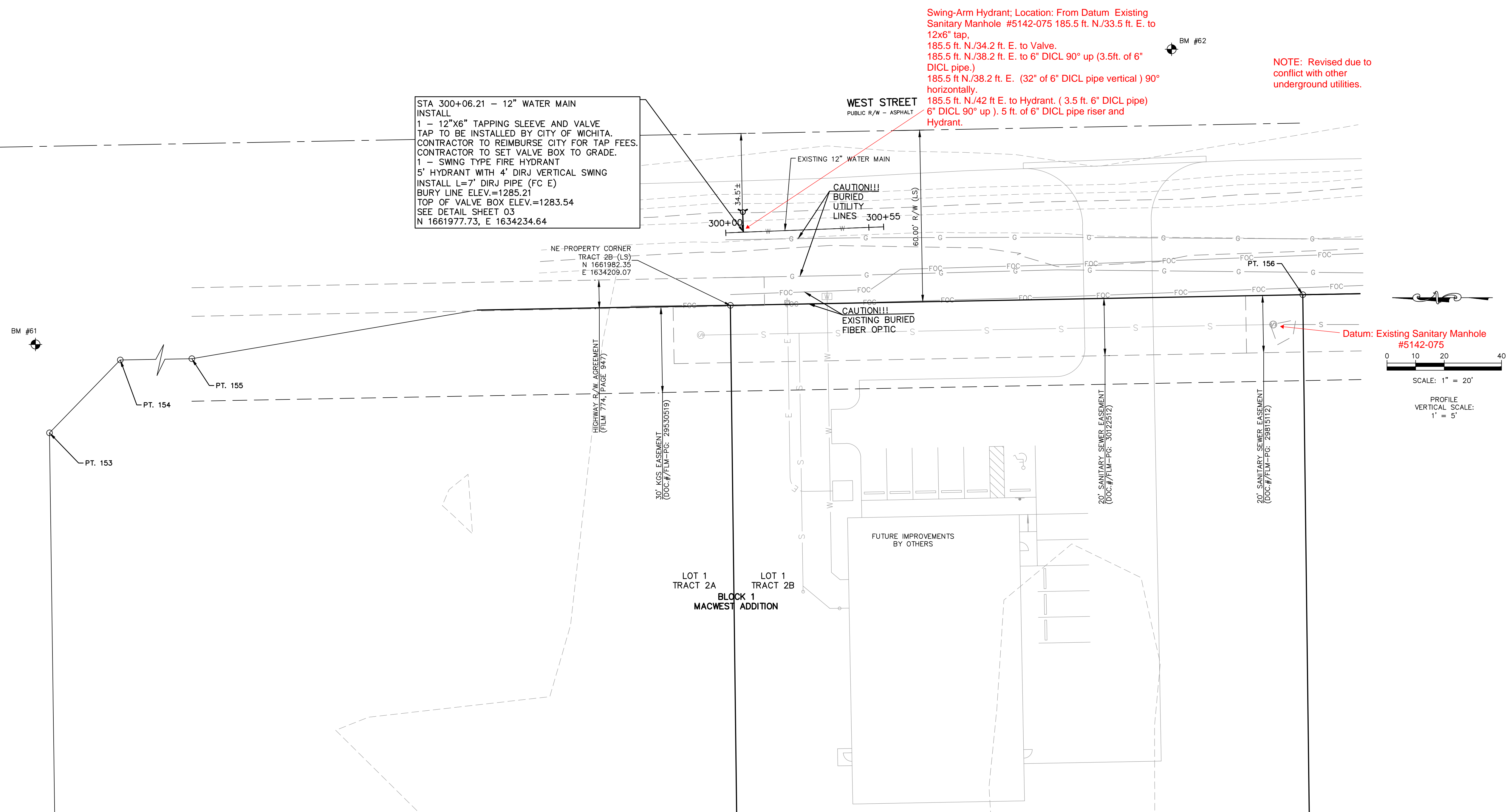


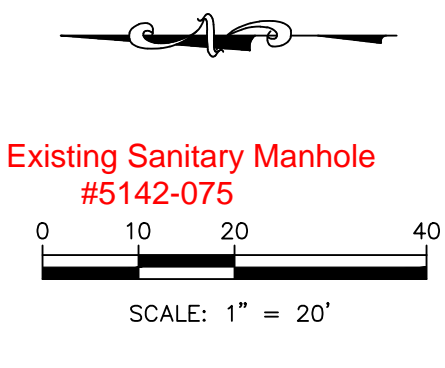
MACARTHUR AVE
PUBLIC R/W - ASPHALT



STA 300+06.21 - 12" WATER MAIN
INSTALL
1 - 12"x6" TAPPING SLEEVE AND VALVE
TAP TO BE INSTALLED BY CITY OF WICHITA.
CONTRACTOR TO REIMBURSE CITY FOR TAP FEES.
CONTRACTOR TO SET VALVE BOX TO GRADE.
1 - SWING TYPE FIRE HYDRANT
5' HYDRANT WITH 4' DIRJ VERTICAL SWING
INSTALL L=7" DIRJ PIPE (FC E)
BURY LINE ELEV.=1285.21
TOP OF VALVE BOX ELEV.=1283.54
SEE DETAIL SHEET 03
N 1661977.73, E 1634234.64

Swing-Arm Hydrant; Location: From Datum Existing
Sanitary Manhole #5142-075 185.5 ft. N./33.5 ft. E. to
12x6" tap,
185.5 ft. N./34.2 ft. E. to Valve,
185.5 ft. N./38.2 ft. E. to 6" D.I.C.L. 90° up (3.5ft. of 6"
D.I.C.L. pipe.)
185.5 ft N./38.2 ft. E. (32" of 6" D.I.C.L. pipe vertical) 90°
horizontally,
185.5 ft. N./42 ft E. to Hydrant. (3.5 ft. 6" D.I.C.L. pipe)
6" D.I.C.L. 90° up). 5 ft. of 6" D.I.C.L. pipe riser and
Hydrant.

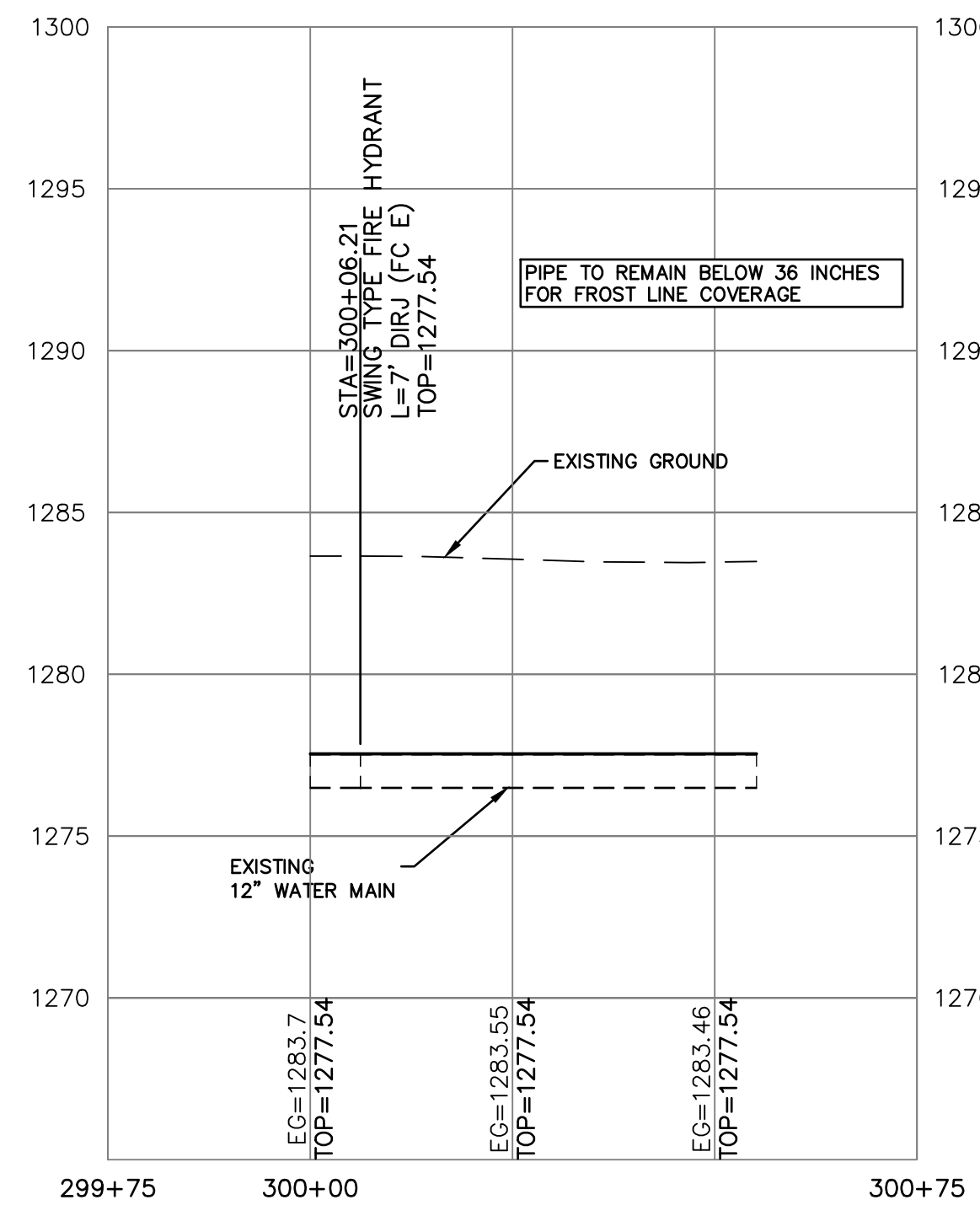
NOTE: Revised due to
conflict with other
underground utilities.



LOT 1 TRACT 2A
LOT 1 TRACT 2B
BLOCK 1
MACWEST ADDITION

FIRE HYDRANT ASS'Y

Point #	Northing	Easting	Description
152	1662343.22	1634012.20	MF *5/8 BAR ILLEGIBLE POE YPC -2*
153	1662345.28	1634162.27	MF *5/8 BAR ILLEGIBLE POE YPC -2*
154	1662320.55	1634187.73	MF *5/8 BAR BENT X -2*
155	1662170.48	1634190.44	MF *5/8 BAR X -2*
156	1661782.38	1634212.78	MF *5/8 BAR POE ASSOC CLS 166 YPC -2*
157	1661982.35	1634209.07	GN *NO_CODE*



CONTRACTOR TO FIELD VERIFY AND LOCATE ALL
UTILITIES AND WATER MAIN PRIOR TO CONSTRUCTION
AND REPORT ANY DISCREPANCIES TO ENGINEER

THE COORDINATES PROVIDED ON THIS PLAN ARE FOR INFORMATION AND
CHECKING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO
CALCULATE CONSTRUCTION STAKING COORDINATES ACCORDING TO THE
DIMENSIONS SHOWN ON THESE PLANS. CONTRACTOR SHALL VERIFY THE
ACCURACY OF THE COORDINATES SHOWN HEREON BEFORE CONSTRUCTION.

THIS PLAN SHEET IS PART OF AN OVERALL KAW VALLEY ENGINEERING PLAN SET
FOR THE SPECIFIC IMPROVEMENTS CONTEMPLATED THEREIN. AS SUCH, THE
INFORMATION CONTAINED MAY BE LIMITED AND SHOULD ONLY BE
INTERPRETED WITHIN THE CONTEXT OF THE COMPLETE PLAN SET.

DATUM BENCHMARK:
VERTICAL DATUM IS NAVD 88 DERIVED FROM USING THE SEDGWICK
COUNTY NTRIP NETWORK. ORTHOMETRIC HEIGHT WAS DETERMINED
USING THE GEOID 18 (CONUS) MODEL. UNITS ARE U.S. SURVEY FEET.

BENCHMARKS:
BM #61: CHISELED SQUARE CUT AT NORTHWEST CORNER ON TOP
BACK OF CURB AT SOUTHWEST QUADRANT OF MACARTHUR
AND WEST STREET. ELEV=1286.89
BM #62: CHISELED "X" CUT ON SOUTH END RCP CULVERT 100± ENE
OF SOUTHEAST CORNER SURVEYED PROPERTY. ELEV=1285.48

PROJ. NO.	G21-2024-2
DESIGNER	SRB
DRAWN BY	CS
CFN	2024-2WPP
SHEET	02
REV	2

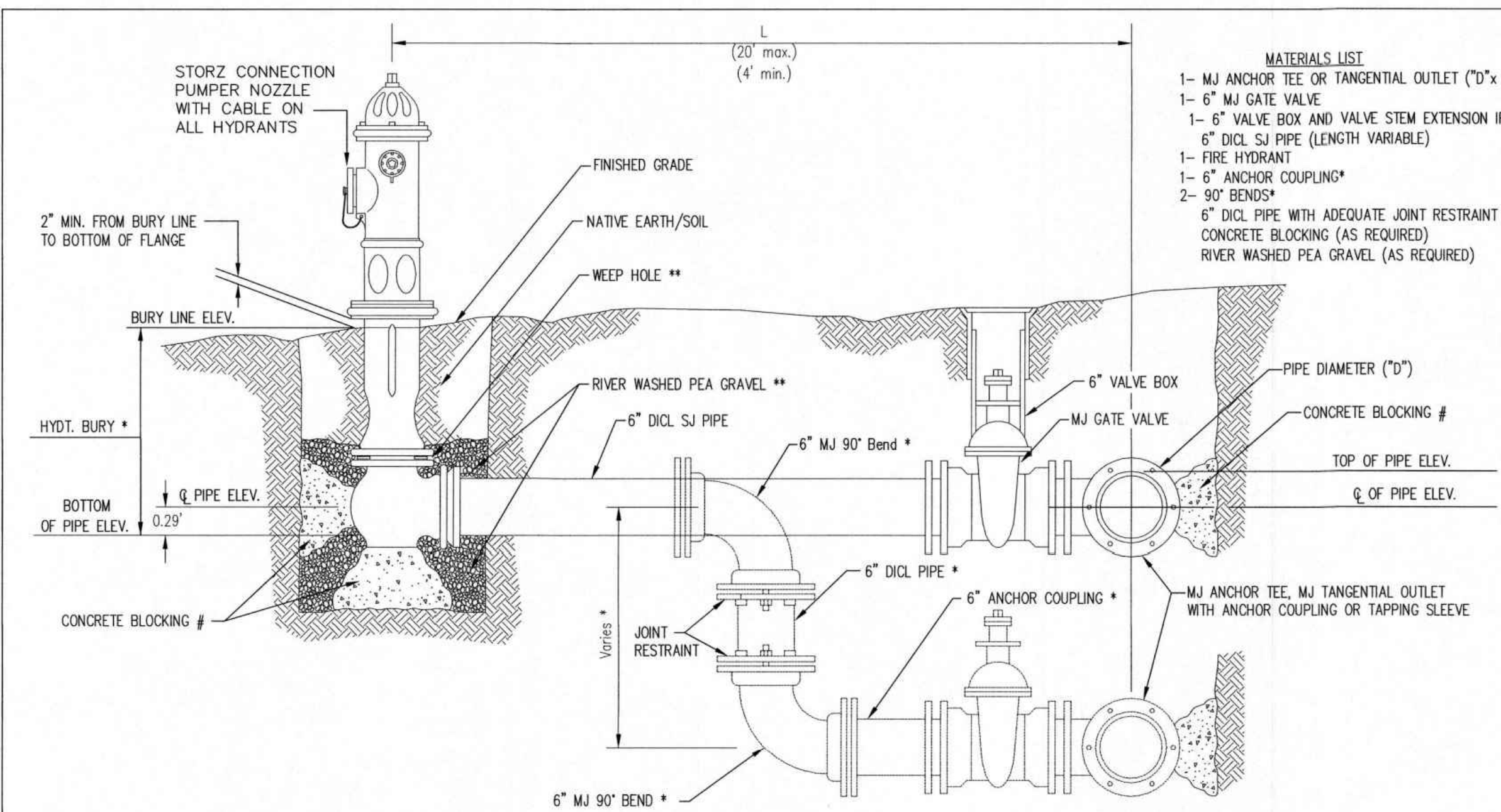
REV	DATE	DESCRIPTION
2	4-15-22	CHANGE TO SWING TYPE HYDRANT
1	4-14-22	UPDATE HYDRANT LOCATION
0	1-18-22	CITY REVIEW

KAW VALLEY ENGINEERING
200 N. EMPORIA, SUITE 100
WICHITA, KANSAS 67202
PH. (316) 261-4040 ext. 4309
www.kawvalley.com | www.kvweng.com

EKATERINA MIKHAYLICHENKO
ENGINEER
KS # 28404

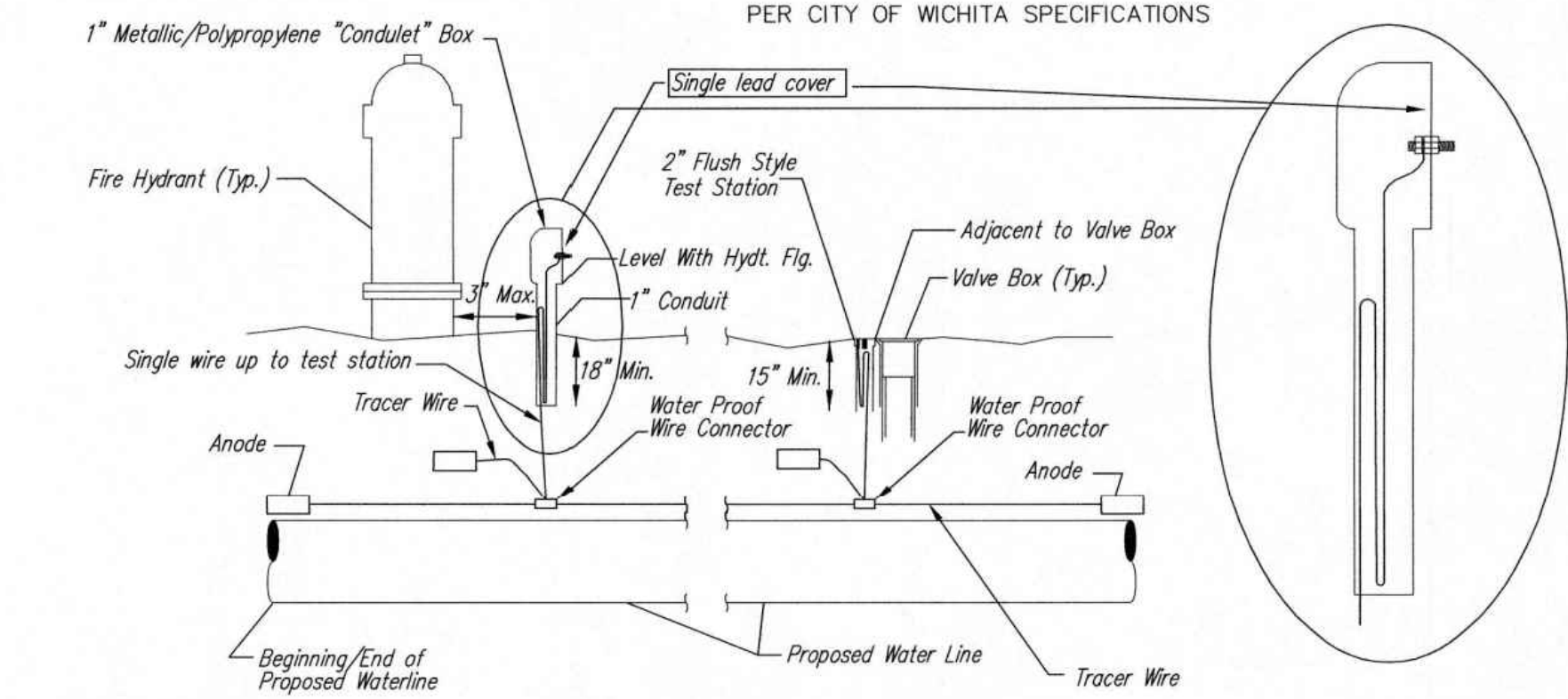
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING
SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-113.
EXPIRES 12/31/22

FIRE HYDRANT PLAN & PROFILE



- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET (10" 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)

- * 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.

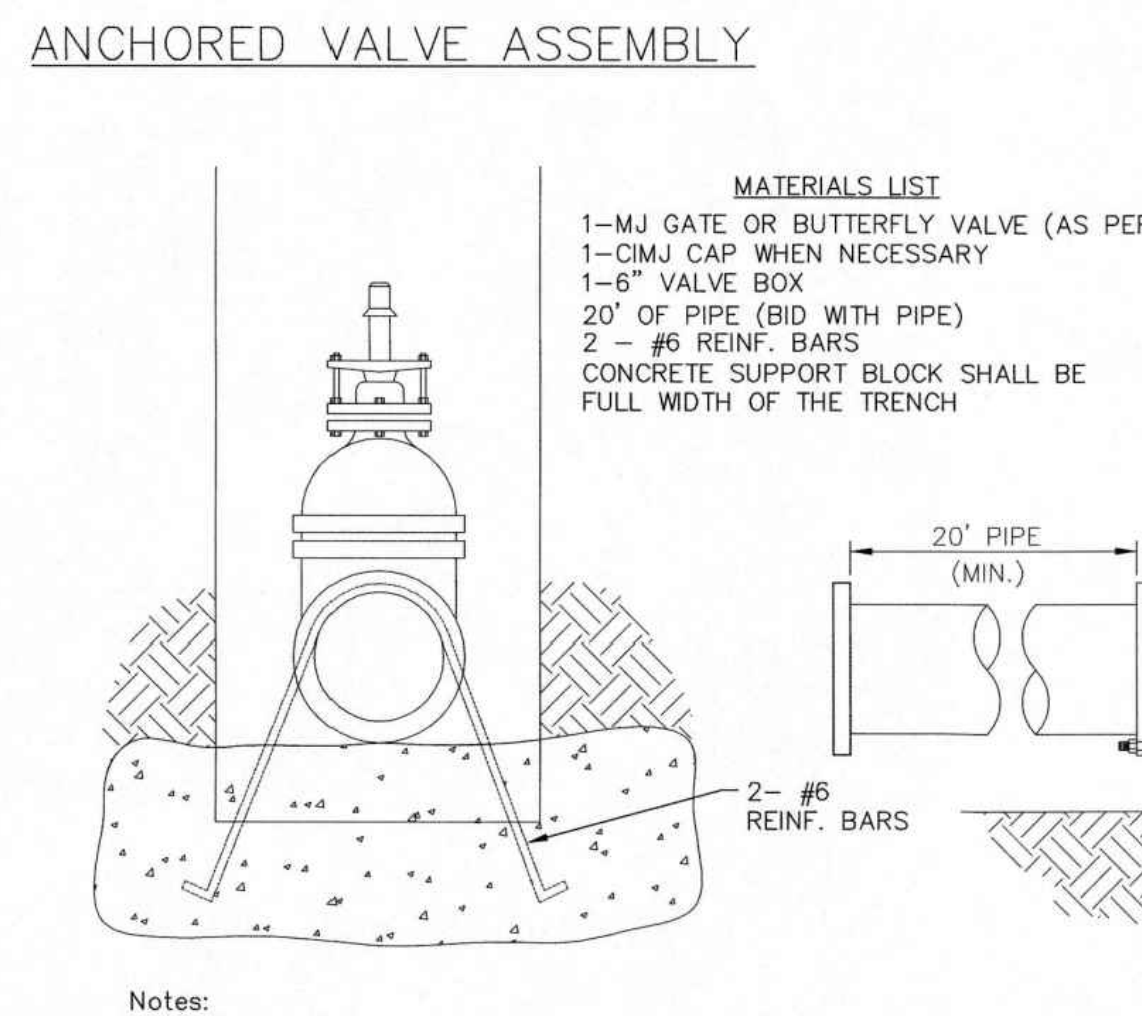
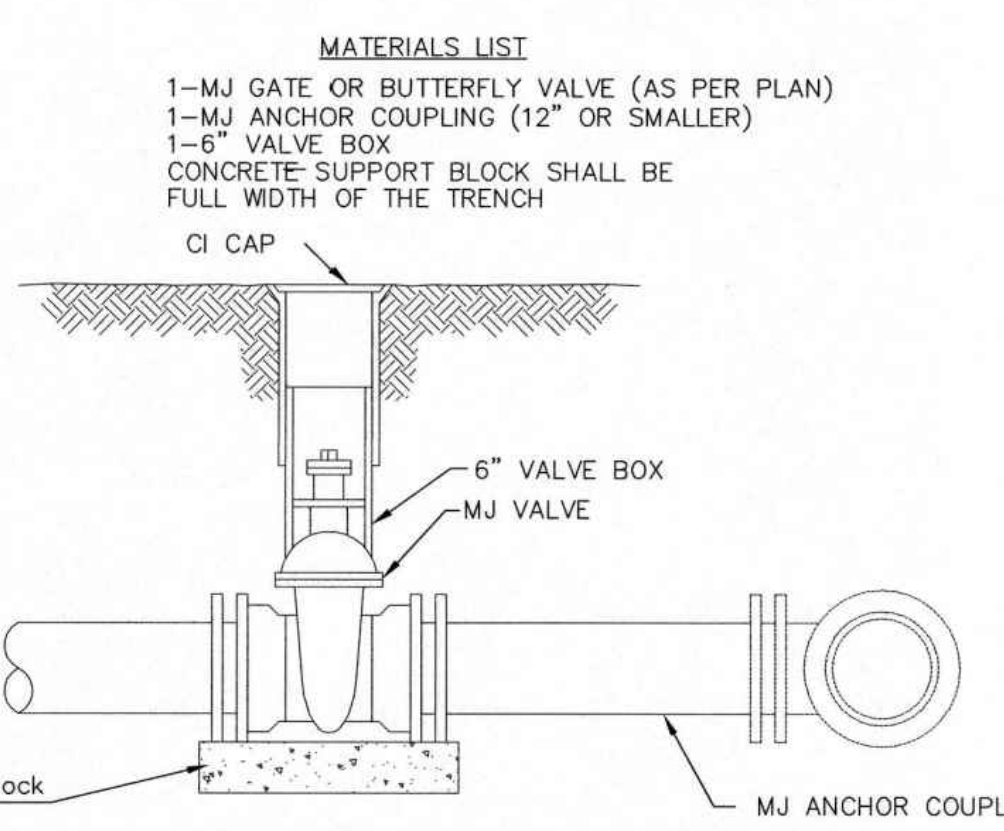
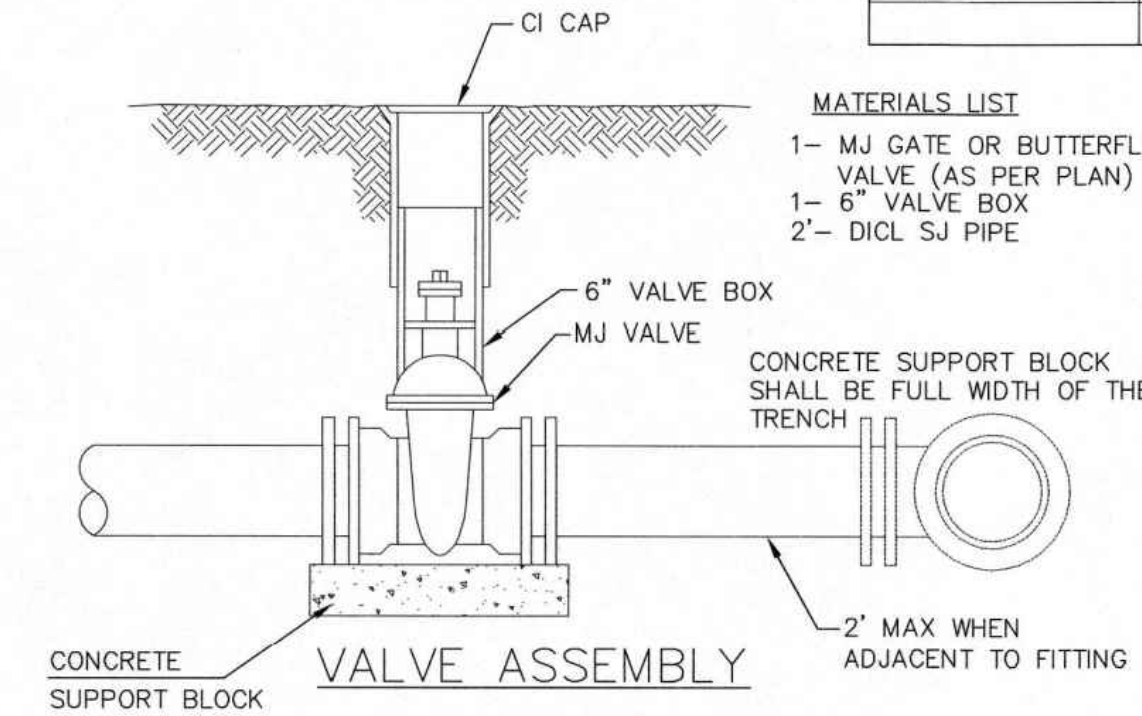
WIRE
The tracer wire shall be Blue No. 12 AWG CCS with 45 mil HDPE insulation. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. Wire connectors shall be installed per manufacturer recommendations. Contractor shall attach wire 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 # I2PH7B1LP Handley Industries or CD14*TP SnakePit 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

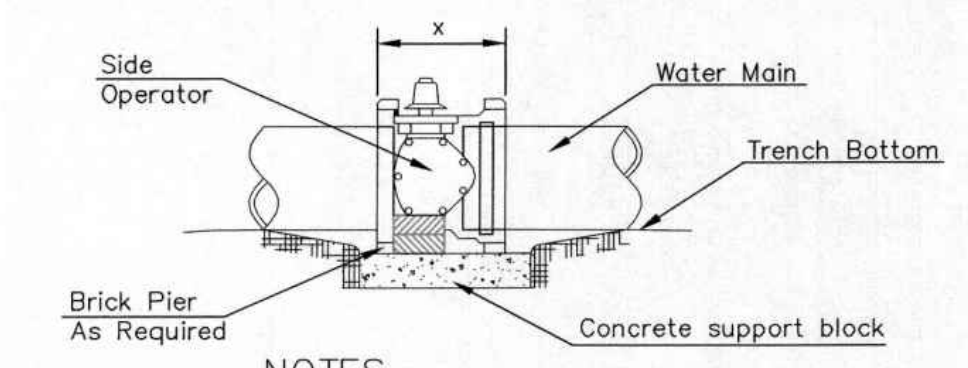
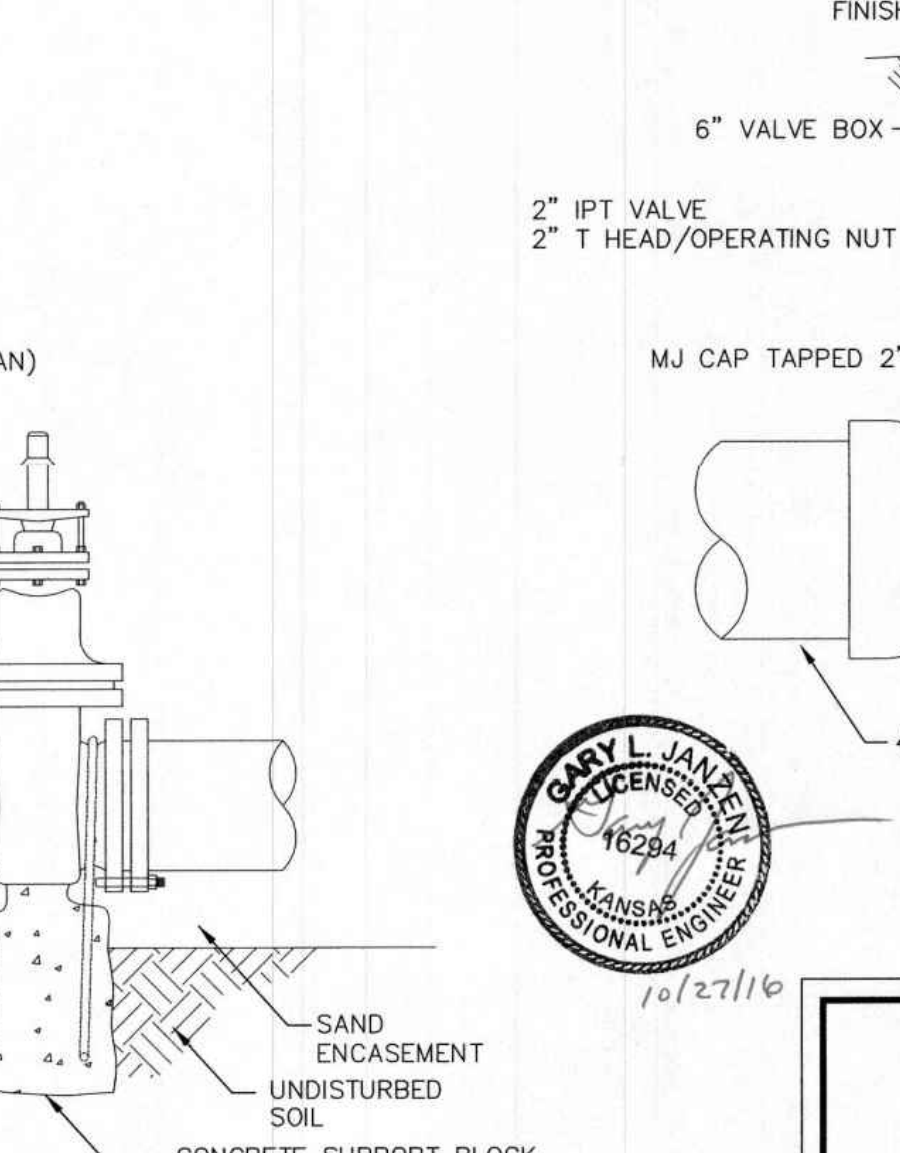
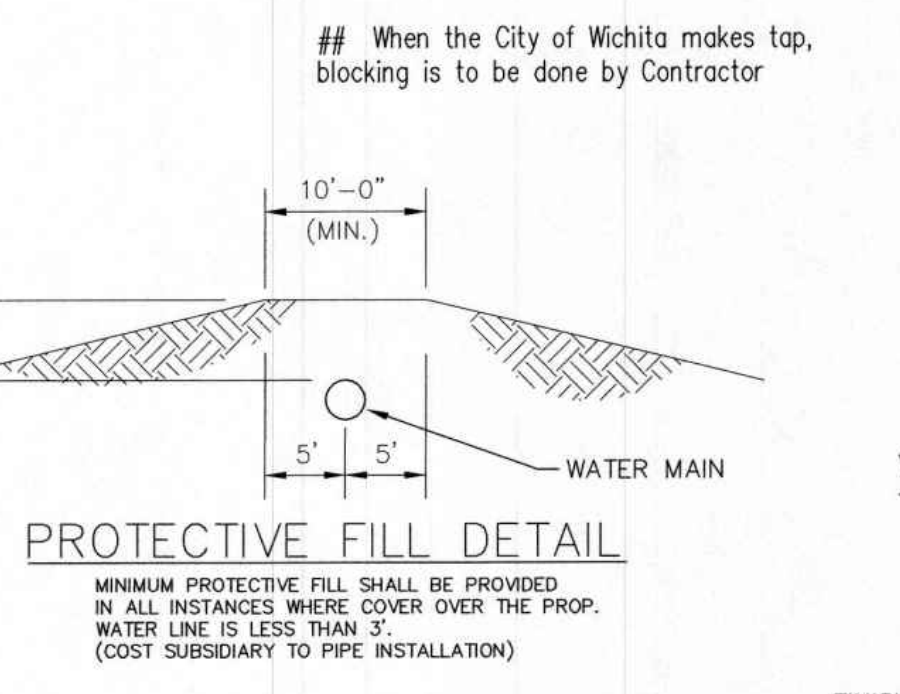
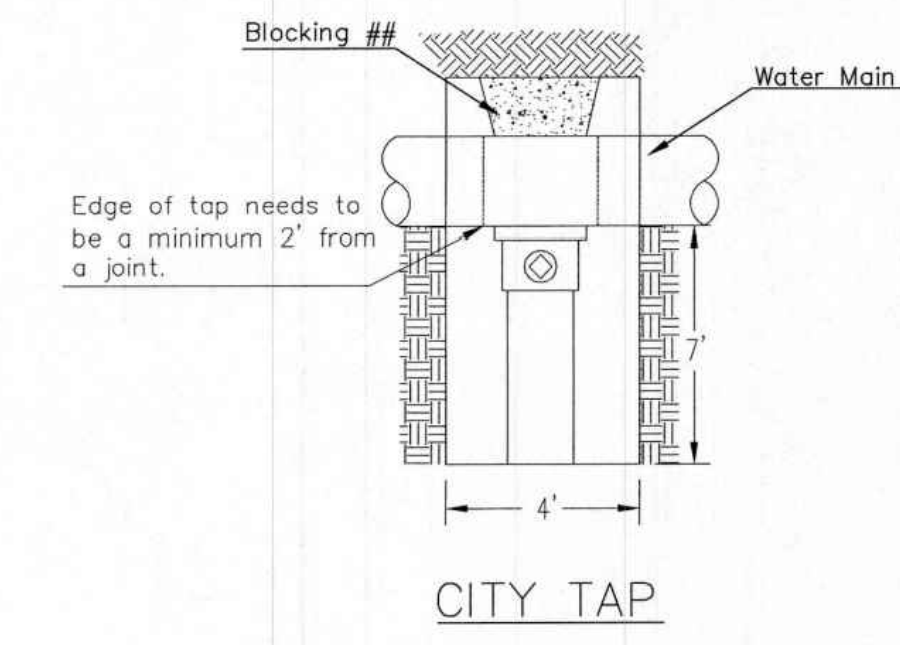
FIRE HYDRANTS REQUIRED				
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
300+06.21	1285.21	1277.54	9'	3'



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

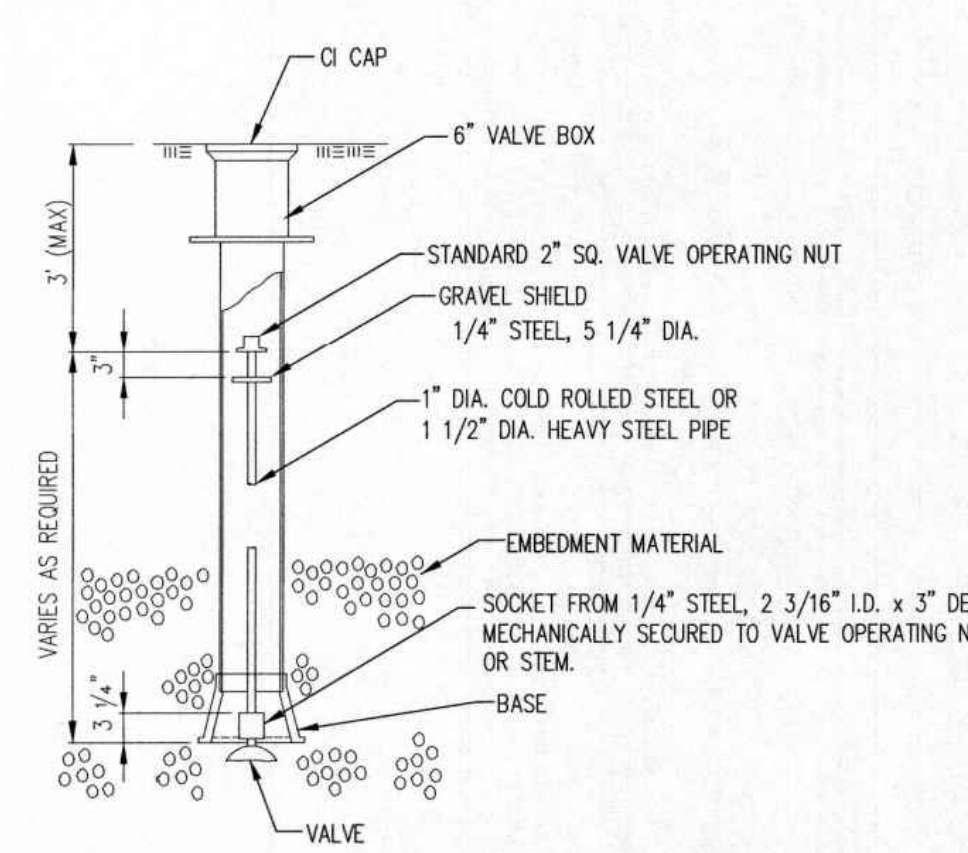
- Notes:**
1. Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
 2. The thrust block shall be constructed such that bolts, nuts, and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

ANCHORED VALVE ASSEMBLY, SPECIAL

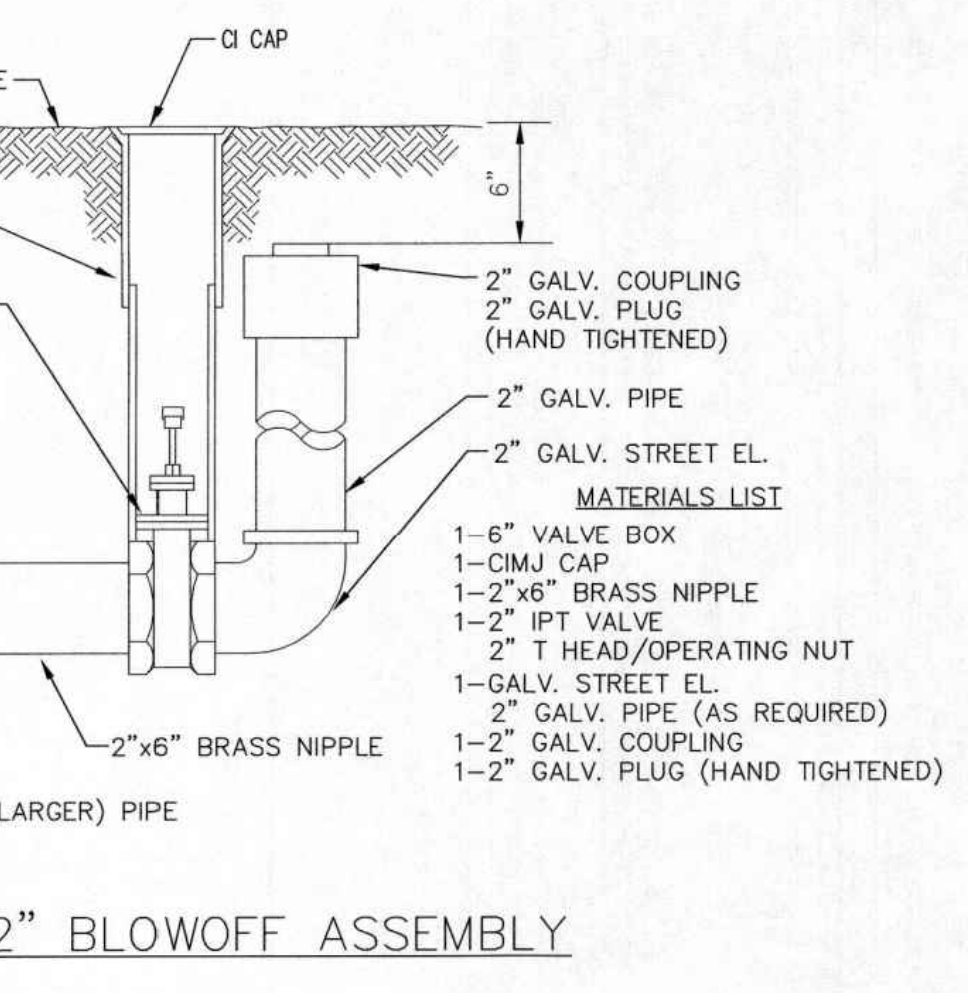


- NOTES**
1. This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
 2. 6" Valve Box and Cover required per City of Wichita Std. Specifications.
 3. Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION



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



2" BLOWOFF ASSEMBLY

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STANDARD WATER ASSEMBLY DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER: OCA NUMBER: DATE:

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

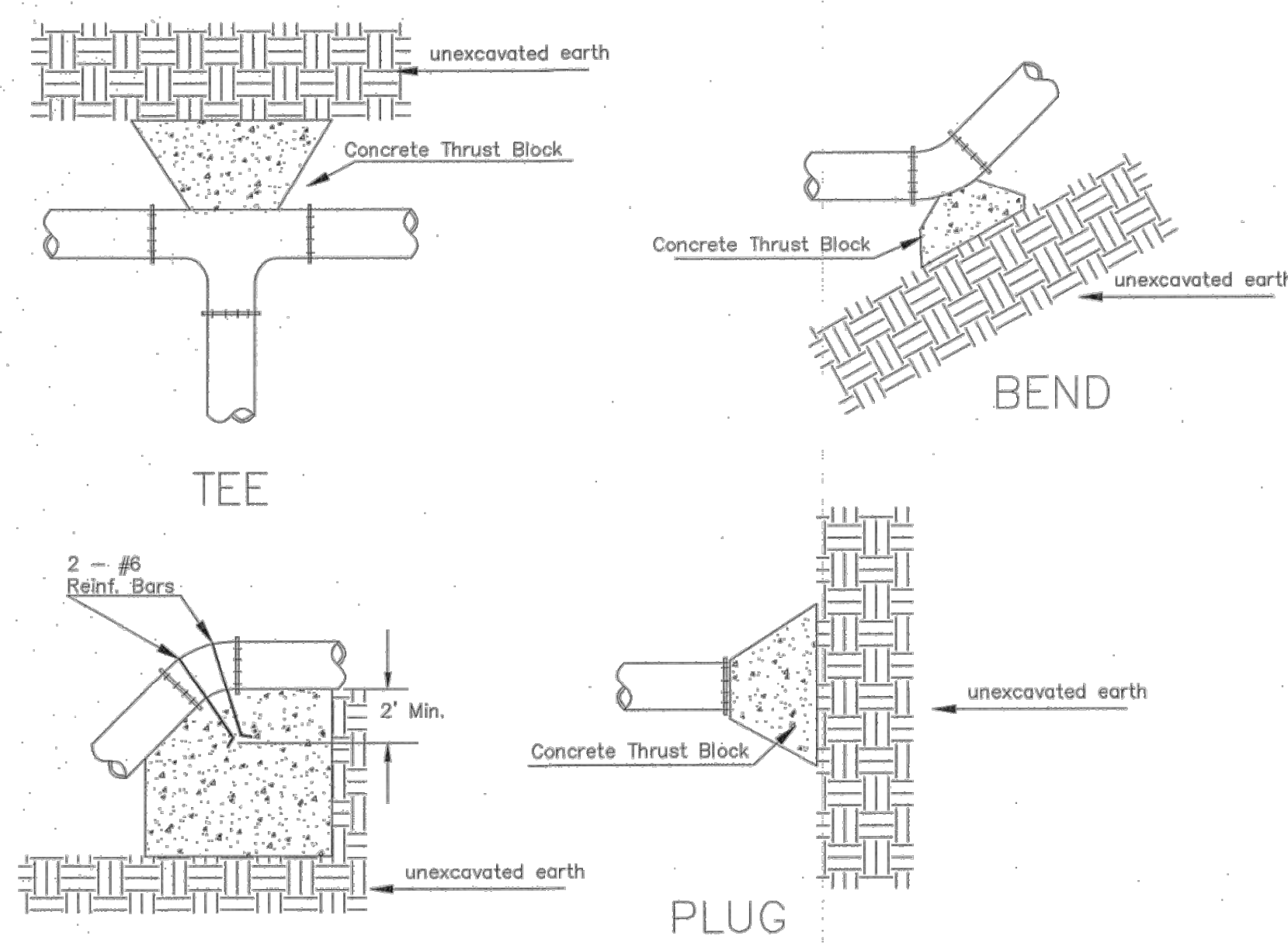
REV	DATE	DESCRIPTION
2	4-15-22	CHANGE TO SWING TYPE HYDRANT
1	4-14-22	UPDATE HYDRANT LOCATION
0	1-18-22	CITY REVIEW

PROJ. NO.	DESIGNER	DRAWN BY
G21_2024-2	CS	CS

SHEET	REV
03	2

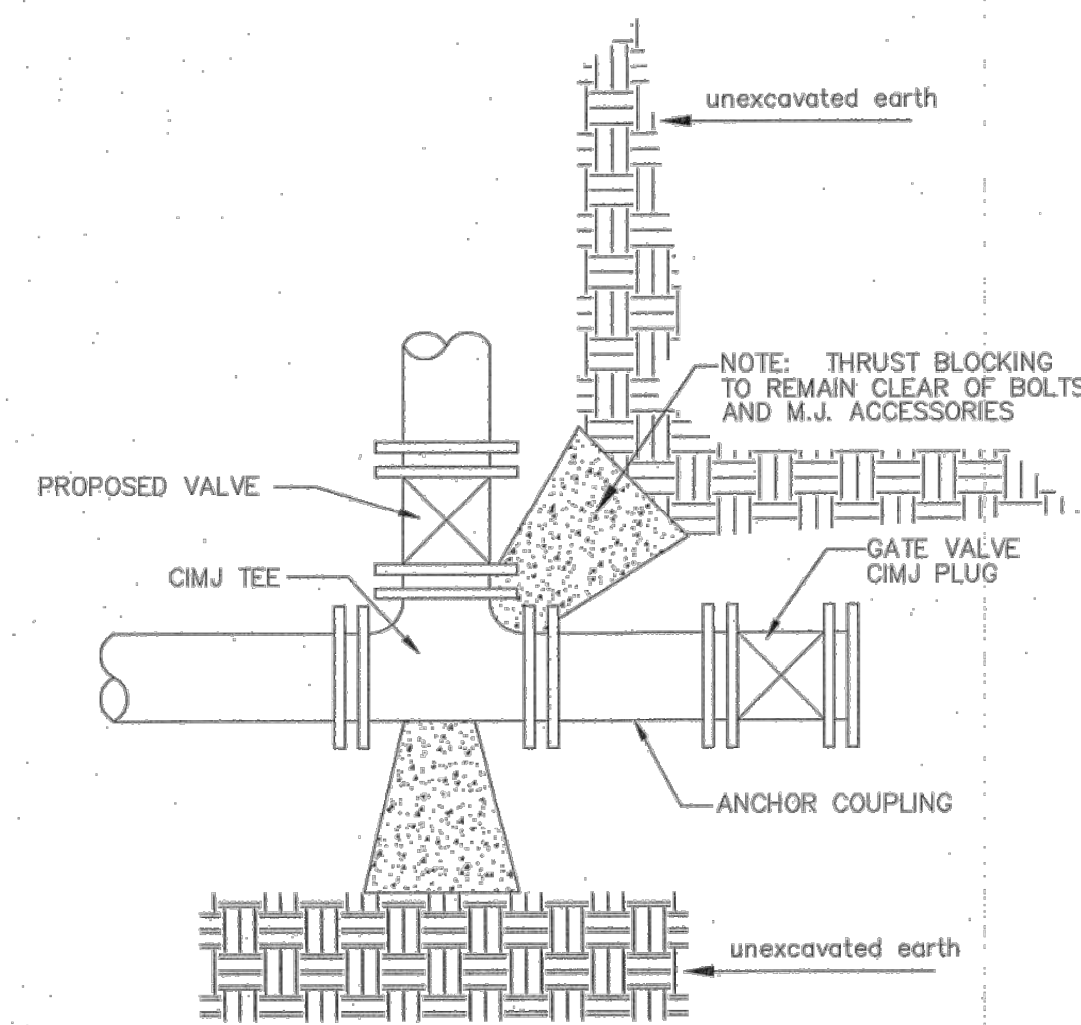
FIRST WIRELESS
4049 S. WEST STREET
WICHITA, KANSAS

DETAIL SHEET

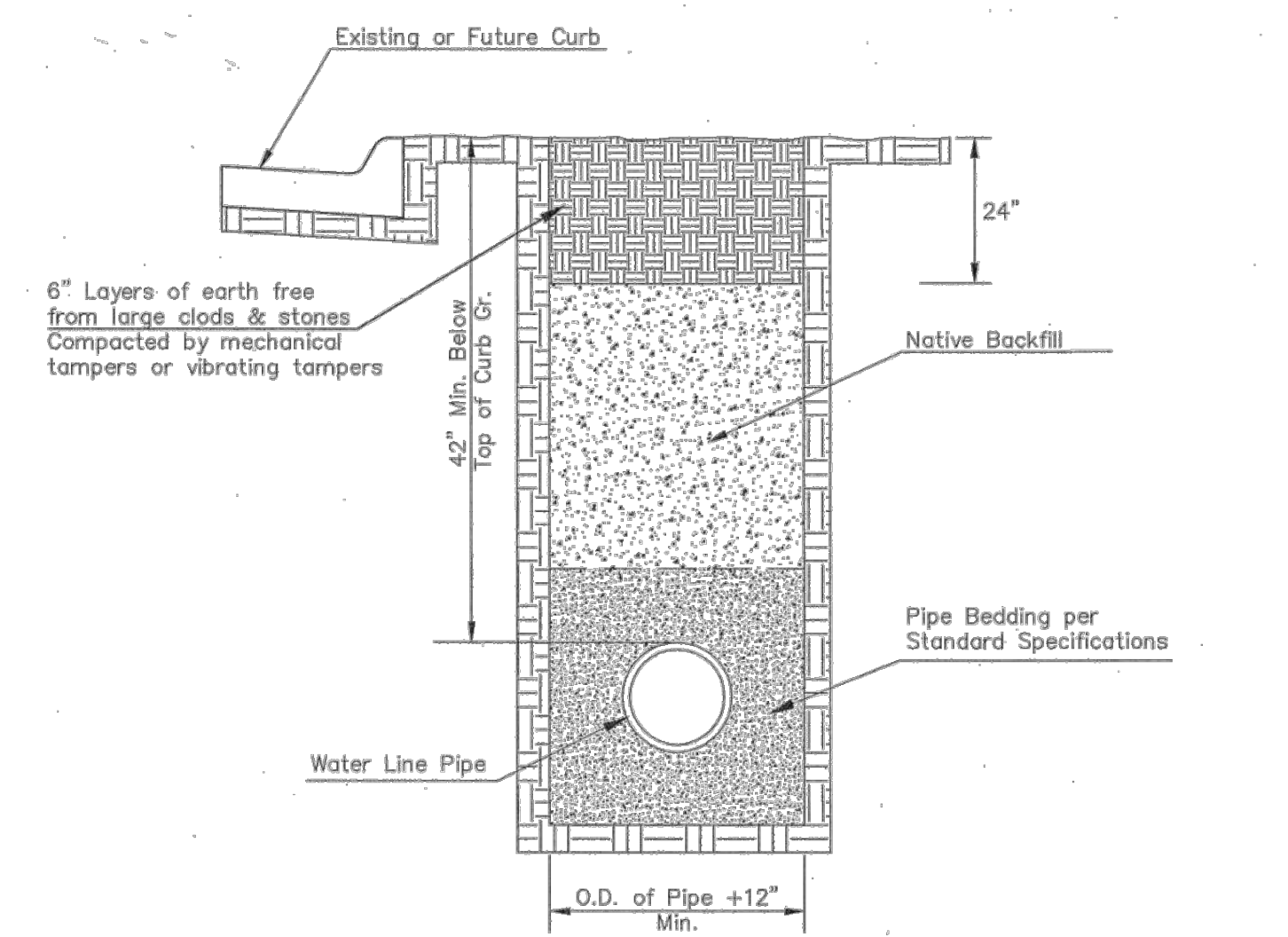


TYPICAL THRUST BLOCKS

PIPE SIZE	THRUST AT FITTINGS IN TONS--AT 150#/IN ² 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

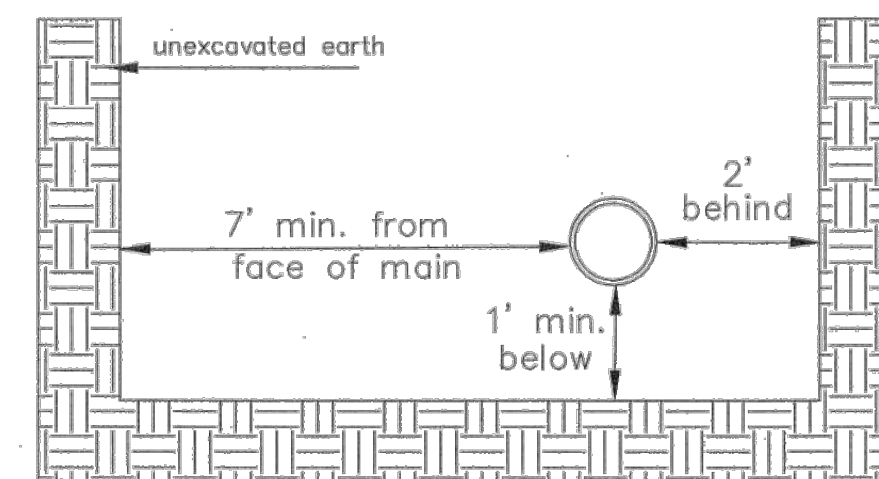


* PLANS GOVERN
UNLESS OTHERWISE NOTED ON PLANS



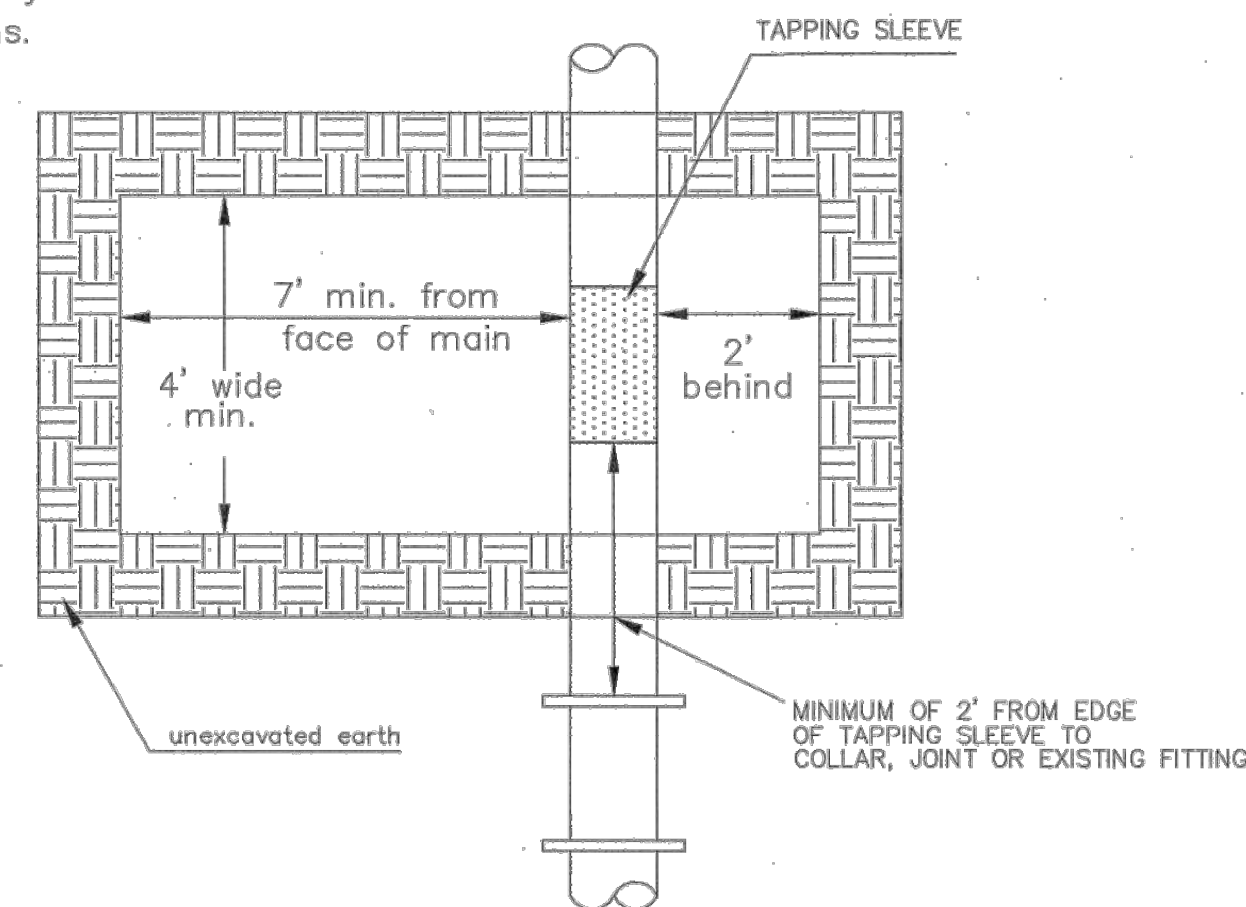
TRENCH COMPACTION IN ROAD RIGHT-OF-WAY

SIDE VIEW

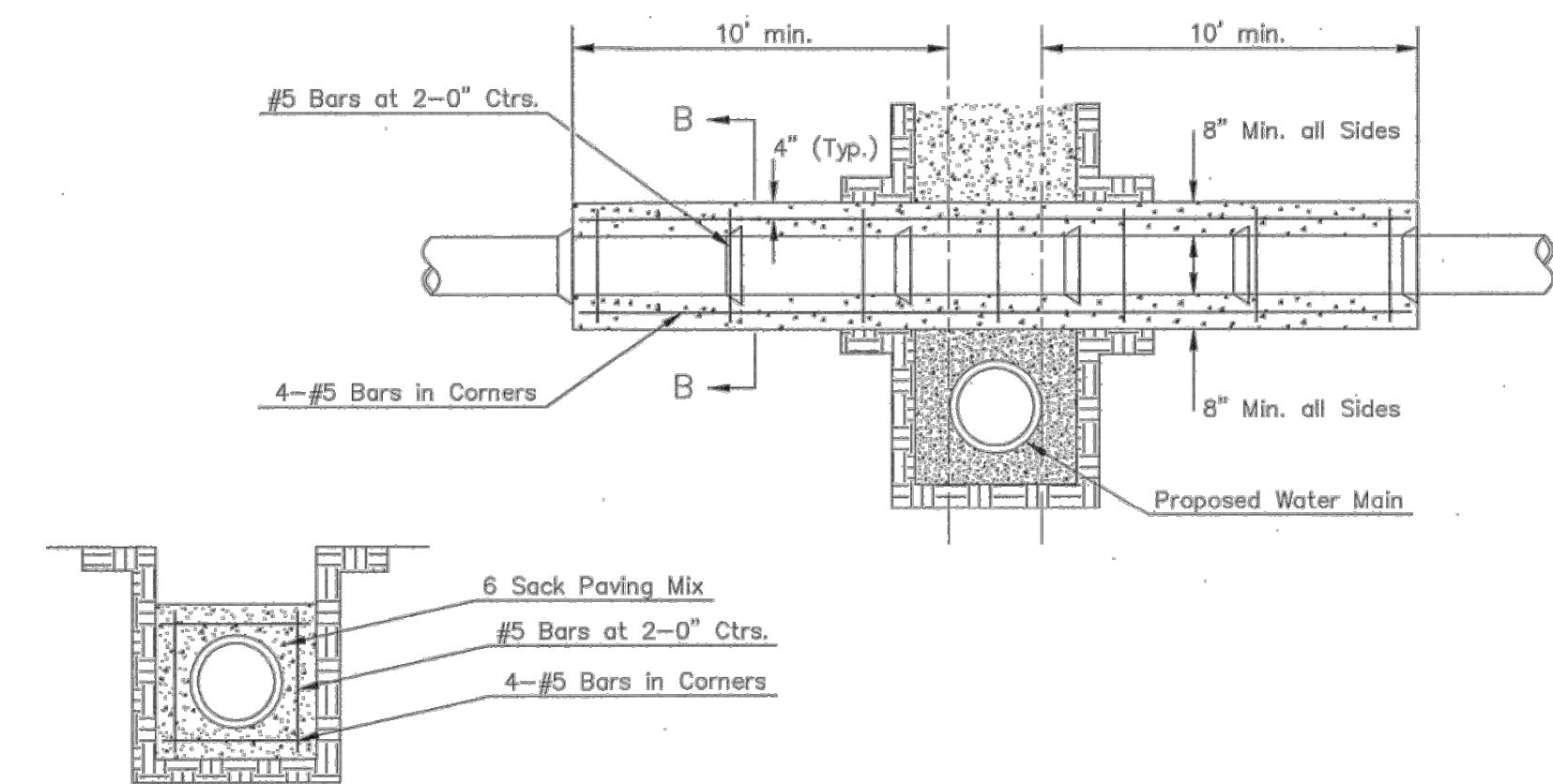


TOP VIEW

Note: When shoring is required it is to be per The City of Wichita Standard Specifications.



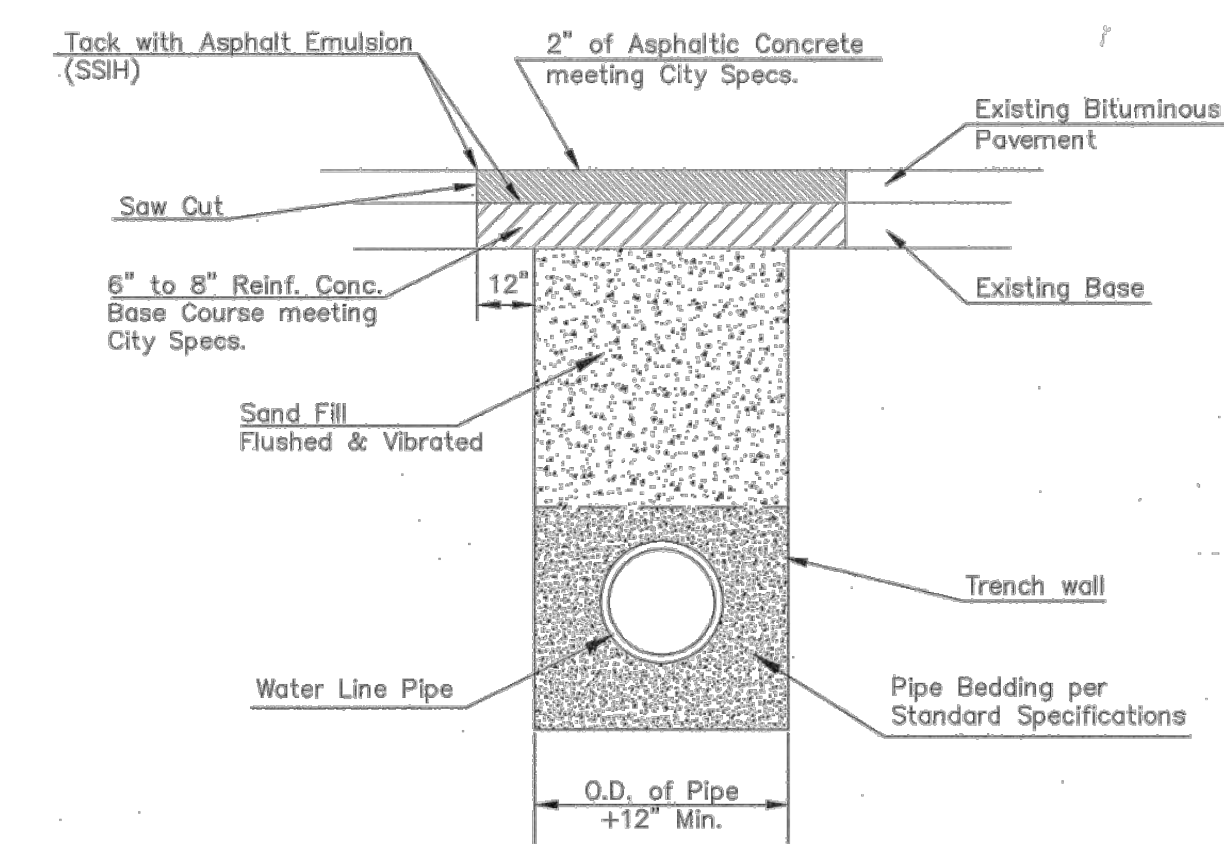
EXCAVATION FOR WET TAP



SECTION B-B

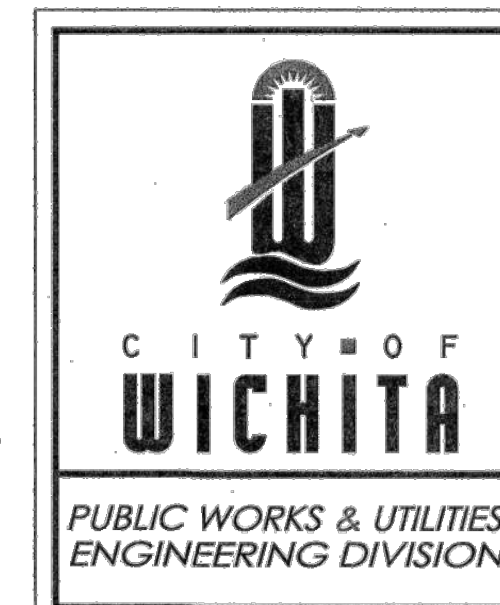
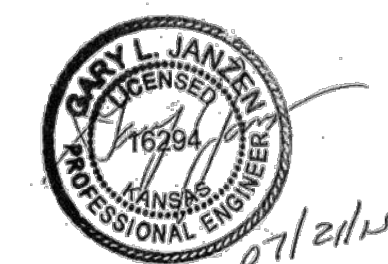
Note: Encasement to begin and end at a Bell on Sanitary Sewer Pipe.

REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER



PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS

REVISED: JULY 2015



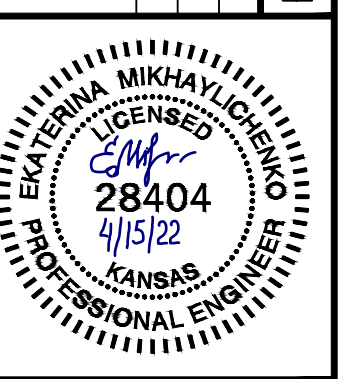
MISCELLANEOUS WATER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
G21 2024-2		
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		

WL-104

REV	DATE	DESCRIPTION
2	4-15-22	CHANGE TO SWING TYPE HYDRANT
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EKATERINA MIKHAYLICHENKO
ENGINEER
KS # 28404

200 N. EMPORIA, SUITE 100
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PH. (316) 268-4509
www.kawvalley.com

KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-113. EXPIRES 12/31/22

FIRST WIRELESS
4049 S. WEST STREET
WICHITA, KANSAS

DETAIL SHEET

PROJ. NO.	G21 2024-2
DESIGNER	CS
CFN	2024-2WDET
SHEET	04
REV	2