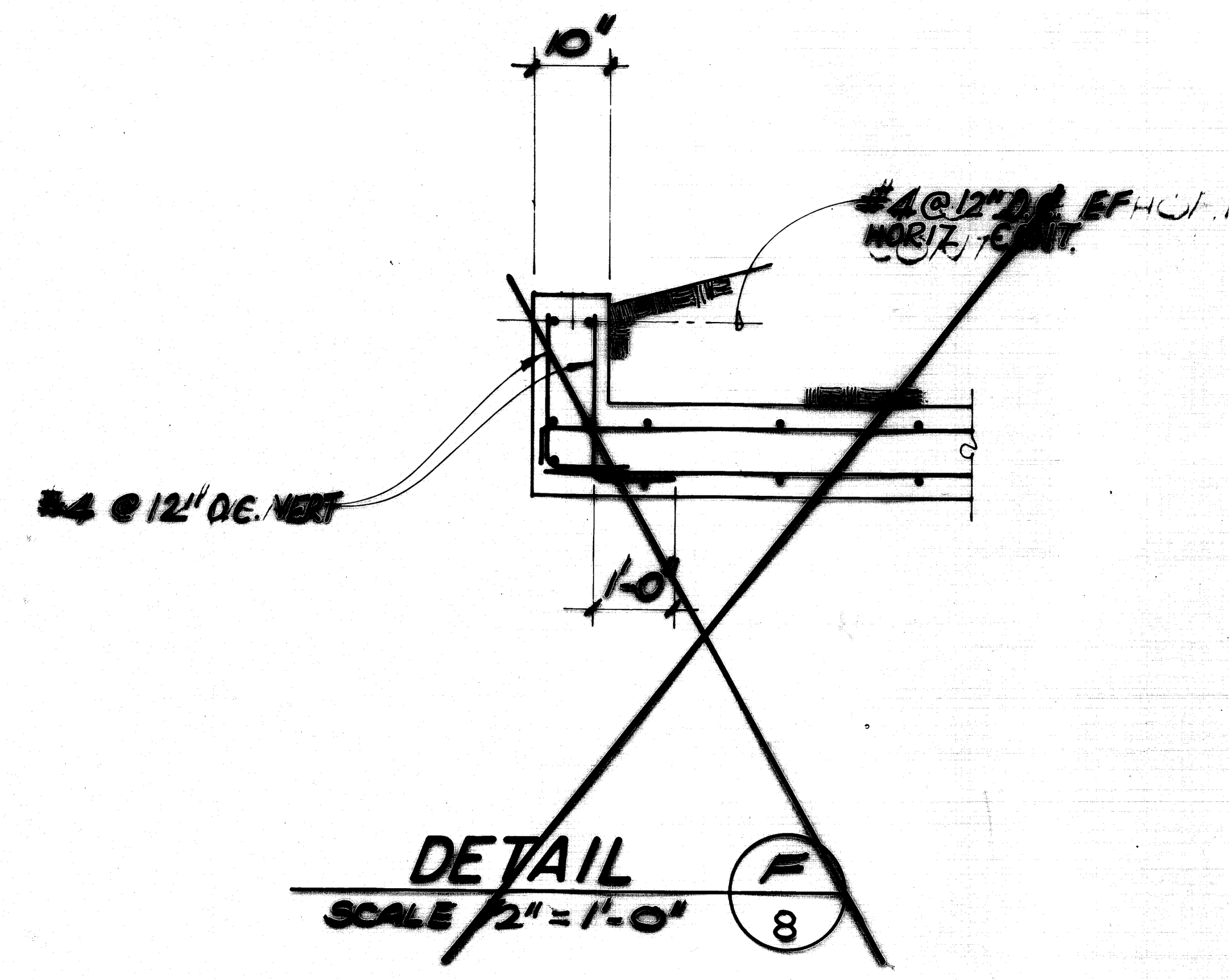
DETAIL (H/8)
SCALE 3/8" = 1'-0"



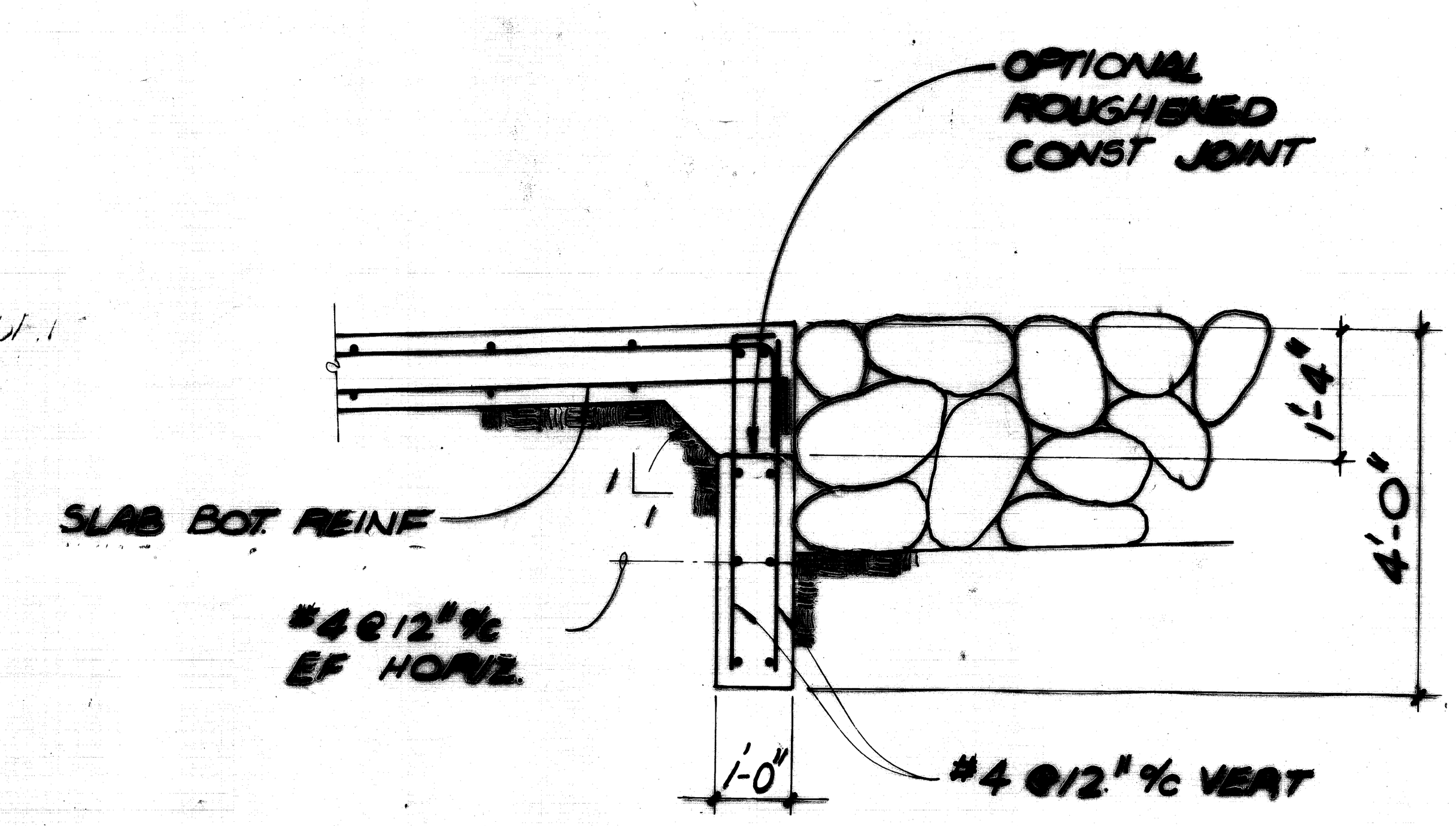
SECTION (M/8)
SCALE 3/8" = 1'-0"



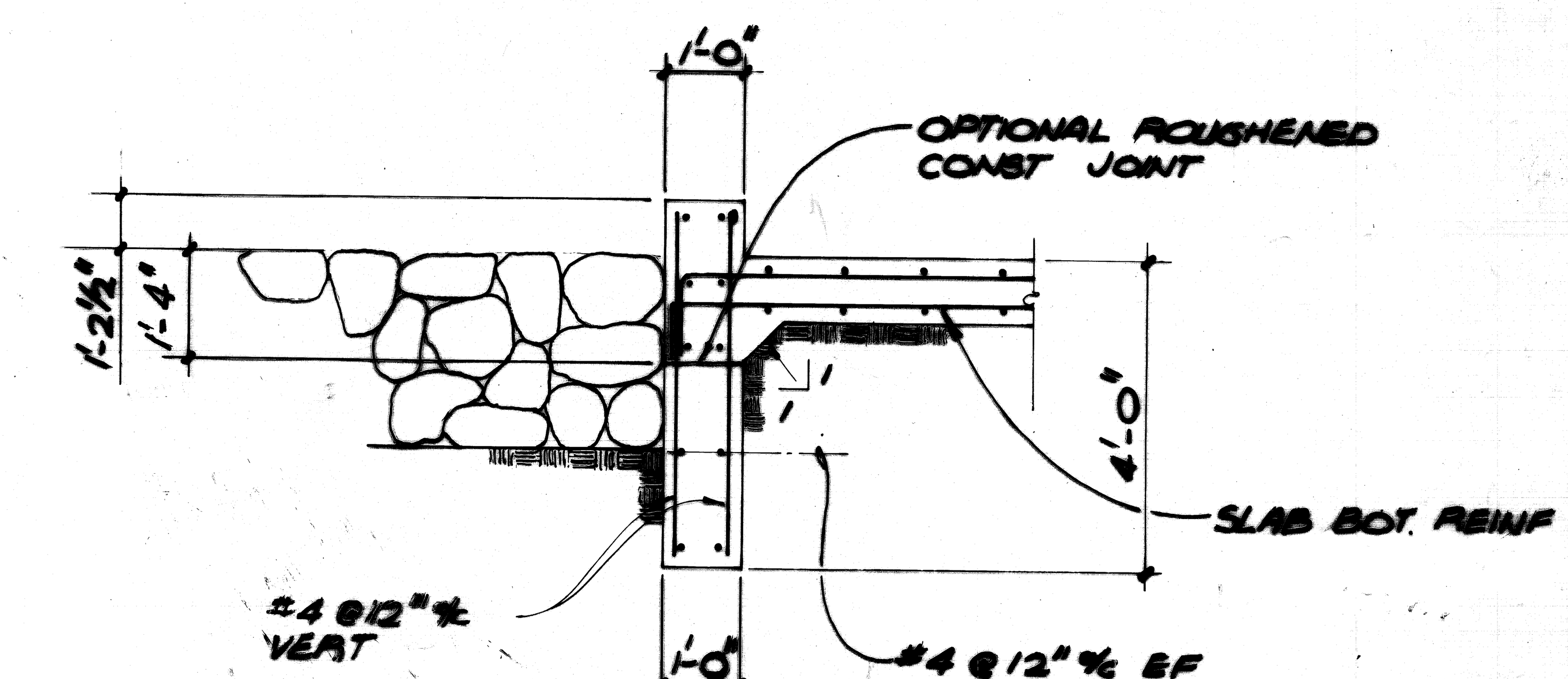
DETAIL (G/8)
SCALE 1/2" = 1'-0"



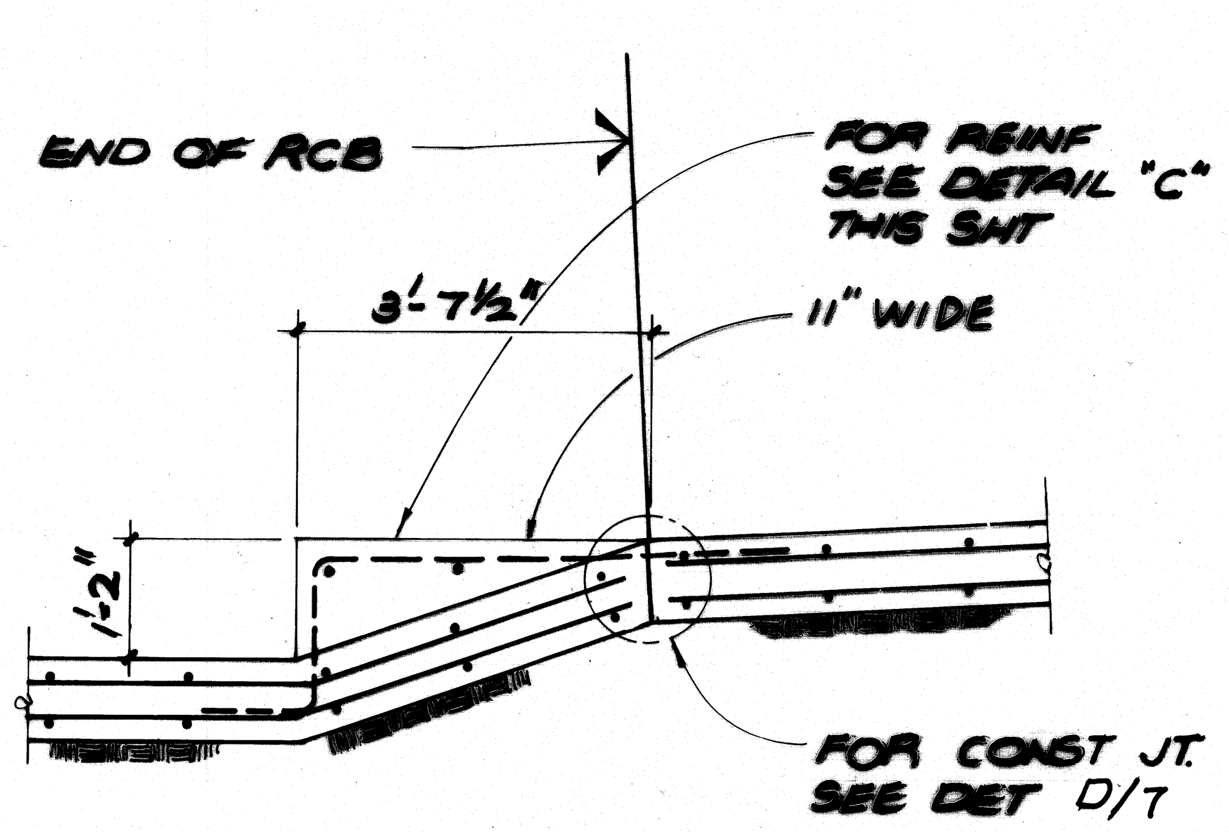
DETAIL (F/8)
SCALE 1/2" = 1'-0"



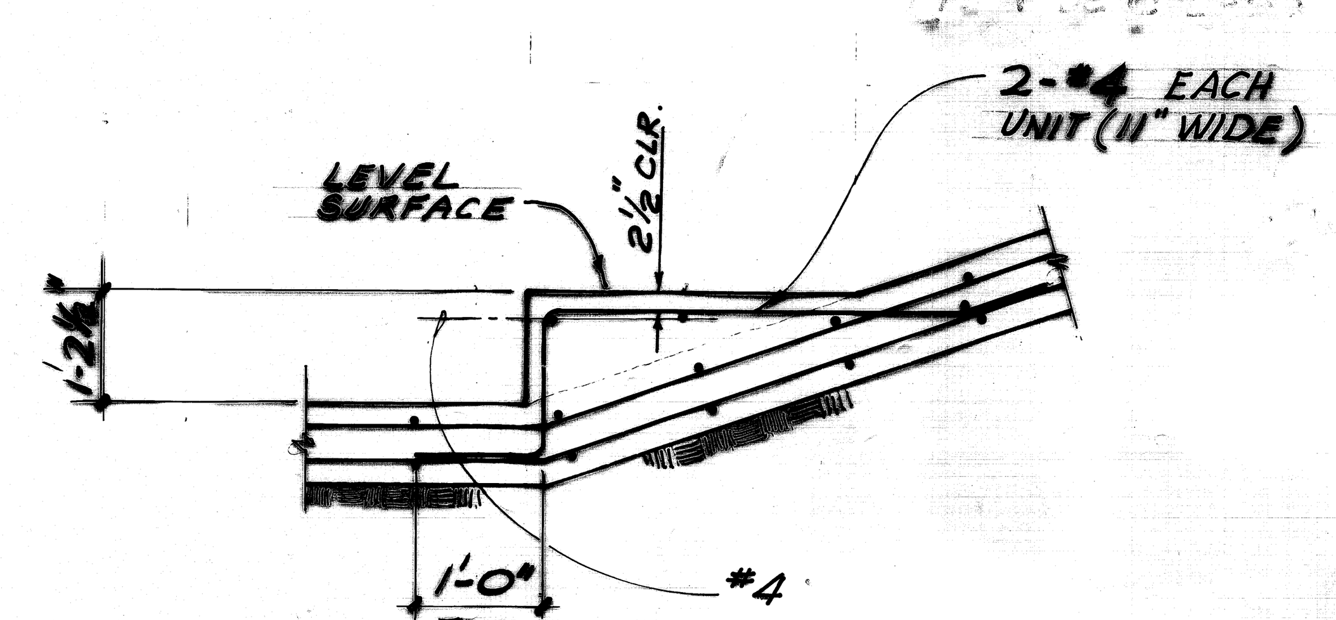
DETAIL (E/8)
SCALE 1/2" = 1'-0"



DETAIL (A/8)
SCALE 1/2" = 1'-0"



DETAIL (D/8)
SCALE 1/2" = 1'-0"



DETAIL (C/8)
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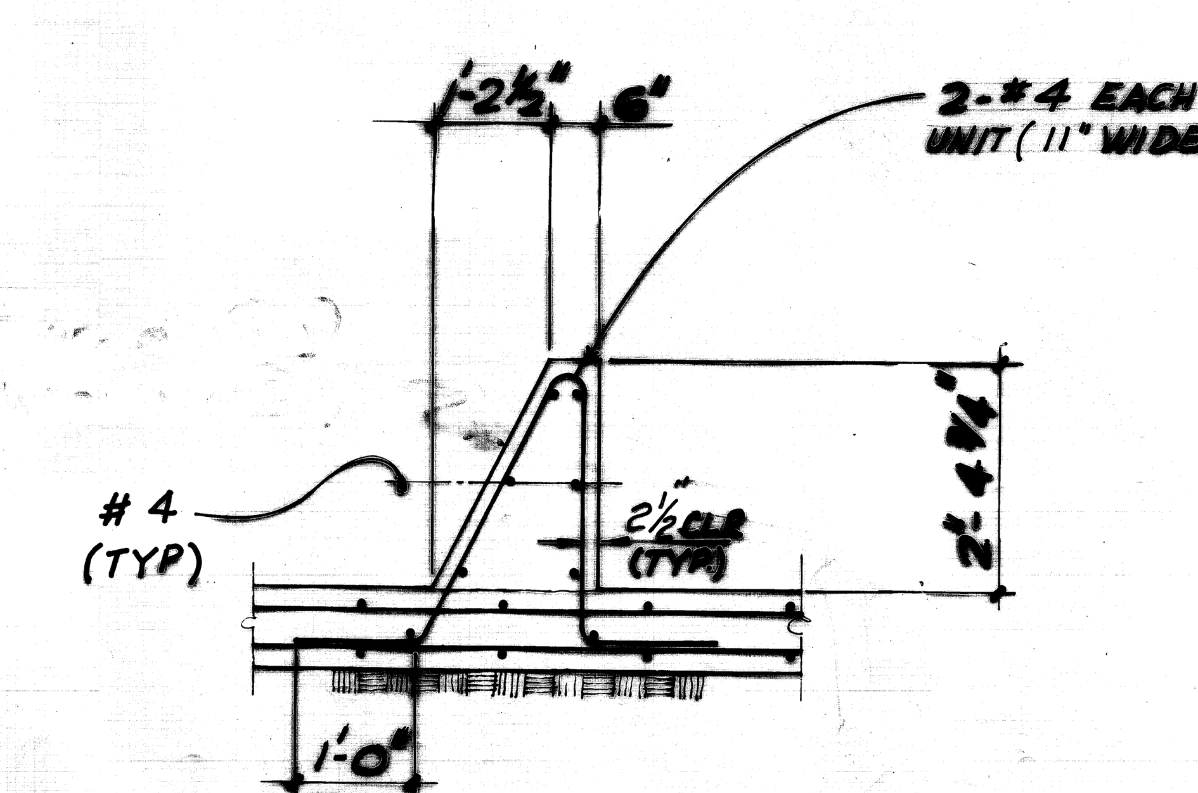


DETAIL (B/8)
SCALE 1/2" = 1'-0"

STRUCTURE DESIGN UNDER SUPERVISION OF EARL ROY BEDNER
Signature [signature] 4-27-84
SE 4605 Date

APPROVED
CITY OF WALNUT, CITY ENGINEER
BY [signature] DATE 7/6/84

Prepared By:
vtn Consolidated, Inc.
ENGINEERS ARCHITECTS PLANNERS
2301 Campus Drive, Irvine, California 92713 (714) 851-5200
Signature [signature] 4-27-84
RCE 17046 Date

CITY OF WALNUT
MISC. TRANSFER DRAIN NO.

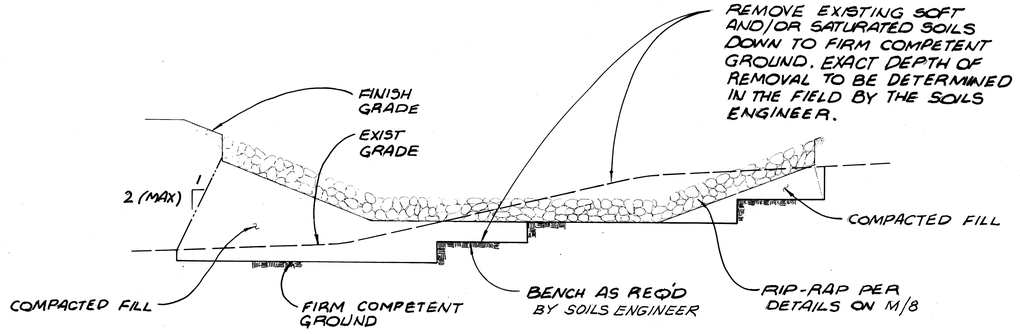
MISCELLANEOUS DETAILS

137H

TENTATIVE TRACT No. 32158

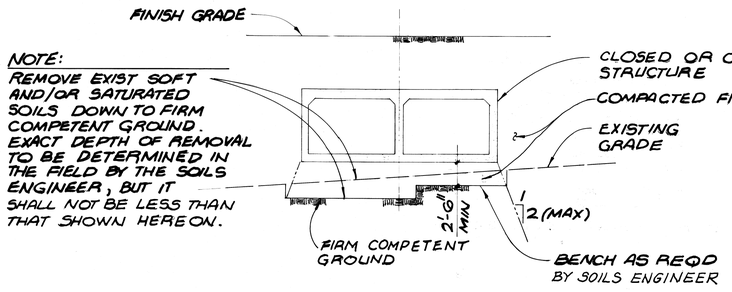
Designed By: P.L.
Drawn by: J.M
Checked By: E.R.B. / P.L.

sheet no. 8 of 9



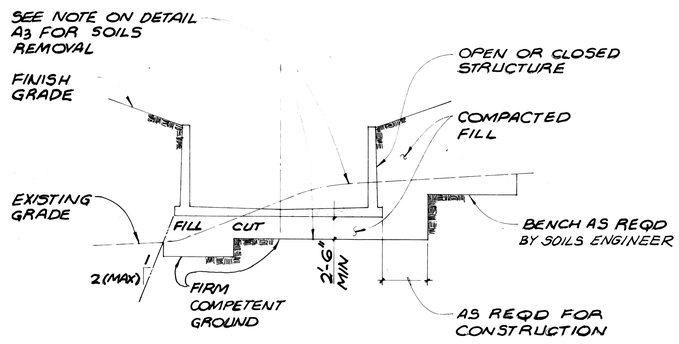
EARTHWORK REQUIREMENTS FOR RIP-RAP (B/9)

NO SCALE



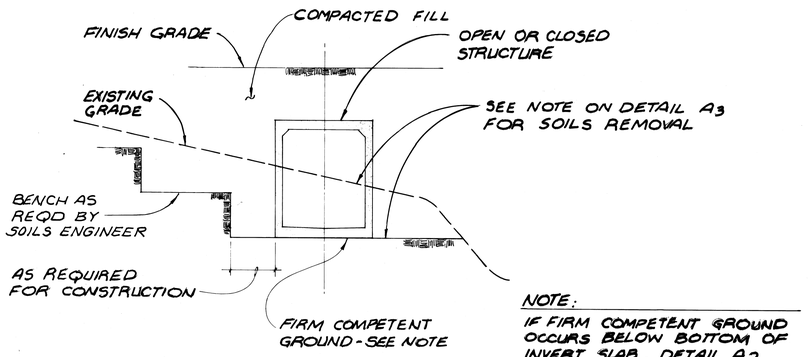
DRAINAGE STRUCTURE IN FILL (A3)

NO SCALE



DRAINAGE STRUCTURE IN CUT & FILL (A2)

NO SCALE



DRAINAGE STRUCTURE IN CUT (A1)

NO SCALE

TYPICAL EARTHWORK REQUIREMENTS FOR DRAINAGE STRUCTURES (A/9)

NOTE:

FOR ADDITIONAL EARTHWORK REQUIREMENTS INCLUDING INSPECTIONS, SEE NOTES ON SHT NO. 1. OF 9

STRUCTURE DESIGN UNDER SUPERVISION OF EARL ROY BECKER

Signature Earl Roy Becker 4-27-84
SE 1405 Date

APPROVED
CITY OF WALNUT, CITY ENGINEER

BY Jack D. Hatch DATE 7/6/84

Prepared By:

VTN Consolidated, Inc.
ENGINEERS ARCHITECTS PLANNERS
2301 Campus Drive, Irvine, California 92713 (714) 851-5200

Signature James J. McCarthy 4-27-84
RCE 17069 Date

CITY OF WALNUT

MISC. TRANSFER DRAIN NO.

TYPICAL EARTHWORK DETAILS

137J

TENTATIVE TRACT No. 32158

Designed By: P.L.
Drawn By: J.M
Checked By: E.R.B./P.L.

sheet no. 9 of 9