

PRIVATE WATER DISTRIBUTION SYSTEM IMPROVEMENTS

TO SERVE

WSU WOOLSEY HALL

1845 FAIRMOUNT STREET  
WICHITA, KS 67260

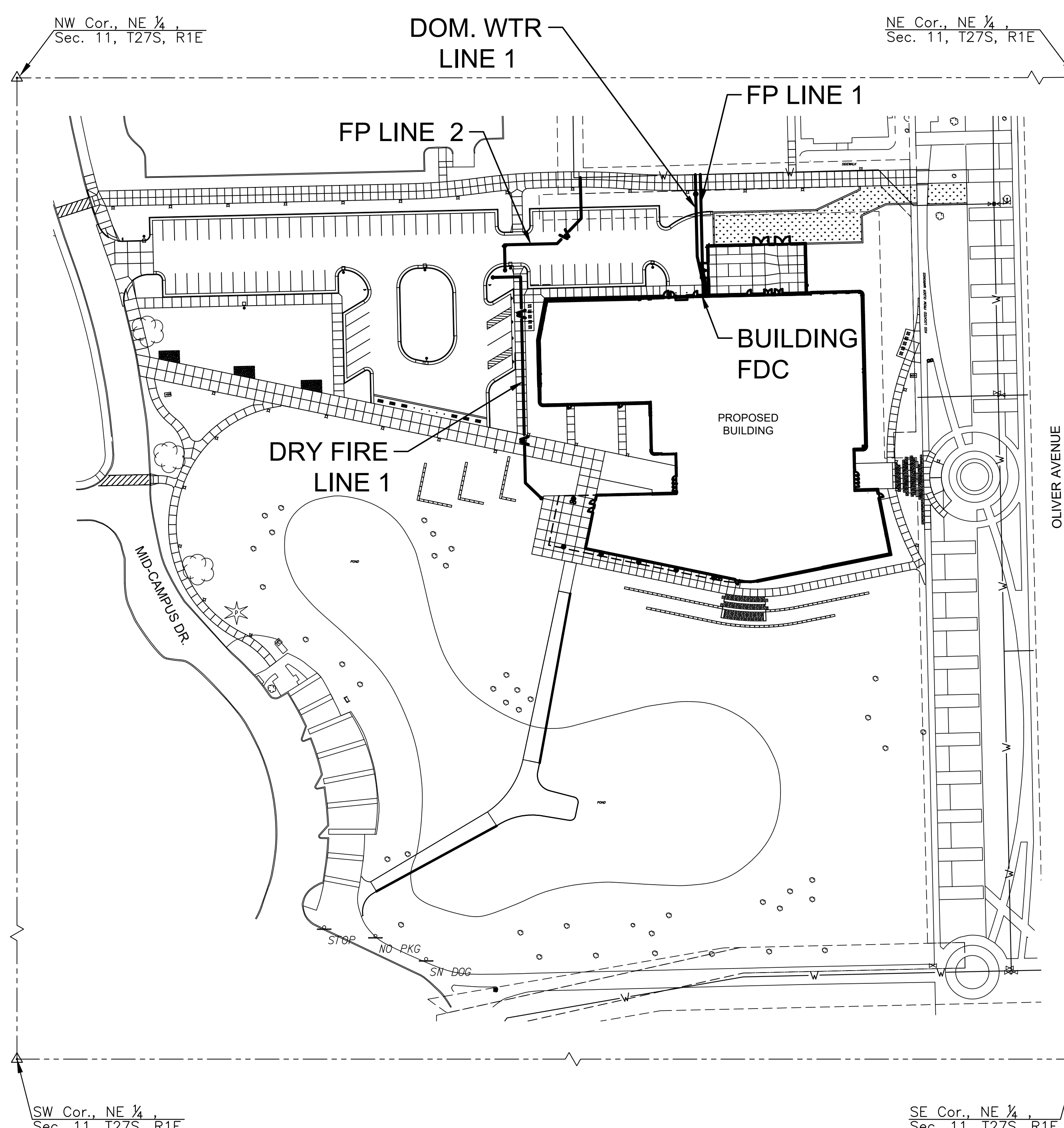
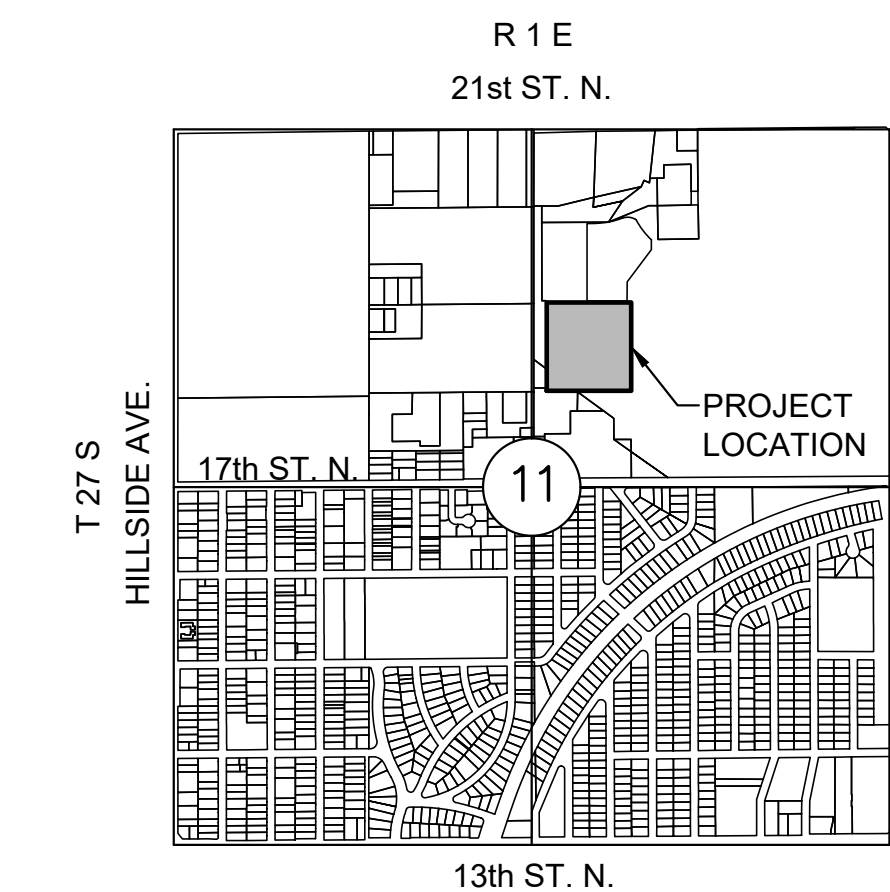
THE CITY OF WICHITA, KANSAS  
GARY JANZEN, P.E. - CITY ENGINEER

PROJECT NO.  
PPW-2020-021139 (183021)

GENERAL NOTES

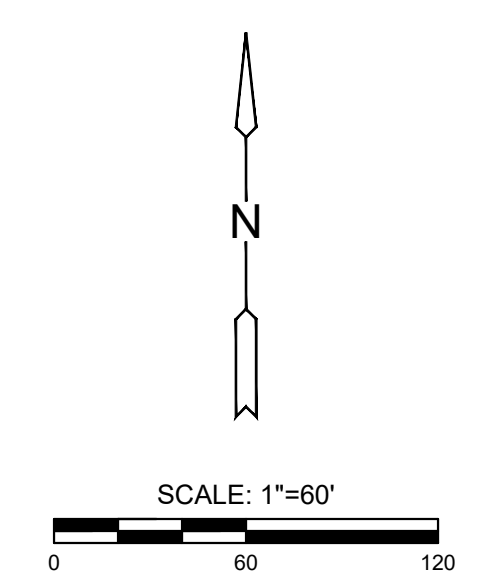
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION SHALL BE COMPLETED FOLLOWING CURRENT CITY STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- THE CONTRACTOR WILL BE REQUIRED TO PROVIDE NOTICE TO THE WSU PROJECT MANAGER & UTILITY COMPANIES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION. AS FOLLOWS:  
TODD WOOLSONCROFT (WSU PROJECT MANAGER) 316-978-3030  
KANSAS ONE-CALL 316-887-2470
- THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:  
AT&T 1-800-248-8484  
BLACK HILLS ENERGY (GAS) 1-800-884-8889  
CITY OF WICHITA WATER & SEWER 316-219-8821  
CITY OF WICHITA STORMWATER 316-268-4090  
CITY OF WICHITA TRAFFIC 316-268-4034  
COX COMMUNICATIONS 1-888-249-3530  
KANSAS GAS SERVICE 1-888-482-4950  
EVERGY 1-800-544-4857  
WSU FIBER 316-978-5069  
WSU FACILITIES SERVICES 316-798-3444
- UTILITY SERVICE LINES, POLES, ETC. ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS, IN THE OPINION OF THE ENGINEER, THAT WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WILL REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- THE ENGINEERING DIVISION SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE. VALVE BOXES AND WATER METERS WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO MATCH FIELD GRADES BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOTIFY THE INSPECTING ENGINEER AND TOM MASON AT 316-268-4574 WITH THE CITY OF WICHITA WITH THE ANTICIPATED CONSTRUCTION START DATE AND NOTIFY THEM OF PROJECT COMPLETION. STAKING AND INSPECTION FOR THIS PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL ELEVATIONS SHOWN ARE NAVD 88.
- ALL APPLICABLE FEES (TAP, EQUITY, IN LIEU OF A MAIN BENEFIT) MUST BE PAID BEFORE ANY CONNECTIONS CAN BE MADE ON THIS PROJECT. QUOTES CAN BE OBTAINED ON FEES BY CALLING 316-268-4555.
- CITY MAINTENANCE OF WATER MAINS ENDS AT RIGHT-OF-WAY OR EASEMENT LINE OR WITHIN TWO FEET OF VAULT.
- CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS COMPANIES AND IS EITHER FROM COMPANY UTILITY DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
- OPENING AND CLOSING OF WATER VALVES SHALL BE DONE SLOWLY TO PREVENT DAMAGE TO THE WATER DISTRIBUTIONS SYSTEM FROM WATER HAMMER. ALL VALVES CLOSED BY THE CONTRACTOR MUST BE REOPENED AS NEW CONSTRUCTION PERMITS. THE PROJECT INSPECTOR MUST ASCERTAIN THAT ANY VALVE CLOSED BY THE CONTRACTOR IS REOPENED. THE CONTRACTOR WILL BE PERMITTED TO OPERATE WATER VALVES ONLY WHEN THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT.
- THE CONTRACTOR SHALL LAY A TRACER WIRE AND SET TEST STATIONS ALONG ALL WATER PIPE INSTALLED IN ACCORDANCE WITH CITY SPECIFICATIONS AND TRACER WIRE DETAIL ON DETAIL SHEET WL-101, COST IS SUBSIDIARY TO PIPE INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE MATERIALS FOR TEMPORARY BLOWOFF OF WATER LINES. CONNECTIONS TO THE EXISTING WATERLINE(S) SHALL BE MADE WITH CLEAR, SWAGED PIPE AND FLUSHED UPON COMPLETION OF THE LINES.
- REQUESTS FOR SHORT TERM WATER INTERRUPTIONS SHALL BE MADE TO THE CITY WATER DISTRIBUTION DIVISION AND WILL BE SUBJECT TO THEIR APPROVAL. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO ANY PROPERTY OWNER, BUSINESS, AND/OR TENANTS THAT WILL HAVE WATER SERVICE INTERRUPTED AT LEAST 5 DAYS IN ADVANCE. SUCH NOTIFICATIONS SHOULD INDICATE THE TIME AND DATE THAT THE WATER WILL BE TURNED OFF AND WHEN THE SERVICE WILL BE RESTORED. NO BUSINESS, PROPERTY OWNER, AND/OR TENANTS SHALL BE WITHOUT WATER SERVICE FOR MORE THAN 8 HOURS. PROPOSED TIME LOCATIONS WHICH WILL AFFECT WATER SERVICE TO PROPERTY OWNERS SHALL BE PREFORMED DURING NON-PEAK HOURS.
- THE CONTRACTOR MUST SCHEDULE THE CONNECTIONS TO THE EXISTING MAIN WITH THE CITY SUCH THAT THERE IS A MINIMUM DISRUPTION OF SERVICE. CONNECTIONS SHALL BE MADE DURING PERIODS OF LOW WATER USAGE. THE CONTRACTOR SHALL SUBMIT HIS PROPOSED SCHEDULE FOR COMPLETING WORK FOR CITY APPROVAL AT LEAST 10 DAYS PRIOR TO BEGINNING CONSTRUCTION.
- DEFLECTIONS AT PIPE JOINT OR COUPLINGS SHALL NOT EXCEED THE PIPE MANUFACTURERS RECOMMENDED MAXIMUM. WHERE DEFLECTIONS ARE GREATER THAN THE MAXIMUM ALLOWED, THE CONTRACTOR SHALL UTILIZE CHIM LONG SLEEVE OR MULTIPLE JOINTS.
- ANY EXISTING JOINT EXPOSED DURING EXCAVATION SHALL BE REPLACED IF WITHIN FOUR FEET OF PROPOSED JOINT.
- VALVES 12 INCH AND LARGER ARE TO BE OPERATED BY THE CITY WATER DISTRIBUTION DIVISION. 48 HOURS OF ADVANCE NOTICE IS REQUIRED WITH THE WATER DIVISION AT 316-291-8921.
- ALL WET TAPS SHALL BE INSTALLED BY THE CITY OF WICHITA. THE CONTRACTOR WILL REIMBURSE THE CITY FOR TAPPING FEES.
- THE CONTRACTOR SHALL PROTECT FROM DAMAGE AND SUPPORT EXISTING UTILITIES THROUGH CONSTRUCTION AS APPROVED BY THE UTILITY OWNER AND THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- WORK DONE UNDER THIS PROJECT IS SUBJECT TO THE CITY OF WICHITA REQUIREMENTS FOR CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENTS BY PRIVATE CONTRACT. THE CONTRACTOR SHALL BE FAMILIAR AND COMPLY WITH ALL OF THE REQUIREMENTS, INCLUDING BONDING, INSPECTION, TESTING, NOTIFICATION, PROVIDING AS-BUILT DRAWINGS, PAYING FOR ALL NECESSARY CONNECTIONS, AND/OR STREET REPAIR FEES AND PROVIDING PIPE MATERIAL AND OTHER CERTIFICATIONS.
- DEVELOPER FOR THIS PROJECT IS:  
WICHITA STATE UNIVERSITY  
1845 FAIRMOUNT STREET  
WICHITA, KANSAS 67260  
EMILY PATTERSON - EXECUTIVE DIRECTOR OF FACILITIES PLANNING  
316-978-303

Start Date: 2021-01-05  
Inspector: A. Thompson  
Design Firm: MKEC  
Insp firm Kaw Valley Engineering, Inc.  
Contractor: Dondlinger Construction  
Subcontractor: Apex Excavating  
  
Built in general conformance to construction plans,  
except where noted on plans.  
As built Date: 4-8-22



INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
C206	TITLE SHEET
C207-C210	DETAILS
C211	FP LINE 1 & DOM. WTR LINE 1
C212	FP LINE 2 & DRY FIRE LINE 1
C213-C217	BMP DETAILS



APPROVED AS NOTED  
BY WICHITA PUBLIC WORKS  
ENGINEERING DIVISION  
& BY WICHITA FIRE DEPARTMENT

Engineering approved by Seth Gotchey on this day  
the 24th of August, 2020

Utilities approved by Greg Lolley on this day  
the 24th of August, 2020

Fire Department approved by Jose Ocaziz on this day  
the 24th of August, 2020

NOTE TO CONTRACTORS

Public Property:  
Inspection and testing for the water line is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Professional Engineer Licensed in the state of Kansas. No work shall be performed in dedicated easements or public rights-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer. All Construction and Materials shall comply with the City of Wichita Specifications and Standards and Special Provision (on file and available in the City Engineer's office) or on the City's Website.

Private Property:  
Installation and testing for the fire protection line is to be performed by a City of Wichita licensed fire protection contractor in accordance with the fire codes as adopted by the City of Wichita. All material and construction practices for the fire protection line shall comply with the fire codes as adopted by the City of Wichita (available from the City of Wichita Fire Department). The contractor shall not commence work without notification and approval of the Wichita Fire Department. Inspection of the fire protection line is to be provided by a licensed Engineering Firm under contract with the Owner/Developer and the Fire Department. The contractor shall not start work until the project inspector is assigned to the project and present on the site. Any work done without inspection will be required to be uncovered for inspection.

An approved copy of these plans signed by City staff is required on-site.

CONTROL POINTS

PNT	NORTH	EAST	ELEV.	DESCRIPTION
110	1659716.897	165295.391	1408.10	5/8" rebar w/ red MKEC CP cap
111	1659797.853	165270.896	1403.10	5/8" rebar w/ red MKEC Alum CP cap
145	1657460.863	165295.433	1401.16	+Cut
160	1657840.120	165295.627	1413.015	5/8" rebar w/ red MKEC CP cap
186	1656086.916	165294.724	1409.815	5/8" rebar w/ red MKEC Alum CP cap
187	1656086.121	165323.866	1411.695	5/8" rebar w/ red MKEC CP cap
188	1657732.820	165321.273	1408.875	5/8" rebar w/ red MKEC CP cap

DATUM

The Horizontal Datum is based on the Kansas Coordinate System of 1983(2011), South Zone. Coordinates shown have been modified to the ground using a combined adjustment factor of 1.0001200144. State Plane coordinates can be calculated by multiplying the shown values by 0.99988.

All elevations shown are based on the NAVD 88 vertical datum.

NOTE

All Control Points shown have elevations established using standard surveying procedures and can be used as temporary benchmarks. When using a Control Point as a temporary benchmark, it is recommended that cross-checks be made to other control points or benchmarks to confirm elevations prior to use.

BENCHMARKS

PNT	NORTH	EAST	ELEV.	DESCRIPTION
145	1657460.863	165295.433	1401.16	+Cut

NOTE:  
WATER LINE VALVES TO BE OPERATED BY CONTRACTOR ONLY IF WATER INSPECTOR IS ON SITE.

NOTE: ALL LINES TO BE INSTALLED BY OTHERS ARE SUBJECT TO MABCD REVIEW.

NOTE: CONTRACTOR TO VERIFY DEPTH AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.



**GastingerWalkers**  
817 Wyandotte  
Kansas City, MO 64105  
816-421-1200 phone  
816-421-1262 fax  
gastingerwalkers.com

**Gensler**  
111 East Jackson Street  
Suite 300  
Chicago, IL 60602  
312-456-0123

**Professional Engineer**  
24,423  
6,543  
Professional Engineer  
KANSAS

CIVIL / LANDSCAPE  
MKEC Engineering, Inc.  
411 N. Wells Rd  
Wichita, KS 67206  
316.684.9600

STRUCTURAL  
Bob D. Campbell & Co., Inc.  
4338 Belview  
Kansas City, MO 64111  
816.931.4144

MECHANICAL / ELECTRICAL / PLUMBING  
IMEG  
1600 Baltimore, Suite 300  
Kansas City, MO 64108  
816.842.8437

AUDIO / VISUAL  
Branch/Pattern  
7400 College Boulevard, Suite 150  
Overland Park, KS 66210  
913.951.8311

WSU Project #A-013842

#	Date	Revision
01	31 August 2020	1

Sheet Issue / Revision  
Description  
Permit and Bid Set

Wichita State University  
**WOOLSEY HALL**  
home of W. Frank Barton School of Business  
1845 Fairmount Street, Wichita, Kansas 67260  
BUILDING NUMBER #183021-0032  
State of Kansas #A-013942

DATE: 31 August 2020

Drawn By: LM  
Checked By: SPE

PPW TITLE SHEET

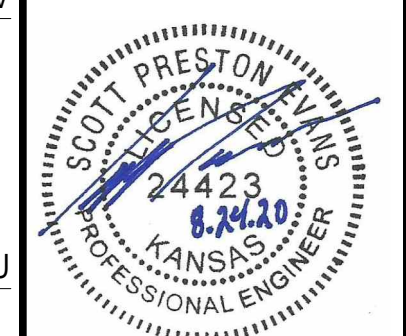
A-013842

**C206**  
Bid and Permit Set

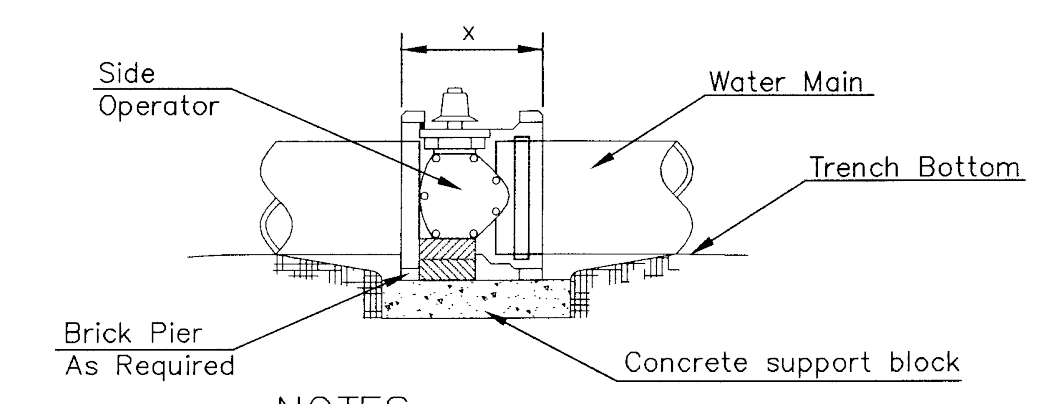
Wichita, KS • 316-684-9600

State of Kansas #A-013942

BIM-380/Woolsey Hall - Wichita State University/Architecture - WSU Woolsey.rvt

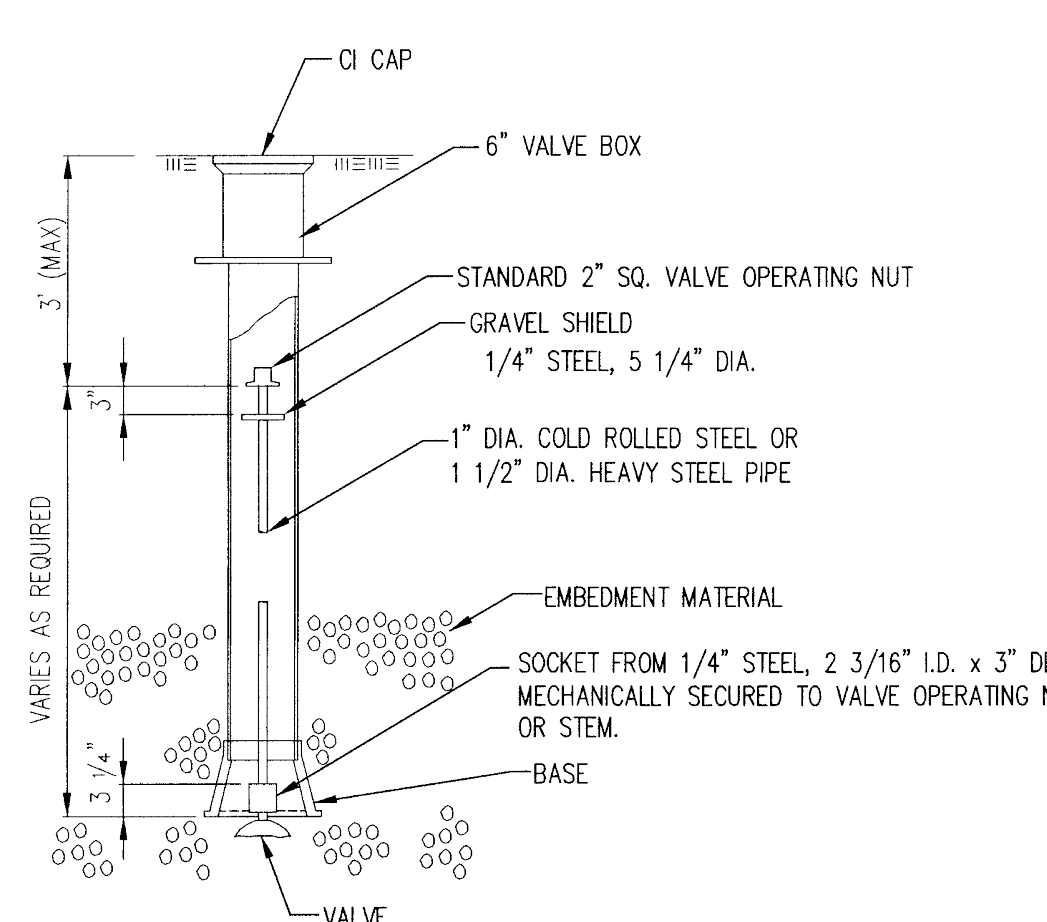


Sheet Issue / Revision	Date
1	31 August 2020



- NOTES**
- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
  - 6" Valve Box and Cover required per City of Wichita Std. Specifications.
  - Conc. Support Block to be full width of trench.

**CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION**

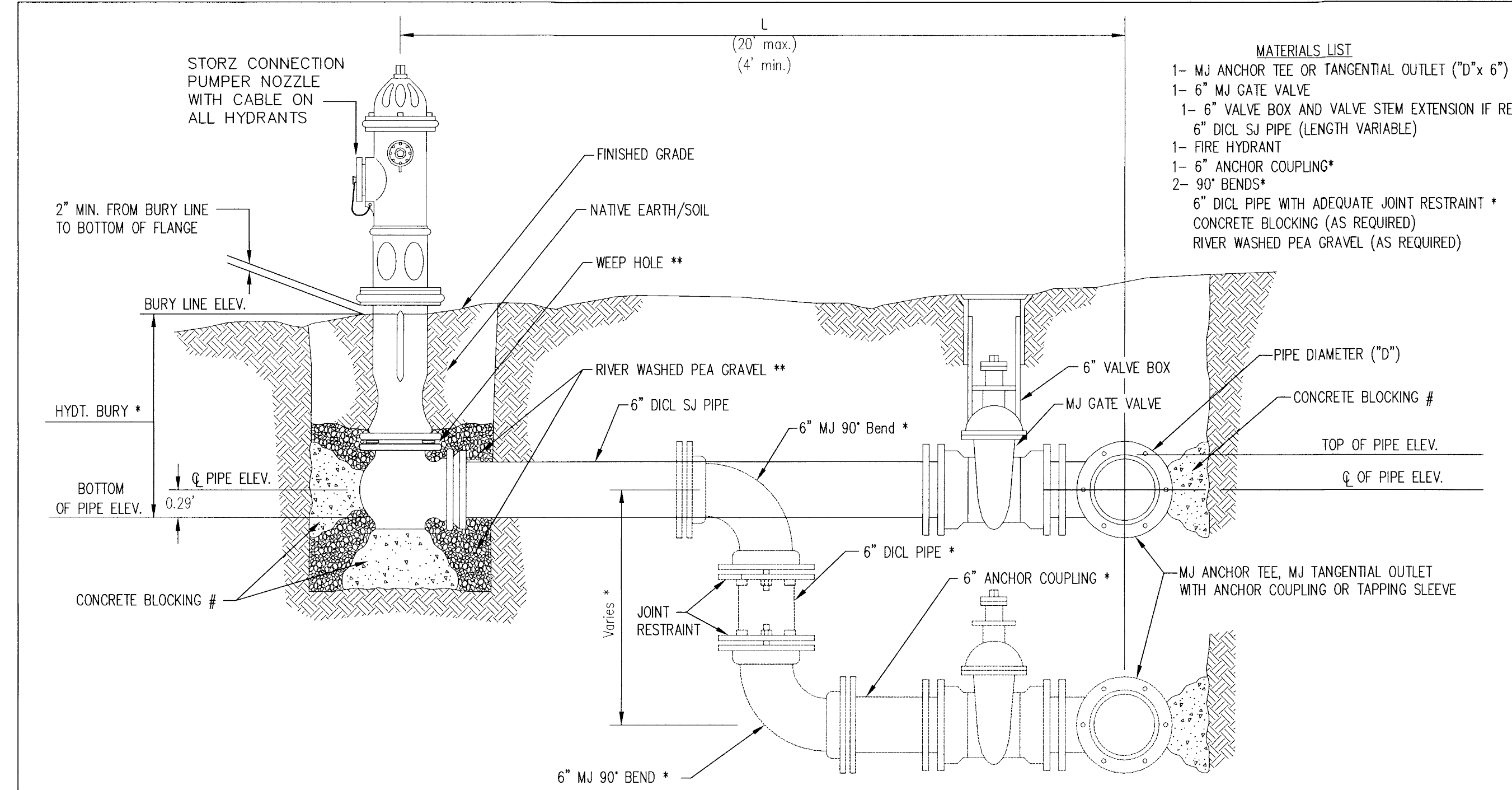


**VALVE STEM EXTENSION DETAIL**

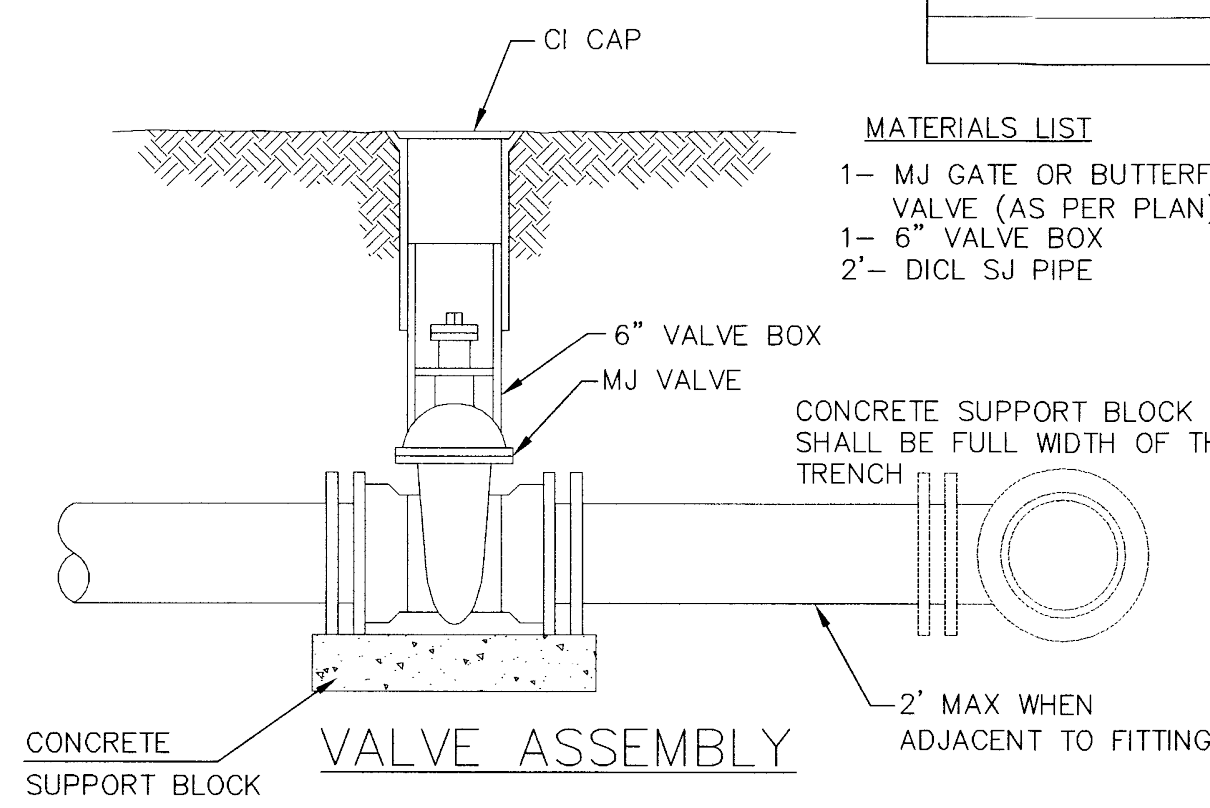
NOTE: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.

**FIRE HYDRANTS REQUIRED**

STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
11+00.41, FP2	1409.60	1405.27	5.0	N/A

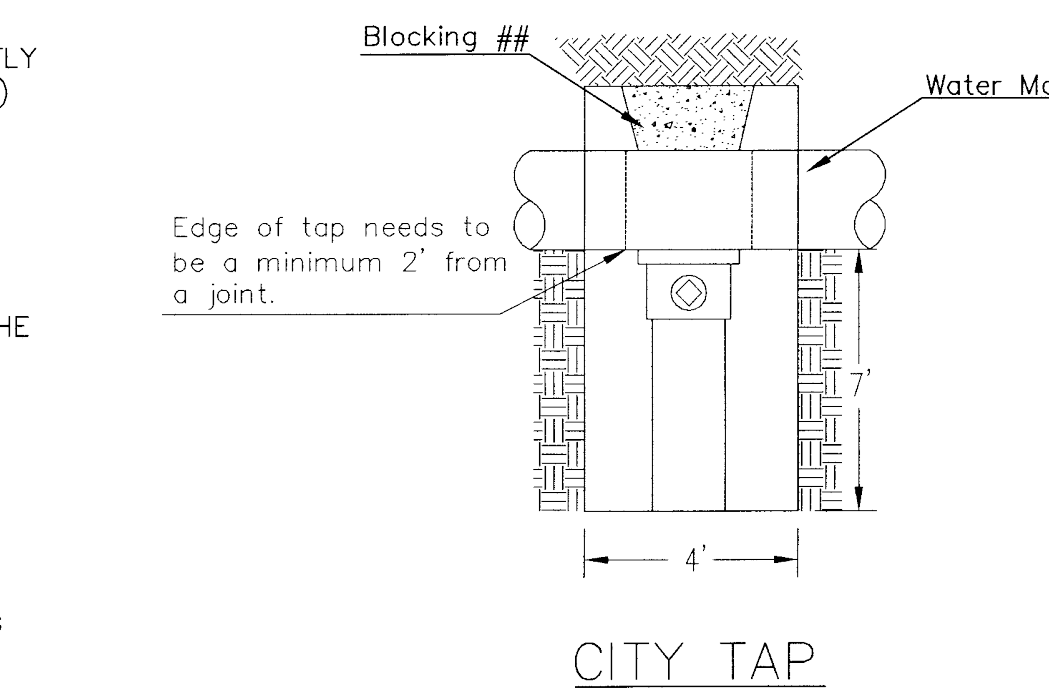


- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET (12" x 6")
  - 1- 6" MJ GATE VALVE
  - 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED \*
  - 6" DI CL SJ PIPE (LENGTH VARIABLE)
  - 1- FIRE HYDRANT
  - 1- 6" ANCHOR COUPLING\*
  - 2- 90° BENDS\*
  - 6" DI CL PIPE WITH ADEQUATE JOINT RESTRAINT \*
  - CONCRETE BLOCKING (AS REQUIRED)
  - RIVER WASHED PEA GRAVEL (AS REQUIRED)



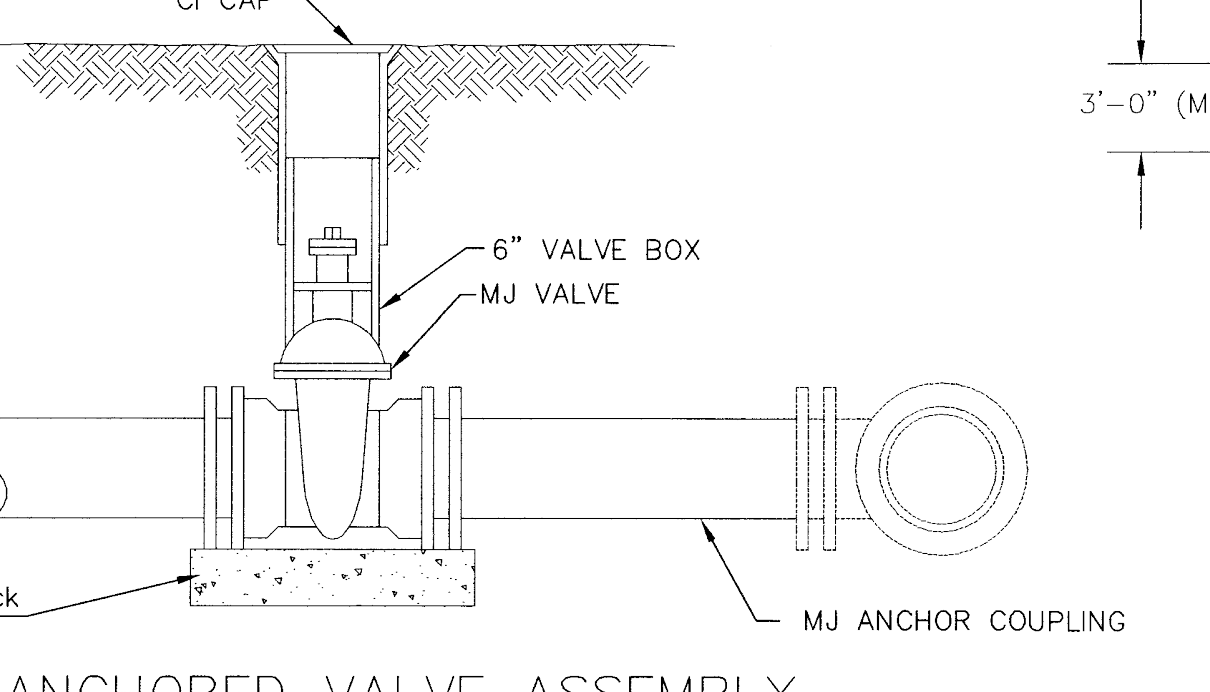
**VALVE ASSEMBLY**

- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
  - 1- 6" VALVE BOX
  - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



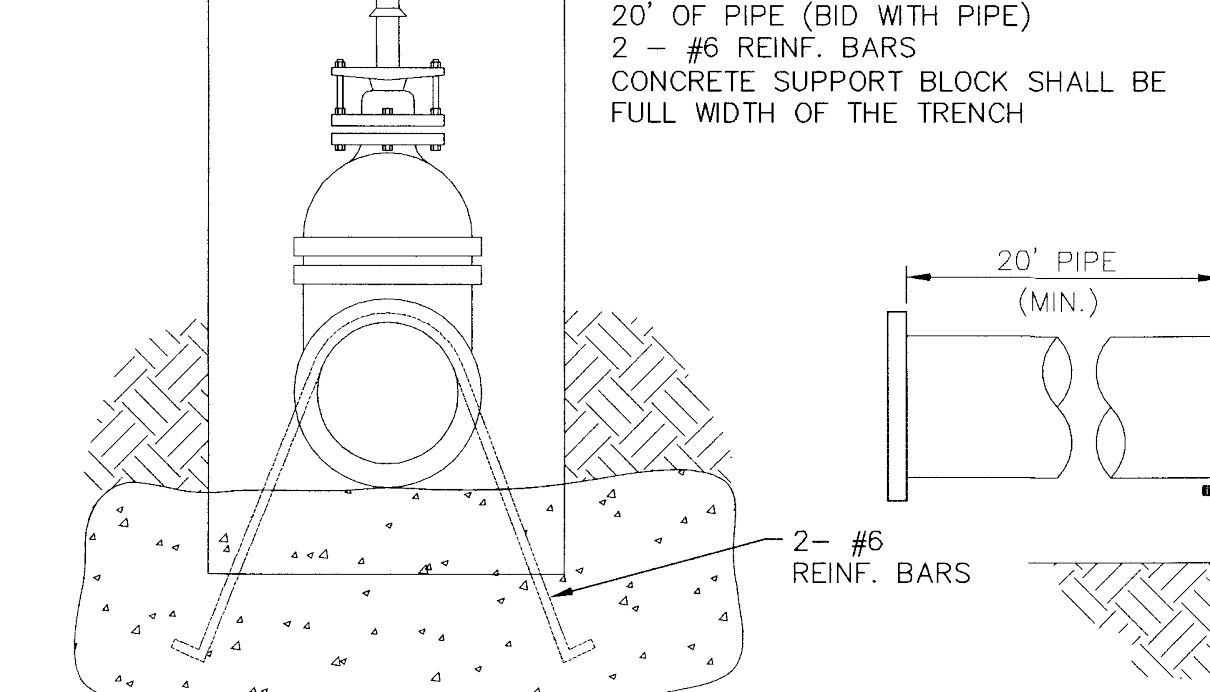
**CITY TAP**

## When the City of Wichita makes tap, blocking is to be done by Contractor



**ANCHORED VALVE ASSEMBLY**

- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
  - 1- CI MJ CAP WHEN NECESSARY
  - 1- 6" VALVE BOX
  - 20' OF PIPE (BID WITH PIPE)
  - 2- #6 REINF. BARS
  - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

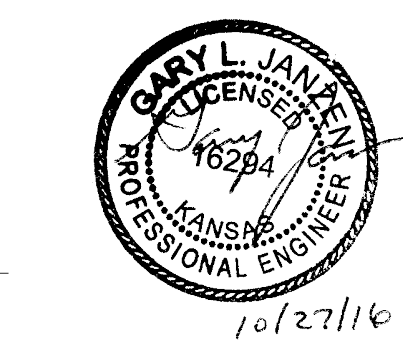


**ANCHORED VALVE ASSEMBLY, SPECIAL**

- Notes:**
- Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
  - The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
  - All valves at dead ends and at other locations as called out on the plans shall be blocked as shown here.

**THRUST AT VALVES**

VALVE	THRUST AT 150 #/sq ft
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.



REVISED: OCTOBER 2016

**STANDARD WATER ASSEMBLY DETAIL**

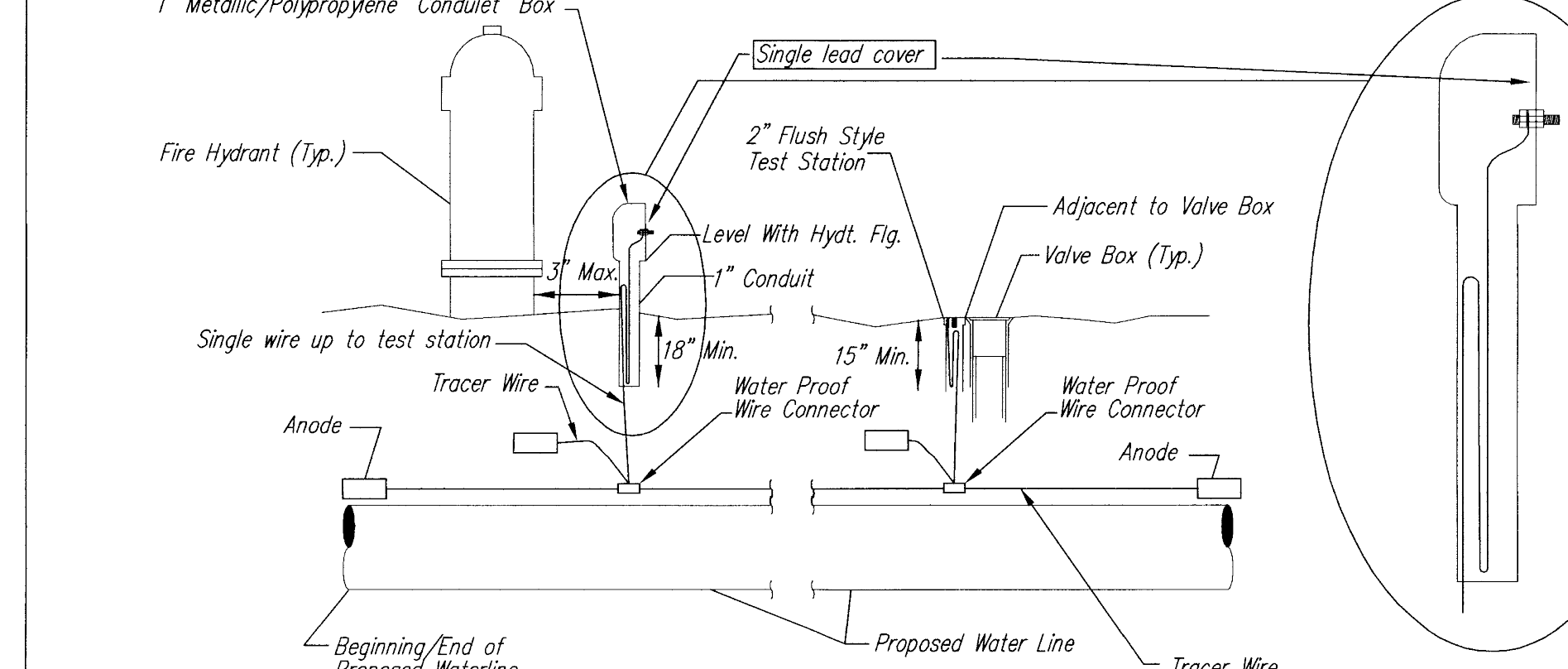
CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER PPW-2020-021139	OCA NUMBER 183021	DATE MAY 2020
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CITY ENGINEER'S OFFICE  
CITY HALL - SEVENTH FLOOR  
435 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

SHEET  
**C207**

- \* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DI CL PIPE AS NECESSARY FOR VERTICAL ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING AT HYDRANT AND MEGALUGS, OR SIMILAR RESTRAINT BETWEEN 90° BENDS TO SECURE ALL FITTINGS DURING TESTING AND OPERATION. THE CONTRACTOR SHALL PROVIDE A VALVE STEM EXTENSION PER DETAIL THIS SHEET.
- \*\* CAUTION: WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES. PLACE 1 CUBIC FOOT OF RIVER WASHED PEA GRAVEL AROUND EACH WEEP HOLE.
- # CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.



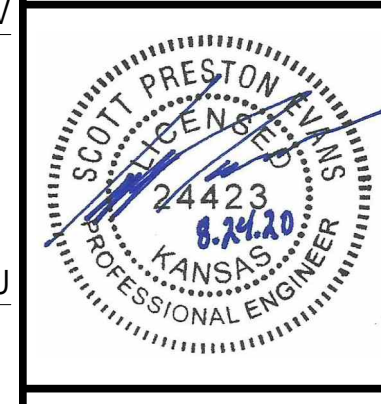
**TRACER WIRE**  
Conductive type pipe locator/tracer wire shall be installed to locate all waterline pipe regardless of pipe material. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. A waterproof connector shall be used at splice locations. A complete list of approved tracer wire and waterproof connectors can be found on the City of Wichita's website at [www.wichita.gov](http://www.wichita.gov).

**WIRE**  
The tracer wire shall be Blue No. 12 AWG CCS with 45 mil HDPE insulation. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. Wire connectors shall be installed per manufacturer recommendations. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

**TEST STATIONS**  
The test station for fire hydrant application shall be a 1" "conduit" style station as manufactured by AGRA Industries with a removable solid cover having a single lead extending from the face or approved equal. The "conduit" style test station shall be attached to a 1" rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. The test station for valve applications shall be a 2" flush style test station with wire connector on lid. Model # 12PH7B1LP Handley Industries or CD14\*TP SnakeFit as manufactured by Copperhead Industries or approved equal. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be installed to allow 12" of wire within the test station. The location of all test stations shall be recorded, and shown in the as-built drawings. Flush style test stations shall not be installed in pavement or sidewalk unless approved by the Engineer. Contractor shall extend tracer wire & move flush mount test station to nearest location out of pavement or sidewalk.

**ANODES**  
The anodes shall be 3 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to 12 AWG CCS which shall be extended to the test station.

**TRACER WIRE DETAIL**  
COST IS SUBSIDIARY TO PIPE INSTALLATION



#	Date	Description
01	31 August 2020	Permit and Bid Set
02		
03		
04		
05		
06		
07		
08		
09		
10		

Wichita State University  
**WOOLSEY HALL**  
 home of W. Frank Barton School of Business  
 1645 Fairmount Street, Wichita, Kansas 67260  
 BUILDING NUMBER #7500-0052  
 State of Kansas #A-013942

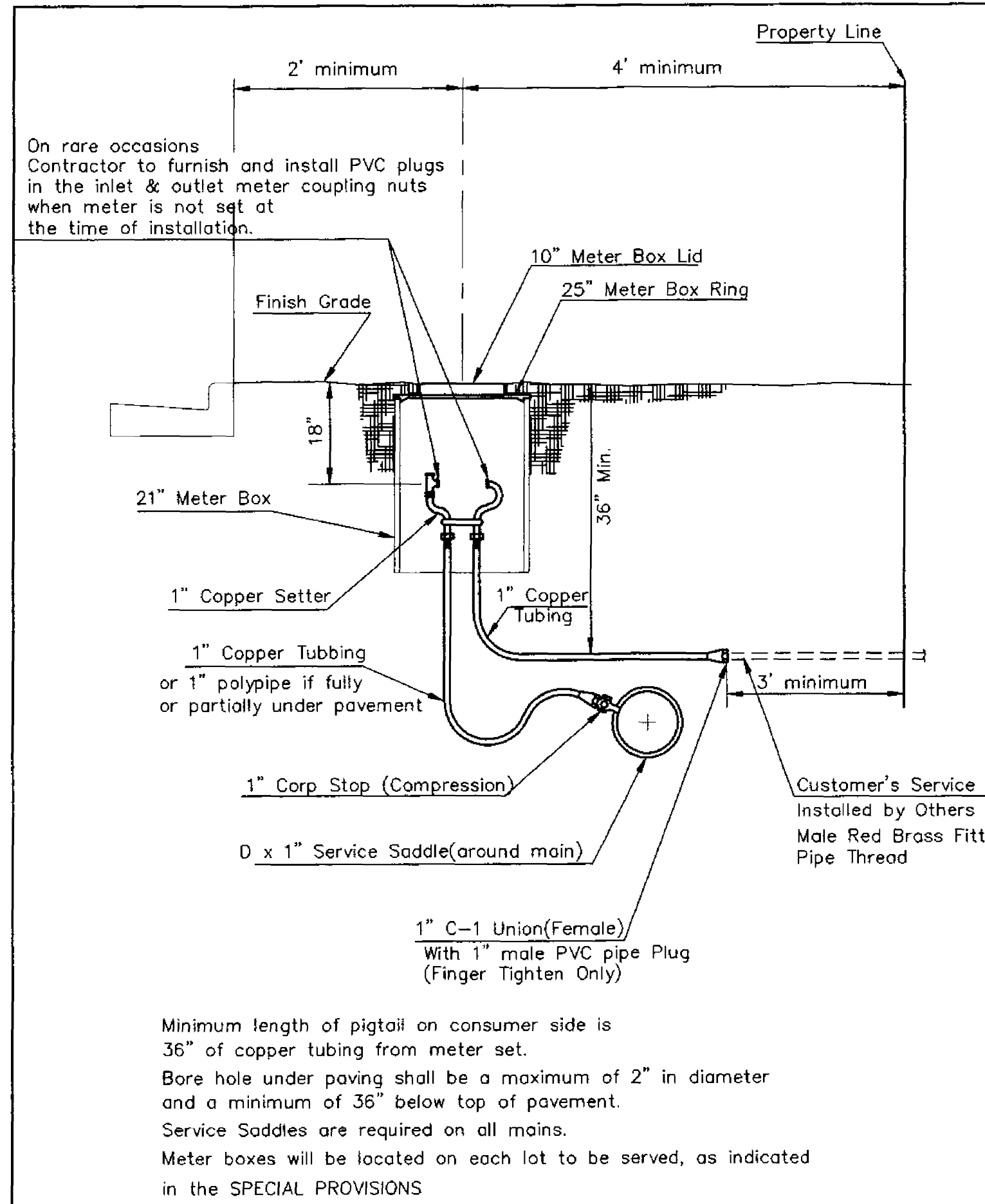
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STD WATER SERVICE  
 DETAIL

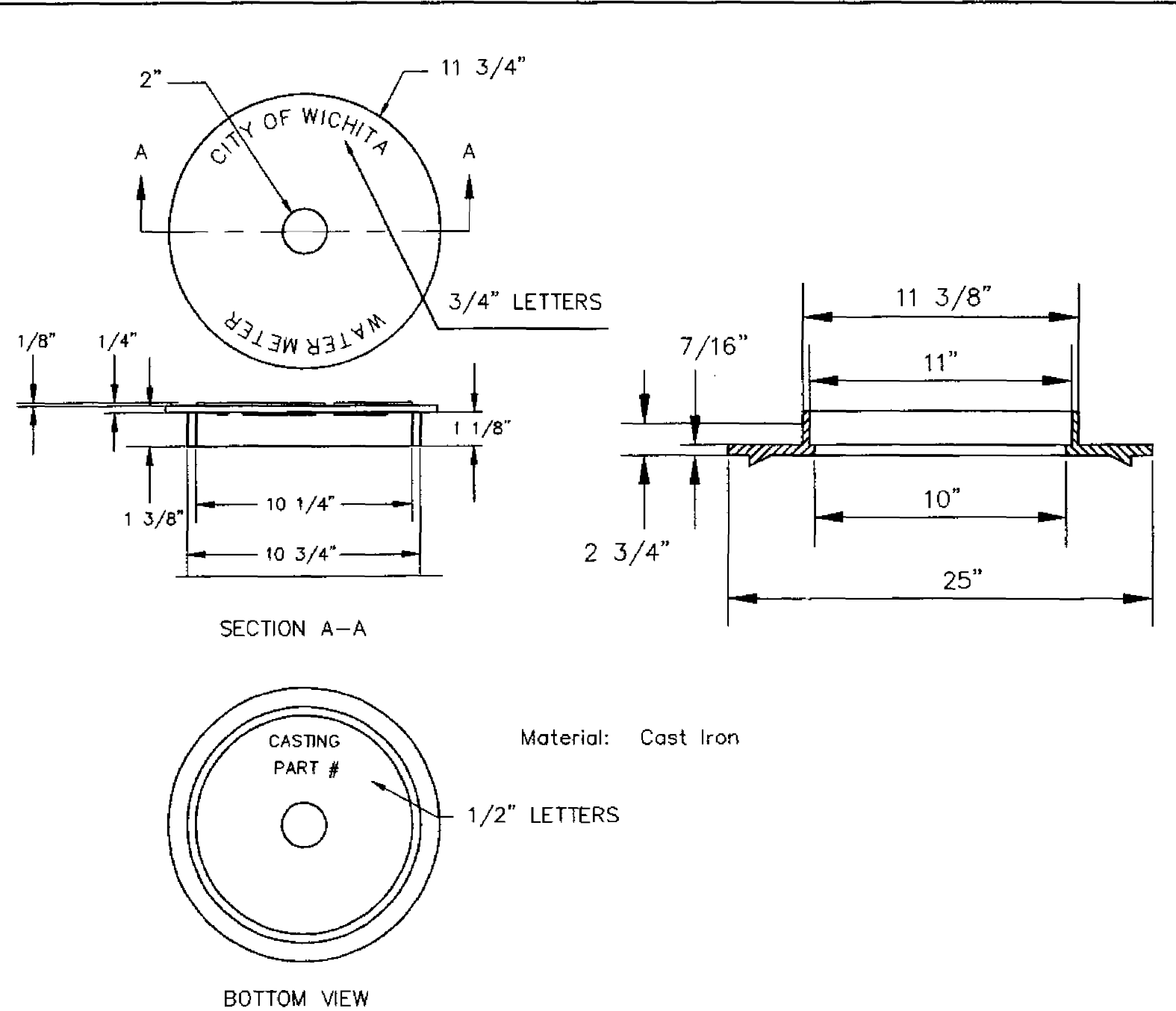
A-013842

**C208**

Bid and Permit Set



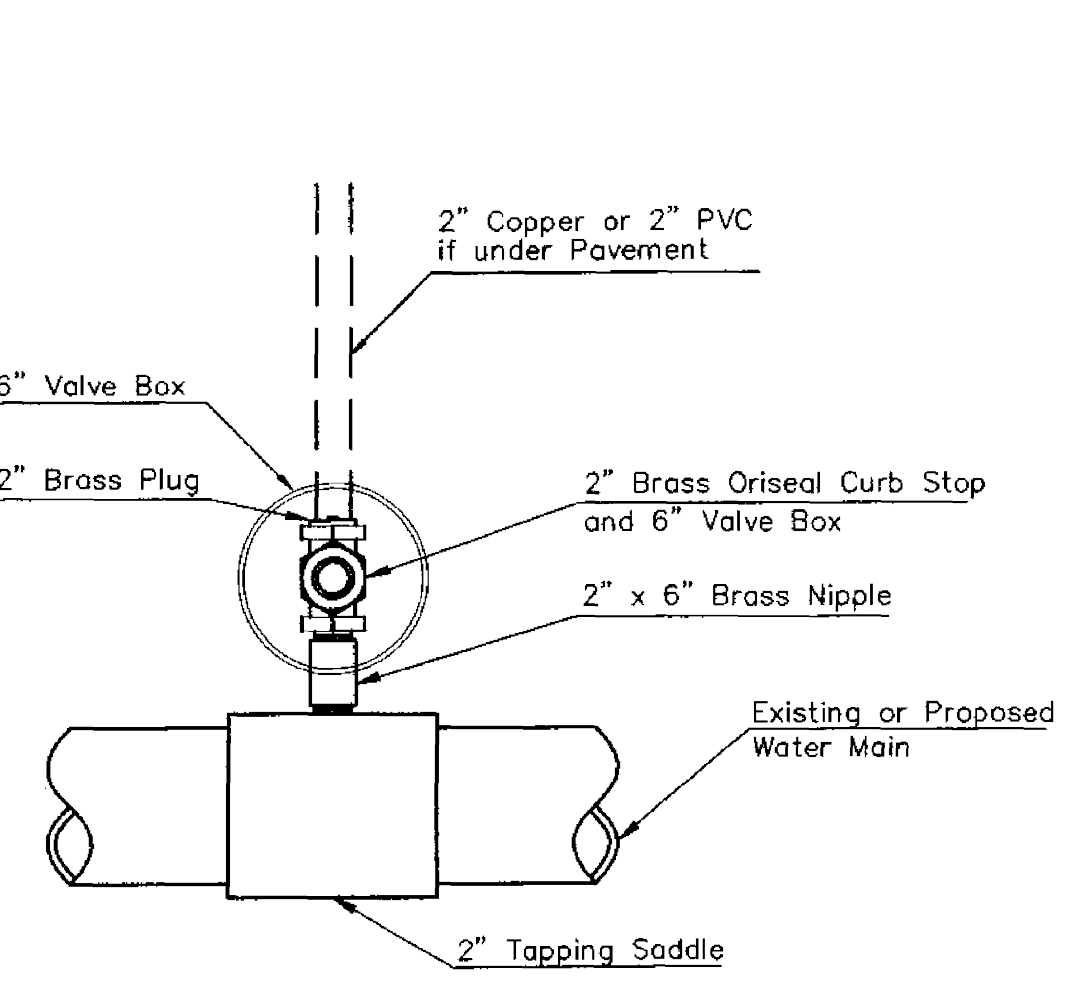
TYPICAL 1" METER SETTING



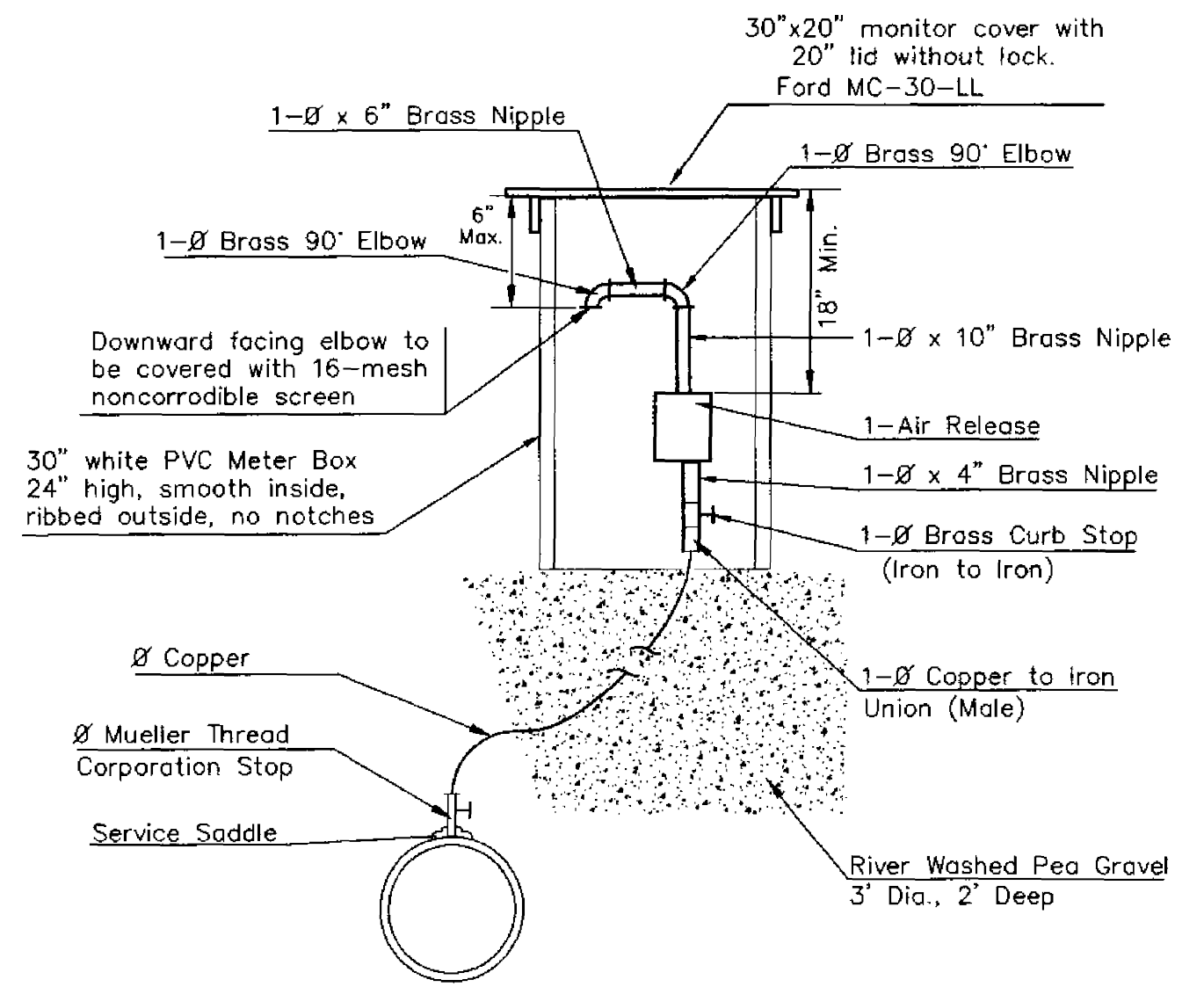
NOT TRAFFIC RATED RING & LID FOR 1" METER BOX

- 1 - Ø Mueller Thread Corporation Stop
- 1 - Ø Type "K" Copper Tubing
- 1 - Ø Copper to Iron Union (Male)
- 1 - Ø Brass Curb Stop (Iron to Iron)
- 2 - Øx4" Brass Nipple
- Air Release
- 2 - Ø Brass Elbows (90°)
- 1 - 1"x6" Brass Nipple
- 1 - 30" Monitor Cover
- 1 - 20" Meter Lid

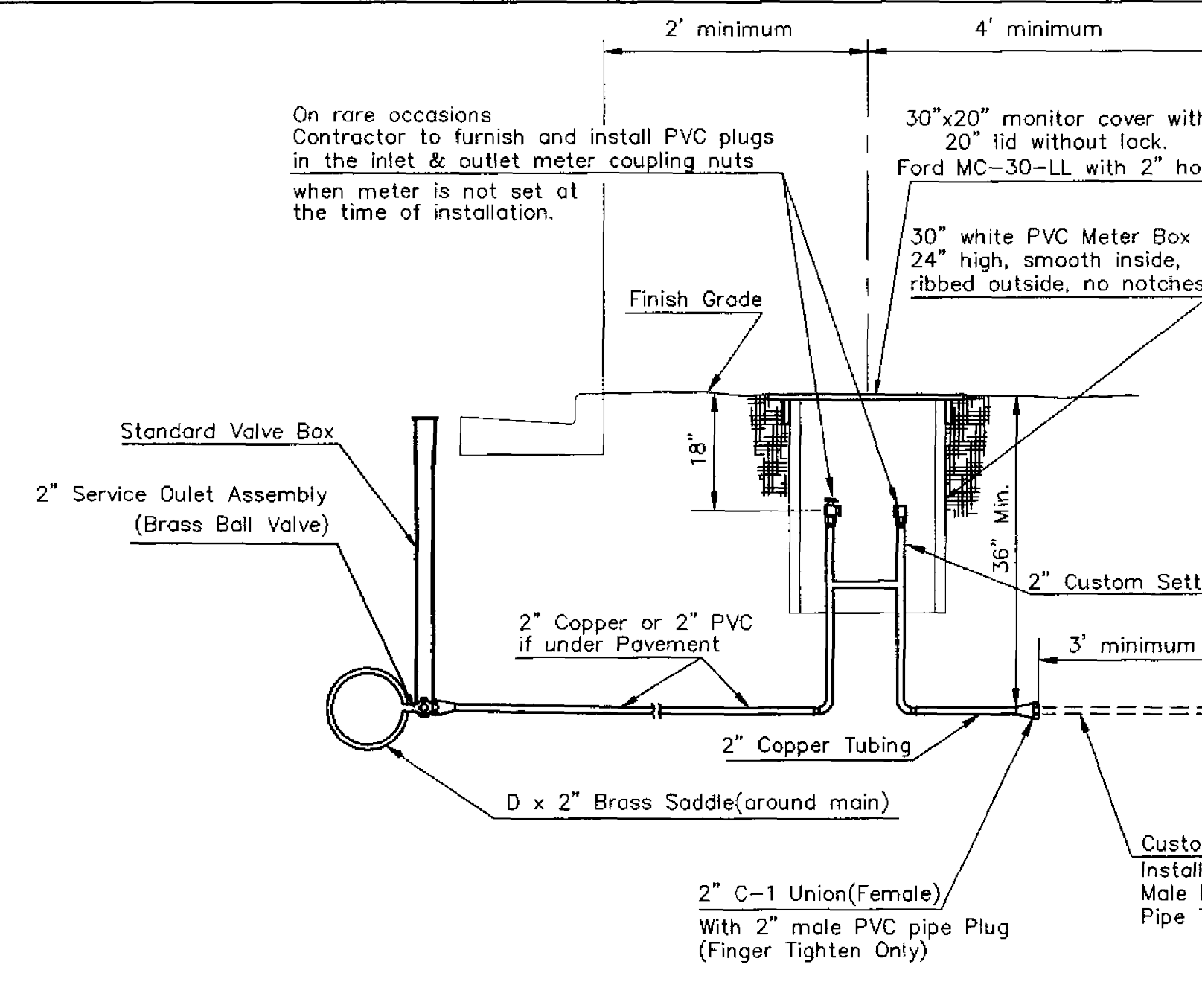
NOTE: THE 1" / 2" AIR RELEASE ASSEMBLY WILL TYPICALLY BE USED ON WATER MAINS 24" AND SMALLER, AS SPECIFICALLY DESIGNATED IN THE PLANS. COMBINATION AIR RELEASE ASSEMBLIES WILL BE SPECIFICALLY DESIGNED FOR PROJECTS WITH LARGER MAINS, AND WILL BE INCLUDED IN THE PLANS.



2" SERVICE OUTLET ASSEMBLY TOP VIEW



MATERIALS FOR 1" or 2" AIR RELEASE ASSEMBLY Ø = 1" or 2"

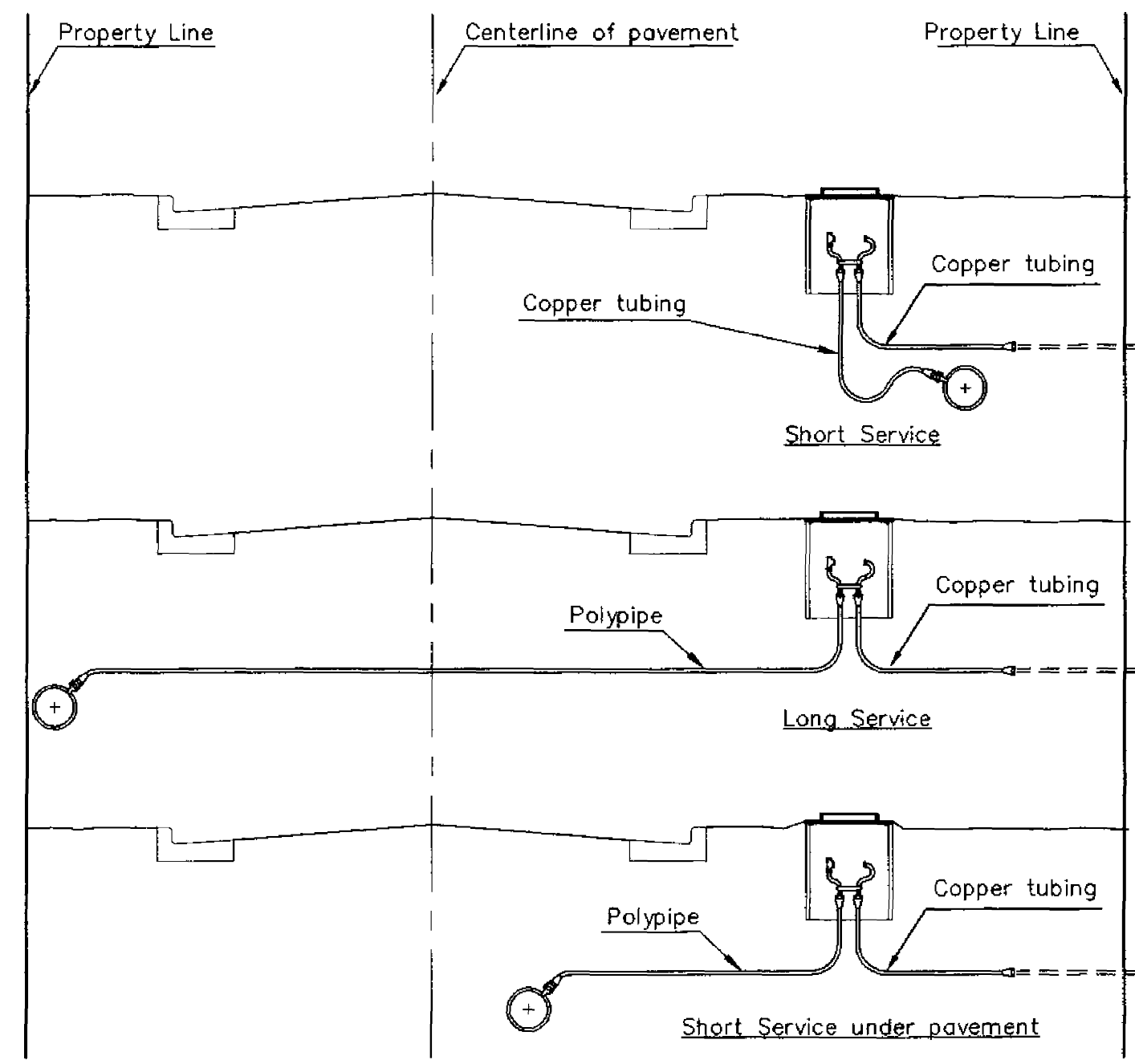


TYPICAL 2" METER SETTING

Note: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'

TYPICAL 2" METER SETTING INVOLVING EXISTING 2" METER VAULT

Note: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'



SERVICE TYPES

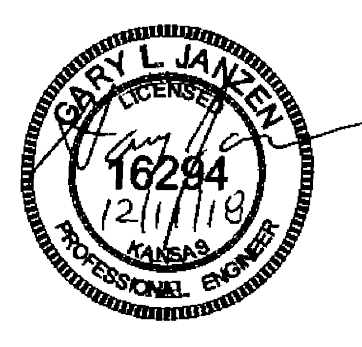
REVISED: DECEMBER 2018 TM BRASS NIPPLE LENGTH TO 10" ON THE 1" OR 2" AIR RELEASE ASSEMBLY

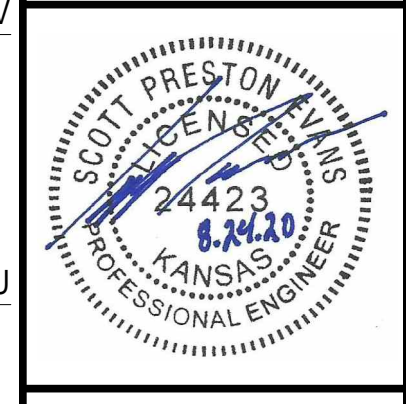
**STANDARD WATER SERVICE DETAIL**  
 CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER PPW-2020-021139	OCA NUMBER 183021	DATE MAY 2020
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CITY ENGINEER'S OFFICE  
 CITY HALL - SEVENTH FLOOR  
 455 NORTH MAIN STREET  
 WICHITA, KANSAS 67202-1620  
 (316) 268-4501

SHEET  
**C208**





CIVIL / LANDSCAPE  
MKEC Engineering, Inc.  
411 N. Webb Rd.  
Wichita, KS 67206  
316.684.9600

STRUCTURAL  
Bob D. Campbell & Co., Inc.  
4338 Bellevue  
Kansas City, MO 64111  
816.531.4144

MECHANICAL /  
ELECTRICAL / PLUMBING  
IMEG  
1600 Baltimore, Suite 300  
Kansas City, MO 64108  
816.842.8437

AUDIO / VISUAL  
Branch/Pattern  
7400 College Boulevard, Suite 150  
Overland Park, KS 66210  
913.951.8311

WSU Project #A-013842

Date	Revision
31 August 2020	1

#	Description	Permit and Bar
01		

Wichita State University  
Woolsey Hall  
home of W. Frank Barton School of Business  
1846 Fairmount Street, Wichita, Kansas 67260  
BUILDING NUMBER #7500-0052  
State of Kansas #A-013842

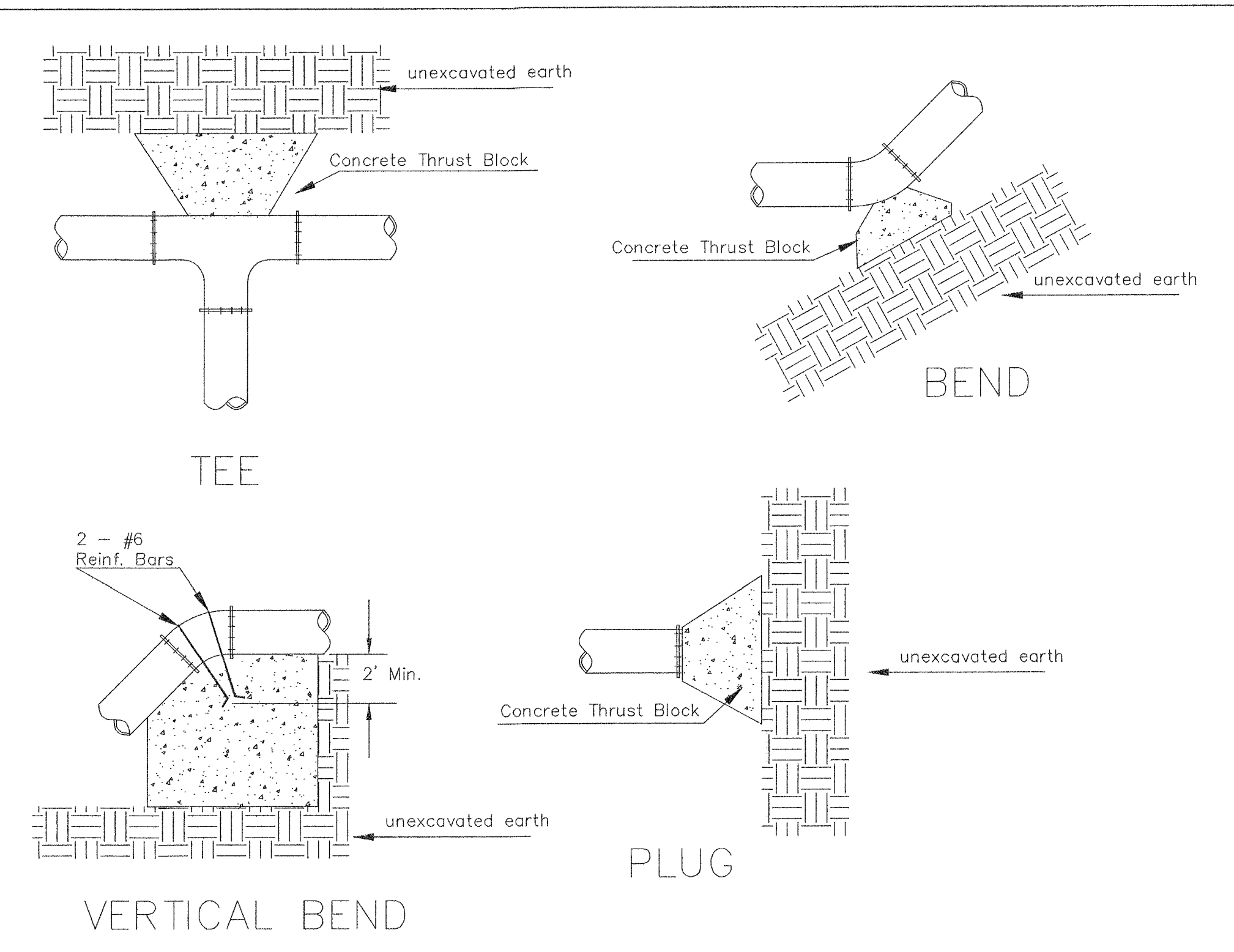
Drawn By: LM  
Checked By: SPE

MISC. WATER DETAILS

A-013842

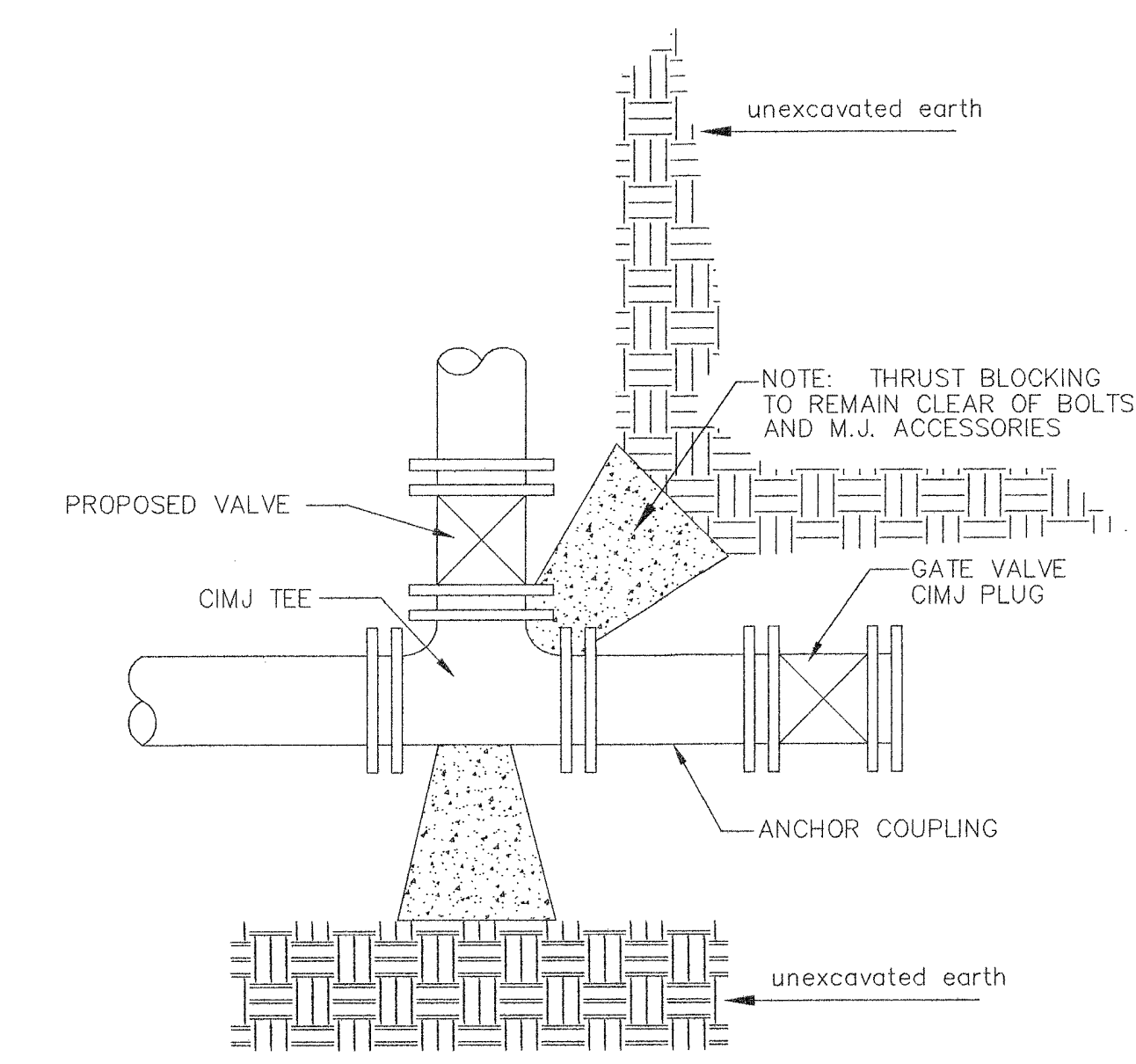
**C209**

Bid and Permit Set



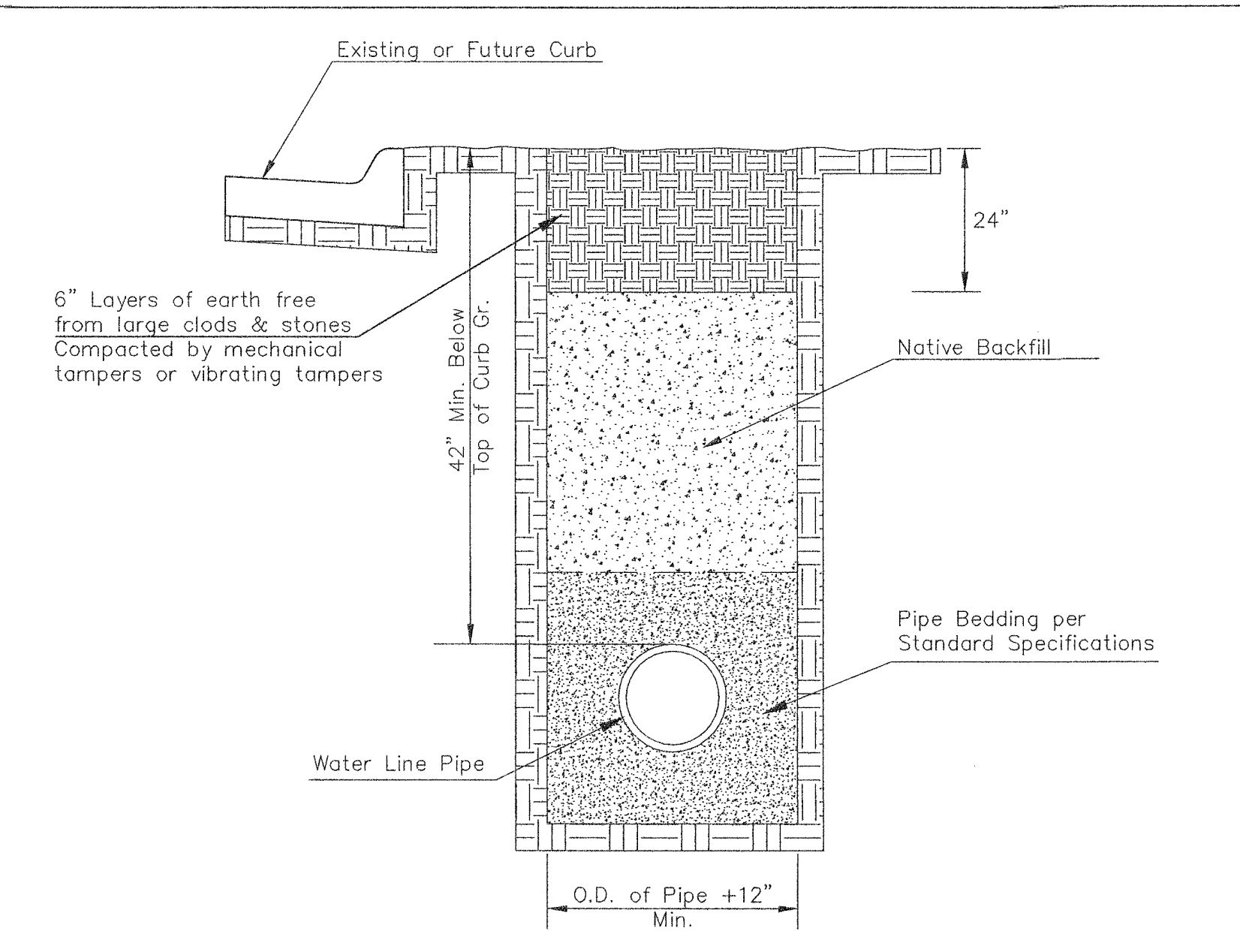
PIPE SIZE	THRUST AT FITTINGS IN TONS--AT 150#/IN <sup>2</sup> P					
	PLUG	90°	45°	22 1/2°	11 1/4°	TEE
6"	2.8	3.95	2.15	1.09	.55	2.8
8"	4.9	6.95	3.75	1.90	.96	4.9
12"	11.4	16.1	8.75	4.45	2.25	11.4
16"	20.15	28.5	15.4	7.85	3.95	20.15
20"	31.15	44.0	23.85	12.15	6.10	31.15
24"	44.55	63.0	34.1	17.4	8.75	44.55

TYPICAL THRUST BLOCKS

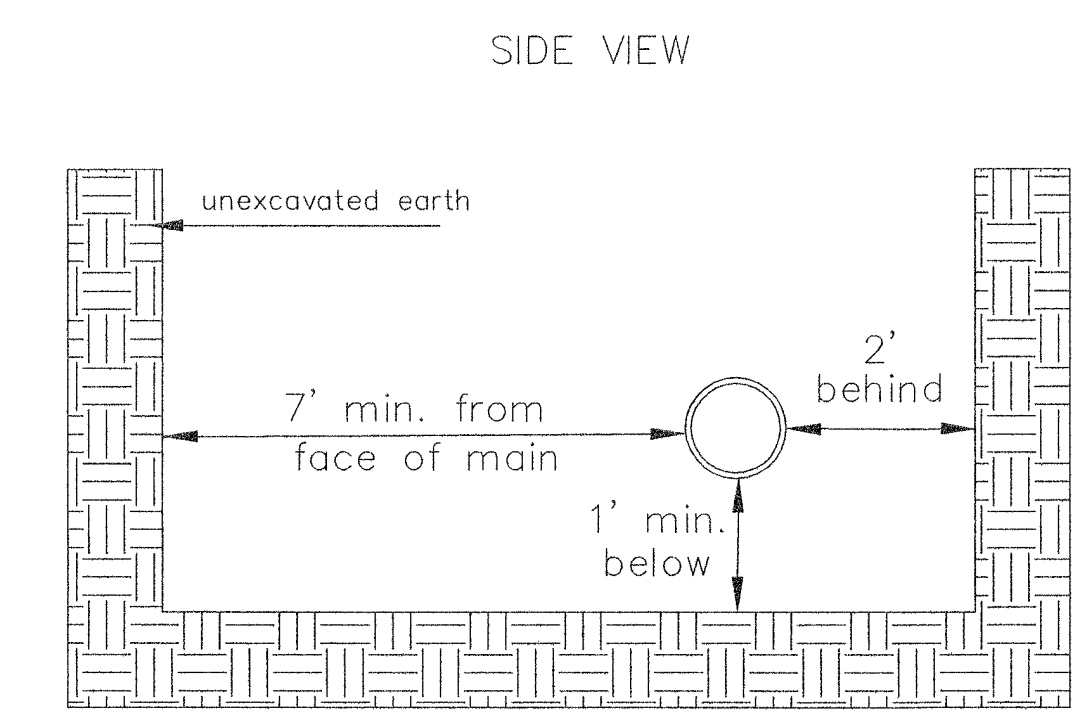


KEY BLOCK DETAIL

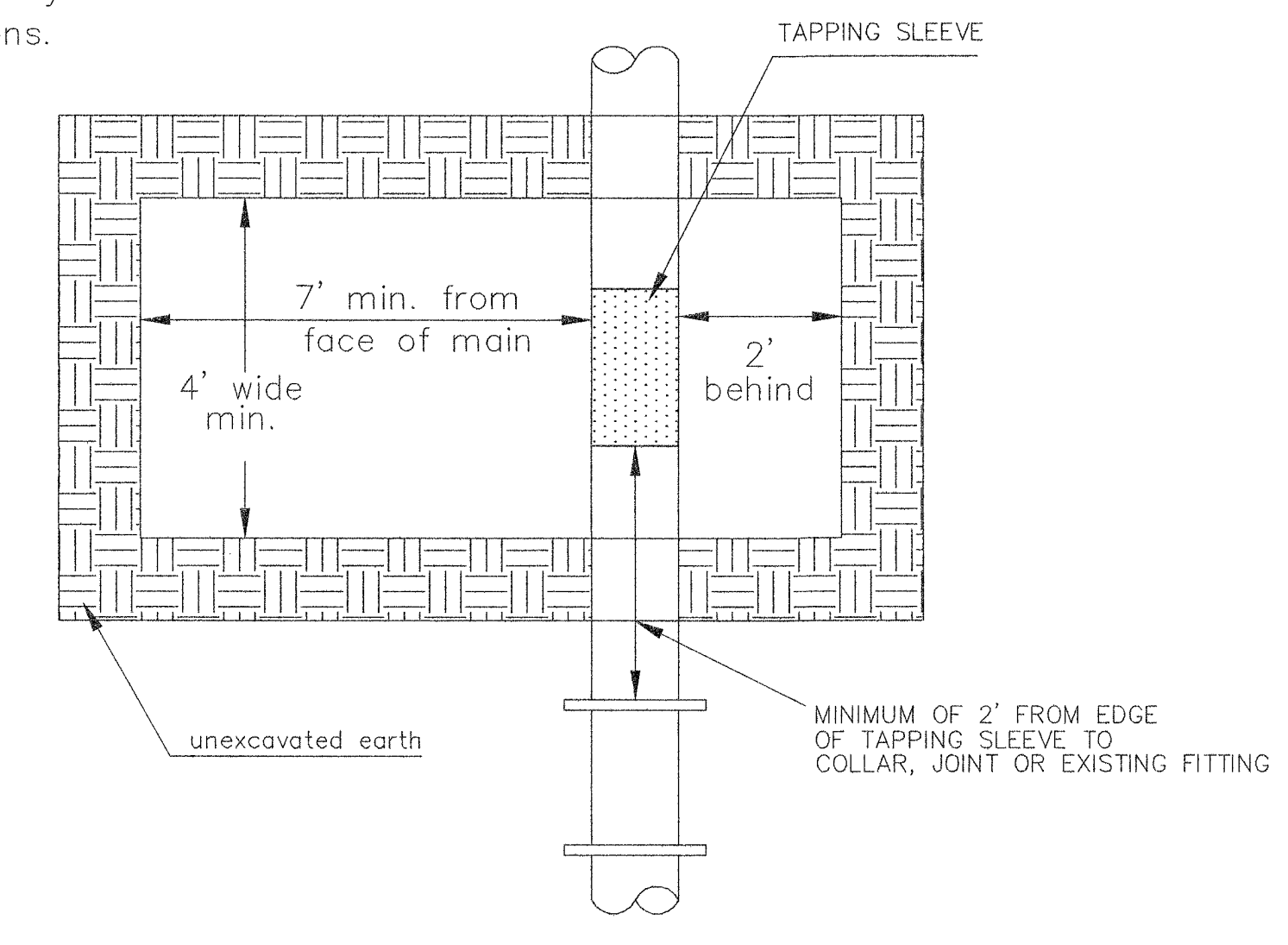
\* PLANS GOVERN  
UNLESS OTHERWISE NOTED ON PLANS



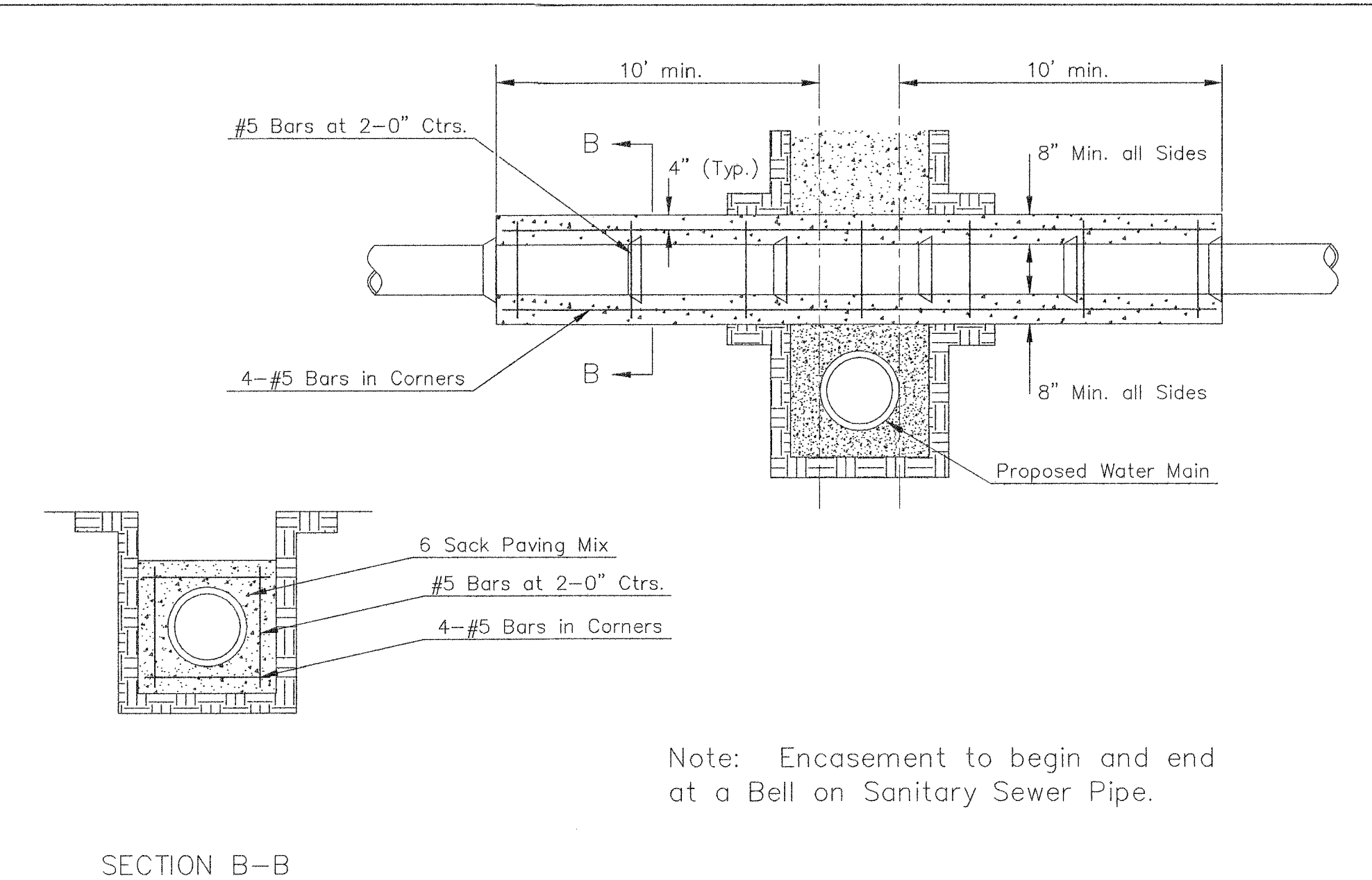
TRENCH COMPACTION IN ROAD RIGHT-OF-WAY



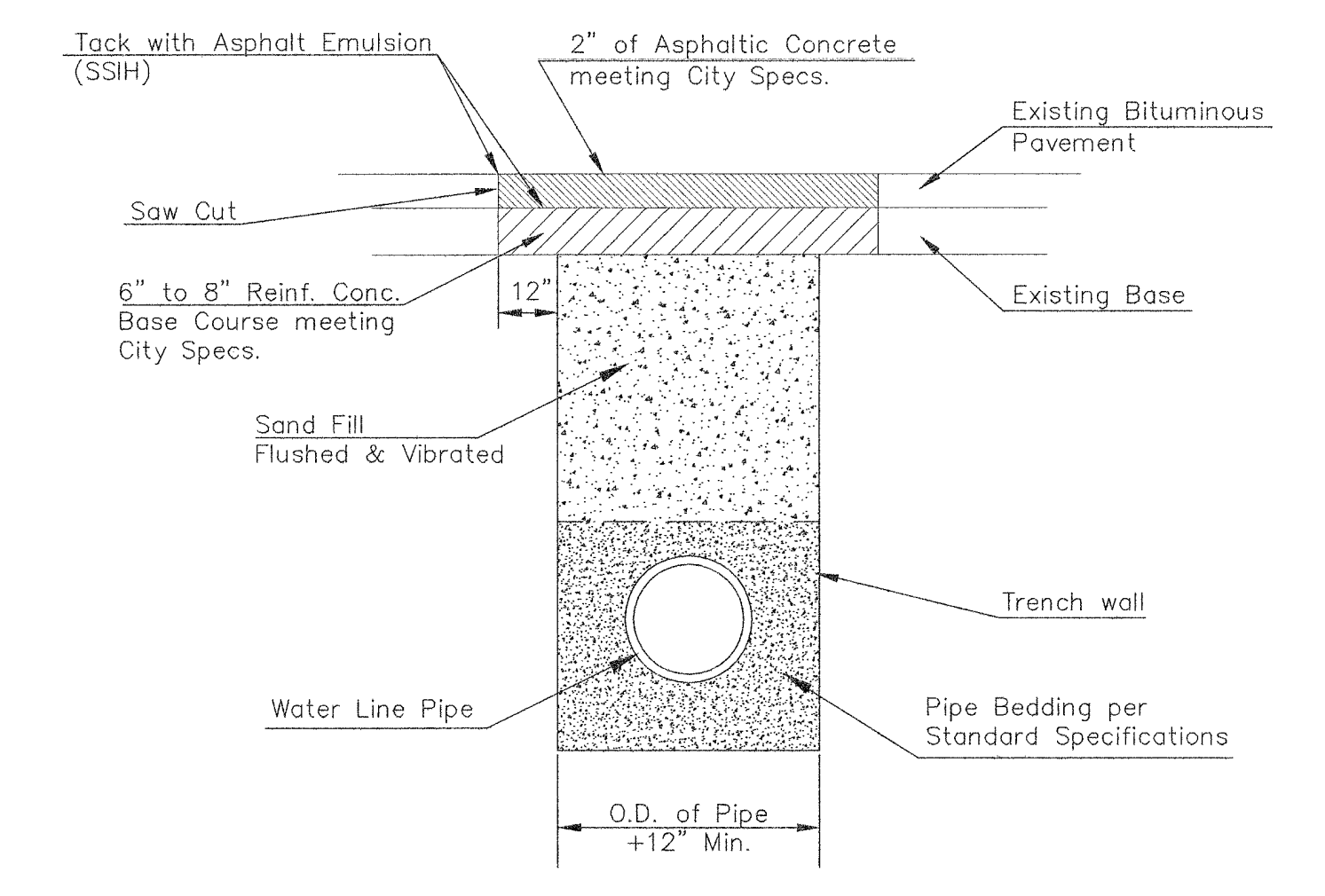
TOP VIEW



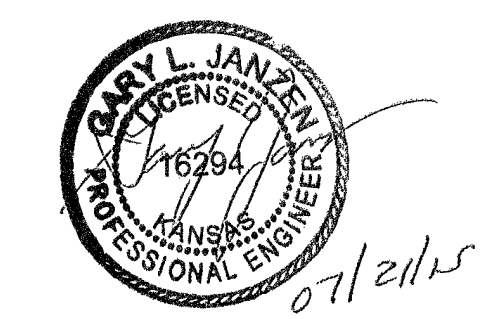
EXCAVATION FOR WET TAP



REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER



PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS



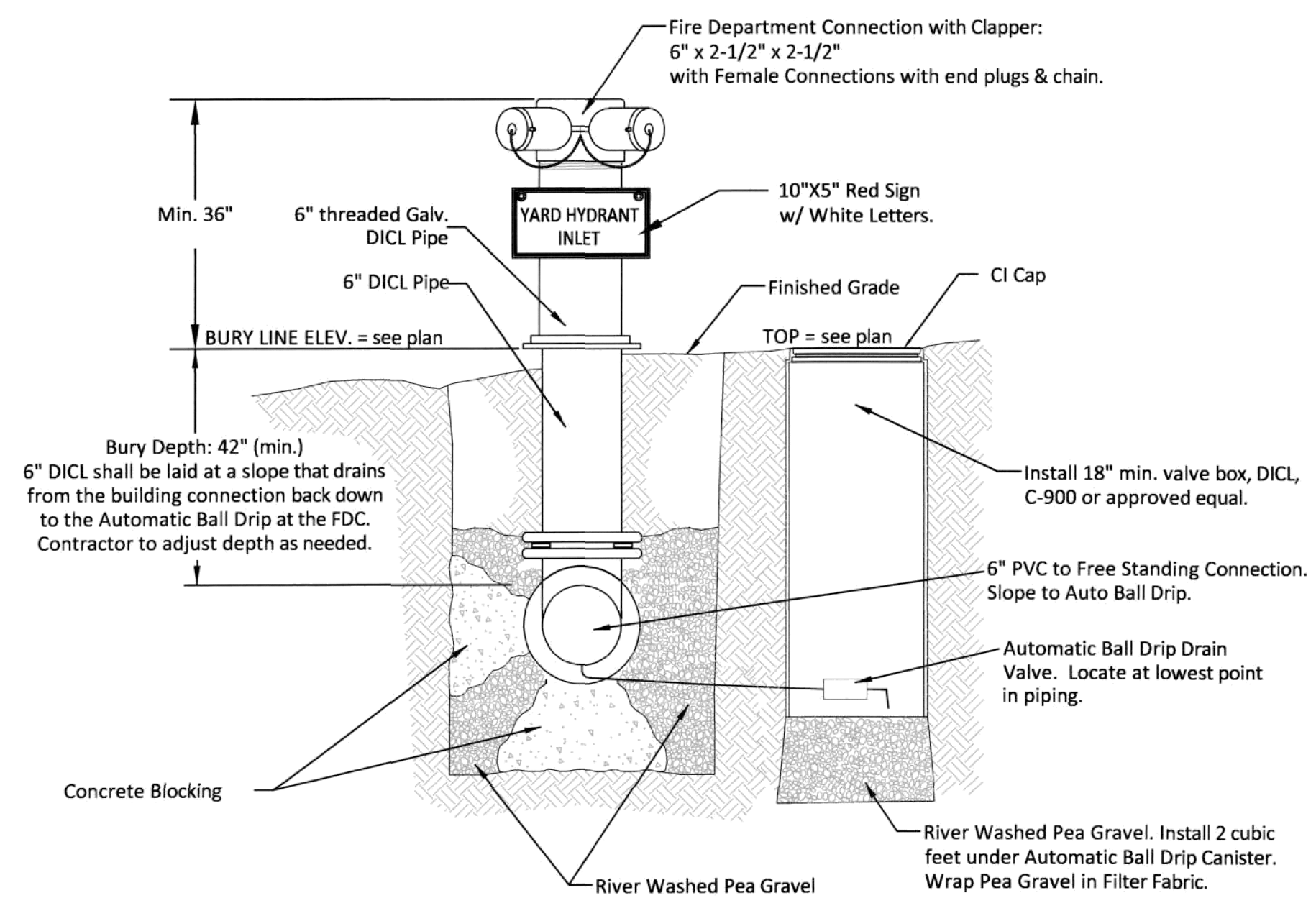
MISCELLANEOUS WATER DETAILS		
CITY ENGINEER		
GARY JANZEN, P.E.		
PROJECT NUMBER PPW-2020-021139	OCA NUMBER 183021	DATE MAY 2020
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET C209

WL-104



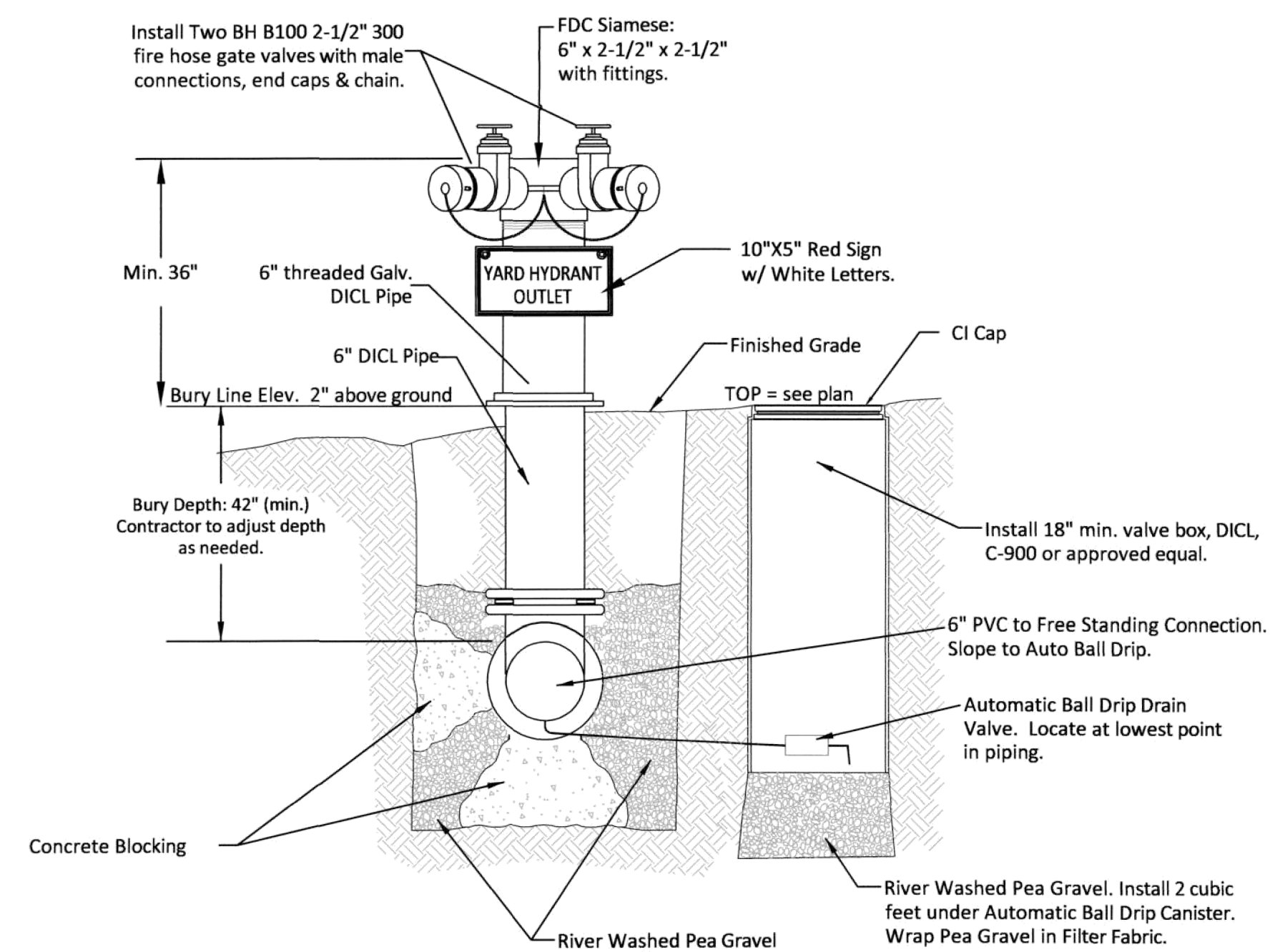
## FREE STANDING YARD HYDRANT (also called Dry Fire Line)

**Inlet and Outlet to be used together to provide fire hydrant coverage on the far side of a building.**



**1 FREE STANDING YARD HYDRANT INLET**  
NOT TO SCALE

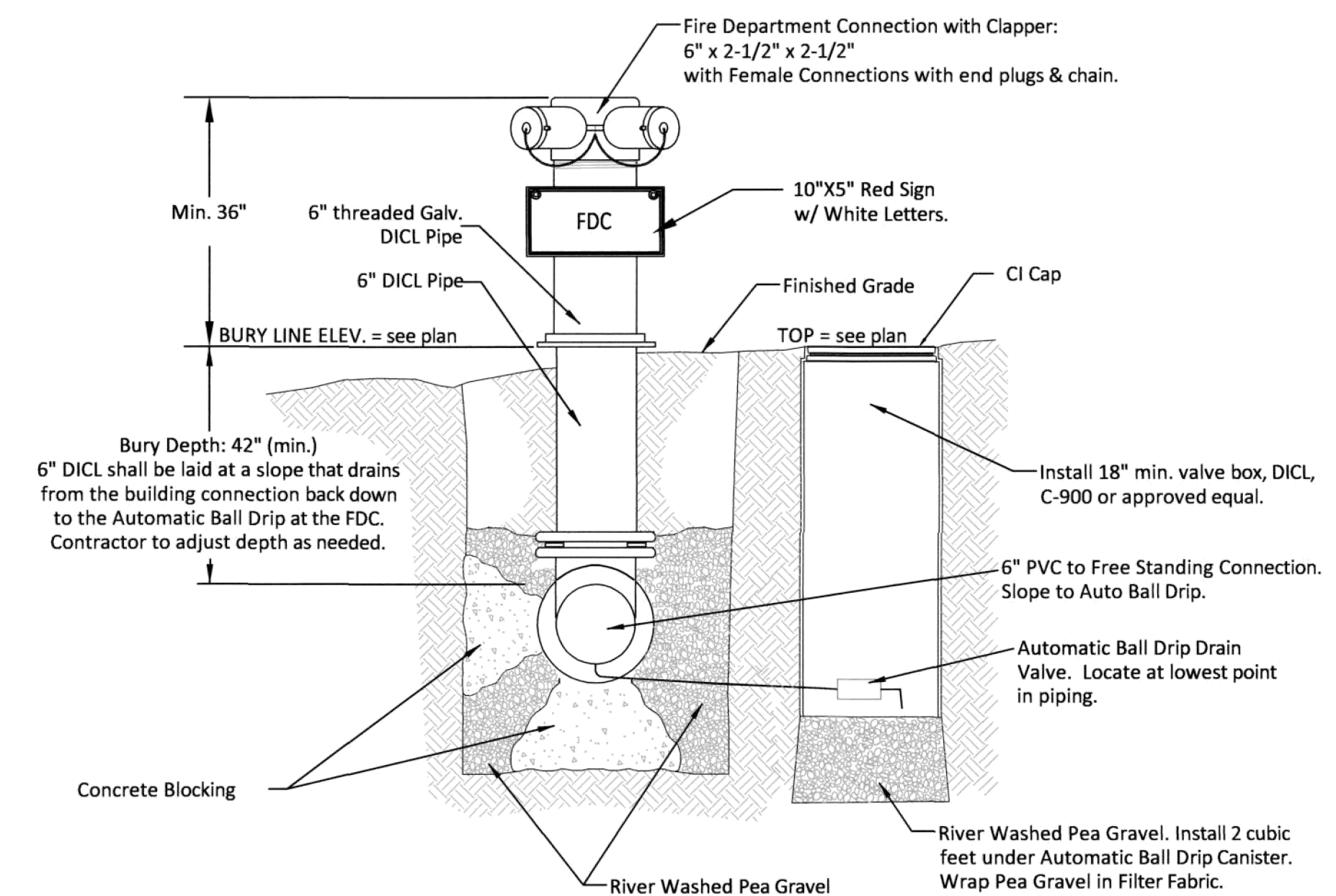
To be located within 150' of a Fire Hydrant



**2 FREE STANDING YARD HYDRANT OUTLET**  
NOT TO SCALE

## REMOTE FIRE DEPARTMENT CONNECTION

**Same construction as Free Standing Yard Hydrant Inlet, with different sign. Used to boost interior sprinkler systems.**



**REMOTE FIRE DEPARTMENT CONNECTION**  
NOT TO SCALE

To be located within 150' of a Fire Hydrant



<p><b>CITY OF WICHITA</b> PUBLIC WORKS &amp; UTILITIES ENGINEERING DIVISION</p>	<p><b>FREE STANDING YARD HYDRANT AND REMOTE FDC DETAIL</b></p> <p>CITY ENGINEER <b>GARY JANZEN, P.E.</b></p>	
	<p>PROJECT NUMBER PPW-2020-021139</p>	<p>OCA NUMBER 183021</p>
<p>CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501</p>		<p>SHEET <b>C210</b></p>

M-105



**GastingerWalker**  
817 Wyandotte  
Kansas City, MO 64105  
816-431-1200 phone  
816-431-1202 fax  
gastingerwalker.com

**Gensler**  
111 East Madison Street  
Suite 300  
Chicago, IL 60602  
312-456-0123



CIVIL / LANDSCAPE  
MKEC Engineering, Inc.  
411 N. West Rd.  
Wichita, KS 67206  
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913.951.8311

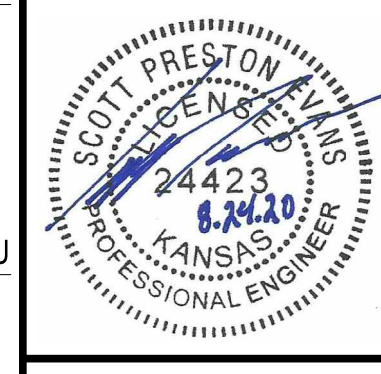
WSU Project #A-013842

#	Date	Description
01	31 August 2020	Permit and Bid Set

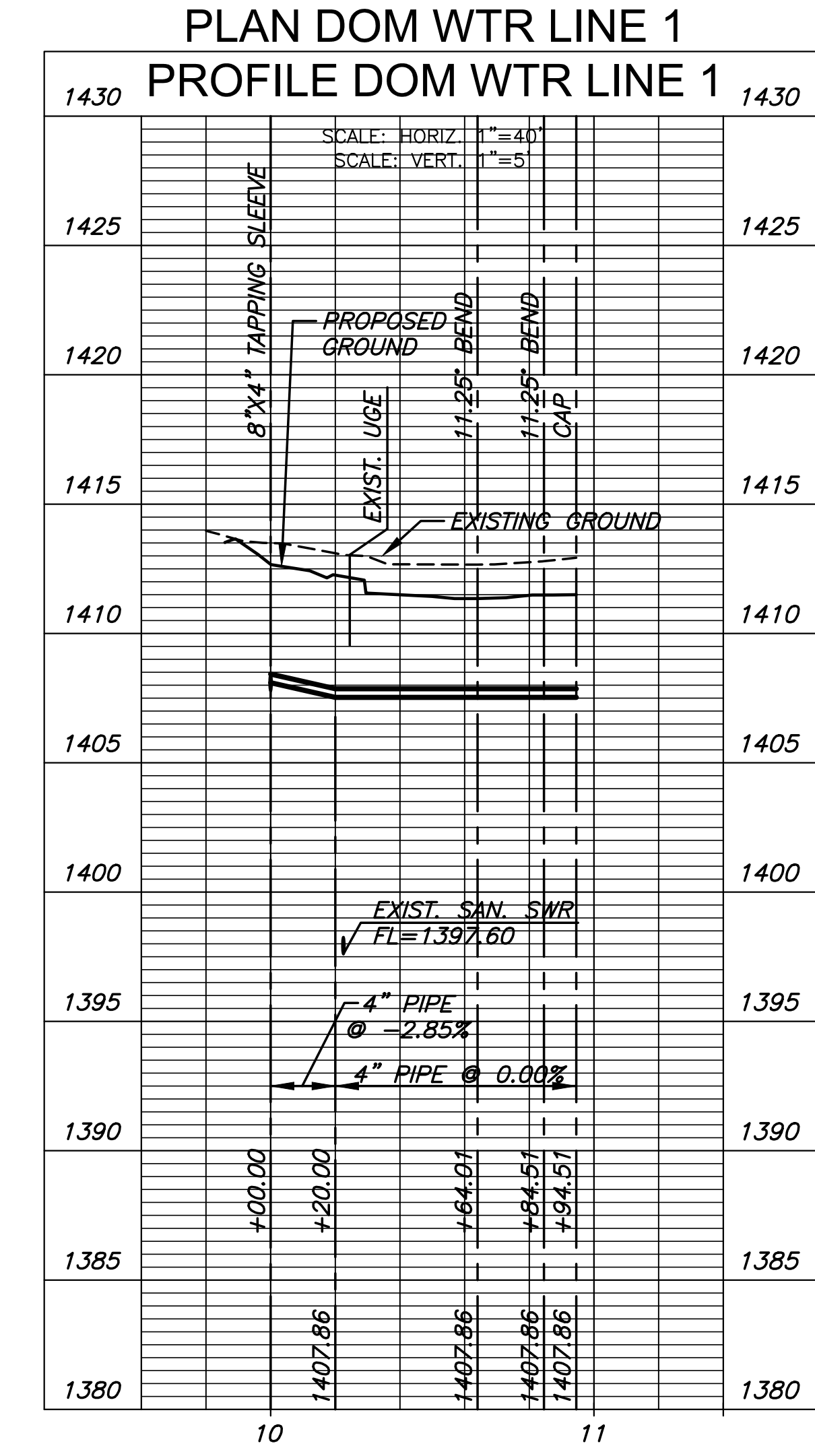
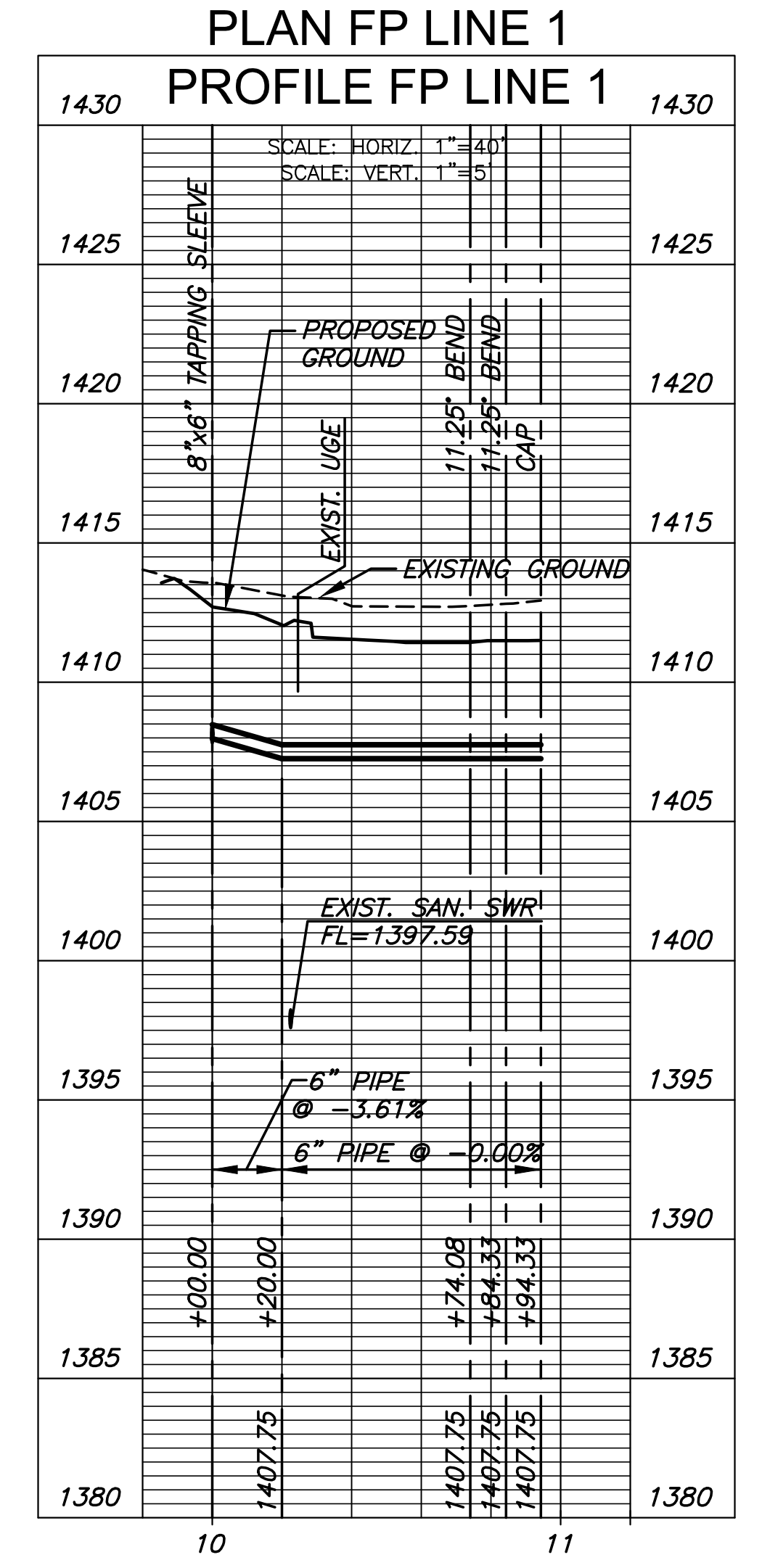
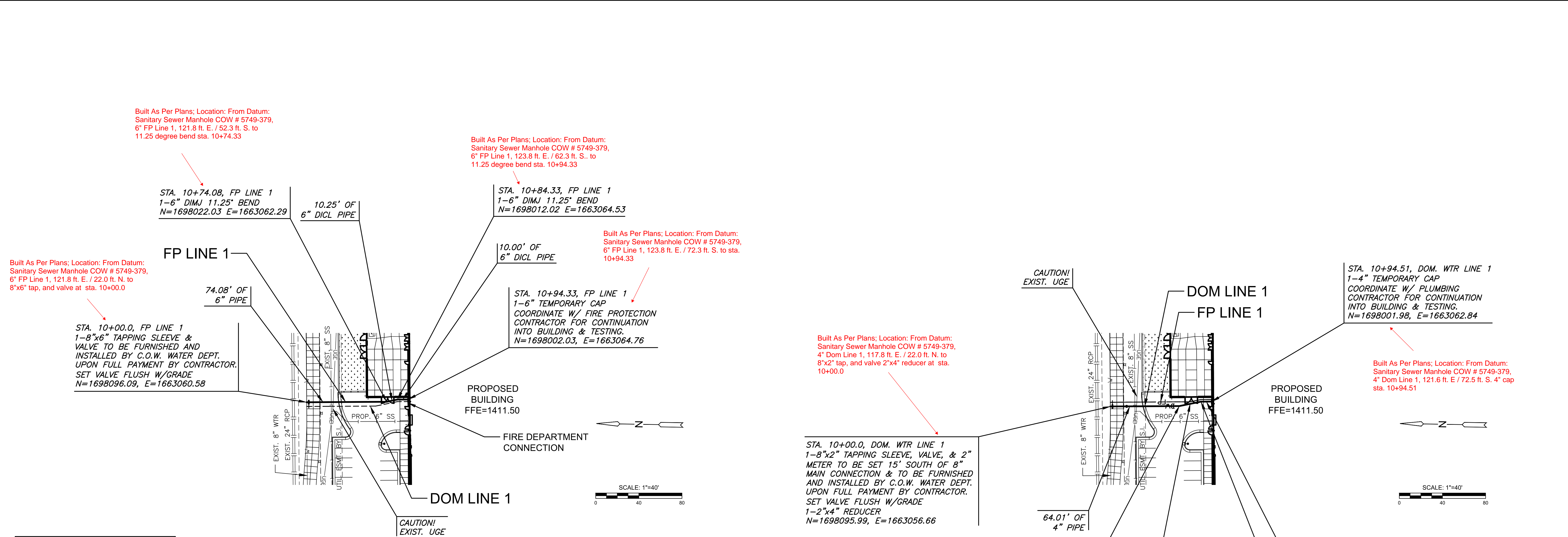
Wichita State University  
**WOOLSEY HALL**  
home of W. Frank Barton School of Business  
1846 Fairmount Street, Wichita, Kansas 67260  
BUILDING NUMBER #7500-0052  
State of Kansas #A-013842

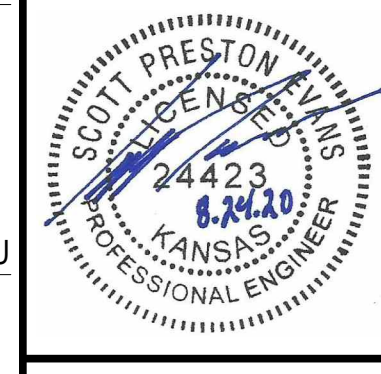
Drawn By: LM  
Checked By: SPIE  
FREE STAND. YARD  
HYD. & REMOTE FDC  
DETAIL  
A-013842  
**C210**  
Bid and Permit Set

DATE: 31 August 2020  
SWS Project Number: 2019-490  
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#	Date	Description
01	31 August 2020	Permit and Bid Set
02		
03		
04		
05		
06		
07		





#	Date	Description
01	31 August 2020	Permit and Bid Set
02		
03		
04		
05		
06		



Built As Per Plans; Location: From Datum:  
 Sanitary Sewer Manhole COW # 5749-379,  
 26 ft. E, 12 ft. S to DIMJ 45 deg bend sta.  
 10+31.89

Built As Per Plans; Location: From  
 Datum: Sanitary Sewer Manhole COW  
 #5749-379, 26 ft. E, 22 ft. N to FP  
 Line 2 Sta. 10+00.00, 8"x8" tap sleeve  
 and valve installed by COW water  
 Dept.

STA. 10+31.89, FP LINE 2  
 1-8" DIMJ 45° BEND  
 N=1698061.77 E=1662967.43

STA. 10+00.00, FP LINE 2  
 1-8"x8" TAPPING SLEEVE &  
 VALVE TO BE FURNISHED AND  
 INSTALLED BY C.O.W. WATER DEPT.  
 UPON FULL PAYMENT BY CONTRACTOR.  
 SET VALVE FLUSH W/GRADE  
 N=1698093.65, E=1662966.69

Built As Per Plans; Location: From Datum:  
 Sanitary Sewer Manhole COW # 5749-379,  
 6 ft. E, 28 ft. S. to sta. 10+59.20 FP Line 2,  
 8" DIMJ 45 deg. bend.

STA. 10+59.20, FP LINE 2  
 1-8" DIMJ 45° BEND  
 N=1698042.02 E=1662948.57

Built As Per Plans; Location: From Datum:  
 Sanitary Sewer Manhole COW  
 #5749-379, 20.4 ft. W / 52.6 ft. S. to sta.  
 10+21.70 to 6" DIMJ 90 degree bend

STA. 10+21.70, DRY FIRE LINE 1  
 1-6" DIMJ 90° BEND  
 N=1698016.08 E=1662919.99

STA. 11+68.56, DRY FIRE LINE 1  
 1-6" DIMJ 11.25° VERTICAL BEND  
 N=1697869.27 E=1662923.40

STA. 11+88.56, DRY FIRE LINE 1  
 1-6" DIMJ 11.25° VERTICAL BEND  
 N=1697850.99 E=1662927.75

Built As Per Plans; Location: From Datum:  
 Sanitary Sewer Manhole COW  
 #5749-379, 8.3 ft. W / 226.5 ft. S. to sta.  
 12+00.28, 6" DCL Dry Fire Line 1, Free  
 Standing Yard Hydrant Outlet.

STA. 12+00.28, DRY FIRE LINE 1  
 INSTALL FREE STANDING YARD  
 HYDRANT OUTLET  
 N=1697842.90, E=1662936.22

Built As Per Plans; Location: From Datum:  
 Sanitary Sewer Manhole COW  
 #5749-379, 42.1 ft. W / 52.6 ft. S. to 6"  
 DCL Dry Line 1 Free Standing Yard  
 Hydrant Inlet. STA. 10+00.00

STA. 10+00.00, DRY FIRE LINE 1  
 INSTALL FREE STANDING YARD  
 HYDRANT INLET  
 N=1698015.58, E=1662898.29

STA. 11+61.29, DRY FIRE LINE 1  
 1-6" DIMJ 11.25° VERTICAL BEND  
 N=1697876.53 E=1662923.23

11.72' OF  
 6" PIPE

21.70' OF  
 6" PIPE

139.59' OF  
 6" PIPE

7.27' OF 6"  
 DCL PIPE

14.45' OF  
 6" PIPE

5.55' OF 6"  
 DCL PIPE

Built As Per Plans; Location: From Datum:  
 Sanitary Sewer Manhole COW  
 #5749-379, 20.4 ft. W / 213.9 ft. S. to 6"  
 DIMJ 45 degree bend at sta. 11+83.01

STA. 11+83.01, DRY FIRE LINE 1  
 1-6" DIMJ 45° BEND  
 N=1697854.82 E=1662923.73

NOTE:  
 Sanitary Sewer Manhole COW #5749-379

CAUTION!  
 EXIST. UGE

Built As Per Plans; Location: From Datum:  
 Sanitary Sewer Manhole COW #5749-379,  
 30 ft. W, 58 ft. S. to FP Line 2, Hydrant.

STA. 11+00.41, FP LINE 2  
 1-FIRE HYDRANT ASSEMBLY  
 L=20'  
 1-8" PLUG (W)  
 N=1698041.06, E=1662907.37

Built As Per Plans; Location: From Datum:  
 Sanitary Sewer Manhole COW  
 #5749-379, 30 ft. W, 28 ft. S. to sta.  
 11+00.41 FP Line 2 8"x8" TEE

NOTE:  
 CONTRACTOR TO VERIFY LOCATION  
 AND ELEVATION OF EXISTING WATER  
 LINE PRIOR TO CONSTRUCTION.

