GENERAL NOTES:

1. The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.

2. 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
Westar Energy	1-800-544-4857

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. If traffic will be impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coon at 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.

11. All elevations shown are NAVD 88.

12. All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.

13. 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.

14. 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.

15. City maintenance of water mains ends at right-of-way or easement line or within two feet of vault.

16. 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.

17. 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 WE-101, cost is subsidiary to pipe installation.

18. 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.

19. 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.

20. 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.

21. 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.

22. Any existing joint exposed during excavation shall be replaced if within four feet of proposed joint.

23. 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.

24. 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.

25. 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.

26. Contractor shall limit the extent of trench openings overnight and weekends to less than 50 feet.

27. Wichita Fire Department inspections may be scheduled by calling 316-268-4441.

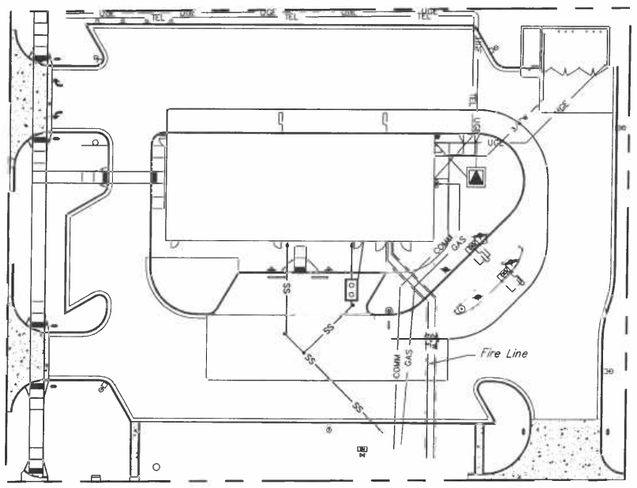
JM EAGLE C-900
SIGMA FITTINGS
PRO-TRACE WIRE
MUELLER (STORZ) FIRE HYD.

FIRE SUPRESSION LINE
to serve
MCDONALD'S

506 N. TYLER RD.

CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer
Project Number
2170 PPW (183021)



Sheet Index

Benchmarks

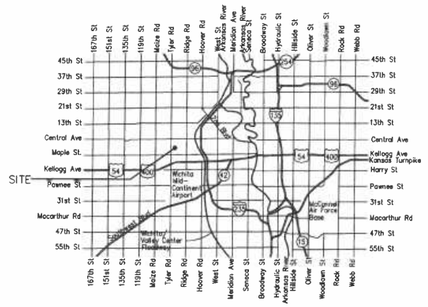
CITY OF WICHITA BENCHMARK: *SQUARE CUT IN CENTER OF CONCRETE HEADWALL OF RCP, NE QUADRANT OF TYLER ROAD & SECOND STREET ELEV.=1324.65 - NAVD88*

BM#1CHISELED SQUARE IN TOP OF CONCRETE CURB, SOUTH CURB LINE, O'RILEY AUTO PARTS PARKING LOT ELEV.=1333.11 - NAVD88

AS BUILTS

Contractor:
Ewertz Excavation
4/24/2019

Project Inspector:
Larry Gann
KEMILLER ENGINEERING PA
117 E. Lewis, Wichita, KS 67202 (316)264-0242



Vicinity Map

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

Engineering Juliann Killman 10-16-18
Utilities [illegible] 10-17-18
Fire Dept. [illegible] 10/12/18

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 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.

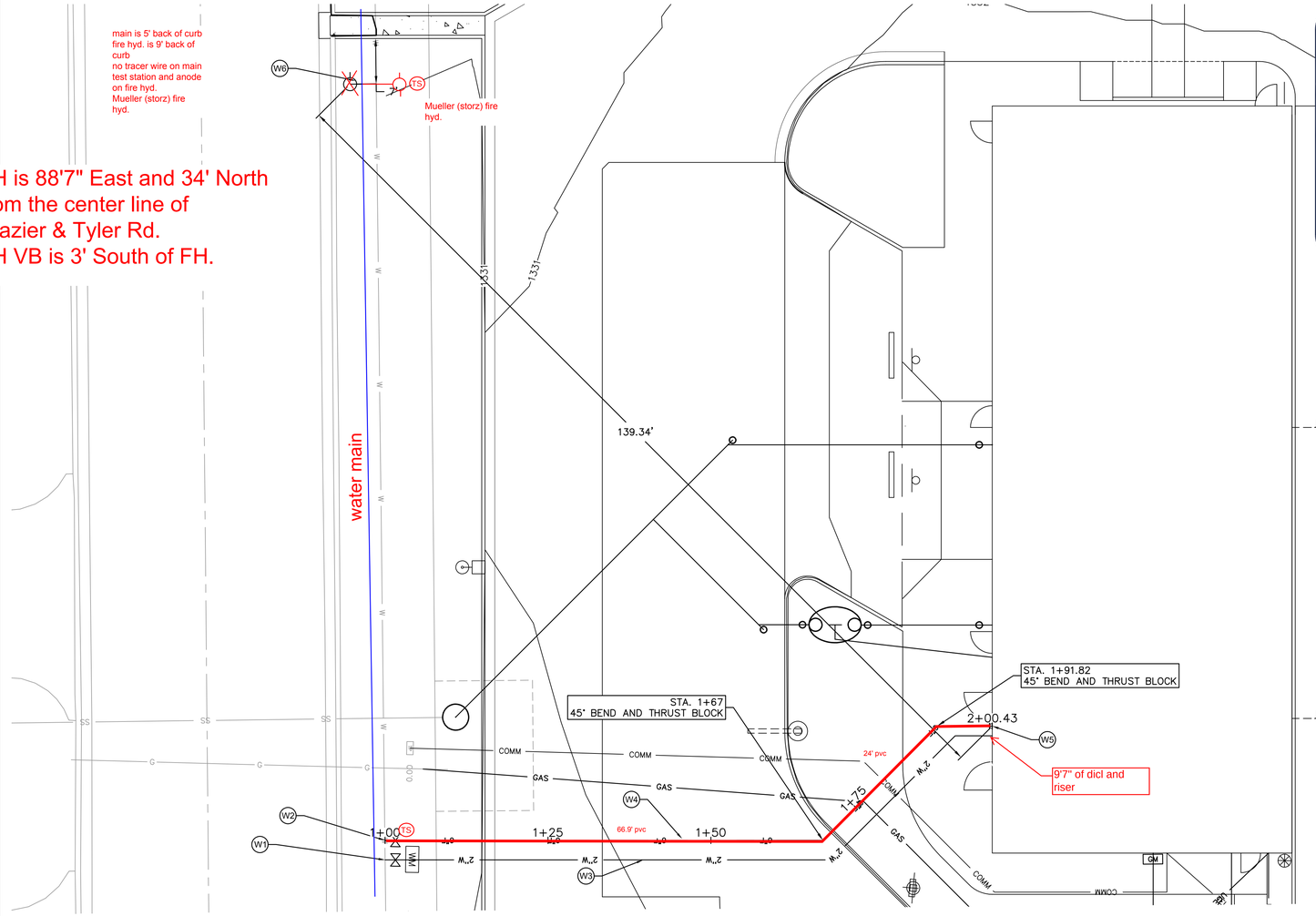
An approved copy of these plans signed by City staff are required on-site.

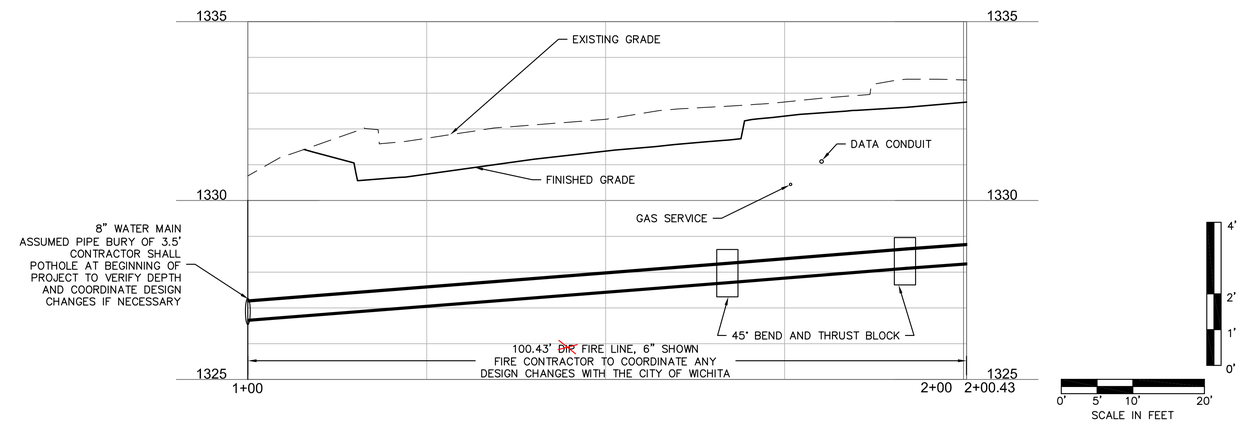
AUGUST 2018

OLSSON ASSOCIATES
302 S 4TH ST, STE 110
MANHATTAN, KS 66502
785.539.6900

main is 5' back of curb
fire hyd. is 9' back of curb
no tracer wire on main
test station and anode on fire hyd.
Mueller (storz) fire hyd.

FH is 88'7" East and 34' North from the center line of Frazier & Tyler Rd.
FH VB is 3' South of FH.





AS BUILTS

KEMILLER ENGINEERING PA
117 E. Lewis,
Wichita, KS 67202
(316)264-0242

UTILITY KEYNOTES

W1 CITY OF WICHITA TO FURNISH AND INSTALL 2" DOMESTIC WATER TAP, METER, AND VALVE. CONTRACTOR TO REIMBURSE

W2 CITY OF WICHITA TO FURNISH AND INSTALL TAP FOR FIRE LINE, THRUST BLOCK, AND VALVE. CONTRACTOR TO REIMBURSE

W3 INSTALL 110 LF 2" TYPE K COPPER WATER LINE, MIN. 3.5' BURY, RE MEP FOR BUILDING CONNECTION

W4 INSTALL 100.43 LF 6" DIP FIRE LINE, MIN. BURY 3.5', 2--45° BENDS AND THRUST BLOCKS
– FINAL SIZE AND CONNECTION BY FIRE CONTRACTOR

W5 FIRE DEPARTMENT SPRINKLER CONNECTION, RE MEP

W6 CITY OF WICHITA TO FURNISH AND INSTALL TAPPING SLEEVE AND VALVE, CONTRACTOR TO REIMBURSE
CONTRACTOR SHALL FURNISH AND INSTALL FIRE HYDRANT PER CITY OF WICHITA SPECIFICATIONS
CONTRACTOR SHALL POTHOLE EXACT LOCATION OF WATER MAIN TO ENSURE ADEQUATE SPACING FOR HYDRANT BEHIND CURB, IF SPACING IS INADEQUATE HYDRANT SHALL BE INSTALLED ON THE NORTH SIDE OF THE MAIN PER CITY OF WICHITA MINIMUMS.

BY	DESCRIPTION	DATE	REV
RY	REVISION TO CITY REVIEW	9/21/18	A

MARK A. BACHAMP
LICENSED
9-21-18
11495
KANSAS
PROFESSIONAL ENGINEER

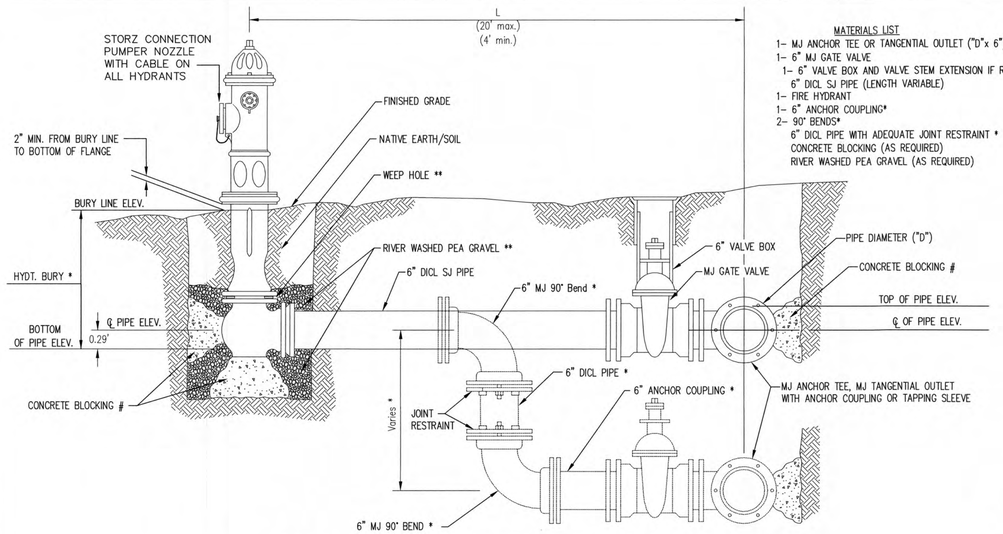
OLSSON ASSOCIATES
302 S. 4th Street, Suite 110
Manhattan, Kansas 66502
TEL 785.539.6900
FAX 785.539.6901
www.olssonassociates.com

PREPARED FOR:
McDonald's USA, LLC

DRAWN BY	RMY
STD ISSUE DATE	07/25/2018
REVIEWED BY	MB
DATE ISSUED	07/25/2018

SHEET NO.
TITLE: PPW PLAN AND PROFILE SHEET
DESCRIPTION: 2018 45x114 PROTOTYPE BUILDING
SITE ID: 15-0060
SITE ADDRESS: 506 TYLER ROAD, WICHITA, KS

DWG: F:\2017\2001-2500\017-2012\40-Design\AutoCAD\Final Plans\Sheets\GNCV\C_UTL_72012.dwg
DATE: Oct 16, 2018 10:13am
XREFS: c_tblk_72012 C_DBASE_172012 C_PBASE_172012
USER: ryenni



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" DICL SJ PIPE (LENGTH VARIABLE)
1- FIRE HYDRANT
1- 6" ANCHOR COUPLING*
2- 90° BENDS*
6" DICL PIPE WITH ADEQUATE JOINT RESTRAINT *
CONCRETE BLOCKING (AS REQUIRED)
RIVER WASHED PEA GRAVEL (AS REQUIRED)

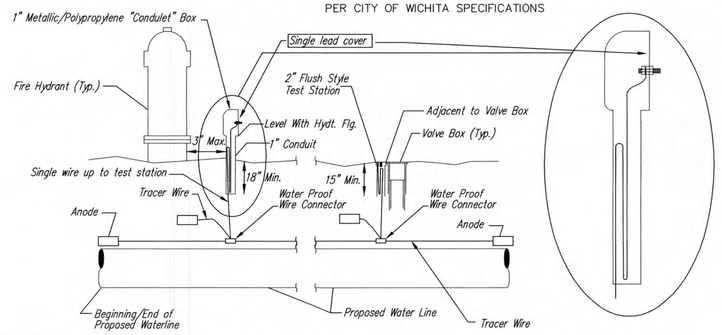
* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DICL PIPE AS 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.

FIRE HYDRANT ASSEMBLY

PER CITY OF WICHITA SPECIFICATIONS



TRACER WIRE

Conductive type pipe locator/tracer wire shall be install 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 # T2PH7B1LP 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 install 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.*

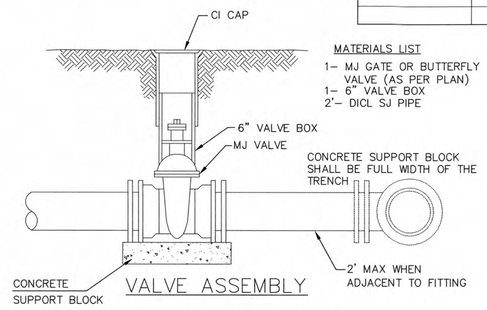
ANODES

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

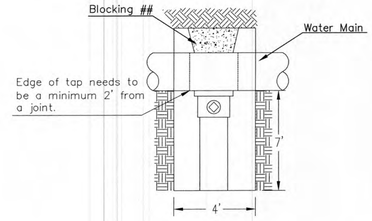
COST IS SUBSIDIARY TO PIPE INSTALLATION

FIRE HYDRANTS REQUIRED				
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*



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

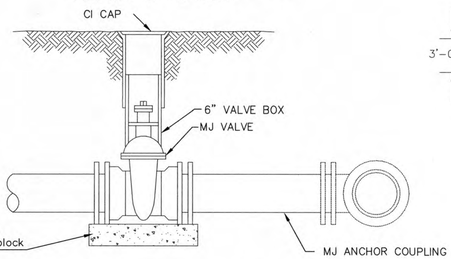
VALVE ASSEMBLY



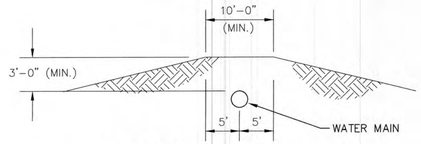
CITY TAP

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

MATERIALS LIST
1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
1-MJ ANCHOR COUPLING (12" OR SMALLER)
1-6" VALVE BOX
CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

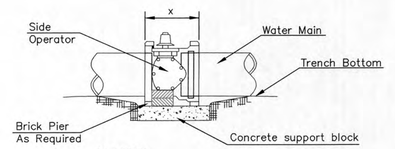


ANCHORED VALVE ASSEMBLY



PROTECTIVE FILL DETAIL

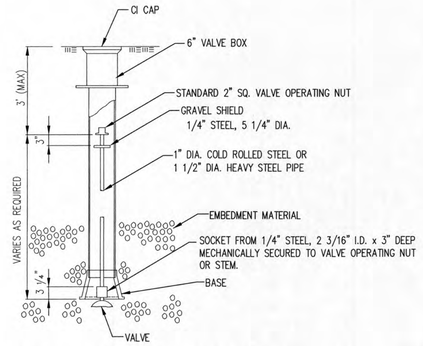
MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE COVER OVER THE PROP. WATER LINE IS LESS THAN 3'. (COST SUBSIDIARY TO PIPE INSTALLATION)



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.

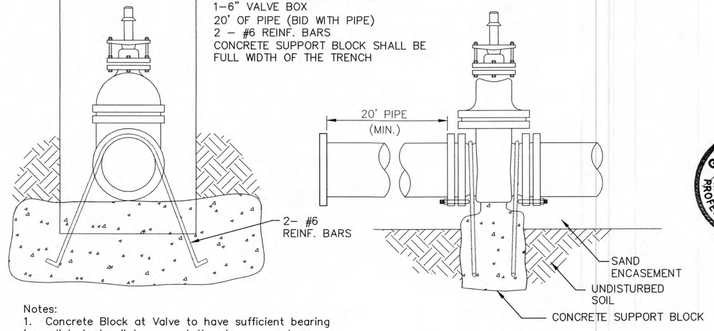
CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION



VALVE STEM EXTENSION DETAIL

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

MATERIALS LIST
1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
1-CIMJ 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



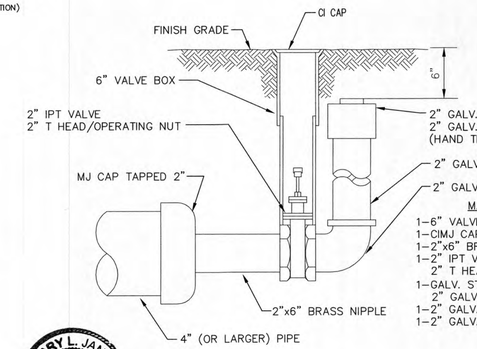
Notes:
1. Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.

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.

THRUST AT VALVES	
VALVE	THRUST AT 150 #/in²
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

ANCHORED VALVE ASSEMBLY, SPECIAL



MATERIALS LIST
1-6" VALVE BOX
1-CIMJ CAP
1-2"x6" BRASS NIPPLE
1-2" IPT VALVE
2" T HEAD/OPERATING NUT
1-GALV. STREET EL.
2" GALV. PIPE (AS REQUIRED)
1-2" GALV. COUPLING
1-2" GALV. PLUG (HAND TIGHTENED)

2" BLOWOFF ASSEMBLY

GARY L. JANZEN LICENSED 16284 KANSAS PROFESSIONAL ENGINEER
10/27/16

REVISED: OCTOBER 2016

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD WATER ASSEMBLY DETAIL

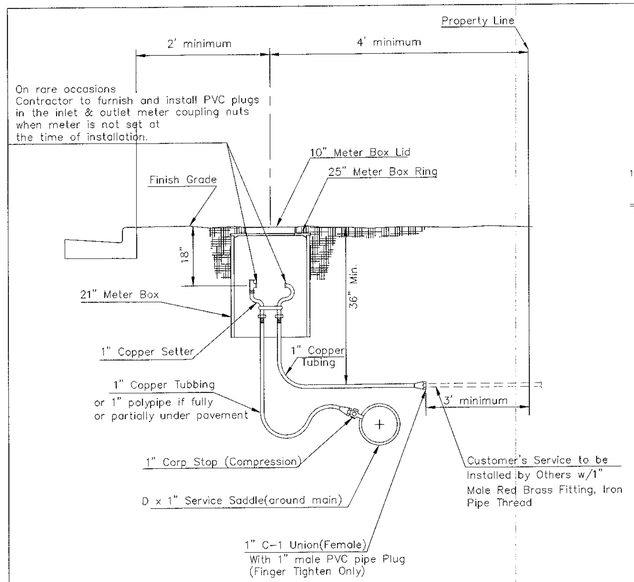
CITY ENGINEER
GARY JANZEN, P.E.

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

WL-101



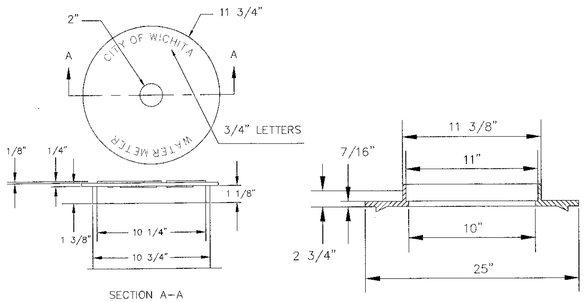
Minimum length of pigtail on consumer side is 36" of copper tubing from meter set.

Bore hole under paving shall be a maximum of 2" in diameter and a minimum of 36" below top of pavement.

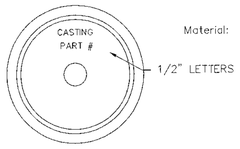
Service Saddles are required on all mains.

Meter boxes will be located on each lot to be served, as indicated in the SPECIAL PROVISIONS

TYPICAL 1" METER SETTING



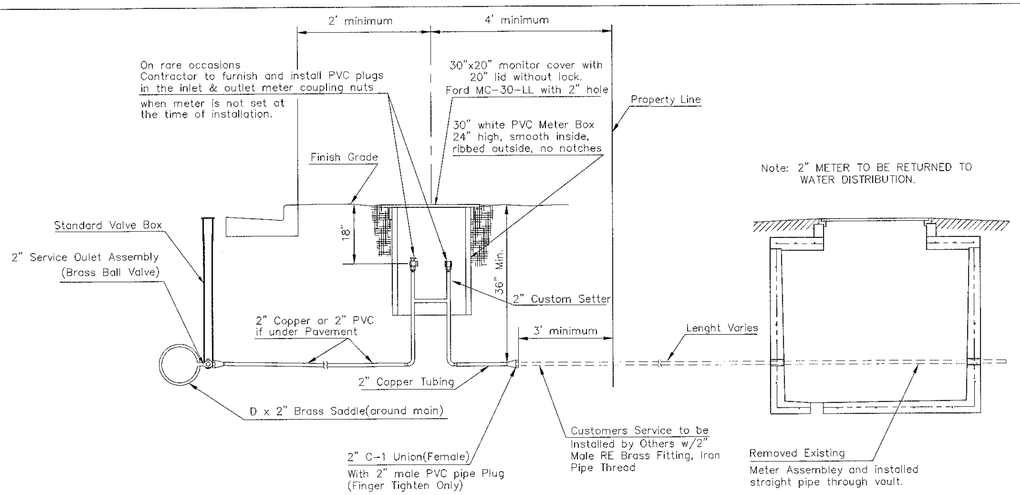
SECTION A-A



BOTTOM VIEW

Material: Cast Iron

NOT TRAFFIC RATED
RING & LID FOR 1" METER BOX

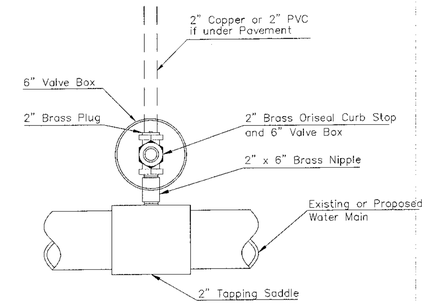


TYPICAL 2" METER SETTING

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'.



Note: Where the 2" Service Outlet Assembly is to be used to connect a 2" main to another main, the 2" valve shall be a 2" IPT Gate Valve. 2" ball or globe vavles shall not be approved for this use.

2" SERVICE OUTLET ASSEMBLY

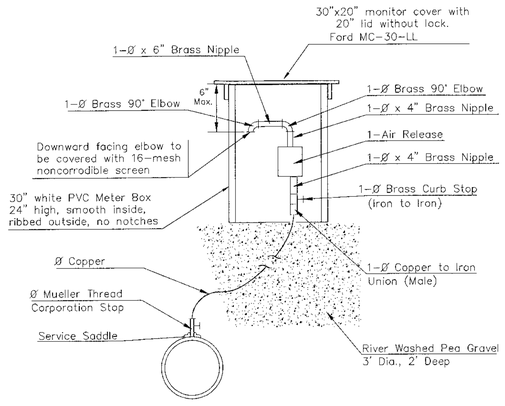
TOP VIEW

1 – Ø Mueller Thread Corporation Stop
– Ø Type "K" Copper Tubing
1 – Ø Copper to Iron Union (Male)
1 – Ø Brass Curb Stop (Iron to Iron)
2 – Øx4" Brass Nipple

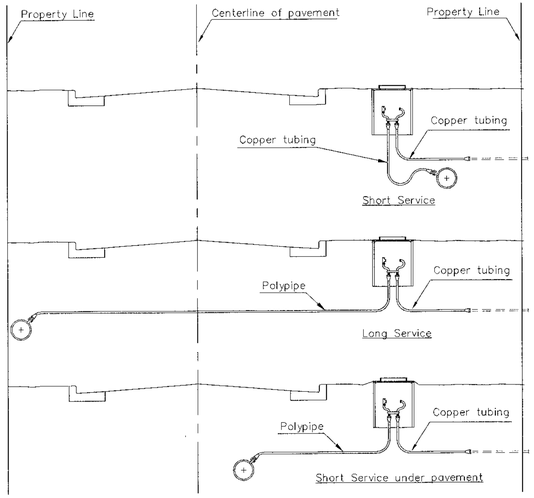
Air Release
2 – Ø Brass Elbows (90°)
1 – 1"x6" Brass Nipple
1 – 30" Monitor Cover
1 – 20" Meter Lid

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 RELAEASE ASSEMBLIES WILL BE SPECIFICALLY DESIGNED FOR PROJECTS WITH LARGER MAINS, AND WILL BE INCLUDED IN THE PLANS.



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



SERVICE TYPES

GARY L. JANZEN LICENSED KANSAS PROFESSIONAL ENGINEER 16294 01/26/15

REVISED: JANUARY 2015

CITY OF WICHITA

PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STANDARD
WATER SERVICE
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

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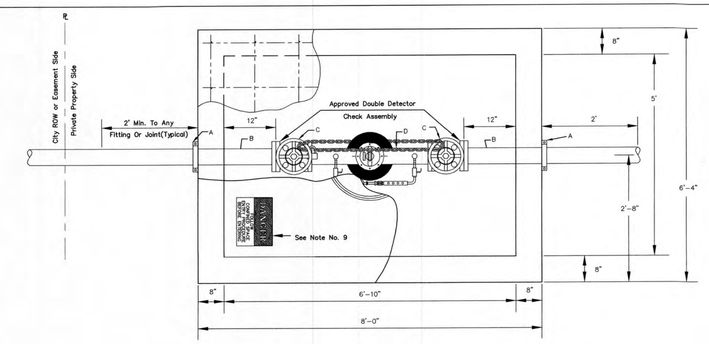
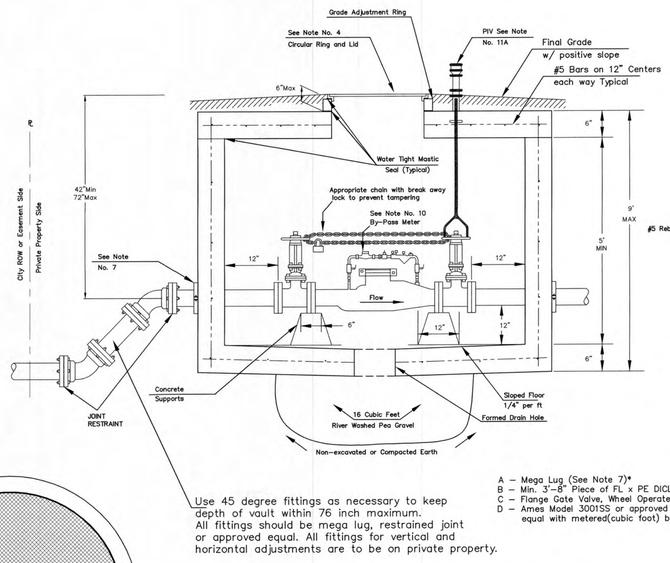
_ of _

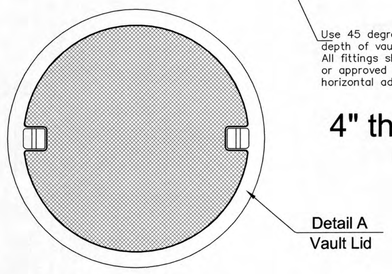
WL-102

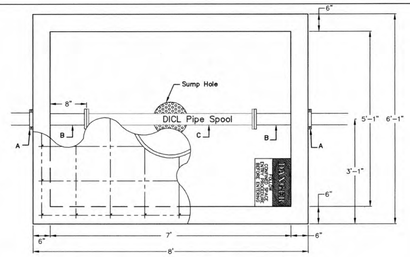


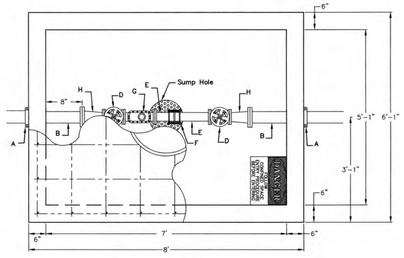


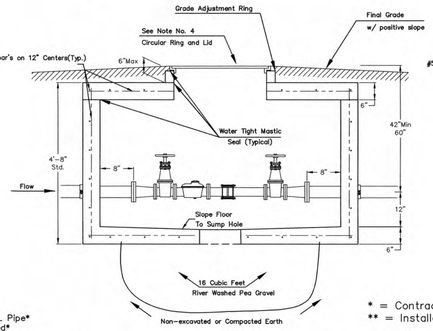
A – Mega Lug (See Note 7)*
B – Min. 3'–8" Piece of FL x PE DICL Pipe*
C – Flange Gate Valve, Wheel Operated*
D – Ames Model 3001SS or approved equal with metered(cubic foot) by–pass assembly*

4" thru 8" Fire Service







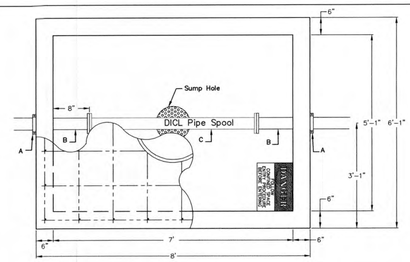


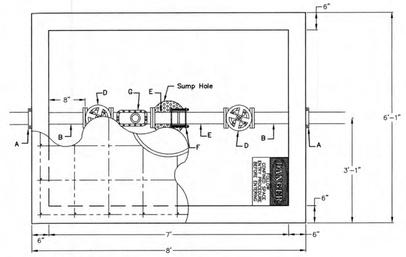
A – 4" Vault Clamp*
B – Min. 3' Piece of 4" FL x PE DICL Pipe*
C – 4" DICL Flanged Pipe Spool*
D – 3" Flange Non–rising Stem Gate Wheel Valve**
E – 3" FL x PE Pipe**
F – 3" Flex Coupling**
G – 3" Badger Recordall II Turbo Cubic Foot Meter with AMR Register with a ADE on the register.**
H – 3" x 4" FL Reducer**

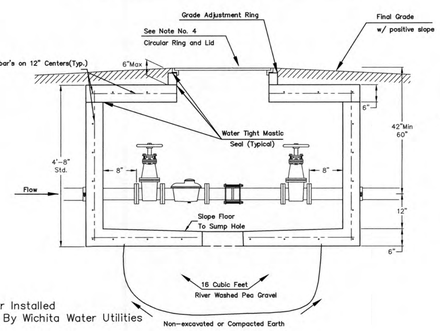
3" Domestic Service

NOTE:

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



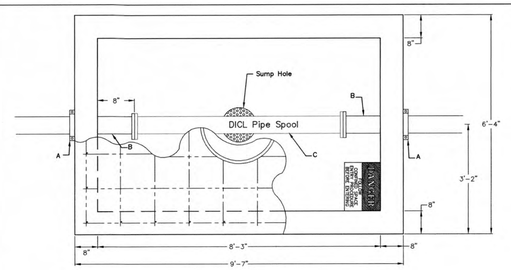


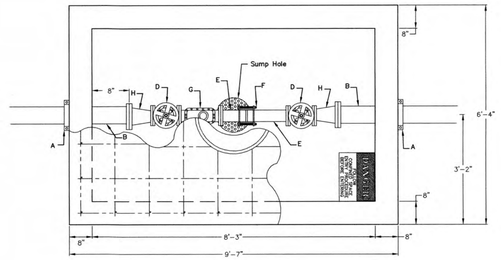


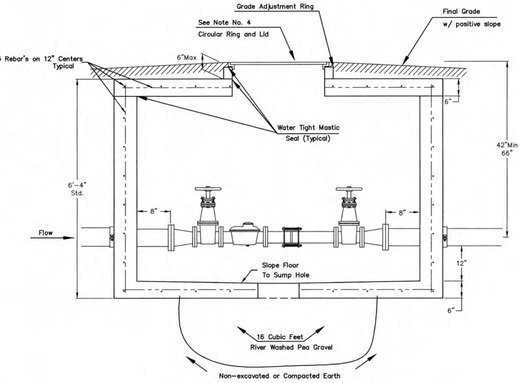
A – 4" Vault Clamp*
B – Min. 3' Piece of 4" FL x PE DICL Pipe*
C – 4" DICL Pipe Spool*
D – 4" Flange Non–rising Stem Gate Wheel Valve**
E – 4" FL x PE Pipe**
F – 4" Flex Coupling**
G – 4" Badger Recordall II Turbo Cubic Foot Meter with AMR Register with a ADE on the register.**

4" Domestic Service

* = Contractor Installed
** = Installed By Wichita Water Utilities







A – 6" Mega Lug (See Note 7)*
B – Min. 3' Piece of 6" FL x PE DICL Pipe*
C – 6" DICL Pipe Spool*
D – 4" Flange Non–rising Stem Gate Wheel Valve**
E – 4" FL x PE Pipe**
F – 4" Flex Coupling**
G – 4" Badger Recordall II Turbo Cubic Foot Meter with AMR Register with a ADE on the register.**
H – 6" x 4" FL Reducer**

6" Domestic Service with 4" meter

Notes For All Services – 3" thru 12":

1. When the standard vault dimensions are not applicable, such as when additional space is required for special pipe, fittings, additional meters, etc. the consultant design engineering shall design a vault with the required dimensions for Public Works and Utilities approval.
2. The vault shall be poured concrete, cement blocks (voids to be completely filled with 2500 P.S.I. concrete), or approved precast structure. The intent of these details shall not be limited by drawings or standards of precast structures.
3. Any vault located in pavement must be traffic rated unless it is protected. Traffic rated vaults must be design and approved by Public Works and Utilities.
4. The manhole ring and lid shall be Neenah R–6034 Frame with Type "C" Solid Lid and Drop Down Handle or US Foundry APS–30x30 (Aluminum) or Deeter 1261 or EJ 1936z1(with pick hole(s) as shown in Detail A). Where applicable the standard 10" Public Works and Utilities pattern meter reading lid and ring shall be located directly above water meter register. All joints of concrete to concrete or metal to concrete in the construction of the vault shall have a approved water tight mastic joint seal.
5. 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 minimum of 2' from the exterior wall of vault.
6. 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 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.
7. 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 ASTM A 536–80, heat treated to a minimum hardness of 370 BHN and have a working pressure of a least 250 P.S.I. For a services smaller than 4" the contractor shall install an approved vault clamp on the exterior walls of the vault.
8. All valves, meters, assemblies and fitting shall be provided with sufficient concrete or other approved supports to the vault floor.
9. The "Confined Space Warning" sign shall be fastened to the top of all vaults. If necessary for landscaping or site consideration, 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.
10. All meters shall have a electronic read register compatible with the current City of Wichita meter reading system. All detector meters shall be on 5/8 cubic foot Badger meter with AMR register with a ADE on the register and 25' long Itron cord and plug or approved equal. Gallon meters shall not be accepted.
11. Additional Notes For Fire Services
    A. A post indicator valve (PIV) is an option for the outlet valve. It is not required by the City of Wichita ordinance, it can be requested by the owner and will be allowed at the discretion of the City Engineer.
    B. When Siamese connections are required by the Wichita Fire Department, refer to the current City Code Section 15.
    C. 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 a appropriate automatic sump pump or approved equal, as well as any other appurtenances required to make such system function as intended.

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
10/27/16

REVISED: OCTOBER 2016

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD VAULT DETAILS AND METER ASSEMBLIES

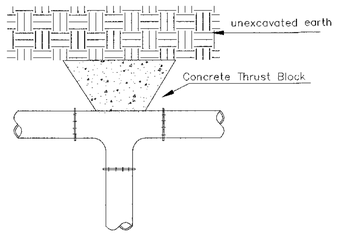
CITY ENGINEER
GARY JANZEN, P.E.

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

WL-103



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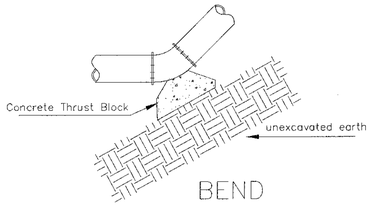
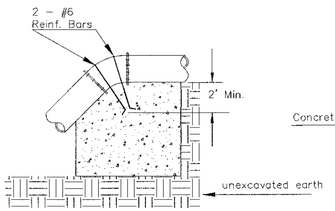
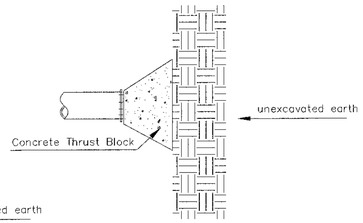


BEND



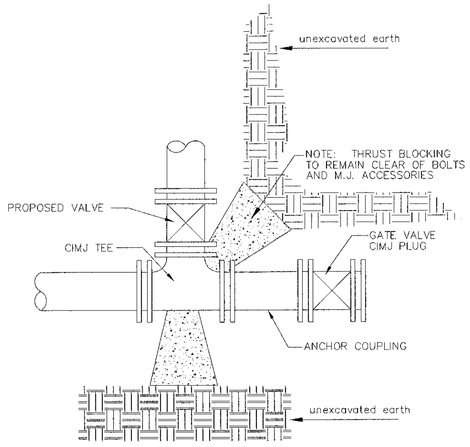
VERTICAL BEND



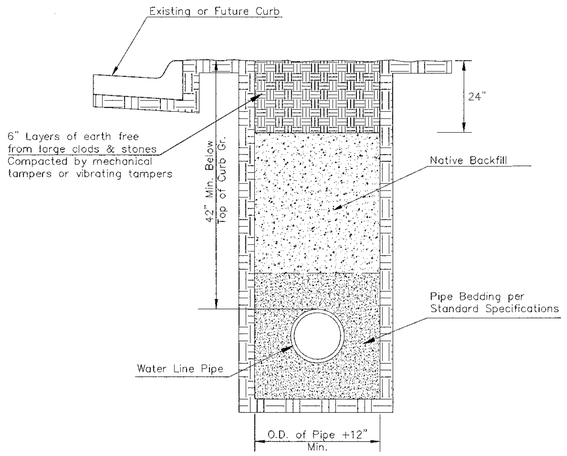
PLUG

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

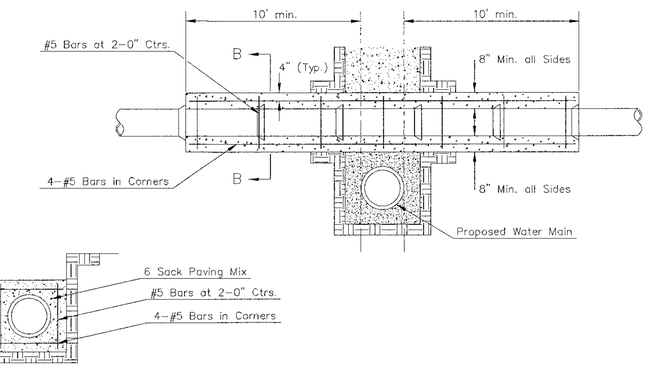
TYPICAL THRUST BLOCKS



KEY BLOCK DETAIL



TRENCH COMPACTION IN ROAD RIGHT–OF–WAY

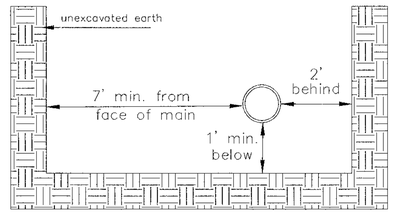


SECTION B–B

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

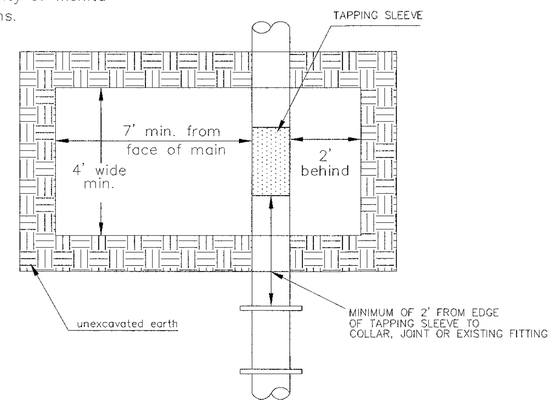
REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER

SIDE VIEW

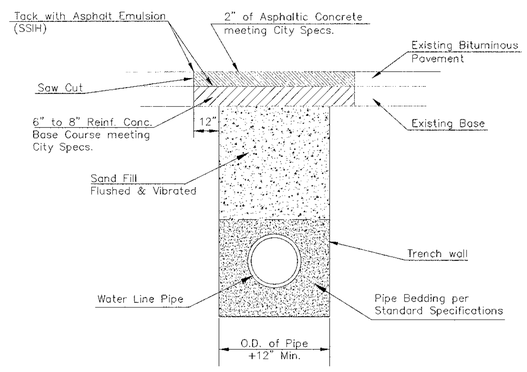


Note: When shoring is required it is to be per The City of Wichita Standard Specifications.

TOP VIEW



EXCAVATION FOR WET TAP



PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS

* PLANS GOVERN
UNLESS OTHERWISE NOTED ON PLANS

GARY L. JANZEN LICENSED 19294 KANSAS PROFESSIONAL ENGINEER
07/21/15

REVISED: JULY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

MISCELLANEOUS WATER DETAILS

CITY ENGINEER
GARY JANZEN, P.E..

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
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WL-104