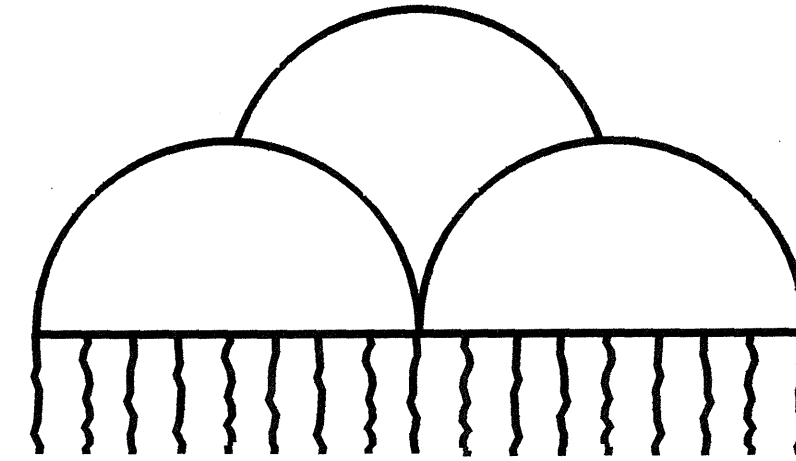
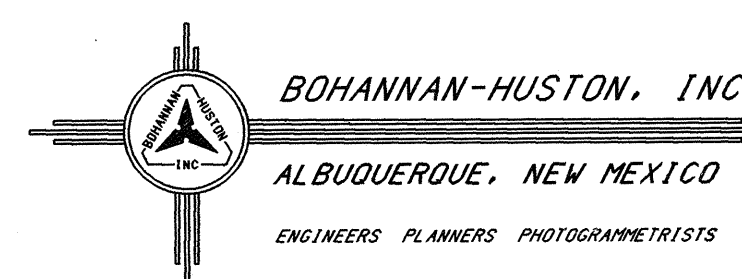
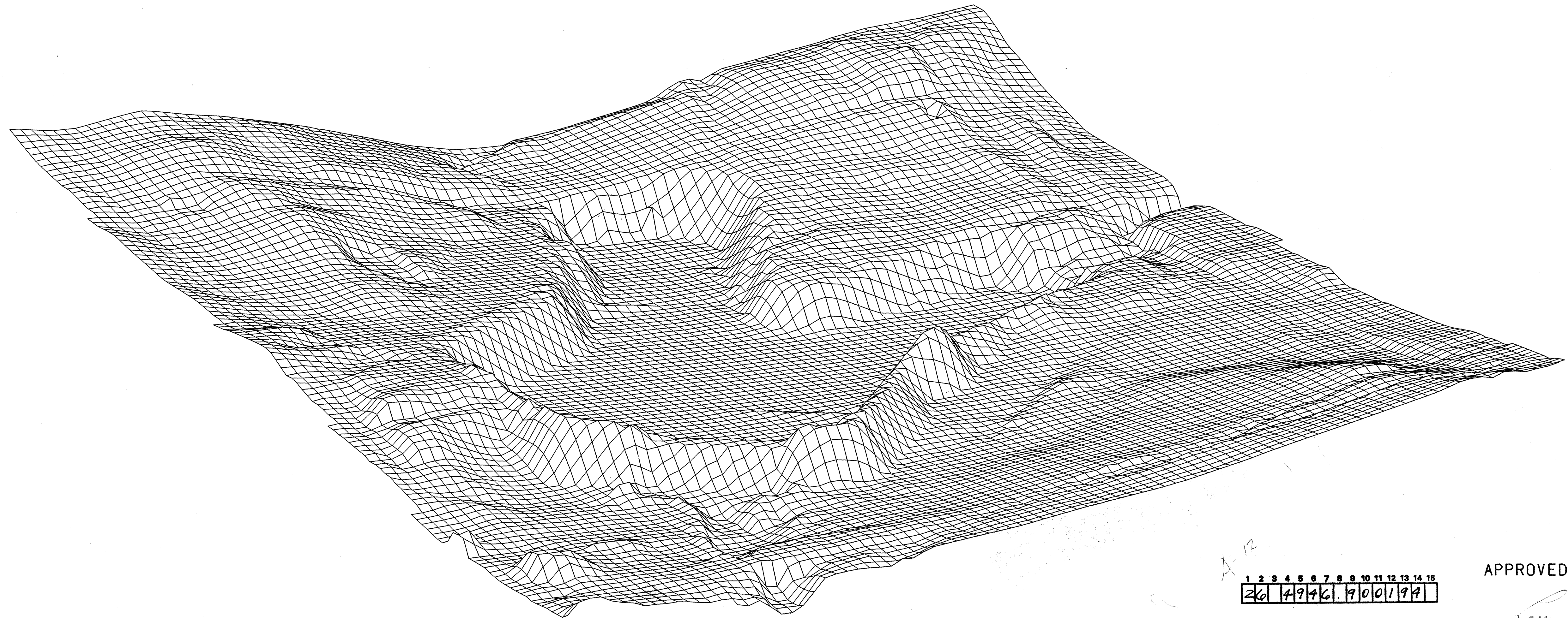


Albuquerque Metropolitan Arroyo Flood Control Authority



Plans for Construction of BLACK ARROYO DETENTION DAM



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
26 49 46 70 01 94

FOR INFORMATION ONLY
NOT AS-BUILT

APPROVED FOR CONSTRUCTION

Larry A. Blair 8/14/91
LARRY A. BLAIR
EXECUTIVE ENGINEER
ALBUQUERQUE METROPOLITAN
FLOOD CONTROL AUTHORITY

BLACK ARROYO DETENTION DAM
ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY
LOCATED IN BERNALILLO COUNTY, STATE OF NEW MEXICO
ALL COURSES STATE GRID NORTH - SCALE AS SHOWN

The undersigned, Albuquerque Metropolitan Arroyo Flood Control Authority, claimant, whose office address is 2600 Prospect N.E., Albuquerque 87107, County of Bernalillo, State of New Mexico, has caused to be drawn up by Bohannon-Huston, Inc., the plans and specifications of the Black Arroyo Detention Dam on Black's Arroyo as hereinafter described and indicated, hereby makes these several statements relative thereto, and offers those plans and statements for acceptance and filing in compliance with the laws of the State of New Mexico. No application is being made for use of water.

The reservoir inlet of the principal spillway is in the N.E. 1/4 of the N.W. 1/4 of the projected Section 1, T11N, R2E whose state plane coordinate (NM Central Zone) is x= 372,215.63, y= 1,533,697.63. The Reservoir will receive drainage from the Black Arroyo Watershed via the east and west branches of Black Arroyo. Black Arroyo Detention Dam is to be constructed of granular native soils present within the proposed reservoir area. Embankment materials will be placed in continuous horizontal lifts blended together to assume a homogeneous embankment. The section beneath the dam contains a cutoff trench keyed to the existing ground to reduce the permeability of the foundation soils. Slope stability analysis was performed and evaluated for side slopes of 2.5:1 and 3:1 (horizontal to vertical) for the downstream and upstream slopes, respectively. Specifications for the construction of this dam will be "New Mexico State Highway Department Standard Specifications for Road and Bridge Construction Edition of 1984" plus special provisions for embankment and soil cement construction, resulting from a comprehensive foundation and materials investigation.

The Black Arroyo Detention Dam PRESENT CONFIGURATION is designed for the following conditions:

- A. The principal spillway shall consist of 2 - 8.5' x 8.5' concrete box culvert with a maximum discharge of 2,385 cubic feet per second passing through the principal spillway during the 100 year frequency flood for existing development conditions upstream of the detention dam.
- B. The crest of the emergency spillway is at an elevation that will not be overtopped by the 100 year frequency flood, for existing development conditions upstream of the detention dam.
- C. One half the Probable Maximum Flood including the flow that can be carried by both the east and west branches of Black's Arroyo will not overtop the dam for existing development conditions upstream of the detention dam.
- D. The concrete box culvert principal spillway will drain the dam, within 96 hours, to a storage volume of less than 10.0 acre feet following a flood that uses all available storage within 96 hours.

The Black Arroyo Detention Dam FUTURE CONFIGURATION is designed for the following conditions:

- A. The principal spillway shall consist of 2 - 8.5' x 8.5' concrete box culvert with a maximum discharge of 2,735 cubic feet per second passing through the principal spillway during the 100 year frequency flood for fully developed conditions upstream of the detention dam.
- B. The crest of the emergency spillway is at an elevation that will not be overtopped by the 100 year frequency flood, for future development conditions upstream of the detention dam.
- C. One half the Probable Maximum Flood including the flow that can be carried by both the east and west branches of Black's Arroyo will not overtop the dam for fully developed conditions upstream of the detention dam.
- D. The concrete box culvert principal spillway will drain the dam, within 96 hours, to a storage volume of less than 10.0 acre feet following a flood that uses all available storage within 96 hours.

STATE OF NEW MEXICO)
) ss
COUNTY OF SANTA FE)

I hereby certify that the accompanying plans and statements have been duly examined by me and are approved as to form and content, and were duly accepted for filing on the _____ day of _____, 19____.

State Engineer's Office

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, Larry A. Blair, on behalf of the Albuquerque Metropolitan Arroyo Flood Control Authority, being first duly sworn upon my oath state that I have read and examined the accompany map and statements (plans and statements consisting of 35 sheets) and know the contents thereof and representations thereon and state that the same are true to the best of my knowledge and belief.

Albuquerque Metropolitan Arroyo Flood Control Authority, Claimant

Larry A. Blair
Larry A. Blair
Executive Engineer

Subscribed and sworn to before me this 15th day of August, 1991.

Notary Public
Notary Public-Seal

My Commission Expires 5/22/95.

STATE OF NEW MEXICO)
) ss

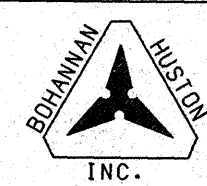
I N D E X

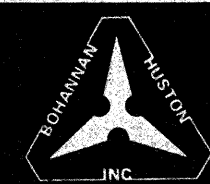
SHEET No.	SHEET TITLE
0	TITLE SHEET
1	FILING SHEET AND TABLE OF CONTENTS
2	LOCATION & DRAINAGE AREA MAP, GENERAL NOTES AND LEGEND
3	SUMMARY OF QUANTITIES
4	HYDROLOGY DATA - PRESENT CONFIGURATION
5	HYDROLOGY DATA - FUTURE CONFIGURATION
6	SITE PLAN
7	UTILITY REMOVAL AND INSTALLATION PLAN
8	DAM EMBANKMENT PLAN - PRESENT CONFIGURATION
9	DAM EMBANKMENT PLAN - FUTURE CONFIGURATION
10	DAM PROFILE WITH BORINGS AND DAM TYPICAL SECTIONS

SHEET No.	SHEET TITLE
11	DAM CROSS SECTIONS - STA. 2+57 TO STA. 7+10
12	DAM CROSS SECTIONS - STA. 7+50 TO STA. 10+90
13	DAM CROSS SECTIONS - STA. 12+60 TO STA. 17+50
14	DAM CROSS SECTIONS - STA. 19+50 TO STA. 24+00
15	DAM CROSS SECTIONS - STA. 26+00 TO STA. 32+57
16	PRINCIPAL SPILLWAY PLAN AND PROFILE
17	CONCRETE BOX CULVERT DETAILS
18	EAST BRANCH DROP STRUCTURE PLAN
19	EAST BRANCH DROP STRUCTURE DETAILS
20	WEST BRANCH DROP STRUCTURE PLAN & DETAILS
21	EMERGENCY SPILLWAY PLAN
22	EMERGENCY SPILLWAY DETAILS
23	DOWNSTREAM CHANNEL PLAN & PROFILE - STA. 21+00 TO STA. 26+21.81
24	UPSTREAM CHANNEL PLAN & PROFILE - STA. 1+00 TO STA. 5+97.55
25	TYPICAL CHANNEL SECTIONS & DETAILS
26	TYPICAL CHANNEL SECTIONS & MISC. DETAILS

SHEET No.	SHEET TITLE
27	PRINCIPAL SPILLWAY TO DOWNSTREAM CHANNEL TRANSITION DETAILS AND SECTIONS
28	DOWNSTREAM CHANNEL CROSS SECTIONS STA. 21+00 TO STA. 24+18.06
29	SOIL CEMENT WALL CROSS SECTIONS - STA. 1+00 TO STA. 3+50
30	SOIL CEMENT WALL CROSS SECTIONS - STA. 3+80 TO STA. 6+33.11
31	UPSTREAM CHANNEL CROSS SECTIONS - STA. 3+50 TO STA. 5+97.55
32	TRASHRACK DETAILS AND MISC. DETAILS
33	RIGHT-OF-WAY AND FENCING PLAN
34	FENCING DETAILS
35	REVEGETATION PLAN
36	LANDSCAPING PLAN
37	IRRIGATION PLAN
38	LANDSCAPING DETAILS
39	LANDSCAPING DETAILS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
26 27 28 29 30 31 32 33 34 35 36 37 38 39

BLACK ARROYO DETENTION DAM FILING SHEET AND TABLE OF CONTENTS	
Project No.	ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY
Seal	Job No. 90113.20 Sheet 1 of 39 Drawn By: HBM, NM Date: 7/91 Checked By: HCS Scale: NONE
	



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	6		4	9	4	6	.	9	0	0	3	9	9	

CLEARING AND GRUBBING

LOCATION	QUANTITY (AC)
WITHIN DAM AND CHANNEL SLOPE LIMITS	32.59

REMOVAL OF MISC. DEBRIS & RUBBLE

LOCATION	QUANTITY (LS)
WITHIN AMAFCA RIGHT-OF-WAY	1

MOBILIZATION

MOBILIZATION IS PAID AS AN ITEM FOR THIS PROJECT
--

FIELD OFFICE

ONE (1) FIELD OFFICE IS REQ'D AND PAID AS AN ITEM FOR THIS PROJECT
--

SOIL CEMENT SUMMARY

LOCATION	QUANTITY (CY)	REMARKS
EMERGENCY SPILLWAY	6.086	
WEST BRANCH DROP STRUCTURE	1.297	
EAST BRANCH DROP STRUCTURE	2.941	
UPSTREAM CHANNEL SOIL CEMENT WALL	3.192	
MISCELLANEOUS	223	Includes Principal Spillway Grade Control Pad and Inlet Blanket, and Access Road
TOTAL	13.739	

* SUBGRADE PREPERATION IS INCIDENTAL TO CONSTRUCTION

EARTHWORK SUMMARY

LOCATION	CUT (CY)	EMBANKMT (CY)	SHRINK (25%) (CY)	WASTE/BORROW (CY)	REMARKS
CUTOFF TRENCH	122.400	122.400	153.000	-30.600 (borrow)	
DAM	337.828	93.785	117.231	+220.597 (waste)	Includes Dam Embankment, compacted fill along Dodge Ave., and Earthen Cover on Emergency Spillway
UPSTREAM CHANNEL AND SOIL CEMENT WALL	16.038	2.703	3.379	+12.659 (waste)	-
DOWNSTREAM CHANNEL	1.220	3.406	4.258	-3.038 (borrow)	-
TOTAL	477.486	222.294	277.868	+199.618 (waste)	

SLOPE PAVING SUMMARY

LOCATION	QUANTITY (SY)	REMARKS
DOWNSTREAM CHANNEL	1.917	Includes Transition to Existing Box Culvert at Golf Course Road and Transition to Principal Spillway Box Culvert
RUNDOWN	565	
TOTAL	2.482	

* SUBGRADE PREPARATION IS INCIDENTAL TO CONSTRUCTION

RIPRAP

LOCATION	QUANTITY (CY)
EMERGENCY SPILLWAY APRON (GROUTED)	1.120
BASE OF DROP STRUCTURES (DUMPED)	360

METAL BARRIER W-BEAM

LOCATION	QUANTITY (LF)
TOP OF DAM: EITHER SIDE OF EMERGENCY SPILLWAY	25

STEEL PIPE RAILING

LOCATION	QUANTITY (LF)
PRINCIPAL SPILLWAY INLET AND OUTLET	408

* POSTS AND MOUNTING BRACKETS ARE INCIDENTAL

GRAVEL MULCH

LOCATION	QUANTITY (SY)
UPSTREAM FACE	29.120
DOWNSTREAM FACE	10.205
TOTAL	39.325

FOUNDATION TREATMENT

LOCATION	QUANTITY (LS)
UNDER DAM EMBANKMENT AND ALL SOIL CEMENT STRUCTURES	1

FENCING

LOCATION	QUANTITY (LF)	REMARKS
ALONG LIMITS OF AMAFCA RIGHT-OF-WAY	8.973	3 Gates will be paid for as a separate bid item. Pull Panels, Horse Entries and Walk Gaps Incidental to Construction.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
24 49 46.9 0 0 49 4

NOTE: INFORMATION ONLY. SEE BID PROPOSAL FOR SPECIFIC PAY ITEMS

PORTLAND CEMENT FOR SOIL CEMENT

LOCATION	QUANTITY (TON)
ALL SOIL CEMENT STRUCTURES	2,400

PRINCIPAL SPILLWAY AND CHANNEL, MISCELLANEOUS ITEMS

DESCRIPTION	UNIT	QUANTITY
1/4"x18" VANDAL PROTECTION TREAD PLATE	LF	340
PRINCIPAL SPILLWAY EXPANSION JOINTS	LF	325
CHANNEL STEP JOINT EXPANSION JOINT	LF	48
TRASH RACK	EA	1
DOUBLE "D" STORM INLET	EA	1
24" REINFORCED CONCRETE PIPE CLASS III	LF	10

STRUCTURAL CONCRETE (4000 PSI)

LOCATION	QUANTITY (CY)
BLACK DIVERSION OVERFLOW NOTCH EXTENSION	6.0
* PRINCIPAL SPILLWAY BOX CULVERT	332.0
ENTRANCE SLAB PRINCIPAL SPILLWAY	7.5
* ANTI-SEEP COLLARS	32.5
PRINCIPAL SPILLWAY CUTOFF WALLS	3.0
TOTAL	381.0

* INCLUDES CONCRETE, REINF., FORMS FINISH, DOWELS, CURING, WATER STOPS AND OTHER CONCRETE ACCESSORIES.

STRUCTURAL CONCRETE 4000 PSI, TINTED

LOCATION	QUANTITY (CY)
CHANNEL AND RUNDOWN CUTOFF WALLS	12.0
* RETAINING WALL, WALL JOINTS	72.0
TOTAL	84.0

* INCLUDES CONCRETE, REINF., FORMS FINISH, DOWELS, CURING, WATER STOPS AND OTHER CONCRETE ACCESSORIES.

BASE COURSE (6" CLASS II B)

LOCATION	LENGTH (FT)	WIDTH (FT)	QUANTITY (CY)
TOP OF DAM MAINTENANCE ROAD	2.364	15	657
UPSTREAM CHANNEL AND SOIL CEMENT WALL	238	16	71
DOWNSTREAM CHANNEL	636	12 to 15	198*
ACCESS ROADS	460	15	128
TOTAL	3,698		1,054

* INCLUDES TURNOUTS

UTILITY REMOVAL SUMMARY

DESCRIPTION	UNIT	QUANTITY
REMOVAL & DISPOSAL OF 8" AC PIPE	LF	4169
REMOVAL & DISPOSAL OF 6" AC PIPE	LF	4143
REMOVAL & DISPOSAL OF 4" AC PIPE	LF	433
REMOVAL & DISPOSAL OF VALVE	EA	8
REMOVAL & DISPOSAL OF FIRE HYD.	EA	5
REMOVAL & DISPOSAL OF MANHOLE	EA	18

MISC. UTILITY INSTALLATION

DESCRIPTION	UNIT	QUANTITY
8" SANITARY SEWERLINE, PVC	LF	203
MANHOLE TYPE E-4' DIA. 10'-16" DEEP	EA	1
SANITARY SEWER SERVICE CONNECTION.	EA	12
SANITARY SEWER TRANSITION COUPLING	EA	3
6" WATERLINE	LF	80
4" WATERLINE CAP	EA	4
6" WATERLINE CAP	EA	3
6" GATE VALVE WITH TYPE B BOX	EA	3
3/4" WATERLINE SERVICE CONNECTION	EA	12
2" WATERLINE SERVICE CONNECTION	EA	1
WATERLINE TRANSITION COUPLING	EA	2
FIRE HYDRANT	EA	2
WATERLINE BLOCKING	CY	3.0

SANITARY SEWER (15")

DESCRIPTION	UNIT	QUAN.
MANHOLE TYPE E-4' DIA. OVER 10'-16' DP	EA	3.0
15" SANITARY SEWERLINE, PVC	LF	685.0
CONCRETE ENCASEMENT FOR SANITARY SEWERLINE	CY	8.0

8" 3000 PSI CONC. SLOPE PAVING, TINTED

LOCATION	QUANTITY (SY)	REMARKS
DOWNSTREAM CHANNEL	1.917	Includes Transition to Existing Box Culvert at Golf Course Road and Transition to Principal Spillway Box Culvert
RUNDOWN	565	
TOTAL	2.482	

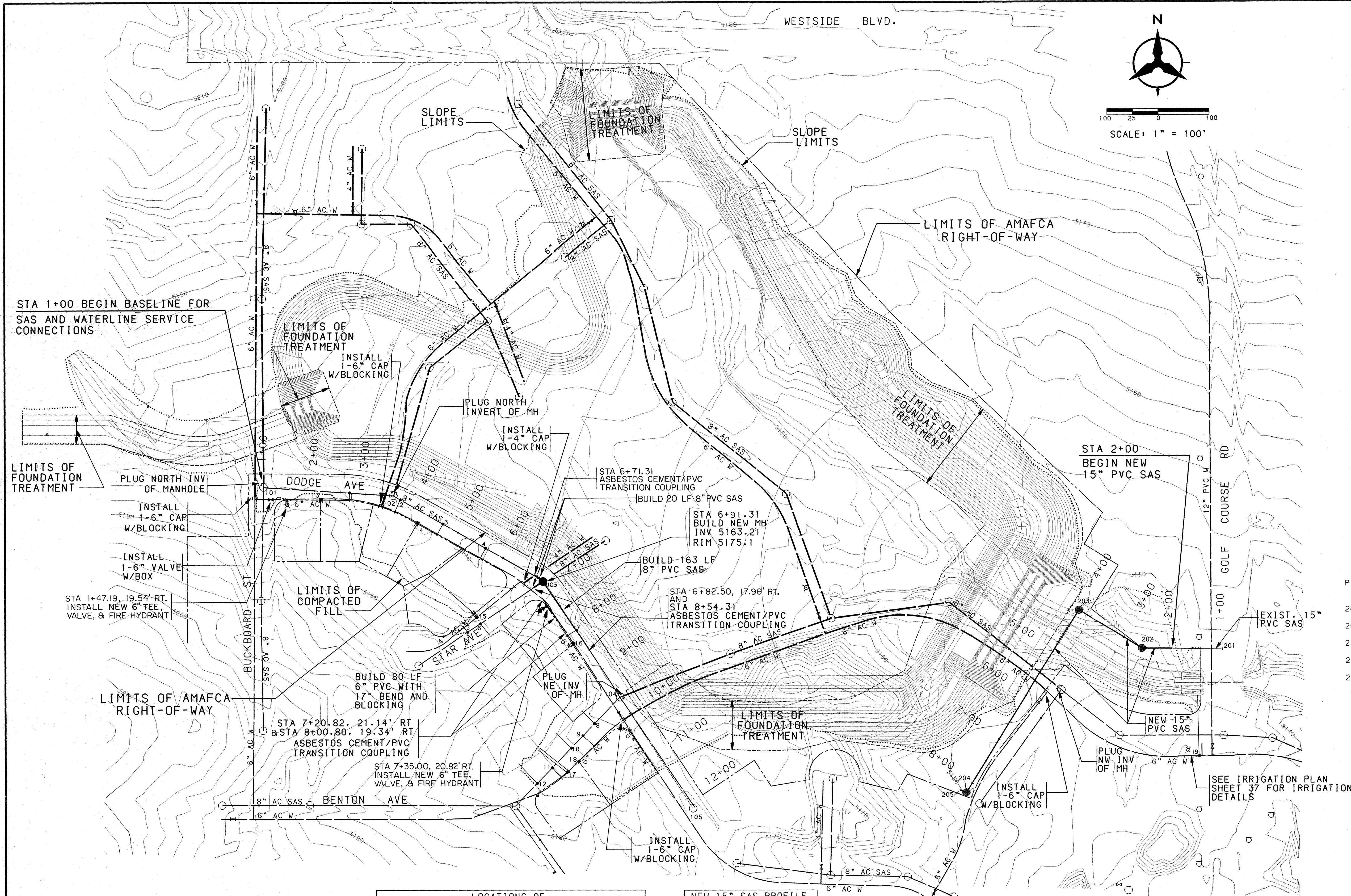
LANDSCAPE / IRRIGATION SYSTEM

LOCATION	QUANTITY (LS)
DOWNSTREAM FACE OF DAM AND DOWNSTREAM CHANNEL	1

REVEGETATIVE SEEDING

LOCATION	QUANTITY (AC)
ALL DISTURBED AREAS; EXCLUDING AREAS COVERED BY STRUCTURES EXCEPT FOR EARTH COVERED PORTION OF EMERGENCY SPILLWAY	29.25

Date	Revision	BLACK ARROYO DETENTION DAM SUMMARY OF QUANTITIES	
Project No.	ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY		
Seal			
Job No.	90113-20	Sheet	3 of 39
Drawn By	HBM	Date	7/91
Checked By	HCS	Scale	NONE
Professional Engineer		INC.	



NOTES:

REMOVE:
433 LF 4" AC WATER LINE
4143 LF 6" AC WATER LINE
2- 4" VALVE
6- 6" VALVE
5- FIRE HYDRANT
4169 LF 8" SANITARY SEWER LINE
18- MANHOLE

- SEE INDIVIDUAL NOTES AND SCHEDULES FOR INSTALLATION LOCATIONS.
- SEE SUPPLEMENTAL DETAIL DRAWINGS IN CONTRACT DOCUMENTS AND SPECIFICATIONS FOR SANITARY SEWER AND WATERLINE SERVICE CONNECTIONS, FIRE HYDRANT STUB, AND SANITARY SEWER ENCASEMENT.
- ALL REMOVALS SHALL BE LIMITED TO THE AMAFCA RIGHT-OF-WAY, WITH THE EXCEPTION OF 8" SAS WITHIN STREET RIGHT-OF-WAY.
- ALL EXISTING UTILITIES WITHIN THE AMAFCA RIGHT-OF-WAY, AND AS NOTED IN STREET RIGHT-OF-WAY SHALL BE REMOVED BY THE CONTRACTOR.
- FIRE HYDRANTS, VALVES, AND MANHOLE RINGS AND COVERS TO BE SALVAGED TO NEW MEXICO UTILITIES WELL SITE AT SWINBURNE DAM.
- SANITARY SEWER SERVICE CONNECTION NO. 7 REQUIRES A SADDLE CONNECTION (TEE).
- EXACT LOCATIONS OF WATERLINE AND SANITARY SEWER SERVICE CONNECTIONS TO BE FIELD VERIFIED.

LEGEND

- 13- SAS SVC CONNECTION LOCATION
18- WATERLINE SVC CONNECTION LOCATION
NEW SAS MH AND LINE
EXISTING LINE TO BE REMOVED

BASELINE FOR NEW 15" PVC SAS

PI #	STATION	COORDINATES (X)	COORDINATES (Y)	TANGENT BEARING
201	1+00.00 (PI)	372719.419	1533545.245	N 89 03 34.852 W
202	2+59.04 (PI)	372560.400	1533547.855	N 58 07 47.211 W
203	4+02.92 (PI)	372438.214	1533623.821	S 31 52 12.989 W
204	8+22.22 (PI)	372216.820	1533267.725	N 68 46 9.640 W
205	8+32.22 (PI)	372207.499	1533271.346	

BASELINE FOR SAS AND WATERLINE RISERS AND LATERALS

PI #	STATION	COORDINATES (X)	COORDINATES (Y)	TANGENT BEARING
101	1+00.00 (PI)	370845.039	1533866.719	S 86 12 29.441 E
102	3+53.99 (PI)	371098.477	1533849.922	S 60 18 57.093 E
103	6+91.31 (PI)	371391.523	1533682.879	S 33 09 25.420 E
104	9+63.36 (PI)	371540.320	1533455.121	S 33 12 10.957 E
105	12+22.37 (PI)	371682.156	1533238.398	

LOCATIONS OF SANITARY SEWER SERVICE CONNECTIONS*

POINT NO.	STATION	OFFSET
1	2+67.79	0.00' RT.
2	3+69.31	0.00' RT.
3	4+65.31	0.00' RT.
4	5+60.91	0.00' RT.
5	6+12.49	161.83' RT.
6	6+25.63	134.86' RT.
7	8+07.66	0.00' RT.
8	9+79.17	70.30' RT.
9	9+86.44	102.49' RT.
10	9+93.70	134.68' RT.
11	10+05.37	186.38' RT.
12	10+14.84	228.32' RT.

LOCATIONS OF WATERLINE SERVICE CONNECTIONS*

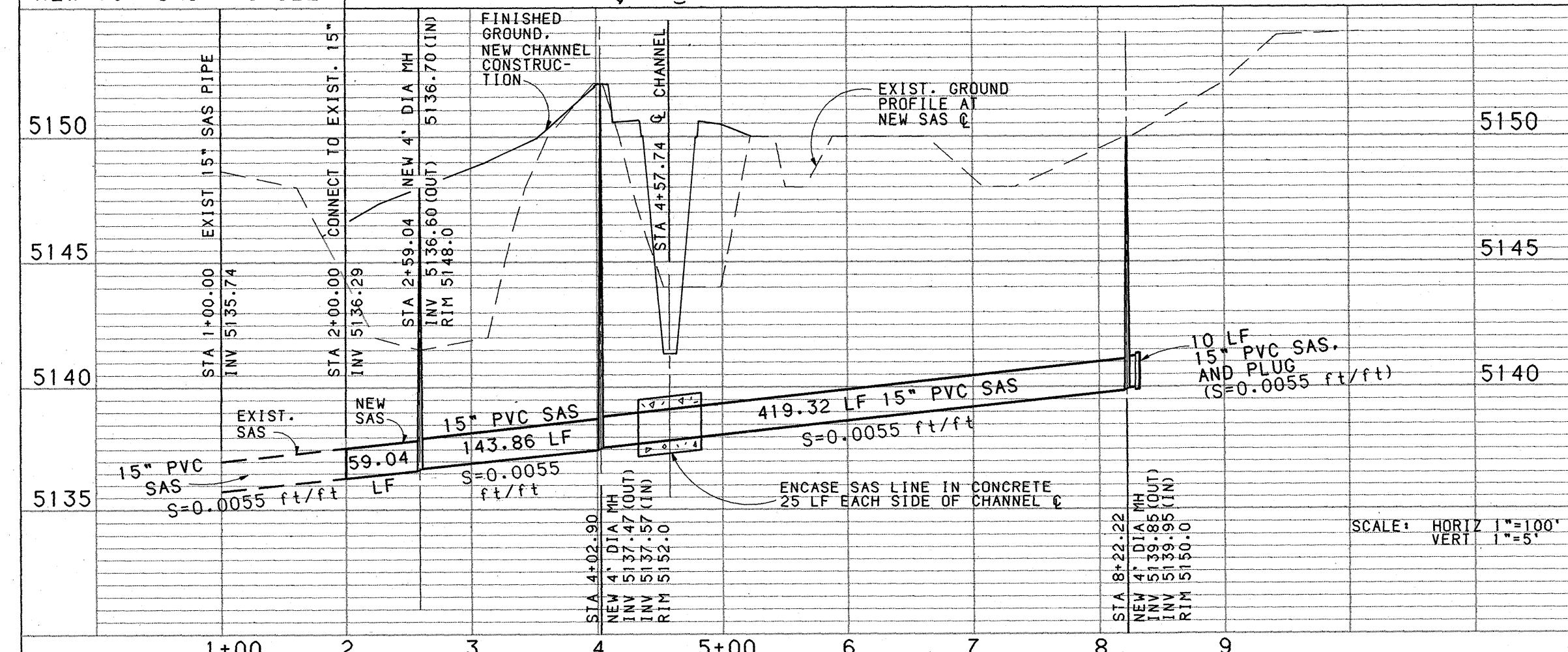
POINT	SIZE	STATION	OFFSET
13	3/4"	2+12.34	15.03' RT.-D
14	3/4"	4+21.18	22.61' RT.-D
15	3/4"	6+13.21	126.64' RT.-D
16	3/4"	8+26.95	19.28' RT.-D
17	3/4"	10+21.77	136.90' RT.-D
18	3/4"	10+28.86	165.78' RT.-D
19	2"	1+44.40	208.10' LT.-S

* BASELINE STA 1+00 = CENTER OF SAS MANHOLE AT INTERSECTION OF BUCKBOARD AND DODGE.

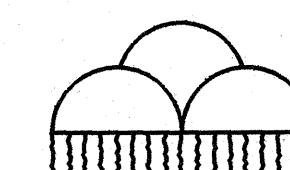
**D=DOUBLE SERVICE
S=SINGLE SERVICE

*** USE BASELINE FOR NEW 15" PVC SAS TO LOCATE POINT NO. 19.

NEW 15" SAS PROFILE



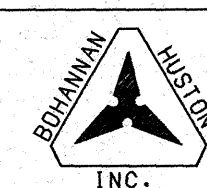
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
26 4946.900594



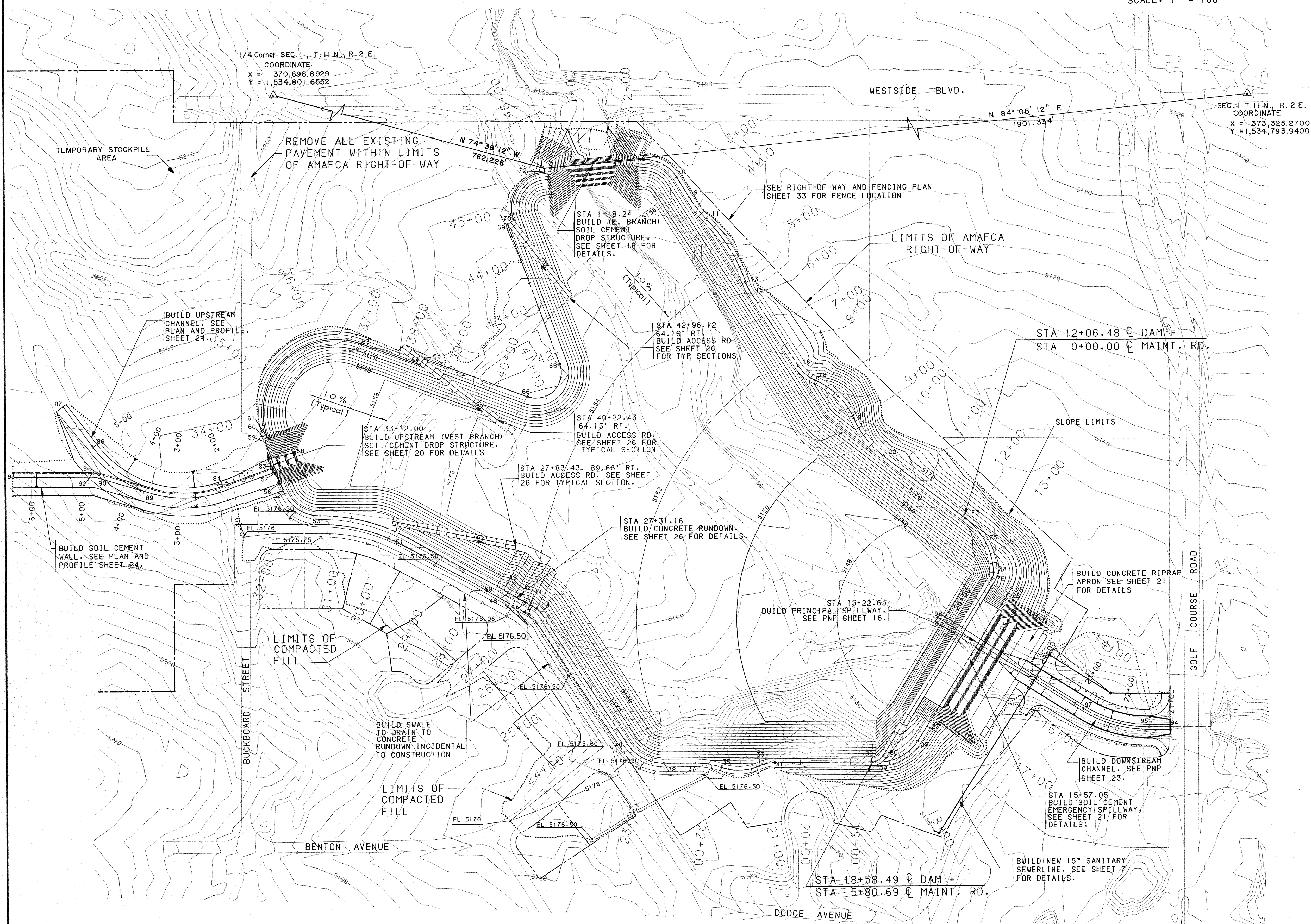
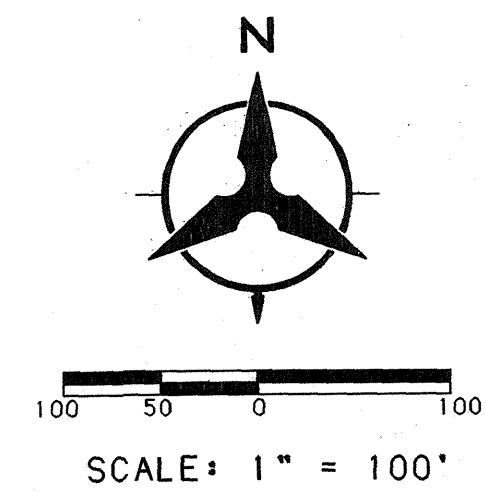
BLACK ARROYO DETENTION DAM UTILITY REMOVAL AND INSTALLATION PLAN

Project No. 90113.20
ALBUQUERQUE METROPOLITAN
ARROYO FLOOD CONTROL
AUTHORITY

Job No. 90113.20
Drawn By NM
Checked By HCS
Sheet 7 of 39
Date 7/91
Scale AS NOTED



CENTERLINE DATA FOR DOWNSTREAM CHANNEL					
POINT	STATION	RADIUS LENGTH	DEGREE OF CURVATURE	COORDINATES (X) (Y)	TANGENT BEARING
94	21+00.00 (PI)			372678.779 1533479.038	N 89 44 42.281 W
95	21+41.58 (PC)			372637.199 1533479.223	
96	22+12.36 (PT)	250.000	22 55 6.099	372556.420 1533479.537	N 58 07 47.388 W
97	22+79.53 (PT)			372506.310 1533516.909	
98	26+21.81 (PI)			372215.629 1533697.632	



CENTERLINE DATA FOR DAM ALIGNMENT					
POINT	STATION	RADIUS LENGTH	DEGREE OF CURVATURE	COORDINATES (X) (Y)	TANGENT BEARING
1	0+21.24 (PI)			371433.882 1534599.715	N 84 59 55.777 E
2	0+34.74 (PI)			371447.332 1534600.892	N 84 59 59.842 E
3	0+64.74 (PI)			371477.216 1534603.507	N 84 59 58.146 E
4	1+71.74 (PI)			371583.809 1534612.833	N 84 59 59.842 E
5	2+01.74 (PI)			371613.696 1534615.448	N 84 59 50.448 E
6	2+15.24 (PC)			371627.142 1534616.625	
7	2+62.32 (PT)	77.501	73 55 44.291	371674.049 1534620.730	S 32 26 20.002 E
8	2+99.86 (PT)			371699.307 1534580.991	
9	3+45.00 (PC)			371723.519 1534584.896	
10	3+74.15 (PT)	300.000	19 05 54.914	371739.158 1534581.291	
11	4+03.13 (PT)			371759.241 1534497.157	
12	4+73.39 (PC)			371811.485 1534462.182	
13	5+52.50 (PT)	350.000	16 22 12.825	371836.286 1534370.511	
14	5+52.50 (PC)			371836.287 1534370.511	
15	5+84.20 (PT)	100.000	57 17 45.576	371840.115 1534359.450	S 32 26 22.448 E
16	5+75.80 (PT)			371846.353 1534349.572	
17	7+50.00 (PC)			371939.835 1534202.556	
18	7+72.95 (PT)	75.000	76 23 38.674	371952.147 1534183.184	
19	7+94.55 (PT)			371973.193 1534174.022	
20	8+52.42 (PT)	150.001	38 11 49.043	372026.256 1534150.919	
21	9+05.02 (PT)			372050.050 1534098.163	
22	9+05.02 (PC)			372050.050 1534098.163	
23	9+51.55 (PT)	200.000	28 38 52.398	372070.877 1534052.877	S 52 17 46.180 E
24	10+02.20 (PT)			372109.554 1534022.539	
25	13+03.75 (PT)	62.500	91 40 22.514	372348.132 1533838.119	S 31 52 21.008 W
26	13+03.75 (PC)			372352.786 1533838.119	
27	13+95.56 (PT)			372362.986 1533755.670	
28	14+12.55 (PT)			372354.015 1533741.242	S 31 52 11.183 W
29	17+01.55 (PT)			372201.426 1533495.809	S 31 52 9.775 W
30	17+51.39 (PC)			372175.113 1533453.485	
31	18+00.57 (PT)	88.501	64 44 25.623	372149.143 1533411.715	S 89 59 49.954 W
32	18+41.17 (PT)			372089.358 1533405.246	
33	20+51.80 (PC)			371889.329 1533411.702	
34	20+67.70 (PT)	75.000	76 23 39.854	371873.425 1533411.701	
35	20+65.14 (PT)			371858.890 1533405.246	
36	20+85.14 (PC)	100.000	57 17 44.332	371822.015 1533389.868	
37	21+59.84 (PC)			371784.099 1533402.668	
38	21+85.03 (PT)	150.001	38 11 49.236	371759.452 1533411.624	N 89 59 59.415 W
39	22+11.69 (PT)			371733.308 1533411.713	
40	22+75.60 (PC)			371669.402 1533411.713	
41	23+25.51 (PT)	88.500	64 44 27.576	371621.434 1533411.714	N 33 05 0.771 W
42	23+63.51 (PT)			371595.250 1533451.905	
43	26+72.92 (PC)			371426.353 1533711.157	
44	26+72.92 (PT)	27.500	151 39 5.087	371422.670 1533716.810	N 60 39 28.365 W
45	26+85.16 (PT)			371416.788 1533720.117	
46	27+01.16 (PT)			371403.709 1533727.470	N 60 39 31.639 W
47	27+11.16 (PT)			371394.992 1533732.370	N 60 39 28.270 W
48	27+26.16 (PT)			371381.917 1533739.720	N 60 39 23.767 W
49	27+36.16 (PT)			371373.199 1533744.621	N 60 39 16.283 W
50	27+51.16 (PT)			371360.124 1533751.972	N 60 39 41.745 W
51	27+61.16 (PT)			371351.406 1533756.872	N 60 39 28.270 W
52	27+76.16 (PT)			371338.331 1533764.222	N 60 39 26.876 W
53	29+79.39 (PC)			371161.172 1533865.812	
54	30+79.21 (PT)	357.178	16 02 28.227	371079.655 1533909.638	
55	31+62.32 (PT)			370986.141 1533909.637	
56	31+62.32 (PC)			370986.141 1533909.638	
57	32+15.58 (PT)	77.500	73 55 48.135	370931.875 1533909.638	N 19 59 56.234 W
58	32+52.00 (PT)			370913.315 1533960.631	
59	32+73.00 (PT)			370907.843 1533975.666	N 20 00 3.063 W
60	32+97.00 (PT)			370899.634 1533998.219	N 20 00 2.036 W
61	33+27.00 (PT)			370889.373 1534026.410	N 19 59 59.391 W
62	33+63.00 (PT)			370877.060 1534060.240	N 19 59 58.854 W
63	33+67.00 (PT)			370875.693 1534063.997	N 70 00 23.158 E
64	33+74.44 (PC)			370882.729 1534066.557	
65	36+87.59 (PT)	145.000	39 30 51.288	370775.680 1534050.694	S 69 42 41.202 E
66	37+04.22 (PT)			371069.263 1534252.156	
67	38+28.32 (PT)			371185.668 1534209.123	N 37 44 32.366 E
68	38+43.32 (PT)			371194.850 1534220.985	S 69 42 40.657 E
69	40+62.83 (PC)			371400.743 1534144.869	
70	41+70.77 (PT)	50.000	114 35 27.245	371501.978 1534107.443	N 19 59 55.920 W
71	41+75.53 (PT)			371465.065 1534205.867	
72	44+75.12 (PT)			371362.948 1534489.452	N 52 34 4.342 E
73	44+90.12 (PC)			371374.860 1534498.570	
74	45+81.35 (PT)	70.000	81 51 3.993	371343.661 1534584.293	
75	46+18.40 (PT)			371434.538 1534592.244	

CENTERLINE DATA FOR MAINTENANCE ROAD					
POINT	STATION	RADIUS LENGTH	DEGREE OF CURVATURE	COORDINATES (X) (Y)	TANGENT BEARING
73	0+00.00 (PC)			372271.916 1533897.033	
74	0+32.44 (PT)	142.500	40 12 29.632	372297.962 1533877.094	
75	0+63.88 (PC)			372312.032 1533848.011	
76	0+95.75 (PT)	142.500	40 12 26.815	372326.248 1533814.440	
77	1+26.91 (PT)			372326.920 1533787.535	
78	1+26.91 (PC)			372326.920 1533787.535	
79	1+54.85 (PT)	27.500	151 39 0.280	372327.092 1533779.371	S 31 52 13.023 W
80	1+42.54 (PT)			372322.780 1533772.436	
81	5+52.08 (PC)			372106.945 1533844.608	
82	5+67.32 (PT)	27.501	151 39 33.440	372098.467 1533411.712	
83	5+79.92 (PT)			372083.225 1533411.712	

CENTERLINE DATA FOR UPSTREAM CHANNEL					
POINT	STATION	RADIUS LENGTH	DEGREE OF CURVATURE	COORDINATES (X) (Y)	TANGENT BEARING
83	1+00.00 (PI)			370893.864 1534006.761	S 69 59 59.393 W
84	2+06.44 (PC)			370793.843 1533970.356	
85	2+76.39 (PT)	225.000	25 27 53.363	370634.145 1533912.229	N 35 52 15.990 W
86	4+97.55 (PT)			370534.561 1534049.944	
87	5+97.54 (PT)			370475.965 1534130.978	

CENTERLINE DATA FOR SOIL CEMENT WALL					
POINT	STATION	RADIUS LENGTH	DEGREE OF CURVATURE	COORDINATES (X) (Y)	TANGENT BEARING
83	1+00.00 (PT)			370893.864 1534006.761	S 69 59 59.393 W
84	2+06.44 (PC)			370793.843 1533970.356	
85	2+76.39 (PT)	225.000	25 27 53.363	370634.145 1533912.229	N 35 52 15.990 W
86	4+97.55 (PT)			370534.561 1534049.944	
87	5+97.54 (PT)			370475.965 1534130.978	
88	5+52.08 (PT)			372106.945 1533844.608	
89	5+67.32 (PT)			372098.467 1533411.712	
90	4+60.00 (PT)			370547.330 1533997.461	N 73 26 50.028 W
91	4+66.56 (PT)			370541.045 1533999.329	N 89 39 32.248 W
92	4+73.11 (PT)			370534.493 1533999.368	N 89 39 43.029 W
93	6+33.11 (PT)			370374.496 1534000.312	

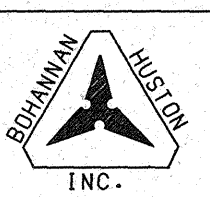
NOTE: CURVE P.I. POINTS ARE NOT SHOWN ON MAP

BLACK ARROYO DETENTION DAM DAM EMBANKMENT PLAN

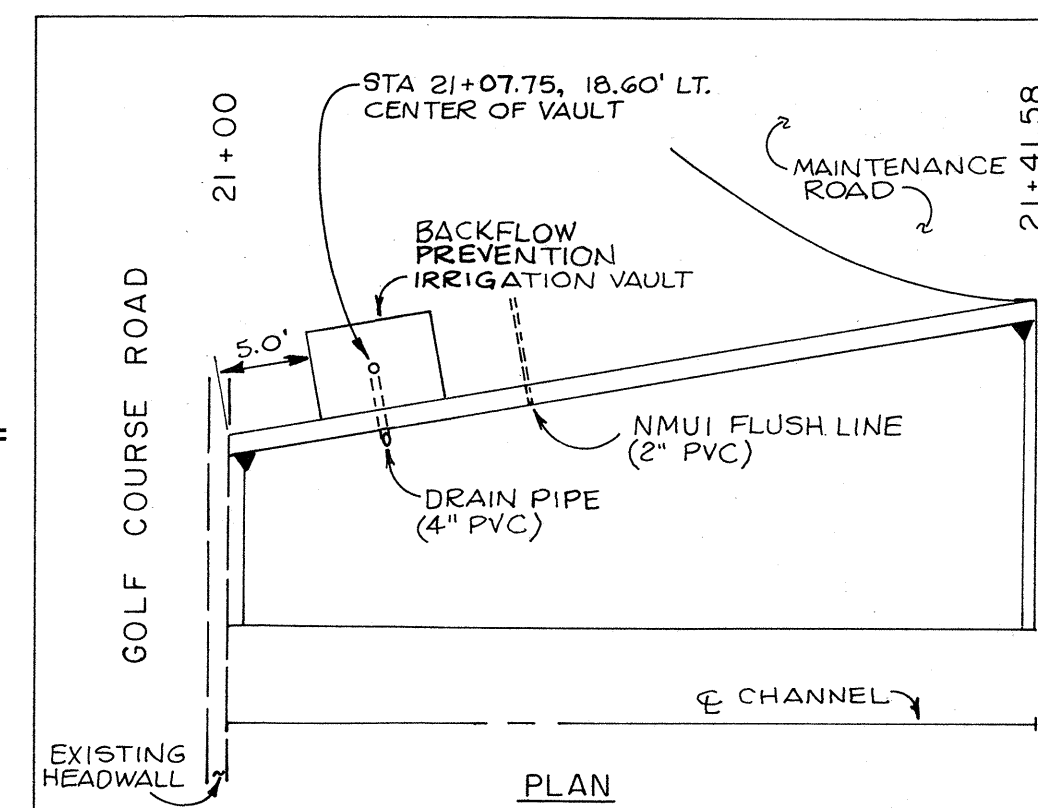
Project No. **ALBUQUERQUE METROPOLITAN
ARROYO FLOOD CONTROL
AUTHORITY**

PRESENT CONFIGURATION

Job No. **90113.20** Sheet **8** of **39**
Drawn By: **MM, CWH** Date: **7/91**
Checked By: **HCS** Scale: **AS NOTED**

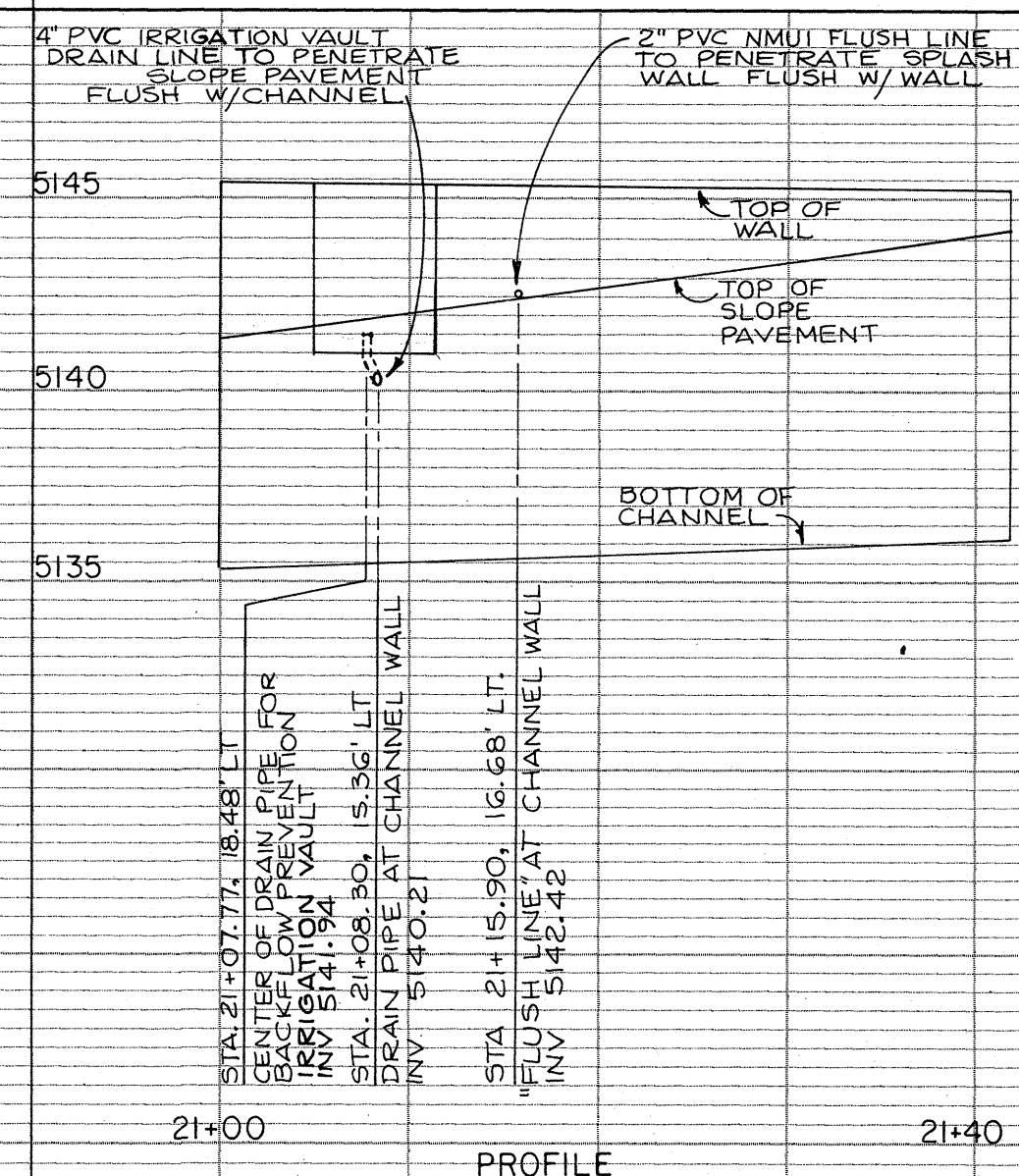


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
26 49 46 90 06 94

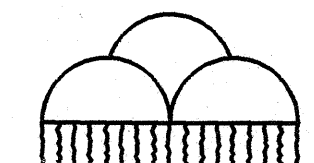


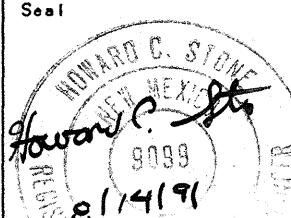
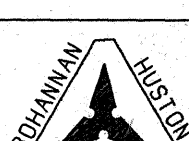
NOTES:

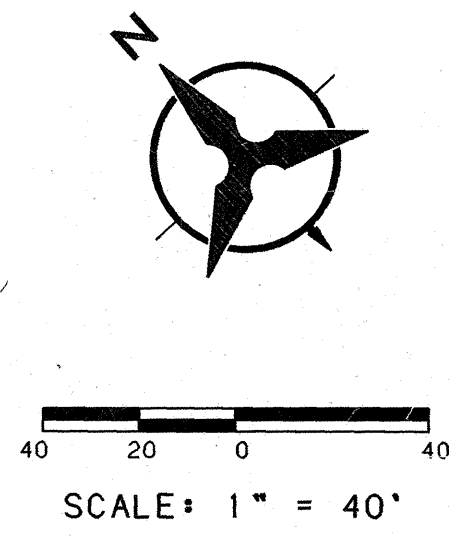
1. SEE SHEET 27 FOR TRANSITION DETAILS AT STATION 24+27.81
2. EXISTING RIPRAP TO BE REMOVED AND SALVAGED TO AMAFCA SITE. LOCATED AT CONFLUENCE OF SEVEN BAR CHANNEL AND BLACK ARROYO.



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	6		4	9	4	6	.	9	0	0	7	9	4	



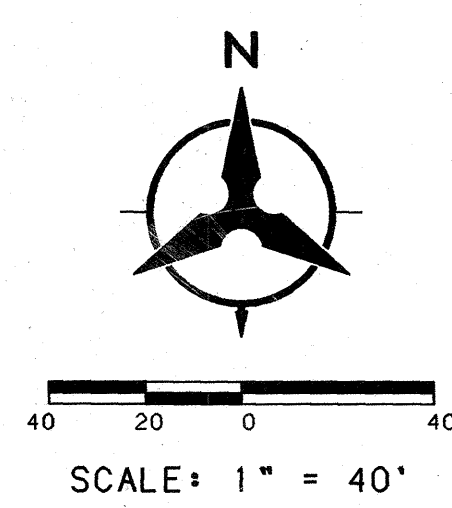
Date	BLACK ARROYO DETENTION DAM	
	DOWNSTREAM CHANNEL	
	PLAN & PROFILE	
	Project No. _____ Seal _____	ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY
	STA 21+00 TO STA 26+21.81	
By	Job No. <u>90113.20</u>	Sheet <u>23</u> of <u>39</u>
	Drawn By: <u>NM</u>	Date: <u>7/91</u>
	Checked By: <u>HCS</u>	Scale: <u>AS NOTED</u>
		



MATCHLINE

ROTOR HEAD - SEE DETAIL (2/39)
POLYPIPE W/DRIP EMITTERS - SEE DETAIL (5/39)
NOTE: FOR DRIP EMITTER LOCATIONS, SEE SPECIFICATIONS.
SCHEDULE 40 PVC LATERAL - SEE DETAIL (4/39)
PRESSURE REGULATOR - SEE DETAIL (4/39)

MATCHLINE



IRRIGATION PARTS LIST

SYMBOL	QTY	MODEL	MANUFACTURER	DESCRIPTION	REMARKS	SIZE
(M)	1			WATER METER	See Specifications	2"
As Per Detail	1	(See Below) SITECAST R6661-VH	NEENAH FOUNDRY	IRRIGATION VAULT CONCRETE BOX FRAME & LID W/LOCK	RPBP As Per Detail 9/38 As Per Detail 9/38	52"x78"x52" 36"x54"
As Per Detail	20		VALVE CAN W/ LOCKING LID	Corrugated Metal Pipe	As Per Detail 5/6, 7/38 3/4, 3/9	28" dia.
As Per Detail		24-R	MIRO INDUSTRIES, INC.	PIPE STANDS	Stack As Per Detail 4/38	---
(B)	1	825YA	FEBCO	BACKFLOW PREVENTER	18" below gate	2"
(V)	9	4200	CHAMPION	GATE VALVE	Brass	2"
(C)	4	QVC-100	CHAMPION	QUICK COUPLER	Brass	3/4"
(D)	7	100-100	CHAMPION	STRAIGHT VALVE	Manual Drain	3/4"
(F)	46	514-20	TORO	FLOOD BUBBLER	As Per Detail 1/39	---
(R)	6	S700C-PC-4.5	TORO	ROTOR HEAD	As Per Detail 2/39	---
(P)	12	UPR 2020-302	HARDIE	PRESSURE REGULATOR	Mount in Box	1 1/4"
(F)	2	3130	CMB INDUSTRIES	"Y" FILTER	As Per Detail 3/39	2"
NOT SHOWN	1296	E-2	HARDIE	EMITTERS	See Specifications	2 gph

LATERAL LINES ABOVE ARROYO TO BE SLEEVED IN GALVANIZED STEEL PIPE, SEE DETAIL (6/39)

NOTE:
IRRIGATION VAULT TO DRAIN TO CHANNEL
SEE DETAIL (8/38)

POINT OF CONNECTION TO BE LOCATED ON EXISTING 6" WATER LINE @ BENTON AVE.

NOTE:
PIPE STANDS TO BE INSTALLED UNDER ALL VALVES AND AT ANY ELBOW WITHIN THE IRRIGATION VAULT. STACK PIPE STANDS AS NEEDED, BOLT TO BOTTOM OF CONC. VAULT. LANDSCAPE ARCHITECT TO FIELD VERIFY LOCATION OF PIPE LAYOUT & PIPE STANDS PRIOR TO INSTALLATION.

BACKFLOW PREVENTER
SEE DETAIL
INSTALL IN IRRIGATION VAULT
SEE DETAIL

MANUAL VALVE - SEE DETAIL

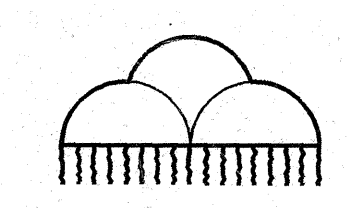
MANUAL DRAIN - SEE DETAIL

DRIP VALVE/FILTER
ASSEMBLY - SEE DETAIL

MANUAL VALVE - SEE
DETAIL

ALL BUBBLERS IN OR ADJACENT TO UTILITY EASEMENTS SHALL BE LOCATED IN THE FIELD BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
26 49 46 90 08 94



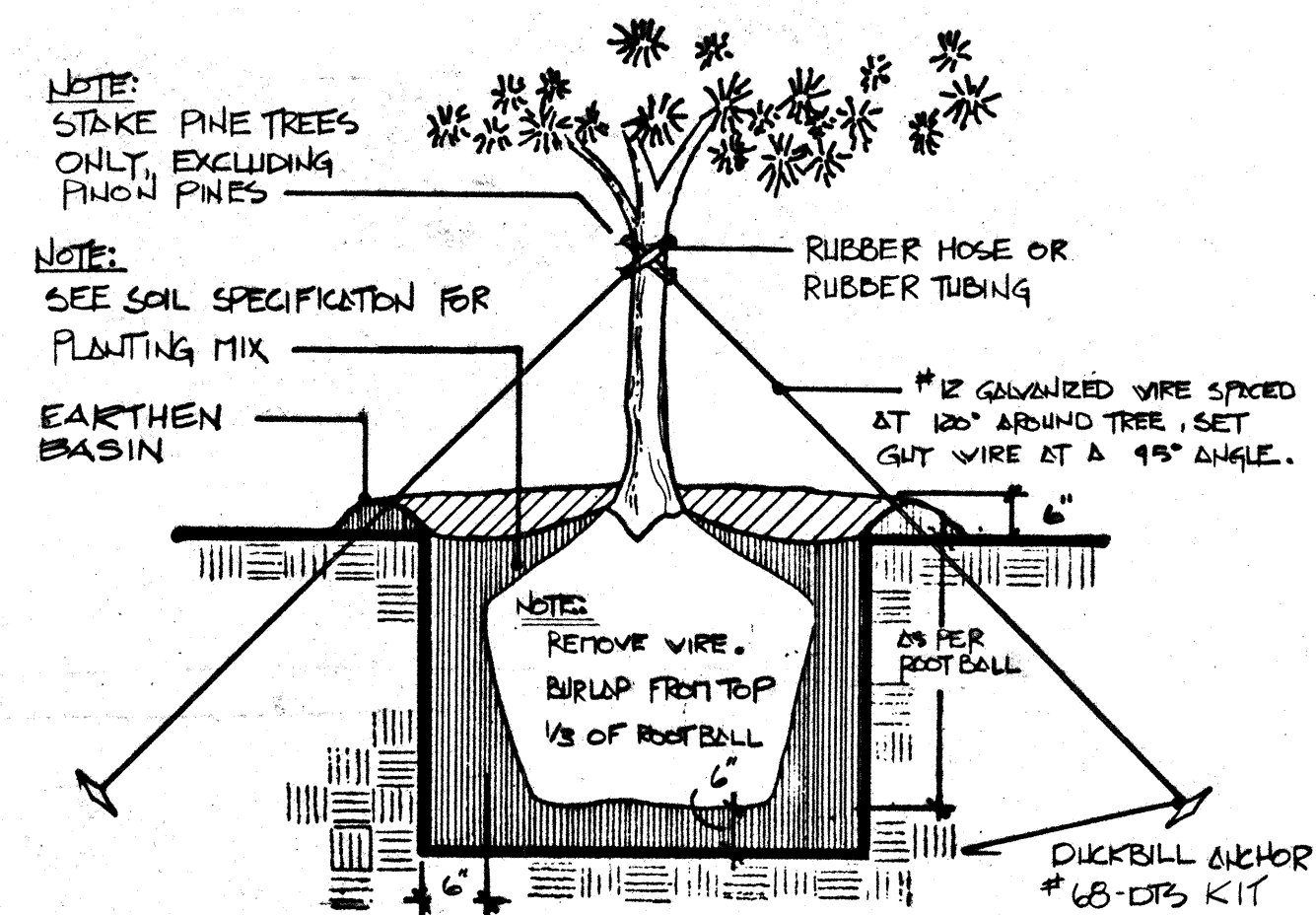
BLACK ARROYO DETENTION DAM
IRRIGATION PLAN

Project No. **ALBUQUERQUE METROPOLITAN
ARROYO FLOOD CONTROL
AUTHORITY**

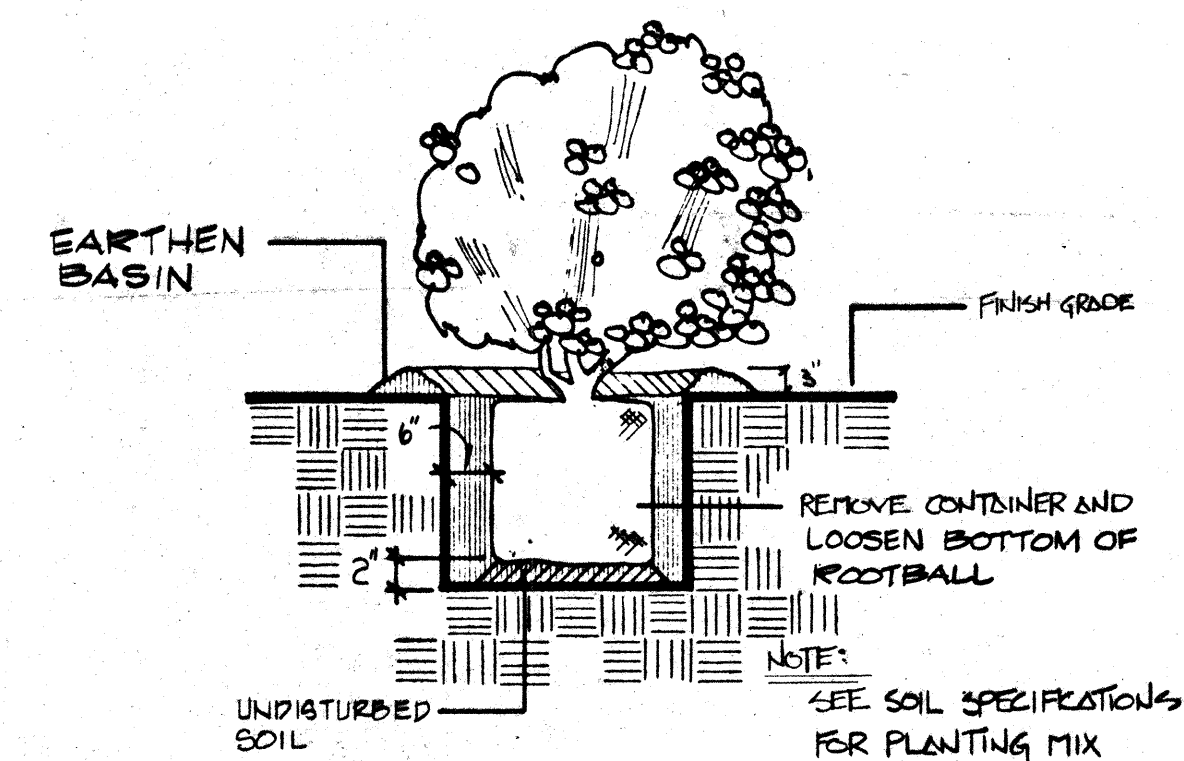
Seal

Drawn By: **PAA**
Checked By: **GR**

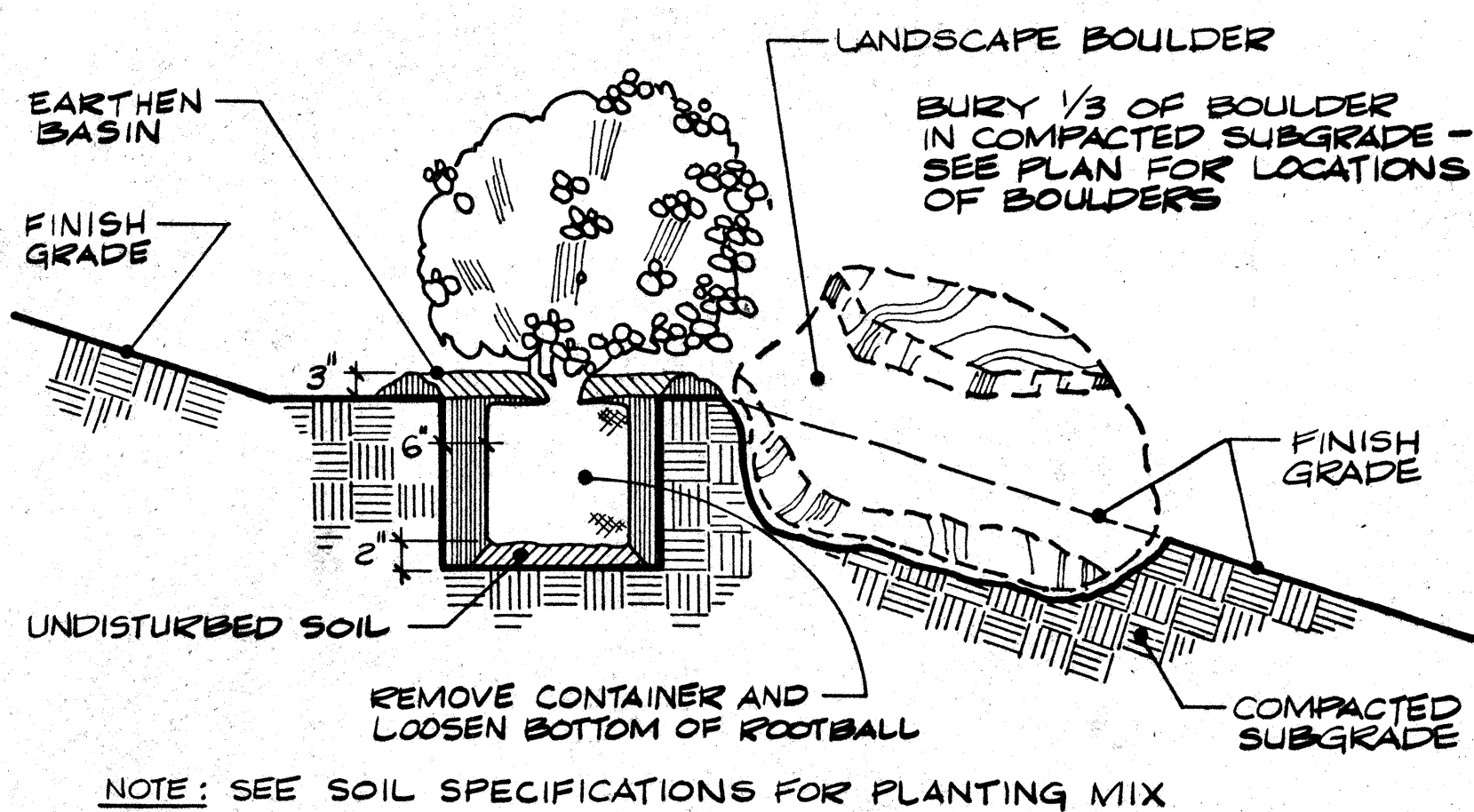
Sheet **37** of **39**
Date: **1/91**
Scale: **AS NOTED**



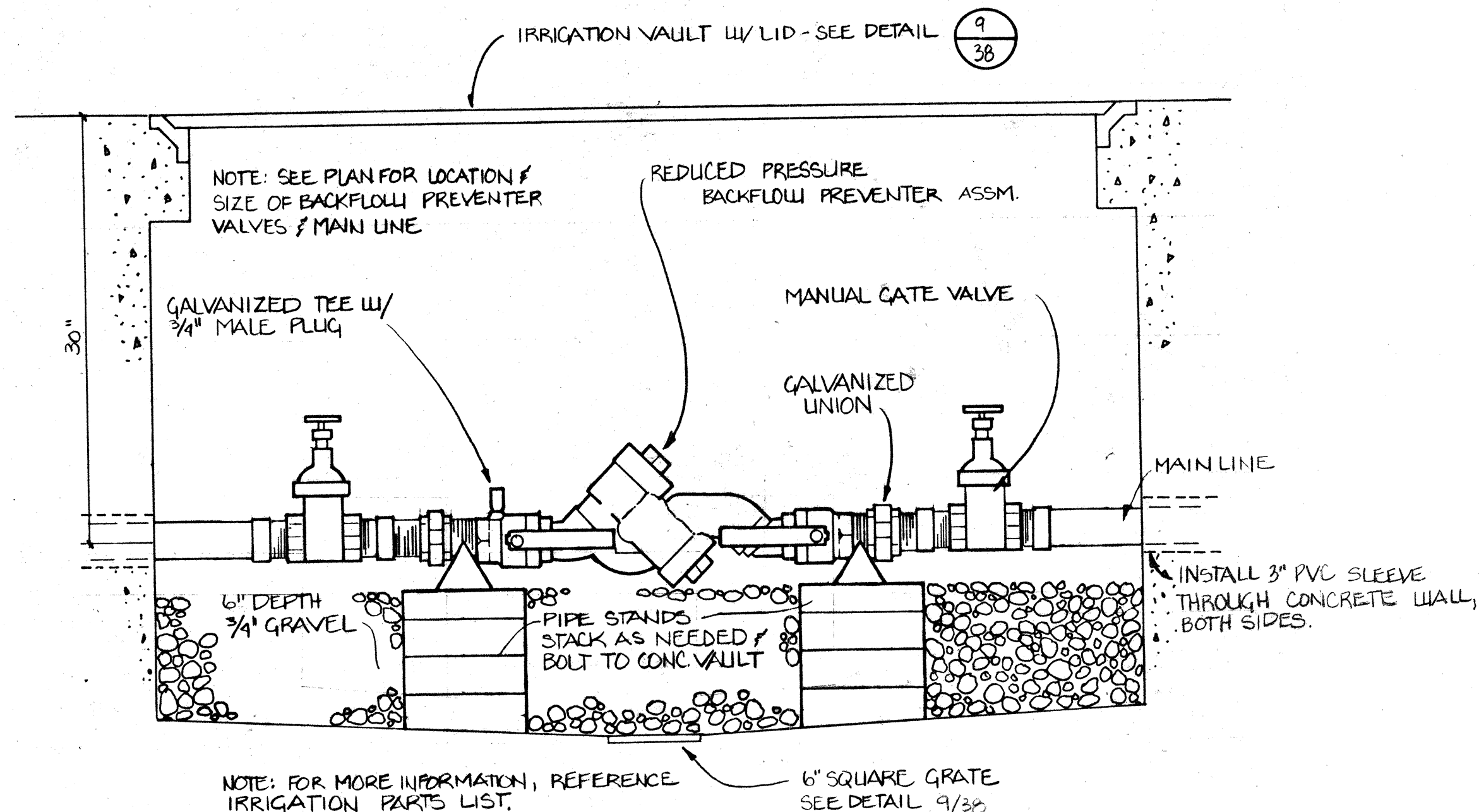
1
38
TREE PLANTING
NTS



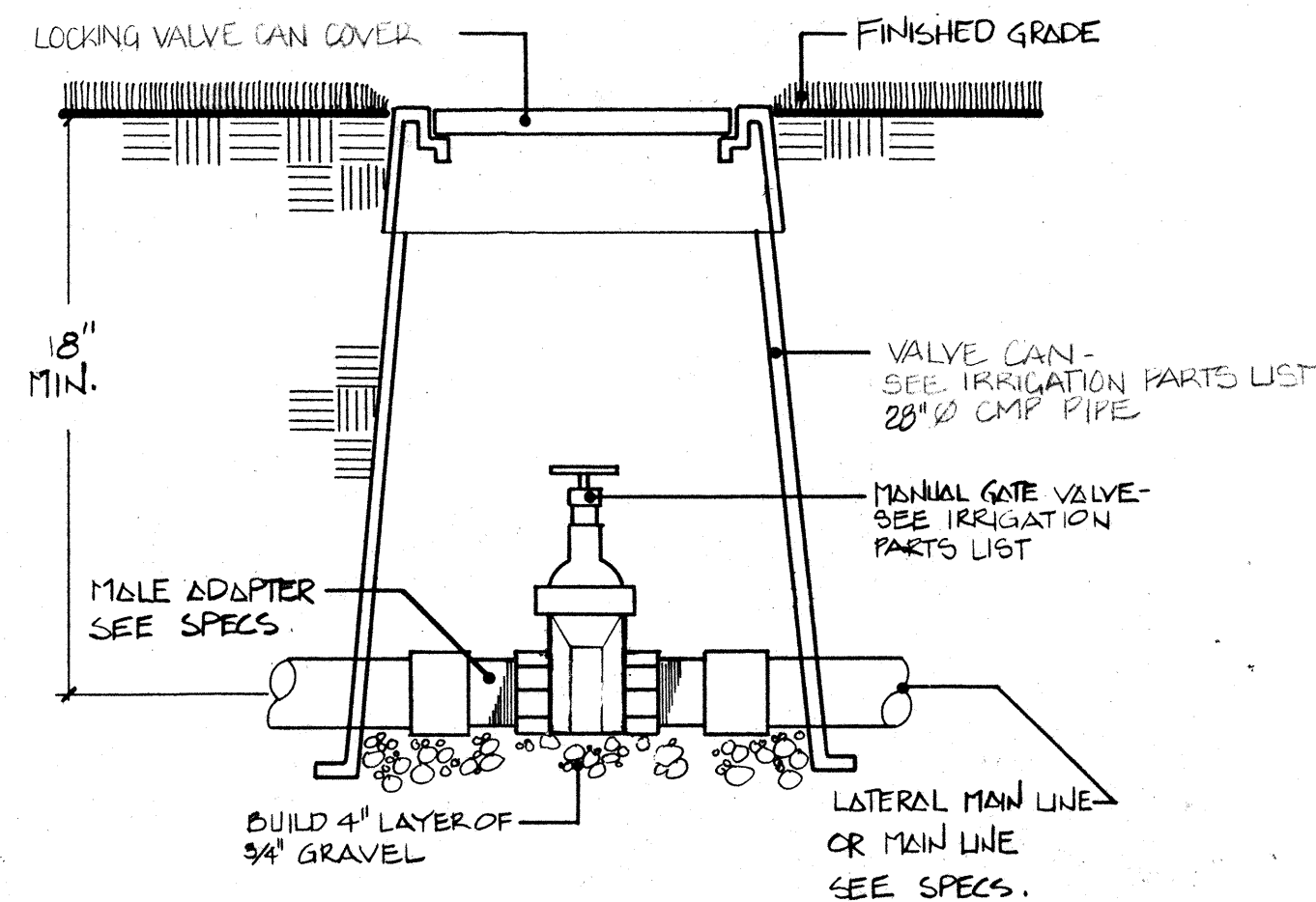
2
38
SHRUB PLANTING
NTS



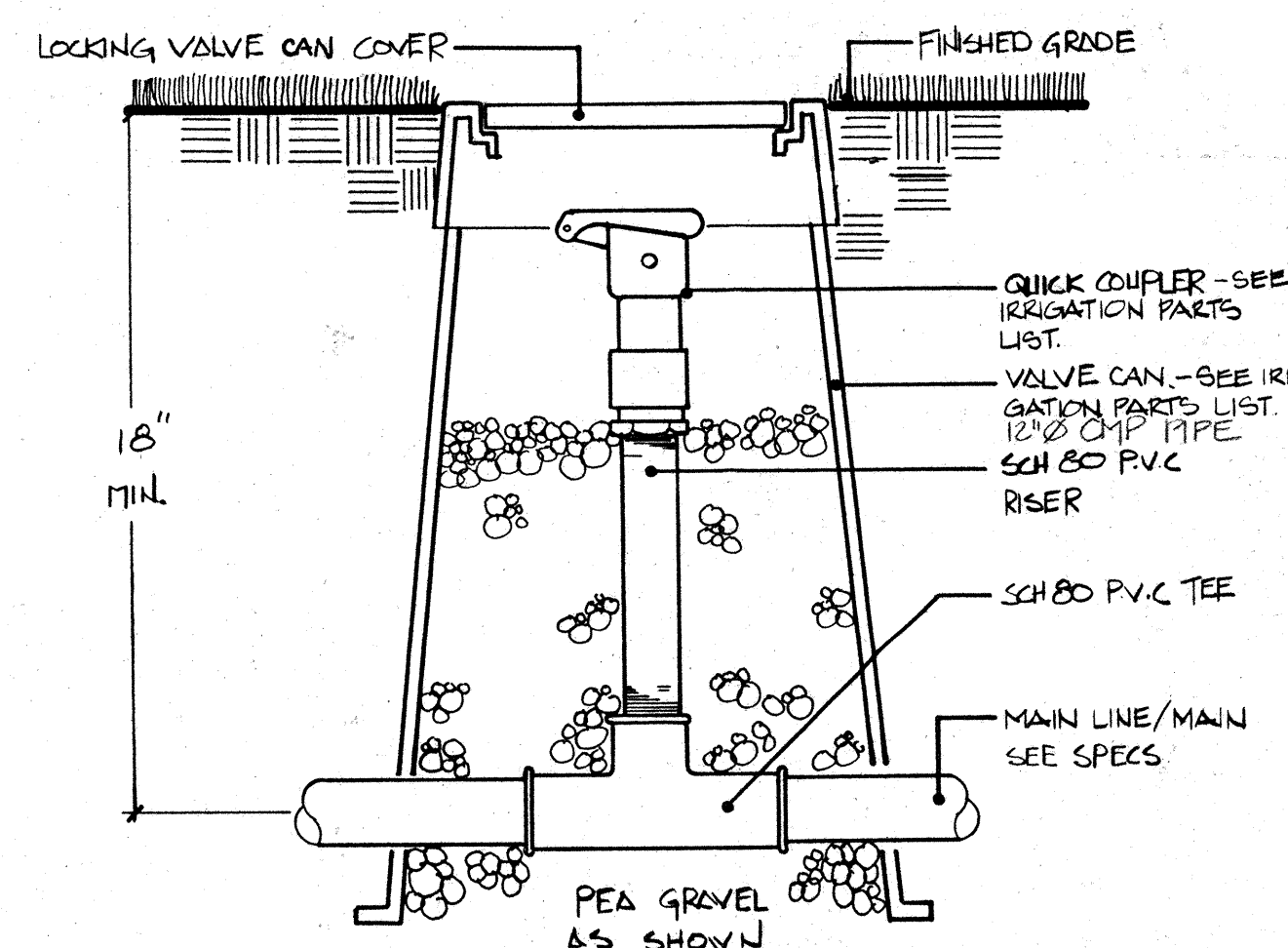
3
38
SHRUB PLANTING ON SLOPE
NTS



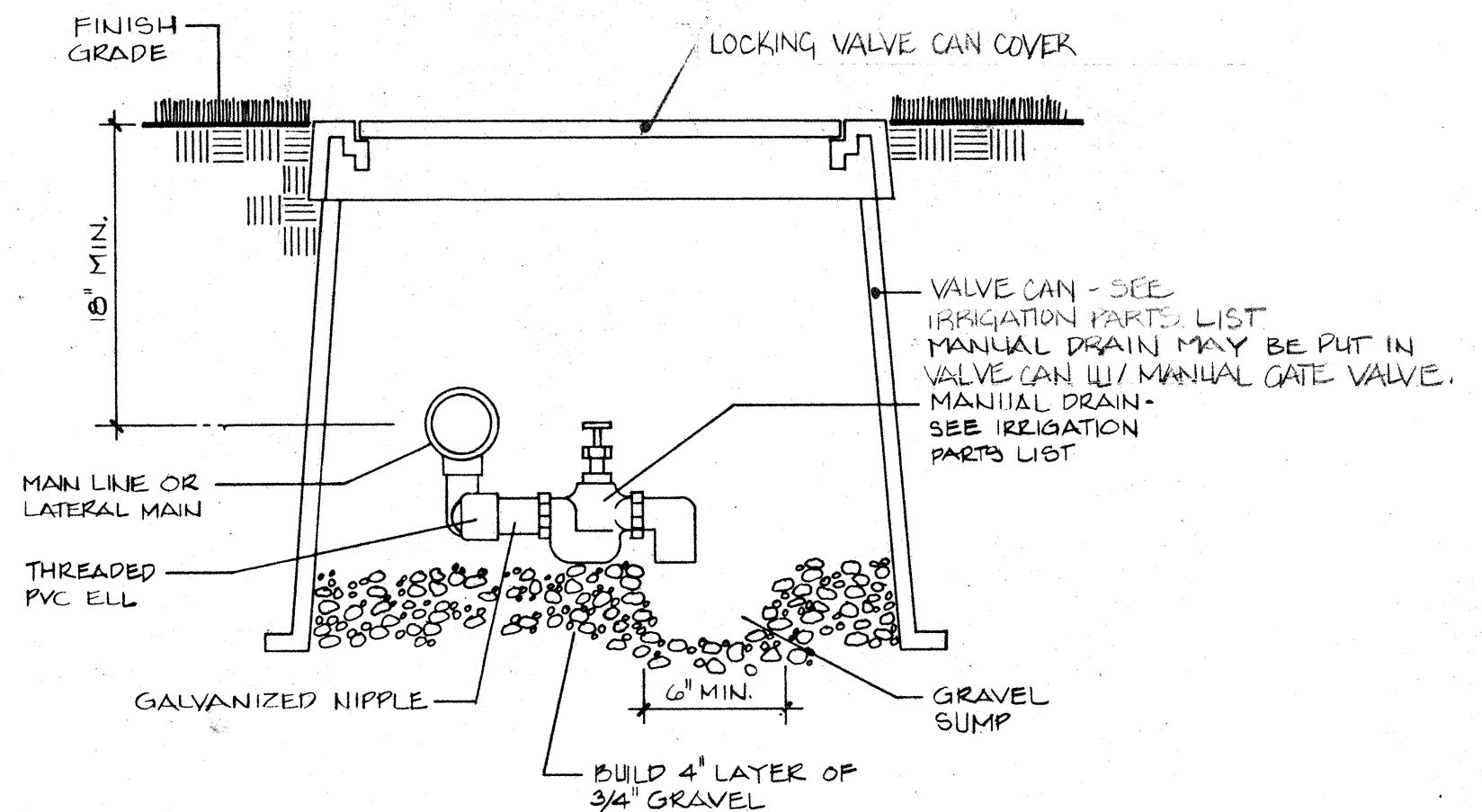
4
38
REDUCED PRESSURE BACKFLOW PREVENTER
NTS



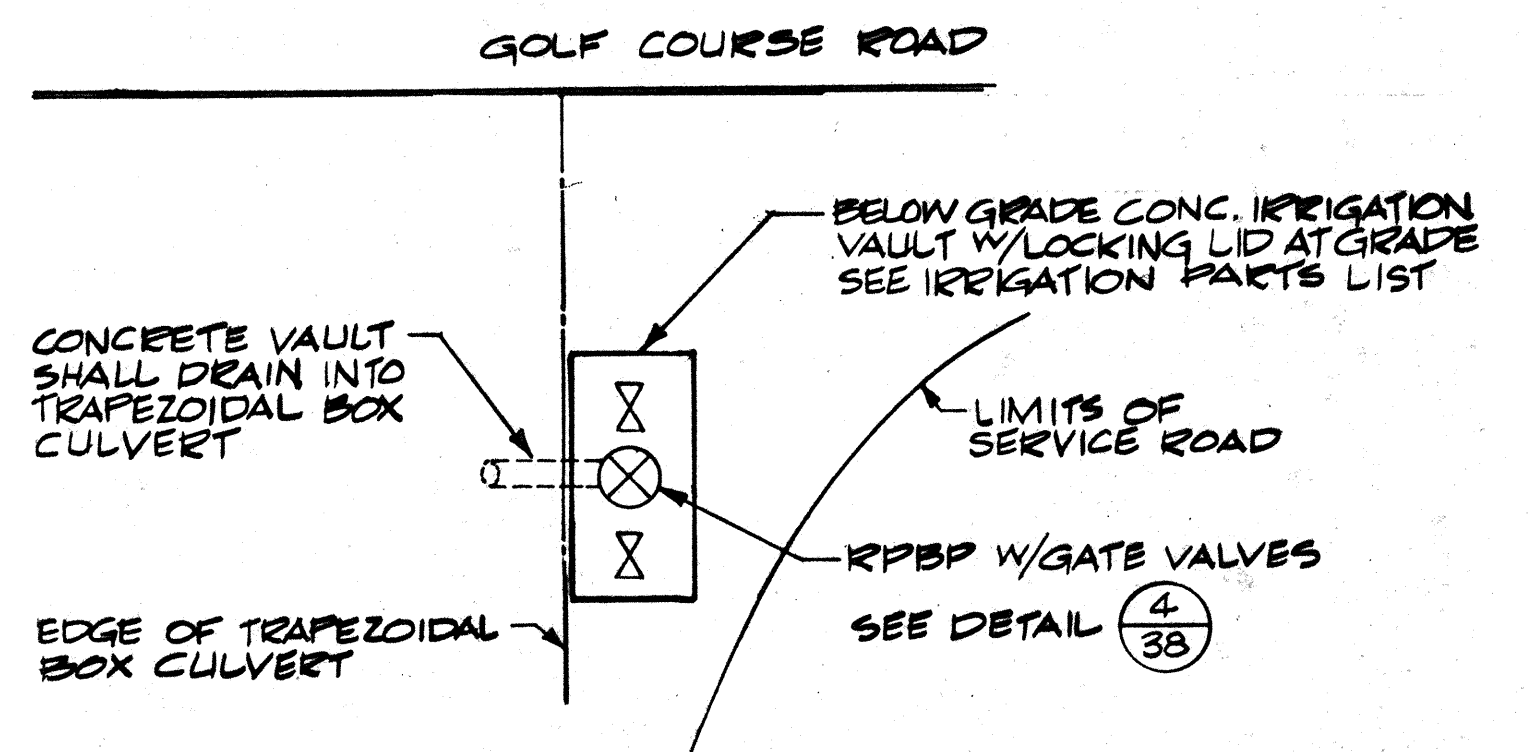
5
38
MANUAL GATE VALVE (TYPICAL)
NTS



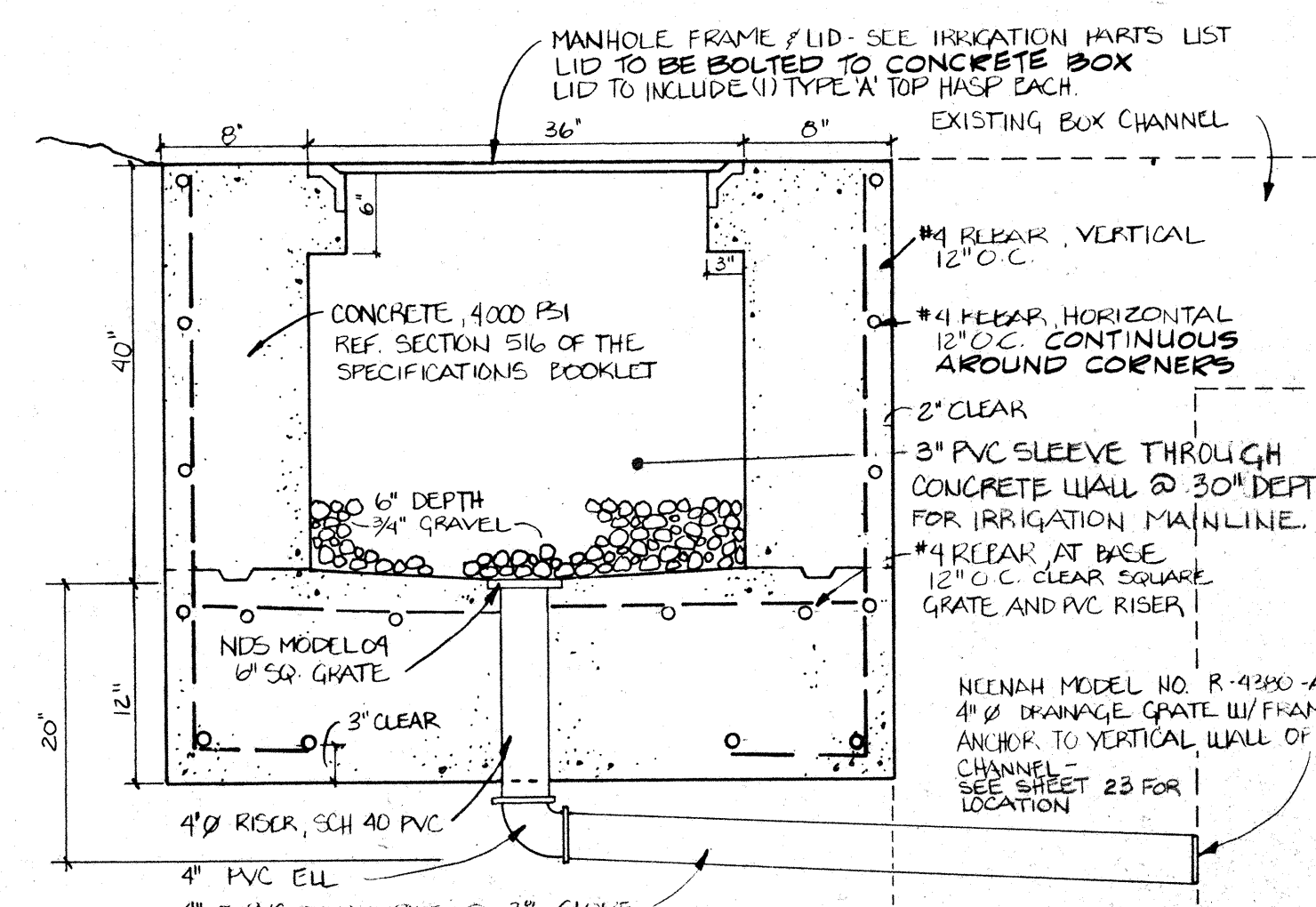
6
38
QUICK COUPLER
NTS



7
38
MANUAL DRAIN (TYPICAL)
NTS



8
38
VALVE ENCLOSURE DETAIL
NTS



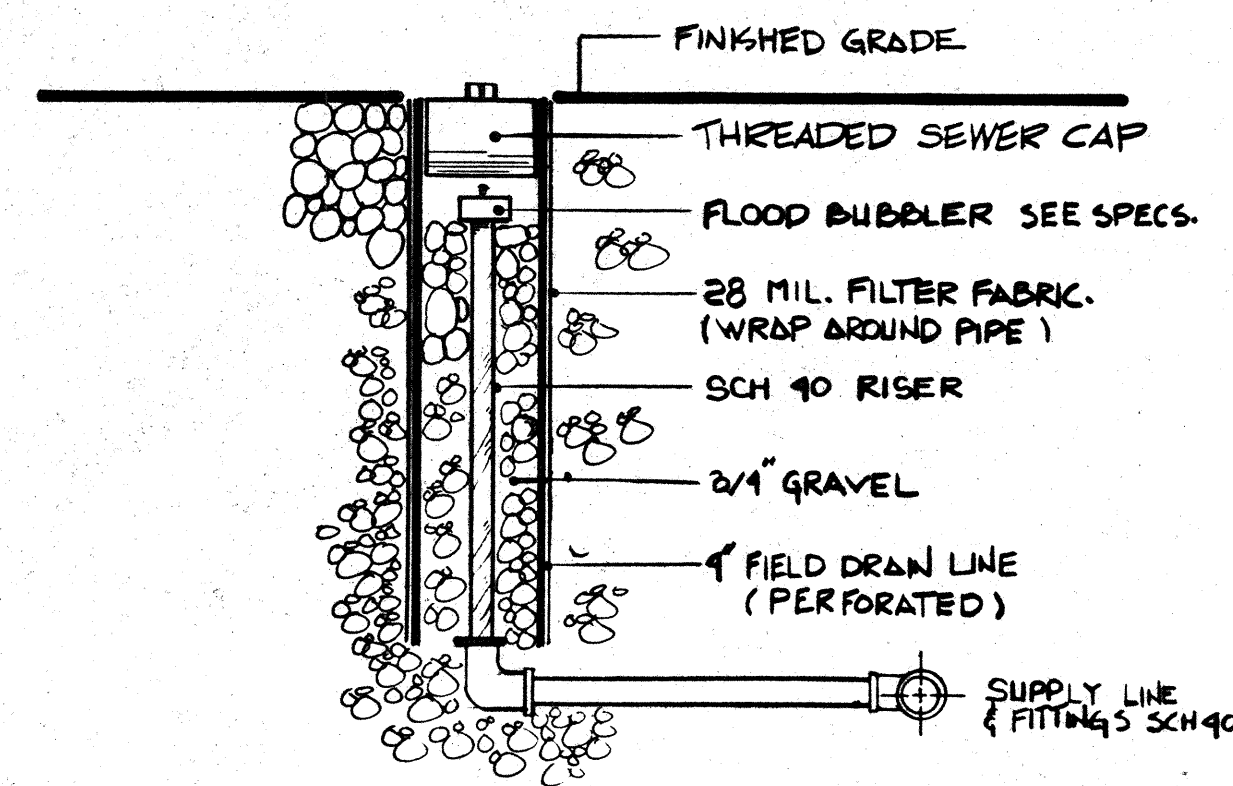
9
38
IRRIGATION VAULT DETAIL

* GENERAL NOTE: PIPE STANDS TO BE INSTALLED UNDER ALL VALVES, AND AT ANY ELBOW WITHIN THE IRRIGATION VAULT. STACK PIPE STANDS AS NEEDED & BOLT TO BOTTOM OF CONC. VAULT. LANDSCAPE ARCHITECT TO FIELD VERIFY LOCATION OF PIPE LAYOUT & STANDS PRIOR TO INSTALLATION.

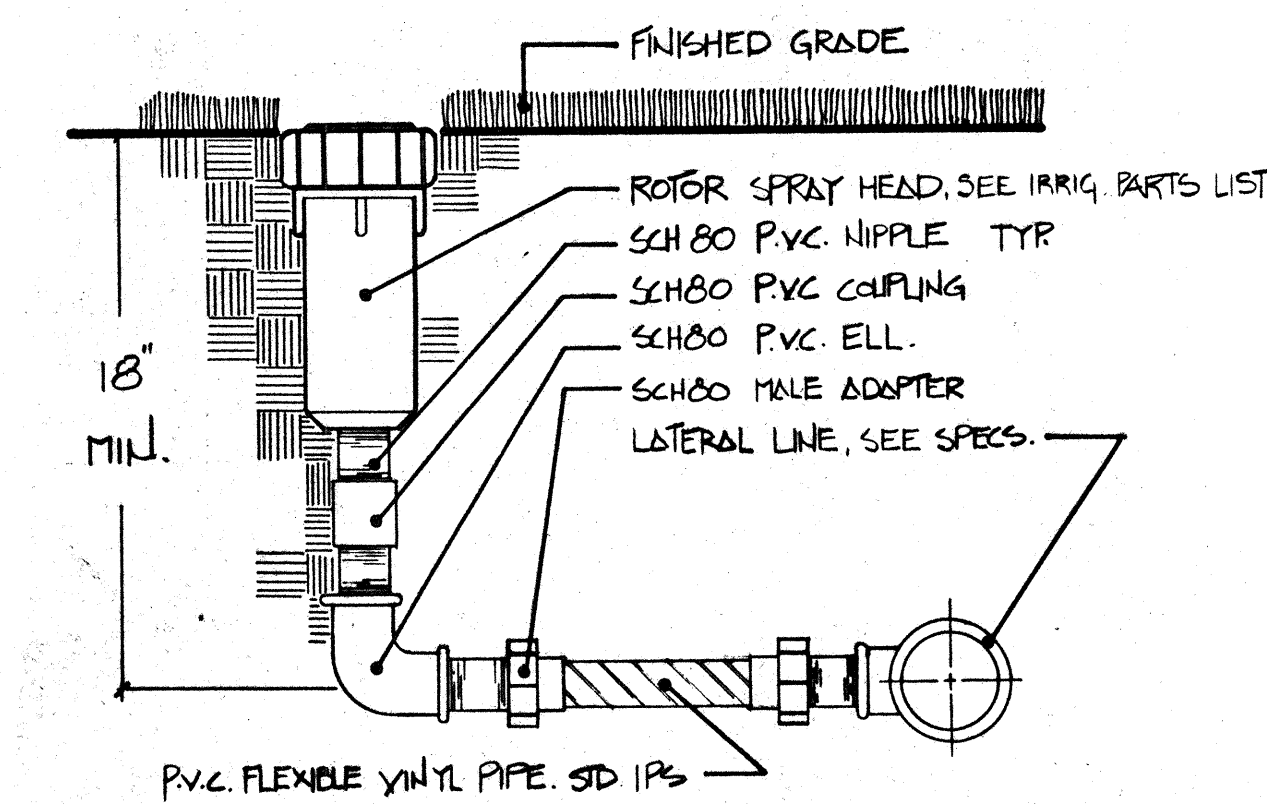
26 4946.900994

BLACK ARROYO DETENTION DAM LANDSCAPE DETAILS	
Project No.	ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY
Job No.	90113.20
Drawn By:	PAA
Checked By:	GR
Scale:	AS NOTED
Sheet	38 39
Date	1/91

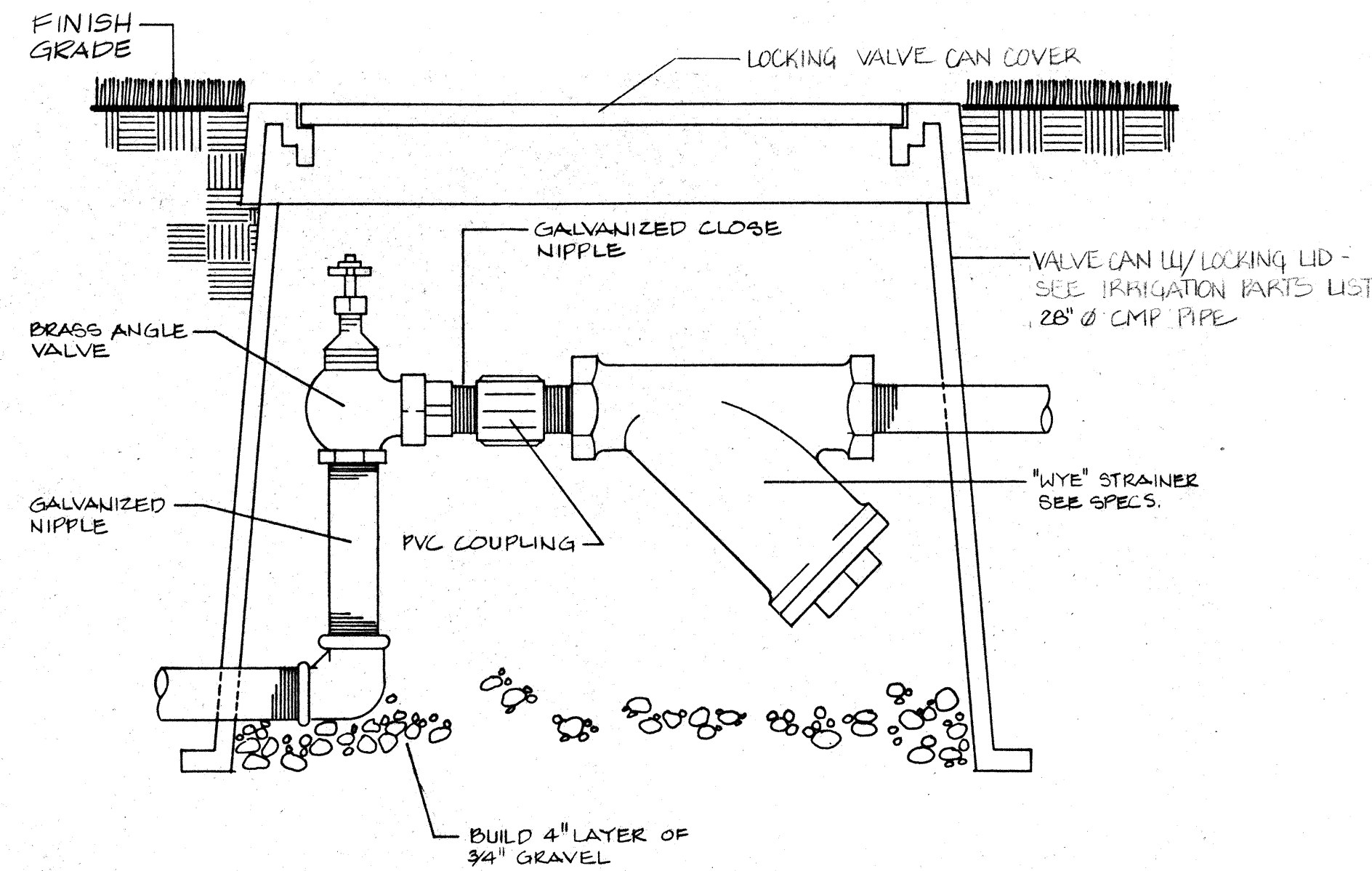
NOTE: INSTALL FLOOD BUBBLER A MINIMUM OF 1' FROM EDGE OF ROOTBALL FOR TREES & 6" FOR SHRUBS.



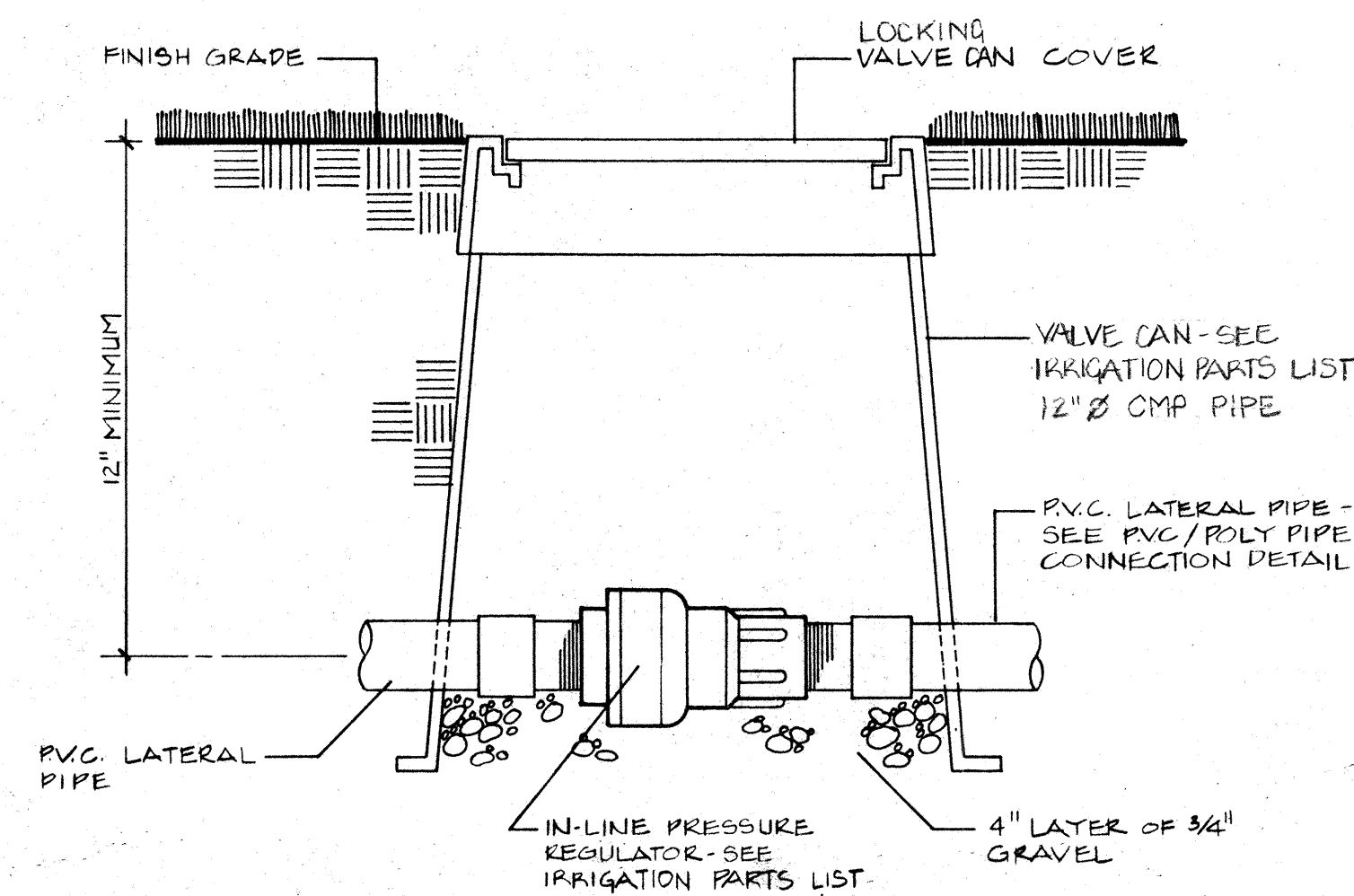
1 FLOOD BUBBLER (PROTECTED)
NTS



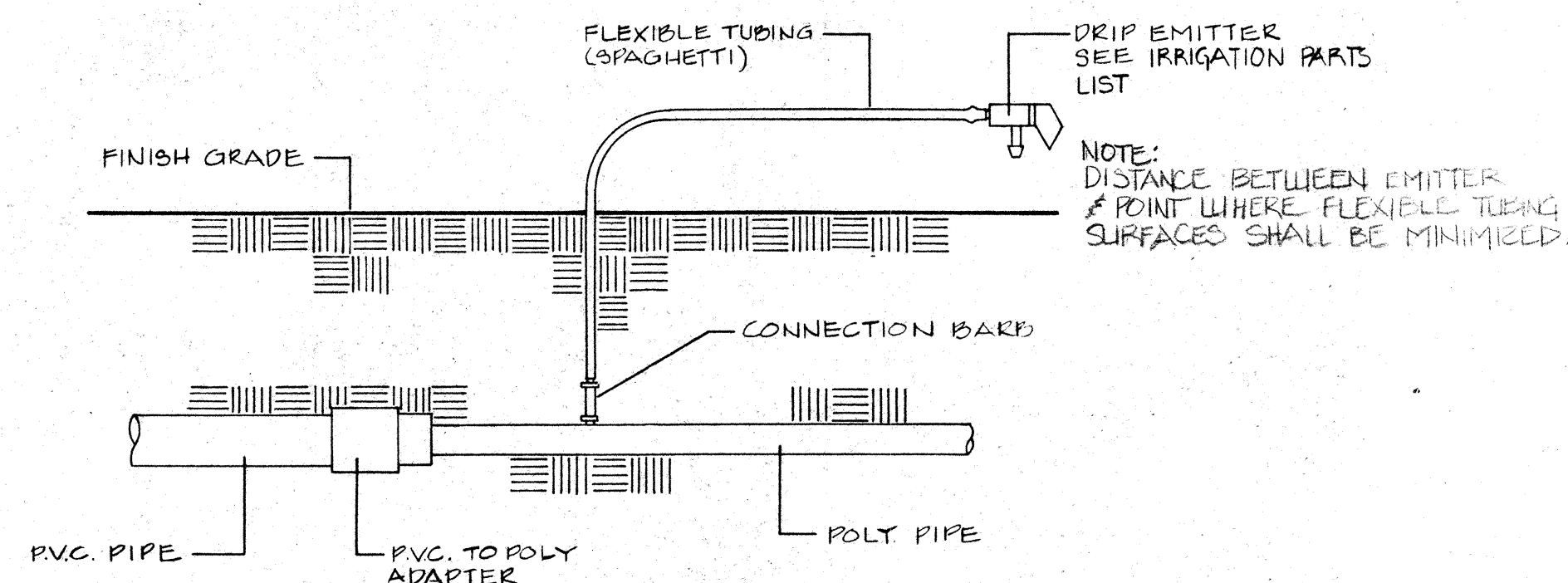
2 ROTOR HEAD
NTS



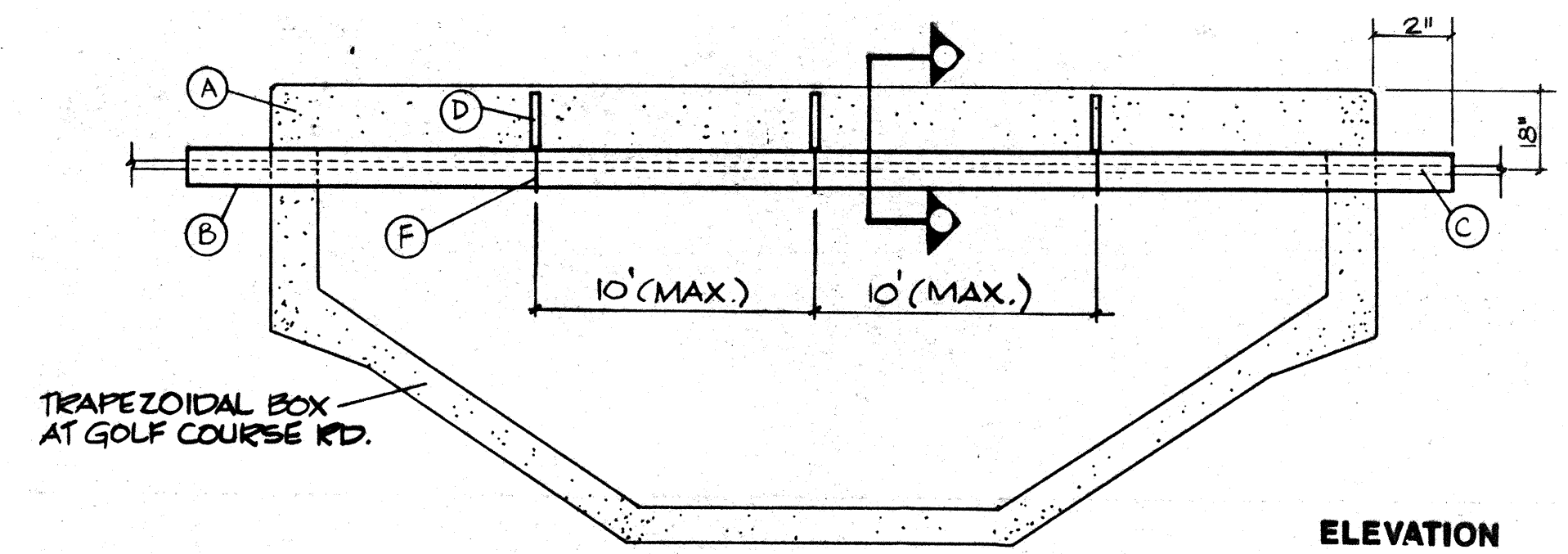
3 DRIP VALVE / FILTER ASSEMBLY (TYPICAL)
NTS



4 IN-LINE PRESSURE REGULATOR
NTS



5 PVC / POLY PIPE CONNECTION
NTS



6 STEEL SLEEVE/BOX CONNECTION
NTS

NOTES:
A- EXISTING TRAPEZOIDAL CONCRETE BOX.
B- 8" Ø SCH. 20 GALVANIZED STEEL SLEEVE.
C- PAINT TO MATCH BOX CULVERT.
D- LATERAL IRRIGATION LINES.
E- 3 X 3 X 3/16" ANGLE IRON FRAME.
F- (3)-1/2" X 5" EXPANSION ANCHORS.
G- 1/2" X 1/2" ROUND U BOLTS.

GENERAL NOTES:
1). DISTANCE ACROSS THE BRIDGE LATERALLY SHALL BE A MAX. OF 10' EQUALLY SPACED.
2). P.V.C. IRRIGATION PIPE ENCASED IN STEEL SLEEVE SHALL BE WRAPPED WITH INSULATION. SEE SPECIFICATION FOR INSULATION WRAPPING BELOW.

INSULATION WRAPPING
INSULATION PRODUCT FOR IRRIGATION PIPE SHALL BE, AP ARMAFLEX PIPE INSULATION, BY ARMSTRONG INSULATION PRODUCTS, 1/2" WALL THICKNESS. SIZE AND INSTALL AS PER MANUFACTURERS RECOMMENDATIONS AS FOUND IN SWEETS CATALOG #5 1989 EDITION, 15250/ARM BUY LINE 2539.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
26 4946.901094

BLACK ARROYO DETENTION DAM LANDSCAPE DETAILS	
Project No.	ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY
Sheet	39 OF 39
Job No.	90113.20
Drawn By:	PAA
Checked By:	GR
Date:	7/91
Scale:	AS NOTED