

# GENERAL NOTES:

- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications (Section 103, Parts 200-900 only) and Applicable Special Provisions.
- Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows:

Kansas One-Call 687-2470

The Contractor must notify the following in case of an emergency:

AT&T	1-800-246-8464
Black Hills Energy	1-800-694-8989
City of Wichita Water & Sewer	1-316-219-8921
City of Wichita Stormwater	1-316-268-4090
City of Wichita Traffic	1-316-268-4034
Cox Communications	1-888-249-3530
Kansas Gas Service	1-888-482-4950
Energy	1-800-544-4857

- 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.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the City Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- 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 Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match final grades by the contractor.
- The Contractor shall notify the inspecting engineer and Dawnita Reinhardt at 316-650-0740 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.
- If traffic will be impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Mike Armour at [traffic@wichita.gov](mailto:traffic@wichita.gov) before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractors responsibility.
- All elevations shown are NAVD 88.
- All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.

- Any sidewalk, drive approach, curb, or street pavement removed to construct project must have a pavement cut permit and be replaced by the City contractor. Permits can be obtained by calling 316-268-4501 or 316-268-4480.
- All applicable fees (tap, equity, in lieu of & 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.
- Opening and closing of 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. 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 waterlines. Connections to the existing waterline(s) shall be made with clean, swabbed pipe and flushed upon completion of tie-ins.
- 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 tie in 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 manufactures recommended maximum. Where deflections are greater than the maximum allowed, the contractor shall utilize fittings.
- 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 Dispatch at 316-291-8921.
- All wet taps shall be installed by the City of Wichita. The Contractor will reimburse the City for tapping fees prior to tap being made. Unless noted on plans.
- The Contractor shall protect from damage and support existing utilities through construction as approved by the utility owner and the Engineer at the contractors expense.
- Contractor shall limit the extent of trench openings overnight and weekends to less than 50 feet.
- Wichita Fire Department inspections may be scheduled by calling Dawnita Reinhardt at 316-650-0740.
- Maintain a minimum of 10-foot horizontal separation between all water lines (mains, services and fire hydrants) and all sanitary sewer lines (mains, services and manholes). All separation distances are to be measured from edge-to-edge, at the closest point.
- Maintain a minimum of 2-foot vertical separation between all water lines (mains and services) and all gravity sanitary sewer lines (mains, services and manholes) at crossings. All separation distances are to be measured from edge-to-edge, at the closest point.
- Maintain a minimum of 2-foot vertical separation between all water lines (mains and services) and all pressurized sanitary sewer lines (force mains and services) at crossings. Waterlines must always be placed above pressurized sanitary sewer lines where they cross. All separation distances are to be measured from edge-to-edge, at the closest point.

# WATER DISTRIBUTION SYSTEM to serve 2020 NEW SUPPLY PIPELINE AND PUMP STATION IMPROVEMENTS (PART F) BUTLER RURAL WATER DISTRICT #5

11990 E 29th Street N

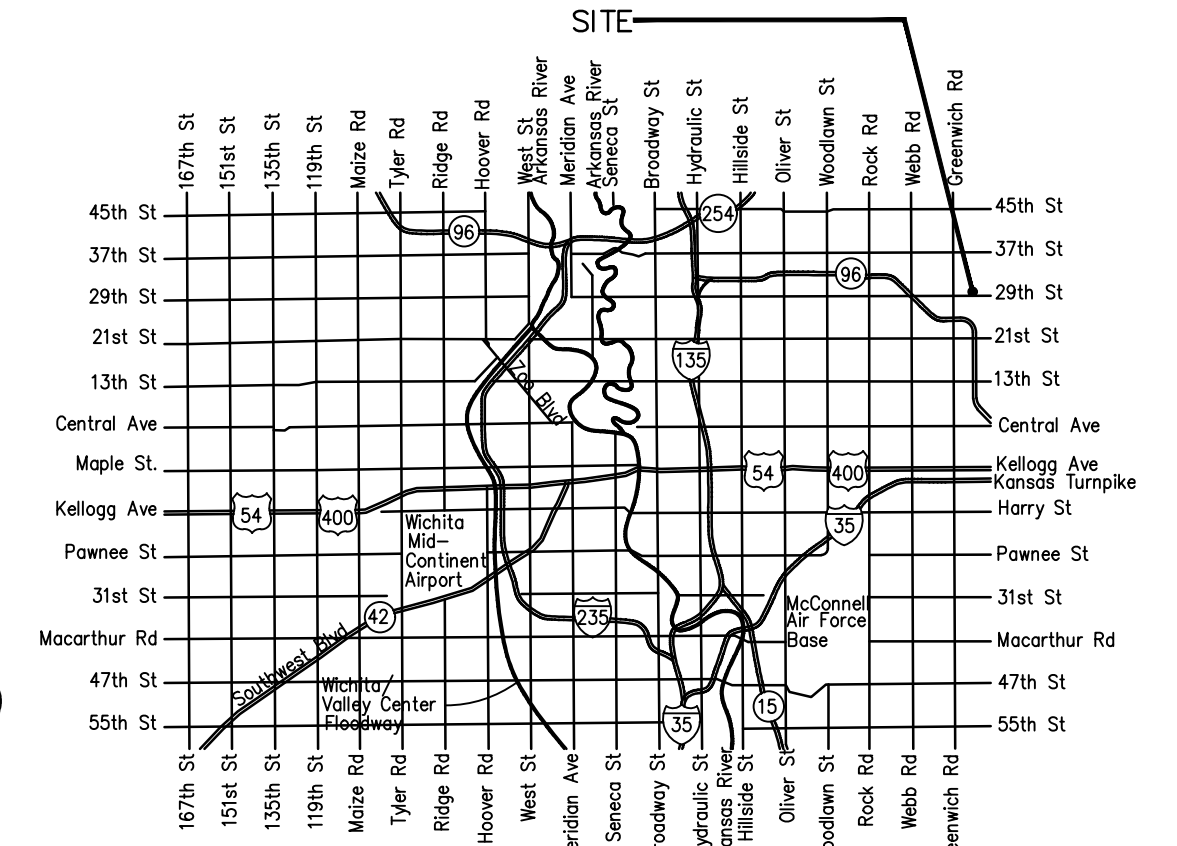
~~11976~~ E 29th Street N

CITY OF WICHITA, KANSAS

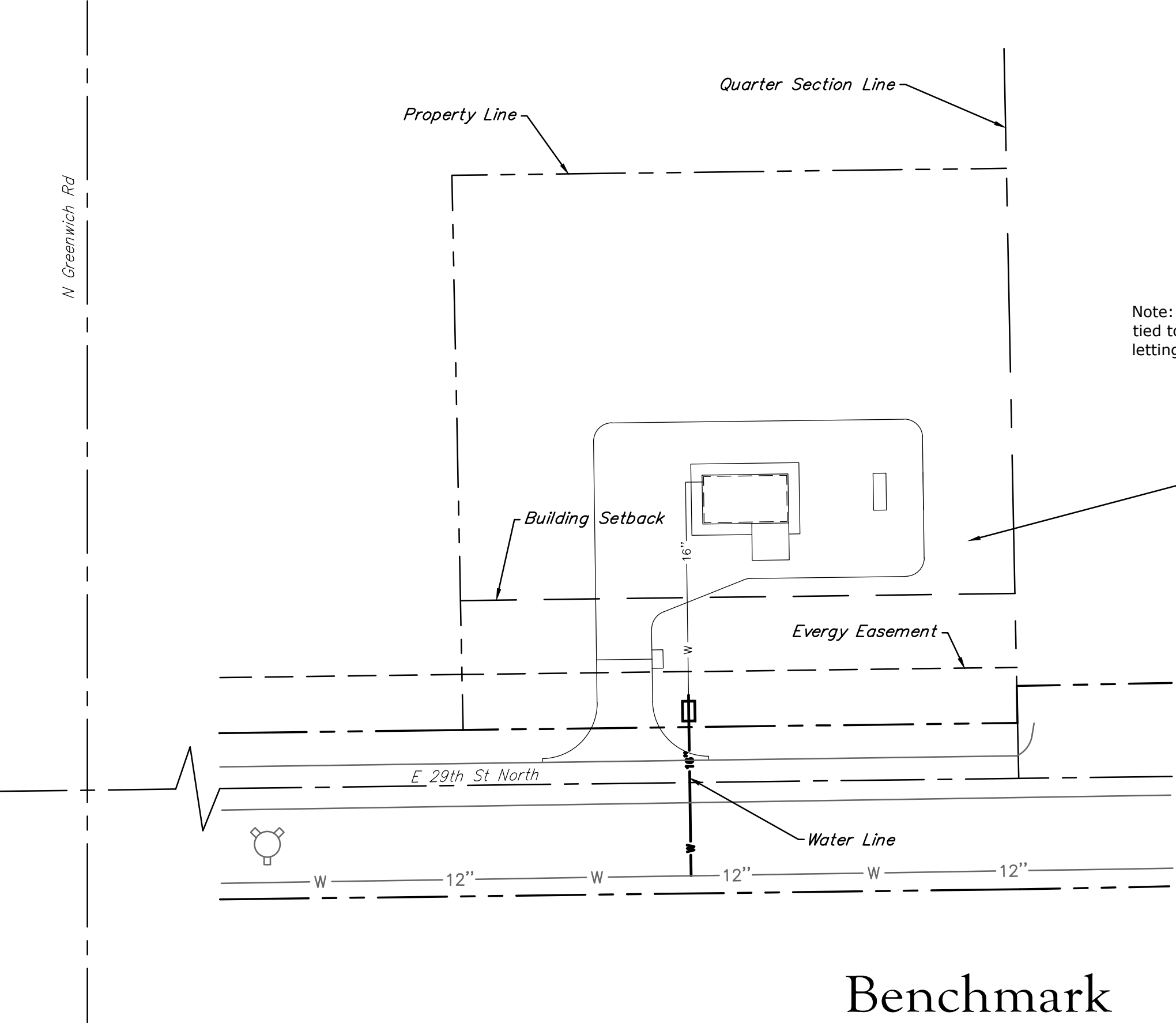
Gary Janzen, P.E. City Engineer

Project Number

2020-032738PPW (54030980)



Vicinity Map



## Sheet Index

PPW1	Title Sheet
PPW2	Water Line Plan & Profile
PPW3-4	Water Line Details
PPW5	Meter Vault
PPW6	Backflow Preventer Building
PPW7-11	Erosion Control Plans

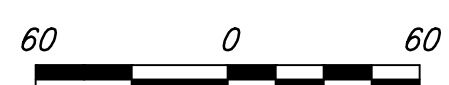
Note: "2020 New Pump Station and Supply Pipeline (Part F)" are tied to "2020 New Pump Station and Supply Pipeline (Parts A-E)" for letting and construction and will be awarded under a single contract.

PROJECT IMPROVEMENT AREA

AS BUILT PLANS  
CONTRACTOR: NOWAK CONSTRUCTION  
SUPERINTENDENT: JACK NOWAK  
FOREMAN: JIM NOWAK  
CLIENT: CITY OF WICHITA  
INSPECTOR: JIM DULING  
INSPECTION FIRM: SCHWAB-EATON, PA.  
PDF BY: JFD 08/26/21

## Benchmark

BM#1: Square cut in top of west end of west entrance pipe of Ergy substation.  
N 1705168.10 E 1688801.15  
Elev. = 1405.65 NAVD88



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

Engineering Approved by: Shawn Mellies 4/22/2021

Utilities Approved by: Greg Lolley 4/22/2021

Fire Dept. Approved by: Jose Ocadiz 4/22/2021

NOTE TO CONTRACTORS

Public Property:  
Inspection and testing for the waterline is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection is 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 right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by City Engineering. All Construction and Materials shall comply with the City or Wichita Specifications (Section 103, Parts 200-900 only) and Applicable Standards and Special Provisions (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 are required on-site.

May 2021



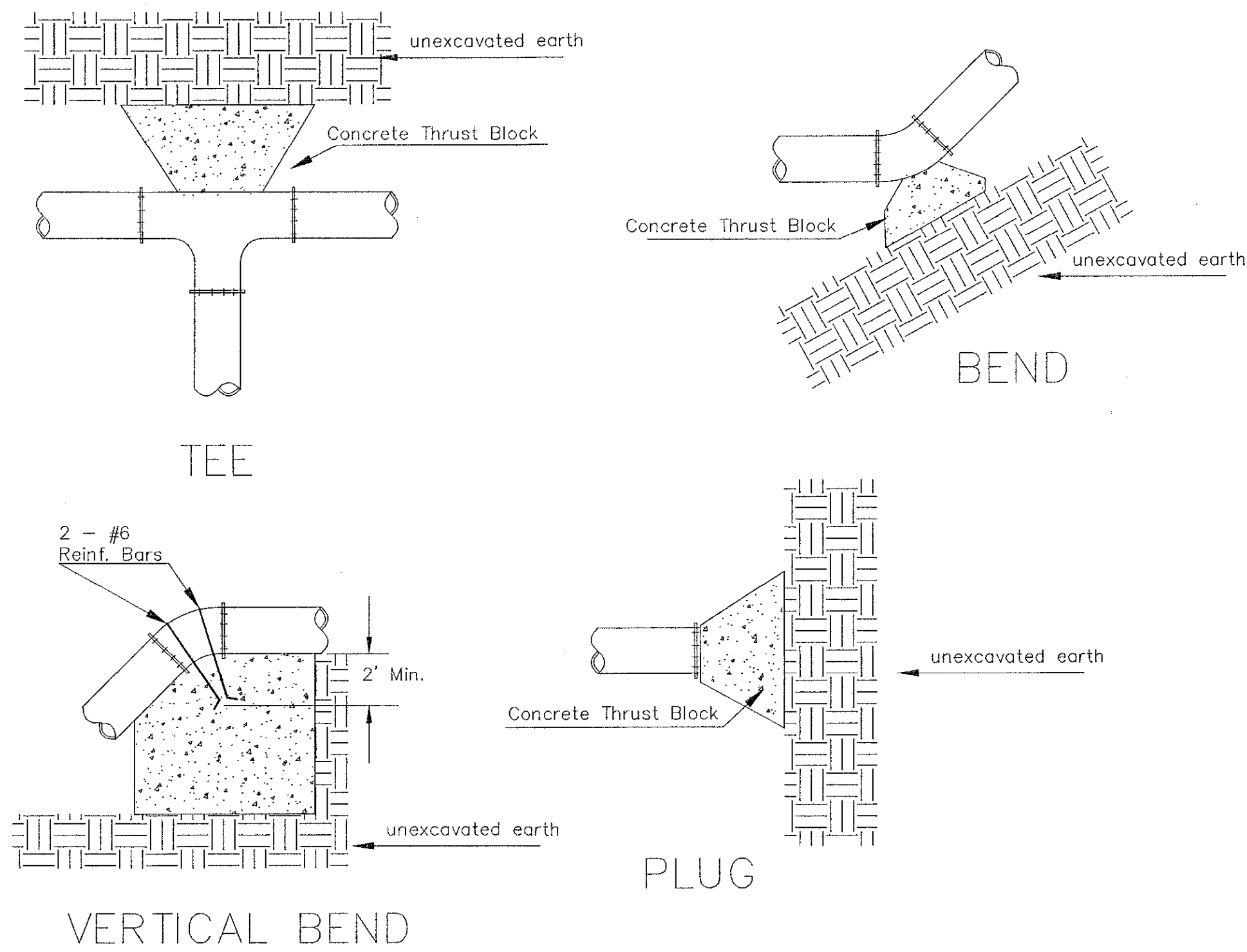
CIVIL ENGINEERS | LAND SURVEYORS | LANDSCAPE ARCHITECTS  
800 EAST 1ST STREET STE. 240 | WICHITA, KANSAS | P. 316.722.4472

BUILT PER PLAN



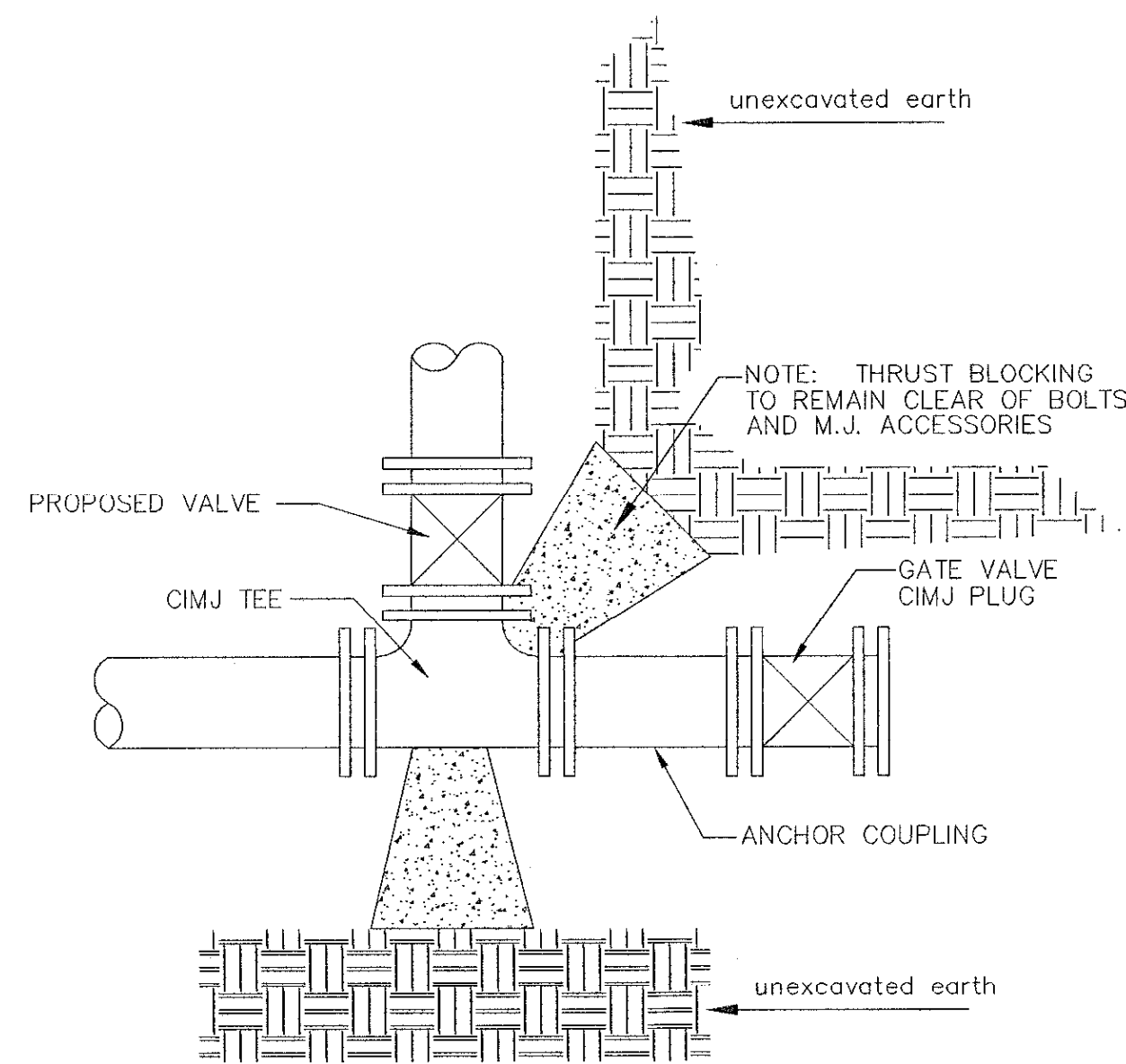






PIPE SIZE	THRUST AT FITTINGS IN TONS - AT 150#/IN <sup>2</sup> P					
	PLUG	90°	45°	22 1/2°	11 1/4°	TEE
6"	2.8	3.95	2.15	1.09	.55	2.8
8"	4.9	6.95	3.75	1.90	.96	4.9
12"	11.4	16.1	8.75	4.45	2.25	11.4
16"	20.15	28.5	15.4	7.85	3.95	20.15
20"	31.15	44.0	23.85	12.15	6.10	31.15
24"	44.55	63.0	34.1	17.4	8.75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

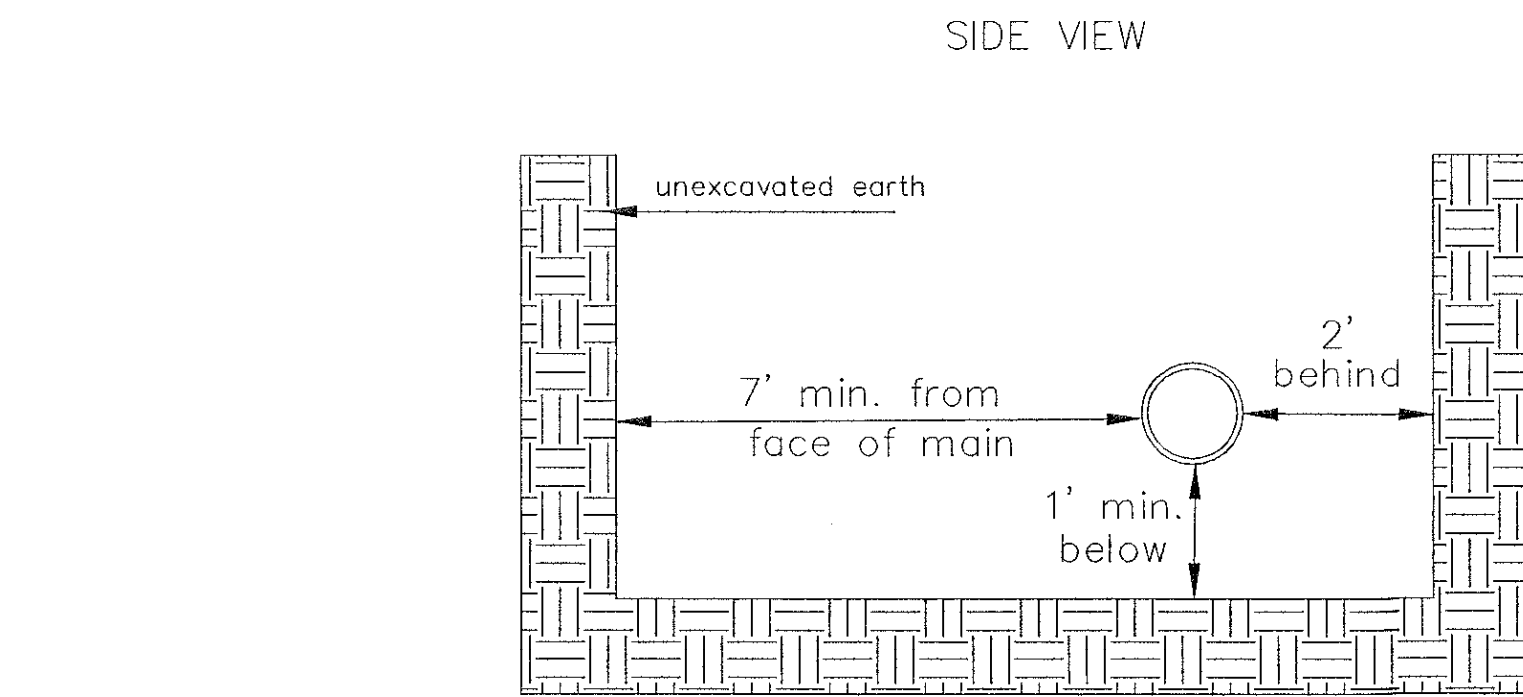
TYPICAL THRUST BLOCKS



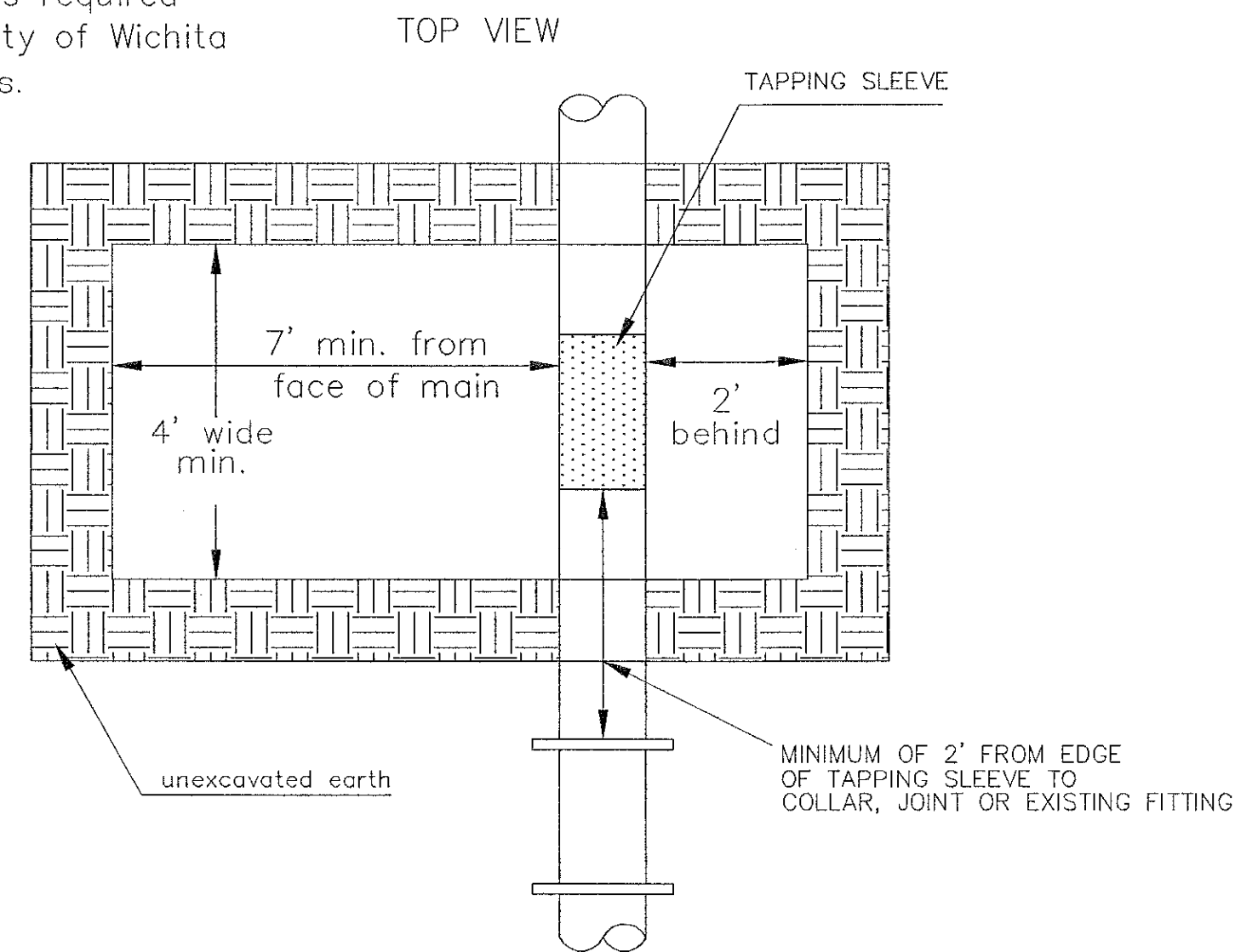
KEY BLOCK DETAIL

\* PLANS GOVERN  
UNLESS OTHERWISE NOTED ON PLANS

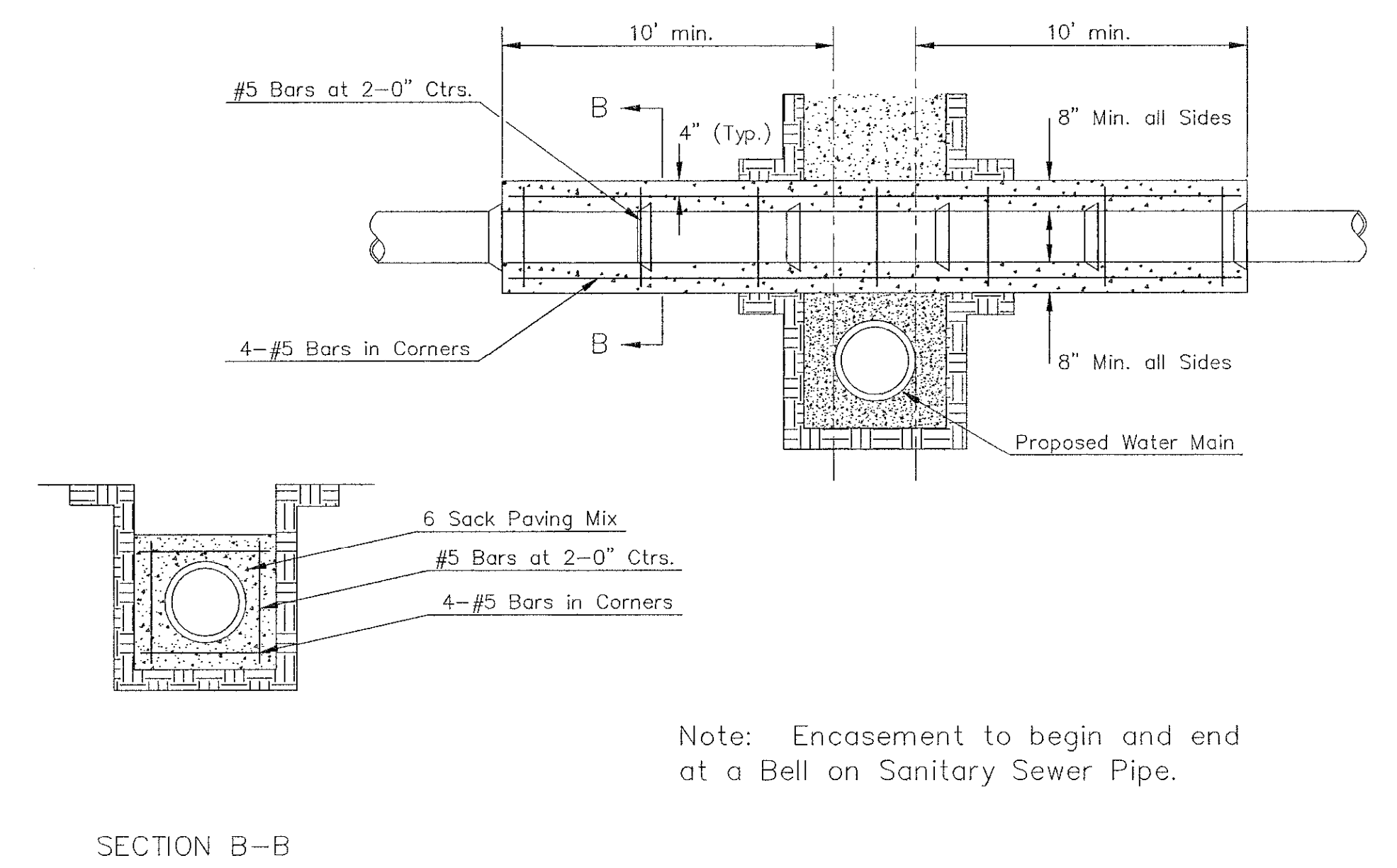
TRENCH COMPACTION IN ROAD RIGHT-OF-WAY



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



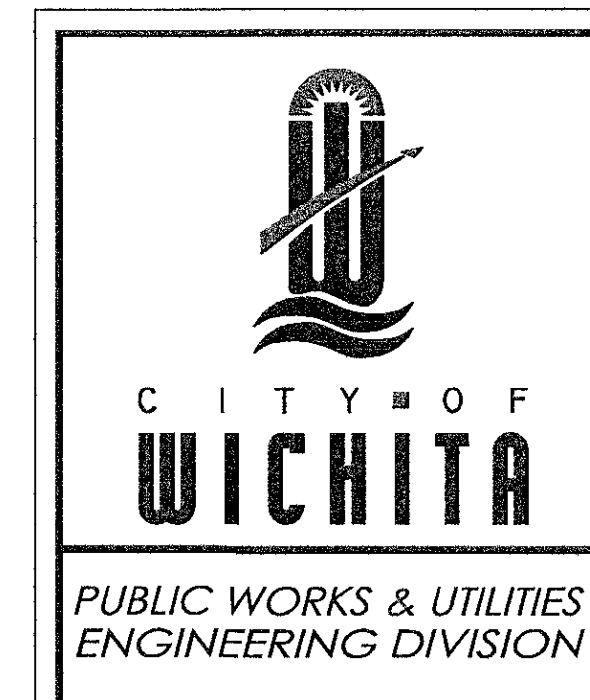
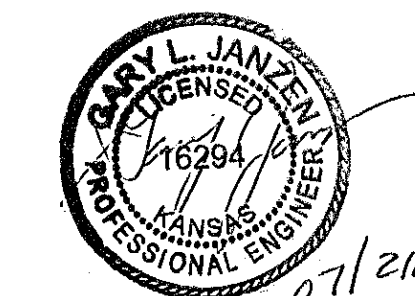
EXCAVATION FOR WET TAP



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

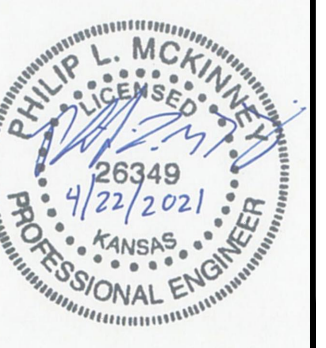
REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER

PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS

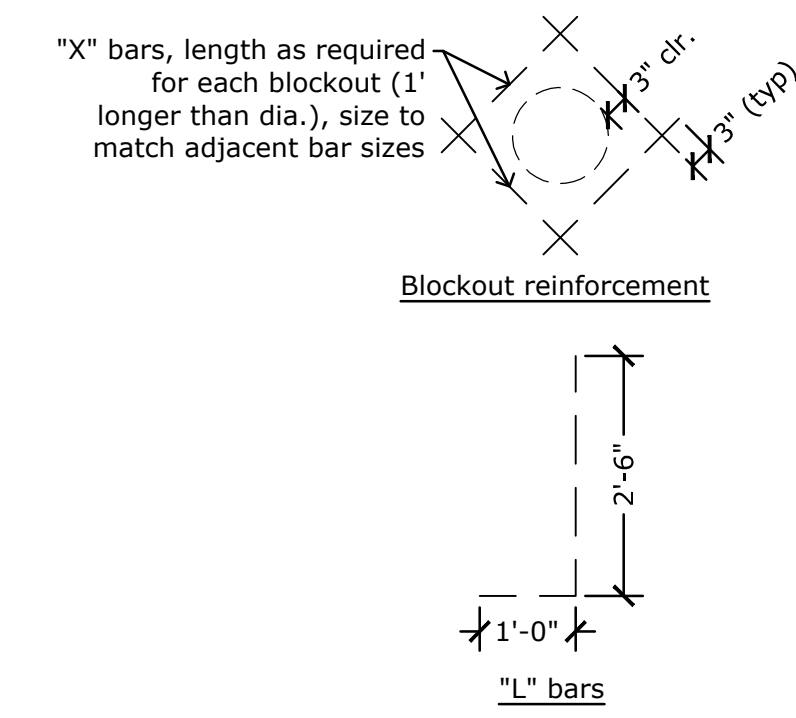
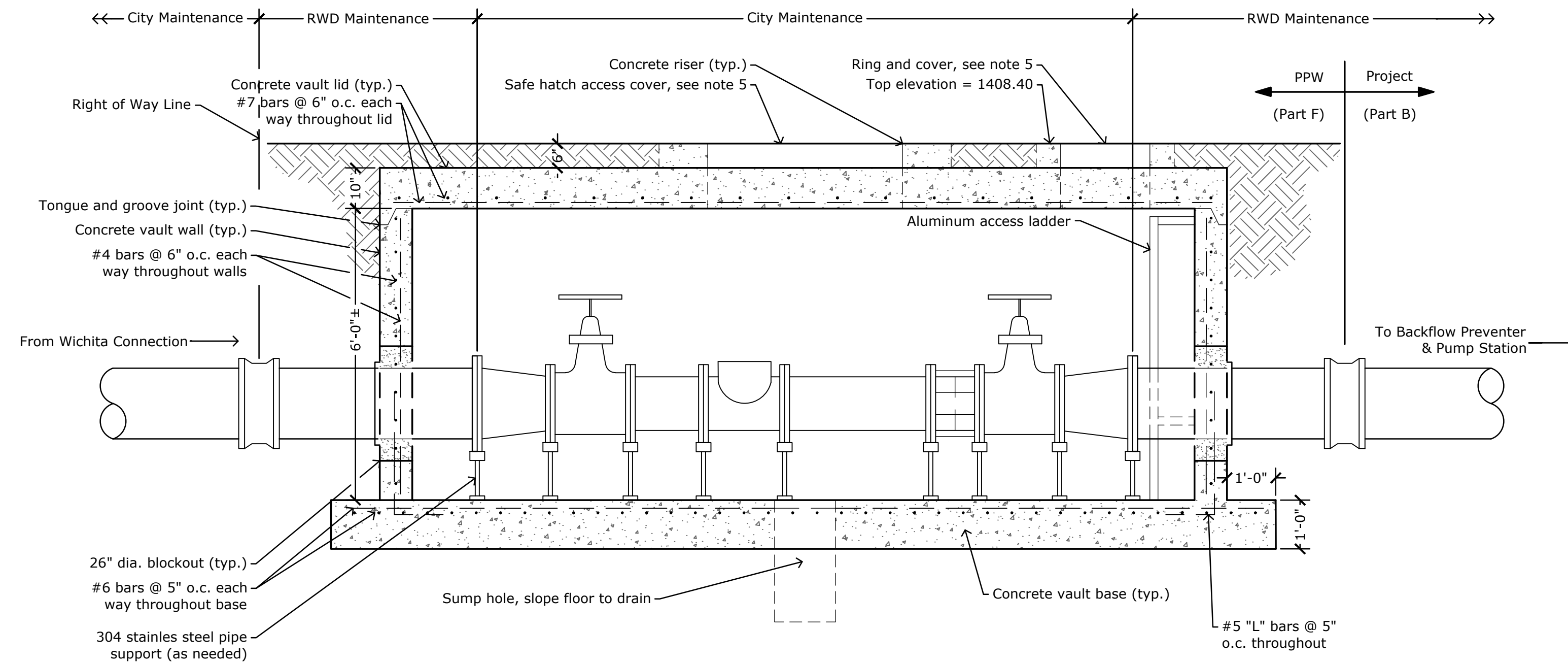


MISCELLANEOUS WATER DETAILS		
CITY ENGINEER		
GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
2020-032738PPW	54030980	May 2021
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		PPW4

REVISED: JULY 2015



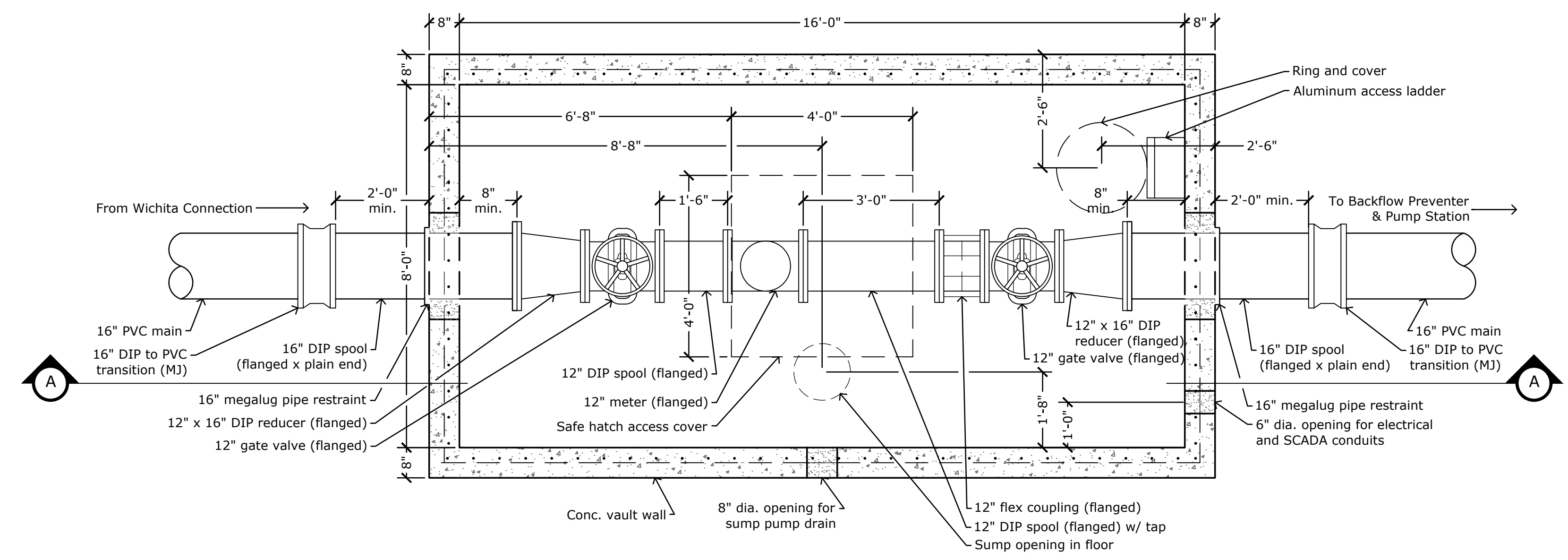
2020 NEW SUPPLY PIPELINE AND PUMP  
STATION IMPROVEMENTS (PART F)  
for BUTLER RURAL WATER DISTRICT NO. 5  
by City of Wichita



**PUMP STATION METER VAULT (SECTION A-A)**

Scale: 1/2" = 1'-0"

- Notes:
- The vault shall be cast-in place concrete, concrete blocks with voids completely filled with 2500 psi concrete or approved precast structure.
  - Provide Deeter 1261, EJ 1936z1, Neenah R-6034 or US Foundry APS-30x30 for manhole ring and cover. Provide Halliday WZR series or approved equivalent for safe hatch access cover. All joints of concrete to 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 the as-builts submitted by the inspecting engineer. Such fittings shall be a min. of 2' from the exterior wall of vault.
  - The Contractor shall provide an outlet flange connection as shown 8" min. from the inside wall. The inlet and outlet pipe shall be ductile iron pipe, cement lined, Class 150 per Standard Specifications and shall be continuous through vault and joint no less than 2' from the exterior wall of vault. Flanges of inlet and outlet pipe 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.
  - The Contractor shall install a MegaLug, restrained joint or approved equivalent on the exterior walls of the vault, which shall be manufactured of ductile iron conforming to ASTM A536-80, heat treated to a min. hardness of 370 BHN and have a working pressure of at least 250 psi.
  - All valves, meters, assemblies and fittings shall be provided with sufficient concrete or other approved supports to the vault floor.
  - The Contractor shall install a "Confined Space Warning" sign on lid adjacent to hatch opening. Sign shall conform to current OSHA and City of Wichita requirements. Acceptable materials: aluminum 73415HH, plastic 73439HH or SA vinyl 73463HH.
  - Ultrasonic meter will be purchased from City of Wichita and installed by Contractor.
  - Concrete top shall be removable. Provide 4 permanent lifting lugs.
  - Grout openings around pipes with non-shrink grout.
  - Provide 2-20A GFCI protected circuits with small, lockable NEMA 3R enclosure on south side of backflow preventer building, outside of fence. Electrical installation shall conform to electrical specifications. Padlock(s) to be provided by City. See electrical plans. Work is subsidiary to pump station site electrical bid item (Part D).
  - Install 2" Sch. 40 conduit between vault and backflow preventer building for SCADA control cable. Install cable from meter through backflow preventer building to SCADA system in pump station. Connect meter to RWD SCADA system. Work is subsidiary to pump station site electrical bid item (Part D).
  - Antenna for meter to be installed directly below vault lid. Coordinate with City for exact location.
  - Install 1/2 HP sump pump. Pump shall be plug-in type (not hardwired). Connect pump discharge to drain line from backflow preventer building. Install flood switch for SCADA system. Install manufactured sump basin in hole and pour concrete floor in bottom of vault, sloped to drain.
  - 12" piping in vault including reducers, spools, valves and other appurtenances (originally included in "Vault Piping" Bid Item) will be supplied by City and installed by Contractor. 16" piping is included in other bid items. Contractor shall supply and install all pipe supports and other items for vault.
  - All piping, fittings and appurtenances in Right-of-Way along with 12" x 16" reducers, 12" piping, meter (including antenna), 12" valves and associated appurtenances in vault will be owned and maintained by the City of Wichita. All other piping and equipment, including the vault itself, will be owned and maintained by Butler Rural Water District #5.



**PUMP STATION METER VAULT (PLAN VIEW)**

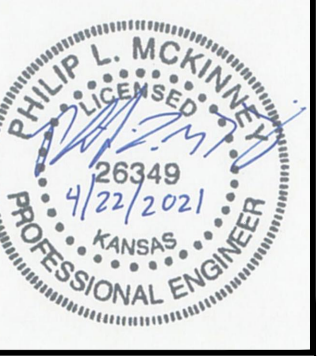
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Revisions:

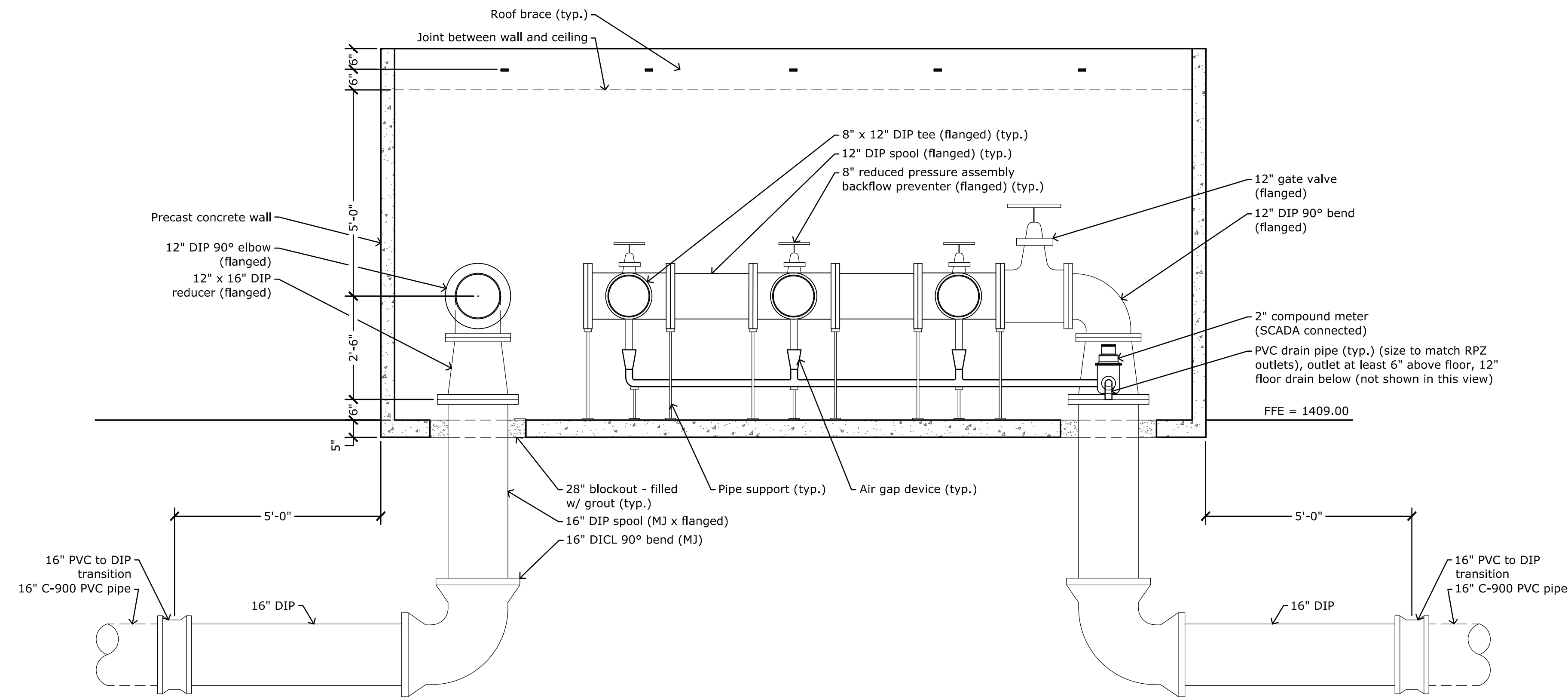
Date:	May 2021
Schwab-Eaton Project Number:	19.089
Drawn By:	PLM
Checked By:	CDM

Sheet Name:  
Meter Vault

Sheet No.:  
**PPW5**

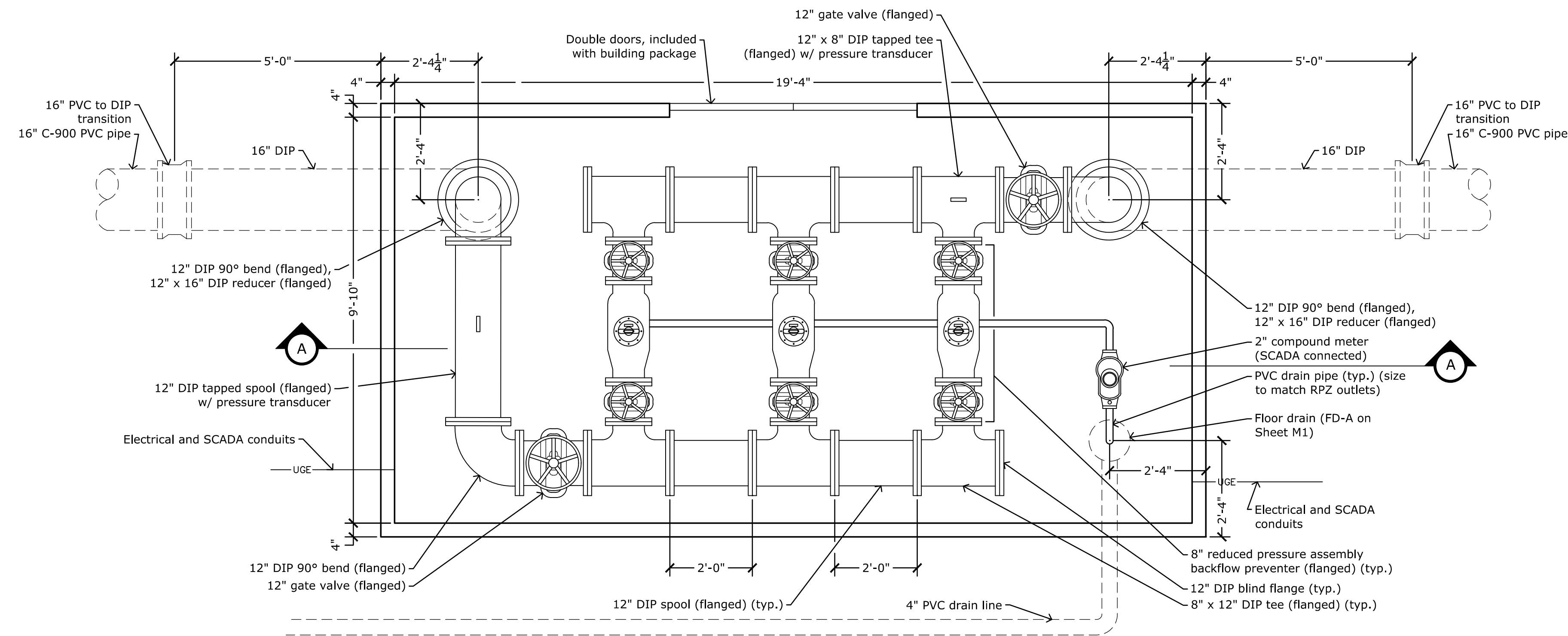


2020 NEW SUPPLY PIPELINE AND PUMP  
STATION IMPROVEMENTS (PART F)  
for BUTLER RURAL WATER DISTRICT NO. 5  
by City of Wichita



**PUMP STATION METER/VALVE BUILDING (SECTION A-A)**

Scale: 1/2" = 1'-0"



**PUMP STATION BACKFLOW PREVENTER BUILDING (PLAN VIEW)**

Scale: 1/2" = 1'-0"

- Notes:
1. Precast concrete building shall be 10.5' x 20' Schweitzer by CXT, Inc. or approved equivalent. See Sheets 44 and 45 of the Project plans (Parts A-E).
  2. Provide double doors centered on west side of building. Key lock(s) to match those of pump station building.
  3. Provide building manufacturer's optional electrical and HVAC packages, along with outdoor security light and electrical supply for SCADA, meter vault, interior lighting and outlets, and associated items. HVAC systems shall be appropriately sized with SCADA-compliant thermostat. Security light shall be small LED fixture over door with shielding to prevent light glare on adjacent roadways and properties. Provide interior switch for security light as well as photocell for dusk-dawn operation. Owner will provide SCADA system components to be installed by Contractor. Electrical components shall conform to electrical specifications. Contractor shall complete electrical installation. Provide electrical supply for meter vault; wiring, conduits, labor, etc. shall be subsidiary to pump station site electrical bid item. See electrical plans.
  4. Install SCADA conduits to connect meter vault, backflow preventer building and pump station. Conduits shall be Sch. 40 PVC. Install adequate cabling in conduits to connect all items noted in plan and 2 spare cables. SCADA conduits and cables shall be subsidiary to pump station site electrical bid item. See electrical plans.
  5. Grout openings around pipes with non-shrink grout.
  6. Provide 1" taps with ball valves and 1" tees where indicated. Cap one opening on each tee and install a pressure transducer on other end of each tee. Owner to provide pressure transducers.
  7. Backflow preventers shall be reduced pressure zone type. Provide assemblies with non-rising stem, resilient-seat gate valves. Install three (3) RPZ assemblies and provide one (1) RPZ repair kit to Owner.
  8. Install air gap device manufactured by RPZ manufacturer on each backflow preventer assembly and install PVC drain piping sized to match air gap (2" min.). Route drain piping through 2" compound meter connected to SCADA system. Owner to provide meter. Drain piping shall continue to floor drain and outlet 6" above floor. Install floor drain w/ traps matching those marked FD-A on Sheet M1. Install 4" sch. 40 PVC drain line at 2% min. slope south to daylight.
  9. All piping within 5' of building shall be DIP.

Note: This sheet is a duplicate of the backflow preventer building detail sheet from Part D (Sheet C9). All items on this sheet are FOR INFORMATION ONLY.

Revisions:

Date:  
May 2021

Schwab-Eaton  
Project Number:  
19.089

Drawn By:  
PLM

Checked By:  
CDM

Sheet Name:  
Backflow  
Preventer  
Sheet No.:

PPW6