

CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

SPANISH FORK CITY JOHNSON PROPERTY WATERLINE PROJECT

Drawings



Spanish Fork City

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June 2024

BOWEN COLLINS
ASSOCIATES



2700 N

1150 W

500 W

1900 N

1600 N

SPANISH FORK AIRPORT

MAIN ST

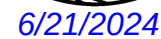
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PROJECT LOCATION

SPANISH FORK

IMAGE: BING 2015

PROJECT VICINITY MAP

[illegible]

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING

JOHNSON PROPERTY WA

SPANISH FORK CITY

SPANISH FORK

DESIGN	REVIEW
DESIGN E. NEIL	CHECKED E. NEIL
DRAWN J. BLACK	APPROVED E. NEIL

DATE: JUNE 2024

PROJECT LOCATION
VICINITY MAPS,
AND INDEX OF DRAWINGS

PROJECT NUMBER 204-24-02

DRAWING NO.
G-01

SHEET 01 OF 09

[illegible]

(1) SECTION CUT SHOWN ON DRAWING AS:

SECTION LETTER

A

C-10

DRAWING NUMBER WHERE THE SECTION IS SHOWN (SEE NOTE A)

(2) THIS SECTION IS IDENTIFIED AS:

SECTION LETTER

SECTION

SCALE: AS DESIGNATED

M-01,C-01...

DRAWING NUMBER WHERE THE SECTION CUT IS SHOWN (SEE NOTE A)

(1) DETAIL IDENTIFICATION SHOWN ON DRAWING AS:

DETAIL NUMBER 3

DRAWING NUMBER WHERE THE DETAIL IS SHOWN C-10

THE DETAIL NAME IS OPTIONAL AND LOCATED HERE, FOLLOWING DETAIL CALLOUT

(2) THIS DETAIL IS IDENTIFIED AS:

DETAIL

SCALE: AS DESIGNATED

DETAIL NUMBER 1

DRAWING NUMBER WHERE THE DETAIL IS SHOWN (SEE NOTE A) M-01,C-01...

TYPICAL DETAIL

NTS

TYPICAL DETAIL NUMBER, SEE INDEX
OF DRAWINGS FOR LOCATION OF
GENERAL DRAWINGS

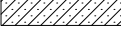
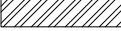
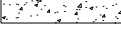
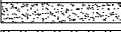
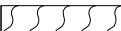
C
2000

LETTER	DISCIPLINE
G	GENERAL
C	CIVIL
GC	GENERAL CIVIL DETAILS

S-02 _____ INDIVIDUAL DRAWING NUMBER
 _____ DISCIPLINE

- A. IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A HORIZONTAL LINE.
- B. ELECTRICAL SYMBOLS SHOWN ON ELECTRICAL DRAWINGS. FOR WELDING SYMBOLS USE AMERICAN WELDING SOCIETY STANDARD SYMBOLS. SEE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.

	COORDINATE IDENTIFICATION
	ELEVATION INDICATOR
	SECTION CORNER
	BENCH MARK
	MONUMENT INDICATOR
	POTHOLE
	TEST HOLE
	BORING HOLE
	SECTION LINE
	PROPERTY LINE
	EASEMENT
	PARCEL
	RIGHT-OF-WAY
	NEW ASPHALT
	EXISTING ASPHALT
	CENTERLINE
	CONTOUR LINE, FINISHED GRADE
	CONTOUR LINE, EXISTING GRADE
	FINISHED ELEVATION
	EXISTING ELEVATION
	CUT OR FILL SLOPE TO BE CONSTRUCTED
	SILT FENCE
	FENCE
	RAILROAD
	DITCH
	CULVERT
	RIPRAP
	TREE LINE/VEGETATION
	EXISTING STRUCTURE OR FACILITY
	NEW STRUCTURE OR FACILITY
	FUTURE STRUCTURE OR FACILITY
	NEW PIPELINE (CIVIL SHEETS)
	NEW PIPELINE 10" DIA AND SMALLER (CIVIL SHEETS)
	EXISTING UTILITY PIPELINE
	ATMS
	CABLE
	COMMUNICATION BURIED
	COMMUNICATION OVERHEAD
	ELECTRICAL BURIED
	ELECTRICAL OVERHEAD
	FIBER OPTICS OVERHEAD
	FIBER OPTICS UNDERGROUND
	GAS
	IRRIGATION
	PETROLEUM LINE
	SANITARY SEWER
	STORM DRAIN
	TELEPHONE BURIED
	TELEPHONE OVERHEAD
	WATERLINE
	CABLE BOX
	CATCH BASIN
	ELECTRICAL BOX
	HYDRANT
	GAS MANHOLE
	SEWER MANHOLE
	STORM DRAIN MANHOLE
	TELEPHONE MANHOLE
	WATER MANHOLE
	WATER METER

	POWER POLE
	TELEPHONE BOX
	LIGHT POLE ONE LUMINAIRE
	LIGHT POLE TWO LUMINAIRES
	LIGHT POLE
	STREET LIGHT WITH BRACKET
	TO BE REMOVED OR ABANDONED
	MASONRY
	STEEL
	INSULATION
	GRAVEL
	CONCRETE
	EARTH
	SAND
	ALUMINUM OR METAL DECKING
	CHECKERED PLATE
	GRATING
	PLASTIC, RUBBER OR NEOPRENE
	WOOD (ROUGH FRAMING) OR, OPENING OR DEPRESSION IN SLAB OR WALL
	DUCT (FIRST DIMENSION DUCT SIDE SHOWN, SECOND DIMENSION DUCT SIDE NOT SHOWN)
	SUPPLY OR OUTSIDE AIR DUCT (FIRST DIMENSION, DUCT WIDTH)
	EXHAUST OR RETURN AIR DUCT (FIRST DIMENSION, DUCT WIDTH)
	CEILING SUPPLY DIFFUSER (SIZE IN INCHES)
	CEILING RETURN OR EXHAUST AIR GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
	EXHAUST OR RETURN AIR GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
	SUPPLY GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
	AIR TURNING VANES IN DUCT
	DEFLECTING DAMPER
	FIRE HOSE CABINET
	FIRE EXTINGUISHER
	UNIT HEATER
	PRESSURE CLEANOUT TO GRADE
	WALL CLEANOUT
	FLOOR CLEANOUT
	CLEANOUT TO GRADE
	BLOW OFF ASSEMBLY
	HUB DRAIN
	FLOOR DRAIN
	FLOOR SINK
	DRAIN TRAP

	24" RCP-RW	PIPE SIZE AND TYPE/FLUID ABBREVIATION (USE FOR EXISTING PIPE CALLOUT)
	10" PW (2)	PIPE CALLOUT (SEE PIPING SCHEDULE)
	ME-2	EQUIPMENT NUMBER (SEE EQUIPMENT SCHEDULE)
		BACKWATER VALVE
		BACKFLOW PREVENTER
		STOP GATE
		SLIDE GATE
		SLUICE GATE
		GATE VALVE, BURIED WITH VALVE BOX
		MUD VALVE
		BUTTERFLY VALVE, BURIED WITH VALVE BOX
		ECCENTRIC PLUG VALVE, BURIED WITH VALVE BOX
		LUBRICATED PLUG VALVE, BURIED WITH VALVE BOX
		KNIFE VALVE
		GATE VALVE
		BUTTERFLY VALVE
		ECCENTRIC PLUG VALVE
		LUBRICATED PLUG VALVE
		GLOBE VALVE
		BALL VALVE
		DIAPHRAGM VALVE
		CHECK VALVE
		PRESSURE REGULATING VALVE
		BACK-PRESSURE VALVE
		MOTOR OPERATOR FOR VALVES (M = ELECTRIC, P = PNEUMATIC, H = HYDRAULIC)
		TEMPERATURE CONTROL VALVE
		SOLENOID SHIELD
		SOLENOID VALVE
		MULTIPORT VALVE - 3 WAY
		MULTIPORT VALVE - 4 WAY
		FLOAT OPERATED VALVE
		NEEDLE VALVE
		PRESSURE RELIEF VALVE
		ANGLE VALVE
		HOSE BIBB (H/B)
		BUBBLER LEVEL CONTROL
		CENTRIFUGAL OR TURBINE PUMP OR FAN
		METERING PUMP
		PROGRESSIVE CAVITY, POSITIVE DISPLACEMENT PUMP
		BLOWER OR COMPRESSOR
		INJECTOR OR EDUCTOR
		FLAME ARRESTER
		AIR VACUUM AND AIR RELEASE ASSEMBLY
		METER

	THERMOMETER
	ROOM THERMOSTAT
	PRESSURE GAUGE
	PRESSURE GAUGE WITH DIAPHRAGM SEAL
	PRESSURE SWITCH
	PRESSURE SWITCH WITH DIAPHRAGM SEAL
	FLANGED FITTING
	WELDED FITTING
	MECHANICAL-TYPE FITTING (GROOVED)
	SCREWED, SOCKET-WELD, BELL AND SPIGOT OR HUBLESS FITTING
	SLEEVE-TYPE COUPLING
	FLANGED ADAPTER COUPLING
	FLANGED ADAPTER - SET SCREW TYPE
	EXPANSION JOINT
	MECHANICAL TYPE COUPLING
	EXPANSION JOINT
	EXPANSION LOOP
	FLEXIBLE COUPLING
	UNION
	QUICK DISCONNECT COUPLER
	CAPPED END OR PLUGGED END
	BLIND FLANGE
	REDUCER OR INCREASER
	ECCENTRIC REDUCER OR INCREASER
	CUT PIPE
	STRAINER
	THERMOSTATIC TRAP
	DRAIN
	FLOW TUBE
	MAGNETIC METER
	DENSITY METER
	PROPELLER METER
	ORIFICE PLATE AND FLANGES
	ROTAMETER
	CONDENSATE TRAP
	PIPE SUPPORT (IN PLAN ONLY)
	PULSATION DAMPENER
	AREA DRAIN
	LIQUID SURFACE EL
	PIPE ANCHOR

	REVISION WORK
	
	REFERENCE TO NOTE
	COLUMN LINE GRID
	
	WINDOW TYPE
	DOOR NUMBER
	ROOM NUMBER

[illegible]

GENERAL NOTES

- SYMBOLS FOR STRUCTURES, PIPE, ETC. USED FOR IDENTIFICATION ARE SHOWN IN LEGENDS AND SHALL BE FOLLOWED THROUGHOUT THE PLANS WHENEVER APPLICABLE. NOT ALL OF THE VARIOUS COMPONENTS SHOWN IN THESE LEGENDS ARE NECESSARILY USED IN THE PROJECT.
2. SCALE OF THE DRAWINGS OR DETAILS ARE SHOWN IN TITLE BLOCK OR DIRECTLY UNDER THE PLAN OR DETAIL. THE SIZE OF THE ORIGINAL PLOTTED DRAWINGS IS 22"x34". CARE SHOULD BE TAKEN TO VERIFY THE SCALE BAR IN THE TITLE BLOCK AREA TO DETERMINE THE SCALE OF REDUCED REPRODUCTIONS.
 3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PERFORM CONSTRUCTION ACTIVITIES PER THE CONTRACT DOCUMENTS. ANY ADDITIONS, DELETIONS, OR MODIFICATIONS SHALL FIRST MEET WITH THE WRITTEN APPROVAL OF THE ENGINEER AND THE OWNER.
 4. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMIT(S) AND COMPLY WITH ALL REQUIREMENTS OF GOVERNING AGENCIES.
 5. THE CONTRACTOR SHALL PREPARE AND SUBMIT TRAFFIC CONTROL PLANS FOR REVIEW AND APPROVAL BY SPANISH FORK CITY. WORK WILL NOT BEGIN UNTIL THE PLANS HAVE BEEN APPROVED.
 6. THE CONTRACTOR SHALL KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE ESTABLISHED RIGHTS-OF-WAY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO, VEHICLES AND EQUIPMENT, LIMITS OF TRENCH EXCAVATION, AND EXCAVATED MATERIAL AND BACKFILL STORAGE. IF THE CONTRACTOR REQUIRES ADDITIONAL CONSTRUCTION EASEMENTS, IT SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SUCH EASEMENTS FROM INDIVIDUAL PROPERTY OWNERS.
 7. UTILITY LOCATIONS:
 - CONTRACTOR SHALL CONTACT BLUE STAKES TO LOCATE EXISTING UTILITIES.
 - ALL UTILITY LOCATIONS, SHOWN ON DRAWINGS, ARE APPROXIMATE AND ARE NOT INCLUSIVE OF ALL EXISTING UTILITIES.
 - CONTRACTOR TO VERIFY DEPTHS OF UTILITIES IN THE FIELD BY POT HOILING A MINIMUM OF TWO WEEKS TIME OR 300- FEET AHEAD OF PIPELINE CONSTRUCTION TO AVOID CONFLICTS WITH DESIGNED PIPELINE GRADE AND ALIGNMENT. IF A CONFLICT ARISES RESULTING FROM THE CONTRACTOR NEGLECTING TO POT HOLE UTILITIES, THE CONTRACTOR TO RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER.
 - CONTRACTOR SHALL POT HOLE CRITICAL LOCATIONS AND OBTAIN ALL EXISTING PIPE O.D. PRIOR TO ORDERING OR OBTAINING MATERIALS REQUIRED FOR CONNECTIONS TO EXISTING PIPING. UTILITY SHUT-DOWNS AND OTHER WORK WILL NOT BE SCHEDULED OR ALLOWED UNTIL THIS IS ACCOMPLISHED AND MATERIALS ARE ON SITE AND APPROVED FOR USE BY SPANISH FORK CITY.
 8. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS FROM DAMAGE WHICH ARE TO REMAIN IN PLACE. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTORS OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO ORIGINAL OR BETTER CONDITION TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.
 9. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING SERVICE LINES FOR GAS, SEWER, WATER, AND OTHER UTILITIES AND REPAIRING DAMAGE TO SUCH LINES AS A RESULT OF THE CONTRACTOR'S OPERATIONS. SERVICE CONNECTIONS FOR UTILITIES ARE NOT SHOWN ON THE DRAWINGS.
 10. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMANCE WITH LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES. CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF THE PUBLIC AND PROTECTION OF PERSONNEL AND WORKERS.
 11. CONTRACTOR SHALL NOT DESTROY, REMOVE, OR DISTURB ANY EXISTING SURVEY MONUMENTS WITHOUT AUTHORIZATION OF CONTROLLING AGENCY. NO PAVEMENT CUTTING OR REMOVAL SHALL BEGIN UNTIL ALL SURVEY MARKERS OR MONUMENT POINTS THAT HAVE THE POTENTIAL OF BEING DISTURBED BY THE CONSTRUCTION OPERATIONS HAVE BEEN PROPERLY REFERENCED BY A REGISTERED LAND SURVEYOR. ALL SURVEY MONUMENTS OR POINTS DISTURBED BY THE CONTRACTOR SHALL BE ACCURATELY RESET BY A REGISTERED LAND SURVEYOR AFTER ALL RESTORATION AND RESURFACING HAS BEEN COMPLETED.
 12. TRENCH SUPPORTS AND DEWATERING (NOTE 13) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. MAXIMUM OPEN TRENCH DURING WORKING HOURS SHALL BE 300 FEET. ALL TRENCHES SHALL BE BACKFILLED AND/OR PLATED DURING NON-WORKING HOURS, PER EXCAVATION PERMIT REQUIREMENTS.
 13. DEWATERING: GROUND WATER AND SURFACE WATER CONTROL SHALL BE PERFORMED AND RESPONSIBLY HANDLED BY THE CONTRACTOR ACCORDING TO, AND IN COMPLIANCE WITH, ALL LOCAL GOVERNING AUTHORITIES. HEAVY GROUND WATER AND/OR SURFACE WATER PUMPING WILL BE REQUIRED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE POTENTIAL PUMPING NEEDS. THE CONTRACTOR SHALL NOT RELY ON OWNER SUPPLIED PROCTOR, GROUND WATER AND/OR SURFACE WATER DATA. CONTRACTOR SHALL OBTAIN DEWATERING PERMIT AS NECESSARY.
 14. AERIAL PHOTOS IN DRAWINGS:

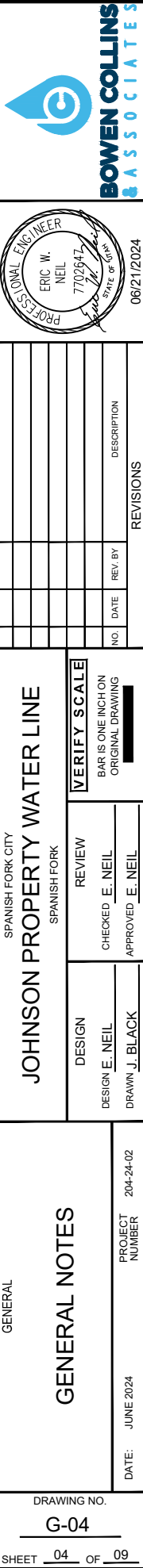
THE AERIAL PHOTOS PROVIDED AS BACKGROUND IN THESE DRAWINGS ARE PROVIDED TO HELP CLARIFY THE WORK SITE. HOWEVER, THE PHOTOS DEPICT CONDITIONS AS THEY EXISTED IN 2022. PRESENT DAY CONDITIONS MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING. BID SHALL INCLUDE ALL WORK REQUIRED TO COMPLETE THE PROJECT.

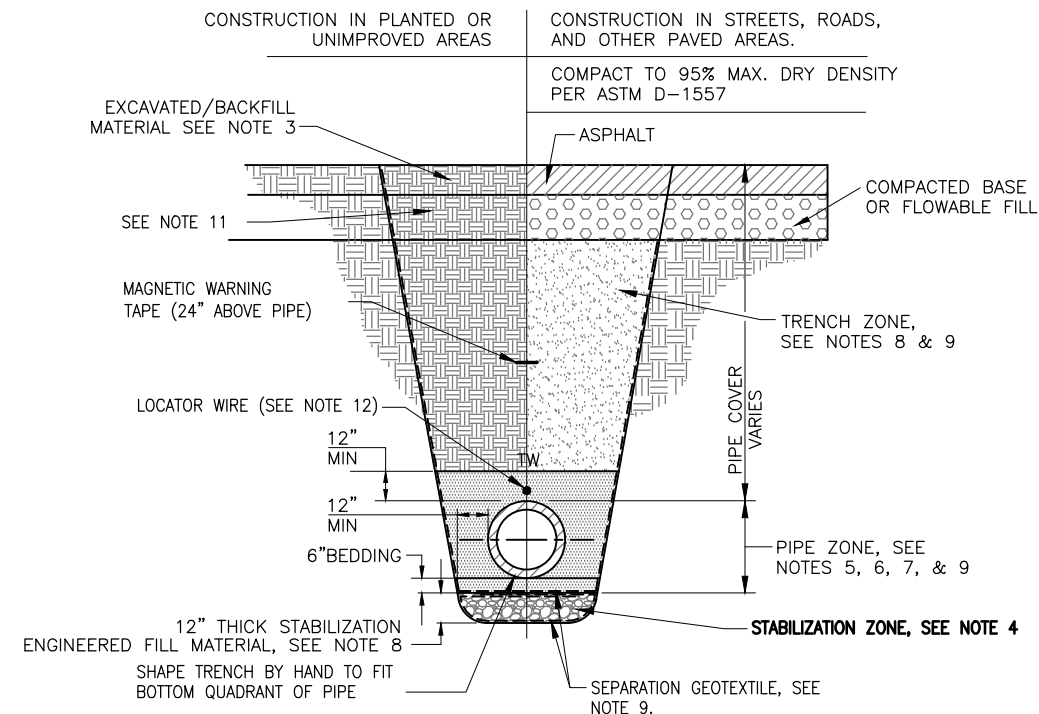
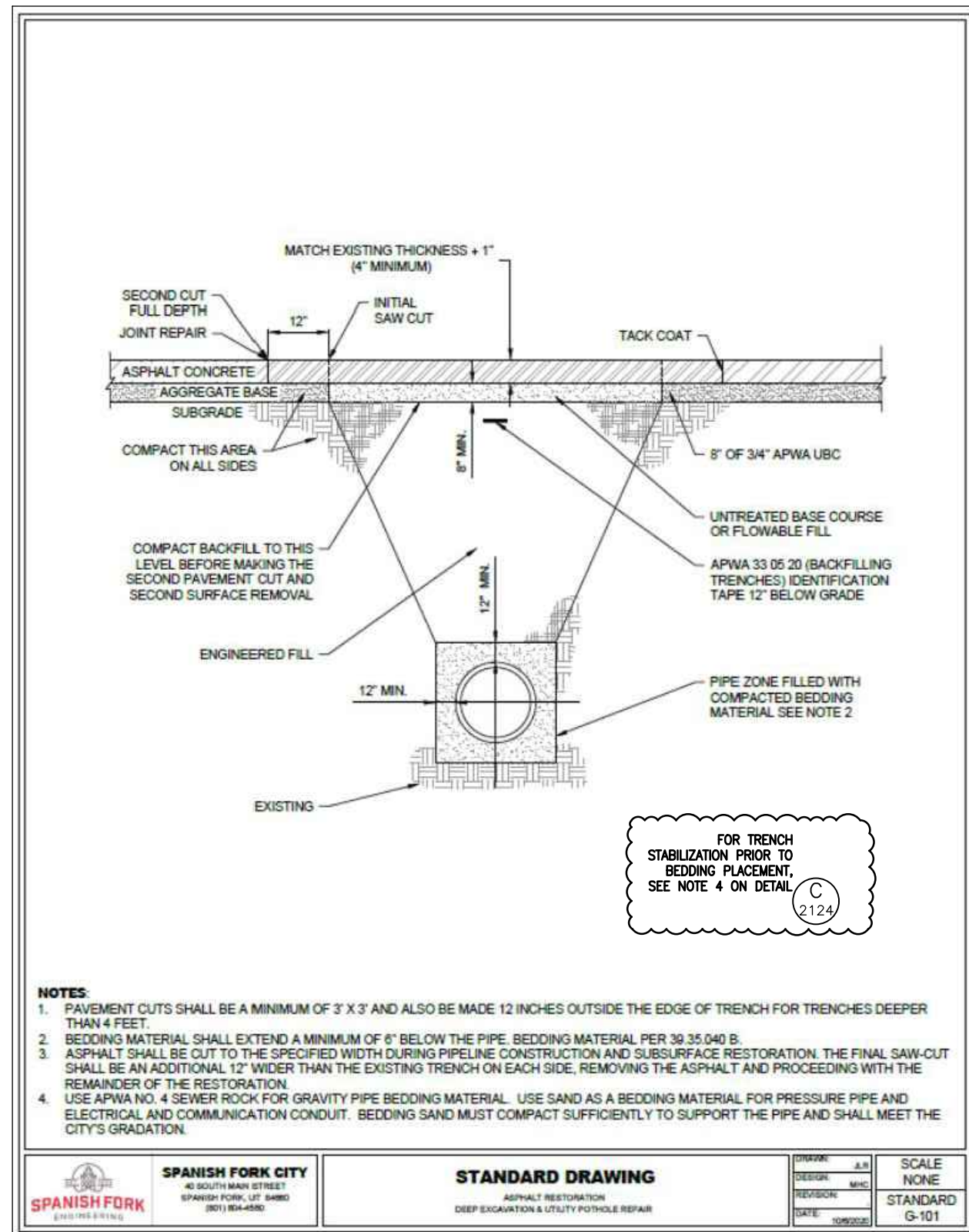
- CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF EXCAVATIONS, AND ANY DAMAGE OF UTILITIES RESULTING FROM SETTLEMENT.
16. CONTRACTOR SHALL PREVENT ANY GROUND WATER OR DEBRIS FROM ENTERING NEW PIPES DURING CONSTRUCTION. THE ENDS OF THE PIPES SHALL BE SEALED AT THE END OF EACH WORKDAY.
17. PROFILE DRAWINGS ARE HORIZONTAL PROJECTIONS OF THE PIPELINE CENTERLINE, UNLESS OTHERWISE NOTED.
18. LAY PIPE TO DEPTH AND ALONG HORIZONTAL ALIGNMENT AS DEFINED IN THESE DRAWINGS. CONTRACTOR SHALL NOT DEVIATE FROM PROPOSED ALIGNMENT OR GRADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. AVOID HIGH AND LOW POINTS EXCEPT WHERE DESIGNED.
19. CONTRACTOR SHALL MAINTAIN A 10-FOOT HORIZONTAL AND AN 18-INCH VERTICAL SEPARATION (OUTSIDE OF PIPE TO OUTSIDE OF PIPE/MANHOLE) BETWEEN ALL SEWER AND WATER LINES, UNLESS EXCEPTION IS NOTED.
20. CONTRACTOR SHALL REPAIR ALL CANALS/DITCHES AND ASSOCIATED CULVERTS TO MATCH EXISTING AT THE SATISFACTION OF SPANISH FORK CITY. ANY CANAL, DITCH, OR CULVERT CROSSING NOT SPECIFICALLY CALLED OUT ON THE PLANS ARE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PIPELINE, AND SHALL NOT BE PAID FOR SEPARATELY.
21. ALL FENCE CROSSINGS ENCOUNTERED DURING THE INSTALLATION OF THE PIPE OR LIFT STATION SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION. ANY FENCES DAMAGED SHALL BE REPAIRED TO MATCH EXISTING CONDITIONS.
22. UNLESS NOTED OTHERWISE, WATER MAIN LINES SHALL BE PVC C-900 DR-18 PIPE. SIZE OF FITTINGS SHOWN ON THE PLANS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, AND SHALL BE DUCTILE IRON FITTINGS.
23. CONTRACTOR SHALL PROTECT ADJACENT PRESSURE PIPELINES AND PROVIDE TEMPORARY THRUST RESTRAINT AS NECESSARY DURING CONSTRUCTION. ALL NEW PRESSURE PIPE SHALL HAVE THRUST BLOCKS, THRUST TIES OR OTHER APPROVED THRUST RESTRAINT. THRUST PROTECTION SHALL BE ADEQUATE FOR THE TEST PRESSURE SPECIFIED.
24. ALL FITTINGS REQUIRED FOR THE COMPLETION OF THE WORK ARE NOT SHOWN IN THE DRAWINGS. PIPE JOINT DEFLECTION IS NOT ALLOWED. ADDITIONAL FITTINGS REQUIRED TO MAINTAIN THE ALIGNMENT SHOWN IN THE PLANS SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
25. ALL BURIED REBAR, FITTINGS, COUPLINGS, VALVES AND MECHANICAL JOINT NUTS AND BOLTS ARE TO BE COATED WITH NON OXIDE GREASE CHEVRON FM 1 OR APPROVED EQUAL, COVERED WITH 8 MIL POLYETHYLENE SHEETING, AND TAPE WRAPPED WITH AWWA C209 OR 214, 70 MIL MIN THICKNESS.
26. MINIMUM DEPTH OF NEW PIPE: 4 FEET TO TOP OF PIPE UNLESS OTHERWISE NOTED.
27. CONTRACTOR SHALL PERFORM PRESSURE TESTING OF ALL PIPELINES. ALL WATERLINES INSTALLED SHALL BE DISINFECTED IN ACCORDANCE WITH THE "AMERICAN WATER WORKS ASSOCIATION STANDARD FOR DISINFECTING WATER MAINS" (AWWA C651). ALL CHLORINATED WATER SHALL BE DISPOSED OF IN ACCORDANCE WITH THE UTAH DEPT OF ENVIRONMENTAL QUALITY RULES AND REQUIREMENTS FOR SURFACE DISCHARGE AND COORDINATED WITH SPANISH FORK CITY.
28. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN A WORKMANLIKE AND SAFE MANNER AND IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND JOB-SITE RELATED CONSTRUCTION CONDITIONS AND REQUIREMENTS. OBTAIN PERMITS, INSPECTIONS AND APPROVALS AS REQUIRED BY JURISDICTIONAL AGENCIES AND PAY ALL ASSOCIATED FEES. CONTRACTOR AND INSTALLERS SHALL BE LICENSED AS REQUIRED BY STATE AND LOCAL JURISDICTIONS, AND BONDED AS DETERMINED BY PROJECT REQUIREMENTS.
29. PRESSURE TEST ALL PIPELINES PER SPANISH FORK CITY REQUIREMENTS. IN THE CASE OF PIPELINES THAT FAIL TO PASS THE LEAKAGE TEST, THE CONTRACTOR SHALL DETERMINE THE CAUSE OF THE EXCESSIVE LEAKAGE, SHALL TAKE CORRECTIVE MEASURES NECESSARY TO REPAIR THE LEAKS, AND SHALL AGAIN TEST THE PIPELINES, ALL AT NO COST TO THE OWNER.
30. ALL WATER PIPES, FITTINGS, AND VALVES SHALL BE NSF 61 COMPLIANT FOR CULINARY WATER USE.
31. CONTRACTOR TO PROVIDE AND DISTRIBUTE APPROVED WRITTEN NOTICE OF CONSTRUCTION ACTIVITIES TO ALL RESIDENTS AND BUSINESSES LOCATED IN THE CONSTRUCTION AREA AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. WRITTEN NOTICE SHALL BE APPROVED BY THE ENGINEER PRIOR TO DISTRIBUTION.
32. CONTRACTOR SHALL PROVIDE AND UPDATE A CONSTRUCTION SCHEDULE FOR WORKING IN THE PUBLIC RIGHT-OF-WAY PRIOR TO CONSTRUCTION.
33. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTROL OF DRAINAGE AND EROSION DURING CONSTRUCTION AT CONSTRUCTION SITE, STAGING, AND SPOILS AREA. CONTRACTOR SHALL SUBMIT STORM RUNOFF CONTROL PLAN FOR APPROVAL BY ENGINEER AND OBTAIN A SWPPP PERMIT FROM THE UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY.
34. CONTRACTOR SHALL PROVIDE SAFE ACCESS ACROSS TRENCH FOR ONE VEHICLE AT ALL DRIVEWAY ENTRANCES DURING CONSTRUCTION. EXCEPTIONS TO THIS REQUIREMENT SHALL BE COORDINATED WITH ENGINEER AND DRIVEWAY OWNER. ALL TRENCHES SHALL BE BACKFILLED AND/OR PLATED DURING NON-WORKING HOURS.

35. INSTALL ALL MATERIALS ACCORDING TO MANUFACTURER RECOMMENDATIONS AND STATE AND LOCAL REQUIREMENTS. USE ONLY NEW AND UNUSED MATERIALS. ALL MATERIALS SHALL BE PROVIDED BY MANUFACTURERS REGULARLY ENGAGED IN PRODUCING SAID ITEMS, AND WHICH SHALL BE FIRST QUALITY, HEAVY DUTY, COMMERCIAL/INDUSTRIAL GRADE, SUITABLE FOR THE INTENDED USE.
36. ALL CONSTRUCTION MUST CONFORM TO SPANISH FORK CONSTRUCTION STANDARDS AND DETAILS.

WEST FIELD IRRIGATION COMPANY (WFIC) NOTES

1. APPLICANT MUST NOTIFY FRANSON CIVIL ENGINEERS (FRANSON CIVIL) AT LEAST 24 HOURS BEFORE CONSTRUCTION ON WFIC FACILITIES. CALL KYLE DEVANAY WITH FRANSON CIVIL AT 801-756-0309. FAILURE TO DO SO MAY RESULT IN A \$5,000 FINE.
2. ALL CONSTRUCTION MUST BE DONE TO WFIC STANDARDS.
3. WFIC CONTACT DURING CONSTRUCTION: BILL BECK, WFIC PRESIDENT, 801-836-6541.



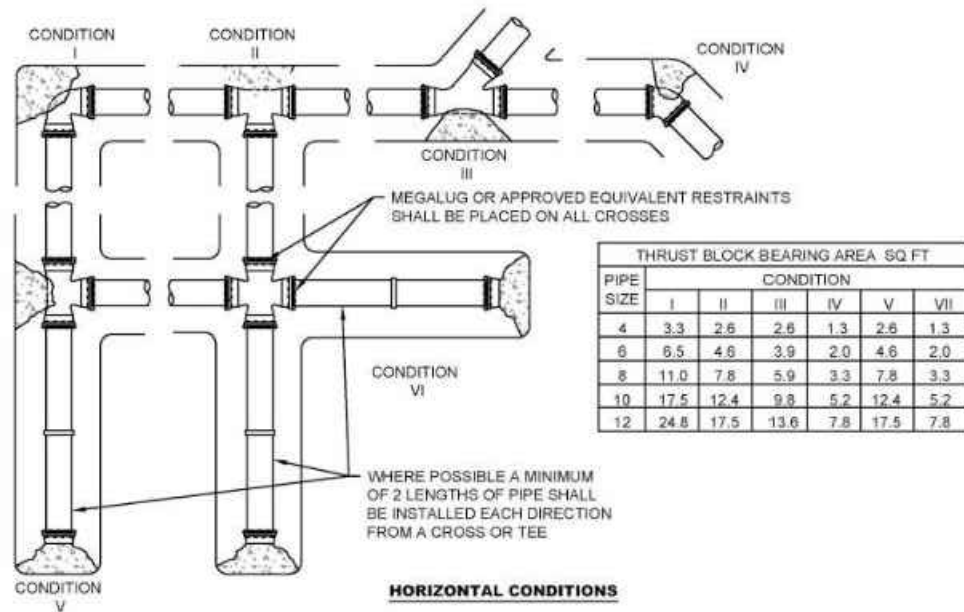


NOTES:

1. DEWATERING – DEWATERING SHALL BE PERFORMED PER SECTION 31 23 19. REMOVE GROUNDWATER TO A MINIMUM DEPTH OF 2' BELOW THE BOTTOM OF THE TRENCH. A GROUNDWATER PERMIT WILL BE REQUIRED IF DISCHARGING OFF SITE.
2. TRENCH SHORING – SHORING SHALL BE PLACED AS REQUIRED TO SAFELY EXECUTE THE WORK AND PER SPECIFICATIONS. BACKFILL SHALL BE PLACED AND COMPACTED AGAINST UNDISTURBED TRENCH SIDEWALLS AS THE SHORING IS REMOVED. SHORING REMOVAL METHODS THAT LEAVE VOIDS OR OTHER DISTURBED MATERIALS BETWEEN THE TRENCH WALL AND THE BACKFILL SHALL NOT BE USED. LOOSE, CAVING, OR SLOUGHING MATERIAL SHALL BE REMOVED IMMEDIATELY AND REPLACED WITH TRENCH BACKFILL MATERIAL.
3. IN UNIMPROVED OR LANDSCAPED AREAS, STRIP 6"–8" OF TOPSOIL AND STOCKPILE PRIOR TO BEGINNING EXCAVATION. RESEED AS NECESSARY PER SPANISH FORK CITY REQUIREMENTS.
4. EXISTING SOILS ARE POOR AND MAY REQUIRE AN EXTENSIVE STABILIZATION EFFORT PRIOR TO PLACEMENT OF BEDDING MATERIALS. CONTRACTOR MUST REVIEW THE GEOTECHNICAL INVESTIGATION REPORT AND ADHERE TO THE RECOMMENDATIONS OF THE REPORT. TRENCH BOTTOM SHALL PROVIDE A FIRM, UNIFORM SURFACE FOR BEDDING. BOTTOM SHALL BE INSPECTED AND APPROVED PRIOR TO PLACEMENT OF BEDDING BY A LICENSED GEOTECHNICAL ENGINEER AND THE CITY ENGINEER, BUT SHALL REQUIRE UP TO 1-FT OF OVER-EXCAVATION. IF DIRECTED BY THE ENGINEER, TRENCH BOTTOM SHALL BE OVER-EXCAVATED DEEPER THAN THE 1-FT TO THE DIRECTED DEPTH AND REPLACED WITH TRENCH STABILIZATION MATERIAL PER THE GEOTECHNICAL ENGINEER AND CITY OR OTHER RECOMMENDED MATERIAL AND SEPARATION FABRIC TO PROVIDE A FIRM, STABLE SUBGRADE. MATERIAL MUST BE FREE OF SLAG OR RECYCLED ASPHALT. SEE ALSO NOTES 8 & 9.
5. PIPE ZONE MATERIAL SHALL BE ANGULAR CRUSHED WASHED STONE; FREE OF SHALE, CLAY, FRIABLE MATERIAL, ORGANIC MATERIAL AND DEBRIS, ALL MATERIAL BEING BETWEEN ¾ INCH AND 1 INCH IN SIZE, UNLESS OTHERWISE SPECIFIED BY THE PIPE MANUFACTURER AND APPROVED BY THE ENGINEER.
6. PIPE ZONE MATERIALS SHALL BE PLACED IN UNIFORM LIFTS NOT TO EXCEED 8" IN LOOSE DEPTH AND CONSOLIDATED. MATERIAL SHALL BE FIRMLY AND READILY CONSOLIDATED INTO AND BENEATH THE PIPE HAUNCHES TO PROVIDE UNIFORM SUPPORT. PIPE ZONE MATERIALS SHALL BE PLACED AND CONSOLIDATED AGAINST UNDISTURBED TRENCH WALLS.
7. AT CONTRACTOR'S OPTION, EXCEPT WHEN REQUIRED, PIPE ZONE MATERIAL, INCLUDING BEDDING, HAUNCHING AND REMAINING PIPE ZONE MAY BE CEMENT TREATED FLOWABLE FILL PER APWA 31 05 15. IF USED, SECURELY BLOCK, SUPPORT AND RESTRAIN PIPE AT DESIGN GRADES. PLACE FLOWABLE FILL IN LIFTS THAT PREVENT PIPE FROM FLOATING. PROVIDE BUOYANCY CALCULATION OF THE PIPE USING THE DENSITIES OF APPROVED MATERIALS PRIOR TO PLACING FLOWABLE FILL. CORRECT ANY VERTICAL OR HORIZONTAL DEFLECTIONS RESULTING FROM THE PLACEMENT OF THE FLOWABLE FILL.
8. UNLESS OTHERWISE NOTED, TRENCH ZONE BACKFILL SHALL MEET THE REQUIREMENTS OF SPANISH FORK CITY'S 4.39.35.040 "FILL MATERIAL" AS SPECIFIED IN THE POLICY 4.39 CONSTRUCTION STANDARDS DOCUMENT. THE REQUIREMENTS OF THE CITY ALLOWS FOR A 4" ENGINEERED FILL MATERIAL. MATERIAL MUST BE FREE OF SLAG OR RECYCLED ASPHALT. PEA GRAVEL, REJECT SAND, SQUEEGEE OR OTHER SIMILAR MATERIALS SHALL NOT BE USED. THE OVER-EXCAVATED STABILIZATION MATERIAL THICKNESS SHALL BE 12".
9. SEPARATION GEOTEXTILE, PROVIDE AND INSTALL A SEPARATION GEOTEXTILE AS SHOWN, COMPLETELY ENVELOPING THE PIPE ZONE AND A SECOND GEOTEXTILE ENVELOPING THE STABILIZATION ZONE BELOW THE PIPE ZONE. THE SIDES OF THE TRENCH ZONE SHALL HAVE A SEPARATION FABRIC UP TO WITHIN 24" OF THE NATURAL GROUND SURFACE OR UP TO THE BOTTOM OF THE BASE COURSE IN ASPHALT AREAS. SEPARATION GEOTEXTILE SHALL BE A 12 OZ. NON-WOVEN GEOTEXTILE FABRIC, MIRAFI S1200, GEOTEX 1291, OR APPROVED EQUAL. ALL JOINTS IN THE PIPE ZONE AND STABILIZATION ZONE SHALL HAVE A MINIMUM 24" OVERLAP ON THE TOP.
10. BACKFILL AND COMPACTION – TRENCH BACKFILL AND COMPACTION SHALL BE COMPLETED PER THESE NOTES AND APWA SECTION 33 05 20. EACH LIFT SHALL BE COMPACTED TO 95% OR GREATER OF THE MAXIMUM DRY DENSITY AS ESTABLISHED BY THE MODIFIED PROCTOR PER ASTM D1557. CONTRACTOR SHALL PROVIDE REQUIRED PROCTOR DATA ON ALL MATERIALS USED FOR BACKFILL. TESTING SHALL BE COMPLETED AT 100 FOOT INTERVALS FOR EACH LIFT PLACED. CONTRACTOR SHALL SUBMIT QUALITY CONTROL COMPACTION TEST RESULTS.
11. TOP 6" OF TRENCH BACKFILL INSTALLED BENEATH TOPSOIL LAYER SHALL BE INSTALLED PLACED AND GRADED SMOOTH, BUT SHALL BE LEFT UNCOMPACTED.
12. INSTALL SOLID INSULATED NO. 12 AWG. THIN COPPER LOCATOR WIRE TAPED CONTINUOUSLY TO THE TOP OF THE PIPE AND ACCESSIBLE AT MANHOLES, VALVE BOXES INSIDE PUMP STATION BUILDING, AND OTHER APPURTENANCES. CONNECT TO EXISTING LOCATOR WIRE MARKING POST.
13. CONTRACTOR SHALL INSTALL CLAY DAMS AT 500-FT SPACING ALONG THE PIPELINE TO PREVENT PIPING CAUSED BY GROUNDWATER MIGRATION.

TYPICAL TRENCH EXCAVATION/BACKFILL SECTION

SCALE: NTS



-  **SPANISH FORK CITY**
40 SOUTH MAIN STREET
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(801) 866-4550

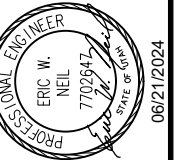
CONCRETE THRUST BLOCKS FOR PRESSURE PIPE

SCALE NONE
STANDARD W-201



PRESSURE PIPE MAIN LINE VALVE

SCALE NONE
STANDARD W-206

[illegible]

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING

DESIGN	REVIEW
DESIGN E. NEIL	CHECKED E. NEIL
DRAWN J. BLACK	APPROVED E. NEIL

DATE: JUNE 2024

DRAWING NO.

GC-02

SHEET 08 OF 09

