

# 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 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 ADJUTING 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 THE 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 TOM MASON WITH THE CITY AT 316-268-4574 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 AT [traffic@wichita.gov](mailto: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 RESPONSIBLY.

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 WL-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 MANUFACTURERS 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 CONSTRUCTIONS AS APPROVED BY THE UTILITY OWNER AND THE ENGINEER AT THE CONTRACTORS EXPENSE.

26. CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH OPENINGS OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.

27. WICHITA FIRE DEPARTMENT INSPECTIONS MAY BE SCHEDULED BY CALLING 316-268-4441.

28. 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.

29. SITE RESTORATION AND PREPARATION SHALL BE SUBSIDIARY TO THE PROJECT.

30. THE CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES (BMP'S) TO PREVENT ERODED SOIL FROM ENTERING DITCHES, CULVERTS, AND DRAINAGE AREAS. STANDARD DETAILS FOR EROSION BMP'S ARE AVAILABLE FROM THE ENGINEER. THE CONTRACTOR SHALL FOLLOW THE INTENT OF THE BMP'S WHICH ACT AS A GUIDELINE.

31. EACH BIDDER SHALL VISIT THE SITE OF THE PROJECT THROUGHOUT ITS ENTIRE EXTENT BEFORE SUBMITTING A PROPOSAL IN ORDER TO BECOME BETTER INFORMED OF THE EXISTING FIELD CONDITIONS AND OBSTACLES WHICH MIGHT BE ENCOUNTERED DURING CONSTRUCTION. EACH BIDDER SHOULD UNDERSTAND THAT NO ADDITIONAL COMPENSATION WILL BE AWARDED FOR EXTRA WORK THAT SHOULD HAVE BEEN EVALUATED PRIOR TO BIDDING.

32. ALL WATER PIPE TRENCHING IN PAVEMENT OR DRIVEWAYS, WHICH WILL BE REQUIRED TO CARRY TRAFFIC UNTIL PERMANENT PAVING REPLACEMENT, SHALL BE TOPPED WITH A MINIMUM OF 6" CRUSHED ROCK (COMPACTED) TO BE INCIDENTAL TO THE PROJECT. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN TEMPORARY CRUSHED ROCK UNTIL PERMANENT PAVEMENT IS INSTALLED.

33. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION AND REPORT FINDINGS TO PROJECT ENGINEER. LOCATION INFORMATION HAS BEEN OBTAINED FROM VARIOUS COMPANIES AND IS EITHER FROM COMPANY UTILITY DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY BE ENCOUNTERED.

34. KAW VALLEY ENGINEERING CAN PROVIDE INSPECTION AND TESTING SERVICES. CONTACT MICHAEL COLLINS AT 785-223-2664.

# WATER DISTRIBUTION SYSTEM IMPROVEMENTS

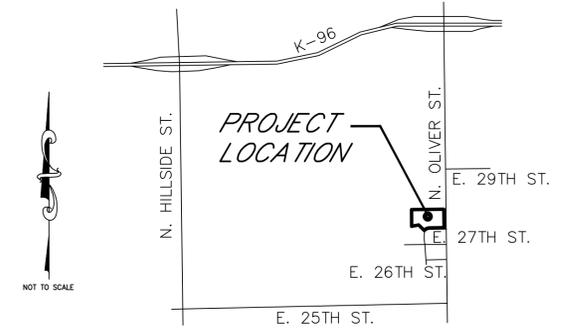
to serve

## LOTS 1 & 2, BLOCK A OLIVER ADDITION CITY OF WICHITA, KANSAS

GARY JANZEN, P.E. CITY ENGINEER

PROJECT NUMBER  
PPW-2020-020987(183021)

Date: 2021-04-23  
Inspector: A.Thompson: M. Collins  
Design/Inspecting Firm: Kaw Valley Engineering, Inc.  
Contractor:  
Subcontractor: Wilks Underground Utilities  
Built in general conformance to construction plans, except where noted on plans.



### VICINITY MAP

### SHEET INDEX

|       |                         |
|-------|-------------------------|
| 01    | TITLE SHEET             |
| 02-04 | WATER PLAN & PROFILE    |
| 05    | EROSION CONTROL PLAN    |
| 06    | STANDARD DETAILS        |
| 07-11 | EROSION CONTROL DETAILS |
| 12    | PLAT                    |

APPROVED AS NOTED  
BY CITY ENGINEER OF WICHITA  
& BY WICHITA FIRE DEPARTMENT

Engineering approved by Seth Gotchey 9/9/2020

Utilities approved by Greg Lolley 9/9/2020

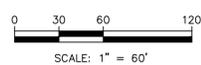
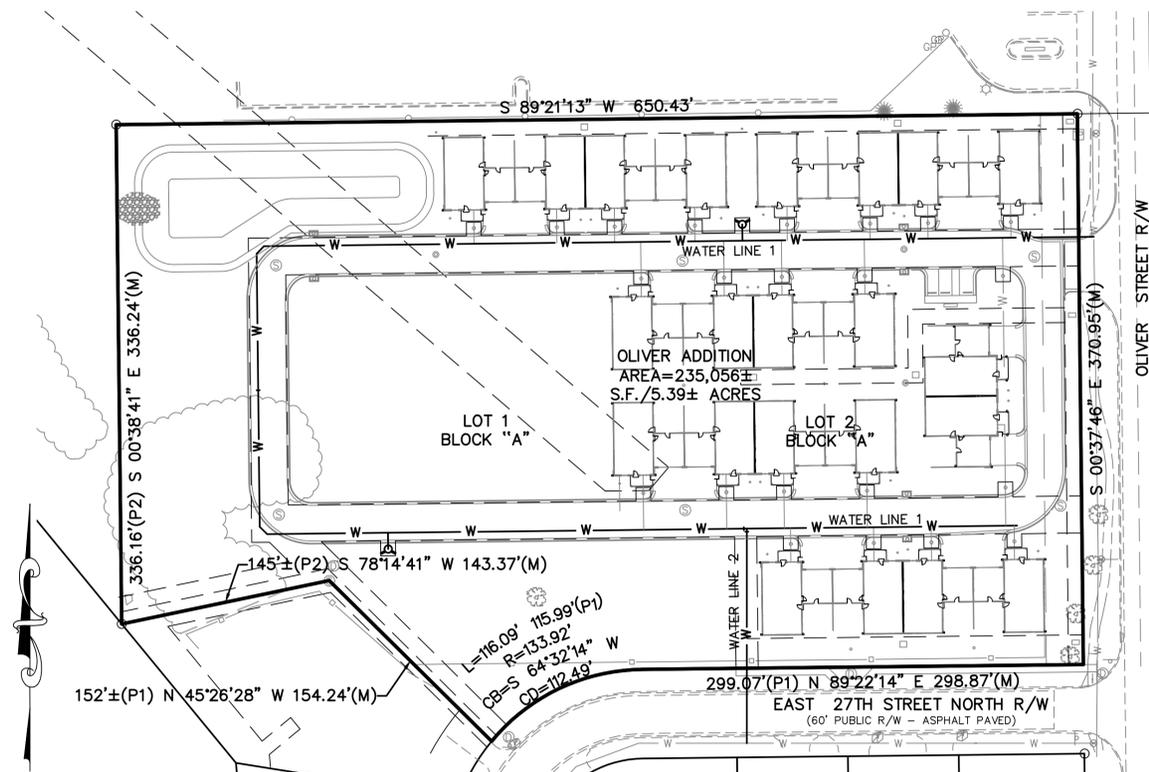
Fire Dept. approved by Jose Ocodiz 9/9/2020

#### 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 City Engineering. All Construction and Materials shall comply with the City of 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.



TIMOTHY R. AUSTIN  
PROFESSIONAL ENGINEER

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### BENCHMARKS

**DATUM BENCHMARK:**  
DATUM IS U.S. SURVEY FEET AND DERIVED FROM THE PLATTED BENCHMARK FOR CAMPUS CREST ADDITION, AN ADDITION IN THE CITY OF WICHITA, COUNTY OF SEDGWICK, STATE OF KANSAS DESCRIBED AS: CHISELED "4" CUT ON SW CORNER TRAFFIC SIGNAL LIGHT BASE POLE ON SW CORNER BOLT AT SW CORNER OLIVER & 29TH ST. N.

**BENCHMARK (NAVD 88 DATUM):**  
BM #61: CHISELED SQUARE CUT ON N. EDGE OF DRIVEWAY AT 2739 DELROSE AVE. AT INTERSECTION 27TH ST. N. & DELROSE AVE. ELEV.=1353.01 NAVD 88

### SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

### WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

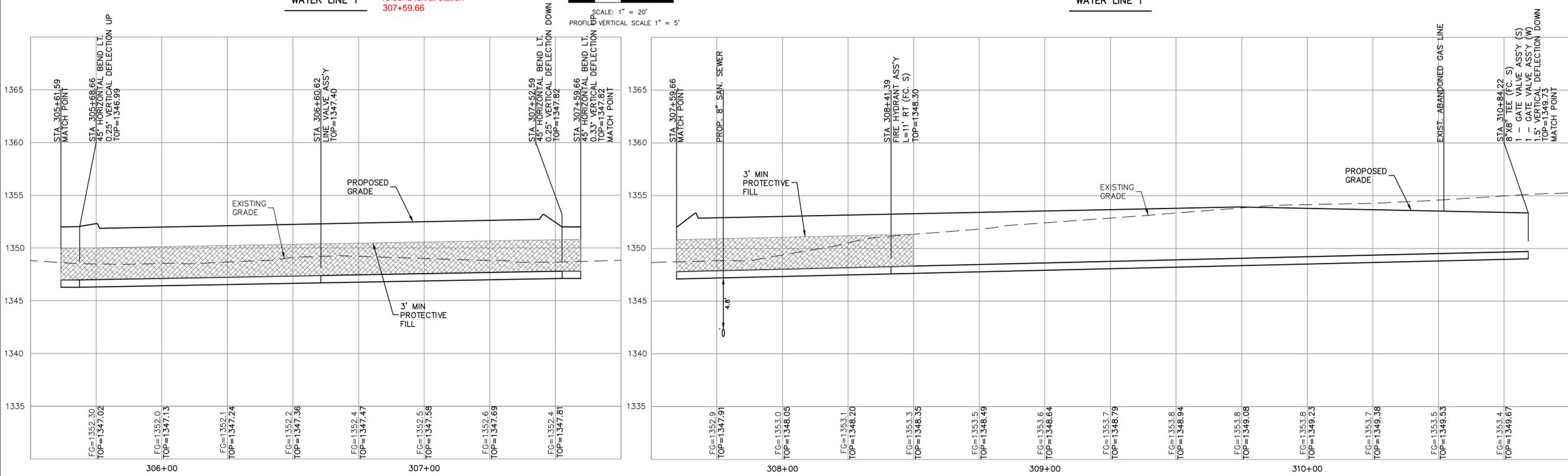
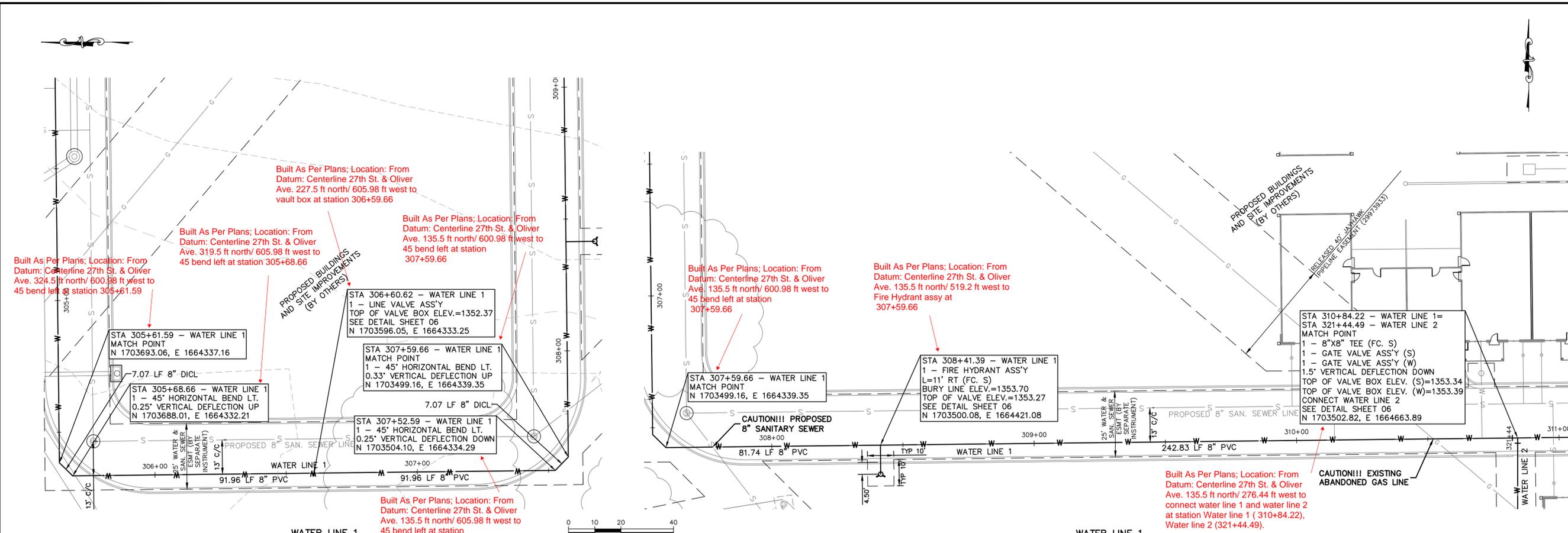
### CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.  
**THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.**

### AUGUST 2020

|   |                      |   |
|---|----------------------|---|
| PROJ. NO. G19-1092<br>CFN: 1092WTS  | DSN: TRA<br>DWN: EAM | TIMOTHY R. AUSTIN<br>ENGINEER<br>KS # 11496 |
| 200 N. EMPORIA, SUITE 100<br>WICHITA, KANSAS 67202<br>PH. (316) 440-4304   FAX (316) 440-4309<br>wh@kveeng.com   www.kveeng.com                                 |                      |   |
| <b>KAW VALLEY ENGINEERING</b>   |                      |   |
| <small>KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-113. EXPIRES 12/31/20</small> |                      |   |





**LEGEND:**  
 13' C/C DISTANCE CENTER OF PIPE TO CENTER OF PIPE

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**BENCHMARK (NAVD 88 DATUM):**  
 BM #61: CHISELED SQUARE CUT ON N. EDGE OF DRIVEWAY AT 2739 DELROSE AVE. AT INTERSECTION 27TH ST. N. & DELROSE AVE. ELEV.=1353.01 NAVD 88

|  |         |                     |      |             |
|--|---------|---------------------|------|-------------|
| TIMOTHY R. AUSTIN<br>LICENSED PROFESSIONAL ENGINEER<br>11496 |         | REV                 | DATE | DESCRIPTION |
| 1  | 8-18-20 | FOR FINAL SUBMITTAL |      |             |
| 0  | 7-10-20 | FOR REVIEW          |      |             |
|  |         | TRA                 | TRA  | DSN         |
|  |         | EAM                 | EAM  | MLT         |
|  |         | MLT                 | MLT  | CHK         |

TIMOTHY R. AUSTIN  
ENGINEER  
KS # 11496

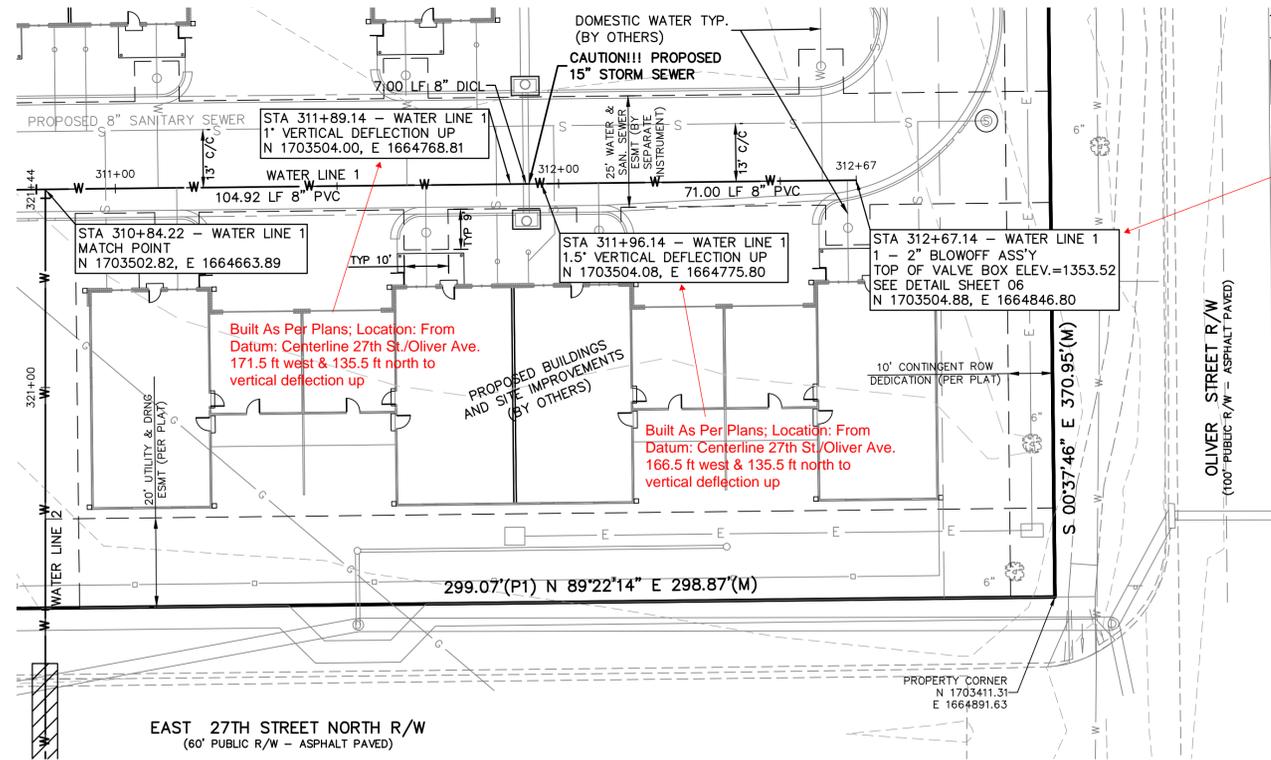
200 N. EMPORIA, SUITE 100  
WICHITA, KANSAS 67202-4400-4309  
PH: (316) 261-1111  
www.kawvalley.com

**KAW VALLEY ENGINEERING**  
 KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF KANSAS UNDER CERTIFICATE OF AUTHORIZATION # E-113. EXPIRES 12/31/20

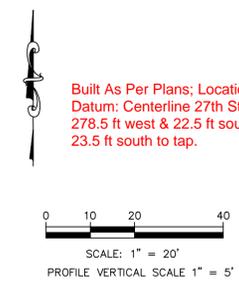
**OLIVER FOURPLEX PROJECT**  
 2805 N. OLIVER  
 WICHITA, KS

**WATER LINE PLAN & PROFILE**

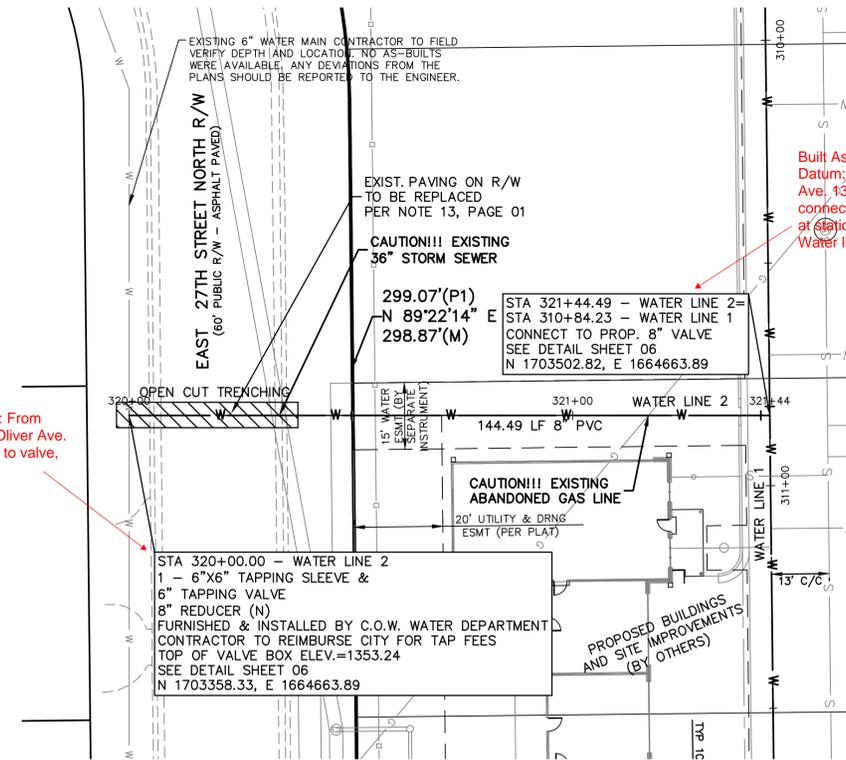
PROJ. NO. **G19-1092**  
 DESIGNER **TRA** DRAWN BY **EAM**  
 CFN **1092WFP**  
 SHEET **03** REV **1**



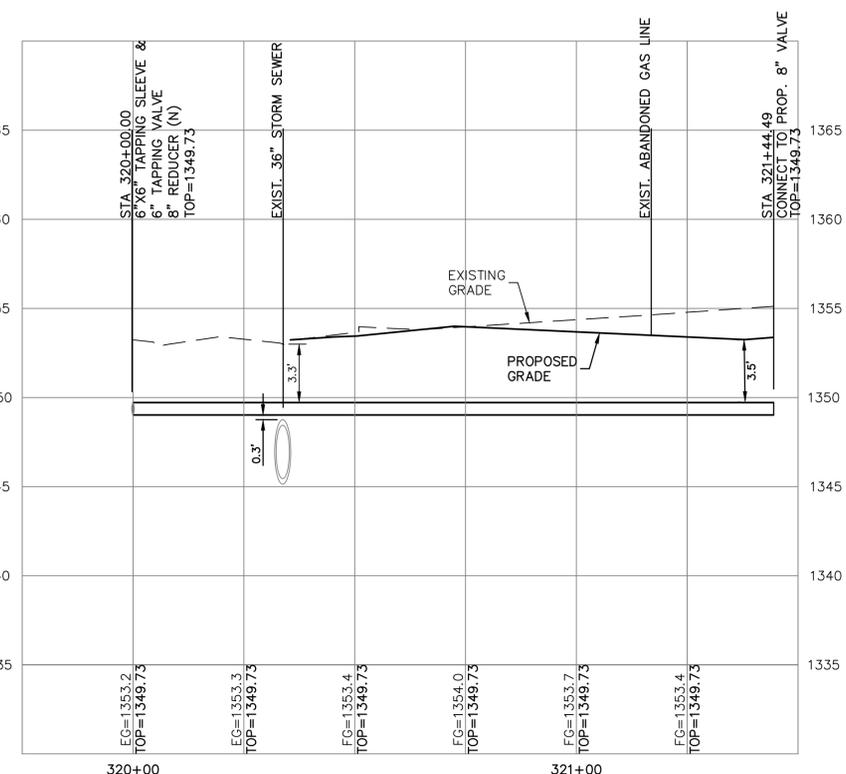
Built As Per Plans; Location: From Datum: Centerline 27th St./Oliver Ave. 95.5 ft west & 135.5 ft north to valve box and blow off ass'y



SCALE: 1" = 20'  
PROFILE VERTICAL SCALE 1" = 5'

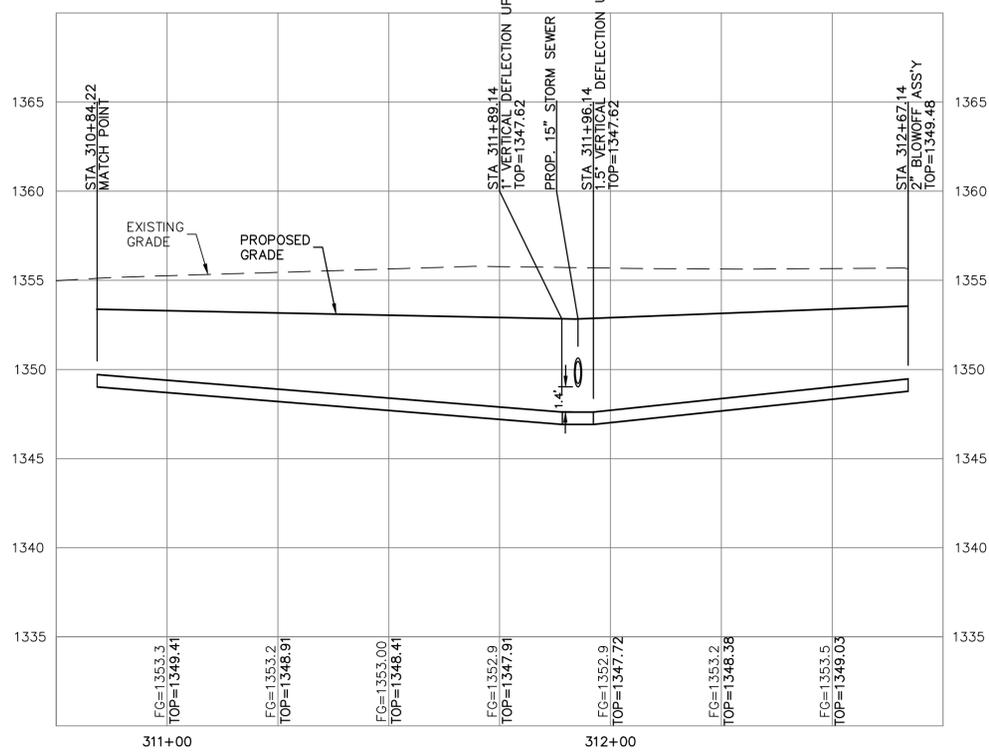


Built As Per Plans; Location: From Datum: Centerline 27th St. & Oliver Ave, 135.5 ft north/ 276.44 ft west to connect water line 1 and water line 2 at station Water line 1 ( 310+84.22), Water line 2 (321+44.49).



WATER LINE 1

WATER LINE 2



THE COORDINATES PROVIDED ON THIS PLAN ARE FOR INFORMATION AND CHECKING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE CONSTRUCTION STAKING COORDINATES ACCORDING TO THE DIMENSIONS SHOWN ON THESE PLANS. CONTRACTOR SHALL VERIFY THE ACCURACY OF THE COORDINATES SHOWN HEREON BEFORE CONSTRUCTION.

**LEGEND:**  
13' C/C DISTANCE CENTER OF PIPE TO CENTER OF PIPE  
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|             |                           |
|-------------|---------------------------|
| PROJ. NO.   | G19_1092                  |
| DESIGNER    | TRA                       |
| DRAWN BY    | EAM                       |
| CFN         |                           |
| SHEET       | 1092WFP                   |
| REV         | 04                        |
| DATE        | 1                         |
| DESCRIPTION | WATER LINE PLAN & PROFILE |

**OLIVER FOURPLEX PROJECT**  
2805 N. OLIVER  
WICHITA, KS

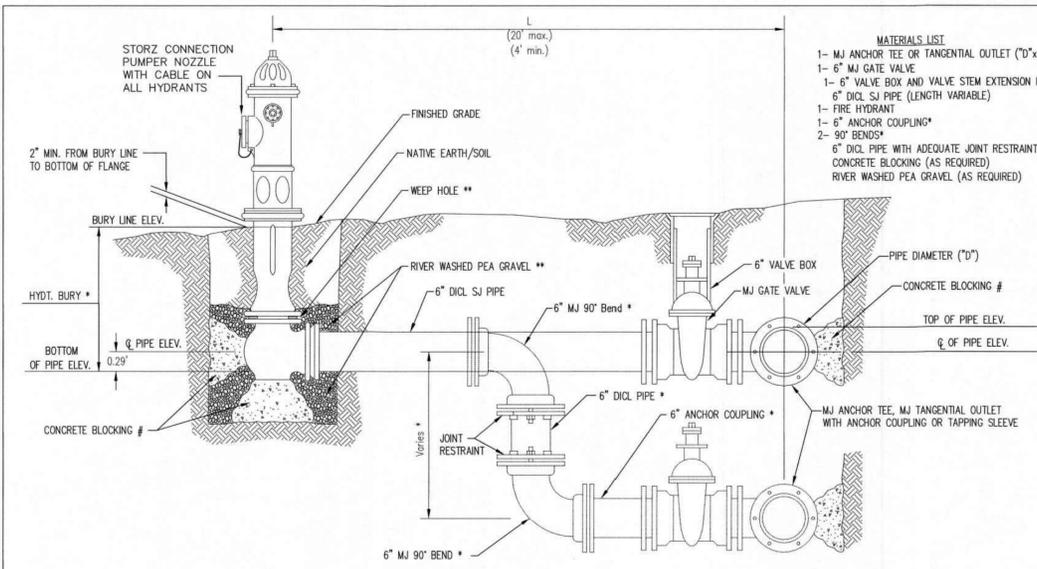
**KAW VALLEY ENGINEERING**  
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www.kaveg.com | www.kveg.com

TIMOTHY R. AUSTIN  
ENGINEER  
KS # 11496

**PROFESSIONAL ENGINEER**  
TIMOTHY R. AUSTIN  
LICENSED  
11496  
KANSAS

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF KANSAS UNDER CERTIFICATE OF AUTHORIZATION # E-113. EXPIRES 12/31/20



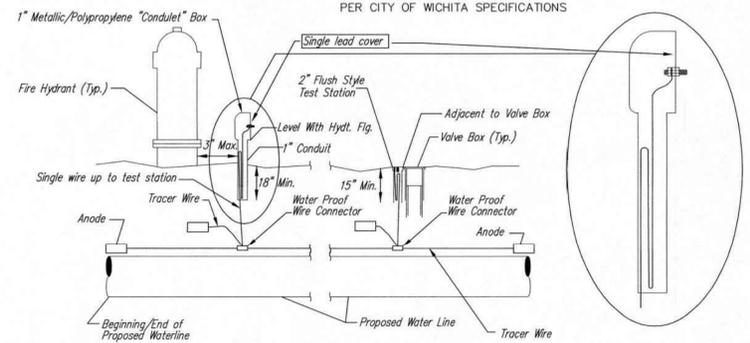


\* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DI CL PIPE AS 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 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. 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](http://www.wichita.gov).

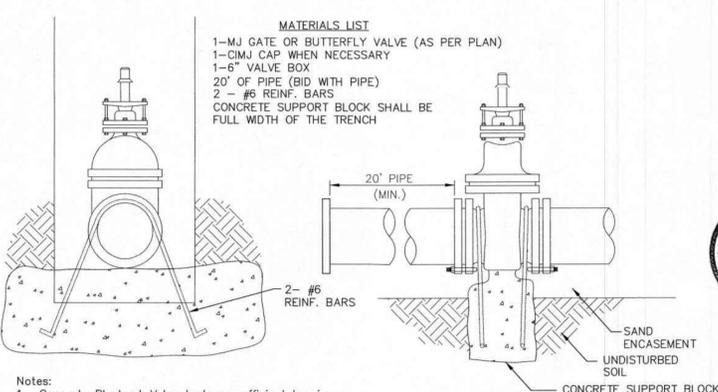
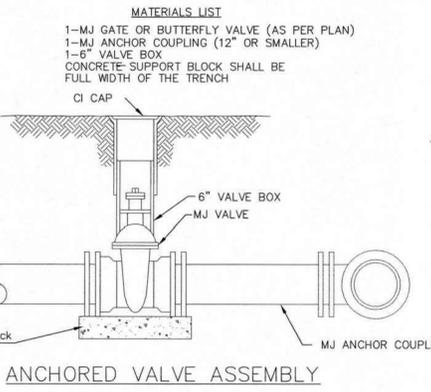
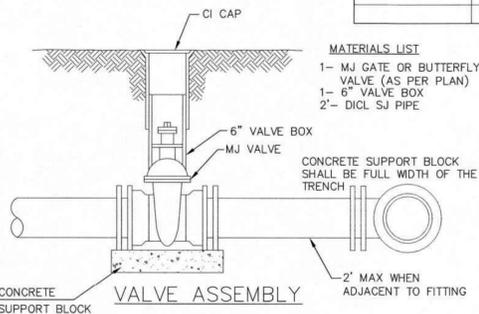
**WIRE**  
The tracer wire shall be Blue No. 12 AWG CCS with 45 mil HDPE insulation. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. Wire connectors shall be installed per manufacturer recommendations. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

**TEST STATIONS**  
The test station for fire hydrant application shall be a 1" "conduit" style station as manufactured by AGRA Industries with a removable solid cover having a single lead extending from the face or approved equal. The "conduit" style test station shall be attached to a 1" rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. The test station for valve applications shall be a 2" flush style test station with wire connector on lid. Model # T2PH7B1LP Handley Industries or CD14\*TP SnakePit as manufactured by Copperhead Industries or approved equal. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be installed 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)* |
| 302+37.76              | 1352.05             | 1347.82               | 5.0'                        |                                |
| 308+41.39              | 1353.70             | 1348.30               | 6.0'                        |                                |
|                        |                     |                       |                             |                                |
|                        |                     |                       |                             |                                |
|                        |                     |                       |                             |                                |
|                        |                     |                       |                             |                                |
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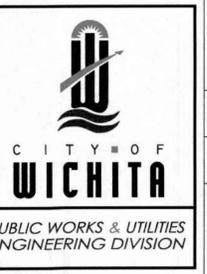
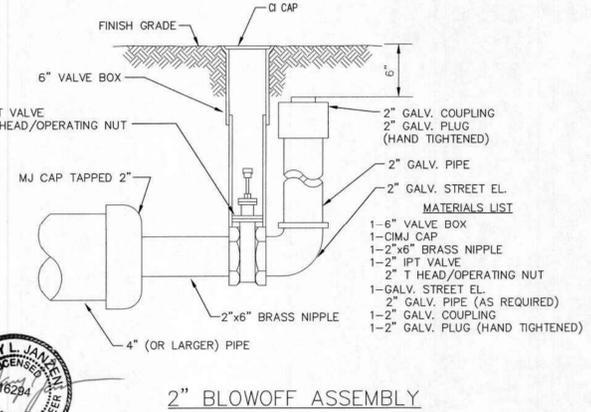
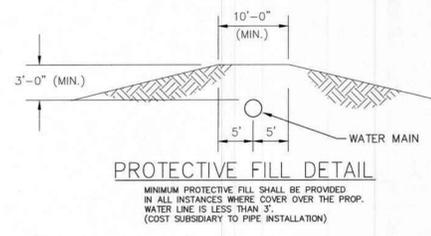
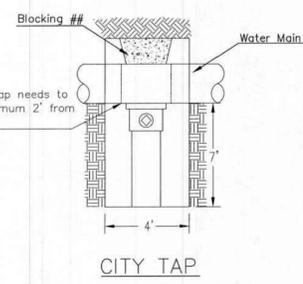


**Notes:**

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 #/sq |
| 4"               | 1809 lbs.          |
| 6"               | 4245 lbs.          |
| 8"               | 7540 lbs.          |
| 12"              | 16965 lbs.         |

**ANCHORED VALVE ASSEMBLY, SPECIAL**



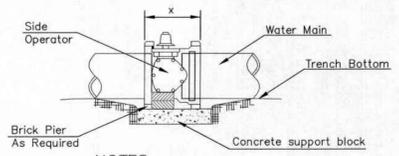
**STANDARD WATER ASSEMBLY DETAIL**

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

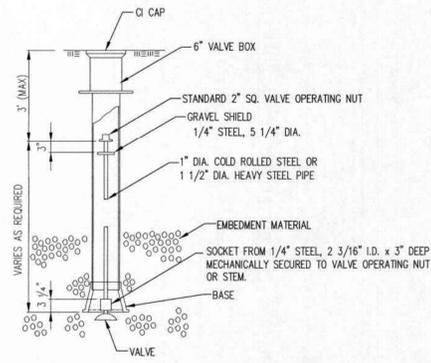
SHEET



**CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION**

**NOTES**

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



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TIMOTHY R. AUSTIN  
ENGINEER  
KS # 11496

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WICHITA, KANSAS 67203-4400-4309  
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**KAW VALLEY ENGINEERING**

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF KANSAS UNDER CERTIFICATE OF AUTHORIZATION # E-113. EXPIRES 12/31/20

**OLIVER FOURPLEX PROJECT**  
2805 N. OLIVER  
WICHITA, KS

**STANDARD DETAILS**

|           |          |
|-----------|----------|
| PROJ. NO. | G19_1092 |
| DESIGNER  | TRA      |
| CFN       | 1092WDET |
| SHEET     | 06       |
| REV       | 1        |











