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 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.

10. 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.

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 work on this project can commence.

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 Wt.-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. Fire Line inspections may be scheduled by calling 316-650-0740

28. 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.

29. Maintain a minimum of 2-foot vertical separation between all water lines (mains and services) and all gravity sanitary lines (mains, services, and manholes) at crossings. All separation distances are to be measured from edge-to-edge, at the closest point.

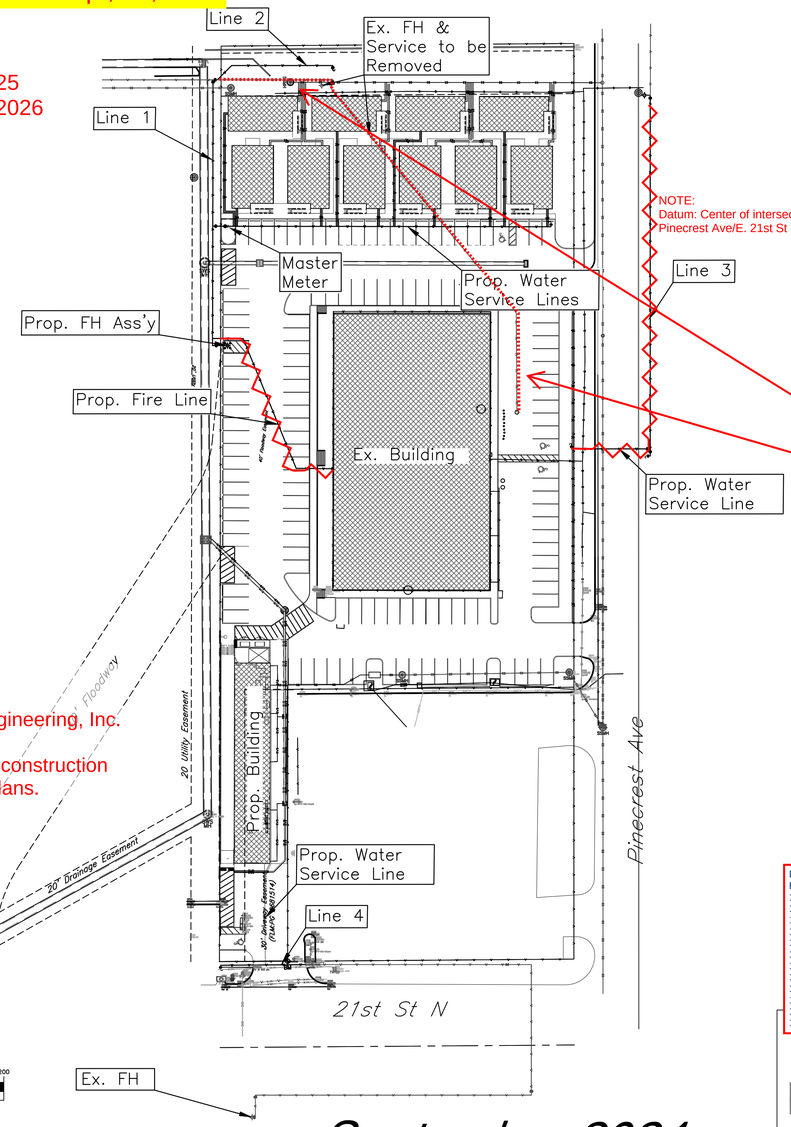
30. Maintain a minimum of 2-foot vertical separation between all water lines (mains and services) and all pressurized sanitary sewer lines (force mains and services) at crossings. Waterlines must always be placed above pressurized sanitary sewer lines where they cross. All separation distances are to be measured edge-to-edge, at the closest point.

WATER DISTRIBUTION SYSTEM
to serve
University Gardens 2nd. Add.
5110 E 21st St N
CITY OF WICHITA, KANSAS

Paul Gunzelman, P.E. City Engineer
Project Number
2023 - 036017 PPW (54030980)

As Built Plans received by C.O.W. Sept, 25, 2026

Construction Begin: Aug. 12, 2025
Construction Complete: April 2, 2026
Defects : Still need bollards and rotate fire hydrant (6-11-26)
Defects corrected: ???



Benchmarks

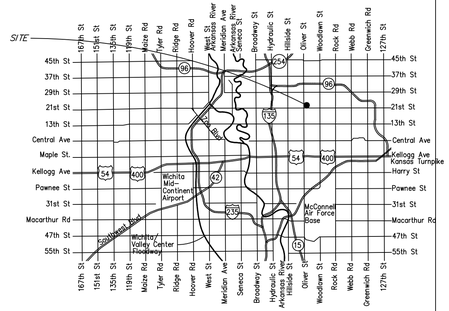
BM#1:
Square Cut approx. 45.14' East and 34.46' South of Northeast Property Corner
Elev. = 1395.66 NAVD88

BM#2:
PK Nail approx. 91.79' South and 18.90' West of Northwest Property Corner
Elev. = 1396.79 NAVD88

As Built Date: 04/01/2026
Inspector: J. Negrete/J. Leos
Inspecting Firm: Kaw Valley Engineering, Inc.
Contractor: Carr Plumbing
Built in general conformance to construction plans, except where noted on plans.

MICHAEL J. EDWARDS LICENSED DATE: 10.08.2024 26045 KANSAS PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED DIGITALLY

50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.



Vicinity Map

Sheet Index

1.0	Title Sheet
2.0	Control Map
2.1	Std. Wtr. Ass'y Details
2.2	Misc. Wtr. Details
3.0	Plan & Profile Line 1
3.1	Plan & Profile Line 2
3.2	Plan & Profile Line 3
3.3	Plan & Profile Line 4
4.0	Erosion Control Plan
4.1-4.5	Erosion Control Details
5.0	Plat

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

Engineering approved by Shawn Mellies on this day the 9th of October, 2024
Utilities approved by Greg Lolley on this day the 9th of October, 2024
Fire Dept approved by Jose Ocadiz on this day the 9th of October, 2024

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.

Disconnected and abandoned existing 6" public & 4" private line & FH 05305.
Below services were tapped on these lines and are now Disconnected Services
113066-100
113065-100
113064-100
113063-100
113062-100
113061-100
113060-100
113059-100
113058-100
113057-100
115015-200
147624-100= 2" DS

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

September 2024

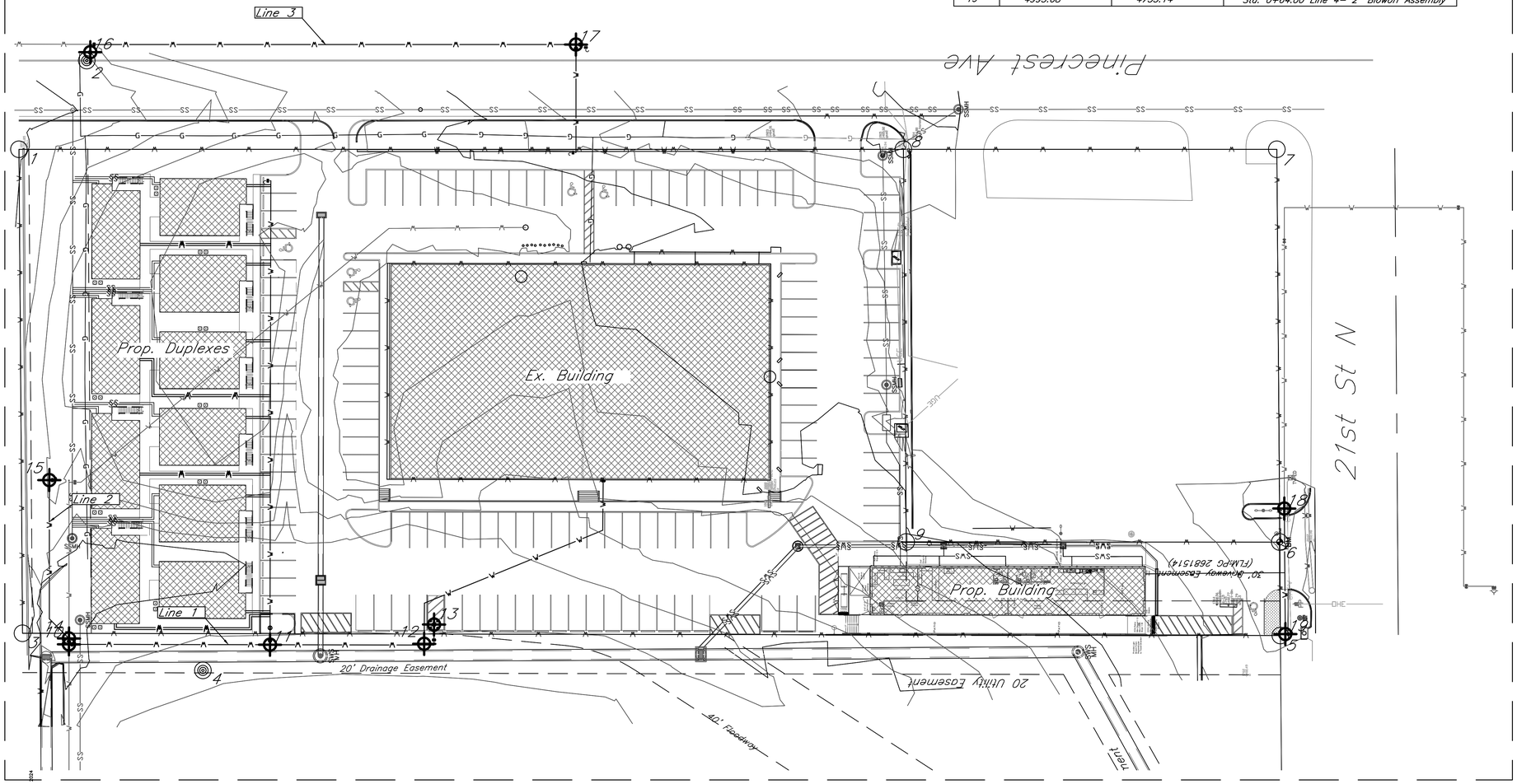
October 9, 2024

○ Control Points

Point #	Northing	Easting	Desc.
1	5640.00	5000.00	1/2" REBAR
2	5605.53	5045.13	Square cut
3	5638.19	4753.55	Calculated Point
4	5546.41	4734.65	PK Nail
5	4998.18	4752.37	Set Cross
6	4998.53	4800.01	Set V-Notch
7	5000.00	5000.00	1/2" REBAR
8	5190.00	5000.00	1/2" IRON PIPE
9	5188.58	4800.04	1/2" REBAR

⌖ WL Control Points

Point #	Northing	Easting	Desc.
10	5614.57	4747.90	Sta. 0+00.00 Line 1– 8"x8" Tap & Valve
11	5512.28	4747.71	Sta. 1+02.81 Line 1– Service Line Tap
12	5433.84	4748.16	Sta. 1+81.22 Line 1– 8"x4" Tee
13	5428.83	4758.01	Sta. 1+86.22 Line 1– Fire Hydrant
14	5614.58	4750.90	Sta. 0+00.00 Line 2– 45° Bend (H)
15	5625.36	5000.00	Sta. 0+84.65 Line 2– 2" Blowoff Assembly
16	5603.78	5049.44	Sta. 0+00.00 Line 3– Ex. Fire Hydrant
17	5356.63	5053.35	Sta. 2+47.14 Line 3– 8"x4" Tee
18	4993.23	4817.07	Sta. 0+00.00 Line 4– Connect to 2"
19	4995.68	4753.14	Sta. 0+64.00 Line 4– 2" Blowoff Assembly



MICHAEL J. EDWARDS
LICENSED
DATE: 9.03.2024
26045
KANSAS
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED DIGITALLY

30 0 15 30 60 120

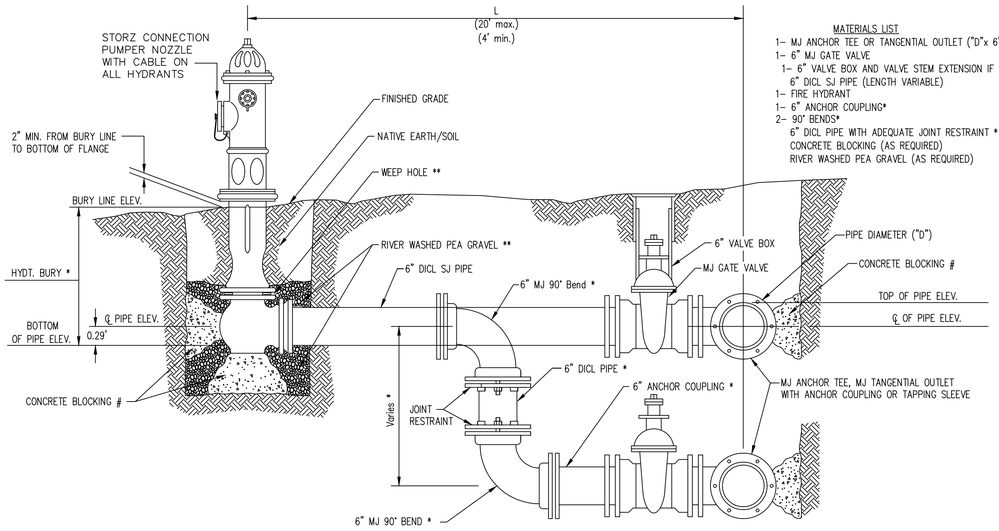
(IN FEET)
1 inch = 30 ft.

University Gardens 2nd Addition
Control Map
Wichita, Kansas

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

PROJECT NUMBER			
KEM NO. 23042	FILE	DATE	SHEET 2.0
DESIGN KEM	DRAWN	REVISED	

October 4, 2024



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)

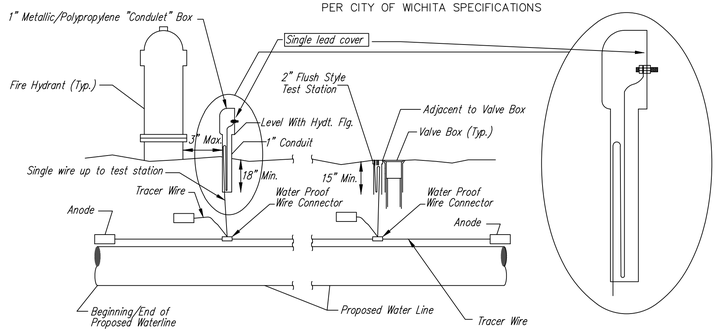
* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DICL PIPE AS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

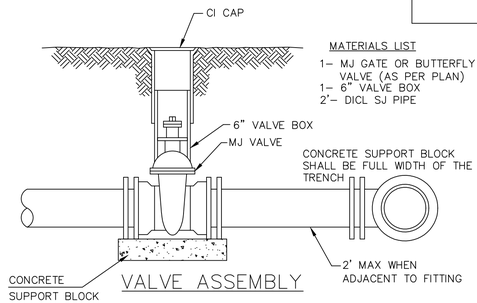
ANODES

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

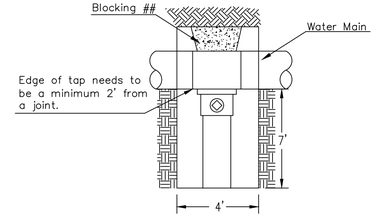
COST IS SUBSIDIARY TO PIPE INSTALLATION

FIRE HYDRANTS REQUIRED				
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
1+86.22	1395.60	1391.29	5.0	N/A



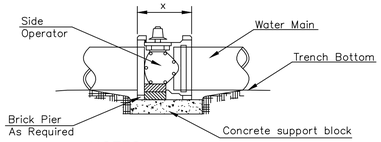
MATERIALS LIST
1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
1- 6" VALVE BOX
2'- DICL SJ PIPE

VALVE ASSEMBLY



CITY TAP

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

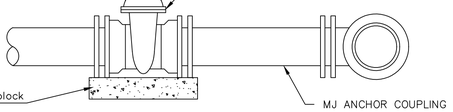


NOTES

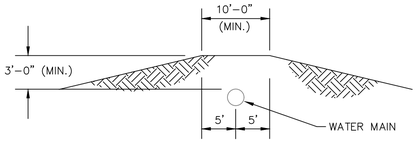
1. This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
2. 6" Valve Box and Cover required per City of Wichita Std. Specifications.
3. Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION

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

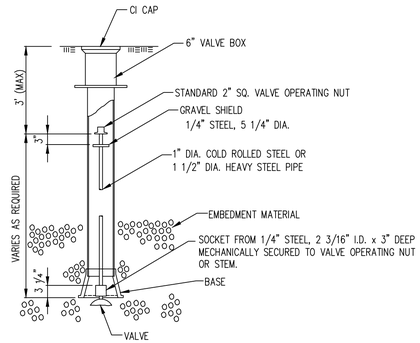


ANCHORED VALVE ASSEMBLY



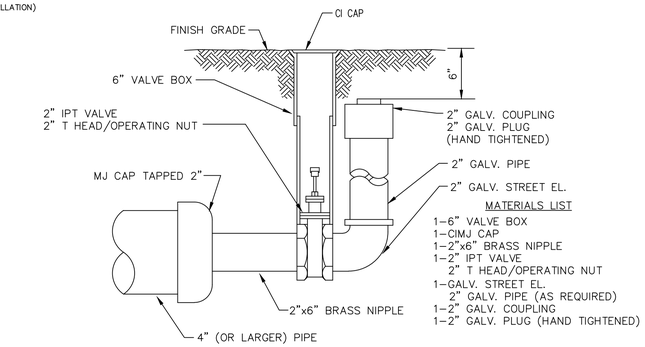
PROTECTIVE FILL DETAIL

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)



VALVE STEM EXTENSION DETAIL

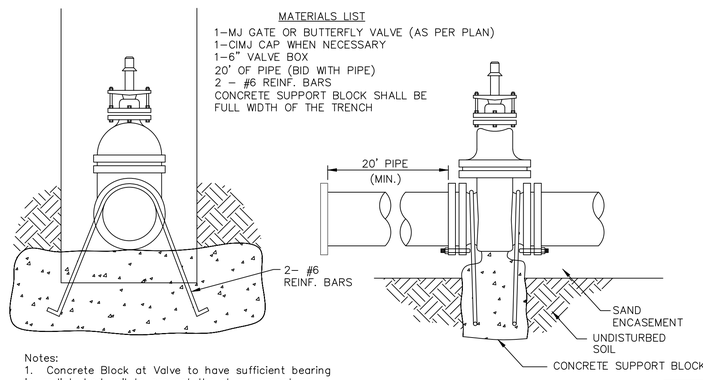
NOTE: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.



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

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

KIRK E. MILLER LICENSED 11.18.2021 11283 PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED DIGITALLY

REVISED: OCTOBER 2016

CITY OF WICHITA

PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD WATER ASSEMBLY DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

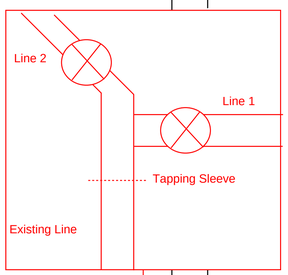
PROJECT NUMBER	OCA NUMBER	DATE

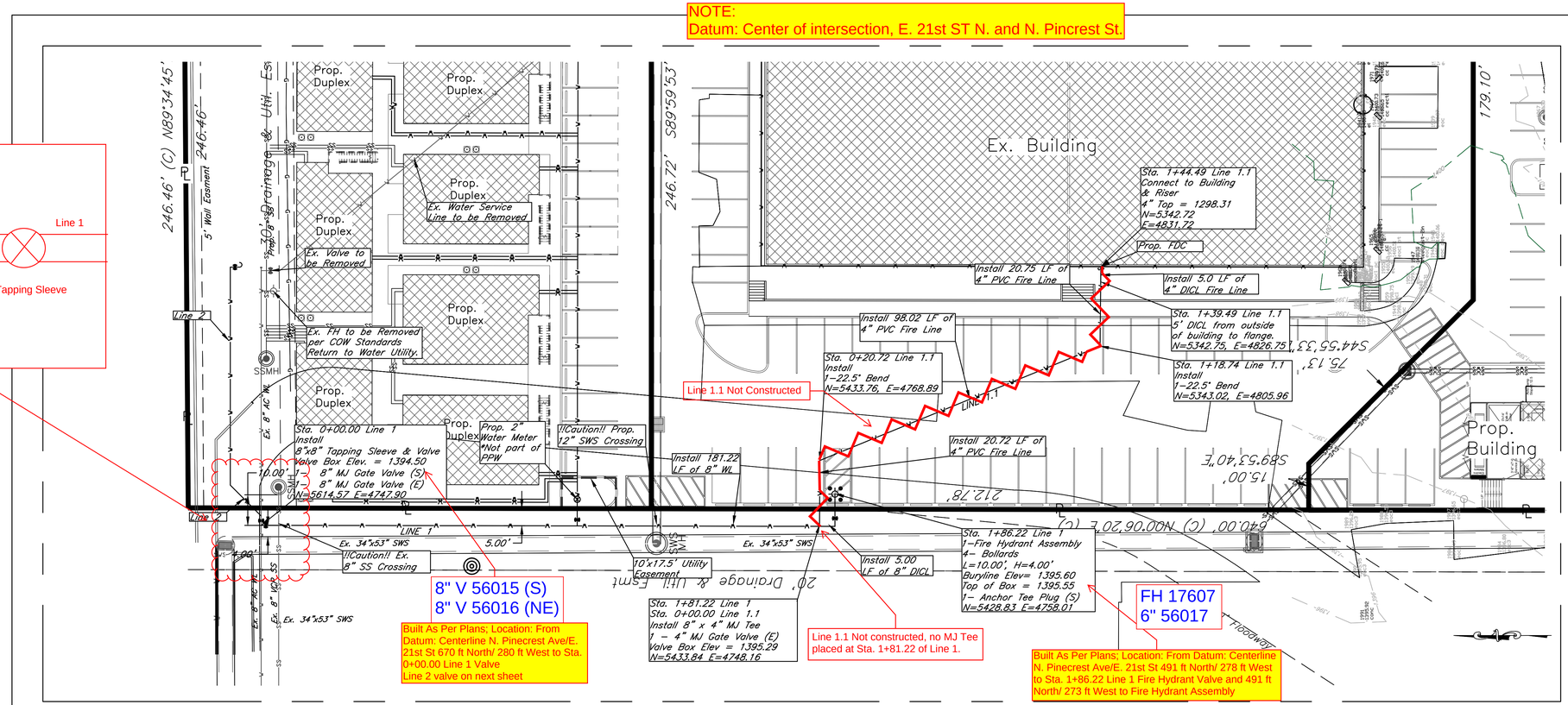
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

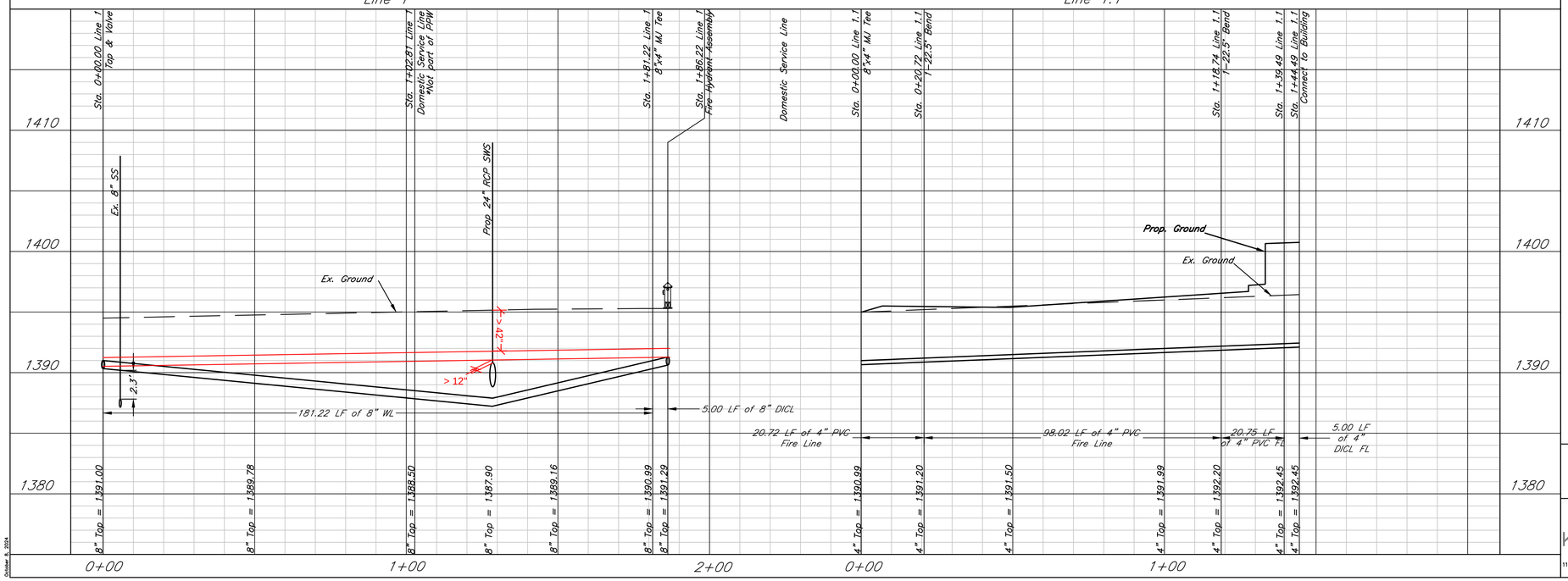
SHEET 2.1

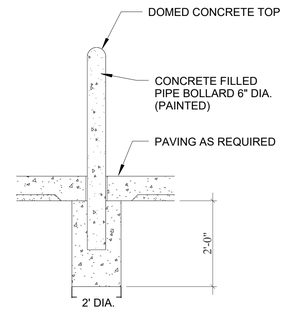
WL-101

NOTE:
Datum: Center of intersection, E. 21st ST N. and N. Pincrest St.









VERTICAL SCALE
(IN FEET)
1 inch = 5 ft.

HORIZONTAL SCALE
(IN FEET)
1 inch = 20 ft.

MICHAEL J. EDWARDS LICENSED DATE: 10.08.2024 26045 KANSAS PROFESSIONAL ENGINEER

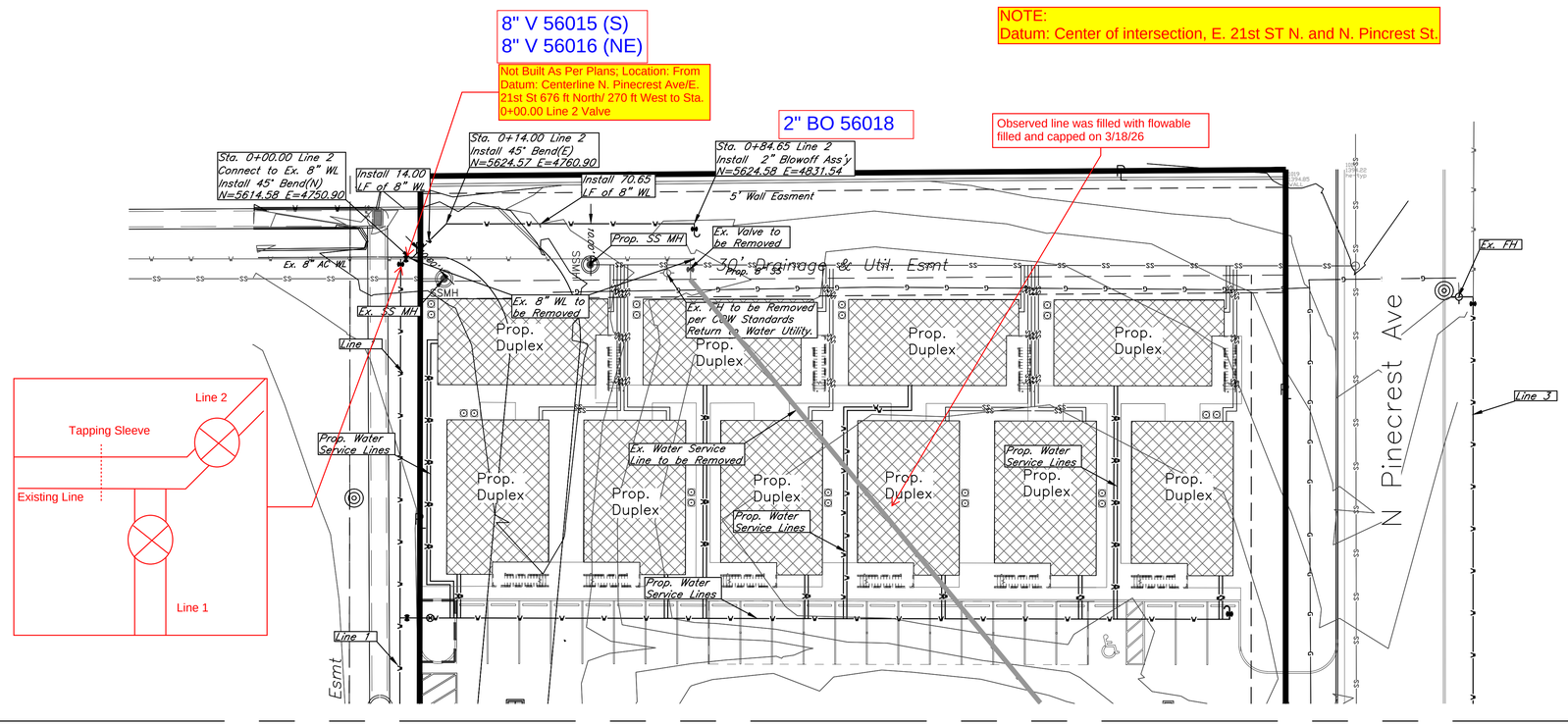
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED DIGITALLY

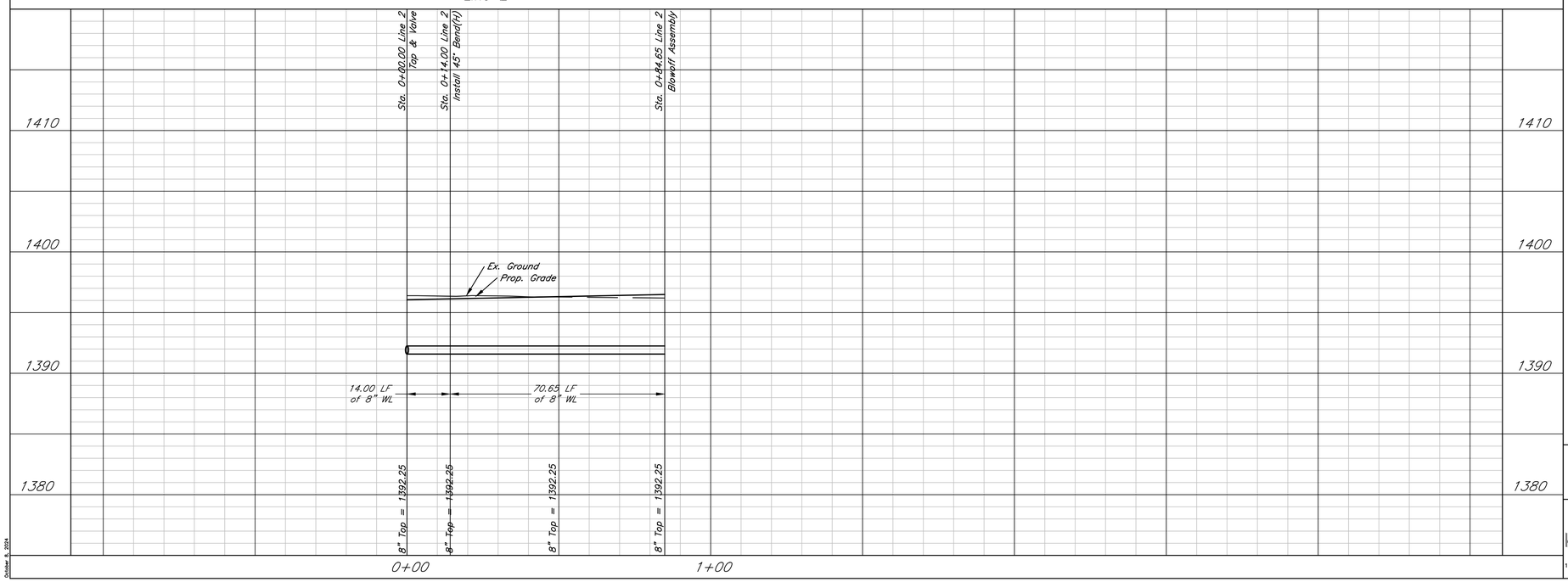
University Gardens 2nd Addition
WL Plan & Profile- Line 1 - 1.2
Wichita, Kansas

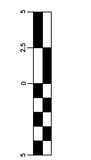
KEMILLER ENGINEERING PA
117 E. Lewis, Wichita, KS 67202 (316)264-0242

PROJECT NUMBER			
KEM NO. 23042	FILE	DATE	SHEET 3.0
DESIGN KEM	DRAWN	REVISED	

October 9, 2024







VERTICAL SCALE
(IN FEET)
1 inch = 5 ft.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED DIGITALLY



HORIZONTAL SCALE
(IN FEET)
1 inch = 20 ft.

University Gardens 2nd Addition

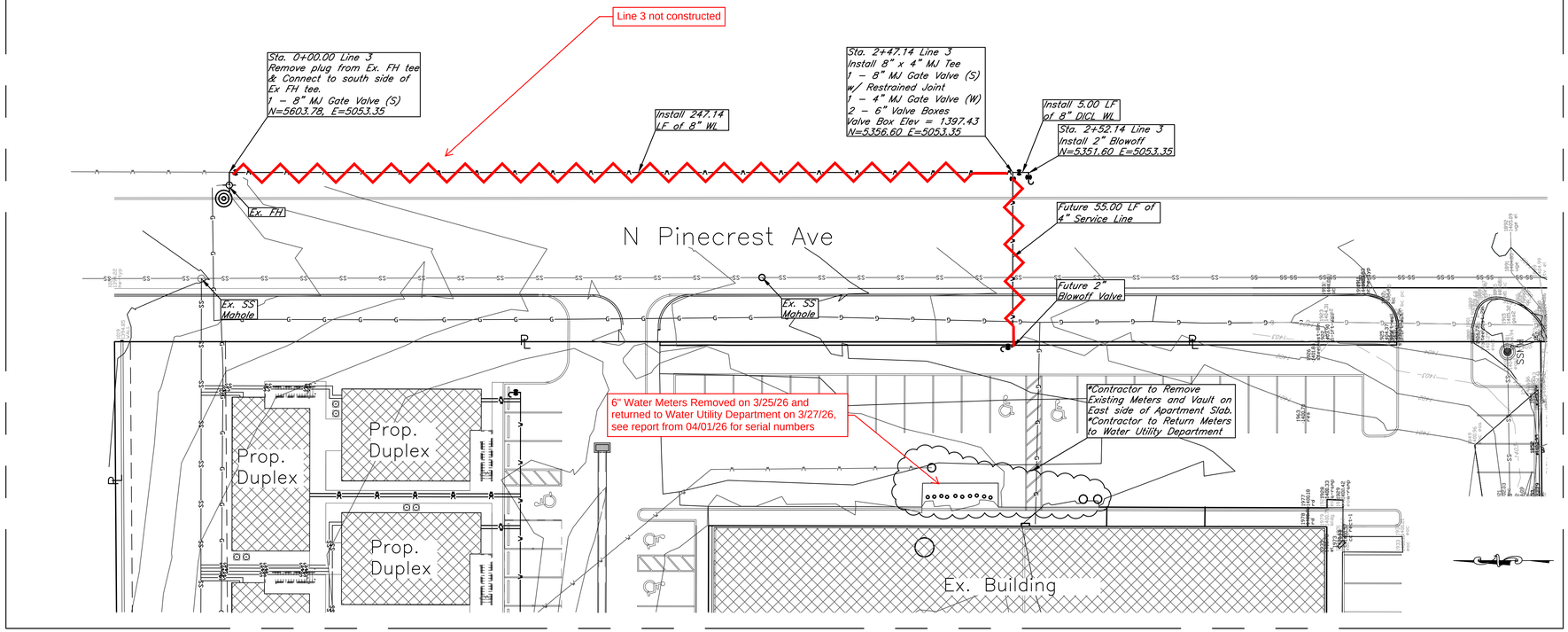
WL Plan & Profile- Line 2

Wichita, Kansas

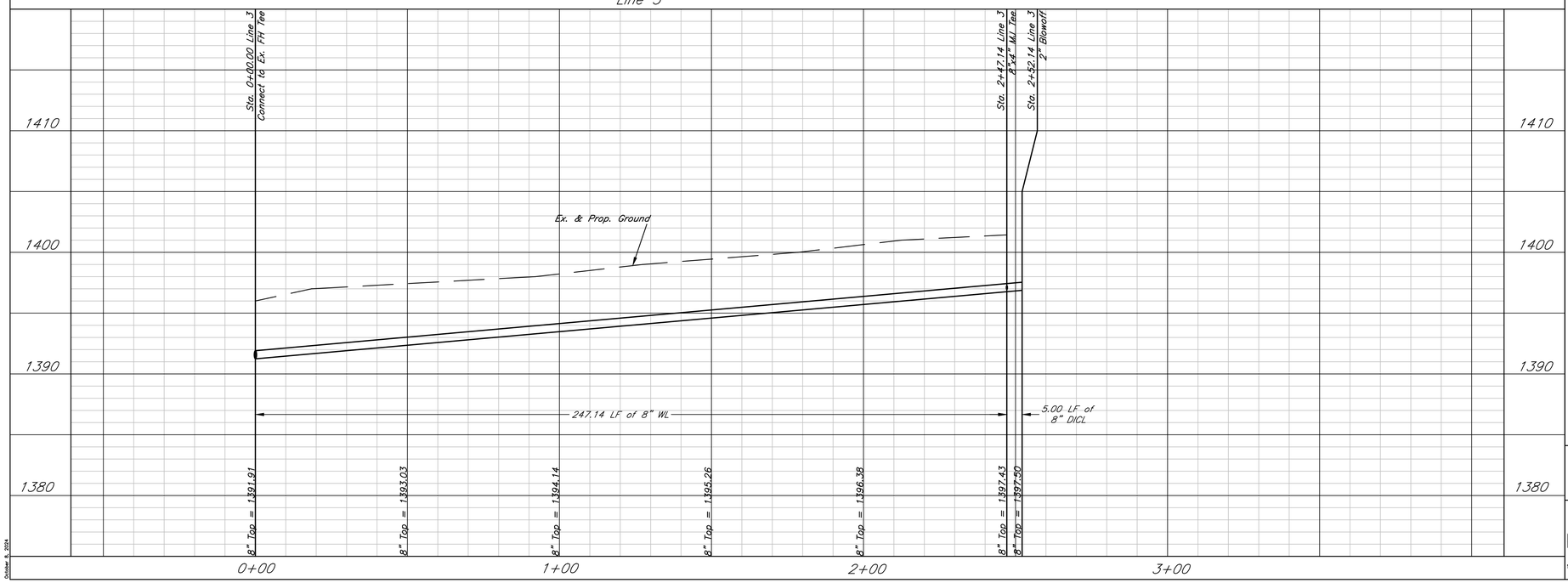
KEMILLER ENGINEERING PA
117 E. Lewis, Wichita, KS 67202 (316)264-0242

PROJECT NUMBER			
KEM NO. 23042	FILE	DATE 10/2023	SHEET 3.1
DESIGN	DRAWN KJ	REVISED	

October 9, 2024



Line 3



VERTICAL SCALE
(IN FEET)
1 inch = 5 ft.

HORIZONTAL SCALE
(IN FEET)
1 inch = 20 ft.

MICHAEL J. EDWARDS
LICENSED
DATE: 10.08.2024
26045
KANSAS
PROFESSIONAL ENGINEER

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University Gardens 2nd Addition

WL Plan & Profile- Line 3

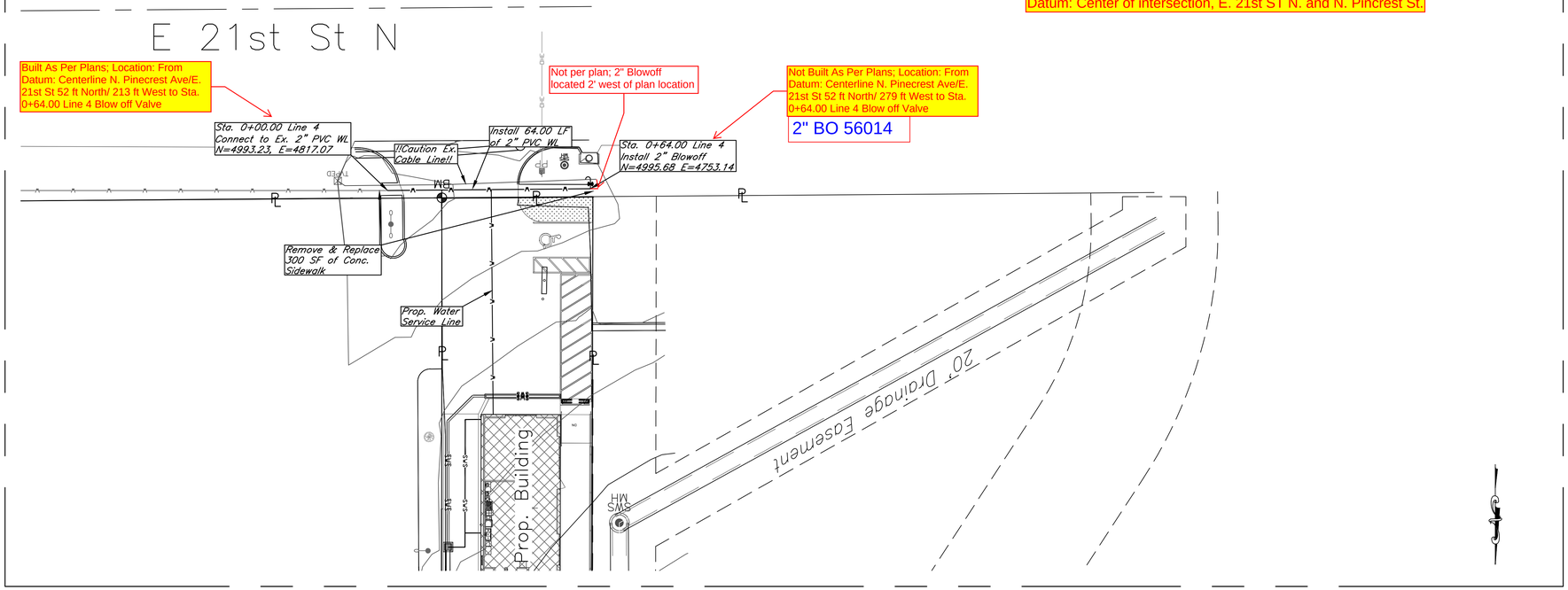
Wichita, Kansas

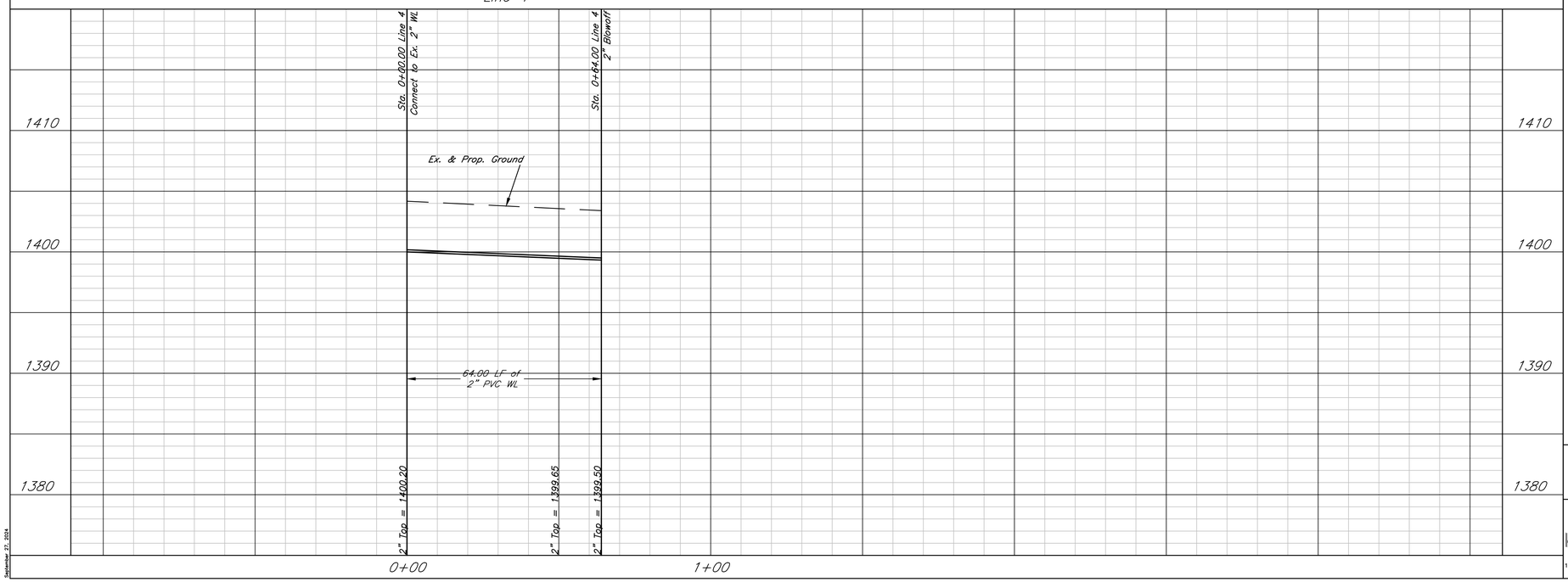
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PROJECT NUMBER			
KEM NO. 23042	FILE	DATE	SHEET 3.2
DESIGN	DRAWN KJ	REVISED	

October 8, 2024

NOTE:
Datum: Center of intersection, E. 21st ST N. and N. Pincrest St.





September 27, 2024



VERTICAL SCALE
(IN FEET)
1 inch = 5 ft.



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HORIZONTAL SCALE
(IN FEET)
1 inch = 20 ft.

University Gardens 2nd Addition
WL Plan & Profile– Line 4
Wichita, Kansas

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PROJECT NUMBER			
KEM NO. 23042	FILE	DATE	SHEET 3.3
DESIGN	DRAWN KJ	REVISED	