

PUBLIC IMPROVEMENT PLANS
PLAT FOR TRACT 223-A
AIRPORT ADDITION FROM TOWN OF
ATRISCO GRANT

GLENRIO RD. NW
ALBUQUERQUE, NM

DECEMBER 2013

PREPARED FOR
PAVILION CONSTRUCTION
5720 SW MACADAM AVE., STE. 310
PORTLAND, OR 97219

PREPARED BY
SCOTT M. McGEE PE, LLC
9700 TANOAN DRIVE NE
ALBUQUERQUE, NM 87111

INDEX TO DRAWINGS

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7 GLENRIO RD. NE STA 11+00 TO 21+00

7A HANOVER RD NW

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON RECORD DRAWINGS

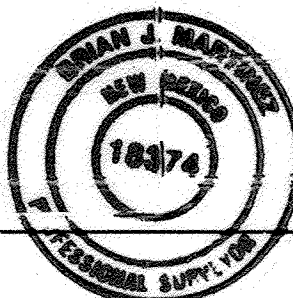
I, Scott M McGee of the firm of SCOTT M. MCGEE PE, LLC, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction and survey information provided by Brian Martinez/Cartesian Surveys, Inc., NMPS number 18374.

Scott M McGee
2/24/15



SURVEYOR'S CERTIFICATION
I, Brian J. Martinez, a duly qualified, registered, professional land surveyor under the laws of the State of New Mexico, do hereby certify that the "AS-BUILT" information shown on these drawings was obtained from field construction and "AS-BUILT" surveys performed by me or under my supervision, that the "AS-BUILT" information shown on these drawings was added by me or under my supervision, and that this "AS-BUILT" information is true and correct to the best of my knowledge and belief. Cartesian Surveys is not responsible for any of the design concepts, calculations, engineering, or intent of the recorded drawings.

Brian J. Martinez, NMPS 18374
2/24/15



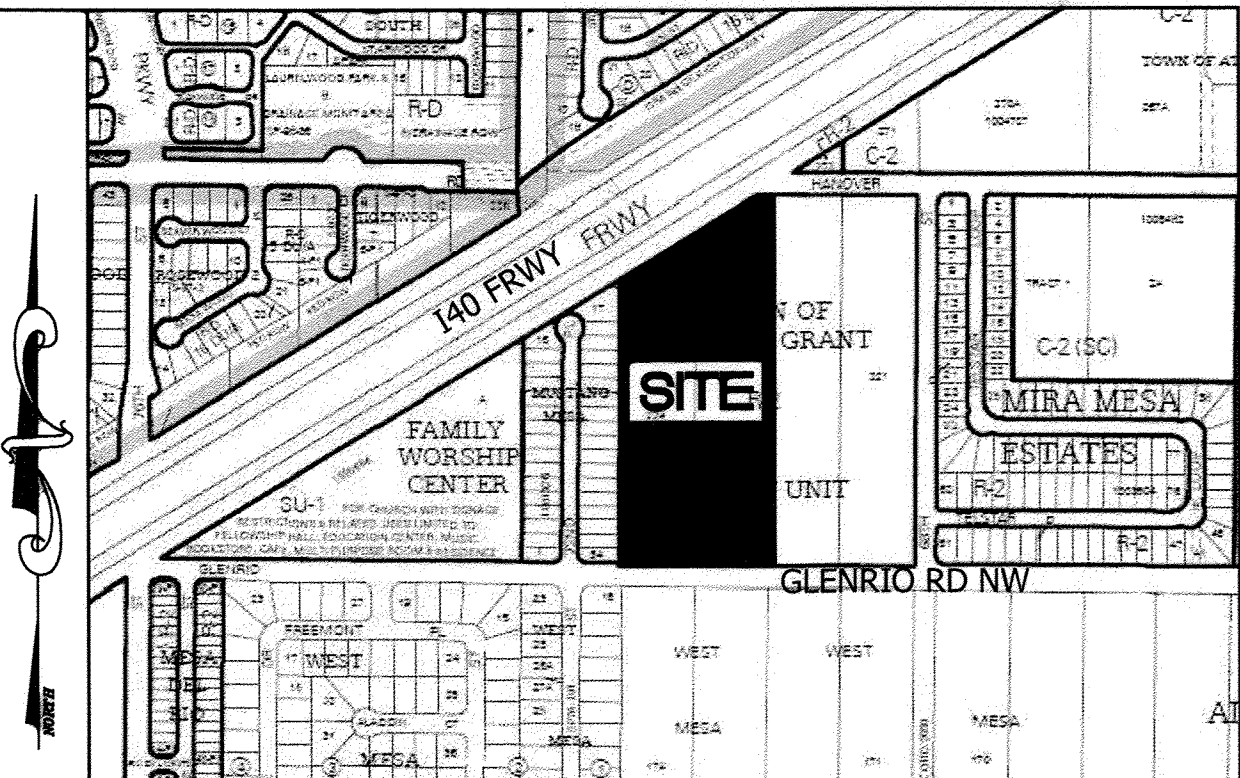
GENERAL NOTES

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION THROUGH UPDATE #8, AND WILL BE REFERRED TO HEREIN AS "STANDARD SPECIFICATIONS".
- ALL CONSTRUCTION WITHIN CITY RIGHT-OF-WAY OR EASEMENTS MUST BE DONE FROM APPROVED WORK ORDER DOCUMENTS FROM THE CITY.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- CONTRACTOR AGREES THAT HE SHALL ASSUME THE SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE OWNER AND ENGINEER FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
- ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE ACCOMPLISHED IN ACCORDANCE WITH OSHA 29CFR 1926.650 SUBPART P.
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
- CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. ONLY THE CITY SURVEYOR SHALL REPLACE SURVEY MONUMENTS. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO STANDARD SPECIFICATIONS SECTION 4.4.
- SEVEN (7) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL SUBMIT TO DMD, CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE DMD, CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. REFER TO SECTION 19 OF STANDARD SPECIFICATIONS.
- PERMIT REQUESTS MAY BE DENIED OR DELAYED DUE TO CONFLICTS WITH OTHER PROJECTS IN THE AREA.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (260-1990) FOR LOCATION OF EXISTING UTILITIES.
- CONTRACTOR SHALL ASSIST THE ENGINEER/INSPECTOR IN THE RECORDING OF DATA ON ALL UTILITY LINES AND ACCESSORIES AS REQUIRED BY THE CITY OF ALBUQUERQUE FOR THE PREPARATION OF "AS CONSTRUCTED" DRAWINGS. CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.
- AT HIS OWN EXPENSE, CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE TO EXISTING PAVEMENT, PAVEMENT MARKINGS, CURB AND GUTTER, HANDICAP RAMPS, AND SIDEWALK DURING CONSTRUCTION APART FROM THOSE SECTIONS INDICATED FOR REMOVAL ON THE PLANS AND SHALL REPAIR OR REPLACE, PER STANDARD SPECIFICATIONS.
- ALL STREET STRIPING, ALTERED OR DESTROYED, SHALL BE REPLACED WITH THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS BY CONTRACTOR TO SAME LOCATION AS EXISTING, OR AS INDICATED BY THIS PLAN SET.
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.

- CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND MAINTAIN ALL CONSTRUCTION SIGNING UNTIL THE PROJECT HAS BEEN ACCEPTED BY THE CITY.
- WATER & SEWER
- ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- THE CONTRACTOR SHALL COORDINATE WITH THE WATER AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUTOFF REQUESTS MUST BE MADE ONLINE AT [HTTP://ABCWUA.ORG/CONTENT/VIEW/463729/](http://abcwua.org/content/view/full/463729/).
- PROPOSED WATERLINE MATERIALS SHALL BE PVC PIPE MEETING AWWA C-900: DR18 REQUIREMENTS (6" - 12"), DUCTILE IRON PIPE MEETING AWWA C-150 REQUIREMENTS (6" - 64").
- ALL FITTINGS ON WATERLINE SHALL HAVE RESTRAINED JOINTS AS NOTED ON THE PLANS.
- ALL SANITARY SEWER LINE STATIONING REFERS TO SANITARY SEWER CENTERLINE STATIONING.
- ALL FINAL BACKFILL FOR TRENCHES WITHIN SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY PER ASTM D-1557 AND AS DIRECTED BY STANDARD SPECIFICATIONS SECTION 701.14.2 AND STANDARD DRAWING NUMBER 2465.
- ELECTRONIC MARKER SPHERES (EMS) WILL BE PLACED ACCORDING TO SECTION OF THE CITY OF ALBUQUERQUE SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #8.

OTHER COMMON NOTES

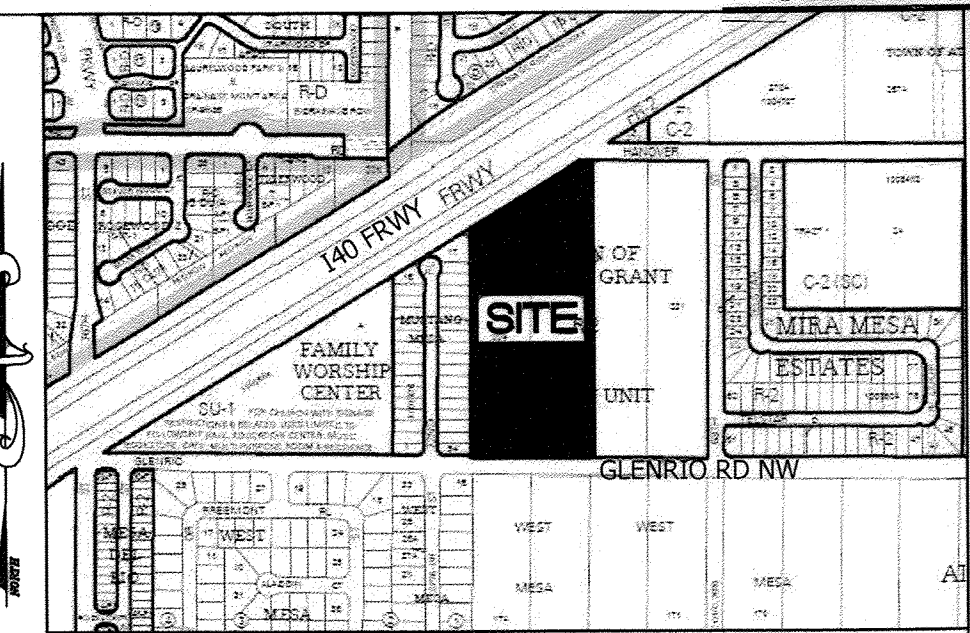
- RCP SHALL BE INSTALLED SO THAT THE JOINT GAP AT THE HOME POSITION SHALL CONFORM TO THE APPROVED MANUFACTURER'S RECOMMENDATION. MANUFACTURER'S RECOMMENDED JOINT GAP TOLERANCES FOR EACH PIPE SIZE AND TYPE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF PIPE. RCP JOINTS SHALL NOT BE ROUTED UNLESS DIRECTED BY THE ENGINEER AFTER CITY APPROVAL.
- CONTRACTOR SHALL SECURE A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL DETERMINE IN ADVANCE OF HIS CONSTRUCTION IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC. ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION TO CONSTRUCTION OPERATIONS IS EVIDENT, CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY OWNER TO REMOVE OR SUPPORT THE UTILITY OBSTRUCTION. ANY COST ASSOCIATED WITH THIS EFFORT SHALL BE THE RESPONSIBILITY OF CONTRACTOR.
- PNM WILL PROVIDE AT NO COST TO THE CITY OR THE CONTRACTOR THE REQUIRED PERSONNEL FOR INSPECTION OR OBSERVATION DEEMED NECESSARY BY PNM WHILE THE CONTRACTOR IS EXPOSING PNM'S CABLES. HOWEVER, THE CONTRACTOR SHALL BE CHARGED THE TOTAL COST ASSOCIATED WITH REPAIRS TO ANY DAMAGED CABLES OR FOR ANY COST ASSOCIATED WITH SUPPORTING OR RELOCATING THE POLES AND CABLES DURING CONSTRUCTION.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL PERTINENT EXISTING UTILITIES AND/OR OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.



VICINITY MAP J-10

NTS

REV.	7A	CITY ENGINEER	DATE	11/12/14	USER DEPARTMENT	DATE	11/12/14	USER DEPARTMENT	DATE	11/12/14
ENGINEER'S STAMP & SIGNATURE		APPROVALS		ENGINEER		DATE				
		DRC Chairman		11/12/14		11/12/14				
		Transportation		11/12/14						
		Water/Wastewater		11/12/14						
		Hydrology		11/12/14						
		C.I.P.		11/12/14						
Constr. Mngmt.										
City Project No.		799682		City Engineer		Date				
				Sheet		Of				
				1		7				



VICINITY MAP J-10

AREA DRAIN TABLE			
A D #	Q (CFS)	TOP OF GRATE	INVERT
1	0.3	10.0	6.7
2	0.7	10.1	7.6
3	1.0	10.1	7.6
4	1.2	10.2	8.2
5	1.1	11.0	8.8
6	0.8	11.4	9.6
7	1.0	11.0	9.0
8	1.1	12.0	9.9

- LEGEND**
- 5109.82 EXISTING SPOT ELEVATION
 - 10- EXISTING CONTOURS
 - COVERED CARPORT
 - SIDEWALK CULVERT
 - FF=5113.5 FINISH FLOOR ELEVATION
 - NEW SPOT ELEVATIONS
 - PROPOSED CONTOURS
 - PROPOSED STORM DRAIN
 - FLOW ARROW

AREA: 8.93 acres (388,989 sf)

BENCHMARK: City of Albuquerque Station '6-J10' being a brass cap
ELEV= 5119.81 (NAVD 1988)

SURVEYOR: Cartesian Surveying, Inc. dated July 2012

FLOOD HAZARD: From FEMA Panel 327 (9/26/08), this site is identified as being within Zone 'X' which is located outside the 100-year floodplain

EXISTING CONDITIONS: The undeveloped site slopes down from the NW to the SE at slightly less than 1%. Glenrio Road NW abuts the site along the south and Interstate 40 runs along the north side of the site. Residential developments abut the site to the west and the east.

OFFSITE FLOW: An existing 30" culvert (at the NW site corner) discharges runoff from the adjacent I-40. This runoff (which is quantified below), will continue to be accepted onsite, routed to a detention pond, and then to Glenrio Road NW.

PROPOSED IMPROVEMENTS: The proposed improvements include four 3-story residential buildings, a community building with pool, maintenance building, garage buildings, and associated paved parking and landscaping. A depressed landscape area is proposed at the northeast end of the site which will receive developed runoff from both roof and parking areas. A drainage inlet located in a second depressed area is proposed at the south end of the parking area which will drain via a storm drain piped to the existing public storm drain in Glenrio Road NW.

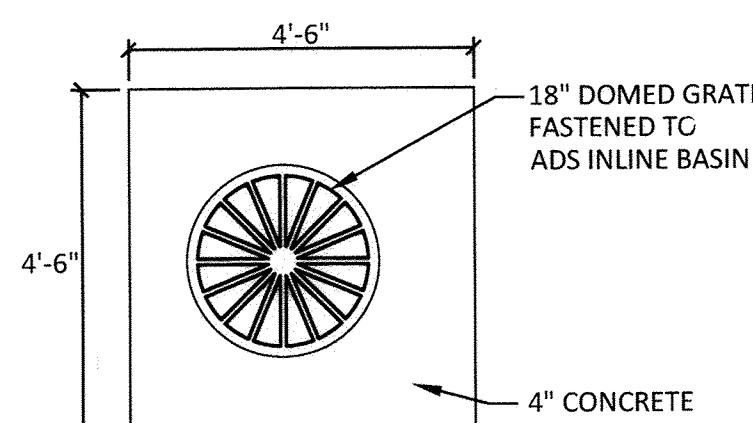
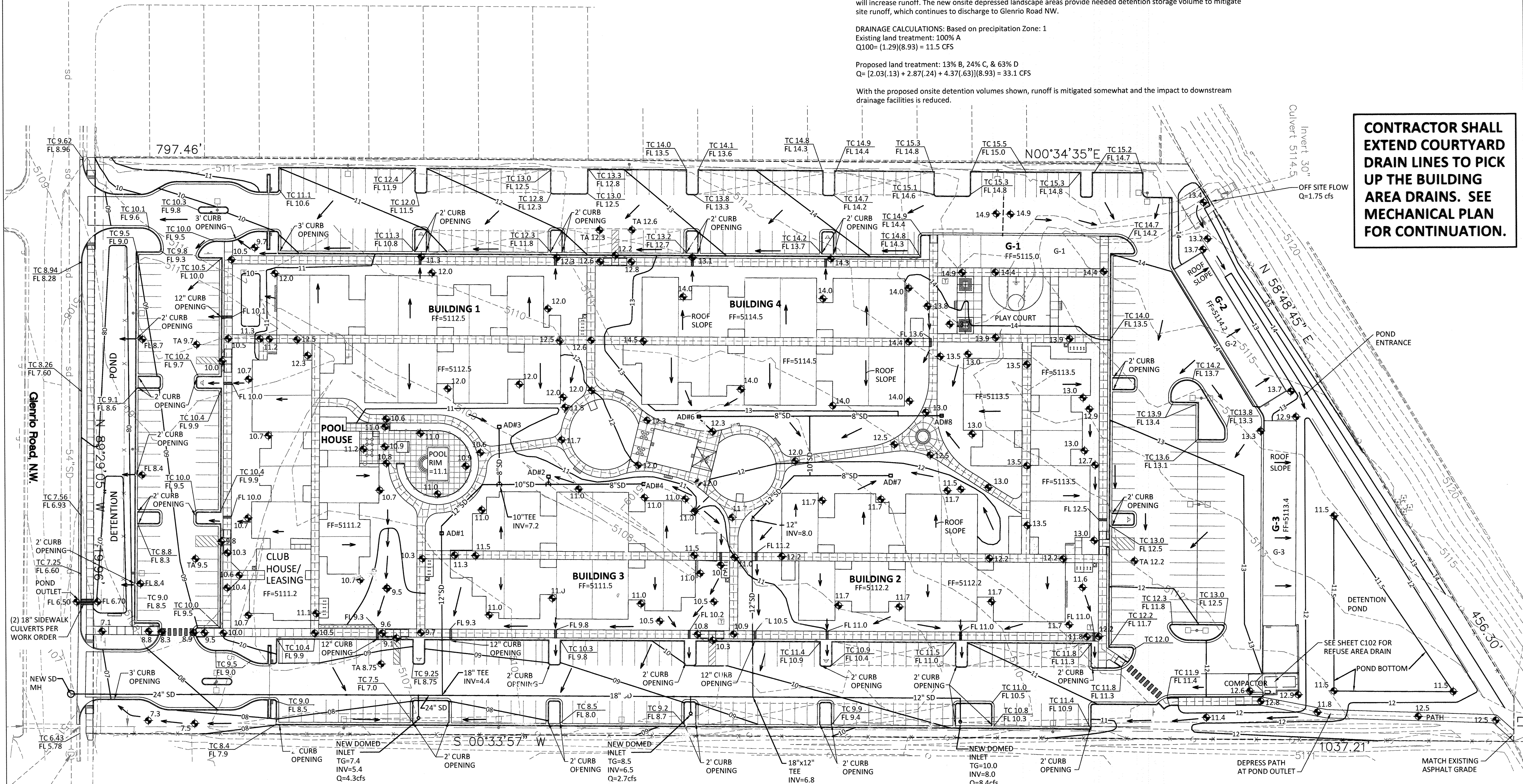
DRAINAGE APPROACH: The proposed drainage plan will continue to follow historic flow paths, but impervious areas will increase runoff. The new onsite depressed landscape areas provide needed detention storage volume to mitigate site runoff, which continues to discharge to Glenrio Road NW.

DRAINAGE CALCULATIONS: Based on precipitation Zone: 1
Existing land treatment: 100% A
 $Q_{100} = (1.29)(8.93) = 11.5$ CFS

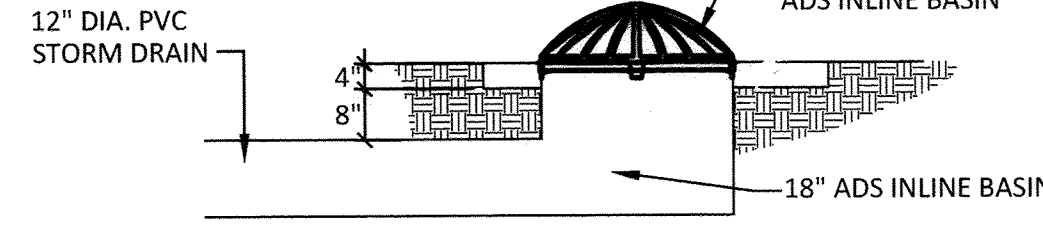
Proposed land treatment: 13% B, 24% C, & 63% D
 $Q = [2.03(13) + 2.87(24) + 4.37(63)](8.93) = 33.1$ CFS

With the proposed onsite detention volumes shown, runoff is mitigated somewhat and the impact to downstream drainage facilities is reduced.

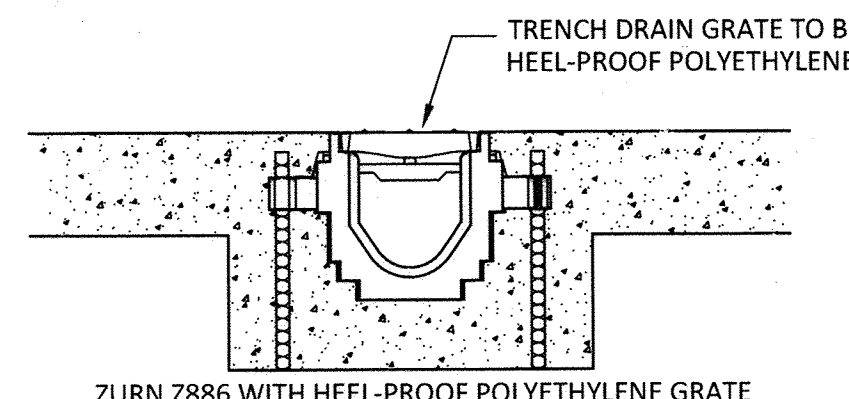
**CONTRACTOR SHALL
EXTEND COURTYARD
DRAIN LINES TO PICK
UP THE BUILDING
AREA DRAINS. SEE
MECHANICAL PLAN
FOR CONTINUATION.**



1 INLET PLAN



2 INLET SECTION



TRENCH DRAIN

GRADING PLAN

1" = 30 FT

0 30' 60'

FOR INFORMATION ONLY

PROJECT
GLENRIO APARTMENTS
ALBUQUERQUE, NM

REVISIONS

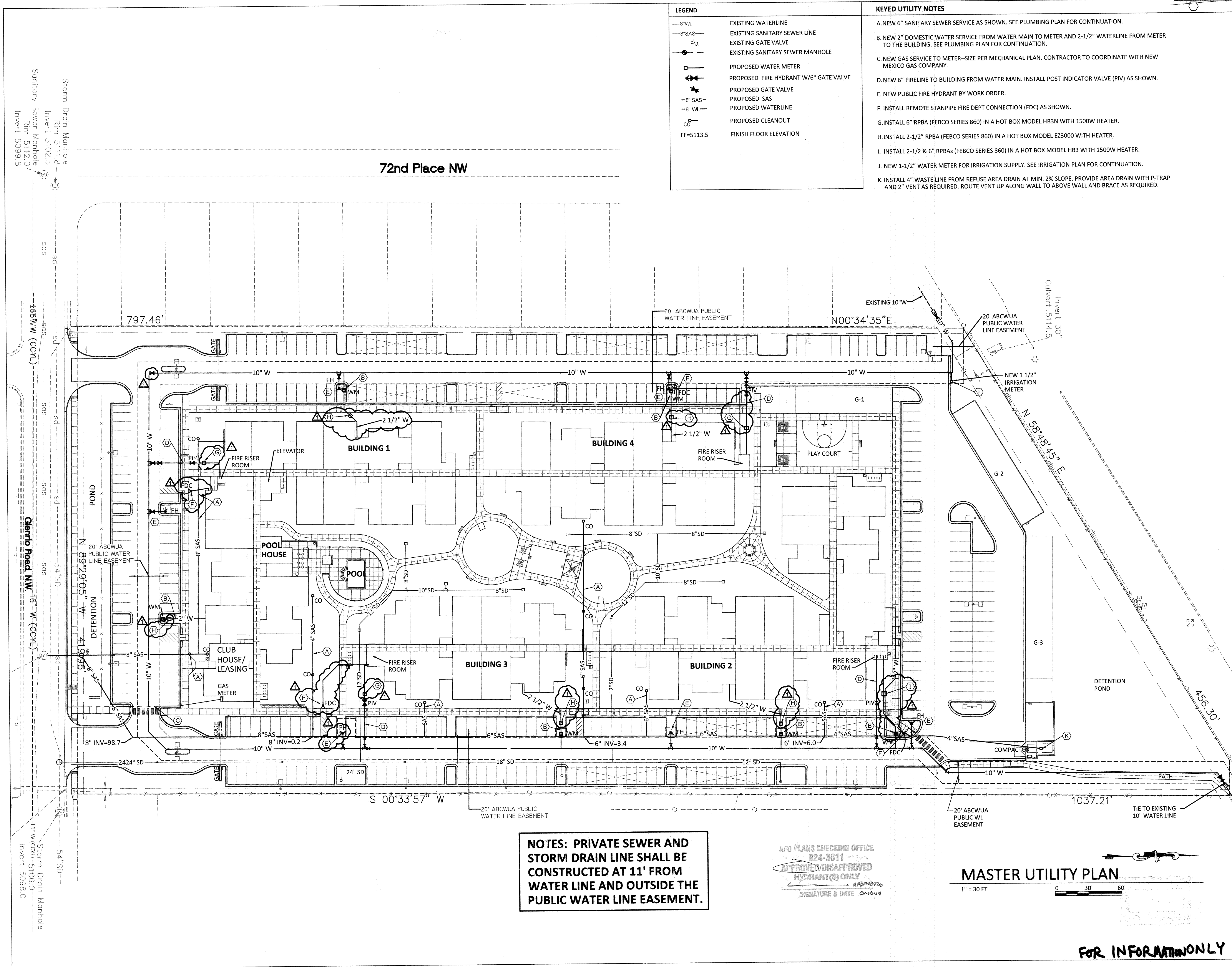
DRAWN BY
REVIEWED BY
DATE 11/12/2013
PROJECT NO.
DRAWING NAME
GRADING PLAN

SHEET NO.

C101
3 OF 7

LEGEND	
8" WL	EXISTING WATERLINE
8" SAS	EXISTING SANITARY SEWER LINE
△	EXISTING GATE VALVE
●	EXISTING SANITARY SEWER MANHOLE
□	PROPOSED WATER METER
⬆	PROPOSED FIRE HYDRANT W/6" GATE VALVE
★	PROPOSED GATE VALVE
8" SAS	PROPOSED SAS
8" WL	PROPOSED WATERLINE
CO	PROPOSED CLEANOUT
FF=5113.5	FINISH FLOOR ELEVATION

- KEYED UTILITY NOTES**
- A. NEW 6" SANITARY SEWER SERVICE AS SHOWN. SEE PLUMBING PLAN FOR CONTINUATION.
- B. NEW 2" DOMESTIC WATER SERVICE FROM WATER MAIN TO METER AND 2-1/2" WATERLINE FROM METER TO THE BUILDING. SEE PLUMBING PLAN FOR CONTINUATION.
- C. NEW GAS SERVICE TO METER--SIZE PER MECHANICAL PLAN. CONTRACTOR TO COORDINATE WITH NEW MEXICO GAS COMPANY.
- D. NEW 6" FIRELINE TO BUILDING FROM WATER MAIN. INSTALL POST INDICATOR VALVE (PIV) AS SHOWN.
- E. NEW PUBLIC FIRE HYDRANT BY WORK ORDER.
- F. INSTALL REMOTE STANPIPE FIRE DEPT CONNECTION (FDC) AS SHOWN.
- G. INSTALL 6" RPBA (FEBCO SERIES 860) IN A HOT BOX MODEL HB3N WITH 1500W HEATER.
- H. INSTALL 2-1/2" RPBA (FEBCO SERIES 860) IN A HOT BOX MODEL EZ3000 WITH HEATER.
- I. INSTALL 2-1/2" & 6" RPBA (FEBCO SERIES 860) IN A HOT BOX MODEL HB3 WITH 1500W HEATER.
- J. NEW 1-1/2" WATER METER FOR IRRIGATION SUPPLY. SEE IRRIGATION PLAN FOR CONTINUATION.
- K. INSTALL 4" WASTE LINE FROM REFUSE AREA DRAIN AT MIN. 2% SLOPE. PROVIDE AREA DRAIN WITH P-TRAP AND 2" VENT AS REQUIRED. ROUTE VENT UP ALONG WALL TO ABOVE WALL AND BRACE AS REQUIRED.



NOTES: PRIVATE SEWER AND
STORM DRAIN LINE SHALL BE
CONSTRUCTED AT 11' FROM
WATER LINE AND OUTSIDE THE
PUBLIC WATER LINE EASEMENT.

AFD PLANS CHECKING OFFICE
024-3611
APPROVED/DISAPPROVED
HYDRANT(S) ONLY
SIGNATURE & DATE 01/04/19

MASTER UTILITY PLAN
1" = 30 FT

FOR INFORMATION ONLY

PROJECT	
GLENRIO APARTMENTS ALBUQUERQUE, NM	
REVISIONS	
△	11-12-13 PERMIT COMMENTS
DRAWN BY	
REVIEWED BY	
DATE 11/12/2013	
PROJECT NO.	
DRAWING NAME	
MASTER UTILITY PLAN	
SHEET NO.	
C102	
4 OF 7	

1. BUILD NEW PRIVATE ENTRY PER COA STD DWG #2426 WITH UNIDIRECTIONAL RAMPS, INCLUDING 2' WIDE BY FULL WIDTH TRUNCATED DOMES (DESIGN PER ADA GUIDELINES). SUBMIT SPECS TO CONSTRUCTION ENGINEER FOR EVALUATION PRIOR TO INSTALLATION OF TRUNCATED DOMES. PROVIDE 3' WIDE ADA PATHWAY (ABUTTING R/W LINE) @ 2% MAX CROSS SLOPE AT CROSSWALK. TRANSITION FROM 8" STD CURB & GUTTER THROUGH RETURNS TO 6" CURB ONSITE.
2. STANDARD CURB & GUTTER PER COA STD DWG #2415A.
3. CONSTRUCT PCC VALLEY GUTTER 6' WIDE, 1" INVERT PER COA STD DWG #2420.
4. CONSTRUCT 6' PC CONCRETE SIDEWALK PER COA STD DWG #2430.
5. NEATLY SAW CUT AND THEN REMOVE & DISPOSE OF EXISTING ASPHALT PAVING NORTH OF R/W CENTERLINE (SHOWN HATCHED).
6. PROVIDE MAXIMUM SLOPE OF 6:1 (HORIZ:VERT) BEHIND 6' SIDEWALK.

1. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO RELOCATE EXISTING JUNCTION BOXES CLEAR OF THE NEW PUBLIC SIDEWALK PRIOR TO SIDEWALK CONSTRUCTION.
8. EXISTING DOUBLE SOLID YELLOW STRIPING TO REMAIN.
9. BUILD NEW 8" SAS CONNECTION TO EXISTING MANHOLE PER COA STD DWG NO. 2118.
INV @ R/W=97.7 INV @ MH=97.5
10. BUILD NEW 6" DIA STORM DRAIN MANHOLE WITH 16 LF 24" SD (RCP CLASS III) CONNECTION TO EXISTING 54" STORM DRAIN. 24" INV = 99.00.
INV @ R/W= 99.30 PROVIDE 24" CAP AT NORTH END.
11. REMOVE AND DISPOSE OF 5 LF EXISTING CURB AND GUTTER.
12. REMOVE AND DISPOSE OF 6 LF EXISTING 4' WIDE SIDEWALK AND REPLACE WITH NEW TRANSITION PER COA STD DWG #2430.
13. 75 LF CROWN TO NO CROWN TRANSITION. MATCH NEW PAVING TO CONCRETE GRADE AT EXISTING CATTLE GUARD INLET.
(12 LF EACH) 1/31/4 SMM
14. INSTALL TWO 18" SIDEWALK CULVERTS AS SHOWN PER COA STD DWG NO 2236. EXTEND CULVERTS 2' BEYOND R/W LINE AND TACK WELD BOLTS TO STEEL PLATE.

15. INSTALL DOUBLE SOLID YELLOW STRIPING AT ROAD CENTERLINE ALONG FRONTAGE & 100' BEYOND BOTH WEST & EAST. OBLITERATE THE EXISTING STRIPING.

Certification
THE CHANGES SHOWN HEREON ARE BASED UPON A
FIELD SURVEY CONDUCTED BY ME OR UNDER MY
SUPERVISION AND REFLECT THE LOCATIONS
(VERTICALLY AND HORIZONTALLY) TO THE BEST OF
MY KNOWLEDGE AND BELIEF.



A. PRIVATE ENTRY DRIVE WORK ENDS AT
RIGHT-OF-WAY LINE.

EXISTING PAVING TO BE REMOVED

EXISTING CURB & GUTTER

NEW CURB & GUTTER

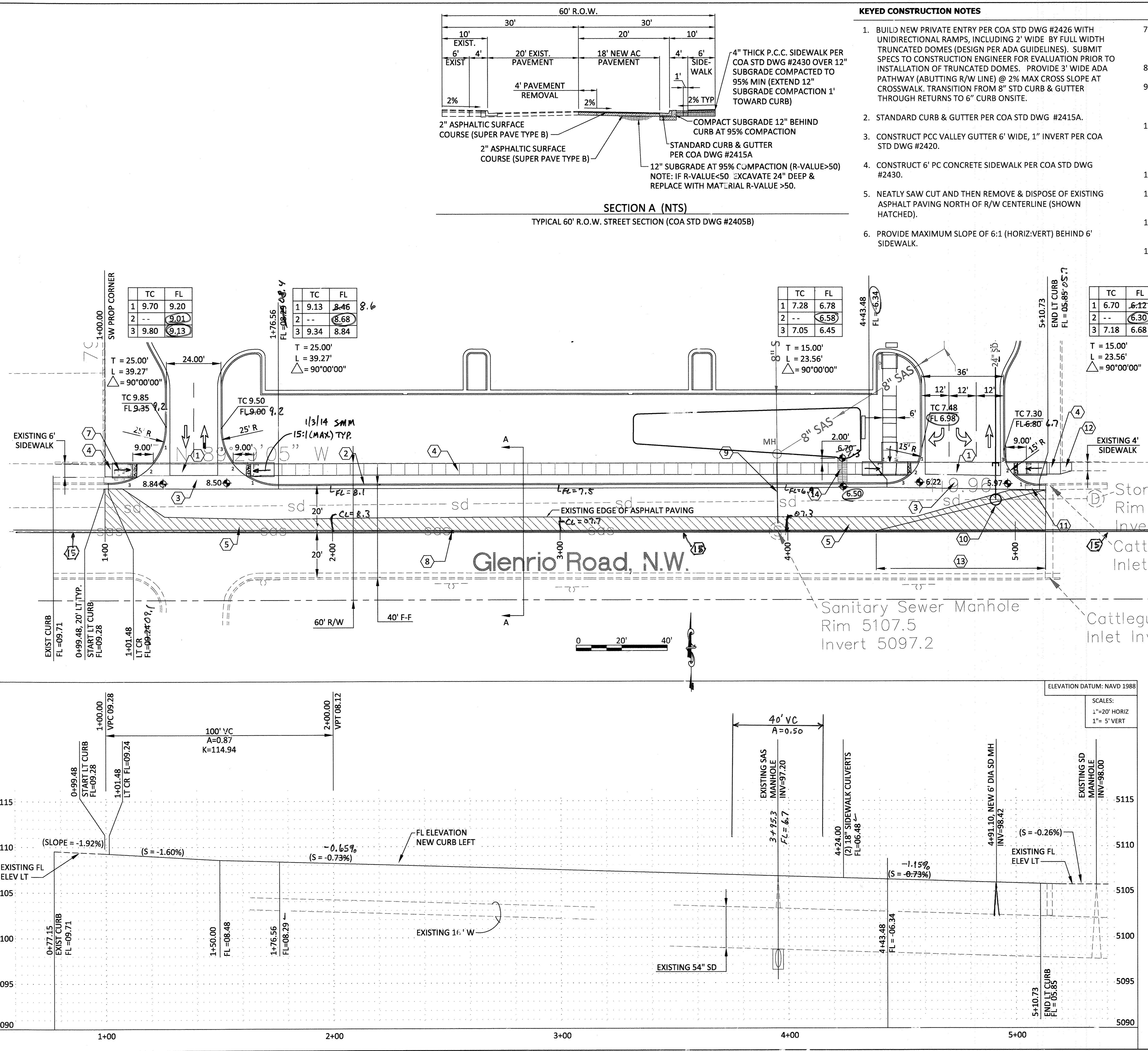
R/W CENTERLINE

TRUNCATED DOMES ^{1 1/3" x 8mm} (SHALL BE PLACED WITHIN 5' OF THE PROJECTED CURB LINE)

	CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP
TITLE:	GLENRIO ROAD NW ROAD IMPROVEMENTS

Design Review Committee  A rectangular stamp with a double border. The word "APPROVED" is at the top in a large, bold, sans-serif font. Below it, the date "JAN 10 2014" is stamped in a smaller font. At the bottom, the words "DESIGN REVIEW COMMITTEE" are printed in a small, all-caps font.	City Engineer Approval  A rectangular stamp with a double border. The word "APPROVED" is at the top in a large, bold, sans-serif font. Below it, the date "AUG 14 2014" is stamped in a smaller font. At the bottom, the words "CITY ENGINEER" are printed in a small, all-caps font.	Last Design Update
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City Project No.	799682	Zone Map No.	J-10
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[illegible]

RESTRAINED JOINT LENGTHS, L _T , FOR TEES, (FT.) ALL JOINTS AT THE TEE MUST BE RESTRAINED.		
SIZE	RUN	BRANCH
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
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.

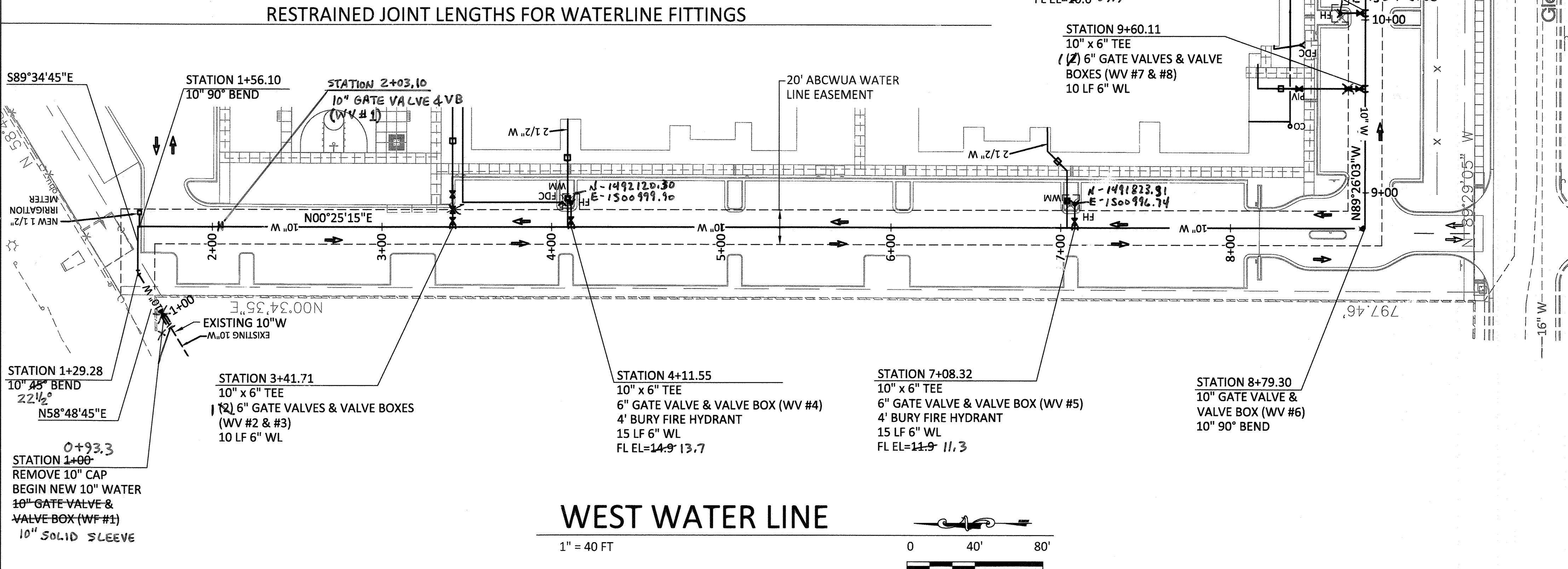
DIFFERENT CRITERIA, E.G., DUCTILE IRON PIPE, GREATER DEPTH OF BURY, ETC., WILL REQUIRE DIFFERENT RESTRAINED LENGTHS. THESE MUST BE CALCULATED BY A QUALIFIED PROFESSIONAL ENGINEER AND APPROVED BY THE PUBLIC WORKS DEPARTMENT

RESTRAINED JOINT LENGTHS, L _T , FOR HORIZONTAL BENDS, VALVES, AND DEAD ENDS, (FT.)					
SIZE	HORIZ. 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

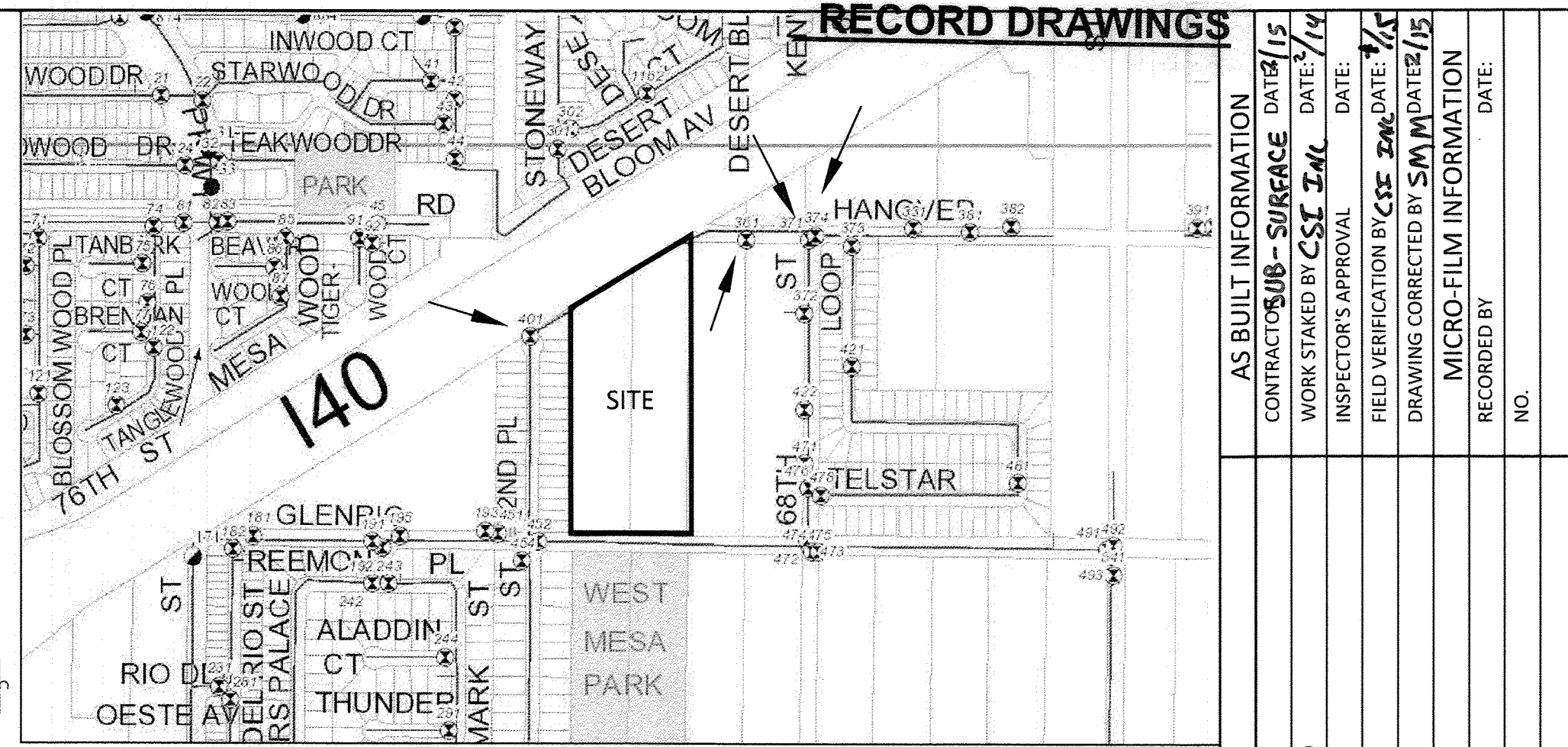
RESTRAINED JOINT LENGTHS, L_T,
FOR REDUCERS, (FT.)
MINIMUM UNOBSTRUCTED, STRAIGHT-RUN LENGTH:
RESTRAIN EITHER LARGE PIPE, OR SMALL PIPE

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

- NOTES:
- ALL MECHANICAL JOINTS SHALL BE RESTRAINED AT THE FITTING.
 - THE CONTRACTOR SHALL PROVIDE A MINIMUM PIPE LENGTH OF 20 LF FROM ALL MECHANICAL JOINTS. ALL PIPE JOINTS WITHIN 20 LF OF A MECHANICAL JOINT SHALL BE RESTRAINED AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL RESTRAIN ALL PIPE JOINTS IN THE SPECIFIED DISTANCE LISTED IN THE TABLE ON THIS SHEET.
 - THE CONTRACTOR SHALL RESTRAIN ALL FIRE HYDRANT JOINTS FROM THE TEE ON THE MAIN TO THE FIRE HYDRANT FLANGE.



WEST WATER LINE



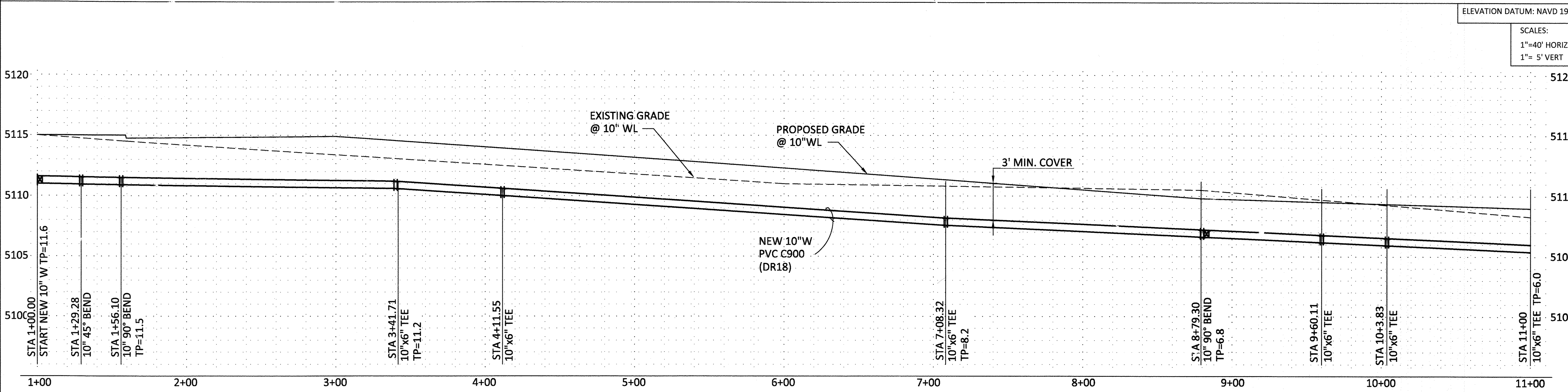
WATER VALVE SHUT-OFF PLAN

OPERATE WATER VALVE NOS. 361, 371, 374, AND 401 TO ISOLATE THE WATER LINE.

THE CONTRACTOR SHALL COORDINATE WITH THE WATER AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUTOFF REQUESTS MUST BE MADE ONLINE AT [HTTP://ABCWUA.ORG/CONTENT/VIEW/463/729/](http://abcwua.org/content/view/463/729/).

GPS TABLE FOR WATER VALVES				
WATER VALVE	E NORTHING	N EASTING	AS-BUILT NORTHING	AS-BUILT EASTING
WV #1	1,500,936.49	1,492,360.12	1,500,989.05	1,492,326.03
WV #2	1,500,990.64	1,492,189.45	1,500,991.66	1,492,188.77
WV #3	1,500,996.99	1,492,189.45		
WV #4	1,500,990.45	1,492,119.60	1,500,990.16	1,492,120.68
WV #5	1,500,988.04	1,491,822.92	1,500,988.07	1,491,823.89
WV #6	1,500,983.07	1,491,654.77	1,500,981.67	1,491,658.54
WV #7	1,501,063.89	1,492,654.81	1,501,062.82	1,491,654.07
WV #8	1,501,063.95	1,491,661.09		
WV #9	1,501,107.59	1,491,654.01	1,501,106.30	1,491,653.51

Certification
THE CHANGES SHOWN HEREON ARE BASED UPON A FIELD SURVEY CONDUCTED BY ME OR UNDER MY SUPERVISION AND REFLECT THE LOCATIONS (VERTICALLY AND HORIZONTALLY) TO THE BEST OF MY KNOWLEDGE AND BELIEF.



ELEVATION DATUM: NAVD 1988			WATER SERVICE TABLE		
STATION	SIZE	COMMENT	STATION	SIZE	COMMENT
1+54.50	1 1/2"	IRRIGATION	4+10.00	2"	DOMESTIC
7+06.00	2"	DOMESTIC	11+00.00	2"	DOMESTIC

NO.	DATE	REVISIONS/REMARKS	BY

DESIGNED BY: SM	DATE: 12/30/13
DRAWN BY: CB	DATE: 12/30/13
CHECKED BY: SM	DATE: 12/30/13

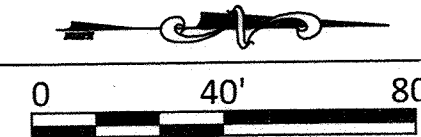
City Project No.	799682	Zone Map No.	J-10	Sheet:	6	Of	7
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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: **GLENRIO APARTMENTS
WATER LINE P & P**
Albuquerque, New Mexico 87107

Design Review Committee	City Engineer Approval	MO. / DAY / YR.	MO. / DAY / YR.

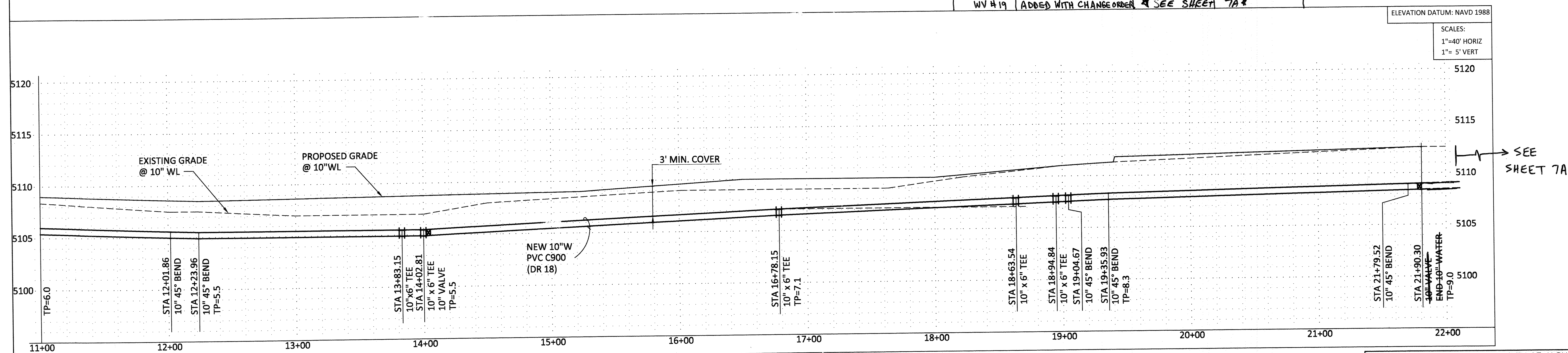
City Project No. 799682 Zone Map No. J-10 Sheet: 6 Of 7



GPS TABLE FOR WA. ER VALVES				
WATER VALVE	E NORTHING	N EASTING	AS-BUILT NORTHING	AS-BUILT EASTING
WV #10	1,501,319.76	1,491,823.39	1491822.27	1501317.57
WV #11	1,501,319.90	1,491,843.05	1491841.58	1501317.96
WV #12	1,501,312.70	1,491,843.11		
WV #13	1,501,322.69	1,491,846.33	1491847.49	1501322.02
WV #14	1,501,321.51	1,492,118.44	1492116.95	1501321.22
WV #15	1,501,323.28	1,492,303.78	1492302.45	1501322.30
WV #16	1,501,316.08	1,492,303.83		
WV #17	1,501,323.10	1,492,335.12	1492333.72	1501323.21
WV #18	1,501,355.36	1,492,613.67	1492609.13	1501352.01
WV #19	ADDED WITH CHANGE ORDER		SEE SHEET 7*	

B. J. Mc

WATER SERVICE TABLE		
STATION	SIZE	COMMENT
15+80.00	2"	DOMESTIC
17+77.50	2"	DOMESTIC
18+80.00	2"	DOMESTIC



SCALES:
1"=40' HORIZ
1"= 5' VERT

[illegible]

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: **GLENRIO APARTMENTS**
WATER LINE P & P
Albuquerque, New Mexico 87107

Design Review Committee

City Engineer Approval

MO. / DAY / YR.

MO. / DAY / YR.

APPROVED
JAN 10 2014
DESIGN
REVIEW COMMITTEE



APPROVED
CITY ENGINEER

Last Design Update																	
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City Project No. _____

799682

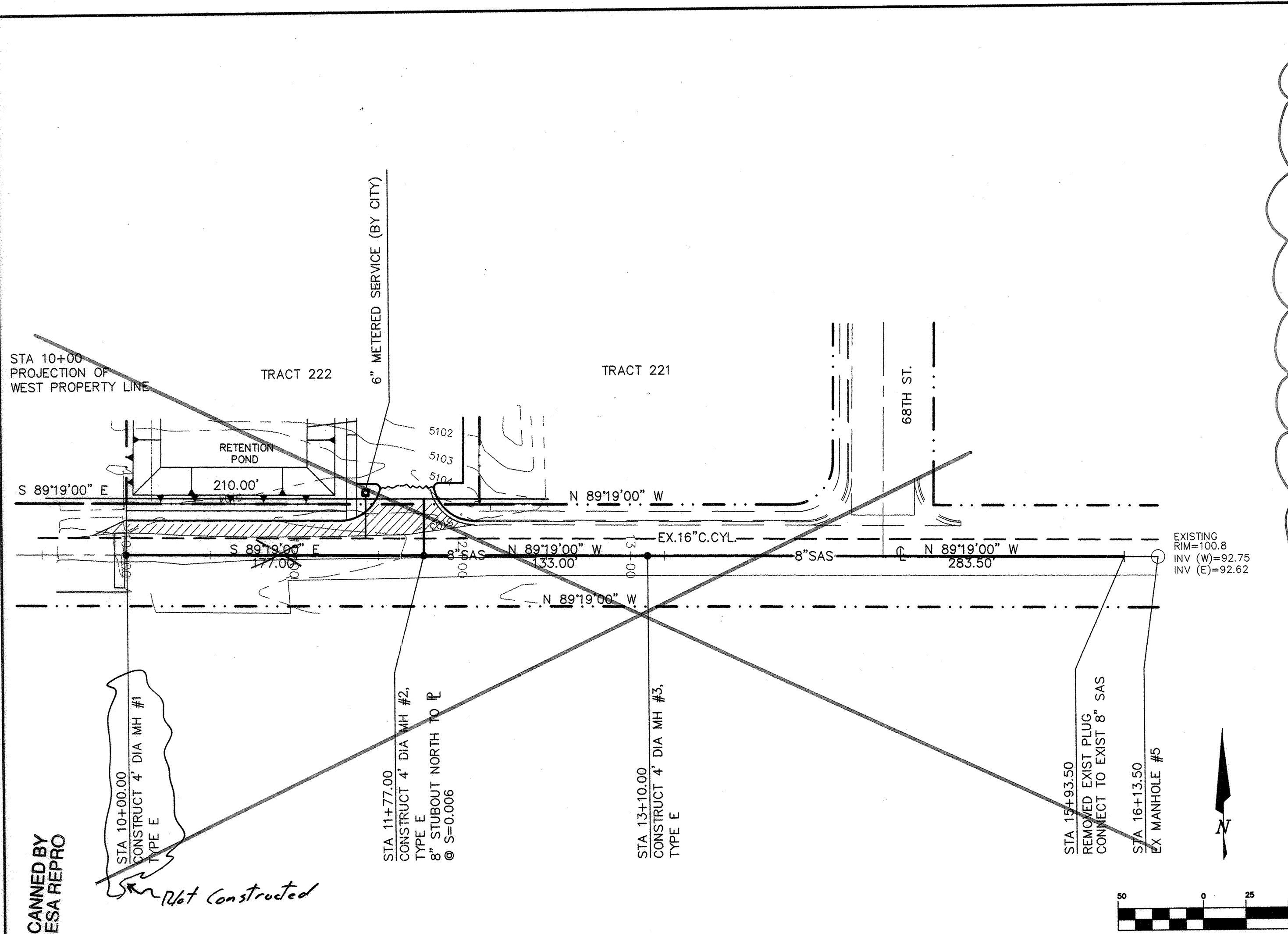
Zone Map No.

J-10

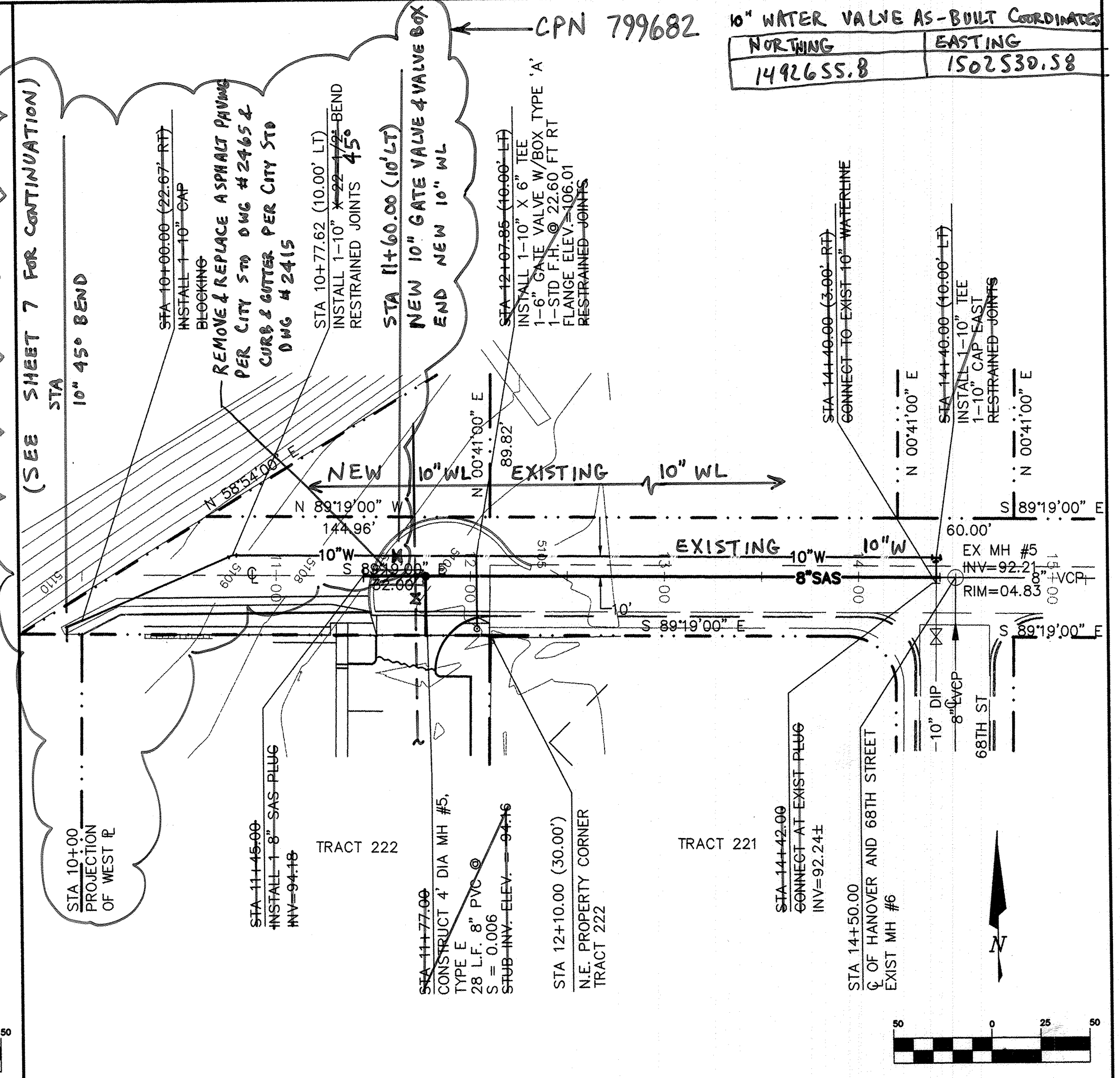
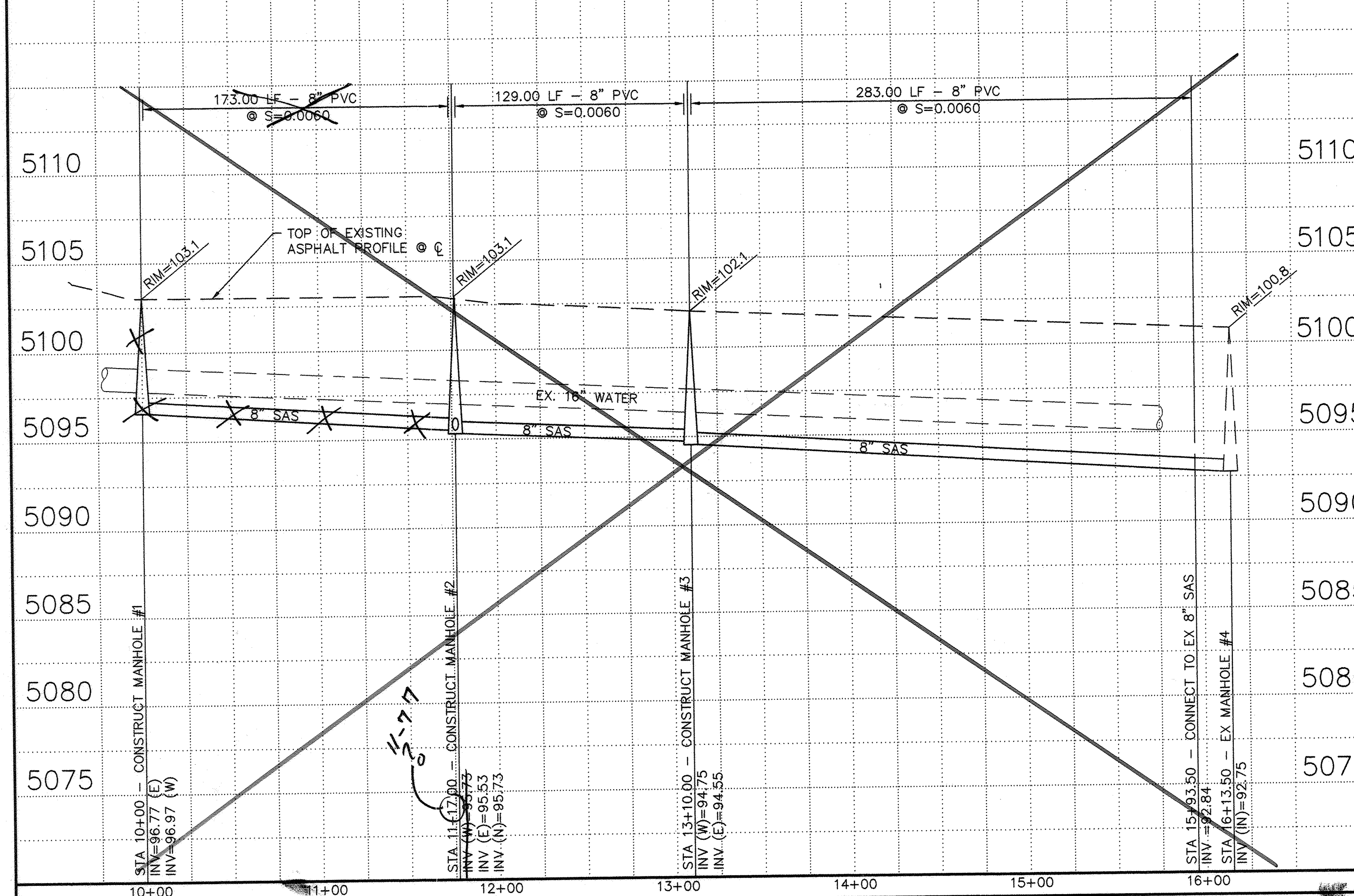
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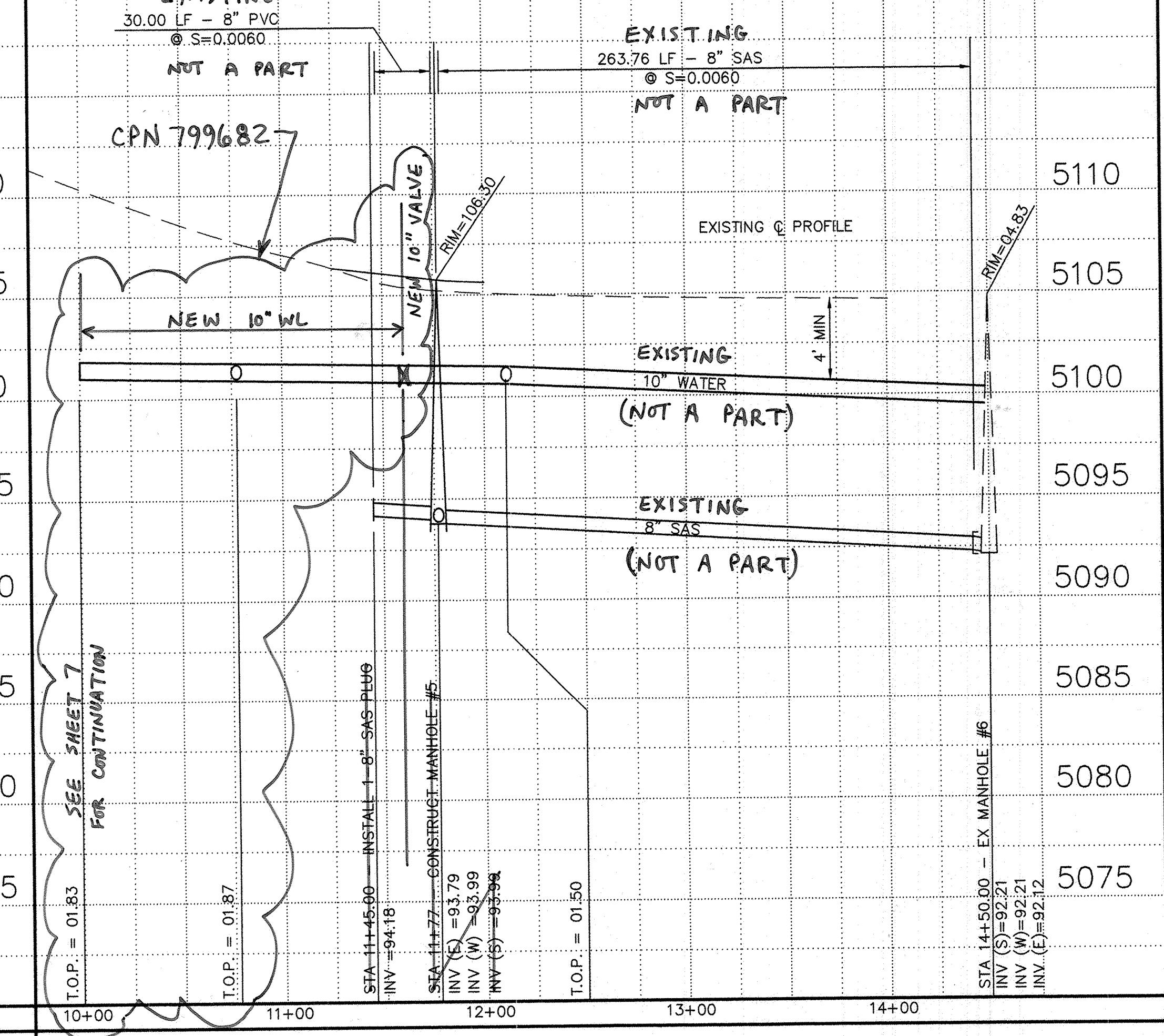
7



GLENRIO RD NW



HANOVER RD NW



10" WATER VALVE AS-BUILT COORDINATES	
NORTHING	EASTING
1492655.8	1502530.58

LEGEND		
ITEM	EXISTING	PROPOSED
WATERLINE	6" W	6" W
SANITARY SEWER	8" SAS	8" SAS
STORM SEWER	36" SD	24" SD
FIRE HYDRANT		
VALVE		
WATER SERVICE (SINGLE)		
WATER SERVICE (DOUBLE)		
MANHOLE		
MOUNTABLE CURB		
STD CURB & GUTTER		
DROP INLET		
OVERHEAD ELEC	OHE	
UNDERGROUND ELEC, GAS, TEL, TV	UGT	
FLOWLINE ELEV.	FL 0.14	FL 0.14
TOP OF CURB ELEV.	99.3	99.31
SPOT ELEV.	x 16.7	16.7
SEWER SERVICE		
RIGHT OF WAY		
POWER POLE (GUYYED)	PP	
CHAIN LINK FENCE	x	
CENTERLINE		
RETAINING WALL		
TOP OF ASPHALT ELEV.	TA 16.2	TA 16.2
TEMP. PAVEMENT		
STREET LIGHT		*

Certification
THE CHANGES SHOWN HEREON ARE BASED UPON A FIELD SURVEY CONDUCTED BY ME OR UNDER MY SUPERVISION AND REFLECT THE LOCATIONS (VERTICALLY AND HORIZONTALLY) TO THE BEST OF MY KNOWLEDGE AND BELIEF.

[Signature]
B. J. M. M.

STATIONING IS BASED ON CENTERLINE OF RIGHT OF WAY UNLESS NOTED OTHERWISE.



CPN: 799682 INCLUDES NEW 10" WL FROM HANOVER CUL-DE-SAC TO THE WEST.

RESTRAINED JOINTS LENGTH	
1. Tee branch—each run pipe shall be minimum 10' w/o joints	
2. Distance shown is in each direction for valves and bends	
3. All dead end caps shall be blocked	
SIZE	Valve
90"	52"
48"	37"
36"	37"
30"	37"
24"	37"
18"	37"
12"	37"

26 6423.81 0604

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: HANOVER / GLENRIO GLENRIO RD NW AND HANOVER RD NW WATER & SANITARY SEWER PLAN & PROFILE	
Design Review Committee	City Engineer Approval
APPROVED NOV 12 2014 DESIGN REVIEW COMMITTEE	APPROVED NOV 12 2014 CITY ENGINEER
City Project No. 799682	Zone Map No. J-10
Sheet 7A	Of 78