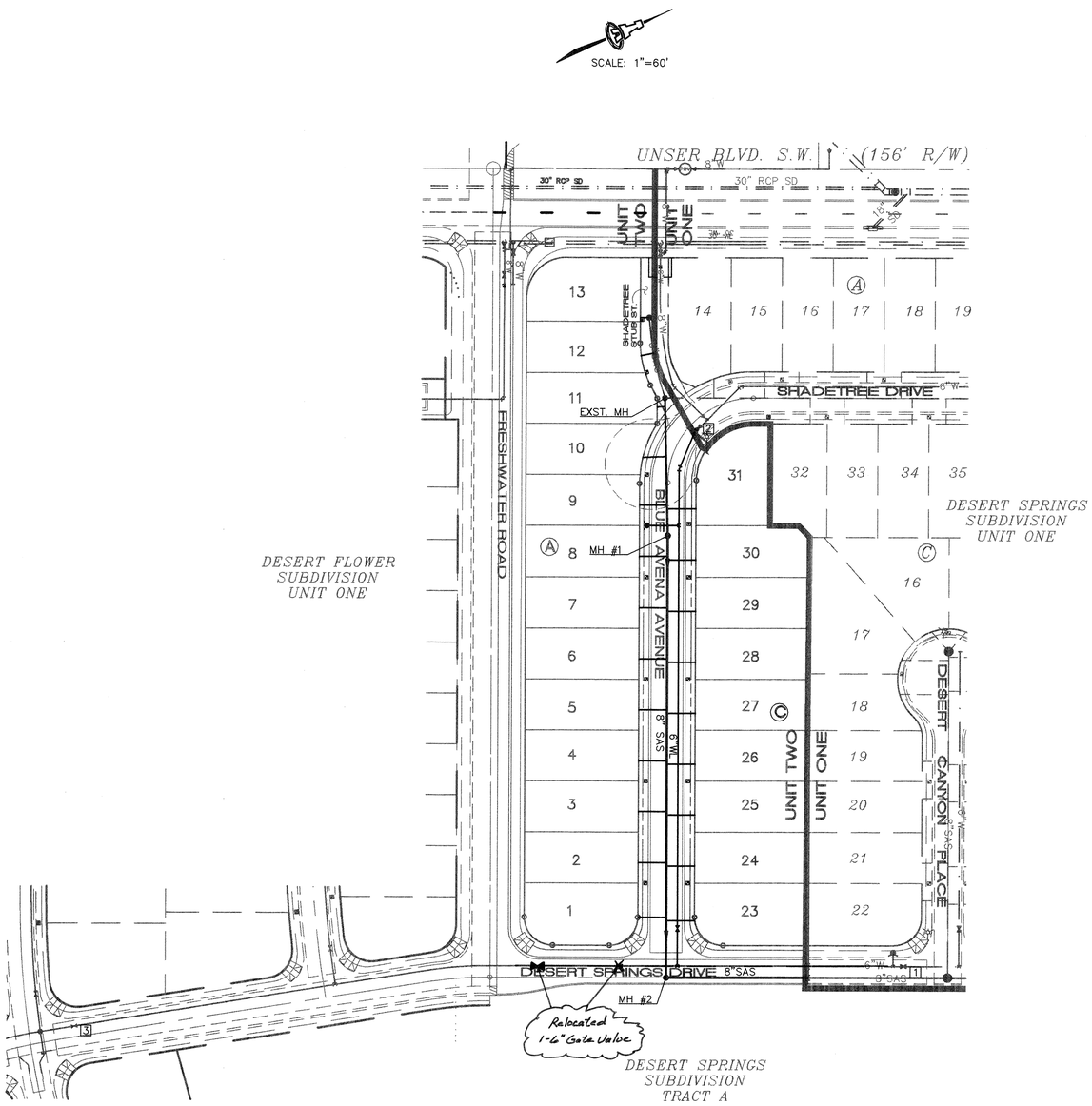

RESTRAINED JOINT LENGTHS, L_T, FOR TEES, (FT.) ALL JOINTS AT THE TEE MUST BE RESTRAINED.		
SIZE	RUN	BRANCH
12x12x12	15	17
12x12x10	10	18
12x12x8	6	19
12x12x6	3	19
12x12x4	1	19
10x10x10	12	18
10x10x8	8	15
10x10x6	4	16
10x10x4	2	4
8x8x8	9	20
8x8x6	5	17
8x8x4	2	15
6x6x6	6	20
6x6x4	2	20

THIS TABLE IS BASED UPON THE FOLLOWING CRITERIA:

DEPTH OF BURY 3.0 FT. MINIMUM
FACTOR OF SAFETY 1.25
MATERIAL PVC PIPE
SOIL TYPE: GM/SM – SILTY GRAVELS AND SILTY SANDS, GRAVEL–SAND–SILT MIXTURES.
TEST PRESSURE 150 PSI
TRENCH TYPE 4: PIPE BEDDED IN SAND, GRAVEL, OR CRUSHED STONE TO DEPTH OF 1/8 PIPE DIAMETER, 4 INCH MINIMUM; BACKFILL COMPACTED TO TOP OF PIPE.

DIFFERENT CRITERIA, E.G., DUCTILE IRON PIPE, GREATER DEPTH OF BURY, ETC., WILL REQUIRE DIFFERENT RESTRAINED LENGTHS. THESE MUST BE CALCULATED BY A QUALIFIED PROFESSIONAL ENGINEER AND APPROVED BY THE PUBLIC WORKS DEPARTMENT.

RESTRAINED JOINT LENGTHS, L_T, FOR HORIZONTAL BENDS, VALVES, AND DEAD ENDS, (FT.)					
SIZE	HORZ. BENDS				VALVES & DEAD ENDS
	90°	45°	22 1/2°	11 1/4°	
12	30	12	6	3	85
10	26	11	5	3	72
8	22	9	4	2	60
6	17	7	3	2	46
4	12	5	2	1	32

RESTRAINED JOINT LENGTHS, L_T, FOR REDUCERS, (FT.) MINIMUM UNOBSTRUCTED, STRAIGHT–RUN LENGTH: RESTRAIN EITHER LARGE PIPE, OR SMALL PIPE.					
SIZE	LARGE SIDE	SMALL SIDE	SIZE	LARGE SIDE	SMALL SIDE
12x10	25	30	10x6	44	73
12x8	45	68	10x4	58	141
12x6	62	121	8x6	25	33
12x4	74	213	8x4	43	83
10x8	24	30	6x4	24	35

RESTRAINED JOINT LENGTHS FOR WATERLINE FITTINGS

WATER SHUT-OFF PLAN

SHUT–OFF VALVES [1], [2] & [3] TO PROVIDE NON–PRESSURE CONNECTION. THE CONTRACTOR SHALL CONTACT WATER SYSTEMS DIVISION (857–8200) 5 WORKING DAYS PRIOR TO SHUT–OFF OR TURN–ON AT VALVES. ONLY CITY PERSONNEL ARE ALLOWED TO OPERATE VALVES.

LEGEND

- SINGLE WATER METER & BOX
- DOUBLE WATER METER & BOX
- GATE VALVE W/ TYPE 'A' VALVE BOX
- FIRE HYDRANT
- SAS MANHOLE
- WATER LINE W/ FITTING

SCANNED BY MEGA REPRO

AS-BUILT INFORMATION
CONTRACTOR Sparling DATE 8/00
WORK STAKED BY Sparling DATE 8/00
INSPECTOR'S ACCEPTANCE BY [illegible] DATE 8/00
FIELD VERIFICATION BY Sparling DATE 8/00
DRAWINGS CORRECTED BY [illegible] DATE 8/00
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.
City Inspector: R. Baca

BENCH MARKS
ACS MONUMENT "1-M10" LOCATED AT THE SOUTHEAST CORNER OF SAGE RD. & UNSER BLVD.
ELEV. = 5079.88
TBM: RIM OF SOUTHWESTERLY MANHOLE AT SAPPHIRE ST. & UNSER BLVD.
ELEV. = 5035.84

SURVEY INFORMATION
FIELD NOTES
1 ALS 1/97

ENGINEER'S SEAL
FRED C. ARFMAN STATE OF NEW MEXICO 7532 REGISTERED PROFESSIONAL ENGINEER
8/24/98

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY M.JC DATE 05/98
DRAWN BY EMS DATE 05/98
CHECKED BY FCA DATE 05/98

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico
9212UMS.DWGanw 07/24/98

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: DESERT SPRINGS SUBDIVISION, UNIT TWO
UTILITY MASTER PLAN

Design Review Committee | City Engineer Approval | Last Design Update | Mo./Day/Yr. | Mo./Day/Yr.
DESIGN REVIEW COMMITTEE

City Project No. 5785.82 | Zone Map No. M-10 | Sheet 10 Of 15