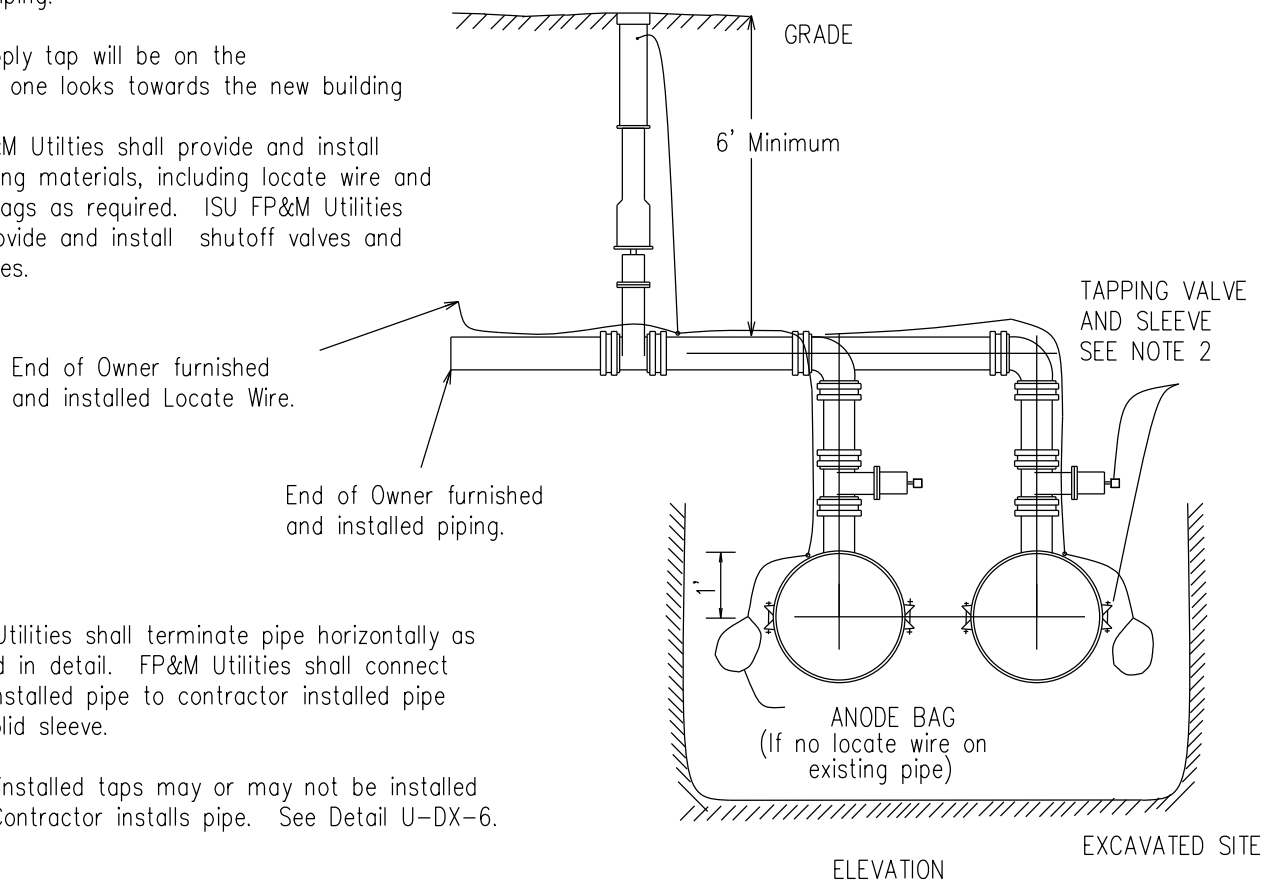


PLAN VIEW

NOTE : This Detail shows the Owner supplied and installed connection made to existing lines. This detail is not to be used for branches connected to Contractor installed piping.

1. The supply tap will be on the right as one looks towards the new building
- 2 ISU FP&M Utilities shall provide and install all tapping materials, including locate wire and anode bags as required. ISU FP&M Utilities shall provide and install shutoff valves and valveboxes.
- 3: FP&M Utilities shall terminate pipe horizontally as indicated in detail. FP&M Utilities shall connect Owner installed pipe to contractor installed pipe using solid sleeve.
- 4: Owner installed taps may or may not be installed before Contractor installs pipe. See Detail U-DX-6.



ELEVATION

STANDARD CHILLED WATER CONNECTION
TO EXISTING MAINS

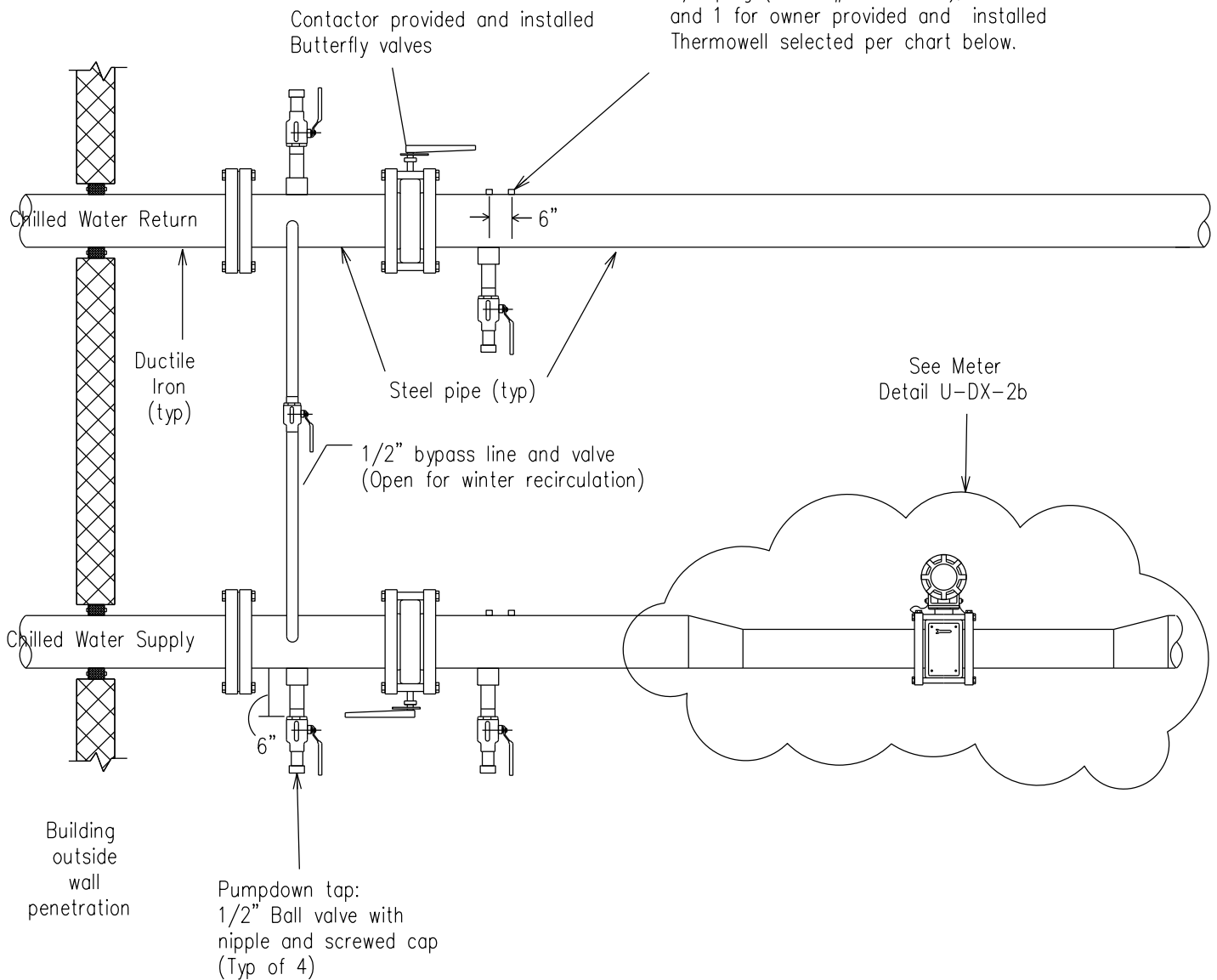
Mechanical Detail

U-DX-1

Rev 8/19/14

Two 1/2 " Thred-o-lets
 Furnished and installed on top half of pipe
 by Contractor
 (Typ of supply and return lines)-

1 for owner provided and installed rubber
 P/T plug (FP&M #6189-5000),
 and 1 for owner provided and installed
 Thermowell selected per chart below.



Entrance Pipe Diam (in)	Thermowell Insert Depth (in)	Thermowell FP&M part no.
2	1.5	6647.7502
3	1.5	6647.7502
4	1.5	6647.7502
6	4	6647.7501
8	4	6647.7501

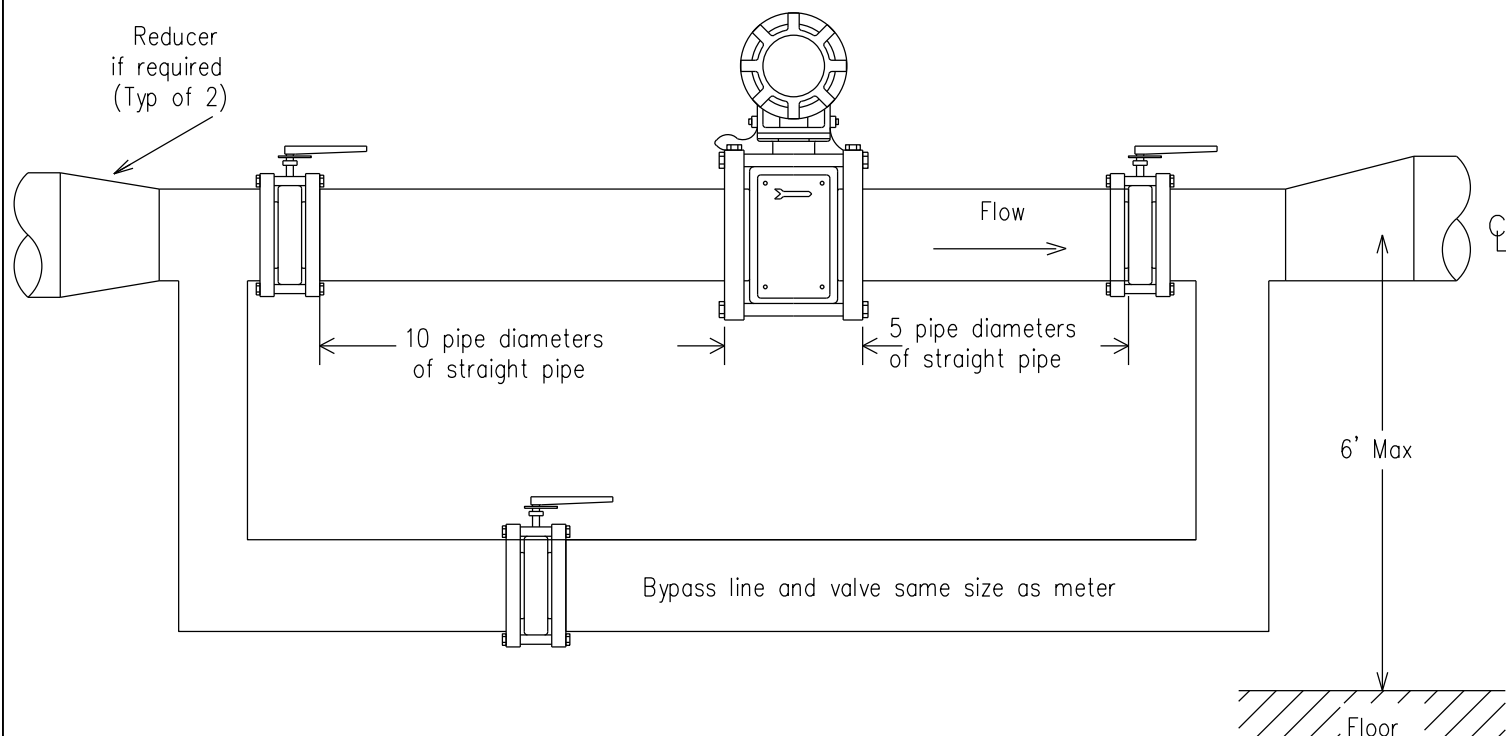
1. On supply line, there will be no lines other than bypass and pumpdown taps between building entrance and meter.
2. On return line, there will be no lines other than bypass and pumpdown taps between temperature sensors and building exit.

TYPICAL CHILLED WATER ENTRANCE

Mechanical Detail

U-DX-2a

Rev 3/6/20



NOTES:

1. WAFER STYLE METER, FLANGES, ALIGNMENT RINGS, STUDS, NUTS, AND GASKETS TO BE SIZED AND FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.
2. METER TO BE NO CLOSER THAN 12" TO ANY WALL OR OBSTRUCTION.
3. USE NEVER SEIZE ON GROUNDING BOLTS.
4. ISOLATION VALVE FLANGES ARE NOT TO BE WELDED DIRECTLY TO REDUCERS.
5. BYPASS LINE SHOWN SCHEMATICALLY AS EXACT LOCATION WILL DEPEND ON INSTALLATION. BYPASS LINE TO PROVIDE ADEQUATE CLEARANCE AROUND METER ASSEMBLY.
6. SEE DETAIL U-DX-2C FOR ELECTRICAL CONNECTIONS.

PARTS LIST (ISU use. Only informational for Contractor):

ISU FP&M STORES

6647.4748-4760

6647.7455

6647.2702-2712

7900.2250-2400

1' - 8" WAFER MAG METER AND KIT
TRANSMITTER HEAD MOUNTED ON METER.
1/8" THICK BUNA N GASKETS
150# RAISED FACE SLIP ON WELDED STEEL
FLANGE. OWNER TO TAP TOP OF FLANGES
FOR 1/4" X 20 X 1/2" GROUNDING BOLT.

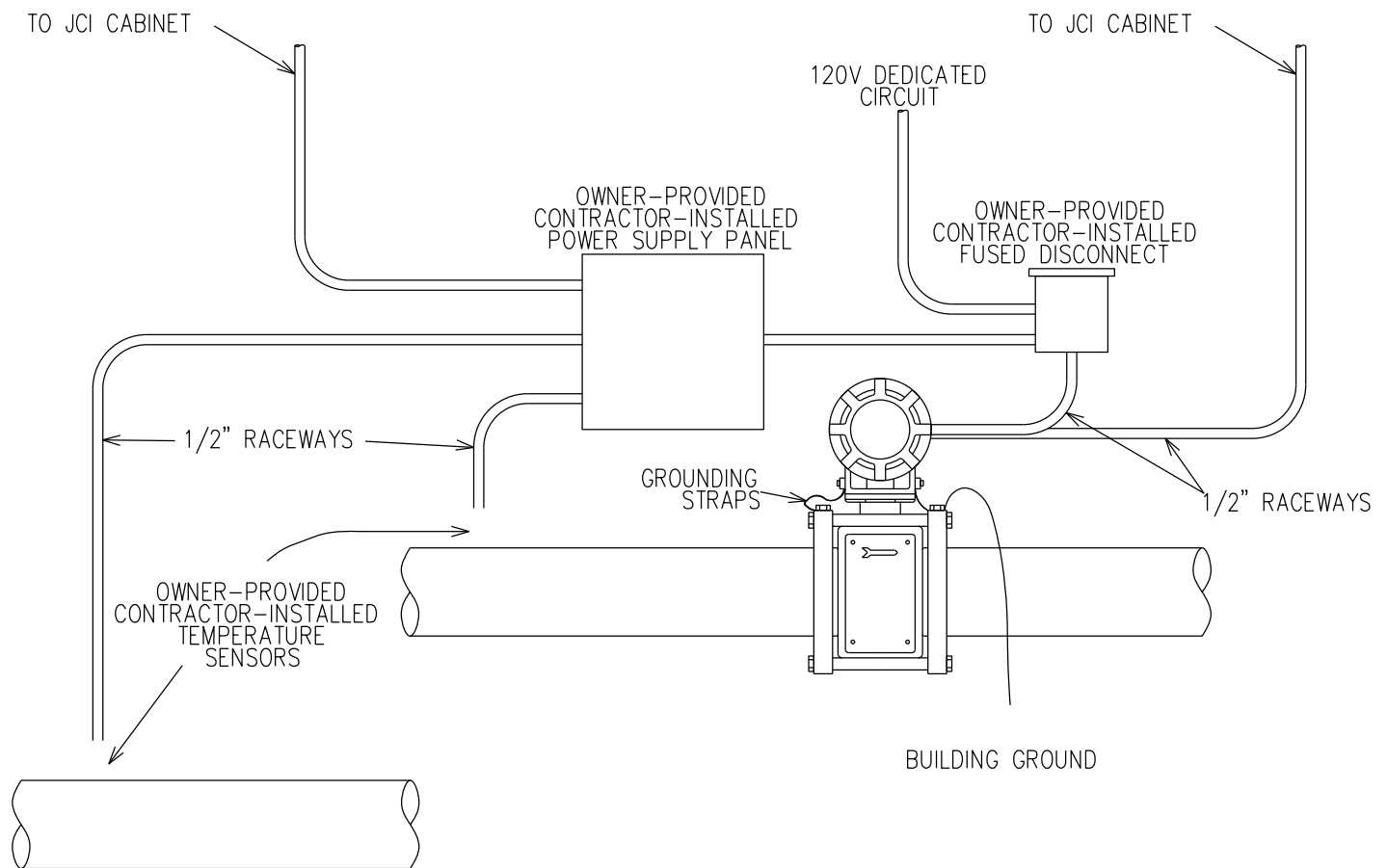
Meter Size (in)	Full Scale Meter Setup (Gpm)	Flange Bolt diam (in)	Bolt Torque (ft lbs)	Face to Face Dimension (in)
1	50	1/2	10	2.13
1.5	120	1/2	15	2.73
2	200	5/8	25	3.26
3	455	5/8	40	4.62
4	800	5/8	30	5.83
6	1800	3/4	50	6.87
8	3400	3/4	70	8.86

STANDARD CHILLED WATER METER

Mechanical Detail

U-DX-2b

Rev 4/12/19



NOTES:

1. ALL RACEWAYS SHALL BE EITHER (OR A COMBINATION OF): EMT, RMC, IMC, OR LFMC, AND WILL BE SUBJECT TO ANY ADDITIONAL REQUIREMENTS FOR SPECIAL LOCATIONS (POWER/CHILLER PLANTS, VAULTS, HAZARDOUS LOCATIONS). ALL RACEWAYS TO BE INSTALLED BY CONTRACTOR.
2. POWER FOR THE FLOW METER AND TEMPERATURE SENSORS WILL BE A DEDICATED 20A, 120V AC CIRCUIT INSTALLED BY THE CONTRACTOR.
3. JCI PROVIDED AND INSTALLED FLOW METER SIGNAL CABLE SHALL BE AN 18-2 SHIELDED CABLE.
4. JCI PROVIDED AND INSTALLED TEMPERATURE SENSOR SIGNAL CABLES SHALL BE AN 18-2 SHIELDED CABLE, CLEARLY MARKED, AND LEFT AT A LENGTH OF AT LEAST 2 FEET AT THE POWER SUPPLY PANEL.
5. ALL TERMINATIONS AT THE FLOW METER, TEMPERATURE SENSORS, AND POWER SUPPLY SHALL BE COMPLETED BY OWNER.
6. FLOW METER GROUNDING MUST MEET MANUFACTURERS INSTALLATION REQUIREMENTS.

PARTS LIST (ISU use. Only informational for Contractor):

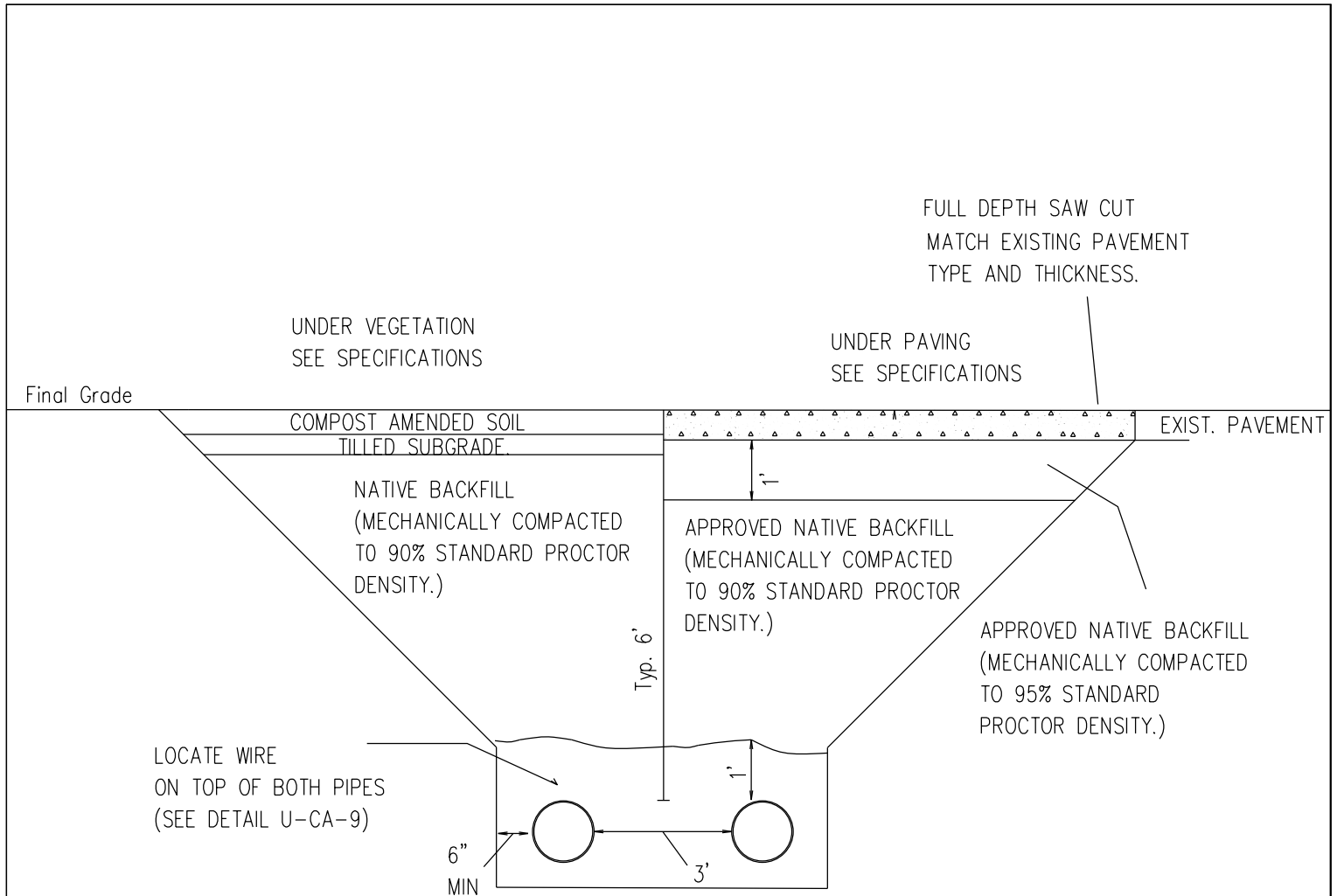
6647.2500:	METER SITE FUSED DISCONNECT
6647.2510:	12"X12"X8" 24v POWER SUPPLY PANEL
6647.7502:	1/2" SS THERMOWELL, 1 1/2" IMMERSION
6647.7499:	1 1/2" TEMPERATURE SENSOR AND TRANSMITTER
6647.7501:	1/2" SS THERMOWELL, 4" IMMERSION
6647.7500:	4" TEMPERATURE SENSOR AND TRANSMITTER
1915.0281:	18-2 SHIELDED 18-2 "ANALOG INPUT" BELDEN CABLE

STANDARD CHILLED WATER METER

Electrical Detail

U-DX-2c

Rev 4/12/19



TRENCH SLOPES SHALL CONFORM TO OSHA STANDARDS.

PIPE	BEDDING	TO CENTERLINE OF PIPE	1' COVER
DUCTILE IRON	NATIVE MATERIAL AS PER SPEC	NATIVE MATERIAL HAND TAMPED	NATIVE MATERIAL HAND TAMPED
HDPE	1" WASHED ROCK	1" WASHED ROCK HAND TAMPED	NATIVE MATERIAL HAND TAMPED

STANDARD CHILLED WATER PIPE TRENCH

Mechanical Detail

U-DX-4

Rev 8/19/14