

GENERAL NOTES:

- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and 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 consultant 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.
- 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 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 work on this project can commence.
- 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 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 manufactures recommended maximum. Where deflections are greater than the maximum allowed, the contractor shall utilize fittings.
- Any extension greater than one length of pipe shall require testing.
- 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 316-268-4441.

WATER DISTRIBUTION SYSTEM to serve MCAS Hangar Development (ICT)

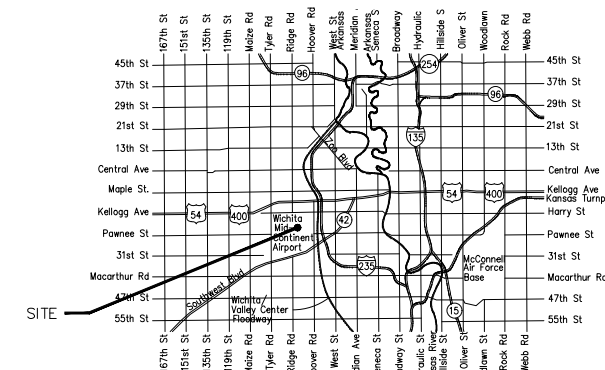
1600 SOUTH AIRPORT ROAD
 CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer

Project Number

~~2021 PPW (027062)~~

PPW 2021-027062 ()



Vicinity Map

AS BUILT PLANS
CONTRACTOR: DONDLINGER CONSTRUCTION
SUPERINTENDENT: BRAD REICHENBERGER
FOREMAN: JULIO VIELMAS
CLIENT: CITY OF WICHITA
INSPECTOR: JIM DULING
INSPECTION FIRM: SCHWAB-EATON, PA.
PDF BY: JFD 10-20-21

Sheet Index

- Title Sheet
- Waterline Plan
- Waterline Profile
- Waterline Details I - II
- Erosion Control Plan
- Erosion Control Details I - V

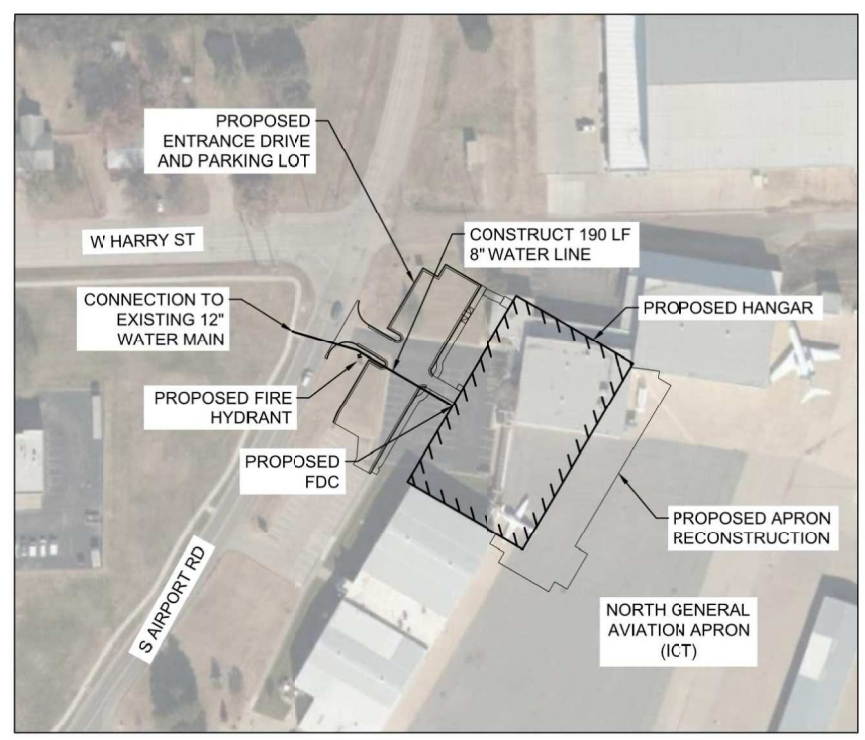
APPROVED AS NOTED BY WICHITA PUBLIC WORKS ENGINEERING DIVISION & BY WICHITA FIRE DEPARTMENT		
Engineering	Ben Ferguson	08/19/2021
Utilities	Greg Lolley	08/19/2021
Fire Dept.	Chief Jose Ocadiz	08/19/2021

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 and Standards and Special Provision (on file and available in the City Engineer's Office) or on the City's Website.

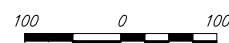
Private Property:
 Installation and testing for the fire protection line is to be performed by a City of Wichita licensed fire protection contractor in accordance with the fire codes as adopted by the City of Wichita. All material and construction practices for the fire protection line shall comply with 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.



Benchmarks

BM#1: Red GSS Rebar located 1590.23 feet south and 1010.40 feet west of the southeast corner of the south building on subject property.
 BM#2: Red GSS Rebar located 619.20 feet south and 643.22 feet west of the southeast corner of the south building on subject property.



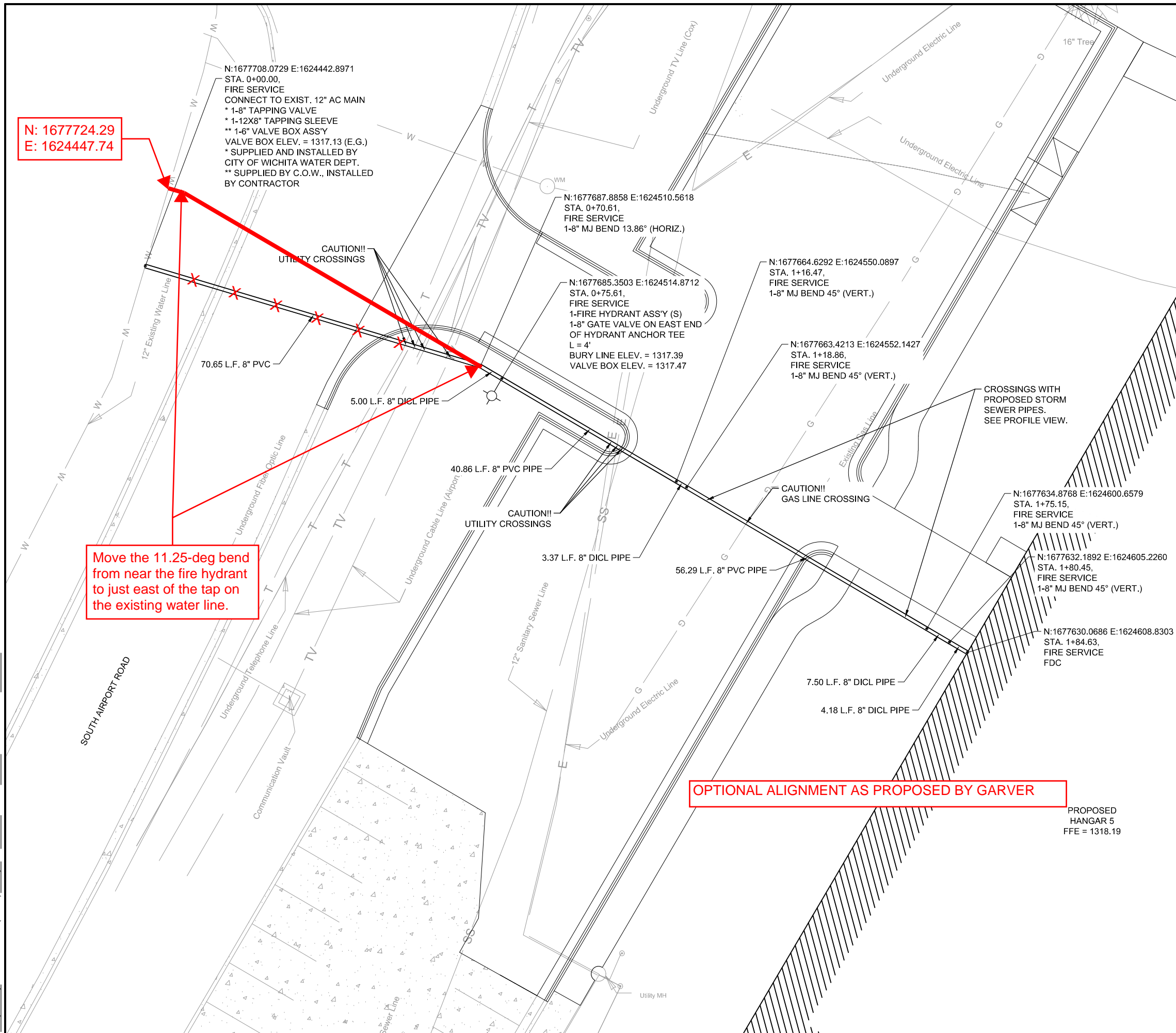
BUILT PER PLAN

July 2021
Garver, LLC
 8535 East 21st St. North
 Suite 130
 Wichita, KS 67206

**CW-001
 09**



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 Last plotted by: Bohm, Christian G. (Gunnar) Plot Style: --- Plot Scale: 1:2,594.9 Plot Date: 8/26/2021 2:48 PM Plotter used: None



N: 1677724.29
 E: 1624447.74

Move the 11.25-deg bend from near the fire hydrant to just east of the tap on the existing water line.

OPTIONAL ALIGNMENT AS PROPOSED BY GARVER

N:1677708.0729 E:1624442.8971
 STA. 0+00.00,
 FIRE SERVICE
 CONNECT TO EXIST. 12" AC MAIN
 * 1-8" TAPPING VALVE
 * 1-12X8" TAPPING SLEEVE
 ** 1-6" VALVE BOX ASSY
 VALVE BOX ELEV. = 1317.13 (E.G.)
 * SUPPLIED AND INSTALLED BY
 CITY OF WICHITA WATER DEPT.
 ** SUPPLIED BY C.O.W., INSTALLED
 BY CONTRACTOR

N:1677687.8858 E:1624510.5618
 STA. 0+70.61,
 FIRE SERVICE
 1-8" MJ BEND 13.86° (HORIZ.)

N:1677685.3503 E:1624514.8712
 STA. 0+75.61,
 FIRE SERVICE
 1-FIRE HYDRANT ASSY (S)
 1-8" GATE VALVE ON EAST END
 OF HYDRANT ANCHOR TEE
 L = 4'
 BURY LINE ELEV. = 1317.39
 VALVE BOX ELEV. = 1317.47

N:1677664.6292 E:1624550.0897
 STA. 1+16.47,
 FIRE SERVICE
 1-8" MJ BEND 45° (VERT.)

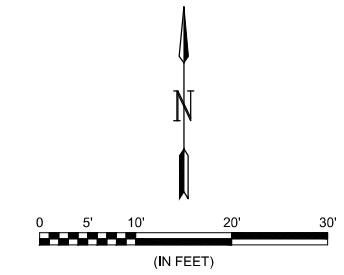
N:1677663.4213 E:1624552.1427
 STA. 1+18.86,
 FIRE SERVICE
 1-8" MJ BEND 45° (VERT.)

N:1677634.8768 E:1624600.6579
 STA. 1+75.15,
 FIRE SERVICE
 1-8" MJ BEND 45° (VERT.)

N:1677632.1892 E:1624605.2260
 STA. 1+80.45,
 FIRE SERVICE
 1-8" MJ BEND 45° (VERT.)

N:1677630.0686 E:1624608.8303
 STA. 1+84.63,
 FIRE SERVICE
 FDC

PROPOSED
 HANGAR 5
 FFE = 1318.19



LEGEND	
	TOFA TAXILANE OBJECT FREE AREA
	PROPOSED HANGAR
	PROPOSED PAVEMENT
	PROPOSED WATER LINE
	EXISTING WATER LINE
	PROPOSED FIRE HYDRANT

NOTES:

- SEE SHEETS CW-301 TO CW-302 FOR WATER LINE DETAILS.
- THE CONTRACTOR SHALL FIELD LOCATE THE EXISTING WATER MAIN AT THE CONNECTION POINT, VERIFY THAT NO JOINTS ARE WITHIN 4' AND ADJUST FIELD TAP LOCATION AS NECESSARY.
- CONTRACTOR SHALL VISUALLY CONFIRM THE LOCATION AND DEPTH OF UTILITIES PRIOR TO BEGINNING ANY TYPE OF EXCAVATION.
- SEE CITY OF WICHITA SPECIFICATION 801 FOR TRENCH EXCAVATION, PIPE BEDDING, BACKFILLING, AND COMPACTION.
- SEE CITY OF WICHITA SPECIFICATION 803 FOR WATER LINE CONSTRUCTION.

CAUTION: UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. AN ATTEMPT HAS BEEN MADE TO LOCATE THESE UTILITIES ON THE PLANS. HOWEVER, ALL EXISTING UTILITIES MAY NOT BE SHOWN AND THE ACTUAL LOCATIONS OF THE UTILITIES MAY VARY FROM THE LOCATIONS SHOWN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITIES ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.



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8535 E. 21st St. N.
 Suite 130
 Wichita, KS 67206
 (316) 264-8008



REV.	DATE	DESCRIPTION	BY



MID-CONTINENT AVIATION SERVICES
 WICHITA, KANSAS
 HANGAR 5 DEVELOPMENT - CIVIL SITE DESIGN

CIVIL WATER LINE PLAN

JOB NO.: 21A17100
 DATE: AUG. 2021
 DESIGNED BY: CGB
 DRAWN BY: CGB

BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER
CW-101
 SHEET NUMBER
10



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MID-CONTINENT AVIATION SERVICES
 WICHITA, KANSAS

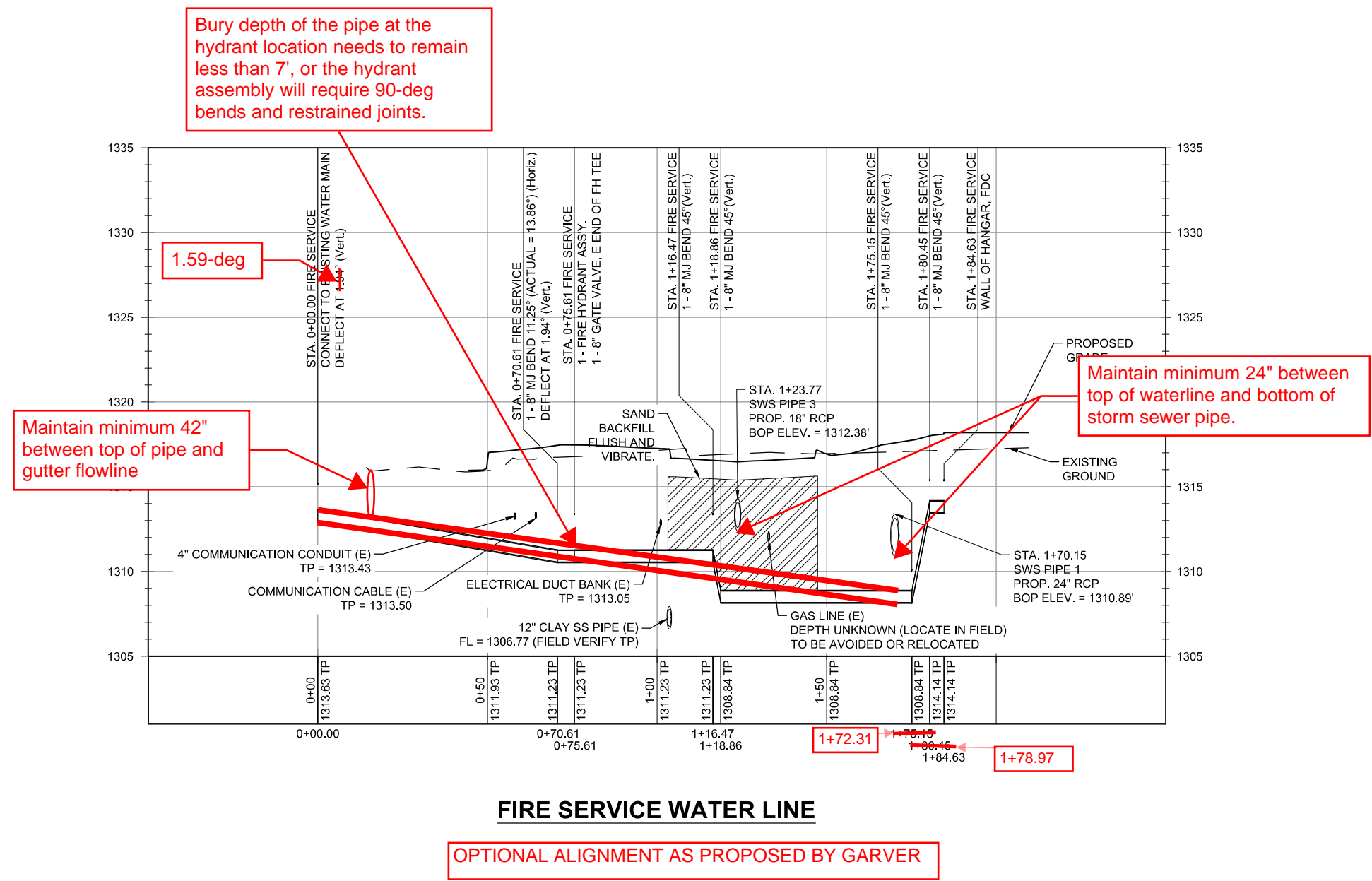
HANGAR 5 DEVELOPMENT - CIVIL SITE DESIGN

CIVIL WATER LINE PROFILE

JOB NO.: 21A17100
 DATE: AUG. 2021
 DESIGNED BY: CGB
 DRAWN BY: CGB

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CW-201
 SHEET NUMBER **11**

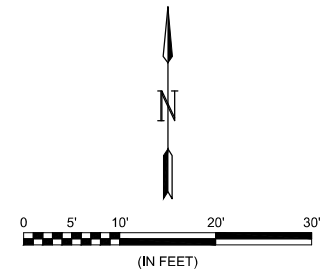
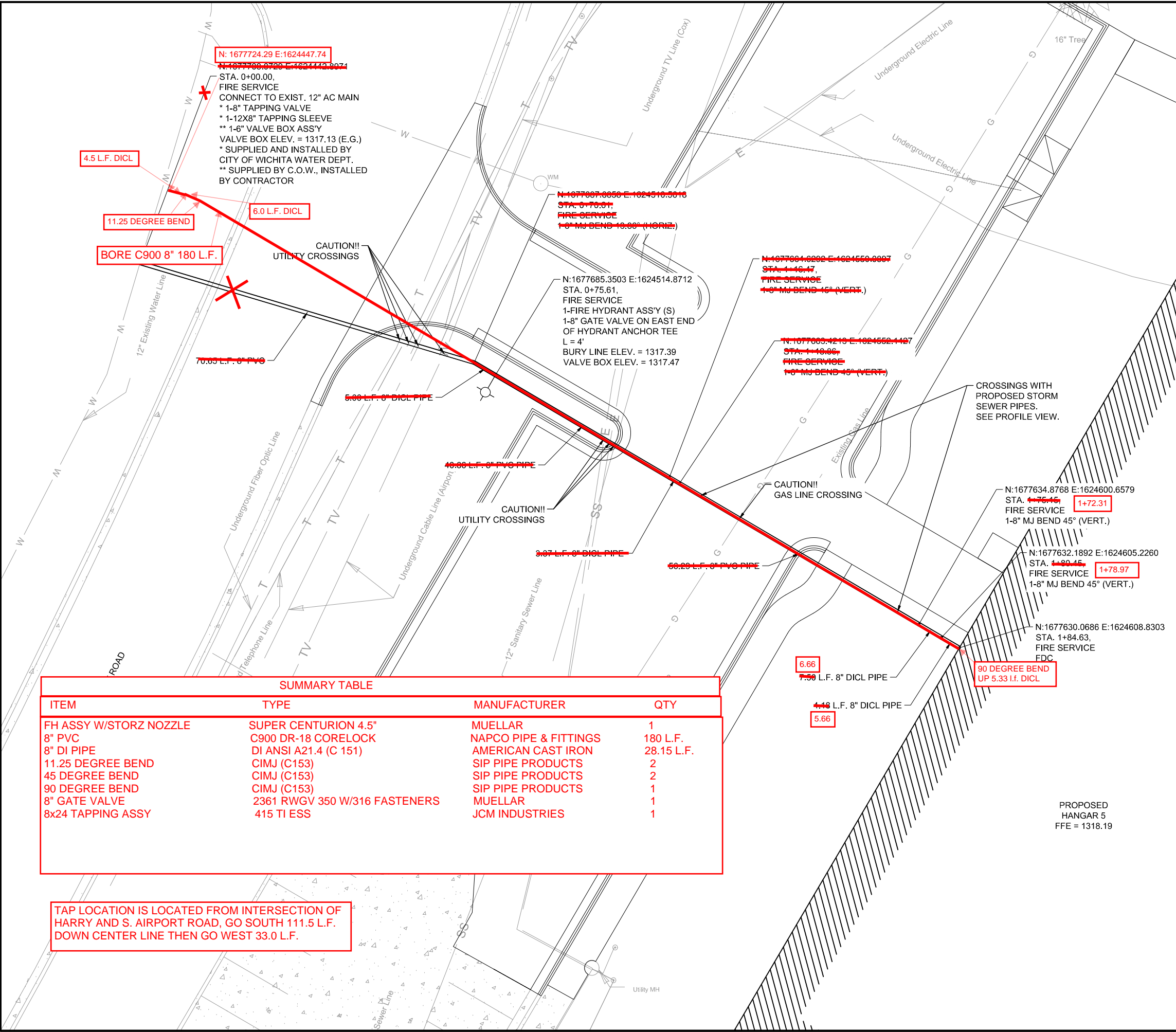


NOTE:
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LEGEND	
	TOFA TAXILANE OBJECT FREE AREA
	PROPOSED HANGAR
	PROPOSED PAVEMENT
	PROPOSED WATER LINE
	EXISTING WATER LINE
	PROPOSED FIRE HYDRANT

- NOTES:
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 - SEE CITY OF WICHITA SPECIFICATION 801 FOR TRENCH EXCAVATION, PIPE BEDDING, BACKFILLING, AND COMPACTION.
 - SEE CITY OF WICHITA SPECIFICATION 803 FOR WATER LINE CONSTRUCTION.

SUMMARY TABLE			
ITEM	TYPE	MANUFACTURER	QTY
FH ASSY W/STORZ NOZZLE	SUPER CENTURION 4.5"	MUELLAR	1
8" PVC	C900 DR-18 CORELOCK	NAPCO PIPE & FITTINGS	180 L.F.
8" DI PIPE	DI ANSI A21.4 (C 151)	AMERICAN CAST IRON	28.15 L.F.
11.25 DEGREE BEND	CIMJ (C153)	SIP PIPE PRODUCTS	2
45 DEGREE BEND	CIMJ (C153)	SIP PIPE PRODUCTS	2
90 DEGREE BEND	CIMJ (C153)	SIP PIPE PRODUCTS	1
8" GATE VALVE	2361 RWGV 350 W/316 FASTENERS	MUELLAR	1
8x24 TAPPING ASSY	415 TI ESS	JCM INDUSTRIES	1

TAP LOCATION IS LOCATED FROM INTERSECTION OF HARRY AND S. AIRPORT ROAD, GO SOUTH 111.5 L.F. DOWN CENTER LINE THEN GO WEST 33.0 L.F.



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REV.	DATE	DESCRIPTION	BY



MID-CONTINENT AVIATION SERVICES
 WICHITA, KANSAS

HANGAR 5 DEVELOPMENT - CIVIL SITE DESIGN

CIVIL WATER LINE PLAN

CAUTION: UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. AN ATTEMPT HAS BEEN MADE TO LOCATE THESE UTILITIES ON THE PLANS. HOWEVER, ALL EXISTING UTILITIES MAY NOT BE SHOWN AND THE ACTUAL LOCATIONS OF THE UTILITIES MAY VARY FROM THE LOCATIONS SHOWN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITIES ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.

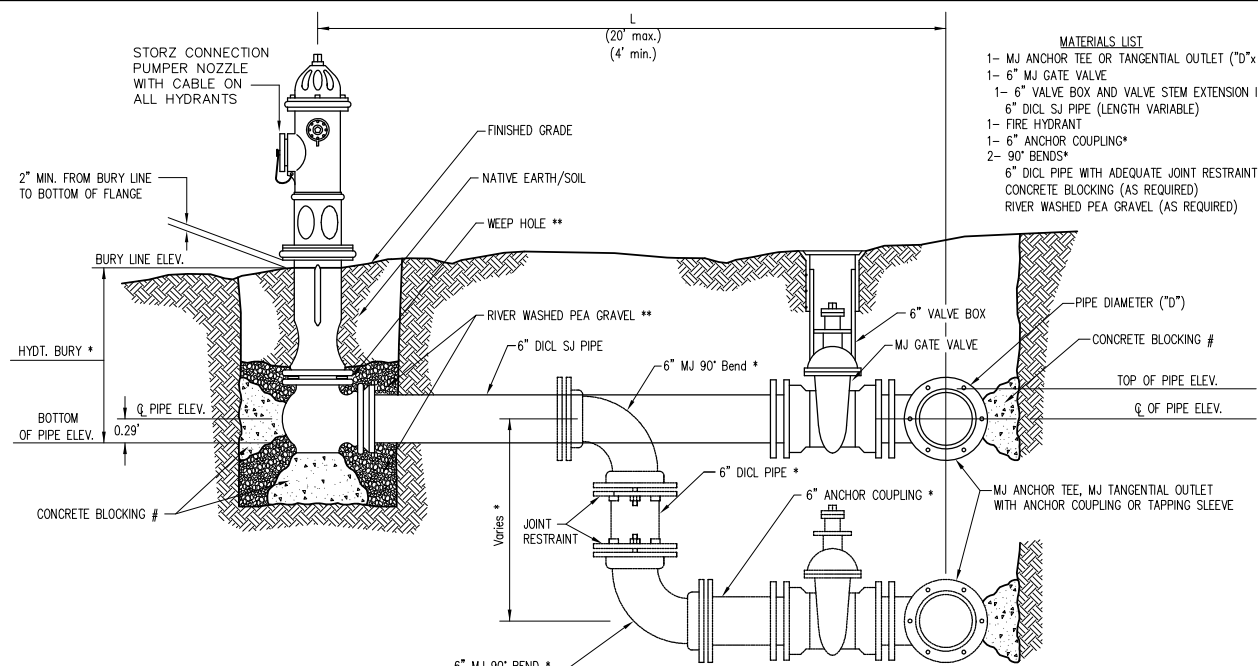


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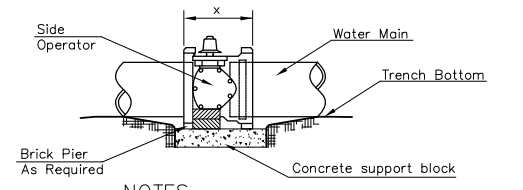
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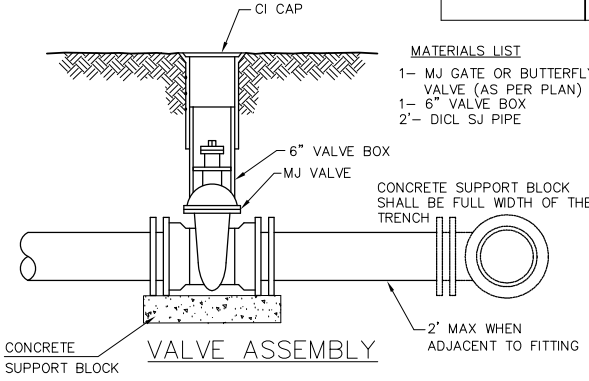
- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET ("D" x 6")
 - 1- 6" MJ GATE VALVE
 - 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED *
 - 6" DI CL SJ PIPE (LENGTH VARIABLE)
 - 1- FIRE HYDRANT
 - 1- 6" ANCHOR COUPLING*
 - 2- 90° BENDS*
 - 6" DI CL PIPE WITH ADEQUATE JOINT RESTRAINT *
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

FIRE HYDRANTS REQUIRED				
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
0+75.61	1317.39	1311.23	7	1.87

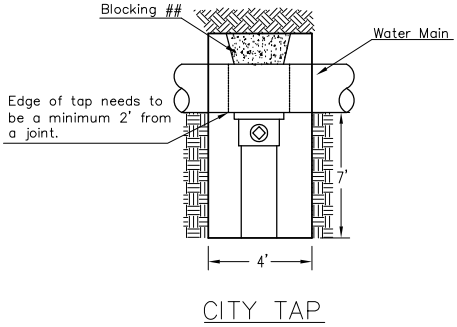


- NOTES**
- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
 - 6" Valve Box and Cover required per City of Wichita Std. Specifications.
 - Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION

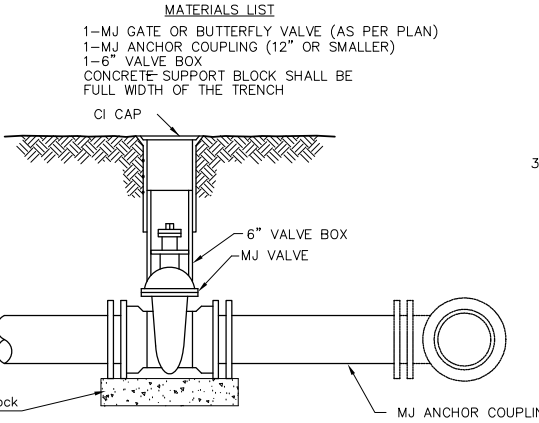


- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1- 6" VALVE BOX
 - 2'- DI CL SJ PIPE

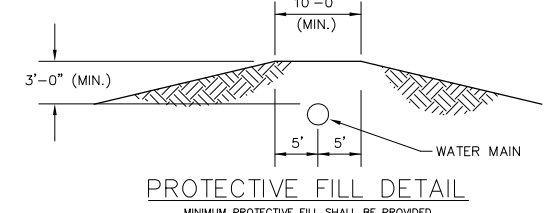


Edge of tap needs to be a minimum 2' from a joint.

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

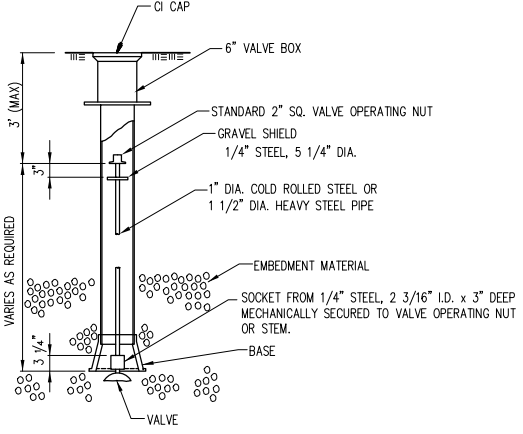


- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1- MJ ANCHOR COUPLING (12" OR SMALLER)
 - 1- 6" VALVE BOX
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



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)

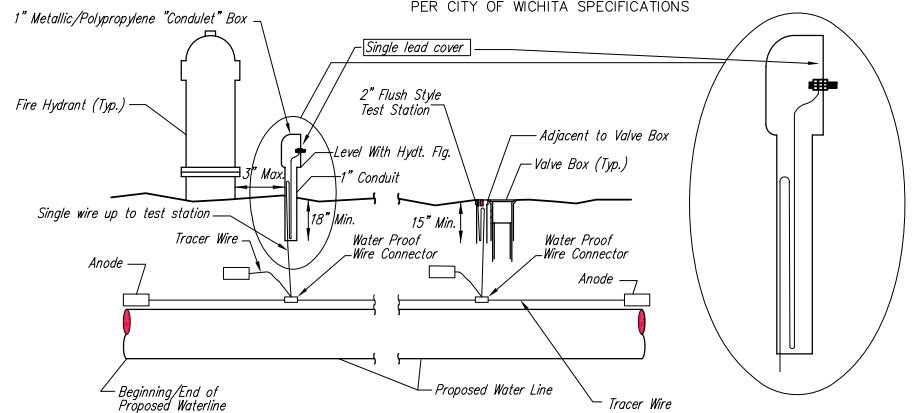


VALVE STEM EXTENSION DETAIL

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

- * 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.

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 # T2PH/7B1LP 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.

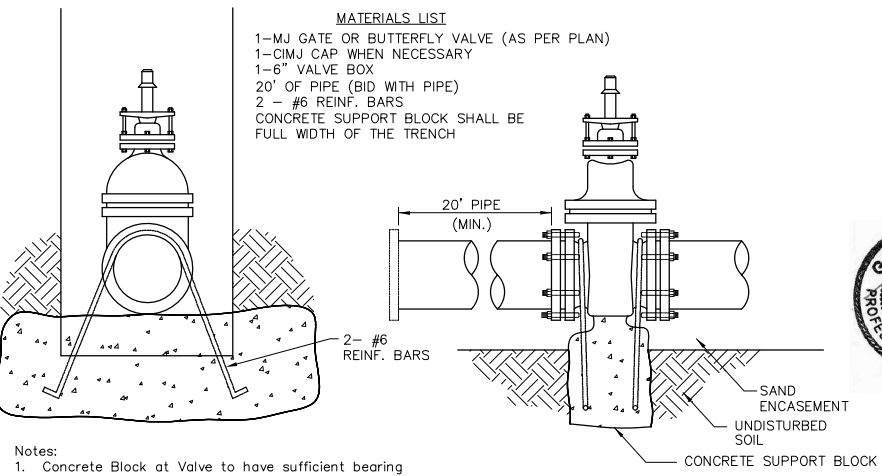
ANODES

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

ANCHORED VALVE ASSEMBLY

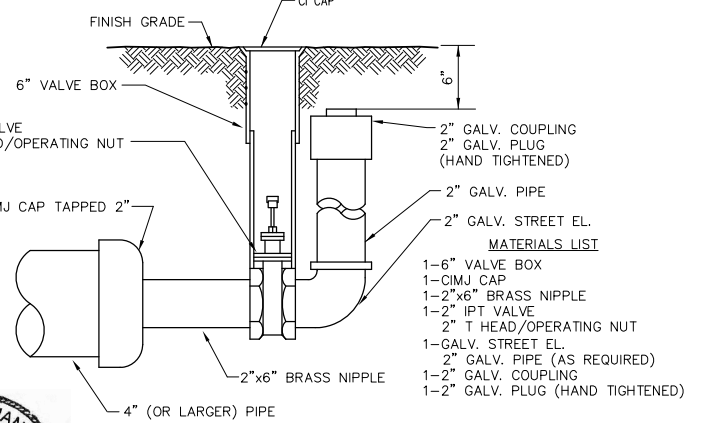


- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1- CIMJ CAP WHEN NECESSARY
 - 1- 6" VALVE BOX
 - 20' OF PIPE (BID WITH PIPE)
 - 2 - #6 REINF. BARS
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

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.

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



2" BLOWOFF ASSEMBLY

STANDARD WATER ASSEMBLY DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
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CITY ENGINEER'S OFFICE
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