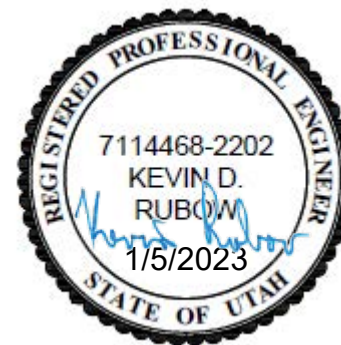




# JORDAN VALLEY WATER CONSERVANCY DISTRICT

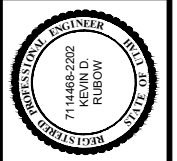
## PIPELINE REPLACEMENT 2023 OLD FARM AND 5650 SOUTH AREAS

PROJECT NUMBER: 4270  
JANUARY 2023



Know what's below.  
Call before you dig.

ZONE	REV.	DESCRIPTION	BY	DATE	APP.



LINE IS 1 INCH  
AT 11X17 SIZE SHEET

DESIGN: Todd Peterson  
DRAFTER: Todd Peterson  
PROJ. MGR: Connor Tyson  
DATE: 1/5/23

**JORDAN VALLEY WATER  
CONSERVANCY DISTRICT**  
8215 SOUTH 1300 WEST  
WEST JORDAN, UTAH 84088  
PHONE (801) 566-4300

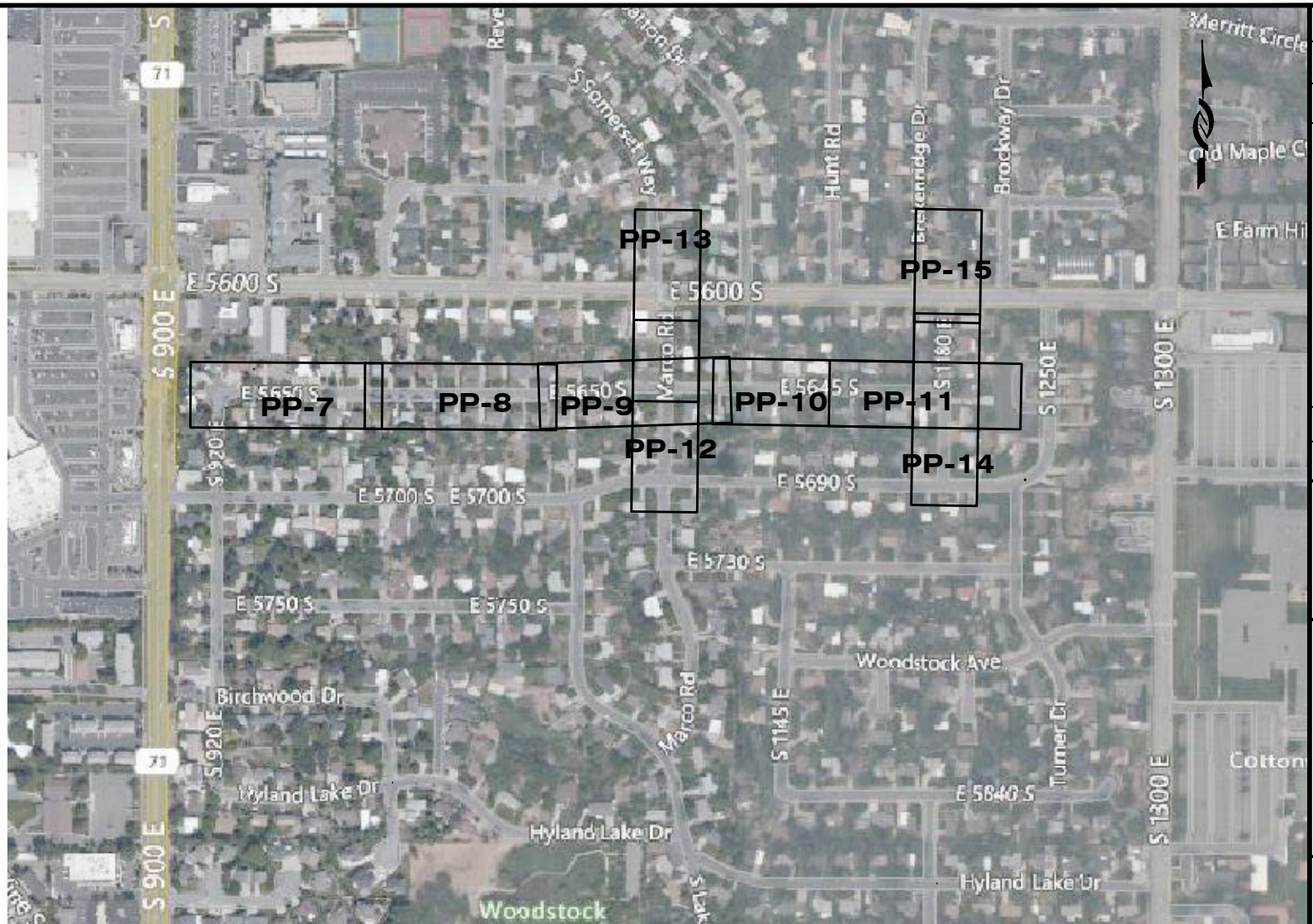
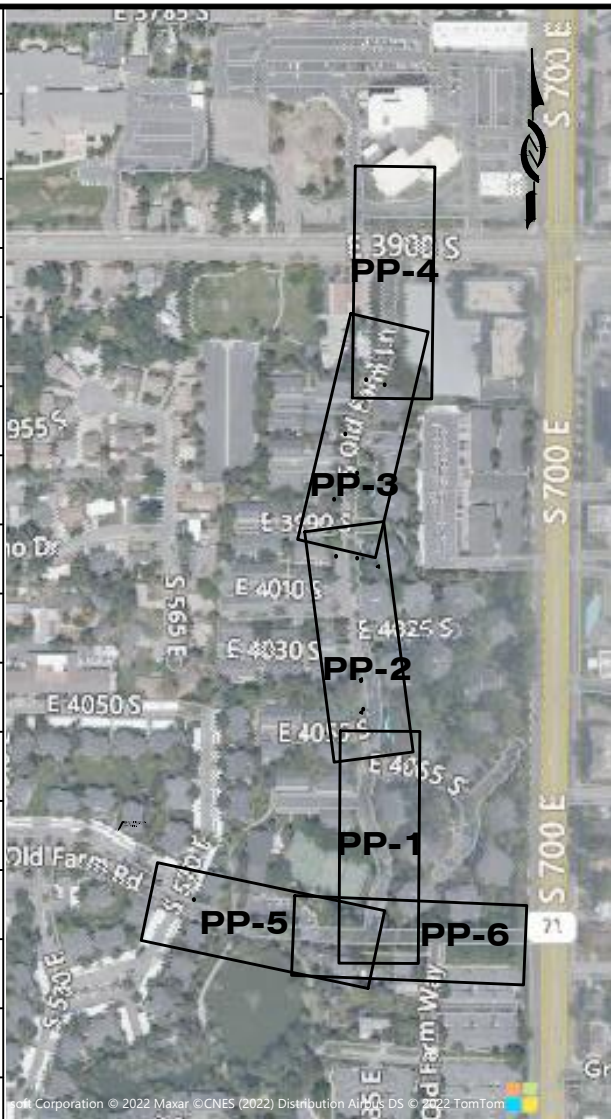
2023 Pipeline Replacement  
COVER

PROJECT NUMBER  
4270

DRAWING NUMBER  
G-1

SHEET NUMBER  
1 OF 24

Sheet List Table	
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G-2	AREA MAP
G-3	NOTES
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PP-2	OLD FARM LANE - 2
PP-3	OLD FARM LANE - 3
PP-4	OLD FARM LANE - 4
PP-5	OLD FARM ROAD - 1
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PP-7	5650 SOUTH - 1
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**LEGEND:**

BURIED ELECTRIC	_____	be	_____
BURIED FIBER OPTIC	_____	fo	_____
BURIED TELEPHONE	_____	bt	_____
BURIED NATURAL GAS	_____		g
EDGE OF ASPHALT	_____		
STORM DRAIN	_____		sd
SANITARY SEWER	_____	ea	ss
EXISTING WATER LINE	_____		w
NEW WATER LINE	_____	8 w	

- WATER METER 
- WATER VALVE 
- FIRE HYDRANT 
- SANITARY SEWER MANHOLE 
- STORM DRAIN MANHOLE 
- POLE 
- GUY WIRE 
- WATER QUALITY SAMPLING STATIONS 



<p>2023 Pipeline Replacement</p> <p style="text-align: center;">AREA MAP</p> <p style="text-align: center;">SHEET LIST TABLE</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">PROJECT NUMBER</td> <td style="text-align: center;">4270</td> </tr> <tr> <td style="font-size: small;">DRAWING NUMBER</td> <td style="text-align: center;"><b>G-2</b></td> </tr> <tr> <td style="font-size: small;">SHEET NUMBER</td> <td style="text-align: center;">2 OF 24</td> </tr> </table>	PROJECT NUMBER	4270	DRAWING NUMBER	<b>G-2</b>	SHEET NUMBER	2 OF 24
PROJECT NUMBER	4270						
DRAWING NUMBER	<b>G-2</b>						
SHEET NUMBER	2 OF 24						
							
<p>DESIGN: Todd Peterson          DRAFTER: Todd Peterson          PROJ. MGR: Connor Tyson          DATE: 1/5/23</p>							
<p>LINE @ 1"=100'          AT 11X17 SIZE SHEET</p>							
<p>JORDAN VALLEY WATER CONSERVANCY DISTRICT          8215 SOUTH 1300 WEST          WEST JORDAN, UTAH 84088          PHONE (801) 566-4300</p>							

**GENERAL NOTES:**

1. Utilities shown on the drawing are based on the best available information provided by others and should be considered approximate and for general information only. Information is shown for the convenience of the contractor but is not guaranteed to be either correct or complete, and all responsibility for accuracy and completeness thereof is expressly disclaimed. Contractor is responsible to locate and protect all utilities in the project area, including those that may not be shown or that may be shown incorrectly. Contractor is solely responsible for the repair of and utility damaged as a result of the contractor's activities.
2. The Contractor shall make such investigations 200' ahead of excavation to locate underground utilities and structures so as not to accidentally damage them during construction operations. The Contractor shall be responsible for repair of any underground utilities damaged during construction activities.
3. Contractor shall be responsible for contacting Blue Stakes 48 hours prior to excavating.
4. Protect all existing pavement, sidewalk, curb and gutter, park strips, structures, turf, and existing utilities. Repair or replace if damaged or disturbed at no additional cost to the owner.
5. Contractor shall repair or replace all disturbed curb, gutter, sidewalk, road striping, and asphalt to appropriate city standards and specifications.
6. Contractor shall modify/repair existing sprinkler systems as required to cover affected landscape areas disturbed by construction. i.e. A new fire hydrant blocking sprinklers would require relocation of affected sprinklers.
7. Connect existing copper residential water lines into the new water main.
8. All water line crossings of sanitary sewer shall have a minimum edge to edge spacing of 18" (vertical).
9. All water lines shall cross sanitary sewer lines at a 90° angle whenever possible.
10. All water lines shall maintain a minimum of 10'-0" edge to edge spacing from sanitary sewer lines unless otherwise specified.
11. New PVC pipe line shall be installed 36" from the center of the pipe to the curb whenever possible unless otherwise specified.
12. Contractor shall be responsible for all excavation,

- road cut, land disturbance, SWPP, and building permits with all agencies/entities impacted by construction (city, state, federal, business, private, etc).
13. Contractor shall replace all signal loops disturbed by pipeline installation activities.
14. Contractor shall be responsible for flagging, caution signs, traffic control, and public safety on all adjacent streets and construction site per MUTCD.
15. Contractor shall be responsible for public safety and OSHA safety standards.
16. Contractor shall be responsible for notification of residents of construction on their road 72 hours prior to an excavation of disruption of water main service.
17. Contractor shall attend all pre construction and construction conferences.
18. All construction staking required by the Contractor shall be provided by the Contractor at the Contractor's expense.
19. Contractor shall be responsible for care of all construction stakes.
20. Contractor to space utilities to provide minimum distances as required by local, county, state, and individual utility codes.
21. All materials and construction shall be in accordance with Jordan Valley Water Conservancy District standards and specifications.
22. All water lines shall be a minimum of 4 feet below finished grade to top of pipe unless otherwise noted.
23. Contractor shall reconnect all services using existing copper pipe. All galvanized and black poly services shall be replaced according to the Jordan Valley Water Conservancy District specification.
24. All service lateral locations are estimated.
25. Contractor shall loop existing services or new water line as necessary when approved by the Engineer.
26. Water line loops shall be performed in accordance with APWA Plan 542.
27. Completed water lines shall be disinfected according to AWWA standards and Jordan Valley Water Conservancy District specifications.
28. Contractor shall notify Engineer of chlorine test prior to flushing lines, with chlorine left in pipe a minimum of 24 hours with 25 ppm residual. All turning of main line valves, chlorination testing, flushing, pressure testing, bacteria testing, etc. to be

- coordinated with Jordan Valley Water Conservancy District. Heavily chlorinated water shall be dechlorinated while flushing.
29. All bends, tees, and other fittings in water line to be supported with concrete thrust blocks and restrained with Mega-Lug followers at joints, unless otherwise noted.
30. All ductile iron valves, fittings and hydrants exposed to soil shall be wrapped with 8 mil thick polyethylene film tube. All exposed nuts & bolts shall be liberally coated with FM grease prior to wrapping. The film shall be held in place by 2-inch wide plastic backed adhesive tape equal to Polyken No. 900 or Scotchrap No. 50. The tape shall be installed to tightly secure the film to the pipe. Enough film shall be used to overlap adjoining sections of film a minimum of one (1) foot.
31. Contractor shall be responsible for all erosion control.
32. Contractor shall employ BMP around all storm drains.
33. Existing pipe lines shall be abandoned in place. For pipelines 2 inches to 8 inches (inside diameter) abandon by removing the valve box and capping or plugging all open ends with concrete. For pipe lines 10 inches and larger, the cap shall be at least 24 inches thick. Follow the abandonment procedure set forth by UDOT including filling with flowable fill for all pipelines 6 inches and larger.
34. Existing water lines shall not be abandoned until new utilities are installed, tested, and accepted by the Jordan Valley Water Conservancy District.
35. Contractor shall legally dispose of all excess excavated material/debris off site unless otherwise noted.
36. Contractor shall supply redlines for preparation of record drawings.
37. Engineer or Engineer's Representative shall field verify all hydrant and valve locations.
38. Contractor shall be responsible to contact Salt Lake County Surveyor's office prior to disturbing any survey monument. Replace monuments at contractor's expense.
39. Contractor shall not assume there are fewer service laterals (for water, and also all other utilities, whether shown on the plans or not), than there are homes or other structures, where project trenches are located between a home or structure and utility main.

40. Contractor shall be prepared for fiber system laterals, and should recognize different fiber company lay at different depths.
41. Costs for crossing all laterals for mains on plans shall be included in bid costs.

**WATER QUALITY SAMPLING STATION NOTES:**

1. Sampling stations shall be 48" bury, with a 3/4" FIP inlet, and a (3/4" hose or unthreaded) nozzle.
2. All stations shall be enclosed in a lockable, non-removable housing.
3. When opened, the station shall require no key for operation, and the water will flow in an all brass waterway.
4. All working parts will be of brass and be removable from above ground with no digging.
5. A 3/8" copper vent tube will enable each station to be pumped free of standing water to prevent freezing and to minimize bacteria growth.
6. Eclipse No. 88 "secure" sampling station with "JVWCD" cast in door. Sever cold version with 3/8" vent tube, PVC sleeve, all brass waterway with security enhancements. Station Shall be manufactured by Kupferle Foundry, St. Louis, MO 63102 (800-231-1144).
7. Contractor shall orient each of the sampling stations with the lock cylinder facing south when possible (for melting of winter ice on lock cylinder). Owner will clarify the design orientations at time of the submittal for the sampling stations.
8. Tapping saddle required when connecting to PVC pipeline.

ZONE	REV	DESCRIPTION	BY	DATE	APP



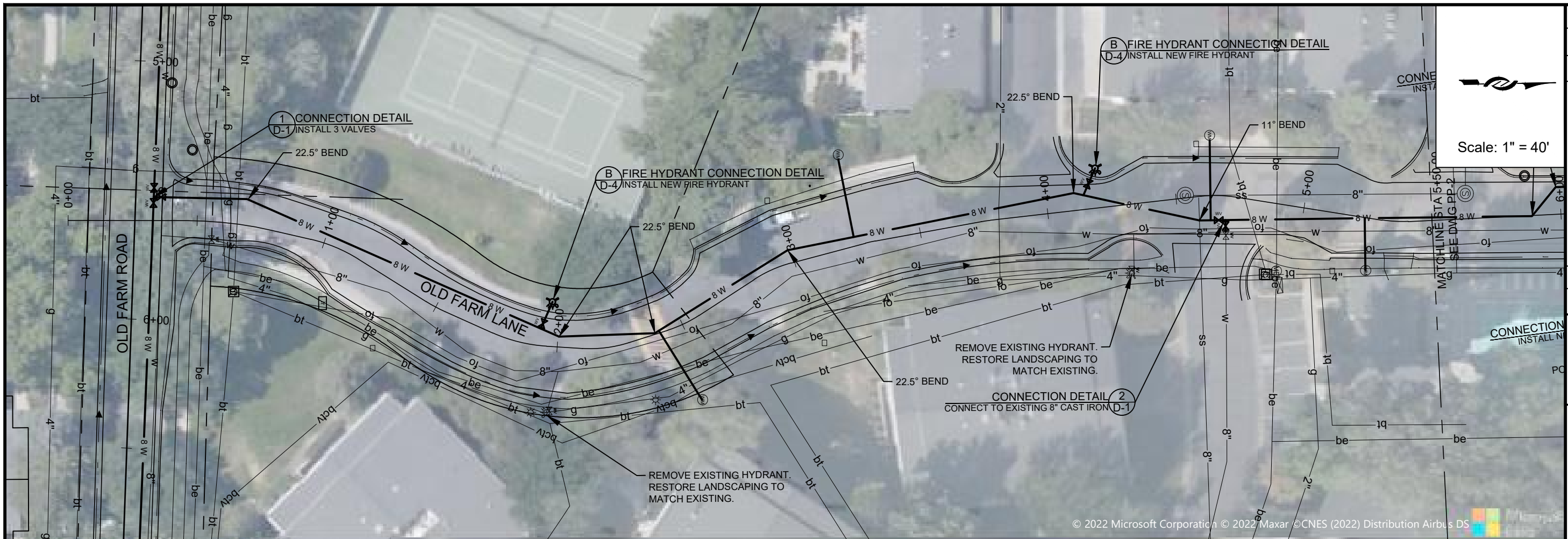
LINE IS 1/8" INCH AT TEXT SIZE SHEET  
 DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 12/27/22



2023 Pipeline Replacement  
 NOTES

PROJECT NUMBER 4270
DRAWING NUMBER G-3
SHEET NUMBER 3 OF 24





Scale: 1" = 40'

ZONE	REV	DESCRIPTION	BY	DATE	APP



LINE IS 1/8" INCH AT 1" X 17" SIZE SHEET

DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 1/5/23

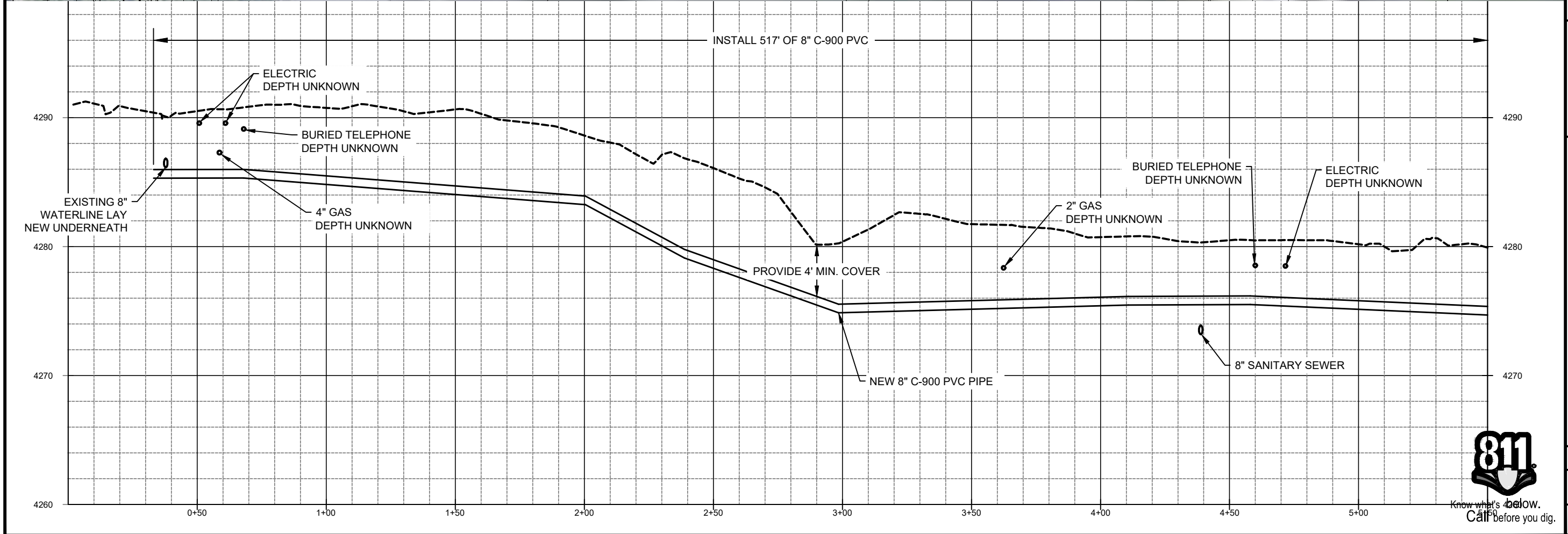


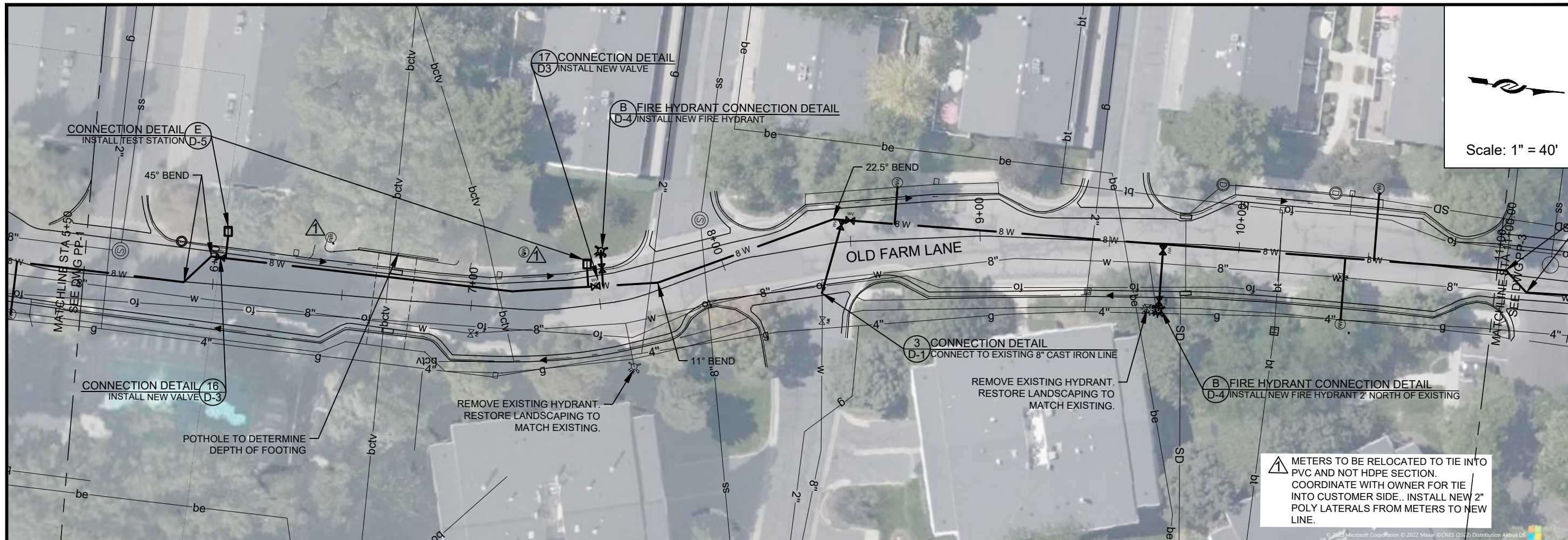
2023 Pipeline Replacement  
 OLD FARM LANE - 1

PROJECT NUMBER  
4270

DRAWING NUMBER  
PP-1

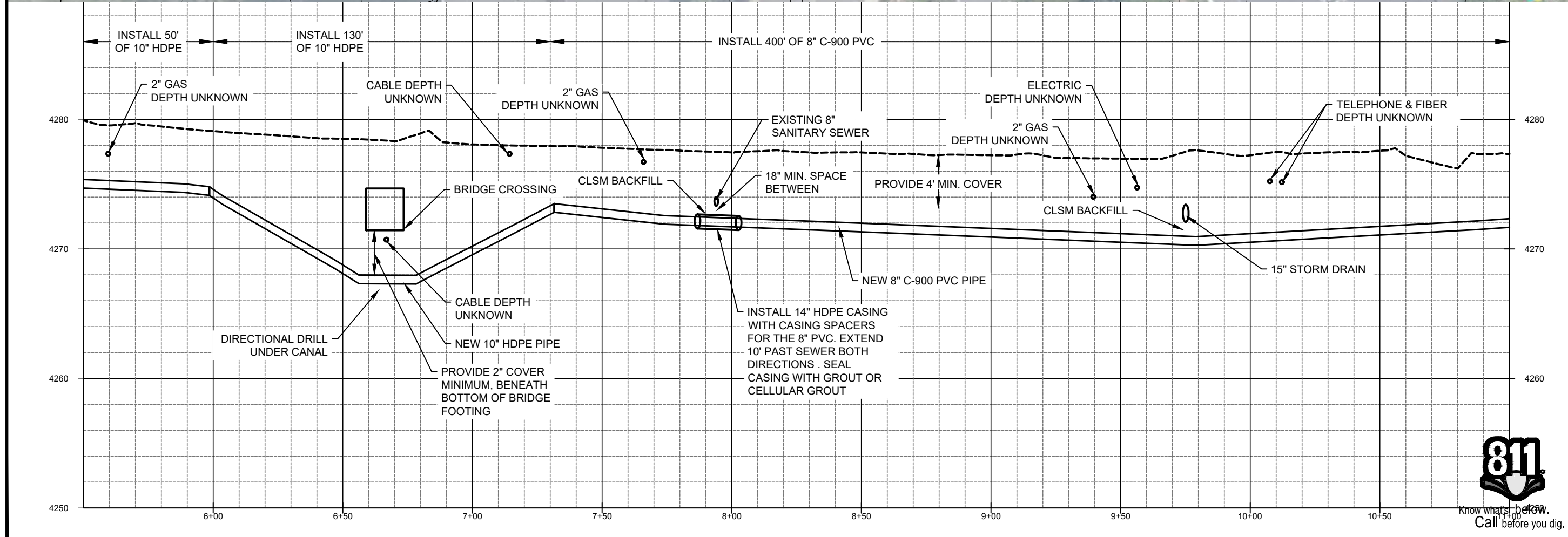
SHEET NUMBER  
4 OF 24





**Scale: 1" = 40'**

**⚠ METERS TO BE RELOCATED TO TIE INTO PVC AND NOT HDPE SECTION. COORDINATE WITH OWNER FOR TIE INTO CUSTOMER SIDE.. INSTALL NEW 2" POLY LATERALS FROM METERS TO NEW LINE.**

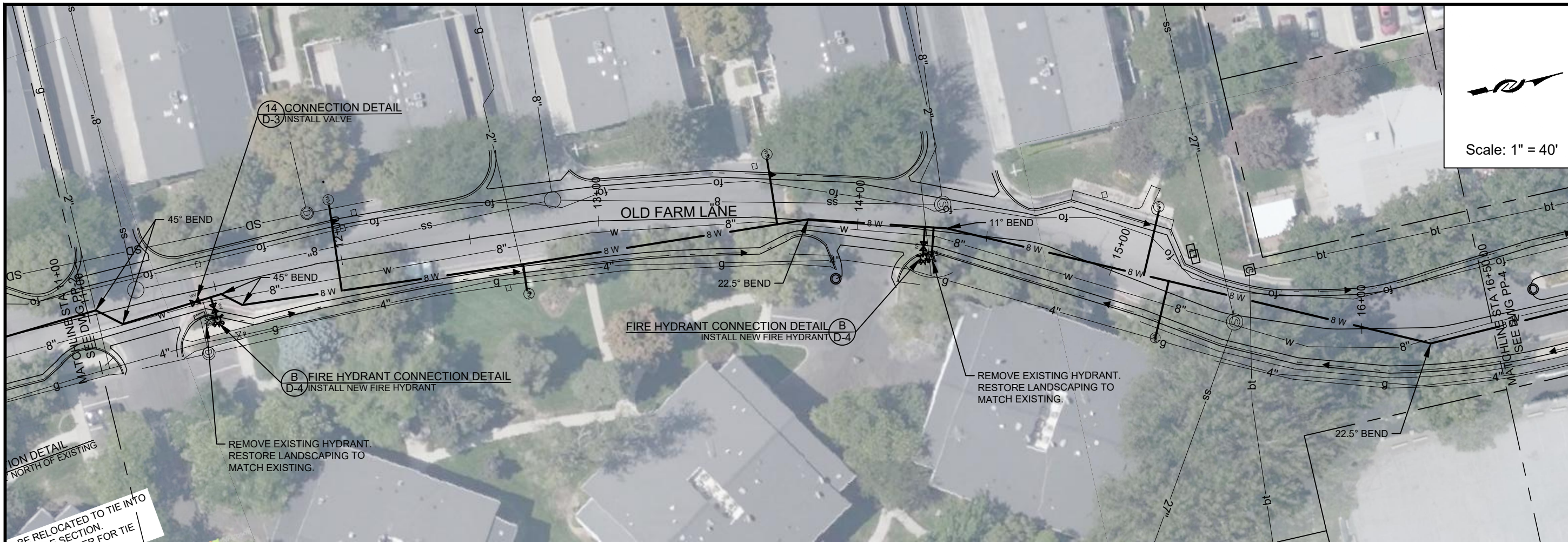


ZONE	REV.	DESCRIPTION	BY	DATE	APP.

**JORDAN VALLEY WATER CONSERVANCY DISTRICT**  
 8215 SOUTH 1300 WEST WEST JORDAN, UTAH 84088  
 PHONE (801) 566-4300

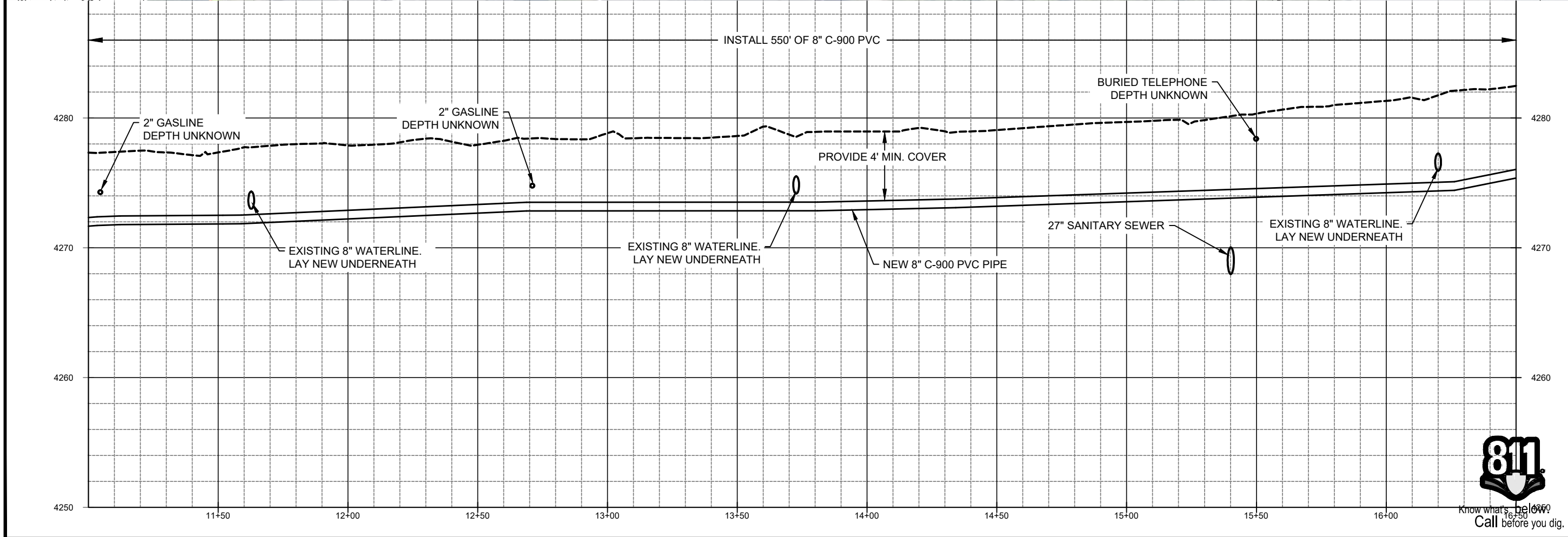
**2023 Pipeline Replacement  
 OLD FARM LANE - 2**

PROJECT NUMBER: **4270**  
 DRAWING NUMBER: **PP-2**  
 SHEET NUMBER: **5 OF 24**

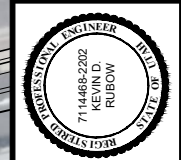


Scale: 1" = 40'

RELOCATED TO TIE INTO SECTION. SEE DIMS PP-3 FOR TIE



ZONE	REV.	DESCRIPTION	BY	DATE	APP.



DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 12/27/22

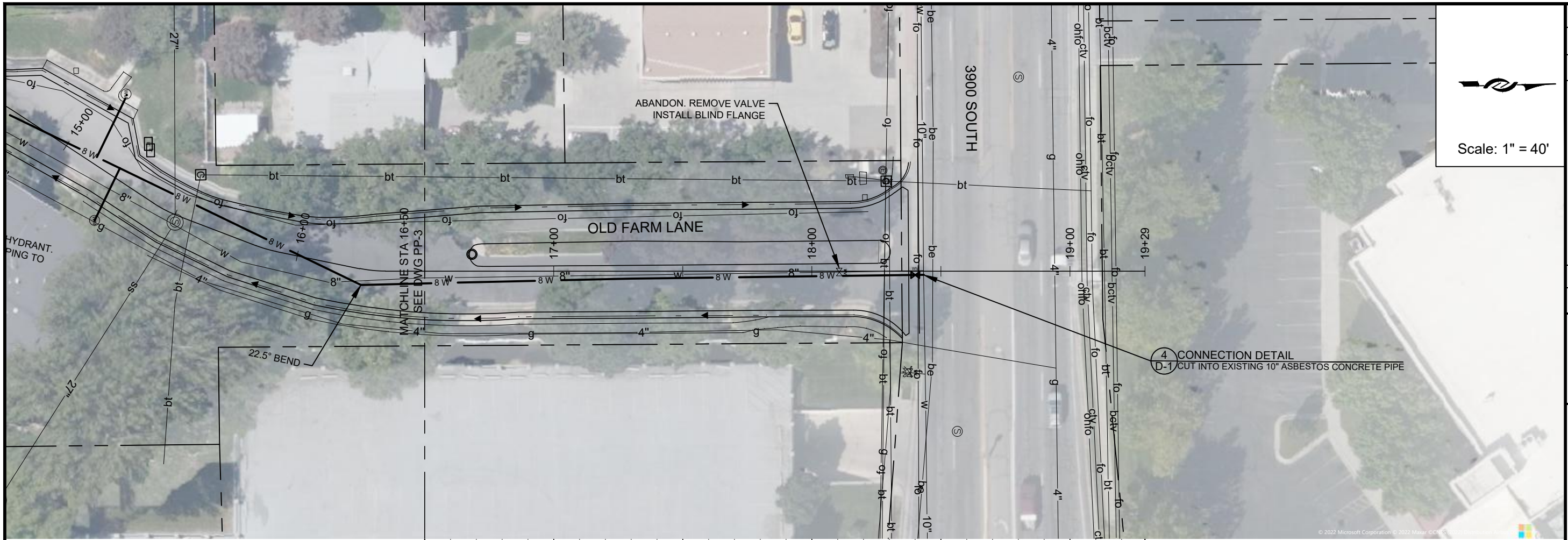


2023 Pipeline Replacement  
 OLD FARM LANE - 3

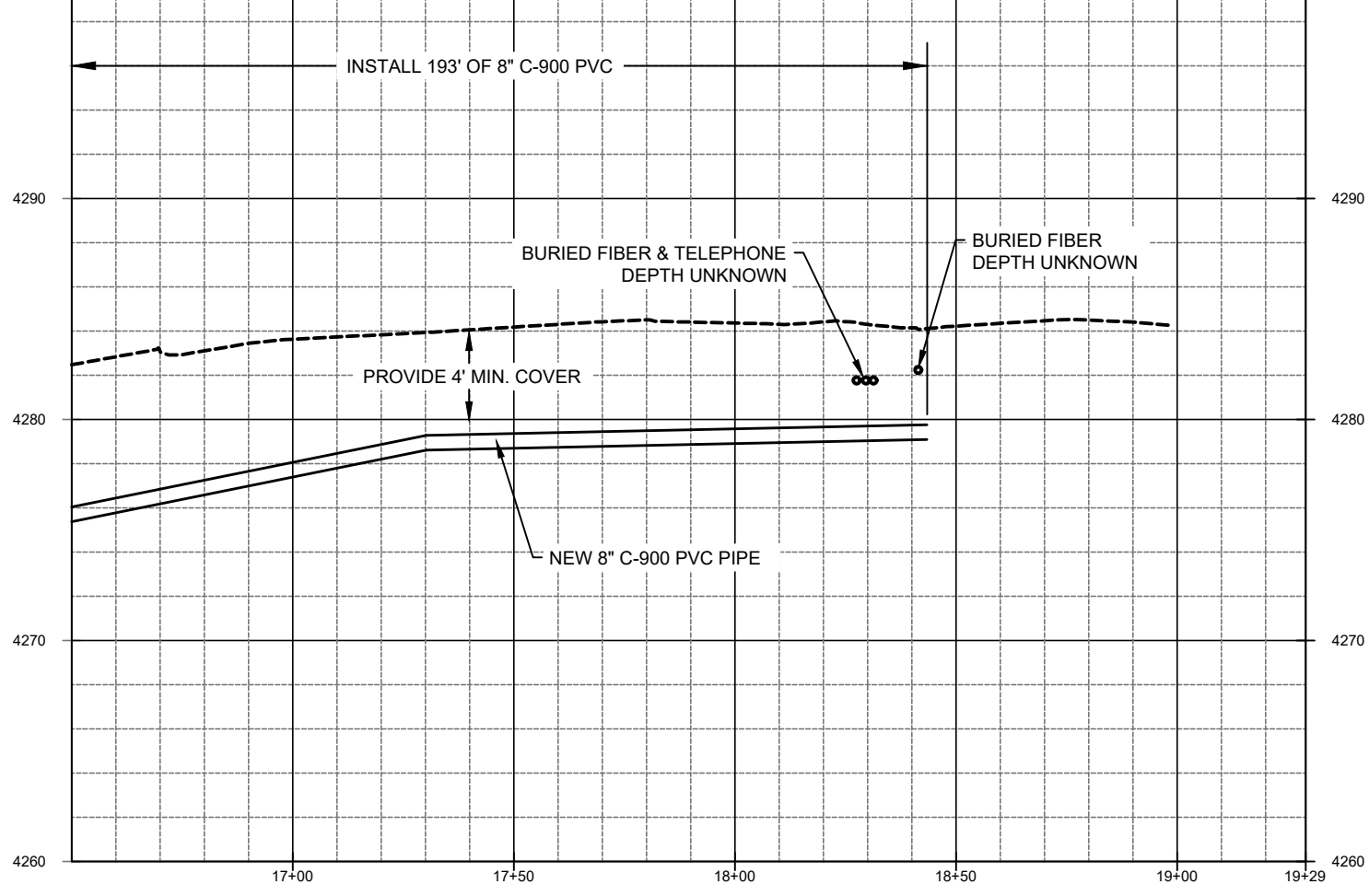
PROJECT NUMBER  
 4270

DRAWING NUMBER  
 PP-3

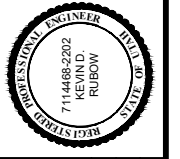
SHEET NUMBER  
 6 OF 24



Scale: 1" = 40'



ZONE	REV	DESCRIPTION	BY	DATE	APP



LINE IS 1/8" INCH  
AT 1/4" X 1/4" SIZE SHEET

DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 1/5/23



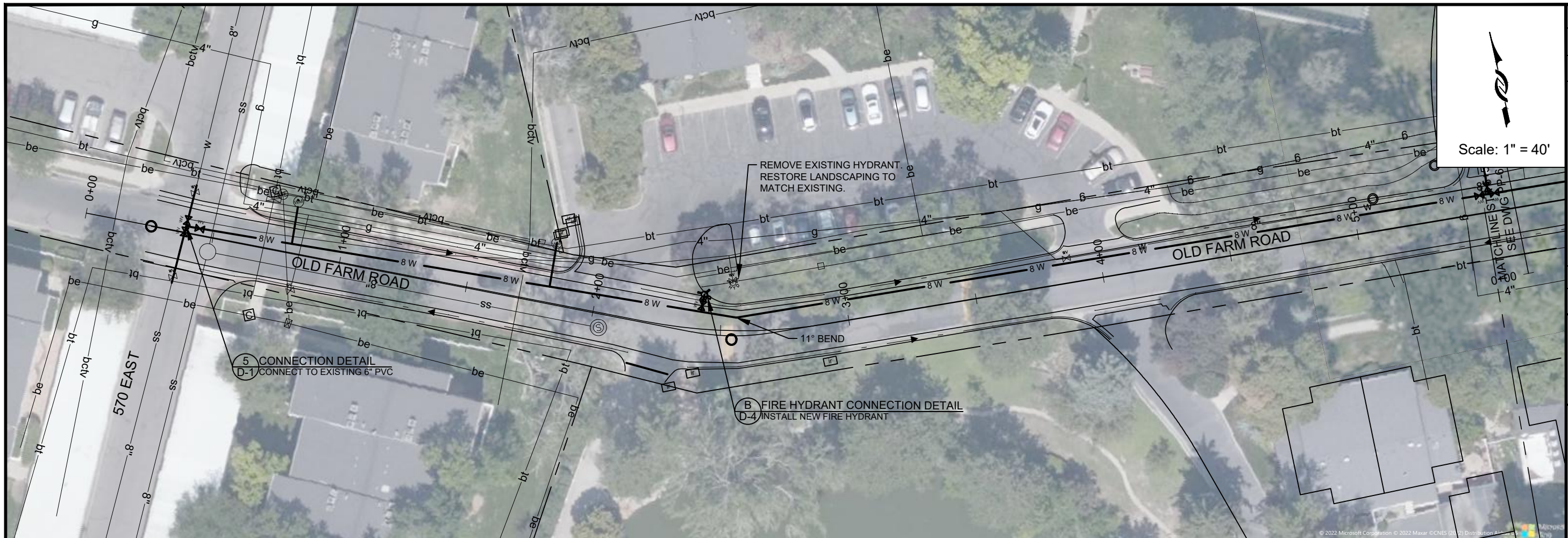
2023 Pipeline Replacement  
 OLD FARM LANE - 4

PROJECT NUMBER  
4270

DRAWING NUMBER  
PP-4

SHEET NUMBER  
7 OF 24





Scale: 1" = 40'

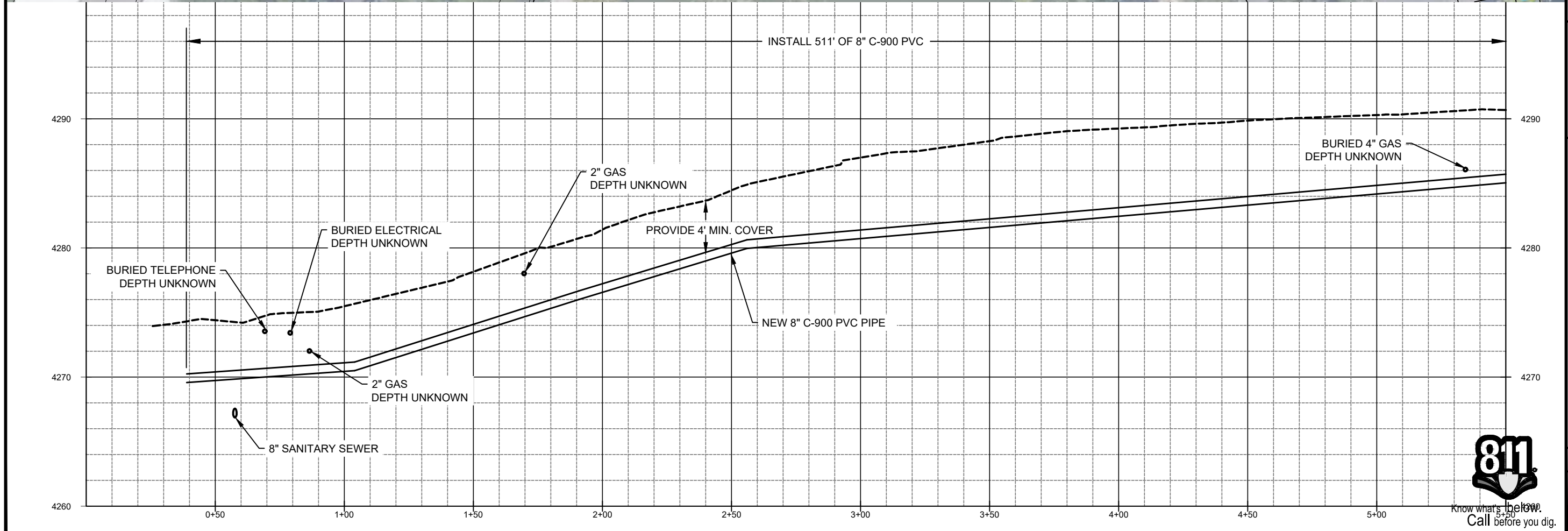
MATCHLINE SEE DWG PP-6  
 8" W  
 4" W  
 4" W

ZONE	REV.	DESCRIPTION	BY	DATE	APP



LINE IS 1/8" INCH  
 AT 1/4" X 1/4" SIZE SHEET

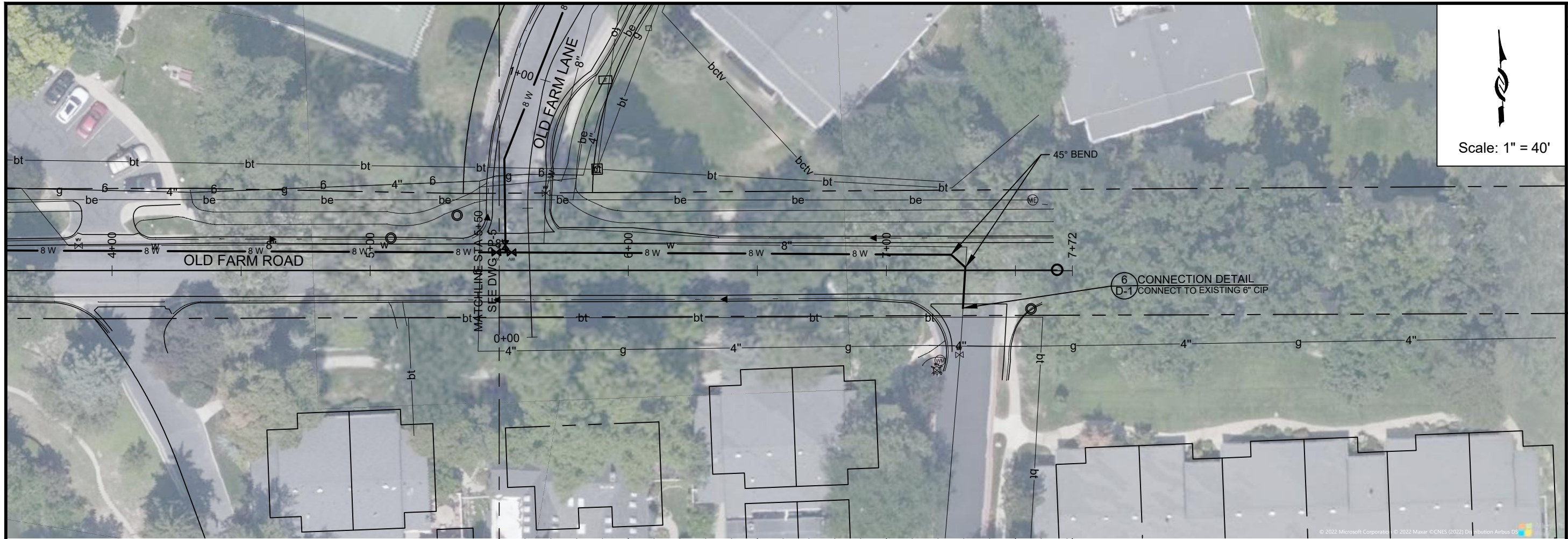
DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 12/27/22



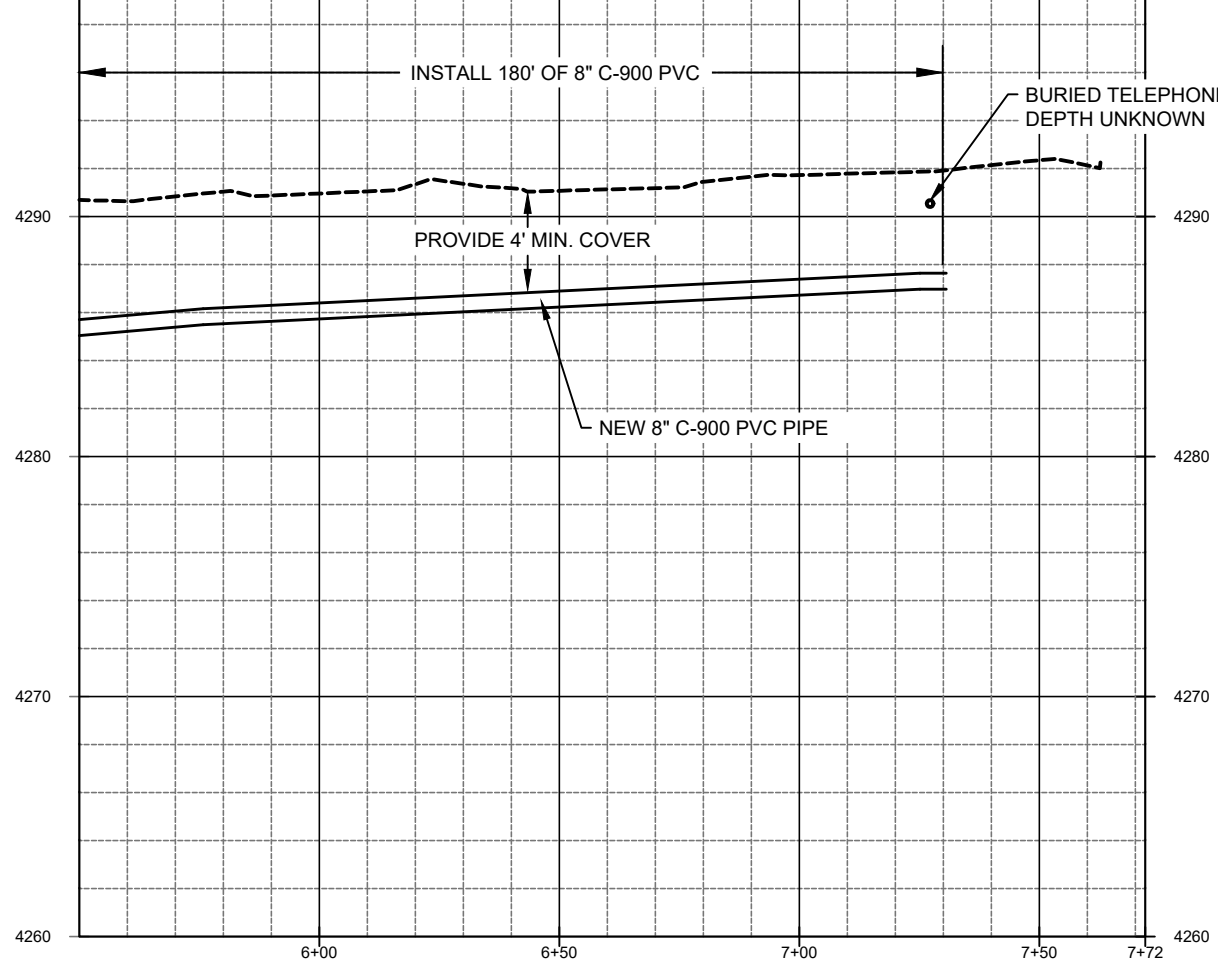
2023 Pipeline Replacement  
 OLD FARM ROAD - 1

PROJECT NUMBER	4270
DRAWING NUMBER	PP-5
SHEET NUMBER	8 OF 24





Scale: 1" = 40'



ZONE	REV.	DESCRIPTION	BY	DATE	APP.



LINE IS 1/8" INCH AT 11x17 SIZE SHEET  
 DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 12/27/22



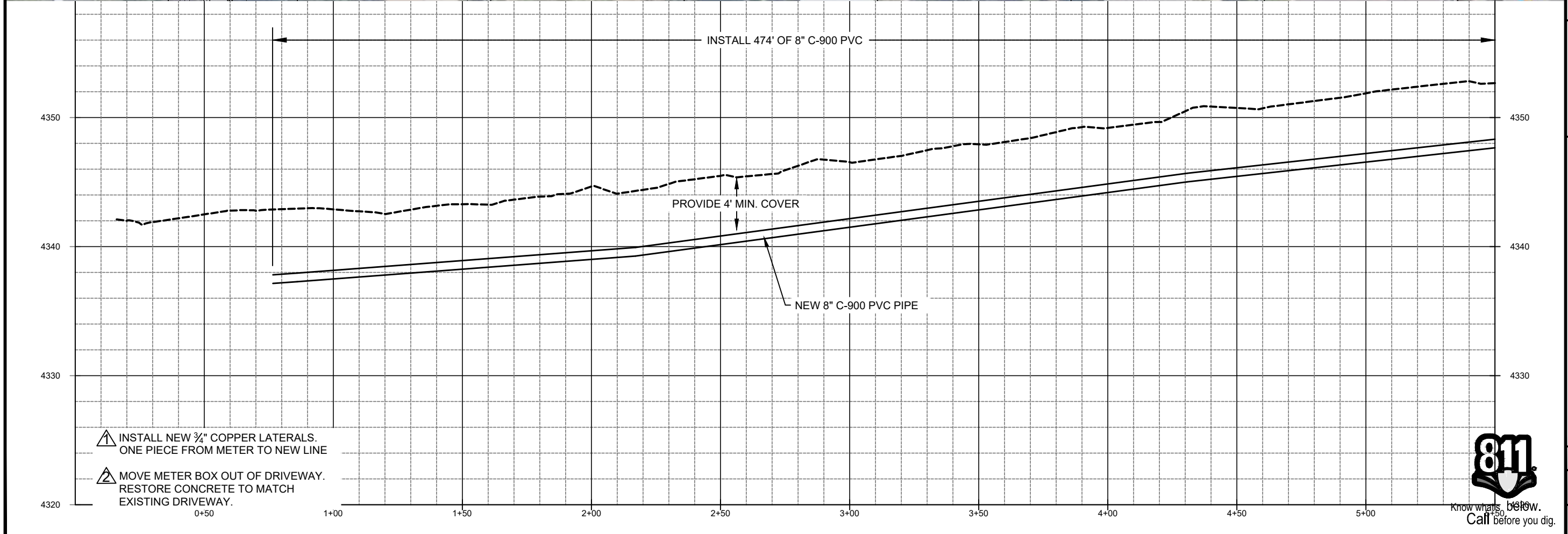
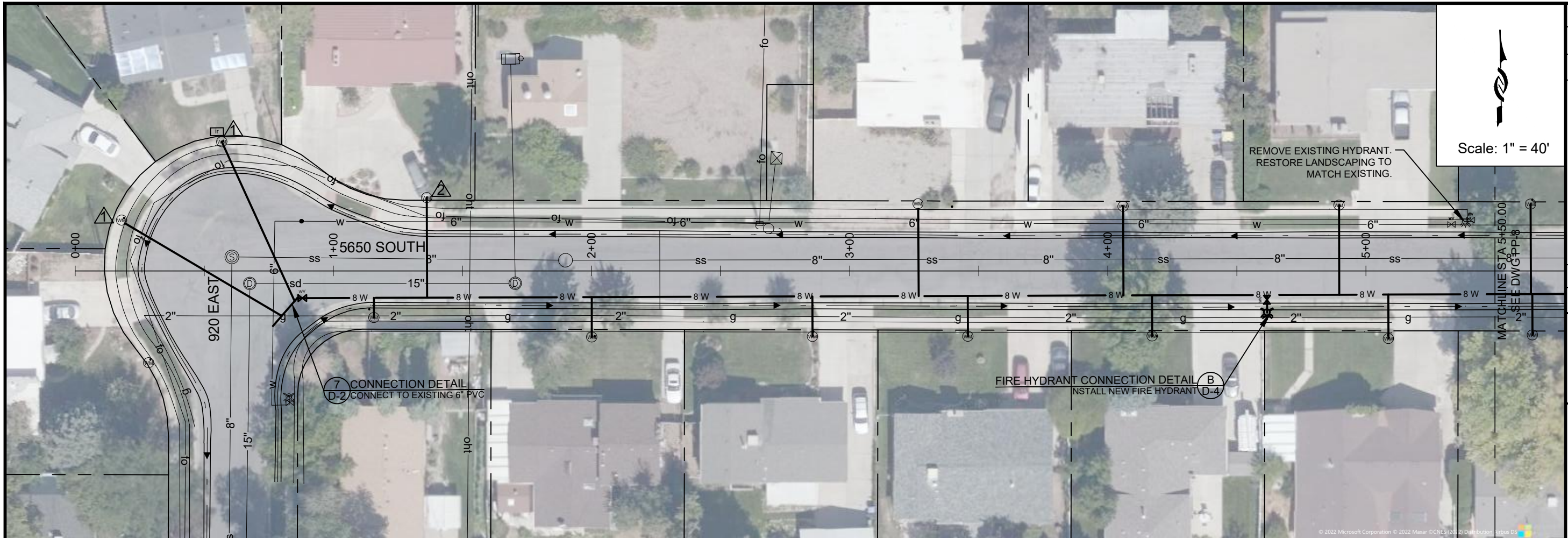
2023 Pipeline Replacement  
 OLD FARM ROAD - 2



PROJECT NUMBER  
**4270**

DRAWING NUMBER  
**PP-6**

SHEET NUMBER  
 9 OF 24



- ▲ INSTALL NEW 3/4" COPPER LATERALS. ONE PIECE FROM METER TO NEW LINE
- ▲ MOVE METER BOX OUT OF DRIVEWAY. RESTORE CONCRETE TO MATCH EXISTING DRIVEWAY.



ZONE	REV.	DESCRIPTION	BY	DATE	APP.

DESIGN:	Todd Peterson
DRAFTER:	Todd Peterson
PROJ. MGR:	Conor Tyson
DATE:	1/5/23

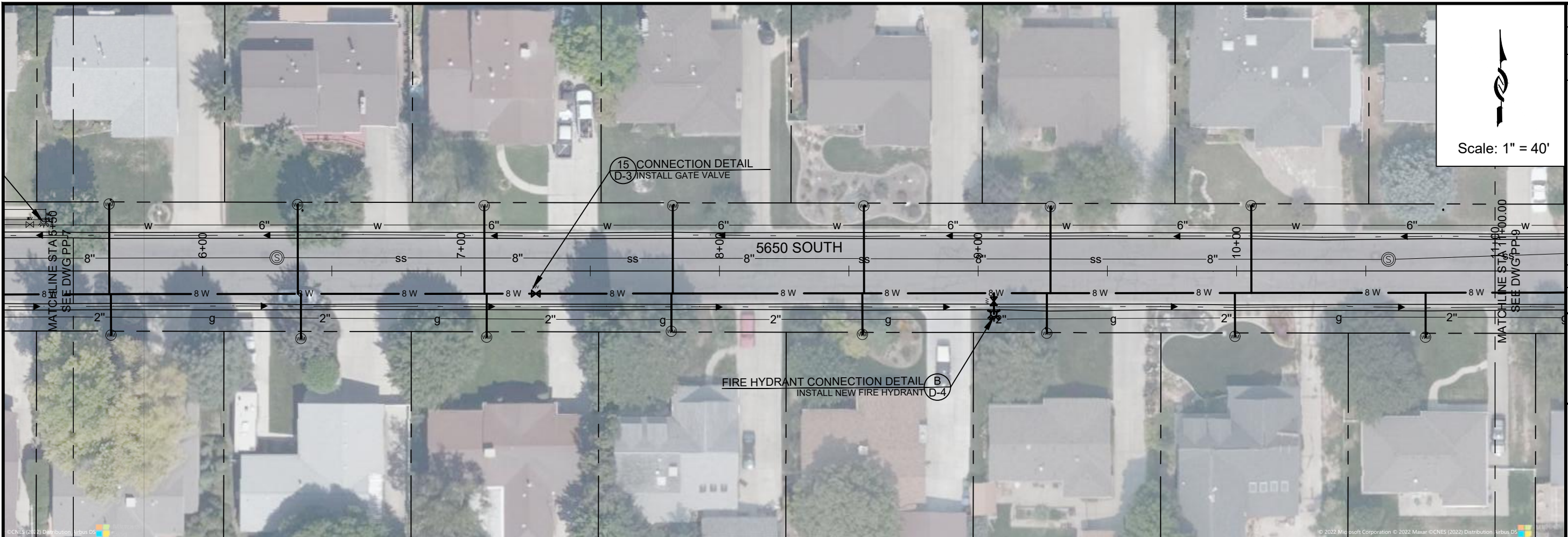
**JORDAN VALLEY WATER**  
 CONSERVANCY DISTRICT  
 8215 SOUTH 1300 WEST  
 WEST JORDAN, UTAH 84088  
 PHONE (801) 565-4300

2023 Pipeline Replacement  
 5650 SOUTH - 1

PROJECT NUMBER	4270
DRAWING NUMBER	PP-7
SHEET NUMBER	10 OF 24



Scale: 1" = 40'

15 CONNECTION DETAIL D-3 INSTALL GATE VALVE

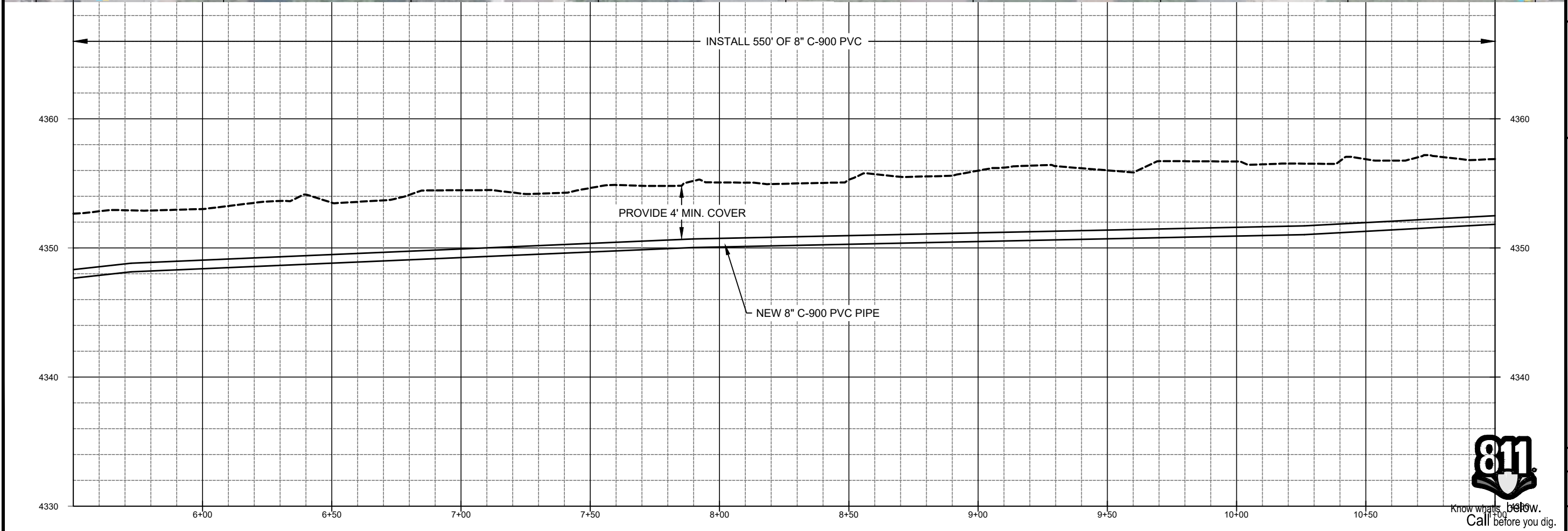
FIRE HYDRANT CONNECTION DETAIL B INSTALL NEW FIRE HYDRANT D-4

ZONE REV.	DESCRIPTION	BY	DATE	APP.

DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 12/27/22

JORDAN VALLEY WATER CONSERVANCY DISTRICT  
 8215 SOUTH 1300 WEST  
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 PHONE (801) 565-4300

2023 Pipeline Replacement  
 5650 SOUTH - 2



INSTALL 550' OF 8" C-900 PVC

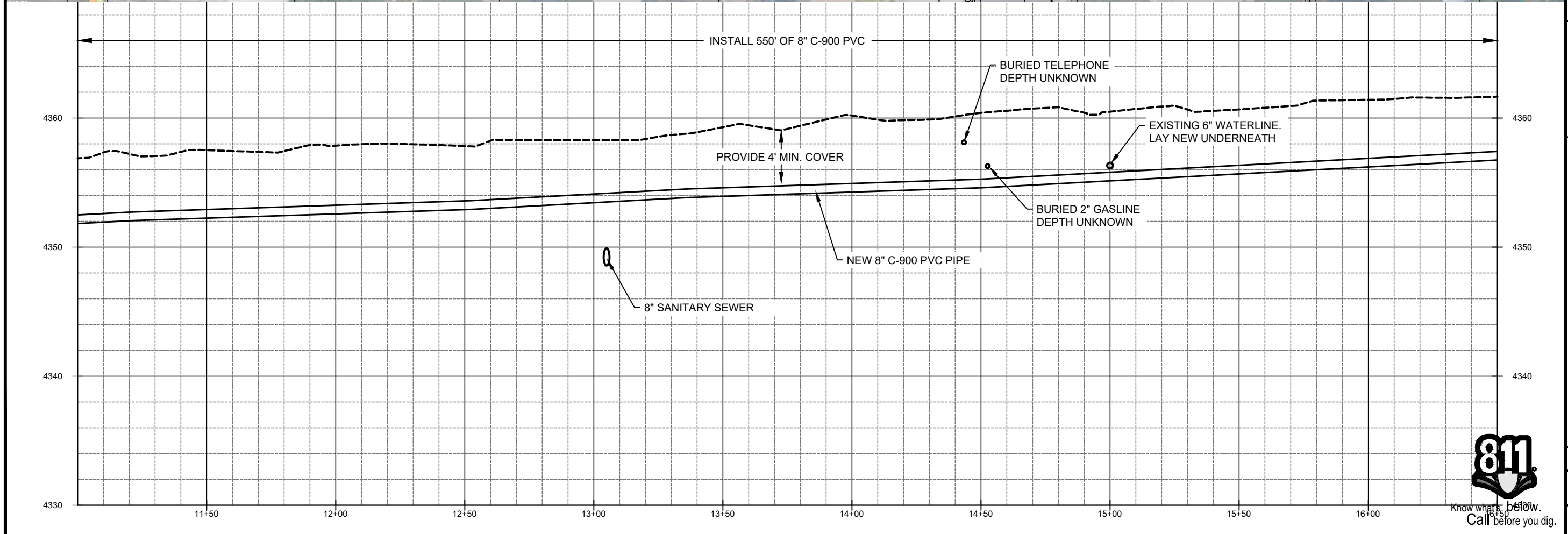
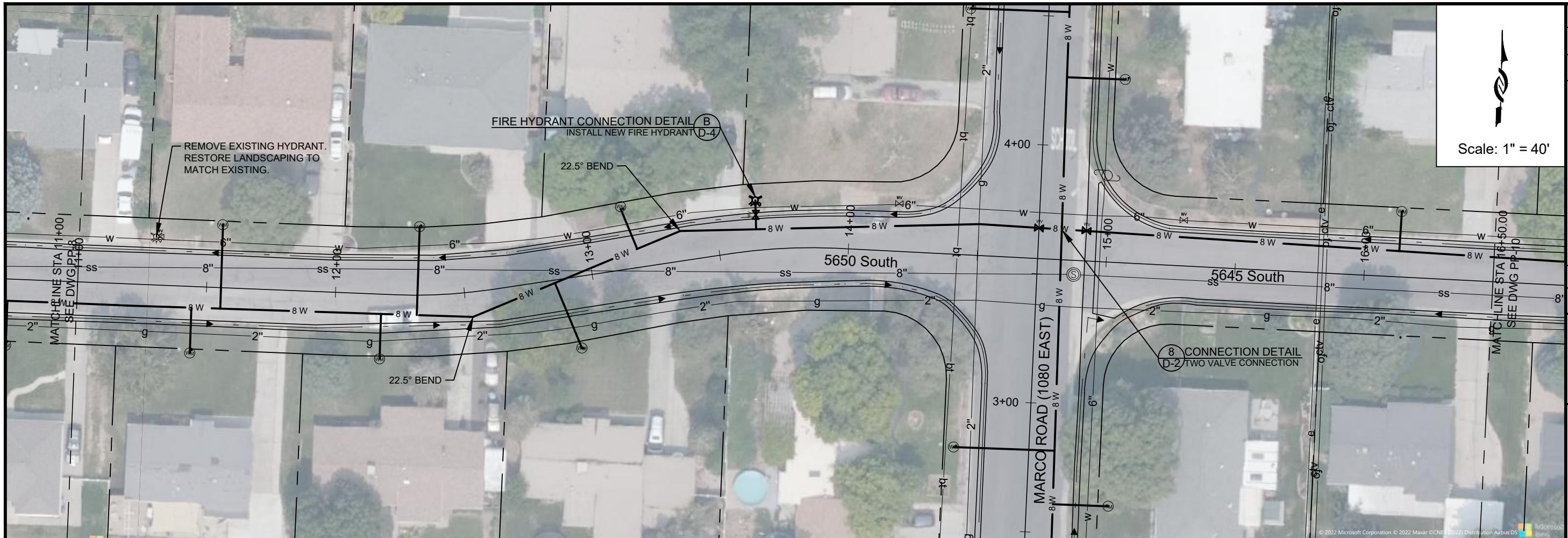
PROVIDE 4' MIN. COVER

NEW 8" C-900 PVC PIPE



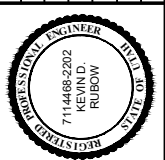
Know what's below.  
 Call before you dig.

PROJECT NUMBER 4270  
 DRAWING NUMBER PP-8  
 SHEET NUMBER 11 OF 24



Scale: 1" = 40'

ZONE	REV.	DESCRIPTION	BY	DATE	APP.



DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 12/27/22



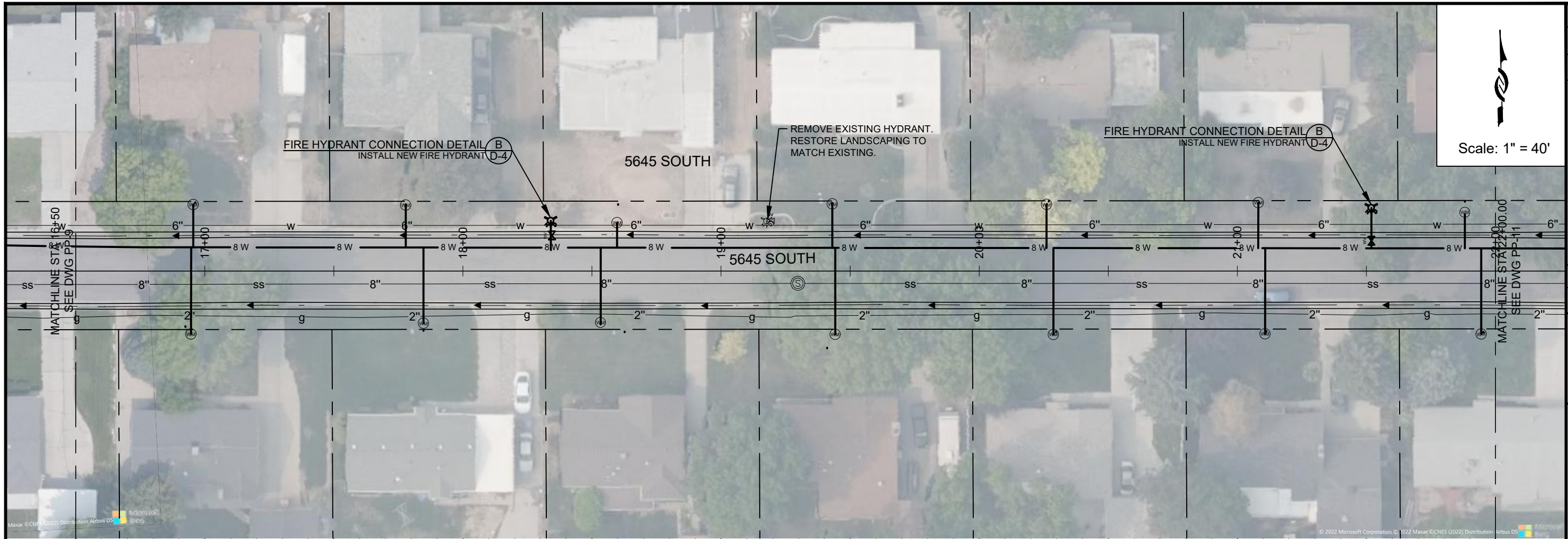
2023 Pipeline Replacement  
 5650 SOUTH - 3

PROJECT NUMBER  
 4270

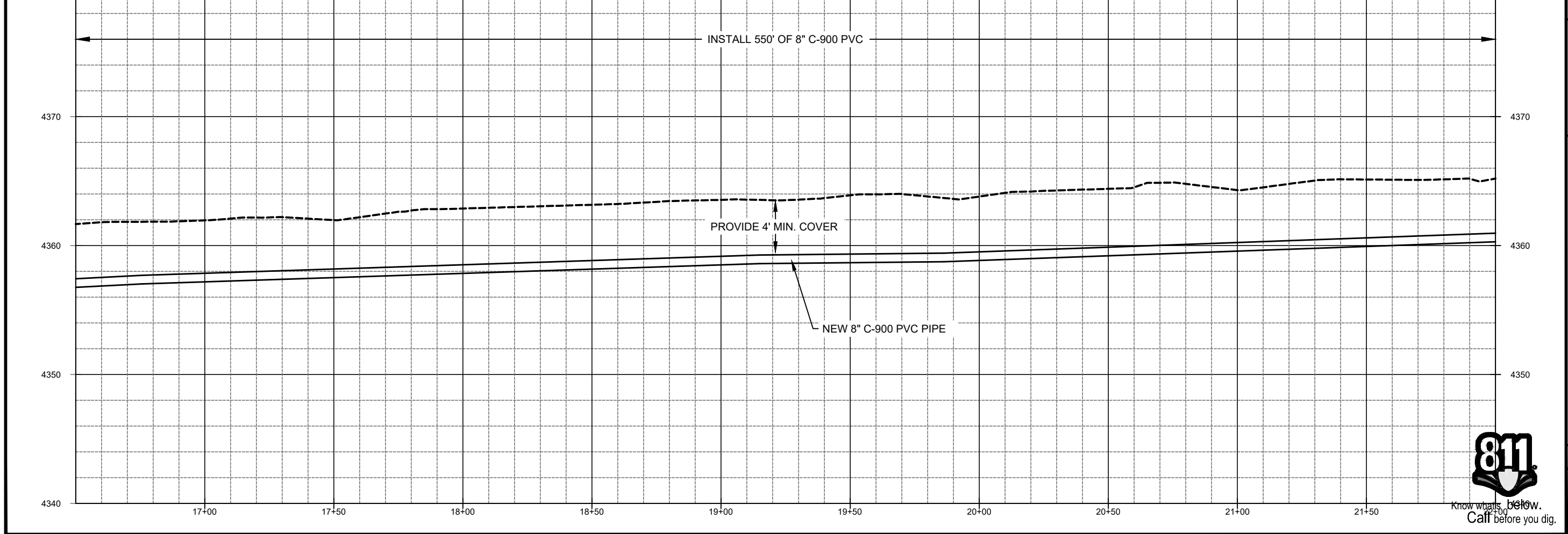
DRAWING NUMBER  
 PP-9

SHEET NUMBER  
 12 OF 24





Scale: 1" = 40'



APP	BY	DATE	DESCRIPTION

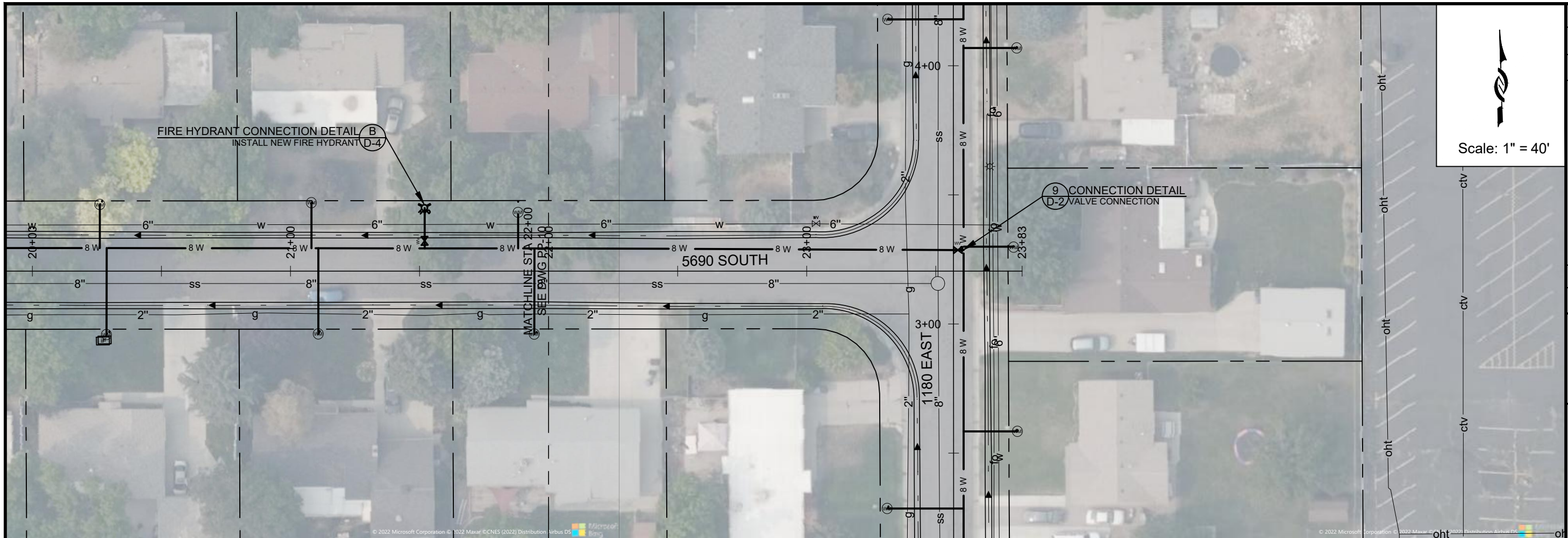
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DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 12/27/22

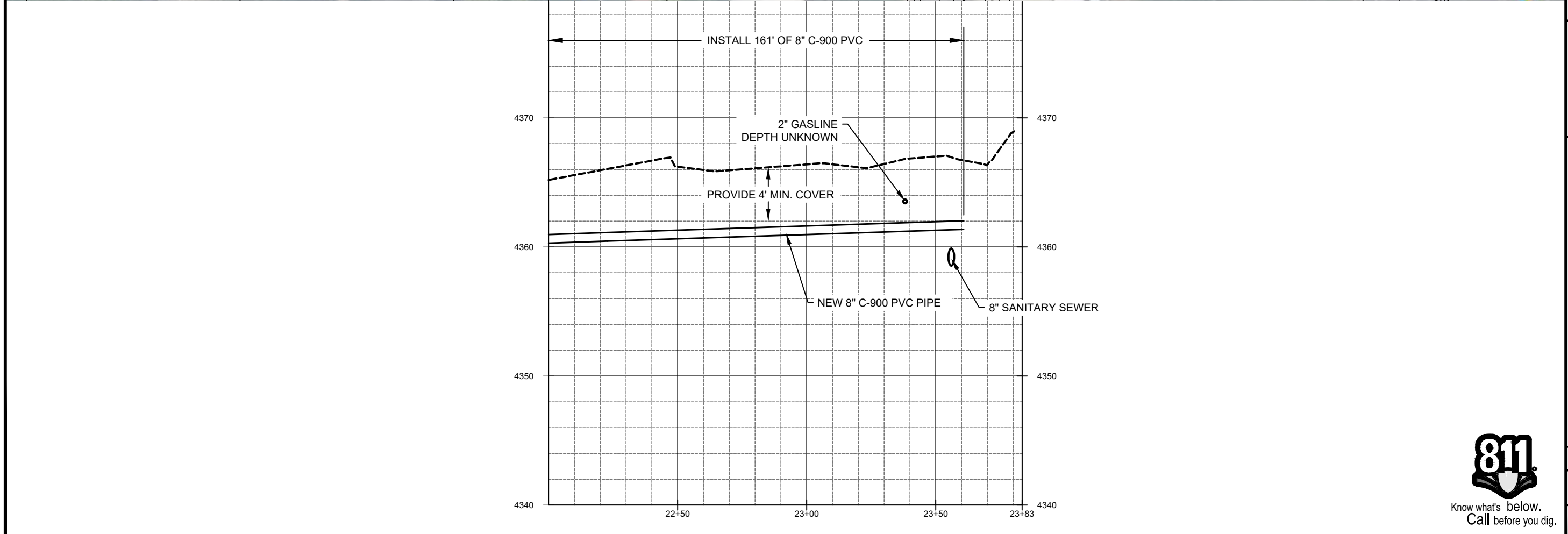
JORDAN VALLEY WATER CONSERVANCY DISTRICT  
 8215 SOUTH 1300 WEST  
 WEST JORDAN, UTAH 84088  
 PHONE (801) 565-4300

2023 Pipeline Replacement  
 5645 SOUTH - 4

PROJECT NUMBER: 4270  
 DRAWING NUMBER: PP-10  
 SHEET NUMBER: 12 OF 24



Scale: 1" = 40'



Know what's below.  
Call before you dig.

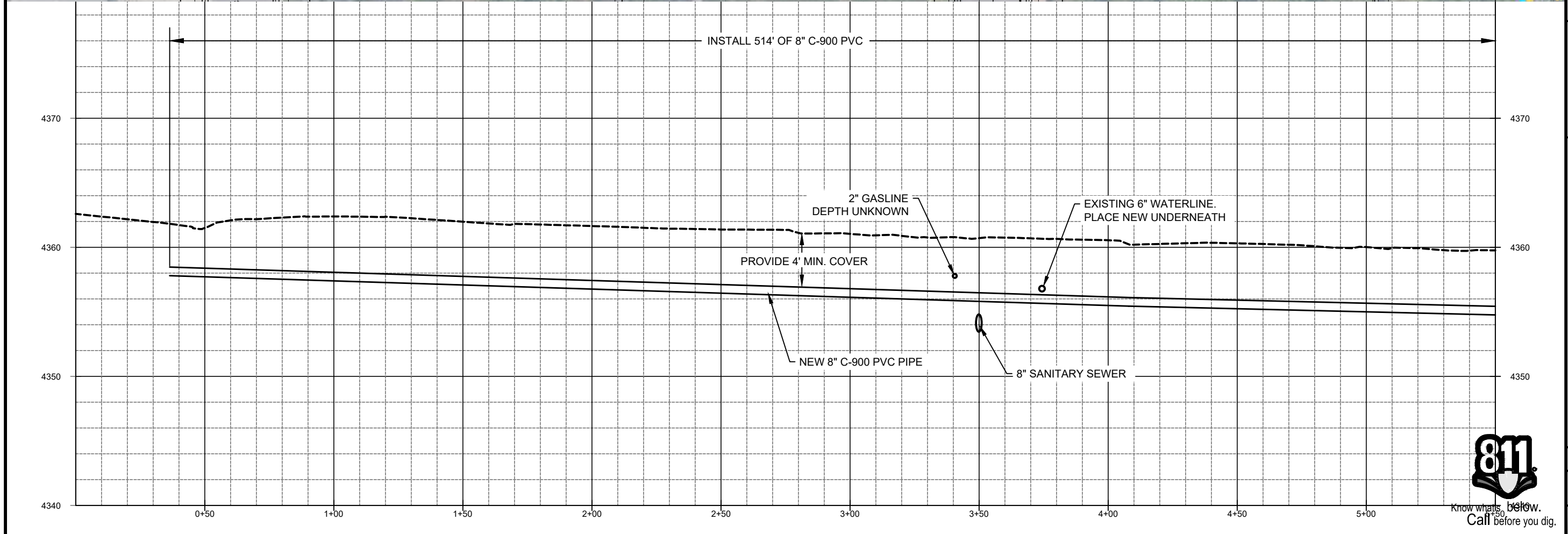
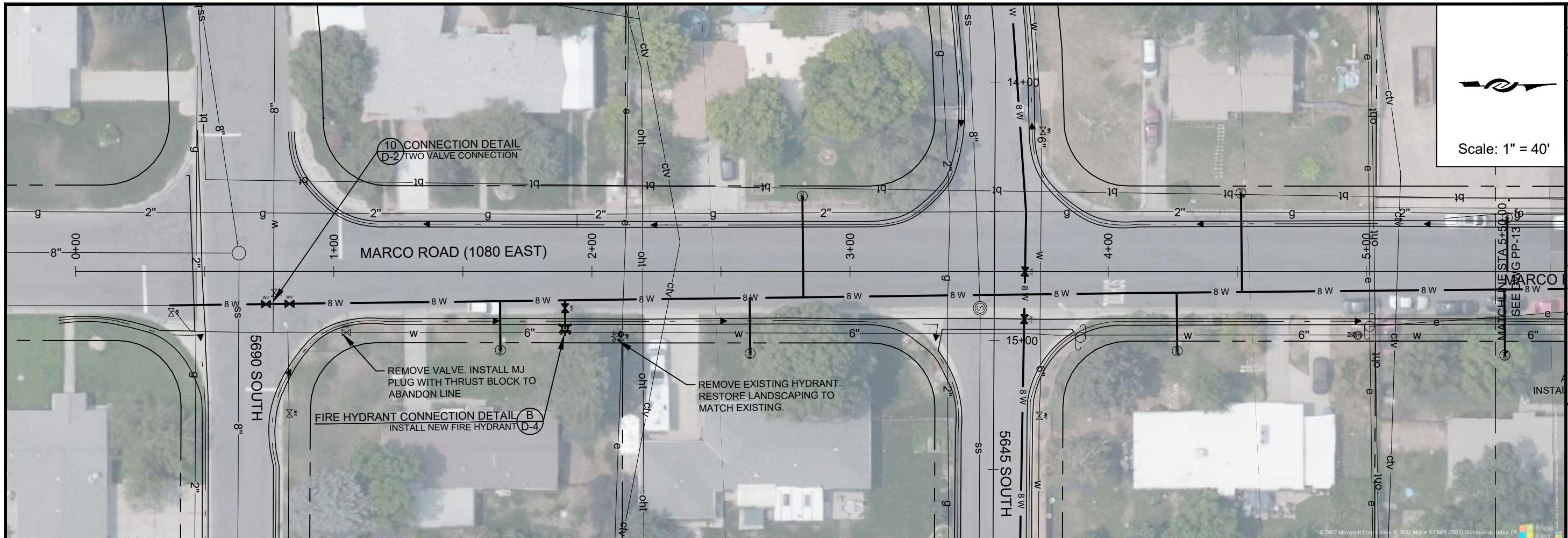
DESIGN:	Todd Peterson
DRAFTER:	Todd Peterson
PROJ. MGR:	Conor Tyson
DATE:	12/27/22

	<b>JORDAN VALLEY WATER CONSERVANCY DISTRICT</b> 8215 SOUTH 1300 WEST WEST JORDAN, UTAH 84088 PHONE (801) 565-4300
--	--

2023 Pipeline Replacement	
5645 SOUTH - 5	
PROJECT NUMBER	4270
DRAWING NUMBER	PP-11
SHEET NUMBER	14 OF 24



ZONE	REV	DESCRIPTION	BY	DATE	APP

DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Conor Tyson  
 DATE: 12/27/22

REGISTERED PROFESSIONAL ENGINEER  
 711468-2202  
 KEVIN D. RUBOW  
 UTAH

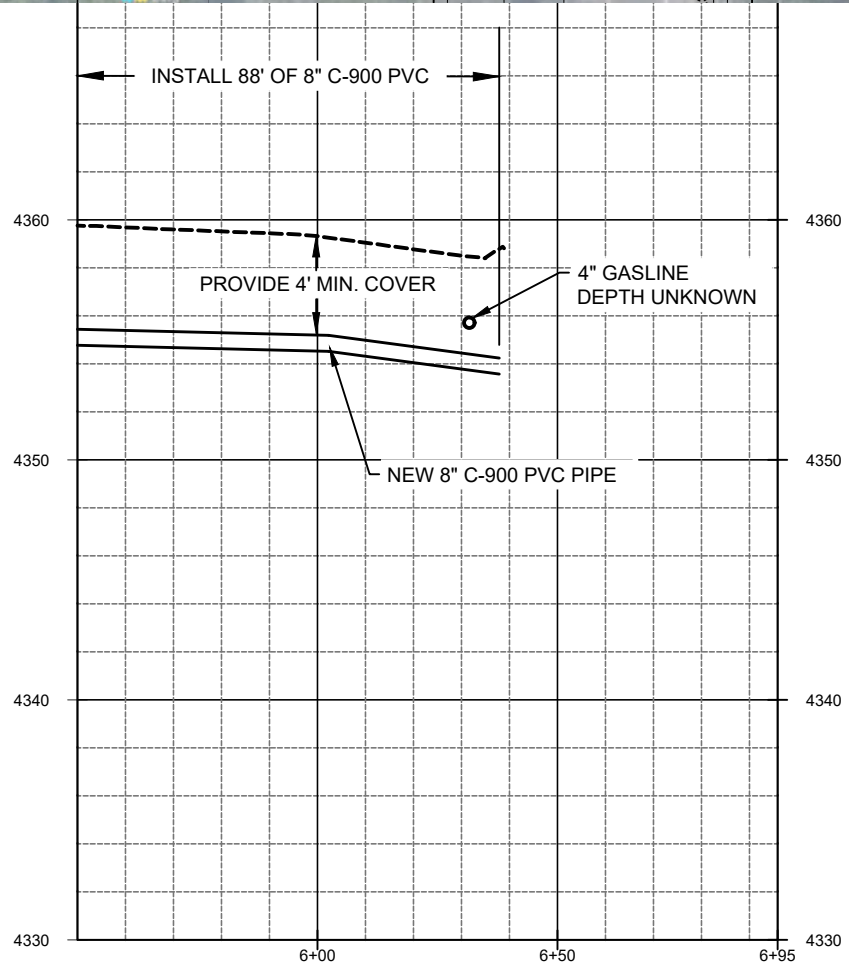
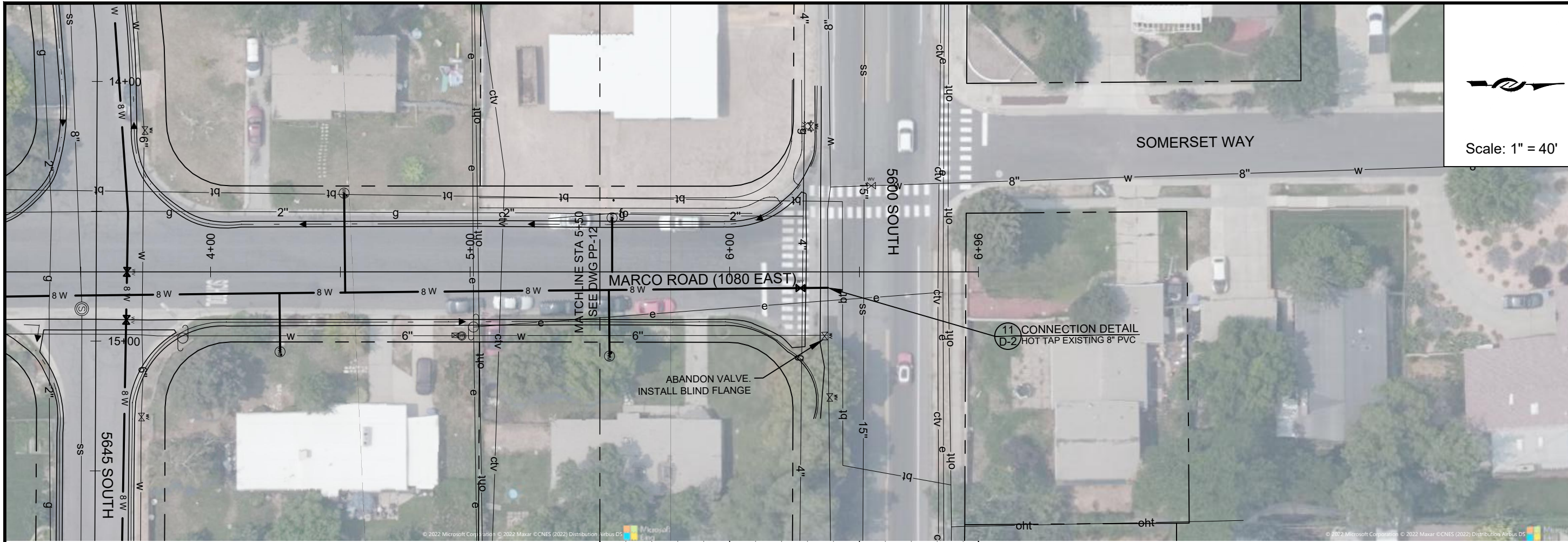
LINE IS 1 INCH AT 1/4" SIZE SHEET

JORDAN VALLEY WATER CONSERVANCY DISTRICT  
 8215 SOUTH 1300 WEST  
 WEST JORDAN, UTAH 84088  
 PHONE (801) 566-4300

2023 Pipeline Replacement  
 MARCO ROAD - 1

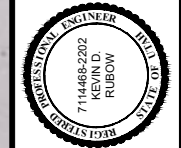
PROJECT NUMBER 4270  
 DRAWING NUMBER PP-12  
 SHEET NUMBER 15 OF 24

PIPELINE DISTRIBUTION SYSTEM 4270 - 2023 DISTRIBUTION PIPELINE REPLACEMENTS 2 ENGINEERING DRAWINGS 4270 DESIGN LAYOUTS.DWG 60.05M



Know what's below.  
Call before you dig.

ZONE	REV	DESCRIPTION	BY	DATE	APP



LINE IS 1 INCH  
AT SIXTY SIZE SHEET

DESIGN: Todd Peterson  
DRAFTER: Todd Peterson  
PROJ. MGR: Connor Tyson  
DATE: 12/27/22



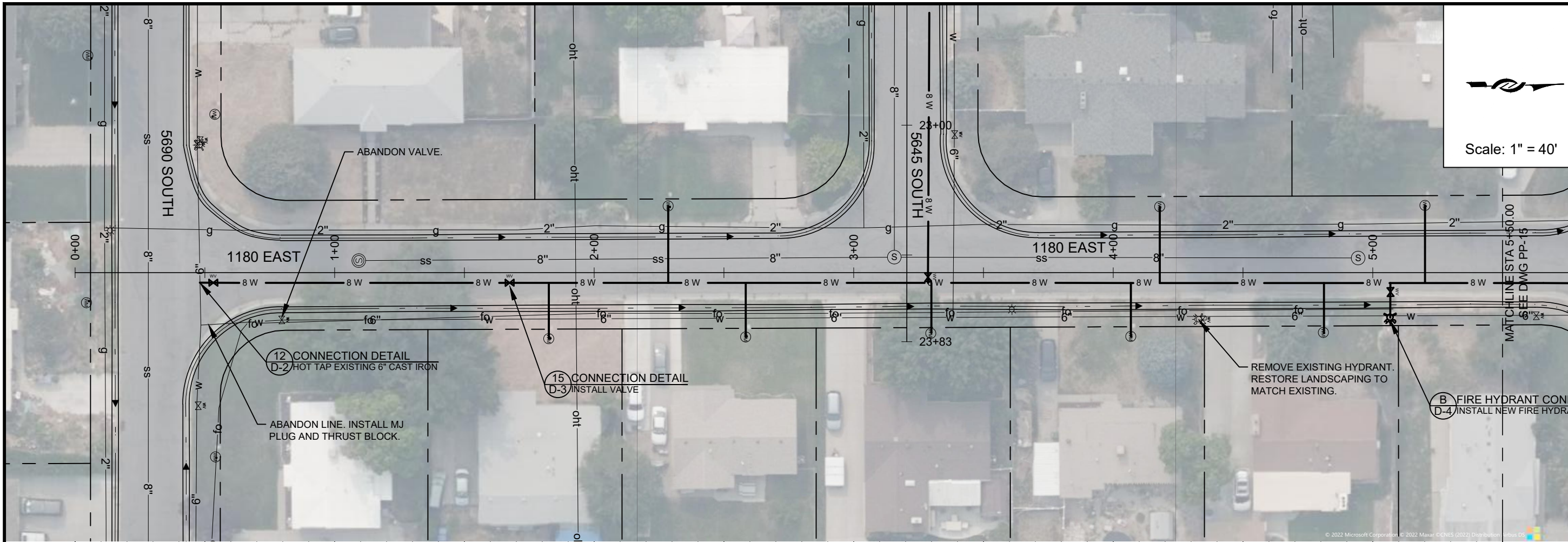
2023 Pipeline Replacement  
MARCO ROAD - 2

PROJECT NUMBER  
4270

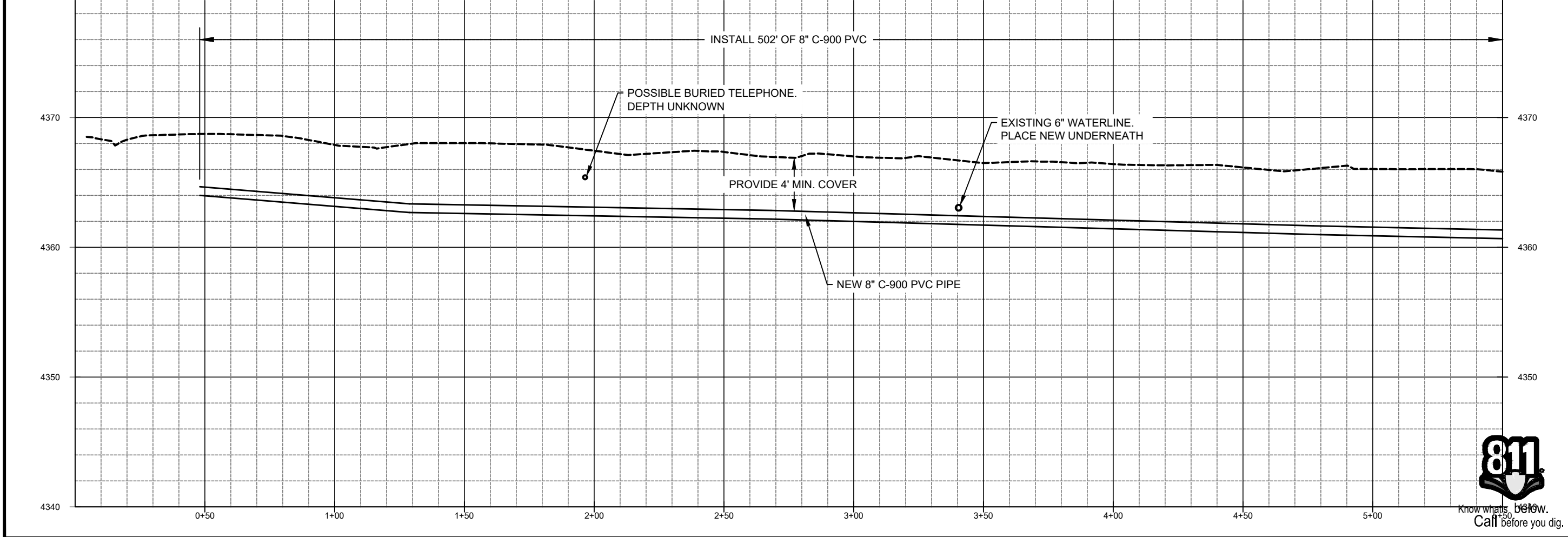
DRAWING NUMBER  
**PP-13**

SHEET NUMBER  
16 OF 24

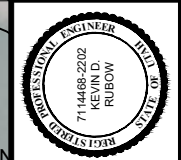




Scale: 1" = 40'



ZONE	REV	DESCRIPTION	BY	DATE	APP.



DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 12/27/22



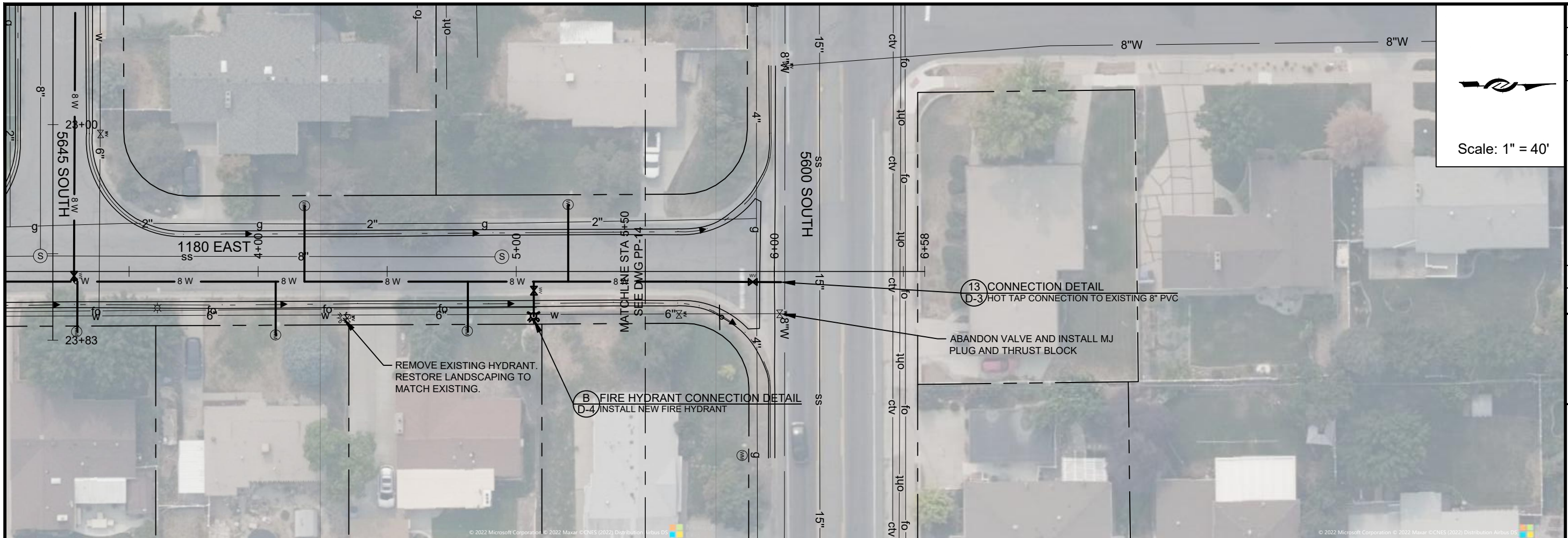
2023 Pipeline Replacement  
 1180 EAST - 1

PROJECT NUMBER  
**4270**

DRAWING NUMBER  
**PP-14**

SHEET NUMBER  
 17 OF 24





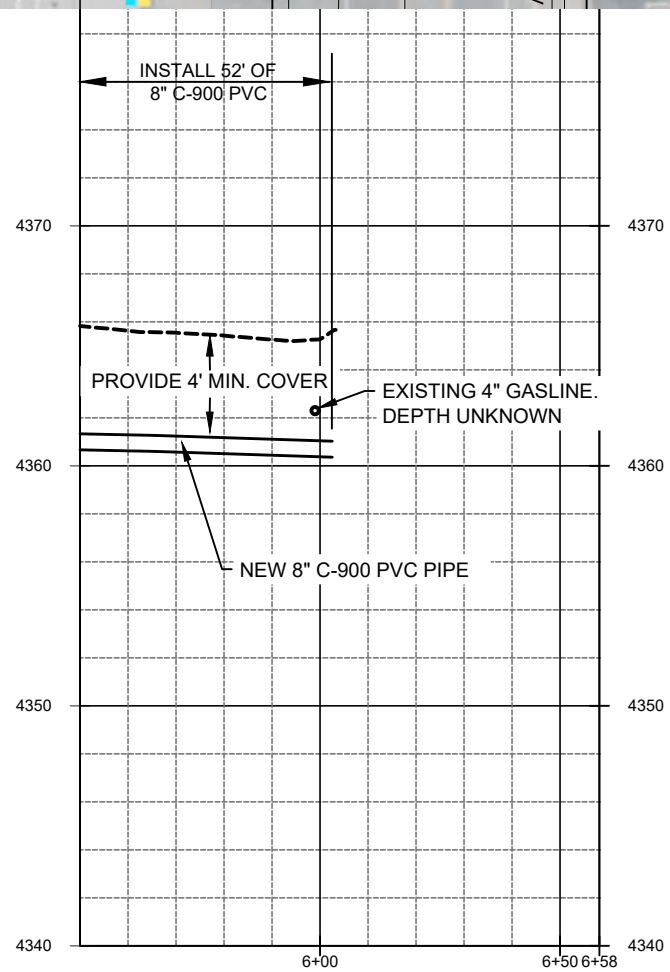
Scale: 1" = 40'

REMOVE EXISTING HYDRANT.  
RESTORE LANDSCAPING TO  
MATCH EXISTING.

(B) FIRE HYDRANT CONNECTION DETAIL  
D-4 INSTALL NEW FIRE HYDRANT

(13) CONNECTION DETAIL  
D-3 HOT TAP CONNECTION TO EXISTING 8" PVC

ABANDON VALVE AND INSTALL MJ  
PLUG AND THRUST BLOCK



Know what's below.  
Call before you dig.

ZONE	REV	DESCRIPTION	BY	DATE	APP



LINE IS 1/8" INCH  
AT SIXTY SIZE SHEET

DESIGN: Todd Peterson  
DRAFTER: Todd Peterson  
PROJ. MGR: Connor Tyson  
DATE: 1/5/23

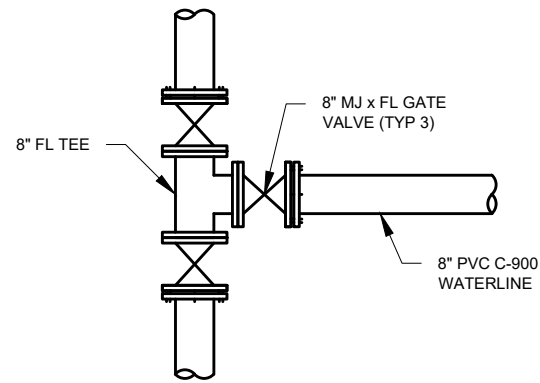


2023 Pipeline Replacement  
1180 EAST - 2

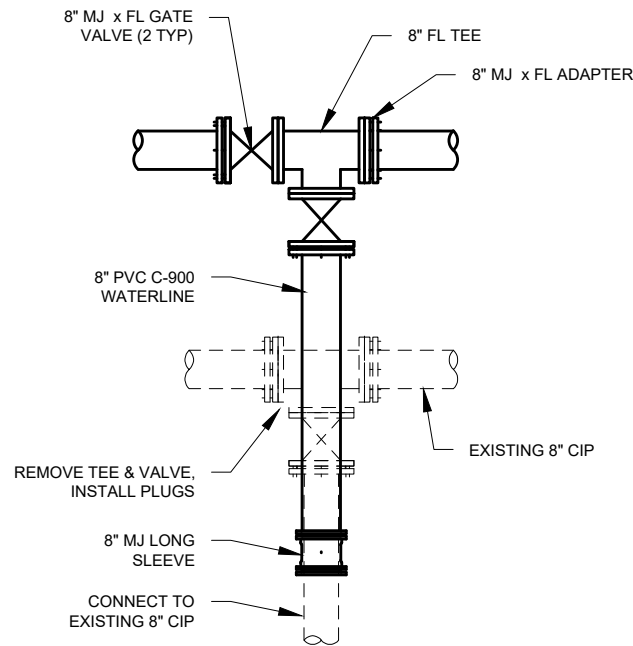
PROJECT NUMBER  
4270

DRAWING NUMBER  
**PP-15**

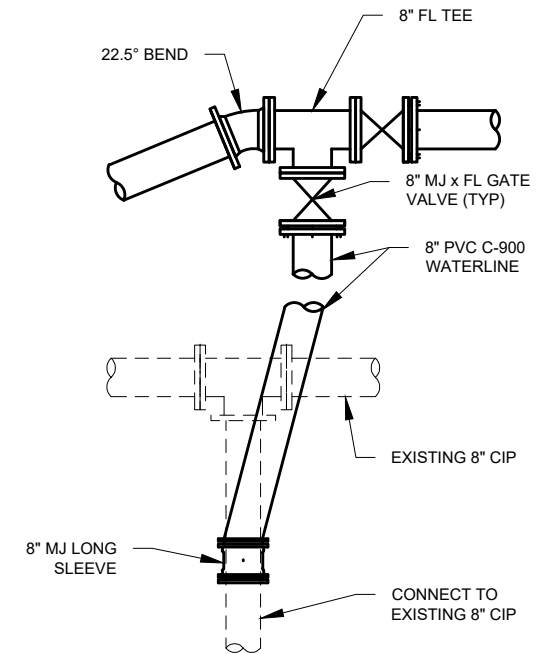
SHEET NUMBER  
18 OF 24



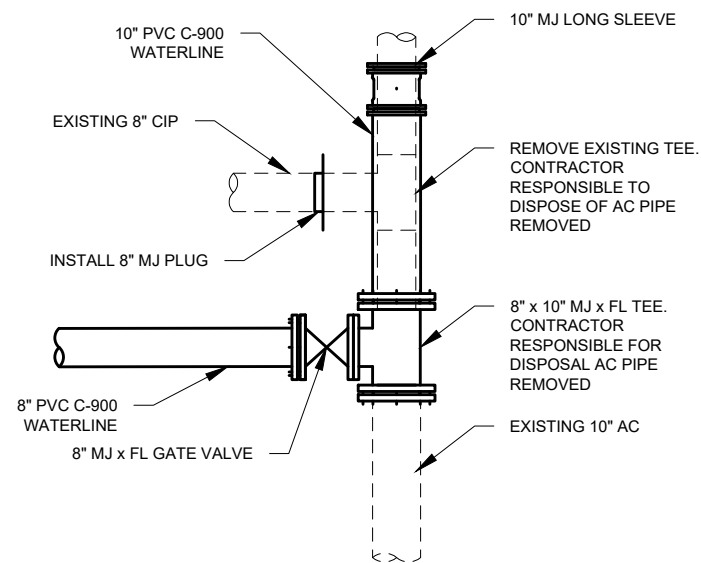
**1 CONNECTION DETAIL**  
SCALE:NTS



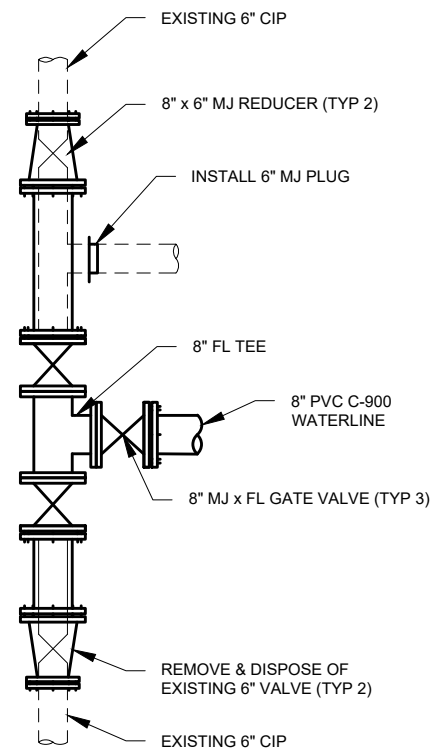
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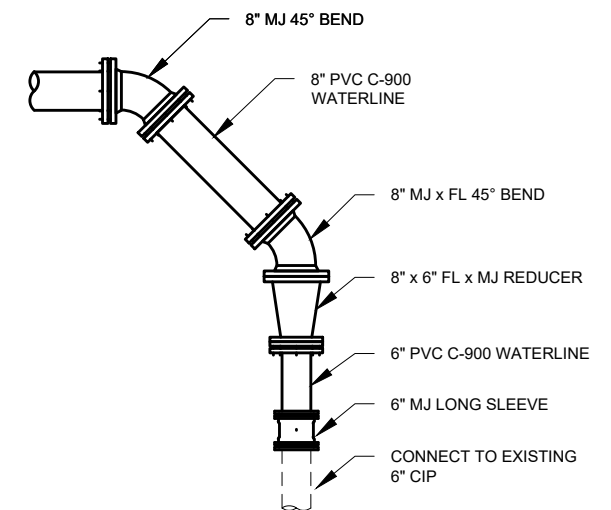
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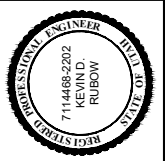
**4 CONNECTION DETAIL**  
SCALE:NTS



**5 CONNECTION DETAIL**  
SCALE:NTS



**6 CONNECTION DETAIL**  
SCALE:NTS



LINE IS 1/8" INCH  
AT 1/4" X 7/8" SIZE SHEET  
DESIGN: Todd Peterson  
DRAFTER: Todd Peterson  
PROJ. MGR: Connor Tyson  
DATE: 1/5/23

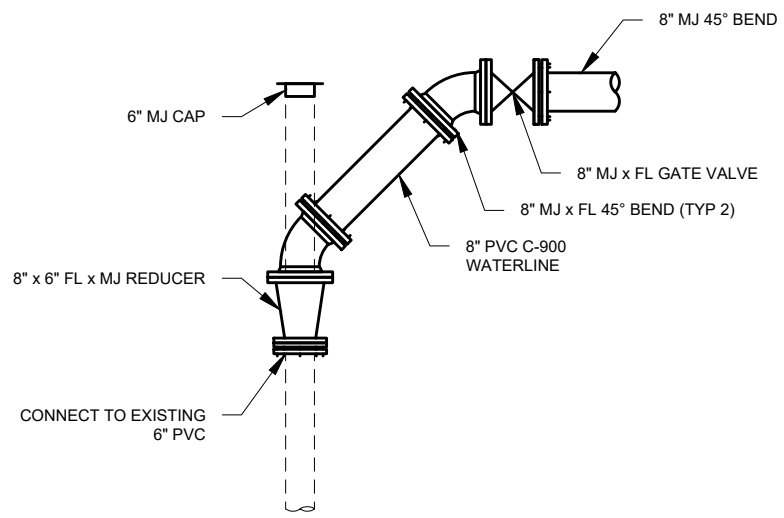


2023 Pipeline Replacement  
PIPE DETAILS - 1

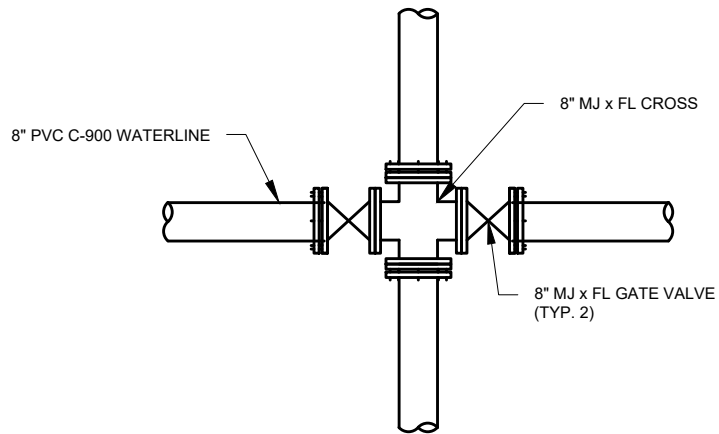
PROJECT NUMBER  
4270

DRAWING NUMBER  
D-1

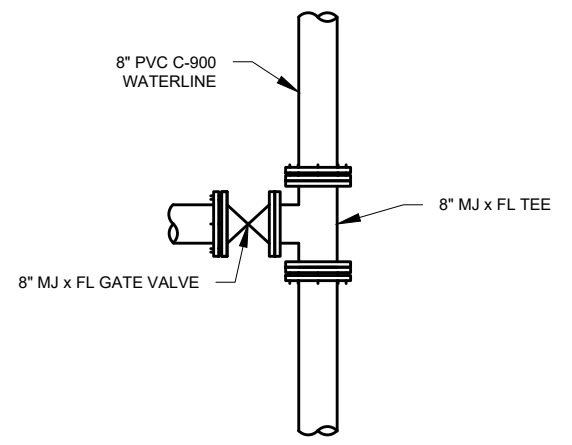
SHEET NUMBER  
19 OF 24



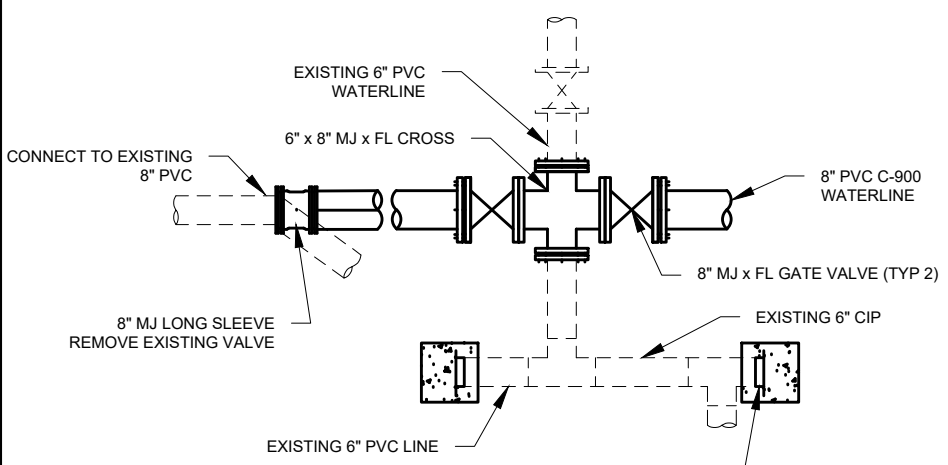
**7 CONNECTION DETAIL**  
SCALE: NTS



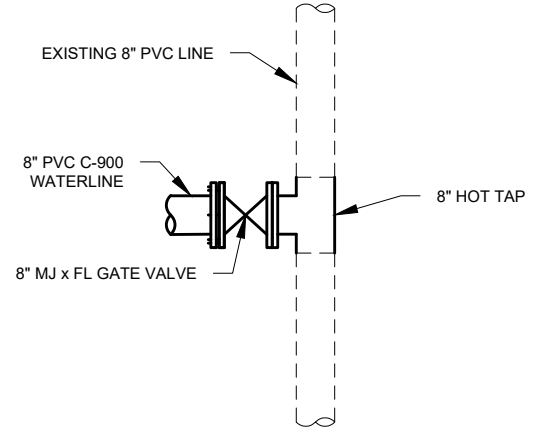
**8 CONNECTION DETAIL**  
SCALE: NTS



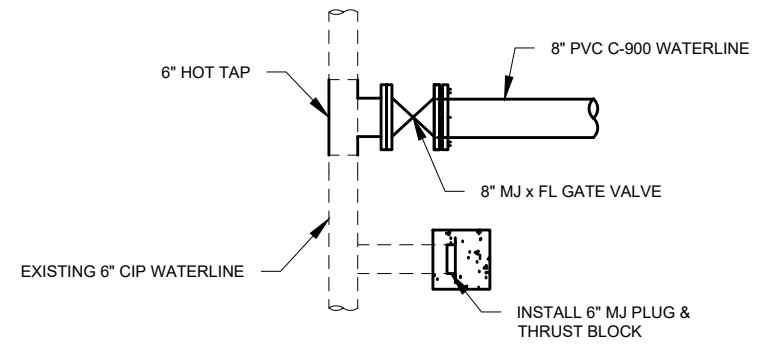
**9 CONNECTION DETAIL**  
SCALE: NTS



**10 CONNECTION DETAIL**  
SCALE: NTS



**11 CONNECTION DETAIL**  
SCALE: NTS



**12 CONNECTION DETAIL**  
SCALE: NTS



LINE IS 1 INCH  
AT 1/16" SIZE SHEET

DESIGN: Todd Peterson  
DRAFTER: Todd Peterson  
PROJ. MGR: Connor Tyson  
DATE: 1/5/23

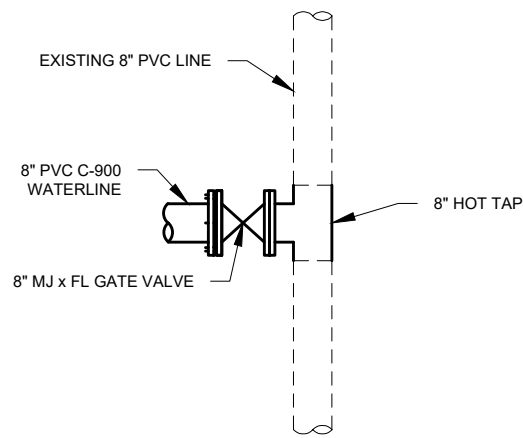
**JORDAN VALLEY WATER CONSERVANCY DISTRICT**  
8215 SOUTH 1300 WEST  
WEST JORDAN, UTAH 84088  
PHONE (801) 566-4300

2023 Pipeline Replacement  
PIPE DETAILS - 2

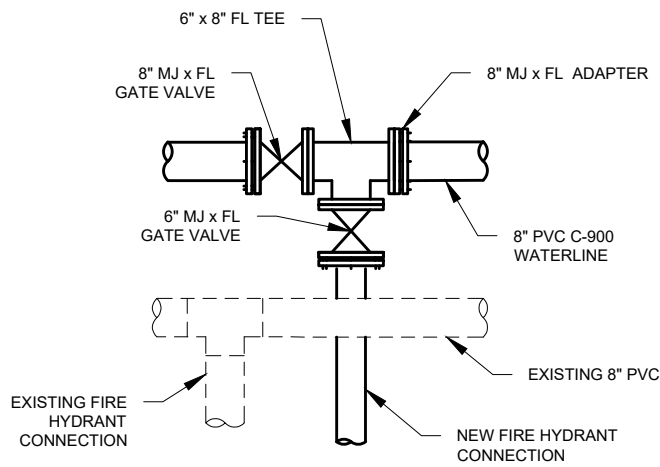
PROJECT NUMBER  
**4270**

DRAWING NUMBER  
**D-2**

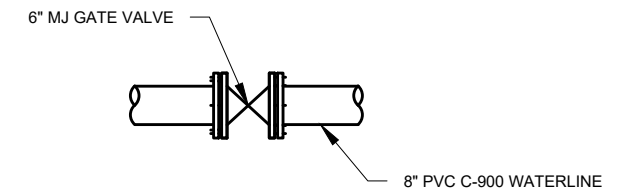
SHEET NUMBER  
**20 OF 24**



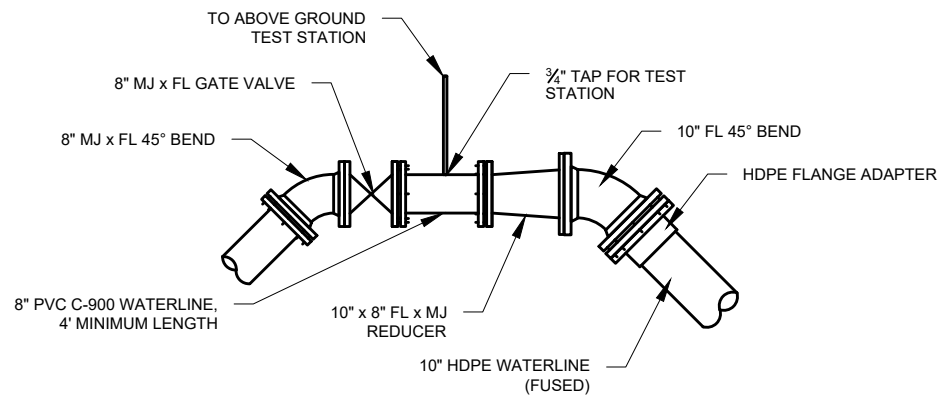
**13 CONNECTION DETAIL**  
SCALE:NTS



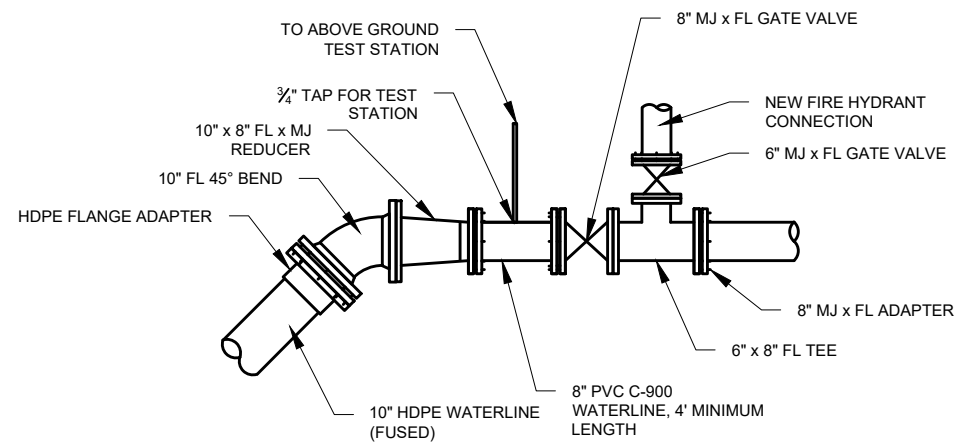
**14 CONNECTION DETAIL**  
SCALE:NTS



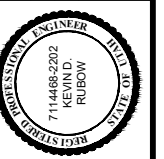
**15 CONNECTION DETAIL**  
SCALE:NTS



**16 CONNECTION DETAIL**  
SCALE:NTS



**17 CONNECTION DETAIL**  
SCALE:NTS



LINE IS 1 INCH  
AT 1/16" SIZE SHEET  
DESIGN: Todd Peterson  
DRAFTER: Todd Peterson  
PROJ. MGR: Connor Tyson  
DATE: 1/5/23

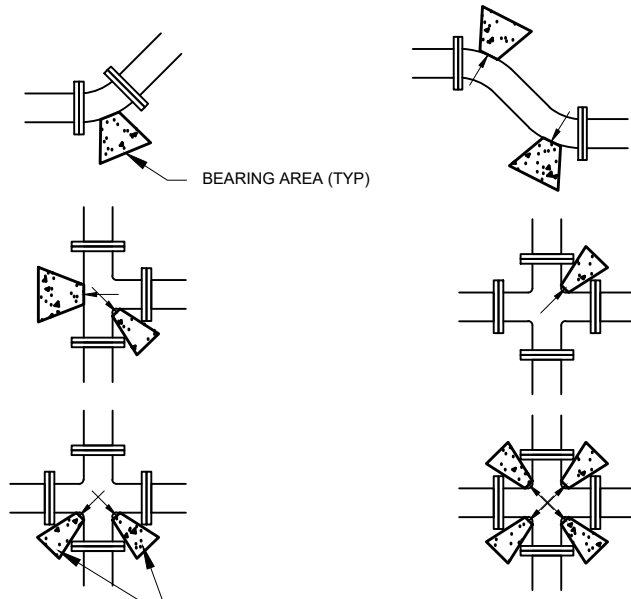
**JORDAN VALLEY WATER CONSERVANCY DISTRICT**  
8215 SOUTH 1300 WEST  
WEST JORDAN, UTAH 84088  
PHONE (801) 566-4300

2023 Pipeline Replacement  
PIPE DETAILS - 3

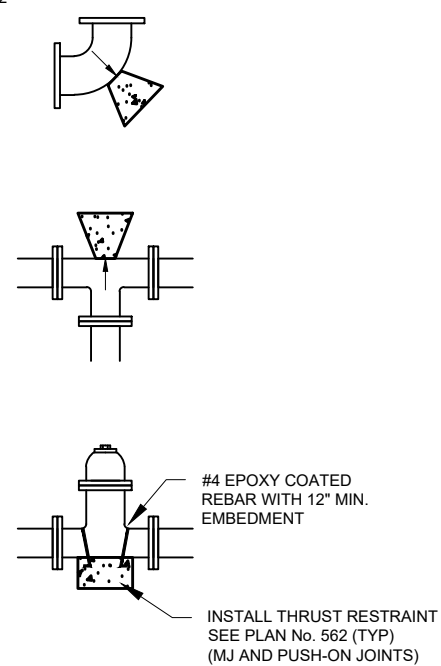
PROJECT NUMBER  
4270

DRAWING NUMBER  
**D-3**

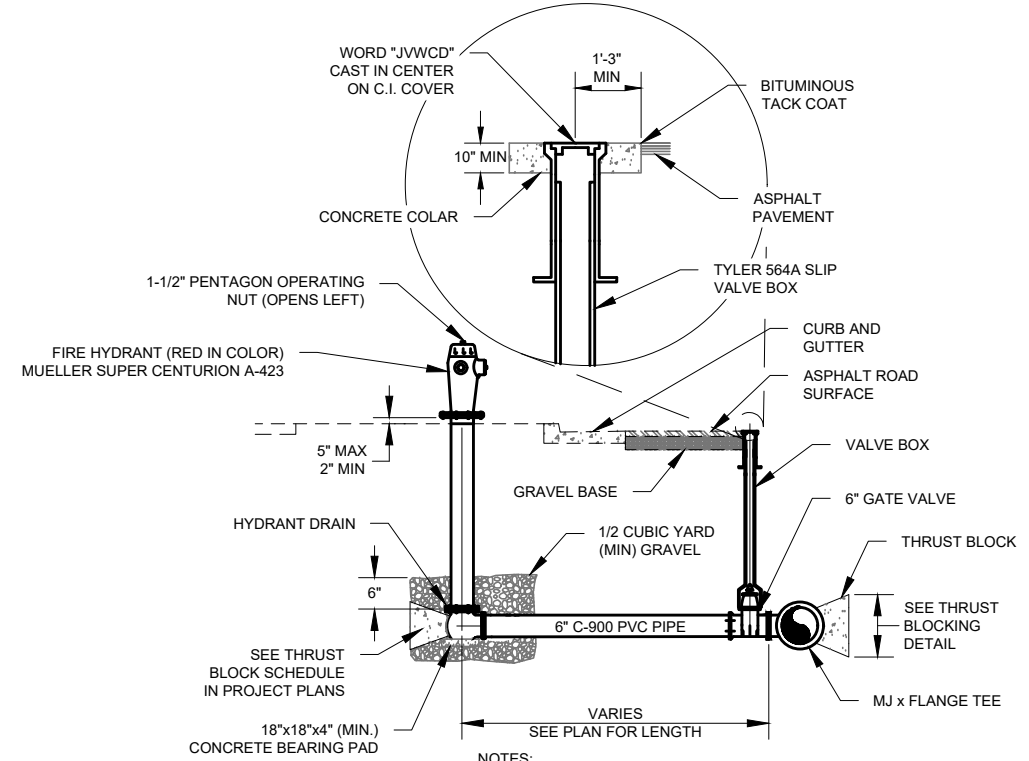
SHEET NUMBER  
21 OF 24



MINIMUM BEARING AREA IN SQ. FT.					
SIZE OF PIPE	TEES, VALVES DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4"	2	3	2	2	2
6"	4	5.5	3	1.5	1
8"	6.5	9.5	5	2.75	1.5
12"	14	20	11	5.5	3
14"	19	26.5	14.5	7.5	4
16"	24	34	18.5	9.5	6
20"	27	52	28.5	14.5	16
24"	53	74	41	21	53
30"	81	114	62	32	16



**A** TYPICAL THRUST BLOCK  
SCALE: NTS



- NOTES:**
- IF FIRE HYDRANT IS GREATER THAN 20' AWAY FROM THE TEE, A SECOND GATE VALVE SHALL BE FLANGED TO FOOT OF THE FIRE HYDRANT.
  - LOCATING WIRE IS TO BE BROUGHT UP TO THE BASE OF FIRE HYDRANT, WITH OF MINIMUM 24" OF WIRE ABOVE GRADE. DO NOT BRING LOCATING WIRE UP THE VALVE BOX.
  - WITH SITE SPECIFIC AUTHORIZATION FROM ENGINEER, INSTALL HYDRANT WITH CONCRETE PAD. PAD SHALL BE MIN. 3' WIDE.
  - RESTORE SURROUNDING LANDSCAPE TO MATCH EXISTING.

**B** FIRE HYDRANT DETAIL - INLINE  
SCALE: NTS

**TYPE 'A' RESTRAINT**  
FOR 11 1/4°-22 1/2° VERTICAL BENDS

**TYPE 'B' RESTRAINT**  
FOR 45° VERTICAL BENDS

TABLE OF DIMENSIONS				
PIPE SIZE NOMIN. DIAMETER - INCH	VB	S	d	L
4"	11.25°	8	2.0	5/8"
	22.5°	15.6	2.5	5/8"
6"	11.25°	15.6	2.5	5/8"
	22.5°	34.3	3.25	5/8"
8"	11.25°	27	3.0	5/8"
	22.5°	64	4.0	5/8"
10"	11.25°	45.5	3.5	3/4"
	22.5°	94.5	4.5	3/4"
12"	11.25°	64	4.0	3/4"
	22.5°	125	5.0	3/4"
14"	11.25°	86	4.4	3/4"
	22.5°	171	5.6	3/4"
16"	11.25°	107	4.25	7/8"
	22.5°	216	6.0	7/8"

TABLE OF DIMENSIONS				
PIPE SIZE NOMIN. DIAMETER - INCH	VB	S	d	L
4"	45°	1	3.0	5/8"
				5/8"
6"	45°	2.37	4.0	5/8"
				5/8"
8"	45°	3.97	4.75	5/8"
				5/8"
10"	45°	6.51	5.50	5/8"
				5/8"
12"	45°	9.04	6.25	5/8"
				5/8"
14"	45°	12.70	7.00	5/8"
				5/8"
16"	45°	17.24	7.75	3/4"
				3/4"

- NOTES:**
- CONCRETE SHALL BE 4,000 PSI.
  - MIN YIELD STRENGTH OF STEEL TIE-DOWN BARS IS 70,000 PSI.
  - POUR CONCRETE AGAINST UNDISTURBED SOILS.
  - APPLY GREASE TO ALL BURIED METAL SURFACES.

**C** TYPICAL VERTICAL THRUST BLOCK  
SCALE: NTS

ZONE REV:		DESCRIPTION:		BY:		DATE:	
APP:							

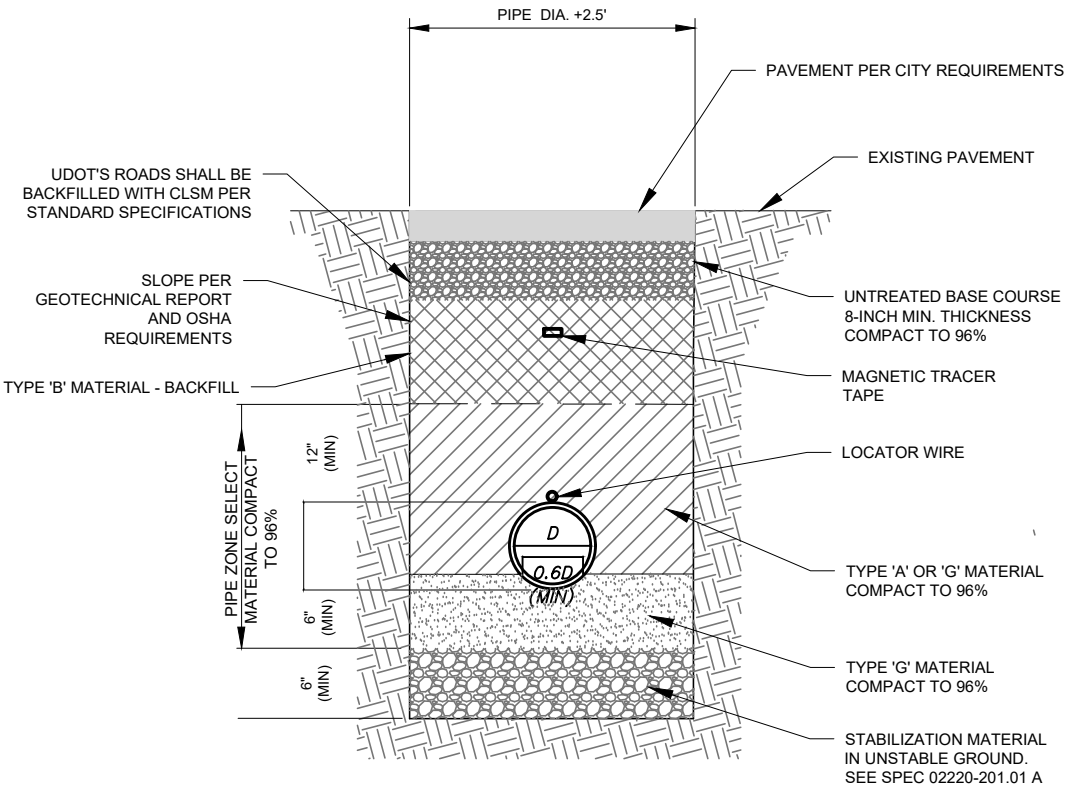
DESIGN: Todd Peterson	PROJECT: Jordan Valley Water Conservancy District	DATE: 12/27/22
DRAWN: Todd Peterson	PROJ. MGR: Connor Tyson	

JORDAN VALLEY WATER CONSERVANCY DISTRICT  
8215 SOUTH 1300 WEST  
WEST JORDAN, UTAH 84088  
PHONE (801) 566-4300

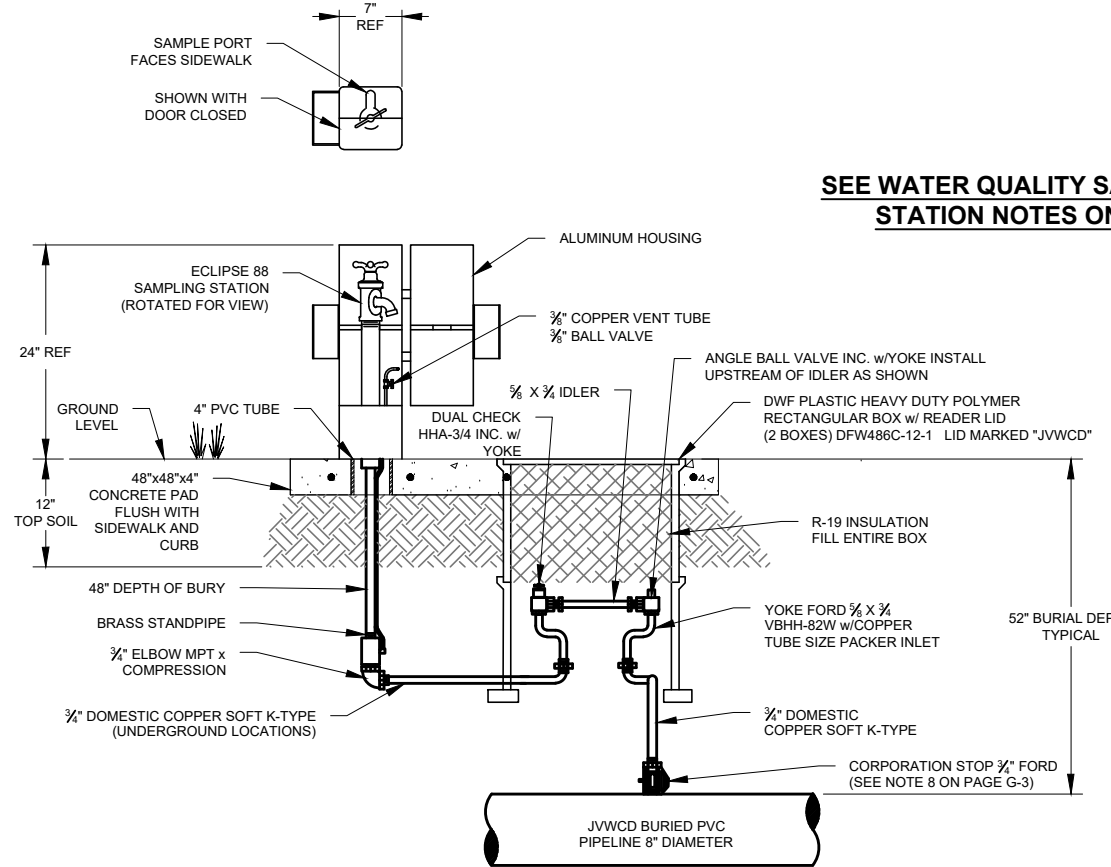
PROJECT NUMBER <b>4270</b>	DRAWING NUMBER <b>D-4</b>
SHEET NUMBER <b>22 OF 24</b>	

2023 Pipeline Replacement  
PIPE DETAILS - 4

I:\PIPELINE\SYSTEM4270 - 2023 DISTRIBUTION PIPELINE REPLACEMENTS\4270\_PIPE DETAILS.DWG 2.95M

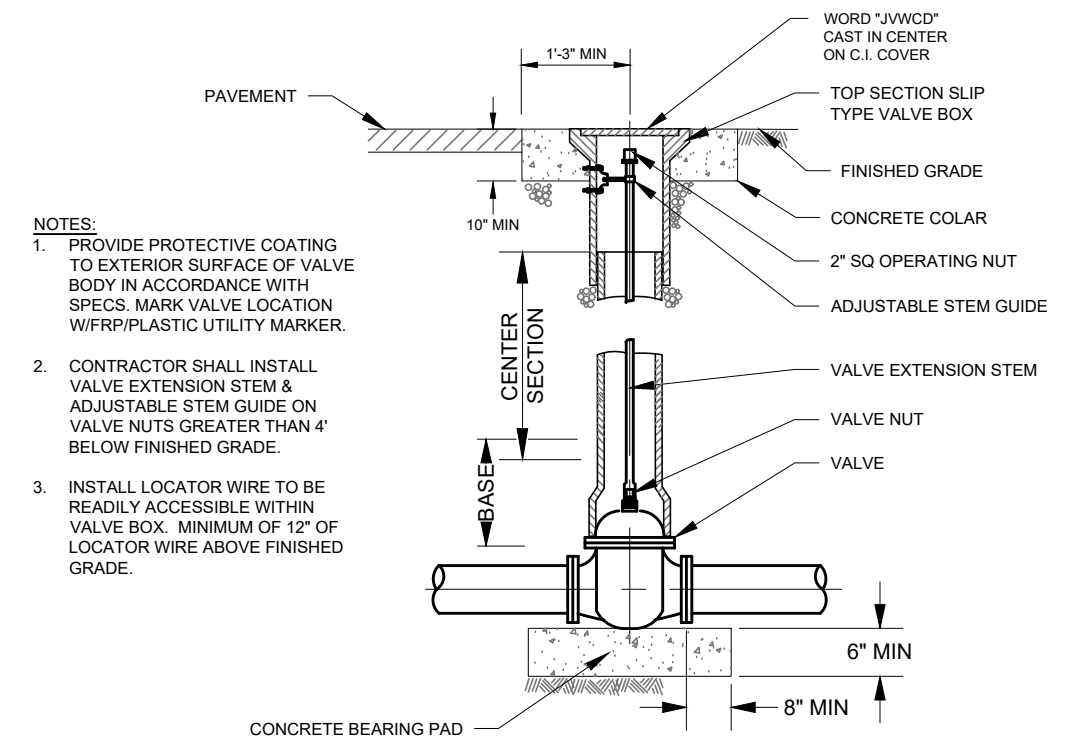


**D** PIPE TRENCH SECTION  
SCALE: NTS



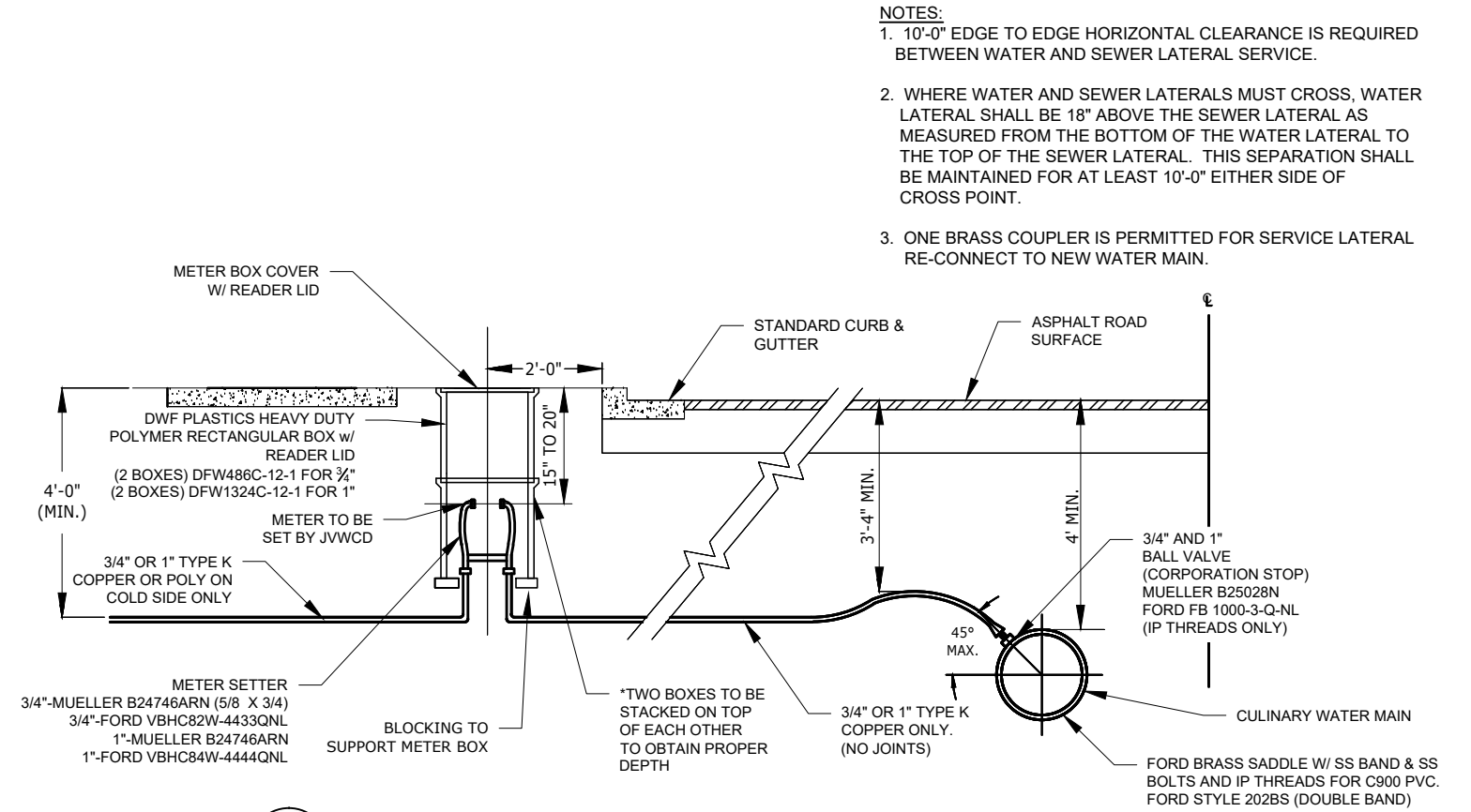
**E** WATER QUALITY SAMPLING STATIONS  
SCALE: NTS

**SEE WATER QUALITY SAMPLING STATION NOTES ON G-3**



**NOTES:**  
1. PROVIDE PROTECTIVE COATING TO EXTERIOR SURFACE OF VALVE BODY IN ACCORDANCE WITH SPECS. MARK VALVE LOCATION W/FRP/PLASTIC UTILITY MARKER.  
2. CONTRACTOR SHALL INSTALL VALVE EXTENSION STEM & ADJUSTABLE STEM GUIDE ON VALVE NUTS GREATER THAN 4' BELOW FINISHED GRADE.  
3. INSTALL LOCATOR WIRE TO BE READILY ACCESSIBLE WITHIN VALVE BOX. MINIMUM OF 12" OF LOCATOR WIRE ABOVE FINISHED GRADE.

**F** TYPICAL VALVE BOX  
SCALE: NTS



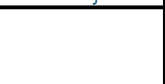
**NOTES:**  
1. 10'-0" EDGE TO EDGE HORIZONTAL CLEARANCE IS REQUIRED BETWEEN WATER AND SEWER LATERAL SERVICE.  
2. WHERE WATER AND SEWER LATERALS MUST CROSS, WATER LATERAL SHALL BE 18" ABOVE THE SEWER LATERAL AS MEASURED FROM THE BOTTOM OF THE WATER LATERAL TO THE TOP OF THE SEWER LATERAL. THIS SEPARATION SHALL BE MAINTAINED FOR AT LEAST 10'-0" EITHER SIDE OF CROSS POINT.  
3. ONE BRASS COUPLER IS PERMITTED FOR SERVICE LATERAL RE-CONNECT TO NEW WATER MAIN.

**G** TYPICAL WATER SERVICE LINE DETAIL  
SCALE: NTS

ZONE	REV	DESCRIPTION	BY	DATE	APP

LINE IS 1 INCH AT 1/16" SIZE SHEET

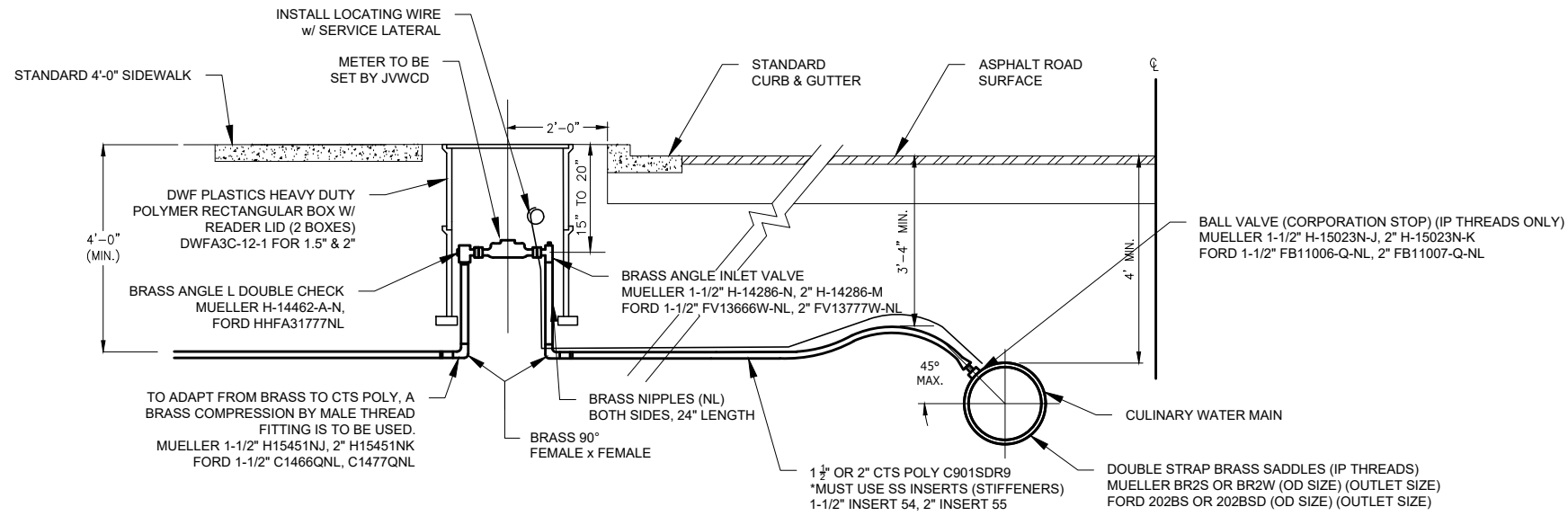
DESIGN: Todd Peterson  
DRAFTER: Todd Peterson  
PROJ. MGR: Connor Tyson  
DATE: 1/5/23



JORDAN VALLEY WATER CONSERVANCY DISTRICT  
8215 SOUTH 1300 WEST  
WEST JORDAN, UTAH 84088  
PHONE (801) 566-4300

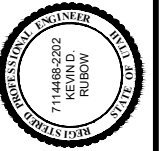
2023 Pipeline Replacement  
PIPE DETAILS - 5

PROJECT NUMBER 4270  
DRAWING NUMBER D-5  
SHEET NUMBER 23 OF 24



- NOTES:**
- 10'-0" EDGE TO EDGE HORIZONTAL CLEARANCE IS REQUIRED BETWEEN WATER AND SEWER LATERAL SERVICE.
  - WHERE WATER AND SEWER LATERALS MUST CROSS, WATER LATERAL SHALL BE 18" ABOVE THE SEWER LATERAL AS MEASURED FROM THE BOTTOM OF THE WATER LATERAL TO THE TOP OF THE SEWER LATERAL. THIS SEPARATION SHALL BE MAINTAINED FOR AT LEAST 10'-0" EITHER SIDE OF CROSS POINT.
  - ANGLE L DOUBLE CHECK FITTINGS ONLY AVAILABLE WITH 2" OUTLET, MAY NEED TO USE 2 x 1-1/2" BRASS BUSHING FOR 1-1/2" METER APPLICATIONS.

**TYPICAL 1 1/2" OR 2" WATER SERVICE LINE DETAIL**  
SCALE: NTS



LINE IS 1 INCH AT 11X17 SIZE SHEET

DESIGN: Todd Peterson  
 DRAFTER: Todd Peterson  
 PROJ. MGR: Connor Tyson  
 DATE: 1/5/23



2023 Pipeline Replacement  
 PIPE DETAILS - 6

PROJECT NUMBER  
**4270**

DRAWING NUMBER  
**D-6**

SHEET NUMBER  
 24 OF 24