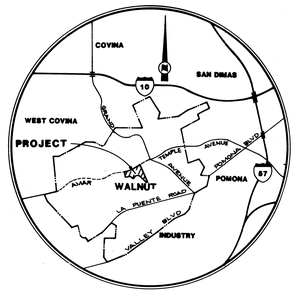
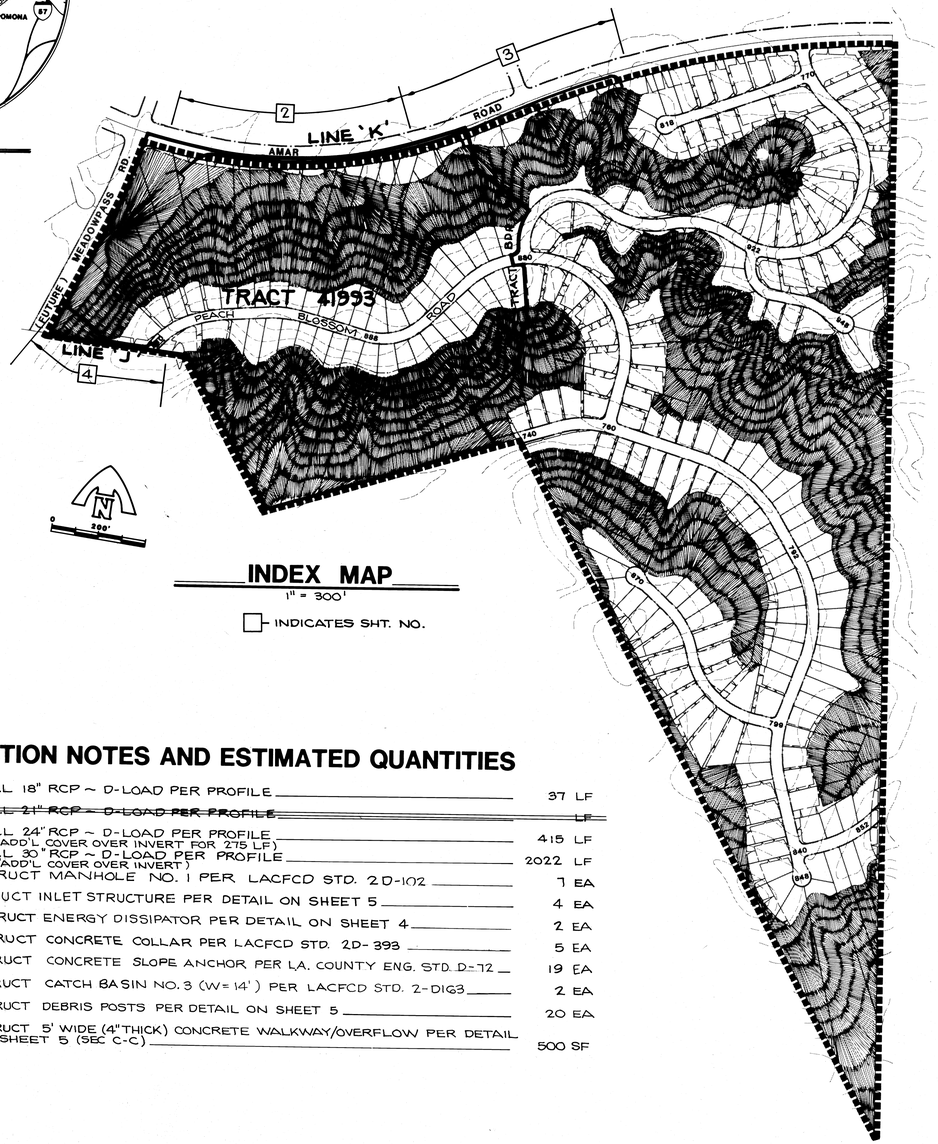
STORM DRAIN PLANS IN TRACT No. 41993 MTD 1207

BASIS OF BEARINGS:
THE BEARING N 46°31'47"E FOR THE CENTERLINE OF AMAR ROAD AS SHOWN ON MAP OF TRACT NO. 35644, M.B. 988/32-41 WAS USED AS THE BASIS OF BEARINGS SHOWN HEREON.

BENCH MARK: C.G. 2710
C.S.B.M. IN 2ND LIGHT STD. OF MT. SAC PARKING LOT, 75 FT. EAST AND 900 FT. NORTH OF CENTERLINE INT. OF GRAND AVE. AND TEMPLE AVE. MARKED CBM 17-31 1963
COVINA 1975 ELEV. 732.057



VICINITY MAP
NOT TO SCALE



INDEX MAP
1" = 300'
INDICATES SHT. NO.

CONSTRUCTION NOTES AND ESTIMATED QUANTITIES

(1)	INSTALL 18" RCP ~ D-LOAD PER PROFILE	37 LF
~~(2)~~	~~INSTALL 21" RCP ~ D-LOAD PER PROFILE~~	~~LF~~
(3)	INSTALL 24" RCP ~ D-LOAD PER PROFILE (1" ADD'L COVER OVER INVERT FOR 275 LF)	415 LF
(4)	INSTALL 30" RCP ~ D-LOAD PER PROFILE (1½" ADD'L COVER OVER INVERT)	2022 LF
(5)	CONSTRUCT MANHOLE NO. 1 PER LACFCD STD. 2D-102	7 EA
(6)	CONSTRUCT INLET STRUCTURE PER DETAIL ON SHEET 5	4 EA
(10)	CONSTRUCT ENERGY DISSIPATOR PER DETAIL ON SHEET 4	2 EA
(11)	CONSTRUCT CONCRETE COLLAR PER LACFCD STD. 2D-393	5 EA
(12)	CONSTRUCT CONCRETE SLOPE ANCHOR PER LA. COUNTY ENG. STD. D-72	19 EA
(13)	CONSTRUCT CATCH BASIN NO. 3 (W=14') PER LACFCD STD. 2-D163	2 EA
(14)	CONSTRUCT DEBRIS POSTS PER DETAIL ON SHEET 5	20 EA
(15)	CONSTRUCT 5' WIDE (4"THICK) CONCRETE WALKWAY/OVERFLOW PER DETAIL ON SHEET 5 (SEC C-C)	500 SF

GENERAL NOTES (Cont'd)

23. 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 DIR.OF PUBLIC WORKS PRIOR TO ACCEPTANCE OF THE WORK BY THE COUNTY
24. 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.
25. THE CONTRACTOR SHALL CONFORM TO THE "MINIMUM PUBLIC SAFETY REQUIREMENTS" AS SHOWN ON LOS ANGELES COUNTY ENGINEER STANDARD S-2.
26. 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.
27. 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.
28. THE PIPE SHALL BE MANUFACTURED WITH 1½" OR 1" ADDITIONAL COVER OVER THE INVERT REINFORCING IN THE REACHS INDICATED IN THE PROFILE.
29. AN INSPECTION PERMIT SHALL BE OBTAINED FROM THE D.P.W.-FLOOD CONTROL PRIOR TO COMMENCING ANY WORK ON THIS PROJECT. CONTACT FLOOD CONTROL AT (213) 226-8247 TO OBTAIN FURTHER INFORMATION ON THE INSPECTION DEPOSIT AND PERMIT APPLICATION.
30. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION DIVISION BY TELEPHONE (213) 226-8281 AT LEAST 24 HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT. THE CONTRACTOR SHALL SUBMIT A DEPOSIT FOR CONSTRUCTION INSPECTION TO THE COUNTY DIRECTOR OF PUBLIC WORKS, 2250 ALCAZAR STREET LOS ANGELES ROOM 201 AT LEAST 24 HOURS BEFORE STARTING WORK UNDER THIS CONTRACT. COPIES OF ALL PERMITS MUST BE FILED WITH THE DIRECTOR OF PUBLIC WORKS PRIOR TO SUBMITTING THE DEPOSIT.
31. ALL CATCH BASINS WITHIN THE DEDICATED STREET RIGHTS-OF-WAY SHALL BE CONSTRUCTED PER THE STREET PLANS.
32. THE CONTRACTOR SHALL PROVIDE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES UNTIL THIS STORM DRAIN SYSTEM IS OPERABLE.
33. ALL REFERENCES ON THIS PLAN TO THE COUNTY ENGINEER, ROAD DEPT. OR FLOOD CONTROL DISTRICT SHALL APPLY TO THE APPROPRIATE SECTIONS OF THE DEPARTMENT OF PUBLIC WORKS.
34. ELEVATIONS ARE IN FEET ABOVE USC & GS MEAN SEA LEVEL DATUM OF 1929.

LIST OF STANDARD PLANS

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

MANHOLE NO. 1	2-D102
MANHOLE SHAFT	2-D107
MANHOLE FRAME & COVER	2-D472
JUNCTION STRUCTURE NO. 2	2-D112
JUNCTION STRUCTURE NO. 4	2-D191
CATCH BASIN NO. 3	2-D163
ADJUSTABLE PROTECTION BAR STIRRUP	2-D264
CATCH BASIN PROTECTION BAR	2-D175
CATCH BASIN OPENING DETAIL	2-D232
CONNECTION TO CATCH BASINS	2-D224
CATCH BASIN REINFORCEMENT	2-D172
STANDARD A-615 REINFORCING BARS	2-D171
CATCH BASIN MANHOLE FRAME & COVER	2-D156
CATCH BASIN MANHOLE REINFORCEMENT	2-D157
TYPICAL HEADWALL FENCE, ETC.	2-D180
CONCRETE COLLAR	2-D393
LOCAL DEPRESSION NO. 2	2-D88

LOS ANGELES COUNTY ENGINEER

MINIMUM PUBLIC SAFETY REQUIREMENTS	S-2
CONCRETE PIPE ANCHORS	D-72
PIPE BEDDING	D-54

LOS ANGELES COUNTY ROAD DEPARTMENT

CURB & GUTTER TRANSITION	66-03
LOCAL DEPRESSION NO. 1	68-01

A.P.W.A.

REINFORCED CONCRETE STAIRWAY	640-0

GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1985 EDITION," INCLUDING SUPPLEMENTS AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE DIRECTOR OF PUBLIC WORKS.
2. 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.
3. APPLICATION FOR INSPECTION BY THE CITY ENGINEER SHALL BE MADE BY THE CONTRACTOR AT LEAST FORTY-EIGHT (48) HOURS BEFORE THE SERVICES THEREOF WILL BE REQUIRED. PHONE (714) 594-9702.
4. ALL CONSTRUCTION JOINTS IN THE FOOTING OF SLABS AND WALLS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED.
5. NO CONCRETE SHALL BE PLACED UNTIL THE FORMS AND REINFORCING STEEL HAS BEEN PLACED, INSPECTED AND APPROVED.
6. TRANSVERSE REINFORCEMENT AND TRANSVERSE JOINTS SHALL BE PLACED AT RIGHT ANGLES (OR RADIAL) TO CONDUIT CENTERLINE EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS.
7. ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH AN ULTIMATE 28 DAYS COMPRESSIVE STRENGTH OF 3250 P.S.I. UNLESS OTHERWISE NOTED.
8. ALL EXPOSED EDGES SHALL BE FINISHED WITH A 3/4" CHAMFER.
9. ALL STEEL ADJACENT TO FACE OF CONCRETE SHALL HAVE 2½" CLEARANCE UNLESS OTHERWISE SPECIFIED.
10. REINFORCEMENT SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE STEEL AS PER A.S.T.M. A-615- GRADE 60
11. ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "MANUAL OF STANDARD PRACTICE".
12. DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE TO CENTERLINE OF STEEL UNLESS OTHERWISE NOTED.
13. ALL BACKFILLS AND FILLS TO BE USED AS SUBGRADE SHALL BE COMPACTED TO A RELATIVE DENSITY OF 90% UNLESS OTHERWISE SPECIFIED.
14. ALL STEEL THAT IS TO BE CONTINUOUS SHALL HAVE A MINIMUM LAP OF 30 BAR DIAMETERS OR 18", WHICHEVER IS GREATER.
15. ALL CATCH BASINS AND CONNECTOR PIPES BETWEEN CATCH BASINS TO BE INSPECTED BY THE DIRECTOR OF PUBLIC WORKS.
16. PIPE SHALL BE EMBEDDED 5 INCHES INTO ALL STRUCTURES INCLUDING INLET & HEADWALLS, UNLESS OTHERWISE SPECIFIED.
17. 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.
18. 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.
19. CONTINUOUS INSPECTION OF THE STORM DRAIN SYSTEM IS REQUIRED BY THE CITY INSPECTOR.
20. ALL REINFORCED CONCRETE PIPE SHALL BE BEDDED 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.
21. 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.
22. 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 DIRECTOR OF PUBLIC WORKS.

RIPRAP NOTES

1. 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.
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.

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.

Stanley C. Morse
STANLEY C. MORSE, R.C.E. 20596 — 2/19/87 DATE

REGISTERED PROFESSIONAL ENGINEER STANLEY C. MORSE No. 20596 Exp. 9-30-88 CIVIL STATE OF CALIFORNIA

NO.	REVISION	REVISED BY	APPROVED BY	DATE

Stanley C. Morse
Consulting Civil Engineers, Inc.
Planning • Engineering • Surveying
4860 Irvine Boulevard, Suite 201
Irvine, California 92714-1299 (714) 730-7117
Irvine Palm Desert

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

PLANS PREPARED UNDER THE SUPERVISION OF:
Stanley C. Morse
STANLEY C. MORSE, R.C.E. 20596 — 2/19/87 DATE

REGISTERED PROFESSIONAL ENGINEER STANLEY C. MORSE No. 20596 Exp. 9-30-88 CIVIL STATE OF CALIFORNIA

CITY OF WALNUT
RONALD L. KRANZER CITY ENGINEER

APPROVED BY: Ronald L. Kranzer DATE: 9-14-87
RONALD L. KRANZER, R.C.E. 18503

SHT 1 OF 5 SHTS

SOUTHERN CALIFORNIA BLUEPRINT CO., P.O. SHEET NO. 1 DATE 1-88

STORM DRAIN PLANS IN
TRACT No. 41993 MTD 1207

Q25 = 55.8 C.F.S.
Q25 = 35.8 C.F.S.
EXISTING GROUND OVER CENTERLINE OF PIPE
FINISHED SURFACE OVER PIPE
HGL
H.G.L.
S=0.0376
S=0.0324
S=0.0288
10+00.00 BEGIN ENERGY DISSIPATOR
13+23.84 ℄ MH. NO. 1
16+33.70 ℄ MH. NO. 1
19+12.84 ℄ MH. NO.
20+00.00 741.74 INV.
SEE SHEET NO. 3
NOTE: 1/2" ADDITIONAL COVER OVER INVERT OF PIPE ~ SEE NOTE 28
88.67 LF~30" RCP D-1600
221.00 LF ~ 30" RCP D-1400
305.19 LF ~ 30" RCP D-1400
274.47 LF ~ 30" RCP D-1400
27.19 LF~30" RCP D-1400
PROFILE SCALES
HORIZ.: 1"=40'
VERT.: 1"= 8'
PLAN SCALE
1"=40'
25' WIDE EASEMENT DEDICATED TO THE CITY OF WALNUT FOR ACCESS ROAD PURPOSES
CONSTRUCT DOUBLE ENTRY GATE (25' WIDE) PER L.A.C.F.C.D. STD. NO. 2-D179
CONSTRUCT AC PAVEMENT CLASS C-AR-4000 ON CAB
EASEMENT TO THE CITY OF WALNUT FOR COVERED STORM DRAIN & APPURTENANT STRUCTURES AND INGRESS AND EGRESS PURPOSES
EASEMENT TO THE CITY OF WALNUT FOR EQUESTRIAN AND LANDSCAPE PURPOSES
CONSTRUCT CONC. STEPS & HANDRAIL PER A.P.W.A. 640-0
EASEMENT TO THE CITY OF WALNUT FOR COVERED STORM DRAIN AND APPURTENANT STRUCTURES AND INGRESS AND EGRESS PURPOSES
LINE 'K-1' - SEE PROFILE ON SHT. 4
EX. 8" W
EX. 8" REC. W

CURVE DATA

	Δ	R	L	T
A	49°10'16"	150.00'	128.73'	68.63'
B	13°50'48"	2034.00'	491.56'	246.98'
C	44°37'11"	22.50'	17.52'	9.23'
D	15°39'15"	2034.00'	555.72'	279.60'

LINE 'K'
AMAR ROAD

NO.	REVISION	REVISED BY	APPROVED BY	DATE

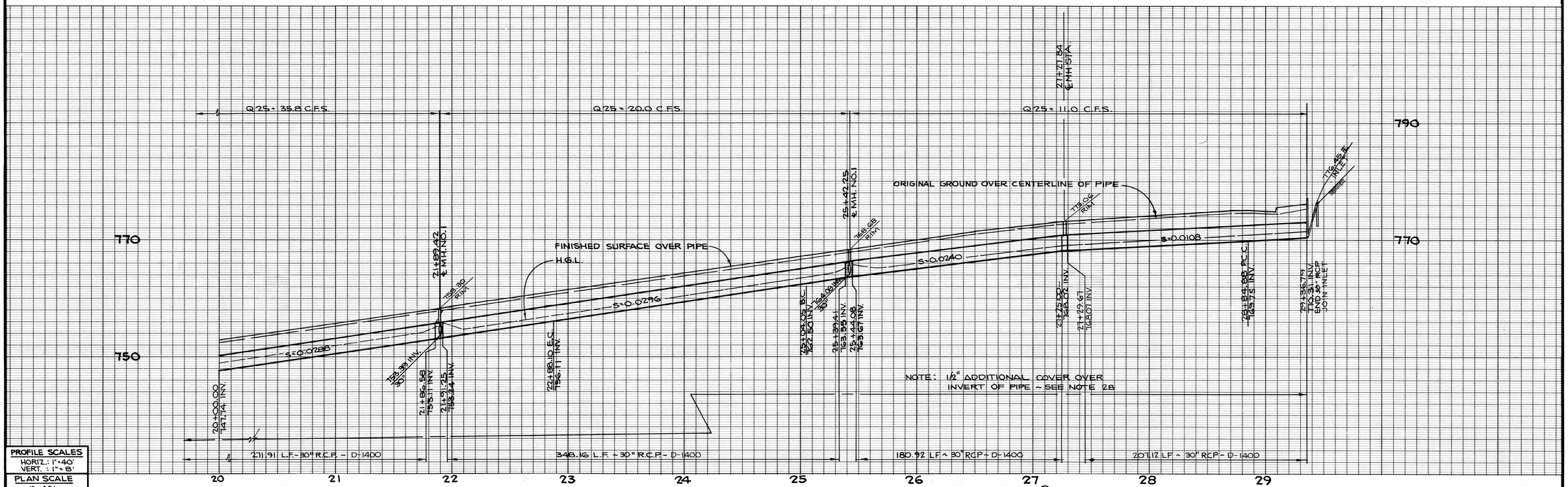
Stanley C. Morse
Consulting Civil Engineers, Inc.
Planning · Engineering · Surveying
4860 Irvine Boulevard, Suite 201
Irvine, California 92714-1299 (714) 730-7117
Irvine Palm Desert

PLANS PREPARED UNDER THE SUPERVISION OF:
Stanley C. Morse 2/19/87
STANLEY C. MORSE, R.C.E. 20596 DATE

CITY OF WALNUT
RONALD L. KRANZER CITY ENGINEER

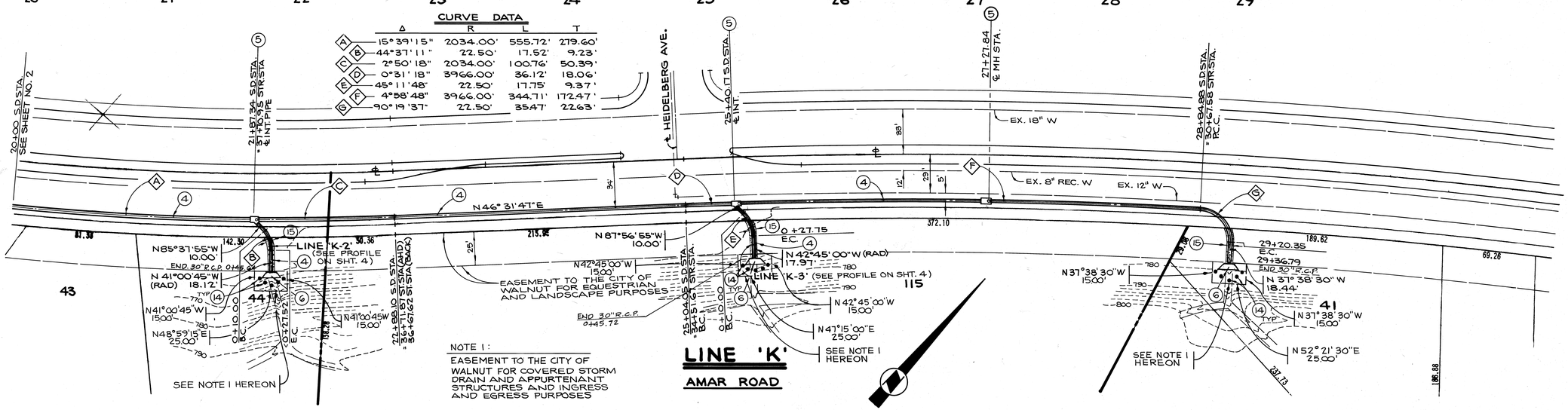
APPROVED BY: Ronald L. Kranzer DATE: 9-11-87
RONALD L. KRANZER, R.C.E. 18503

STORM DRAIN PLANS IN
TRACT No. 41993 MTD 1207



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

PLAN SCALE
1"=40'



NOTE 1:
EASEMENT TO THE CITY OF WALNUT FOR COVERED STORM DRAIN AND APPURTENANT STRUCTURES AND INGRESS AND EGRESS PURPOSES

LINE 'K'
AMAR ROAD

HYDRAULIC DATA

LINE	STA TO STA	Q_{25}	S_o	S_f	n	DIA	d_n	V_n	d_c	V_c	V	REMARKS
K	10+11.33 TO 11+00.00	55.8	0.0742	—	0.013	30"	1.3	22.8	2.4	11.6	—	OPEN CHANNEL FLOW
K	11+00.00 TO 13+21.00	55.8	0.0376	—	0.013	30"	1.5	17.5	2.4	11.6	—	" " "
K	13+25.61 TO 14+25.00	55.8	0.0316	—	0.013	30"	1.5	17.5	2.4	11.6	—	" " "
K	14+25.00 TO 16+30.86	55.8	0.0324	—	0.013	30"	1.6	16.5	2.4	11.6	—	" " "
K	16+35.53 TO 19+10.00	35.8	0.0288	—	0.013	30"	1.3	14.3	2.0	8.4	—	" " "
K	19+14.67 TO 21+86.58	35.8	0.0288	—	0.013	30"	1.3	14.3	2.0	8.4	—	" " "
K	21+91.25 TO 25+39.41	20.0	0.0296	—	0.013	30"	0.9	12.4	1.5	8.4	—	" " "
K	25+44.08 TO 27+25.00	11.0	0.0240	—	0.013	30"	0.7	9.7	1.1	5.2	—	" " "
K	27+29.67 TO 29+36.79	11.0	0.0108	—	0.013	30"	0.9	7.3	1.1	5.2	—	" " "
K-1	0+02.94 TO 0+45.64	20.0	0.0420	0.0024	0.013	30"	—	—	—	—	4.1	PRESSURE FLOW
K-2	0+02.94 TO 0+45.64	15.8	0.0388	—	0.013	30"	0.8	12.8	1.3	6.9	—	OPEN CHANNEL FLOW
K-3	0+02.94 TO 0+45.72	9.0	0.0364	—	0.013	30"	0.6	10.6	1.0	4.9	—	OPEN CHANNEL FLOW

NO.	REVISION	REVISED BY	APPROVED BY	DATE

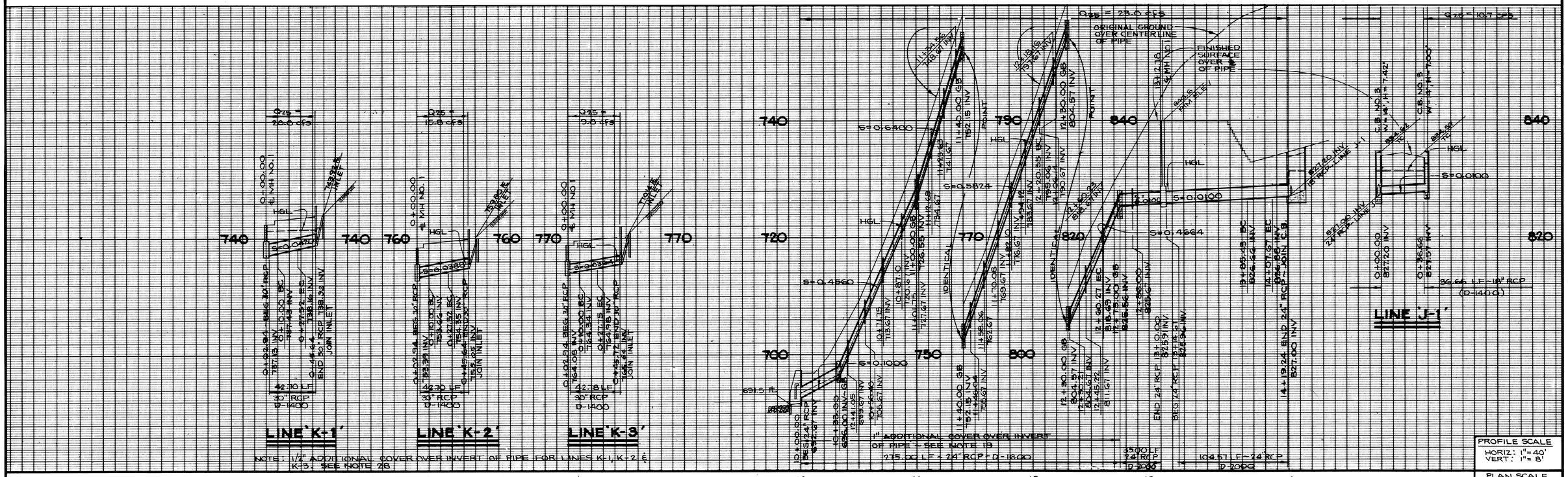
Stanley C. Morse
Consulting Civil Engineers, Inc.
Planning · Engineering · Surveying
4860 Irvine Boulevard Suite 201
Irvine, California 92714-1299 (714) 730-7117
Irvine Palm Desert

PLANS PREPARED UNDER THE SUPERVISION OF:
STANLEY C. MORSE, R.C.E. 20526
REGISTERED CIVIL ENGINEER STANLEY C. MORSE No. 20526 Exp. 9-30-87 CIVIL STATE OF CALIFORNIA
DATE 2/19/87

CITY OF WALNUT
RONALD L. KRANZER CITY ENGINEER

APPROVED BY: Ronald L. Kranzer DATE: 9-11-87
RONALD L. KRANZER, R.C.E. 18503

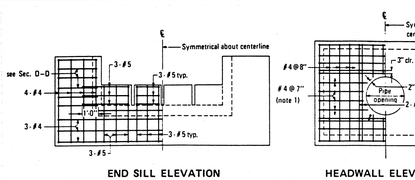
STORM DRAIN PLANS IN TRACT No. 41993 MTD 1207

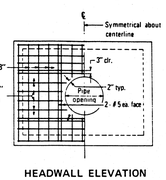


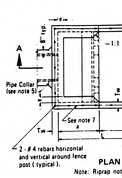
NOTE: 1/2" ADDITIONAL COVER OVER INVERT OF PIPE FOR LINES K-1, K-2 & K-3. SEE NOTE 28

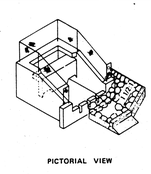
PROFILE SCALE
HORIZ: 1"=40'
VERT: 1"=8'

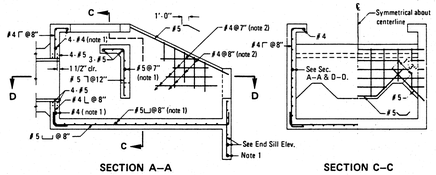
PLAN SCALE
1"=40'

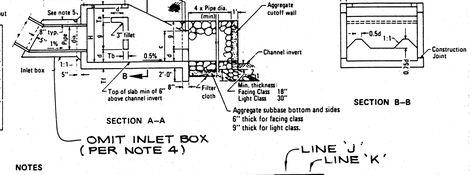






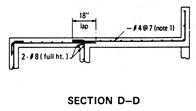






NOTES

1. Place reinforcing, as noted, at center wall (or slab).
2. Match location of reinforcing with that in headwall, end sill and foundation slab.
3. All reinforcing shall be placed with 2" concrete cover, unless noted otherwise.



REINFORCEMENT DETAILS

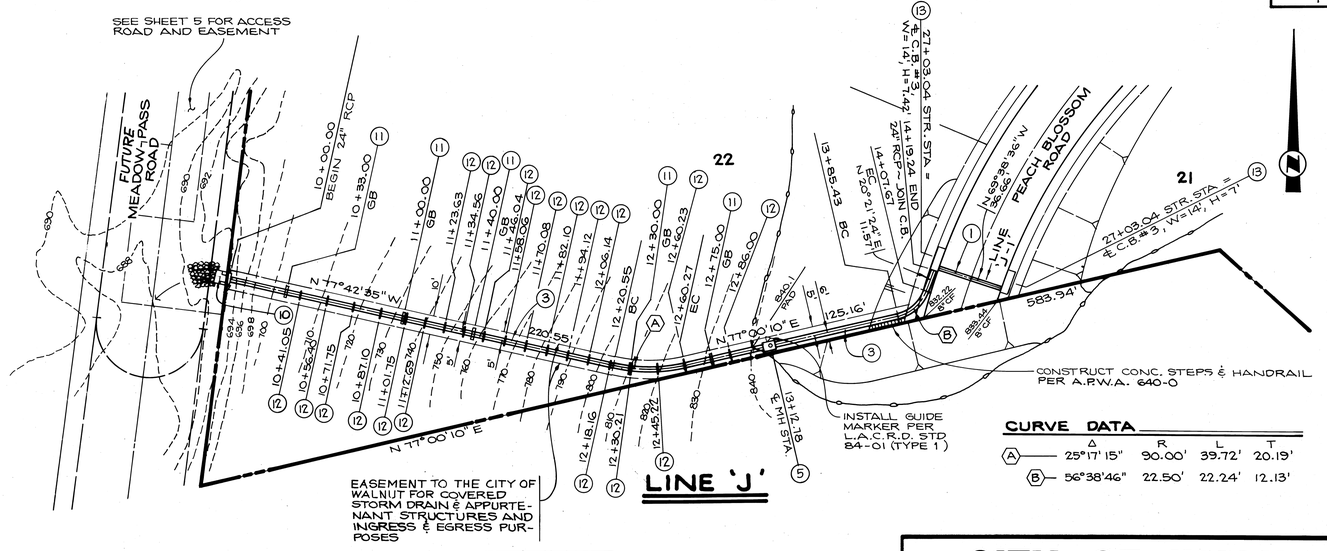
NOTES

1. Design:
   Equivalent Fluid Pressure = 60 p.c.f.
   Maximum Outlet Velocity = 35 f.p.s.
2. Concrete shall be Sack - C-3250
3. Reinforcing shall conform to ASTM designation A615 and may be grade 40 or 60. Reinforcing shall be placed with 2" clear concrete cover unless noted otherwise. Splices shall not be permitted except as indicated on the plans.
4. For pipe grades not exceeding 20%, inlet box may be omitted.
5. If inlet box is omitted, construct pipe collar as shown.
6. Unless noted otherwise, all reinforcing bar bends shall be fabricated with standard hooks.
7. Five foot high chain link fencing, embed post 18" deep in walls and encase with Class B mortar.
8. In Sandy and Silty soil:
   a) Riprap and aggregate base cutoff wall required at the end of rock apron.
   b) Filter cloth (Polyfilter X or equivalent) shall be installed on native soil and base, minimum of 1 ft. overlaps at joints.

Pipe Dia (in)	18	24	30
Area (sq.ft.)	1.77	3.14	4.91
Max. Q. (cfs)	21	38	59
W	5'-0"	6'-9"	8'-0"
H	4'-3"	5'-3"	6'-3"
L	7'-4"	9'-0"	10'-6"
b	3'-3"	3'-11"	4'-7"
b	4'-1"	5'-1"	6'-1"
c	2'-4"	3'-10"	5'-4"
d	0'-11"	1'-2"	1'-4"
e	0'-6"	0'-6"	0'-8"
f	1'-6"	2'-0"	2'-6"
g	2'-1"	2'-6"	3'-0"
T1	8"		
T2	7"		
Tw	7"		
Ts	7"		

LINE 'J'
LINE 'K'

CONSTRUCTION DETAILS



CURVE DATA

	Δ	R	L	T
(A)	25°17'15"	90.00'	39.72'	20.19'
(B)	56°38'46"	22.50'	22.24'	12.13'

CONCRETE ENERGY DISSIPATOR 10

HYDRAULIC DATA

LINE	STA TO STA	Q_{25}	S_o	S_f	n	DIA	dn	V_n	d_c	V_c	V	REMARKS
J	10+00.00 TO 10+33.00	23.0	0.1000	—	0.013	24"	0.8	20.3	1.7	8.1	—	OPEN CHANNEL FLOW
J	10+33.00 TO 11+00.00	23.0	0.4560	—	0.013	24"	0.5	35.0	1.7	8.1	—	" " "
J	11+00.00 TO 11+40.00	23.0	0.6400	—	0.013	24"	0.5	39.5	1.7	8.1	—	" " "
J	11+40.00 TO 12+30.00	23.0	0.5824	—	0.013	24"	0.5	38.2	1.7	8.1	—	" " "
J	12+30.00 TO 12+75.00	23.0	0.4664	—	0.013	24"	0.5	35.3	1.7	8.1	—	" " "
J	12+75.00 TO 13+10.00	23.0	0.0100	0.0103	0.013	24"	—	—	—	—	7.3	PRESSURE FLOW
J	13+14.61 TO 14+19.24	23.0	0.0100	0.0103	0.013	24"	—	—	—	—	"	"
J-1	0+00.00 TO 0+36.66	10.7	0.0100	0.0104	0.013	18"	—	—	—	—	6.1	" "

NO.	REVISION	REVISED BY	APPROVED BY	DATE

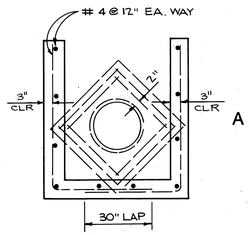
Stanley C. Morse
Consulting Civil Engineers, Inc.
Planning • Engineering • Surveying
4860 Irvine Boulevard, Suite 201, Irvine, California 92714-1299, (714) 730-7117
Irvine, Palm Desert

PLANS PREPARED UNDER THE SUPERVISION OF:
Stanley C Morse 2/19/87
STANLEY C. MORSE, R.C.E. 20506 DATE

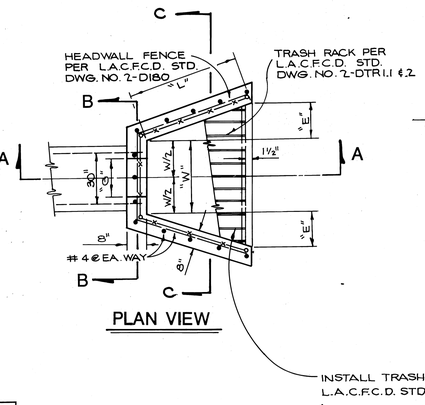
CITY OF WALNUT
RONALD L. KRANZER CITY ENGINEER

APPROVED BY: Ronald L Kranzer DATE: 4-11-87
RONALD L. KRANZER, R.C.E. 18503

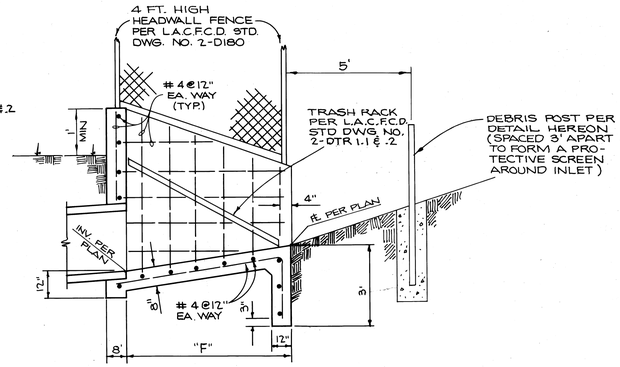
STORM DRAIN PLANS IN TRACT No. 41993 MTD 1207



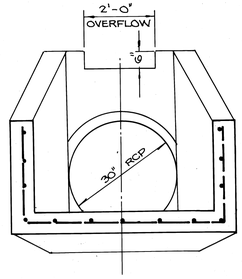
SECTION B-B



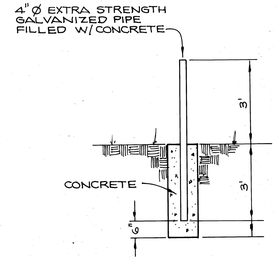
PLAN VIEW



SECTION A-A



SECTION C-C



DEBRIS POST DETAIL
NOT TO SCALE

DIA OF PIPE	DIMENSIONS				
	W	E	F	L	G
30"	3.5'	2.5'	7'	7.43'	2'

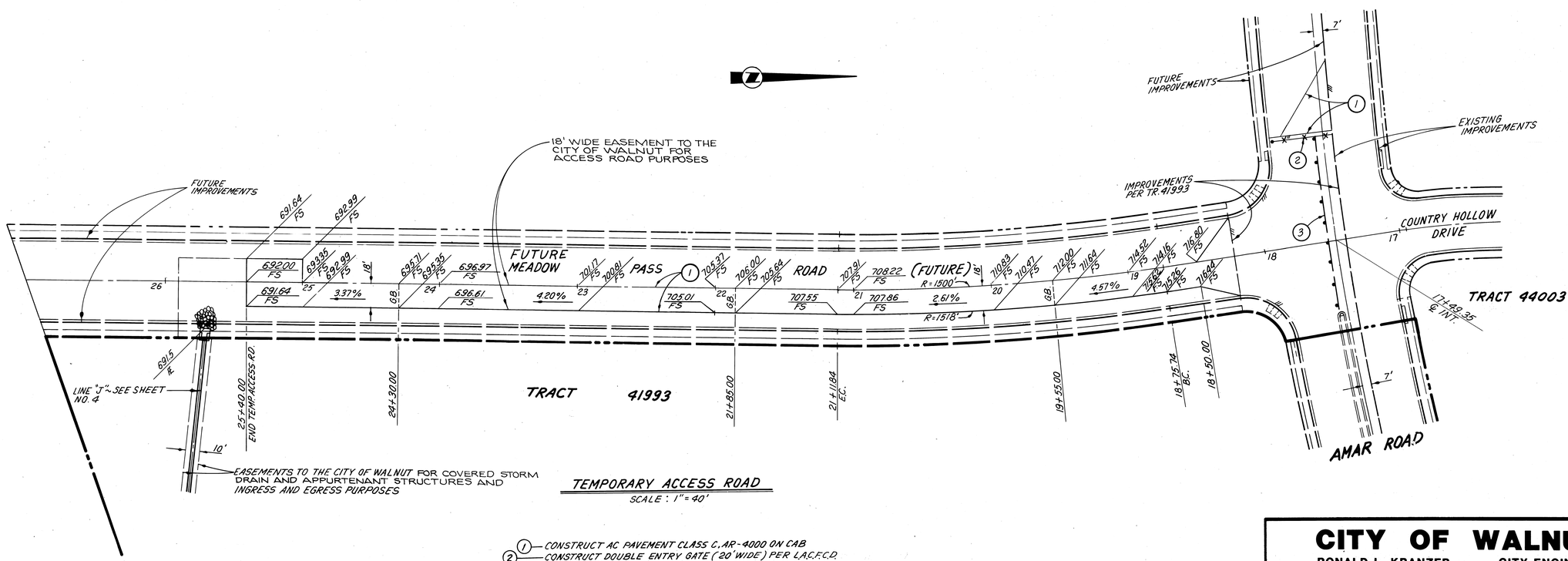
NOTES:

1. Concrete shall be 564 - C-3250
2. Exposed corners to be chamfered 3/4".
3. Multiple pipes to be set a distance of D/2, with a 1' minimum between outside diameters of pipes.
4. Top of headwall shall be placed approximately parallel to profile grade when the grade is 3% or more.
5. Skewed pipes: Dimension W to be increased in width or length due to skew or multiple pipes.

INLET STRUCTURE

LINE K-1, K-2 & K-3

NOT TO SCALE



TEMPORARY ACCESS ROAD
SCALE : 1" = 40'

1. CONSTRUCT AC PAVEMENT CLASS C, AR-4000 ON CAB
2. CONSTRUCT DOUBLE ENTRY GATE (20' WIDE) PER L.A.C.F.C.D. STD. NO. 2-D179
3. CONSTRUCT GUARD RAIL TYPE-2 PER L.A.C.R.D. STD. NO. 84-02

NO.	REVISION	REVISED BY	APPROVED BY	DATE

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Irvine, California 92714-1299 (714) 730-7117
Irvine Palm Desert

PLANS PREPARED UNDER THE SUPERVISION OF:
Stanley C. Morse 5/28/87
STANLEY C. MORSE, R.C.E. 20596

REGISTERED CIVIL ENGINEER STANLEY C. MORSE No 20596 Exp 9-30-89 CIVIL STATE OF CALIFORNIA

CITY OF WALNUT
RONALD L. KRANZER CITY ENGINEER

APPROVED BY: Ronald L. Kranzer DATE: 4-11-87
RONALD L. KRANZER, R.C.E. 18503