

PRIVATE FIRE SERVICE LINE COLVIN ELEMETNARY SCHOOL

Part of Lot 1, Block 1, Planeview School Addition PROJECT NUMBER 1641 PPW (607853)

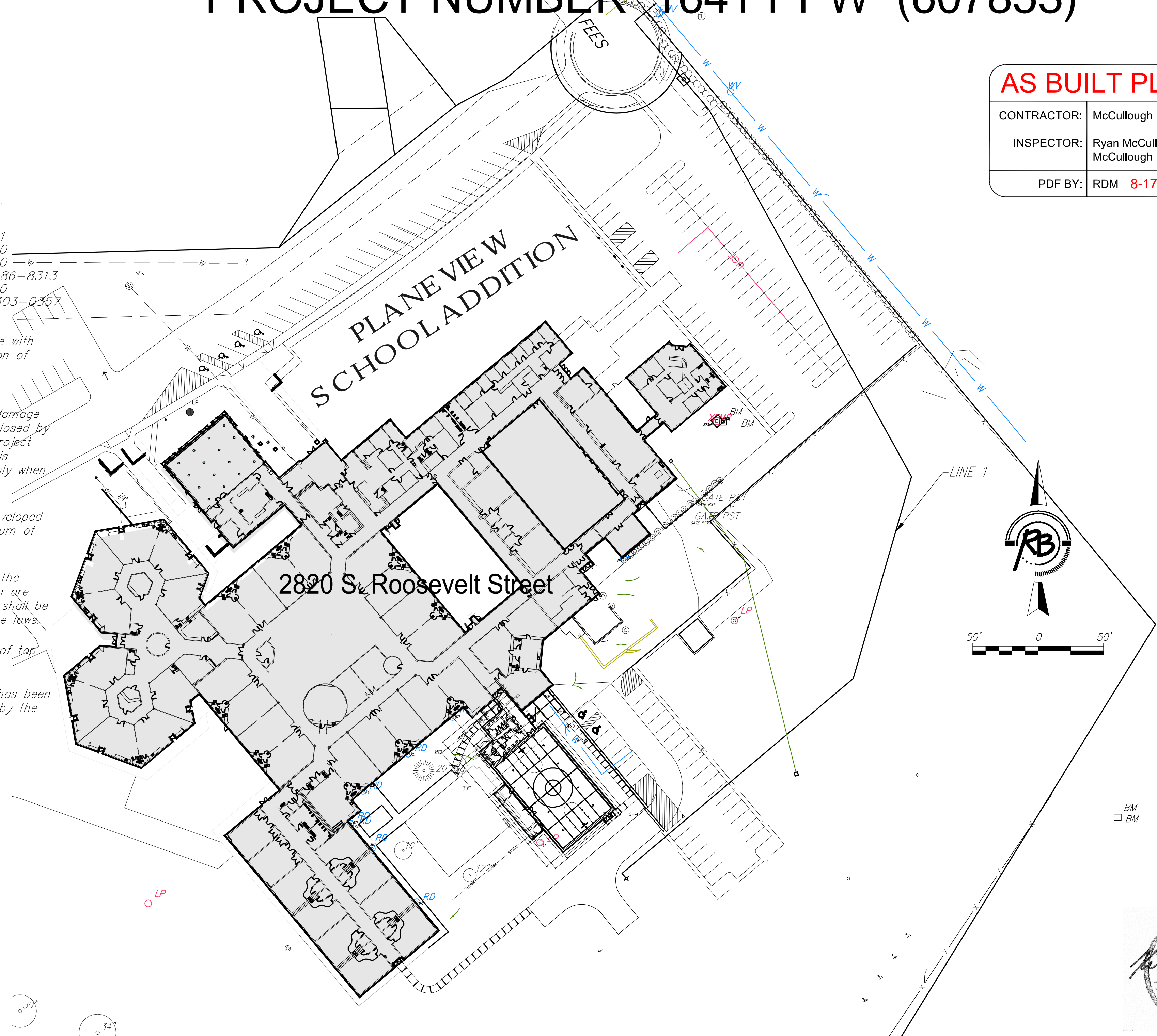
GENERAL NOTES

1. Contractor will be required to provide a minimum notice of 72 hours to utility companies prior to starting any excavation as follows:

Kansas One-Call	687-2470
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The Contractor must notify the following in case of an emergency:

Cox Communications	262-0661
Kansas Gas Service	383-8600
Westar Energy	383-8600
AT&T	1-800-286-8313
City of Wichita Water Utility	268-6000
Black Hills Energy	1-800-303-0357
2. All water mains and appurtenances shall be installed in accordance with City of Wichita, Kansas, Standard Specifications for the Construction of City Projects, and current policy on construction of public works improvements by private contract.
3. Opening and closing water valves shall be done slowly to prevent damage to the water distribution system from water hammer. All valves closed by the Contractor must be reopened as new construction permits. Project inspector must ascertain that any valve closed by the Contractor is reopened. Contractor will be permitted to operate water valves only when the project inspector assigned to the project is present.
4. The Contractor shall give all property owners and/or tenants of developed property directly abutting the construction of this project a minimum of ten (10) days advance notice prior to start of construction.
5. 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.
6. The Contractor shall reimburse the Wichita Water Utilities for cost of tap and materials.
7. No work shall be done on this project until the project inspector has been notified and that Project Bonds have been received and approved by the City of Wichita.



AS BUILT PLANS	
CONTRACTOR:	McCullough Excavation
INSPECTOR:	Ryan McCullough P.E., McCullough Excavation
PDF BY:	RDM 8-17-2012

INDEX OF SHEETS

(CITY SUBMITTAL INDEX)

- SC1.1 TITLE SHEET
- SC1.2 WATER PLAN & PROFILE
- SC1.3 WATER PLAN & PROFILE
- SC1.4 WATER ASSEMBLY DETAILS
- SC1.5 WATER VAULT DETAILS

BENCHMARKS

BENCH MARK: CHISELED SQUARE WITH DIVOT ON THE S.E. CORNER OF CONCRETE TRANSFORMER PAD, 26.5' S. OF THE S.E. CORNER OF NEIGHBORHOOD CITY HALL ELEVATION = 1322.87 (NAVD88)

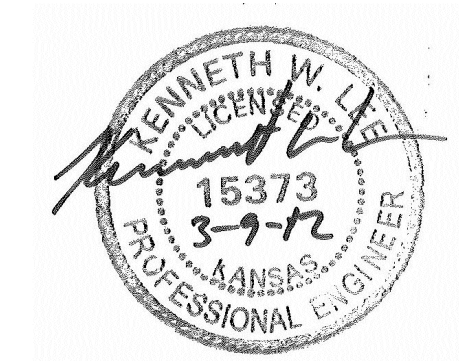
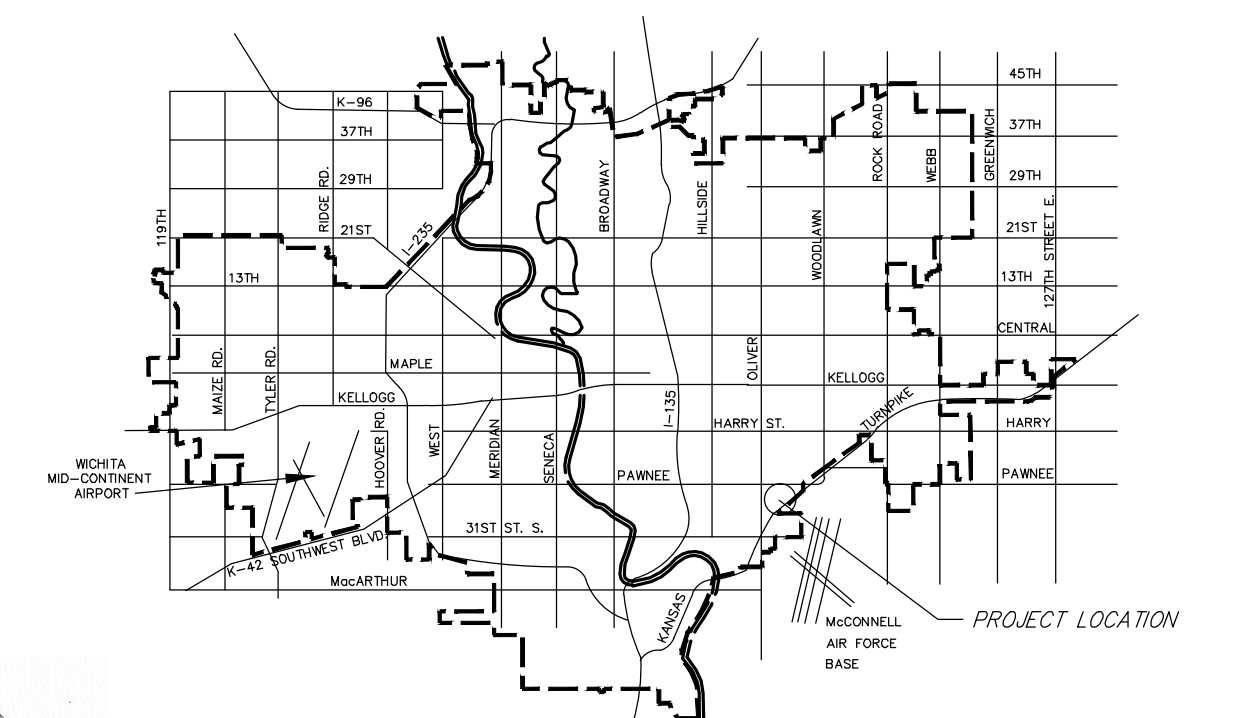
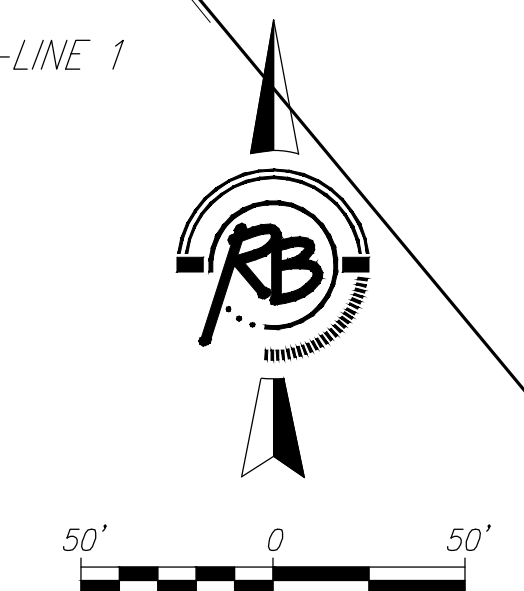
BENCH MARK: CHISELED SQUARE WITH DIVOT ON THE TOP OF CURB ON THE S. SIDE OF DUNKIN STREET SOUTH, E. OF PARKING LOT OF SCHOOL, 18.5' WNW. OF GUY ANCHOR, 13' ENE. FROM POWER POLE, 26' S. TO N.W. CORNER FENCE POST FOR ELECTRIC METER ELEVATION = 1327.15 (NAVD88)

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Engineering *Julianne Kallman* 2-28-12
Water *Andy Kelly* 03-01-12
Fire *Brian Papp* 3-6-2012

NOTE TO CONTRACTORS

Inspection and testing for this project are 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 Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer.

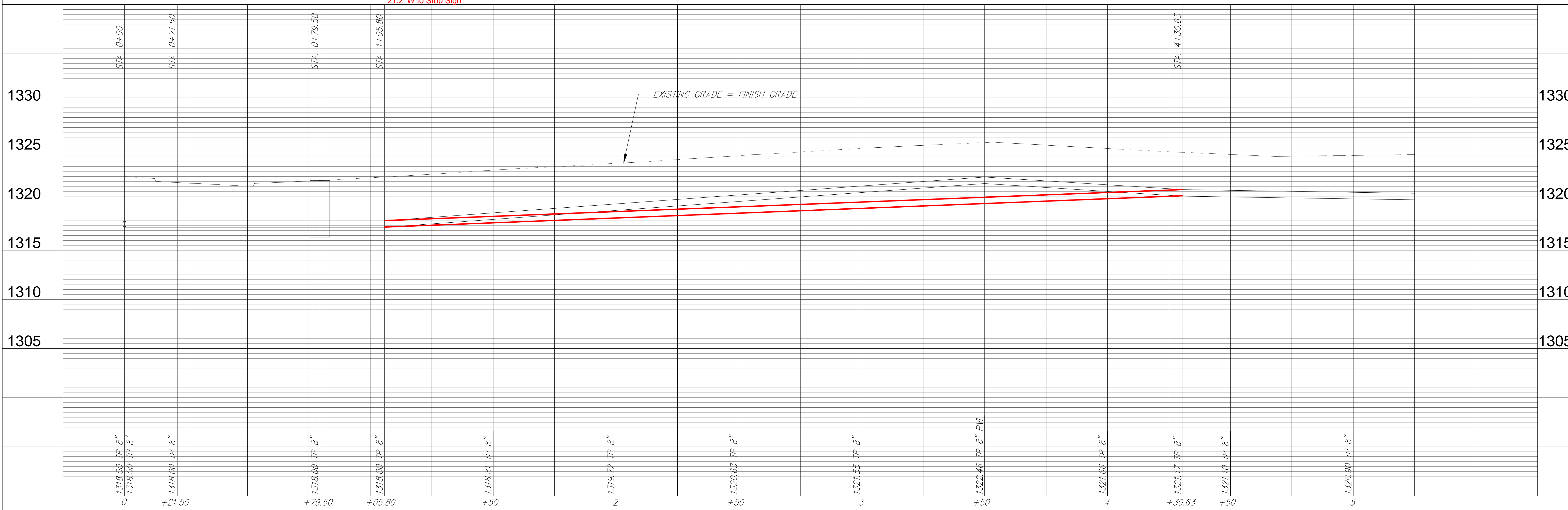
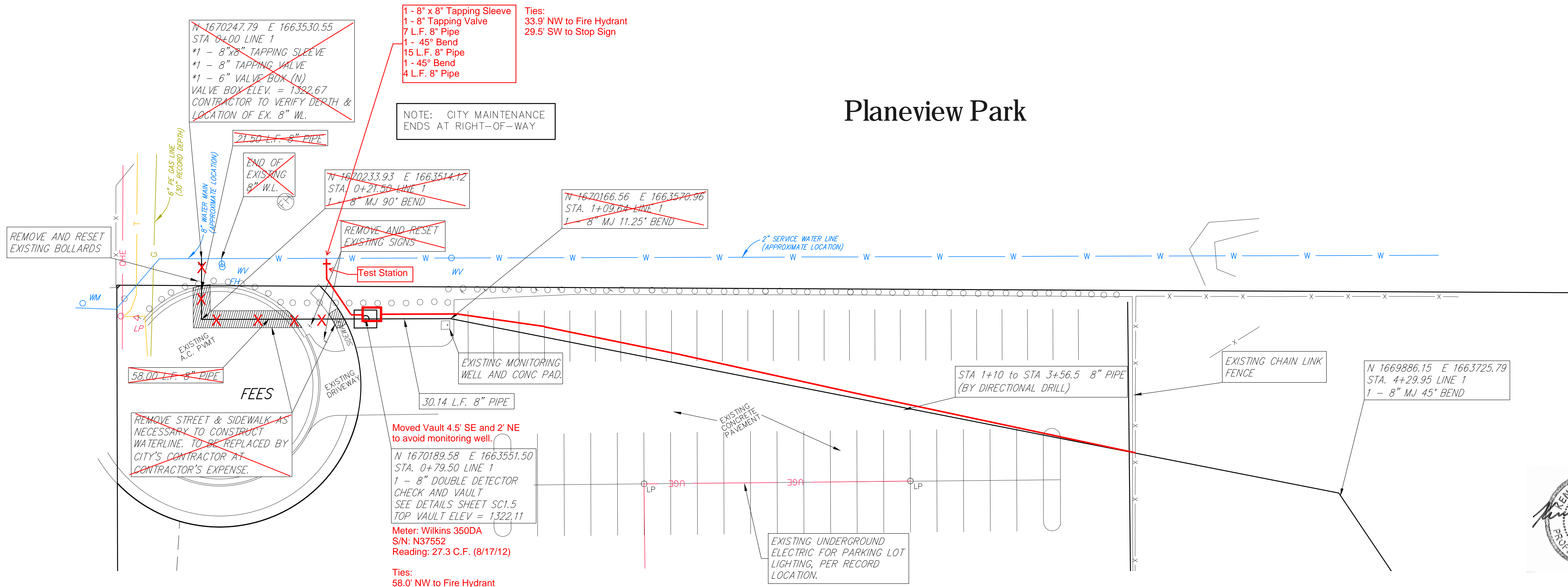
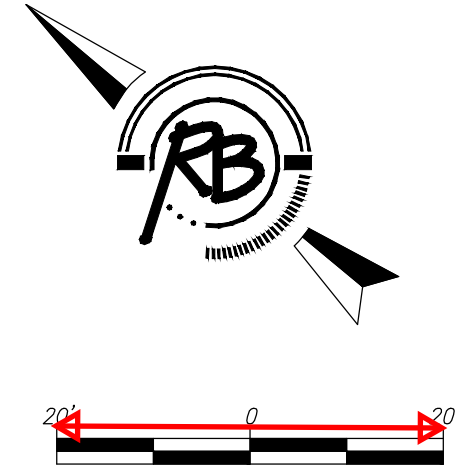


CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E., CITY ENGINEER

Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning

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Planeview Park



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COLVIN ELEMENTARY SCHOOL
 WATERLINE PLAN-PROFILE
 WICHITA, KANSAS

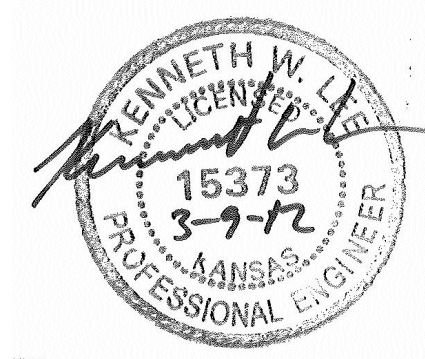
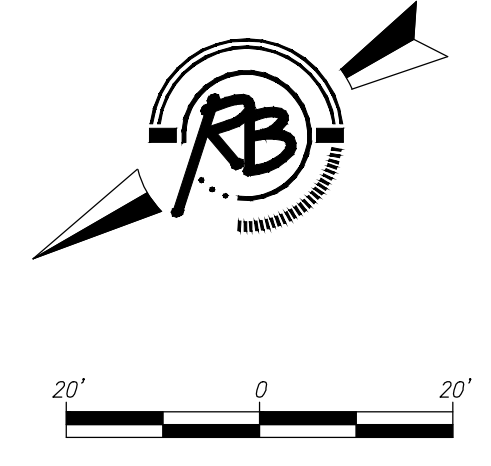
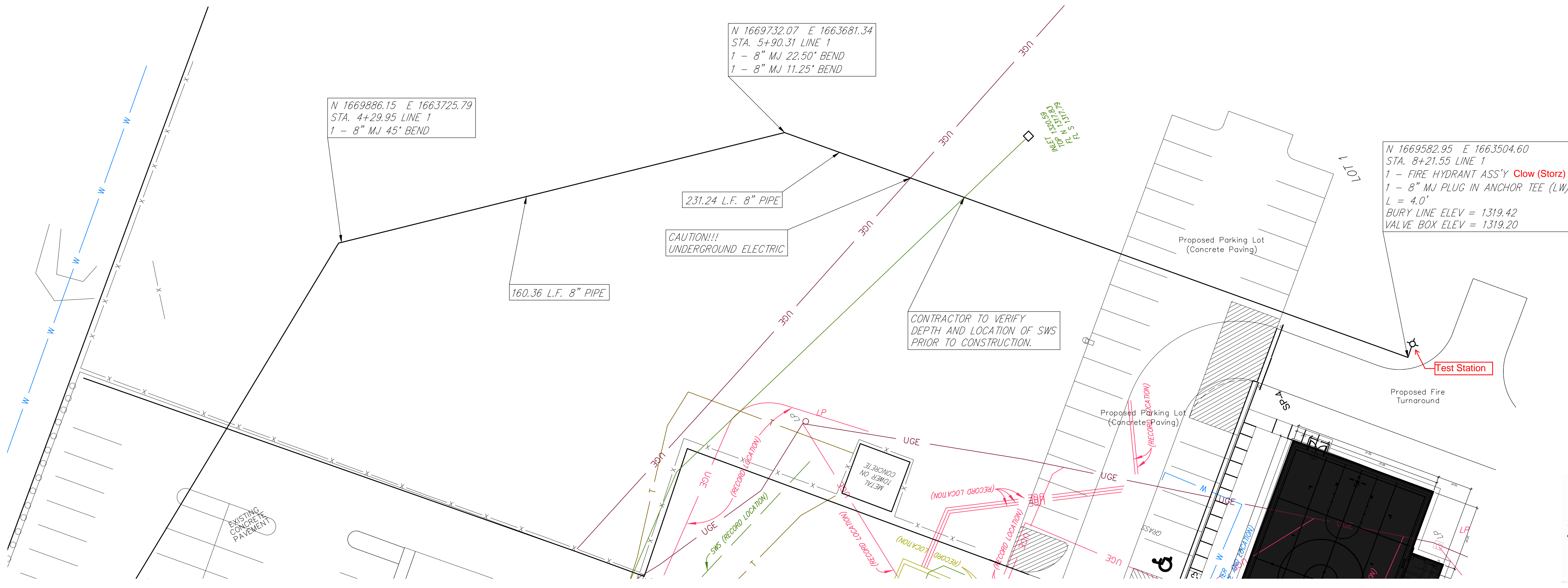
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 UTILITY

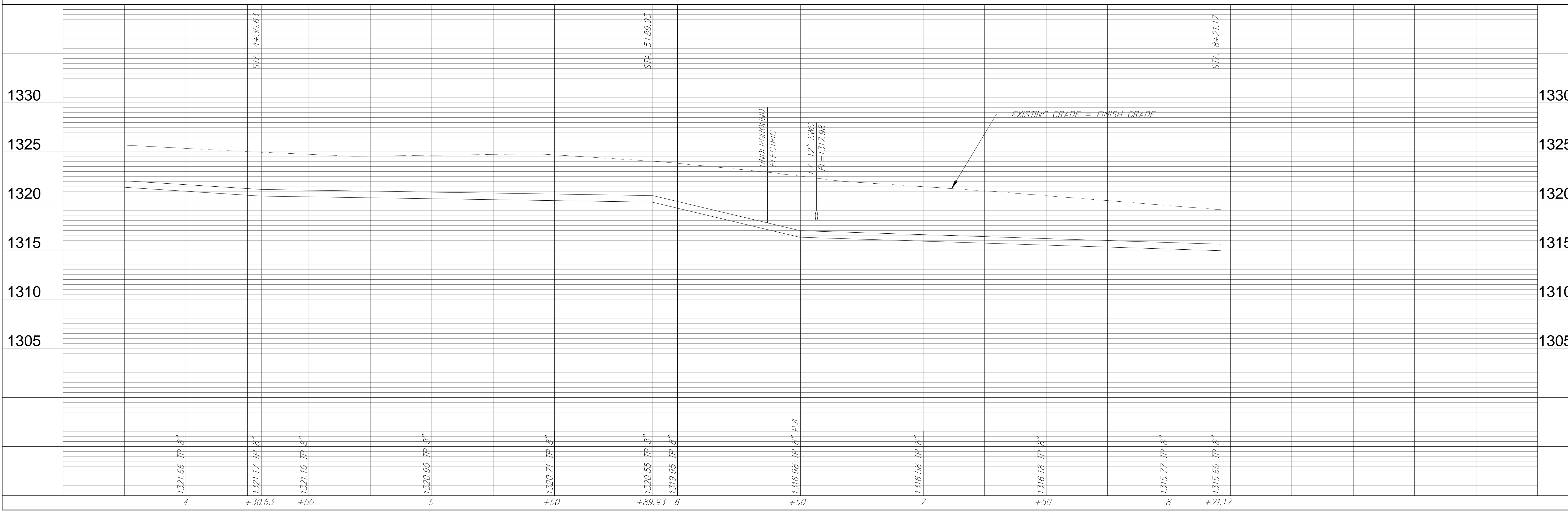
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 DATE: DEC 2011

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RB JOB: 3903E
 SHEET: SC1.2
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 Email: info@rubaas.com

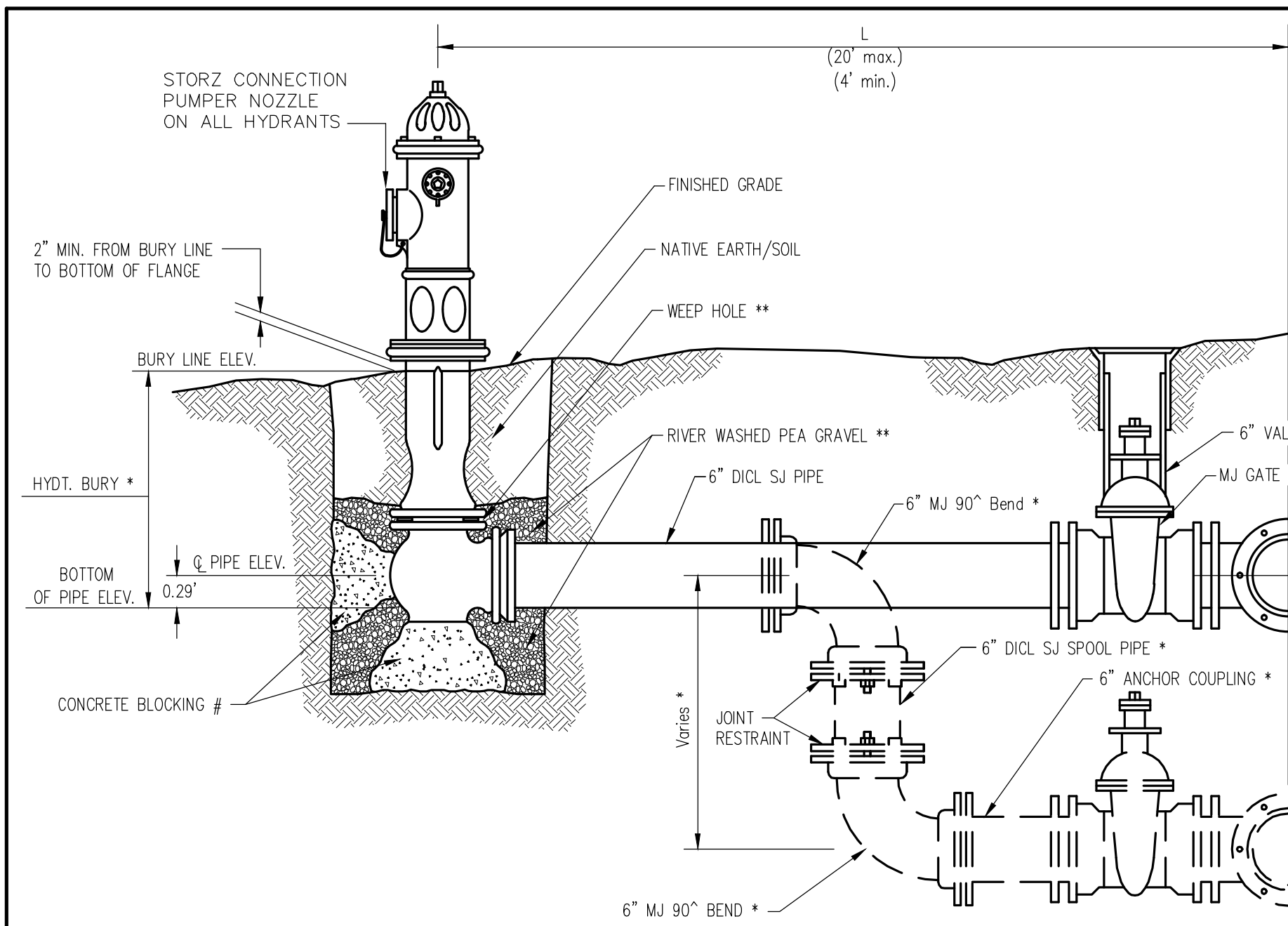


COLVIN ELEMENTARY SCHOOL
WATERLINE PLAN-PROFILE
WICHITA, KANSAS

REVISION	DATE	BY	CHKD
REVIEW	DEC 2011	MLP	MLP
DESIGN	UTILITY	MLP / BDT	MLP

PROJECT NUMBER: _____
 DRAWING FILE: Engineering_boss/eng_02_P&P

RB JOB: 3903E
 SHEET: 3
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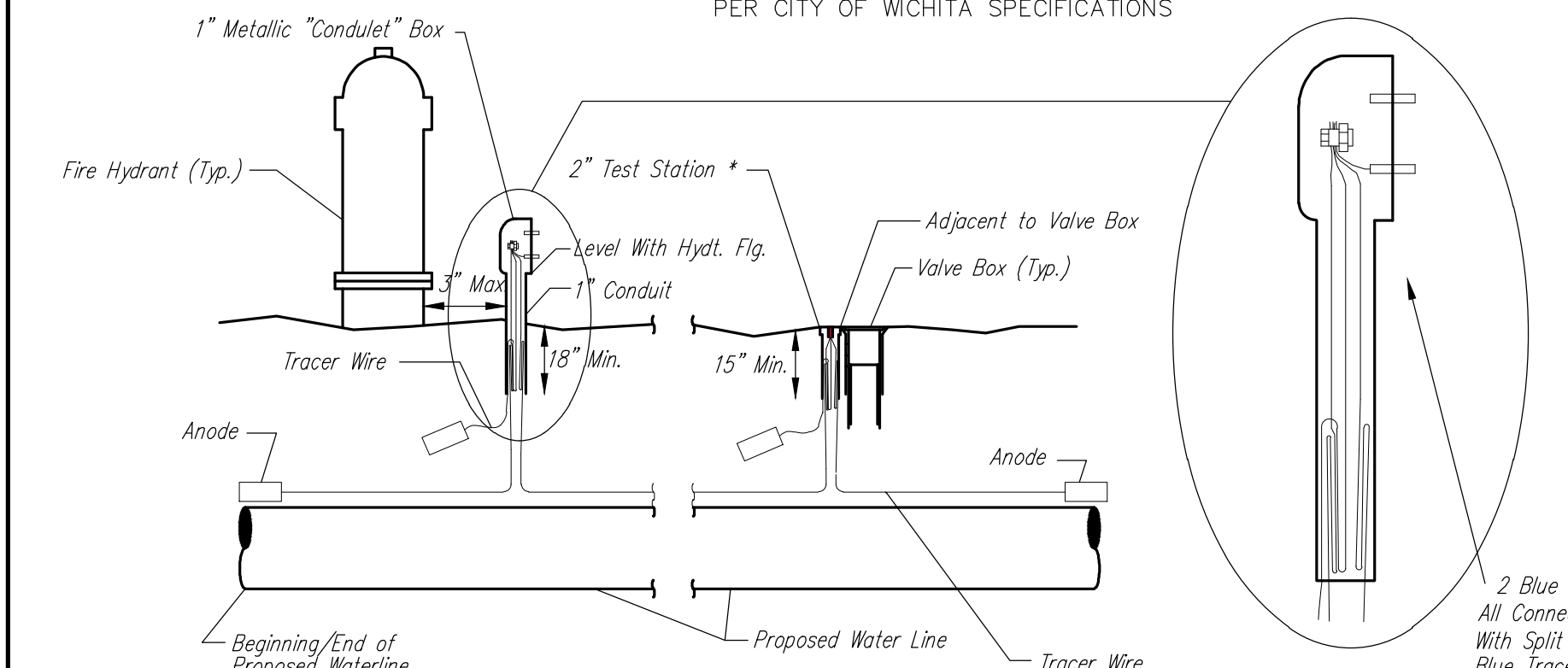
- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET ("D"x 6")
 - 1- 6" MJ GATE VALVE
 - 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED *
 - 6" DI CL SJ PIPE (LENGTH VARIABLE)
 - 1- FIRE HYDRANT
 - 1- 6" ANCHOR COUPLING*
 - 2- 90° BENDS*
 - 6" DI CL SJ SPOOL PIPE WITH ADEQUATE JOINT RESTRAINT *
 - 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 SPOOL PIPE AS NECESSARY FOR VERTICAL ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING AT HYDRANT AND MEGALUGS, ROD AND LUG 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.

FIRE HYDRANT ASSEMBLY
PER CITY OF WICHITA SPECIFICATIONS



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. Split-bolt connectors shall be used at splice locations. Electrical tape shall cover all splices so no bare wire is exposed. Test stations shall be installed adjacent to all fire hydrants along the waterline and at blowoffs or valves near the ends of the waterlines. Any exceptions to the location of test stations shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 3 lb. Zinc or magnesium anode. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed waterline. A typical layout of the tracer wire and test station is provided in the above figure.

WIRE
The tracer wire shall be Blue No. 12 THHN annealed soft copper wire with thermal plastic insulation or Blue No. 12 AWG CCS with 30 mil HDPE insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. 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. The insulation sheathing shall be removed such that 1" bare copper wire is at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

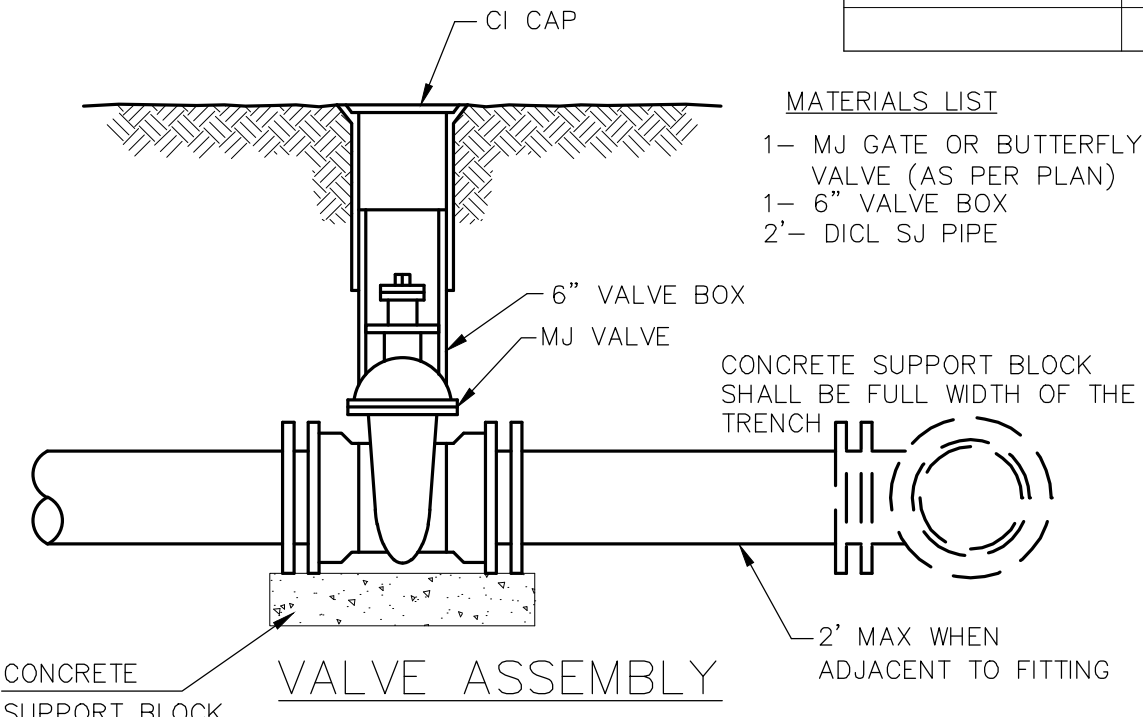
TEST STATIONS
The test station for fire hydrant applications shall be a 1 inch galvanized "condulet" style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be 2 inch flush style test station T2PS3B as manufactured by HANDLEY Industries or approved equal. The "condulet" style test station shall be attached to a 1 inch 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. 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 10 inches of wire within the test station. In concrete environments such as sidewalks or in the downtown area the contractor shall use the flush style test station. The location of all test stations shall be approved by the engineer, recorded, and shown in the as-built drawings.

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 Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.

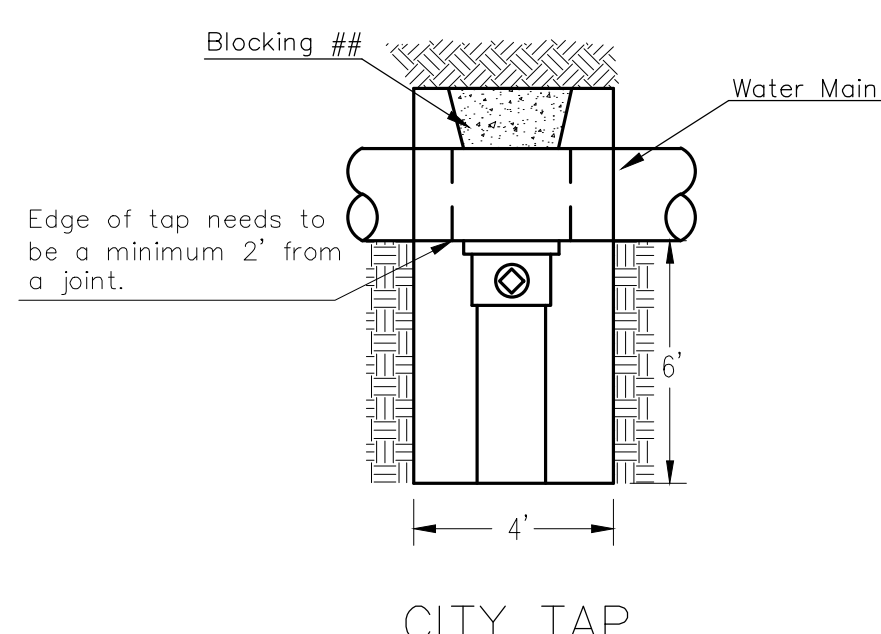
TRACER WIRE DETAIL
COST IS SUBSIDIARY TO PIPE INSTALLATION

FIRE HYDRANTS REQUIRED

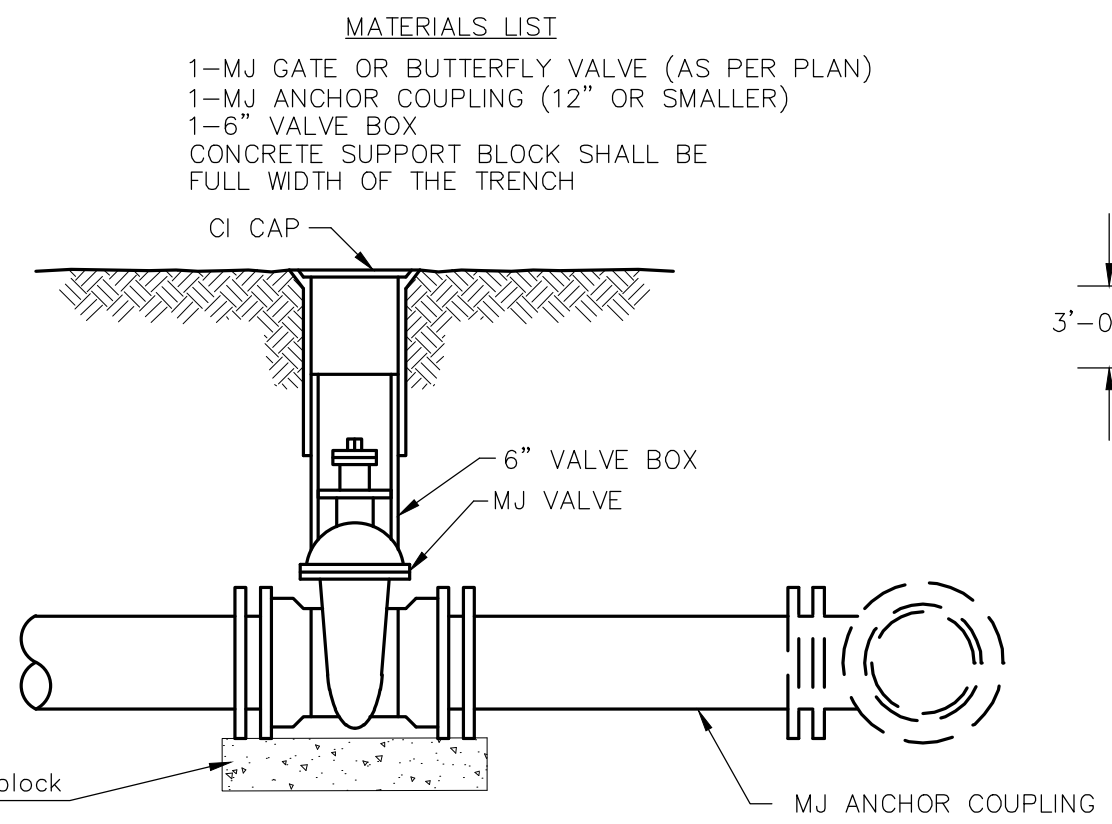
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
8+21.55	1319.42	1315.60	4.5'	



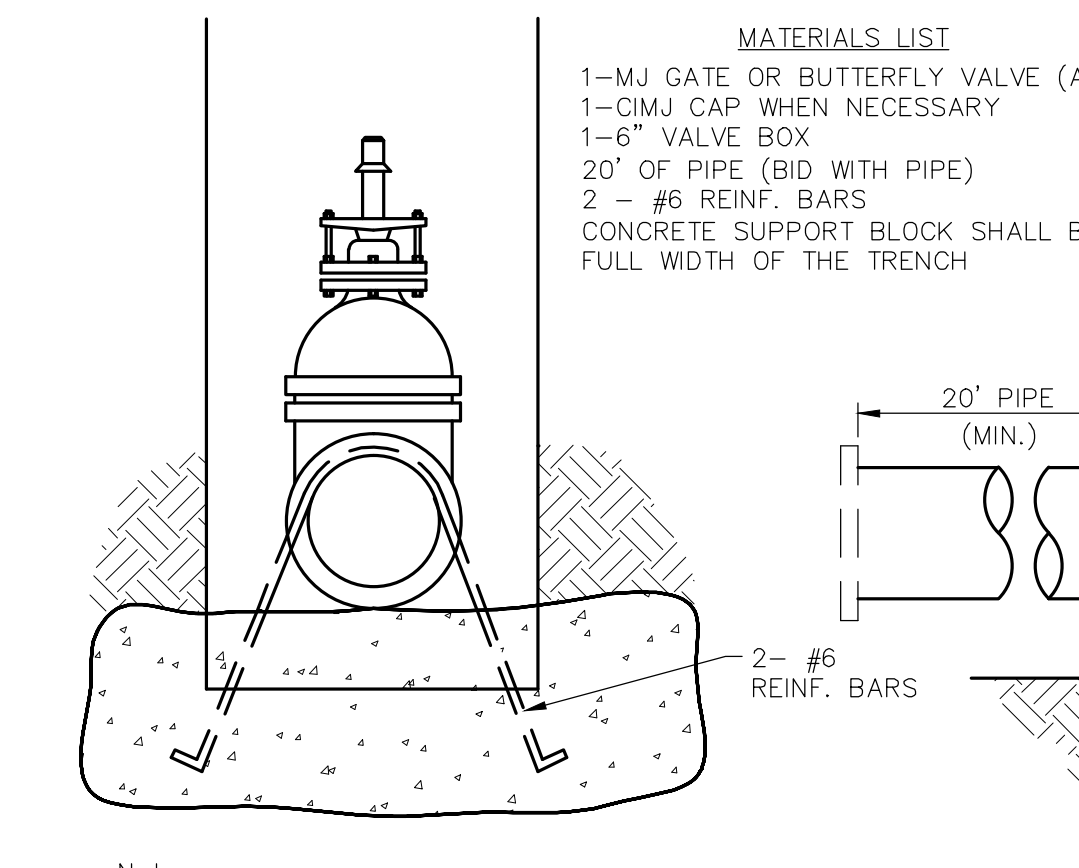
- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1- 6" VALVE BOX
 - 2- DI CL SJ PIPE



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



ANCHORED VALVE ASSEMBLY

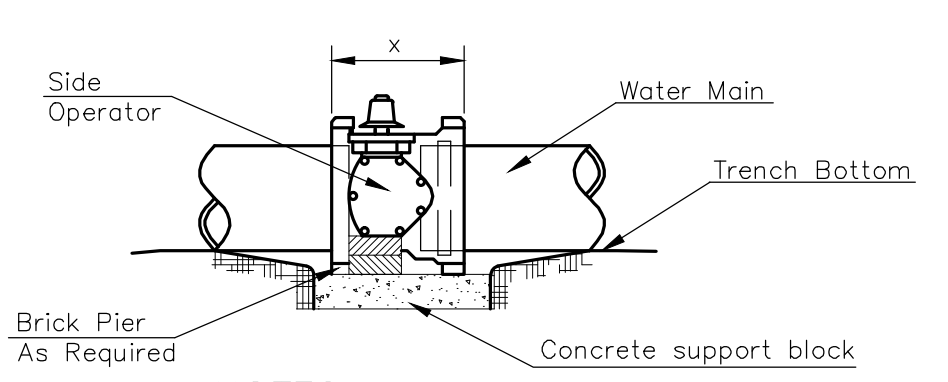


- Notes:**
- Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
 - The thrust block shall be constructed such that bolts, nuts, and 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

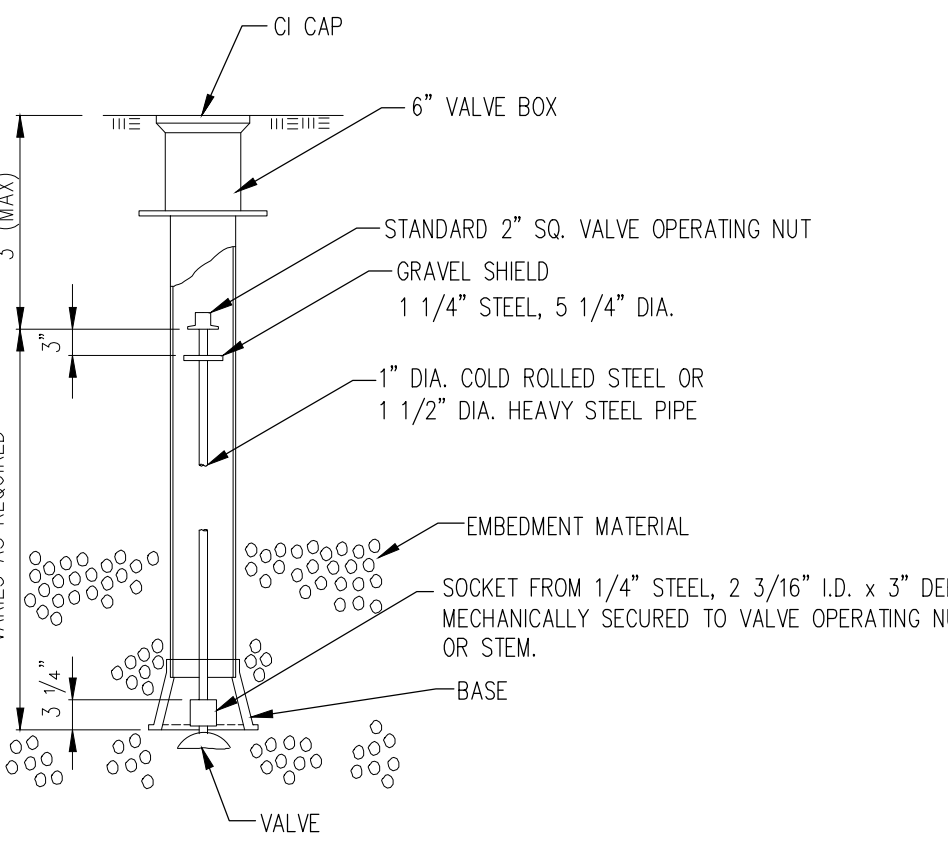
VALVE	THRUST AT 150 #/sq
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

ANCHORED VALVE ASSEMBLY, SPECIAL

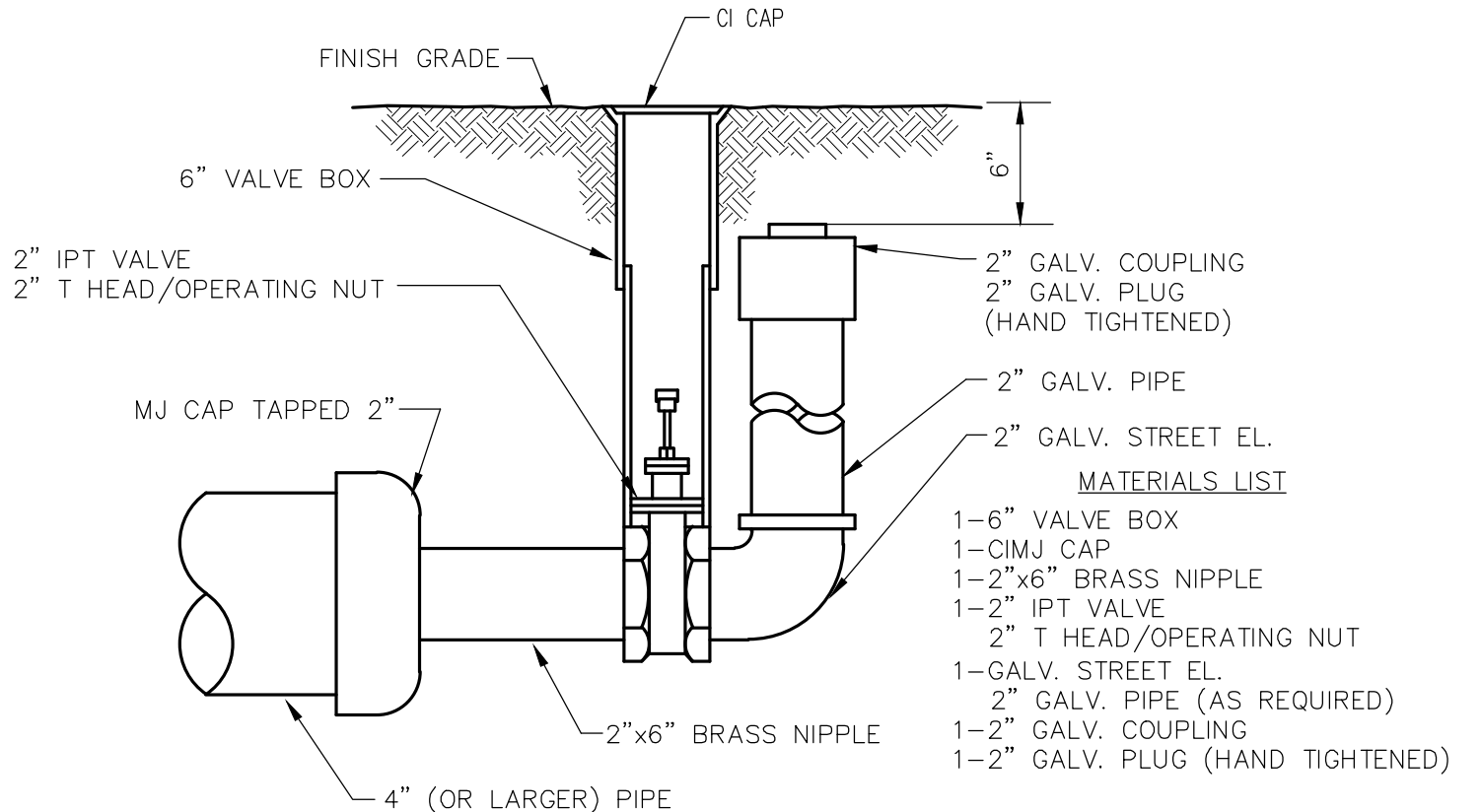


- NOTES**
- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
 - 6" Valve Box and Cover required per City of Wichita Std. Specifications.
 - Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION



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



2" BLOWOFF ASSEMBLY

STANDARD WATER ASSEMBLY DETAIL

CITY ENGINEER
JAMES L. ARMOUR, P.E., L.S.

PROJECT NUMBER 1641 PPW	OCA NUMBER 607853	DATE 12/2011
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CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
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WICHITA, KANSAS 67202-1620
(316) 268-4501

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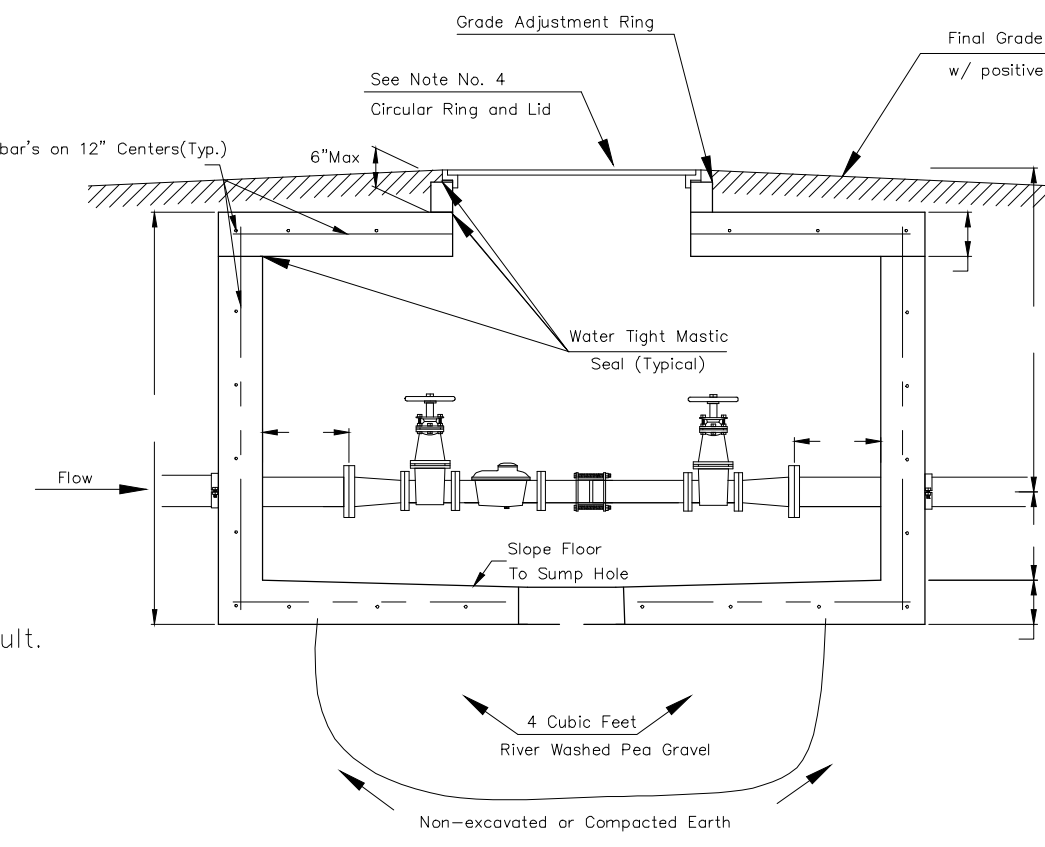
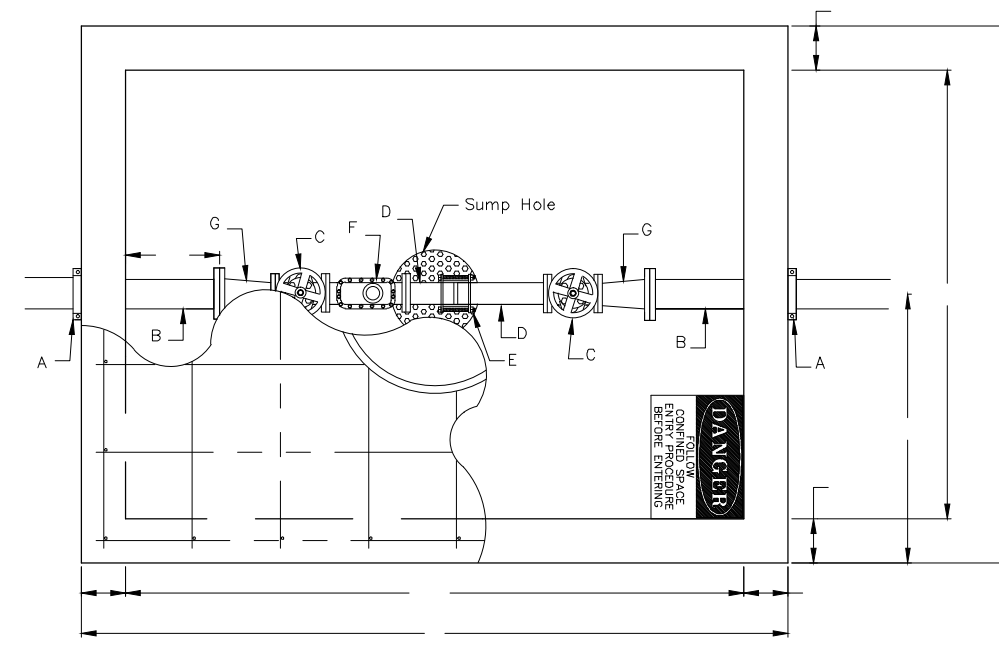
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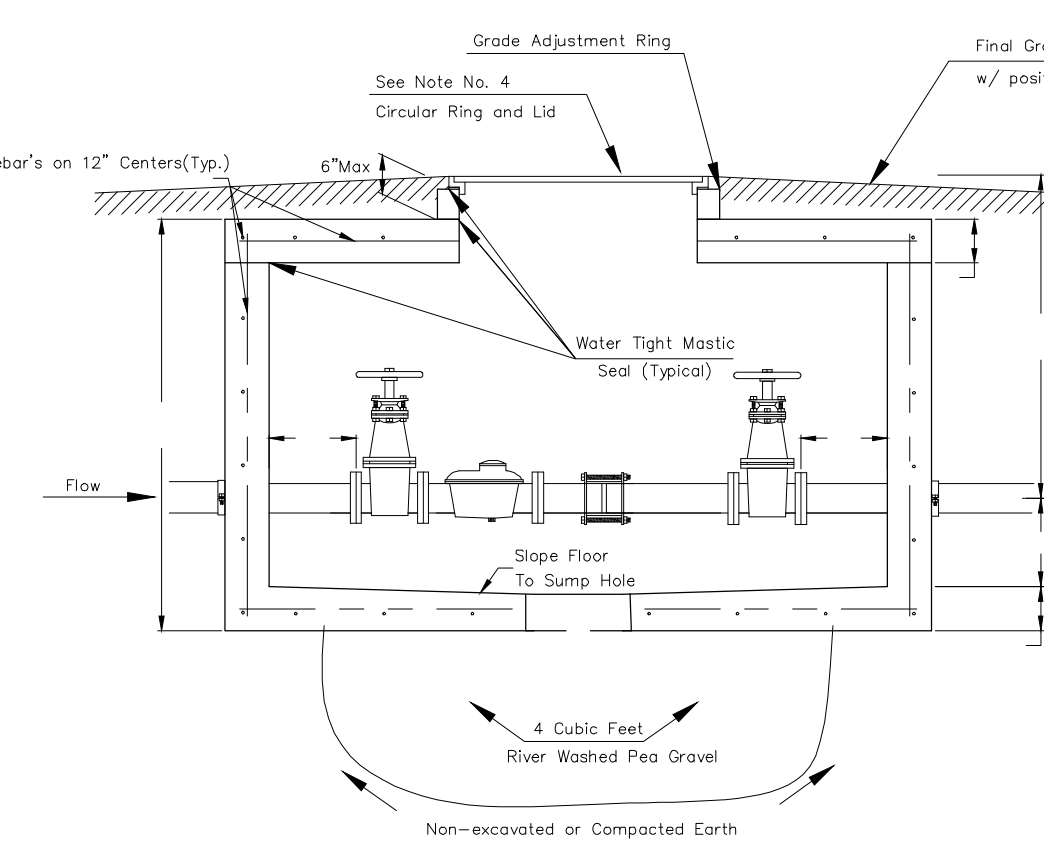
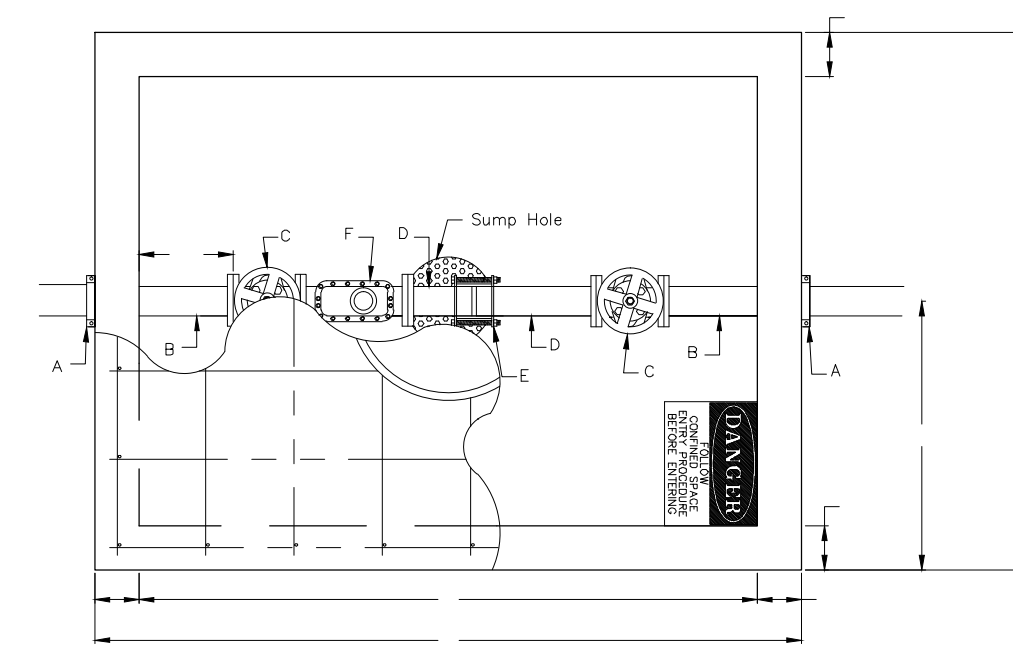
(316) 264-8008
(316) 264-4621 fax
E-mail: info@rbkanssas.com

Notes For All Services - 3" thru 12":

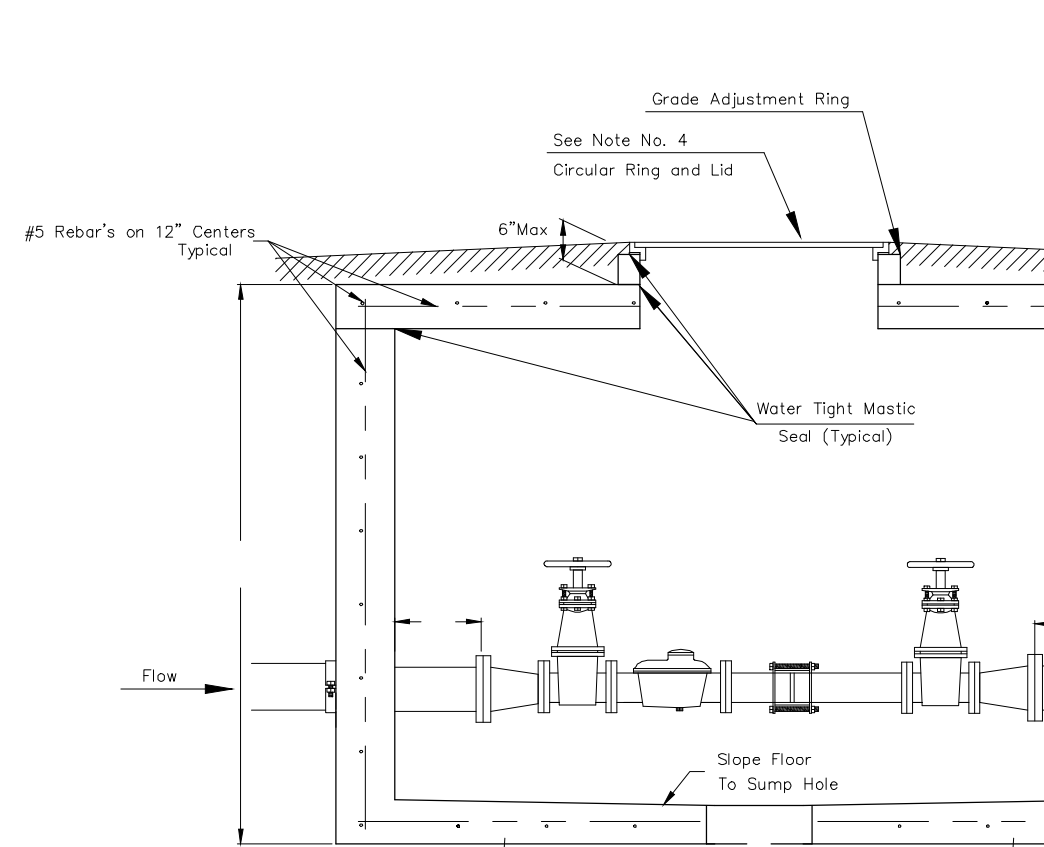
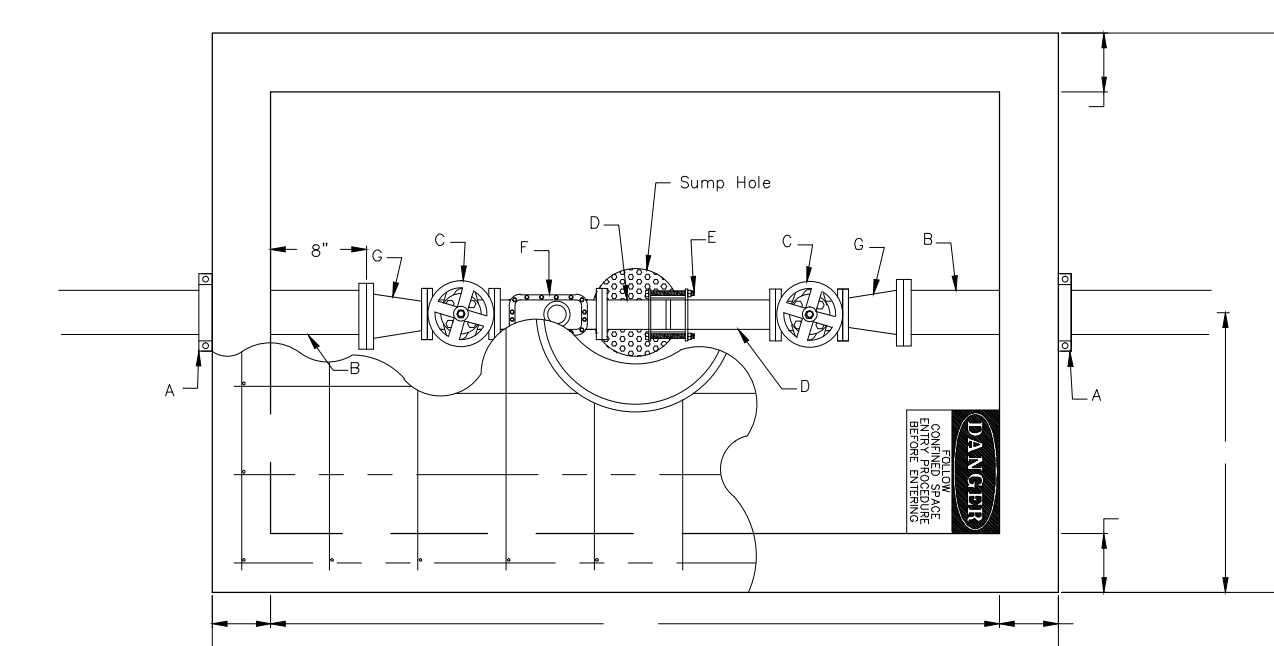
- When the standard vault dimensions are not applicable, such as when additional space is required for special pipe, fittings, additional meters, etc. the design engineer shall design a vault with the required dimensions for Public Works and Utilities approval.
- The vault shall be poured concrete, cement blocks (voids to be completely filled with 2500 P.S.I. concrete), or approved precast structure (such as Clutter Inc. vaults approved 8/1/2000). The intent of these details shall not be limited by drawings or standards of precast structures.
- Vault location to be determined by Public Works and Utilities prior to construction and approved by Department's field supervisor prior to installation. A final inspection will be required for acceptance. Vault location standards include but not limited to: not to be located where subjected to vehicular loads, not to be located in any right-of-way or utility easement, and must be located on the property being served.
- The manhole ring and lid shall be Neenoh R-6034 Frame with Type "C" Solid Lid and Drop Down Handle or US Foundry APS-30x30 (Aluminum). Where applicable the standard 10" Public Works and Utilities pattern meter reading lid and ring shall be located directly above water meter register. All meter registers shall have an approved lid directly vertical above. All joints of concrete or metal to concrete in the construction of the vault shall have an approved water tight mastic joint seal.
- Any fittings or appurtenances required to achieve proper elevation of pipe through the vault shall be provided by the contractor and appropriately noted on as-builts submitted by the inspecting engineer. Such fittings shall be a minimum of 2' from the exterior wall of vault.
- For all domestic services larger than 3" the contractor shall provide an outlet flange connection as shown 8" from the inside wall. Inlet and outlet wall sleeves shall be provided and installed by the contractor and shall be in alignment with one another. The inlet and outlet pipe shall be ductile iron pipe, cement lined, Class 150 per Standard Specifications and shall be continuous through vault wall and joint no less than 2' from the exterior wall of vault. Flanges of inlet and outlet pipes shall be in proper alignment and bolt pattern shall be rotated in such a way that valves and other fittings shall be in their proper vertical alignment when installed.
- For all services 4" and larger the contractor shall install a mega lug, restrained joint, or approved equal on the exterior walls of the vault, which shall be manufactured of ductile iron conforming to ASTM A 536-80, heat treated to a minimum hardness of 370 BHN and have a working pressure of at least 250 P.S.I. For all services smaller than 4" the contractor shall install an approved vault clamp on the exterior walls of the vault.
- All valves, meters, assemblies, and fittings shall be provided with sufficient concrete or other approved supports to the vault floor.
- The "Confined Space Warning" sign shall be fastened to the top of all vaults. If necessary for landscaping or site considerations, the sign may be fastened to the vault lid if it does not impede access to the handle. Acceptable materials: Aluminum 73415HH, Plastic 73439HH, or S.A. Vinyl 73463HH.
- All meters shall have an electronic read register compatible with the current City of Wichita meter reading system. All detector meters shall be an 5/8 cubic foot Badger meter with ERT register or approved equal. Gallon meters shall not be accepted.
- Additional Notes For Fire Services:
 - A post indicator valve (PIV) is an option for the outlet valve and may be requested by the architect or owner. The PIV is not required by City of Wichita ordinance.
 - When Siamese connections are required by the Wichita Fire Department, refer to the current City Code Section 15.
 - If due to any reason the completed vault retains ground or drainage water in excess of 4" in depth from the floor of the vault, the property owner shall be responsible for providing and installing an appropriate automatic sump pump or approved equal, as well as any other appurtenances required to make such system function as intended.
 - The property owner is responsible for completing an "Application for Private Fire Protection" prior to final acceptance of the project.



3" Domestic Service

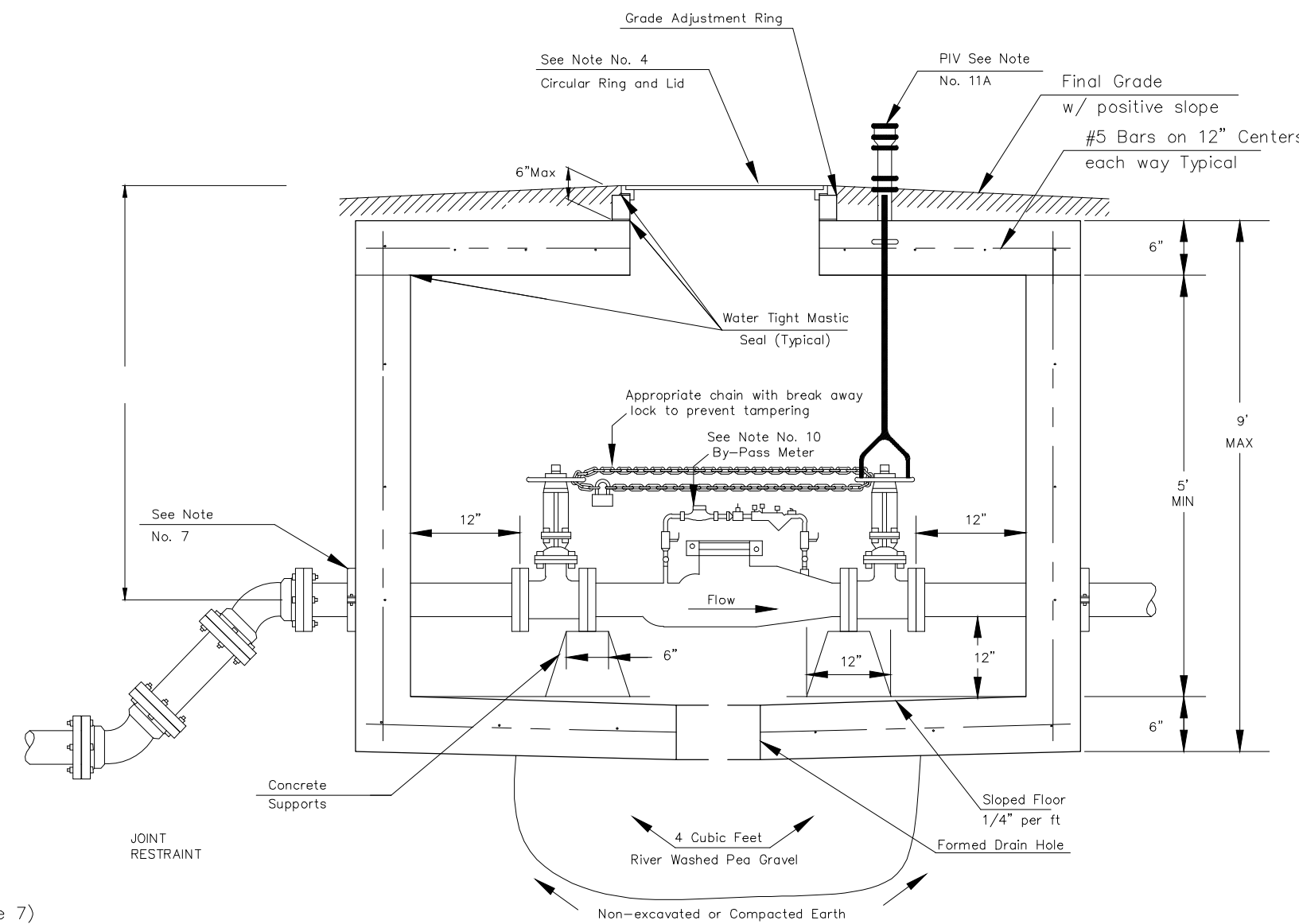
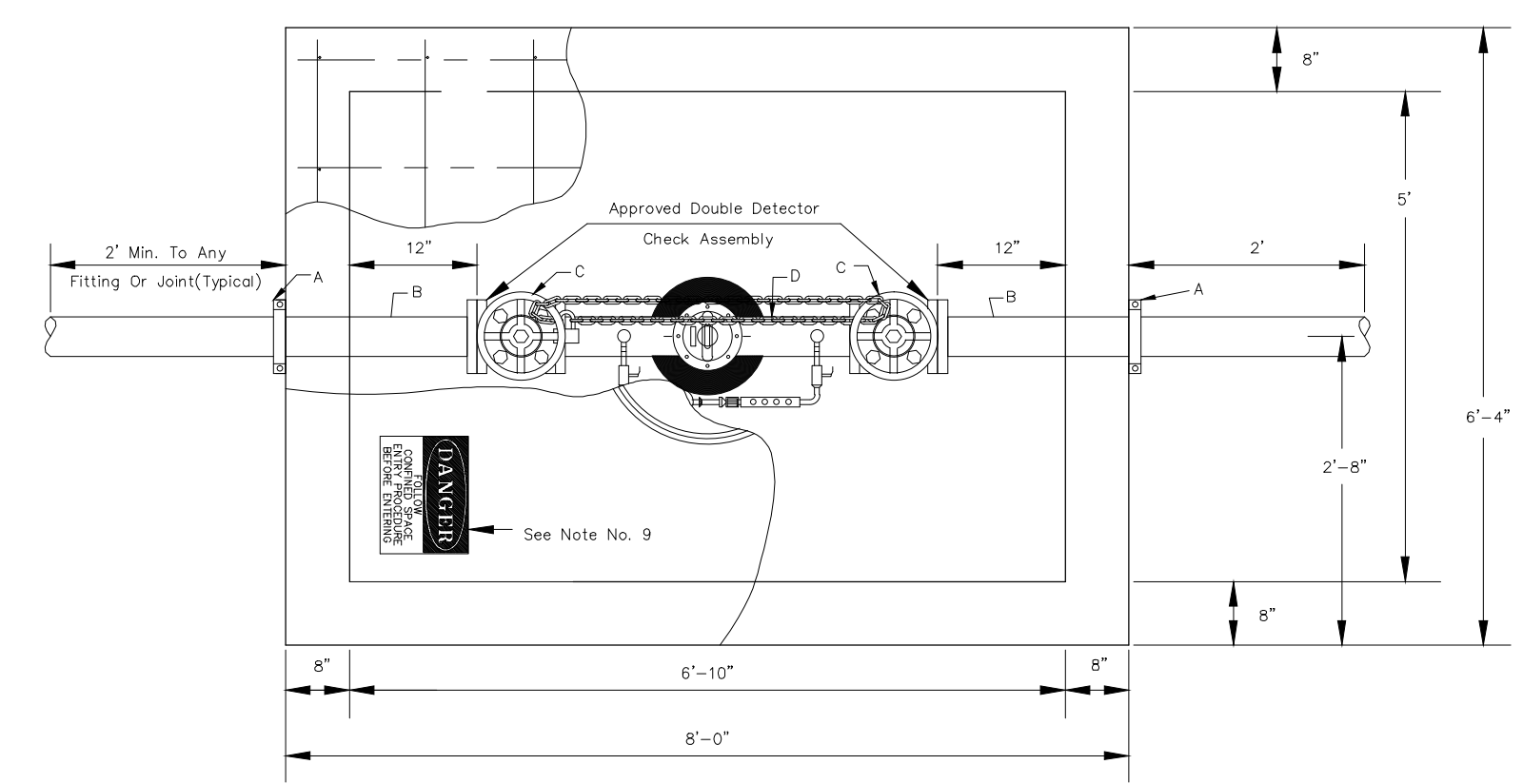


4" Domestic Service



6" Domestic Service with 4" meter

NOTE:
INSPECTOR FROM PUBLIC WORKS AND UTILITIES TO BE CONTACTED
24 HOURS PRIOR TO INSTALLATION TO SET VAULT.
CONTACT: 316-219-8928 OR 316-219-8929



4" thru 8" Fire Service



STANDARD VAULT DETAILS AND METER ASSEMBLIES		
CITY ENGINEER		
JAMES L. ARMOUR, P.E., L.S.		
PROJECT NUMBER	OCA NUMBER	DATE
1641 PPW	607853	12/2011
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SC1.5 of

NOTE:
Domestic Services larger than 6" shall be custom designed by Engineer.

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Wichita, Kansas 67203 (316) 264-4621 fax
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