AS-BUILT PLANS

SANITARY SEWER
to serve
WICHITA PLANT 3 EXTENSION
CITY OF MAIZE, KANSAS
City of Wichita Project # 2022-036973PPS
53030982

BASIN: F-NW-05A

UTILITY CONTRACTOR: NOWAK CONSTRUCTION
INSPECTOR: DAVID VANSICKLE
BAUGHMAN COMPANY, P.A.
AS-BUILTS BY: LARRY POWELL, 12-21-2023
BAUGHMAN COMPANY, P.A.

BEGAN: FEBRUARY 2023
ENDED: DECEMBER 2023

GENERAL NOTES:

1. The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City of Wichita and City of Maize Standard Specifications and special Provisions. For conflicting standards, the more restrictive of the two shall govern.
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:

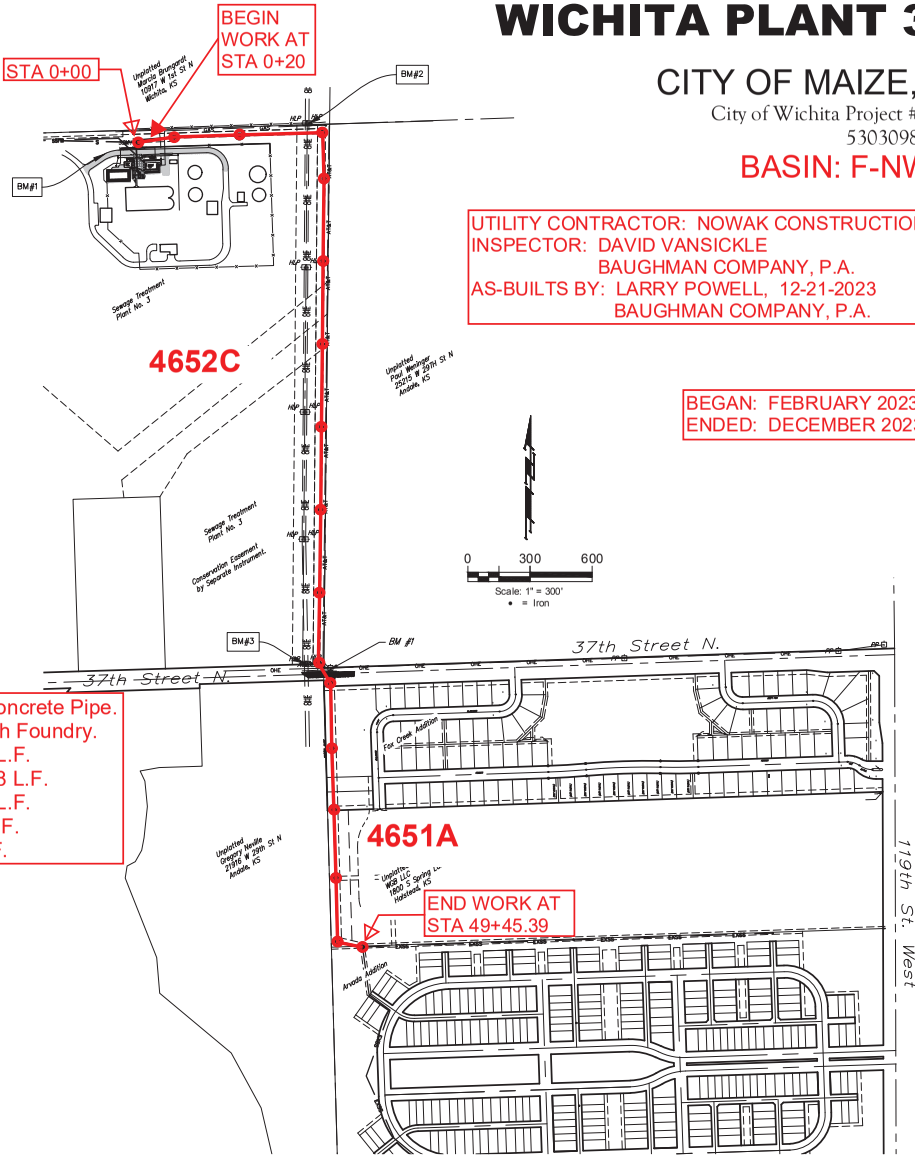
AT&T	1-800-246-6464
Black Hills Energy	1-800-694-8989
City of Wichita Water & Sewer	1-316-219-8921
City of Wichita Stormwater	1-316-268-4090
City of Wichita Traffic	1-316-268-4034
Cox Communications	1-888-249-1530
Kansas Gas Service	1-888-482-4950
Westar Energy	1-800-544-4857

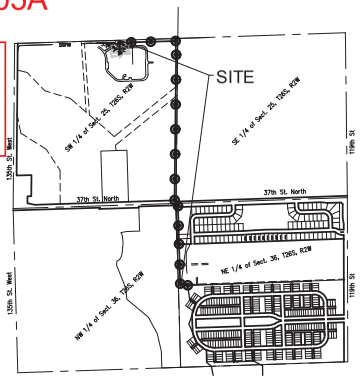
3. Utility service lines, poles, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their 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 and 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 will require additional archaeological investigations unless buried in a previously approved borrow location.
5. Trees and shrubs in the work area which are in direct conflict with proposed new construction shall be removed by the Contractor ONLY with the Developer or Baughman Company approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage. If trimming is necessary, a chainsaw shall be used. Breaking limbs with equipment will not be allowed. An on-site pre-construction meeting will occur prior to any construction to discuss tree removal, tree protection, and tree trimming.
6. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.
7. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
8. If traffic will be impacted by construction, a traffic control plan must be submitted and approved by the Maize Public Works Director, Nick Vestering at nvestering@maizeks.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, traffic control, and signage shall be the Contractors responsibility and subsidiary to the bid item for "Site Clearing and Restoration."
9. All elevations shown are NAVD 88.
10. All disturbed areas shall be limited to within the utility and temporary construction easements. All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
11. All stubs and capped pipes shall be located with green plastic tape in the same manner as risers.
12. Contractor shall limit the extent of trench open overnight and weekend to less than 50 feet.
13. Contractor shall provide positive drainage away from all manhole covers.
14. The Contractor shall prevent any construction debris from entering the existing sanitary sewer during construction.
15. The Contractor shall prevent from damage and support existing utilities through construction as approved by the utility owner and the Engineer at the contractors expense.
16. All excess excavation shall remain on-site and shall be stockpiled or spread at a location determined by the Engineer.
17. Contractor shall grade around exposed manholes at a 1:1 slope. Manholes set lower than existing grade shall have a 9" berm constructed around manhole to prevent infiltration into sanitary sewer system. Cost of dirt, labor, equipment, etc. to be incidental to cost of manhole.
18. Manholes greater than 12' deep or in groundwater shall require joint wraps. Costs for joint wraps shall be subsidiary to the manhole bid items.
19. Manholes that have pipe(s) with diameter of 15" or greater shall be lined per City Specifications and subsidiary to the manhole bid items.
20. All areas disturbed during construction and not within the Conservation easement at Sewage Treatment Plan No. 3 shall be seeded, mulched, and fertilized as follows (Permanent Seeding)

    Seed: Kansas Premium Fescue Blend:8 lbs/1000 sq. ft.
    Mulch: Prairie Hay: 2 tons/acre
    Fertilizer: 12-24-12: 850 lbs./acre

    All costs associated with seeding, mulching, and fertilizing shall be included in bid term "Seeding". All seeding operations shall conform to City of Wichita Standard Specifications.

    An additional bid item for "Seeding, Temporary" has been included and may be used at the discretion of the Design Engineer. Temporary seed shall be Annual Rye at of 5 Lbs./1000 Sq. Ft. unless otherwise noted and shall be planted when permanent seed or sod cannot be used due to seasonal limitations.
21. A Conservation Easement is located in the Southeast corner of Sewage Treatment Plant No. 3, between stations 19+68 to 34+88. Within the Easement, the disturbed area will be established per the requirements in Section "V", Performance Standards section of the Conservation Easement, See Conservation Easement for details.
22. The Contractor shall not begin work on the project until the Project Inspector is assigned and on site. Any work completed without inspection will be required to be uncovered for inspection at the Contractor's expense.
23. Existing 37th street Gravel Road shall be reconstructed to to existing conditions. Cost to be subsidiary to the Site Clearing and Restoration. Construction within the West half mile of 37th Street North Right of Way will require a "Utility Permit Agreement" to be on file with the County Engineer with applicable bonds to be provided, prior to construction in the Right of Way.
24. Contractor shall submit a dewatering plan to the City of Maize and the Field Engineer prior to the start of construction. The plan should include information on proposed routing of water being pumped away from trenches. The contractor will be responsible for obtaining all necessary permits for dewatering.
25. All disturbed areas shall conform to the rules and requirements of the KDHE NOI construction permit KS# S-AR58-0074 / Fed # KSR120768 issued August 19, 2022. Limit of construction shall be within the corresponding Utility, Sanitary Sewer and Temporary Construction Easements, along with not exceeded 20' outside the sewer alignment inside the 37th Street ROW. Contractor to coordinate with the engineer for any disturbance outside these confines, prior to the disturbance.





VICINITY MAP

SS Manhole Structures: Wichita Concrete Pipe.
SS Manhole Lids / Frames: Neenah Foundry.
21" Pipe: Diamond Plastics = 882 L.F.
18" Pipe: Diamond Plastics = 3,948 L.F.
12" Pipe: Diamond Plastics = 126 L.F.
10" Pipe: Diamond Plastics = 14 L.F.
8" Pipe: Diamond Plastics = 28 L.F.

BENCHMARKS:

BM #1:
Mag Nail at edge of road for
North Entrance into WWT Plant 3.
Elev. = 1361.65 ~~NGVD88~~ NAVD88

BM #2:
RR Spike in East ~~Transmittion~~ Transmission
Power Pole, NE corner of Sewer
Treatment Plant #3 Add.
Elev. = ~~1357.64 NGVD88~~ 1357.84 NAVD88

BM #3:
RR Spike in East ~~Transmittion~~ Transmission
Power Pole, N. of 37th St. N.
SE corner of Sewer Treatment
Plant #3 Add.
Elev. = ~~1360.00 NGVD88~~ 1360.20 NAVD88

SHEET INDEX

Rev. 2-07-2023
Shifted 1st MH from 1+00 to 1+85.
Shifted 1+85 thru 9+00, 5' south.
Reduced 5 lf of 18" and lowered
stationing 5lf shorter.

PATRICK SHAWN BIRD
16976
Feb 7, 2023
KANSAS
PROFESSIONAL ENGINEER

APPROVED AS NOTED
BY MAIZE PUBLIC WORKS ENGINEERING
Engineering _____ 11/04/22

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

BAUGHMAN JOB NUMBER: 21-12-E094

February 7, 2023

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

E:\Projects\MAIZE PLANT 3 Sewer Extension (21-12-E093)\Engineering\MAIZEP3_SS (2-7-23).dwg

BENCHMARKS:

BM #1:
Mag Nail at edge of road for North Entrance into WWT Plant 3.
Elev. = 1361.65 NGVD88

BM #2:
RR Spike in East Transmittion Power Pole, NE corner of Sewer Treatment Plant #3 Add.
Elev. = 1357.64 NGVD88

BM #3:
RR Spike in East Transmittion Power Pole, N. of 37th St. N, SE corner of Sewer Treatment Plant #3 Add.
Elev. = 1360.00 NGVD88

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 and Restoration".

Remove excess Excavation as necessary. Temporary and permanent seed disturbed areas.

Spray-On Epoxy used to Line SS Manholes.

Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron

COW I.D.# 4652-007

Sta. 0+00.00, Begin SS Line 1
Proposed new manhole by others.
Top Elev. = 1,362.00
N. = 1,711,415.78
E = 1,603,329.29

Sta. 0+20.00, SS Line 1
Const. Connect to 21" Stub, by others. Begin 21" SS Line 1
Top Elev. = 1,335.11
N. = 1,711,417.33
E = 1,603,349.23

Contractor to minimize Tree Clearing. Trim and branches as required for construction and remove debris. Subsidiary to Site Clearing and Restoration.

Unplatted Marcia Brungardt 10917 W 1st St N Wichita, KS

COW I.D.# 4652-008

Sta. 1+85.00, SS Line 1
Const. Std. Lined Manhole (6')
Top Elev. = ~~1,365.05~~ 1,364.93
N. = 1,711,430.10
E = 1,603,513.73

COW I.D.# 4652-009

Sta. 5+00.00, SS Line 1
Const. Std. Lined Manhole (6' Dia.)
Top Elev. = ~~1,367.26~~ 1,367.21
N. = 1,711,439.85
E = 1,603,828.58

COW I.D.# 4652-010

Sta. 9+00.00, SS Line 1
Const. Std. Lined Manhole (5' Dia.) w/ 18" Stub (N).
Rim Elev. = ~~1,356.33~~ 1,356.42
Matchpoint.
N. = 1,711,452.24
E = 1,604,228.39

CAUTION! Ex. KGS Regulator.

8 L.F. 18" Dia. Stub (N)

Unplatted Paul Weninger 10315 W 29TH St N Andale, KS

Rev. 11-30-2022
Moved first 3 manholes and 21" SS line, south 15'.

Rev. 2-07-2023
Moved first 3 manholes 5' south and MH sta. 1+00 to sta.1+85.

CAUTION! Ex. KGS line

CAUTION! Ex. UGE line

CAUTION! Ex. Overhedd Electric lines.

Existing Fence

Existing AC Pvmnt

Existing Structure

Headworks / Maintenance Building

Sewage Treatment Plant No. 3

Contractor to remove existing 14 trees. Install 14 new 2" caliper trees with the same deciduous species as the ones removed. Cost for removal and installation of trees to be Subsidiary to Site Clearing and Restoration.

Planted Week of December 4-8, 2023.

20' Util. Esmt.

25' Prop. Util. Esmt.

20.00' Util. Esmt.

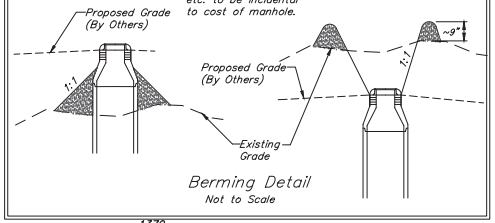
100' KG&E Esmt. Film 76, Pg. 187

37.48' Prop. Sewer Esmt.

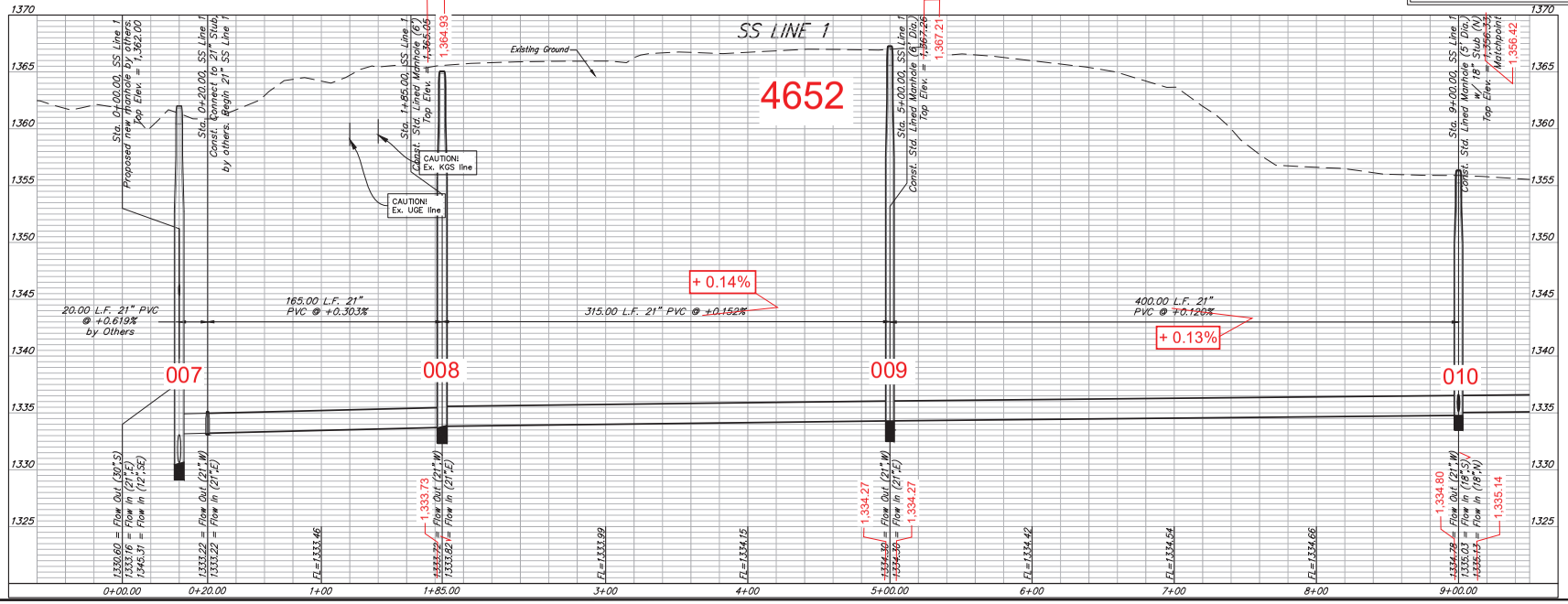
35.19'

007 008 009 010

Contractor to grade at 1:1 slope around manholes. Cost of dirt, labor, equipment, etc. to be incidental to cost of manhole.



Berming Detail
Not to Scale



PATRICK SHAWN BAUGHMAN LICENSED 16976 Feb 7, 2023 KANSAS PROFESSIONAL ENGINEER

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

Maize Plant 3 Sanitary Sewer Extension Project

LINE 1
Sta 0+00 to 9+01
SANITARY SEWER IMPROVEMENTS

PROJECT NUMBER: 21-12-E093
DESIGN: PSB DRAWN: PDM
DATE: Febuary 07, 2023
SHEET 2 OF 14

File: E:\Projects\MAIZE PLANT 3 Sewer Extension (21-12-E093)\Engineering\MAIZEP3_SS (2-7-23).dwg

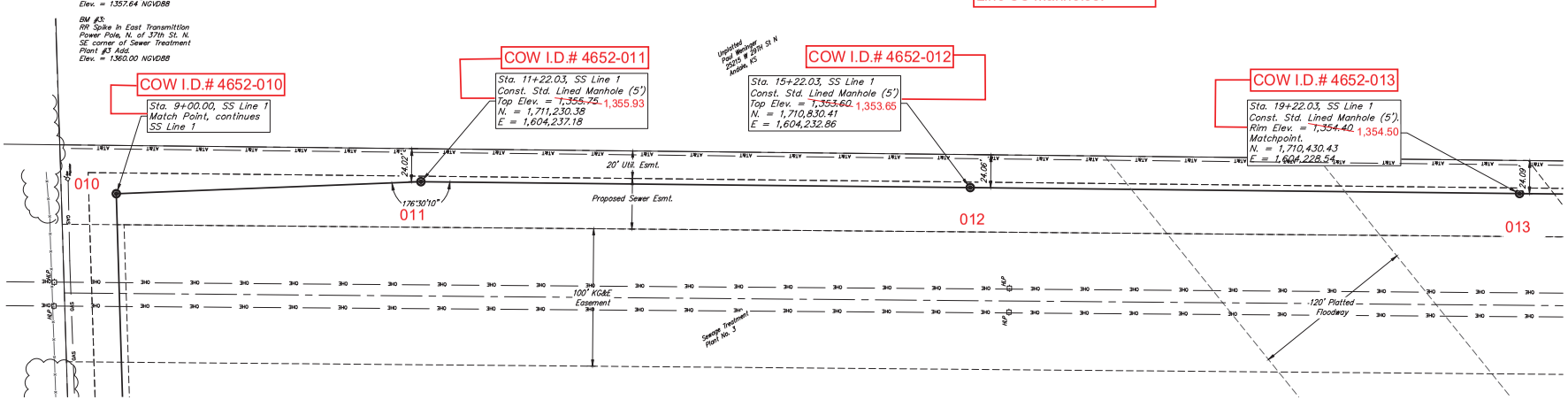
BENCHMARKS:

BM #1:
Mag Nail at edge of road for North Entrance into WWT Plant 3.
Elev. = 1361.65 NGVD88

BM #2:
RR Spike in East Transmittion Power Pole, NE corner of Sewer Treatment Plant #3 Add.
Elev. = 1357.64 NGVD88

BM #3:
RR Spike in East Transmittion Power Pole, N. of 37th St. N. SE corner of Sewer Treatment Plant #3 Add.
Elev. = 1360.00 NGVD88

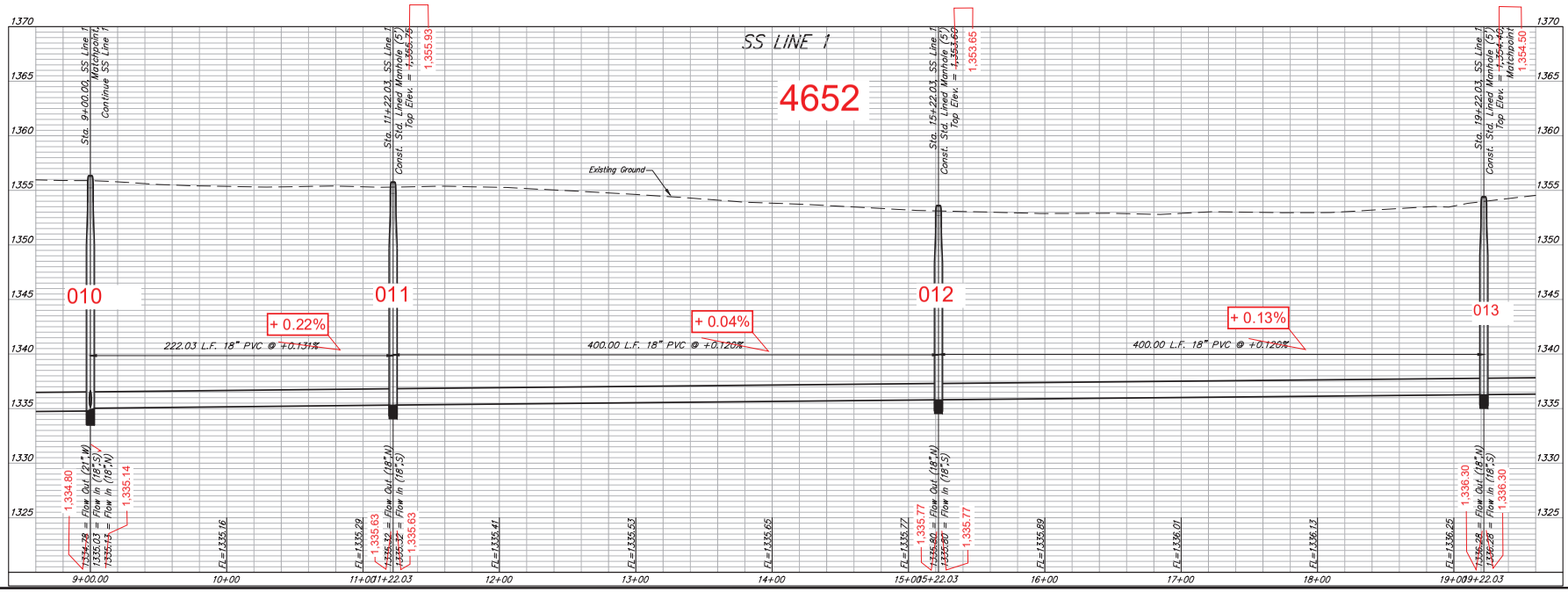
Spray-On Epoxy used to Line SS Manholes.



0 40 80
Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron

Rev. 2-07-2023
With 0+00 to 9+00 shift, all reduces subsequent Station by 5ft.

Rev. 11-30-2022
Moved first 3 manholes and 21" SS line, south 15'.



PATRICK SHAWN BAUGHMAN LICENSED 16976 Feb 7, 2023 KANSAS PROFESSIONAL ENGINEER

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

Maize Plant 3 Sanitary Sewer Extension Project

LINE 1
Sta 9+01 to 19+43
SANITARY SEWER IMPROVEMENTS

PROJECT NUMBER: 21-12-E093
DESIGN: PAB DRAWN: PDM
DATE: Febuary 07, 2023
SHEET 3 OF 14

File: E:\Projects\MAIZE PLANT 3 Sewer Extension (21-12-E093)\Engineering\MAIZEP3_SS (2-7-23).dwg

BENCHMARKS:

BM #1:
Mag Nail at edge of road for North Entrance into WWT Plant 3.
Elev. = 1361.65 NGVD88

BM #2:
RR Spike in East Transmittion Power Pole, NE corner of Sewer Treatment Plant #3 Add.
Elev. = 1357.64 NGVD88

BM #3:
RR Spike in East Transmittion Power Pole, N. of 37th St. N. SE corner of Sewer Treatment Plant #3 Add.
Elev. = 1360.00 NGVD88

Spray-On Epoxy used to Line SS Manholes.

Unplatted
Paul A. Wenger
2525 S. 39th St N
Maize, KS

COW I.D.# 4652-013

Sta. 19+22.03, SS Line 1
Match Point, continues SS Line 1

COW I.D.# 4652-014

Sta. 23+22.03, SS Line 1
Const. Std. Lined Manhole (5')
Top Elev. = ~~1,357.38~~ 1,357.39
N. = 1,710,030.45
E = 1,604,224.22

COW I.D.# 4652-015

Sta. 27+22.03, SS Line 1
Const. Std. Lined Manhole (5')
Top Elev. = ~~1,358.50~~ 1,358.54
N. = 1,709,630.48
E = 1,604,219.90

Sta. 30+00, SS Line 1
Matchpoint
N = 1,709,352.52
E = 1,604,216.90

Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron

24.09'
20' Util. Esmt.
34.86' Proposed Sewer Esmt.
24.16'
013
014
015
Conservation Easement by Separate Instrument.
100' KG&E Easement
Sewage Treatment Plant No. 3
Platted Roadway

Conservation Easement by Separate Instrument:
The noted area is designated a Eastern Spotted Skunk Critical Habitat Restoration Site. All Construction of the sanitary sewer, between station 19+68 to 34+88 shall restore the disturbed area per the requirements established in Section "V", Performance Standards section of the Conservation Easement, See Conservation Easement for details.

Rev. 2-07-2023
With 0+00 to 9+00 shift, all reduces subsequent Station by 5ft..

Rev. 11-30-2022
Moved first 3 manholes and 21" SS line, south 15'.

SS LINE 1

4652

Sta. 19+22.03, SS Line 1 Matchpoint, Continue SS Line 1
Sta. 23+22.03, SS Line 1 Const. Std. Lined Manhole (5') Top Elev. = 1,357.38 1,357.39
Sta. 27+22.03, SS Line 1 Const. Std. Lined Manhole (5') Top Elev. = 1,358.50 1,358.54
Sta. 30+00, SS Line 1 Matchpoint

Existing Ground

+ 0.11%
400.00 L.F. 18" PVC @ +0.120%
+ 0.12%
400.00 L.F. 18" PVC @ +0.120%
+ 0.18%
272.96 L.F. 18" PVC @ +0.120%

013 Flow Out (18"-N) = 1,336.30
013 Flow In (18"-S) = 1,336.30
014 Flow Out (18"-N) = 1,336.74
014 Flow In (18"-S) = 1,336.74
015 Flow Out (18"-N) = 1,337.21
015 Flow In (18"-S) = 1,337.21

1370 1365 1360 1355 1350 1345 1340 1335 1330 1325

19+22.03 20+00 21+00 22+00 23+00 23+22.03 24+00 25+00 26+00 27+00 27+22.03 28+00 29+00 30+00

PATRICK SHAWN BAKER
LICENSED
16976
Feb 7, 2023
KANSAS
PROFESSIONAL ENGINEER

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

Maize Plant 3 Sanitary Sewer Extension Project

LINE 1
Sta 19+43 to 30+00
SANITARY SEWER IMPROVEMENTS

PROJECT NUMBER: 21-12-E093
DESIGN: PSB DRAWN: PDM
DATE: Febuary 07, 2023
SHEET 4 OF 14

File: E:\Projects\MAIZE PLANT 3 Sewer Extension (21-12-E093)\Engineering\MAIZEP3_SS (2-7-23).dwg

BENCHMARKS:

BM #1:
Mag Nail at edge of road for North Entrance into WWT Plant 3.
Elev. = 1361.65 NGVD88

BM #2:
RR Spike in East Transmittion Power Pole, NE corner of Sewer Treatment Plant #3 Add.
Elev. = 1357.64 NGVD88

BM #3:
RR Spike in East Transmittion Power Pole, N. of 37th St. N, SE corner of Sewer Treatment Plant #3 Add.
Elev. = 1360.00 NGVD88

Existing 37th street Gravel Road shall be reconstructed to to existing conditions. Cost to be subsidiary to the Site Clearing and Restoration. Construction within the West half mile of 37th Street North Right of Way will require a "Utility Permit Agreement to be on file with the County Engineer with applicable bonds to be provided, prior to construction in the Right of Way.

All trench and manhole excavation areas from Sta. 34+77 to Sta. 35+78, Line 1 shall be backfilled with sand. The sand backfill shall be water-jetted and vibrated during backfilling. All costs shall be paid for as L.F. "Fill, Sand (Flushed & Vibrated)".

Section 25 - T26S - R2W
South 1/4 Corner,
was Reset.

Pipe Stub 8" Dia. (E), Not Installed on this project. See Note 1.

Sta. 30+00, SS Line 1
Matchpoint
N = 1,709,352.52
E = 1,604,216.90

COW I.D.# 4652-016
Sta. 31+22.03, SS Line 1
Const. Std. Lined Manhole (5')
Top Elev. = ~~1,358.40~~ 1,358.38
N. = 1,709,230.50
E = 1,604,215.58

South Center Section
Corner Pin to be reset.
Coordinate with Baughman to reestablish Pin.

CAUTION!
OHE Crossing.

CAUTION!
AT&T Ped & underground line.

Temporary Construction Easement
Doc.#/Fim-Pg: 30199213

Sta. 35+73.48, SS Line 1
Const. Std. Outside Drop Lined Manhole (5') w/ Pipe Stub, 8" (E), see Note 1
Top Elev. = ~~1,360.50~~ 1,360.49
N. = 1,708,793.38
E = 1,604,266.82

COW I.D.# 4651-040

COW I.D.# 4651-041
Sta. 38+88.46, SS Line 1
Const. Std. Lined Manhole (5')
Matchpoint
Top Elev. = ~~1,361.00~~ 1,360.97
N. = 1,708,478.53
E = 1,604,275.70

Fox Creek Addition

Unplatted
Paul Wagner
12615 W 39TH ST N
Andale, KS

Unplatted
Gregory Heckle
12786 W 39th St N
Andale, KS

20' Util. Esmt.
32.42' Proposed Sewer Esmt.
50' Util. & Drng. Esmt.
50' Util. & Drng. Esmt.

016
017
040
041

Conservation Easement by Separate Instrument.
Sewer Treatment Plant No. 3
100' KG&E Easement

Sta. 34+61.06, SS Line 1
Const. Std. Lined Manhole (5')
Top Elev. = ~~1,359.45~~ 1,359.52
N. = 1,708,891.49
E = 1,604,211.92

COW I.D.# 4652-017

Sta. 35+08 to 35+48, Install 40lf of sand fill, flush & vibrate to 1357.0, per City of Wichita specifications.

Contractor to minimize Tree Clearing. Trim and branches as required for construction and remove debris. Subsidiary to Site Clearing and Restoration.

NOTE 1: Standard Outside Drop Manhole
Contractor to set outside drop bottom pipe, Concrete support, riser pipe and riser pipe restraints per SS-101 details. Install 8 vertical feet of Riser Pipe to elevation 1347.42 and plug. Future contractor will core upper pipe stub and complete outside drop.

Rev. 2-07-2023
With 0+00 to 9+00 shift, all reduces subsequent Station by 5ft.

Rev. 11-30-2022
Moved first 3 manholes and 21" SS line, south 15'.

Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron

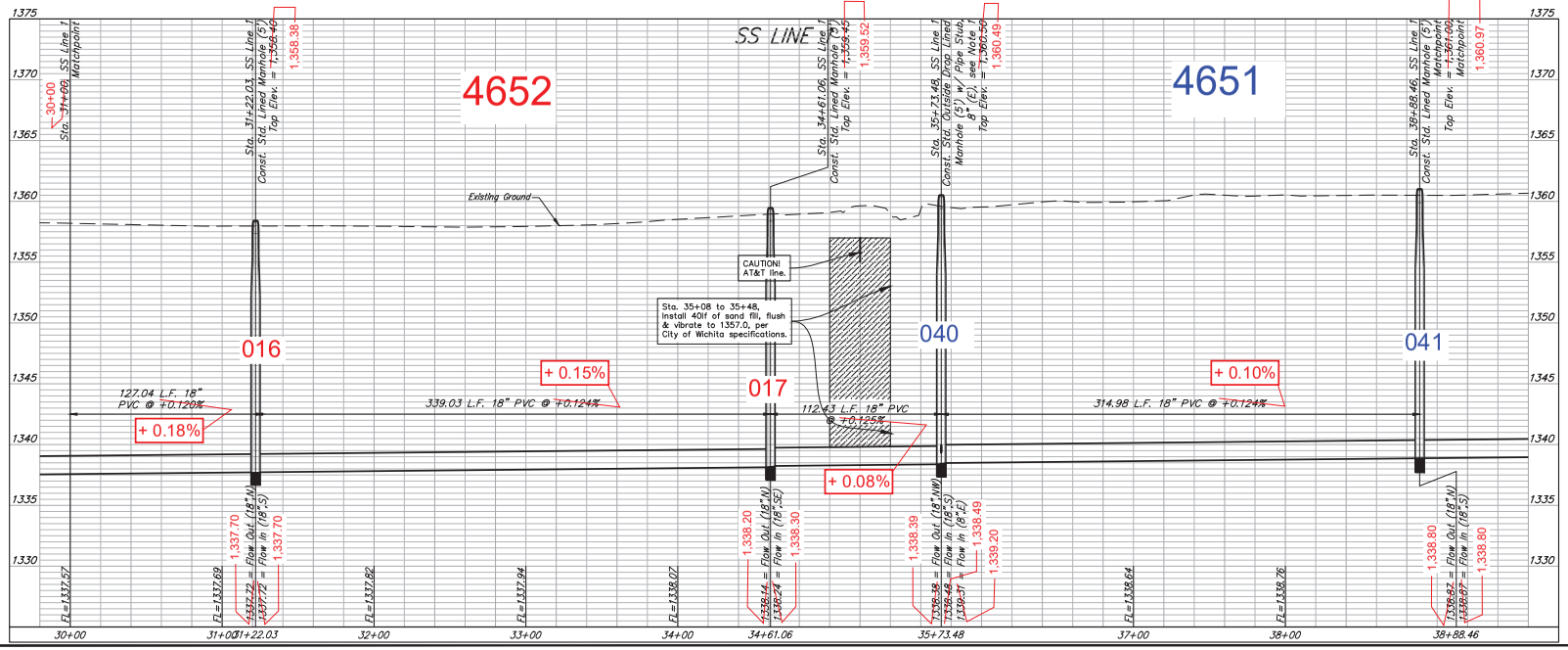
Conservation Easement by Separate Instrument:
The noted area is designated a Eastern Spotted Skunk Critical Habitat Restoration Site. All Construction of the sanitary sewer, between station 19+68 to 34+88 shall restore the disturbed area per the requirements established in Section "V", Performance Standards section of the Conservation Easement, See Conservation Easement for details.

Spray-On Epoxy used to Line SS Manholes.

Contractor is to regrade existing temporary driveway, reestablish the north road ditch and reseed the disturbed area. Cost shall be subsidiary to site clearing and restoration.

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 and Restoration".

37th Street N



PATRICK SHAWN BAUGHMAN
LICENSED
16976
Feb 7, 2023
KANSAS
PROFESSIONAL ENGINEER

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

Maize Plant 3 Sanitary Sewer Extension Project

LINE 1
Sta 30+00 to 39+15
SANITARY SEWER IMPROVEMENTS

PROJECT NUMBER: 21-12-E093

DESIGN: PSB DRAWN: PDM

DATE: Febuary 07, 2023

SHEET 5 OF 14

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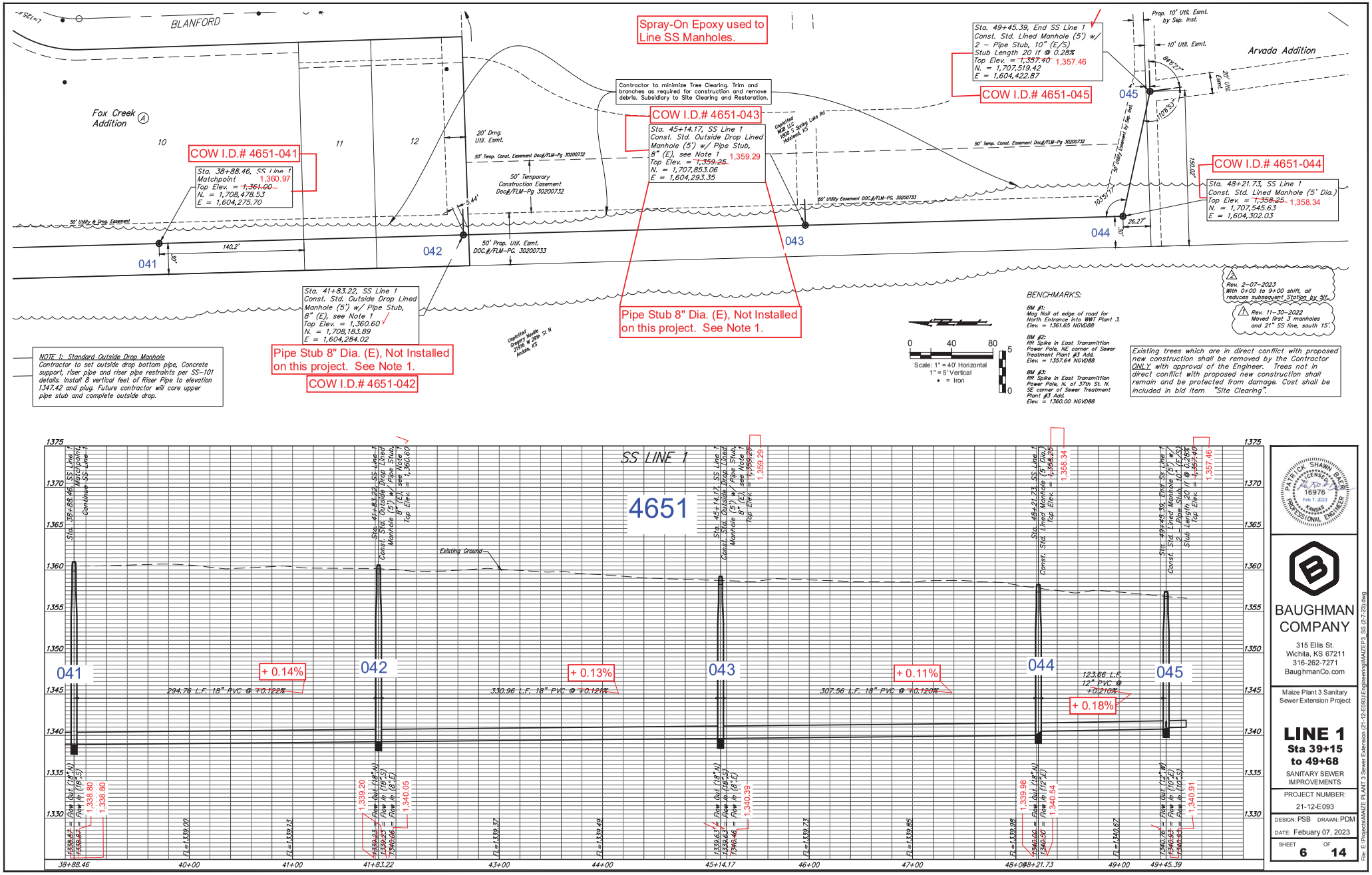


PATRICK SHAWN BAUGHMAN LICENSED PROFESSIONAL ENGINEER 16976 Feb 7, 2023 Kansas
BAUGHMAN COMPANY
315 Ellis St.
Wichita, KS 67211
316-262-7271
BaughmanCo.com

Maize Plant 3 Sanitary Sewer Extension Project

LINE 1
Sta 39+15 to 49+68
SANITARY SEWER IMPROVEMENTS

PROJECT NUMBER: 21-12-E093
DESIGN: PSB DRAWN: PDM
DATE: Febuary 07, 2023
SHEET 6 OF 14

File: E:\Projects\MAIZE PLANT 3 Sewer Extension (21-12-E093)\Engineering\MAIZEP3_SS (2-7-23).dwg

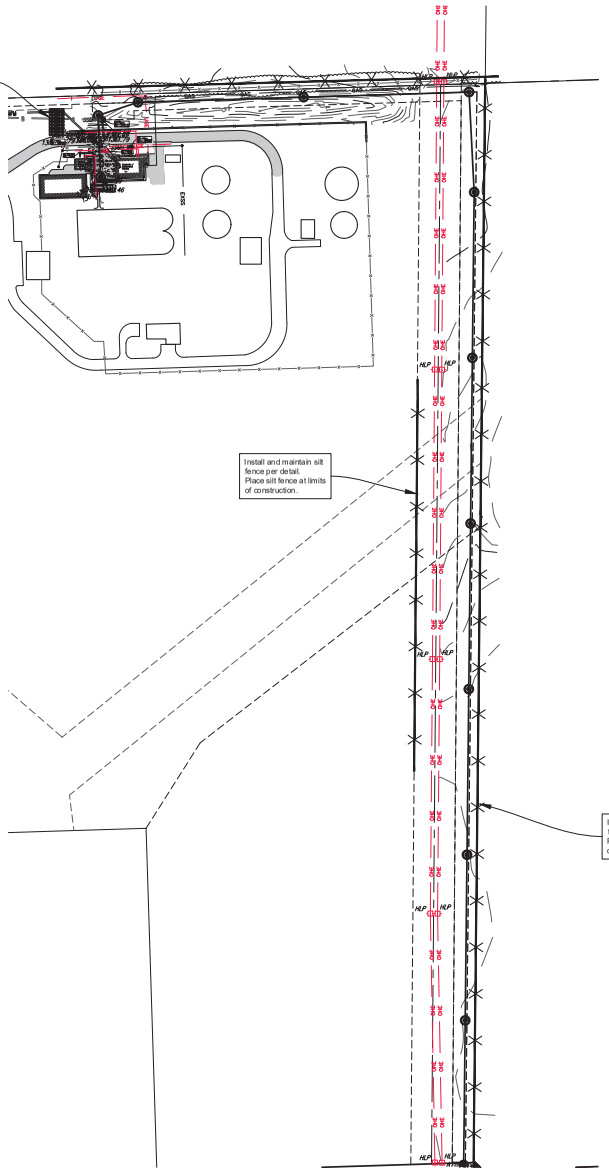
BENCHMARKS:

BM #1:
Mag Nail at edge of road for North Entrance into WWT Plant 3.
Elev. = 1361.65 NGVD88

BM #2:
RR Spike in East Transmittion Power Pole, NE corner of Sewer Treatment Plant #3 Add.
Elev. = 1357.64 NGVD88

BM #3:
RR Spike in East Transmittion Power Pole, N. of 37th St. N. SE corner of Sewer Treatment Plant #3 Add.
Elev. = 1360.00 NGVD88

CONSTRUCTION ENTRANCE INFORMATION:
Contractor Shall Construct and Maintain Approved Entrance as Discussed in the Storm Water Pollution Prevention Plan Guidelines, and Detail, this Sheet. Entrance Shall be a Minimum of 12' Wide by 50' in Length With 2"-3" Dia. Stone at a Depth of 6".



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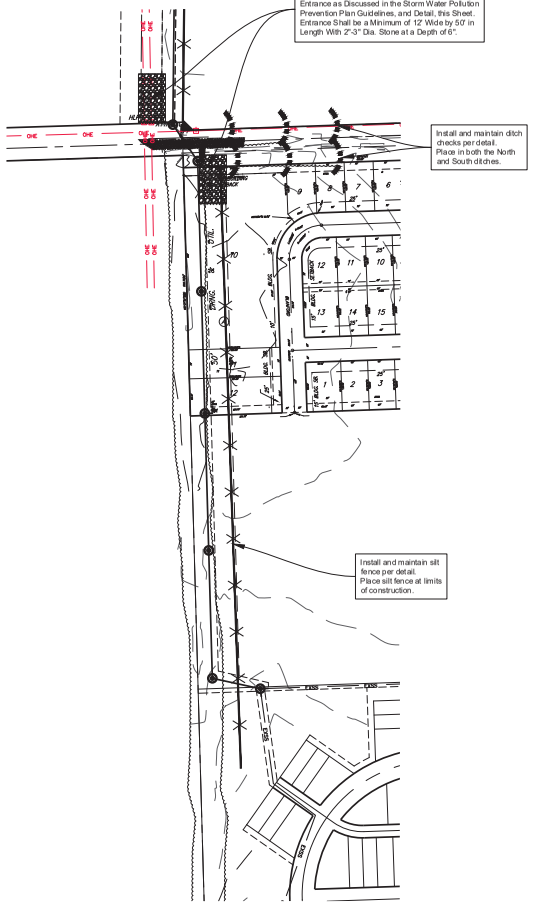


0 100 200
Scale: 1" = 100'
• = Iron

Existing Ground — — —1364— — —

EROSION CONTROL PLAN LEGEND

- DROP INLET PROTECTION
- CURB INLET PROTECTION
- DITCH CHECKS
- SILT FENCING
- STRAW WATTLE DITCH CHECKS
- EROSION CONTROL BERM
- BACK OF CURB PROTECTION
- EROSION CONTROL MAT
- TEMPORARY DITCH

All disturbed areas to be seeded with native per KDHE standards.

EROSION CONTROL MEASURE	INSTALL	MAINTAIN
CONSTRUCTION ENTRANCE (EA)	3	0
SILT FENCE (LF)	5950	0
DITCH CHECKS (EA)	6	0
CURB INLET PROTECTION (EA)	0	0
DROP INLET PROTECTION (EA)	0	0
EROSION CONTROL MAT (SY)	0	0
MULCH WATTLE SED. BARRIER (LF)	0	0
EROSION CONTROL BERM (LF)	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.

PATRICK SHAWN BAUGHMAN LICENSED 16976 11/03/2022 KANSAS PROFESSIONAL ENGINEER

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

Maize Plant 3 Sanitary Sewer Extension Project

EROSION CONTROL

Sanitary Sewer Improvements

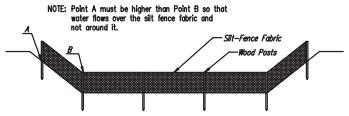
PROJECT NUMBER: 21-12-E093

DESIGN: PSB DRAWN: PDM

DATE: October 24, 2022

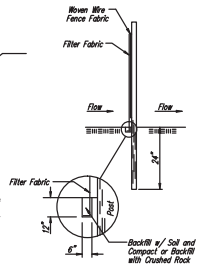
SHEET 7 OF 14

File: E:\Projects\MAIZE PLANT 3 Sewer Extension (21-12-E093)\Engineering\MAIZEP3_SS.dwg



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

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 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 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.

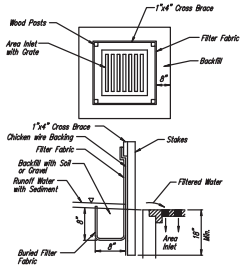
List of common placement/installation mistakes to avoid:

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?



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

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.

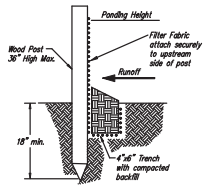
List of common placement/installation mistakes to avoid:

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?



SILT FENCE BARRIERS

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?

CITY OF MAIZE
"Where Community Counts"

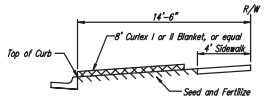
General Notes

No.	Revision/Issue	Date

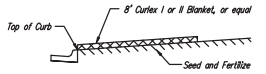
Firm Name and Address
CITY OF MAIZE
10100 GRADY AVE.
MAIZE,KS. 67101–0245

Project Name and Address
SILT FENCE DITCH CHECK AND BARRIER DETAILS

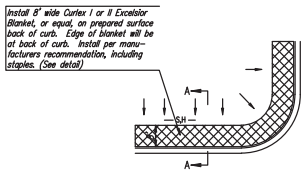
Project	Sheet
Date 10/22/13	8 of 14
Scale	



SECTION B–B



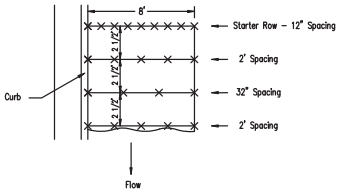
SECTION A–A



NOTES:

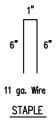
1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE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

BACK OF CURB PROTECTION DETAIL

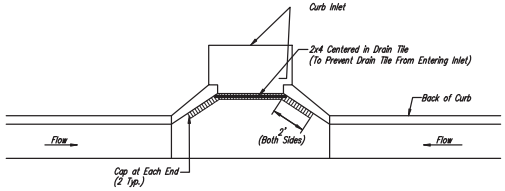


STAPLE PATTERN

NOTES: Use 6" seam overlap

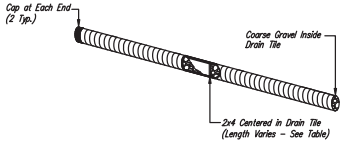


DETAILS FOR CURLEX I OR II BLANKETS

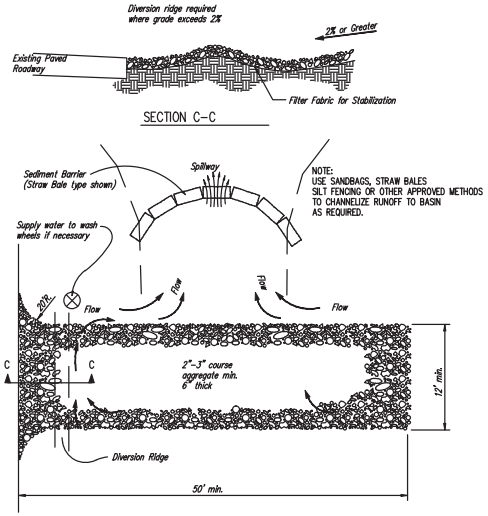


Note:
Place 4" perforated PVC pipe, filled with 1/2"-1" dia. gravel, in front of curb inlet as shown.

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



SECTION C–C

STABILIZED CONSTRUCTION ENTRANCE

NOTES:

1. 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.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. 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.
4. 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.

CITY OF MAIZE
"Where Community Counts"

General Notes

No.	Revision/Issue	Date

Firm Name and Address
CITY OF MAIZE
10100 GRADY AVE.
MAIZE,KS. 67101-0245

Project Name and Address
CURB INLET PROTECTION BMP

Project:
Date: 10/22/13
Scale:
Sheet
9 of 14

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.

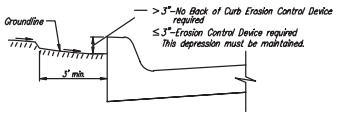
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

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.

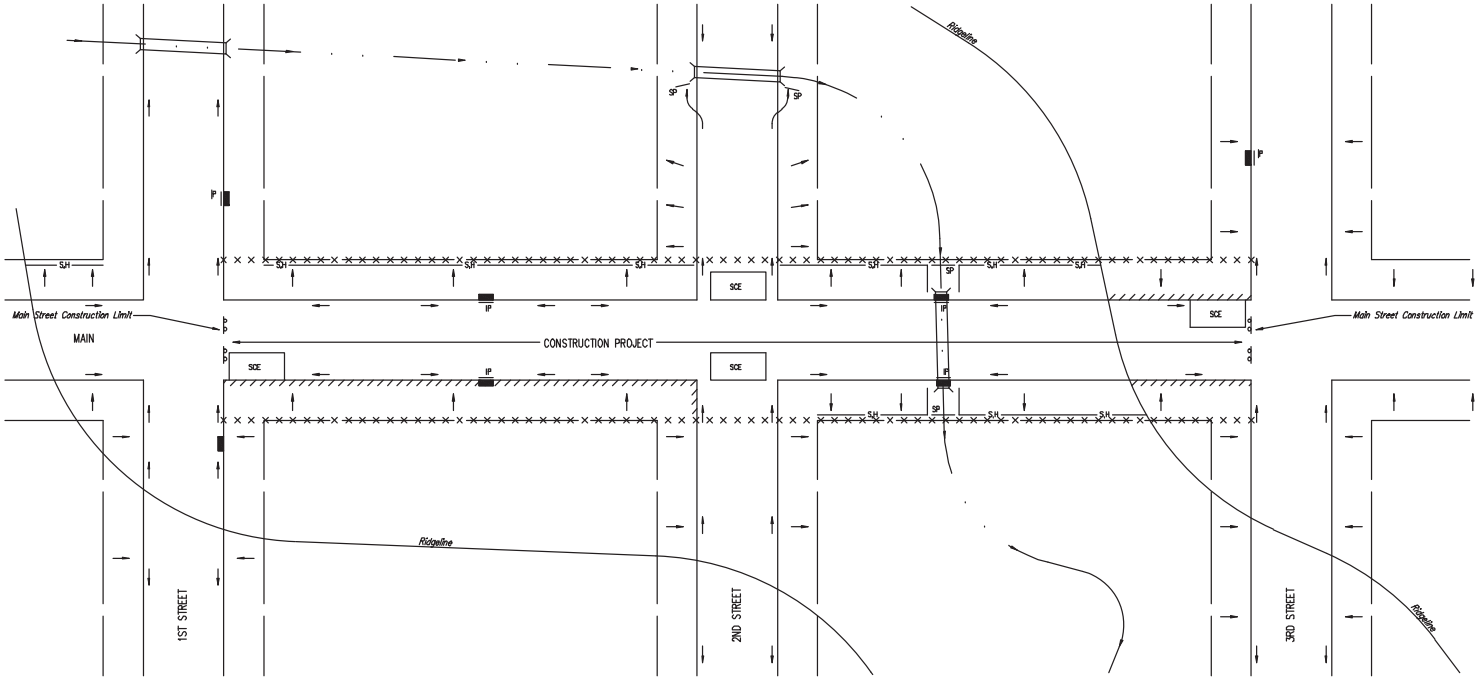
4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.

5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF Artical 10 SECTION 8-1001 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.



CURB BACKFILL DETAIL



LEGEND

- R-O-W LIMITS
- DRAINAGE FLOW PATH
- R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP — INLET PROTECTION
- SJH — SILT FENCE OR HAY BALE BARRIER
- SP — STREAM PROTECTION
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- BACK OF CURB PROTECTION

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 CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL. 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)

CITY OF MAIZE
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General Notes

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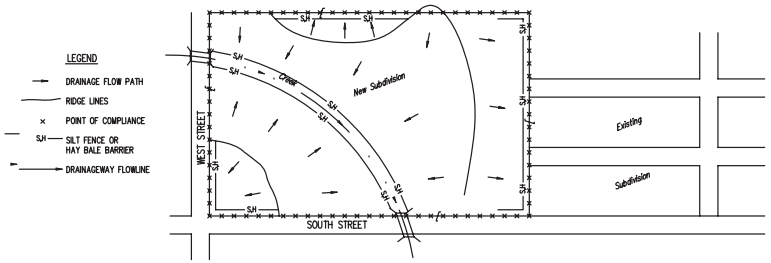
Project Name and Address

STREET IMPROVEMENTS

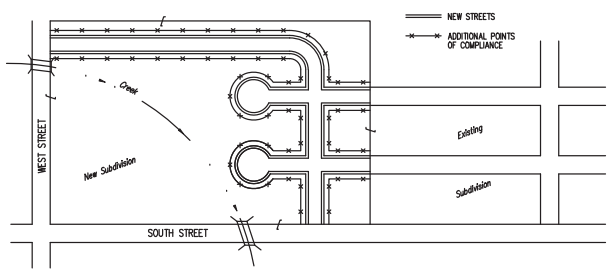
Project:
Date: 10/22/13
Scale:
Sheet: 10 of 14

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



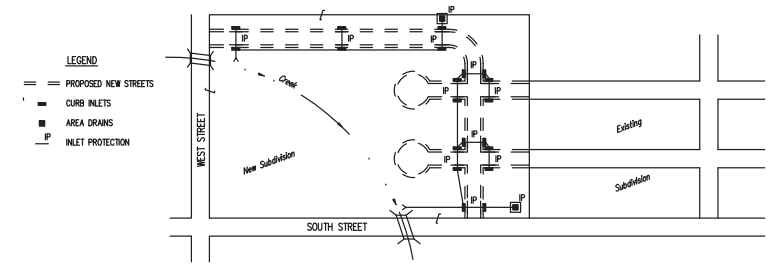
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. 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.

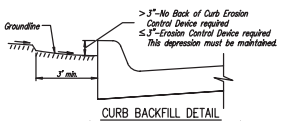
PHASE 2 – INSTALLATION OF STORM SEWER



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 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 ARTICALE 10, SECTION 8-1001 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)

CITY OF MAIZE
"Where Community Counts"

SPECIAL NOTES

Firm Name and Address

CITY OF MAIZE
10100 GRADY AVE.
MAIZE,KS. 67101-0245

Project Name and Address:

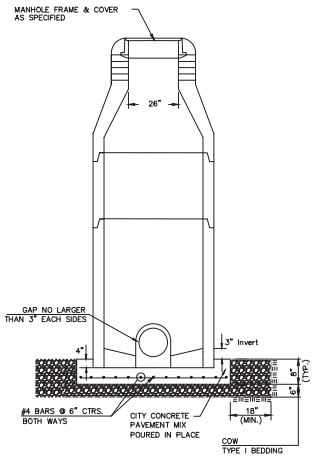
SUBDIVISION DEVELOPMENT PROCESS

Project:

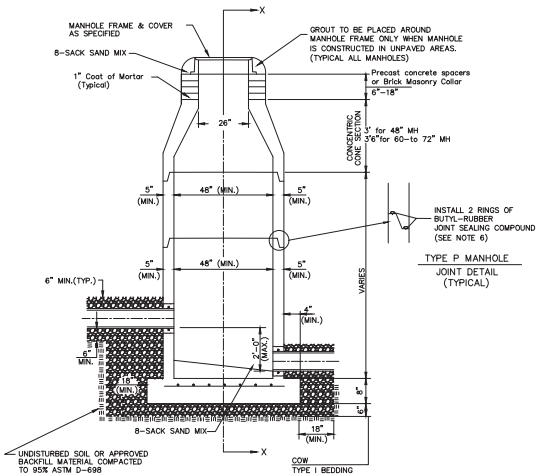
Date: 10/22/13

Scale:

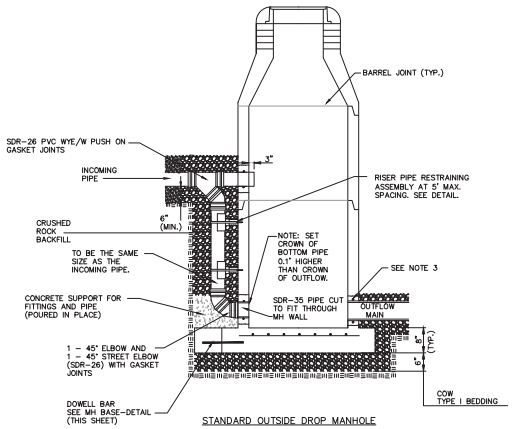
Sheet: 11 of 14



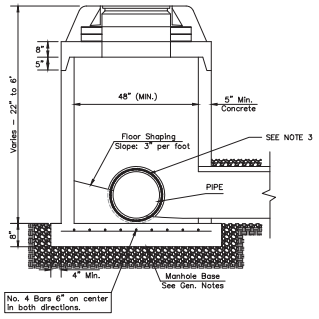
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale

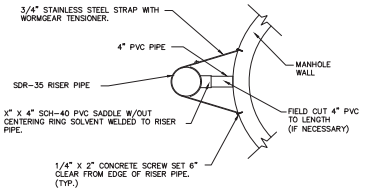


STANDARD OUTSIDE DROP MANHOLE
Not to Scale



SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL



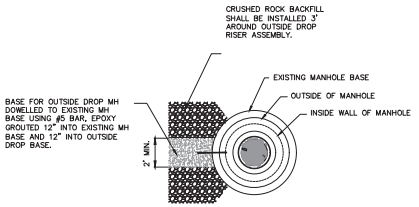
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"

PRECAST MANHOLE GENERAL NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS, AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.



MH BASE DETAIL
Not to Scale

REVISION NOVEMBER 2019	RISER PIPE RETAINING ASSEMBLY REVISED ON MANHOLE DRAWING

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

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

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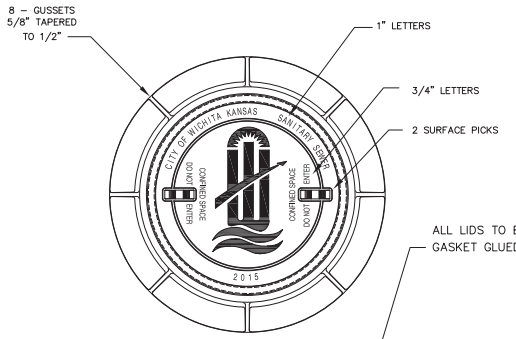
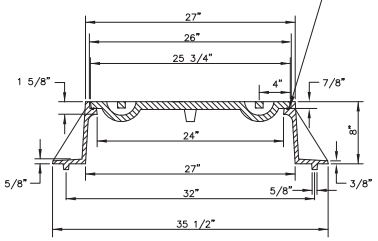
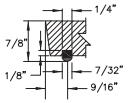




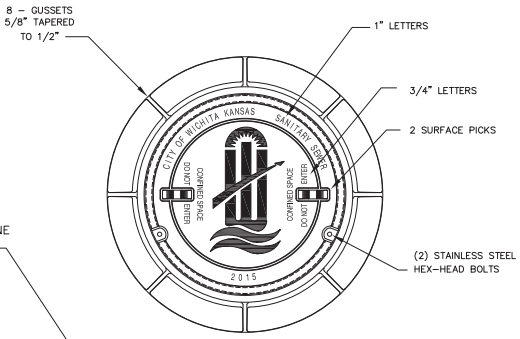
STANDARD MANHOLE FRAME & COVER

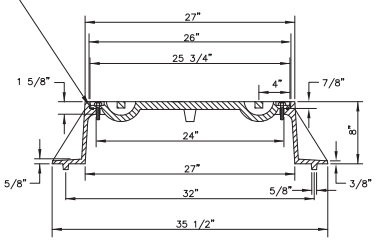
DEETER #1261 OR EJIW #1936–Z1

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



O–RING DETAIL

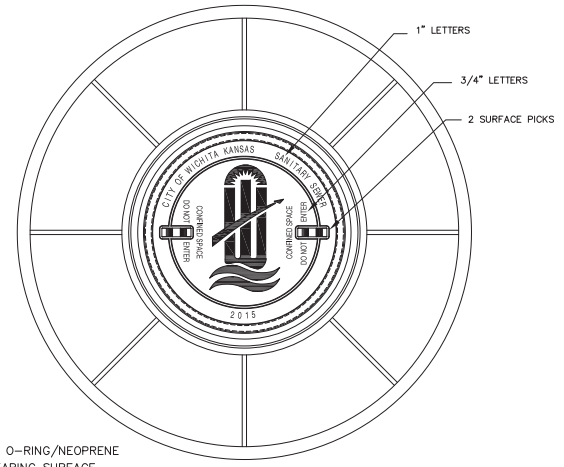


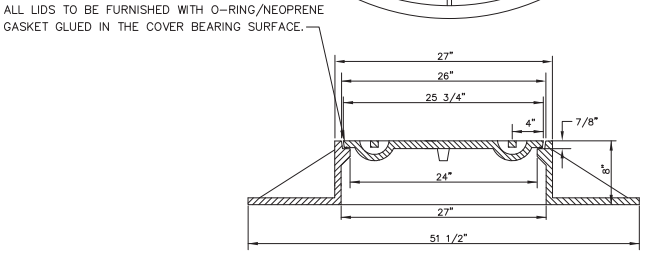


BOLT DOWN MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936–Z1

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.





WIDE FLANGED FRAME & COVER

DEETER #1261A

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A–48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

2. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDARY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON–ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

3. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUM–FERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

4. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1"IIN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER".
THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH CITY OF WICHITA DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

REVISED: MARCH 2016

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

MANHOLE
FRAME AND COVER
(SANITARY SEWER)

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

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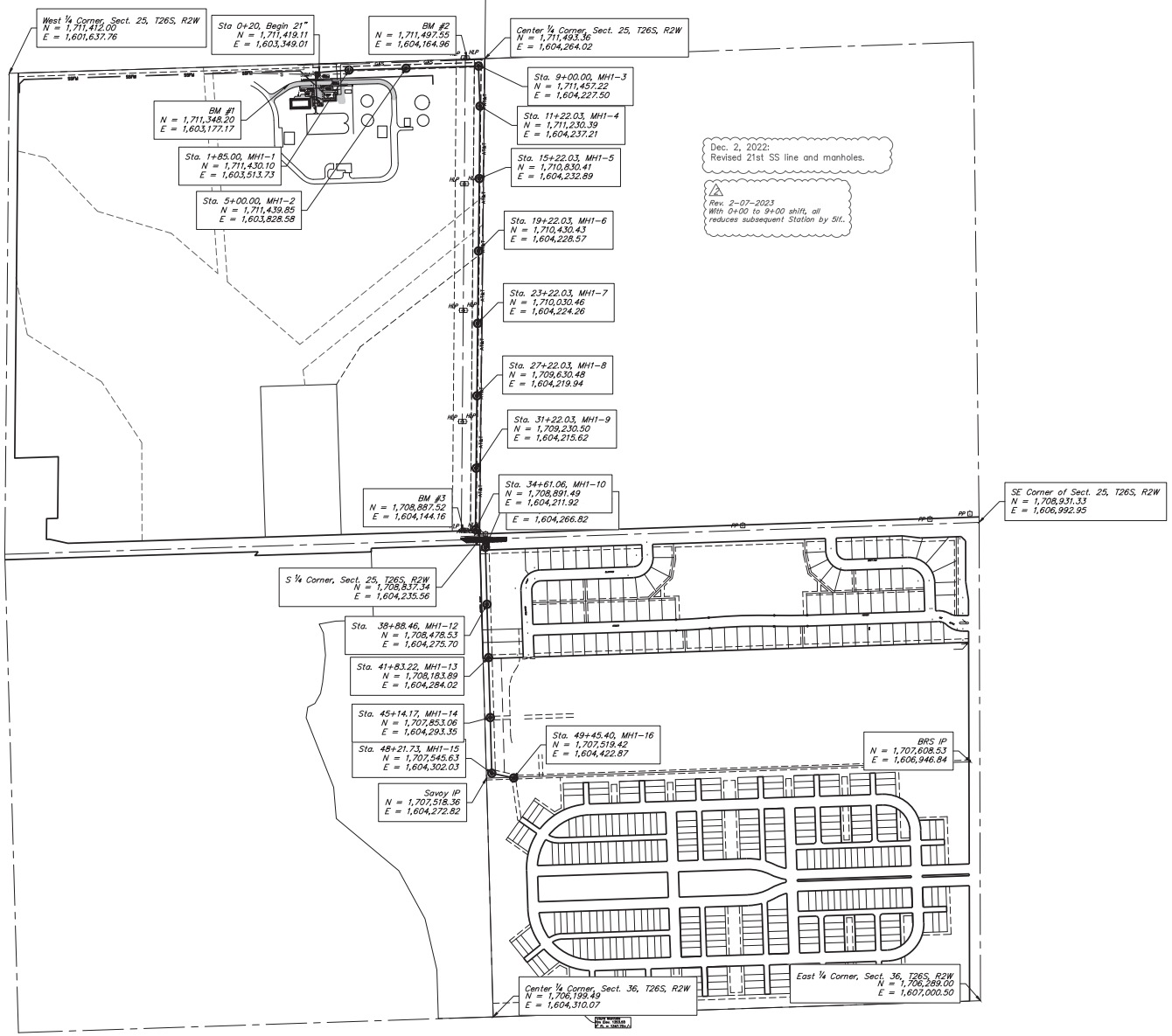
BENCHMARKS:

BM #1:
Mag Nail at edge of road for North Entrance into WWT Plant 3.
Elev. = 1361.65 NGVD88

BM #2:
RR Spike in East Transmittion Power Pole, NE corner of Sewer Treatment Plant #3 Add.
Elev. = 1357.64 NGVD88

BM #3:
RR Spike in East Transmittion Power Pole, N. of 37th St. N. SE corner of Sewer Treatment Plant #3 Add.
Elev. = 1360.00 NGVD88



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

Maize Plant 3 Sanitary Sewer Extension Project

COORDINATES

SANITARY SEWER IMPROVEMENTS

PROJECT NUMBER:
21-12-E093

DESIGN: PSB DRAWN: PDM

DATE: Febuary 07, 2023

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File: E:\Projects\MAIZE PLANT 3 Sewer Extension (21-12-E093)\Engineering\MAIZEP3_SS (2-7-23).dwg