

GENERAL NOTES:

1. 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:

Cox Communications 262-4270
Kansas Gas Service 1-888-482
Evergy 383-8650
Black Hills Energy 1-800-303-0357
AT&T 268-2245
City of Wichita Water Dept. 268-4563
City of Wichita Sewer Maint. 268-4024
City of Wichita Storm Sewer Maint. 268-4090
City of Wichita Traffic Maint. 268-4034
Conoco Phillips Pipeline Co. 1-877-267-2290
Southern Star Pipeline Co. 529-6600
Kinder-Morgan Pipeline Co. 1-888-844-5658

2. 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.

3. 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.

4. 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.

5. Utility service lines, poles, valve boxes, meters, and etcetera 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.

6. 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 would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.

7. 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.

8. 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.

9. 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.

10. 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 BMP's."

11. The Contractor shall adjust water valve boxes and fire hydrants as directed by the Engineer at the price bid for said adjustments. The Water Department shall field locate water valves one time during construction when requested by Contractor. It shall be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, water valve boxes or fire hydrants damaged during construction shall be repaired by the Contractor at his own expense.

10. All areas within Hillside Ave. R/W disturbed during construction shall be seeded, mulched, and fertilized as follows:

SEED -- Kansas Premium Fescue Blend; 8#/1000 Sq. Ft.
Rye grass (PLS); 3#/1000 Sq. Ft. and
FERTILIZER -- 12-24-12 Ratio at 45 Lbs./Ac.
MULCH -- 2 Tons Prairie Hay / Acre

All other disturbed areas are to be seeded in the Stormwater Drain project.

11. All construction shall be completed following current City Standard Specifications and Special Provisions.

12. All excess excavation shall remain on-site and shall be stockpiled or spread at a location determined by the engineer.

13. Opening and closing of water valves shall be done slowly to prevent damage to the water distributions system from water hammer. All valves closed by the contractor must be reopened as new construction permits. Project inspector must ascertain that any valve closed by the Contractor is reopened. Contractor will be permitted to operate water valves only when the project inspector assigned to the project is present.

14. Geotechnical Report shows the presence of groundwater at an approximate elevation of 1339.0 (April 2022).

15. Sales tax exemption does not apply to this project.

16. Geotechnical Report Available. Contact Design Engineer.

17. Staking & Inspection will be provided by the City of Wichita.

18. The Developer for this project is Jay Russell.
P.O. Box 75337, Wichita, KS 67272
PH# (316) 990-2105 Email j@russellco.com

8" PVC Pipe (C-900) = SANDERSON PIPE = 3,574 LF
12" PVC Pipe (C-900) = SANDERSON PIPE = 639 LF
12" RJPVC Pipe (C-900) = WESTLAKE = 110 LF
8" DICL Pipe (Class 350) = McWANE DUCTILE = 61 LF
12" DICL Pipe (Class 350) = McWANE DUCTILE = 12 LF
Fire Hydrants = CLOW = 5 EACH
2" Blow-Off Valves = CLOW = 5 EACH
8" Valves = CLOW = 6 EACH
8" Anchored Valve = CLOW = 3 EACH
Fittings = Sigma

BENCHMARKS

Square cut in the center of headwall, southerly RCBC, ±82' north of the northeast corner of Lot 30, Block C, Falcon Falls 3rd Addition. Elev.=1344.07 NAVD 88

Square cut in top of curb, center of east curb return of center island, Blackhawk St, 53' west of centerline intersection of Hillside Ave. and Blackhawk St. Elev.=1354.01 NAVD 88

Square cut with cross, in hub guard, east side of Hillside Avenue, 110 feet south of and 27' west of the southwest corner of the northwest quarter, Section 23, Township 26 South, Range 1 East. Elev.=1355.28 NAVD 88

WATER DISTRIBUTION SYSTEM

to serve

FALCON FALLS EAST 2ND ADDITION - PHASE I

CITY OF WICHITA, KANSAS

Paul Gunzelman, P.E., City Engineer

Project Number: 448-2023-031003

Org Code Number: 47122623

Munis Number: E3164

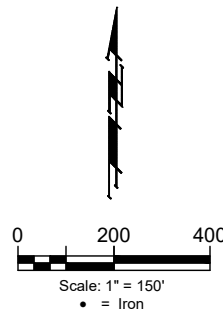
Contractor = Nowak Construction
Inspector = Fred Smith -
Baughman Company

As-Built Plans = FES & Larry Powell
10-31-2024

Construction Began = May 2024

Construction End = October 2024

Release Date 07-01-2024



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APPROVED AS NOTED
BY WICHITA PUBLIC WORKS ENGINEERING
Engineering *Mark Schuch* 2/13/24

An approved copy of these plans signed by City staff are required on-site.

CONSTRUCTION PHASING

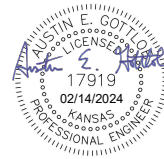
The goal is to complete the mass grading, pond construction, utilities, etc. serving phase 1 lots so the phase 1 street paving construction can begin and be completed as soon as possible. The mass grading, storm sewer, and sanitary sewer construction outside of the phase 1 lots may be constructed concurrently and after the phase 1 paving project.

Baughman Company Project No.: 24-03-E741

January 24, 2024



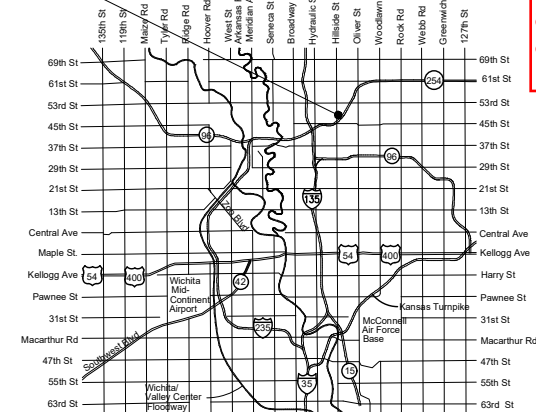
BAUGHMAN COMPANY
315 Ellis St. Wichita, KS 67211 316-262-7271
BaughmanCo.com



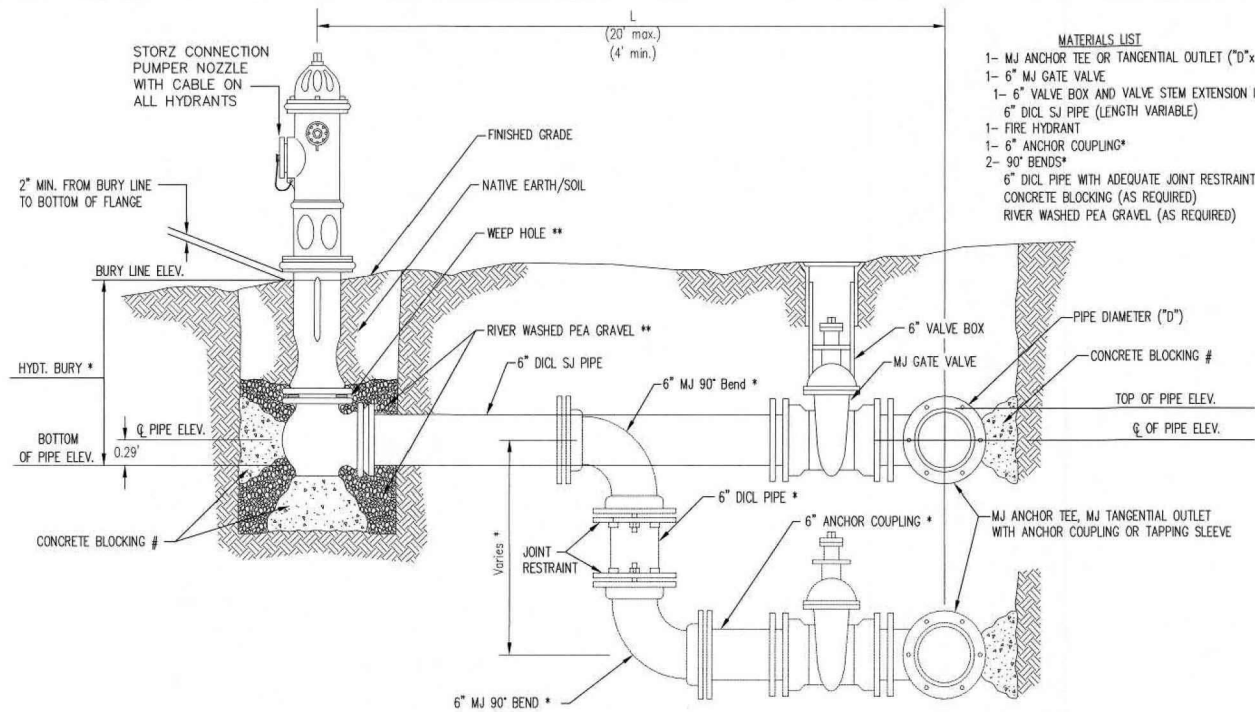
BENEFIT DISTRICT



SITE



VICINITY MAP



- 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)

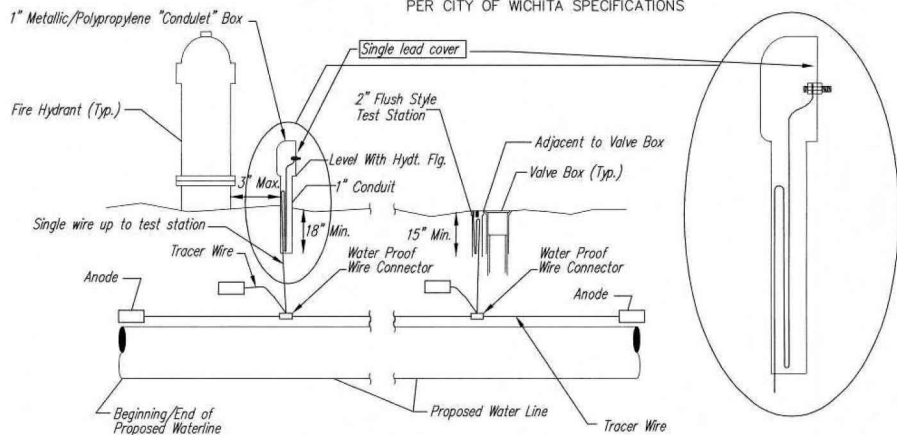
* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DICL PIPE AS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

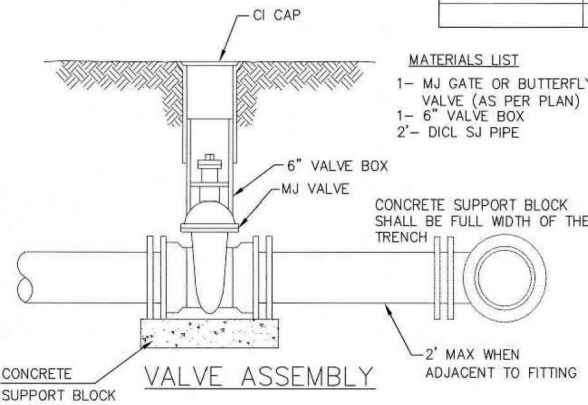
AS-BUILT BURY LINE ELEVATION

1351.86
1351.10
1362.60
1366.23
1368.55

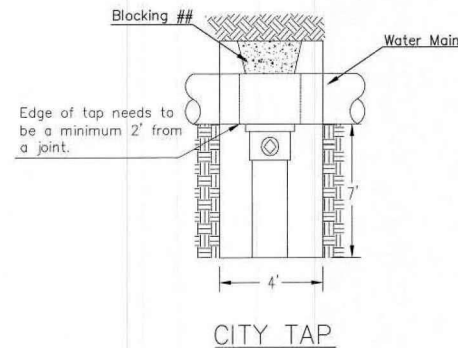
4+68.9

FIRE HYDRANTS REQUIRED

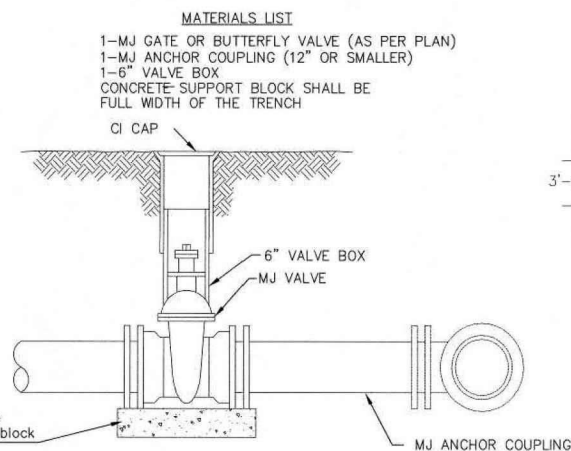
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	FIRE HYDRANT VALVE STEM EXT. REQUIRED (ft)*
3+77.57, Line 1	1352.05	1347.89	5'	No
12+46.20, Line 1	1350.95	1347.10	4.5'	No
4+08.99, Line 2	1362.75	1358.40	5'	No
5+09.25, Line 3	1366.90	1362.55	5'	No
0+56.00, Line 4	1368.35	1364.50	4.5'	No



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

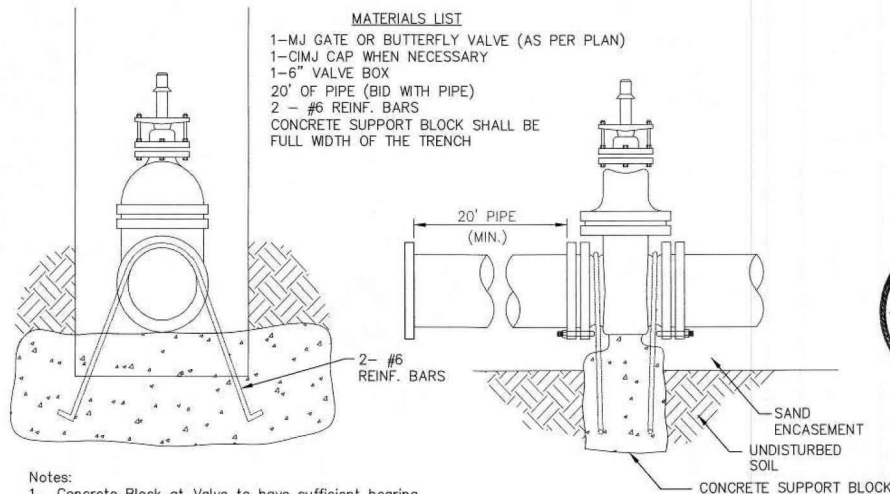


When the City of Wichita makes tap, blocking is to be done by Contractor



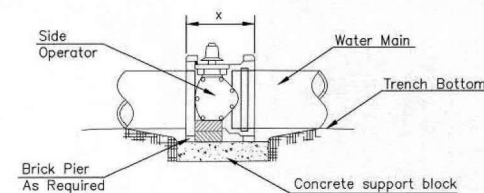
ANCHORED VALVE ASSEMBLY

- 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



VALVE	THRUST AT 150 #/sq.2
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

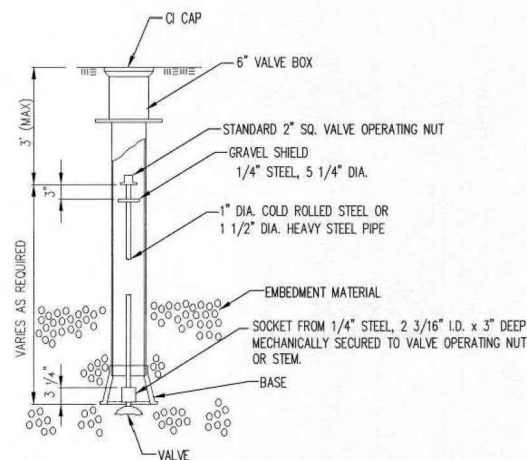
ANCHORED VALVE ASSEMBLY, SPECIAL



NOTES

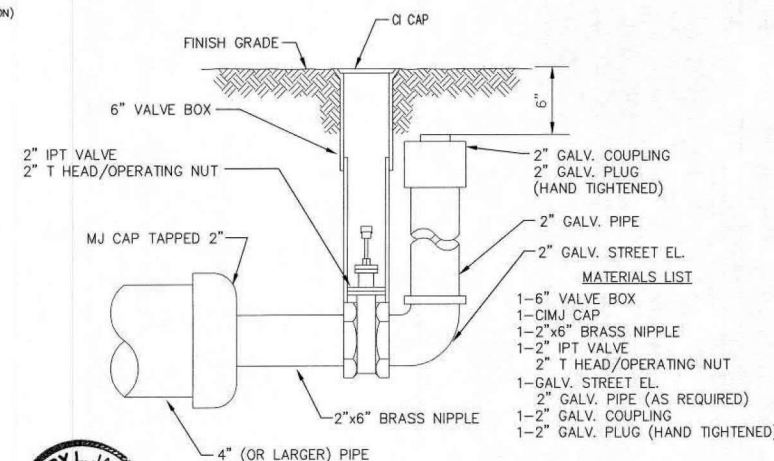
1. This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
2. 6" Valve Box and Cover required per City of Wichita Std. Specifications.
3. Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION

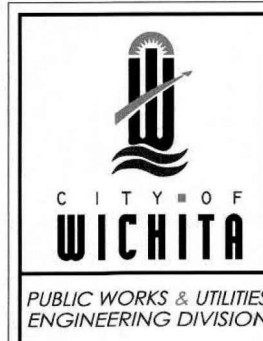


VALVE STEM EXTENSION DETAIL

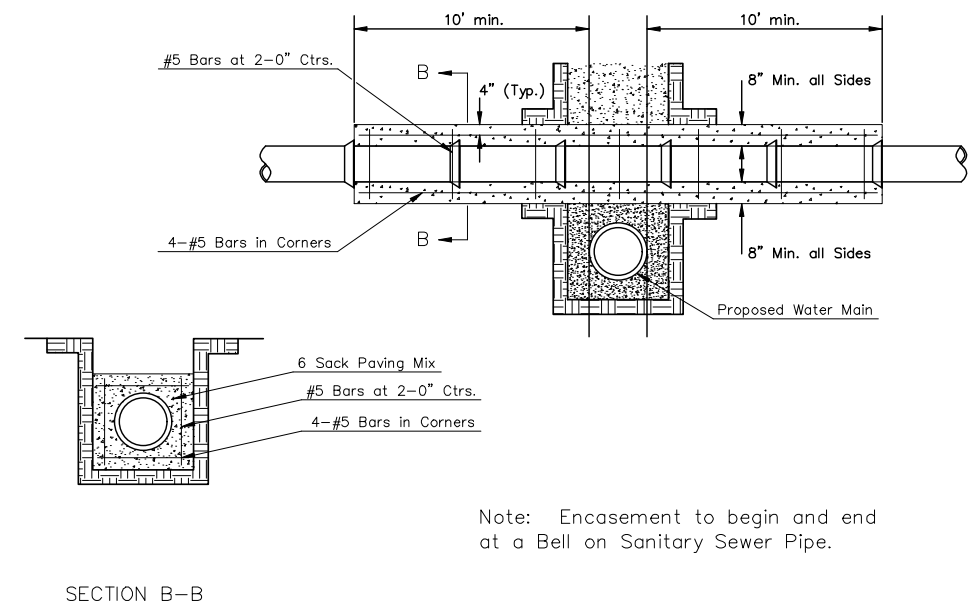
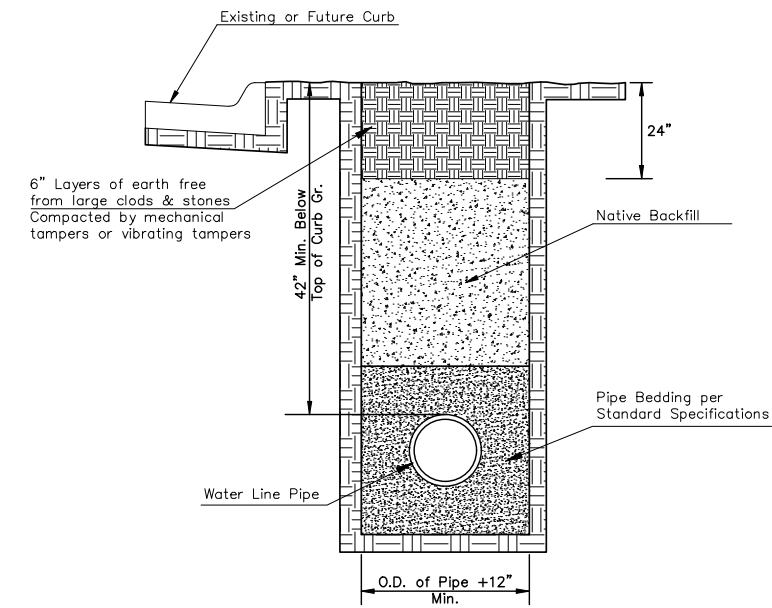
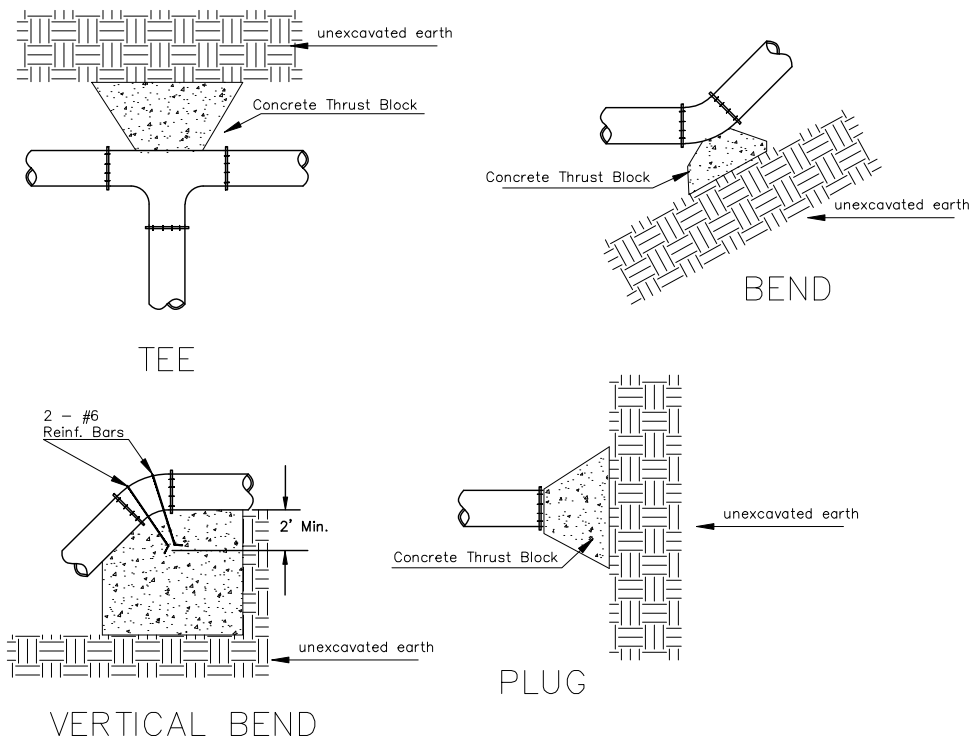
NOTE: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.



2" BLOWOFF ASSEMBLY



STANDARD WATER ASSEMBLY DETAIL		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		02 of 19

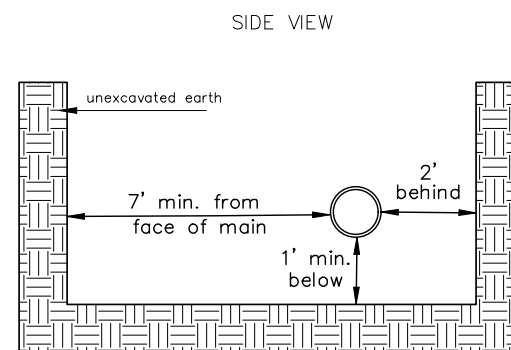


TRENCH COMPACTION IN ROAD RIGHT-OF-WAY

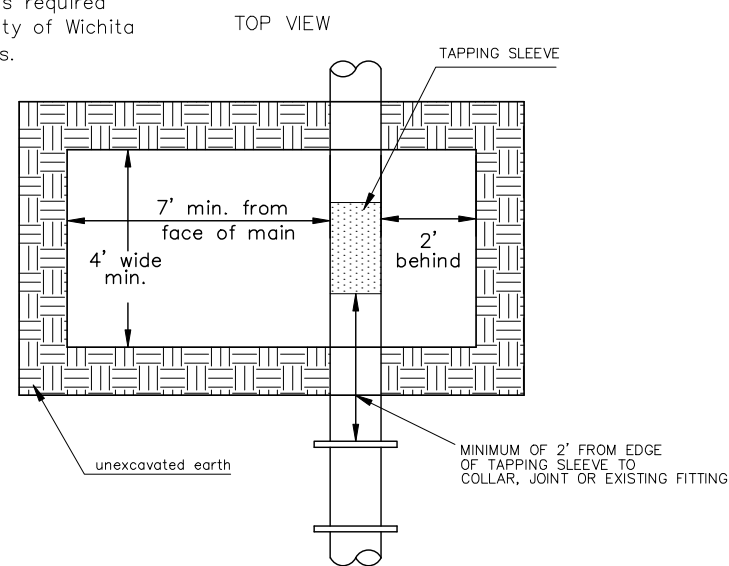
REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER

PIPE SIZE	THRUST AT FITTINGS IN TONS--AT 150#/IN ² P					
	PLUG	90°	45°	22 1/2°	11 1/4°	TEE
6"	2.8	3.95	2.15	1.09	.55	2.8
8"	4.9	6.95	3.75	1.90	.96	4.9
12"	11.4	16.1	8.75	4.45	2.25	11.4
16"	20.15	28.5	15.4	7.85	3.95	20.15
20"	31.15	44.0	23.85	12.15	6.10	31.15
24"	44.55	63.0	34.1	17.4	8.75	44.55

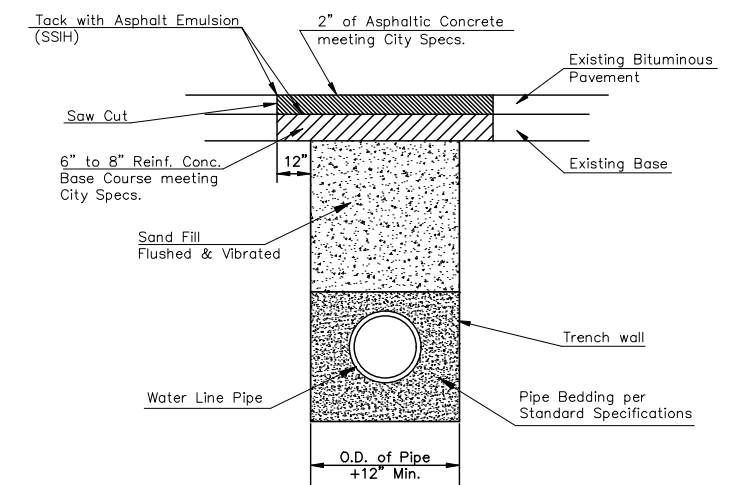
TYPICAL THRUST BLOCKS



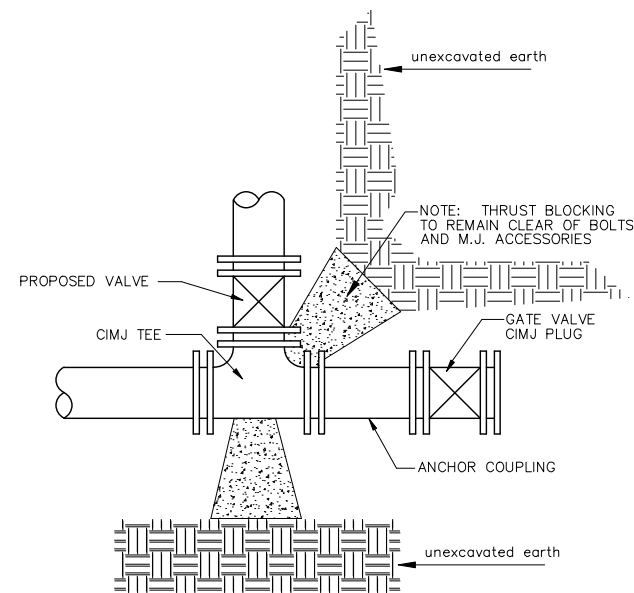
Note: When shoring is required it is to be per The City of Wichita Standard Specifications.



EXCAVATION FOR WET TAP



PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS



KEY BLOCK DETAIL

* PLANS GOVERN
UNLESS OTHERWISE NOTED ON PLANS



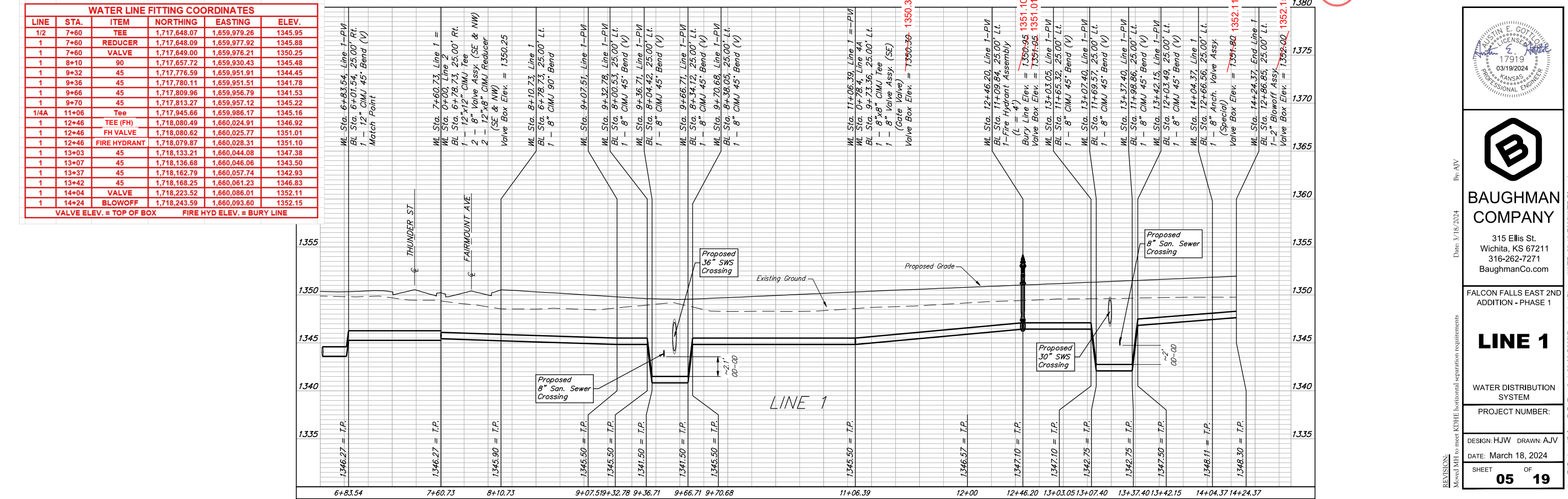
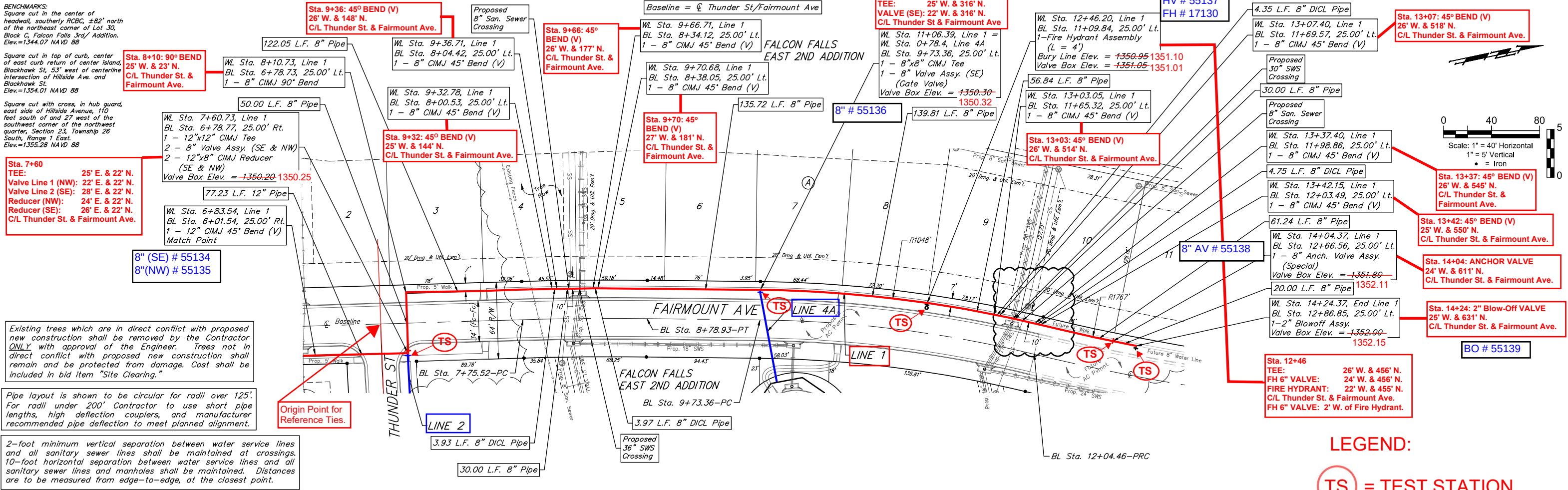


CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

**MISCELLANEOUS
WATER
DETAILS**

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 3 of 19



BAUGHMAN COMPANY

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

LINE 1

WATER DISTRIBUTION SYSTEM

PROJECT NUMBER:

DESIGN: HJW DRAWN: AJV

DATE: March 18, 2024

SHEET 05 OF 19

BENCHMARKS:
Square cut in the center of headwall, southerly RCB, ±82' north of the northeast corner of Lot 30, Block C, Falcon Falls 3rd Addition. Elev.=1344.07 NAVD 88

Square cut in top of curb, center of east curb return of center island, Blackhawk St, 53' west of centerline intersection of Hillside Ave. and Blackhawk St. Elev.=1354.01 NAVD 88

Square cut with cross, in hub guard, east side of Hillside Avenue, 110 feet south of and 27 west of the southwest corner of the northwest quarter, Section 23, Township 26 South, Range 1 East. Elev.=1355.28 NAVD 88

WL Sta. 0+00.00, Begin Line 2 =
WL Sta. 7+60.7, Line 1
BL Sta. 0+25.00, 22.04' Lt.
Valve Box Elev. = ~~1350.25~~ 1350.22

Baseline = ϕ Thunder St/Vassar Ave

HV # 55140
FH # 17131

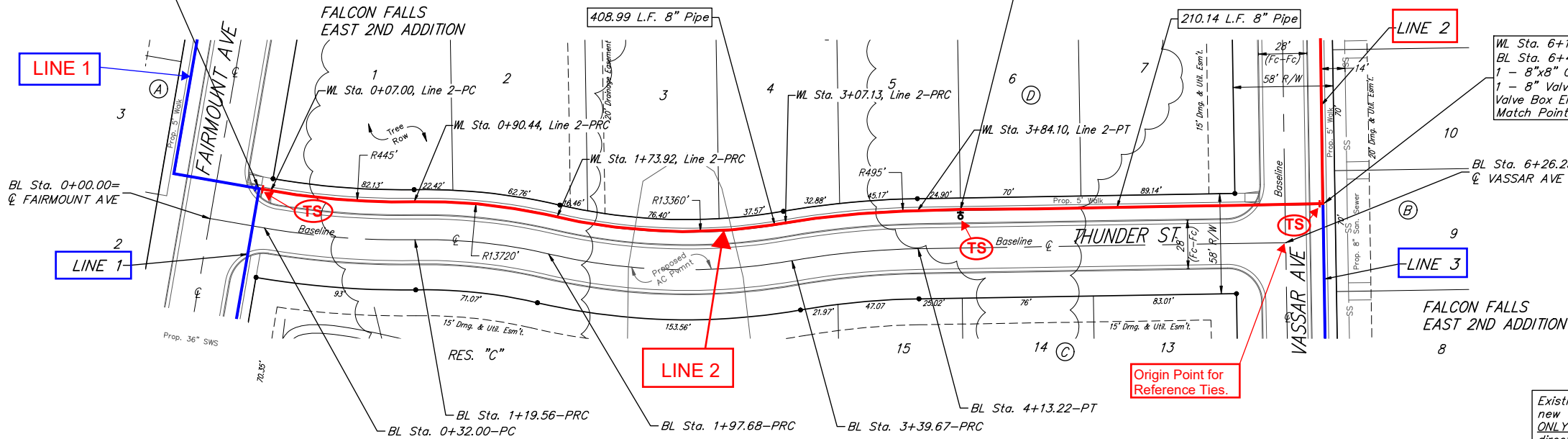
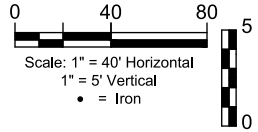
WL Sta. 4+08.99, Line 2
BL Sta. 4+38.11, 22.00' Lt.
1-Fire Hydrant Assembly
(L = 4')
Bury Line Elev. = ~~1362.75~~ 1362.60
Valve Box Elev. = ~~1362.85~~ 1362.54

TEE: 190' W. & 23' N.
FH 6" VALVE: 190' W. & 21' N.
FIRE HYDRANT: 190' W. & 19' N.
C/L Vassar & Thunder St.
FH 6" VALVE = 2' N. of Fire Hydrant.

8" V # 55141

WL Sta. 6+19.13, Line 2
BL Sta. 6+48.25, 22.00' Rt.
1 - 8"x8" CIMJ Tee
1 - 8" Valve Assy. (W)
Valve Box Elev. = ~~1368.60~~ 1368.77
Match Point

Sta. 6+19
TEE: 23' N. & 22' E.
VALVE (W): 21' N. & 20' E.
C/L Vassar & Thunder St.

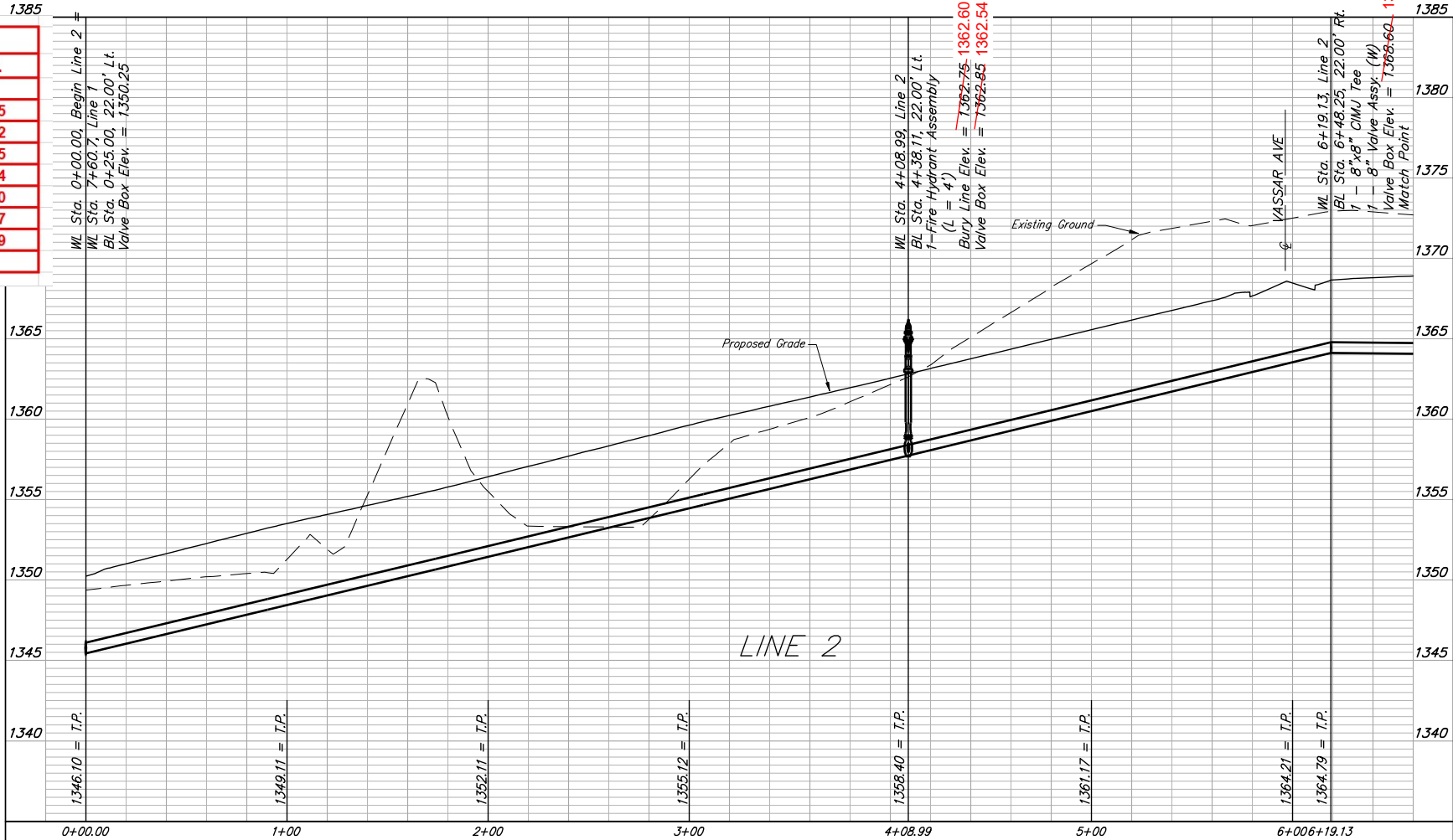


Existing trees which are in direct conflict with proposed new construction shall be removed by the Contractor ONLY with approval of the Engineer. Trees not in direct conflict with proposed new construction shall remain and be protected from damage. Cost shall be included in bid item "Site Clearing."

Pipe layout is shown to be circular for radii over 125'. For radii under 200' Contractor to use short pipe lengths, high deflection couplers, and manufacturer recommended pipe deflection to meet planned alignment.

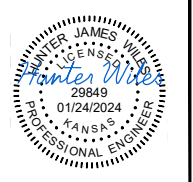
2-foot minimum vertical separation between water service lines and all sanitary sewer lines shall be maintained at crossings. 10-foot horizontal separation between water service lines and all sanitary sewer lines and manholes shall be maintained. Distances are to be measured from edge-to-edge, at the closest point.

WATER LINE FITTING COORDINATES					
LINE	STA.	ITEM	NORTHING	EASTING	ELEV.
2	0+00	REDUCER	1,717,647.37	1,659,980.35	1345.85
2	0+02	VALVE	1,717,647.86	1,659,980.78	1350.22
2	4+08	FH TEE	1,717,636.26	1,660,383.85	1357.75
2	4+08	FH 6" VALVE	1,717,634.96	1,660,382.97	1362.54
2	4+08	FH	1,717,632.26	1,660,383.53	1362.60
2	6+19	VALVE	1,717,638.16	1,660,593.89	1368.77
2/3	6+19	TEE	1,717,639.49	1,660,595.85	1365.19
VALVE ELEV. = TOP OF BOX			FIRE HYD ELEV. = BURY LINE		



LEGEND:

TS = TEST STATION



BAUGHMAN
COMPANY

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

FALCON FALLS EAST 2ND
ADDITION - PHASE 1

LINE 2

WATER DISTRIBUTION
SYSTEM

PROJECT NUMBER:

DESIGN: HJW DRAWN: AJV

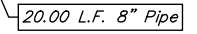
DATE: January 24, 2024

SHEET 06 OF 19

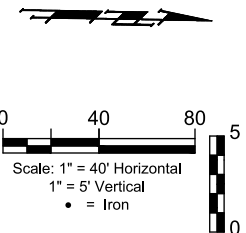
File: E:\Projects\Falcon Falls East 2nd 23-02-P865\Engineering\Phase 1\WTR_23-10-E625\WTR Plans.dwg

Square cut with cross, in hub guard,
east side of Hillside Avenue, 110
feet south of and 27 west of the
southwest corner of the northwest
quarter, Section 23, Township 26
South, Range 1 East.
Elev.=1355.28 NAVD 88

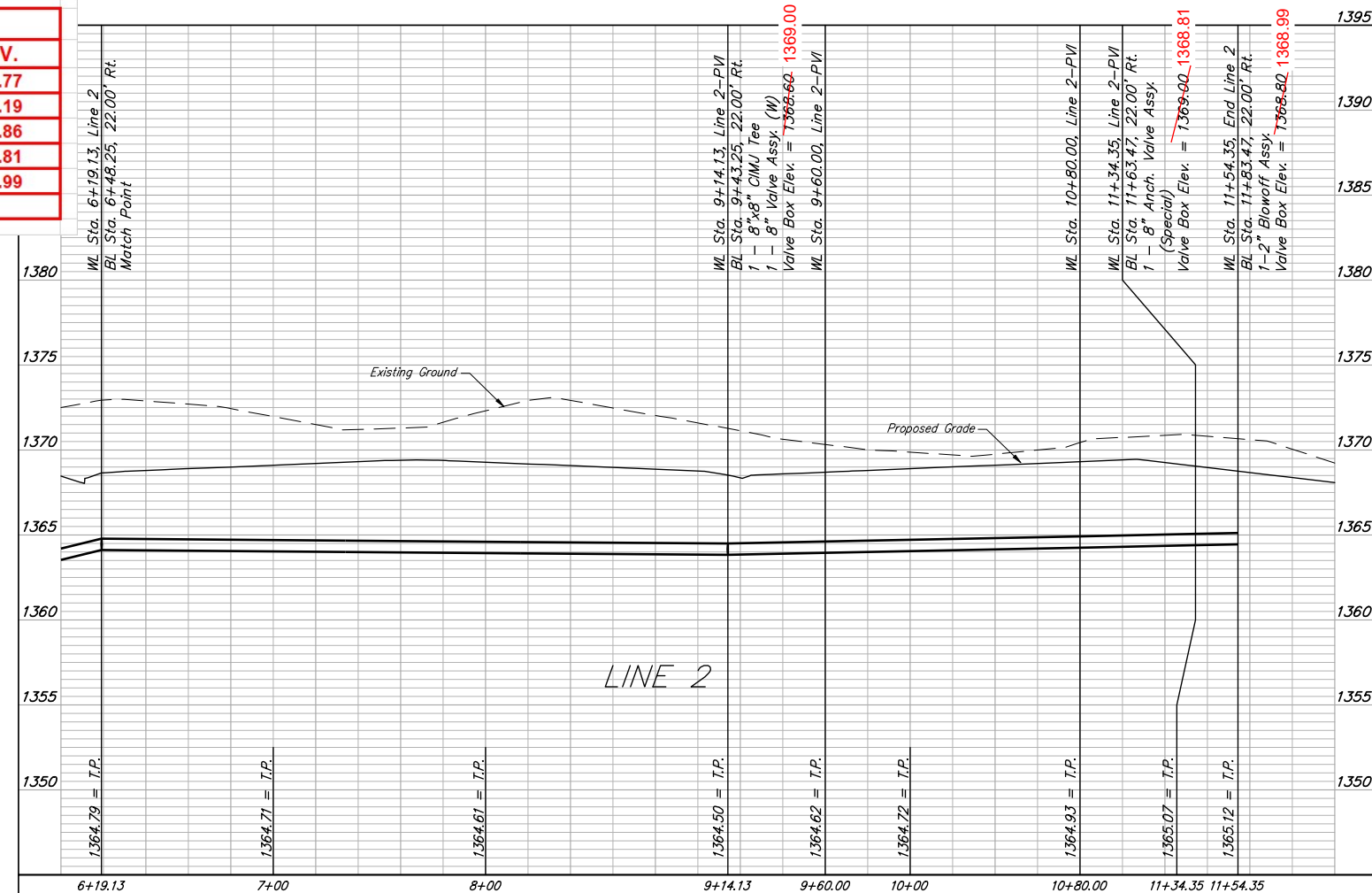
Sta. 11+54
2" Blow-Off VALVE: 218' N. & 21' E.
C/L Vassar Ave. & Vassar Ct.



TS = TEST STATION



LINE	STA.	ITEM	NORTHING	EASTING	ELEV.
2	6+19	VALVE	1,717,638.16	1,660,593.89	1368.77
2/3	6+19	TEE	1,717,639.49	1,660,595.85	1365.19
2/4	9+14	TEE	1,717,933.73	1,660,590.86	1364.86
2	11+34	VALVE	1,718,153.73	1,660,587.72	1368.81
2	11+54	BLOWOFF	1,718,174.56	1,660,586.65	1368.99
VALVE ELEV. = TOP OF BOX			FIRE HYD ELEV. = BURY LINE		



REVISION:
Added dimensions to show KDHE separation requirements are met



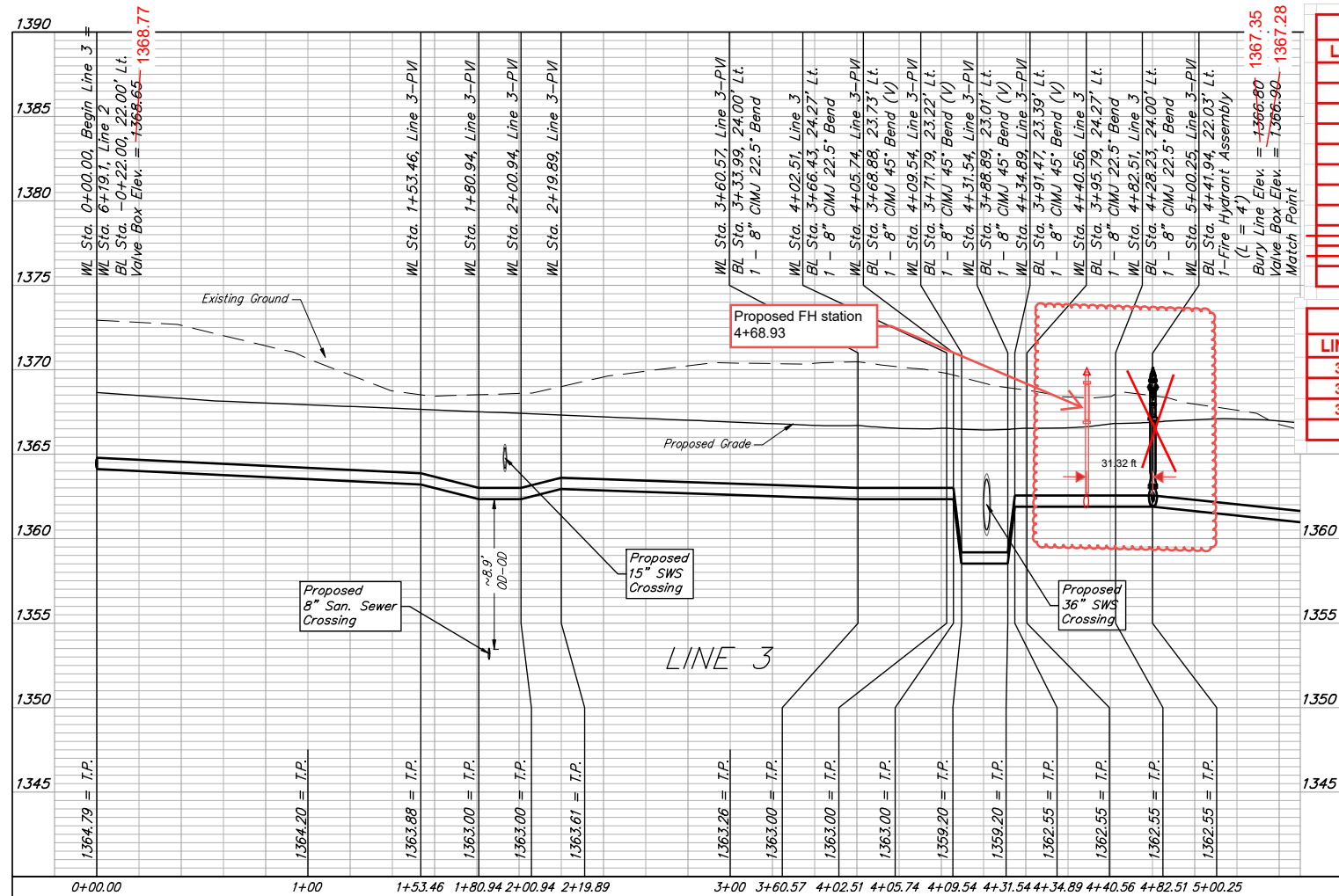
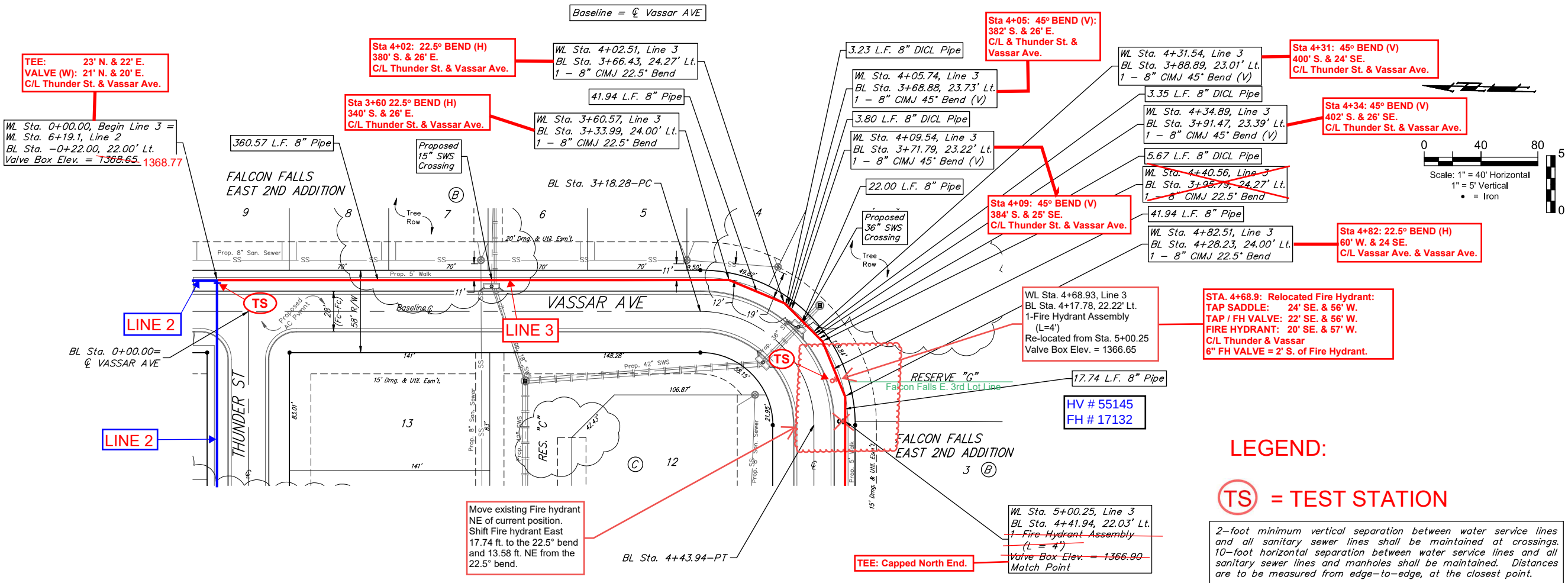
315 Ellis St.
Wichita, KS 67211
316-262-7271
BaughmanCo.com

WATER DISTRIBUTION SYSTEM

SHEET **07** OF **19**

File: E:\Projects\Falcon Falls East 2nd_23-02-P865\Engineering\Phase 1\WTR_23-10-E625\WTR Plans.dwg

BENCHMARKS:
Square cut in the center of headwall, southerly RCBC, ±82' north of the northeast corner of Lot 30, Block C, Falcon Falls 3rd/ Addition. Elev.=1344.07 NAVD 88
Square cut in top of curb, center of east curb return of center island, Blackhawk St, 53' west of centerline intersection of Hillside Ave. and Blackhawk St. Elev.=1354.01 NAVD 88
Square cut with cross, in hub guard, east side of Hillside Avenue, 110 feet south of and 27 west of the southwest corner of the northwest quarter, Section 23, Township 26 South, Range 1 East. Elev.=1355.28 NAVD 88



WATER LINE FITTING COORDINATES					
LINE	STA.	ITEM	NORTHING	EASTING	ELEV.
3	3+60	22.5	1,717,279.28	1,660,602.27	1362.96
3	4+02	22.25	1,717,240.00	1,660,586.18	1363.35
3	4+05	45	1,717,238.00	1,660,584.51	1363.38
3	4+09	45	1,717,232.80	1,660,580.37	1358.51
3	4+31	45	1,717,219.37	1,660,566.91	1358.89
3	4+34	45	1,717,216.30	1,660,563.86	1362.46
3	4+82	22.25	1,717,195.23	1,660,521.24	1362.37
3	5+00	FH TEE	1,717,195.46	1,660,502.69	1362.61
3	5+00	FH VALVE	1,717,196.54	1,660,502.72	1367.20
3	5+00	FH BL	1,717,199.09	1,660,502.42	1367.35
VALVE ELEV. = TOP OF BOX			FIRE HYD ELEV. = BURY LINE		

WATER LINE FITTING COORDINATES					
LINE	STA.	ITEM	NORTHING	EASTING	ELEV.
3	4+68	Saddle	1,717,197.21	1,660,524.80	1362.21
3	4+68	Valve	1,717,197.78	1,660,523.96	1366.65
3	4+68	FH	1,717,200.49	1,660,523.09	1366.23
VALVE ELEV. = TOP OF BOX			FIRE HYD ELEV. = BURY LINE		

17919

03/19/2024

KANSAS

PROFESSIONAL ENGINEER

BAUGHMAN COMPANY

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

FALCON FALLS EAST 2ND ADDITION - PHASE 1

LINE 3

WATER DISTRIBUTION SYSTEM

PROJECT NUMBER:

DESIGN: HJW DRAWN: AJV

DATE: March 18, 2024

SHEET **08** OF **19**

REVISION:

Added dimensions to show KDI/E separation requirements are met

Date: 3/18/2024 By: AJV

File: E:\Projects\Falcon Falls East 2nd_23-02-P865\Engineering\Phase 1\WTR_23-10-E625\WTR Plans.dwg

BENCHMARKS:
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Square cut with cross, in hub guard, east side of Hillside Avenue, 110 feet south of and 27 west of the southwest corner of the northwest quarter, Section 23, Township 26 South, Range 1 East. Elev.=1355.28 NAVD 88

Sta 7+20:
22.5° BEND (H)
48' S. & 30' E.
C/L Vassar Ave. & Vassar Ave.

Sta 6+96:
22.5° BEND (H)
30' S. & 48' E.
C/L Vassar Ave. & Vassar Ave.

Sta 6+73:
22.5° BEND (H)
22' S. & 70' E.
C/L Vassar Ave. & Vassar Ave.

See Sheet 8 -
For Relocated
Fire Hydrant.

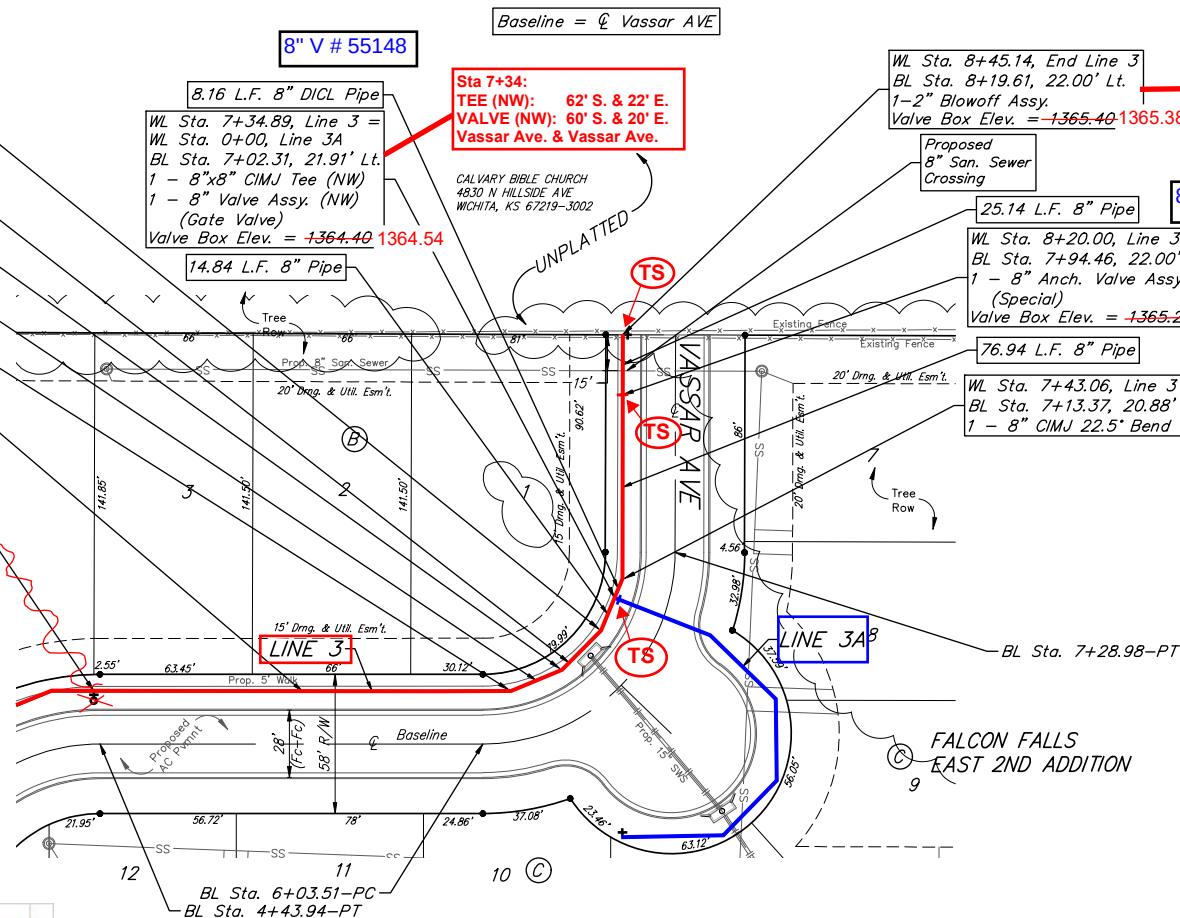
WL Sta. 7+20.05, Line 3
BL Sta. 6+82.05, 20.86' Lt.
1 - 8" CIMJ 22.5° Bend

23.07 L.F. 8" Pipe
WL Sta. 6+96.98, Line 3
BL Sta. 6+50.64, 20.86' Lt.
1 - 8" CIMJ 22.5° Bend

23.07 L.F. 8" Pipe
WL Sta. 6+73.91, Line 3
BL Sta. 6+19.22, 20.86' Lt.
1 - 8" CIMJ 22.5° Bend

173.66 L.F. 8" Pipe
WL Sta. 5+00.25, Line 3
BL Sta. 4+41.94, 22.03' Lt.
1 - Fire Hydrant Assembly
(L = 4')
Bury Line Elev. = 1366.90
Valve Box Elev. = 1367.00
Match Point

RESERVE "G"
FALCON FALLS
EAST 2ND ADDITION

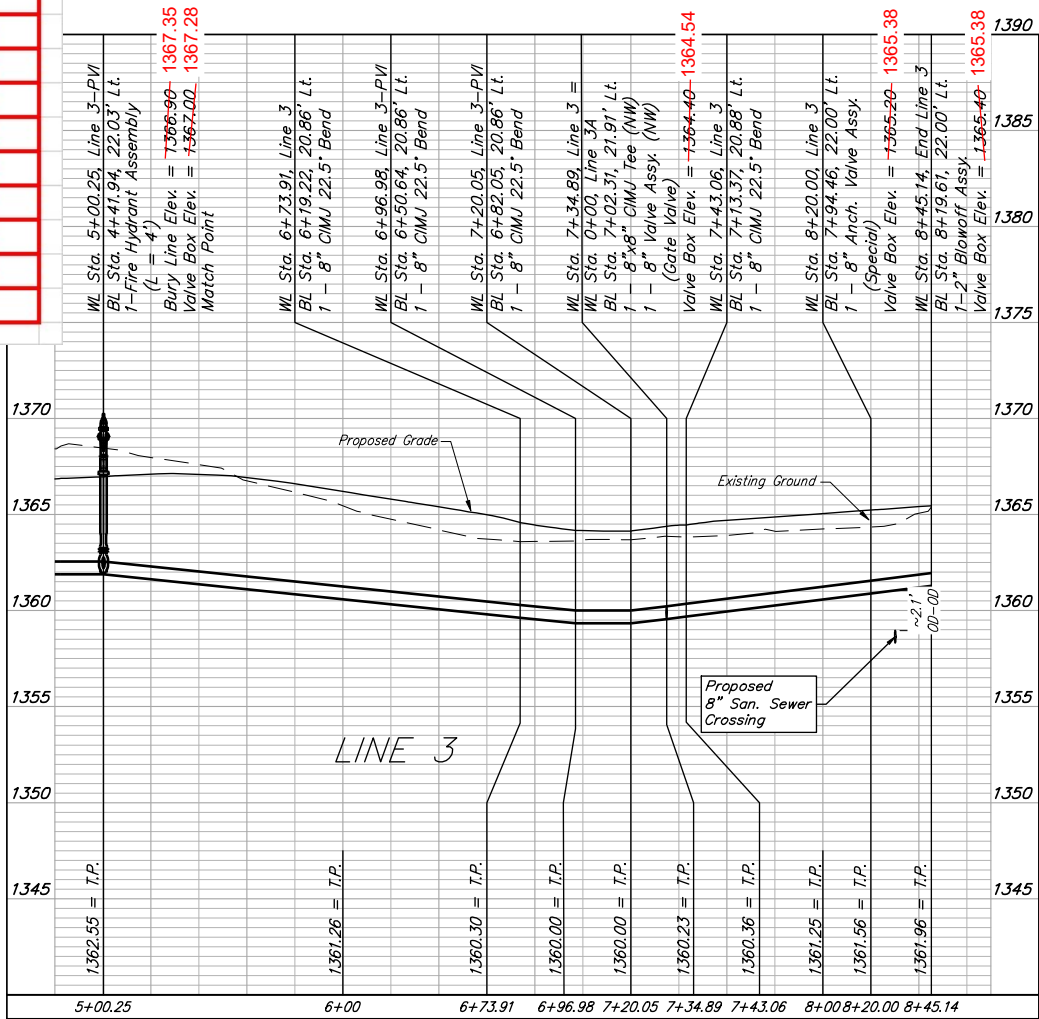


LEGEND:

(TS) = TEST STATION

2-foot minimum vertical separation between water service lines and all sanitary sewer lines shall be maintained at crossings. 10-foot horizontal separation between water service lines and all sanitary sewer lines and manholes shall be maintained. Distances are to be measured from edge-to-edge, at the closest point.

WATER LINE FITTING COORDINATES					
LINE	STA.	ITEM	NORTHING	EASTING	ELEV.
3	6+73	22.25	1,717,193.11	1,660,328.94	1360.49
3	6+96	22.25	1,717,183.08	1,660,309.16	1360.19
3	7+20	22.25	1,717,167.76	1,660,294.57	1359.94
3/3A	7+34	TEE	1,717,153.15	1,660,288.24	1360.24
3	7+43	22.5	1,717,144.70	1,660,285.08	1360.09
3	7+43	22.5	1,717,145.32	1,660,284.70	1360.07
3	8+20	VALVE	1,717,069.32	1,660,285.17	1365.38
3	8+45	BLOWOFF	1,717,048.00	1,660,286.02	1365.38
VALVE ELEV. = TOP OF BOX			FIRE HYD ELEV. = BURY LINE		



**BAUGHMAN
COMPANY**

315 Ellis St.
Wichita, KS 67211
316-262-7271
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FALCON FALLS EAST 2ND
ADDITION - PHASE 1

LINE 3

WATER DISTRIBUTION
SYSTEM

PROJECT NUMBER:

DESIGN: HJW DRAWN: AJV
DATE: January 24, 2024

SHEET **09** OF **19**

File: E:\Projects\Falcon Falls East 2nd 23-02-P865\Engineering\Phase 1\WTR_23-10-E625WTR Plans.dwg

BENCHMARKS:
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Square cut with cross, in hub guard, east side of Hillside Avenue, 110 feet south of and 27 west of the southwest corner of the northwest quarter, Section 23, Township 26 South, Range 1 East. Elev.=1355.28 NAVD 88

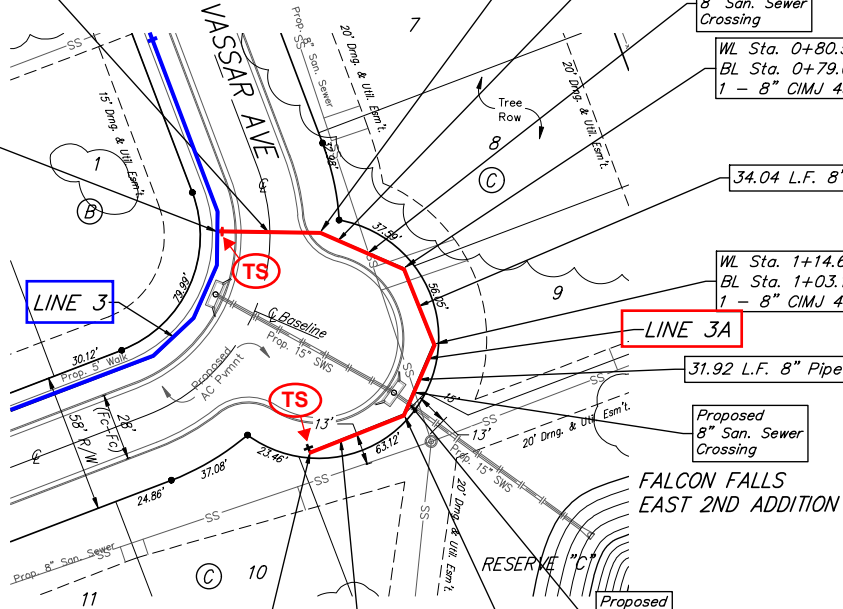
Baseline = ϕ Vassar CT

Sta 0+00 LINE 3A:
VALVE (NW): 60' S. & 20' E.
Vassar Ave. & Vassar Ave.

WL Sta. 0+00.00, Begin Line 3A =
WL Sta. 7+34.9, Line 3
BL Sta. 0+01.76, 24.32' Lt.
Valve Box Elev. = ~~1364.40~~ 1364.54

42.65 L.F. 8" Pipe

FALCON FALLS
EAST 2ND ADDITION



Sta. 0+42: 22.5° BEND (H)
45' S. & 15' W.
C/L Vassar Ave. & Vassar Ave.

Sta. 0+80 45° BEND (H)
18' S. & 42' W.
C/L Vassar Ave. & Vassar Ave.

Sta. 1+14: 45° BEND (H)
17' N. & 42' W.
C/L Vassar Ave. & Vassar Ave.

Sta. 1+46: 45° BEND (H)
40' N. & 20' W.
C/L Vassar Ave. & Vassar Ave.

Sta 1+88: 2" Blow-Off VALVE:
40' N. & 22' E.
C/L Vassar Ave. & Vassar Ave.

WL Sta. 1+88.64, End Line 3A
BL Sta. 0+73.37, 45.12' Rt.
1-2" Blowoff Assy.
Valve Box Elev. = ~~1362.60~~ 1363.79

WL Sta. 1+46.53, Line 3A
BL Sta. 1+03.15, 15.34' Rt.
1 - 8" CIMJ 45° Bend

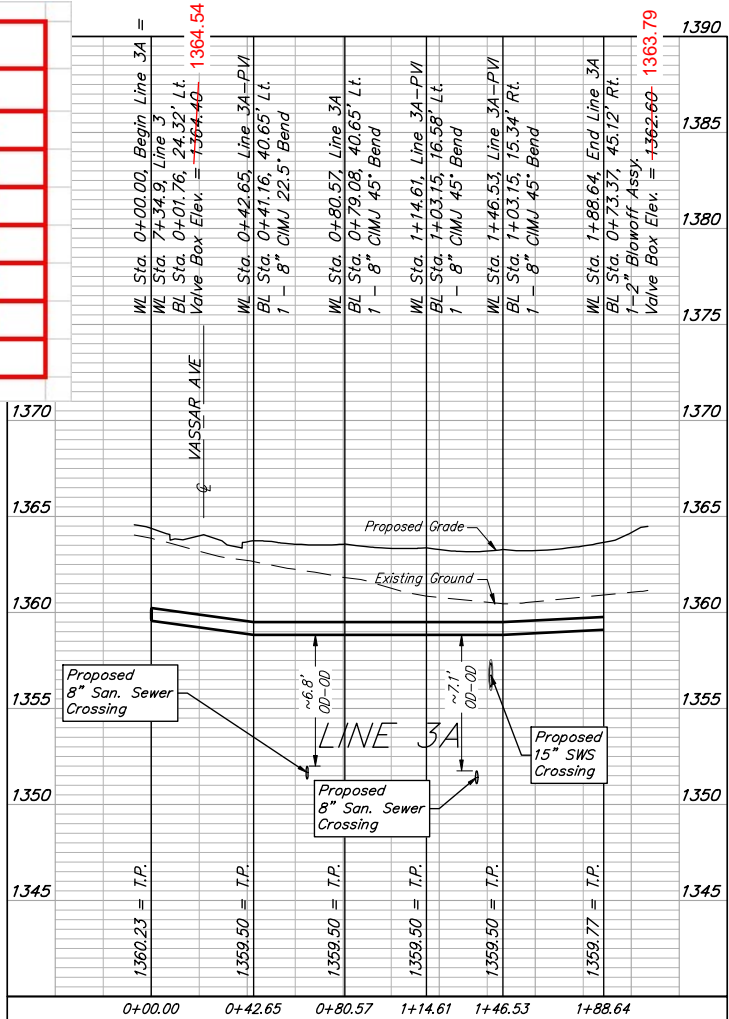
LEGEND:

TS = TEST STATION

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WATER LINE FITTING COORDINATES

LINE	STA.	ITEM	NORTHING	EASTING	ELEV.
3A	0+02	VALVE	1,717,153.55	1,660,284.68	1364.54
3A	0+42	22.25	1,717,167.78	1,660,246.43	1359.54
3A	0+80	45	1,717,195.02	1,660,219.30	1359.23
3A	1+14	45	1,717,227.60	1,660,218.89	1359.78
3A	1+46	45	1,717,254.87	1,660,244.94	1359.18
3A	1+88	BLOWOFF	1,717,252.45	1,660,280.04	1363.79
VALVE ELEV. = TOP OF BOX			FIRE HYD ELEV. = BURY LINE		



By: AJV
Date: 3/18/2024

REVISION:
Dimensions adjusted to show KDHE separation requirements are met

**BAUGHMAN
COMPANY**

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

FALCON FALLS EAST 2ND
ADDITION - PHASE 1

LINE 3A

WATER DISTRIBUTION
SYSTEM

PROJECT NUMBER:

DESIGN: HJW DRAWN: AJV
DATE: March 18, 2024

SHEET
10 OF
19

File: E:\Projects\Falcon Falls East 2nd_23-02-P865\Engineering\Phase 1\WTR_23-10-E625\WTR Plans.dwg

BENCHMARKS:
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Square cut with cross, in hub guard, east side of Hillside Avenue, 110 feet south of and 27 west of the southwest corner of the northwest quarter, Section 23, Township 26 South, Range 1 East. Elev.=1354.01 NAVD 88

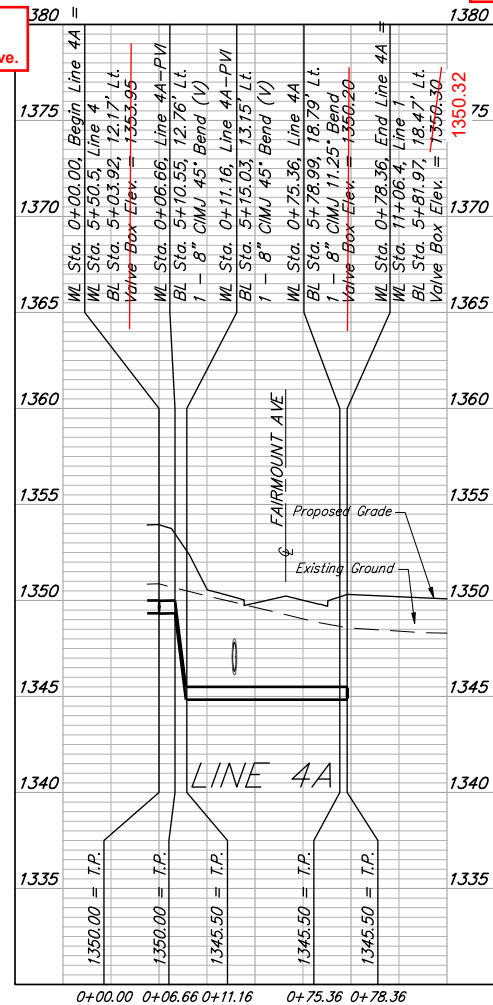
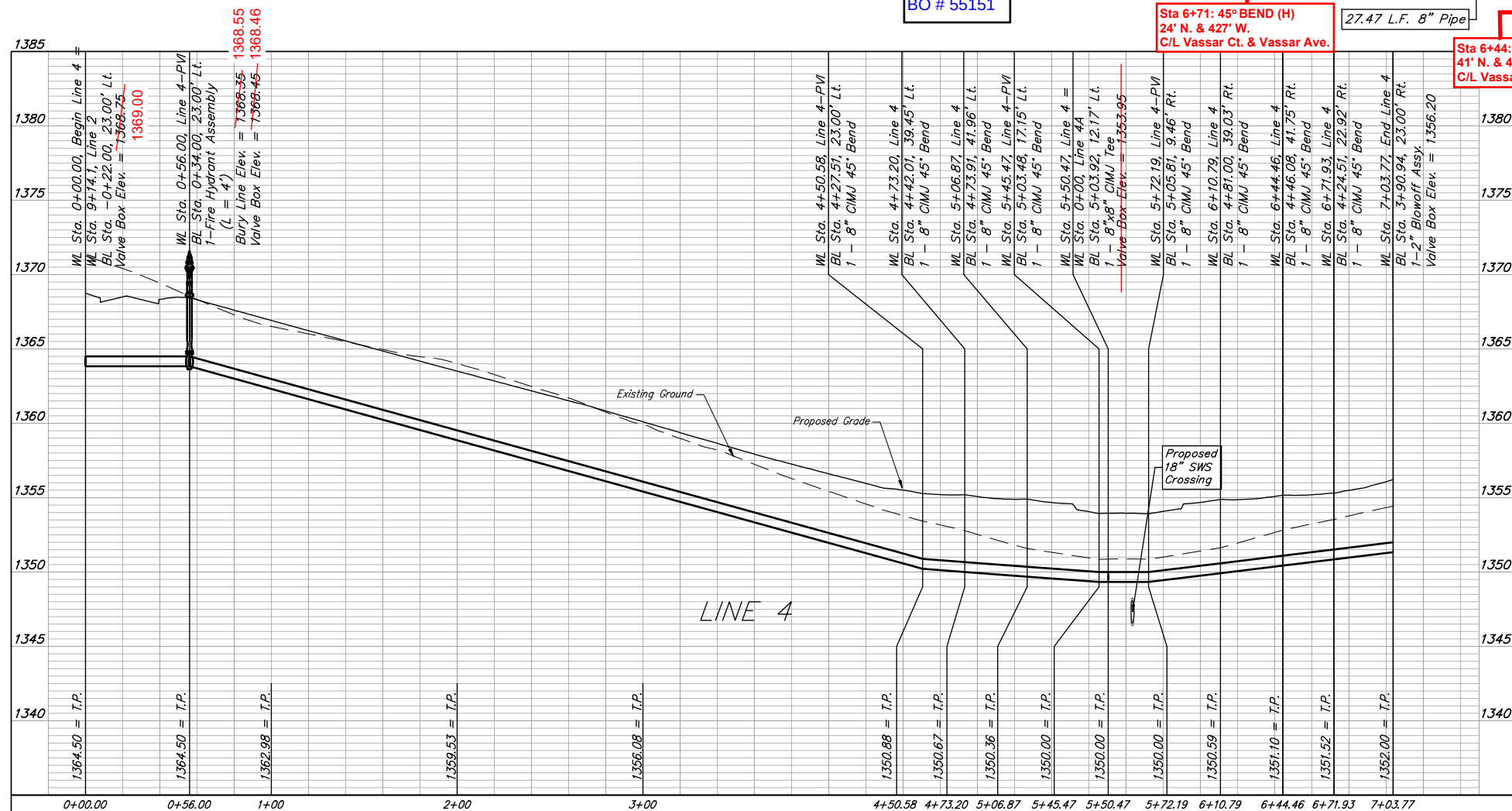
Sta. 0+00
TEE: 23' S. & 21' E.
VALVE (W): 23' S. & 19' E.
C/L Vassar Ct. & Vassar Ave.

WL Sta. 0+00.00, Begin Line 4 =
WL Sta. 9+14.1, Line 2
BL Sta. -0+22.00, 23.00' Lt.
Valve Box Elev. = 1368.75 1369.00

WATER LINE FITTING COORDINATES					
4	0+02	VALVE	1,717,933.79	1,660,588.02	1369.00
4	0+56	FH TEE	1,717,933.46	1,660,535.96	1364.65
4	0+56	FH VALVE	1,717,934.71	1,660,534.64	1368.46
4	0+56	FH BL	1,717,937.14	1,660,535.08	1368.55
4	4+50	45	1,717,926.18	1,660,138.75	1350.44
4	4+73	45	1,717,912.47	1,660,124.69	1350.50
4	5+06	45	1,717,911.77	1,660,091.09	1350.23
4	5+45	45	1,717,912.47	1,660,124.69	1350.50
4	5+50	TEE	1,717,944.55	1,660,064.41	1348.95
4	5+72	45	1,717,975.64	1,660,065.24	1349.42
4	6+10	45	1,717,993.45	1,660,093.24	1351.14
4	6+44	45	1,717,991.96	1,660,127.99	1351.43
4	6+71	45	1,717,975.54	1,660,142.98	1351.98
4	7+03	BLOWOFF	1,717,934.71	1,660,534.64	1368.46
4A	0+06	45	1,717,944.82	1,660,055.78	1348.46
4A	0+11	45	1,717,945.08	1,660,052.92	1346.50
4A	0+75	11.25	1,717,945.05	1,659,990.90	1345.25
4A	0+78	VALVE	1,717,944.11	1,659,988.63	1350.32
VALVE ELEV. = TOP OF BOX			FIRE HYD ELEV. = BURY LINE		

FALCON FALLS
EAST 2ND ADDITION

Pipe layout is shown to be circular for radii over 125'. For radii under 200' Contractor to use short pipe lengths, high deflection couplers, and manufacturer recommended pipe deflection to meet planned alignment.



LEGEND:
(TS) = TEST STATION

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FALCON FALLS EAST 2ND
ADDITION - PHASE 1

LINE 4
&
LINE 4A

WATER DISTRIBUTION
SYSTEM

PROJECT NUMBER:

DESIGN: HJW DRAWN: AJV
DATE: January 24, 2024

SHEET 11 OF 19

E:\Projects\Falcon Falls East 2nd_23-02-P865\Engineering\Phase 1\WTR_23-10-E625\WTR Plans.dwg

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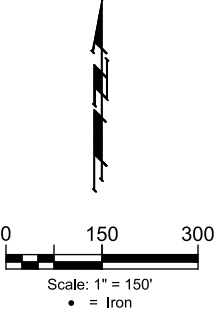
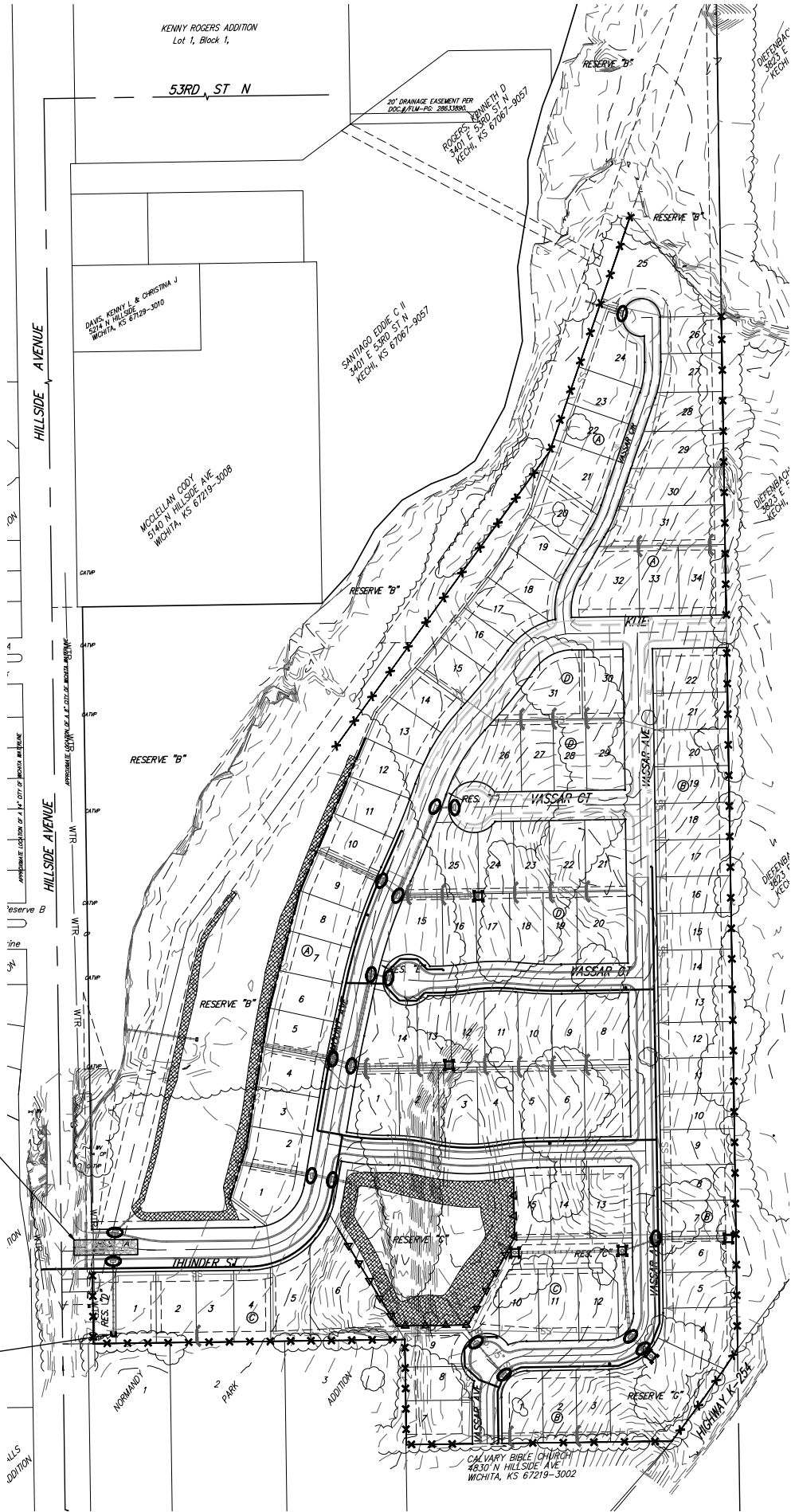
EROSION CONTROL MEASURE	INSTALL	MAINTAIN	REMOVE
CONSTRUCTION ENTRANCE (EA)	0	1	0
CURB INLET BARRIER (EA)	0	18	0
DROP INLET PROTECTION (EA)	0	6	0
DITCH CHECKS (EA)	0	19	0
BACK OF CURB PROTECTION (LF)	0	0	0
EROSION CONTROL BERM (LF)	0	667	0
STRAW WATTLE (LF)	0	970	0
SILT FENCE (LF)	0	4,807	0
EROSION CONTROL MAT (SY)	0	7,935	0
MAINTAIN EROSION CONTROL BMP's (LS)	0	0	0

* ALL EXISTING BMPs INCLUDING CONSTRUCTION ENTRANCE, SEDIMENT BARRIERS, SILT FENCE, CUT-OFF TRENCH, AND EROSION CONTROL MAT SHALL BE MAINTAINED AND REPAIRED IF NECESSARY.

Contractor shall make sure all erosion control is in place before project is accepted. This plan represents the minimum standard. Any additional erosion control measures shall be installed by the Contractor as needed.

Maintain 50'x12' Gravel Construction Entrance.

Install 30 L.F. Straw Wattle.



Existing Ground — — — — — 1364 — — — — —

EROSION CONTROL PLAN
LEGEND

- DROP INLET PROTECTION

- CURB INLET PROTECTION

- STRAW BALE DITCH CHECKS

- STRAW WATTLE

- SILT FENCING

- EROSION CONTROL BERM

- BACK OF CURB PROTECTION



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FALCON FALLS EAST 2ND
ADDITION - PHASE 1

EROSION
CONTROL

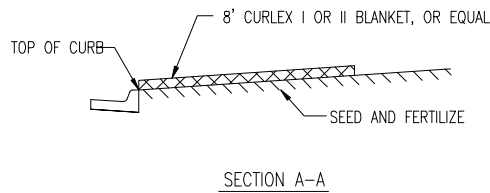
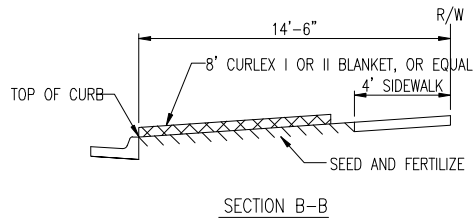
Water Distribution
System

PROJECT NUMBER:

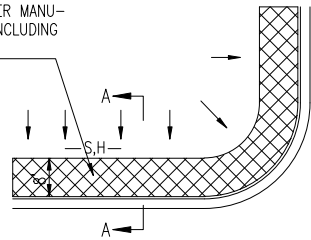
DESIGN: HJW DRAWN: AJV

DATE: January 24, 2024

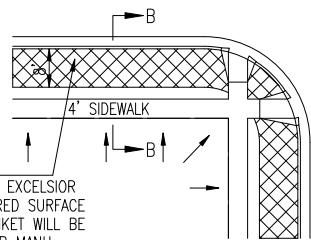
SHEET 12 OF 19



INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)



SOUTH STREET

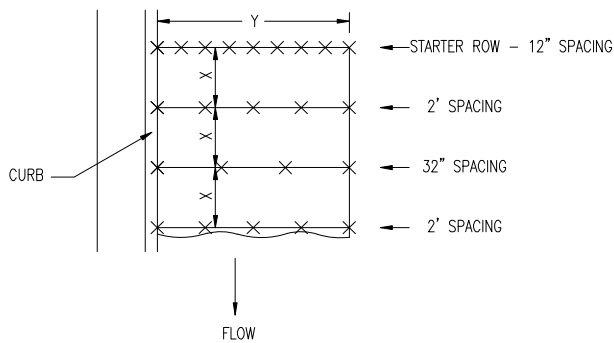


INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

GENERAL NOTES

- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

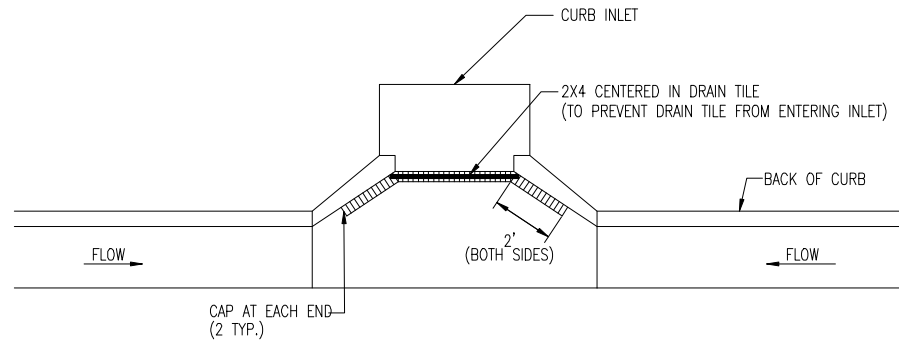
BACK OF CURB PROTECTION DETAIL



STAPLE PATTERN

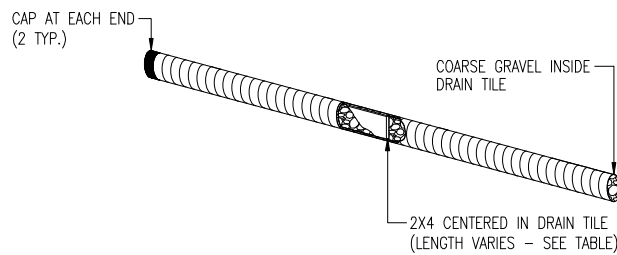
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT



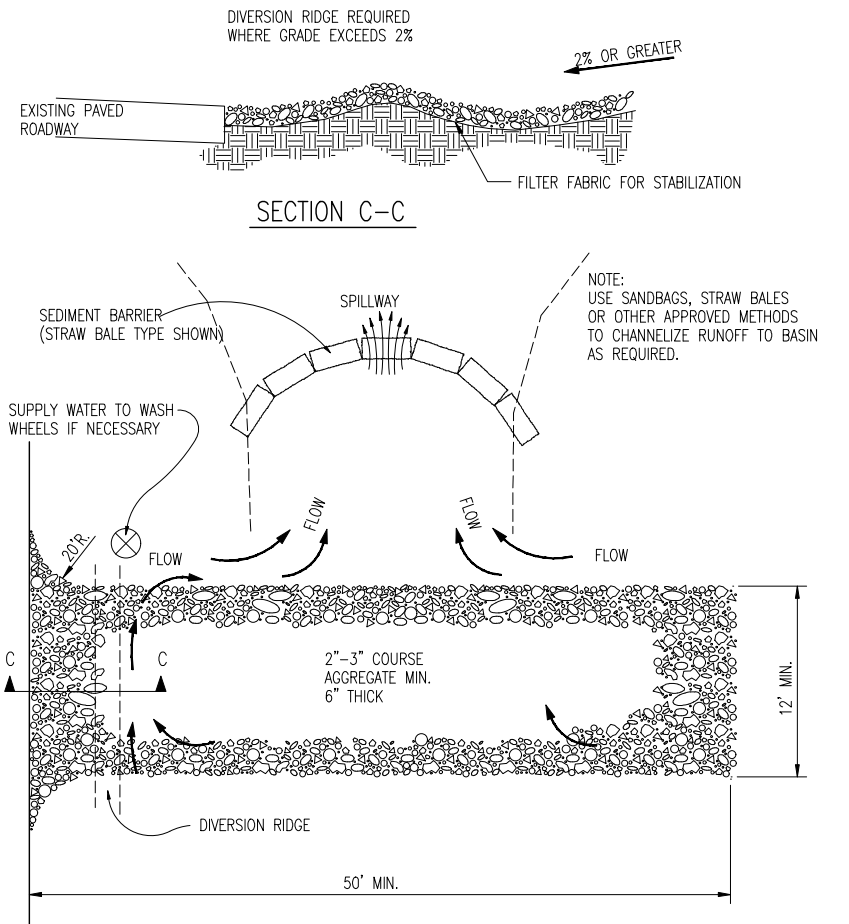
NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION

4" PERFORATED PIPE W/ GRAVEL



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
- DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

REVISION DATE: MAY 2013

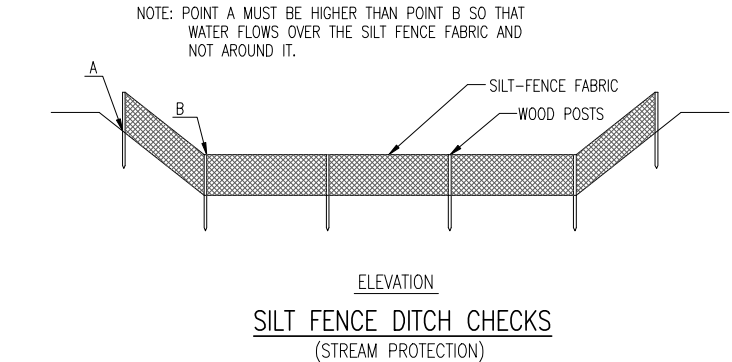


**BACK OF CURB PROTECTION,
CURB INLET PROTECTION AND
CONSTRUCTION ENTRANCE**

CITY ENGINEER

GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE	SHEET	
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501	13 of 19	



MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED. SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSTREAM SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH. LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

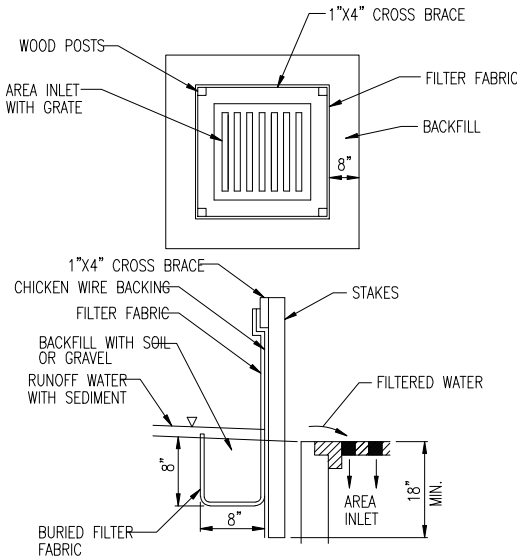
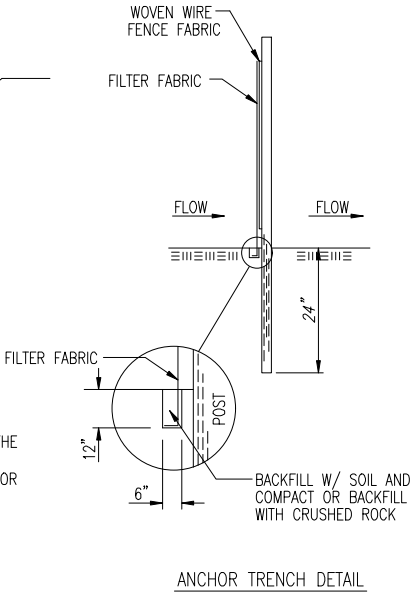
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK—NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM. DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE. DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS. SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME. WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE. DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET. THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM. CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING. ATTACH THE WIRE OR POLYMERIC-MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

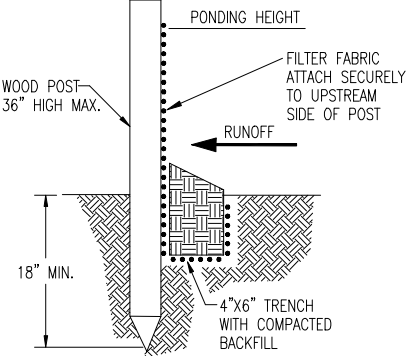
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET—NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESISTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS. THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE SILT FENCE?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

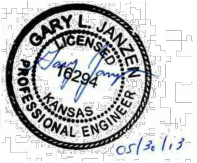
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES. DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT. SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND—SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

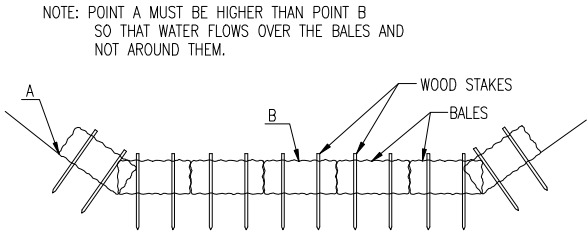
INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DO THE SILT FENCES SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?



REVISION DATE: MAY 2013		
SILT FENCE DITCH CHECK AND BARRIER DETAILS		
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 14 of 19



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE. OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED. THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK SPACING DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER. OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

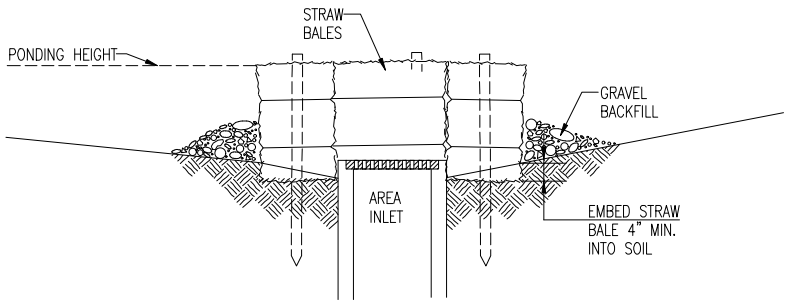
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

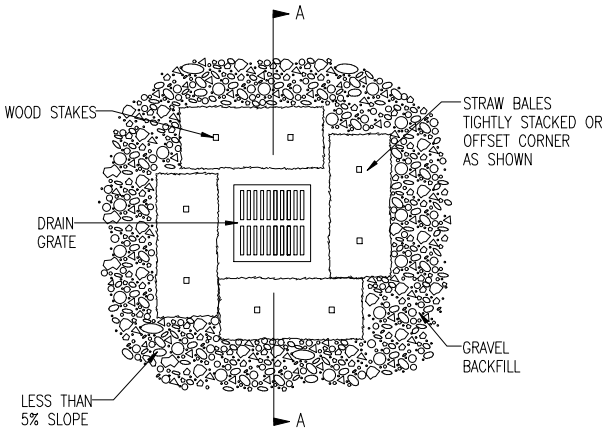
INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS

(INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP. NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

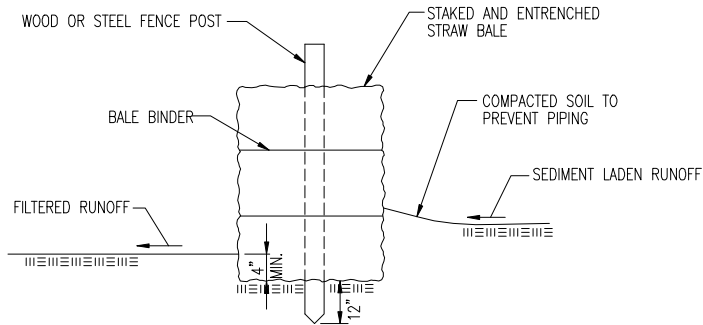
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR. BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE AREA INLET BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS. DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013



STRAW BALE DITCH CHECK AND BARRIER DETAILS

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

15 of 19

GENERAL NOTES

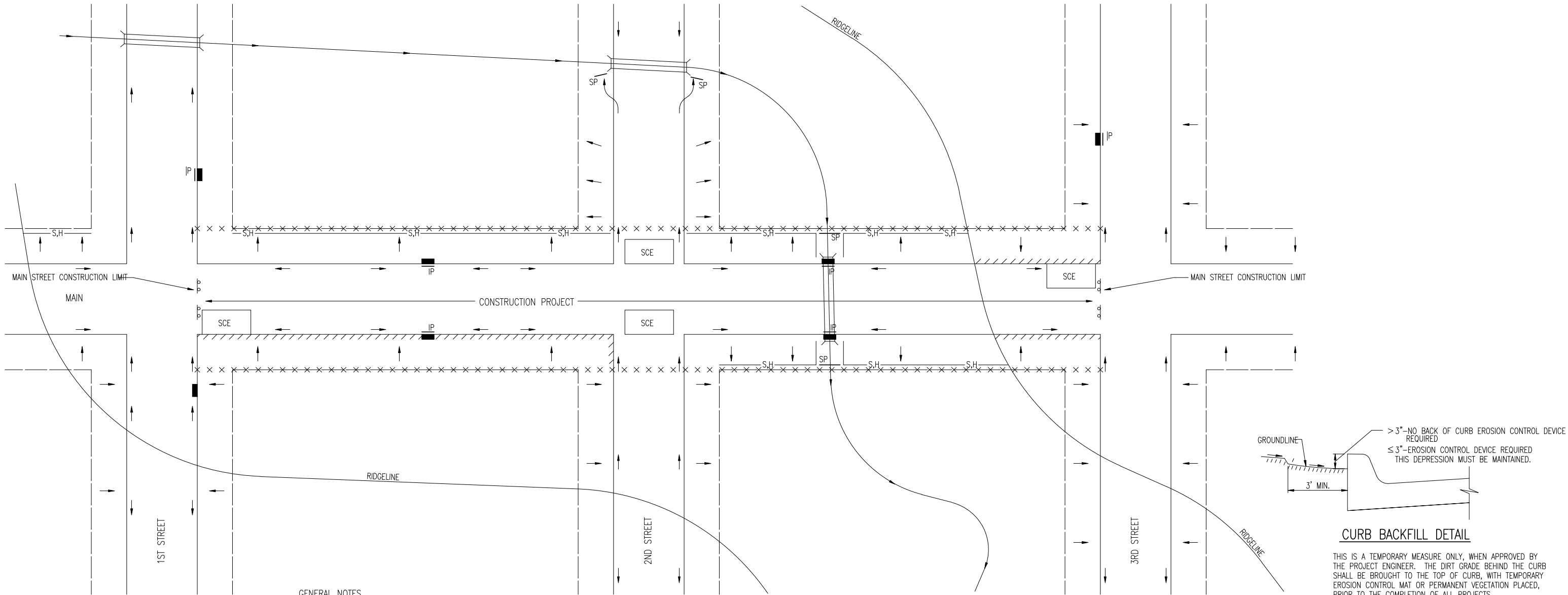
1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.

2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.

5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.

6. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.



GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.

2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.

3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.

4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.

5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.

6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.

8. THE CONTACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:

A. THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs - BACK OF CURB SEDIMENT BARRIER DETAILS)

B. THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.

C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.

D. SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

LEGEND

- R-O-W LIMITS

→ DRAINAGE FLOW PATH

× × × × × R/W LIMIT WITHIN CONSTRUCTION LIMIT

■ STORM WATER INLETS

IP INLET PROTECTION

— S,H — SILT FENCE OR HAY BALE BARRIER

SP STREAM PROTECTION

SCE STABILIZED CONSTRUCTION ENTRANCE

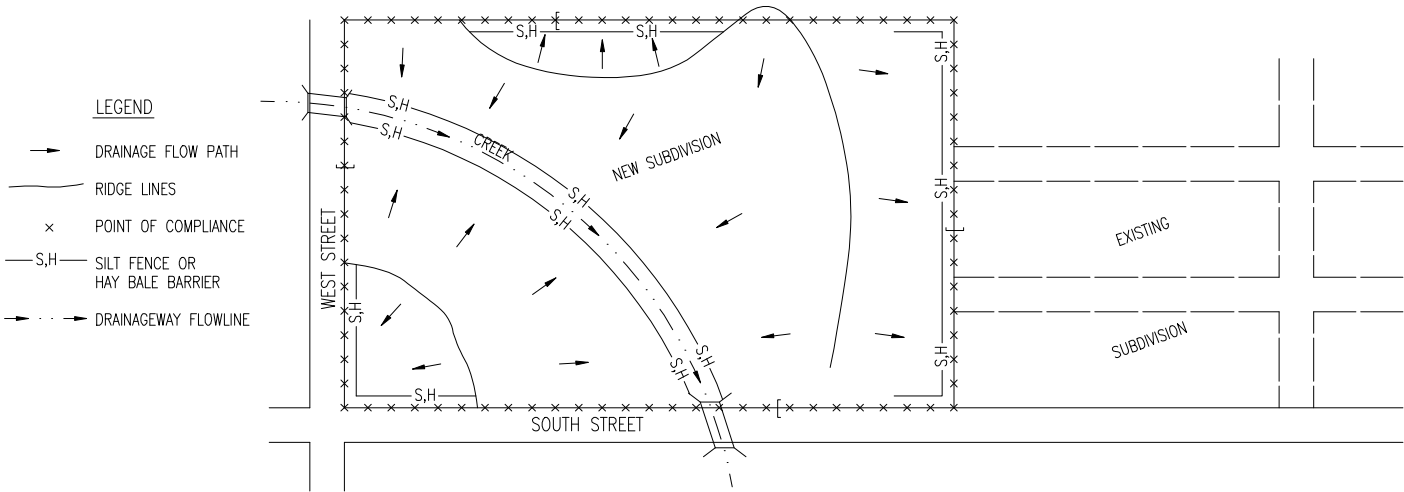
//// BACK OF CURB PROTECTION



STREET IMPROVEMENT PROJECTS		
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 16 of 19

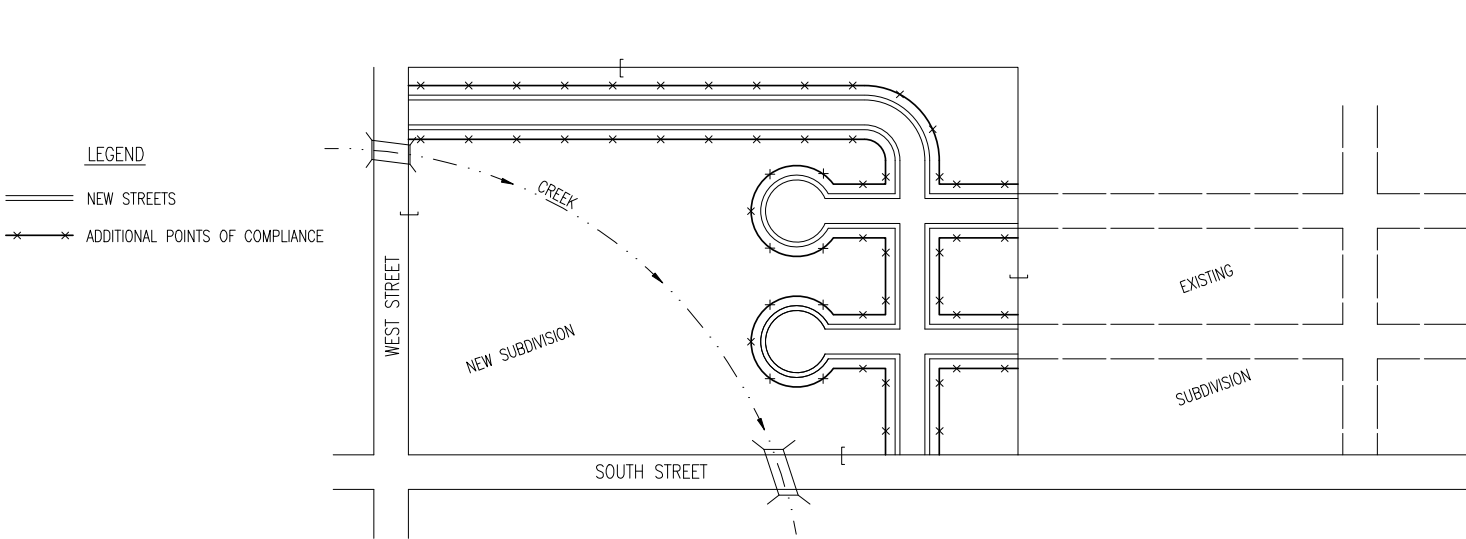
REVISION: JUNE 2015

PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



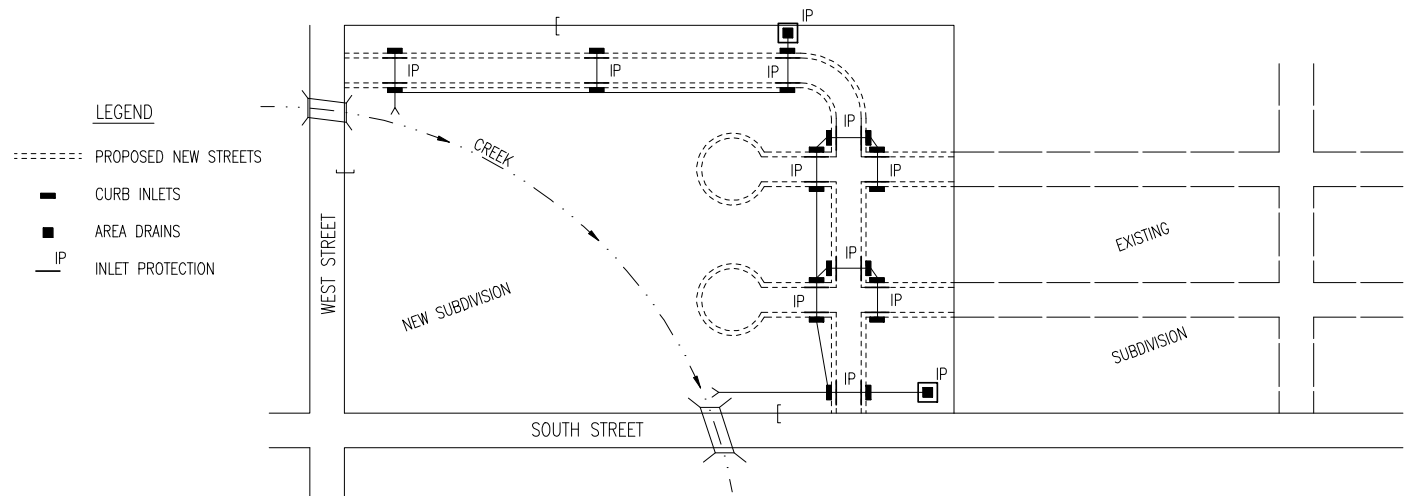
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 3 – STREET CONSTRUCTION



1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
 - A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
 - B. NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

PHASE 2 – INSTALLATION OF STORM SEWER

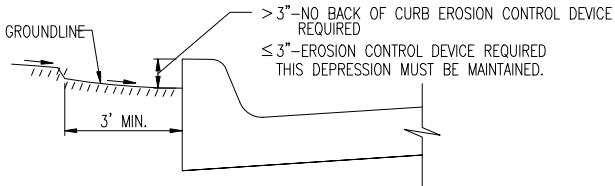


1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

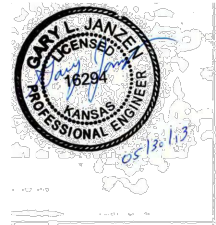
SEE DETAIL SHEET FOR
BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL
(STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

REVISION DATE: MAY 2013



SUBDIVISION DEVELOPMENT PROCESS		
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 17 of 19

BENCHMARKS:
Square cut in the center of headwall, southerly RCBC, ±82' north of the northeast corner of Lot 30, Block C, Falcon Falls 3rd/ Addition. Elev.=1344.07 NAVD 88

Square cut in top of curb, center of east curb return of center island, Blackhawk St, 53' west of centerline intersection of Hillside Ave. and Blackhawk St. Elev.=1354.01 NAVD 88

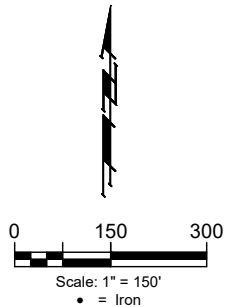
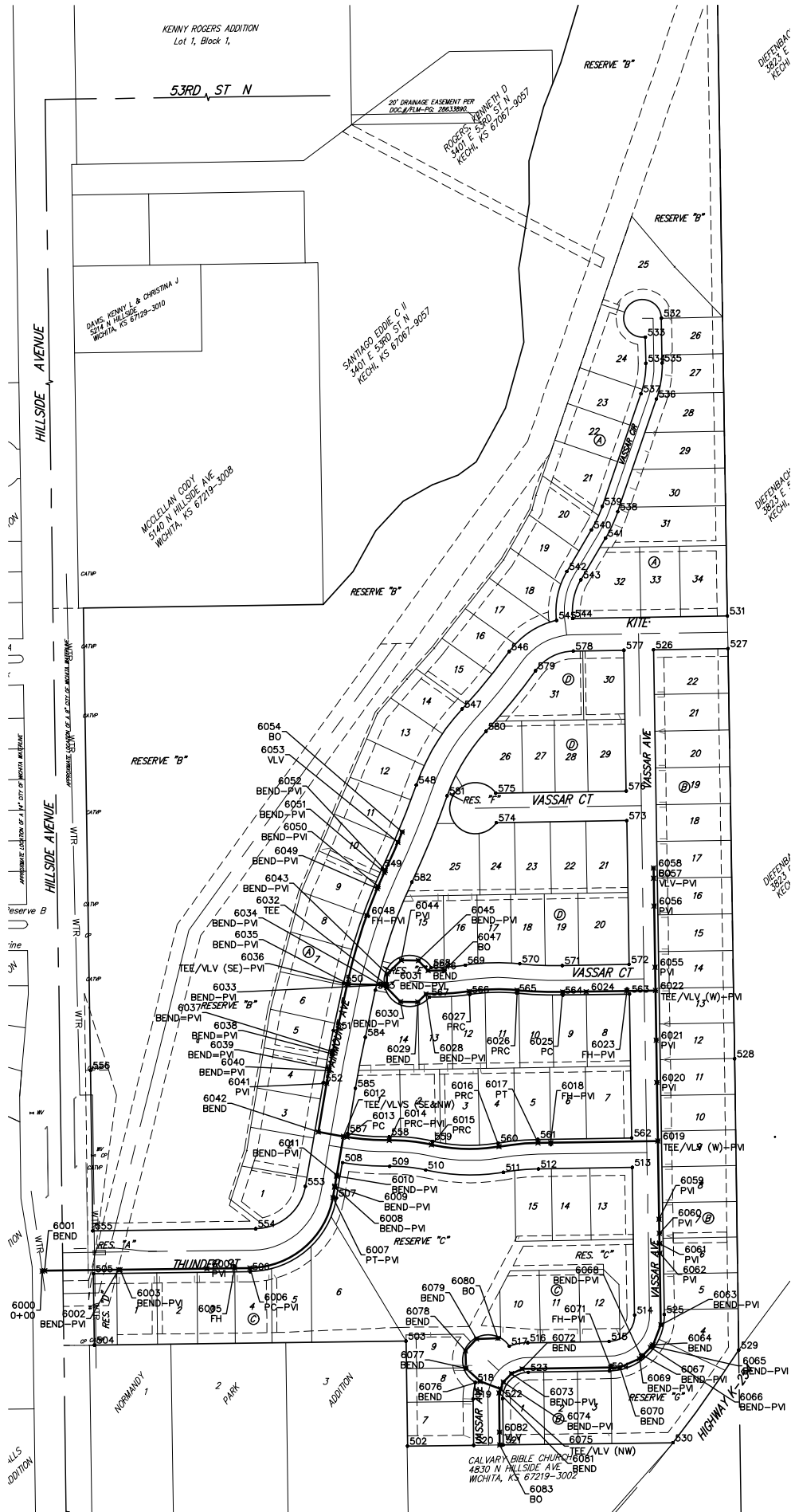
Square cut with cross, in hub guard, east side of Hillside Avenue, 110 feet south of and 27 west of the southwest corner of the northwest quarter, Section 23, Township 26 South, Range 1 East. Elev.=1355.28 NAVD 88

IRONS			
Point #	Northing	Easting	Description
500	0.00	0.00	IRON
502	1,717,040.68	1,660,105.11	IRON
503	1,717,246.66	1,660,102.25	IRON
504	1,717,238.82	1,658,491.30	IRON
505	1,717,378.80	1,659,488.36	IRON
506	1,717,382.75	1,659,796.66	IRON
507	1,717,527.12	1,659,965.89	IRON
508	1,717,586.45	1,659,977.87	IRON
509	1,717,589.27	1,660,070.44	IRON
510	1,717,581.81	1,660,140.94	IRON
511	1,717,577.59	1,660,293.42	IRON
512	1,717,584.06	1,660,362.08	IRON
513	1,717,587.05	1,660,546.09	IRON
514	1,717,297.81	1,660,550.77	IRON
515	1,717,245.89	1,660,500.61	IRON
516	1,717,243.40	1,660,341.06	IRON
517	1,717,236.56	1,660,304.80	IRON
518	1,717,165.44	1,660,238.34	IRON
519	1,717,132.90	1,660,233.84	IRON
520	1,717,042.34	1,660,235.10	IRON
521	1,717,043.09	1,660,293.09	IRON
522	1,717,133.70	1,660,291.84	IRON
523	1,717,185.40	1,660,342.00	IRON
524	1,717,188.00	1,660,501.55	IRON
525	1,717,298.75	1,660,608.77	IRON
526	1,718,601.86	1,660,587.67	IRON
527	1,718,604.22	1,660,733.65	IRON
528	1,717,800.14	1,660,746.67	IRON
529	1,717,228.93	1,660,754.77	IRON
530	1,717,047.36	1,660,625.93	IRON
531	1,718,668.21	1,660,732.61	IRON
532	1,719,252.01	1,660,603.14	IRON
533	1,719,214.84	1,660,571.74	IRON
534	1,719,163.53	1,660,572.57	IRON
535	1,719,164.05	1,660,604.57	IRON
536	1,719,093.47	1,660,593.37	IRON
537	1,719,103.86	1,660,563.11	IRON
538	1,718,872.66	1,660,517.55	IRON
539	1,718,883.05	1,660,487.29	IRON
540	1,718,836.97	1,660,466.02	IRON
541	1,718,820.68	1,660,493.56	IRON
542	1,718,755.46	1,660,417.80	IRON
543	1,718,739.16	1,660,445.34	IRON
544	1,718,663.31	1,660,429.34	IRON
545	1,718,659.54	1,660,397.56	IRON
546	1,718,598.16	1,660,304.53	IRON
547	1,718,485.61	1,660,212.36	IRON
548	1,718,336.85	1,660,122.63	IRON
549	1,718,173.43	1,660,053.83	IRON
550	1,717,948.09	1,659,979.81	IRON

IRONS			
Point #	Northing	Easting	Description
551	1,717,855.78	1,659,959.91	IRON
552	1,717,752.97	1,659,939.95	IRON
553	1,717,549.87	1,659,904.87	IRON
554	1,717,466.89	1,659,807.62	IRON
555	1,717,462.80	1,659,488.20	IRON
556	1,717,777.41	1,659,796.66	IRON
557	1,717,653.60	1,659,987.74	IRON
558	1,717,647.26	1,660,069.50	IRON
559	1,717,638.32	1,660,154.00	IRON
560	1,717,634.73	1,660,283.51	IRON
561	1,717,642.05	1,660,361.14	IRON
562	1,717,645.05	1,660,545.15	IRON
563	1,717,927.01	1,660,540.59	IRON
564	1,717,924.88	1,660,408.80	IRON
565	1,717,928.63	1,660,319.73	IRON
566	1,717,926.24	1,660,227.41	IRON
567	1,717,920.88	1,660,148.14	IRON
568	1,717,978.84	1,660,151.57	IRON
569	1,717,983.57	1,660,218.67	IRON
570	1,717,986.35	1,660,325.49	IRON
571	1,717,982.87	1,660,408.85	IRON
572	1,717,985.00	1,660,539.65	IRON
573	1,718,266.96	1,660,535.08	IRON
574	1,718,262.80	1,660,279.30	IRON
575	1,718,320.80	1,660,278.36	IRON
576	1,718,324.96	1,660,534.14	IRON
577	1,718,600.92	1,660,529.67	IRON
578	1,718,599.32	1,660,430.37	IRON
579	1,718,560.73	1,660,356.44	IRON
580	1,718,442.10	1,660,259.30	IRON
581	1,718,315.63	1,660,183.01	IRON
582	1,718,146.27	1,660,113.78	IRON
583	1,717,934.59	1,660,042.38	IRON
584	1,717,842.29	1,660,022.47	IRON
585	1,717,742.07	1,660,003.02	IRON

WTR POINTS			
Point #	Northing	Easting	Description
6000	1,717,383.68	1,659,388.93	0+00
6001	1,717,384.58	1,659,393.85	BEND
6002	1,717,386.44	1,659,538.84	BEND-PVI
6003	1,717,386.48	1,659,541.84	BEND-PVI
6004	1,717,388.66	1,659,712.00	PI
6005	1,717,389.36	1,659,766.38	PI
6006	1,717,389.75	1,659,796.57	PC-PVI
6007	1,717,528.31	1,659,958.99	PT-PVI
6008	1,717,548.26	1,659,962.44	BEND-PVI
6009	1,717,550.46	1,659,962.82	BEND-PVI
6010	1,717,570.17	1,659,966.22	BEND-PVI
6011	1,717,571.83	1,659,966.51	BEND-PVI
6012	1,717,647.89	1,659,978.65	TEE/VLV (SE&NW)
6013	1,717,646.70	1,659,986.55	PC
6014	1,717,640.26	1,660,069.61	PRC-PVI
6015	1,717,631.50	1,660,152.42	PRC
6016	1,717,627.84	1,660,284.71	PRC
6017	1,717,635.05	1,660,361.25	PT
6018	1,717,635.46	1,660,386.14	PI-PVI
6019	1,717,638.88	1,660,586.26	TEE/VLV (W)-PVI
6020	1,717,753.68	1,660,594.40	PI
6021	1,717,636.44	1,660,593.06	PI
6022	1,717,933.84	1,660,591.48	TEE/VLV (W)-PVI
6023	1,717,932.93	1,660,535.49	PI-PVI
6024	1,717,931.62	1,660,455.50	PC
6025	1,717,930.88	1,660,409.70	PC
6026	1,717,934.80	1,660,320.32	PRC
6027	1,717,932.17	1,660,226.51	PRC
6028	1,717,927.03	1,660,141.60	BEND-PVI
6029	1,717,911.32	1,660,125.33	BEND
6030	1,717,911.92	1,660,091.66	BEND-PVI
6031	1,717,939.69	1,660,064.85	BEND-PVI
6032	1,717,944.69	1,660,064.94	TEE
6033	1,717,944.81	1,660,058.28	BEND-PVI
6034	1,717,944.88	1,660,053.79	BEND-PVI
6035	1,717,945.98	1,659,989.59	BEND-PVI
6036	1,717,946.61	1,659,986.66	TEE/VLV (SE)-PVI
6037	1,717,813.88	1,659,958.38	BEND-PVI
6038	1,717,809.98	1,659,957.61	BEND-PVI
6039	1,717,780.51	1,659,951.99	BEND-PVI
6040	1,717,776.65	1,659,951.28	BEND-PVI
6041	1,717,751.78	1,659,946.85	PI
6042	1,717,656.40	1,659,930.38	BEND
6043	1,717,966.40	1,660,065.33	BEND-PVI
6044	1,717,983.21	1,660,083.10	PI
6045	1,717,992.61	1,660,126.77	BEND-PVI
6046	1,717,972.85	1,660,145.85	BEND
6047	1,717,973.39	1,660,177.68	BO
6048	1,718,080.91	1,660,025.14	PI-PVI
6049	1,718,133.84	1,660,045.85	BEND-PVI

WTR POINTS			
Point #	Northing	Easting	Description
6050	1,718,137.85	1,660,047.55	BEND-PVI
6051	1,718,165.26	1,660,059.74	BEND-PVI
6052	1,718,169.56	1,660,061.74	BEND-PVI
6053	1,718,224.52	1,660,086.39	VLV
6054	1,718,244.79	1,660,094.94	BO
6055	1,717,979.70	1,660,590.74	PI
6056	1,718,099.68	1,660,588.80	PI
6057	1,718,154.03	1,660,587.92	VLV-PVI
6058	1,718,174.02	1,660,587.59	BO
6059	1,717,485.43	1,660,588.74	PI
6060	1,717,457.96	1,660,589.19	PI
6061	1,717,437.97	1,660,599.51	PI
6062	1,717,419.02	1,660,599.82	PI
6063	1,717,278.35	1,660,602.10	BEND-PVI
6064	1,717,239.35	1,660,586.68	BEND
6065	1,717,237.03	1,660,594.43	BEND-PVI
6066	1,717,234.30	1,660,581.79	BEND-PVI
6067	1,717,218.49	1,660,566.49	BEND-PVI
6068	1,717,216.08	1,660,564.15	BEND-PVI
6069	1,717,212.01	1,660,560.21	BEND-PVI
6070	1,717,195.33	1,660,521.73	BEND
6071	1,717,195.04	1,660,503.99	PI-PVI
6072	1,717,192.21	1,660,330.35	BEND
6073	1,717,183.04	1,660,309.18	BEND-PVI
6074	1,717,166.46	1,660,293.13	BEND-PVI
6075	1,717,152.66	1,660,287.68	TEE/VLV (NW)
6076	1,717,167.63	1,660,247.74	BEND
6077	1,717,193.52	1,660,220.03	BEND
6078	1,717,227.54	1,660,218.88	BEND
6079	1,717,250.86	1,660,240.67	BEND
6080	1,717,252.29	1,660,282.76	BO
6081	1,717,145.07	1,660,284.68	BEND
6082	1,717,068.13	1,660,285.74	VLV
6083	1,717,042.99	1,660,286.09	BO



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

FALCON FALLS EAST 2ND ADDITION - PHASE 1

COORDINATES

WATER DISTRIBUTION SYSTEM

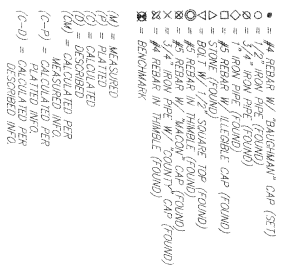
PROJECT NUMBER:

DESIGN: HJW DRAWN: AJV

DATE: January 24, 2024

SHEET 18 OF 19

File: E:\Projects\Falcon Falls East 2nd 23-02-P865\Engineering\Phase 1\WTR 23-10-E625\WTR Plans.dwg



WALL BUILDING PAD ELEVATIONS FOR LOOSEST OPENING TO THE STRUCTURE		
LOT	BLOCK	ELEVATION
24-29	A	1,564.4
19-21	A	1,553.9
11-17	A	1,552.9
6-10	A	1,552.4
1-5	A	1,552.0
1-4	B	1,552.0
6, 9, 10, 15	C	1,561.9

DECKLARK: 100' is at the center of the road, southwesterly corner of the intersection of the proposed center of Lot 30, Block C, Faxon Road, 3rd Addition.

Elev.=1544.07 MMD 88

#2 Square cut in top of curb, center of east curb of Faxon Road, 3rd Addition, at intersection of Faxon Road and Broadbrook St.

Elev.=1546.01 MMD 88

#3 Square cut with cross in hub point, east side of Hillside Avenue, 110 feet south of and 27' west of the southwest corner of the northwest quarter of the southeast quarter of Section 34, Township 36N, Range 1E, 160E.

Elev.=1555.28 MMD 88

MUNICIPAL BUILDING AND ELEVATIONS FOR LONGEST OPENING TO THE STRUCTURIONS		
LOT	BLOCK	ELEVATION
24-29	A	1554.4
19-23	A	1553.9
11-17	A	1552.9
6-10	A	1552.4
1-5	A	1550.0
1-4	B	1552.0
6, 9, 10, 15	C	1561.9

100' MARK INDICATES POINT NOT SET (POINT FALLS IN GREEN)

DECKLARK: 100' has been developed for this plot. All drainage measures, rights-of-way, and reserves shall remain of established grades (unless modified to allow for the convenience of the City Engineer) and shall be unobstructed to allow for the convenience of stormwater in accordance with the Stormwater Manual. The City Engineer shall be responsible for the design and construction of the drainage easement and reserves shall be the responsibility of the property owner, and shall be enforced by the City Engineer's Association and be provided for in the Stormwater Association covenants.

