

## REQUEST FOR COUNCIL ACTION

**SUBJECT:** ENGINEERING STANDARDS: WATER METER SPECIFICATIONS

**SUMMARY:** Approve new standard for water meters

**FISCAL AND/OR ASSET IMPACT:** No immediate fiscal impact.

**STAFF RECOMMENDATION:**

Staff recommends that the City Council authorize the adoption of a new water meter specification for all residential and commercial water meters.

**MOTIONS RECOMMENDED:**

**Motion:** I move to approve the update to the West Jordan standard water meter detail.

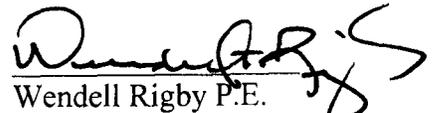
**Prepared by:**

  
Nate Nelson P.E.  
City Engineer

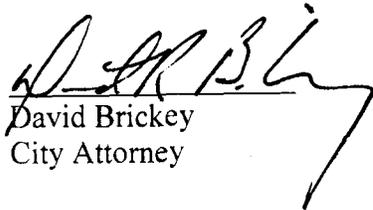
**Reviewed by:**

  
Roger Payne P.E.  
Engineering Manager Utilities

**Reviewed by:**

  
Wendell Rigby P.E.  
Public Works Director

**Reviewed as to legal form:**

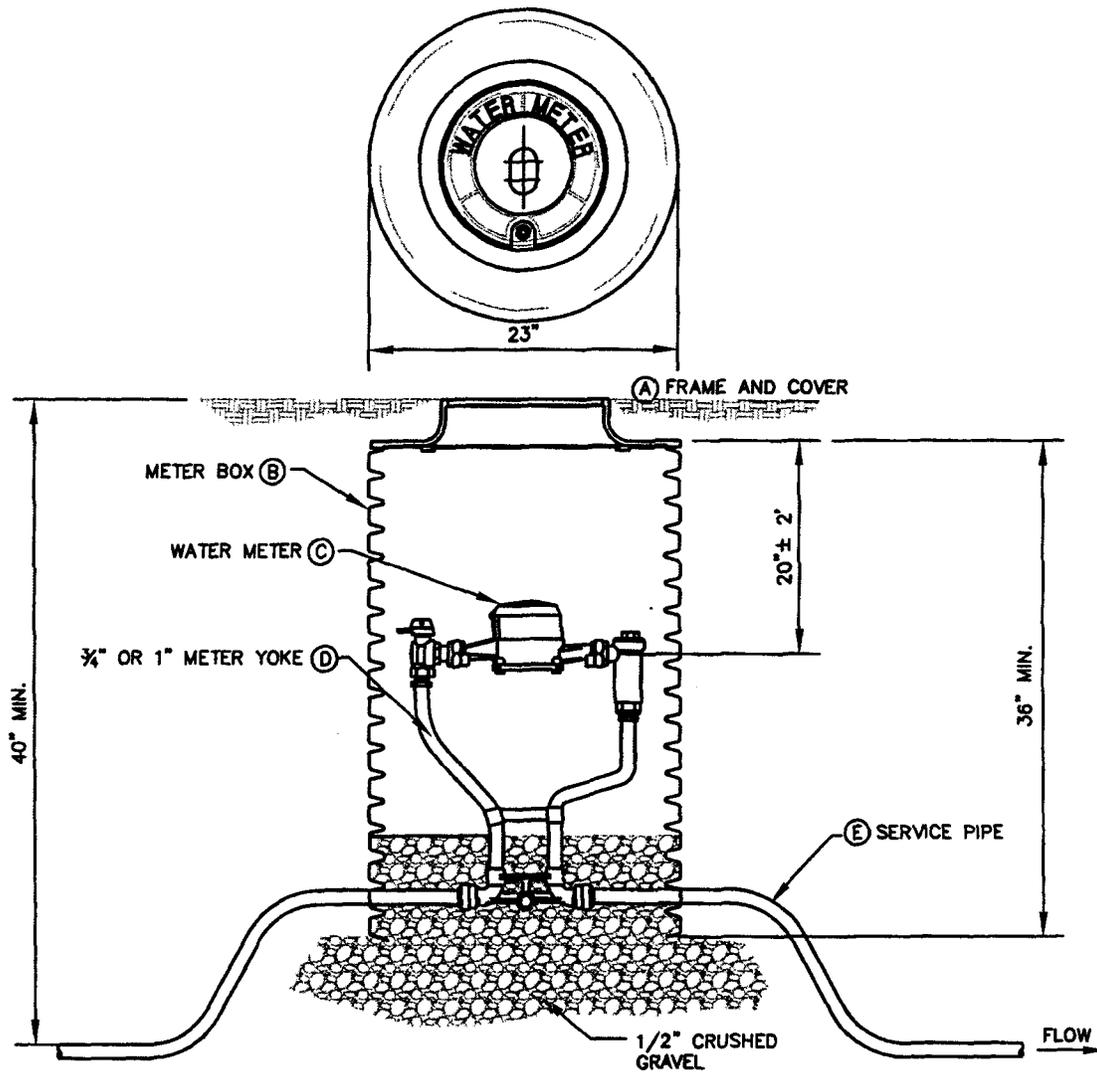
  
David Brickey  
City Attorney

**Recommended by:**

  
Mark Palesh  
City Manager

## **BACKGROUND DISCUSSION:**

The new meter standards will benefit the City by reducing the cost of maintenance and replacement. They have fewer moving parts, are more accurate and are less expensive for initial purchase. In addition, developers will save money because the 1.5 and 2-inch meters are able to be placed in typical meter boxes similar to those used for residential meters instead of the large concrete meter vaults as is currently required.



NO.	ITEM	DESCRIPTION 3/4" METER	DESCRIPTION 1" METER
(A)	FRAME AND COVER LABELED "WATER METER"	D&L SUPPLY L-2240-01, L-2244-R1 OLYMPIC MTU-9000-9021	D&L SUPPLY L-2240-01, L-2244-R1 OLYMPIC MTU-9000-9021
(B)	METER BOX	21" DIA. HANCOR METER PIT	21" DIA. HANCOR METER PIT
(C)	WATER METER FURNISHED & INSTALLED BY CITY	3/4" RESIDENTIAL MASTER METER BOTTOM LOAD MULTI-JET METERS	1" RESIDENTIAL MASTER METER BOTTOM LOAD MULTI-JET METERS
(D)	3/4" OR 1" METER YOKE	3/4" COPPERSETTER 70 SERIES VBHC72-21W-11-33-NL	1" COPPERSETTER 70 SERIES VBHC72-21W-11-44-NL
(E)	SERVICE PIPE	3/4" POLYETHYLENE IPS-ID-200 PSI SIDR-7 "BLUE" NSF APPROVED	1" POLYETHYLENE IPS-ID-200 PSI SIDR-7 "BLUE" NSF APPROVED

**NOTES:**

1. INSPECTION: PRIOR TO BACK FILLING AROUND METER BOX, SECURE APPROVAL OF INSTALLATION BY INSPECTOR
2. BACK FILL: INSTALL BACK FILL IN LIFTS NOT EXCEEDING 8" AFTER COMPACTION.
3. ALL METER SETTERS MUST HAVE BACK FLOW PREVENTERS
4. PIPE: INSTALL SERVICE PIPE TO PROPERTY LINE.
5. PLACEMENT: ALL METERS ARE TO BE INSTALLED IN THE PARK STRIP, (ALL EXCEPTIONS REQUIRE INSPECTOR APPROVAL), AND MUST BE PLACED IN THE CENTER OF THE LOT AND MUST BE LOCATED 1' AWAY FROM DRIVEWAY.

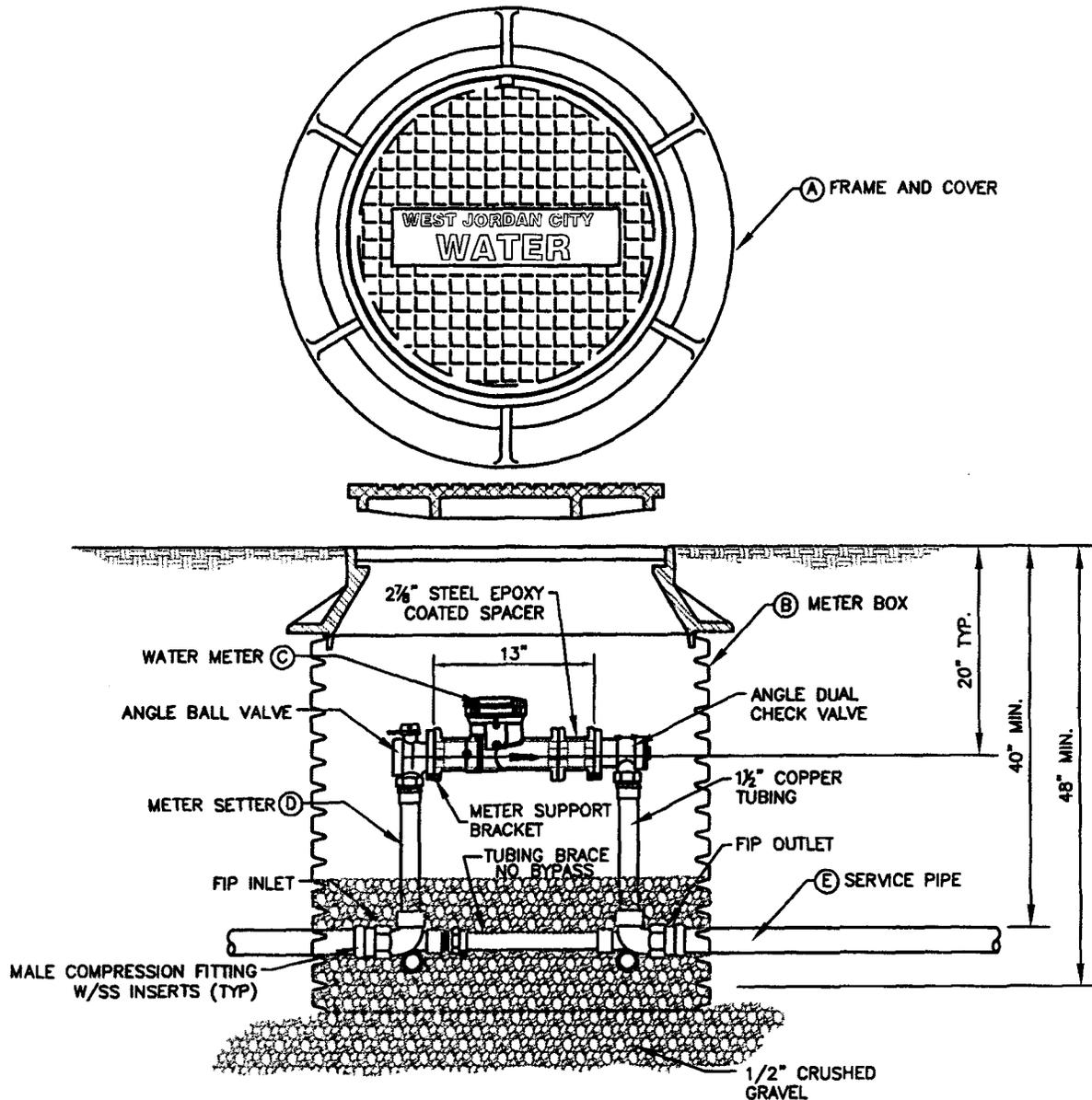
REVISED DRAWING JUNE 2016

City of West Jordan, Utah



3/4" - 1" METER DETAIL

PLAN  
CW-120



**NOTES:**

1. INSPECTION: PRIOR TO BACK FILLING AROUND METER BOX, SECURE APPROVAL OF INSTALLATION BY INSPECTOR
2. BACK FILL: INSTALL BACK FILL IN LIFTS NOT EXCEEDING 8" AFTER COMPACTION.
3. ALL METER SETTERS MUST HAVE BACK FLOW PREVENTERS
4. PIPE: INSTALL SERVICE PIPE TO PROPERTY LINE.
5. PLACEMENT: ALL METERS ARE TO BE INSTALLED IN THE PARK STRIP, (ALL EXCEPTIONS REQUIRE INSPECTOR APPROVAL), AND MUST BE PLACED IN THE CENTER OF THE LOT AND MUST BE LOCATED 1' AWAY FROM DRIVEWAY.

NO.	ITEM	DESCRIPTION	SPECIFICATIONS
(A)	FRAME & COVER	30" MANHOLE RING & COVER LABELED "WEST JORDAN CITY WATER"	D&L SUPPLY A-1181
(B)	METER BOX	30" DIA. HDPE CORRIGATED PIPE SECTION	ADS - WHITE OR EQUAL
(C)	WATER METER AND SPACER FURNISHED BY CITY	1 1/2" OCTAVE ULTRASONIC METER	MASTER METER OCTAVE GPM #139-125-09
(D)	METER SETTER	1 1/2" METER SETTER W/CHECK VALVE	FORD VBHH76-18-11-66 NL
(E)	SERVICE PIPE	1 1/2" POLYETHYLENE TUBE NSE APPROVED	CTS-10-200 PSI SIDR-7 "BLUE"

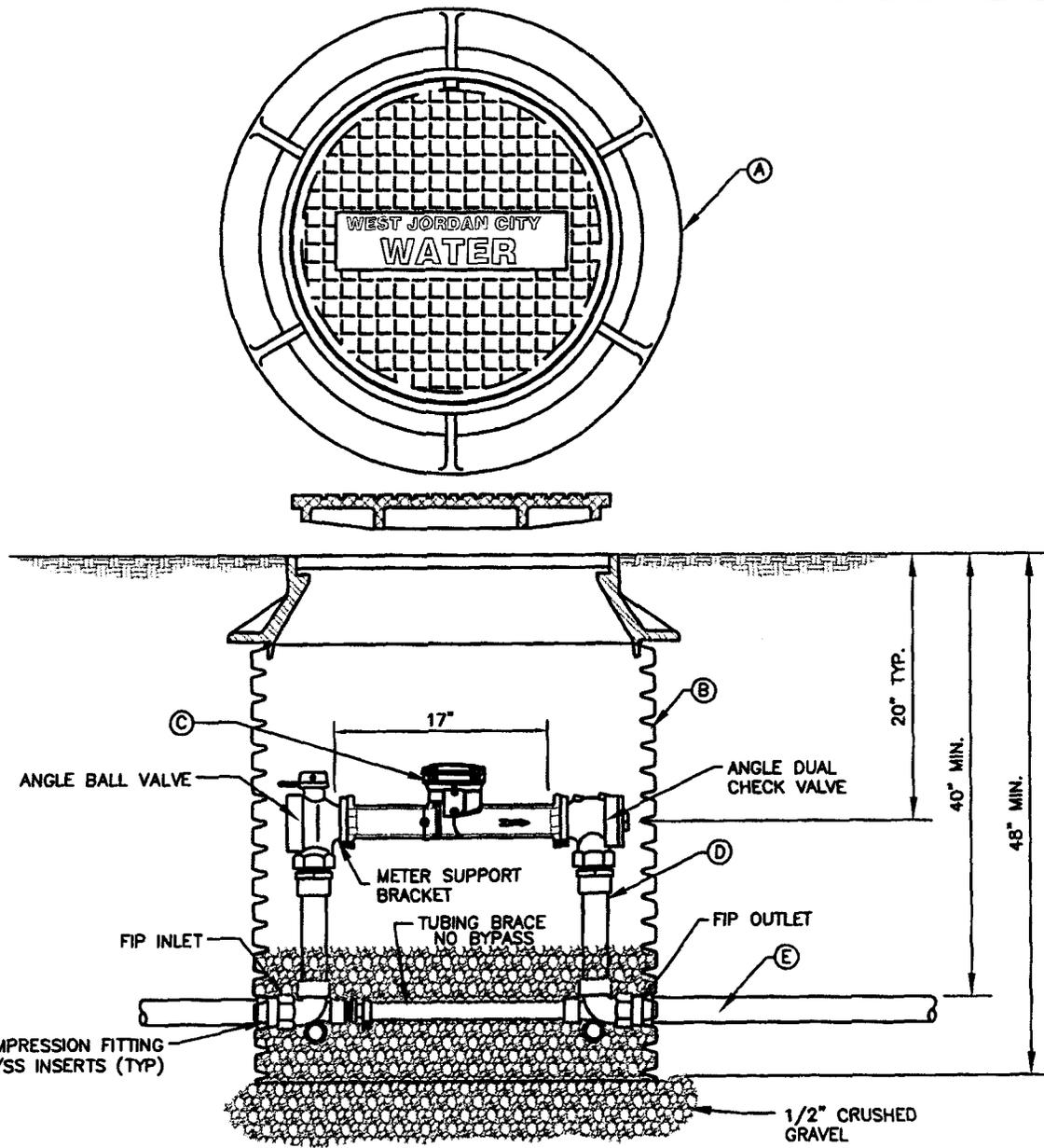
DRAWING JUNE 2018

City of West Jordan, Utah



1 1/2" METER DETAIL

PLAN  
CW-121



**NOTES:**

1. INSPECTION: PRIOR TO BACK FILLING AROUND METER BOX, SECURE APPROVAL OF INSTALLATION BY INSPECTOR
2. BACK FILL: INSTALL BACK FILL IN LIFTS NOT EXCEEDING 8" AFTER COMPACTION.
3. ALL METER SETTERS MUST HAVE BACK FLOW PREVENTERS
4. PIPE: INSTALL SERVICE PIPE TO PROPERTY LINE.
5. PLACEMENT: ALL METERS ARE TO BE INSTALLED IN THE PARK STRIP, (ALL EXCEPTIONS REQUIRE INSPECTOR APPROVAL), AND MUST BE PLACED IN THE CENTER OF THE LOT AND MUST BE LOCATED 1' AWAY FROM DRIVEWAY.

NO.	ITEM	DESCRIPTION	SPECIFICATIONS
(A)	FRAME AND COVER	30" MANHOLE RING & COVER LABELED "WEST JORDAN CITY WATER"	D&L SUPPLY A-1181
(B)	METER BOX	30" DIA. HDPE CORRUGATED PIPE SECTION	-
(C)	WATER METER FURNISHED BY CITY	2" OCTAVE ULTRASONIC METER	MASTER METER OCTAVE GPM #139-125-09
(D)	METER SETTER	2" METER SETTER W/CHECK VALVE	FORD VBHH76-18-11-66 NL
(E)	SERVICE PIPE	1½" POLYETHYLENE TUBE NSE APPROVED	CTS-10-200 PSI SIDR-7 "BLUE"

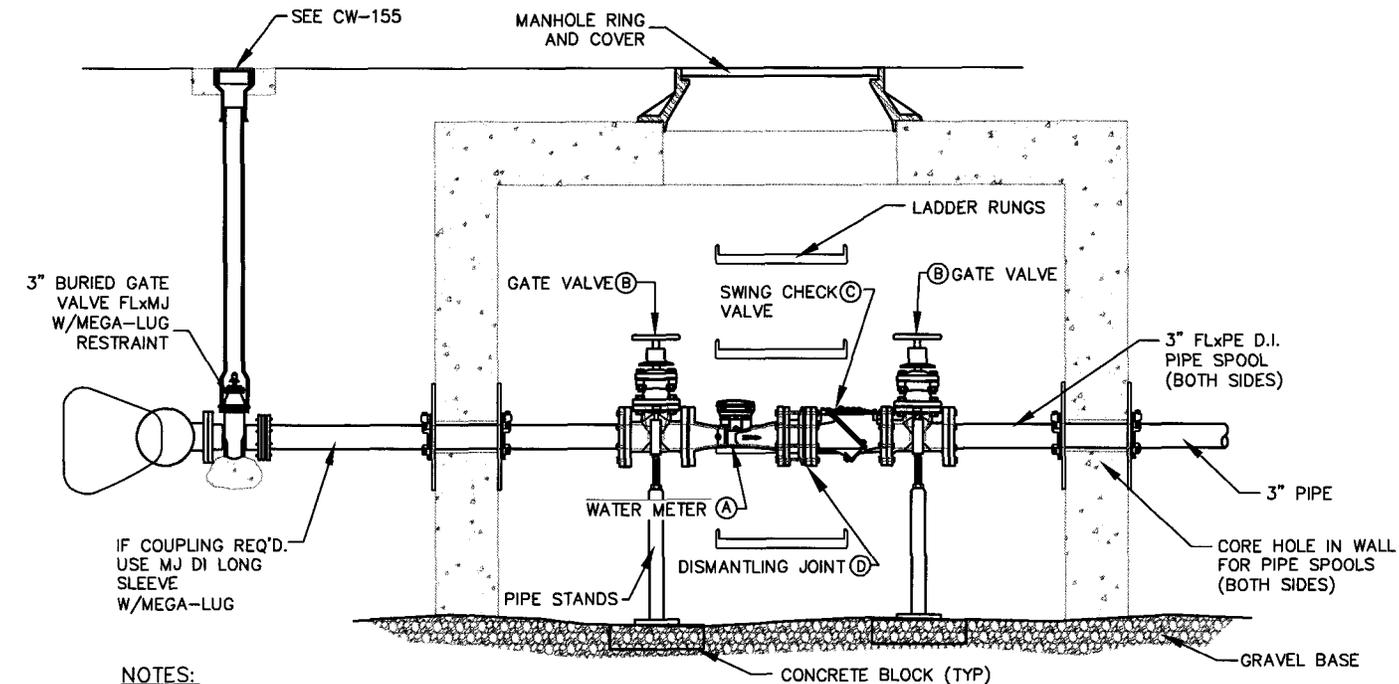
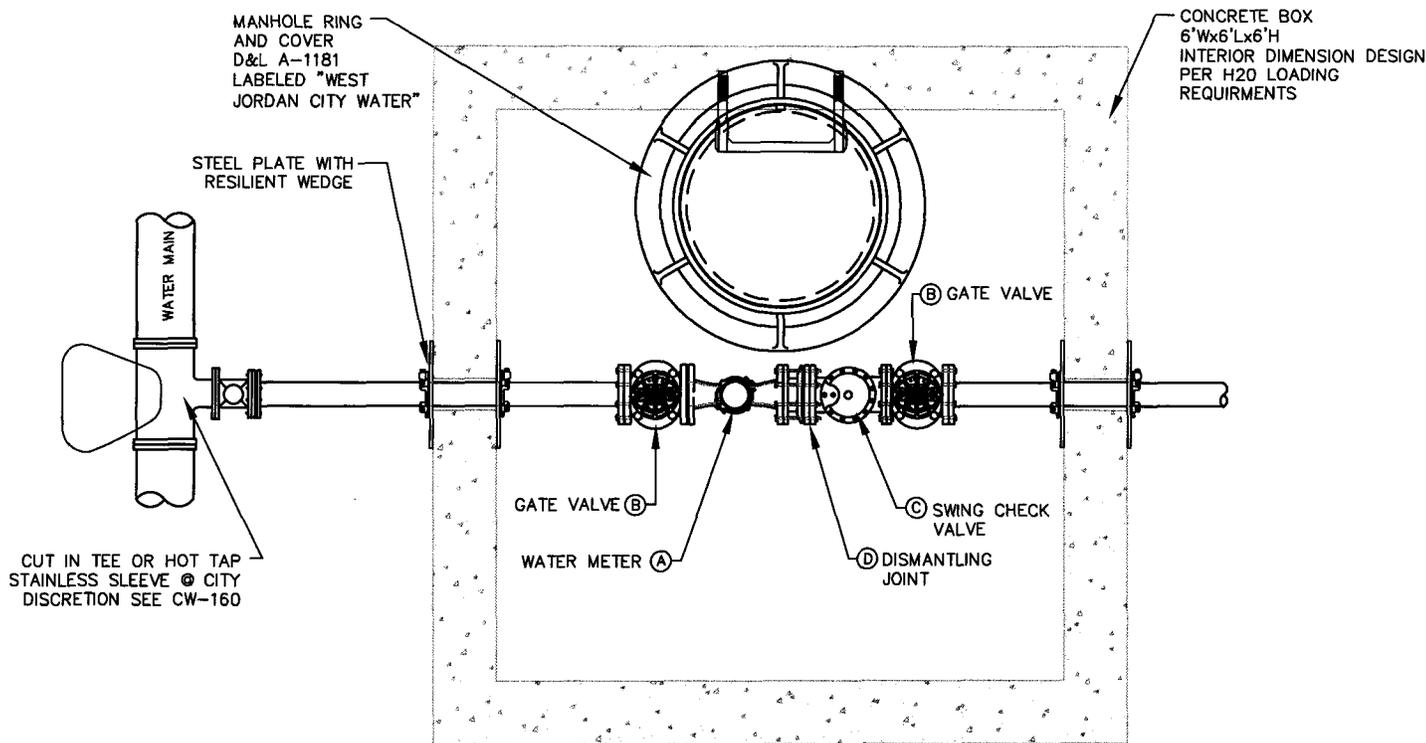
REVISED DRAWING JULY 2016

City of West Jordan, Utah



**2" METER DETAIL**

PLAN  
CW-130



**NOTES:**

1. INSPECTION: PRIOR TO BACK FILLING AROUND METER BOX, SECURE APPROVAL OF INSTALLATION BY INSPECTOR
2. BACK FILL: INSTALL BACK FILL IN LIFTS NOT EXCEEDING 8" AFTER COMPACTION. COMPACT EACH LIFT PER APWA 33-05-20.
3. CONCRETE BOX: PRECAST OR CAST-IN-PLACE BOX, FOR PRECAST BOX: ALLOW 1 INCH CLEARANCE AROUND WATERLINE WHERE LINE PASSES THROUGH THE WALL. SEAL OPENING AROUND PIPE, IN HIGH WATER AREAS SEAL W/LINK SEAL.

NO.	ITEM	DESCRIPTION	SPECIFICATIONS
(A)	WATER METER FURNISHED BY CITY	3" OCTAVE ULTRASONIC METER	MASTER METER 3" OCTAVE GPM #139-325-09
(B)	GATE VALVE	3" FL GATE VALVE W/HANDWHEEL	RESILIENT WEDGE, AWWA C509
(C)	CHECK VALVE	3" FL SWING CHECK	VAL MATIC VM-503A-M
(D)	DISMANTLING JOINT	3" FL DISMANTLING JOINT W/RESTRAINT	ROMAC DJ 400

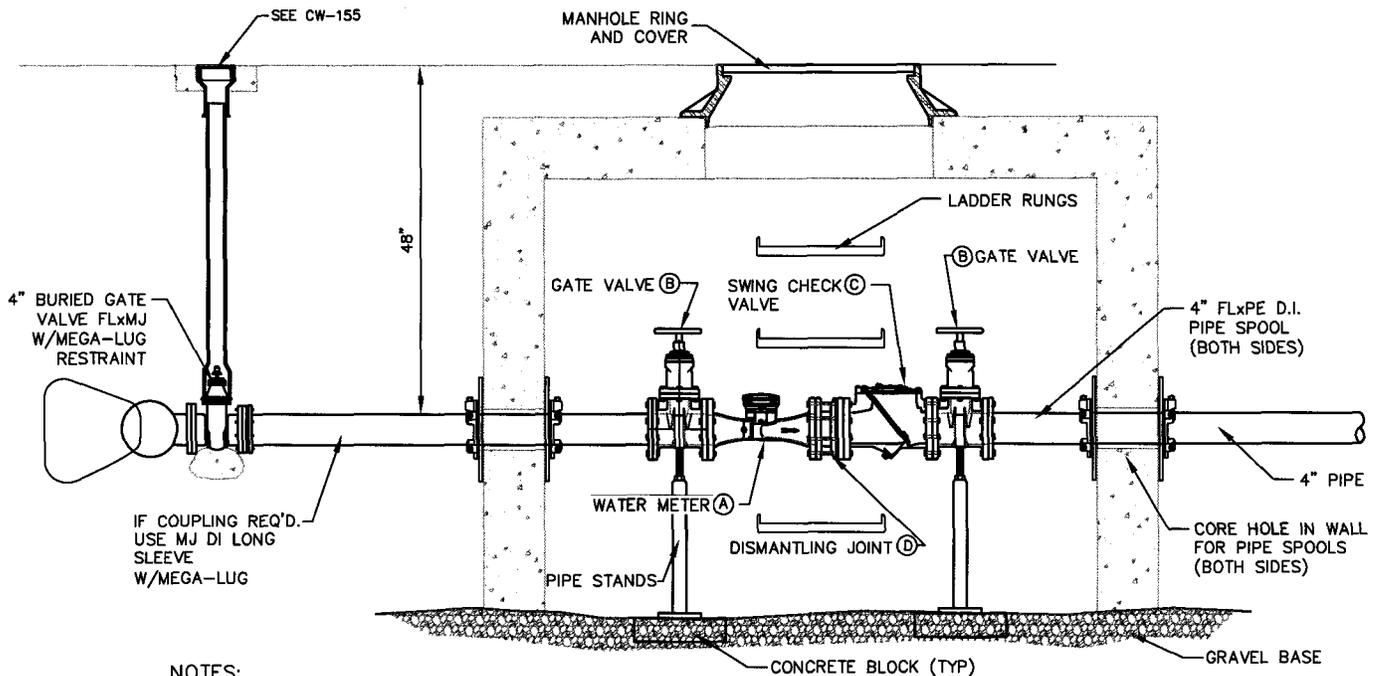
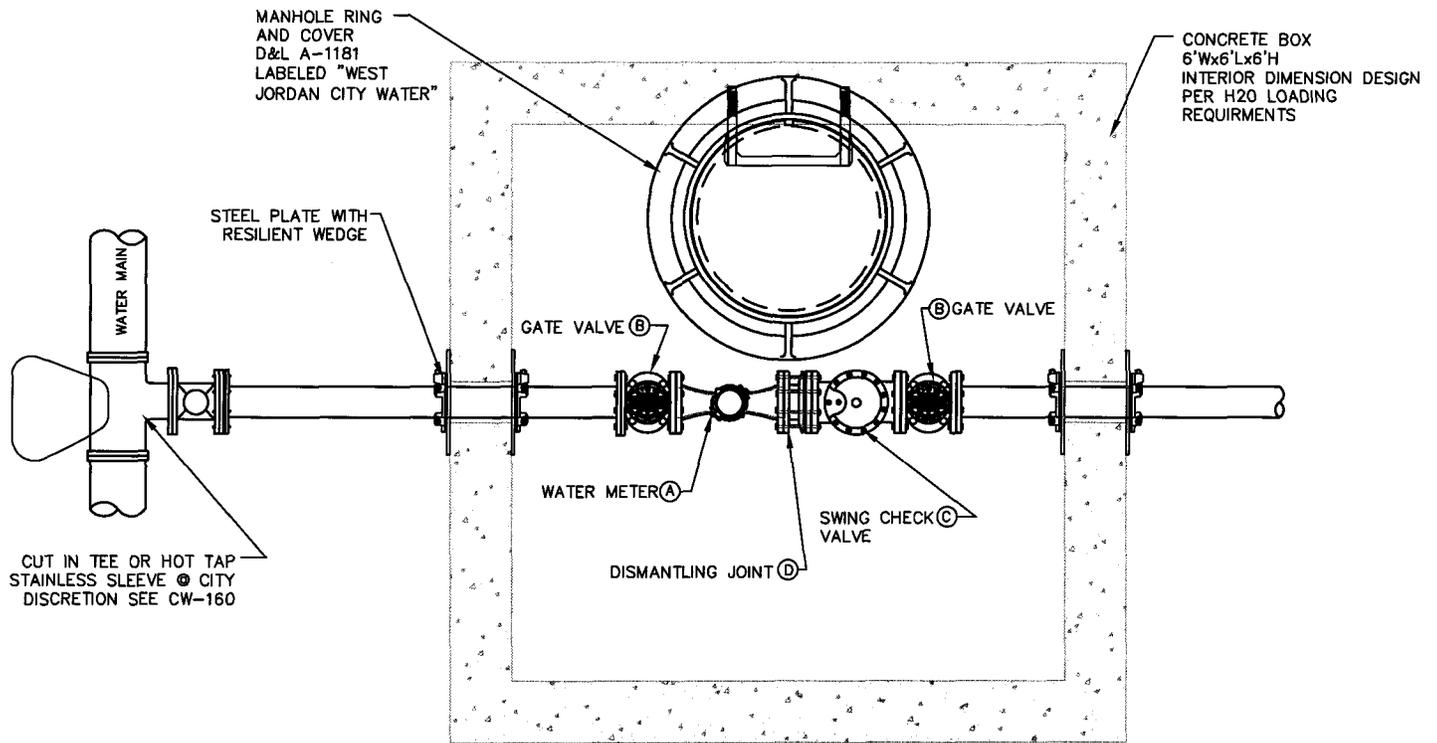
REVISED DRAWING JULY 2016

City of West Jordan, Utah



# 3" METER DETAIL

PLAN  
CW-135



**NOTES:**

1. INSPECTION: PRIOR TO BACK FILLING AROUND METER BOX, SECURE APPROVAL OF INSTALLATION BY INSPECTOR
2. BACK FILL: INSTALL BACK FILL IN LIFTS NOT EXCEEDING 8" AFTER COMPACTION. COMPACT EACH LIFT PER APWA 33-05-20
3. CONCRETE BOX: PRECAST OR CAST-IN-PLACE BOX, FOR PRECAST BOX: ALLOW 1 INCH CLEARANCE AROUND WATERLINE WHERE LINE PASSES THROUGH THE WALL. SEAL OPENING AROUND PIPE, IN HIGH WATER AREAS SEAL W/LINK SEAL.

NO.	ITEM	DESCRIPTION	SPECIFICATIONS
(A)	WATER METER FURNISHED BY CITY	4" OCTAVE ULTRASONIC METER	MASTER METER 4" OCTAVE GPM
(B)	GATE VALVE	4" FL GATE VALVE W/HANDWHEEL	WEDGE RESILIENT, AWWA C509
(C)	CHECK VALVE	4" FL SWING CHECK	VAL MATIC VM-504A-M
(D)	DISMANTLING JOINT	4" FL DISMANTLING JOINT W/RESTRAIN	ROMAC DJ 400

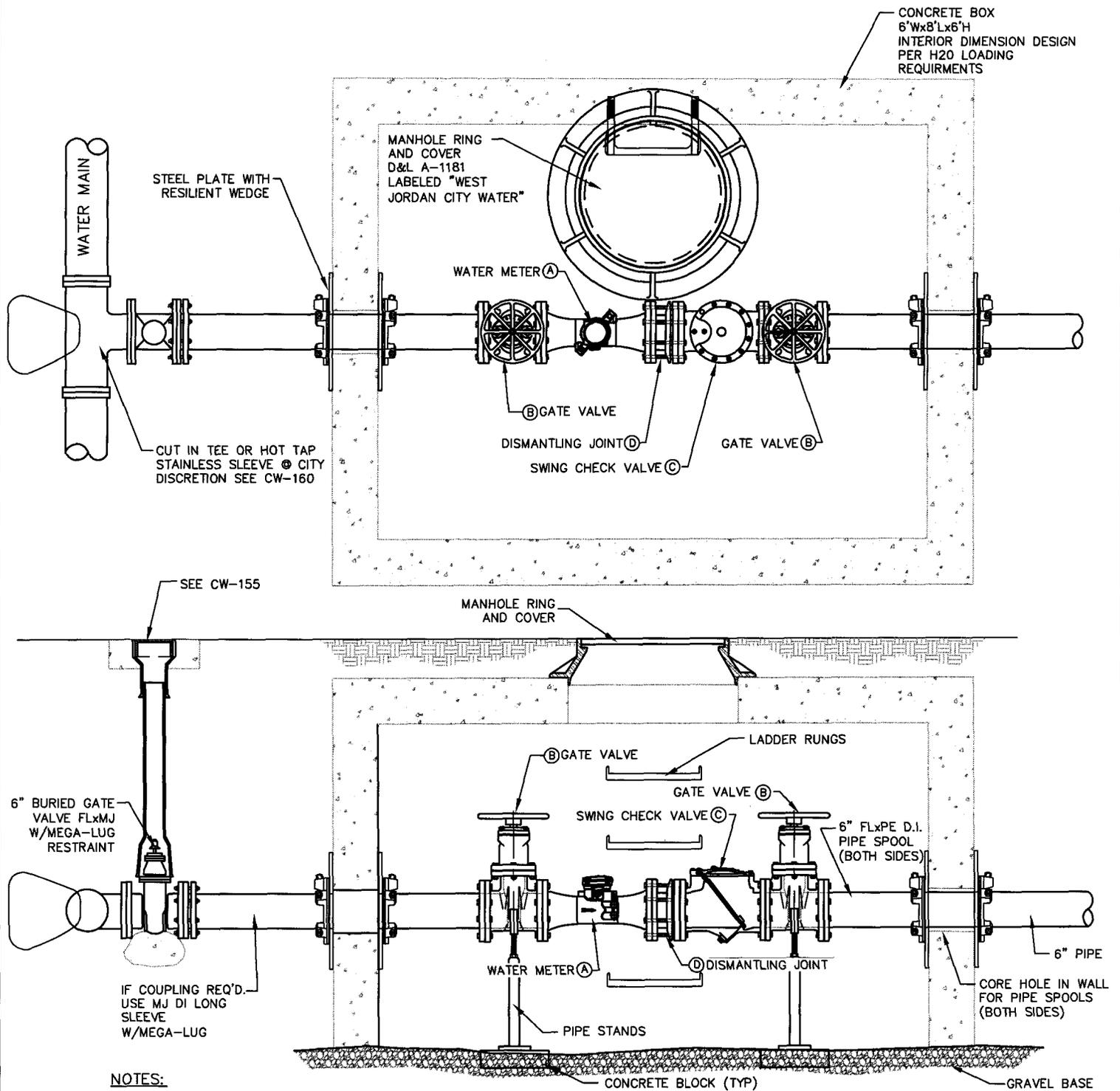
REVISED DRAWING JULY 2016

City of West Jordan, Utah



# 4" METER DETAIL

PLAN  
CW-140



**NOTES:**

1. INSPECTION: PRIOR TO BACK FILLING AROUND METER BOX, SECURE APPROVAL OF INSTALLATION BY INSPECTOR
2. BACK FILL: INSTALL BACK FILL IN LIFTS NOT EXCEEDING 8" AFTER COMPACTION. COMPACT EACH PER APWA 33-05-20.
3. CONCRETE BOX: PRECAST OR CAST-IN-PLACE BOX, FOR PRECAST BOX: ALLOW 1 INCH CLEARANCE AROUND WATERLINE WHERE LINE PASSES THROUGH THE WALL. SEAL OPENING AROUND PIPE, IN HIGH WATER AREAS SEAL W/LINK SEAL

NO.	ITEM	DESCRIPTION	SPECIFICATIONS
(A)	WATER METER FURNISHED BY CITY	6" OCTAVE ULTRASONIC METER	MASTER METER 6" OCTAVE GPM
(B)	GATE VALVE	6" FL GATE VALVE W/HANDWHEEL	RESILIENT WEDGE, AWWA C-509
(C)	CHECK VALVE	6" FL SWING CHECK	VAL MATIC VM-506A-M
(D)	DISMANTLING JOINT	6" FL DISMANTLING JOINT W/RESTRAIN	ROMAC DJ 400

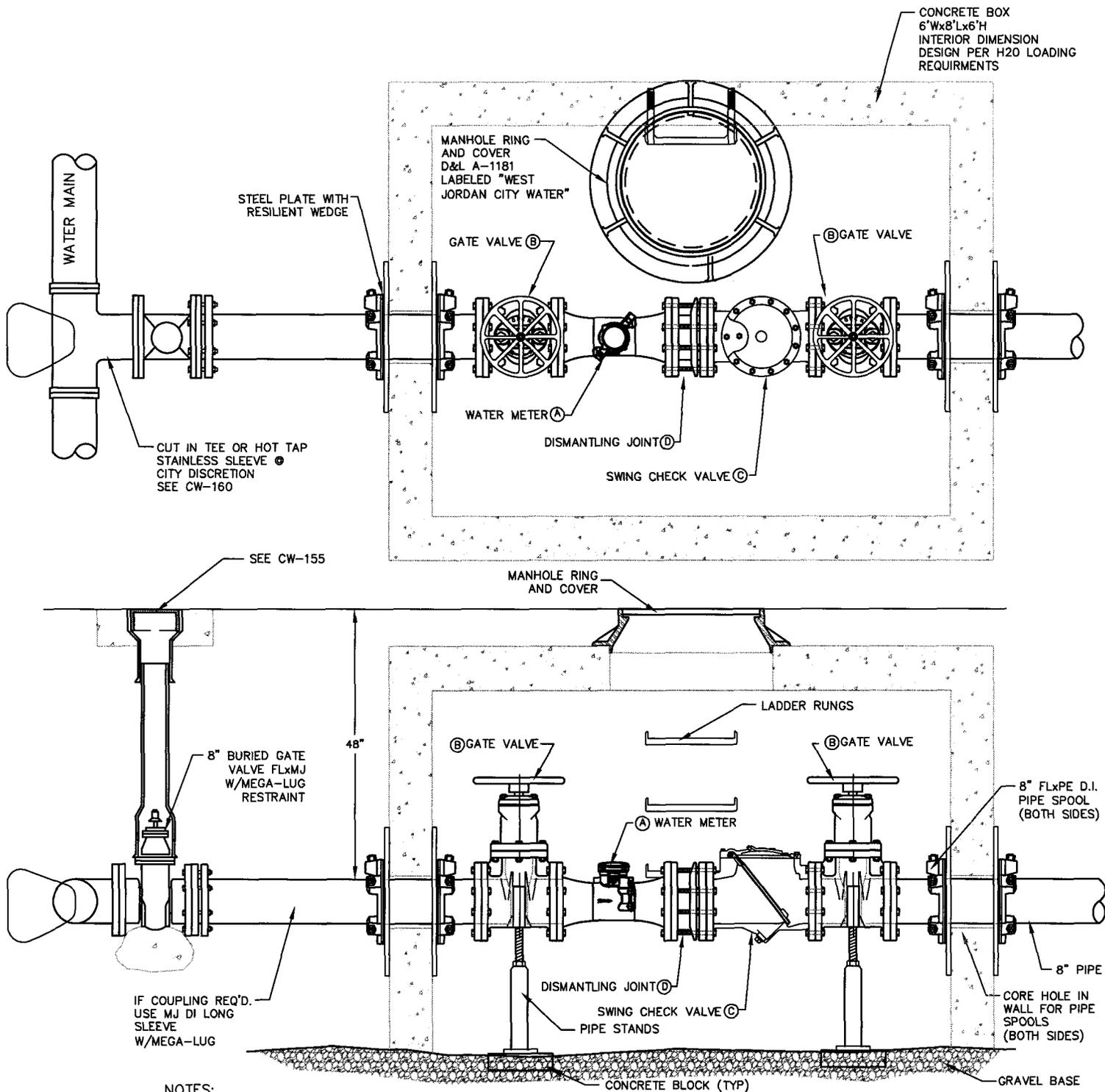
REVISED DRAWING JULY 2016

City of West Jordan, Utah



# 6" METER DETAIL

PLAN  
CW-145



**NOTES:**

1. INSPECTION: PRIOR TO BACK FILLING AROUND METER BOX, SECURE APPROVAL OF INSTALLATION BY INSPECTOR
2. BACK FILL: INSTALL BACK FILL IN LIFTS NOT EXCEEDING 8" AFTER COMPACTION. COMPACT EACH PER APWA 33-05-20.
3. CONCRETE BOX: PRECAST OR CAST-IN-PLACE BOX, FOR PRECAST BOX: ALLOW 1 INCH CLEARANCE AROUND WATERLINE WHERE LINE PASSES THROUGH THE WALL. SEAL OPENING AROUND PIPE, IN HIGH WATER AREAS SEAL W/LINK SEAL.

NO.		DESCRIPTION	SPECIFICATIONS
(A)	WATER METER FURNISHED BY CITY	8" OCTAVE ULTRASONIC METER	MASTER METER 8" OCTAVE GPM
(B)	GATE VALVE	8" FL GATE VALVE W/HANDWHEEL	RESILIENT WEDGE, AWWA C-509
(C)	CHECK VALVE	8" FL SWING CHECK	VAL MATIC VM-508A-M
(D)	DISMANTLING JOINT	8" FL DISMANTLING JOINT W/RESTRAIN	ROMAC DJ 400

REVISED DRAWING JULY 2016

City of West Jordan, Utah



# 8" METER DETAIL

PLAN  
CW-150