

GENERAL NOTES:

- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
 - 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.
- 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
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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
Evergy	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 valve 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 field grades by the contractor.
- The Contractor shall notify the consultant 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 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 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 NAVD88.
- All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions per City specifications.
- 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 work on this project can commence. Quotes can be obtained on fees by calling 316-268-4555.
- City maintenance of water mains ends within two feet of vault or at property line.
- 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 performed 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 manufacturers 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.
- The Contractor shall protect from damage and support existing utilities through construction as approved by the utility owner and the Engineer at the contractor's 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.
- All existing and proposed erosion control measures including silt fencing, erosion control mat, straw bales, inlet barriers, and const. entrance shall be maintained throughout construction by the contractor and until project is accepted by the City of Wichita. The on-site engineer shall complete weekly reports on the status of erosion control measures. The contractor shall be required to comply with maintenance and/or replacement of erosion control measures as determined by the on-site engineer until project is accepted by City of Wichita. Maintenance and/or replacement of erosion control measures to be paid by L.S. bid item "Maintain Existing BMPs".

- All excess excavation shall remain on-site and shall be stockpiled or spread at a location determined by the engineer.
- All of Esthner St. R/W disturbed during construction shall be seeded and mulched as follows:

Seed -- Kansas Premium Fescue Blend; 8 lbs. PLS/1000 Sq. Ft.
Annual Rye grass; 3 lbs./1000 Sq. Ft.
Fertilizer -- 12-24-12 Ratio; 45 Lbs./Ac.
Mulch -- 2 Tons Prairie Hay/Ac.

All other areas disturbed during construction are to be seeded as follows:

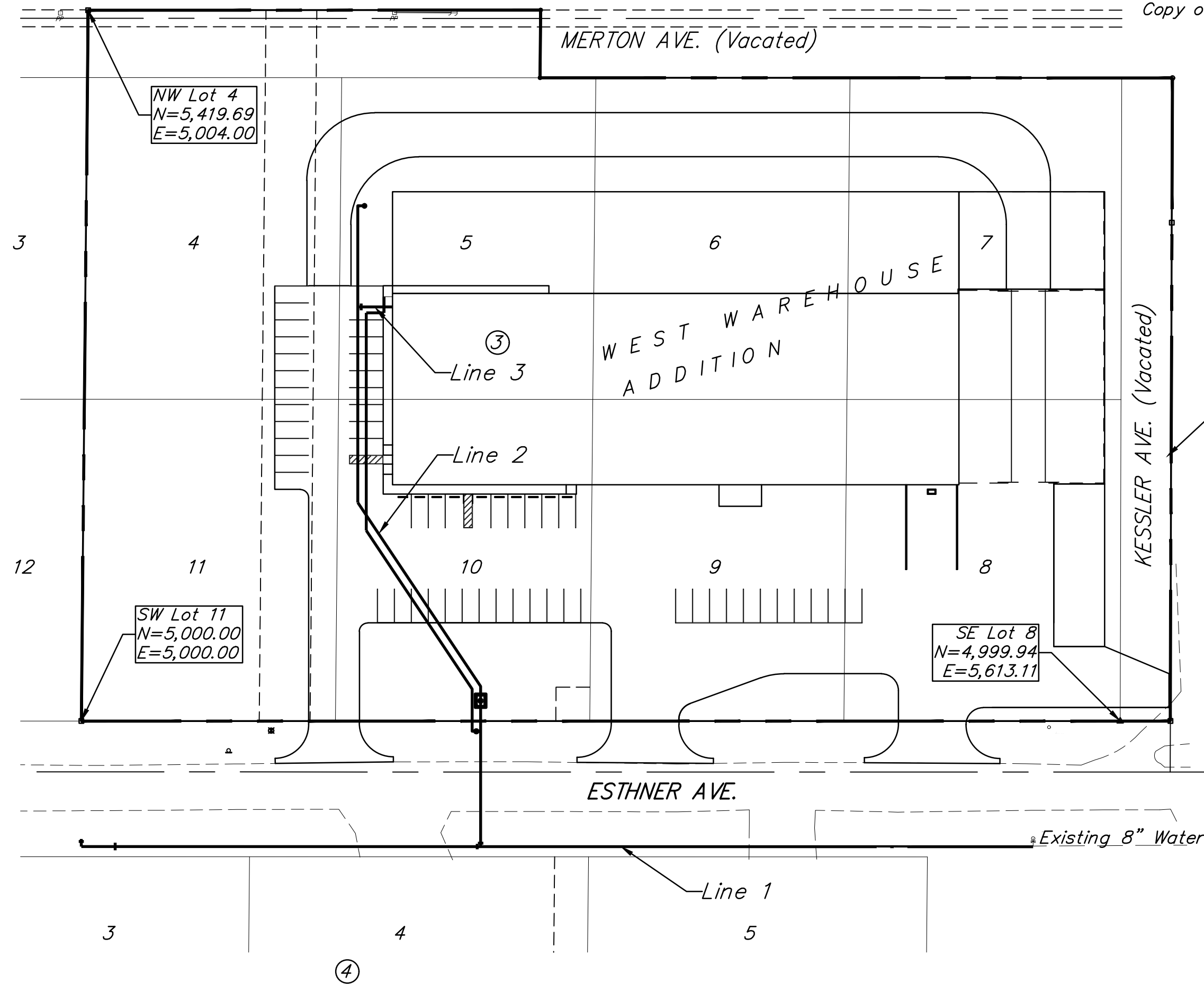
Seed -- Rye grass; 5 lbs./1000 Sq. Ft.

All costs associated with seeding including mobilization, preparation of ground, seeding, fertilizing, mulching, etc. shall be included in the L.S. bid item "Seeding".

An additional bid item for "Seeding, Temporary" has been included and may be used at the discretion of the design engineer. Temporary seed shall be Annual Rye at 5 lbs./1000 Sq. Ft. unless otherwise noted and shall be planted when permanent seed or sod cannot be used due to seasonal limitations. If the "Seeding, Temporary" bid item is not used, 100% of the pay item will be deducted from the contract. All costs associated with temporary seeding including mobilization, preparation of ground, seeding, etc., shall be included in the L.S. bid item "Seeding, Temporary".
- The Contractor shall not begin work on the project until the Project Inspector is assigned and on site. Any work completed without inspection will be required to be uncovered for inspection at the Contractor's expense.

Benchmarks

BM #1: Square cut on top of NW corner of inlet, approx. 112.1 east and 5.6' south of the southeast corner of the Lot 10, West Warehouse Addition, Wichita, Sedgwick County, KS
Elev. = 1296.89 (NAVD 88)



WATER DISTRIBUTION SYSTEM

to serve **Revised 10/05/21**

ELLIOTT ELECTRICAL SUPPLY

Lots 4-11, Block 3, W. Warehouse Add.

3804 W. ESTHNER AVE.

CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer
2021-014972PPW
54030980

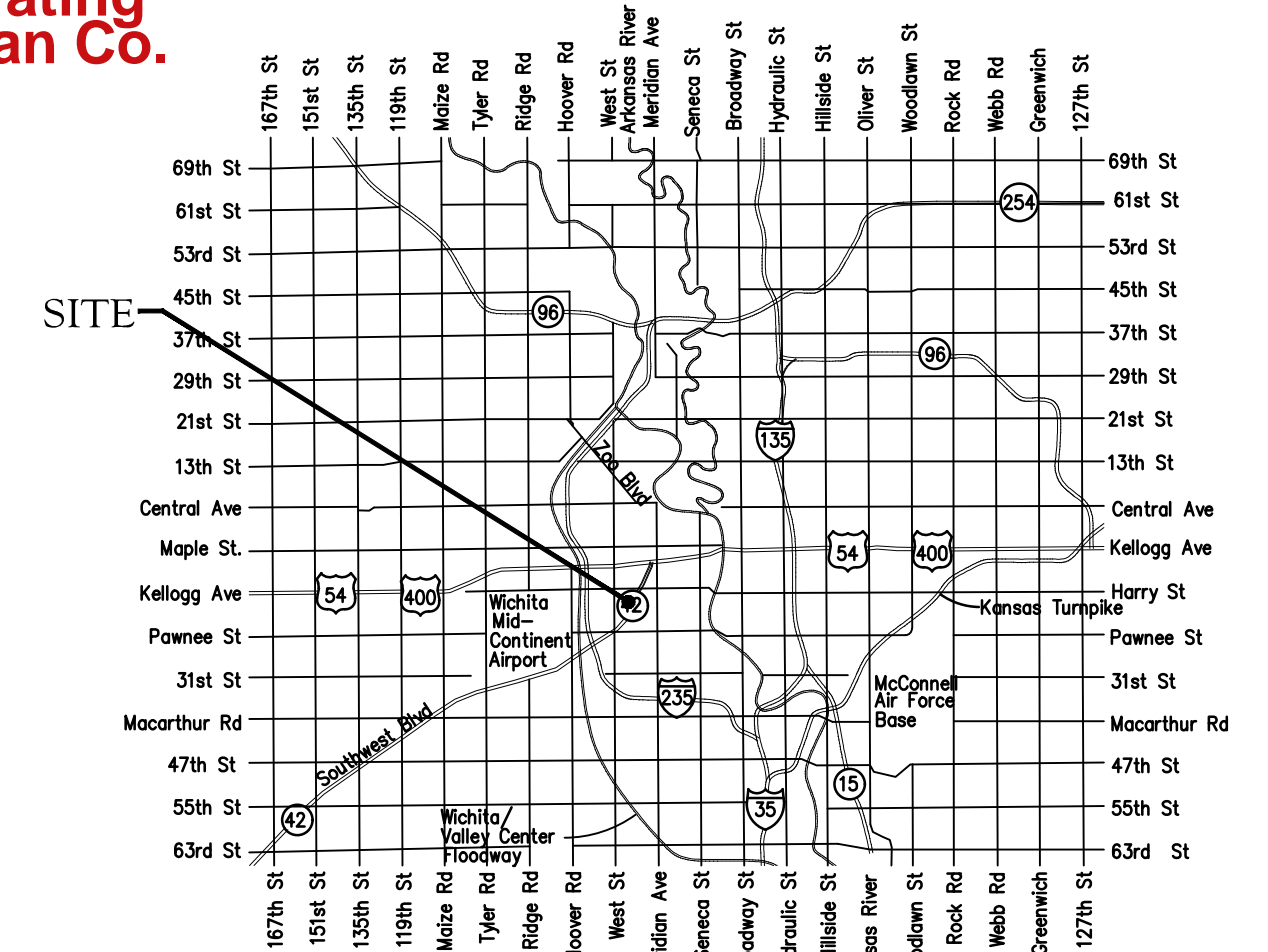
Vault is a 3'x8' Concrete 4" thru 8" Fire Service from WCP
SE Corner is 50' N of the CL of Esthner Ave R/W
and 114' E of the Cntr of a SWS Manhole on
the North Side of Esthner Ave
SW Corner is 50' N of the CL of Esthner Ave R/W
and 111' E of the Cntr of a SWS Manhole on
the North Side of Esthner Ave

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Vicinity Map

**Mueller Valves and Fire Hydrant
Kennedy Valves in the Vault
Badger Water Meter Number: 200515744
Reading: 000052.84 Cu. Ft.
ERT Number: 69163114**

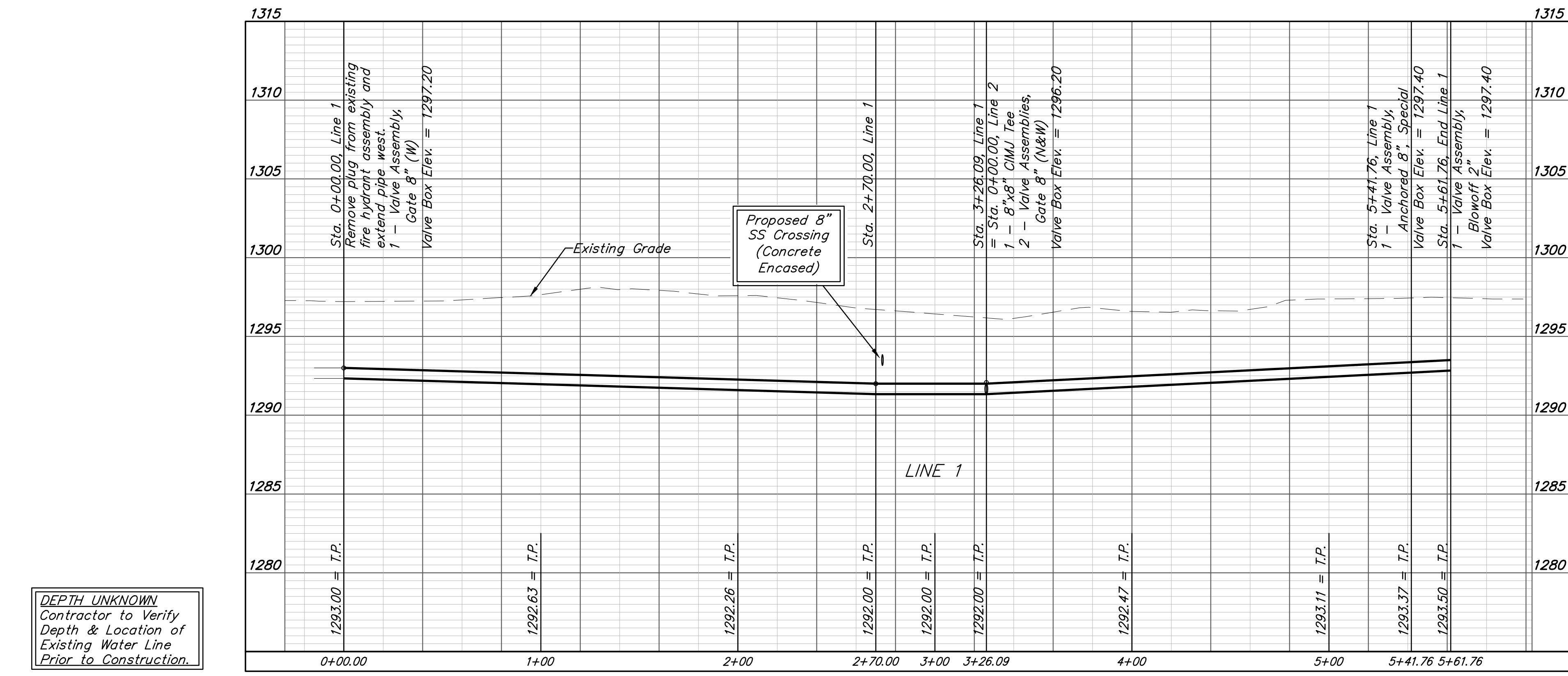
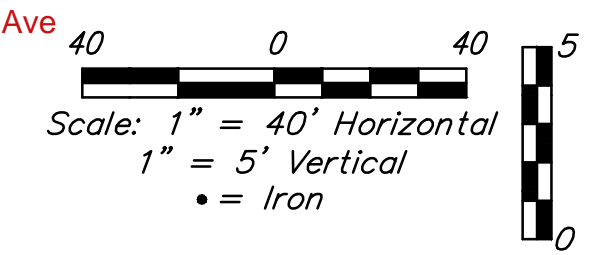
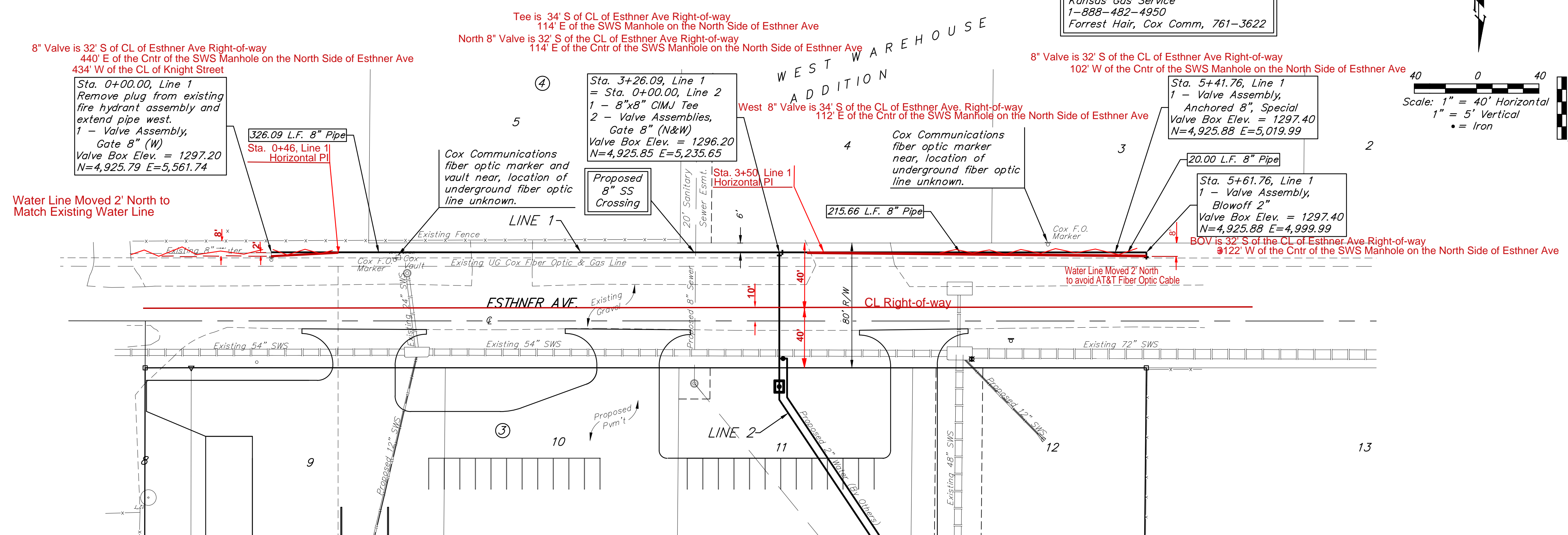


BENCHMARK:
 BM #1: Square cut on top of NW corner of inlet, approx. 112.1 east and 5.6' south of the southeast corner of the Lot 10, West Warehouse Addition, Wichita, Sedgwick County, KS
 Elev. = 1296.89 (NAVD 88)

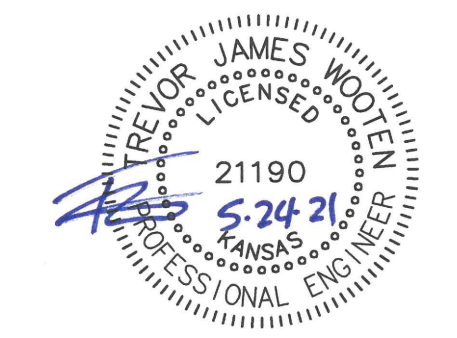
Contact utility companies 3 weeks prior to construction to coordinate temporary removal/replacement.
 Kansas Gas Service
 1-888-482-4950
 Forrest Hair, Cox Comm, 761-3622

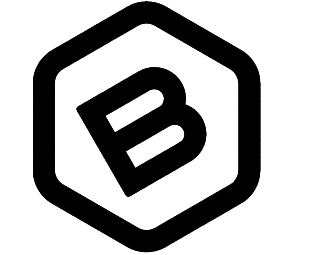
Contractor to verify depth and location of existing utilities. Contractor to relocate any existing utilities as necessary for construction.

Remove and replace existing gravel surfacing as necessary for water line construction.



DEPTH UNKNOWN
 Contractor to Verify Depth & Location of Existing Water Line Prior to Construction.





BAUGHMAN COMPANY

315 Ellis St.
 Wichita, KS 67211
 316-262-7271
 BaughmanCo.com

ELLIOTT ELECTRICAL SUPPLY

LINE 1

WATER DISTRIBUTION SYSTEM

PROJECT NUMBER:
20-10-E756

DESIGN: TJW DRAWN: TMS

DATE: June 2, 2021

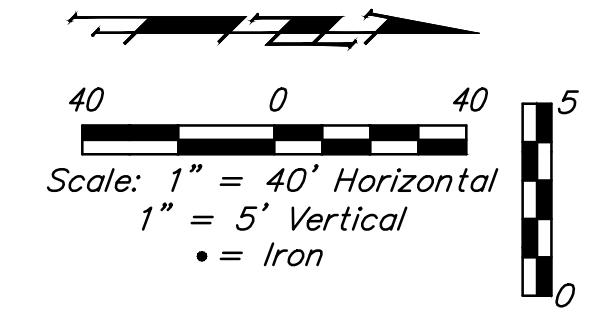
SHEET **2** OF **13**

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BENCHMARK:
 BM #1: Square cut on top of NW corner of inlet, approx. 112.1 east and 5.6' south of the southeast corner of the Lot 10, West Warehouse Addition, Wichita, Sedgwick County, KS
 Elev. = 1296.89 (NAVD 88)

City maintenance of water mains ends within two feet of vault or at property line.

Proposed 2" water service will be installed by The City of Wichita at a location Wichita Water Distribution approves.



Contractor to verify depth and location of existing utilities. Contractor to relocate any existing utilities as necessary for construction.

Remove and replace existing gravel surfacing as necessary for water line construction.

Contact utility companies 3 weeks prior to construction to coordinate temporary removal/replacement.
 Kansas Gas Service
 1-888-482-4950
 Forrest Hair, Cox Comm, 761-3622

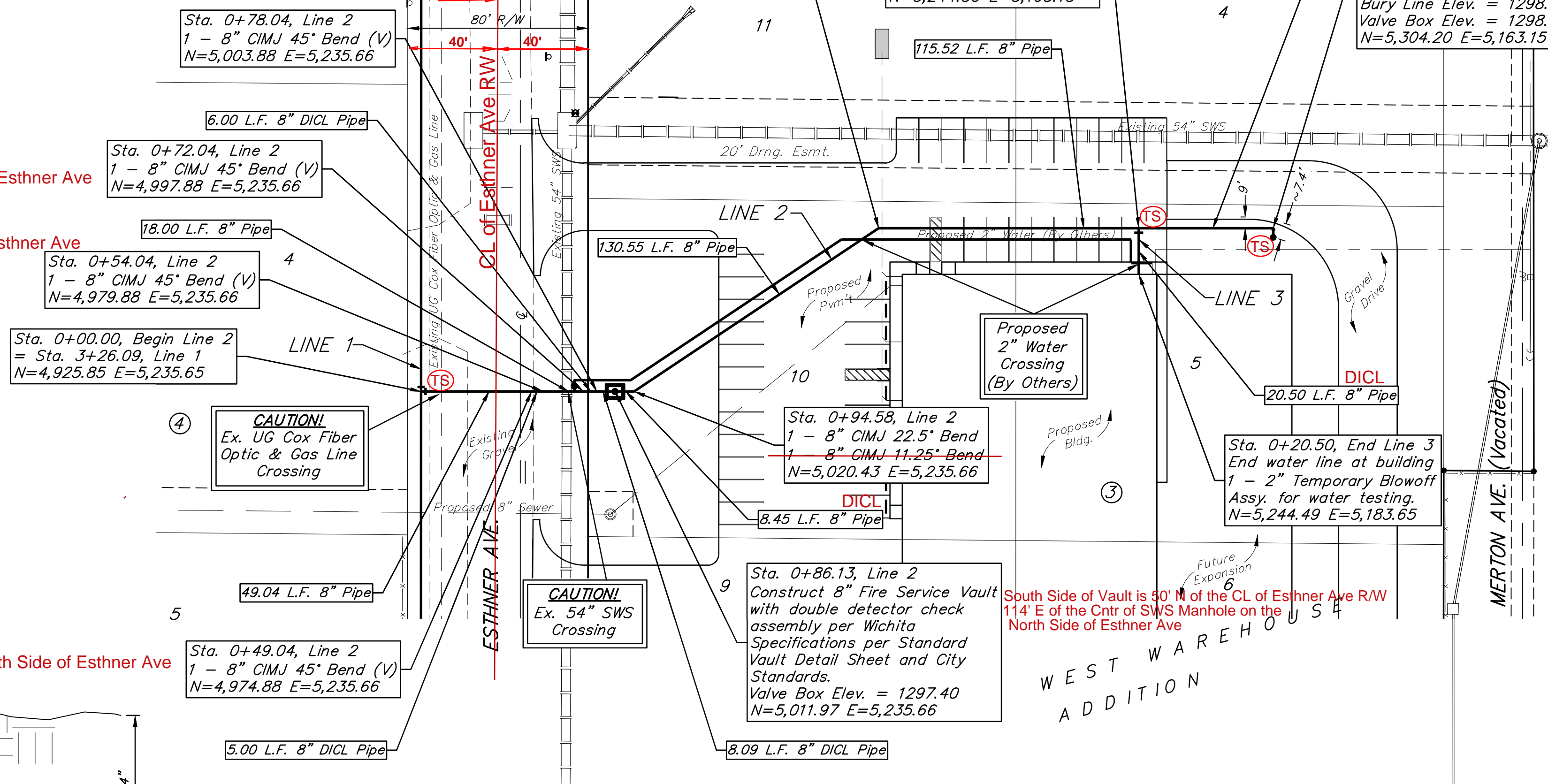
When fire service and domestic water line installed in same trench, trench shall be compacted per detail, this sheet.

115' E of the Cntr of the SWS Manhole on the North Side of Esthner Ave
 44' N of the CL of Esthner Ave R/W

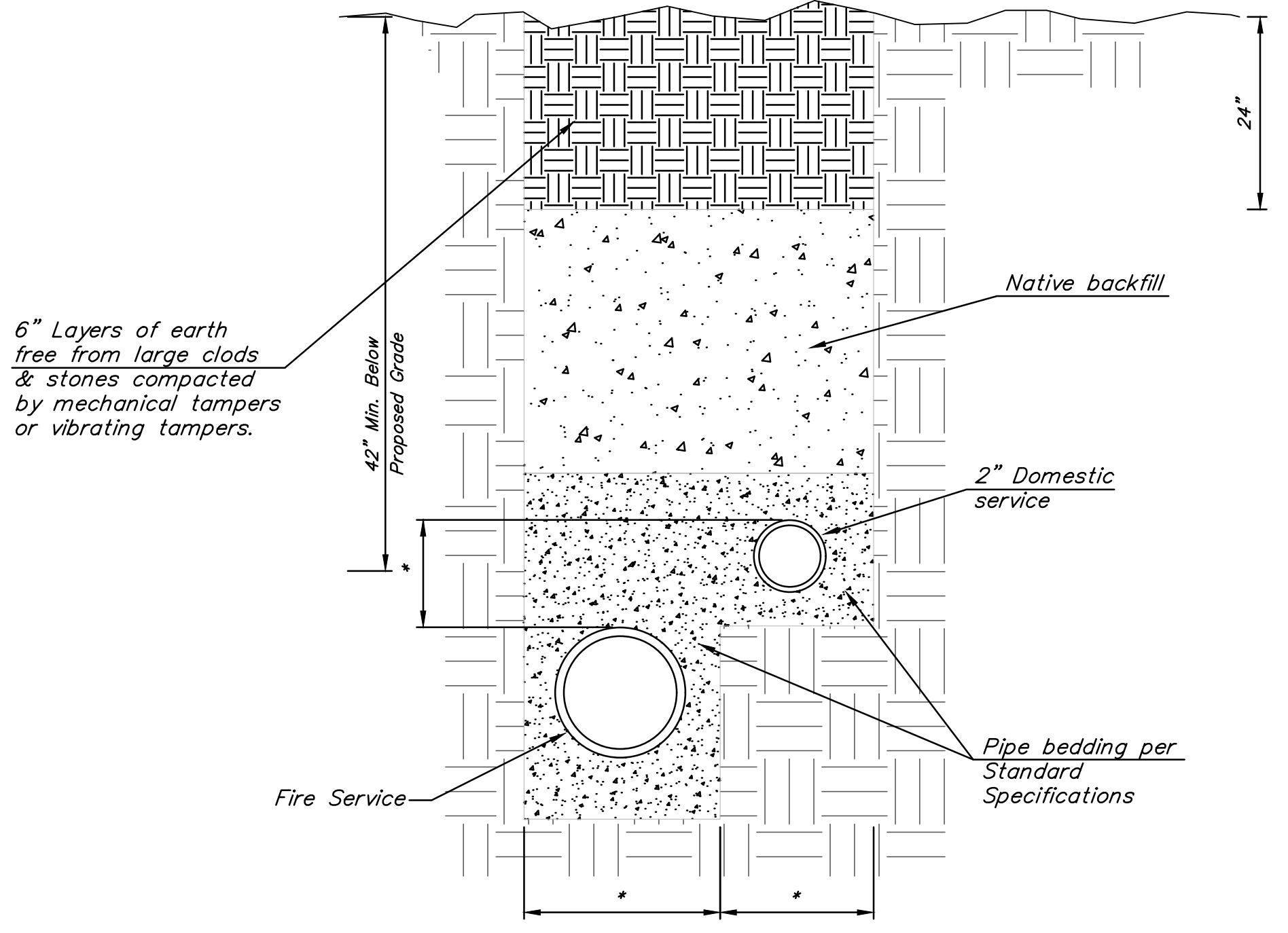
115' E of the Cntr of the SWS Manhole on the North Side of Esthner Ave
 38' N of the CL of Esthner Ave R/W

115' E of the Cntr of the SWS Manhole on the North Side of Esthner Ave
 20' N of the CL of Esthner Ave R/W

115' E of the Cntr of the SWS Manhole on the North Side of Esthner Ave
 15' N of the CL of Esthner Ave R/W

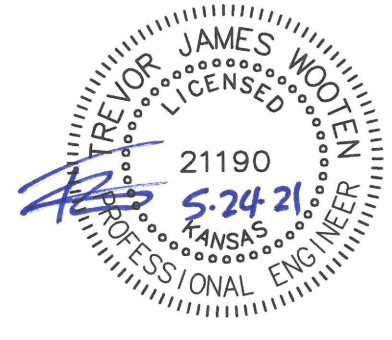
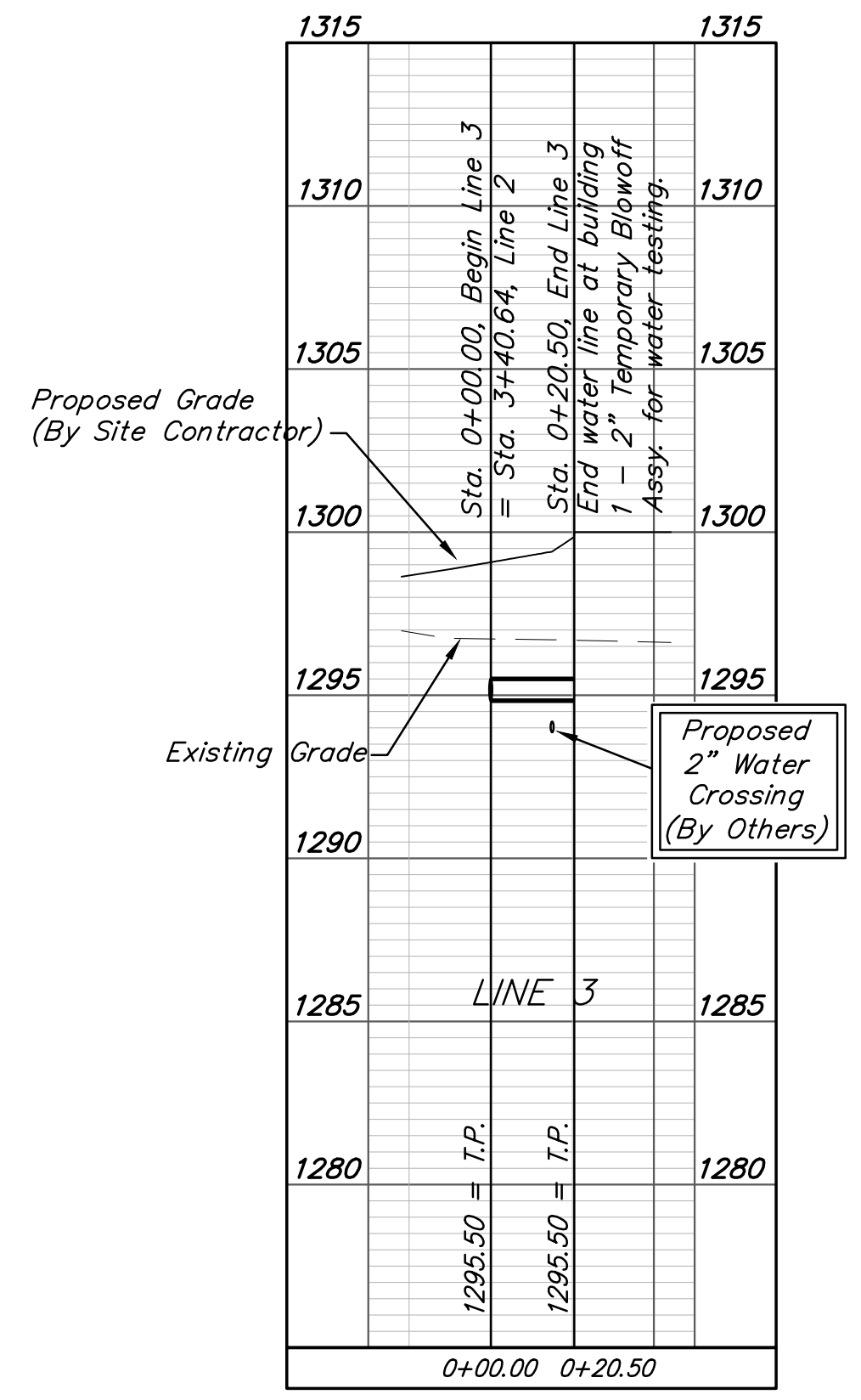
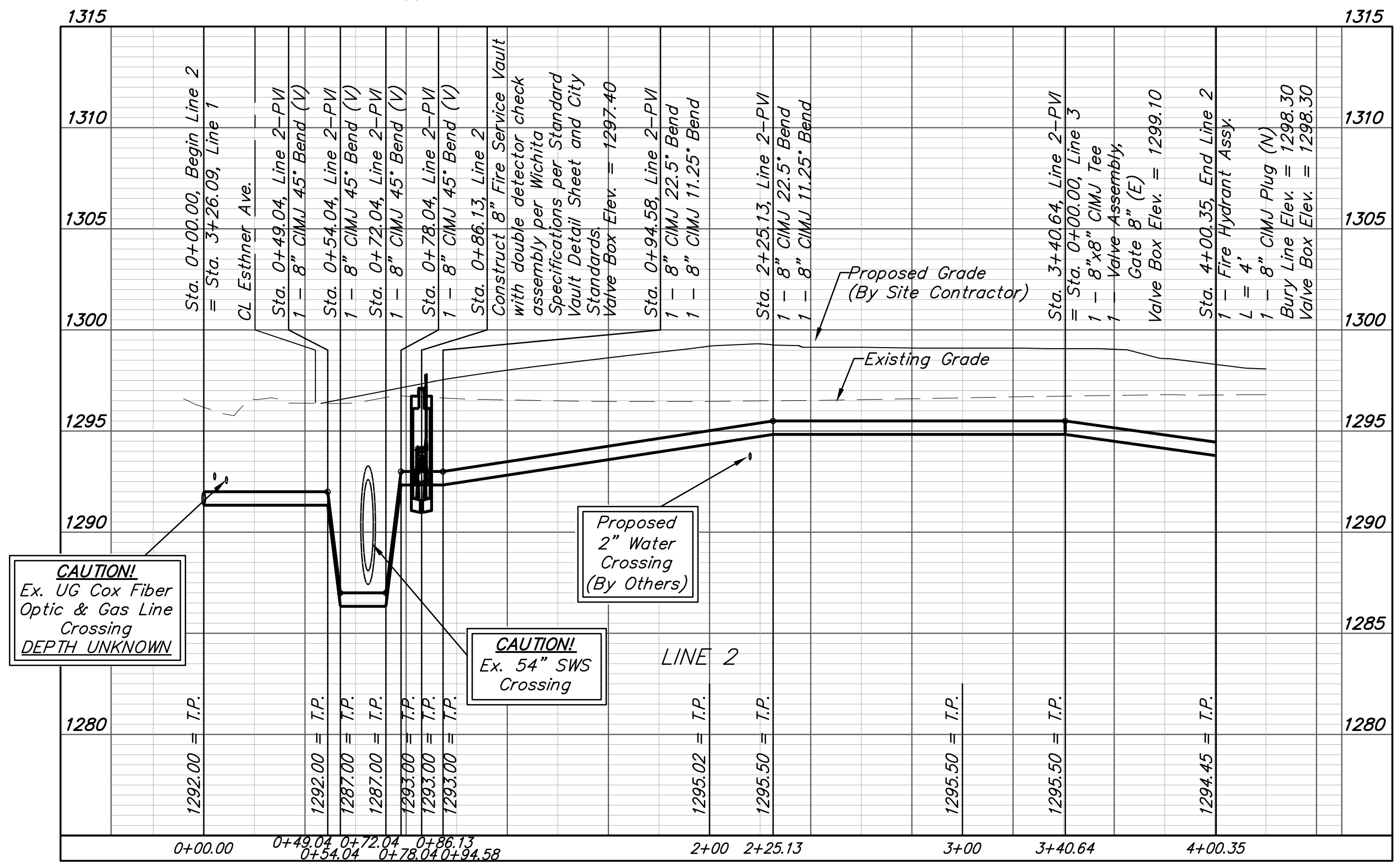


Tee is 186' N of the CL of Esthner Ave R/W
 76' E of the Cntr of the SWS Manhole on the North Side of Esthner Ave
 Valve is 186' N of the CL of Esthner Ave R/W
 78' E of the Cntr of the SWS Manhole on the North Side of Esthner Ave
 Fire Hydrant is 186' N of the CL of Esthner Ave R/W
 80' E of the Cntr of the SWS Manhole on the North Side of Esthner Ave



COMBINED TRENCH SECTION & COMPACTION

*TRENCH SIZE AND STAIR STEP SHALL BE BASED ON THRUST BLOCK REQUIREMENTS AGAINST VIRGIN SOIL OR CONTRACTOR MAY OPT TO USE RESTRAINED JOINT PIPE MATERIAL.





BAUGHMAN COMPANY

315 Ellis St.
 Wichita, KS 67211
 316-262-7271
 BaughmanCo.com

ELLIOTT ELECTRICAL SUPPLY

LINES 2 & 3

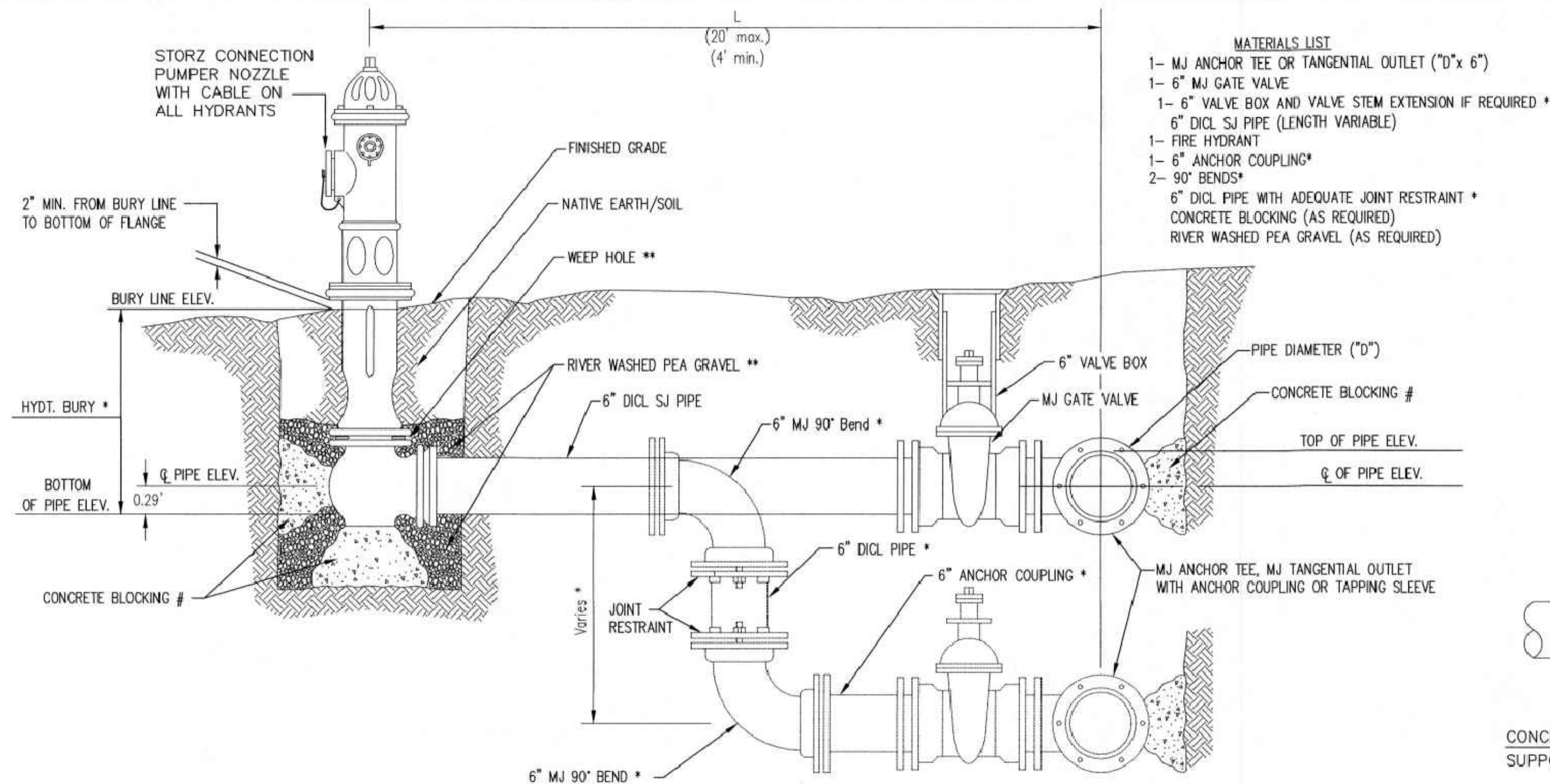
WATER DISTRIBUTION SYSTEM

PROJECT NUMBER:
 20-10-E756

DESIGN: TJW DRAWN: TMS
 DATE: June 8, 2021

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3 13

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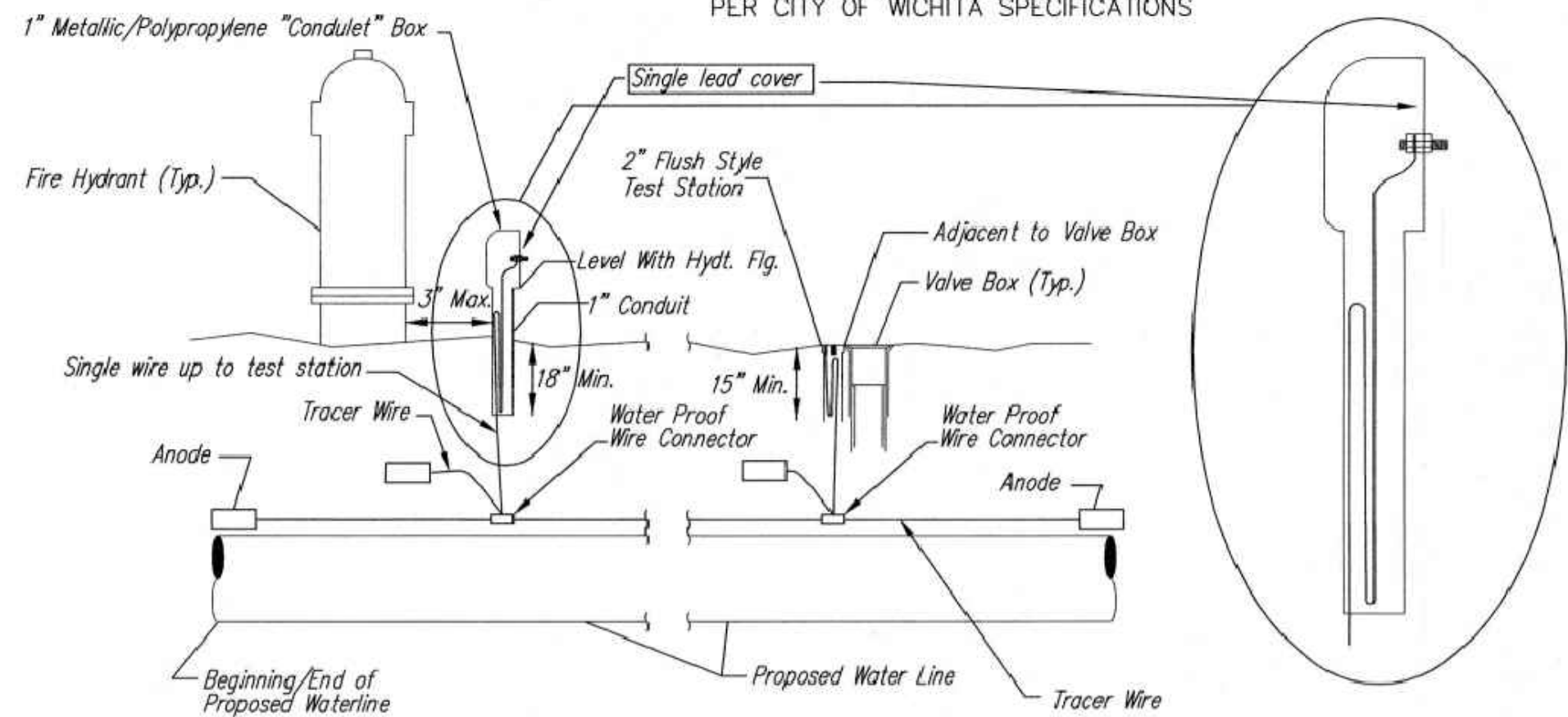
- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET ("D" x 6")
 - 1- 6" MJ GATE VALVE
 - 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED *
 - 6" DI CL SJ PIPE (LENGTH VARIABLE)
 - 1- FIRE HYDRANT
 - 1- 6" ANCHOR COUPLING*
 - 2- 90° BENDS*
 - 6" DI CL PIPE WITH ADEQUATE JOINT RESTRAINT *
 - CONCRETE BLOCKING (AS REQUIRED)
 - RIVER WASHED PEA GRAVEL (AS REQUIRED)

* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DI CL PIPE AS NECESSARY FOR VERTICAL ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING AT HYDRANT AND MEGALUGS, OR SIMILAR RESTRAINT BETWEEN 90° BENDS TO SECURE ALL FITTINGS DURING TESTING AND OPERATION. THE CONTRACTOR SHALL PROVIDE A VALVE STEM EXTENSION PER DETAIL THIS SHEET.

** CAUTION: WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES. PLACE 1 CUBIC FOOT OF RIVER WASHED PEA GRAVEL AROUND EACH WEEP HOLE.

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

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.

WIRES
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.

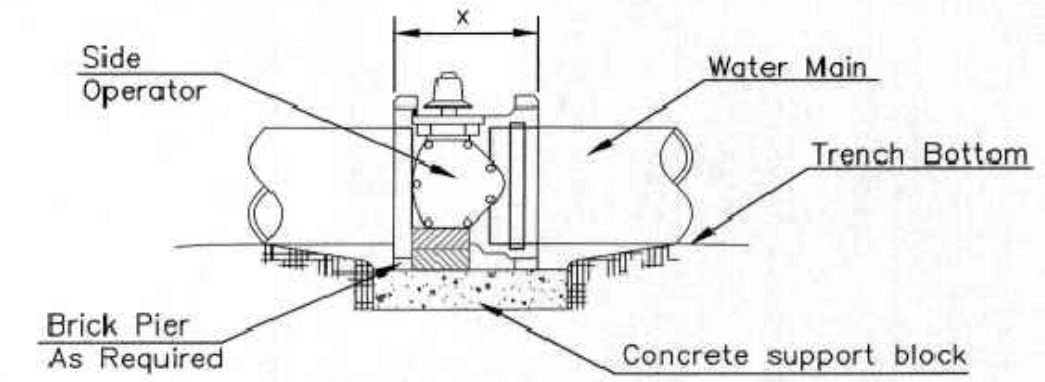
TEST STATIONS
The test station for fire hydrant application shall be a 1" "conduit" style station as manufactured by AGRA Industries with a removable solid cover having a single lead extending from the face or approved equal. The "conduit" style test station shall be attached to a 1" rigid galvanized 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

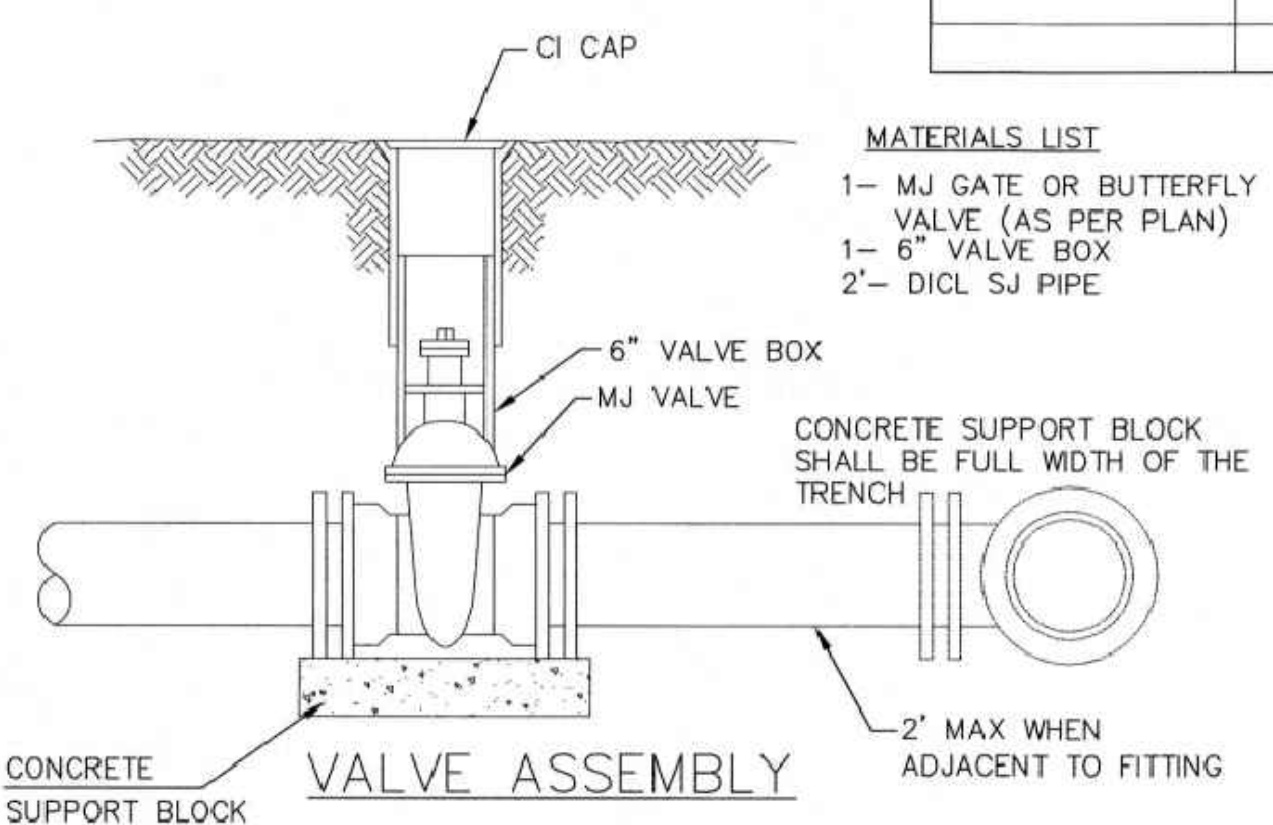
FIRE HYDRANTS REQUIRED				
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
4+00.35	1298.30	1294.45	4.5'	-



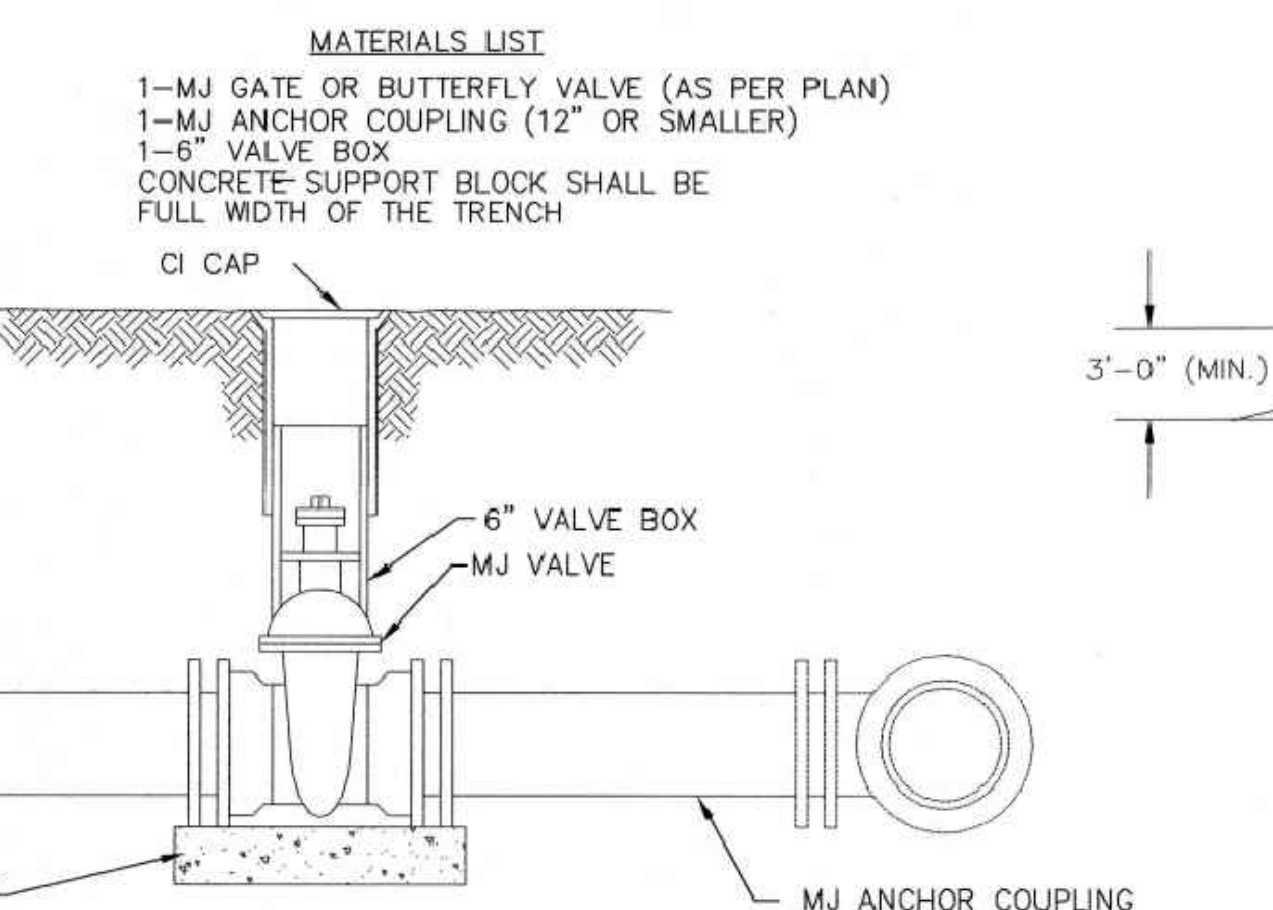
NOTES

- 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

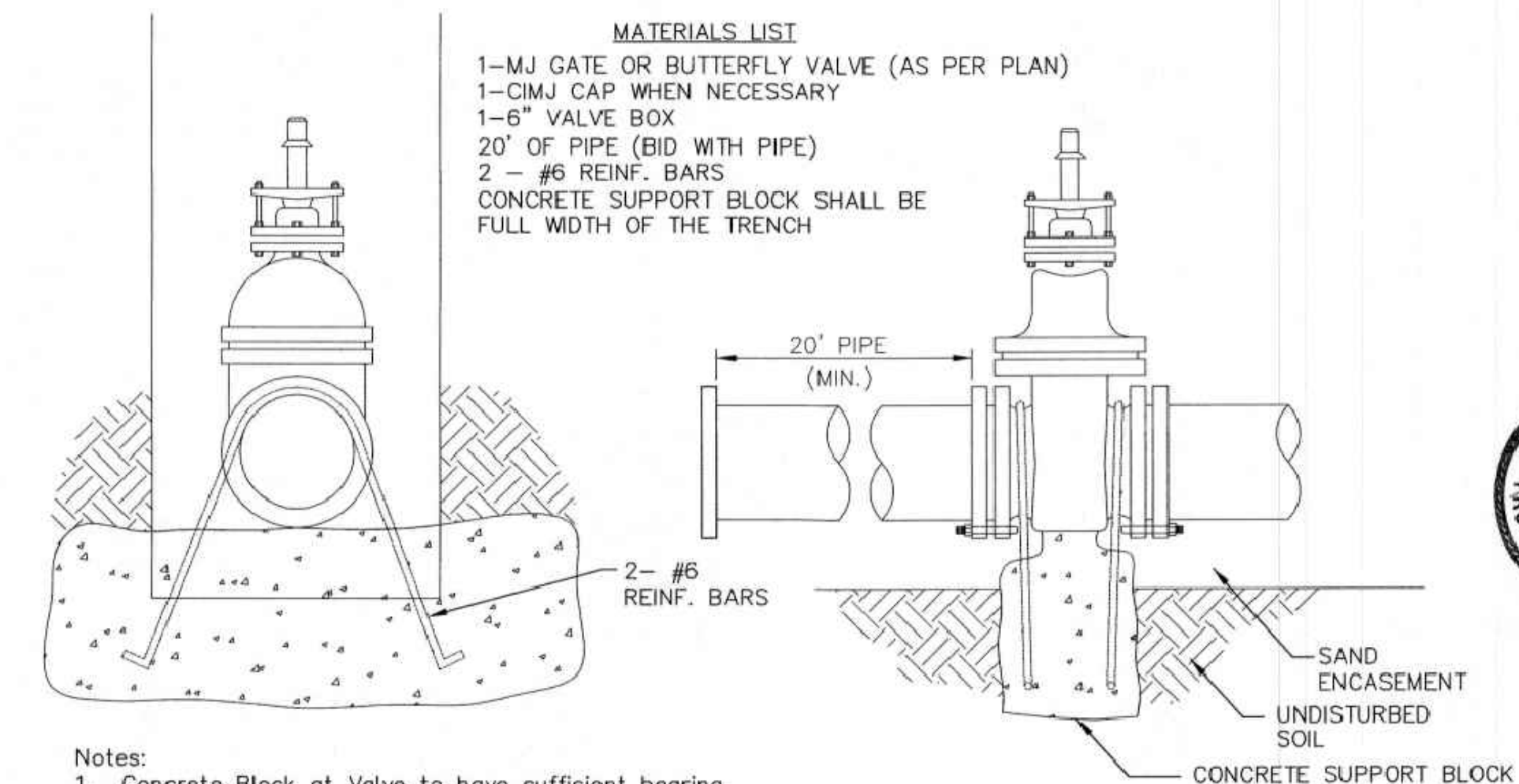


- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1- 6" VALVE BOX
 - 2'- DI CL SJ PIPE



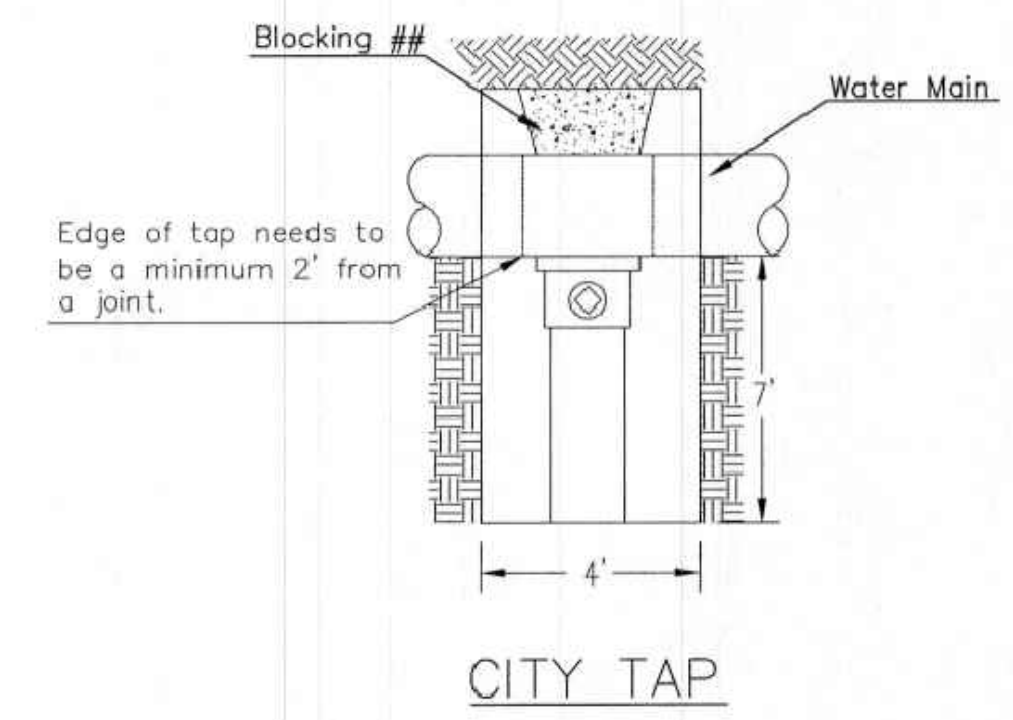
ANCHORED VALVE ASSEMBLY, SPECIAL

- 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



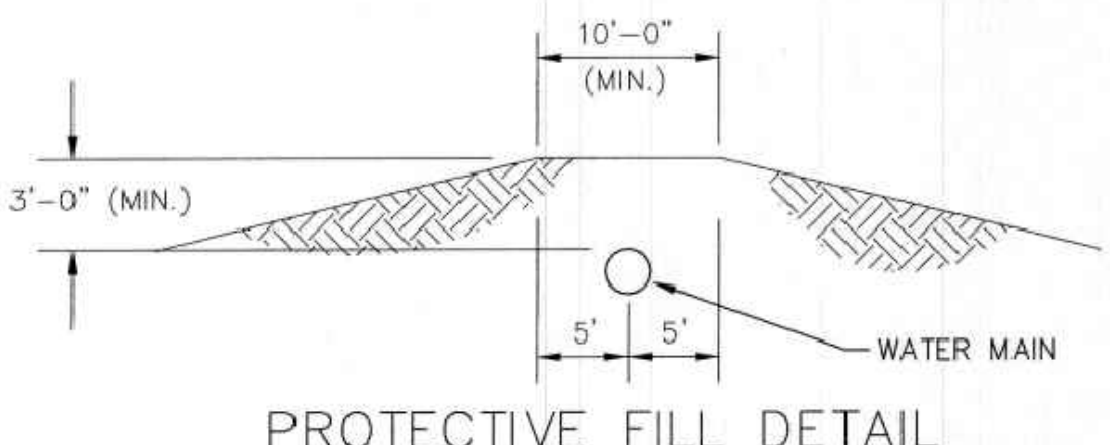
- Notes:**
- Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
 - The thrust block shall be constructed such that bolts, nuts, and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

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



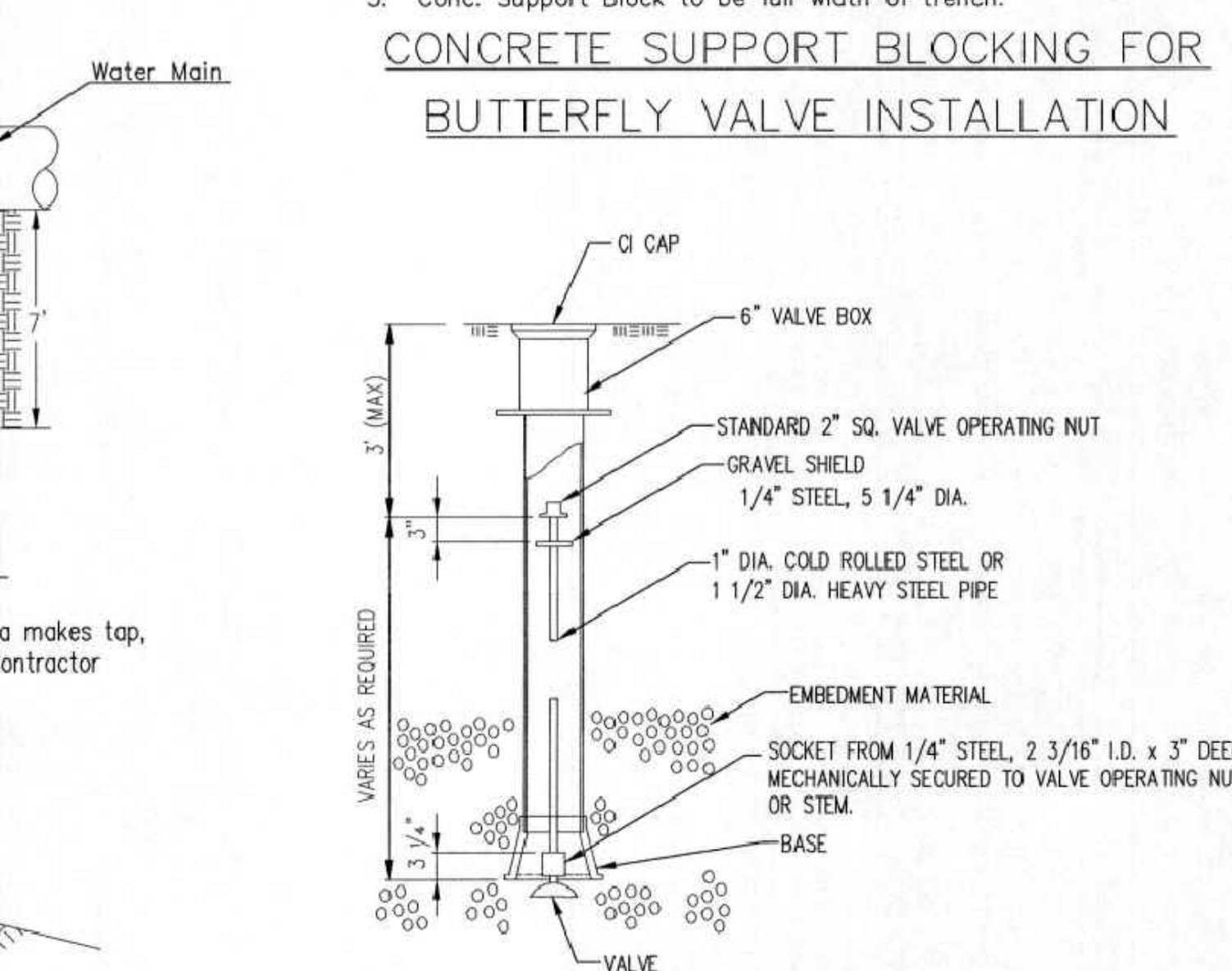
CITY TAP

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



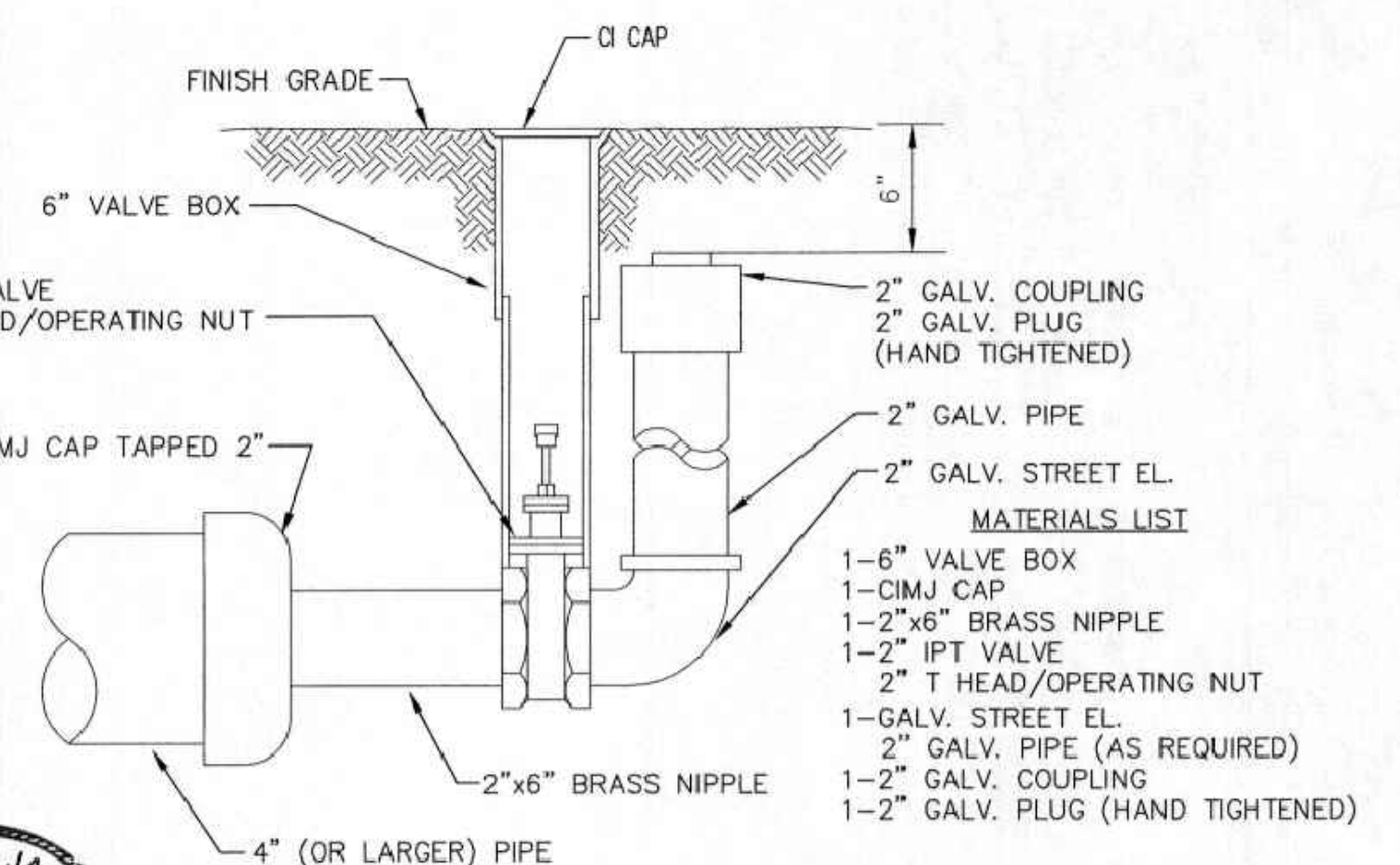
PROTECTIVE FILL DETAIL

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)



VALVE STEM EXTENSION DETAIL

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



2" BLOWOFF ASSEMBLY



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
5 of 13

REVISED: OCTOBER 2016

