

PUBLIC IMPROVEMENT PLANS
FOR
12 TH STREET WATERLINE
ALBUQUERQUE, NEW MEXICO

MARCH 2015

PREPARED FOR:
BCR CONSTRUCTION
P.O. BOX 7489
ALBUQUERQUE, NM 87194

PREPARED BY:
ISAACSON & ARFMAN, P.A.
128 MONROE ST. NE
ALBUQUERQUE, NM 87108

INDEX TO DRAWINGS

SHEET NO. — TITLE

- 1 — COVER SHEET
2 — SITE SURVEY
3 — MASTER UTILITY PLAN
4 — WATERLINE PLAN & PROFILE

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Fred C. Arfman, PE No. 7322 of the firm of Isaacson & Arfman, P.A., 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 Fred C. Arfman, PE #7322

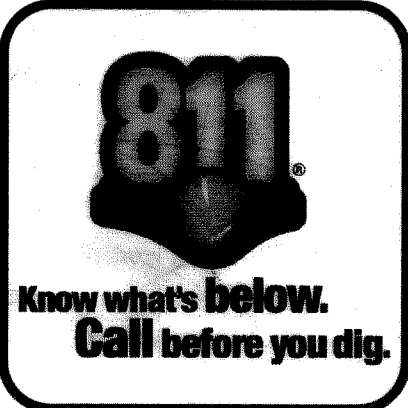
Fred C. Arfman

NMPE No. 7322



AS BUILT DRAWING

This set of drawings is accepted for RECORD
Purpose by *Trish Cypora*
on *6-26-17* ASBUILT SIGNATURE



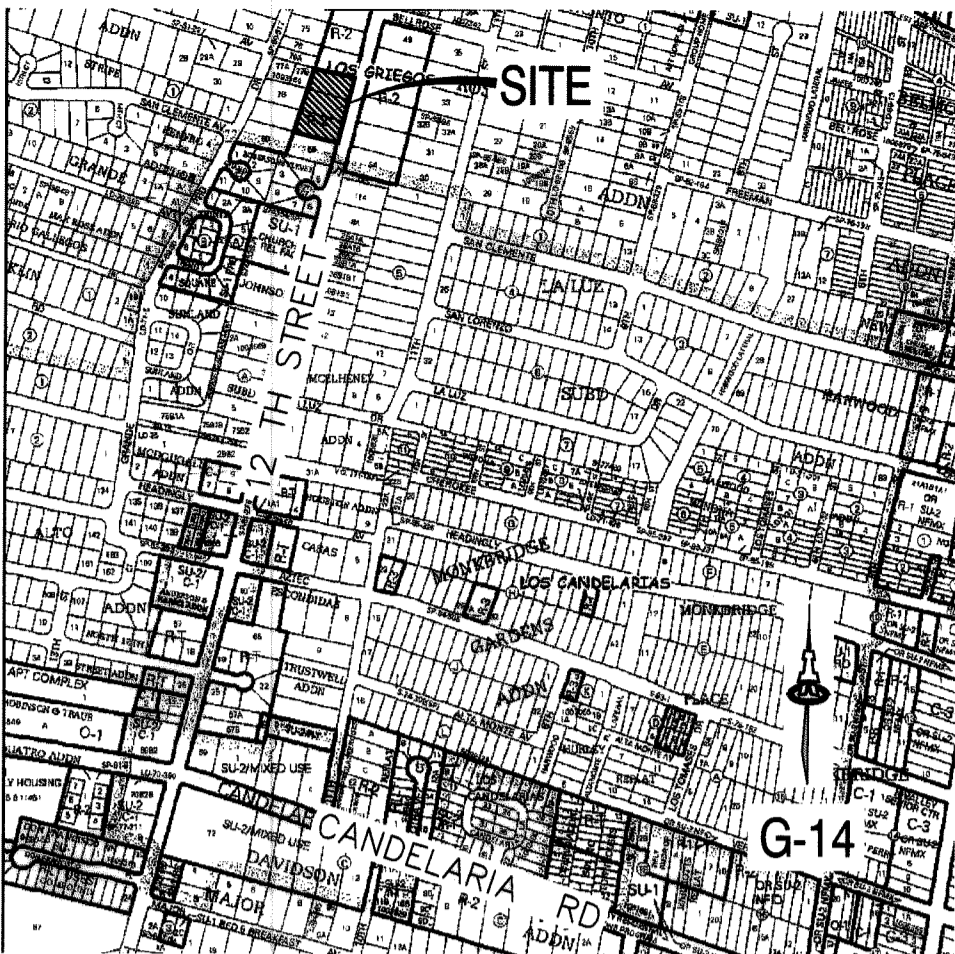
GENERAL NOTES

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986 EDITION AS AMENDED WITH UPDATE #8 INCLUDING AMENDMENT #1.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE & VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, NM 811, FOR LOCATION OF EXISTING UTILITIES.
- CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER WHICH WILL MINIMIZE INTERFERENCE WITH LOCAL TRAFFIC. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY, AND TO PROTECT THEM FROM DAMAGE, INJURY, OR LOSS. CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADHERE TO SECTION 19 OF THE GENERAL CONDITIONS OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS AMENDED WITH UPDATE #8.
- THE 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; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE OWNER & ENGINEER FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
- TRAFFIC CONTROL: SEVEN (7) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY CONSTRUCTION COORDINATION ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE SPECIFICATIONS. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PRE-FORMED THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS BY CONTRACTOR TO LOCATION AS EXISTING OR AS SHOWN IN THIS PLAN SET.
- WHEN ABUTTING EXISTING PAVEMENT TO NEW, SAWCUT EXISTING PAVEMENT TO A STRAIGHT EDGE AND AT A RIGHT ANGLE, OR AS APPROVED BY THE FIELD ENGINEER. REMOVAL OF BROKEN OR CRACKED PAVEMENT WILL ALSO BE REQUIRED.
- EXISTING CURB AND GUTTER NOT TO BE REMOVED UNDER THE CONTRACT WHICH IS DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT HIS EXPENSE PER COA STD DWG #2415A
- THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY OR PRIVATE ROADWAY EASEMENTS SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET OR INTO ANY PUBLIC DRAINAGE FACILITY.
- THE 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. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. 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 SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS UPDATE #8.

- 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.
- WARNING--EXISTING UTILITY LINE LOCATIONS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION OF ANY SUCH EXISTING LINES IS BASED UPON INFORMATION PROVIDED BY THE UTILITY COMPANY. THE OWNER, OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY, AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES, IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "BLUE STAKES" PROCEDURES, OR OTHERWISE.

- ANY WORK OCCURRING WITHIN A FULLY DEVELOPED ARTERIAL ROADWAY REQUIRES 24 HR. CONSTRUCTION — AS ALLOWED BY THE CITY.
- ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE ACCOMPLISHED IN ACCORDANCE WITH OSHA 29CFR 1926.650 SUBPART
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY
- THE CONTRACTOR WILL BE RESPONSIBLE FOR DISPOSING OF ALL DEBRIS, INCLUDING, BUT NOT LIMITED TO HAZARDOUS WASTE AT DISPOSAL SITES APPROVED BY GOVERNMENTAL AGENCIES REGULATING THE DISPOSAL OF SUCH MATERIALS.
- TACK COAT FOR SURFACE COURSE REQUIREMENTS WILL BE DETERMINED BY THE ENGINEER.
- PERMANENT PAVEMENT STRIPING AND MARKINGS WILL BE PLACED BY THE CONTRACTOR. THE ROAD SHALL NOT BE OPENED TO THE TRAFFIC UNTIL IT IS STRIPED. ALL STRIPING, PAVEMENT MARKINGS INCLUDING CROSSWALKS, ARROWS AND LINE MARKINGS ARE TO BE CONSTRUCTED OF PREFORMED THERMO-PLASTIC IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.



- ELECTRONIC MARKING SPHERES (EMS) WILL BE PLACED ACCORDING TO SECTION 170 OF THE CITY OF ALBUQUERQUE SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #8 INCLUDING AMENDMENT #1.
- ALL WATER VALVE BOXES AND MANHOLES IN THE STREET CONSTRUCTION ARE TO BE ADJUSTED TO FINISH GRADE AND WILL BE MEASURED AND PAID PER EACH.
- 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://www.abcwug.org/Water_Shut_off_and_Turn_on_Procedures.aspx
- CONTRACTOR SHALL SUPPORT ALL EXISTING, UNDERGROUND UTILITY LINES WHICH BECOME EXPOSED DURING CONSTRUCTION. PAYMENT FOR SUPPORTING WORK SHALL BE INCIDENTAL TO WATERLINE AND/OR SEWER LINE COSTS.
- 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 RECORD DRAWINGS. CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL CONSTRUCTION SIGNING UNTIL PROJECT HAS BEEN ACCEPTED BY THE CITY.
- THE CONTRACTOR SHALL NOTIFY THE ALBUQUERQUE TRAFFIC ENGINEERING DIVISION THRU DRC CHAIR THREE (3) WORKING DAYS IN ADVANCE OF ANY WORK THAT REMOVES, RELOCATES, OR REINSTALLS ANY EXISTING REGULATORY SIGNS.
- RCP PIPE JOINTS SHALL BE INSTALLED SO THAT THE JOINT GAP AT THE HOME POSITION SHALL CONFORM TO THE APPROVED MANUFACTURER'S RECOMMENDATIONS. 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 GROUTED UNLESS DIRECTED BY THE ENGINEER AFTER CITY APPROVAL.
- IF A PAVEMENT DROP-OFF IS CREATED DURING CONSTRUCTION, THE CONTRACTOR SHALL INITIATE PROTECTIVE MEASURES TO PREVENT ABRUPT PAVEMENT CHANGES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- CONTRACTOR SHALL REPLACE IN KIND ANY EXISTING SIGNAGE, STRIPING OR ANY OTHER PAVEMENT MARKINGS IMPACTED BY THE WORK. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN EXISTING PEDESTRIAN AND ADA PATHWAYS DURING CONSTRUCTION OR PROVIDE AN ALTERNATE ROUTE OR PROVIDE "SIDEWALK CLOSED" SIGNAGE.
- CONTRACTOR SHALL REPAIR OR REPLACE DISTURBED UTILITIES IMMEDIATELY AND WITHOUT DELAY.

REV.	SHEETS	CITY	ENGINEER	DATE	USER	DEPARTMENT	DATE	USER	DEPARTMENT	DATE
ENGINEERS STAMP & SIGNATURE		APPROVALS		ENGINEER	DATE	APPROVED FOR CONSTRUCTION				
		DRC Chairman	<i>[Signature]</i>	<i>[Signature]</i>	4/11/15	<i>[Signature]</i> 5-21-15 City Engineer <i>[Signature]</i> Date				
		Transportation	<i>[Signature]</i>	<i>[Signature]</i>	3/31/15					
		Water/Wastewater	<i>[Signature]</i>	<i>[Signature]</i>	03/04/15					
		Hydrology	<i>[Signature]</i>	<i>[Signature]</i>	3/24/15					
		Constr. Mngmt.								
Constr. Coord.										
City Project No.		740485		Sheet 1 Of 4						

DRB NO. —

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Mar 03,2015

BOUNDARY SURVEY with TOPOGRAPHY
OF
LOTS 57, 58 and 59
ROSSITER ADDITION
WITHIN
SECTION 30,
TOWNSHIP 10 NORTH, RANGE 2 EAST
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
AUGUST, 2007



LEGAL DESCRIPTION:

LOTS NUMBERED FIFTY-SEVEN (57), FIFTY-EIGHT (58) AND FIFTY-NINE (59) OF THE ROSSITER ADDITION, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME ARE SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON MAY 11, 1945 IN VOLUME D, FOLIO 20.

GENERAL NOTES:

- 1: CONTOUR INTERVAL IS ONE (1) FOOT.
- 2: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION No. "17-F13", HAVING AN ELEVATION OF 4973.33 NAVD 88.
- 3: UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS FOR EXACT LOCATION AND/ OR DEPTH PRIOR TO EXCAVATION OR DESIGN CONSIDERATIONS.
- 4: OWNER OF RECORD BILLY BACA
- 5: LEGAL DESCRIPTION AND EASEMENTS SHOWN WERE PROVIDED BY BILLY BACA
- 6: PLATS USED TO ESTABLISH BOUNDARY.
A: PLAT OF LOTS 77-A and 77-B, ROSSITER ADDITION
FILED: JULY 28, 2004 IN Book 2004C, Page 217
B: PLAT OF ROSSITER ADDITION
FILED : MAY 11, 1945 IN VOLUME D, FOLIO 20
- 7: FIELD WORK PERFORMED ON: AUGUST, 2007

SURVEYOR'S CERTIFICATE:

State of New Mexico
County of Bernalillo

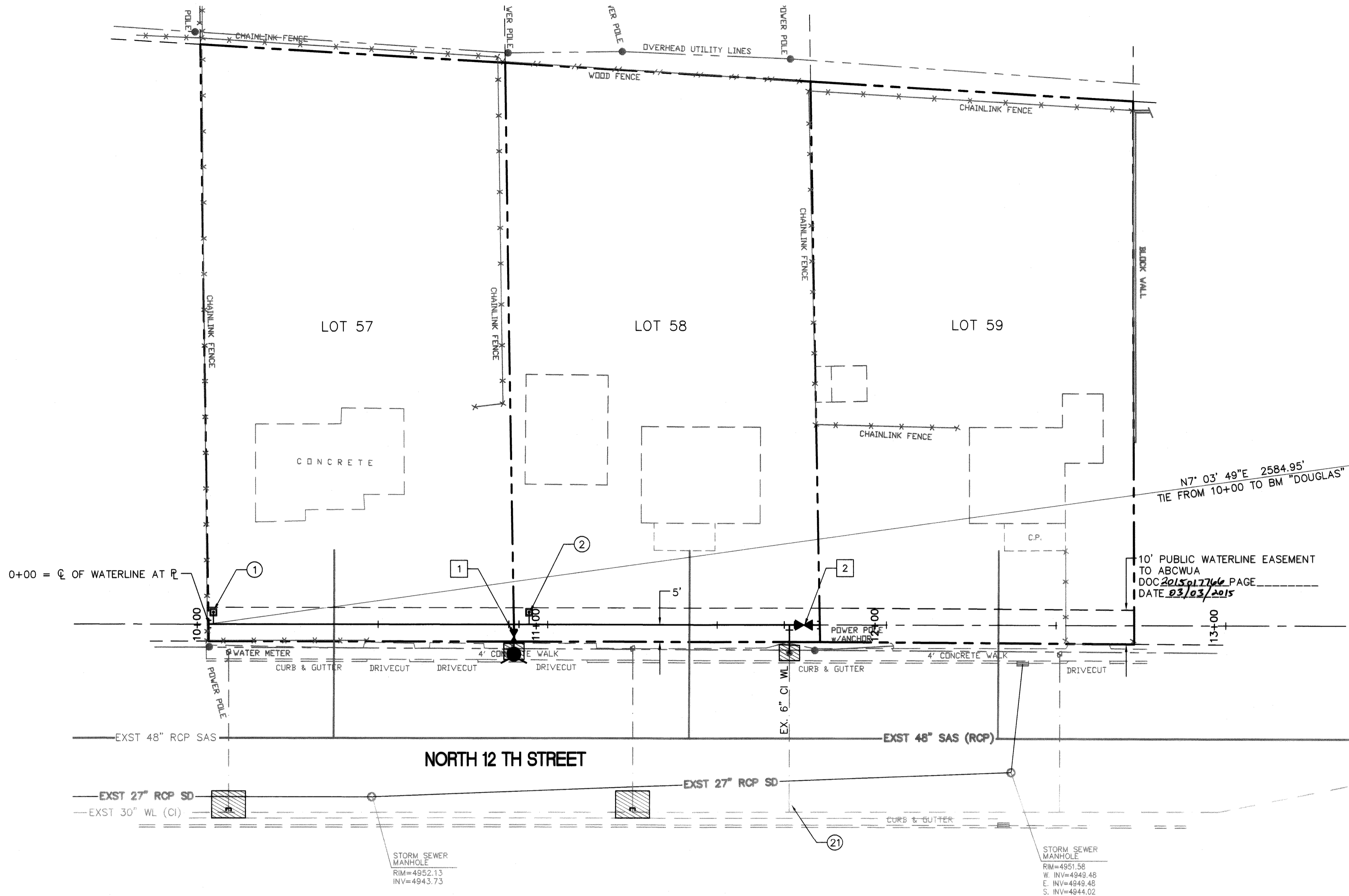
I, Anthony L. Harris, a Professional Surveyor, licensed under the laws of the State of New Mexico, do hereby certify that I have surveyed the above described property and I am responsible for said survey and that the plat hereon drawn is a true and correct representation of said survey, to the best of my knowledge and belief, and meets the minimum standards for land surveys in the State of New Mexico; that the bearings and distances shown hereon are based on the Plat or Deed of Record, unless otherwise indicated herein; that it shows all easements shown on the plat of record; that there are no encroachments from the said property onto adjoining properties onto said property, unless shown hereon and that it shows the location of all permanent improvements pertinent to the said survey.

Given under my hand and seal at Albuquerque, New Mexico, this _____ day of _____ 2007

Anthony L. Harris, N.M.P.S.#11463 HARRIS SURVEYING, INC.
2412-D Monroe Street, NE
Albuquerque, New Mexico 87110
Telephone (505) 889-8056 FAX (505) 889-8645

AS BUILT DRAWING

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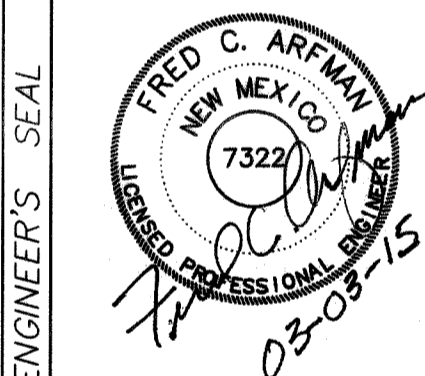


GENERAL NOTES

- EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. ALL UTILITIES SHOULD BE FIELD VERIFIED AND LOCATED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES.
- CONTRACTOR SHALL NOT USE VIBRATORY COMPACTION EQUIPMENT OR HEAVY VEHICLES OVER EXISTING UTILITIES.
- PROPOSED WATERLINE MATERIALS SHALL BE PVC PIPE MEETING AWWA C900 OR-18 REQUIREMENTS (6"-12").
- ALL FITTINGS ON WATERLINES SHALL HAVE RESTRAINED JOINTS PER TABLE THIS SHEET.
- SUPPLEMENTAL SPECIFICATION: ALL SEWER BACKFILL FOR WATER LINE AND SANITARY LINE TRENCHES SHALL BE COMPACTED TO A MINIMUM 95% MAXIMUM DENSITY PER ASTM D-1557.
- ALL WATER VALVE BOXES AND MANHOLES IN THE STREET CONSTRUCTION ARE TO BE ADJUSTED TO FINISH GRADE AND WILL BE MEASURED AND PAID PER EACH.
- CONSTRUCT FIRE HYDRANTS PER DESIGNATED DEPTHS & LENGTHS PER ABCWUA STD DWG #2340.
- SEE ABCWUA STD DWG #2328 & 2329 FOR VALVE RING & COVER DETAIL. SEE ABCWUA STD DWG #2326 FOR VALVE BOX DETAIL.

LEGEND

- NEW GATE VALVE W/ VALVE BOX
- NEW WATER LINE W/ FITTING
- NEW WATER SERVICE METER
- EXISTING SAS LINE & MH
- EXISTING WL & GV
- REMOVE AND REPLACE EXISTING PAVEMENT OR SIDEWALK



RESTRAINED JOINT LENGTHS, L _T , FOR REDUCERS, (FT.) MINIMUM UNOBSTRUCTED, STRAIGHT-RUN LENGTH: RESTRAIN LARGE PIPE.					
SIZE	LARGE SIDE		SIZE	LARGE SIDE	
12x10	30		10x6	53	
12x8	54		10x4	71	
12x6	74		8x6	31	
12x4	89		8x4	52	
10x8	29		6x4	29	

THESE TABLES ARE BASED UPON THE FOLLOWING CRITERIA:

DEPTH OF BURY: 3.0 FT. MINIMUM
FACTOR OF SAFETY: 1.50
MATERIAL: PVC
SOIL TYPE: GW/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., GREATER DEPTH OF BURY, ETC., WILL REQUIRE DIFFERENT RESTRAINED LENGTHS. THESE MUST BE CALCULATED BY A QUALIFIED PROFESSIONAL ENGINEER AND APPROVED BY ABCWUA.

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	37	15	8	4	4	102
10	31	13	7	4	4	87
8	27	11	6	3	3	72
6	20	9	4	2	2	55
4	15	6	3	2	2	39

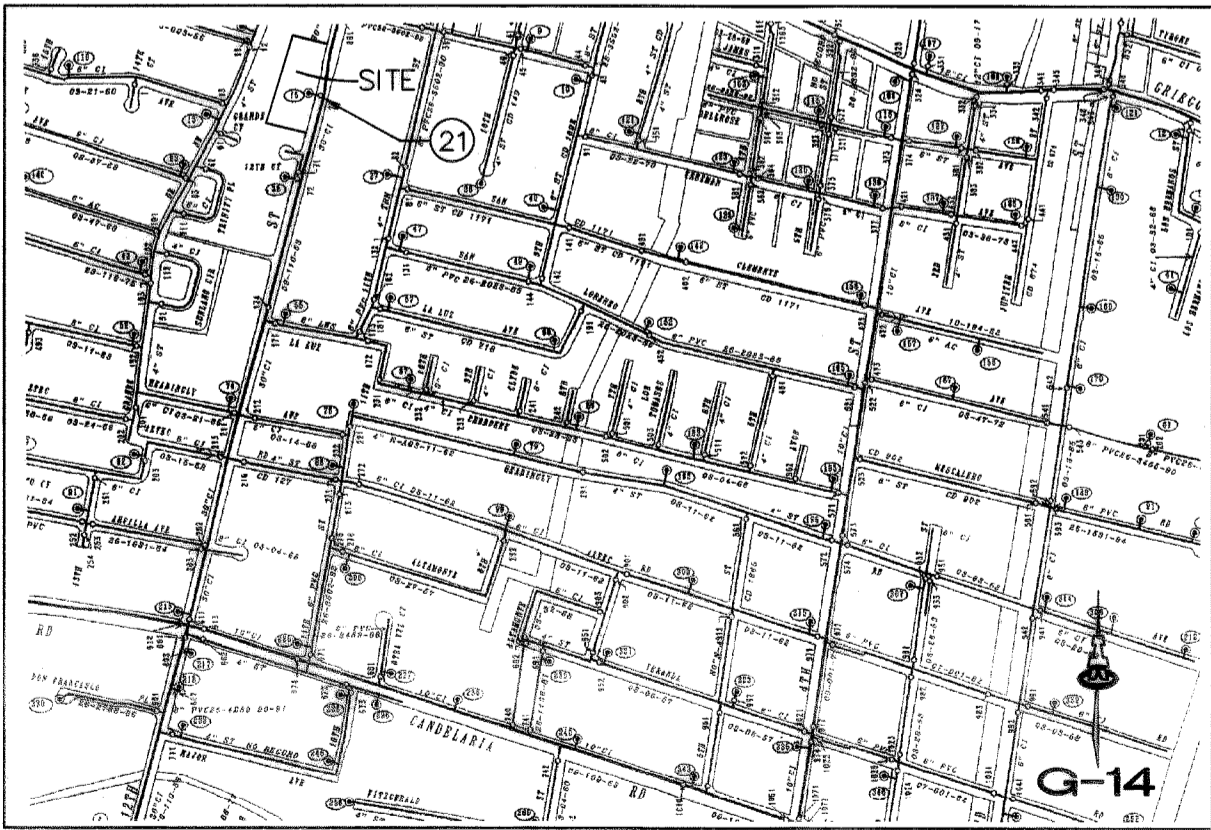
NOTES:

- 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.

RESTRAINED JOINT LENGTHS
FOR WATERLINE FITTINGS

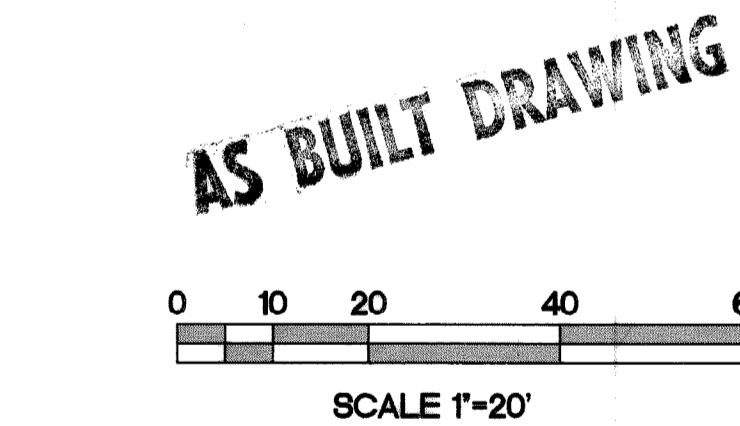
WATER METER AND FIRE LINE SUMMARY FOR COMMERCIAL DEVELOPMENT				
WATER METERS				
#	SIZE	LOCATION (STATION/OFFSET)	USE (DOMESTIC/IRRIGATION)	No. UNITS SERVED
①	1 1/2"	10+01.44	DOMESTIC	8
②	1 1/2"	10+94.54	DOMESTIC	8

VALVE COORDINATES		
NOS.	X	Y
1		
2		



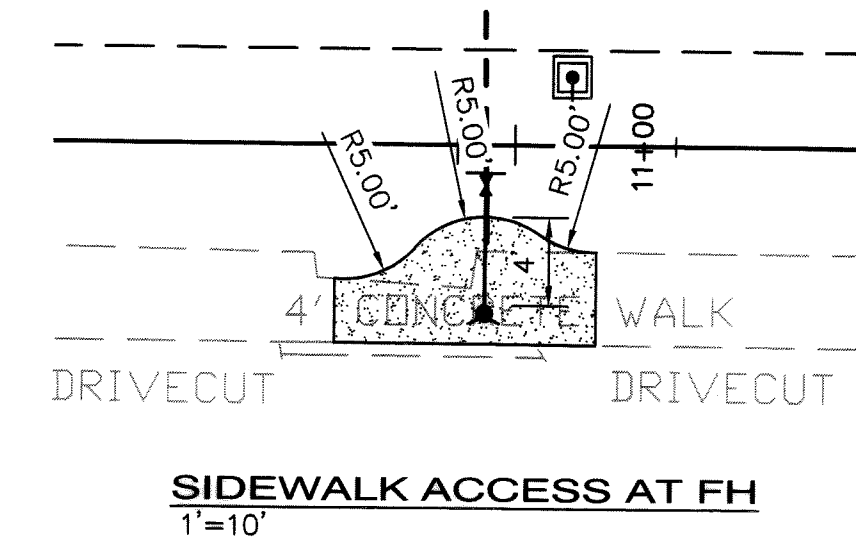
SHUT-OFF VALVE 21 TO PROVIDE NON-PRESSURE CONNECTIONS.
THE CONTRACTOR SHALL COORDINATE WITH THE WATER AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE.
WORK REQUIRING SHUTOFF OF WELL COLLECTORS, TRANSMISSION LINES, OR FACILITIES 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://www.abcwua.org/Water_Shut_off_and_Turn_on_Procedures.aspx

WATER SHUT-OFF PLAN



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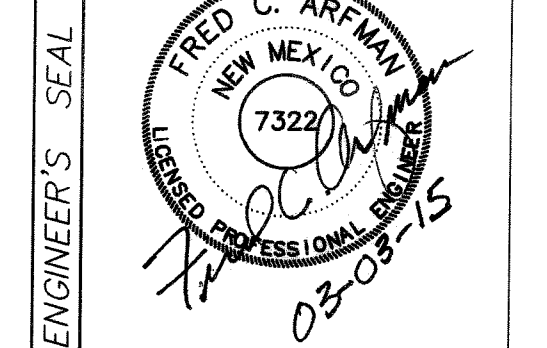
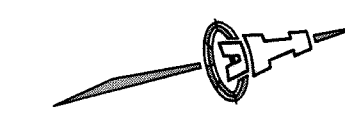
DESIGN REVIEW COMMITTEE		CITY ENGINEER APPROVAL		LAST DESIGN UPDATE	
APPROVED APR 15 2015 DESIGN REVIEW COMMITTEE		APPROVED APR 15 2015 CITY ENGINEER		Mo./DAY/YR.	
City Project No.		Zone Map No.		Sheet	
740485		G-14		3 Of 4	



- A. SEE SHEET 3 FOR WATER SHUT-OFF PLAN.
- B. ALL FITTINGS AND VALVES SHALL HAVE JOINT RESTRAINTS. SEE SHEET 3 FOR RESTRAINED JOINT LENGTHS.
- C. CONSTRUCT FIRE HYDRANTS PER DESIGNATED DEPTHS & LENGTHS PER ABCWUA STD DWG #2340.
- D. SEE ABCWUA STD DWG #2328 & 2329 FOR VALVE RING & COVER DETAIL. SEE ABCWUA STD DWG #2326 FOR VALVE BOX DETAIL.
- E. INSTALL 1 1/2" WATER SERVICE PER ABCWUA STD DWG. 2361, 2363 & 2367.
- F. REMOVE AND REPLACE EXISTING PAVEMENT (AND CURB & GUTTER IF NECESSARY) PER COA STD DWGS 2465 & 2415A.
- G. REMOVE AND REPLACE EXISTING SIDEWALK, TO NEAREST JOINT, PER COA STD DWG. 2430.
- H. PROVIDE 4' SIDEWALK ACCESS AROUND FIRE HYDRANT PER COA STD DWG 2431.
- J. REMOVE AND REPLACE PAVEMENT (ARTERIAL) FOR UTILITY CUTS PER COA STD DWG 2465.

SURVEY INFORMATION		BENCH MARKS	AS-BUILT INFORMATION	
FIELD	NOTES		CONTRACTOR	
		ACS STATION "DOUGLAS"	WORK SHED BY	DATE
		X=1,520,286.421 Y=1,503,417.495	INSURANCE BY	DATE
		ELEV = 4972.25	ACCEPTANCE BY	DATE
		GRD TO GRID=0.999682452	FIELD REVISION BY	DATE
		$\Delta PC = -00^{\circ} 13' 52.53''$	DRAWINGS CORRECTED BY	DATE
		CENTRAL ZONE, NAD 1983	MICRO-FILM INFORMATION	
		LOCATED 36' NORTH 00 DELMAR AVE. CL. AND	RECORDED BY	DATE
		80' EAST OF GRANDE RD. CL.	NO.	

Elevation Datum: NAVD 88

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LEGEND

NEW GATE VALVE W/ VALVE BOX

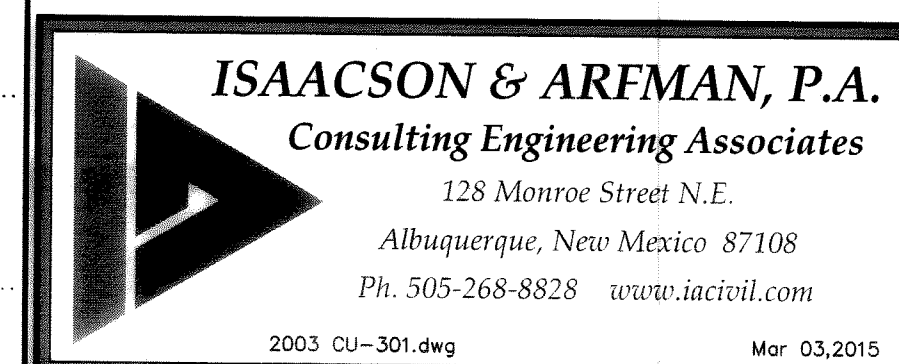
NEW WATER LINE W/ FITTING

NEW WATER SERVICE METER

EXISTING SAS LINE & MH

EXISTING WL & GV

REMOVE AND REPLACE
EXISTING PAVEMENT OR
SIDEWALK



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

12 TH STREET WATERLINE PLAN & PROFILE

[illegible]

City Project No.	Zone Map No.	Sheet	Of
740485	G-14	4	4