

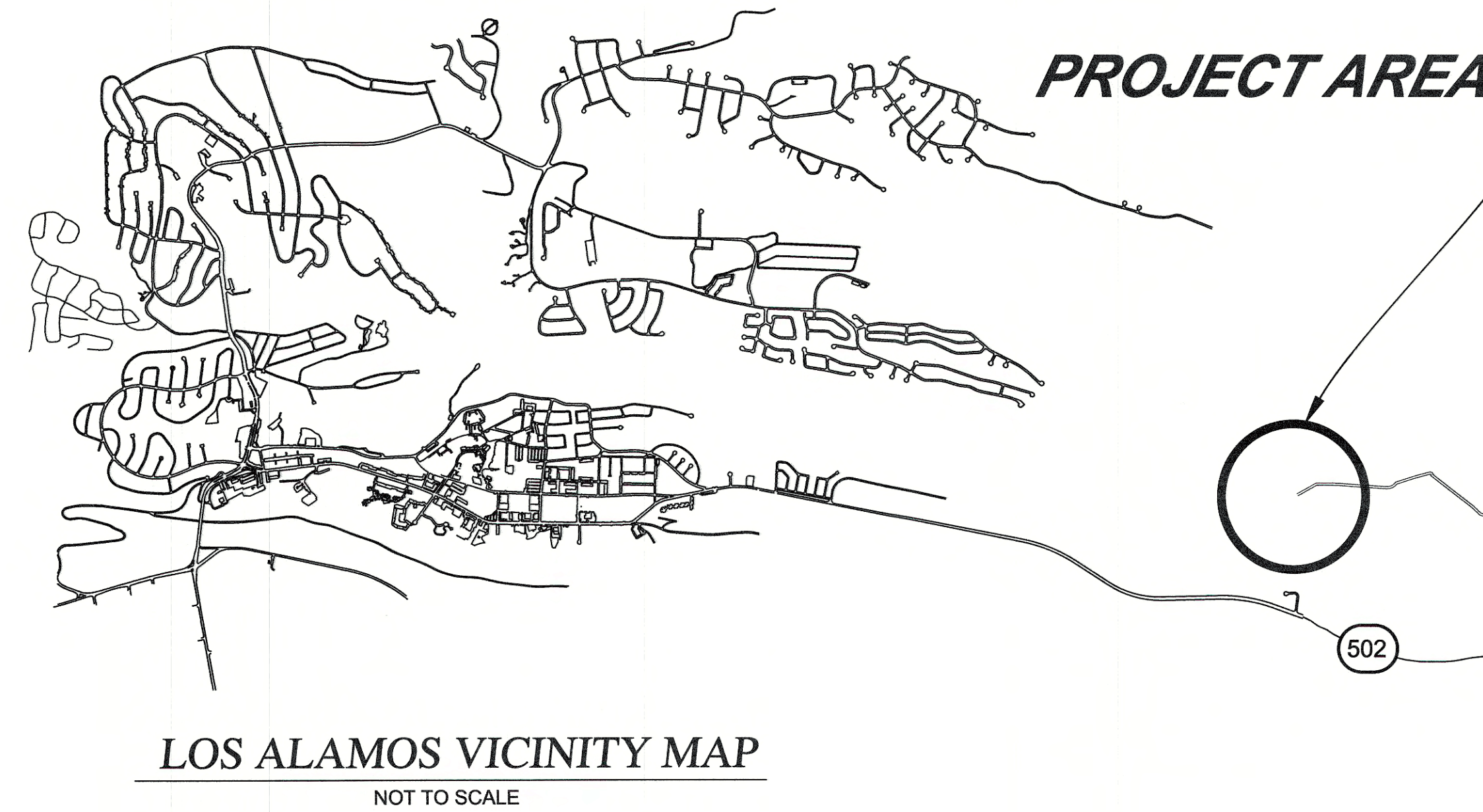
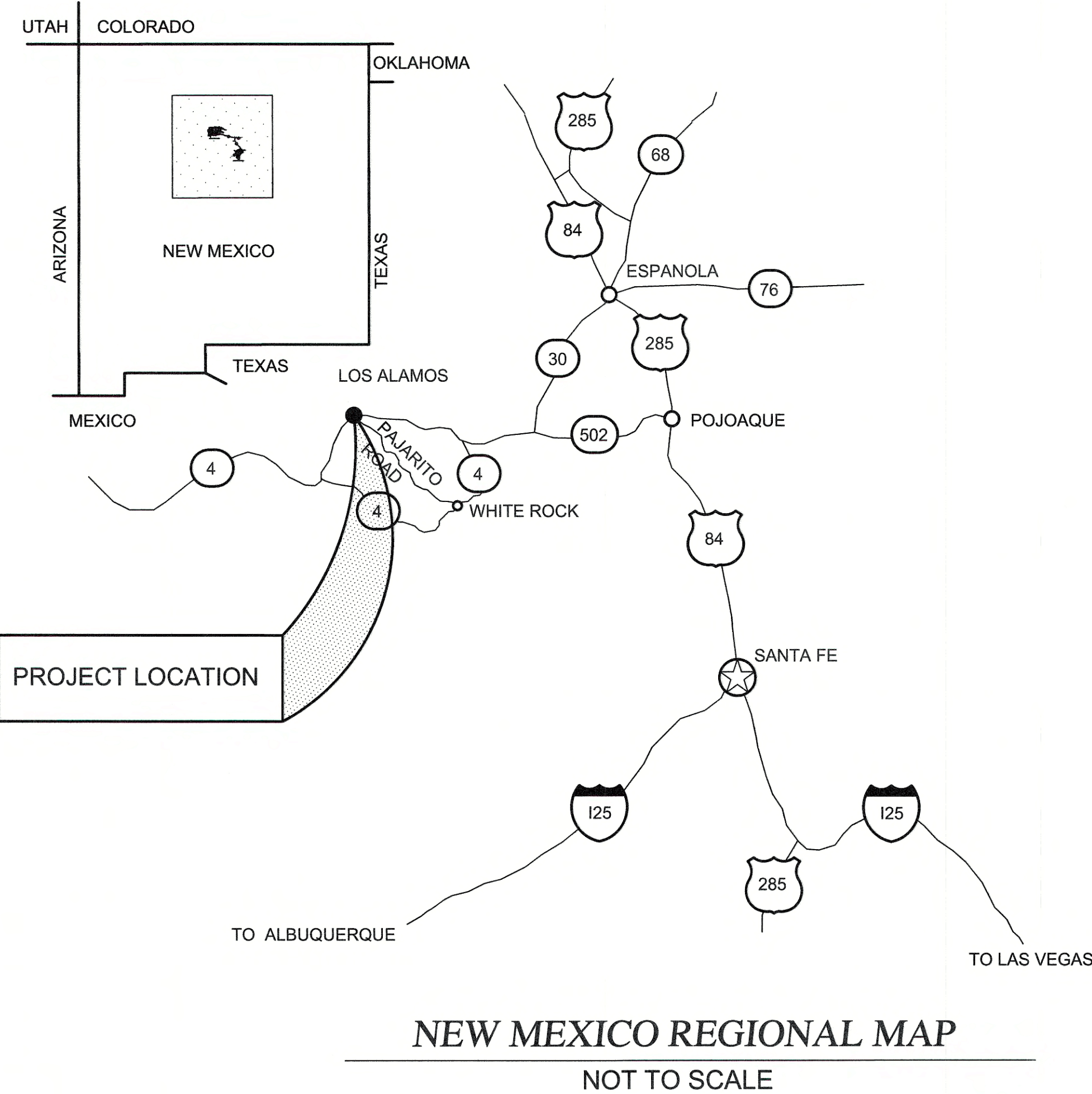
# BAYO BOOSTER NON-POTABLE WATER STORAGE TANK CONSTRUCTION PROJECT PHASE I

IFB-2022-52

LOS ALAMOS COUNTY - NEW MEXICO

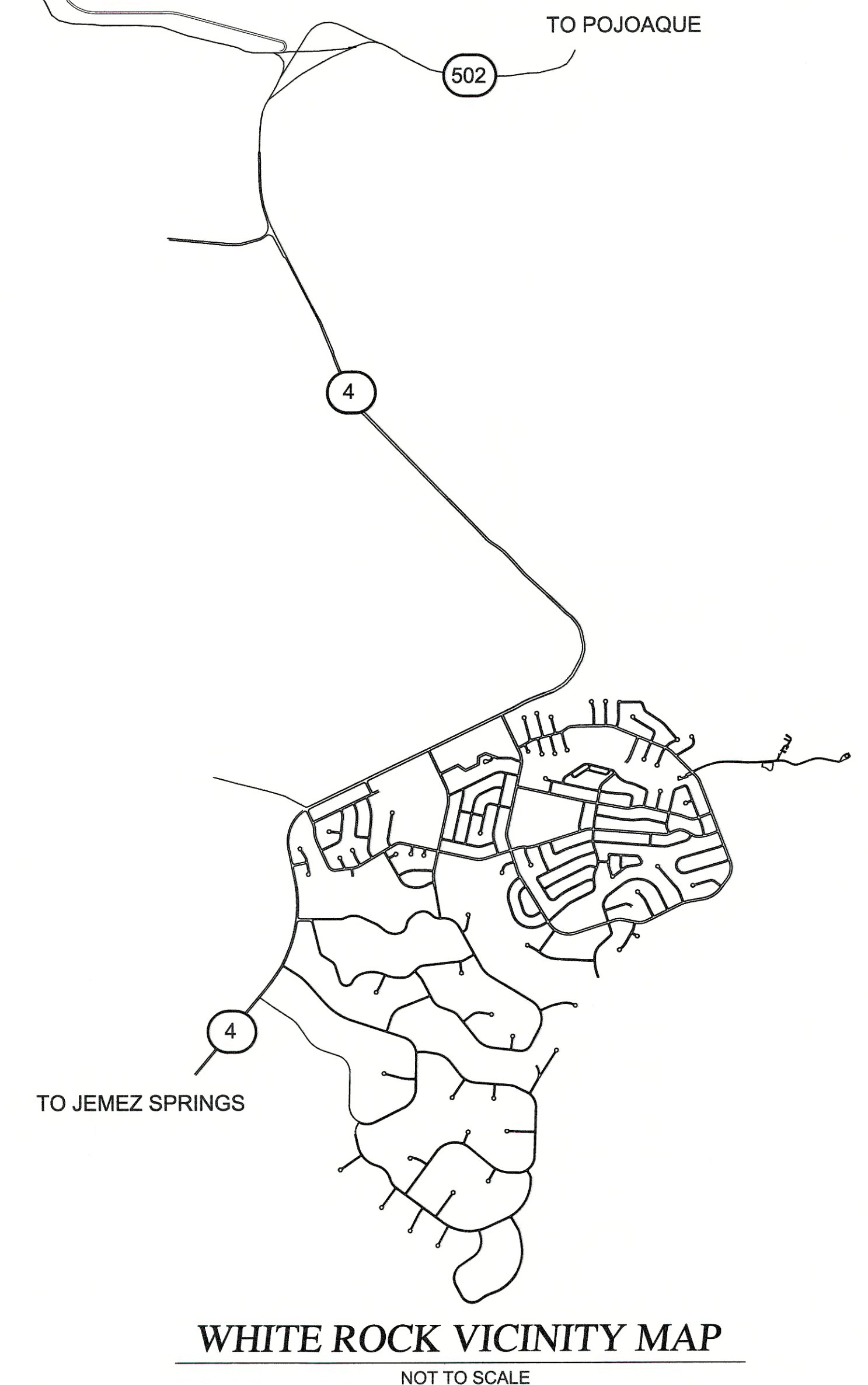


LOS ALAMOS

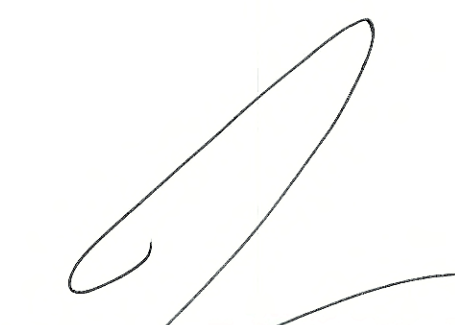


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APPROVED BY:

  
DEPARTMENT OF PUBLIC UTILITIES  
DEPUTY UTILITY MANAGER

DATE

10/20/21

  
DEPARTMENT OF PUBLIC UTILITIES  
PROJECT ENGINEER

DATE

17/10/21

DEPARTMENT OF PUBLIC UTILITIES CONSTRUCTION NOTES

PROJECT SEASONAL RESTRICTIONS

- 1. THE EXISTING BOOSTER STATION, TANK AND PIPING SHALL REMAIN IN SERVICE FROM APRIL 1 TO NOVEMBER 1. CONTRACTOR SHALL PLAN AND SCHEDULE WORK TO AVOID DISRUPTION TO THE EXISTING FACILITIES.
2. WORK ON THE EXISTING TANK, DEMOLITION OF EXISTING FACILITIES AS SHOWN ON PLANS, CONNECTIONS TO EXISTING PIPELINES AND RETROFITTING THE METER VAULT CANNOT TAKE PLACE WHILE THE BOOSTER STATION IS IN SERVICE DURING THE PERIOD STATED IN 1. ABOVE.
3. CONTRACTOR SHALL COORDINATE ALL WORK WITH LAC OPERATIONS STAFF TO AVOID ANY CONFLICTS, INACCESSIBILITY OR RESTRICTIONS TO THE BOOSTER STATION, TANK AND PIPELINES OPERATION.

PROJECT BENCHMARK

- 1. THE PROJECT BENCHMARK IS THE EASTERN-MOST PROPERTY CORNER IDENTIFIED ON SHEET 2 OF THE PLAN SET, TOPOGRAPHIC SURVEY PERFORMED BY SOUTHWEST MOUNTAIN SURVEYS DATED MARCH 8, 2021, ELEVATION 6506.13 FEET.

PROJECT LOCATION

- 1. THE PROJECT IS LOCATED WITHIN SANTA FE COUNTY, NEW MEXICO. NEW MEXICO GROSS RECEIPTS TAX SHALL BE AT THE APPROPRIATE SANTA FE COUNTY RATE.

GENERAL

- 1. ALL NON-POTABLE WATER AND ELECTRIC UTILITY INSTALLATIONS, RE-CONSTRUCTION OR REPAIR SHALL COMPLY WITH LOS ALAMOS COUNTY DEPARTMENT OF PUBLIC UTILITIES (DPU) CONSTRUCTION STANDARDS AND THE RELEVANT STANDARD DRAWINGS. THE CONSTRUCTION STANDARDS CAN BE FOUND AT:

ftp://files.losalamosnm.us/utl/LAC%20DPU%20Construction%20Standards%202018/

- 2. SUBMITTALS SHALL BE SUBMITTED TO THE DPU PROJECT MANAGER FOR REVIEW AND APPROVAL PER THE DPU STANDARD SPECIFICATIONS. SUBMITTALS SHALL INCLUDE THE COVER SHEET IN THE DPU CONSTRUCTION STANDARDS.
3. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A NEW MEXICO LICENSED PROFESSIONAL SURVEYOR (NMPS), FOR CONSTRUCTION STAKING, AS WELL AS VERIFICATION OF ALL CRITICAL HORIZONTAL AND VERTICAL CONTROL DATA SHOWN ON THESE CONTRACT DRAWINGS. CONTRACTOR SHALL PROVIDE COORDINATE INFORMATION FOR THE NEW WATER VALVES, ALL BASED ON STATE PLANE COORDINATES.
4. FOR ANY WORK INVOLVING NEW WATER, GAS OR SEWER PIPELINE CONNECTING TO AN EXISTING PIPELINE, CONTRACTOR SHALL OBTAIN A PENETRATION PERMIT FROM THE COUNTY, AT LEAST 48 HOURS IN ADVANCE OF ANY SUCH WORK. THE PERMIT APPLICATION FORM FOR THIS PERMIT CAN BE FOUND AT:

https://www.losalamosnm.us/government/departments/utilities/new\_services\_new\_construction/

- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING, TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES, PRIOR TO PERFORMING ANY EXCAVATION WORK.
6. PRIOR TO CONNECTING NEW NON-POTABLE WATER LINES INTO THE EXISTING SYSTEM, THE LOCATE WIRE SHALL BE TESTED AS FOLLOWS. CONTRACTOR WILL ENSURE THAT ALL LOCATE WIRE HAS BEEN INSTALLED AND MADE ACCESSIBLE IN ALL REQUIRED LOCATIONS. CONTRACTOR WILL VERIFY CONTINUITY IN THE LOCATE WIRE WITH THEIR OWN LOCATE EQUIPMENT. THE LOCATED LOCATION WILL BE PAINTED WITH WHITE PAINT AND DPU STAFF WILL THEN VERIFY THE LOCATION AND CONTINUITY OF THE LOCATE WIRE WITH THEIR OWN EQUIPMENT. ANY AREAS WHERE CONTINUITY IS LOST MUST BE REPAIRED AND RE-VERIFIED BY DPU STAFF TO BE LOCATEABLE. CONTRACTOR SHALL COORDINATE THE LOCATE WIRE VERIFICATION WITH DPU PROJECT MANAGER.
7. INFORMATION SPECIFICALLY STATED IN THE CONTRACT DRAWINGS, OR WHEN THE DPU PROJECT MANAGER SPECIFICALLY IDENTIFIES IN THE FIELD, CRITICAL DATA (X, Y, AND Z) RELATED TO WATER VALVES OF ALL KINDS, FIRE HYDRANTS, CULVERT INLET OR OUTLET INVERTS, SHALL BE COLLECTED BY THE CONTRACTOR'S SURVEYOR FOR THE RECORD DRAWINGS TO BE COMPLETE.
8. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF SURVEY MONUMENTS OR MARKS. IF CONTRACTOR'S ACTIVITIES CAUSED DAMAGE TO ANY OF THESE MARKS, CONTRACTOR SHALL RETAIN, AT THEIR OWN EXPENSE, THE SERVICES OF A NMLPS, TO RE-ESTABLISH THE MARKS IN COMPLIANCE WITH STANDARDS AND PROCEDURES SET FORTH BY THE "GEODETIC MARK PRESERVATION GUIDEBOOK".
9. CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE CLEAN WATER ACT, RELATED TO STORM WATERS. CONTRACTOR SHALL PREPARE, EXECUTE AND MAINTAIN A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), IF THE AREA DISTURBED BY THE CONSTRUCTION OPERATIONS IS ONE ACRE OR MORE IN SIZE. COSTS ASSOCIATED WITH CLEAN WATER ACT COMPLIANCE, INCLUDING BMP'S, SHALL BE INCIDENTAL TO THE PROJECT'S COST.
10. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE COSTS OF REPAIRING ANY DAMAGE OR ALTERATIONS CAUSED DURING

- EXECUTION OF THIS PROJECT, TO THE ORIGINAL CONDITION OF THIRD PARTY'S PROPERTY (E.G. STRUCTURES, EXISTING UTILITIES OR UTILITY EASEMENTS) LOCATED WITHIN OR OUT OF THE PROJECT BOUNDARIES.
11. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF ALL PROJECT-RELATED MATERIALS OR EQUIPMENT, BEFORE INSTALLATION, UNTIL FINAL WRITTEN ACCEPTANCE APPROVAL OF THE PROJECT BY THE DPU PROJECT MANAGER AND THE COUNTY.
12. ALL MATERIAL QUALITY TESTS SHALL BE PERFORMED BY A RECOGNIZED LABORATORY. SUCH A LABORATORY SHALL BE OPERATED UNDER THE AUSPICES/DIRECTION OF AN NMPE. NAME AND CONTACT OF THE LABORATORY SHALL BE SUBMITTED BY THE CONTACTOR TO THE DPU PROJECT MANAGER AS SOON AS PRACTICAL AFTER THE CONTRACTOR'S RECEIPT OF THE NOTICE TO PROCEED.
13. ALL AREAS DISTURBED BY THE CONSTRUCTION ACTIVITIES OF THIS PROJECT, INCLUDING PRIVATE LANDSCAPING, SHALL BE RESTORED.

NON-POTABLE WATER PIPELINES

- 1. NON-POTABLE WATERLINES SHALL BE CONSTRUCTED PER STANDARD SPECIFICATION 601 WATER SYSTEMS. NOTE THAT LOCATE WIRE, WARNING TAPE AND FIRE HYDRANT COLORS SHALL BE PURPLE.
2. CONTRACTOR SHALL INSTALL PIPELINE SO THAT HIGH POINTS ARE NOT CREATED, UNLESS SPECIFICALLY SHOWN ON APPROVED CONSTRUCTION DRAWINGS.
3. MINIMUM BURY SHALL BE 48 INCHES FOR MAINS AND 36 INCHES FOR SERVICE LINES, AT ALL POINTS ALONG THE ALIGNMENT.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH A MINIMUM 4-FOOT HORIZONTAL CLEARANCE ALL AROUND THEM.
5. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE HYDROSTATIC (PRESSURE) TESTING OF ALL WATER PIPES INSTALLED. PRESSURE TEST SHALL BE DOCUMENTED ON FORM INCLUDED IN STANDARD SPECIFICATION. DPU PROJECT MANAGER SHALL WITNESS ALL SUCH TESTING.

ASPHALT MILLINGS

- 1. THE ASPHALT MILLINGS TO BE USED TO PAVE THE SITE ARE AVAILABLE AT NO CHARGE TO THE CONTRACTOR ON DP ROAD IN LOS ALAMOS, APPROXIMATELY 7 MILES FROM THE PROJECT SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOADING AND HAULING THE MILLINGS FROM DP ROAD TO THE PROJECT SITE.

GEOTECHNICAL REPORT AND EARTHWORK

- 1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE SPECIFIED MATERIAL TESTING AND MEET 95% DENSITY COMPACTION. TESTING SHALL BE PERFORMED BY QUALIFIED FIRM UNDER THE DIRECTION OF A LICENSED GEOTECHNICAL ENGINEER.



DESIGNED BY: JM
DRAWN BY: JM
APPROVED BY: JA
DATE: 5/13/21
SCALE:

GENERAL NOTES
BAYO BOOSTER NP WATER STORAGE TANK
CONSTRUCTION PROJECT



INCORPORATED COUNTY OF LOS ALAMOS
DEPARTMENT OF PUBLIC UTILITIES
1000 CENTRAL AVE., SUITE 130
LOS ALAMOS, NEW MEXICO 87544
(505) 662-8333 FAX: (505) 662-8005

SHEET
1

Drawing File: L:\PROJECTS\IFB 2022-02 BAYO BOOSTER NON-POTABLE WATER STORAGE TANK CONSTRUCTION PROJECT\02\_CAD\_DESIGN\WORK\CAD FILE DONE\CAD 95%PHASE 1\PDFS\COVER & TITLE SHEET JM 9-9-21.DWG

# TOPOGRAPHIC SURVEY OF A PORTION OF BAYO CANYON TRACT FOR THE LOS ALAMOS COUNTY COMPOST FACILITY

LYING AND BEING SITUATED WITHIN SECTION 18, T.19 N., R.7 E., N.M.P.M.,  
COUNTY OF SANTA FE, NEW MEXICO

## BAYO CANYON TRACT

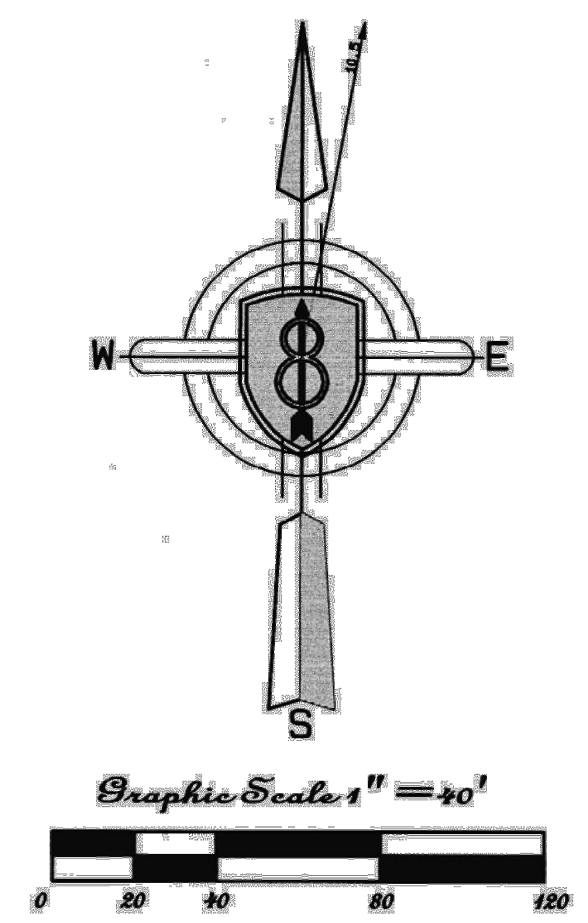
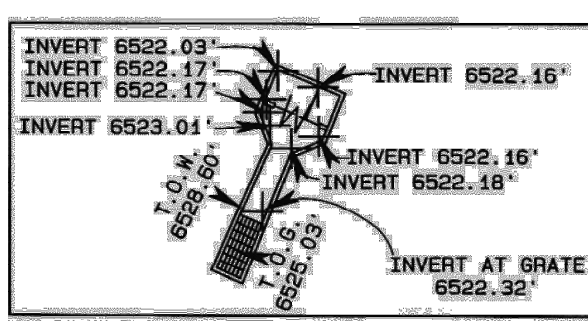
78.298 AC.±

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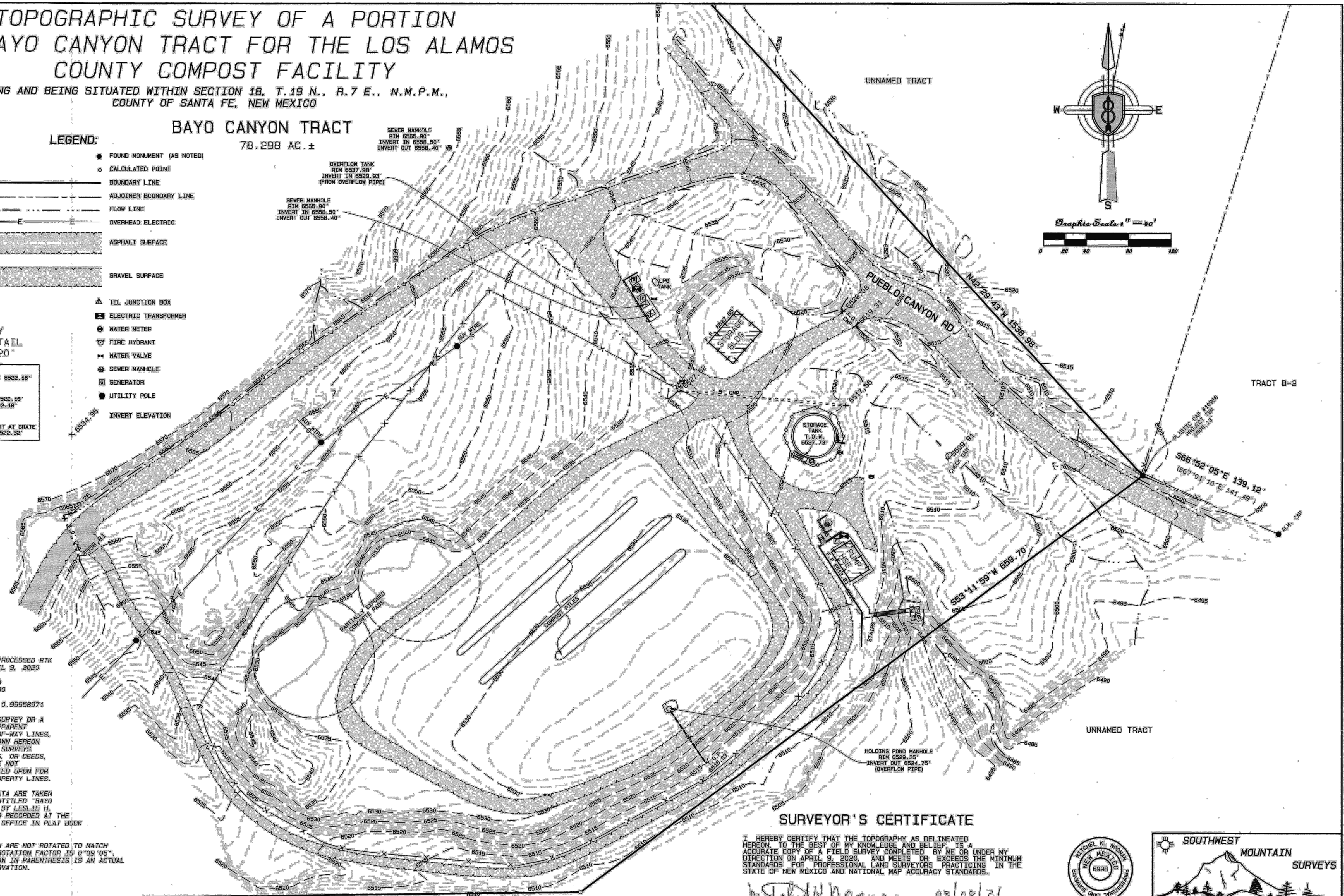
- FOUND MONUMENT (AS NOTED)
- CALCULATED POINT
- BOUNDARY LINE
- - - ADJOINER BOUNDARY LINE
- - - FLOW LINE
- - - OVERHEAD ELECTRIC
- ▨ ASPHALT SURFACE
- ▩ GRAVEL SURFACE

- △ TEL JUNCTION BOX
- ⊞ ELECTRIC TRANSFORMER
- ⊙ WATER METER
- ⊕ FIRE HYDRANT
- ⊖ WATER VALVE
- ⊙ SEWER MANHOLE
- ⊙ GENERATOR
- ⊙ UTILITY POLE

### MAIN FACILITY SPLITTER BOX DETAIL SCALE: 1 IN. = 20'



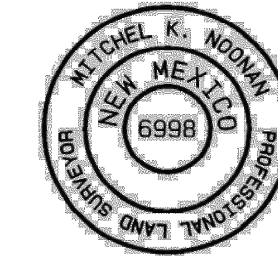
- ### SURVEYOR'S NOTES:
1. BASIS OF BEARING: POST PROCESSED RTK GNSS OBSERVATION ON APRIL 9, 2020  
ZONE: NW CENTRAL  
HORIZONTAL DATUM: NAD83  
VERTICAL DATUM: GRS 1980  
ELEVATION: 6550.56'  
GROUND TO GRID FACTOR: 0.99958871
  2. THIS IS NOT A BOUNDARY SURVEY OR A RIGHT-OF-WAY SURVEY. APPARENT PROPERTY CORNERS RIGHT-OF-WAY LINES, OR PROPERTY LINES AS SHOWN HEREON ARE DERIVED FROM RECORD SURVEYS, PLATS, RIGHT-OF-WAY MAPS, OR DEEDS, REFERENCE HEREON AND ARE NOT GUARANTEED OR TO BE RELIED UPON FOR THE ESTABLISHMENT OF PROPERTY LINES.
  3. BEARINGS AND EASEMENT DATA ARE TAKEN FROM A PLAT OF SURVEY ENTITLED "BAYO CANYON TRACT", PREPARED BY LESLIE H. BEATY, NMPLS # 1089, AND RECORDED AT THE SANTA FE COUNTY CLERK'S OFFICE IN PLAT BOOK 15, PAGE 34.
  4. RECORD BEARINGS AS SHOWN ARE NOT ROTATED TO MATCH GPS BASIS OF BEARINGS. ROTATION FACTOR IS 0.00905'. BEARING AND DISTANCE SHOWN IN PARENTHESIS IS AN ACTUAL POINT TO POINT GPS OBSERVATION.



### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE TOPOGRAPHY AS DELINEATED HEREON TO THE BEST OF MY KNOWLEDGE AND BELIEF IS AN ACCURATE COPY OF A FIELD SURVEY COMPLETED BY ME OR UNDER MY DIRECTION ON APRIL 9, 2020, AND MEETS OR EXCEEDS THE MINIMUM STANDARDS FOR PROFESSIONAL LAND SURVEYORS PRACTICING IN THE STATE OF NEW MEXICO AND NATIONAL MAP ACCURACY STANDARDS.

*Mitchel K. Noonan* 03/08/21  
MITCHEL K. NOONAN, N.M.P.L.S. NO. 6998



**SOUTHWEST MOUNTAIN SURVEYS**

1114 HICKOX ST., SANTA FE, N.M. 87501  
(505) 982-9429 FAX (505) 986-3413  
DATE (S): 4/9/20 DRAWN BY: MEN PROJECT NO.: LA-3054

**LOS ALAMOS**

DESIGNED BY: JM  
DRAWN BY: JM  
APPROVED BY: JA  
DATE: 5/13/21  
SCALE:

**SITE TOPOGRAPHIC SURVEY MAP**

BAYO BOOSTER NP WATER STORAGE TANK  
CONSTRUCTION PROJECT



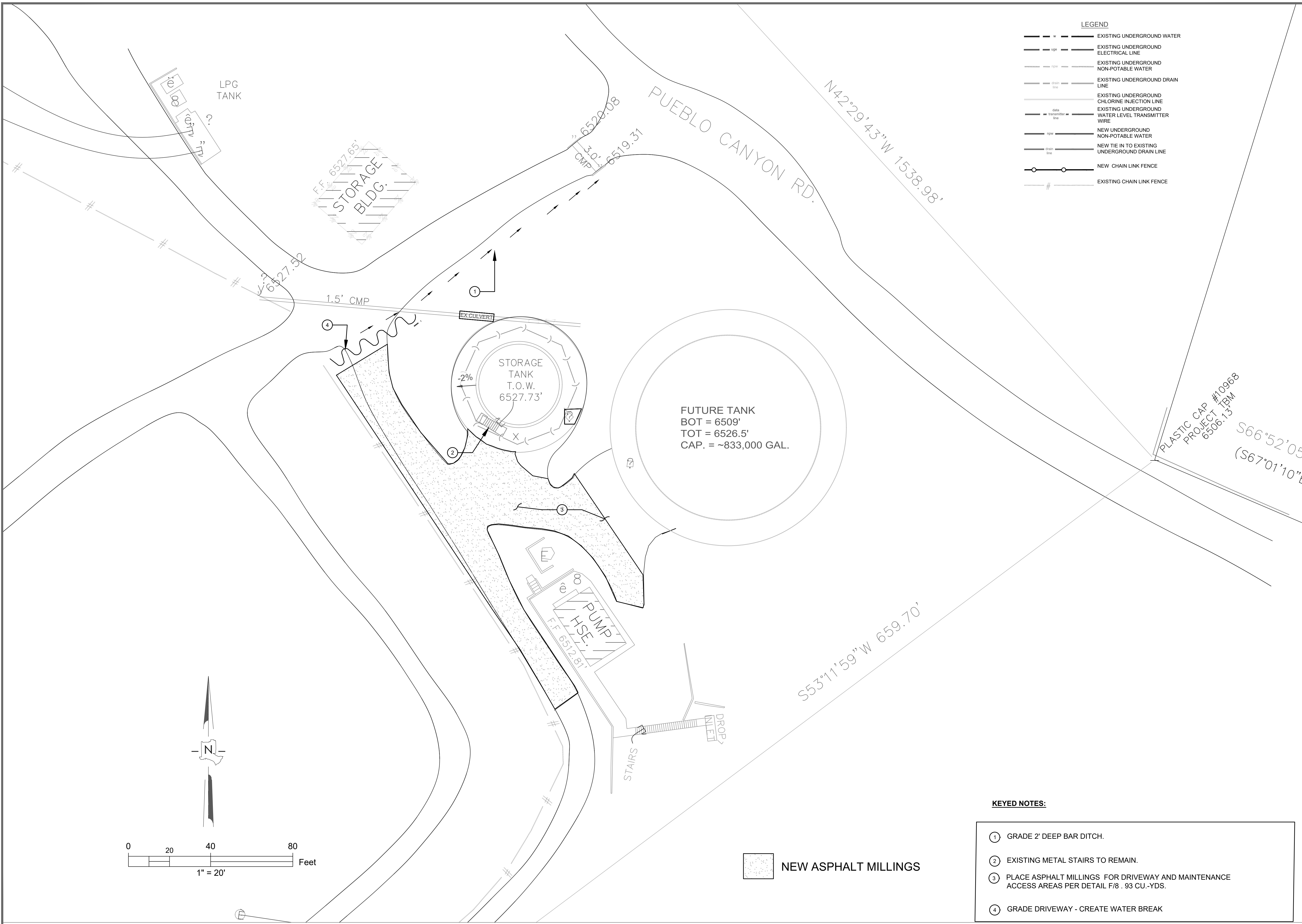
**INCORPORATED COUNTY OF LOS ALAMOS**

DEPARTMENT OF PUBLIC UTILITIES  
1000 CENTRAL AVE., SUITE 130  
LOS ALAMOS, NEW MEXICO 87544  
(505) 662-8333 FAX: (505) 662-8005

SHEET

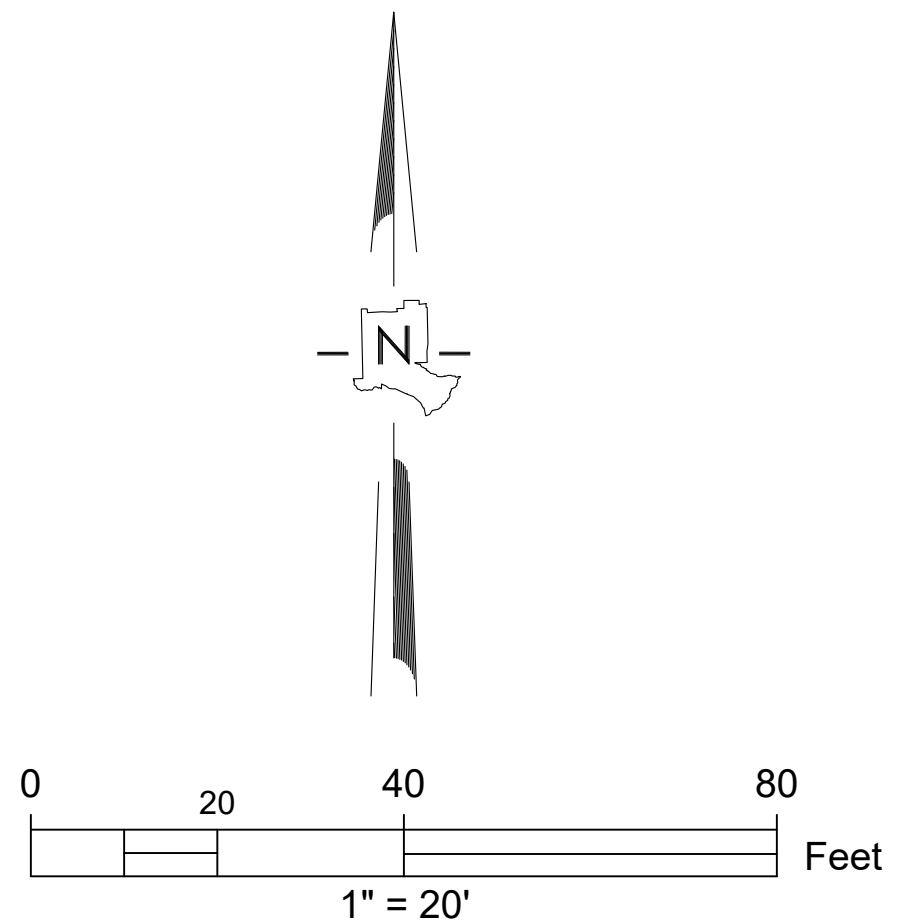
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Drawing File: L:\PROJECTS\IBF 2022-02 BAYO BOOSTER NON-POTABLE WATER STORAGE TANK CONSTRUCTION PROJECT\02\_CAD\_DESIGN\WORK\CAD FILE DONE\CAD 95\%SITE GRADING AND DRAINAGE TWO WALLS - JAM 5-14-21.DWG



**LEGEND**

	EXISTING UNDERGROUND WATER
	EXISTING UNDERGROUND ELECTRICAL LINE
	EXISTING UNDERGROUND NON-POTABLE WATER
	EXISTING UNDERGROUND DRAIN LINE
	EXISTING UNDERGROUND CHLORINE INJECTION LINE
	EXISTING UNDERGROUND WATER LEVEL TRANSMITTER WIRE
	NEW UNDERGROUND NON-POTABLE WATER
	NEW TIE IN TO EXISTING UNDERGROUND DRAIN LINE
	NEW CHAIN LINK FENCE
	EXISTING CHAIN LINK FENCE



NEW ASPHALT MILLINGS

- KEYED NOTES:**
- ① GRADE 2' DEEP BAR DITCH.
  - ② EXISTING METAL STAIRS TO REMAIN.
  - ③ PLACE ASPHALT MILLINGS FOR DRIVEWAY AND MAINTENANCE ACCESS AREAS PER DETAIL F/8 . 93 CU.-YDS.
  - ④ GRADE DRIVEWAY - CREATE WATER BREAK



DESIGNED BY: JIM  
 DRAWN BY: JIM  
 APPROVED BY: JA  
 DATE: 5/13/21  
 SCALE: 1" = 20'

**SITE PLAN**

BAYO BOOSTER NP WATER STORAGE TANK  
 CONSTRUCTION PROJECT



INCORPORATED COUNTY  
 OF LOS ALAMOS  
 DEPARTMENT OF PUBLIC UTILITIES  
 1000 CENTRAL AVE., SUITE 130  
 LOS ALAMOS, NEW MEXICO 87544  
 (505) 662-8333 FAX: (505) 662-8005

SHEET  
**3**

Drawing File: L:\PROJECTS\FB 2022-02 BAYO BOOSTER NP WATER STORAGE TANK CONSTRUCTION PROJECT\02\_CAD\_DESIGN\WORK\CAD FILE DONE\CAD 95\PHASE 1 EXISTING PIPING - JAM 8-23-21.DWG

**GENERAL NOTES:**

1. CONTRACTOR SHALL POTHOLE EXISTING 24" DIP FILL LINE AT POINT OF CONNECTION TO VERIFY DEPTH.
2. CONTRACTOR SHALL POTHOLE EXISTING 12" DRAIN LINE TO VERIFY DEPTH.
3. NEW PIPE ELEVATIONS WILL BE ESTABLISHED BASED ON EXISTING PIPE DEPTHS.
4. ALL NEW NON-POT WATER LINES SHALL MEET OR EXCEED THE LOS ALAMOS COUNTY MINIMUM TRENCH DEPTH REQUIREMENTS AS PER DETAIL C/11.



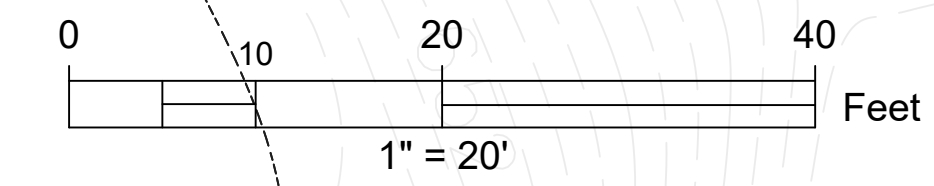
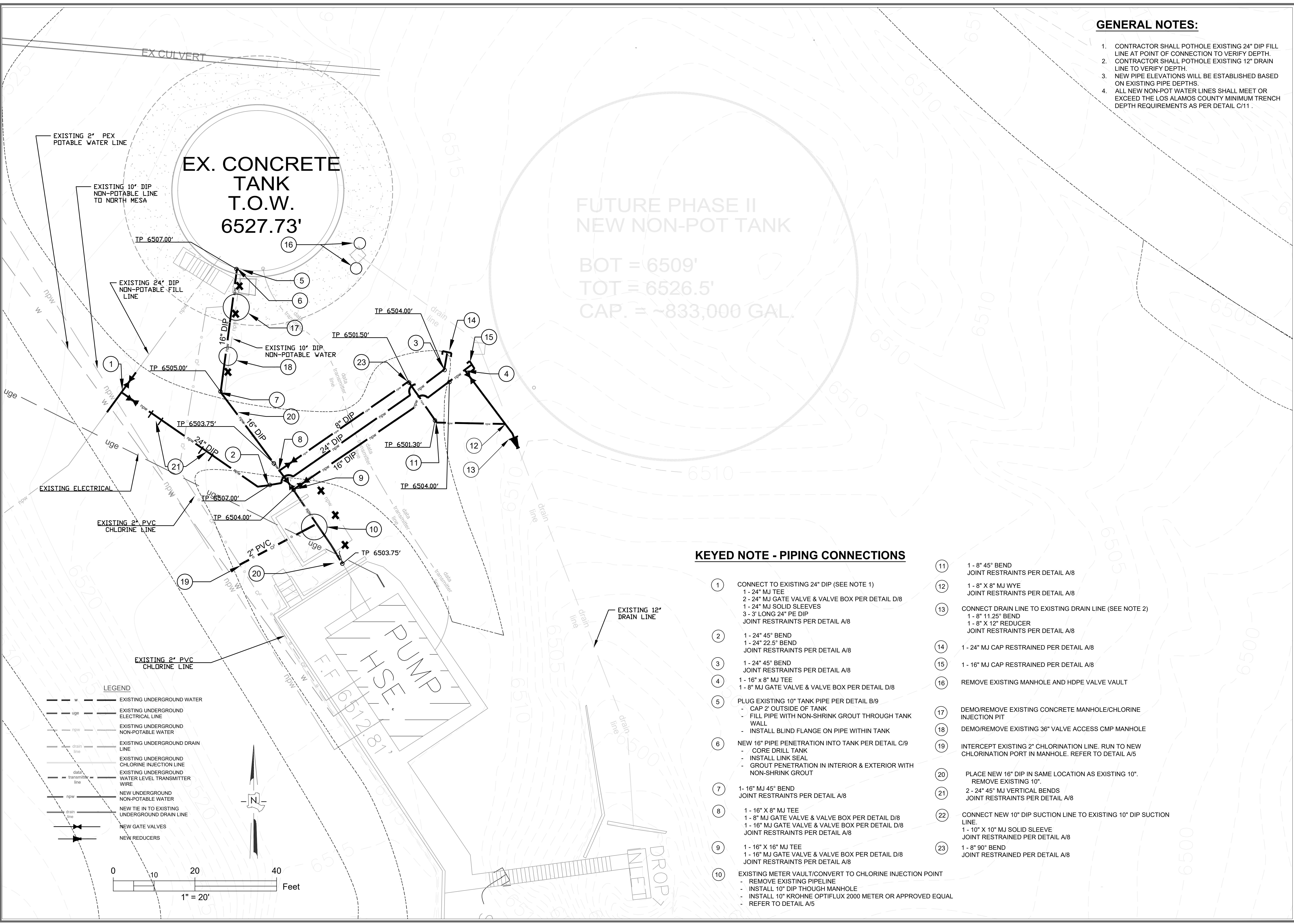
DESIGNED BY: JM  
 DRAWN BY: JM  
 APPROVED BY: JA  
 DATE: 5/13/21  
 SCALE: 1" = 20'

**EXISTING UTILITIES & PIPING LAYOUT**  
 BAYO BOOSTER NP WATER STORAGE TANK  
 CONSTRUCTION PROJECT



INCORPORATED COUNTY  
 OF LOS ALAMOS  
 DEPARTMENT OF PUBLIC UTILITIES  
 1000 CENTRAL AVE., SUITE 130  
 LOS ALAMOS, NEW MEXICO 87544  
 (505) 862-6833 FAX: (505) 662-6005

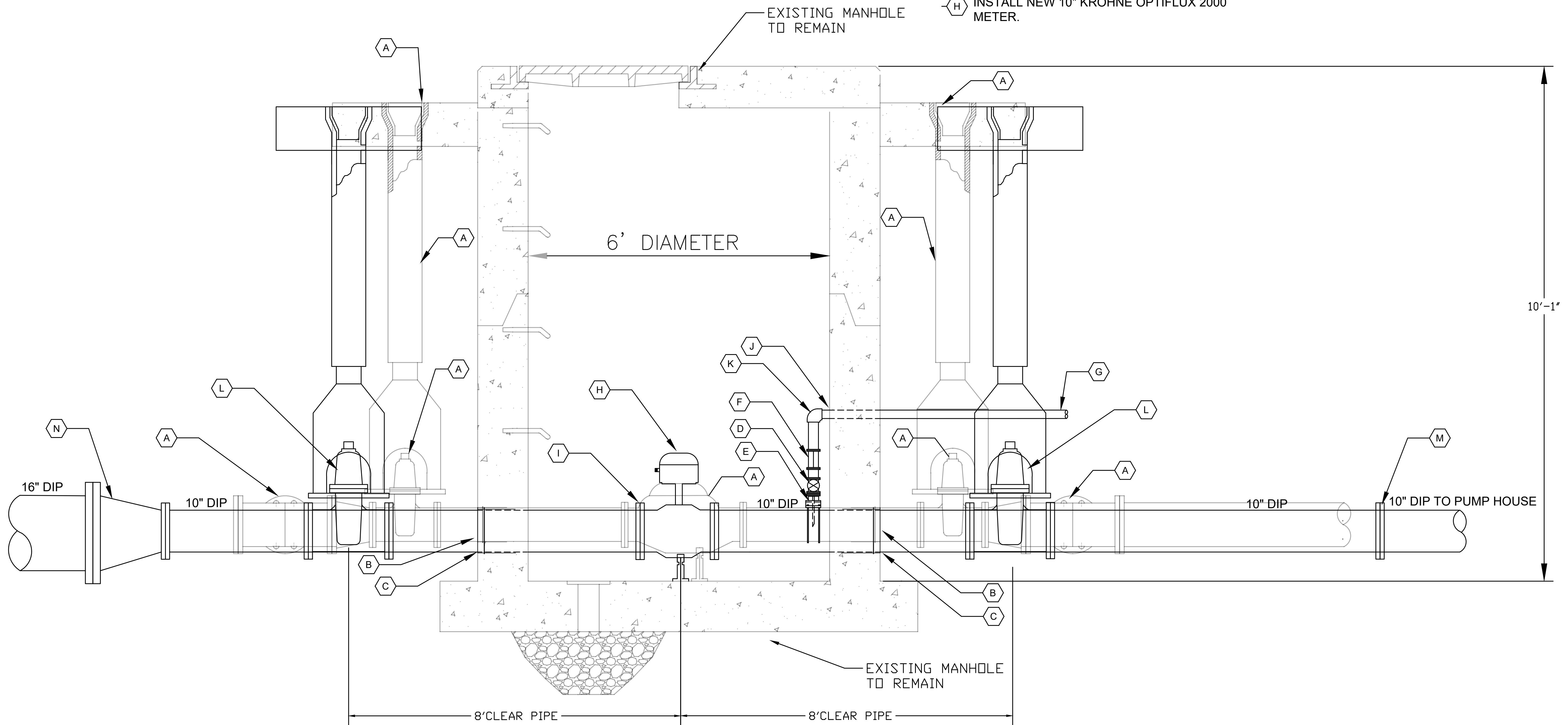
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**KEYED NOTES - MANHOLE CONVERSION NOTES**

- (A) REMOVE EXISTING METER/PIPING/VALVES AND BY-PASS PIPING FROM VAULT
- (B) INSTALL NEW 10" DIP THROUGH VAULT
- (C) NEATLY EXPAND MANHOLE PENETRATIONS FOR 10" DIP. USE NON-SHRINK GROUT TO SEAL 10" DIP IN PLACE.
- (D) CHLORINE DIFFUSER/INJECTION QUILL W/ CORP. STOP TAPPED INTO 16" DIP LINE
- (E) INSTALL 12" X 2" TAPPING SADDLE
- (F) NEW 2" SCH 80 PVC UNION
- (G) NEW 2" SCH. 80 PVC CHLORINE INJECTION LINE.
- (H) INSTALL NEW 10" KROHNE OPTIFLUX 2000 METER.
- (I) 10" MJ MEGA FLANGE
- (J) CORE DRILL MANHOLE FOR 2" PVC. USE NON-SHRINK GROUT TO SEAL 2" PVC IN PLACE.
- (K) NEW 2" SCH. 80 PVC 90° ELBOW
- (L) 2 - 10" MJ GATE VALVE & VALVE BOX PER DETAIL D/8
- (M) TIE NEW 10" TO EXISTING 10" DIP  
1 - 10" MJ SOLID SLEEVE  
JOINT RESTRAINT PER DETAIL A/8
- (N) TIE 16" DIP TO NEW 10" DIP  
1 - 16" X 10" MJ REDUCER  
JOINT RESTRAINT PER DETAIL A/8



A  
5

**6 FT. DIA. EXISTING METER VAULT/ CONVERT TO NEW CHLORINE INJECTION MANHOLE DETAIL**



LOS ALAMOS

DESIGNED BY: JM  
 DRAWN BY: JM  
 APPROVED BY: JA  
 DATE: 5/13/21  
 SCALE: NTS

**EXISTING MANHOLE/CONVERT TO CL<sup>2</sup> INJECTION PORT**

BAYO BOOSTER NP WATER STORAGE TANK  
 CONSTRUCTION PROJECT



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 DEPARTMENT OF PUBLIC UTILITIES  
 1000 CENTRAL AVE., SUITE 130  
 LOS ALAMOS, NEW MEXICO 87544  
 (505) 662-8333 FAX: (505) 662-8005

SHEET  
 5

Drawing File: L:\PROJECTS\IIFB 2022-02\_BAYO BOOSTER NON-POTABLE WATER STORAGE TANK CONSTRUCTION PROJECT\02\_CAD\_DESIGN\WORK\CAD FILE DONE\CAD 95%\PHASE 1 - BAYO BOOSTER NEW TANK-1\_JM.9.9.21.DWG



LOS ALAMOS

DESIGNED BY: JM  
 DRAWN BY: JM  
 APPROVED BY: JA  
 DATE: 5/13/21  
 SCALE: 1" = 20'

### TANK AND PIPING ELEVATION PROFILE

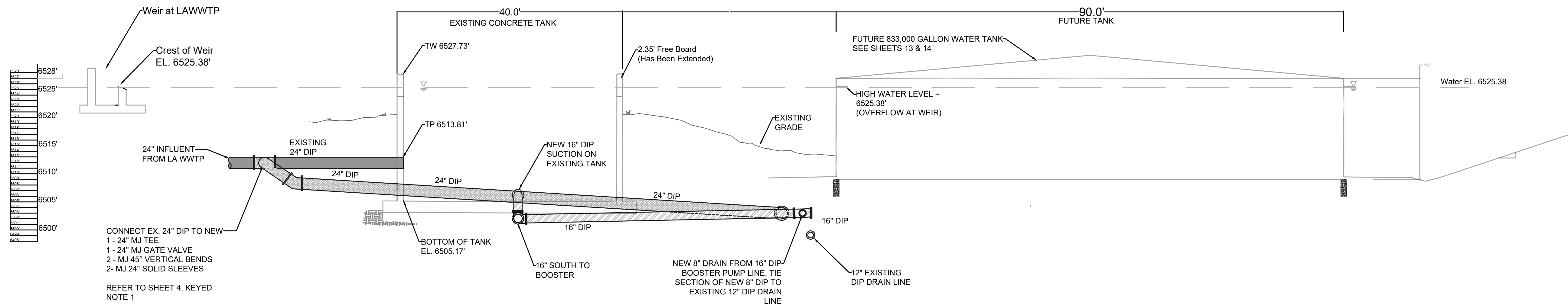
BAYO BOOSTER NP WATER STORAGE TANK  
 CONSTRUCTION PROJECT



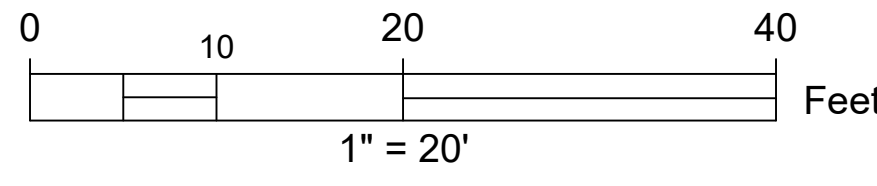
INCORPORATED COUNTY  
 OF LOS ALAMOS  
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 1000 CENTRAL AVE., SUITE 130  
 LOS ALAMOS, NEW MEXICO 87544  
 (505) 662-8333 FAX: (505) 662-8005

SHEET

6

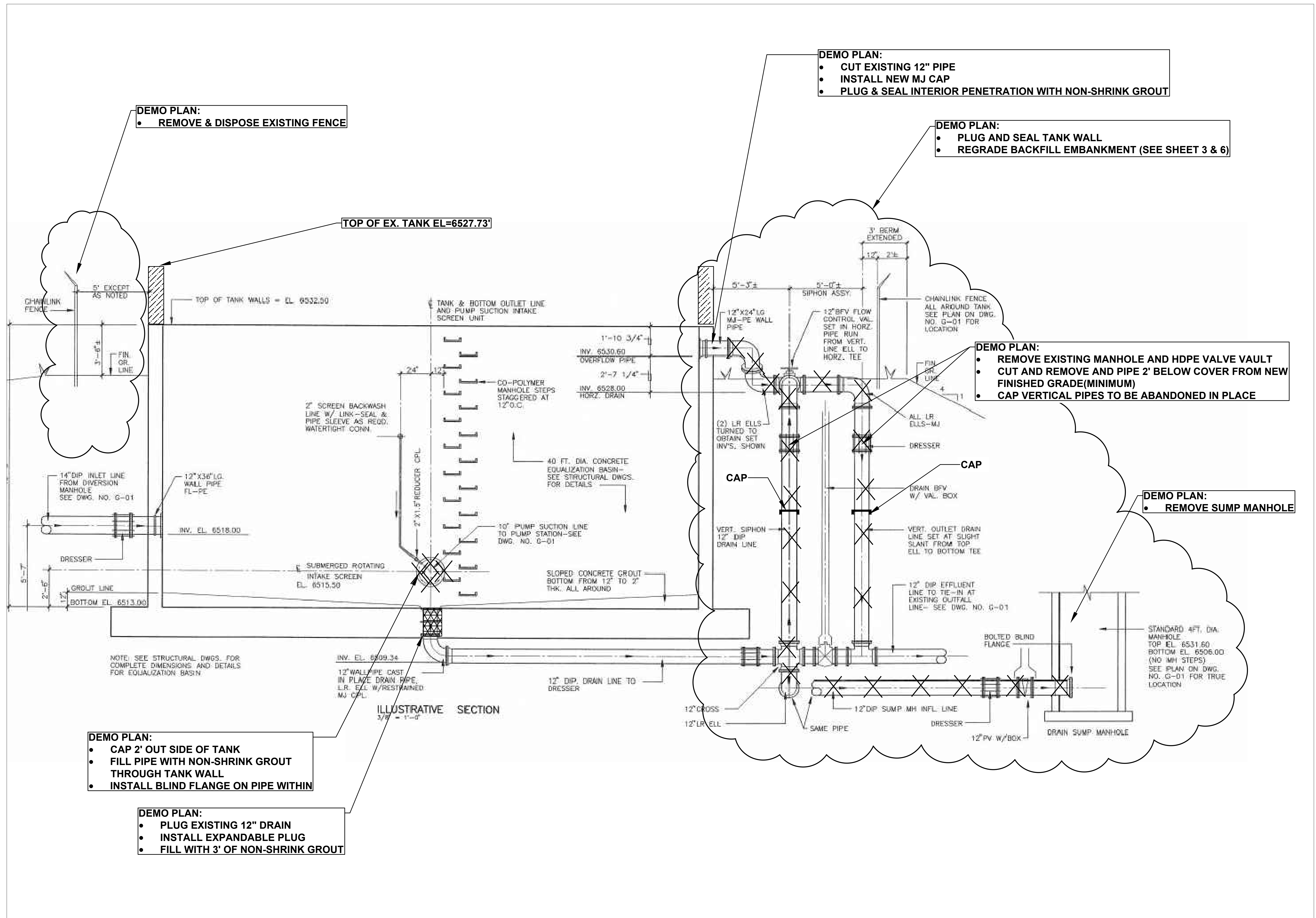


CONNECT EX. 24" DIP TO NEW  
 1- 24" MJ TEE  
 1- 24" MJ GATE VALVE  
 2- MJ 45° VERTICAL BENDS  
 2- MJ 24" SOLID SLEEVES  
 REFER TO SHEET 4, KEYED  
 NOTE 1



- NEW 24" DIP FILL LINE
- NEW 16" DIP PUMP/DRAIN LINE
- EXISTING 24" LINE FROM WWTP & LINE TO BOOSTER PUMP/ WELL CASING

Drawing File: L:\PROJECTS\IBF 2022-02 BAYO BOOSTER NON-POTABLE WATER STORAGE TANK CONSTRUCTION PROJECT\02\_CAD\_DESIGN\WORKCAD FILE DONE\CAD 95%\PHASE 1-1 BAYO BOOSTER NEW TANK-1 JM 9-9-21.DWG



**DEMO PLAN:**  
 • REMOVE & DISPOSE EXISTING FENCE

**DEMO PLAN:**  
 • CUT EXISTING 12" PIPE  
 • INSTALL NEW MJ CAP  
 • PLUG & SEAL INTERIOR PENETRATION WITH NON-SHRINK GROUT

**DEMO PLAN:**  
 • PLUG AND SEAL TANK WALL  
 • REGRADE BACKFILL EMBANKMENT (SEE SHEET 3 & 6)

**DEMO PLAN:**  
 • REMOVE EXISTING MANHOLE AND HDPE VALVE VAULT  
 • CUT AND REMOVE AND PIPE 2' BELOW COVER FROM NEW FINISHED GRADE(MINIMUM)  
 • CAP VERTICAL PIPES TO BE ABANDONED IN PLACE

**DEMO PLAN:**  
 • REMOVE SUMP MANHOLE

**DEMO PLAN:**  
 • CAP 2' OUT SIDE OF TANK  
 • FILL PIPE WITH NON-SHRINK GROUT THROUGH TANK WALL  
 • INSTALL BLIND FLANGE ON PIPE WITHIN

**DEMO PLAN:**  
 • PLUG EXISTING 12" DRAIN  
 • INSTALL EXPANDABLE PLUG  
 • FILL WITH 3' OF NON-SHRINK GROUT



DESIGNED BY: JM  
 DRAWN BY: JM  
 APPROVED BY: JA  
 DATE: 5/13/21  
 SCALE: NTS

**EXISTING PIPING DEMOLITION & TANK SEALING**  
 BAYO BOOSTER NP WATER STORAGE TANK  
 CONSTRUCTION PROJECT



INCORPORATED COUNTY OF LOS ALAMOS  
 DEPARTMENT OF PUBLIC UTILITIES  
 1000 CENTRAL AVE., SUITE 130  
 LOS ALAMOS, NEW MEXICO 87544  
 (505) 662-6333 FAX: (505) 662-8005



PVC Mechanical Joint Restraint Table

PIPE SIZE	BENDS				TEES				VERTICAL OFFSETS				DEAD ENDS & VALVES
	11 1/4	22 1/2	45	90	LRN=5	LRN=10	LRN=20	45	DOWN	UP	DOWN	UP	
4"	2	4	7	18	15	1	1	16	4	2	2	39	
6"	2	5	10	25	30	7	1	23	5	11	3	55	
8"	3	7	14	33	48	24	1	30	7	15	3	73	
10"	4	9	16	39	61	37	1	36	9	17	4	88	
12"	5	11	19	45	78	52	5	43	10	21	5	104	

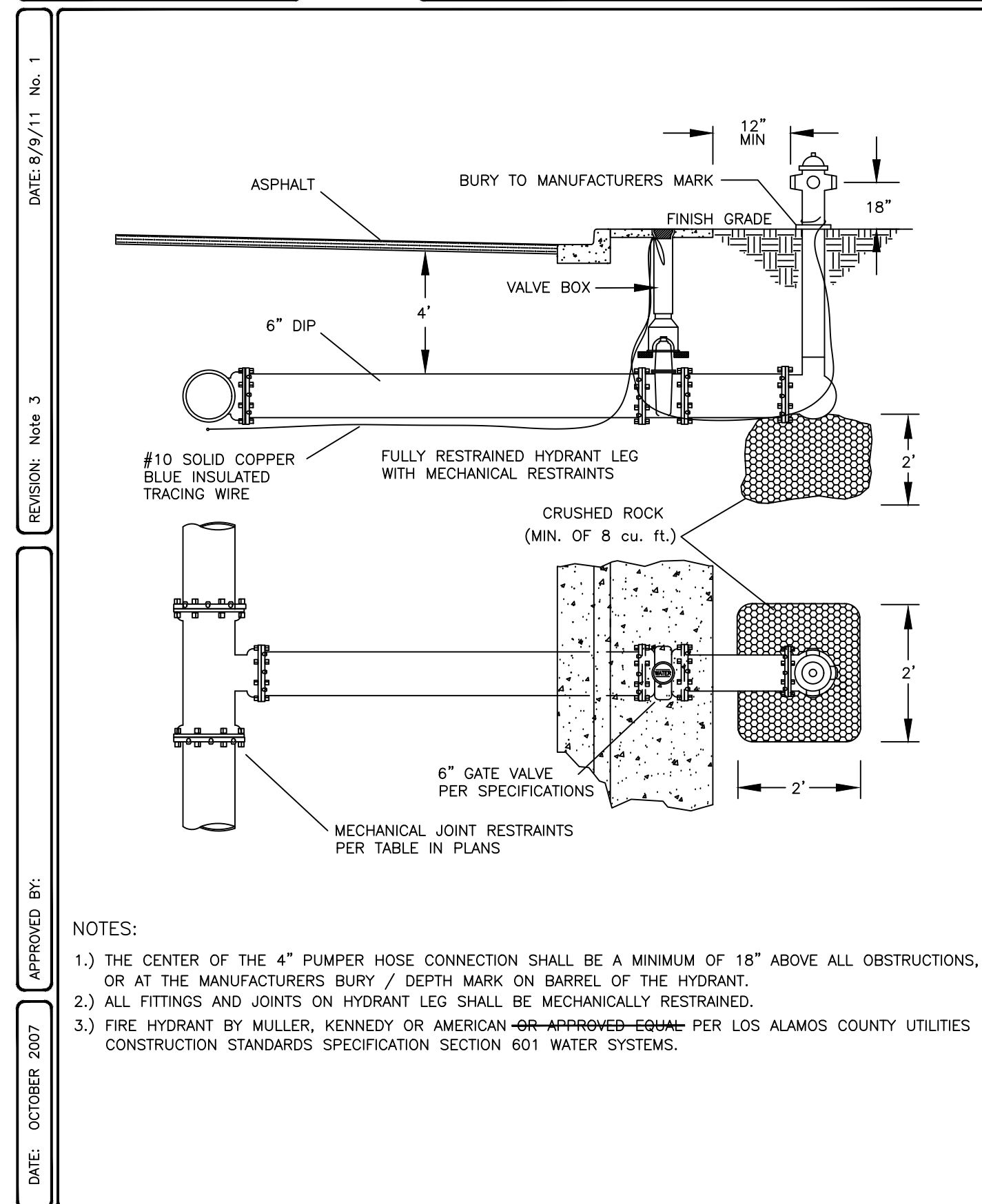
  

Ductile Iron/Poly Wrap Mechanical Joint Restraint Table

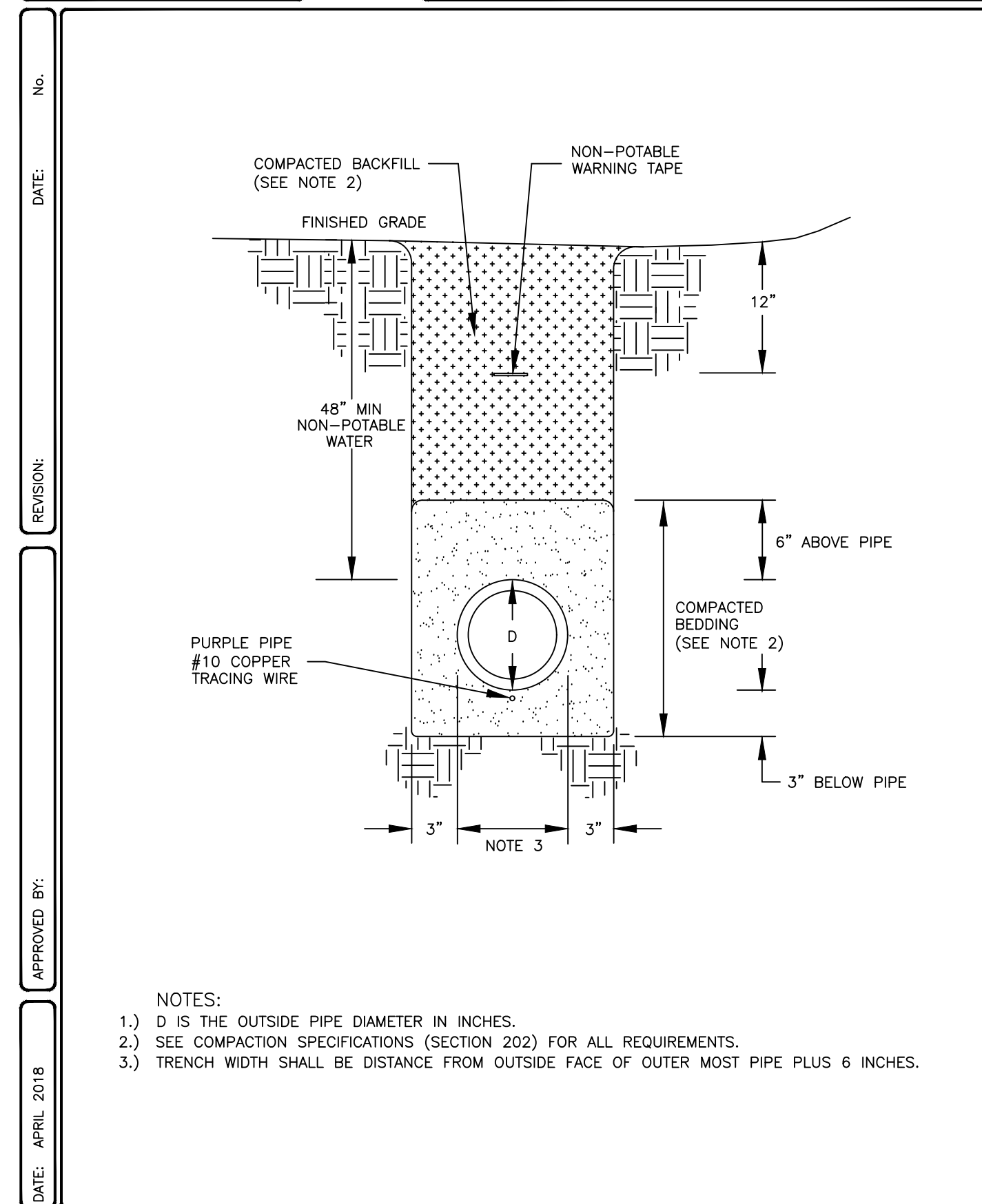
PIPE SIZE	BENDS				TEES				VERTICAL OFFSETS				DEAD ENDS & VALVES
	11 1/4	22 1/2	45	90	LRN=5	LRN=10	LRN=20	45	DOWN	UP	DOWN	UP	
4"	2	4	7	21	23	1	1	24	4	12	2	59	
6"	2	5	10	29	47	10	1	34	6	17	3	63	
8"	3	7	14	38	74	37	1	45	8	22	4	109	
10"	4	9	16	48	84	57	1	54	10	25	5	131	
12"	5	11	22	54	118	80	20	64	12	31	6	155	
14"	6	12	25	61	139	101	41	73	14	35	7	177	
16"	7	14	29	69	162	124	63	83	15	40	7	200	
18"	7	15	32	76	183	145	84	92	17	44	8	222	

1. Restraint lengths provided are in feet.  
2. Lr = the minimum attached length of solid pipe without joints, fittings, etc. to extend in each direction along the run of the tee.  
3. Restraint lengths computed for pipe with 6' of cover from top of pipe.  
4. Maximum test pressure of 150 psi.  
5. All pipe joints and fittings within the restraint length specified in the table shall be restrained.

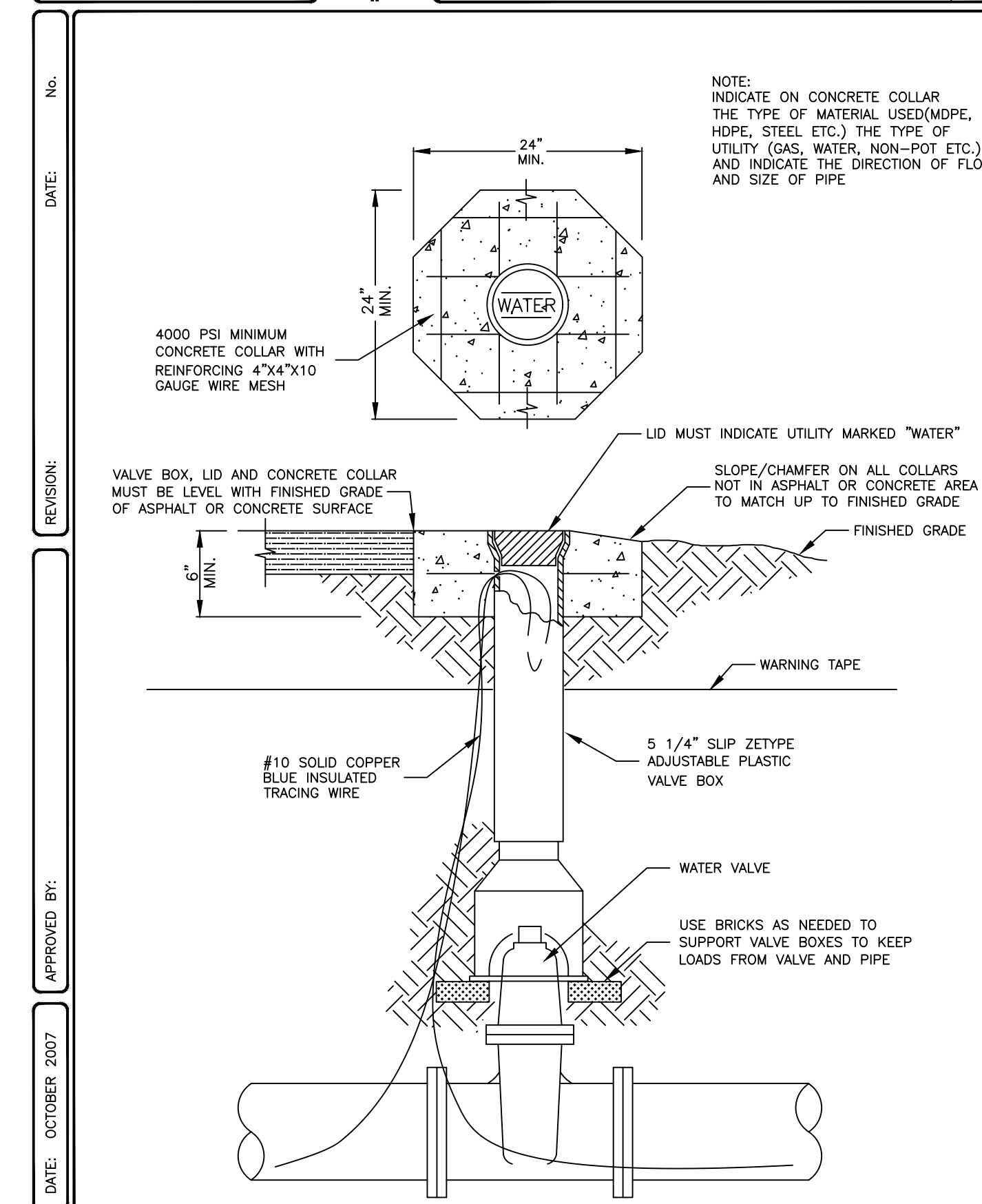
**A**  
8  
MECHANICAL JOINT RESTRAINT SCHEDULE



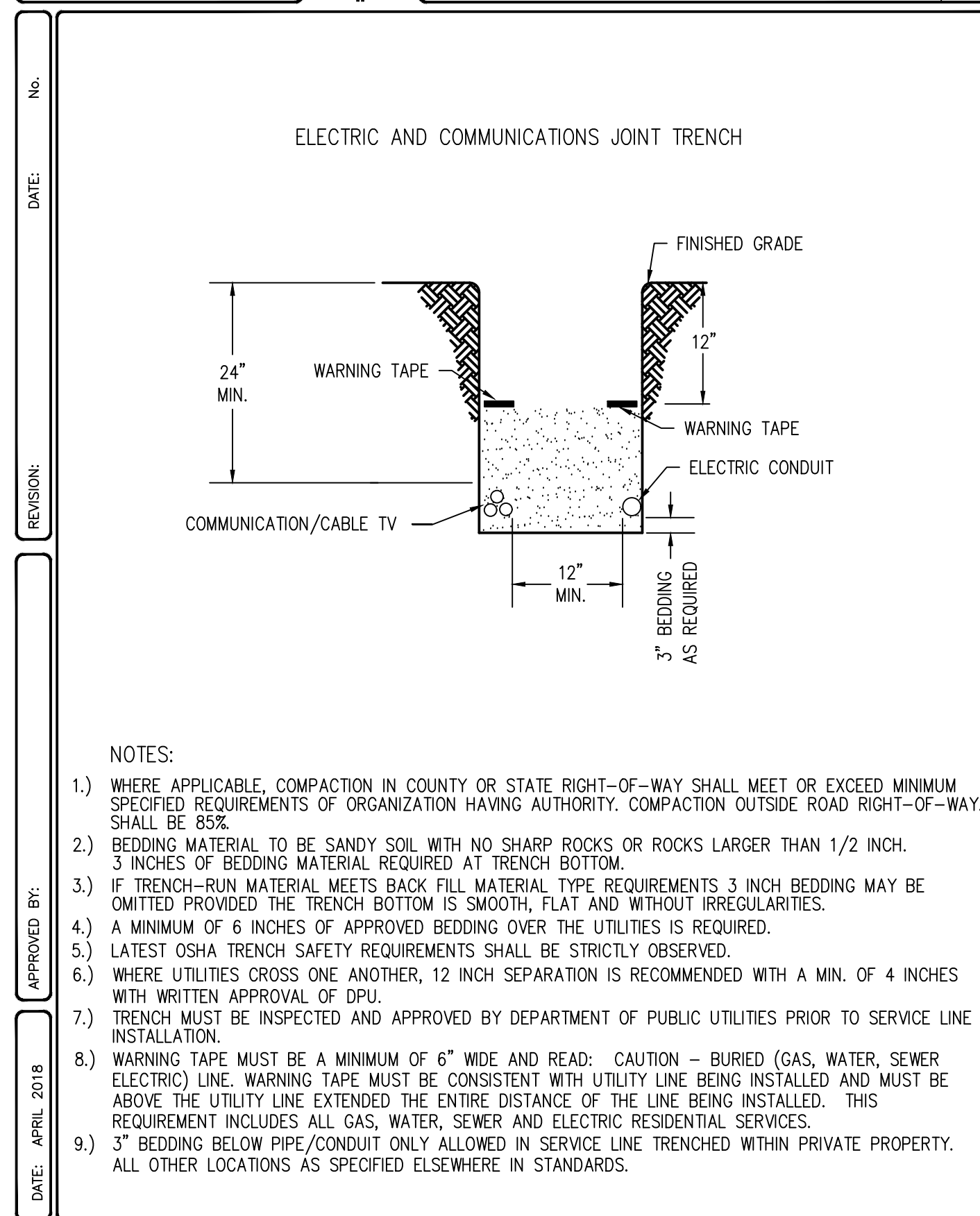
**B**  
8  
FIRE HYDRANT ASSEMBLY DETAIL



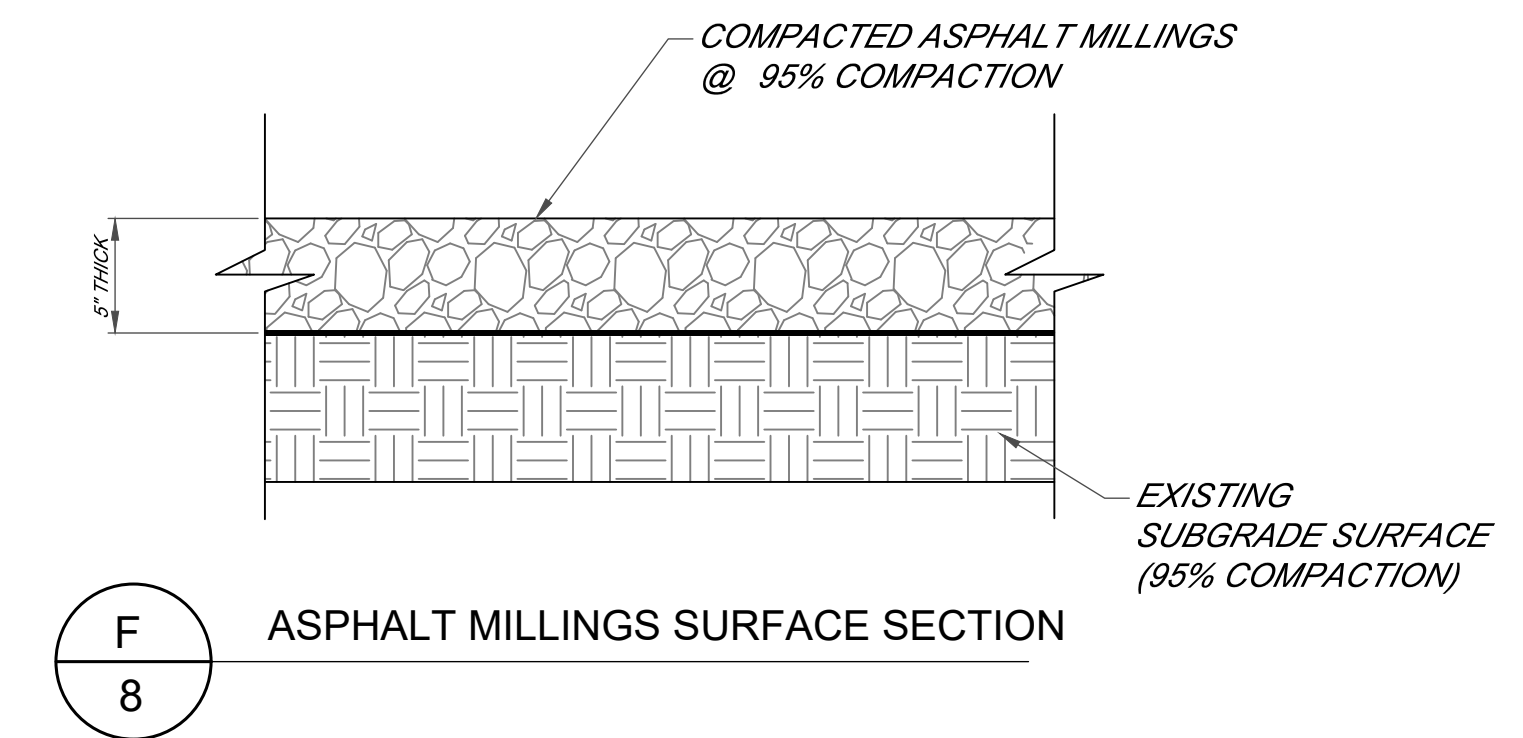
**C**  
8  
NON-POTABLE WATER UTILITY TRENCH DETAIL



**D**  
8  
VALVE BOX ASSEMBLY DETAIL



**E**  
8  
ELECTRIC AND COMMUNICATIONS COMMON TRENCH DETAIL



**F**  
8  
ASPHALT MILLINGS SURFACE SECTION



DESIGNED BY: JM  
DRAWN BY: JM  
APPROVED BY: JA  
DATE: 5/13/21  
SCALE: 1"=20'

**PIPE INSTALLATION AND SITE DETAILS**

BAYO BOOSTER NP WATER STORAGE TANK CONSTRUCTION PROJECT



INCORPORATED COUNTY OF LOS ALAMOS  
DEPARTMENT OF PUBLIC UTILITIES  
1000 CENTRAL AVE., SUITE 130  
LOS ALAMOS, NEW MEXICO 87544  
(505) 662-8333 FAX: (505) 662-8005

Drawing File: L:\PROJECTS\BFB 2022-02 BAYO BOOSTER NON-POTABLE WATER STORAGE TANK CONSTRUCTION PROJECT\02\_CAD\_DESIGN\WORK\CAD FILE DONE\CAD 95%\PHASE 1 - BAYO BOOSTER NEW TANK-1 JM 9-9-21.DWG



DESIGNED BY: JM  
DRAWN BY: JM  
APPROVED BY: JA  
DATE: 5/13/21  
SCALE: NTS

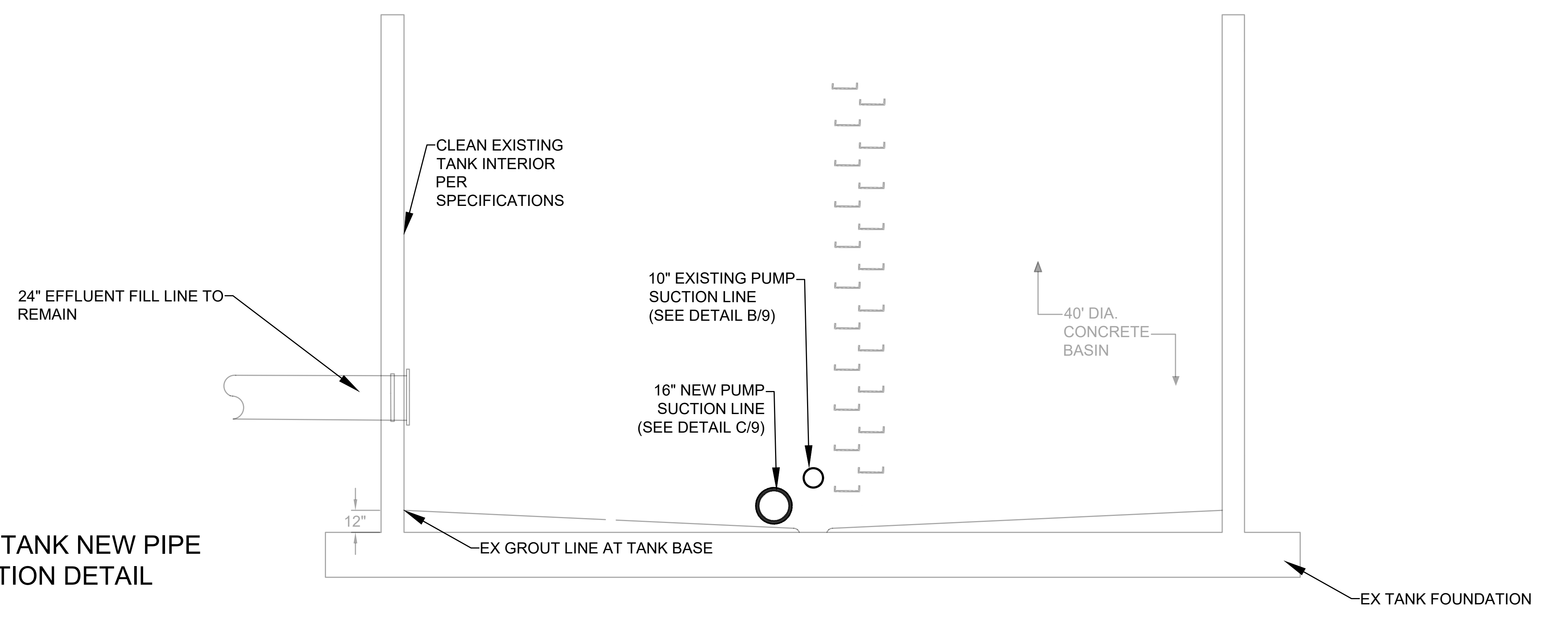
**EXISTING CONCRETE TANK MODIFICATIONS**  
BAYO BOOSTER NP WATER STORAGE TANK  
CONSTRUCTION PROJECT



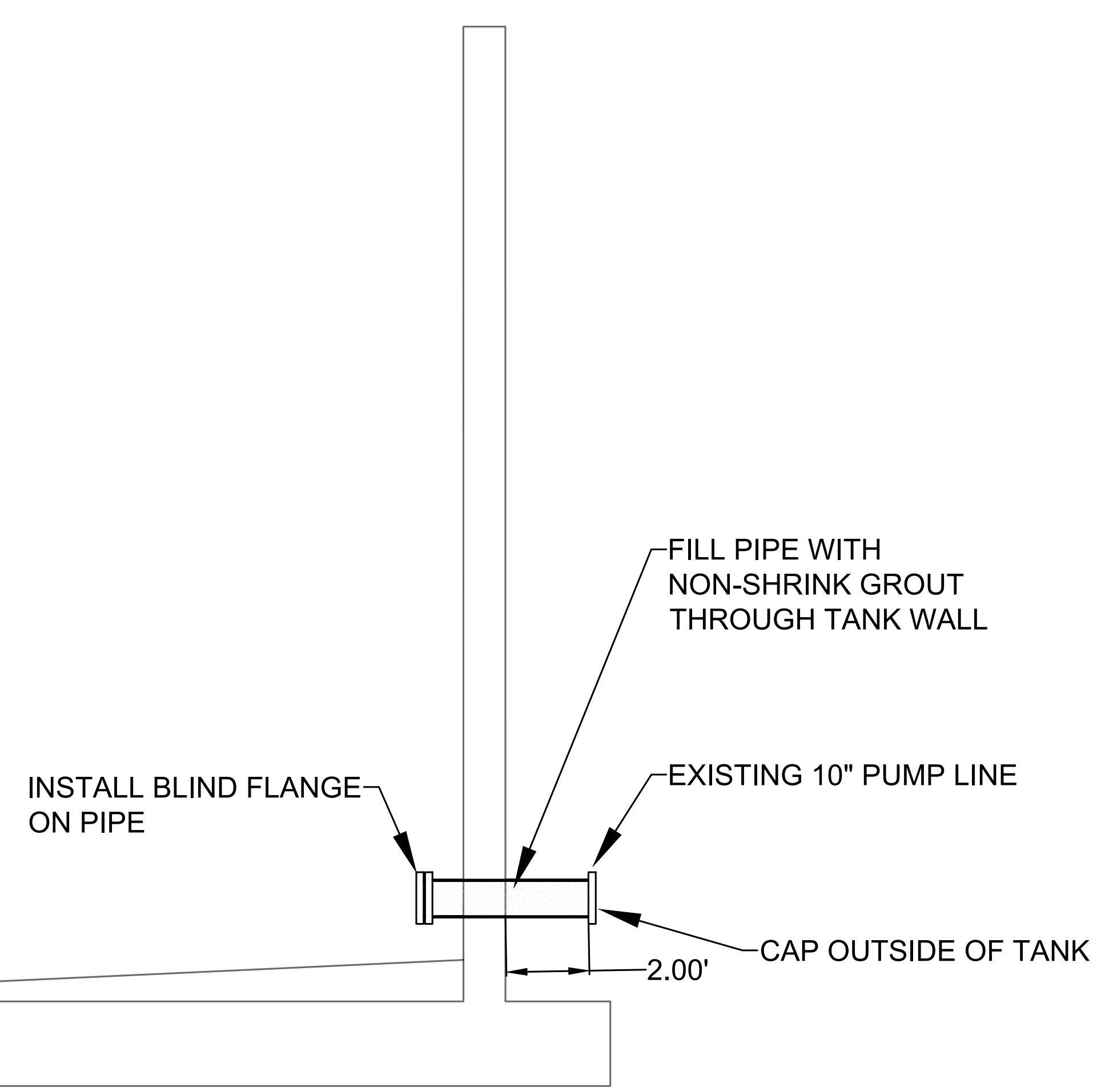
INCORPORATED COUNTY OF LOS ALAMOS  
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SHEET  
9

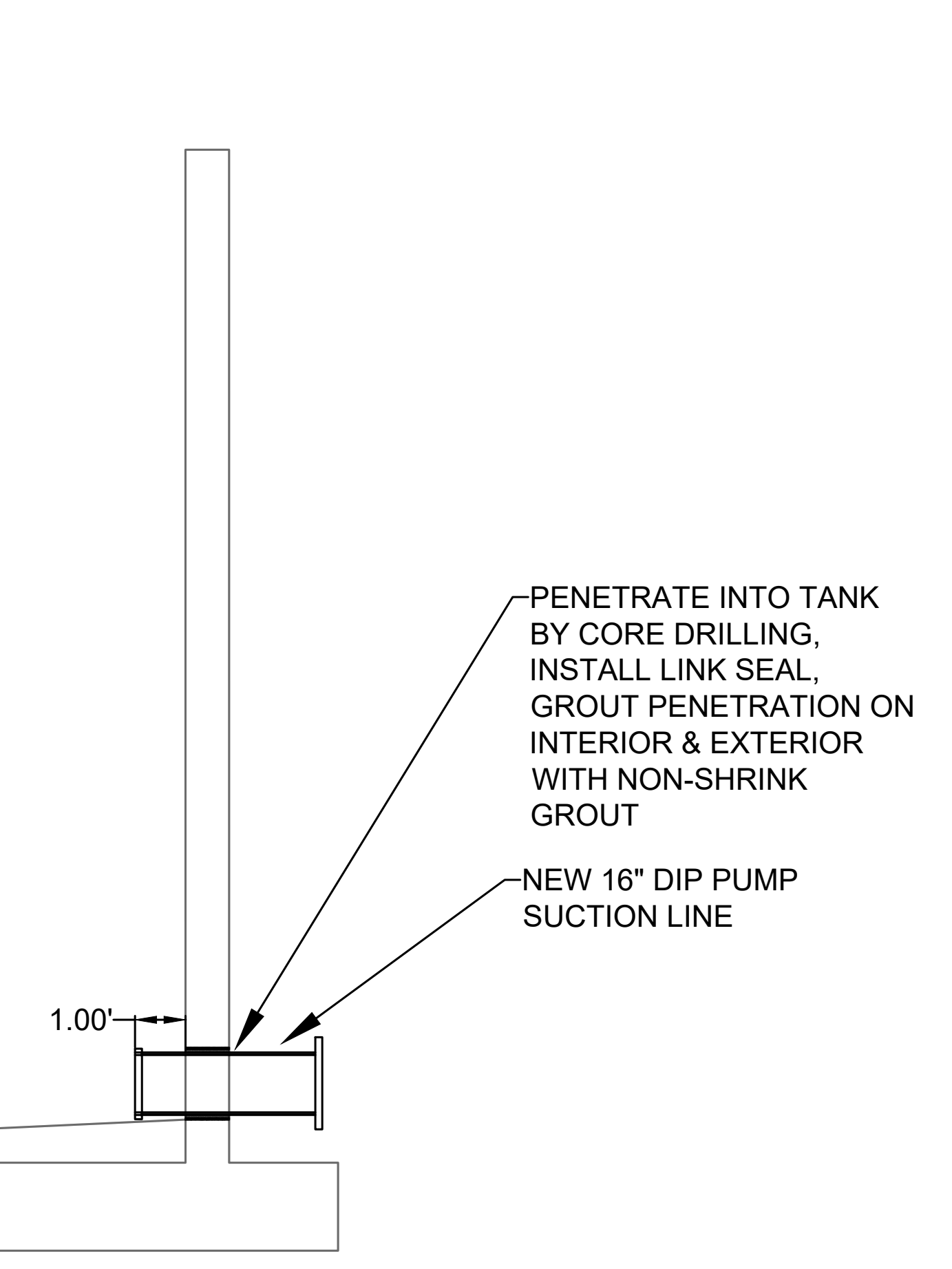
**A**  
**9** EXISTING TANK NEW PIPE PENETRATION DETAIL



**B**  
**9** ABANDON EXISTING 10" TANK PIPE DETAIL



**C**  
**9** NEW 16" DIP PIPE DETAIL



**GENERAL NOTES:**

- CONTRACTOR SHALL COMPLETE THIS PORTION OF WORK FOLLOWING ALL SITE UTILITY LINE WORK.
- SAW CUT SIDEWALK ON NORTH SIDE OF PUMP HOUSE TO BURY RIGID CONDUIT LINES 1 FOOT BELOW GROUND. CONCRETE SIDEWALK SECTION IS TO BE REPLACED.
- ALL INTERIOR CONDUIT AND EXTERIOR EXPOSED CONDUIT SHALL BE RIGID METAL CONDUIT.
- ALL BURIED CONDUIT SHALL BE SCH-40 PVC.
- BURIED CONDUIT PER DETAIL E/8.
- CONTRACTOR SHALL INSTALL POWER AND DATA CONDUCTORS PER REQUIREMENTS OF MANUFACTURE.
- ALL WORK SHALL COMPLY WITH APPLICABLE NESC AND ELECTRICAL CODES.

**KEYED NOTE - ELECTRICAL WORK**

- REUSE EXISTING RIGID ELECTRICAL CONDUIT PENETRATION FOR DATA WIRE.
  - 1" RIGID ELECTRICAL CONDUIT - RAIN TIGHT
- PLACE NEW CONDUIT PENETRATION FOR ELECTRICAL AND DATA WIRING.
  - 4 EACH - 1" RIGID ELECTRICAL CONDUIT - RAIN TIGHT
- RUN NEW 2" CONDUIT TO EXISTING NON-POT STORAGE TANK FOR LIQUID LEVEL SENSOR DATA WIRE.
  - SAW CUT CONCRETE SIDEWALK AND BURY SCH. 80 PV CONDUIT PER DETAIL E/8.
- RUN NEW 2" CONDUIT TO CHLORINE INJECTION METER MANHOLE FOR ELECTRICAL POWER FOR METER.
  - SAW CUT CONCRETE SIDEWALK AND BURY SCH. 80 PVC CONDUIT PER DETAIL E/8.
- RUN NEW 2" CONDUIT TO CHLORINE INJECTION METER MANHOLE DATA WIRE.
  - SAW CUT CONCRETE SIDEWALK AND BURY RIGID CONDUIT PER DETAIL E/8.
- INSTALL NEW LIQUID LEVEL SENSOR
- CAP (2) TWO PVC CONDUITS 1' FROM SIDEWALK FOR FUTURE USE TO NEW TANK.
  - 1 - 2" PVC CAP FOR DATA WIRE
  - 1 - 2" PVC CAP FOR ELECTRICAL WIRE
- FUTURE 2" CONDUIT TO NEW STEEL NON-POT STORAGE TANK FOR CATHODIC PROTECTION.
  - SAW CUT CONCRETE SIDEWALK AND BURY SCH. 80 PVC CONDUIT PER DETAIL E/8.
- FUTURE 1-3/4" CONDUIT TO NEW STEEL NON-POT STORAGE TANK FOR LIQUID LEVEL SENSOR DATA WIRE.
  - SAW CUT CONCRETE SIDEWALK AND BURY SCH. 80 PVC CONDUIT PER DETAIL E/8.
- INSTALL NEW 1-3/4" CONDUIT IN BOOSTER STATION TO APPROPRIATE CONTROL BOXES AS SHOWN IN INTERIOR WIRING PLAN FIGURE.

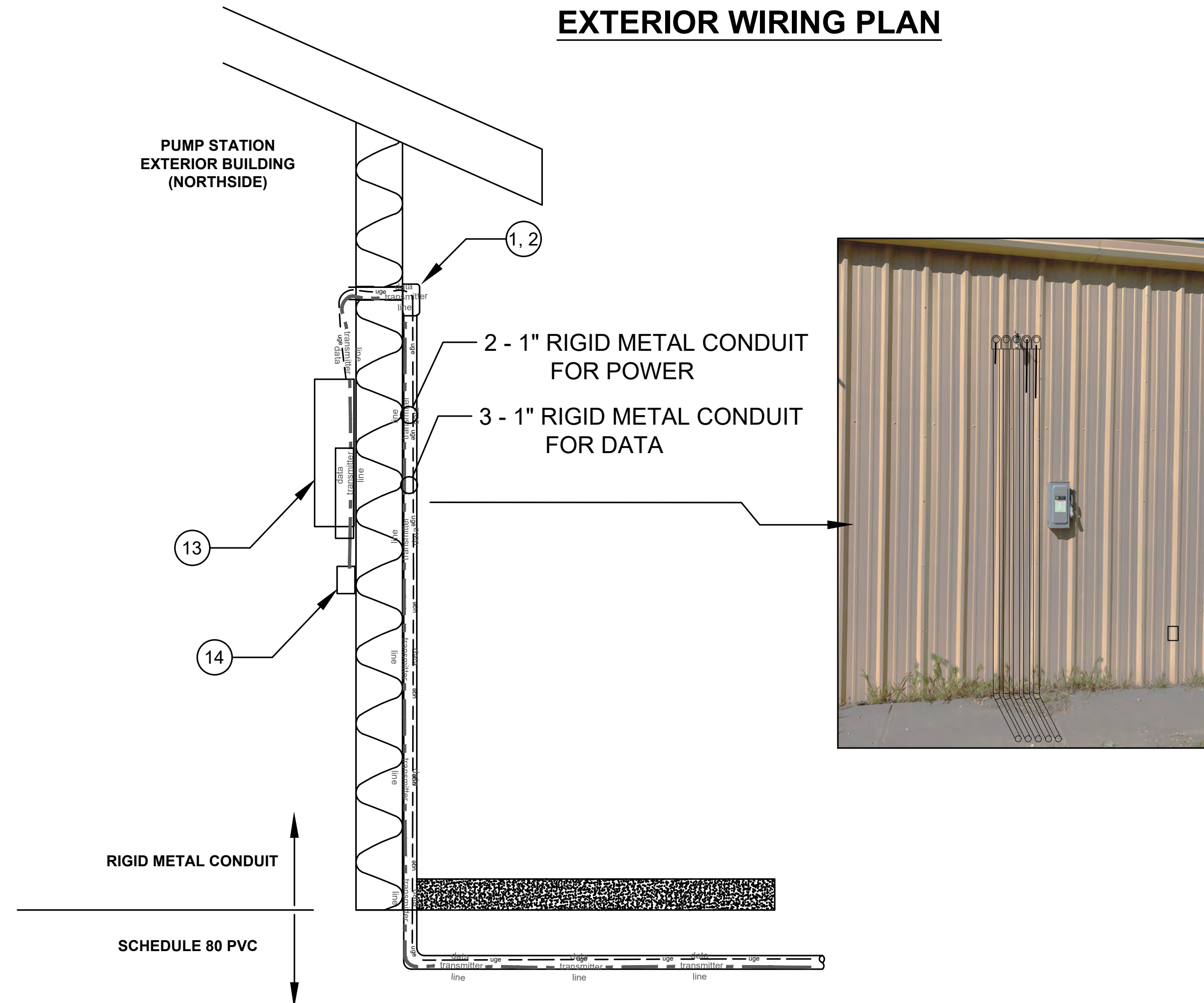
**WORK DONE BY LOS ALAMOS COUNTY**

- INSTALL NEW BREAKER IN SPARE LOCATION FOR MANHOLE POWER RECEPTACLE AND FUTURE CATHODIC PROTECTION.
- DROP SENSOR WIRES FROM KEYED NOTE 3 AND 4 INTO SCADA PANEL.
  - 2 - PROVIDE 2' OF EXTRA WIRE IN CABINET TO TERMINATE CONNECTIONS FOR LIQUID LEVEL SENSORS.
  - 1 - CONNECT FLOW METER DATA WIRE TO WALL MOUNT IFC 300 METER DISPLAY.
  - WORK FOR TERMINATIONS TO BE COMPLETED BY OWNER.

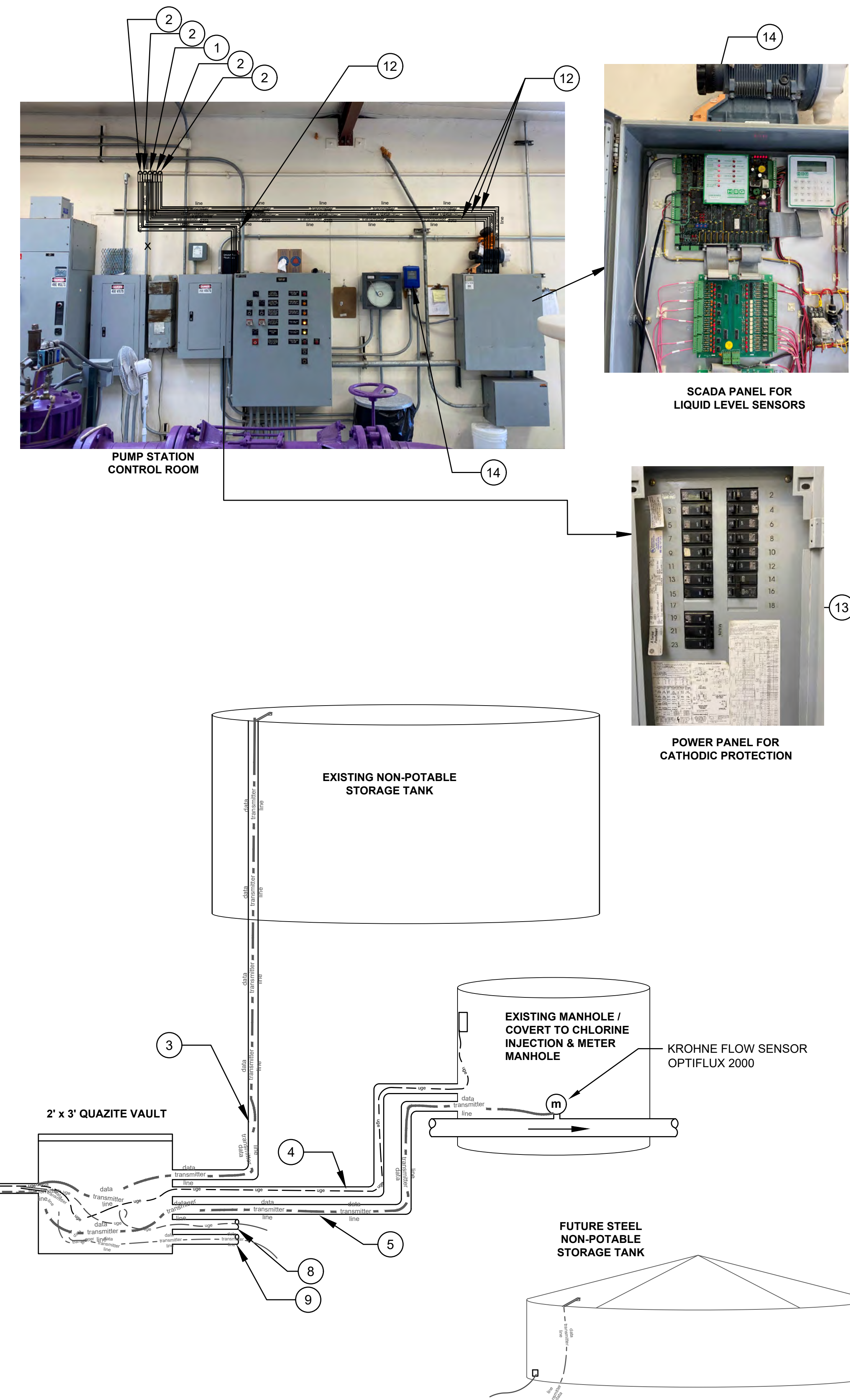
**LEGEND**

- w --- EXISTING UNDERGROUND WATER
- uge --- EXISTING UNDERGROUND ELECTRICAL LINE
- npw --- EXISTING UNDERGROUND NON-POTABLE WATER
- drain --- EXISTING UNDERGROUND DRAIN LINE
- --- EXISTING UNDERGROUND CHLORINE INJECTION LINE
- data --- EXISTING UNDERGROUND WATER LEVEL TRANSMITTER WIRE
- npw --- NEW UNDERGROUND NON-POTABLE WATER
- drain --- NEW TIE IN TO EXISTING UNDERGROUND DRAIN LINE
- NEW GATE VALVE
- NEW 16" x 12" Reducer

**EXTERIOR WIRING PLAN**

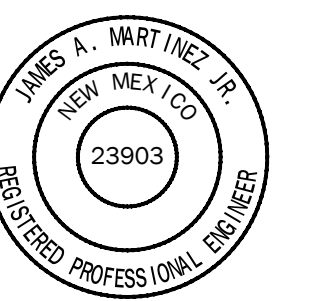


**INTERIOR WIRING PLAN**



DESIGNED BY: JM  
 DRAWN BY: JM  
 APPROVED BY: JA  
 DATE: 5/13/21  
 SCALE: NTS

**ELECTRICAL AND SCADA WIRING**  
 BAYO BOOSTER NP WATER STORAGE TANK  
 CONSTRUCTION PROJECT



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SHEET  
 10