

# COPPERVIEW ELEMENTARY SITE IMPROVEMENTS

8449 MONROE STREET  
MIDVALE, UTAH

CONSTRUCTION DOCUMENTS: FEBRUARY 7, 2025

## INDEX OF SHEETS

- G100 - COVER SHEET
- C100 - GENERAL NOTES AND DETAILS
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- LS 1.1 - IRRIGATION DETAILS
- LS 1.2 - IRRIGATION DETAILS

PROJECT  
LOCATION



VICINITY MAP  
NOT TO SCALE

## OWNER:

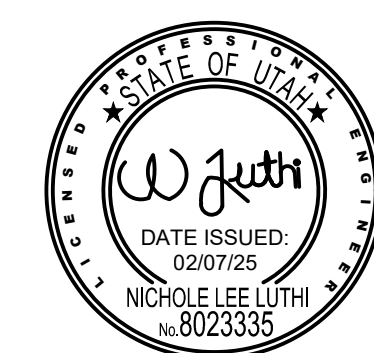
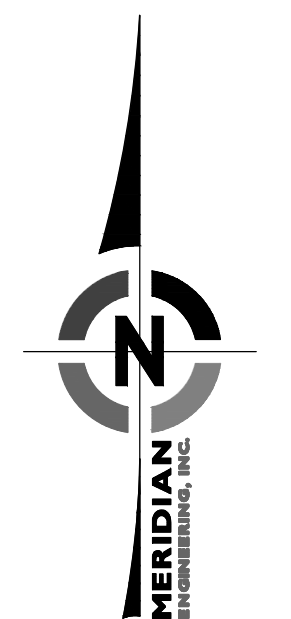
CANYONS SCHOOL DISTRICT  
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9100 S 500 W  
SANDY, UT 84070  
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CONTACT: STEVE MCCLEARY  
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## CIVIL ENGINEER:

MERIDIAN ENGINEERING INC.  
1628 WEST 11010 SOUTH, SUITE 102  
SOUTH JORDAN, UTAH 84095  
PHONE: 801-569-1315  
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CONTACT: NICHOLE LUTHI  
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## LANDSCAPE ARCHITECT:

IN-SITE DESIGN GROUP  
17 NORTH 470 WEST  
AMERICAN FORK, UTAH 84003  
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CONTACT: CORY WHITING  
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COPPERVIEW ELEM. SITE IMPROV. COVER SHEET CONSTRUCTION DOCUMENTS	COMP. FILE 24x36	PROJECT NO. 22194	SHEET NO. G100	 <b>MERIDIAN ENGINEERING, INC.</b> REGISTERED PROFESSIONAL ENGINEERS 1628 WEST 11010 SOUTH, SUITE 102 SOUTH JORDAN, UTAH 84095 PHONE (801) 569-1315 FAX (801) 569-1319	DRAWN _____ SURVEYED _____ CHECKED _____ DATE _____	NO. _____ REVISIONS _____ BY _____ DATE _____
					JOB _____ DATE FEB-2025	NO. _____ REVISIONS _____ BY _____ DATE _____

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SPECIAL PROJECT NOTE:

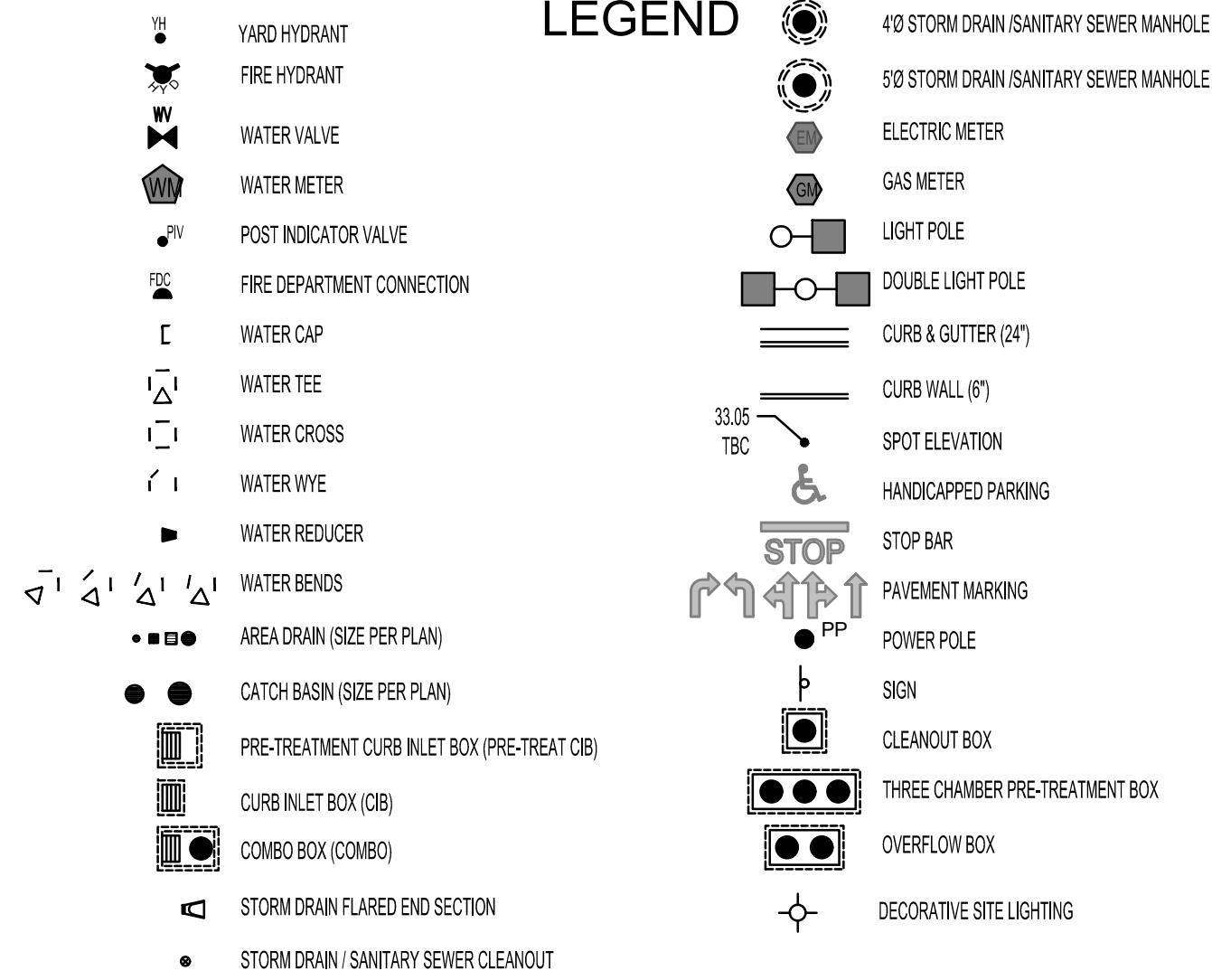
ALL CONSTRUCTION ACTIVITY WITHIN STREET ROW AND FOR SITE WATER LINES AND SEWER LINES SHALL CONFORM TO MIDVALE CITY STANDARD PLANS AND "APWA MANUAL OF STANDARD PLANS" (LATEST EDITION) AND THE DEVELOPMENT GUIDELINES AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN COPIES OF SAID CITY STANDARDS AND APWA STANDARDS PRIOR TO CONSTRUCTION.

GENERAL

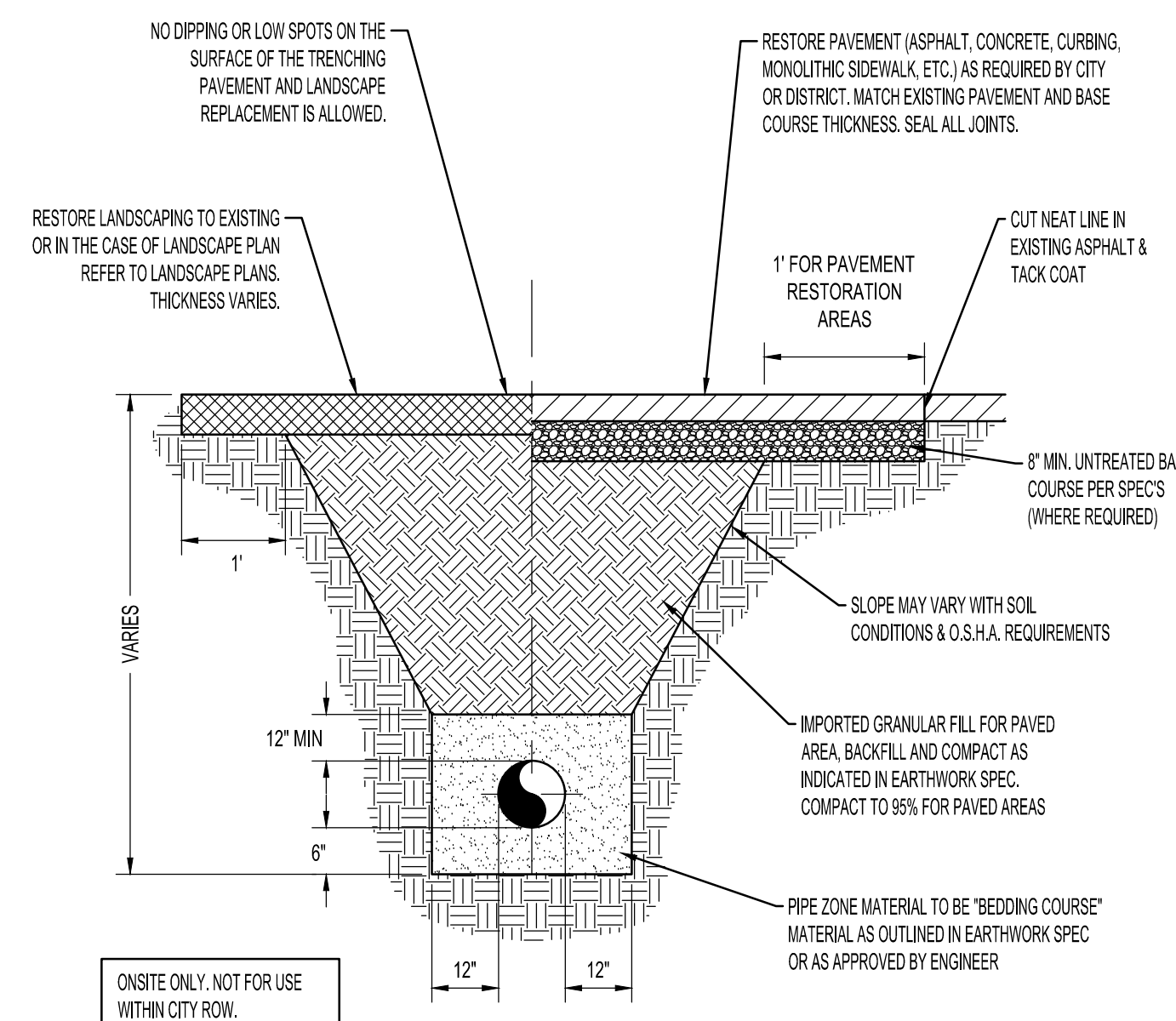
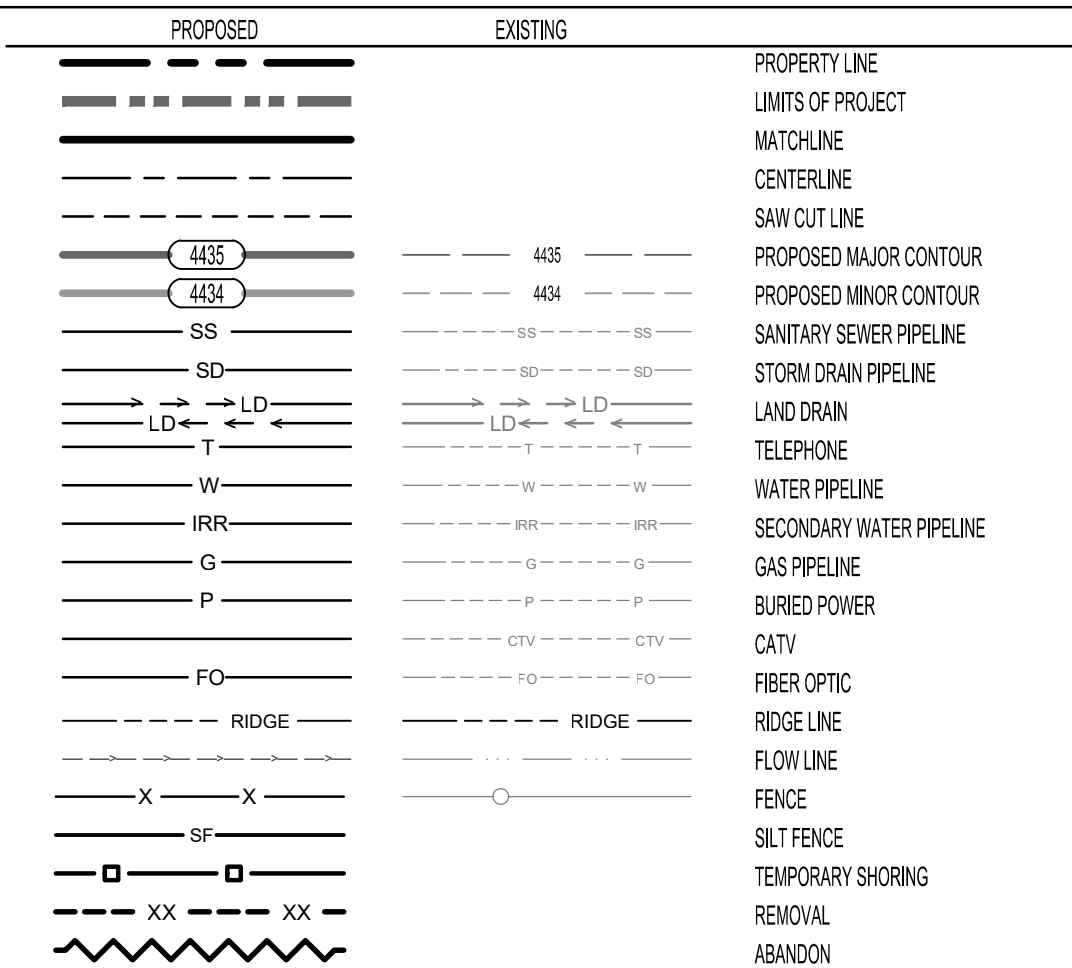
- 1. ANY MODIFICATION TO THIS CONSTRUCTION PACKAGE SHALL BE APPROVED BY THE OWNER. PRIOR TO SAID APPROVAL, ALL IMPROVEMENT DRAWINGS SHALL BE RESUBMITTED AND APPROVED BY THE CITY ENGINEER.
2. THE CONTRACTOR SHALL LOCATE, RETAIN AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE DIRECTED BY THE ENGINEER. EXISTING GAS, TELEPHONE, POWER, OR WATER LINES WHICH MUST BE RELOCATED OR LOWERED FOR NEW GRAVITY LINES WILL BE COMPLETED BY THE CONTRACTOR TO THE UTILITY COMPANY SPECIFICATIONS.
3. TRACER TAPE SHALL BE PLACED ABOVE ALL SEWER, PVC ROOF DRAIN LINES, WATER AND SECONDARY WATER LINES PER CITY AND DISTRICT STANDARD SPECIFICATIONS. TRACER WIRE SHALL BE INSTALLED OVER THE WATER LINES.
4. ALL EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY, AS INDICATED ON THE C200 SHEET. CONTRACTOR SHALL NOTIFY BLUE STAKES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION. CONTRACTOR SHALL POthOLE AND FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL UTILITY CONFLICTS UPON DISCOVERY.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BACKFILLING, COMPACTING, AND PAVEMENT RESTORATION WHERE NECESSARY TO INSTALL NEW UTILITIES OR NEW IMPROVEMENTS PER CITY STANDARDS IN EXISTING ROADWAYS.
6. CONTRACTOR SHALL PROVIDE CITY INSPECTOR WITH CONSTRUCTION SCHEDULE AFTER SAID SCHEDULE HAS BEEN APPROVED BY OWNER.
7. CONTRACTOR SHALL COORDINATE CONSTRUCTION DEMOLITION AND INSTALLATION OF ELECTRICAL, AND COMMUNICATION SERVICES WITH THE UTILITY COMPANY. OWNER SHALL PAY ALL ASSOCIATED UTILITY COMPANY FEES. CONTRACTOR TO PROVIDE ELECTRICAL LINE OR COMMUNICATION TRENCHING AND BACKFILL. COORDINATE LOCATIONS WITH POWER AND COMMUNICATION COMPANY. ALL DEMOLITION OF EXISTING AND PROPOSED NEW SITE ELECTRICAL EQUIPMENT STRUCTURES AND LINES SHOWN ON CIVIL PLANS ARE SCHEMATICALLY SHOWN ONLY AS A COORDINATION BETWEEN ELECTRICAL AND CIVIL. PLEASE REFER DIRECTLY TO ELECTRICAL PLANS FOR THE LAYOUT AND DETAILS OF ALL SITE ELECTRICAL EQUIPMENT AND LINES.
8. CONTRACTOR TO KEEP A SET OF NEAT PLANS ON WHICH ALL CHANGES HAVE BEEN CLEARLY SHOWN. THIS SET OF REDLINES SHALL BE TURNED IN TO THE ARCHITECT.
9. CONTRACTOR TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY PRIOR TO ANY WORK.
10. ALL UTILITY STRUCTURES WITHIN PAVEMENT SHALL BE RAISED TO ACCURATE FINISHED GRADE WITH A CONCRETE COLLAR. SEE DETAIL ON THIS SHEET.
11. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL REQUIRED PERMITS, BONDS, AND APPROVALS HAVE BEEN OBTAINED. ALL PERMIT AND BOND FEES ARE TO BE PAID BY THE OWNER.
12. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED, AND THOROUGHLY REVIEWED, ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
13. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE CURRENT REQUIREMENTS AND DEVELOPMENT STANDARDS OF THE CITY. THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND SHALL TAKE PRECEDENCE IN CASE OF CONFLICT UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCY BETWEEN THE SOILS REPORT AND PLANS ETC.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST AND EROSION CONTROL, CLEANING STREET AND OTHER SWPP REGULATIONS.
15. ALL EXISTING ASPHALT TO REMAIN SHALL BE SAW CUT IN NEAT, STRAIGHT LINES BY THE CONTRACTOR PRIOR TO EXCAVATION.
16. NO CHANGE IN DESIGN LOCATIONS OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE OWNER AND ENGINEER.
17. CONTRACTOR SHALL NOT ALLOW ANY GROUND WATER, SURFACE WATER, ANIMALS, OR DEBRIS TO ENTER NEW PIPING DURING CONSTRUCTION.
18. CONTRACTOR SHALL TAKE NECESSARY MEASURES TO PROTECT ALL NEW FACILITIES DURING THE CONSTRUCTION PERIOD UNTIL THE DESIGN GRADE AND COVER HAVE BEEN REACHED AND WORK HAS BEEN ACCEPTED BY OWNER.
19. CONTRACTOR IS TO REMAIN WITHIN THE CONTRACT LIMITS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS DURING CONSTRUCTION.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF, OR DAMAGE TO, EXISTING AND NEW UTILITIES AND FACILITIES, INCLUDING WORK DONE WITHIN THE WARRANTY PERIOD.
21. ALL ONSITE PAVEMENT SECTIONS, GRADING, EXCAVATION, BACKFILLING, AND OTHER EARTHWORK OPERATIONS SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS PREPARED FOR THIS PROJECT. STRUCTURAL FILL, BEDDING, IMPORTED BACKFILL, GRANULAR SUBBASE, BASE COURSE AND ASPHALTIC CONCRETE MATERIALS SHALL MEET THE REQUIREMENTS OUTLINED IN THE PROJECT SPECIFICATIONS. ALL EARTHWORK AND PAVING IN CITY R.O.W. SHALL MEET CITY SPECS.
22. SEE SHEET C200 FOR SURVEY CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION STAKING THAT MAY BE NEEDED TO COMPLETE THE JOB.
23. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS AND TRAFFIC PERMITS AND TRAFFIC CONTROL PLANS FOR ALL WORK IN CITY R.O.W. (EXISTING AND NEW ROADWAYS) PRIOR TO BEGINNING WORK.
24. THE USE OF MOTOR OILS AND OTHER PETROLEUM-BASED OR TOXIC LIQUIDS, FOR DUST SUPPRESSION, IS ABSOLUTELY PROHIBITED.
25. NO DRIVEWAY SHALL BE CONSTRUCTED TO CONVEY STORM RUNOFF TOWARDS ANY BUILDING.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE CITY OR COUNTY SURVEYOR FOR MONUMENT LOCATIONS AND CONSTRUCTION DETAILS.
27. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMING TO LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES AND FOR THE PROTECTION OF WORKERS.
28. CONTACT FOR UTILITY COORDINATION INCLUDE:
SEWER- MIDVALE CITY SEWER: 801-567-7226
WATER- MIDVALE CITY WATER DIVISION: 801-567-7200, OPTION #1
STORM- MIDVALE CITY STORMWATER DIVISION: 801-567-7263
IRRIGATION- MIDVALE PUBLIC UTILITIES: 801-567-7239
GAS- ENBRIDGE GAS: 800-323-5517
POWER- ROCKY MOUNTAIN POWER: 888-221-7070
29. CONTRACTOR TO COORDINATE INSTALLATION OF ALL LANDSCAPE SLEEVES PRIOR TO FORMING CONCRETE SIDEWALKS, RETAINING WALLS, SEAT WALLS OR STAIR WALLS. SEE LANDSCAPE PLANS.

GENERAL NOTES

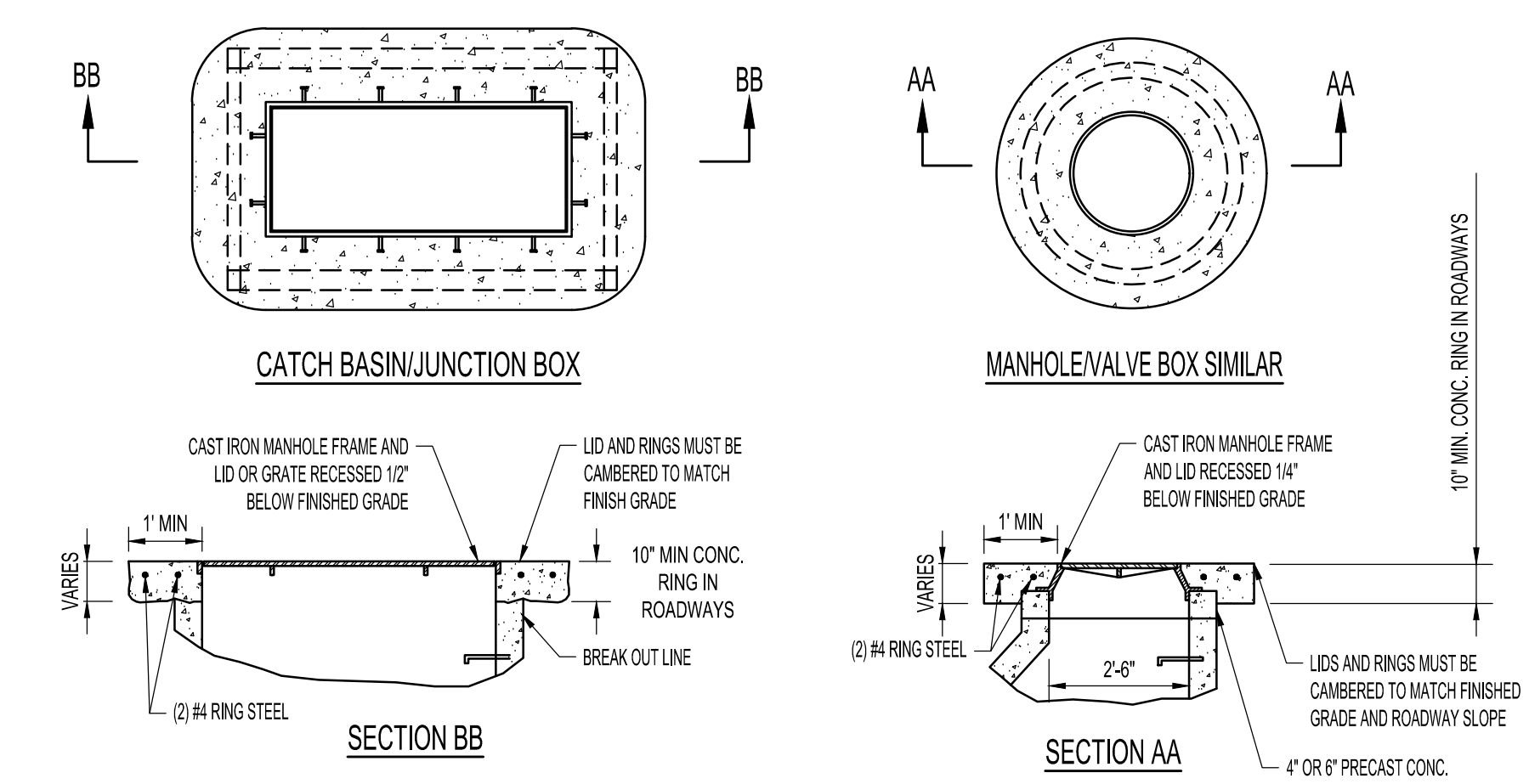
SYMBOL LEGEND



LINE LEGEND



TYPICAL TRENCH AND SURFACE REPAIR N.T.S. A

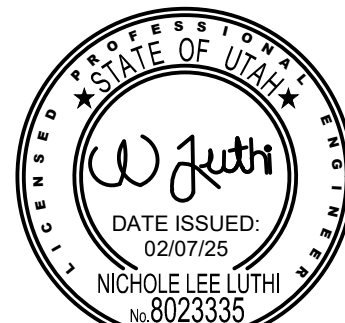
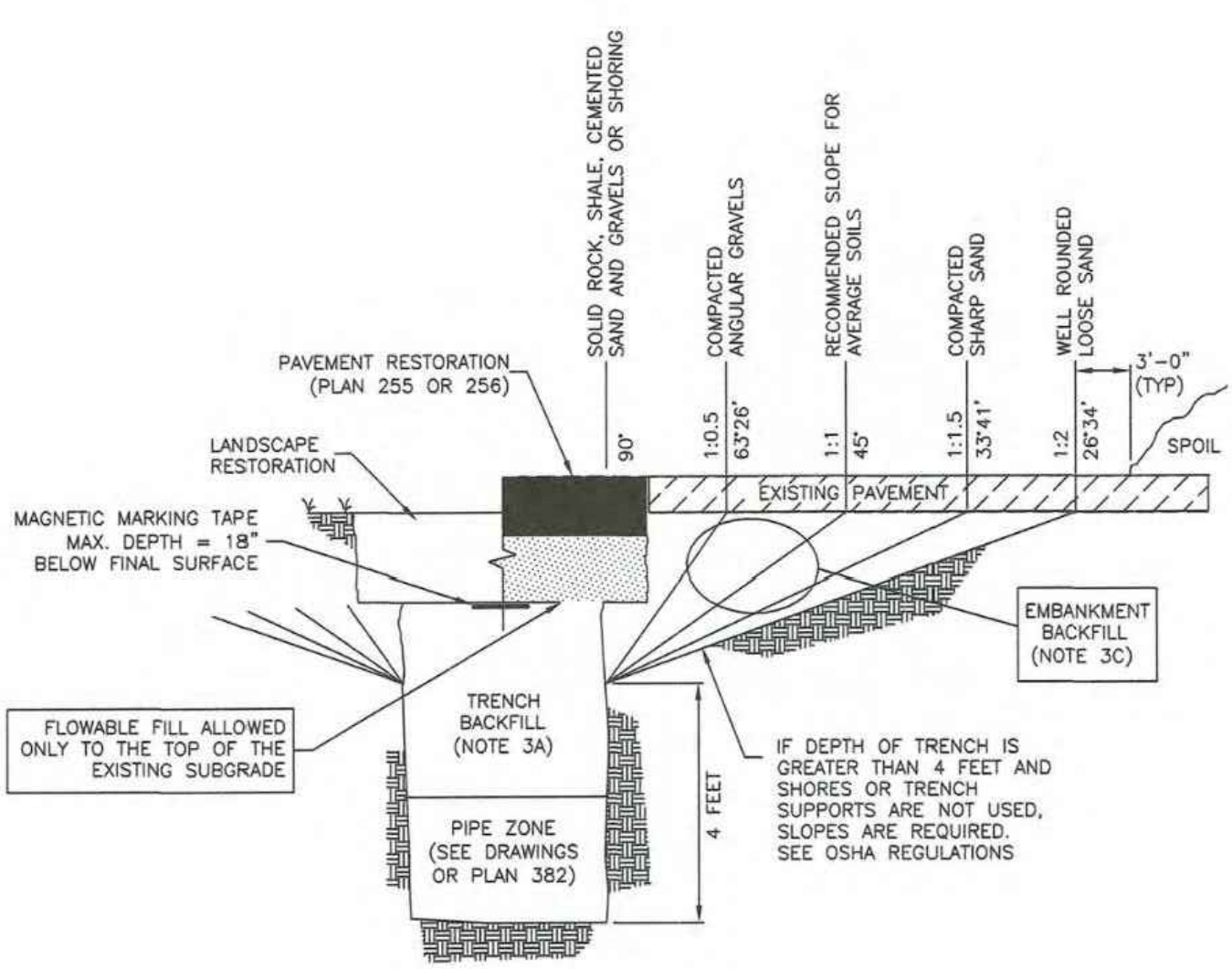


CONCRETE RING AROUND SURFACE UTILITY STRUCTURES N.T.S. B

NARRATIVE: THIS PLAN SHOWS VARIOUS SLOPES RECOMMENDED FOR VARIOUS TYPES OF SLOPE STABILITY PROBLEMS. THE VERTICAL TEXT INDICATES VARIOUS MATERIALS THAT MAY BE ENCOUNTERED. THE SERVICES OF A PROFESSIONAL SOILS ENGINEER SHOULD BE USED TO VERIFY SLOPE STABILITY.

Trench backfill

- 1. GENERAL
A. The drawing applies to backfilling a trench (and embankment) above the pipe zone.
2. PRODUCTS
A. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 3-inches.
B. Flowable Fill: APWA Section 31 05 15. Target is 60 psi in 28 days with 90 psi maximum in 28 days, it must flow easily requiring no vibration for consolidation.
3. EXECUTION
A. Trench Backfill Above the Pipe Zone: Follow requirement indicated in APWA Section 33 05 20 and the following provisions. See Standard Plan 382 for backfilling the pipe zone.
1) DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate as trench backfill.
2) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.
3) Water jetting is NOT allowed.
B. Flowable Fill: If controlled low strength material is placed in the trench. Cure the material before placing surface restorations.
C. Embankment Backfill: When trench sides are sloped proceed as follows.
1) Maximum lift thickness is 8-inches before compaction.
2) Compact per APWA Section 31 23 26 to 95 percent or greater relative to a standard proctor density.
3) Submission of quality control compaction test result data may be requested by ENGINEER at any time. Provide results of tests immediately upon request.
D. Surface Restoration:
1) Landscaped Surface: Follow APWA Section 32 92 00 (turf or grass) or APWA Section 32 93 13 (ground cover) requirements. Rake to match existing grade. Replace vegetation to match pre-construction conditions.
2) Paved Surface: Follow APWA Section 33 05 25 (bituminous pavement surfacing), or APWA Section 33 05 25 (concrete pavement surfacing). Do not install surfacing until compaction density is acceptable to ENGINEER.

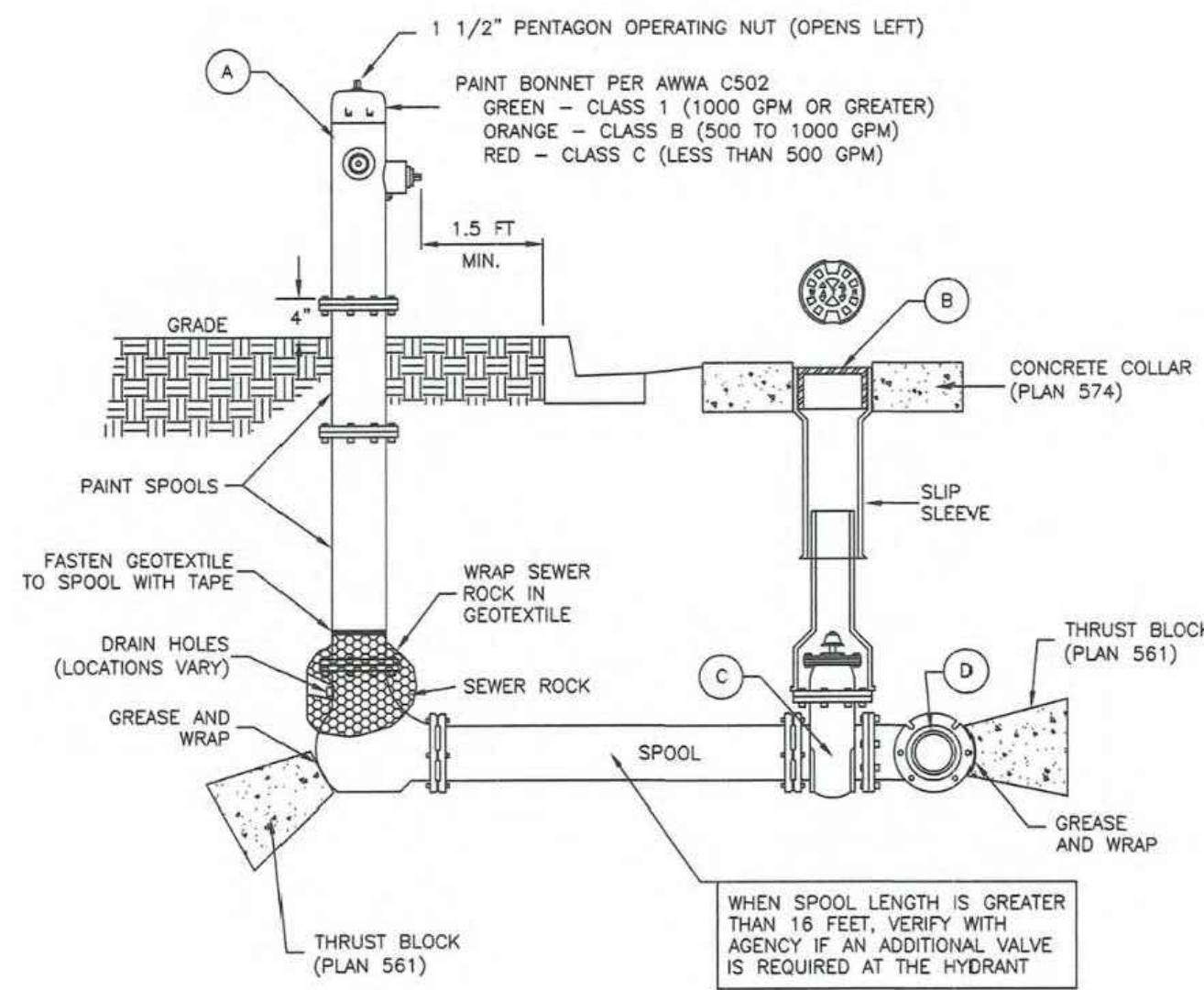


Vertical sidebar containing project information: CANYON SCHOOL DISTRICT, 8449 MONROE STREET, MIDVALE, UTAH; COPPERVIEW ELEM. SITE IMPROV.; GENERAL NOTES AND DETAILS; CONSTRUCTION DOCUMENTS; COMP. FILE 24x36; PROJECT NO. 22194; SHEET NO. C100; MERIDIAN ENGINEERING, INC. logo and contact info; and a table for REVISIONS.



**Fire hydrant with valve**

1. **GENERAL**
  - A. Before backfilling, secure inspection of installation by ENGINEER.
  - B. Additional requirements are specified in APWA Section 33 11 00.
2. **PRODUCTS**
  - A. Hydrant: Dry barrel, AWWA C502.
  - B. Thrust Blocks: Concrete Class 4000, APWA Section 03 30 04.
  - C. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
  - D. Backfill: APWA Section 31 05 13. Maximum particle size 2-inches.
    - 1) Sewer Rock: ASTM Size No. 3 (2" to 1") or larger.
    - 2) Other Type of Common Fill: CONTRACTOR'S choice.
  - E. Geotextile: Stabilization-separation fabric, APWA Section 31 05 19.
3. **EXECUTION**
  - A. Installation:
    - 1) Provide at least 1 cubic yard of sewer rock around drain hole at base of hydrant spool. Wrap geotextile around sewer rock and tape geotextile to hydrant spool to prevent silting of sewer rock.
    - 2) Paint fire hydrant to agency's fire hydrant paint code.
    - 3) Apply non-oxide grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
    - 4) Notify fire department as soon as hydrant is placed in service.
  - B. Thrust Blocks:
    - 1) Before pouring concrete, wrap pipe system with polyethylene sheet to prevent bonding of concrete to pipe system.
    - 2) Not required for flange or welded pipe systems.
  - C. Backfill: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.



LEGEND			
No.	*	ITEM	DESCRIPTION
(A)		FIRE HYDRANT	AWWA C502
(B)		VALVE BOX WITH LID	2-PIECE CAST IRON
(C)		GATE VALVE WITH 2" X 2" NUT	AWWA C509
(D)		TEE WITH 125 # FLANGE	AWWA C110

\* FURNISHED BY UTILITY AGENCY

**SECTION**

511



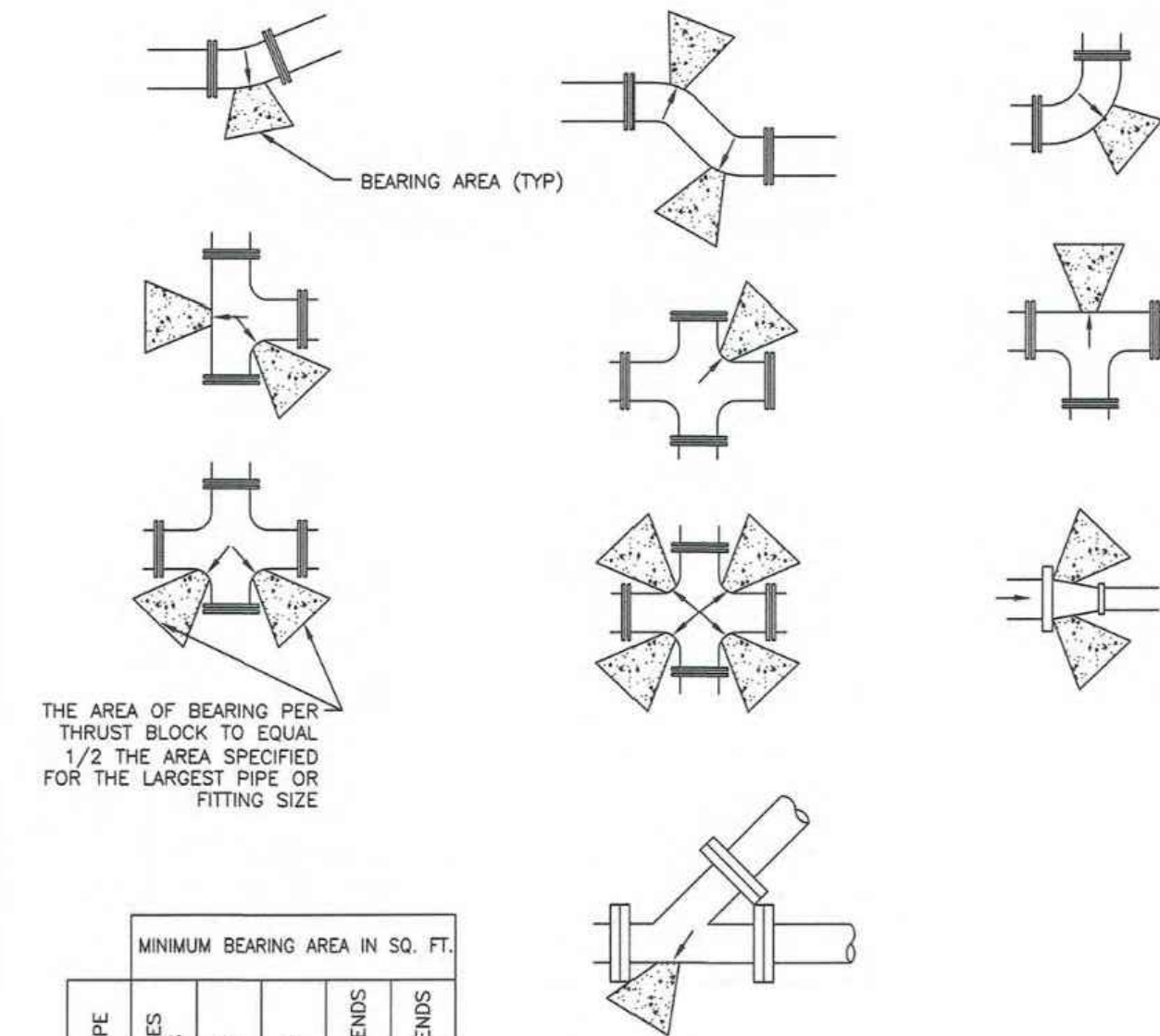
**Fire hydrant with valve**

Plan 511  
February 2011

523

**Direct bearing thrust block**

1. **GENERAL**
  - A. Thrust design for pipe sizes or configurations not shown require special design.
  - B. Bearing areas, volumes, and special thrust blocking details shown on Drawings take precedence over this plan.
  - C. Restraint sizing is based upon a maximum operating pressure of 150 psi and a test pressure of 200 psi, and a minimum soil bearing strength of 2,000 psf. Operating pressures in excess of 150 psi or soils with less than 2,000 pound bearing strength will require special design.
  - D. Before backfilling around thrust block, secure inspection of installation by ENGINEER.
2. **PRODUCTS**
  - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER'S permission.
  - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
  - C. Thrust Blocks: Concrete Class 4000, APWA Section 03 30 04.
  - D. Grease: Non-oxide poly-FM.
3. **EXECUTION**
  - A. Pour concrete against undisturbed soil.
  - B. Pipe Joints: Do not cover with concrete. Leave completely accessible.
  - C. Grease: Apply grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
  - D. Locking restraint devices may be used in conjunction with concrete thrust blocking (at discretion of ENGINEER).
  - E. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.



SIZE OF PIPE	MINIMUM BEARING AREA IN SQ. FT.				
	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	2.5	2
8"	6.5	8.5	5	2.75	2.5
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	9
24"	53	74	41	21	12
30"	81	114	62	32	16



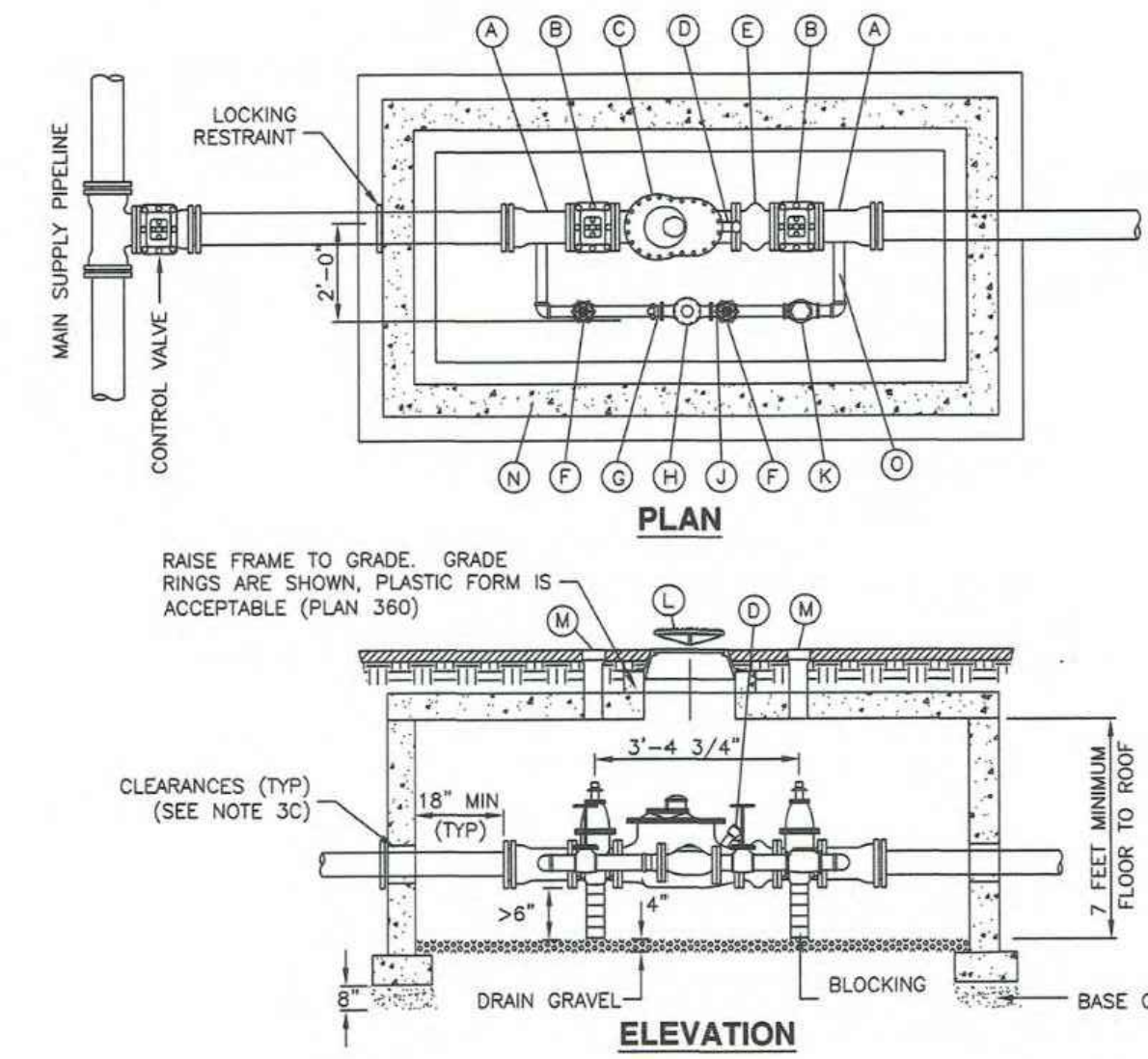
**Direct bearing thrust block**

Plan 561  
August 2010

561

**3" and 4" Compound meter with 2" bypass**

1. **GENERAL**
  - A. Configuration may be changed at ENGINEER'S discretion.
  - B. Additional requirements are specified in APWA Section 33 12 16.
2. **PRODUCTS**
  - A. Small Fittings: Brass. Do not use galvanized materials.
  - B. Blocking: Clay brick or concrete block.
  - C. Drain Gravel: Sewer rock, ASTM size no. 3 (2" to 1") or equal, APWA Section 31 05 13.
3. **EXECUTION**
  - A. Control Valve: Install valve with valve box adjacent to main.
  - B. Center frame and cover over water meter.
  - C. Allow 1-inch clearance around waterline where water line passes through concrete box wall. Seal opening with compressible seal.



LEGEND			
No.	*	ITEM	DESCRIPTION
(A)		3" OR 4" FLANGE x M.J. ADAPTER	
(B)		3" OR 4" GATE VALVE WITH 2"x2" OPERATING NUT	
(C)		3" OR 4" COMPOUND METER	
(D)		2" TEST ASSEMBLY	
(E)		3" OR 4" CHECK VALVE	
(F)		2" GATE VALVE	
(G)		2" METER FLANGE	
(H)		2" DISPLACEMENT METER	
(J)		2" MALE METER FLANGE	
(K)		2" CHECK VALVE	
(L)		27" FRAME AND COVER	PLAN 502
(M)		TOP SECTION OF VALVE BOX WITH LID	PLAN 574
(N)		CONCRETE BOX	PLAN 505
(O)		COPPER PIPING	

\* FURNISHED BY AGENCY



**3" and 4" Compound meter with 2" bypass**

Plan 523  
August 2001

<p><b>MERIDIAN ENGINEERING, INC.</b> 1025 SOUTH LINDA AVENUE SUITE 102 SALT LAKE CITY, UTAH 84119 PHONE (801) 566-1315 FAX (801) 569-1319</p>	<p>NO. _____</p> <p>DATE FEB-2025</p> <p>BY _____</p> <p>DATE _____</p>
<p>COPYRIGHT ALL RIGHTS RESERVED NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS ELECTRONIC OR MECHANICAL INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE RETRIEVAL SYSTEM</p>	<p>NO. _____</p> <p>DATE _____</p> <p>BY _____</p> <p>DATE _____</p>
<p>APWA Utah Chapter</p>	<p>APWA Utah Chapter</p>
<p>CANYON SCHOOL DISTRICT 8449 MONROE STREET MIDVALE, UTAH</p>	<p>COPPERVIEW ELEM. SITE IMPROV. APWA DETAILS CONSTRUCTION DOCUMENTS</p>
<p>COMP. FILE 24x36</p>	<p>PROJECT NO. 22194</p>
<p>SHEET NO. C101</p>	<p>STATE OF UTAH NICHOLE LEE LUTHI 02/07/25 8023335</p>

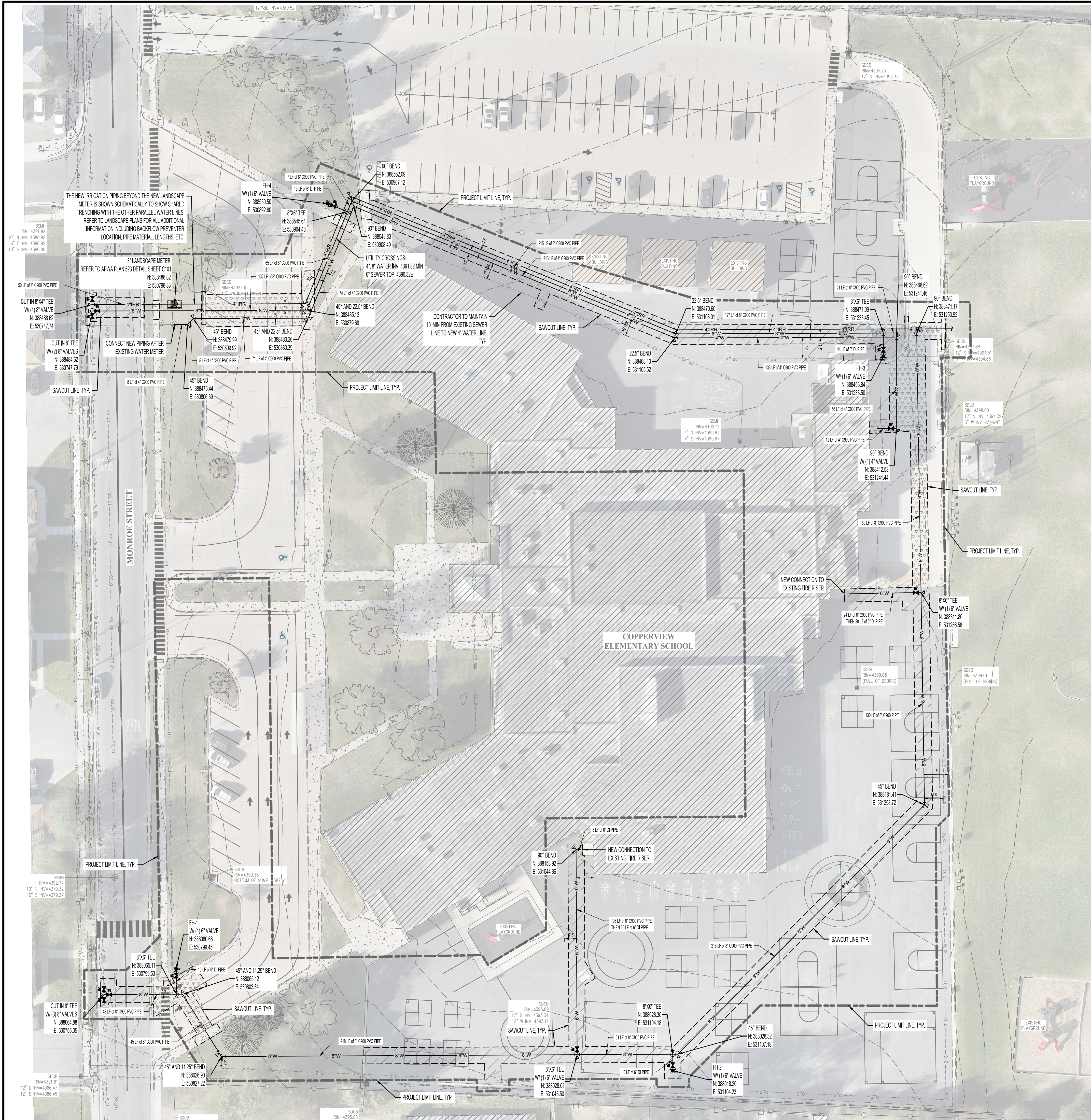










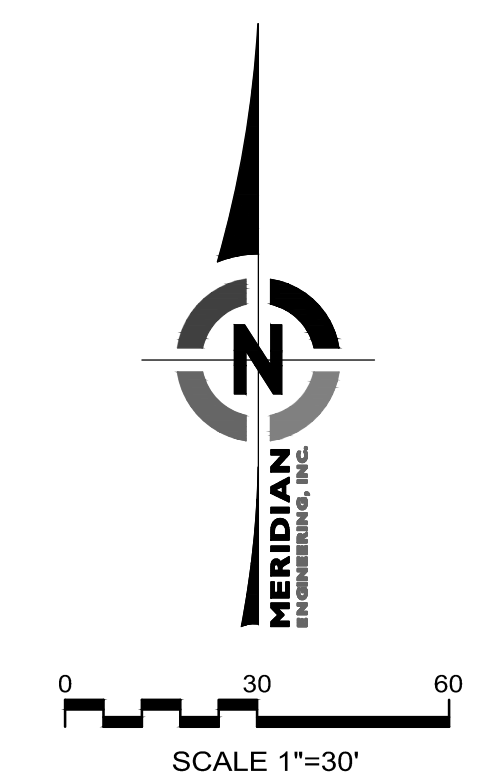


GENERAL UTILITY NOTES:

- "INTERFACE LINE" BETWEEN THE EXISTING BUILDING PLUMBING UTILITIES AND THE SITE UTILITIES WILL BE AT 5' FROM THE BUILDING AND (EXCEPT FOR THE FIRE SPRINKLER LINE) CONTRACTOR TO CONNECT TO THE EXISTING FIRE RISER LINE JUST OUTSIDE OF THE EXISTING BUILDING WITH DUCTILE IRON PIPE. CONNECTION TO BUILDING PIPING AND ALL PIPING BEYOND THIS INTERFACE SHALL BE THE SITE UTILITY CONTRACTORS RESPONSIBILITY. PROVIDE REDUCERS, ADAPTERS, OR OTHER FITTINGS AS REQUIRED AT THE INTERFACE TO CONNECT TO BUILDING PIPE.
- SITE CONTRACTOR SHALL COORDINATE WITH MIDVALE CITY INSPECTOR WHEN COMPLETING WATER CONNECTIONS IN CITY STREETS OR ON SITE WHERE REQUIRED.
- ALL CONSTRUCTION IN THE CULINARY WATERLINE AND SANITARY SEWER LINE PIPE ZONE SHALL COMPLY WITH ALL MIDVALE CITY SPECIFICATIONS AND REQUIREMENTS. SEE GENERAL NOTES ON SHEET C100. WHERE THRUST BLOCKING CANNOT BE COMPLETED DUE TO OTHER ADJACENT UTILITIES OR OTHER SITE CONSTRAINTS, RESTRAINED JOINTS WILL BE REQUIRED PER MIDVALE CITY STANDARD SPECS. THRUST BLOCK ALL WATERLINE FITTINGS PER MIDVALE CITY STANDARDS TYP.
- COORDINATES FOR FIRE HYDRANTS, CURB INLETS, CATCH BASINS, OR CLEAN OUTS ARE AT THE CENTER OF THE UTILITY STRUCTURE.
- ALL VALVES, AREA CATCH BASINS (NOT IN C&G), CLEAN OUTS, OR MANHOLES SHALL HAVE CONCRETE GRADE ADJUSTMENT COLLARS PLACED PER DETAIL ON C100.
- THE FIRE SPRINKLER LINES SHALL BE ROUTED TO THE EXISTING FIRE RISERS. REFER TO PLAN FOR RISER LOCATIONS INTO THE BUILDING. THE FIRE SERVICE LINES SHALL BE CEMENT LINED DUCTILE IRON PIPE (PER AWWA C151 350 PSI AND AWWA C104) WRAPPED IN POLYETHYLENE (PER AWWA C105) FROM THE BUILDING CONNECTION AS INDICATED ON THE PLANS PER CITY WATER STANDARD SPECIFICATIONS AND DETAILS.
- ALL CONSTRUCTION, PIPING MATERIALS AND INSTALLATION TO BE:
  - WATER LINES:
    - 4"-8" WATERLINES TO BE C900 PVC PIPE PER MIDVALE CITY STANDARDS AND AWWA STANDARDS.
- PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION. ANY NEW BACKFLOW DEVICES AND THE STOP AND WASTE VALVE ARE SHOWN ON THE LANDSCAPE DRAWINGS.
- INSPECTION AND APPROVAL FOR THE SEWER/WATER LINE CROSSINGS ON SITE SHALL BE REVIEWED AND APPROVED BY MIDVALE CITY PRIOR TO CONSTRUCTION OF THE CROSSING. MIDVALE CITY SHALL ALSO INSPECT THE CROSSING PRIOR TO BACKFILL.
- REFER TO SHEET C200 FOR PROJECT BASIS OF BEARING, BASIS OF COORDINATES AND BENCHMARK.
- ALL UTILITIES OUTSIDE OF PUBLIC R.O.W. ARE PRIVATELY OWNED AND SHALL BE MAINTAINED BY OWNER UNLESS NOTED OTHERWISE.
- POT HOLE AND FIELD VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- USE FLOWABLE FILL BETWEEN UTILITY CROSSINGS THAT ARE LESS THAN 12" SEPARATION. ALL GRAVITY LINES MUST BE INSTALLED BEFORE PRESSURIZED LINES.
- PIPING LENGTHS ARE APPROXIMATE LENGTHS AND ARE ROUNDED TO THE NEAREST FOOT. LENGTHS ARE FROM CENTER TO CENTER OF STRUCTURES.
- ALL FIRE SPRINKLER LINES SHALL HAVE 60" OF COVER MINIMUM. ALL OTHER WATERLINES INCLUDING EXISTING LINES TO HAVE 48" MINIMUM COVER.
- POT HOLE ALL EXISTING UTILITY CROSSINGS PRIOR TO ROUTING ANY NEW UTILITIES. PROVIDE 12" MIN. CLEARANCE BETWEEN WATER AND OTHER UTILITIES. WATER LINES SHALL NOT BE PLACED UNDER SEWER LINES AND SHALL HAVE A MINIMUM OF 18" CLEARANCE OF SEWER.
- THRUST BLOCK ALL FITTINGS OR PROVIDE RESTRAINED JOINTS PER CITY STANDARDS. THE NEW 6" CONNECTIONS TO THE NEW BUILDING WILL REQUIRE RESTRAINED JOINTS FOR MANY FITTINGS DUE TO LIMITED SPACE BETWEEN PIPES.
- COORDINATE WITH LANDSCAPE PLANS PRIOR TO COMPLETION OF PAVEMENT FOR INSTALLATION OF IRRIGATION SLEEVES ACROSS PAVING OR PARKING AREAS.
- WATER VALVES AND OTHER SURFACE UTILITY ACCESSORIES SHALL BE RAISED AND SLOPED TO ACCURATE FINISH SURFACE BY A CONCRETE GRADE COLLAR IN PAVEMENT. COLLAR SHALL BE 12" WIDE AROUND THE UTILITY APPARATUS AND 8" MINIMUM THICKNESS. PLACE 2 #4 REBAR HOOPS IN COLLAR. REFER TO DETAIL ON SHEET C100. CONCRETE COLLARS TO BE USED IN ONLY ASPHALT PAVEMENT AREAS OR PAVEMENT AREAS.
- REPAIR PAVEMENT, AS WELL AS CURB AND GUTTER, AND SIDEWALKS WHERE UTILITIES CROSS INTO PUBLIC R.O.W. TO MAINTAIN TRAFFIC THROUGH THESE AREAS. ALL REPAIR IN PUBLIC R.O.W. TO MEET AWWA AND CITY STANDARDS.
- CONTRACTOR RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS AND INSPECTIONS WHILE WORKING IN THE PUBLIC RIGHT OF WAY.
- PROJECT LOCATED IN FEMA FLOOD PLAIN ZONE X, 4903C0423G EFFECTIVE 9/25/2009.
- VALVES ATTACH DIRECTLY TO TEE FITTINGS. "FL" INDICATES FLANGE FITTING AND "MJ" INDICATED MECHANICAL JOINT FITTING. ALL VALVING WILL CONNECT TO MAIN LINE PIPE WITH FLANGE FITTINGS. MAIN LINE FITTINGS CONNECTING TO VALVES WILL ALSO BE FLANGE FITTINGS. WRAP AND GREASE ALL FITTINGS PER SPECIFICATIONS AND NOTES.
- THE CONTRACTOR SHALL MAINTAIN 10 FOOT HORIZONTAL AND 18 INCH VERTICAL SEPARATION BETWEEN SANITARY SEWER AND CULINARY WATER LINES. FOLLOW CITY STANDARDS FOR ALL WATER/SEWER CROSSINGS.
- SPOT ELEVATION PREFIX OF 44 OR 43 HAS BEEN DROPPED FROM THE ELEVATIONS IE. ELEVATION 00.00 = 4400.00 AND 43.50 = 4396.50.

GENERAL SITE NOTES:

- REFER TO SHEET CS210 FOR LOCATIONS OF ASPHALT AND CONCRETE REMOVAL AND REPAIR AFTER COMPLETION OF NEW WATER LINE.
- ALL PAVEMENT REPAIR TO MEET REQUIREMENT STANDARD DETAILS ON C100 OR CITY STANDARDS IN CITY R.O.W.
- TRANSITION CURB FROM STANDARD CURB HEIGHT TO CURB TERMINATION OVER 6" MINIMUM AT ALL LOCATIONS.
- REPAIR/CONSTRUCT DRIVE APPROACHES PER CITY STANDARDS.

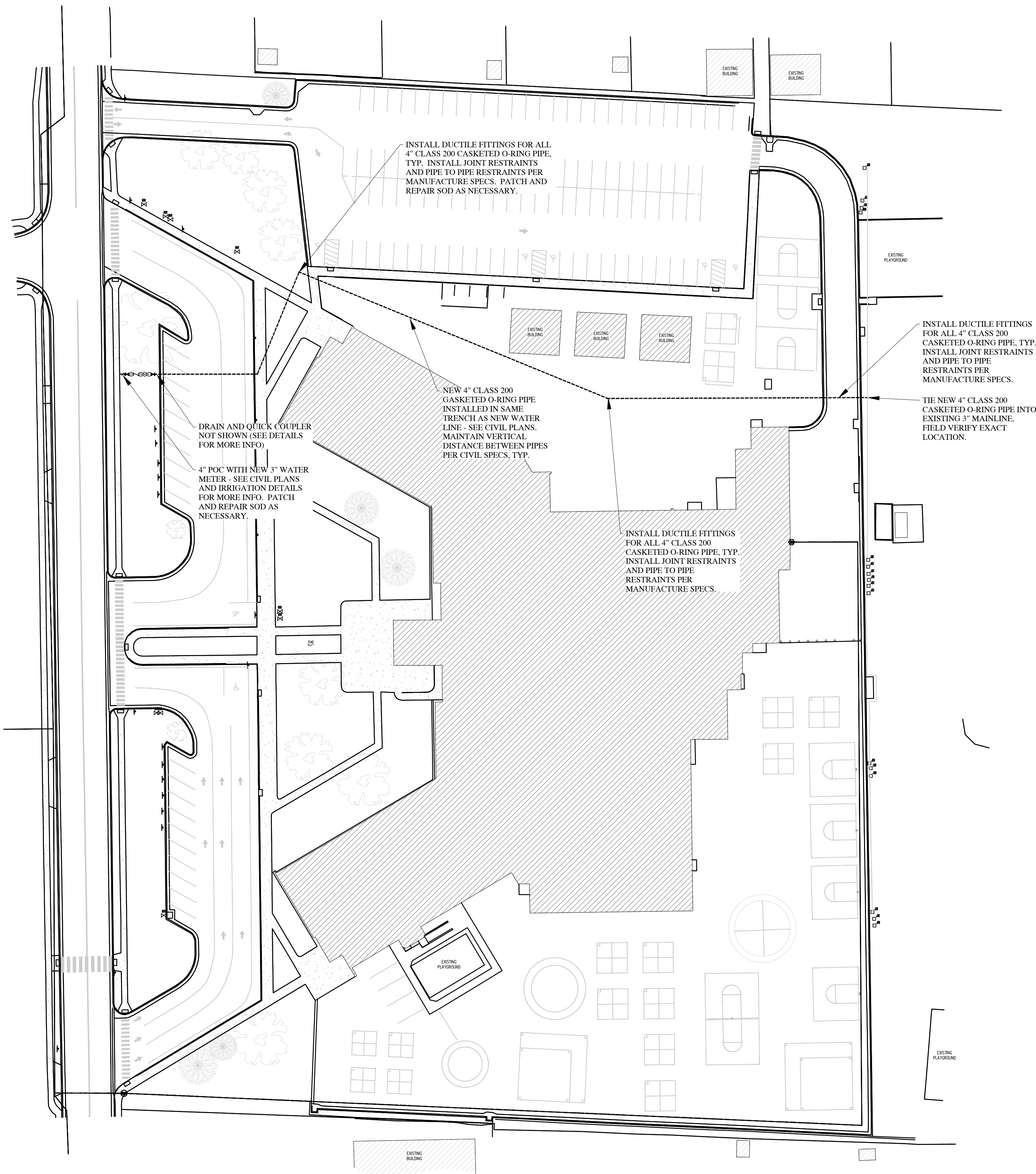


STRUCTURE LABEL	DETAIL #
FH- FIRE HYDRANT	APWA PLAN 511 SHEET C101
3" LANDSCAPE METER	APWA PLAN 523 SHEET C101



 <b>MERIDIAN ENGINEERING, INC.</b> 1625 SOUTH LINDSAY BLVD SUITE 102 MIDVALE, UTAH 84047 PHONE (801) 666-1315 FAX (801) 589-919	<b>CANYON SCHOOL DISTRICT</b> 8449 MONROE STREET MIDVALE, UTAH	<b>COPPERVIEW ELEM. SITE IMPROV.</b> UTILITY PLAN CONSTRUCTION DOCUMENTS	COMP. FILE 24x36 PROJECT NO. 22194 SHEET NO. CU300	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>REVISIONS</th> <th>BY</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	REVISIONS	BY	DATE				
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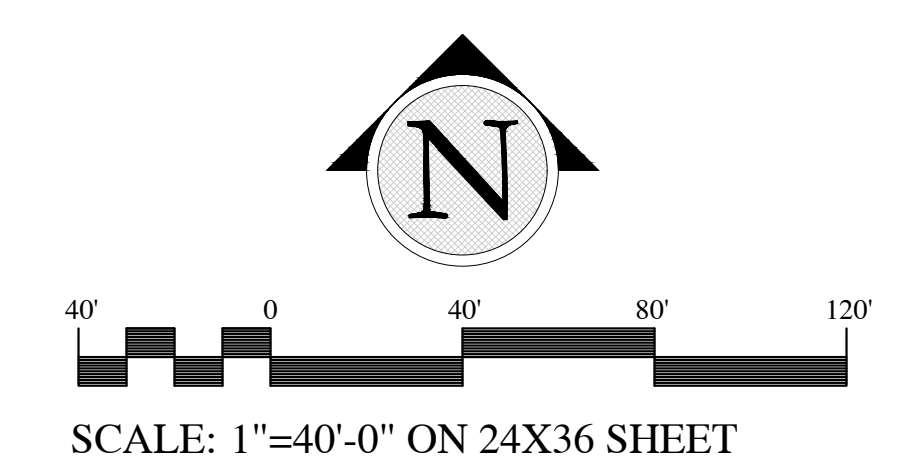
**IRRIGATION LEGEND**

SYMBOL	NOTES	DETAILS SEE SHEETS LS2.01,LS2.1	REMARKS
[Symbol]	EXISTING CAL SENSE CONTROLLER LOCATED IN BASEMENT. CONNECT FLOW SENSOR AND MASTER VALVE WIRES TO EXISTING CONTROLLER USING EXISTING MAINLINE AS A CONDUIT.	N/A	VERIFY EXISTING LOCATION ON-SITE
[Symbol]	3" CAL SENSE ULTRASONIC FLOW SENSOR	7	REFERENCE DETAILS
[Symbol]	3" RAINBIRD BPES VALVE	7	REFERENCE DETAILS
[Symbol]	3" WILKINS 375 ASST FCS BACKFLOW PREVENTOR WITH 3" Y STRAINER AND SS STRONGBOX ENCLOSURE	7	REFERENCE DETAILS
[Symbol]	4" POINT OF CONNECTION - SEE CIVIL PLANS	7	REFERENCE DETAILS
[Symbol]	1" RAINBIRD QUICK COUPLER, MODEL #4LRC. FOR IRRIGATION SYSTEM BLOWOUT. ALL GALVANIZED FITTINGS & PIPE. MAXIMAL DRAIN PER DETAILS	2	REFERENCE DETAILS
[Symbol]	3" AND 4" LEEMCO MAINLINE ISOLATION VALVE (SIZE PER DETAILS)	1	REFERENCE DETAILS
[Symbol]	MAINLINE: 4" CLASS 200 CASKEDED O-RING WITH LEEMCO FITTINGS, JOINT RESTRAINTS AND PIPE TO PIPE RESTRAINTS. P.O.C. PIPING TO BE DUCTILE IRON AND SCH. 80 PER DETAILS.	4.5	REFERENCE DETAILS
[Symbol]	EXISTING MAINLINE: THE NEW MAINLINE INTO EXISTING MAINLINE AND REPAIR AS REQ. FIELD VERIFY EXACT LOCATION	N/A	REFERENCE DETAILS
[Symbol]	14 GAUGE SINGLE STRAND COPPER WIRE	4.5.7	REFERENCE DETAILS

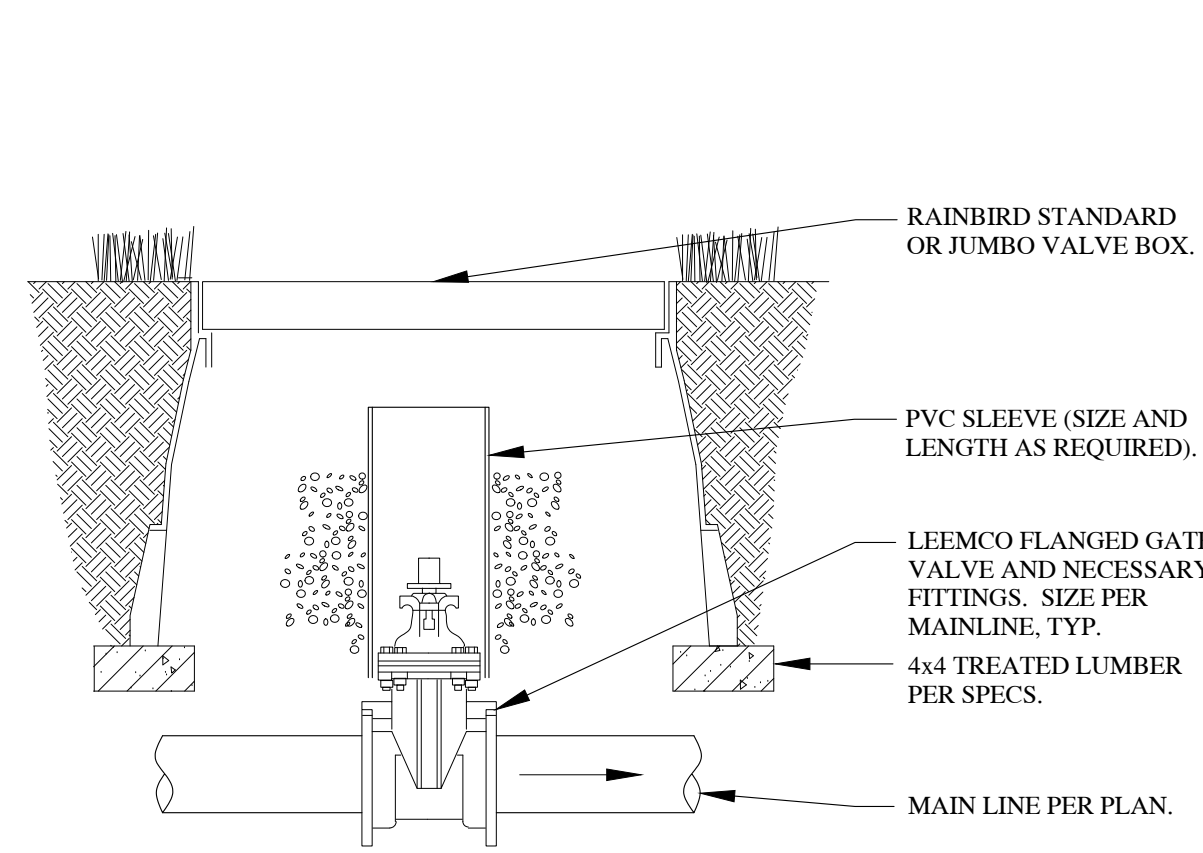
**IRRIGATION NOTES**

- ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND/OR COUNTY CODES. THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY PERMITS.
- CONTRACTOR SHALL HAVE ALL UTILITIES BLUE STAKED BEFORE DIGGING. ANY DAMAGE TO THE UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF CONTRACTOR WITH NO EXTRA COST TO THE OWNER.
- PROVIDE AN AS-BUILT, REPRODUCIBLE DRAWING TO OWNER SHOWING ALL DRAINS, VALVES, FLOW SENSOR, WIRE RUNS AND PIPES. PROVIDE INSTRUCTIONS TO MAINTENANCE PERSONNEL FOR WINTERIZATION. SPRINKLER SYSTEM TO BE BLOWN OUT WITH AN AIR COMPRESSOR EACH FALL.
- CONTRACTOR SHALL ONLY USE COMMERCIAL GRADE PRODUCTS AND IS RESPONSIBLE FOR ENSURING ACCURATE COUNTS AND QUANTITIES OF ALL IRRIGATION MATERIALS FOR BIDDING AND INSTALLATION PURPOSES.
- LANDSCAPE CONTRACTOR (L.C.) SHALL PROVIDE AND INSTALL SLEEVES FOR ALL WIRES UNDER PAVEMENT AND SIDEWALKS. SLEEVES SHALL BE 2 SIZES LARGER THAN PIPE INSIDE. ALL WIRE SHALL BE IN SEPARATE SLEEVES (NOT SHOWN). ALL CONTROL WIRE SHALL BE INSTALLED IN SCH. 40 GREY ELECTRICAL CONDUIT EXCEPT WHERE THE EXISTING MAINLINE WILL BE USED TO GET POWER FROM THE EXISTING CONTROLLER OUT TO THE LANDSCAPE AREA IN THE BACK PLAYFIELD. PLACE JUNCTION BOXES WHERE NECESSARY TO MINIMIZE LONG RUNS OR AT DIRECTIONAL CHANGES AS NECESSARY.
- ALL SLEEVES INSTALLED SHALL BE DUCT TAPED TO PREVENT DIRT OR OTHER DEBRIS ENTERING PIPE. ALL SLEEVES SHALL BE IDENTIFIED BY WOOD OR PVC STAKES AND BE SPRAY PAINTED WITH MARKING PAINT. REMOVE STAKES ONCE IRRIGATION SYSTEM IS COMPLETE.
- MAIN LINE SHALL BE 4" (UNLESS OTHERWISE NOTED). PIPES SHALL CARRY NO MORE THAN THE FOLLOWING: 3" PIPE MAX. 110 GPM AND 4" PIPE MAX. 220 GPM.
- MAIN LINES SHALL BE 24" DEEP MIN. DEEP. NO ROCK GREATER THAN 1/2" DIAMETER SHALL BE ALLOWED IN TRENCHES.
- PLACE PIPES, VALVE BOXES AND ALL OTHER SPRINKLER CONSTRUCTION IN LANDSCAPE AREAS EXCEPT MAINLINE THAT RUNS UNDER THE ASPHALT. ALL PIPES SHALL BE ON PROPERTY OF OWNER. LANDSCAPE ARCHITECT OR OWNER SHALL VISUALLY INSPECT ALL TRENCHES PRIOR TO BACKFILLING. CONTRACTOR SHALL GIVE OWNER OR LANDSCAPE ARCHITECT MIN. 72 HR. NOTICE BEFORE INSPECTION IS TO BE MADE. CONTRACTOR SHALL PRESSURE TEST MAINLINE FOR LEAKS PRIOR TO BACKFILLING.
- ACTUAL INSTALLATION OF IRRIGATION UPGRADES MAY VARY SOMEWHAT FROM PLANS. CONTRACTOR IS RESPONSIBLE TO MAKE NECESSARY ADJUSTMENTS.
- VALVE BOXES SHALL BE INSTALLED SQUARED TO AND 6" MIN. AWAY FROM WALKS.
- THE SYSTEM HAS BEEN DESIGNED WITH A STATIC PRESSURE OF 92 PSI AT THE P.O.C. THE CONTRACTOR SHALL VERIFY THE EXISTING PRESSURE AND NOTIFY IN-SITE DESIGN GROUP (IN WRITING PRIOR TO BEGINNING WORK ON THE SYSTEM). IF THE STATIC PRESSURE AT THE POINT OF CONNECTION EXCEEDS 100 PSI, INSTALL A 3" PRESSURE REDUCER BEFORE RPZ PER MANUFACTURER SPECS. CONTRACTOR SHALL PERFORM PRESSURE AND FLOW TEST AND GIVE RESULTS TO LANDSCAPE ARCHITECT PRIOR TO BEGINNING WORK ON THE SYSTEM. ADJUST PRESSURE AS REQUIRED FOR NORMAL OPERATION OF THE IRRIGATION SYSTEM. IF A PRESSURE REDUCER IS REQUIRED, A CHANGE ORDER WILL BE ISSUED.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES OF ALL MATERIALS FOR BIDDING AND INSTALLATION PURPOSES. IF DISCREPANCIES EXIST, THEN PLAN SHALL DICTATE QUANTITIES TO BE USED.
- REFER TO DEMOLITION PLANS BY CIVIL ENGINEER. PATCH AND REPAIR ALL DAMAGED SOD DUE TO INSTALLATION OF CIVIL UTILITIES AND IRRIGATION SYSTEM COMPONENTS. NEW SOD SHALL BE INSTALLED AND SHALL MATCH EXISTING SOD AS MUCH AS POSSIBLE. INSTALL 4" DEPTH OF SANDY LOAM TOPSOIL IN ALL NEW SODDED AREAS.
- PATCH AND REPAIR ASPHALT AND CONCRETE PER CIVIL PLANS AND SPECS.

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<b>CANYON SCHOOL DISTRICT</b> 8449 MONROE STREET MIDVALE, UTAH			
<b>COPPERVIEW ELEM. SITE IMPROV.</b> IRRIGATION PLAN BID SET			
COMP. FILE 24x36			
PROJECT NO. 22194			
SHEET NO. LS 1.0			



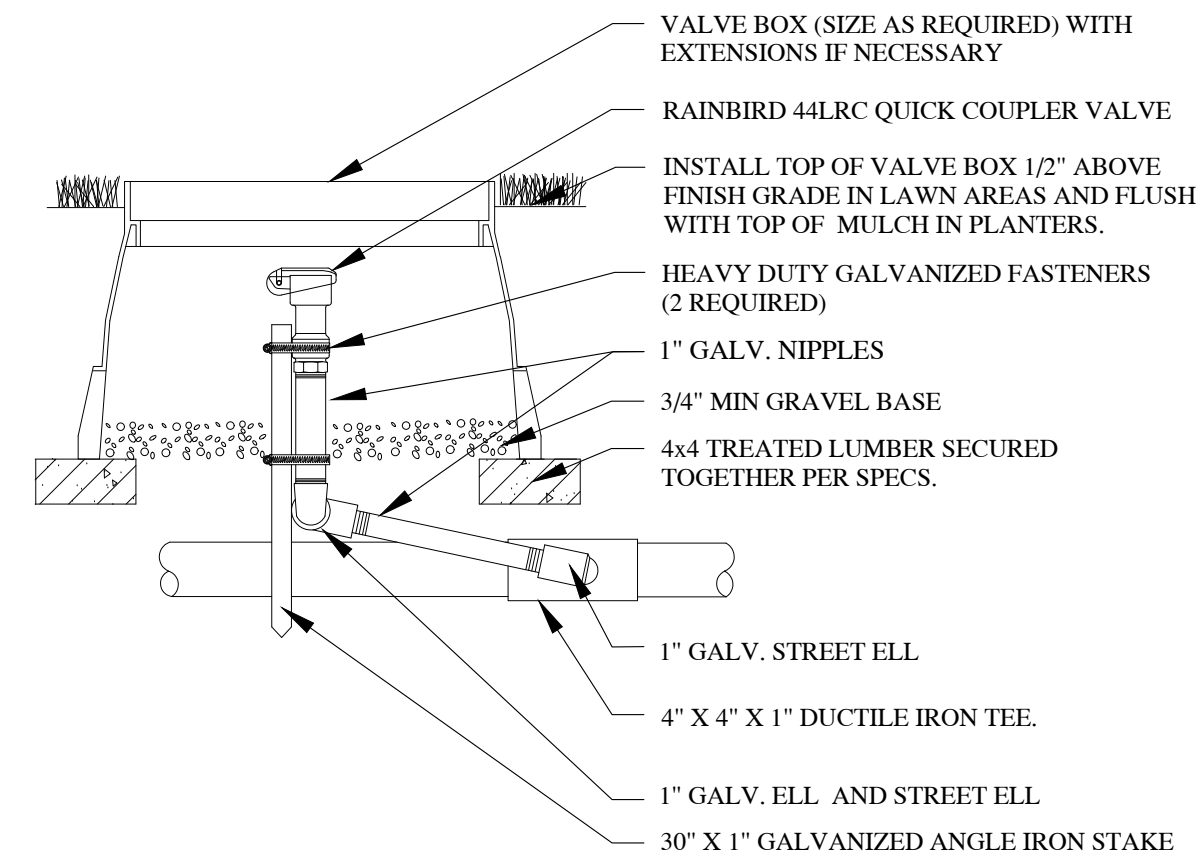




- NOTES:
1. PROVIDE OWNER WITH (2) OPERATING KEYS.
  2. INSTALL FLANGE X BELL ADAPTER TO CONNECT PVC PIPE TO LEEMCO VALVE.
  3. LINE SIZE ISOLATION VALVES AND FITTING.
  4. INSTALL LEEMCO RESTRAINTS PER MANUFACTURERS SPECS.

**1 MAINLINE GATE VALVE**

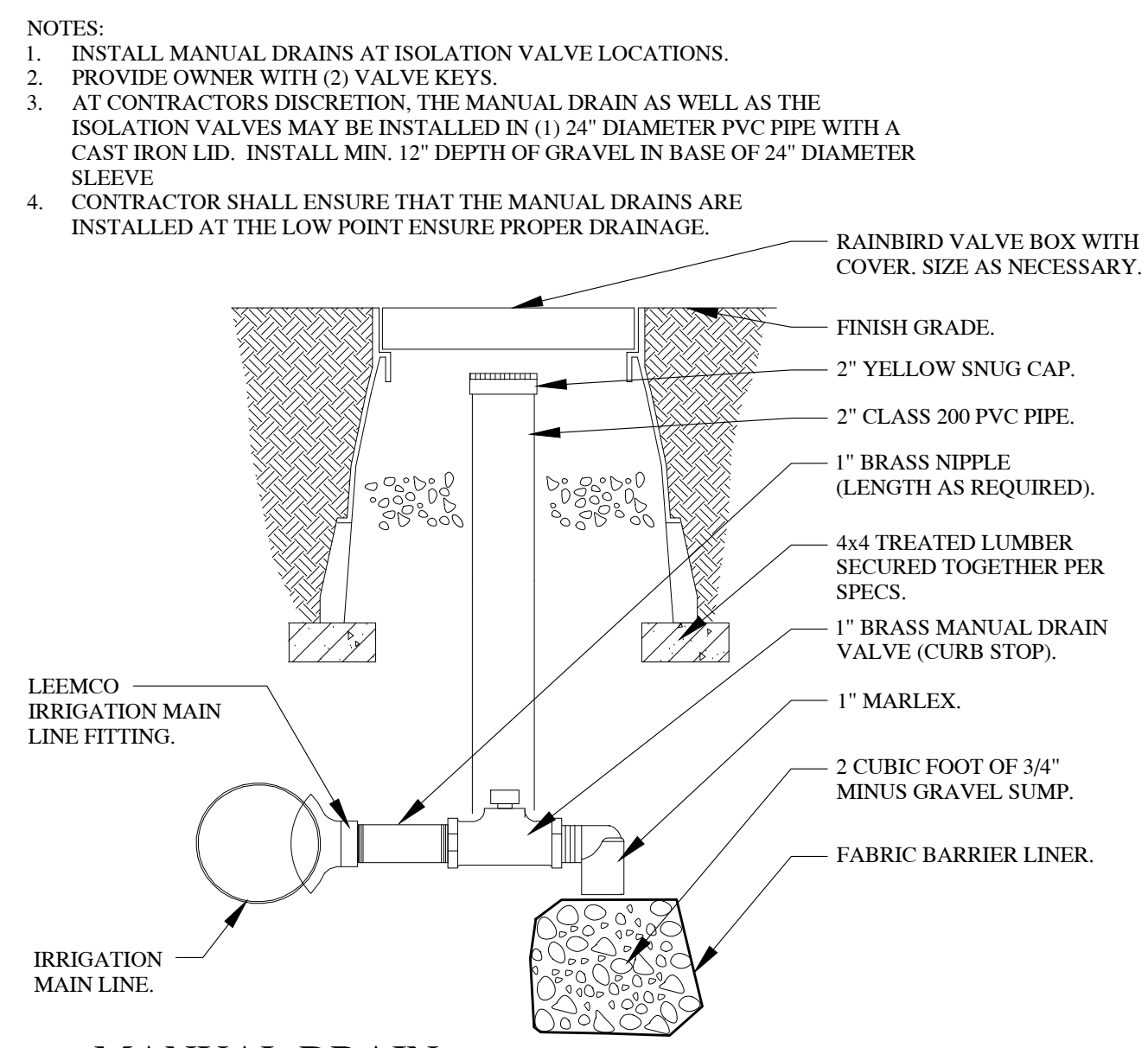
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- NOTES:
1. FLUSH ALL PIPING PRIOR TO INSTALLING VALVE.
  2. WRAP ALL THREADS WITH TEFLON TAPE. 1/2 TO 2 WRAPS MAXIMUM.
  3. COMPACT SOILS AROUND VALVE BOX TO 80% OF ORIGINAL DRY DENSITY.
  4. INSTALL GEOFABRIC UNDER VALVE BOXES AND TAPE TO PIPE NIPPLES AND VALVE BOX.
  5. BOX COLOR - GREEN IN TURF AND TAN IN PLANTER AREAS.
  6. IRRIGATION SYSTEM TO BE BLOWN OUT WITH AIR COMPRESSOR THROUGH THE RPZ AND QUICK COUPLERS BEFORE FREEZING TEMPERATURES OCCUR. TYP.
  7. SCH 80 PVC TEE OR ELL'S CAN BE USED ON ALL QUICK COUPLERS EXCEPT AT POINT OF CONNECTION (IF QUICK COUPLER(S) ARE INSTALLED AT THE POINT OF CONNECTION). ALL QUICK COUPLER FITTINGS AND NIPPLES AT P.O.C. QUICK COUPLER(S) TO BE GALVANIZED.

**2 QUICK COUPLER VALVE**

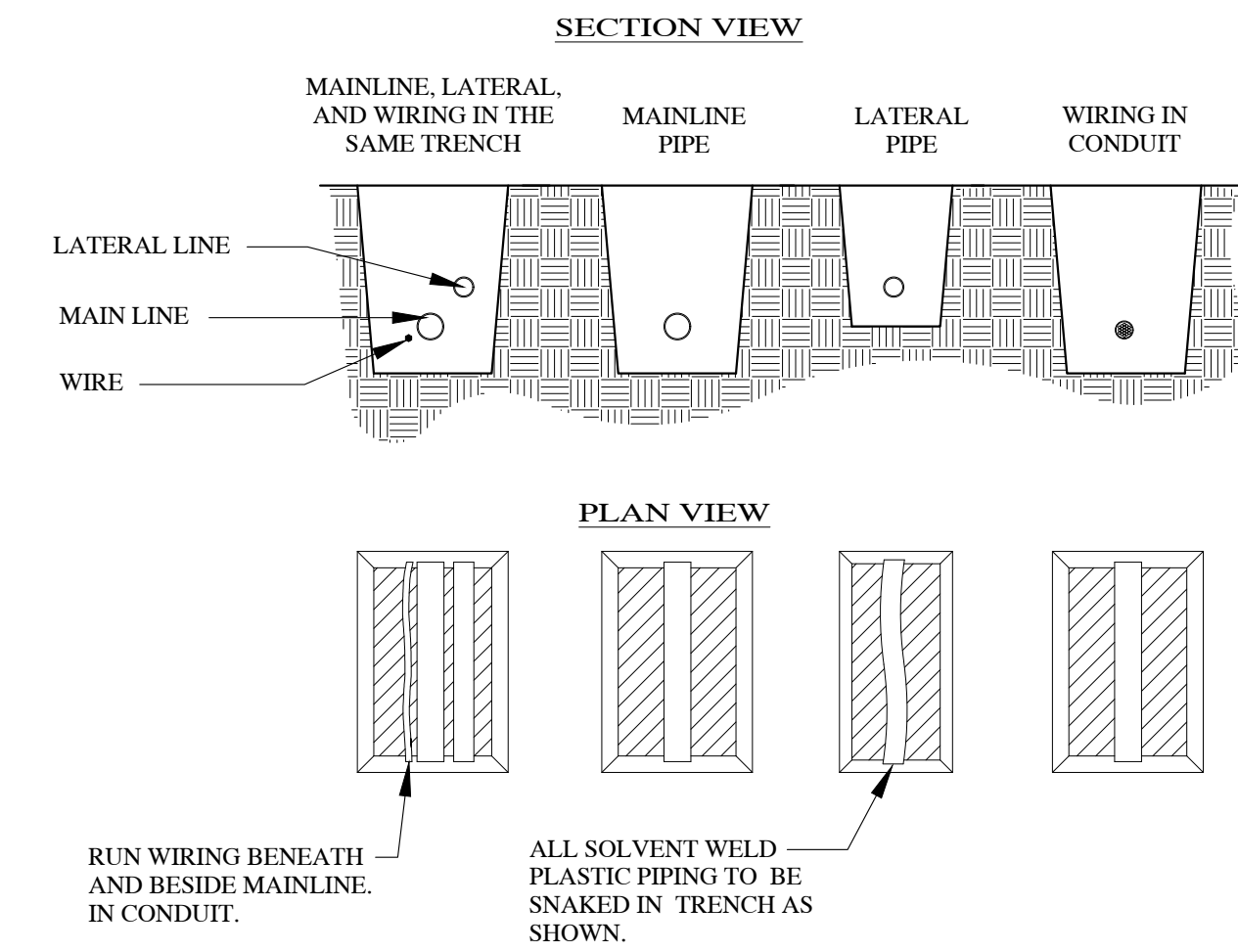
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- NOTES:
1. INSTALL MANUAL DRAINS AT ISOLATION VALVE LOCATIONS.
  2. PROVIDE OWNER WITH (2) VALVE KEYS.
  3. AT CONTRACTORS DISCRETION, THE MANUAL DRAIN AS WELL AS THE ISOLATION VALVES MAY BE INSTALLED IN (1) 24" DIAMETER PVC PIPE WITH A CAST IRON LID. INSTALL MIN. 12" DEPTH OF GRAVEL IN BASE OF 24" DIAMETER SLEEVE.
  4. CONTRACTOR SHALL ENSURE THAT THE MANUAL DRAINS ARE INSTALLED AT THE LOW POINT ENSURE PROPER DRAINAGE.

**3 MANUAL DRAIN**

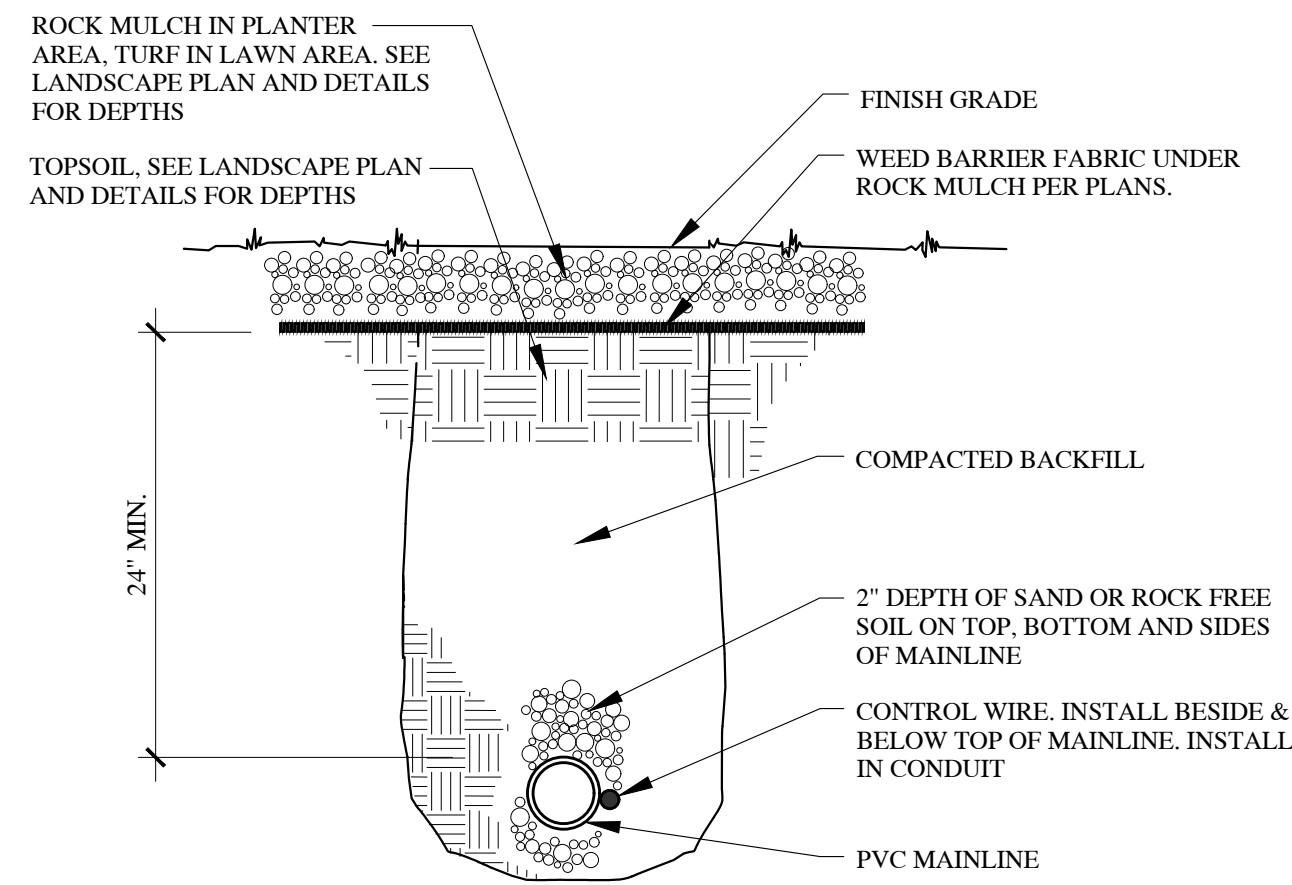
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- NOTES:
1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS (WITH CLASS 200 OR SCH. 40 OR SCH. 80 PER SPECS.) TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
  2. FOR PIPE AND WIRE BURIAL DEPTHS. SEE NOTES AND SPECS.
  3. NO LINE VOLTAGE WIRING SHALL BE ALLOWED IN IRRIGATION TRENCHES.

**4 PIPE, WIRE, AND TRENCH**

SCALE: NTS



- NOTES:
1. PROVIDE SCH. 40 GREY ELECTRICAL CONDUIT FOR ALL CONTROL WIRES, COMMUNICATION CABLE, ETC.
  2. MAINLINE DEPTH SHALL BE 24" DEEP. INSTALL ADDITIONAL FITTINGS & RESTRAINTS AS REQUIRED.
  3. MAINLINE LINE SHALL BE KEPT MIN. 12" FROM ALL SIDEWALKS AND CURBS.

**5 TRENCH SECTION**

SCALE: NTS

**DISTANCE CHART**

REFER TO THE FOLLOWING TABLE THAT LISTS THE LENGTH (IN FEET) FOR EACH SIZE/TYPE FITTING WITHIN WHICH ALL JOINTS MUST BE RESTRAINED. ALL FITTINGS AND JOINT RESTRAINTS SHALL BE INSTALLED PER LEEMCO MANUFACTURERS RECOMMENDATIONS & SPECIFICATIONS.

AS AN EXAMPLE, IF YOU ARE INSTALLING A 3" MAINLINE WITH A DIRECTIONAL CHANGE OF 90°, REFER TO CHART UNDER PIPE SIZE TO 3" AND UNDER BENDS 90° YOU WILL SEE THE DISTANCE OF 11". IF THERE IS ANY JOINT (VALVE, BELL, ETC.) YOU MUST INSTALL A JOINT RESTRAINT WITHIN 11" OF THE 90° MAINLINE DIRECTIONAL CHANGE.

PIPE SIZE	BENDS				REDUCERS			DEAD END	
	11°	22°	45°	90°	1 STEP	2 STEP	3 STEP	BLIND	SERV. B.
2"	1'	1'	2'	6'	-	-	-	19"	6'
2.5"	1'	2'	4'	9'	4'	-	-	23"	10'
3"	2'	3'	6'	11'	8'	10'	-	30"	15'
4"	2'	4'	9'	20'	14'	20'	31'	45"	25'
6"	3'	6'	13'	29'	30'	40'	53'	63"	40'
8"	4'	8'	15'	38'	33'	55'	63'	75"	70'
10"	5'	9'	19'	45'	36'	56'	75'	96"	90'
12"	5'	10'	21'	53'	38'	60'	83'	112"	110'

- NOTES:
1. JOINT RESTRAINTS ARE REQUIRED FOR ALL 3" & 4" PIPING.
  2. PIPE SMALLER THAN 3" WILL NOT NEED JOINT RESTRAINTS OR THRUST BLOCKS.
  3. LEEMCO FITTINGS SHALL BE USED AT ALL CHANGES IN DIRECTION FOR 3" & 4" MAINLINE.
  4. INSTALL LEEMCO JOINT RESTRAINT SYSTEM PER MANUFACTURERS RECOMMENDATIONS.

**6 JOINT RESTRAINT CHART**

SCALE: NTS

**INSTALLATION CHART**

REFER TO THE FOLLOWING TABLE WHICH LISTS THE NUMBER OF BOLTS, SIZE, AND TORQUE FOR EACH BOLT IN REFERENCE TO THE SIZE OF PIPE WHICH IS BEING RESTRAINED.

AS AN EXAMPLE, IF YOU HAVE A 3" PIPE, YOU WILL NEED 2 BOLTS THAT ARE 3/8" X 2.5" AND TIGHTEN THEM WITH A TORQUE WRENCH TO 20 FT-LBS.

PIPE SIZE	NO. BOLTS	BOLT SIZE	TORQUE FT-LBS.
2"	2	3/8" x 2.5"	20
2.5"	2	3/8" x 2.5"	20
3"	2	3/8" x 2.5"	20
4"	2	1/2" x 3"	50
6"	2	1/2" x 3.5"	50
8"	4	1/2" x 4"	50
10"	4	5/8" x 5.5"	100
12"	4	5/8" x 5.5"	100

CONTACT THE LEEMCO REPRESENTATIVE FOR ALL QUESTIONS CONCERNING LEEMCO PRODUCTS. COORDINATE AN INSTALLATION CLINIC WITH MANUFACTURERS REP. PRIOR TO INSTALLING THE MAINLINE. CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO MANUFACTURERS REP. PRIOR TO INSTALLATION CLINIC.

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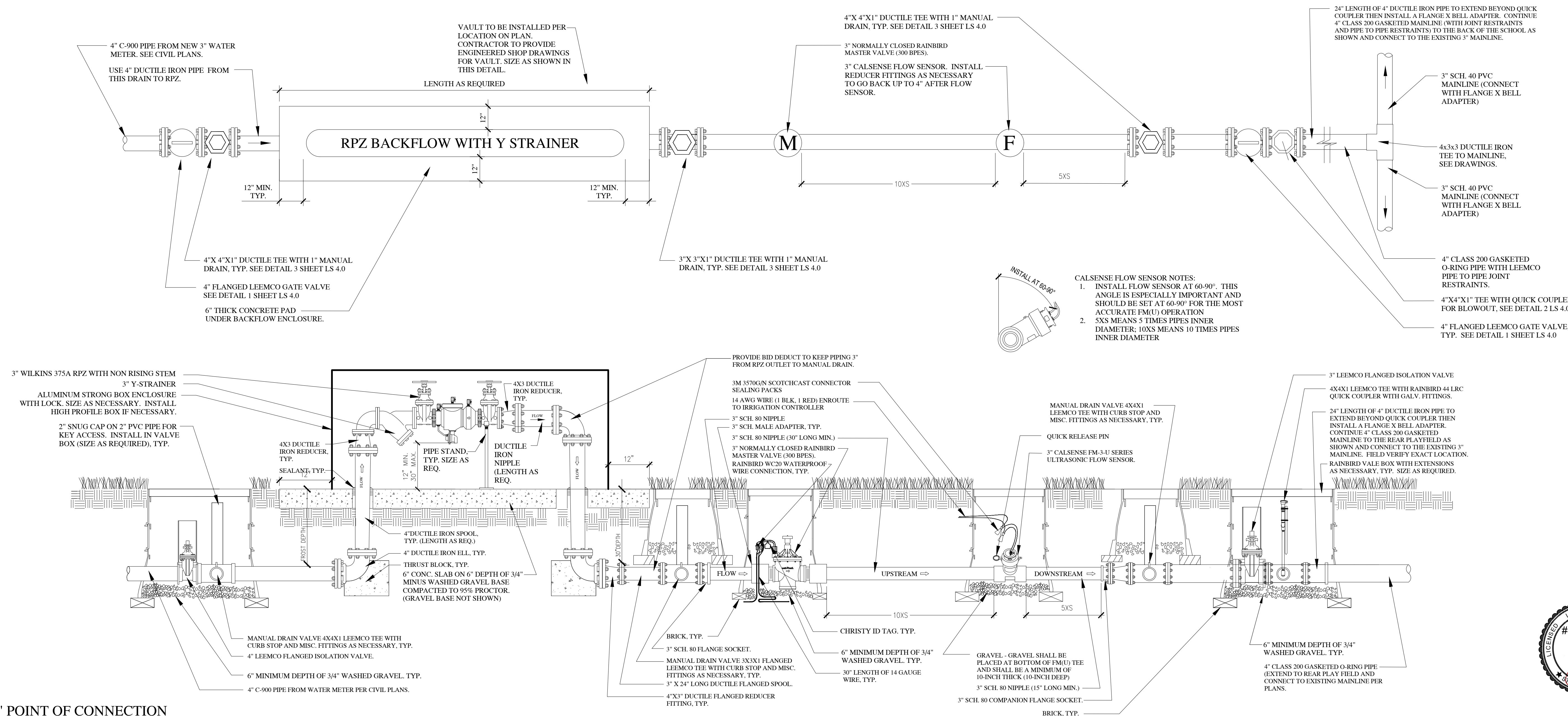
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PROJECT NO.	22194
SHEET NO.	LS 1.1





**POINT OF CONNECTION NOTES:**

- THIS DETAIL FOR DESIGN INTENT ONLY. CONTRACTOR TO INSTALL ALL COMPONENTS PER MANUFACTURER RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE ALL MATERIALS NECESSARY FOR PROPER INSTALLATION INCLUDING MISC. FITTINGS, JOINT RESTRAINTS, PIPE TO PIPE RESTRAINTS, ETC. EVEN IF NOT SHOWN ON THE DRAWINGS AND DETAILS.
- ALL DUCTILE IRON FITTINGS, NIPPLES, ETC FOR RPZ AND POINT OF CONNECTION CONSTRUCTION TO BE LINE SIZED EXCEPT WHERE DETAILED OTHERWISE. INSTALL ADDITIONAL MISC. FITTINGS AND RESTRAINTS AS NECESSARY.
- CONTRACTOR SHALL ENSURE THAT ALL PRODUCTS ARE INSTALLED IN SUCH A WAY THAT THE MANUFACTURERS WARRANTY WILL NOT BE VOIDED. CONSULT WITH CALSENSE AND LEEMCO MANUFACTURERS PRIOR TO INSTALLATION OF COMPONENTS.
- USE A DIELECTRIC UNION WHEREVER A COPPER-BASED METAL (COPPER, BRASS, BRONZE) IS JOINED TO AN IRON-BASED METAL (IRON, GALVANIZED STEEL, STAINLESS STEEL).
- CONNECT FLOW METER AND MASTER VALVE TO THE EXISTING CONTROLLER WITH 14 GAUGE WIRES. A TOTAL OF 5 WIRES SHALL BE INSTALLED (BLUE, GREEN, RED, YELLOW AND WHITE). MARK THE BLUE WIRE AS A SPARE WIRE. ALL WIRING SHALL BE IN SCH. 40 ELECTRICAL CONDUIT. CONTRACTOR SHALL USE THE EXISTING MAINLINE COMING FROM THE BUILDING OUT TO THE EXISTING LAWN AREA AS A SLEEVE TO FISH THE 5 NEW WIRES FROM INSIDE THE SCHOOL OUT TO THE LANDSCAPE AREA WHERE THEY WILL THEN BE HOUSED IN A NEW CONDUIT RUNNING FROM THIS POINT BACK TO THE POINT OF CONNECTION IN FRONT OF THE SCHOOL.
- INSTALL SWEEP ELLS, JUNCTION BOXES, PIPE HANGERS, ALL-THREAD AND UNISTRUT AS NECESSARY AND PER LOCAL CODE. CONDUIT WILL NEED TO BE INSTALLED THRU CONCRETE PAD. CONDUIT AND WIRE IS NOT SHOWN.
- CARE SHALL BE TAKEN WHEN BLOWING AIR THROUGH SYSTEM FOR WINTERIZATION. AIR SHALL NOT BE BLOWN THROUGH THE FLOW METER AS DAMAGE MAY OCCUR. CONTRACTOR SHALL ENSURE THAT FLOW METER AND ENTIRE POINT OF CONNECTION IS NOT DAMAGED BY WINTERIZATION PROCESS. FOLLOW MANUFACTURER SPECS.
- CONTRACTOR SHALL ENSURE RPZ, MASTER VALVE AND FLOW METER CAN GRAVITY DRAIN TO DRAIN LOCATIONS SHOWN (SLOPE PIPE ACCORDINGLY). INSTALL ADDITIONAL MANUAL DRAINS AS NECESSARY.
- PROVIDE AND INSTALL A STAINLESS STEEL STRONG BOX ENCLOSURE MOUNTED ON A 6" THICK CONCRETE PAD. PROVIDE LOCK FOR OWNER. SIZE THE STRONG BOX AS REQUIRED.



7 4" POINT OF CONNECTION

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<p>COMP. FILE</p> <p>24x36</p>			
<p>PROJECT NO.</p> <p>22194</p>			
<p>SHEET NO.</p> <p>LS 1.2</p>			

