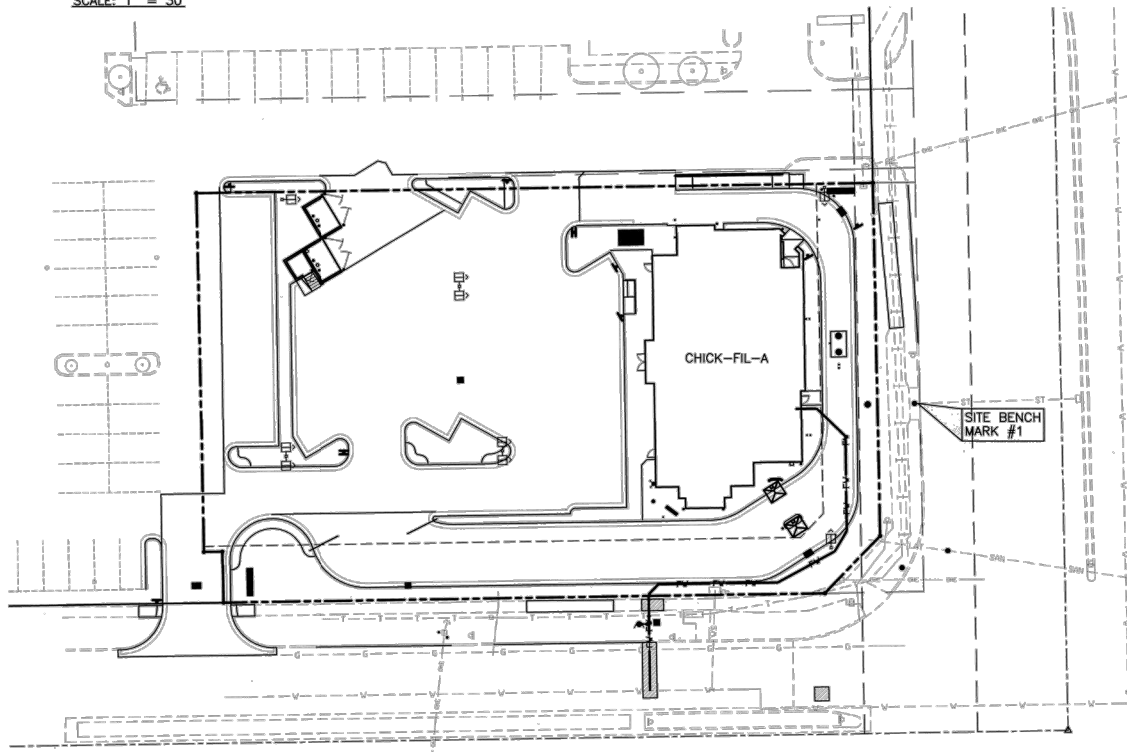


AS BUILT PLANS
 CONTRACTOR: UTILITIES PLUS
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-27-2011

WATER LINES AND FIRE HYDRANTS TO SERVE CHICK-FIL-A STORE #2817

LOT 30, BLOCK 3
 PRIVATE PROJECT: 1620 PPW (607853)

CITY OF WICHITA, KANSAS
 JAMES ARMOUR, P.E. CITY ENGINEER
 SEPTEMBER, 2011



SITE BENCH MARK 1
 STORMWATER SEWER MANHOLE FLOW LINE
 NAVD88 DATUM
 ELEVATION = 1351.59

DESCRIPTION	SHEET NO.
TITLE SHEET	PS-2.0
DETAIL SHEET	PS-2.1
DETAIL SHEET	PS-2.2
PLAN/PROFILE SHEET	PS-2.3

GENERAL NOTES

- Contractor will be required to provide notice to utility companies a minimum of forty-eight (48) hours prior to any excavation, as follows:
 Kansas One-Call 687-2470
- The Contractor must notify the following in case of an emergency:
 Cox Communications 262-4270
 Kansas Gas Service Company 1-888-482-4950
 Westar Energy (Electric) 383-8650
 Black Hills Energy (Gas) 1-800-303-0357
 Southwestern Bell Telephone Co. 1-800-286-8313
 City of Wichita Water Dept. (Water) 262-6000
 City of Wichita Sewer Maintenance (SS) 262-6000
 City of Wichita Storm Sewer Maintenance 268-4090
 City of Wichita Traffic Maintenance 268-4034
- All disturbed R/W areas not intended for pavement or sidewalk construction shall be seeded with Kansas Premium Fescue Blend at a rate of 8 lb./1000 SF, fertilized with a 16-20-6 ratio at a rate of 4 lb./1000 SF and mulched with Prairie Hay at a rate of 92 lb./1000 SF. Mulch shall be "patted" with forks or punched into soil to reduce loss due to wind.
- Utility service lines, poles, valve boxes, meters, et cetera 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 and shall be field verified. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- All water lines and appurtenances shall be installed in accordance with the most recent edition of City of Wichita, Kansas Standard Specifications for the Construction of City Projects.
- Contractor shall furnish the inspector with a copy of the manufacturer's certification for any pipe used on this project after completion of pipe installation. The engineer will not certify the project to the City until pipe certification has been received.
- Properties within the project limits may have underground sprinkler systems which conflict with new construction. Contractor will be required to remove such improvements should they not be removed by their owner at the time of construction. The Contractor will be required to salvage all sprinkler heads and/or valves and give such material to their owner. Portions of underground sprinkler systems not in conflict with new construction shall be protected from damage and shall remain in place. All work in connection with underground sprinkler systems shall be considered as subsidiary to the contract pay items of work.
- Contractor shall not start work on the project until the project inspector is assigned to the project and is present on the site. Contractor shall not start on the project until all necessary bonds and permits have been obtained. Bonds may include but are not limited to Statutory, Performance & Maintenance. Any work done without inspection will be required to be uncovered for inspection.
- 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 that, in the opinion of the Engineer, 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 would 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 would require additional archaeological investigations unless buried in a previously approved borrow location.

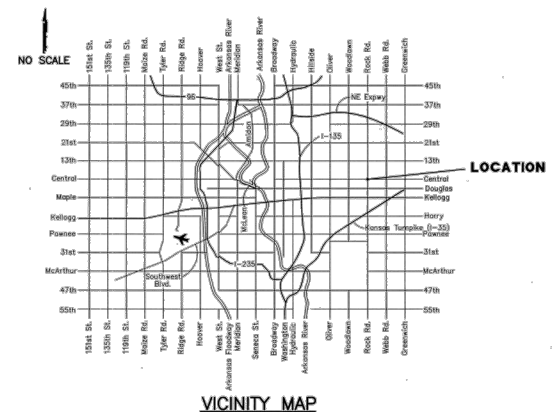
APPROVED AS NOTED
 BY CITY ENGINEER OF WICHITA,
 BY WICHITA WATER UTILITIES,
 & BY WICHITA FIRE DEPARTMENT

Water Mains (Public Works) *J. Kellman 10-17-11*
 Water Mains (Water Utilities) *D. Kelly 10-17-11*
 Fire Prot. Line (Fire Dept.) *B. Swanson 10-18-2011*

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 to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed 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 the City Engineer. All Construction and Materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

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 materials 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 the City of Wichita Fire Department and by a licensed Consulting Engineering Firm under contract with the Owner/Developer.
 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.



5200 Buffington Rd.
 Atlanta Georgia,
 30349-2998

Revisions:
 Mark Date By
 △ _____
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 △ _____

10/14/2011

GBC DESIGN, INC.
 3378 W. Market St. Akron, OH 44333-8386
 Phone 330-896-0228 Fax 330-896-5752

STORE #2817
 Central & Rock Rd.
 FSR S08A
 Lease Parcel

7990 East Central Ave.
 Wichita, KS 67206

SHEET TITLE
**WATER LINE
 TITLE
 SHEET**

DWG EDITION 07.1
 REVISION 1

Job No. : 43204A
 Store : 2817
 Date : 3/4/11
 Drawn By : D.K.G.
 Checked By: A.S.W.

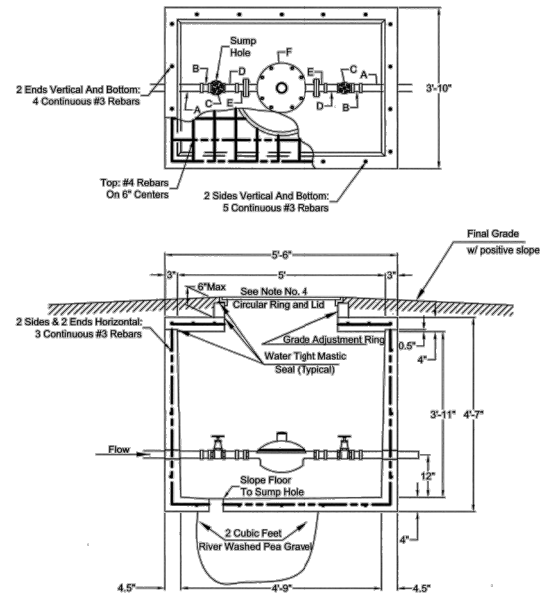
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PS-2.0

Notes For All Services - 2" 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 Water & Sewer Dept. approval and Public Works 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 Wichita Water & Sewer 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 Neenah R-6034 Frame with Type "C" Solid Lid and Drop Down Handle or US Foundry APS-30x30 (Aluminum). Where applicable the standard 10" Wichita Water & Sewer 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 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 as-builts submitted by the inspecting engineer. Such fittings shall be a minimum of 2" from the exterior wall of vault.
- For all services larger than 2" the contractor shall provide an outlet flange connection as shown 12-inches 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 two(2) feet from the exterior wall of vault. Flanges of inlet and outlet pipes shall be in proper alignment and both pattern shall be related 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.

11. Additional Notes For Fire Services:

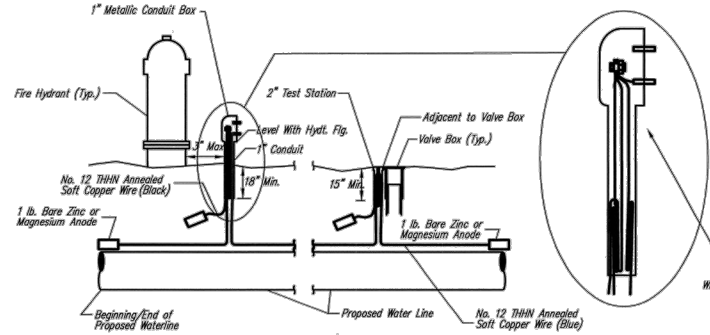
- A post indicator valve (PIV) is an option for the outlet valve and may be requested by the architect or owner. The PIV is not required by
- When Siamese connections are required by the Wichita Fire Department,
- If due to any reason the completed vault retains ground or drainage water in excess of 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.



- A - 2" PVC or Copper (to be extended completely through vault to ensure proper alignment)
- B - 2" F PVC to M Iron or 2" F Copper to M Iron**
- C - 2" Bronze IPT Gate Valve, Wheel Operated**
- D - 2" x 4" or 2" x 6" Brass Nipple**
- E - Lok-Pak Meter Couplings**
- F - 2" Meter**

** = Contractor Installed
 ** = Installed By Wichita Water & Sewer

2"DS



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 1 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. 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 exposed 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 conduit 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 12PS3B as manufactured by HANDLEY Industries or approved equal. The conduit style 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.

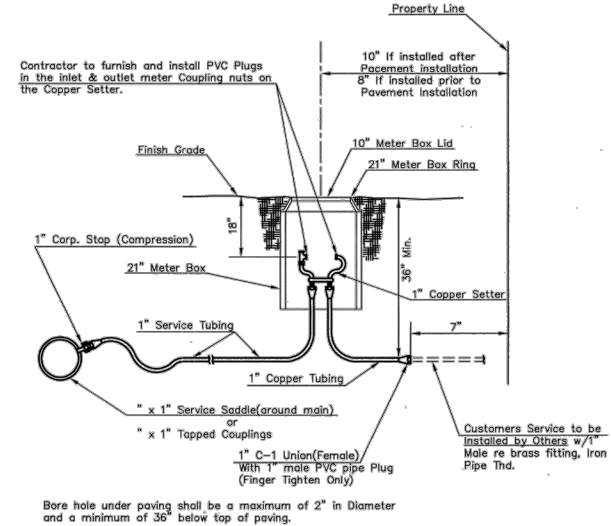
ANODES

The anodes shall be 1 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

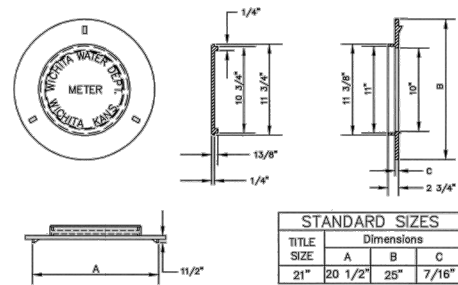
AS BUILT PLANS
 CONTRACTOR: UTILITIES PLUS
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-27-2011



Note: Service Saddles are not required on top of 8" mains or larger

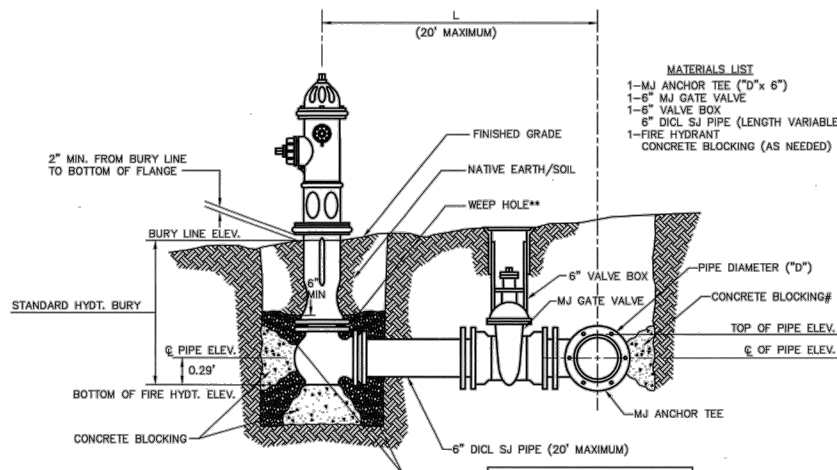
Meter boxes will be located on each lot to be served, as indicated in the SPECIAL PROVISIONS

TYPICAL METER SETTING
 LONG SERVICE 1"



Other Approved Ring And Lids: Ford Meter Box Co. Inc. 21" Ring & Lid Catalog No. C-4

RING & LID FOR METER VAULTS



** CAUTION! WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES.

CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.

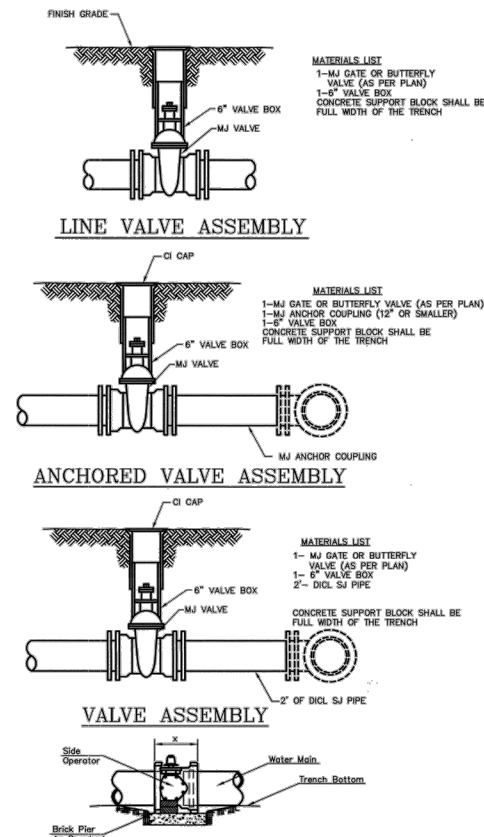
* IF HYDRANT BURY IS IN EXCESS OF 5', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY.

MINIMUM 1 CU. FT. PER WEEP HOLE

SIEVE SIZE	SPECIFICATION % RETAINED
3/4"	0 - 5
1/2"	5 - 35
3/8"	40 - 85
# 4	95 - 100
# 8	97 - 100

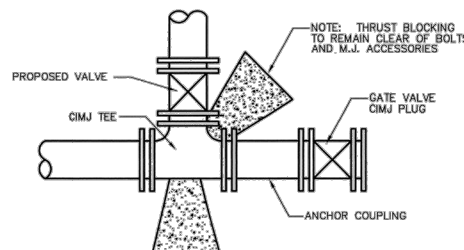
FIRE HYDRANT ASSEMBLY

PER CITY OF WICHITA SPECIFICATIONS



- NOTES
- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 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



KEY BLOCK DETAIL



5200 Buffington Rd.
 Atlanta Georgia,
 30349-2998

Revisions:

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Mark Date By

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10/14/2011

GBC DESIGN, INC.
 3878 W. Market St. Akron, OH 44333-3386
 Phone 330-896-0228 Fax 330-896-5752

STORE #2817
 Central & Rock Rd.
 FSR S08A
 Lease Parcel

7990 East Central Ave.
 Wichita, KS 67206

SHEET TITLE
**WATER LINE
 DETAIL
 SHEET**

DWG EDITION 07.1
 REVISION 1

Job No. : 43204A
 Store : 2817
 Date : 3/4/11
 Drawn By : D.K.G.
 Checked By: A.S.W.

Sheet

PS-2.1

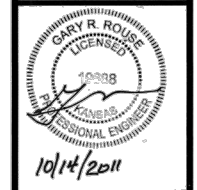
AS BUILT PLANS
 CONTRACTOR: UTILITIES PLUS
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-27-2011



Chick-fil-A
 5200 Buffington Rd.
 Atlanta Georgia,
 30349-2998

Revisions:

Mark	Date	By
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GBC DESIGN, INC.
 3378 W. Market St. Akron, OH 44333-3386
 Phone 330-836-0228 Fax 330-836-5752

STORE #2817
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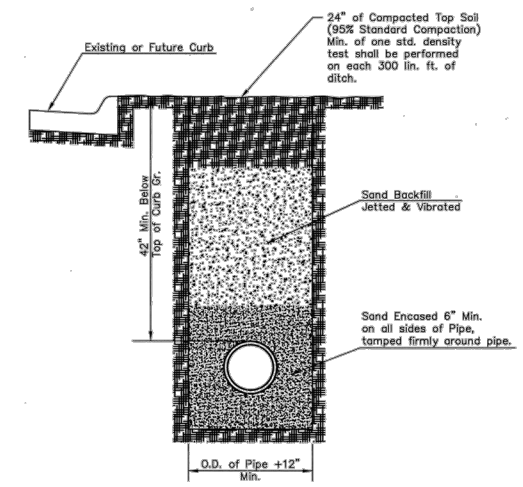
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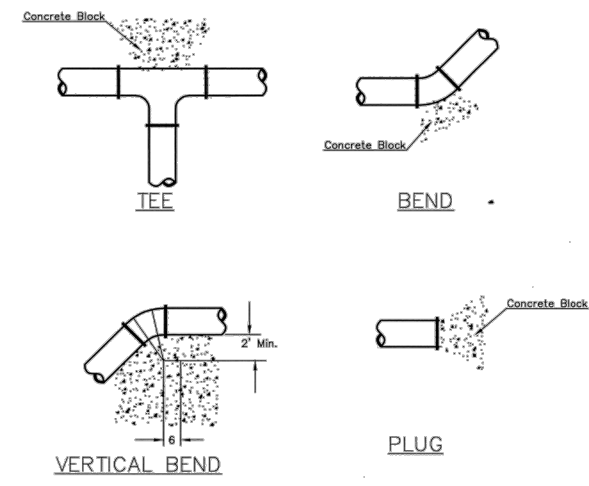
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Job No. : 43204A
 Store : 2817
 Date : 3/4/11
 Drawn By : D.K.G.
 Checked By: A.S.W.

Sheet
PS-2.2

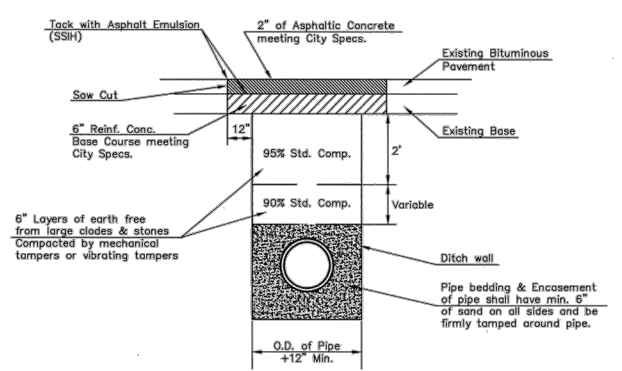


**SETTLEMENT & COMPACTION ON CITY AND COUNTY
 ROAD RIGHT-OF-WAY EXCEPT UNDER PAVEMENT**



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

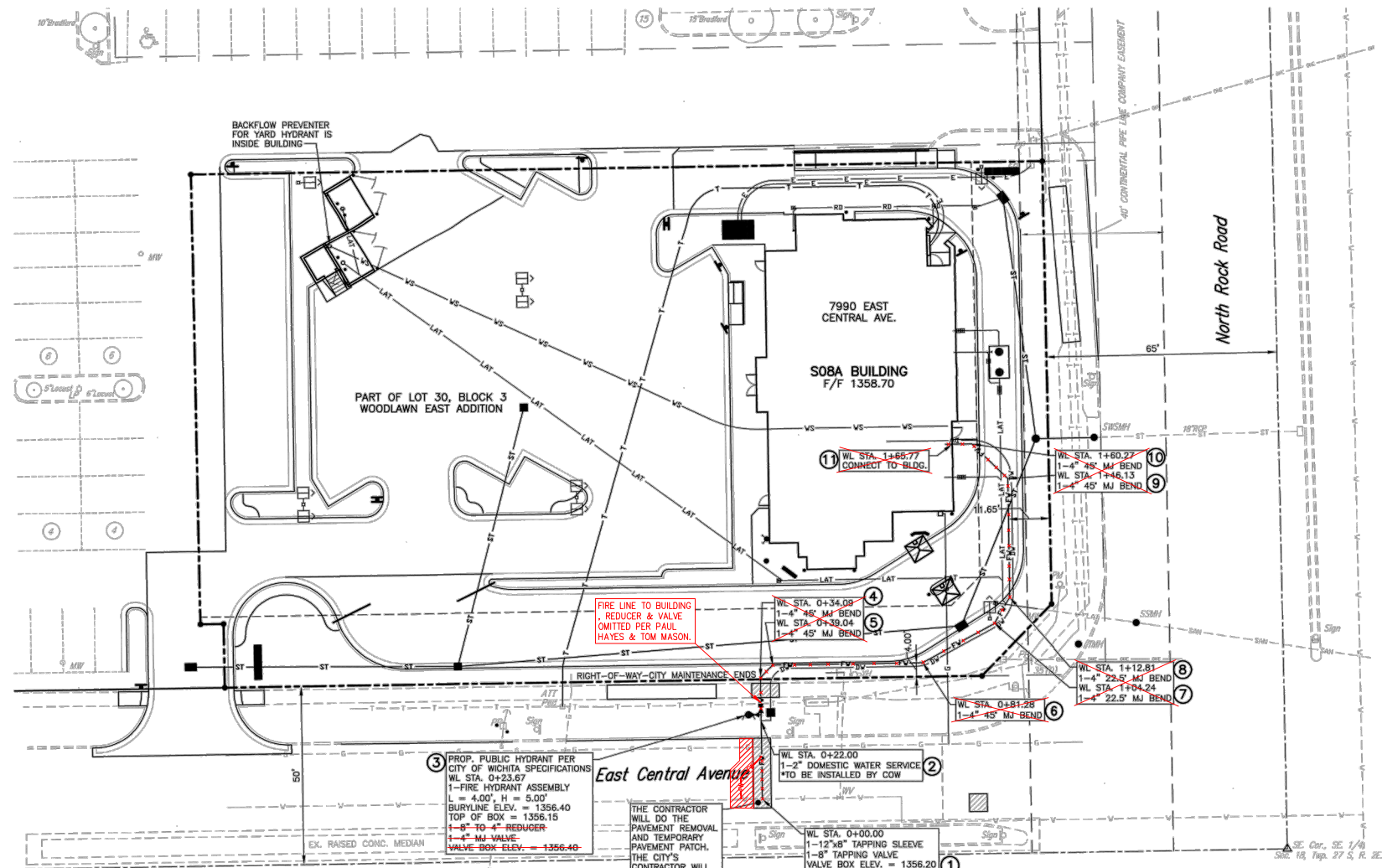
TYPICAL THRUST BLOCKS



Standard Density Test, as described in the latest addition of ASTM D698, shall be performed to verify the above requirements to the Satisfaction of the Sedgwick County Director of Public Works. All testing cost shall be included in the unit price bid for the pipe in place.

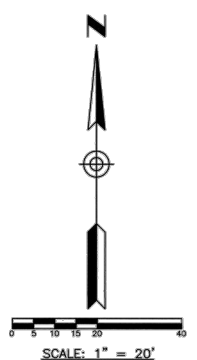
When laying under paving, parallel with the centerline of the street, a minimum of one (1) Standard Density Test shall be performed on each 300 lined feet of ditch.

**PAVEMENT REPLACEMENT & DITCH COMPACTION UNDER
 EXISTING AND PROPOSED CITY ROADS**



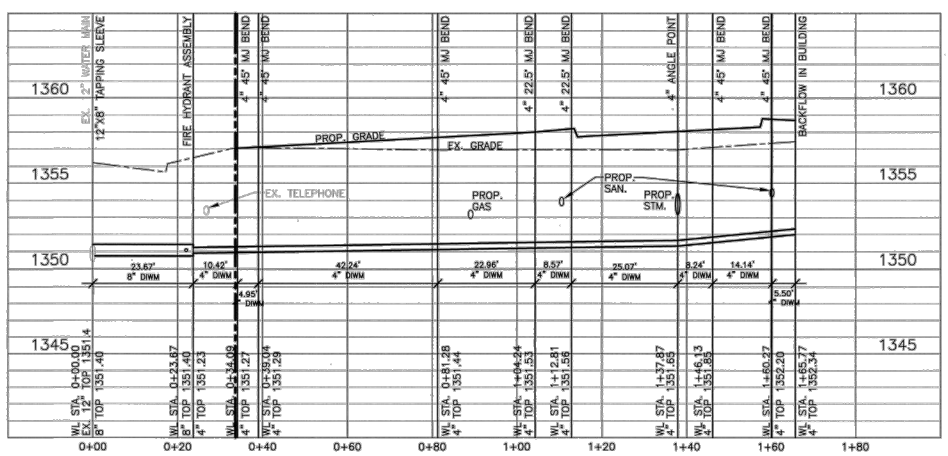
AS BUILT PLANS
 CONTRACTOR: UTILITIES PLUS
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-27-2011

	NORTHING	EASTING
①	5014.09	4852.16
②	5036.08	4851.82
③	5037.75	4851.79
④	5048.17	4851.62
⑤	5051.72	4855.07
⑥	5052.39	4897.30
⑦	5063.44	4917.43
⑧	5070.85	4921.73
⑨	5104.16	4921.21
⑩	5114.01	4911.06
⑪	5113.92	4905.57



SITE BENCH MARK 1
 STORMWATER SEWER MANHOLE FLOW LINE
 NAVD83 DATUM
 ELEVATION = 1351.59

FIRE HYDRANTS REQUIRED			
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*
0+23.67	1356.40	1351.40	5'-0"



HORIZONTAL SCALE: 1" = 20'
 HORIZONTAL SCALE: 1" = 5'

- LEGEND**
- PROP. FIRE HYDRANT
 - ▲ EX. FIRE HYDRANT
 - ⊕ PROP. VALVE
 - ⊕ EX. VALVE
 - PROP. MANHOLE
 - EX. MANHOLE
 - PROP. CURB INLET
 - EX. BOX INLET
 - EX. TREE
 - EX. PINE TREE
 - EX. LIGHT POLE
 - EX. CABLE T.V. LINE
 - PROP. ELECTRIC LINE
 - EX. ELECTRIC LINE
 - PROP. GAS LINE
 - EX. GAS LINE
 - PROP. TELEPHONE LINE
 - EX. TELEPHONE LINE
 - POLE MOUNTED SITE LIGHTING FIXTURE
 - SAN PROP. SANITARY SEWER
 - LAT PROP. SANITARY LATERAL
 - DSH EX. SANITARY SEWER
 - LAT EX. SANITARY LATERAL
 - ST PROP. STORM SEWER
 - SD PROP. ROOF DRAIN
 - ST EX. STORM SEWER
 - DW PROP. DOMESTIC WATER LINE
 - VS PROP. WATER SERVICE
 - FV PROP. FIRE PROTECTION WATER LINE
 - V EX. WATER LINE
 - VS EX. WATER SERVICE
 - X EX. FENCE
 - EX. CURB

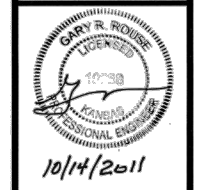


Chick-fil-A
 5200 Buffington Rd.
 Atlanta Georgia,
 30349-2998

Revisions:
 Mark Date By
 ② 6/6/11 ASW
 Building Comments

Mark Date By
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Mark Date By
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STORE #2817
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SHEET TITLE
**WATER LINE
 PLAN AND
 PROFILE**

DWG EDITION 07.1
 REVISION 1

Job No. : 43204A
 Store : 2817
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Sheet



PS-2.3