Agenda -Notice of Meeting
Polk City | City Council
****
May 10, 2021 | 6:00 pm
City Hall-Council Chambers | Electronic Meeting
Due to Covid-19 Mayor and Council will meet in person with
Public Meeting participation via phone only
Call in local 515-329-8019 Toll-Free 833-329-8019
Participant Code 593054
Public can also provide comments directly to support@polkcityia.gov
***any comments received before the time of the meeting will be made a part of the public hearing**
Broadcast live and playback will be available at https://www.youtube.com/c/polkcityiagovchannel
****
Jason Morse | Mayor
Mandy Vogel | Pro Tem
City Council Members: Jeff Walters | Dave Dvorak | Ron Anderson | Rob Sarchet

1. **Call to Order**

2. **Roll Call**

3. **Approval of Agenda**

4. **Presentation by Justin Vogel and Cris Christenson, Board Members of Iowa Foundation for Parks and Recreation**

5. **Public Hearing:**
   a. FY 20.21 Budget Amendment Public Hearing
      i. Resolution 2021-35 approving FY 20.21 Budget Amendment
   b. Vacation of Drainage Easement Public Hearing
      i. First Reading of Ordinance 2021-1400 vacating Drainage Easement
         a. Optional waive second and third reading
      ii. Resolution 2021-36 approving Record of Lot Tie Agreements, acceptance of 30' Surface Water Flowage Easement and Plat of Survey for Parcels 2021-5 and 2021-6

6. **Public Comments:** *This is the time and place for comments for any item other than those that are a Public Hearing. If you wish to speak, please contact the City Clerk by 5pm on the date of the meeting by email at jgibbons@polkcityia.gov with your name and address for the record including the phone number you will be calling in with. The Mayor will recognize you for five minutes of comment during which time your line will be unmuted.*

7. **Consent Items**
   a. City Council Meeting Minutes for April 26, 2021
   b. City Council Work Session Meeting Minutes for April 26, 2021
   c. Receive and file Parks Commission Meeting Minutes for May 3, 2021
   d. Claims listing May 10, 2021
   e. RFP for Soil Quality Restoration
   f. Receive and file April 2021 Water Report
   g. Receive and file April 5, 2021 Library Board Meeting Minutes
   h. Receive and file the March and April Library Director Reports
   i. Acknowledge Library Resolution 2021-03L Authorizing appropriate disposal of certain Library furniture
   j. Resolution 2021-37 Acceptance of Public Improvements for Creekview Estates Plat 1

k. Resolution 2021-38 approving Construction Drawings for Ledgestone Ridge Public Improvements
l. Resolution 2021-40 to apply for Wellmark Foundation small grant application in the amount of $25,000
m. Resolution 2021-41 setting public hearing on the vacation of a drainage easement in Big Creek Valley Plat 1
n. Resolution 2021-42 to apply for Prairie Meadows Community Betterment Grant in the amount of $75,000
o. Resolution 2021-43 to apply for the COVID-19 Recreational Trails Program in the amount of $550,000
p. Receive and File the April 2021 Parks & Recreation Department Report
q. Firefighter/Paramedic Job Description

8. Business Items

a. Resolution 2021-39 approving Pay App No 2 for 2021 Street Repairs Project in the amount of $68,914.20
b. Third Reading of Ordinance 2021-1300 rezoning 77.66 acres of Knapp Properties located North and East of 220 E. Vista Lake Avenue from A-1 to R-1, from A-1 to R-1A, and from R-1 to R-1A

9. Reports & Particulars

Mayor Proclamations:

National Emergency Medical Services Week May 16-22
National Public Works May 16-22

Mayor, Council, City Manager, Staff, Boards, and/or Commissions

10. Adjournment

--next meeting date May 24, 2021

City of Polk City, Iowa

City Council Agenda Communication

Date: **May 10, 2021 City Council Meeting**
To: Mayor Jason Morse & City Council
From: Chelsea Huisman, City Manager

Subject: **FY21 Public hearing & Resolution to approve budget amendment #2**

BACKGROUND: On Monday, the City Council will hold a public hearing for a 2nd budget amendment for the Fiscal Year 2021 (July 1, 2020-June 30, 2021). The proposed amendment includes amending for $356,713 in revenue, and $2,405,176 in expenditures. The majority of the additional expenditures are attributed to the DMWW project, UB Assistance program and the purchase of 214 S. 3rd Street. Please note that I did need to adjust a transfer in and out in the amount of $27,552 for overfunding the LMI fund. This transfer in/out is just the movement of money.

In 2018 the City issued General Obligation debt for the DMWW project. The City received the revenue immediately but has still not paid for the full expenses associated with the project. A large part of this amendment appears as though the City is spending much more than it is bringing in from revenue, but most of the amendment is attributed to the DMWW project. The other larger expenses for LMI expenses are utilizing some LMI fund balance the City currently has. The additional expenses without these 3 larger capital expenses will be paid for with fund balance from the general fund. The City plans to utilize some fund balance cash to offset the additional expenses proposed in the amendment. Explanation for each adjustment is as follows:

Revenue:

1. Amend for CARES Act money in the amount of $117,905.
2. Amend for building permit revenue in the additional amount of $55,000. The City has seen an influx of building permits over the last several months.
3. Amend for development fees in the amount of $6,000.
4. Amend for DOT money for the traffic signal at 3rd and Bridge Road in the amount of $154,193.
5. Amend for Derecho revenue in the amount of $105,263. It does appear we will be receiving some additional revenue from FEMA for the Derecho, but this amount of revenue covers our expenses from that event.
6. Amend for transfers in to the Capital Fund for the 2020-2021 Street Project in the amount of $-200,000. We have some fund balance in the capital fund, mainly due to the traffic signal project expenses being paid for, and finally reimbursed. Therefore, instead of using general fund money for that project I recommend we spend some of our fund balance in the capital fund down.
7. Amend for transfer in to the TIF Fund in the amount of $27,552. The LMI fund was overfunded by this amount per our audit ending June 30, 2020.

8. Amend for solid waste revenue in the amount of $90,800, which was under-estimated. This is still the first budget year we have started providing garbage and charging for recycling. Revenue and expenses for the solid waste fund will balance out as we collect only what we pay to the MWA.

Expenses:

1. Amend for the purchase of a van for the Parks and Recreation Department in the amount of $37,000.
2. Amend for health and social services for mosquito control for an additional $2,000 for chemicals.
3. Amend for building permit expenses in the additional amount of $120,000. Because we have seen the influx in revenue, we also have additional expenses for inspection of permits
4. Amend for Engineering in the additional amount of $125,000. This line item was under-budgeted for and we have had some additional engineering expenses this year.
5. Amend for additional expenses for CARES Act funding in the amount of $117,905.
6. Amend for the transfer out of the general fund in the amount of $-200,000 for the 2020-2021 Street project. Again, we will be utilizing some fund balance in the capital fund to pay for this project.
7. Amend for transfers out to the LMI Fund in the amount of $27,552. The LMI fund was overfunded by this amount per out audit ending June 30, 2020.
8. Amend the LMI fund for the purchase of 214 S. 3rd Street in the amount of $200,000.
9. Amend the LMI fund for the UB Assistance program in the amount of $10,000.
10. Amend the capital fund for the last payment of the traffic signal in the amount of $15,180.
11. Amend for Derecho damage in the capital fund in the amount of $105,263.
12. Amend for expenses in the capital fund in the amount of $1,600,000 for the DMWW Booster Station and Feeder project
13. Amend for payment to Creekview Estates for water main extension and looping project in the amount of $154,476.
14. Amend for solid waste expenditures in the additional amount of $90,800, which again was under-estimated.

ALTERNATIVES: Do not approve the budget amendment

FINANCIAL CONSIDERATIONS: The financial considerations for this amendment are additional expenditures in the amount of $2,048,463.

RECOMMENDATION: It is my recommendation that the Council approve the 2nd budget amendment for FY21.

77-723

CITY BUDGET AMENDMENT AND CERTIFICATION RESOLUTION - FY 2021 - AMENDMENT #1

To the Auditor of POLK County, Iowa:

The City Council of Polk City in said County/Counties met on 5/10/2021 ,at the place and hour set in the notice, a copy of which accompanies this certificate and is certified as to publication. Upon taking up the proposed amendment, it was considered and taxpayers were heard for and against the amendment.

The Council, after hearing all taxpayers wishing to be heard and considering the statements made by them, gave final consideration to the proposed amendment(s) to the budget and modifications proposed at the hearing, if any. thereupon, the following resolution was introduced.

RESOLUTION No. 2021-35

A RESOLUTION AMENDING THE CURRENT BUDGET FOR THE FISCAL YEAR ENDING JUNE 3 2021

(AS AMENDED LAST ON 10/26/2020 **.)**

Be it Resolved by the Council of the City of **Polk City**

Section 1. Following notice published 4/23/2021 and the public hearing held, 5/10/2021 the current budget (as previously amended) is amended as set out herein and in the detail by fund type and activity that supports this resolution which was considered at that hearing:

		Total Budget as certified or last amended	Current Amendment	Total Budget after Current Amendment
Revenues & Other Financing Sources				
Taxes Levied on Property	1	2,846,655	0	2,846,655
Less: Uncollected Property Taxes-Levy Year	2	0	0	0
Net Current Property Taxes	**3**	2,846,655	0	2,846,655
Delinquent Property Taxes	4	0	0	0
TIF Revenues	5	335,461	0	335,461
Other City Taxes	6	704,782	117,905	822,687
Licenses & Permits	7	249,925	61,000	310,925
Use of Money and Property	8	215,400	0	215,400
Intergovernmental	9	539,732	0	539,732
Charges for Services	10	3,343,019	90,800	3,433,819
Special Assessments	11	0	0	0
Miscellaneous	12	31,580	0	31,580
Other Financing Sources	13	1,848,324	259,456	2,107,780
Transfers In	14	769,793	-172,448	597,345
Total Revenues and Other Sources	**15**	10,884,671	356,713	11,241,384
Expenditures & Other Financing Uses				
Public Safety	16	2,077,987	245,000	2,322,987
Public Works	17	624,772	0	624,772
Health and Social Services	18	15,000	2,000	17,000
Culture and Recreation	19	810,998	37,000	847,998
Community and Economic Development	20	371,461	210,000	581,461
General Government	21	1,553,659	117,905	1,671,564
Debt Service	22	528,360	0	528,360
Capital Projects	23	3,139,117	1,874,919	5,014,036
Total Government Activities Expenditures	24	9,121,354	2,486,824	11,608,178
Business Type / Enterprises	25	2,316,759	90,800	2,407,559
Total Gov Activities & Business Expenditures	**26**	11,438,113	2,577,624	14,015,737
Transfers Out	27	769,793	-172,448	597,345
Total Expenditures/Transfers Out	**28**	12,207,906	2,405,176	14,613,082
Excess Revenues & Other Sources Over (Under) Expenditures/Transfers Out Fiscal Year	**29**	-1,323,235	-2,048,463	-3,371,698
Beginning Fund Balance July 1	30	8,665,089	0	8,665,089
Ending Fund Balance June 30	**31**	7,341,854	-2,048,463	5,293,391

Passed this _____ day of _____

(Day) *(Month/Year)*

Signature
City Clerk/Finance Officer

Signature
Mayor

EASEMENT DOCUMENT

PREPARED FOR:

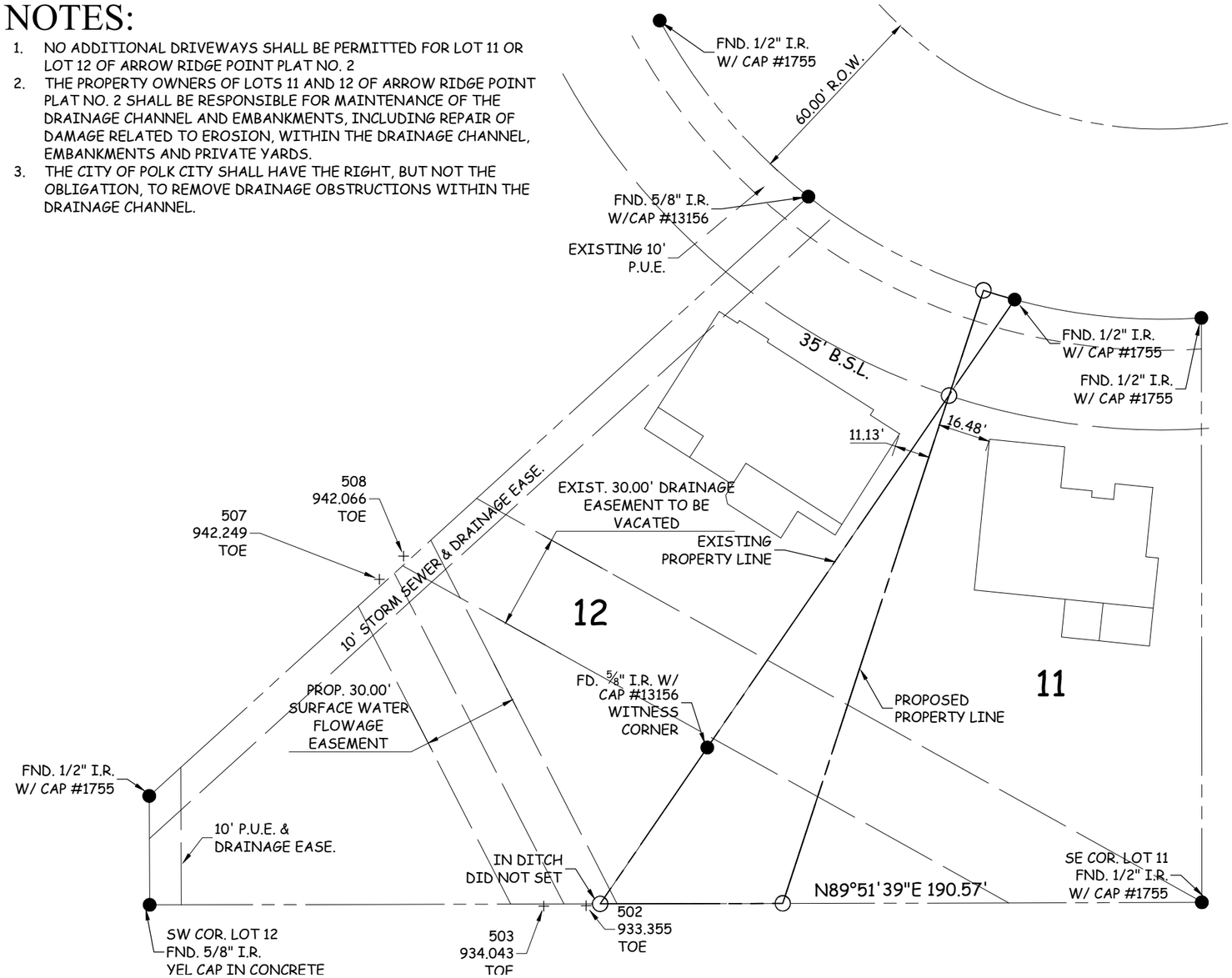
STEVEN BRYANT
1816 W WAHKONSA AVE
POLK CITY, IA 50226

INDEX LEGEND

LOCATION :	LOT 12 ARROW RIDGE POINT PLAT NO. 2
REQUESTOR:	STEVEN BRYANT
PROPRIETOR:	STEVEN & KIM BRYANT WILLIAM & CONNIE SHARP
SURVEYOR:	KEVEN J. CRAWFORD
SURVEYOR COMPANY:	COOPER CRAWFORD & ASSOCIATES, LLC 475 S 50th ST., STE. 800, WDM, IA 50023
RETURN TO :	COOPER CRAWFORD & ASSOCIATES, LLC

NOTES:

1. NO ADDITIONAL DRIVEWAYS SHALL BE PERMITTED FOR LOT 11 OR LOT 12 OF ARROW RIDGE POINT PLAT NO. 2
2. THE PROPERTY OWNERS OF LOTS 11 AND 12 OF ARROW RIDGE POINT PLAT NO. 2 SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE DRAINAGE CHANNEL AND EMBANKMENTS, INCLUDING REPAIR OF DAMAGE RELATED TO EROSION, WITHIN THE DRAINAGE CHANNEL, EMBANKMENTS AND PRIVATE YARDS.
3. THE CITY OF POLK CITY SHALL HAVE THE RIGHT, BUT NOT THE OBLIGATION, TO REMOVE DRAINAGE OBSTRUCTIONS WITHIN THE DRAINAGE CHANNEL.



PROPOSED 30.00' SURFACE WATER FLOWAGE EASEMENT

A 30.00 FEET WIDE DRAINAGE EASEMENT ACROSS A PART OF LOT 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA. SAID 30.00 FEET WIDE EASEMENT BEING 15.00 FEET ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE NORTHWESTERLY CORNER OF LOT 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA; THENCE S47°44'11"W, 177.18 FEET ALONG THE NORTHWESTERLY LINE OF SAID LOT 12, TO THE POINT OF BEGINNING; THENCE S27°09'03"E, 117.63 FEET, TO THE SOUTH LINE OF SAID LOT 12, WHERE SAID CENTERLINE TERMINATES.

EXISTING 30.00' DRAINAGE EASEMENT TO BE VACATED

AN EXISTING 30.00 FEET WIDE DRAINAGE EASEMENT ACROSS A PART OF LOTS 11 & 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA. SAID 30.00 FEET WIDE EASEMENT BEING PARALLEL WITH AND 30.00 FEET SOUTHWESTERLY OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT THE NORTHWESTERLY CORNER OF LOT 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA; THENCE S47°44'11"W, 142.00 FEET ALONG THE NORTHWESTERLY LINE OF SAID LOT 12, TO THE POINT OF BEGINNING; THENCE S60°55'50"E, 262.77 FEET, TO THE SOUTHEAST CORNER OF SAID LOT 11, WHERE SAID LINE TERMINATES.

SAID EXISTING 30.00 FEET WIDE DRAINAGE EASEMENT TO BE VACATED.

LEGEND

——— - - ———	PLAT BOUNDARY
▲	SECTION CORNER
●	FOUND CORNER AS NOTED
○	SET CORNER 5/8" IR W/ YELLOW CAP #13156
I.R.	IRON ROD
G.P.	GAS PIPE
D.	DEEDED DISTANCE
M.	MEASURED DISTANCE
R	PREVIOUSLY RECORDED DISTANCE
P.U.E.	PUBLIC UTILITY EASEMENT

LICENSED PROFESSIONAL LAND SURVEYOR
KEVEN J. CRAWFORD
13156
IOWA

I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

KEVEN J. CRAWFORD, PLS IOWA LICENSE NO. 13156
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2022

PAGES OR SHEETS COVERED BY THIS SEAL:
THIS SHEET ONLY

COOPER CRAWFORD
& ASSOCIATES, L.L.C.
CIVIL ENGINEERS
475 S. 50th Street, Suite 800, West Des Moines, IA 50265
Phone: (515) 224-1344 Fax: (515) 224-1345

0 20 40
SCALE: 1"=40'
DATE: 1-18-2021

JOB NUMBER
CC
2411

ORDINANCE NO. 2021-1400

AN ORDINANCE VACATING DRAINAGE EASEMENT AT LOTS 11 & 12, ARROW RIDGE POINT PLAT NO. 2.

WHEREAS, on the 10 day of May 2021, pursuant to published notice as required by law, the City Council has held a public hearing on a proposal to vacate a drainage easement legally described as follows:

AN EXISTING 30.00 FEET WIDE DRAINAGE EASEMENT ACROSS A PART OF LOTS 11 & 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA. SAID 30.00 FEET WIDE EASEMENT BEING PARALLEL WITH AND 30.00 FEET SOUTHWESTERLY OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT THE NORTHWESTERLY CORNER OF LOT 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA; THENCE S47°44'11"W, 142.00 FEET ALONG THE NORTHWESTERLY LINE OF SAID LOT 12, TO THE POINT OF BEGINNING; THENCE S60°55'50"E, 262.77 FEET, TO THE SOUTHEAST CORNER OF SAID LOT 11, WHERE SAID LINE TERMINATES; and

WHEREAS, the City Council of the City of Polk City, Iowa, has determined that it is in the best interests of the City to vacate said drainage easement.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Polk City, Iowa, as follows:

Section 1. The City of Polk City, Iowa, hereby vacates the following described drainage easement:

AN EXISTING 30.00 FEET WIDE DRAINAGE EASEMENT ACROSS A PART OF LOTS 11 & 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA. SAID 30.00 FEET WIDE EASEMENT BEING PARALLEL WITH AND 30.00 FEET SOUTHWESTERLY OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT THE NORTHWESTERLY CORNER OF LOT 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA; THENCE S47°44'11"W, 142.00 FEET ALONG THE NORTHWESTERLY LINE OF SAID LOT 12, TO THE POINT OF BEGINNING; THENCE S60°55'50"E, 262.77 FEET, TO THE SOUTHEAST CORNER OF SAID LOT 11, WHERE SAID LINE TERMINATES.

Section 2. All ordinances or parts of ordinances in conflict with the provisions of this Ordinance are hereby repealed.

Section 3. This Ordinance shall be in effect upon its passage, approval and publication as provided by law.

PASSED AND APPROVED this _____ day of _____ 2021.

_____
Jason Morse, Mayor

ATTEST:

_____
Jenny Gibbons, City Clerk

First Reading *Roll call vote:* *YES* *NO* *Abstain*	*Second Reading* *Roll call vote:* *YES* *NO* *Abstain*	*Third Reading* *Roll call vote:* *YES* *NO* *Abstain*

PLAT OF SURVEY

Date: April 14, 2021
Project: Bryant Plat of Survey

Prepared by: Kathleen Connor
Project No.: 121.0305.01

GENERAL INFORMATION:

Owner: Steven & Kim Bryant

Location: 1816 W. Wahkonsa Ave.

Zoning: R-1

Area: 4,649 sf – Parcel 2021-5

Area: 179 sf – Parcel 2021-6

PROJECT DESCRIPTION:

Steven and Kim Bryant, Lot 12 of Arrow Ridge Point Plat No 1, and their neighbors, desire to swap some property in order to adjust the property line defining their respective properties. On behalf of the property owners, Cooper-Crawford has submitted a Plat of Survey to subdivide two parcels that will be exchanged, thus defining the new property line. Both lots will continue to the bulk requirements of the R-1 district after the land swap.

Parcel 2021-5 is currently part of Lot 11, but will be transferred from Sharp to Bryant and then tied to the remainder of Lot 12. A Record of Lot Tie will be required permanently tying 2021-5 to Lot 12 of Arrow Ridge Point Plat No 1.

Parcel 2021-6 is currently part of Lot 12, but will be transferred from Bryant to Sharp and then tied to the remainder of Lot 11. A Record of Lot Tie will be required permanently tying 2021-6 to Lot 11 of Arrow Ridge Point Plat No 1.

The existing 30' drainage easement running across Lots 11 and 12, as shown on the recorded final plat, does not properly align with the existing natural drainage way. City staff recommends this existing easement be vacated. A public hearing will be required prior to City Council approval of the easement vacation. The City Attorney has prepared the vacation documents which will need to be approved by City Council and recorded in conjunction with the Plat of Survey.

The developer's engineer has determined the proper location for the Surface Water Flowage Easement, based on the location of the natural drainage way, and has calculated its proper width. The Surface Water Flowage Easement, in the appropriate location, will clarify the property owner sis responsible for maintenance of the embankments. The City Attorney has prepared the easement document which will need to be signed by the Sharps, accepted by the City Council, and recorded in conjunction with the Plat of Survey.

REVIEW COMMENTS:

We have reviewed Submittal #1 of the Plat of Survey and have the following comments to offer:

1. Prior to this item moving forward to City Council approval, the property owners will need to sign the Record of Lot Tie Agreements to be provided by the city.
2. Prior to this item moving forward to City Council approval, the property owners will need to sign the 30' Surface Water Flowage Easement document to be provided by the city.

RECOMMENDATION:

Based on the foregoing review comments being satisfactorily addressed, staff recommends P&Z approval of the Plat of Survey for Parcels 2021-5 and 2021-6, subject to the following:

1. City Council approval of both Record of Lot agreements prior to approval of the Plat of Survey.
2. Council approval of the vacation of the existing Drainage Easement following a public hearing.
3. Council acceptance of the proposed 30' Drainage Easementprior to approval of the Plat of Survey.
4. The applicant shall be responsible for providing recorded copies of the Plat of Survey, Record of Lot Tie Agreement for Parcel-5, Record of Lot Tie Agreement for Parcel-6, Easement Vacation documents, and 30' Drainage Easement to the City Clerk within 60 days of City Council approval.
5. All application and review fees shall be paid in full to the City of Polk City.

PLAT OF SURVEY

PREPARED FOR:

STEVEN BRYANT
1816 W WAHKONSA AVE
POLK CITY, IA 50226

INDEX LEGEND

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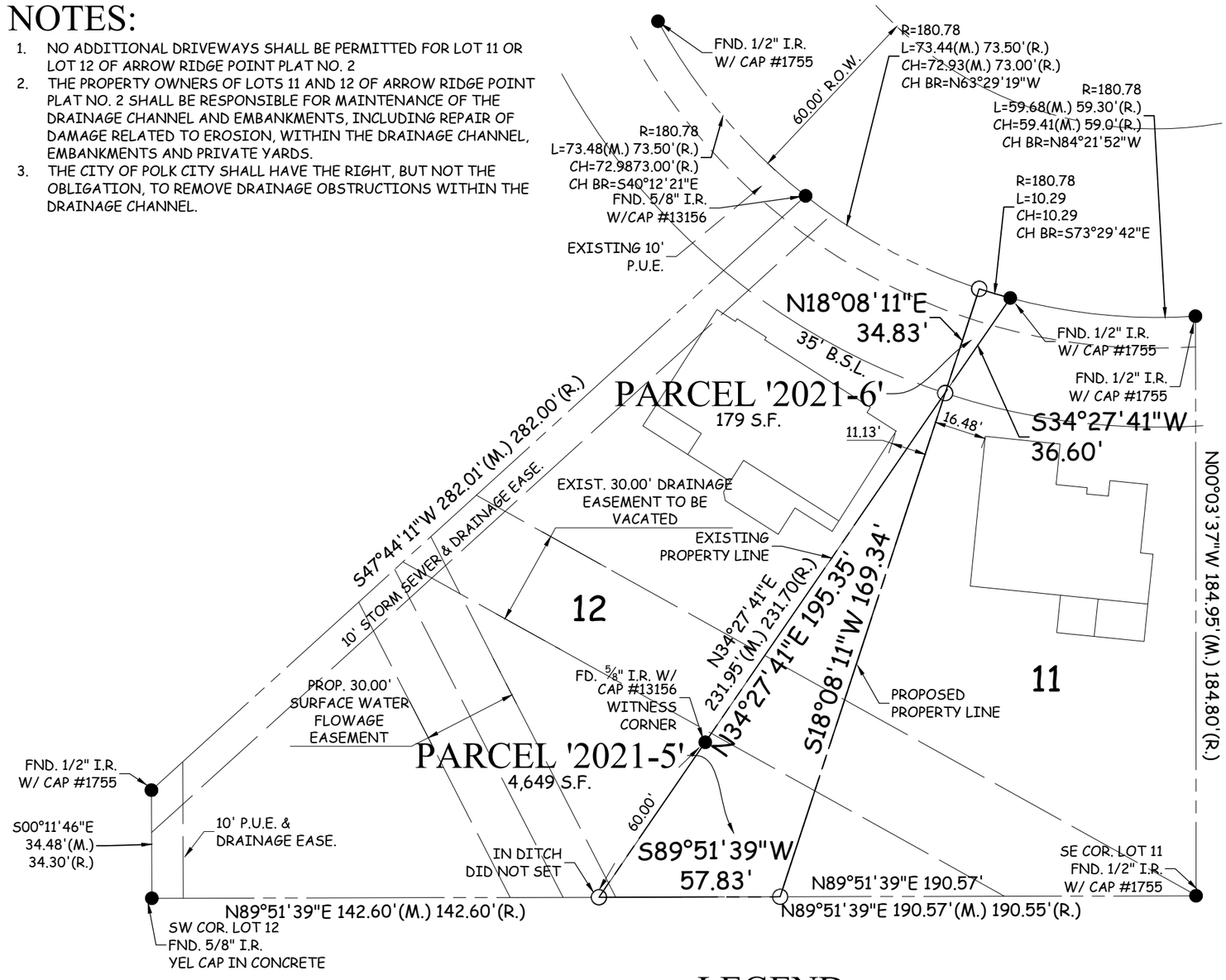
SURVEYOR COMPANY:	COOPER CRAWFORD & ASSOCIATES, LLC 475 S 50th ST., STE. 800, WDM, IA 50023
RETURN TO :	COOPER CRAWFORD & ASSOCIATES, LLC

NOTES:

1. NO ADDITIONAL DRIVEWAYS SHALL BE PERMITTED FOR LOT 11 OR LOT 12 OF ARROW RIDGE POINT PLAT NO. 2
2. THE PROPERTY OWNERS OF LOTS 11 AND 12 OF ARROW RIDGE POINT PLAT NO. 2 SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE DRAINAGE CHANNEL AND EMBANKMENTS, INCLUDING REPAIR OF DAMAGE RELATED TO EROSION, WITHIN THE DRAINAGE CHANNEL, EMBANKMENTS AND PRIVATE YARDS.
3. THE CITY OF POLK CITY SHALL HAVE THE RIGHT, BUT NOT THE OBLIGATION, TO REMOVE DRAINAGE OBSTRUCTIONS WITHIN THE DRAINAGE CHANNEL.



PARCEL '2021-5'

A PART OF LOT 11, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, CITY OF POLK CITY, POLK COUNTY, IOWA WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 11; THENCE N34°27'41"E, 195.35 FEET ALONG THE WESTERLY LINE OF SAID LOT 11; THENCE S18°08'11"W, 169.34 FEET TO THE SOUTH LINE OF SAID LOT 11; THENCE S89°51'39"W, 57.83 FEET ALONG SAID SOUTH LINE TO THE SOUTHWEST CORNER OF SAID LOT 11 AND TO THE POINT OF BEGINNING.

SAID TRACT OF LAND CONTAINS 4,649 SQUARE FEET MORE OR LESS.

SAID TRACT OF LAND BEING SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

PARCEL '2021-6'

A PART OF LOT 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, CITY OF POLK CITY, POLK COUNTY, IOWA WHICH IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 12; THENCE S34°27'41"W, 36.60 FEET ALONG THE EASTERLY LINE OF SAID LOT 12; THENCE N18°08'11"E, 34.83 FEET TO THE NORTHERLY LINE OF SAID LOT 12, TO THE SOUTHERLY RIGHT-OF-WAY LINE OF WAHKONSA AVENUE AS IT IS PRESENTLY ESTABLISHED, AND TO A NON-TANGENT 180.78 FEET RADIUS CURVE CONCAVE TO THE NORTHEAST; THENCE SOUTHEASTERLY 10.29 FEET ALONG SAID NORTHERLY LINE, SAID SOUTHERLY RIGHT-OF-WAY LINE AND SAID CURVE, SAID CURVE HAS A CHORD LENGTH OF 10.29 AND A CHORD BEARING OF S73°29'42"E, TO THE NORTHEAST CORNER OF SAID LOT 12 AND TO THE POINT OF BEGINNING.

SAID TRACT OF LAND CONTAINS 179 SQUARE FEET MORE OR LESS.

SAID TRACT OF LAND BEING SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

LEGEND

——— – – ———	PLAT BOUNDARY
▲	SECTION CORNER
●	FOUND CORNER AS NOTED
○	SET CORNER 5/8" IR W/ YELLOW CAP #13156
I.R.	IRON ROD
G.P.	GAS PIPE
D.	DEEDED DISTANCE
M.	MEASURED DISTANCE
R	PREVIOUSLY RECORDED DISTANCE
P.U.E.	PUBLIC UTILITY EASEMENT

LICENSED PROFESSIONAL LAND SURVEYOR
KEVEN J. CRAWFORD
13156
IOWA

I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

KEVEN J. CRAWFORD, PLS IOWA LICENSE NO. 13156
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2022

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THIS SHEET ONLY

COOPER CRAWFORD
& ASSOCIATES, L.L.C.
CIVIL ENGINEERS
475 S. 50th Street, Suite 800, West Des Moines, IA 50265
Phone: (515) 224-1344 Fax: (515) 224-1345

0 20 40
SCALE: 1"=40'
DATE: 1-18-2021

JOB NUMBER
CC
2411

WHEN RECORDED RETURN TO: Jenny Gibbons, City Clerk, 112 S. 3rd Street, Polk City, Iowa 50226

RECORD OF LOT TIE

WHEREAS, on the_____day of_____, 2021 the City Council of Polk City approved a Plat of Survey to subdivide Parcel "2021-5" from the remainder of Lot 11 of Arrow Point Ridge Plat No. 2.

WHEREAS, the Plat of Survey for Parcel "2021-5" is attached hereto as Exhibit A; and

WHEREAS, said Parcel "2021-5" is not be considered an independent lot for zoning and building permit purposes under the Polk City City Code; and

WHEREAS, it is the desire of the City of Polk City and Steven and Kim Bryant to agree to and to put on notice any future purchaser of the restrictions to be placed upon said Parcel "2021-5" and to tie said Parcel "2021-5" to said Lot 12 and that such parcel is to be made part and parcel of said Lot 12.

NOW, THEREFORE, for good and valuable consideration, the property owners agree to the following restrictions:

1. That said Parcel "2021-5" is now part and parcel with said Lot 12 (hereinafter collectively referred to as "Properties").

2. That no building permit for any structure, other than for a fence, shall be issued for said Parcel "2021-5".

3. That no driveways shall be permitted on said Parcel "2021-5".

4. That no new driveways or driveway widening shall be permitted on said Lot 12.

5. That no portion of said Properties shall be transferred, sold, or conveyed independent of the remainder of the Properties, without the written approval of the City Engineer of the City of Polk City, Iowa.

This Agreement shall be deemed to run with the land and shall be binding on Grantor and on Grantor's heirs, lessee, occupants, successors and assigns.

SIGNED on this 16 day of April 2021.

Steven Bryant

Kim Bryant

STATE OF IOWA)
) ss:
COUNTY OF POLK)

On this 16 day of April 2021, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Steven Bryant and Kim Bryant, to me personally known, executing the within and foregoing instrument; and did acknowledge the execution of said instrument to be voluntarily executed.

JENNY L GIBBONS
Commission Number 790510
My Commission Expires
6-12-21

Notary Public in and for the State of Iowa

ACCEPTANCE BY CITY

STATE OF IOWA)
) ss:
COUNTY OF POLK)

I, Jenny Gibbons, City Clerk of the City of Polk City, Iowa, do hereby certify that the within and foregoing Agreement was duly approved and accepted by the City Council of said City of Polk City by Resolution No._____, passed on the____day of April 2021, and this certificate is made pursuant to authority contained in said Resolution.

Signed this_____day of April 2021.

_____
Jenny Gibbons, City Clerk of Polk City, Iowa

WHEN RECORDED RETURN TO: Jenny Gibbons, City Clerk, 112 S. 3rd Street, Polk City, Iowa 50226

RECORD OF LOT TIE

WHEREAS, on the_____day of_____, 2021 the City Council of Polk City approved a Plat of Survey to subdivide Parcel "2021-6" from the remainder of Lot 11 of Arrow Point Ridge Plat No. 2.

WHEREAS, the Plat of Survey for Parcel "2021-6" is attached hereto as Exhibit A; and

WHEREAS, said Parcel "2021-6" is not be considered an independent lot for zoning and building permit purposes under the Polk City City Code; and

WHEREAS, it is the desire of the City of Polk City and William and Connie Sharp agree to and to put on notice any future purchaser of the restrictions to be placed upon said Parcel "2021-6" and to tie said Parcel "2021-6" to said Lot 11 and that such parcel is to be made part and parcel of said Lot 11.

NOW, THEREFORE, for good and valuable consideration, the property owners agree to the following restrictions:

1. That said Parcel "2021-6" is now part and parcel with said Lot 11 (hereinafter collectively referred to as "Properties").

2. That no building permit for any structure, other than for a fence, shall be issued for said Parcel "2021-6".

3. That no driveways shall be permitted on said Parcel "2021-6".

4. That no new driveways or driveway widening shall be permitted on said Lot 11.

5. That no portion of said Properties shall be transferred, sold, or conveyed independent of the remainder of the Properties, without the written approval of the City Engineer of the City of Polk City, Iowa.

This Agreement shall be deemed to run with the land and shall be binding on Grantor and on Grantor's heirs, lessee, occupants, successors and assigns.

SIGNED on this 15 day of April 2021.

William Sharp

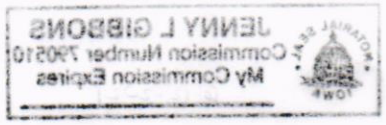
Connie Sharp

STATE OF IOWA)
) ss:
COUNTY OF POLK)

On this 15 day of April 2021, before me, the undersigned, a Notary Public in and for said County and State, personally appeared William Sharp and Connie Sharp, to me personally known, executing the within and foregoing instrument; and did acknowledge the execution of said instrument to be voluntarily executed.

JENNY L GIBBONS
Commission Number 790510
My Commission Expires
6-12-2021

Notary Public in and for the State of Iowa


JENNY L GIBBONS
Commission Number 795110
My Commission Expires
NOTARIAL SEAL
IOWA

ACCEPTANCE BY CITY

STATE OF IOWA)
) ss:
COUNTY OF POLK)

I, Jenny Gibbons, City Clerk of the City of Polk City, Iowa, do hereby certify that the within and foregoing Agreement was duly approved and accepted by the City Council of said City of Polk City by Resolution No._____, passed on the____day of April 2021, and this certificate is made pursuant to authority contained in said Resolution.

Signed this_____day of April 2021.

_____
Jenny Gibbons, City Clerk of Polk City, Iowa

WHEN RECORDED RETURN TO:
Amy S. Beattie
6701 Westown Parkway, Suite 100
West Des Moines, Iowa 50266

Preparer Information: Amy S. Beattie, 6701 Westown Parkway, Suite 100, West Des Moines, Iowa 50266 (515) 274-1450

SURFACE WATER FLOWAGE EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS:

That the undersigned, STEVEN BRYANT, of the City of Polk City, County of Polk, State of Iowa, hereinafter referred to as "Grantor", in consideration of the sum of one dollar ($1.00), and other valuable consideration, in hand paid by the City of Polk City, Iowa, receipt of which is hereby acknowledged, do hereby sell, grant and convey unto the City of Polk City, Iowa, a municipal corporation, in the County of Polk, State of Iowa, hereinafter referred to as "Grantee" or "City", a permanent easement under, through, and across the following described real estate:

A 30.00 FEET WIDE SURFACE WATER FLOWAGE EASEMENT ACROSS A PART OF LOT 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA. SAID 30.00 FEET WIDE EASEMENT BEING 15.00 FEET ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE NORTHWESTERLY CORNER OF LOT 12, ARROW RIDGE POINT PLAT NO. 2, AN OFFICIAL PLAT, POLK CITY, POLK COUNTY, IOWA; THENCE S47°44'11"W, 177.18 FEET ALONG THE NORTHWESTERLY LINE OF SAID LOT 12, TO THE POINT OF BEGINNING; THENCE S27°09'03"E, 117.63 FEET, TO THE SOUTH LINE OF SAID LOT 12, WHERE SAID CENTERLINE TERMINATES.

That the above described easement is granted unto the City of Polk City, Iowa, for the purpose of constructing, reconstructing, repairing, replacing, enlarging, inspecting and maintaining the following public improvements:

Surface Water Flowage

1. Erection and Placement of Structures, Obstructions, Plantings or Materials Prohibited. Grantor and its grantees, assigns and transferees shall not erect any fence or other structure under, over, on, through, across or within the Easement Area without obtaining the prior written consent of the City, nor shall Grantor cause or permit any obstruction, planting or material to be placed under, over, on, through, across or within the Easement Area without obtaining the prior written consent

of the City.

2. Change of Grade Prohibited. Grantor and its grantees, assigns and transferees shall not change the grade, elevation or contour of any part of the Easement Area without obtaining the prior written consent of the City. The City shall have the right to restore any changes in grade, elevation or contour without prior written consent of the Grantor, its grantees, assigns or transferees.

3. Drainage Obstructions. The City shall have the right, but not the obligation, to remove drainage obstructions from the Easement Area.

4. Embankments. Grantor and its grantees, assigns and transferees shall be responsible for maintenance of all embankments, including repair of any damage due to erosion, within the Easement Area and private yards

5. Right of Access. The City shall have the right of access to the Easement Area and have all rights of ingress and egress reasonably necessary for the use and enjoyment of the Easement Area from property adjacent thereto as herein described, including but not limited to, the right to remove any unauthorized fences, structures, obstruction, planting or material placed or erected under, over, on, through, across or within the Easement Area.

6. Property to be Restored. The City shall restore the Easement Area after exercising its rights hereunder, provided, however, that the City's duty of restoration shall be limited to grading and replacing grass, sod or any other ground cover (but not including any structures, trees or shrubs). The City shall not be responsible for any construction, reconstruction, replacement, repair or maintenance of any improvements located within the Easement Area.

7. Liability. Except as may be caused by the negligent acts or omissions of the City, its employees, agents or its representatives, the City shall not be liable for injury or property damage occurring in or to the Easement Area, the property abutting said Easement Area, nor for property damage or any improvements or obstructions thereon resulting from the City's exercise of this Easement. Grantor agrees to indemnify and hold City, its employees, agents and representatives harmless against any loss, damage, injury or any claim or lawsuit for loss, damage or injury arising out of or resulting from the negligent or intentional acts or omissions of Grantor or its employees, agents or representatives.

8. Easement Benefit. This Easement shall be for the benefit of the City, its successors and assigns, and its permittees and licensees.

9. Easement Runs with Land. This Easement shall be deemed perpetual and to run with the land and shall be binding on Grantor and on Grantor's heirs, successors and assigns.

10. Consent and Subordination of Mortgage Holder(s). By signing this Agreement, the undersigned lender, its successors and assigns consents to the terms of this easement agreement and hereby subordinates its interest in the Easement Area to the interest of the City and its successors and assigns.

11. Approval by City Council. This Easement shall not be binding until it has received the final approval and acceptance by the City Council by Resolution which approval and acceptance shall be noted on this Easement by the City Clerk.

That the Grantor does hereby covenant with the said Grantee, and successor-in-interest, that said Grantor holds said real estate by title and fee simple; that it has good and lawful authority to sell and convey the same; that said premises are free and clear of all liens and encumbrances whatsoever, except as may be herein stated; that said Grantor covenants to warrant and defend the said premises against the lawful claims of all persons whomsoever, except as may be herein stated.

IN WITNESS WHEREOF, we have hereunto affixed our hands this _____ day of April, 2021.

By Steven Bryant

STATE OF IOWA)
) ss:
COUNTY OF POLK)

On this 19 day of April, 2021, before me the undersigned, a Notary Public in and for said State, personally appeared Steven Bryant, to me known to be the persons named in and who executed the foregoing instrument to which is attached; and acknowledged that they executed the instrument as their voluntary act and deed.

Carol Thornburg
Notary Public in and for the State of Iowa

NOTARIAL SEAL IOWA
CAROL THORNBURG
Commission Number 822356
My Commission Expires
November 21, 2022

ACCEPTANCE BY CITY

STATE OF IOWA)
) ss:
COUNTY OF POLK)

I, Jenny Gibbons, City Clerk of the City of Polk City, Iowa, do hereby certify that the within and foregoing Easement was duly approved and accepted by the City Council of said City by Resolution No. _____, passed on the ____ day of _____, 2021, and this certificate is made pursuant to authority contained in said Resolution.

Signed this ___ days of April, 2021.

_____
Jenny Gibbons, City Clerk of the City of Polk City, Iowa

RESOLUTION NO. 2021-36

A RESOLUTION APPROVING A PLAT OF SURVEY FOR PARCEL NUMBERS 2021-5 AND 2021-6, APPROVING LOT TIE AGREEMENTS AND SURFACE WATER FLOWAGE EASEMENT

WHEREAS, Cooper-Crawford on behalf of the property, has submitted a Plat of Survey for approval for Parcel Numbers 2021-5 and 2021-6 in Polk City, Iowa; and

WHEREAS, on April 19, 2021, the Polk City Planning and Zoning Commission reviewed these Plat of Surveys and recommended its approval at their meeting; and

WHEREAS, the City Engineer has reviewed said Plat of Surveys and recommend approval of same, including proposed Surface Water Flowage Easement and vacation of existing Drainage Easement; and

WHEREAS, the City Attorney has reviewed the Lot Tie Agreements, Surface Water Flowage Easement, and vacation of Drainage Easement and recommends approval of same; and

WHEREAS, the applicant shall be required to record, or cause to be recorded, the Plat of Survey, Lot Tie Agreements and Surface Water Flowage Easement, all within 60 days of City Council approval of same and provide copies of the recorded documents to the City Clerk.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa, hereby approves the Lot Tie Agreements and the Surface Water Flowage easement and does hereby approve the Plat of Survey for Parcel Numbers 2021-5 and 2021-6, provided recorded copies of all legal documents are provided to the City Clerk within 60 days of Council approval.

PASSED AND APPROVED the 10th day of May 2021.

_____
Jason Morse, Mayor

ATTEST:

_____
Jenny Gibbons, City Clerk

MEETING MINUTES
The City of Polk City
City Council Meeting
6:00 p.m., April 26, 2021
City Hall – Council Chambers

Polk City, City Council held a meeting in the City Hall Council Chambers with public participation via phone at 6:00 p.m., on April 26, 2021. The Agenda was posted at the City Hall office as required by law.
These tentative minutes reflect all action taken at the meeting.

1. ***Call to Order*** | *Mayor Morse called the meeting to order at 6:02 p.m.*

2. ***Roll Call*** | Walters, Dvorak, Vogel, Anderson, Sarchet | In attendance via zoom

3. ***MOTION:*** A motion was made by Dvorak and seconded by Walters to approve the agenda
MOTION CARRIED UNANIMOUSLY

4. ***Presentation*** | Ken Morse, Tree Board/Arbor League, congratulated Mayor and City Council on earning recognition as 2020 Tree City USA and for receiving a Growth Award for tree care on City owned property. (press release attached to minutes)

5. ***Public Comments*** **|** None

6. ***Consent Items***
MOTION: A motion was made by Vogel and seconded by Dvorak to approve the consent agenda items.
   a. City Council Meeting Minutes for April 12, 2021
   b. City Council Work Session Meeting Minutes for April 12, 2021
   c. Receive and file P&Z Commission Meeting Minutes for April 19, 2021
   d. Claims listing April 26, 2021
   e. March 2021 Finance Report
   f. Receive and file the March 2021 Police Department Report
   g. Receive and file the March 2021 Fire Department Report
   h. Resolution 2021-28 resolution setting a Public Hearing for May 10, 2021 at 6pm for vacation of an easement
   i. Resolution 2021-29 approving the renewal of an agreement with Polk County for use of the Community Room for the Polk City Senior Congregate Meal Program
   j. Water Connection Agreement for 10465 NW 44th Street, Polk City, Iowa
   k. Twelve (12) months Class C Liquor License for Papas Pizzeria located at 214 W Van Dorn St. with Sunday Sales and Outdoor Services effective 5/28/2021
   l. Twelve (12) month Class E Liquor License for Fareway Stores #137 located at 1101 South 4th Street effective June 17, 2021
   m. Resolution 2021-30 approving PA-44 Complete Streets Policy
   n. Special Events application from American Legion closing 1st Street between Broadway and Van Dorn on the following dates and times: May 14th 5p-9p, June 11th5p-9p, June 13th 11a-2p, June 26th 9a-12p, July 9th 5p-9p, August 13th 5p-9p, and September 10th 5p-9p
   o. Twelve-month Tobacco Permit for Kum & Go #0135 effective July 1, 2021
   p. Set pay for Parks & Recreation seasonal employee, Aaron Hughes, Recreation Assistant I at $14.00 per hour, starting May 1, 2021, contingent upon successful completion of background check
   MOTION CARRIED UNANIMOUSLY

7. ***Business Items***
   a. ***MOTION:*** A motion was made by Walters and seconded by Dvorak to approve Resolution 2021-31 approving 28E Agreement with North Polk Community School District for intersection improvements at N 3rd and E Vista Lake Dr.
   MOTION CARRIED UNANIMOUSLY
   b. ***MOTION:*** A motion was made by Vogel and seconded by Dvorak to approve Resolution 2021-32 approving agreement with Knapp Properties for intersection improvements at N 3rd and E Vista Lake Dr.
   MOTION CARRIED UNANIMOUSLY
   c. ***MOTION:*** A motion was made by Walters and seconded by Vogel to approve Resolution 2021-33 approving petition and waiver with North Polk for right turn lane on E Vista Lake Dr.
   MOTION CARRIED UNANIMOUSLY
   d. ***MOTION:*** A motion was made by Vogel and seconded by Anderson to approve Resolution 2021-34 approving an amendment to the North Polk Intermediate School Site Plan
   MOTION CARRIED UNANIMOUSLY

e. ***MOTION:*** A motion was made by Vogel and seconded by Dvorak to approve Snyder & Associates Engineering Services Agreement in the amount of $141,500 for the roundabout at N 3rd Street and E Vista Lake Dr.
YES: Vogel, Anderson, Sarchet, Dvorak
ABSTAIN: Walters
MOTION CARRIED

f. ***MOTION:*** A motion was made by Vogel and seconded by Sarchet to approve Snyder & Associates Engineering Services Agreement in the amount of $11,140 for the West Bridge Road Water Main Loop
YES: Sarchet, Dvorak, Vogel, Anderson
ABSTAIN: Walters
MOTION CARRIED

g. ***MOTION:*** A motion was made by Walters and seconded by Dvorak to approve Second Reading of Ordinance 2021-1300 rezoning 77.66 acres of Knapp Properties located North and East of 220 E. Vista Lake Avenue from A-1 to R-1, from A-1 to R-1A, and from R-1 to R-1A
YES: Dvorak, Vogel, Walters
NO: Anderson, Sarchet
MOTION CARRIED

8. ***Reports & Particulars*** **|** Mayor, Council, City Manager, Staff, Boards, and/or Commissions
Mayor Proclamations:
Arbor Day April 30
Municipal Clerk Week May 2-8
National Police Week May 9-15

- Parks & Recreation Director Thraen reported the silver maple on the square will need to be removed in May due to rot issues in the trunk. The replacement plan is to spade in a mature tree to see some instant benefits. Thraen also reported the North Polk 8th grade class will be volunteering in the Parks on May 26th.
- Council Member Dvorak suggested the Council look at lack of connectivity of a trail along S 3rd Street between Southside Dr. and Pine Ridge Dr. Dvorak thanked City Manager Huisman and the School for getting through everything to come to terms on agreements.
- Council Member Vogel thanked Huisman for her extra work and effort with the School and thanked her for keeping things moving forward. Vogel said she was thrilled the Library is open again to give the kids some normalcy. Vogel said she appreciated everyone's efforts on the facility needs assessment and could really tell the Department Heads are working well together and look out for each other as they all work together to help make the most out of future plans for the citizens.
- Council Member Walters told staff they did a great job putting the best plan forward while not stepping on each other. He said it is up to Council to make sure the plan happens now because it has been too long that the City has just been getting by with what is available and although there are great challenges ahead to see the plan to completion it is important to get the buildings built.
- Council Member Sarchet asked that Staff re-engage with the Army Corp on the property between Bridgeview and the Sports Complex to get the debris piles of trees cleaned up.

9. ***Adjournment***
MOTION**:** A motion was made by Anderson and seconded by Vogel to adjourn at 6:43 p.m.
MOTION CARRIED UNANIMOUSLY

Next Meeting Date –May 10, 2021

_____
Jason Morse, Mayor

Attest

_____
Jenny Gibbons, City Clerk

MEETING MINUTES
The City of Polk City
Work Session
5:000 p.m., Monday, April 26, 2021
City Hall – Council Chambers

A Council Work Session was held on April 26, 2021 at 5:00 p.m. in the City Hall Council Chambers in Polk City, Iowa with public participation via phone.

Mayor and City Council Members Present:	***Staff Members Present:***
Jason Morse | Mayor	Chelsea Huisman | City Manager
Mandy Vogel | Pro Tem	Jenny Gibbons | City Clerk/Treasurer
Jeff Walters | City Council Member	Mike Schulte | Public Works Director
Dave Dvorak | City Council Member	Jason Thraen | Parks & Recreation Director
Ron Anderson | City Council Member	Jeremy Siepker | Police Chief
Robert Sarchet | City Council Member	Jim Mitchell | Fire Chief
	Jamie Noack | Library Director

Minutes
City Manager Huisman provided an overview of the proposed facility needs plan and discussed the amount of modifications made to the plan to get to the current estimated project cost. Each Department Head reviewed their thoughts on the proposal and the desire for the plan to be executed as proposed to allow immediate needs to be resolved as efficiently and effectively as possible.

Adjournment – Meeting adjourned at 6:00 p.m.

_____

Jason Morse, Mayor

_____

Jenny Gibbons, City Clerk

MEETING MINUTES
The City of Polk City
Parks Commission
6:00 p.m., Monday, May 3, 2021
City Hall

The Polk City Parks Commission held a meeting at 6:00 p.m., on May 3, 2021. The Agenda was posted at the City Hall office as required by law. **These tentative minutes reflect all action taken at the meeting.**

1. ***Call to Order*** |*The meeting was called to order at 6:02 p.m.*

2. ***Roll Call*** | Bentley, Haaland, Converse, Karsjen, Reed, Delaney, Otis | In attendance.

3. ***MOTION:*** A motion was made by Converse and seconded by Bentley to approve the April 5, 2021 Meeting Minutes. ***MOTION CARRIED UNANIMOUSLY***

4. ***Audience Items*** | Jennifer Puttmann, 1385 Twelve Oaks Dr, Polk City, IA 50226, provided feedback on the new regional park.

5. Delaney reviewed March 2021 city survey results pertaining to parks & recreation satisfaction levels. Delaney then discussed survey question #10 which pertained to park amenities and reviewed top 10 desired amenities. Delaney stressed this survey is for entire Polk City parks system, not just regional park. Karsjen commented that future surveys should include age demographics. Bentley suggested additional questions about park usage frequency be added as well. City Clerk Gibbons mentioned this survey is scheduled to be offered every 2 years going forward.

6. Delaney covered the history of 2011 and 2015 bond votes for new sports complexes/parks. Delaney reviewed 4 initial regional park concepts from Confluence, then reviewed 2 revised concepts from 4-29-2021 advisory committee. Delaney shared 2 concepts of her own that included small variations from Confluence. Delaney shared feedback received from Confluence. Confluence is currently completing revisions based on 4-29-2021 advisory committee feedback. Conversation amongst the commission revolved around what overall needs are. Karsjen showed support of potential HTT connecting trail going around the regional park. Commission discussed if a softball field should be removed to accommodate pickleball courts and greenspace. Karsjen inquired about striping current tennis courts for pickleball. Thraen replied that 1 tennis court already has pickleball lines on the sport court overlay. Tennis courts were originally funded through grants, and Thraen would review grant verbiage for future changes to the courts. Commission discussed moving soccer fields closer together to provide more space. Otis advised to go with more space as tight fields are not the best setup.

7. Thraen provided update on 2021 parks & rec/library sponsorship campaign. Parks & recreation department received 11 sponsorships totaling $2100.00. Sponsors include: North Polk Family Medicine, Fareway, First Continental Group, Iowa Chiropractic Clinic, P.C, Currie Engineering Associates, PLC, Ankeny Sanitation, Luana Savings Bank, Cornerstone Dental, Polk City Veterinary Hospital, Gurney Electric, LC, and MidAmerican Energy.

8. ***Reports & Particulars*** | Council Liaison, City Manager, Staff, and Commission
    - Council Member Dvorak expressed he was happy we were able to start meeting in person. Thanked the commission for their efforts on the regional park. Land purchase will go to council for final reading at next council meeting. Expressed to keep in mind that per the survey, 64% of responses said not to raise taxes.
    - Tree Board Liaison Morse mentioned Polk City Arbor League now has a Facebook page for anyone interested in getting involved.
    - Commission member Karsjen spoke on behalf of Community Visioning. Group held their second implementation meeting and established timetables for 4 initiatives.
    - Parks and Rec Director Thraen gave an update on registration for summer programming. North Polk Middle School 8th graders will be in Polk City May 26th to perform community service. Thraen met with IA DNR

fisheries biologist Tyler Stubbs to assess the health of ponds at Twelve Oaks Park and Marina Cove Park. Stubbs will present to the commission this summer. Thraen also shared the impending removal of a "tree of concern" on the town square. Thraen and the Tree Board are working on a replacement planting plan.

9. ***MOTION:*** A motion was made by Otis and seconded by Haaland to adjourn at 7:25 pm.
MOTION CARRIED UNANIMOUSLY
Next Meeting Date –June 7, 2021

Attest: _____
Jason Thraen, Parks & Recreation Director

CLAIMS REPORT		
CITY OF POLK CITY	DATED	5/10/2021
VENDOR	REFERENCE	AMOUNT
440-PRAXAIR DISTR. INC.	OXYGEN	$ 174.02
ACCUJET LLC	JET VAC	$ 1,081.96
ADRIANE TIEDENS	LTC GRANT SPEAKER HONORARIUM	$ 250.00
AMAZON BUSINESS	TETHERBALL	$ 39.98
ANKENY HARDWARE	GARDEN HOSE/LOCKS	$ 122.46
ARNOLD MOTOR SUPPLY	VEHICLE PARTS & SUPPLIES	$ 147.85
AT&T MOBILITY	DATA CARDS/CELL PHONES	$ 777.58
AUREON TECHNOLOGY	PHONE SERVICES	$ 1,484.39
BAKER & TAYLOR	LIBRARY BOOKS	$ 1,088.58
BANLEACO	COPIER LEASE	$ 79.92
BLANK PARK ZOO FOUNDATION	SPR - RAINFOREST PRESENTER	$ 100.00
Bound Tree Medical	MEDICAL SUPPLIES	$ 902.77
BRICK LAW FIRM	GENERAL	$ 9,985.00
BUSINESS PUBLICATIONS CORP	PUBLICATIONS	$ 198.32
CAPITAL CITY EQUIPMENT CO.	BUILDING SUPPLIES	$ 90.96
Central Pump & Motor	RESTROOM PUMP FIX	$ 1,126.21
CENTURY LINK	PHONE SERVICE	$ 10.20
CITY LAUNDERING	CITY HALL FIRST AID SUPPLIES	$ 90.00
CITY OF DES MOINES	WRA HOOK-UP	$ 29,428.50
Crystal Clear Water Co	PURCHASED WATER	$ 25.50
DANKO EMERGENCY EQUIPMENT	NAME PLATES FOR BUNKER COATS	$ 1,190.14
DEAN FRANZEN	SRP PRESENTER	$ 300.00
Des Moines Metal Fabricating	REPAIRS LID PIPING GALLERY	$ 1,473.16
Des Moines Water Works	INVOICE #3-FEEDER MAIN/BOOSTER	$ 309,434.58
EMSLRC	CPR CARD	$ 8.50
FAREWAY	COMET CUPBOARD PURCHASES	$ 4,121.17
GALL'S INC.	UNIFORM PANTS	$ 204.97
Gurnsey Electric Co	ELECTRICAL REPAIRS	$ 539.43
HACH COMPANY	WATER DEPARTMENT SUPPLIES	$ 1,469.61
HAWKINS INC	CHLORINE	$ 869.30
HOTSY CLEANING SYSTEMS INC.	EQUIPMENT REPAIR	$ 244.26
INSPIRON LOGISTICS	ANNUAL WENS SERVICE 4/21-4/2022	$ 2,585.00
JENNY GIBBONS	REIMBURSEMENT MILEAGE/LUNCH	$ 49.05
LOGAN CONTRACTORS SUPPLY	OPERATING SUPPLIES	$ 68.64
MARTIKA DANIELS	SRP PRESENTER	$ 375.00
MERCYONE NORTH PHARMACY	RX SUPPLIES	$ 194.96
MICHAEL BUGEJA, PH.D.	LTC GRANT SPEAKER HONORARIUM	$ 250.00
MIKAYLA OZ	SRP PRESENTER	$ 300.00
MOWBILITY SALES & SERVICE	EQUIPMENT REPAIR	$ 215.99
OMNISITE	ALARM SYSTMEM ANNUAL PAYMENT	$ 192.07
ONESOURCE	SEASONAL BACKGROUND CHECK	$ 42.00
P & M APPAREL	UNIFORMS	$ 711.50
POLK COUNTY TREASURER	ANIMAL CONTROL FEES FY20/21	$ 1,321.00

PORTABLE PRO, INC.	PORTABLE SERVICE	$	400.00
RACOM	EDACS ACCESS	$	671.16
RICHARD TAYLOR	TECH SUPPORT	$	450.00
RUAN, INCORPORATED	T10901 - VEHICLE LEASE	$	1,588.04
Safe Building Comp. & Tech	BUILDING INSPECTIONS	$	33,285.11
STEW HANSEN	#25 OIL CHANGE AND FILTER	$	107.76
STOREY KENWORTHY	CHECKS	$	302.32
TELEFLEX FUNDING LLC	IO STABILIZER	$	109.50
TOTAL QUALITY INC.	LAWNCARE	$	8,653.02
VAN-WALL EQUIPMENT	STRING TRIMMER	$	49.98
WILL STUCK	SRP 2021	$	375.00
Accounts Payable Total		$	419,356.42
GENERAL		$	70,042.13
ROAD USE		$	858.55
CAPITAL IMPROVEMENTS		$	4,121.17
CAPITAL WATER PROJECT		$	285,190.33
WATER		$	27,841.27
SEWER		$	31,302.97
TOTAL FUNDS		$	419,356.42

City of Polk City, Iowa

City Council Agenda Communication

Date: **May 10, 2021 City Council Meeting**
To: Mayor Jason Morse & City Council
From: Chelsea Huisman, City Manager

Subject: **RFP for Soil Quality Restoration contractor**

BACKGROUND: For your review and consideration on Monday evening is a request for proposal for bids for our Soil Quality Restoration (SQR) project. The City has been awarded a $50,000 award from IDALS for the project. The City's current budget for the project is $115,000, with $50,000 from IDALS, $50,000 from the property owners (or equal to 50% match for their property), and $5,000 from the Rain Campaign for marketing of the program. The City will also contribute to the project with purchasing compost and hauling compost to the Public Works Facility. The estimated value and cost for the City contribution is $10,000.

The project will be completed in the Fall of 2021. In order to keep our project on schedule, City staff has put together the proposed timeline:

- City Council approves the RFP to be sent out to qualified contractors-May 10, 2021
- Proposals are due by contractors-June 10, 2021
- City Council awards contract-June 14, 2021
- Applications are available on a first come, first served basis-June 15, 2021
- Applications are due-July 27, 2021
- Payments for the homeowner's contribution are due-August 31, 2021
- Projects begin for those homeowners that filed an application and made full payment-after September 1, 2021

ALTERNATIVES: Do not approve the RFP

FINANCIAL CONSIDERATIONS: No financial considerations to send this out. Sending out the RFP is to obtain pricing from contractors interested.

RECOMMENDATION: It is my recommendation that the Council approve the RFP to be sent out to qualifying contractors.

REQUEST FOR PROPOSAL SOIL QUALITY RESTORATION PROJECT

The City of Polk City, Iowa is seeking competitive qualification proposals for contracting for a City-wide Soil Quality Restoration (SQR) Project. Contractors qualified to perform the work are invited to submit competitive qualification proposals, pursuant to the requirements of Section 26.14 of the Iowa Code.

1. **Description of the contractual services to be performed pursuant to this solicitation.**
The contractual services for which the City is seeking competitive qualification proposals is generally described as follows:

The City of Polk City is preparing for a Fall 2021 Soil Quality Restoration (SQR) application on residential properties throughout Polk City. The City has a budget to conduct SQR on approximately 40-50 residential lots in city limits. The program will be available to homeowners on a first come, first served basis. Contrary to other city programs in the Des Moines Metro, Polk City will be administering the program by coordinating with homeowners, managing funding/payments, and hiring contractor for group installation across the community. For this new program, the City will communicate with the homeowners and collect the homeowner's portion of the installation costs and pay the contractor for the installation. This process will allow the contractor to focus on the installation work without having to do homeowner education, coordination, billing and collection.

The SQR will consist of over turf application in existing lawns. The process uses deep tine aeration, application of ¾" depth compost, and overseeding with matching turfgrass seed. The City is requesting pricing from experienced contractors to offer the service competitively in Polk City during ideal fall installation window (generally September 1 to early November) All work will need to be completed prior to December 31, 2021. The list of approved properties shall be provided by the city at least 30 days prior to construction season. All interested contracts should submit a proposal to the City for the following:

- Include cost per square foot (sq. ft.) for deep tine aeration, and application of ¾" depth compost, and turfgrass overseeding.
- Deep tine aerator (Exmark 24" stand-on aerator) is available for rent from Polk Soil and Water Conservation District if needed
- The City will purchase, haul and store compost at Public Works Maintenance Facility located at 301 Northside Drive Polk City, IA 50226 for free contractor use.
- The contractor will need to haul the provided compost from the Maintenance facility to those participating homeowners throughout Polk City. The compost will be paid for by the City.
- The contractor should match existing turfgrass species when overseeding.
- The contractor may be asked to return to rake compost in yards (to bring the grass above the compost application in certain areas) if deemed necessary by the city.
- The contractor shall be responsible for damages occurred during SQR application and protection of underground utilities (including irrigation, dog fence, cable lines, etc.)
- The City will administer the program, which includes receiving applications, measuring yards via desktop measurement, and taking payment for application prior

to a start date for the project. Measurements of each property will be provided to the selected contractor.

- The applications will request information pertinent to the installation process- including presence and location of irrigation systems, buried dog fence, cable lines or other obstacles. It will allow for the homeowners to provide other coordination needs to be known (dogs housed outdoors when homeowners are at work, etc).
- The City will directly pay the successful contractor. Invoicing from the contractor will be required for payment.
- Please include all of these requirements and benefits in your cost per square foot for SQR installation.

2. **Site Visit.**

Interested contractors are further advised that a meeting or site visit may be arranged by contacting the Nick Furness, Public Works Construction Observer at City Hall. Nick can be reached at 515-984-6233.

Contractor shall be required to participate in a pre-construction meeting prior to work starting. At this meeting each property will be reviewed for special circumstances or considerations.

3. **Time, Place and Manner for Filing Competitive Proposals.**

a. Competitive qualification proposals for contractual services described above shall be filed in the office of the City Clerk, 112 3rd Street, Polk City, Iowa, 50226, on or before **12:00 p.m. on Thursday, June 10, 2021.** The City Council will review and award contract at their meeting on Monday, June 14, 2021 at City Hall.

b. Competitive proposals shall be filed with the City Clerk by –

i. placing them in the United States Mail, appropriately stamped and addressed to the City Clerk's office at:

City of Polk City, PO Box 426, City of Polk City, Iowa 50226

ii. filing them in person at the office of the City Clerk at City Hall

iii. e-mailing them as an e-mail attachment, addressed to the City Clerk's e-mail address, jgibbons@polkcityia.gov

c. If a competitive proposal is delivered by U.S. Mail or by in-hand delivery, it shall be placed in a sealed envelope addressed to the City Clerk at the address stated above. Competitive proposals received after the time stated above will not be considered and the quoting contractor will be so notified.

4. **Competitive Proposals to be submitted on Form Provided.**

Competitive proposals shall be filed on the Competitive Proposal form provided by the City and included with this RFP. Competitive proposals which are filed in any other form shall be determined to be non-responsive and shall be rejected by the City.

5. **Evidence of Insurance Required.**

a. Each contractor submitting a proposal pursuant to this RFP shall be required to commit to provide to the City, at the time of the award and execution of the contract, a certificate(s) of insurance naming the City of Polk City as an additional insured for any applicable general liability insurance, evidencing insurance with coverage in the following minimum amounts.

Workers Compensation	*Statutory*
Contractors General Liability	
A. *General Aggregate*	*$2,000,000*
B. *Products – Completed Operations Aggregate*	*$2,000,000*
C. *Personal and Advertising Injury (per person/organization)*	*$1,000,000*
D. *Bodily Injury and Property Damage (per occurrence)*	*$1,000,000*
E. *Fire Legal Liability Damage (any one fire)*	*$ 50,000*
F. *Medical Expense Limit (any one person)*	*$ 5,000*
Automobile Liability	
A. *Bodily Injury*	
a. each person	*$1,000,000*
b. each accident	*$1,000,000*
B. *Property Damage*	*$1,000,000*
C. *Combined Single Limit*	*$1,000,000*
Umbrella	*$1,000,000*

6. Required Commitments by Contractors / Payment.

a. Contractors submitting proposals pursuant to this RFP shall be required to commit to the execution of a contract for the work in the form required by the City, which form of contract is included with this RFP.

b. Contractors submitting proposals pursuant to this RFP shall be required to commit to the commencement of the work comprising the above-described contractual services after awarded on and shall be required to commit to the contract to begin **June 15, 2021 and end December 31, 2021**.

7. Sales Tax.

The City will issue special sales tax exemption certificates to the contractor awarded the contract to perform the work and to its subcontractors, pursuant to Iowa Code Section 422.42, (15) and (16) and Iowa Code Section 422.47 (5). The contractor awarded the contract for the work and its subcontractors should present such certificate when procuring materials and equipment for the project and should not pay sales tax for such materials and equipment. Accordingly, the contractor should not include sales tax in its competitive proposal for the work. The City will not accept contractor claims for reimbursement of sales tax, will not attempt to obtain a refund of sales taxes paid from the State of Iowa, and will not reimburse the contractor for any sales taxes mistakenly paid by it or its subcontractors.

8. **Evaluation of Competitive Proposals.**
If a quoting contractor does not submit its proposal on the form required by the governmental entity, or does not provide all information or documentation or make all commitments required by the governmental entity, or does not cause said form to be executed as required by the governmental entity, said proposal shall be determined to be non-responsive and shall be rejected by the governmental entity.

9. **Execution of Contract Evidence of Insurance.**
Upon the City's determination which contractor has submitted the lowest responsive, responsible proposal, the City will take action to award the contract to that contractor, conditioned upon the contractor's submission, the City's approval, of the contractor's evidence of insurance, and further conditioned upon the contractor's execution of a contract in the form included with this RFP and its approval and execution by the City.

Proposal Form
Request for Proposal
SQR Project
City of Polk City, Iowa

Company Name _____

Business Owner _____

Address _____

Phone _____

Email _____

Signature _____

Title _____

Date _____

***Price per square foot as outlined in the document:**

_____

Please also provide the City with 3 Professional References for successful projects completed. References should include Name of property owner or organization successfully worked with, address and contact information for reference.

Polk City Water Department

Monthly Report

Month_ April_ Year_ 2021

Total Water Pumped 16768260 Gallons
Monthly Daily Avg 542275 Gallons

Testing Results

- **SDWA Bacteriological Coliform Analysis** Absent **University Hygienic Lab.**
  Fecal Coliform Analysis- Sample incubated 35c for 48 hrs then examine for gas production Gas production verifies presence of fecal coliform organisms.

- **Fluoride Analysis** .6 **University Hygienic Lab.**
  A fluoride concentration of approx. 1mg/l in drinking water effectively reduces dental caries without harmful effects on health. MCL for fluoride is 4.0 mg/l.
  Fluoride at Plant- Monthly Average .74 **mg/l Polk City Lab.**
  Fluoride in System- Monthly Average .78 **mg/l Polk City Lab.**

- **Chlorine Free At Plant- Monthly Average** 1.29 **mg/l Polk City Lab.**
  Chlorine Total at plant- Monthly Average 3.65 **mg/l Polk City Lab.**
  Chlorine Free in System- Monthly Average .57 **mg/l Polk City Lab.**
  Chlorine Total in System- Monthly Average .85 **mg/l Polk City Lab.**
  Chlorine requirement is the quantity of chlorine that must be added to H2O to achieve complete disinfection of pathogens and protozoa. Chlorine residuals will vary widely depending on organic loading. We also use chlorine to oxidize iron prior to filtration.

- **Iron Raw Water- Monthly Average** 6.11 **mg/l Polk City Lab.**
  Iron Finish Water- Monthly Average .08 **mg/l Polk City Lab.**
  Iron System Water- Monthly Average .08 **mg/l Polk City Lab.**
  Iron occurs in rocks and minerals in the earth's crust. It's the 4th most abundant element respectively. Iron has no effect on human health; its main objection is aesthetics. Concentrations of Iron in finish H2O should be between 0.03-0.06mg/l.

- **Manganese Raw Water- Monthly Average** .27 **mg/l Polk City Lab.**
  Manganese Finish Water- Monthly Average .16 **mg/l Polk City Lab.**
  Manganese System Water- Monthly Average .09 **mg/l Polk City Lab.**
  Manganese also occurs in rocks and the earth's crust. It is the 7th most abundant element. Manganese is extremely difficult to remove. Concentrations of Manganese in finish H2O should not exceed 0.05mg/l or black staining of plumbing fixtures may occur. No effect on human health.

- **pH Raw Water Monthly Average** 7.2 **mg/l Polk City Lab.**
  pH Finish Water-Monthly Average 7.5 **mg/l Polk City Lab.**
  pH System Water- Monthly Average 8.5 **mg/l Polk City Lab.**
  pH scale ranges from 0-14 with 7 being considered neutral. Below 7 becomes corrosive to plumbing, above 7 tends to deposit minerals in plumbing. We add caustic soda to maintain proper pH, which should range between 7.5-7.9 in finish water.

Total Tests Preformed- Polk City Lab_____ Total Hours to perform tests_____

POLK CITY LIBRARY BOARD MEETING NOTES
Polk City Community Library Meeting Room, 1500 W.Broadway
Monday, April 5, 2021 at 6:30 pm
Meeting held via Zoom
https://us02web.zoom.us/j/85160415404Live Participation Link

I. Call to order – President Lisa Mart called the meeting to order at 6:32pm.

II. Approval of the Agenda

MOTION: A motion was made by Rod Bergren and seconded by Sara Olson to approve Meeting Agenda.
MOTION PASSED UNANIMOUSLY.

Board Members Present: Sara Olson, Corey Hoodjer, Rod Bergren. Lisa Mart
Board Members Absent: Angie Conley
City Council Liaison: Ron Anderson
Library Director: Jamie Noack

Consent Items

1. Approve the March 2021 Board Minutes

2. Approve February 2021 financial statements.

    a) February 2021 History
    b) February 2021 Budget
    c) February 2021 Revenue & Expenses

MOTION: A motion was made by Sara Olson and seconded by Rod Bergren to approve Consent Items.
MOTION PASSED UNANIMOUSLY.

3. Communication from the Public: Email was read from a board member of the Indian Point Home Owners Association, regarding the landscaping in back of the library that backs the Indian Point neighborhood.

4. Director's report - **Library Statistics**:

- Circulation and library usage.
    - March 2021 circulation increased by 670 checkouts compared to February 2021..
    - Library Patrons saved $28,980 in March by borrowing materials from the library versus purchasing them (does not include digital ebook/audiobook downloads or hotspot loans).
    - 25 puzzles were borrowed from the puzzle exchange
    - 25 passport applications were processed
    - 6 Notary appointments
    - 7 Adventure Passes were used saving patrons $298.
- Third Quarter Statistics
    - Circulation increased by 370 checkouts compared to 2nd quarter
    - Visitors to the library increased by 136 compared to 2nd quarter
- March 16, 2020-March 15, 2021 Statistics (One year with COVID-19)
    - Circulated nearly 23,500 items
    - Offered 225 online programs for adults
    - 1,885 individuals attended online adult programs
    - Offered 142 online programs for youth
    - 4,928 individuals attended online youth programs
    - 345 individuals participated in our online summer reading programs
    - 4 library staff became certified passport acceptance agents

What's New:.

- The library pergola and furniture were assembled and installed by public works on March 22.
- This is National Library Week. We are giving out treats each day.
- Wednesday is National Library Giving Day. We are participating in this in an effort to increase individual donations.
- A joint fundraising letter for the library and parks & recreation department was mailed to local businesses last month. To date the library has received $900 in donations.
- The Friends of the Library Polk City Nutrition fundraiser raised nearly $450 for the outdoor furniture.
- The new website has not yet gone live as we are waiting on some editing permissions.

- The Institute of Museum and Library Services received an increase in federal funding with the recent passage of the American Rescue Plan Act of 2021. IMLS received $200 million dollars with $178 million of that going to state library agencies. Each state will receive at least $2 million dollars.
- The State Library of Iowa conducted a survey of Iowa libraries and the services they are currently providing.
    - 74% of Iowa libraries require patrons to wear a mask while in the library.
    - Over 90% of libraries are open for in building browsing and computer use.
    - 51.7% of libraries plan to continue offering virtual programming
- The city is exploring options for VOIP phone service in all departments. This would provide a cost savings of approximately $100 per month for the library.

Upcoming Programs

April	Spring Craft Kits (Ages K-5)
April	STEM Egg Shell Planters (Ages K-5)
April	K-2, 3-5 and 6th & up Book Clubs
April	Monday Story Times & Busy Bees (Ages PK-5)
April	Faux Succulent Crafts (Tween/Teen)
April 7	Book Club
April 8	The Forgotten Generation-American Children and WWII with Dr. Lisa Payne Ossian
April 14	Friends of the Library Meeting
April 22	DIY Eco-Friendly Bead Bracelets

5. Liaison report – Ron talked about a couple of grants that the city may be receiving. He also mentioned that the city will be getting a new Mexican restaurant, where P&M apparel was.
6. Board Education – Lisa Mart 6:46pm – 6:55pm – 9 minutes – Chapters 3 & 6 of Trustee Handbook
7. Agenda Items
    - Review Tier Standards Section 4: Library Collections -Jamie reviewed the standard – no action taken.
    - Review Dress Code Policy-No changes recommended at this time. No action taken.
    - Approve Bridges Renewal for 2021-2022. Rod Bergern moved to approve the Bridges Renewal for 2021-2022, Corey Hoodjer seconded, MOTION PASSED UNANIMOUSLY
    - Select personnel committee to conduct Director Evaluation – Lisa asked for volunteers, Sara Olson and Corey Hoodjer volunteered.
    - Discuss city manager recommendation for FY22 Director Salary – Lisa shared that the city has budged more than normal for Jamie's increase to get her more equal to other managers at the city.
    - Accept gift of outdoor furniture valued at $870 from the Friends of the Polk City Library. Corey Hoodjer moved and Rod Bergren accepted, MOTION PASSED UNANIMOUSLY.
    - Determine next Board Education topic and presenter: Corey Hoodjer will present in June.
8. Adjourn – meeting adjourned at 7:12pm.
   MOTION: A motion was made by Sara Olson and seconded by Corey Hoodjer to approve adjourning the meeting. MOTION PASSED UNANIMOUSLY.

Next Meeting May 3rd, 2021 at 6:30 PM

Mission Statement: The Polk City Community Library provides a place where all can meet, learn, and grow.

Library Director's Report
April 2021

Library Statistics:

- Circulation and library usage.
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April 22	DIY Eco-Friendly Bead Bracelets

Library Director's Report
May 2021

Library Statistics:

- Circulation and library usage.
    - April 2021 circulation increased by 130checkouts compared to March 2021 and by 512 compared to April 2020.
    - Library Patrons saved $31,664 in April by borrowing materials from the library versus purchasing them (does not include digital ebook/audiobook downloads or hotspot loans).
    - 1.005 individuals visited the library in April.
    - 12 puzzles were borrowed from the puzzle exchange
    - 20 passport applications were processed
    - 0 Notary appointments
    - 6 Adventure Passes were used saving patrons $254.

What's New:.

- The library opened to the public without appointments on April 5.
- The library raised $930 on National Library Giving Day. $1130 was pledged; $930 collected.
- A joint fundraising letter for the library and parks & recreation department was mailed to local businesses last month. To date the library has received $1,900 in donations. Sponsors will receive a window clings for their business indicating their support of the library.
- The city received CARES money as part of pandemic relief. The money was distributed to the city departments in the amount of $23,500 which we have to spend by the end of the fiscal year. We are looking at storage options, staff desks,new staff computers, Ancestry.com, etc.
- The new website has not yet gone live as we are waiting on some editing permissions.
- May is quiet program-wise so that we can finish preparing for summer.
- We are having trouble with our wireless router and are looking for the best option for replacing it and boosting its range within the library.
- We are recruiting our teen summer reading program volunteers
- We will have a summer reading registration kick-off at the May 27 farmer's market.
- We have created a summer reading program promotional video that will be shared with both elementary schools and we are sending them bookmarks with the programs listed to give to students
- The library will be sponsoring a Kids' Craft Table at the Concerts on the Course this summer. Polk City Women are going to help staff the tables.
- The Friends of the Library are going to have several events this summer
    - Round-up Fundraiser at Fareway May 24-29
    - free activity at the Police Night Out event on June 25
    - Papa's Pizzeria/Fender's Fundraiser on July 10
    - Pop Toss Fundraiser at the Four Seasons Mini-Fest on July 17
-

<u>Upcoming Programs</u>

May 5	Wednesday Book Club 7:00
May 6	Plant. Grow. Fly Zoom program with Blank Park Zoo 7:00
May 11	6th & up Book Clubs 4:00
May 13	Adult DIY: Washi Tape jars
May 18	K-2 Book Club 4:00
May 25	3rd-5th Book Club 4:00
May 27	Summer Reading Kickoff at Farmers Market 4-7

RESOLUTION NO. 2021-03L

A RESOLUTION AUTHORIZING THE SALE, DONATION OR DISPOSAL OF PODIUM, FUTON, TABLE, & LAMP

WHEREAS, the Polk City Community Library has identified one wooden podium, one futon with cushion, one end table and one lamp as no longer function or are obsolete, more particularly described in the list attached hereto as Exhibit "A"; and

WHEREAS, the Board of Trustees for the Polk City Community Library finds that it is in the best public interest to dispose of the non-functioning or obsolete items that are of no further use to the Polk City Community Library through sale, donation or destruction.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Trustees for the Polk City Community Library in Polk City, Iowa, that the Polk City Community Library is hereby authorized to proceed with the appropriate disposal of the items through sale, donation or destruction.

DATED this 3rd day of May 2021.

Lisa Mart, Board President

ATTEST:

Jamie Noack, Library Director

EXHIBIT "A"

Wooden Podium	Serial# NA
Metal Futon w/cushion	Serial # NA
Wooden End Table	Serial # NA
Table Lamp	Serial # NA

May 6, 2021

Honorable Mayor and City Council
City of Polk City
112 S. 3rd Street
Polk City, Iowa

RE: CREEKVIEW ESTATES PLAT 1 - ACCEPTANCE OF PUBLIC IMPROVEMENTS
PROJECT NO:. 119.0842.01

Dear Honorable Mayor and City Council:

The public improvements associated with the above referenced plat have been completed in substantial conformance with the approved construction documents, including being subject to a rideability test as conducted by the Polk City Police Department to ensure smoothness in all directions of travel. The developer has provided the as-built record drawings, certified by Civil Design Advantage, including as-built elevations along swale flow lines in conformance with the City requirements. In addition, the developer's land surveyor has certified that the pins have been set at all property corners.

Legacy Excavation, LLC. has provided a 4-year maintenance bond in the amount of $785,184.02 for public storm sewer, public sanitary sewer, public water main, services and appurtenances within the plat boundary of Creekview Estates Plat 1. Legacy Excavation, LLC. has also provided a 4-year maintenance bond in the amount of $107,095.00 for public water main installed along the south side of NW Hugg Drive. Alliance Construction Group, LLC. has provided a 4-year maintenance bond for reinforced PCC pavement, sidewalk ramps, detectable warning panels, and sidewalks in the amount of $376,858.75. The date of Council acceptance, anticipated to be May 10, 2021, will be the start date for these bonds, which are retained in the City Clerk's files.

We recommend acceptance of the public improvements associated with Creekview Estates Plat 1 and the City Manager be authorized to return the developer's check in the amount of $16,425.00 for completion of the punchlist. Further, we recommend the City Manager be authorized to return the developer's check in the amount of $6,500.00 after grass is established.

Please contact me should you have any questions. We will be in attendance at the May 10, 2021, City Council meeting to answer any questions regarding the acceptance of these public improvements.

Sincerely,

SNYDER & ASSOCIATES, INC.

John W. Haldeman

John W. Haldeman, P.E.

cc: Chelsea Huisman, City of Polk City
Mike Schulte, City of Polk City
Kathleen Connor, Snyder & Associates, Inc.
John Larson, North Polk Development

RESOLUTION NO. 2021-37

A RESOLUTION ACCEPTING THE PUBLIC IMPROVEMENTS FOR CREEKVIEW ESTATES PLAT 1

WHEREAS, the Developer, North Polk Development, LLC, has completed the Public Improvements, including punchlist items, installed in connection therewith Creekview Estates Plat 1 with the exception of grass being established; and

WHEREAS, on October 26, 2020, the developer signed an Agreement to Complete and provided a Certified Check in the amount of $16,425 to cover the cost of completing the punchlist dated October 16, 2020, said check to be returned to the developer when the public improvements are accepted; and

WHEREAS, the developer provided a Certified Check in the amount of $6,500 to cover the cost of establishing seeding, said check to be returned by the City Manager once grass is established and the developer has paid all fees; and

WHEREAS, Legacy Excavation, LLC has provided a 4-year maintenance bond in the amount of $785,184.02 for the public improvements associated with Sanitary Sewer, Water and storm Sewer; and

WHEREAS, Legacy Excavation, LLC has provided a 4-year maintenance bond in the amount of $107,095 for the public improvements associated with Water Main Improvements on NW Hugg Drive; and

WHEREAS, Alliance Construction Group, LLC. has provided a 4-year maintenance bond in the amount of $376,858.75 for the paving improvements; and

WHEREAS, the start date for the maintenance period for each of the aforementioned bonds will begin on the date of Council approval of this Resolution; and

WHEREAS, Civil Design Advantage has provided Record Drawings showing the as-built location of all improvements and certification of a Land Surveyor that all property corner monuments are in place as indicated on the final plat; and

WHEREAS, Civil Design Advantage has certified the plans are in compliance of Polk City's Subdivision Regulations and the Statewide Urban Design and Specifications; and

WHEREAS, the City Engineer has reviewed said public improvements and finds them to be satisfactorily completed and recommends acceptance of said public improvements.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa that the Public Improvements completed by the Developer North Polk Development, LLC and certified by the Developer's Engineer Civil Design Advantage in connection with Creekview Estates Plat 1 are hereby accepted.

BE IT FURTHER RESOLVED, the City Clerk/Treasurer is hereby directed to return the security check in the amount of $16,425 to the Developer.

BE IT FURTHER RESOLVED, the City Manager is hereby authorized to return the security check in the amount of $6,500 to the Developer once grass is established.

PASSED AND APPROVED the 10th day May 2021.

_____
Jason Morse, Mayor

ATTEST:

_____
Jenny Gibbons, City Clerk

RESOLUTION NO. 2021-38

A RESOLUTION APPROVING THE CONSTRUCTION DRAWINGS FOR PUBLIC IMPROVEMENTS FOR LEDGESTONE RIDGE

WHEREAS, Shive-Hattery, on behalf of MJR Development, LLC, has submitted the Construction Drawings for Public Improvements associated with Ledgestone Ridge, including but not limited to grading, street paving, assessable sidewalk ramps along with associated storm sewers, sanitary sewers, water main and services; and

WHEREAS, said Construction Drawings appear to be in general conformance with Polk City's Subdivision Regulations, SUDAS and the approved Preliminary Plat for Bridgeview Plat 2; and

WHEREAS, it shall be the Developer's responsibility to obtain a Private Storm Sewer Easement from the abutting property owner for construction and maintenance of a private storm sewer on their property; and

WHEREAS, it shall be the Developer's responsibility to obtain approval for all necessary permits including the Iowa DNR permits for water main and sanitary sewer construction, and the NPDES Storm Water Discharge permit; and

WHEREAS, the Developer's Engineer remains solely responsible for their design and ensuring it is fully compliant with all applicable code and permit requirements; and

WHEREAS, the Developer's Engineer is also responsible for construction staking and ensuring all locations, grades and slopes are in conformance with said standards and the approved construction drawings; and

WHEREAS, the City Engineer has reviewed said Construction Drawings for Public Improvements and recommended their approval subject to all outstanding engineering comments being satisfactorily addressed.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa hereby accepts the recommendations of the City Engineer and hereby approves the Construction Drawings for the Public Improvements associated with Ledgestone Ridge provided that no grading or construction shall begin until the Developer has provided a copy of the Private Storm Sewer signed by the abutting property owner, to the City Clerk for recordation.

PASSED AND APPROVED the 10th day May 2021.

_____
Jason Morse, Mayor

ATTEST:

_____
Jenny Gibbons, City Clerk

May 6, 2021

Honorable Mayor and City Council
City of Polk City
112 3rd Street
Polk City, Iowa 50226

RE: LEDGESTONE RIDGE PUBLIC IMPROVEMENTS
APPROVAL OF CONSTRUCTION DRAWINGS
PROJECT NO.: 121.0204.01

Dear Honorable Mayor and City Council:

On behalf of MJR Developments, LLC, Shive-Hattery, Inc. has submitted the construction drawings for the above referenced plat. These plans represent construction of the public improvements for 32 bi-attached lots. The plans cover the construction of Ledgestone Court, along with the sanitary sewers, storm sewers, water main and associated services.

The construction drawings and Storm Water Management Plan appear to be in general conformance to the Subdivision Regulations, SUDAS and the approved Preliminary Plat. Shive-Hattery, Inc. remains solely responsible for their design and ensuring it is fully compliant with all applicable code and permit requirements. Shive-Hattery, Inc. is also responsible for construction staking and ensuring all locations, grades and slopes are in conformance with the approved construction drawings.

We recommend approval of the construction drawings for the Ledgestone Ridge Public Improvements. However, construction will not be permitted until the adjacent property owner has signed the off-site drainage easement. It shall be the developer's responsibility to obtain approval for all necessary permits prior to the start of applicable construction items. These permits include, but are not limited to the Iowa DNR permits for water main and sanitary sewer construction, and the NPDES Storm Water Discharge permit.

Please contact me should you have any questions. We will be in attendance at the May 10, 2021, City Council meeting to answer any questions regarding the acceptance of these public improvements.

Respectfully submitted,

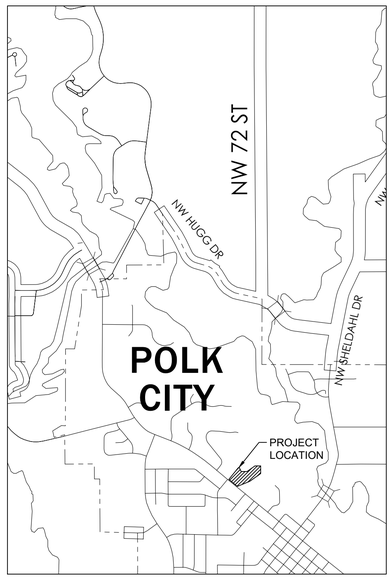
SNYDER & ASSOCIATES, INC.

John W. Haldeman, P.E.

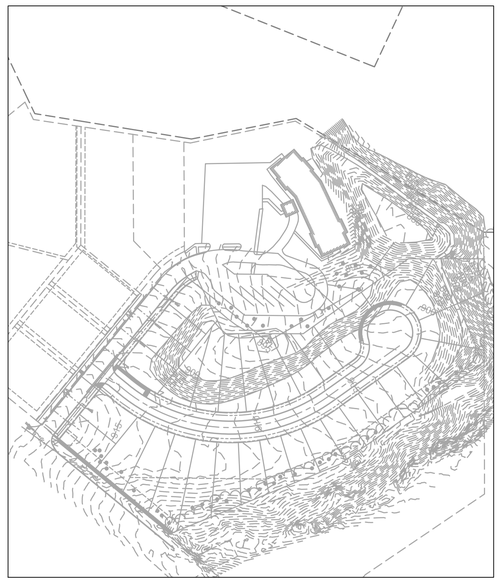
CC: Chelsea Huisman, City of Polk City
Mike Schulte, City of Polk City
Jarrod Ruckle, MJR Developments, LLC.
Chris Bauer, P.E., Shive-Hattery, Inc.

LEDGESTONE RIDGE PUBLIC IMPROVEMENTS
PUBLIC IMPROVEMENTS

W BROADWAY ST, POLK CITY, IOWA



VICINITY MAP
1" = 2000'



PROJECT MAP
1" = 150'

DEVELOPER

MJR DEVELOPMENTS LLC
ATTN: JARROD RUCKLE
1425 NW HUGG DRIVE
POLK CITY, IOWA 50226
EMAIL: JARROD@MJRIOWA.COM
PHONE: 515-419-2462

PROPERTY OWNER

MJR DEVELOPMENTS LLC
ATTN: JARROD RUCKLE
1425 NW HUGG DRIVE
POLK CITY, IOWA 50226
EMAIL: JARROD@MJRIOWA.COM
PHONE: 515-419-2462

ENGINEER

SHIVE-HATTERY, INC.
ATTN: KELSEY SCALLON
4125 WESTOWN PARKWAY, SUITE 100
WEST DES MOINES, IA 50266
EMAIL: KSCALLON@SHIVE-HATTERY.COM
PHONE: 515-223-8104

BENCHMARKS

446.46' S OF NW CORNER OF PARCEL 'B', MAG NAIL AT PC OF CENTERLINE CURVE
ELEVATION = 934.93 (NAVD 88)

NOTE:
ALL REQUIRED TEMPORARY CONSTRUCTION EASEMENTS, AND PERMANENT UTILITY EASEMENTS SHALL BE PROVIDED TO THE CITY PRIOR TO THE CONSTRUCTION OF SAID PUBLIC IMPROVEMENTS.

LEGEND:

EXISTING	DESCRIPTION	PROPOSED
	STORM STRUCTURES	
	FLARED END SECTION	
	STORM SEWER	
	STORM SERVICE	
S	SANITARY MANHOLE	S
	SANITARY SEWER	
	SANITARY SERVICE	
W	WATER MAIN	
	WATER SERVICE	
	WATER VALVE	
	FIRE HYDRANT ASSEMBLY	
OE	OVERHEAD ELECTRIC	
	PROPERTY LINE	
	EASEMENT LINE	
850	MAJOR CONTOUR	850
849	MINOR CONTOUR	849
	BASE FLOOD ELEVATION	BFE
	MINIMUM OPENING ELEVATION	MOE

PUBLIC IMPROVEMENT CONSTRUCTION SCHEDULE (PLAT 1 & PLAT 2)

PUBLIC IMPROVEMENTS & GRADING	- SPRING/SUMMER/FALL 2021
TELEPHONE, CABLE, AND OTHER UTILITIES	- FALL 2021

NO.	REVISION	
1	CITY SUBMITTAL #1	03/05/2021
2	CITY SUBMITTAL #2	04/12/2021
3	CITY SUBMITTAL #3	04/23/2021

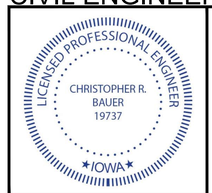
Sheet List Table

Sheet Number	Sheet Title
C000	COVER SHEET
C001	GENERAL INFORMATION
C002	ESTIMATE QUANTITIES AND TYPICAL SECTIONS
C101	ROADWAY PLAN & PROFILE
C121	JOINTING PLAN
C122	JOINTING PLAN
C123	JOINTING PLAN
C201	GRADING PLAN
C250	EROSION AND SEDIMENT CONTROL PLAN - PRE - CONSTRUCTION
C251	EROSION AND SEDIMENT CONTROL PLAN - POST - CONSTRUCTION
C252	EROSION AND SEDIMENT NOTES AND DETAILS
C301	SANITARY SEWER PLAN & PROFILE
C302	SANITARY SEWER PLAN & PROFILE
C303	SANITARY SEWER PLAN & PROFILE
C304	STORM SEWER PLAN & PROFILE
C305	STORM SEWER PLAN & PROFILE
C306	STORM SEWER PLAN & PROFILE
C307	STORM SEWER PLAN & PROFILE
C308	WATER PLAN & PROFILE
C309	WATER PLAN & PROFILE
C310	WATER PLAN & PROFILE
C311	WATER PLAN & PROFILE
C312	FIRE HYDRANT COVERAGE MAP
C501	CONSTRUCTION DETAILS
C502	CONSTRUCTION DETAILS
L101	LANDSCAPE PLAN

THE 2021 EDITION OF THE IOWA STATEWIDE URBAN DESIGN SPECIFICATIONS FOR PUBLIC IMPROVEMENTS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.

CITY APPROVAL

CIVIL ENGINEER



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Signature: 05/06/2021 Date

Printed or typed name: CHRISTOPHER R. BAUER
License Number: 19737
My License Renewal Date is: DECEMBER 31, 2021

PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL:
ALL SHEETS

SHIVEHATTERY
ARCHITECTURE+ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.8104 | www.shive-hattery.com
Iowa | Illinois | Indiana | Nebraska

LEDGESTONE RIDGE
PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC
POLK CITY, IOWA

04/23/2021
SUBMITTAL 03
PROJECT NO: 4211030
CLIENT NO: ---

C000

GENERAL NOTES:

1. ONE WEEK PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY:
   - 1.1. SNYDER & ASSOCIATES
   - 1.2. CITY OF POLK CITY
   - 1.3. DEVELOPER
   - 1.4. ENGINEER
   - 1.5. IOWA ONE-CALL
2. THE CONTRACTOR SHALL NOTIFY THE POLK CITY PUBLIC WORKS DIRECTOR AND SNYDER & ASSOCIATES PRIOR TO COMMENCING CONSTRUCTION AND PRIOR TO UTILITY CONSTRUCTION, SUBGRADE PREPARATION, MAIN LINE PAVING, AND BOX-OUT PAVING.
3. ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, CURRENT AT THE COMMENCEMENT OF CONSTRUCTION.
4. THE CONTRACTOR, DEVELOPER, AND DEVELOPER'S ENGINEER SHALL ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY AND SNYDER & ASSOCIATES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. ALL IOWA DNR AND IOWA DOT PERMITS SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING THE NECESSARY NPDES STORM WATER DISCHARGE PERMIT AND FOR MAINTAINING EROSION CONTROL MEASURES IN CONFORMANCE WITH THE SWPPP.
6. THE CONTRACTOR SHALL PROVIDE ALL SHOP DRAWINGS AND MATERIALS SUBMITTALS TO THE DEVELOPER'S ENGINEER FOR REVIEW AND APPROVAL. THE DEVELOPER'S ENGINEER THEN SHALL PROVIDE TO SNYDER & ASSOCIATES PRIOR TO THE PRE-CONSTRUCTION CONFERENCE. MATERIAL SUBMITTALS SHALL INCLUDE MANUFACTURER'S CUT SHEETS, OR SIMILAR, OF PIPE MATERIALS FOR ALL UTILITIES AND UTILITY SERVICE LINES; FIRE HYRANTS, VALVES, CURB STOPS, SUBDRAIN PIPE MATERIALS, CLEAN-OUTS, APRON GUARDS, CONCRETE MIX, MATURITY CURVES, OR OTHER ACCEPTABLE TESTING. SHOP DRAWINGS SHALL INCLUDE MANHOLES, INTAKES, BOX CULVERTS, FENCING/GUARD RAILS, AND OTHER SPECIALTY ITEMS.
7. THE DEVELOPER'S ENGINEER SHALL IMMEDIATELY NOTIFY SNYDER & ASSOCIATES AND THE CONSTRUCTION OBSERVER IF FIELD CONDITIONS DO NOT MATCH THE APPROVED CONSTRUCTION DRAWINGS. THESE CONDITIONS MAY INCLUDE, BUT ARE NOT LIMITED TO, STAKING DISCREPANCIES OF MORE THAN 0.2' VERTICAL OR 1.0' HORIZONTAL, DISCOVERY OF PIPES AND/OR FIELD TILES NOT SHOWN ON PLANS, ELEMENTS SHOWN ON PLANS THAT ARE MISSING IN THE FIELD, OR OTHER DISCREPANCIES BETWEEN THE APPROVED PLANS AND FIELD CONDITIONS.
8. THE CONTRACTOR SHALL VERIFY THE LOCATION AND PROTECT ALL EXISTING UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CITY AND THE OWNER.
9. THE CONTRACTOR SHALL CONDUCT CLEAN-UP OPERATIONS ON EXISTING STREETS AND ADJACENT PRIVATE PROPERTY AT THE END OF EACH WORKING DAY OR MORE OFTEN AS DIRECTED BY THE CITY.
10. THE CONTRACTOR SHALL PROVIDE 4-YEAR MAINTENANCE BONDS, IN AN AMOUNT EQUAL TO THE COST OF CONSTRUCTION, FOR THE PAVING AND FOR WATER MAINS, SANITARY SEWERS, STORM SEWERS, INCLUDING ALL UTILITY SERVICES. THE MAINTENANCE BONDS SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE AS-BUILT LOCATION OF ALL SANITARY SEWER, SUMP AND WATER MAIN SERVICES. A TABLE DIMENSIONING THE DISTANCE FROM THE NEAREST PROPERTY CORNER TO EACH SERVICE SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
13. THE DEVELOPER'S ENGINEER SHALL PROVIDE AS-BUILT MYLARS, CAD FILES IN ELECTRONIC FORMAT, AND PDF FILES OF THE FULL RECORD DRAWING SET TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. RECORD DRAWINGS SHALL INCLUDE FLOW LINE ELEVATIONS OF ALL SWALES AT EACH PROPERTY LINE PER CITY CODE.
14. THE DEVELOPER'S SURVEYOR SHALL PROVIDE A STATEMENT TO THE CITY ENGINEER CERTIFYING THAT ALL PROPERTY CORNERS HAVE BEEN SET PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
15. THE LOCATIONS OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS PLOTTED ON THE DRAWINGS ARE APPROXIMATE ONLY AND WERE OBTAINED FROM RECORDS MADE AVAILABLE TO SHIVE-HATTERY, INC. THERE MAY BE OTHER EXISTING UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS NOT KNOWN TO SHIVE-HATTERY, INC. AND NOT SHOWN ON THIS DRAWING. THE UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR.
16. THE MEANS OF THE WORK AND THE SAFETY OF THE CONTRACTOR'S EMPLOYEES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
17. NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION FROM THE OWNER'S REPRESENTATIVE.
18. HANDICAP RAMPS, IF ANY, FOR DESIGNATED BIKE TRAILS SHALL HAVE BRICK RED TRUNCATED DOMES; ALL OTHER HANDICAP RAMPS SHALL BE CHARCOAL GRAY TRUNCATED DOMES FOR DETECTABLE WARNINGS.
19. THE DEVELOPER SHALL BE RESPONSIBLE FOR REIMBURSING THE CITY OF POLK CITY FOR MATERIAL COSTS FOR ALL STREET SIGNS WITHIN THIS PLAT.
20. MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.
21. ALL OPEN EXCAVATIONS SHALL BE PROTECTED.
22. ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THE COMPLETION OF THIS WORK.
23. WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSE, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY SHIVE-HATTERY, INC. AT THE CONTRACTOR'S EXPENSE. WORK DONE CONTRARY TO THE INSTRUCTIONS OF SHIVE-HATTERY, INC., WORK DONE BEYOND THE LINES SHOWN ON THE PLANS OR ANY EXTRA WORK DONE WITHOUT AUTHORITY WILL NOT BE PAID FOR.
24. STAGING LOCATION FOR CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER.
25. ALL AREAS DISTURBED BY CONSTRUCTION, NOT DESIGNATED AS PLANTED, SHALL BE SODDED OR SEEDED. REFER TO PLANS.
26. NOTIFY UTILITY COMPANIES WHO HAVE FACILITIES THAT ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS OF THE SCHEDULE PRIOR TO EACH STAGE OF CONSTRUCTION.
27. CONTROL DUST SPREADING FROM ALL WORK AND STAGING AREAS.
28. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.

GRADING/BACKFILL NOTES:

1. RECONNECT ANY FIELD TILE THAT ARE INTERCEPTED DURING UTILITY CONSTRUCTION.
2. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE PROPER UTILITY IMMEDIATELY UPON DAMAGING ANY UTILITY LINE OR APPURTENANCE, OR IF THERE IS ANY INTERRUPTION OF THEIR SERVICE. IF EXISTING UTILITY LINES ARE ENCOUNTER THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED AND APPROVED BY CITY.
3. STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT.
4. STOCKPILE SUFFICIENT TOPSOIL TO RESPREAD TO MINIMUM DEPTH OF 4-INCHES ON UNPAVED AREAS, INCLUDING FRONT, REAR, AND SIDE YARDS OF ALL LOTS.
5. ALL AREAS TO RECEIVE FILL ARE TO BE BENCHED. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO A DEPTH OF 6-INCHES.
6. ALL SITE GRADING FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95% STANDARD PROCTOR DENSITY.
7. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL FALL WITH IN A RANGE OF OPTIMUM MOISTURE TO 4% ABOVE OPTIMUM MOISTURE.
8. THE CONTRACTOR SHALL PROTECT AND BACKFILL AROUND UNDERGROUND UTILITIES. BACKFILL SHALL BE IN 6-INCH LIFTS, COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
10. FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.
11. A MINIMUM OF ONE FOOT OF COMPACTED COHESIVE SUBGRADE SHALL BE PROVIDED BENEATH ALL PAVEMENTS.
12. ALL SLOPES WITHIN PUBLIC EASEMENTS, RIGHT-OF-WAY, PARKS, OR LAND TO BE PUBLICLY OWNED SHALL BE GRADED TO A 4:1 MAXIMUM SLOPE.
13. ALL SLOPES ON PRIVATE PROPERTY SHALL BE 4:1 MAXIMUM, UNLESS THE SPECIFIC LOCATION(S) HAVE BEEN LABELED AS 3:1 MAXIMUM.
14. ALL EXISTING ROADSIDE DITCHES SHALL BE GRADED TO DRAIN.
15. ALL SWALES WITHIN DRAINAGE OR SURFACE WATER FLOWAGE EASEMENTS SHALL BE GRADED TO A 2% MINIMUM SLOPE, MEASURED ALONG THE FLOWLINE OF SAID SWALE. IF THE AS-BUILT CONDITION OF ANY SWALE HAS LESS THAN 2% MINIMUM SLOPE, A 6" SUBDRAIN WILL BE REQUIRED. THE SUBDRAIN SHALL HAVE CLEAN-OUTS LOCATED NEAR PROPERTY LINES WHERE POSSIBLE, BUT IN NO CASE HAVING A SPACING GREATER THAN 200 FEET.
16. HYDRANTS, MANHOLE COVERS, AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED PAVEMENT ELEVATIONS.
17. EXISTING TREES SHALL BE SAVED TO THE EXTENT POSSIBLE TO ACCOMMODATE GRADING, UTILITY AND STREET CONSTRUCTION.
18. EXISTING TREES SHALL BE REMOVED FROM EXISTING AND PROPOSED PUBLIC RIGHT-OF-WAY UNLESS THE PUBLIC WORKS DIRECTOR PROVIDES SPECIFIC APPROVAL TO MAINTAIN CERTAIN TREES WITHIN SAID RIGHT-OF-WAY.
19. CONTRACTOR SHALL OBTAIN A GRADING PERMIT PRIOR TO COMMENCING CONSTRUCTION.
20. THE GEOTECHNICAL ENGINEER SHALL BE PRESENT FOR ALL SUBGRADE PREPARATION OPERATIONS TO DETERMINE APPROPRIATE SUBGRADE STABILIZATION MEASURES TO BE USED PRIOR TO PAVING OPERATIONS

PAVING NOTES:

1. THE CONTRACTOR SHALL ATTEND A PRE-POUR MEETING WITH THE CITY AND SNYDER & ASSOCIATES PRIOR TO COMMENCING PAVING OPERATIONS. NO PAVING OPERATIONS SHALL BEGIN UNTIL CONTRACTOR HAS RECEIVED AUTHORIZATION FROM SNYDER & ASSOCIATES.
2. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL TEST RESULTS, INCLUDING BUT NOT LIMITED TO COMPACTION TEST MAP, STORM SEWER AND SANITARY SEWER TELEVISING, TO SNYDER & ASSOCIATES FOR REVIEW PRIOR TO REQUESTING THE PRE-POUR MEETING.
3. ALL ELEVATIONS ARE PROPOSED FINISHED GRADE AT TOP OF CURB UNLESS OTHERWISE NOTED.
4. PAVEMENTS SHALL BE 6" CONTINUOUSLY-REINFORCED PCC PAVEMENT, UNLESS OTHERWISE NOTED ON THE PLANS.
5. ALL REINFORCING SHALL BE EPOXY-COATED REINFORCING STEEL.
6. ALL STREETS SHALL HAVE 6" INTEGRAL CURBS.
7. PROVIDE CURB DROPS FOR SIDEWALKS AT INTERSECTIONS.
8. CONSTRUCTION OF HANDICAPPED ACCESSIBLE RAMPS, WITH DETECTIBLE WARNINGS AND INCLUDING COMMON SQUARE, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.
9. CONSTRUCTION OF 4-FT SIDEWALK SHALL BE THE RESPONSIBILITY OF THE HOMEOWNER UNLESS OTHERWISE NOTED IN THE PLANS.

STORM SEWER NOTES:

1. PROVIDE SUBDRAIN BEHIND BACK OF CURB ON BOTH SIDES FOR ALL PUBLIC STREETS. ANY SUBDRAIN CROSSING UNDER THE PAVEMENT SHALL BE RCP PIPE.
2. ADDITIONAL RIP-RAP MAY BE REQUIRED AT ANY FES BASED UPON FIELD REVIEW BY THE CITY OF POLK CITY.
3. ALL CURB INTAKES SHALL HAVE TYPE "R" VANE GRATES.
4. ALL INTAKES SHALL BE POURED-IN-PLACE CONCRETE OR PRECAST CONCRETE.
5. 12" AND LARGER STORM SEWERS SHALL BE RCP. WRAP PIPE JOINTS WITH ENGINEERING FABRIC.
6. 8-INCH FOOTING DRAINS TO BE PVC, SDR 35.
7. FOOTING DRAIN SERVICES TO BE 4-INCH PVC, SDR 35. EXTEND SERVICES 10' INSIDE LOT UNLESS OTHERWISE NOTED.
8. ALL INTAKES SHALL BE LOCATED A MINIMUM OF 7.5 FEET FROM END OF RETURNS.
9. CORE DRILL ALL CONNECTIONS TO EXISTING STRUCTURES.
10. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3'-6" COVER ON ALL STORM SEWER, INCLUDING SUMP SERVICES.
11. INSTALL CONTINUOUS PERFORATED SUBDRAIN IN LOCATIONS SHOWN ON ALL PLANS.
12. ALL SUBDRAIN, 6-INCHES OR SMALLER, SHALL HAVE CRITTER GUARDS.
13. ALL CLEAN-OUTS SHALL BE SET IN A 24" ROUND CONCRETE PAD.
14. FLARED END SECTIONS AND LAST 3 PIPE SECTIONS MUST BE TIED. ALL FLARED END SECTIONS SHALL HAVE 48-INCH FOOTINGS AND APRON GUARD.
15. THE CONTRACTOR SHALL JET CLEAN AND VACUUM ANY SECTION OF PIPE, FROM MANHOLE TO MANHOLE, WITH MUD OR DEBRIS MORE THAN 1" DEEP, ALONG WITH ANY DOWNSTREAM SEGMENTS AS REQUIRED DUE TO THIS CONSTRUCTION.
16. THE CONTRACTOR SHALL TELEVISE EVERY STORM SEWER LINE AND PROVIDE A COPY OF THE VIDEO IN DIGITAL FORMAT TO SNYDER & ASSOCIATES. USING A 500 GALLON TANK AND GARDEN HOSE, THE CONTRACTOR SHALL GRAVITY FLOW WATER DOWN THE PIPE JUST PRIOR TO TELEVISING SO DIPS AND SAGS CAN BE IDENTIFIED. THE CITY SHALL NOTIFY THE CONTRACTOR OF ANY NECESSARY REPAIRS AND/OR CLEANING REQUIRED PRIOR TO COMMENCING PAVING. THE SEGMENTS SHALL THEN BE RE-TELEVISED TO DEMONSTRATE PIPES ARE CLEAN. REPAIRS, IF NECESSARY, AND RE-TELEVISING SHALL BE AT THE CONTRACTORS EXPENSE.
17. ALL RCP STORM SEWER SHALL BE CLASS 3 (2000D) WITH R-2 BEDDING.
18. ALL LOTS WILL HAVE SUMP CONNECTIONS TO STORM SEWER MAIN AS SHOWN IN PLAN VIEW.
19. ALL CURB INTAKES, STORM SEWER PIPE RUNS, STRUCTURES, AND MANHOLES SHALL INCLUDE PLACEMENT AND COMPACTION OF A LAYER OF SPECIAL BACKFILL IN ACCORDANCE WITH POLK CITY CODE CHAPTER 170.08-9.C USING IOWA DOT APPROVED MATERIAL.

STANDARD DETAILS

STATEWIDE URBAN DESIGN AND SPECIFICATIONS

FIGURE	DATE	TITLE
3010.101	04-17-18	TRENCH BEDDING AND BACKFILL ZONES
3010.102	04-20-21	RIGID GRAVITY PIPE TRENCH BEDDING
3010.103	04-20-21	FLEXIBLE GRAVITY PIPE TRENCH BEDDING
3010.104	04-20-21	PRESSURE PIPE TRENCH BEDDING
4030.222	10-18-16	CIRCULAR CONCRETE APRONS
4030.224	10-18-16	CONCRETE PIPE APRON GUARD
5010.101	10-18-16	THRUST BLOCKS
5010.102	10-18-16	TRACER SYSTEM
5020.201	04-20-21	FIRE HYDRANT ASSEMBLY
6010.301	04-20-21	CIRCULAR SANITARY SEWER MANHOLE
6010.401	04-20-21	CIRCULAR STORM SEWER MANHOLE
6010.501	04-21-20	SINGLE GRATE INTAKE
6010.503	04-21-20	SINGLE GRATE INTAKE WITH MANHOLE
6010.505	04-21-20	DOUBLE GRATE INTAKE
6010.601	04-21-20	CASTINGS FOR SANITARY SEWER MANHOLES
6010.602	04-21-20	CASTINGS FOR STORM SEWER MANHOLES
6010.603	10-16-18	CASTINGS FOR GRATE INTAKES
6010.604	04-21-20	CASTINGS FOR AREA INTAKES
7010.905	10-19-10	PCC CUL-DE-SAC JOINTING LOCATIONS
9040.110	10-21-14	RIP RAP FOR PIPE OUTLET ONTO FLAT GROUND
9040.119	10-21-14	SILT FENCE

SANITARY SEWER NOTES:

1. ALL 8" SANITARY SEWER SHALL BE PVC PIPE WITH CLASS 'F-3' BEDDING UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. PROVIDE SANITARY SEWER SERVICE RISES AS REQUIRED.
3. THE CONTRACTOR SHALL INSTALL SEWER TAPE AT THE END OF EACH SANITARY SEWER SERVICE.
4. ALL INVERTS LOCATED AT AN ELEVATION ABOVE THE CENTERLINE OF THE EXISTING THROUGH PIPE AND LESS THAN 2.0' ABOVE THE MANHOLE FLOOR SHALL HAVE A POURED-IN-PLACE SLOPED INVERT.
5. ALL MANHOLES WITHIN PAVEMENT SHALL HAVE TYPE 'B' ADJUSTABLE CASTINGS. ALL MANHOLES NOT WITHIN PAVEMENT SHALL HAVE TYPE 'A' NON-ADJUSTABLE CASTINGS.
6. ALL MANHOLES SHALL HAVE I/I BARRIERS.
7. CORE DRILL ALL CONNECTIONS TO EXISTING MANHOLES AND PROVIDE SLOPE INVERT.
8. ALL 4" AND 6" SANITARY SEWER SERVICES SHALL BE SDR 23.5 IN ACCORDANCE WITH URBAN STANDARD SPECIFICATIONS. ALL SERVICE LINES SHALL BE EXTENDED 10' INSIDE LOT LINES UNLESS OTHERWISE NOTED ON PLANS.
9. ALL SERVICES AND 8-INCH STUB OUTS SHALL BE CAPPED.
10. MANHOLE STEPS ARE REQUIRED IN ALL SANITARY SEWER MANHOLES.
11. MANHOLE COVERS SHALL HAVE RAISED DIAMOND ROUGHNESS PATTERN.
12. THE CONTRACTOR SHALL JET CLEAN AND VACUUM ANY SECTION OF PIPE, FROM MANHOLE TO MANHOLE, WITH MUD OR DEBRIS MORE THAN 1" DEEP, ALONG WITH ANY DOWNSTREAM SEGMENTS AS REQUIRED DUE TO THIS CONSTRUCTION.
13. THE CONTRACTOR SHALL TELEVISE EVERY SANITARY SEWER LINE AND PROVIDE A COPY OF THE VIDEO FILE IN DIGITAL FORMAT TO SNYDER & ASSOCIATES. USING A 500 GALLON TANK AND GARDEN HOSE, THE CONTRACTOR SHALL GRAVITY FLOW WATER DOWN THE PIPE JUST PRIOR TO TELEVISING SO DIPS AND SAGS CAN BE IDENTIFIED. THE CITY SHALL NOTIFY THE CONTRACTOR OF ANY NECESSARY REPAIRS AND/OR CLEANING REQUIRED PRIOR TO COMMENCING PAVING. THE SEGMENTS SHALL THEN BE RE-TELEVISED TO DEMONSTRATE PIPES ARE CLEAN. REPAIRS, IF NECESSARY, AND RE-TELEVISING SHALL BE AT THE CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL SWEEP ALL JOINTS TO REMOVE ROCKS AND DEBRIS FROM THE ENDS OF PIPE PRIOR TO MAKING THE JOINT CONNECTION. REPAIRS, IF NECESSARY, DUE TO ROCKS AND/OR DEBRIS IN JOINT(S) SHALL BE AT THE CONTRACTOR'S EXPENSE.
15. SAGS IN PIPE SHALL NOT EXCEED TOLERANCES AS SPECIFIED BY SUDAS. REPAIRS, IF NECESSARY, AND RE-TELEVISING SHALL BE AT THE CONTRACTOR'S EXPENSE.
16. THE CONTRACTOR SHALL INSTALL $\frac{1}{2}$" X 12" REBAR 6" BELOW FINISHED GROUND TO LOCATE SERVICES. A TEMPORARY STEEL POST SHALL BE PLACED AT EACH LOCATION FOR AS-BUILTS.
17. THE CONTRACTOR IS RESPONSIBLE FOR RETESTING EXISTING SANITARY SEWER TO THE CLOSEST DOWNSTREAM STRUCTURE FOR ALL LINES THAT HAVE ADDED SERVICES.

WATER MAIN NOTES:

1. PIPE MATERIALS SHALL BE AWWA C900, CLASS 150 PVC.
2. INSTALL NO. 10 THIN STANDARD COPPER TRACER WIRE UNDER PIPE, BRING TRACER WIRE TO SURFACE AT HYDRANTS, TERMINATING IN RECEPTACLE BOX.
3. CONNECT NEW TRACER TO EXISTING USING APPROVED SPLICE KIT AND PROVIDE A GROUND ROD AT END OF TRACER WIRE FOR LOCATION AND EXTENSION IN FUTURE. THE CITY WILL TEST THE TRACER WIRE PRIOR TO ACCEPTANCE OF PLAT AND REPAIRS, IF ANY, SHALL BE AT THE CONTRACTOR'S EXPENSE.
4. HYDRANTS SHALL BE SET 3.5 FEET FROM THE WATER MAIN.
5. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY THAT FIRE HYDRANTS WILL NOT CONFLICT WITH SIDEWALK CONSTRUCTION.
6. HYDRANTS, MANHOLE COVERS AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED PAVEMENT ELEVATIONS.
7. HYDRANTS TO BE WATROUS PRODUCTS, OPEN LEFT, PAINTED YELLOW.
8. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.
9. SERVICES TO BE 1-INCH COPPER.
10. RISER RODS ARE REQUIRED AT ALL CURB STOPS.
11. STOP BOXES FOR 1" THROUGH 2" WATER SERVICE LINES SHALL INCLUDE A STAINLESS STEEL SELF-CENTERING ROD WITH STAINLESS STEEL COTTER PIN WITHIN A STOP BOX HOUSING. ALL STOP BOX INSTALLATIONS SHALL BE COMPLETED IN SUCH A MANNER THAT THE LID IS ALLOWED TO RAISE WITH THE FROST AND LOWER IF DRIVEN OVER WITHOUT DAMAGE TO CURB VALVE. FINISH GRADE OF THE LID SHALL BE LEVEL WITH THE SURROUNDING SURFACE AND DOES NOT PRESENT A HAZARD TO THE PUBLIC.
12. WATER MAIN TO HAVE 5 ½ FEET BURY, TYPICAL EXCEPT AT CRITICAL CROSSINGS.
13. ALL VALVES SHALL HAVE A VALVE BOX ADAPTER INSTALLED TO MAINTAIN ALIGNMENT.
14. THE CONTRACTOR SHALL REMOVE CHAINS ON ALL HYDRANTS.
15. THE CONTRACTOR SHALL WORK WITH THE CITY OF POLK CITY WATER DEPARTMENT AND SNYDER & ASSOCIATES WHEN OPERATING EXISTING VALVES. WATER SHALL NOT BE TURNED ON WITHOUT PRIOR APPROVAL OF THE CITY OF POLK CITY.
16. WATER CANNOT BE USED BY THE CONTRACTOR UNLESS IT IS PART OF THE PURIFICATION PROCESS OF THE NEW MAIN. WATER NEEDED FOR ANY REASON AFTER BACTERIA TESTING HAS BEEN COMPLETED AND PASSED WILL NEED PRIOR APPROVAL FROM THE CITY OF POLK CITY.
17. PROVIDE 2" BLOW-OFF AT THE TERMINAL END OF THE 8" WATER LINE UNLESS HYDRANT HAS BEEN PROVIDED.
18. WATER MAIN SHALL BE PRESSURE TESTED AND CHLORINATED WITH THE CONSTRUCTION OBSERVER PRESENT. RESULTS OF THE TEST SHALL BE PROVIDED TO PUBLIC WORKS. IF ANY TESTS DO NOT PASS, THE CONTRACTOR SHALL REIMBURSE THE CITY FOR THE COST OF THE WATER ASSOCIATED WITH RE-TESTING.
19. THE CONTRACTOR SHALL INSTALL ½" X 12" REBAR 6" BELOW FINISHED GROUND TO LOCATE SERVICES. A TEMPORARY STEEL POST SHALL BE PLACED AT EACH LOCATION FOR AS-BUILTS.
20. WATER VALVES SHALL BE SPACED AT A MAXIMUM SPACING OF 400 FEET.

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LEDGESTONE RIDGE
PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC

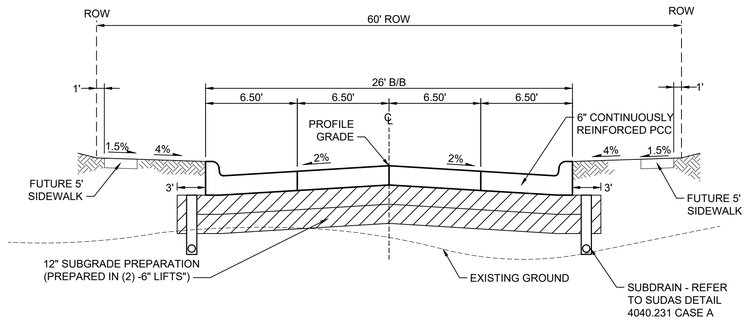
POLK CITY, IOWA

DRAWN: LCH
APPROVED: CRB
ISSUED FOR: SUBMITTAL 03
DATE: 04/23/2021
PROJECT NO.:4211030
FIELD BOOK: ---
CLIENT NO: ---

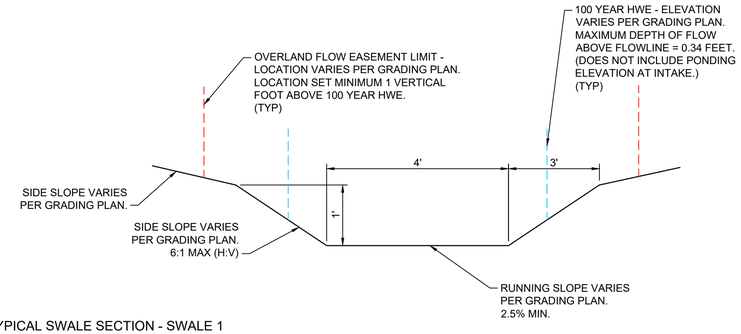
GENERAL INFORMATION

C001

ESTIMATED PROJECT QUANTITIES		
ITEM	UNIT	TOTAL
EARTHWORK AND PAVING		
TOPSOIL STRIP, SALVAGE, AND RESPREAD	CY	5700
SUBGRADE PREPARATION	SY	3000
EXCAVATION CLASS 10	CY	15000
REINFORCED PAVEMENT, PCC, 6 IN.	SY	2640
SIDEWALK, PCC, 5 IN.	SY	323
DETECTABLE WARNINGS	SF	40
STORM SEWER		
STORM SEWER, TRENCHED, PVC, 8 IN.	LF	140
STORM SEWER, TRENCHED, RCP, 15 IN.	LF	519
STORM SEWER, TRENCHED, RCP, 18 IN.	LF	200
STORM SEWER, TRENCHED, RCP, 24 IN.	LF	162
PIPE APRON, RCP, 15 IN.	EA	1
PIPE APRON, RCP, 18 IN.	EA	2
FOOTING FOR CONCRETE PIPE APRON	EA	3
PIPE APRON GUARD	EA	3
SUBDRAIN, LONGITUDINAL, 6 IN.	LF	1560
FOOTING DRAIN COLLECTOR, 4 IN.	LF	1618
SUBDRAIN CLEANOUT, TYPE A-2	EA	1
SUBDRAIN OUTLETS AND CONNECTIONS	EA	22
FOOTING DRAIN CONNECTIONS, INSERT-A-TEE	EA	32
MANHOLE, SW-401, 48 IN.	EA	2
INTAKE, SW-501	EA	5
INTAKE, SW-503	EA	4
INTAKE, SW-506	EA	1
INTAKE, SW-512, 24"	EA	2
RIP RAP, CLASS 'E'	TON	50
CONNECTION TO EXISTING MANHOLE	EA	1
SANITARY SEWER		
SANITARY SEWER, GRAVITY MAIN, TRENCHED, 8 IN.	LF	550
SANITARY SEWER MANHOLE, SW-301, 48"	EA	5
SANITARY SEWER SERVICE STUB, PVC, 4 IN.	LF	2750
SANITARY SEWER SERVICE WYE, PVC	EA	29
CONNECTION TO EXISTING MANHOLE	EA	1
WATER MAIN		
WATER MAIN, TRENCHED, PVC, 8 IN.	LF	835
WATER MAIN FITTINGS, PVC	EA	10
FIRE HYDRANT ASSEMBLY	EA	3
WATER MAIN SERVICE STU, COPPER, 1IN.	EA	32
CONNECTION TO EXISTING WATER MAIN	EA	2
GATE VALVE	EA	4



1 TYPICAL ROADWAY SECTION - LEDGESTONE CT
NOT TO SCALE



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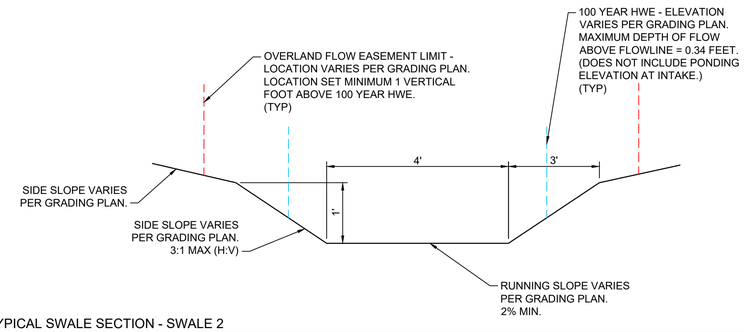

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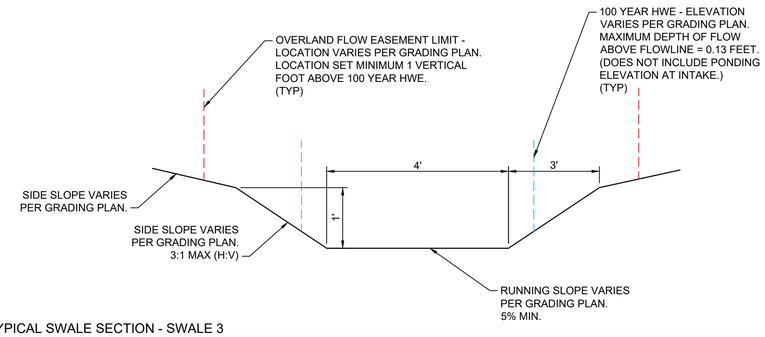

4 TYPICAL SWALE SECTION - SWALE 3
NOT TO SCALE

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LEDGESTONE RIDGE
PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC
POLK CITY, IOWA

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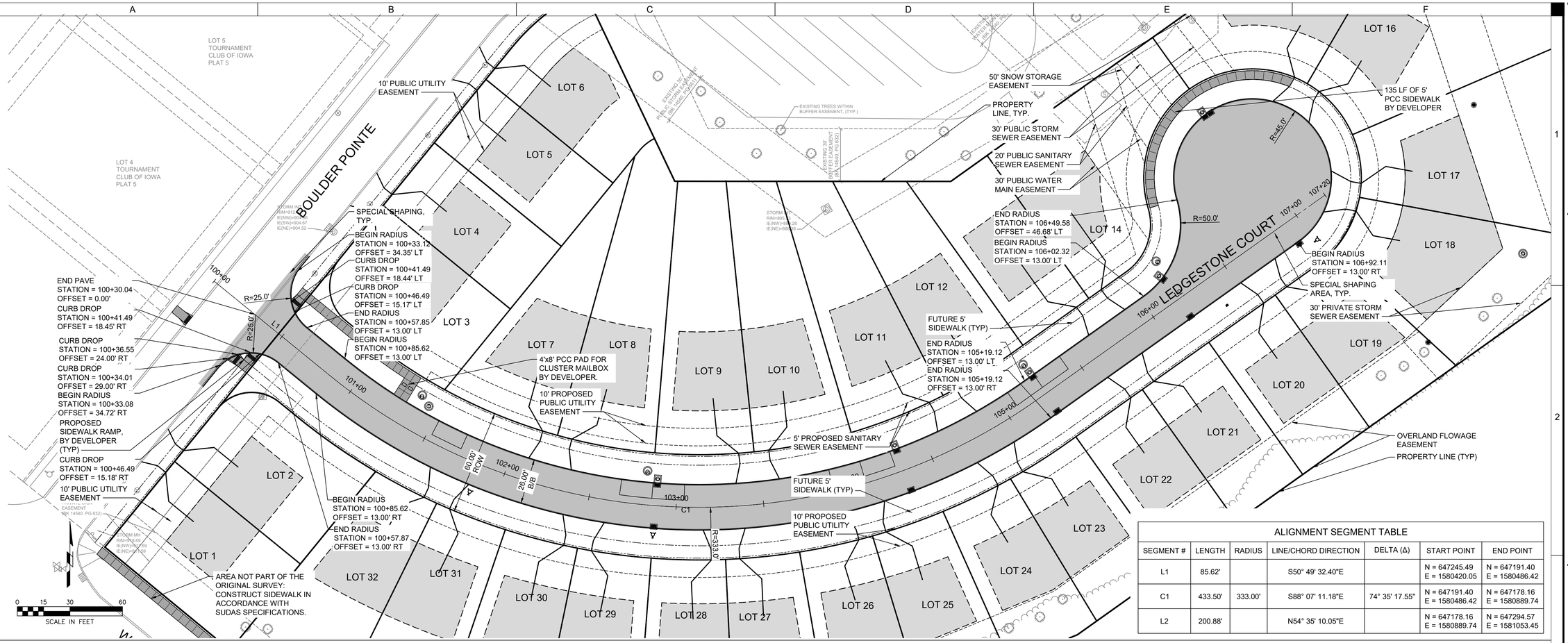
FIELD BOOK: ---
CLIENT NO: ---

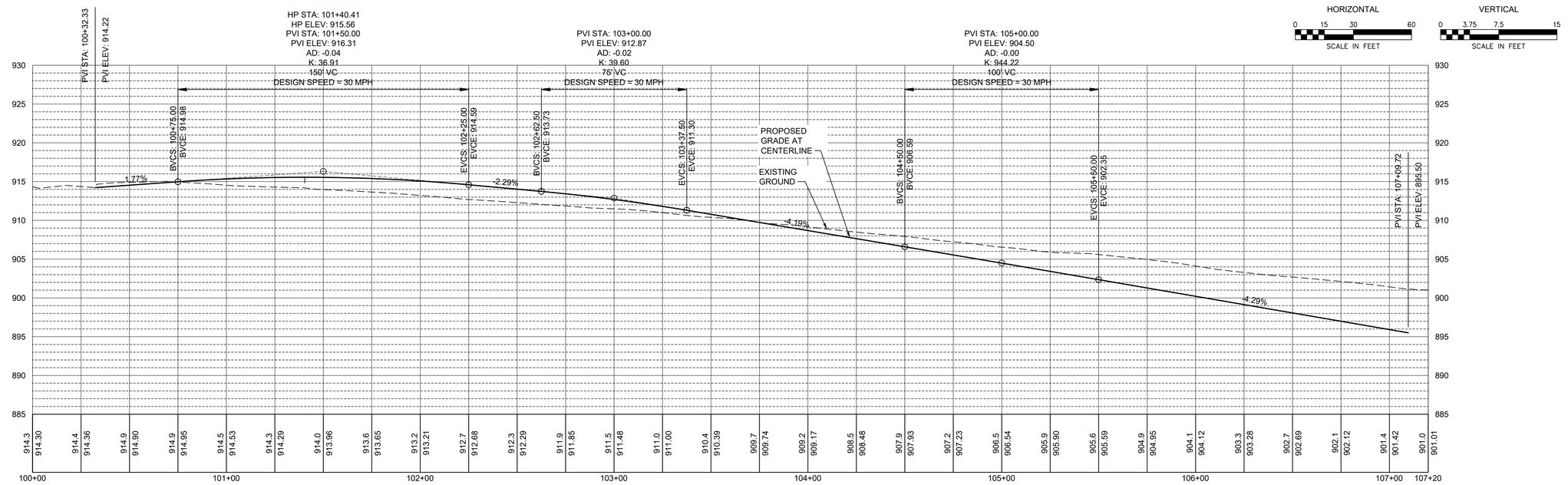
ESTIMATE QUANTITIES AND TYPICAL SECTIONS

C002



ALIGNMENT SEGMENT TABLE

SEGMENT #	LENGTH	RADIUS	LINE/CHORD DIRECTION	DELTA (Δ)	START POINT	END POINT
L1	85.62'		S50° 49' 32.40"E		N = 647245.49 E = 1580420.05	N = 647191.40 E = 1580486.42
C1	433.50'	333.00'	S88° 07' 11.18"E	74° 35' 17.55"	N = 647191.40 E = 1580486.42	N = 647178.16 E = 1580889.74
L2	200.88'		N54° 35' 10.05"E		N = 647178.16 E = 1580889.74	N = 647294.57 E = 1581053.45



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ROADWAY PLAN & PROFILE

C101

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JOINTING PLAN

C121

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C122

JOINTING PLAN

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LOT 11
LOT 12
LOT 13
LOT 14
LOT 18
LOT 19
LOT 20
LOT 21
LOT 22
LOT 23

FUTURE 5' SIDEWALK BY DEVELOPER (TYP)
SPECIAL SHAPING AREA, TYP.
FUTURE 5' SIDEWALK (TYP)
FUTURE 5' SIDEWALK (TYP)
LEDGESTONE COURT
4.34%
4.73%
R=40.0'
SCALE IN FEET
0 5 10 20

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JOINTING PLAN

C123

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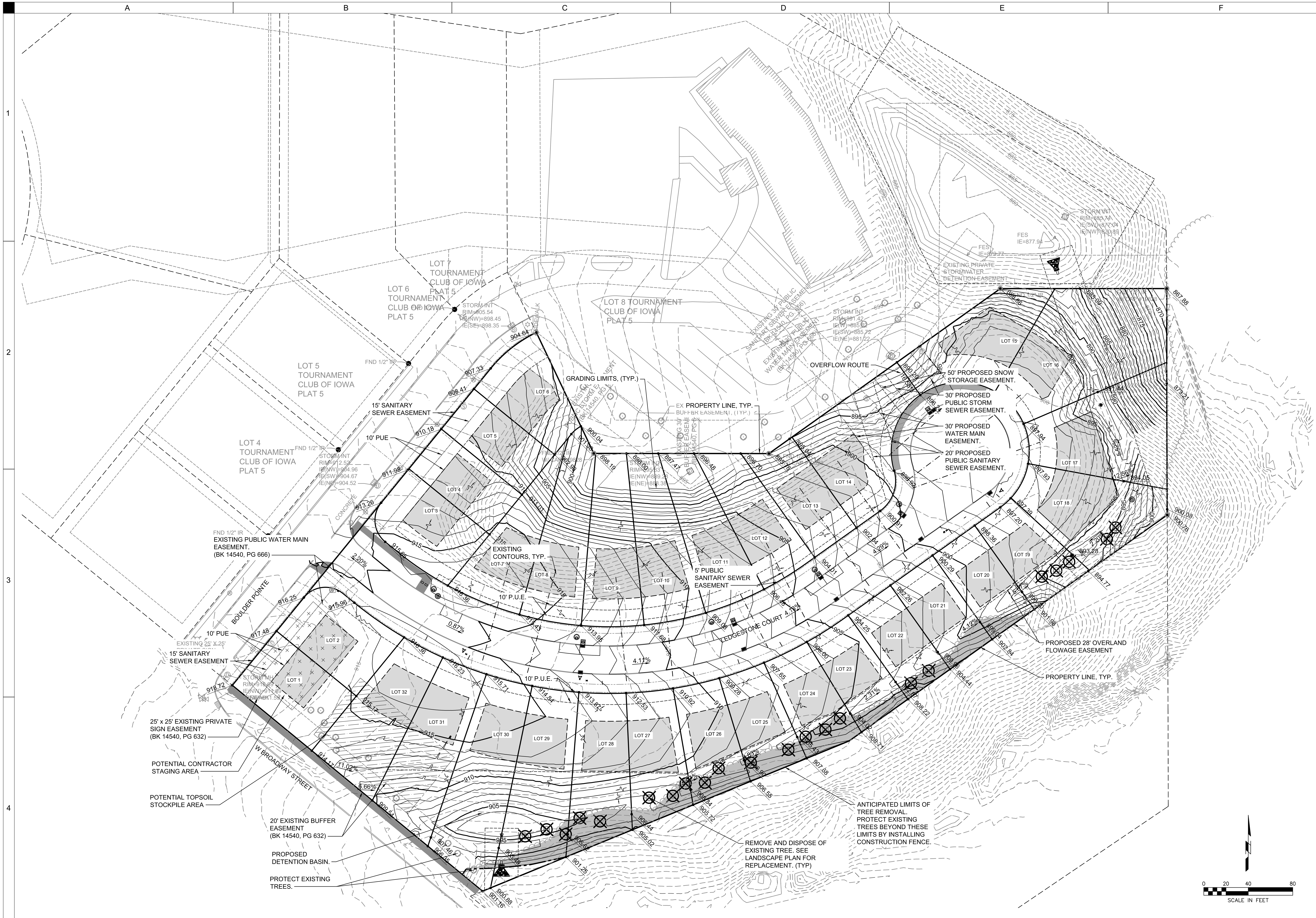
LOT 7 TOURNAMENT CLUB OF IOWA PLAT 5
LOT 6 TOURNAMENT CLUB OF IOWA PLAT 5
LOT 8 TOURNAMENT CLUB OF IOWA PLAT 5
LOT 5 TOURNAMENT CLUB OF IOWA PLAT 5
LOT 4 TOURNAMENT CLUB OF IOWA PLAT 5
FND 1/2" IR
STORM INT
GRADING LIMITS, (TYP.)
15' SANITARY SEWER EASEMENT
10' PUE
PROPERTY LINE, TYP.
OVERFLOW ROUTE
50' PROPOSED SNOW STORAGE EASEMENT.
30' PROPOSED PUBLIC STORM SEWER EASEMENT.
30' PROPOSED WATER MAIN EASEMENT.
20' PROPOSED PUBLIC SANITARY SEWER EASEMENT.
EXISTING PUBLIC WATER MAIN EASEMENT. (BK 14540, PG 666)
EXISTING CONTOURS, TYP.
5' PUBLIC SANITARY SEWER EASEMENT
10' P.U.E.
LEDGESTONE COURT
BOULDER POINTE
EXISTING 25' X 25'
25' x 25' EXISTING PRIVATE SIGN EASEMENT (BK 14540, PG 632)
POTENTIAL CONTRACTOR STAGING AREA
POTENTIAL TOPSOIL STOCKPILE AREA
W BROADWAY STREET
20' EXISTING BUFFER EASEMENT (BK 14540, PG 632)
PROPOSED DETENTION BASIN.
PROTECT EXISTING TREES.
PROPOSED 28' OVERLAND FLOWAGE EASEMENT
PROPERTY LINE, TYP.
ANTICIPATED LIMITS OF TREE REMOVAL. PROTECT EXISTING TREES BEYOND THESE LIMITS BY INSTALLING CONSTRUCTION FENCE.
REMOVE AND DISPOSE OF EXISTING TREE. SEE LANDSCAPE PLAN FOR REPLACEMENT. (TYP)
EXISTING PRIVATE STORMWATER DETENTION EASEMENT
0 20 40 80
SCALE IN FEET

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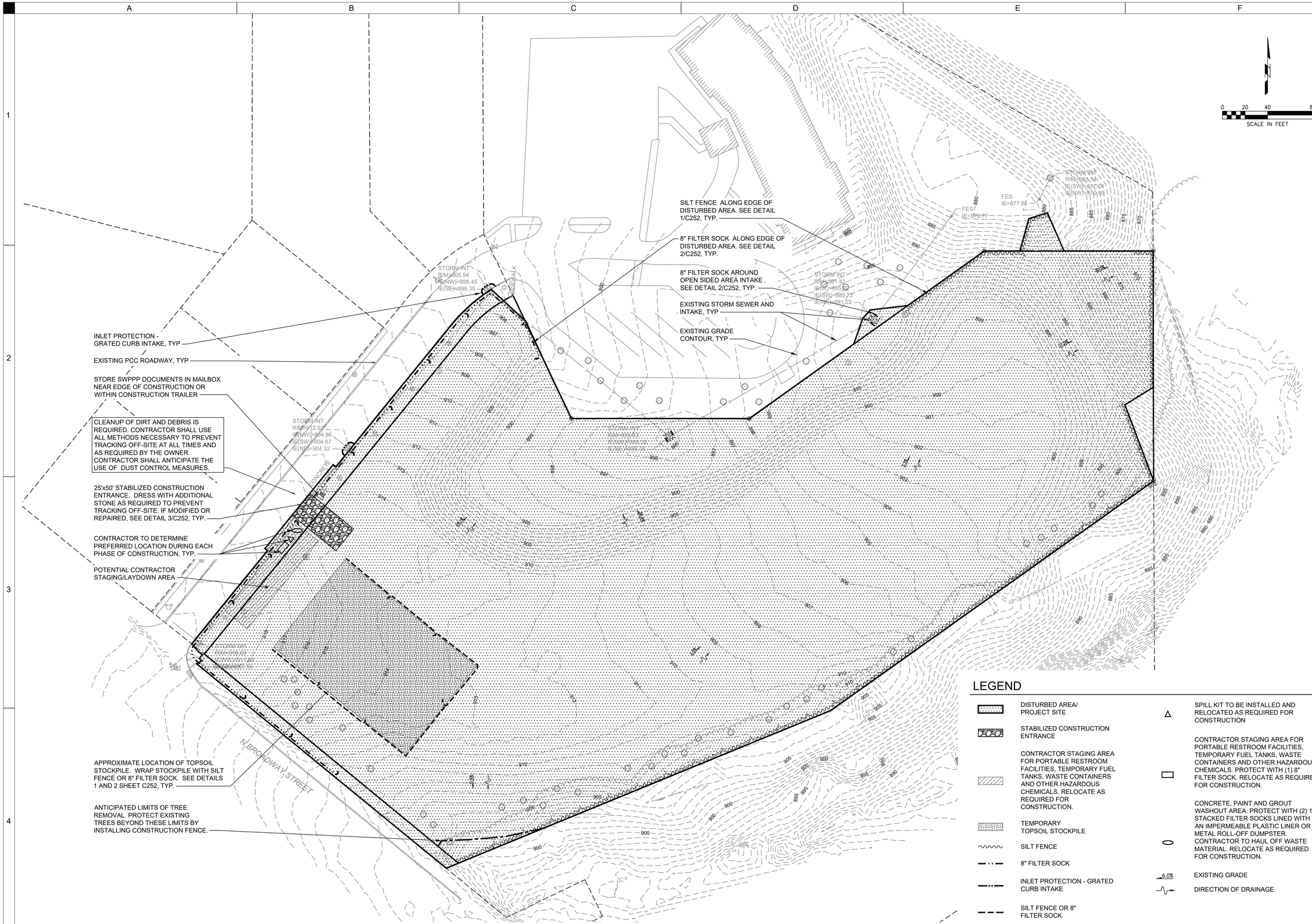
GRADING PLAN

C201



LEGEND

- DISTURBED AREA/ PROJECT SITE
- STABILIZED CONSTRUCTION ENTRANCE
- CONTRACTOR STAGING AREA FOR PORTABLE RESTROOM FACILITIES, TEMPORARY FUEL TANKS, WASTE CONTAINERS AND OTHER HAZARDOUS CHEMICALS. RELOCATE AS REQUIRED FOR CONSTRUCTION.
- TEMPORARY TOPSOIL STOCKPILE
- SILT FENCE
- 8" FILTER SOCK
- INLET PROTECTION - GRATED CURB INTAKE
- SILT FENCE OR 8" FILTER SOCK
- SPILL KIT TO BE INSTALLED AND RELOCATED AS REQUIRED FOR CONSTRUCTION
- CONTRACTOR STAGING AREA FOR PORTABLE RESTROOM FACILITIES, TEMPORARY FUEL TANKS, WASTE CONTAINERS AND OTHER HAZARDOUS CHEMICALS. PROTECT WITH (1) 8" FILTER SOCK. RELOCATE AS REQUIRED FOR CONSTRUCTION.
- CONCRETE, PAINT AND GROUT WASHOUT AREA. PROTECT WITH (2) 18" STACKED FILTER SOCKS LINED WITH AN IMPERMEABLE PLASTIC LINER OR A METAL ROLL-OFF DUMPSTER. CONTRACTOR TO HAUL OFF WASTE MATERIAL. RELOCATE AS REQUIRED FOR CONSTRUCTION.
- 6.0% EXISTING GRADE
- DIRECTION OF DRAINAGE

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EROSION AND SEDIMENT CONTROL PLAN - PRE - CONSTRUCTION

C250

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EROSION AND SEDIMENT CONTROL PLAN - POST - CONSTRUCTION

C251

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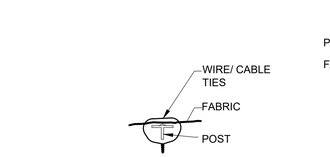
EROSION AND SEDIMENT CONTROL NOTES

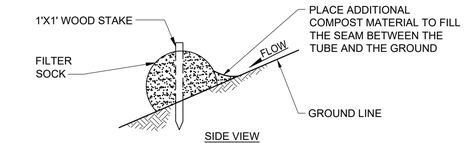
1. EROSION/SEDIMENT CONTROL MEASURES ARE REQUIRED REGARDLESS OF THE TIME OF YEAR. THIS PLAN AND ITS ASSOCIATED REQUIREMENTS FOR THE PERMIT MUST BE IMPLEMENTED DURING WINTER MONTHS AS WELL.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTROL EROSION/SEDIMENT ON THE SITE AT ALL TIMES. THE CONTROL MEASURES IDENTIFIED ON THE PLAN ARE A MINIMUM. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS NECESSARY AND BY CONSTRUCTION PHASE, TO FULFILL THIS REQUIREMENT.
3. EXCEPT AS PRECLUDED BY SNOW COVER, THE CONTRACTOR IS REQUIRED TO USE STABILIZATION CONTROLS ON ALL DISTURBED AREAS OF THE SITE REGARDLESS OF THE TIME PERIOD BEFORE THEY WILL BE DISTURBED AGAIN. IN THE EVENT THAT CONSTRUCTION ACTIVITY WITHIN A DISTURBED AREA WILL NOT OCCUR FOR A PERIOD OF 14 OR MORE CALENDAR DAYS, THE CONTRACTOR IS REQUIRED TO INSTALL STABILIZATION MEASURES IMMEDIATELY AFTER CONSTRUCTION ACTIVITY CEASED IN THAT AREA.
4. IN THE EVENT THAT SOILS LEAVE THE SITE, CLEANUP OF ALL SURROUNDING ROADS, DRIVES AND PARKING LOTS SHALL BE PERFORMED IMMEDIATELY AND UPON REQUEST BY OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST. PAVEMENT IS TO BE SCRAPED OF DEBRIS AND MUD AND BROOMED CLEAN. MUD TRACKS ARE TO BE REMOVED AS THEY ARE CREATED.
5. MAINTAIN SILT FENCING AT ALL TIMES IN AN UPRIGHT POSITION. CLEAN SILT FROM FENCING/FILTER SOCKS ON A REGULAR BASIS AS PER THE SPECIFICATIONS. SILT FENCES MUST BE CLEANED OUT WHEN THEY ARE 50% FULL. FILTER SOCKS MUST BE CLEANED OUT WHEN THEY ARE 33% FULL.
6. CONTRACTOR TO LOCATE/RELOCATE SILT FENCING/ FILTER SOCKS AS NECESSARY THROUGHOUT THE PROJECT TO CONTROL EROSION/SEDIMENT.
7. REMOVE ALL TEMPORARY EROSION/SEDIMENT CONTROLS, NOT CALLED OUT TO REMAIN, AFTER SITE HAS BEEN STABILIZED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
8. ALL STORM INTAKES/CULVERTS, WITHIN AND ADJACENT TO THE PROJECT AREA, MUST BE PROTECTED THROUGHOUT THE DURATION OF THE PROJECT AS IDENTIFIED ON THE DRAWINGS. THESE PROTECTION MEASURES ARE TO REMAIN IN PLACE UNTIL THE SITE HAS BEEN STABILIZED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
9. CONTRACTOR TO USE EXTREME CAUTION WHILE INSTALLING SILT FENCE OR OTHER EROSION/SEDIMENT CONTROL DEVICES TO NOT DAMAGE UNDERGROUND UTILITIES.
10. WHERE WATER IS PUMPED FROM EXCAVATIONS ON SITE, PROVISIONS SHALL BE MADE TO REMOVE SEDIMENT FROM THE WATER BEFORE IT IS RELEASED INTO THE STORM SEWER SYSTEM. METHODS INCLUDE: DEWATERING BAGS, ADDING FLOCCULANTS TO SILTY WATER AND PLACING A FILTER FABRIC BARRIER AROUND THE PUMP INLET. THE COMBINATION OF THESE METHODS HELPS TO REMOVE SEDIMENT FROM THE WATER. THE MOST COMMON METHOD INCLUDES PLACING CHITOSAN GEOTEXTILE TREATMENT BAGS WITHIN THE DEWATERING BAG AND INSTALLING AN ADDITIONAL INTAKE PROTECTION BAG AT THE NEAREST DOWNSTREAM INTAKE.
11. WHERE WATER IS RELEASED FROM A DEWATERING SYSTEM, PRECAUTIONS SHALL BE TAKEN TO ENSURE THAT EROSION GULLIES DO NOT FORM. ONE METHOD IS TO PIPE THE WATER DIRECTLY INTO A STORM SEWER STRUCTURE. WATER MUST BE FREE OF SEDIMENT PRIOR TO DISCHARGING INTO THE STORM SEWER.
12. CONTRACTOR TO CLEAN OUT ALL INTAKES WITHIN THE PROJECT SITE AT COMPLETION OF WORK. THIS INCLUDES ALL CURB INTAKES, AREA DRAINS AND CULVERTS.
13. CONCRETE SLURRY AND DUST FROM SAWCUTTING ACTIVITIES IS PROHIBITED FROM ENTERING THE STORM SEWER SYSTEM. ALL STORM INTAKES LOCATED NEAR SAWCUTTING ACTIVITIES ARE REQUIRED TO BE PROTECTED. SAWCUT SLURRY AND DUST MUST BE CONTAINED, CLEANED UP, AND DISPOSED OF OFF-SITE. A TEMPORARY 8" FILTER SOCK IS REQUIRED.
14. SANITARY WASTE DISPOSAL: ALL LOCATIONS OF PORTABLE RESTROOM FACILITIES MUST BE IDENTIFIED ON THE PLAN. IN THE EVENT THAT PORTABLE RESTROOM FACILITIES ARE USED ON-SITE, THE CONTRACTOR IS REQUIRED TO INSTALL AN 8" FILTER SOCK AROUND THE FACILITY TO MINIMIZE THE RADIUS OF THE AFFECTED ZONE IN THE EVENT OF A SPILL. WASTES SHALL BE COLLECTED AND DISPOSED OF IN COMPLETE COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. PORTABLE RESTROOM FACILITIES MUST NOT BE LOCATED NEAR DRAINAGE WAYS. RELOCATE AS REQUIRED FOR CONSTRUCTION.
15. IDENTIFICATION OF ALLOWABLE NON-STORMWATER DISCHARGES: DURING CONSTRUCTION THE NON-STORMWATER DISCHARGES, WHICH INCLUDE WATER FLUSHED FROM WATER LINES, PAVEMENT WASHING (WHERE NO SPILLS OR LEAKS HAVE OCCURRED, UNLESS THE SPILLED MATERIAL HAS BEEN CLEANED UP), VEHICLE WASHING, AND GROUNDWATER (DEWATERING), SHOULD BE DIRECTED AS MUCH AS POSSIBLE TOWARDS VEGETATED AREAS AND AWAY FROM DRAINAGE WAYS. REFER TO THE IDNR NPDES GENERAL PERMIT NO. 2 FOR ALLOWABLE NON-STORMWATER DISCHARGES.
16. POLLUTION AND SPILL PREVENTION PLANNING: POTENTIALLY HAZARDOUS MATERIALS ON THE CONSTRUCTION SITE INCLUDE FUEL, LUBRICANTS, CURING COMPOUNDS, FERTILIZERS, GREASE AND CLEANING SOLVENTS. THE CONTRACTOR STAGING AREA FOR PORTABLE RESTROOM FACILITIES, TEMPORARY FUEL TANKS, WASTE CONTAINERS AND OTHER HAZARDOUS CHEMICALS MUST BE PROTECTED BY AN 8" FILTER SOCK AT ALL TIMES. ALL REASONABLE PRECAUTIONS WILL BE TAKEN TO PREVENT SPILLS. ANY SPILLED MATERIAL WILL IMMEDIATELY BE DIRECTED AWAY FROM STORMWATER INTAKES, DETENTION BASINS, OR DRAINAGE WAYS. SPILLED MATERIALS WILL BE CLEANED AND, IF NECESSARY, SOIL REMEDIATION PRACTICES WILL BE USED. A RECORD OF SPILLS WILL BE MAINTAINED BY THE PRIME CONTRACTOR. RELOCATE AS REQUIRED FOR CONSTRUCTION.
19. CONCRETE, PAINT AND GROUT WASHOUT AREA: PROTECT WITH (2) 18" STACKED FILTER SOCKS LINED WITH AN IMPERMEABLE PLASTIC LINER OR A METAL ROLL-OFF DUMPSTER. CLEAN OUT AND MAINTENANCE OF THE WASHOUT SHALL BE INCIDENTAL TO SWPPP MANAGEMENT. IF A PUMP TRUCK IS USED ON-SITE AND UNABLE TO USE THE WASHOUT AREA, THE CONTRACTOR SHALL DIG A PIT FOR WASTE MATERIAL AND LINE IT WITH AN IMPERMEABLE PLASTIC LINER. CONTRACTOR TO HAUL OFF ALL WASTE MATERIAL. ALL LOCATIONS OF CONCRETE, PAINT AND GROUT WASHOUT AREAS MUST BE PROVIDED BY THE CONTRACTOR AND IDENTIFIED ON THE PLAN. THE CONTRACTOR IS REQUIRED TO INSTALL A SIGN THAT DESIGNATES THE WASHOUT AREA. RELOCATE AS REQUIRED FOR CONSTRUCTION.
20. SPILL KIT: THE LOCATION OF THE SPILL KIT MUST BE IDENTIFIED ON THE PLAN. THE SPILL KIT SHALL BE A SEALED STORAGE SHED LOCATED NEAR THE CONSTRUCTION TRAILER OR FUELING AREA. THE SPILL KIT SHALL CONTAIN, BUT NOT BE LIMITED TO THE FOLLOWING ITEMS: A GARBAGE CAN, GLOVES, SAFETY GOGGLES, BROOM AND DUST PAN AND OIL ABSORBENT CLAY CHIPS OR PADS. THE SPILL KIT SHALL BE RESTOCKED AS SUPPLIES ARE USED. THE CONTRACTOR SHALL INSTALL A SIGN THAT DESIGNATES THE SPILL KIT. RELOCATE AS REQUIRED FOR CONSTRUCTION.
21. STOCKPILED MATERIALS: CONTRACTOR TO IDENTIFY ALL LOCATIONS OF STOCKPILED MATERIALS ON THE PLAN. CONTRACTOR SHALL PROVIDE ALL EROSION/SEDIMENT CONTROLS AS REQUIRED TO CONTAIN MATERIALS ON-SITE. AT A MINIMUM, THE CONTRACTOR IS REQUIRED TO PROVIDE SILT FENCE/8" FILTER SOCKS AROUND THE PERIMETER OF STOCKPILED SOILS BEFORE STOCKPILE IS RE-SPREAD. FOR STOCKPILES THAT REMAIN FOR 14 DAYS OR MORE, CONTRACTOR TO PROVIDE COVER OR TEMPORARY STABILIZATION CONTROLS.
22. DUST CONTROL: THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES WHERE DUST IS GENERATED. FREQUENT WATERING OF THE SITE, SPRINKLING/IRRIGATION, VEGETATIVE COVER, MULCH, WINDBREAKS, TILLAGE, STONE AND SPRAY-ON CHEMICAL SOIL TREATMENTS (PALLIATIVES) ARE POSSIBLE DUST CONTROL MEASURES. IF THE DUST CONTROL IS NOT ACCEPTABLE IT SHALL BE CHANGED AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
23. SEQUENCE OF MAJOR ACTIVITIES: INCORPORATE ALL TEMPORARY STABILIZING AND PERMANENT EROSION/SEDIMENT CONTROL FEATURES AT THE EARLIEST TIME PRACTICABLE.

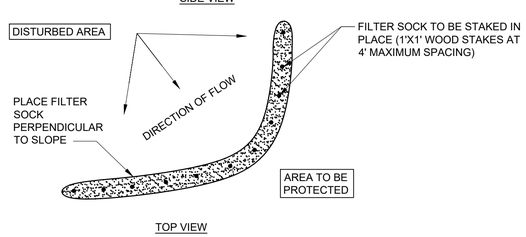


GENERAL NOTES:

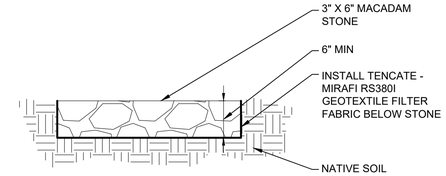
1. SECURE ENGINEERING FABRIC USING WIRE OR CABLE TIES AT TOP, MIDDLE AND BOTTOM OF EXPOSED STEEL POST.
2. FOR MANUAL/TRENCH INSTALLATION, ENGINEERING FABRIC TO BE FOLDED ACROSS BOTTOM OF TRENCH. SEE TYPICAL SECTION OF SILT FENCE.
3. ENGINEERING FABRIC SHALL HAVE A MINIMUM 36" WIDTH.
4. FOR MACHINE INSTALLATION, POSTS SHALL BE EMBEDDED 28" BELOW GROUND LINE. ALL COMPACTION SHALL BE ACCOMPLISHED BY DRIVING OVER EACH SIDE OF SILT FENCE 2-4 TIMES WITH A RUBBER-TIRED VEHICLE.
5. FOR MANUAL/TRENCH INSTALLATION, POSTS SHALL BE EMBEDDED 28" BELOW THE TRENCH BOTTOM. ALL COMPACTION SHALL BE ACCOMPLISHED WITH A MECHANICAL OR PNEUMATIC TAMPER.

1 SILT FENCE DETAIL
NOT TO SCALE



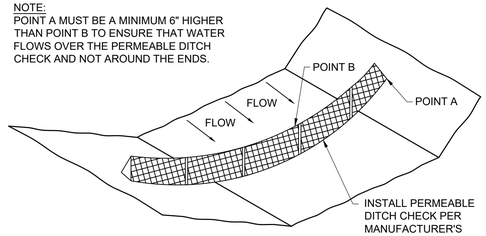


2 FILTER SOCK DETAIL
NOT TO SCALE



3 STABILIZED CONSTRUCTION ENTRANCE/ CONTRACTOR STAGING AND LAYDOWN AREA (AS REQUIRED)
NOT TO SCALE

NOTE:
POINT A MUST BE A MINIMUM 6" HIGHER THAN POINT B TO ENSURE THAT WATER FLOWS OVER THE PERMEABLE DITCH CHECK AND NOT AROUND THE ENDS.



4 PERMEABLE DITCH CHECK
NOT TO SCALE

SITE INFORMATION:
PROJECT SITE/DISTURBED AREA = 5.9 AC
PRE-DEVELOPMENT COEFFICIENT= 0.20
POST-DEVELOPMENT COEFFICIENT= 0.45
NEAREST SURFACE WATER ACCEPTING SITE DISCHARGE: DES MOINES RIVER

SEQUENCING AND PHASING NOTES

1. THIS PROJECT WILL BE CONSTRUCTED OVER SEVERAL PHASES. EROSION/SEDIMENT CONTROL DEVICES IDENTIFIED ON THE PLAN WILL BE IMPLEMENTED ON A PER PHASE BASIS TO ALLOW FOR MAXIMUM PEDESTRIAN ACCESS AND EASE OF CONSTRUCTION.
2. INSTALL INTAKE PROTECTION AND DOWN SLOPE AND SIDE SLOPE PERIMETER CONTROLS BEFORE LAND DISTURBING ACTIVITY OCCURS.
3. STRIP TOPSOIL TO A DEPTH OF 6" AND STOCKPILE. DO NOT MIX TOPSOIL WITH SUBSOIL.
4. GRADE SUBSOIL TO CONFORM WITH THE GRADES, CONTOURS AND LEVELS IDENTIFIED ON THE DRAWINGS.
5. ROUGH GRADE FOR ROADWAY, WALKS, CURBS, GUTTERS, AND LANDSCAPED AREAS.
6. COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.
7. SCARIFY AREAS TO RECEIVE TOPSOIL TO A DEPTH OF 4". REMOVE ALL STONES, WOOD AND OTHER DEBRIS LARGER THAN 1" FROM AREAS TO RECEIVE TOPSOIL. DO NOT COMPACT TOPSOIL.
8. OUTSIDE LANDSCAPED AREAS, ALL DISTURBED AREAS NOT PAVED, OR HARD SURFACED ON THE SITE SHALL RECEIVE A MINIMUM 6" OF TOPSOIL AND SUDAS TYPE 1 - PERMANENT LAWN MIXTURE. SEE SUDAS 9010 FOR MORE INFORMATION.
9. UPON COMPLETION OF EACH PHASE AND APPROVAL BY THE OWNER'S REPRESENTATIVE, EROSION/SEDIMENT CONTROL DEVICES MAY BE REMOVED/RELOCATED.

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POLK CITY, IOWA

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EROSION AND SEDIMENT NOTES AND DETAILS

C252

P:\Projects\DM\4211030\Delivered\Drawings\1_Civil\C252 EROSION CONTROL PLAN.dwg
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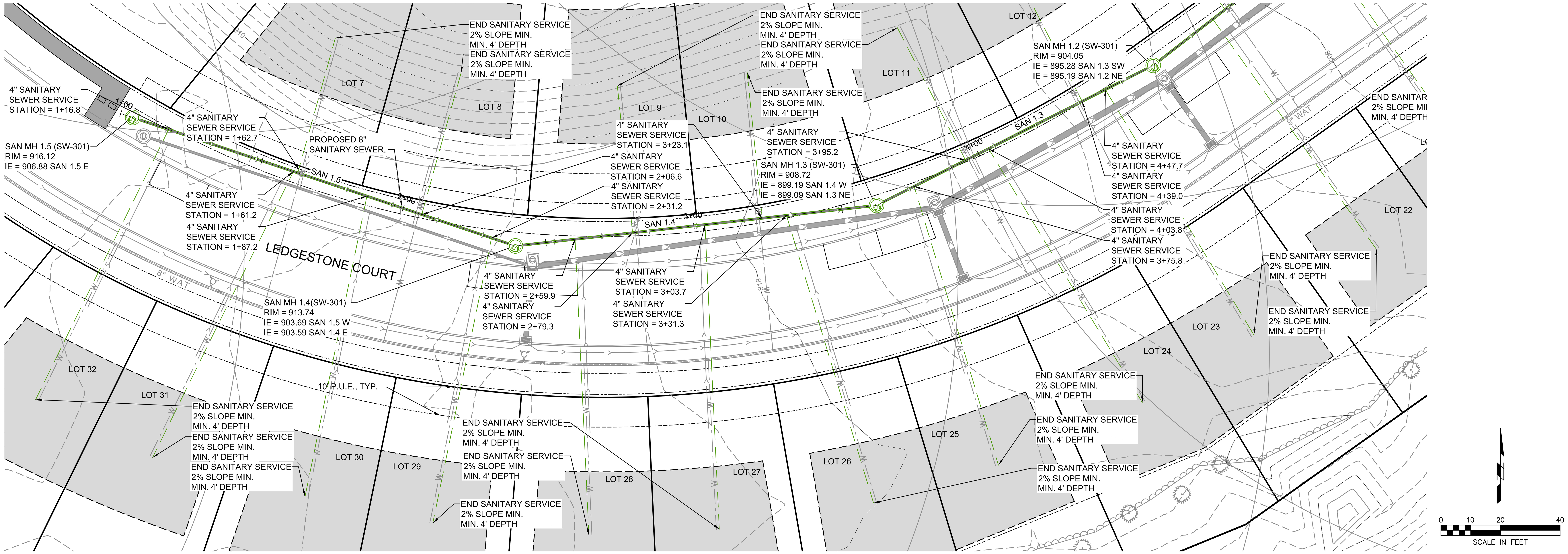

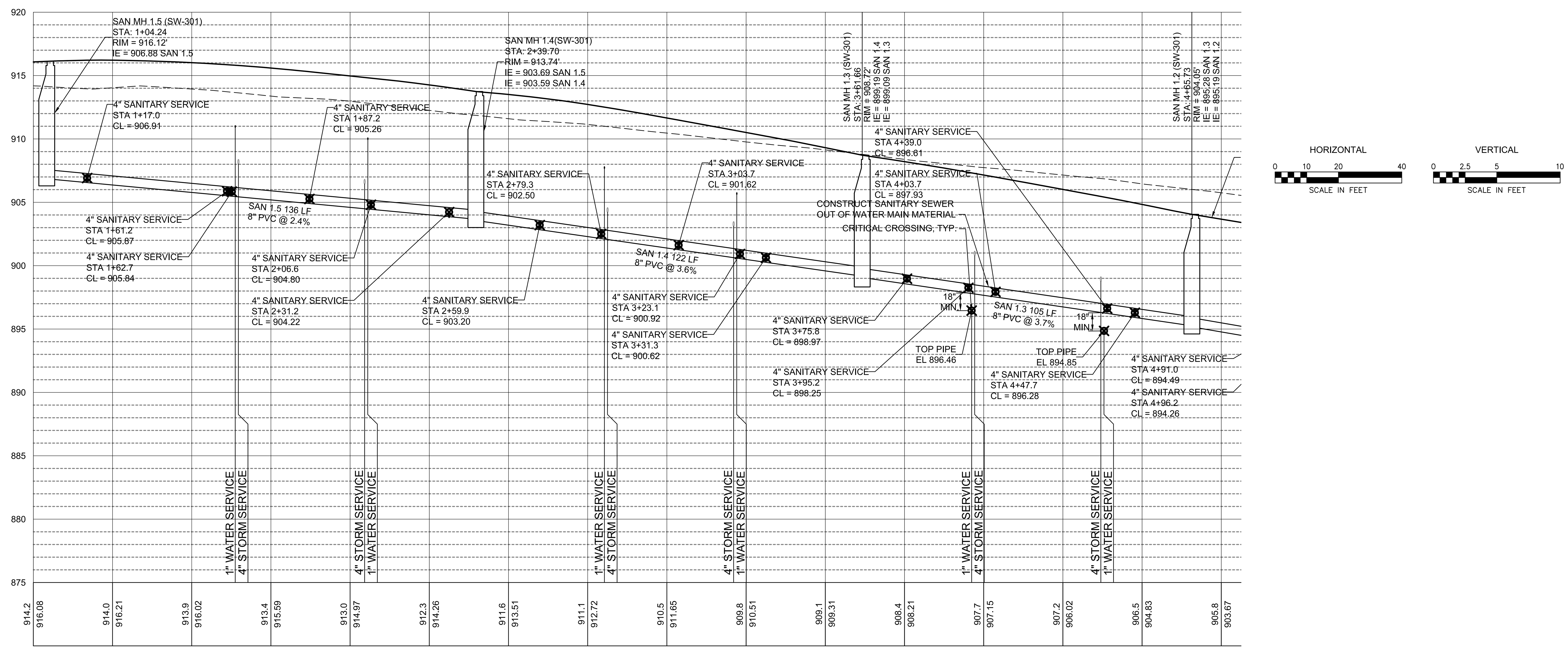

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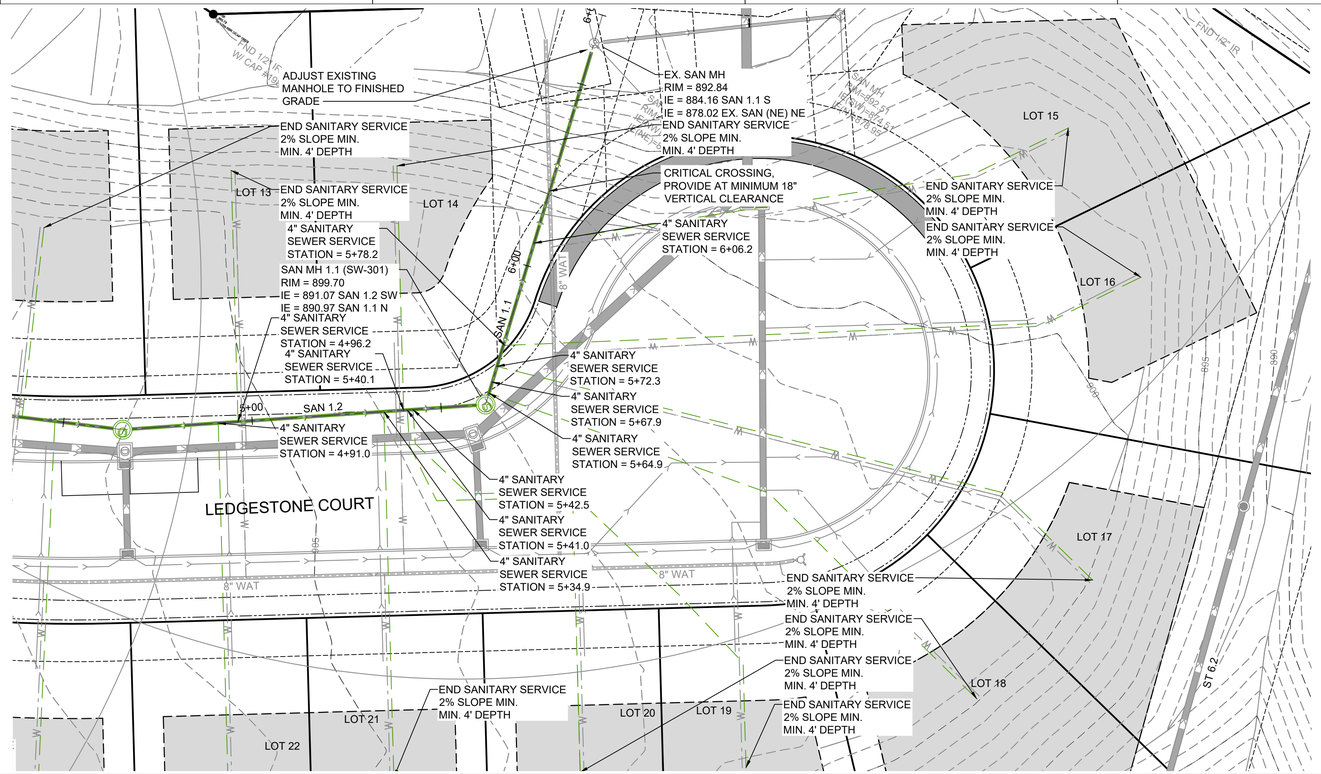
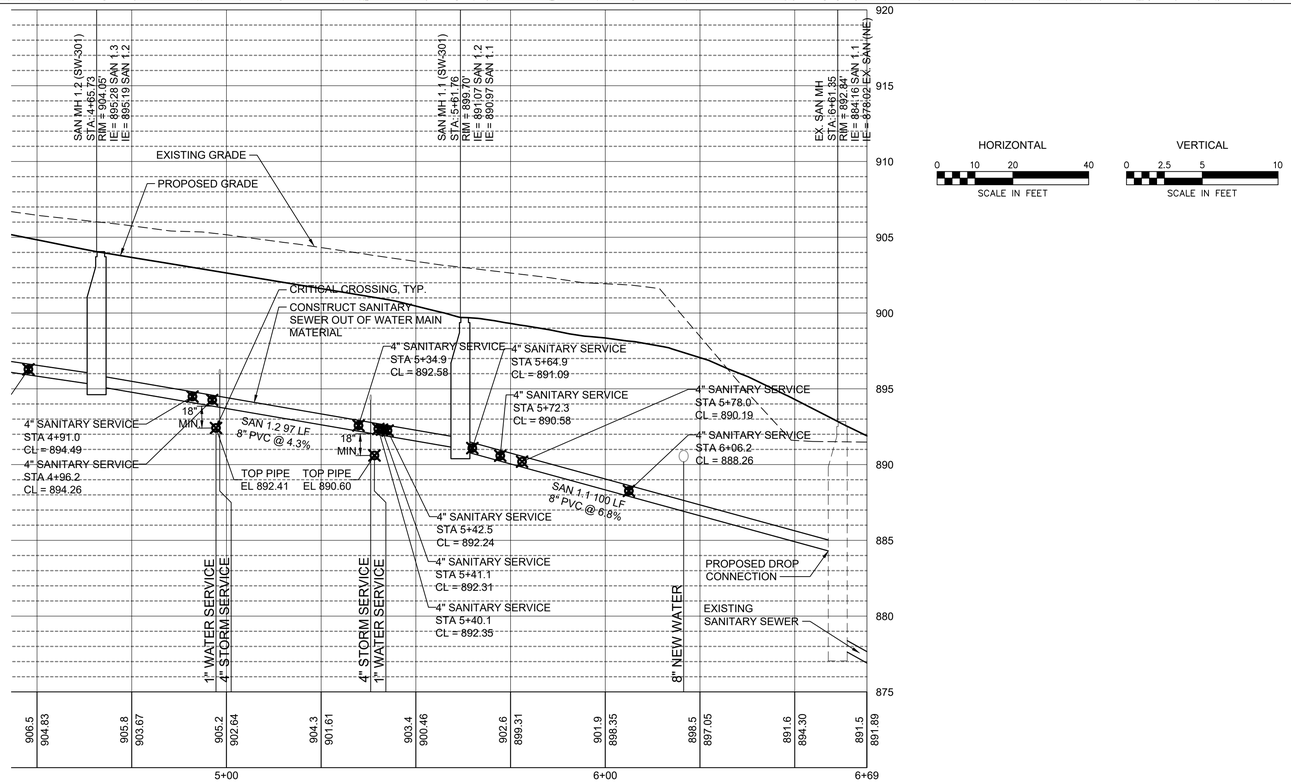
SANITARY SEWER PLAN & PROFILE

C301





HORIZONTAL
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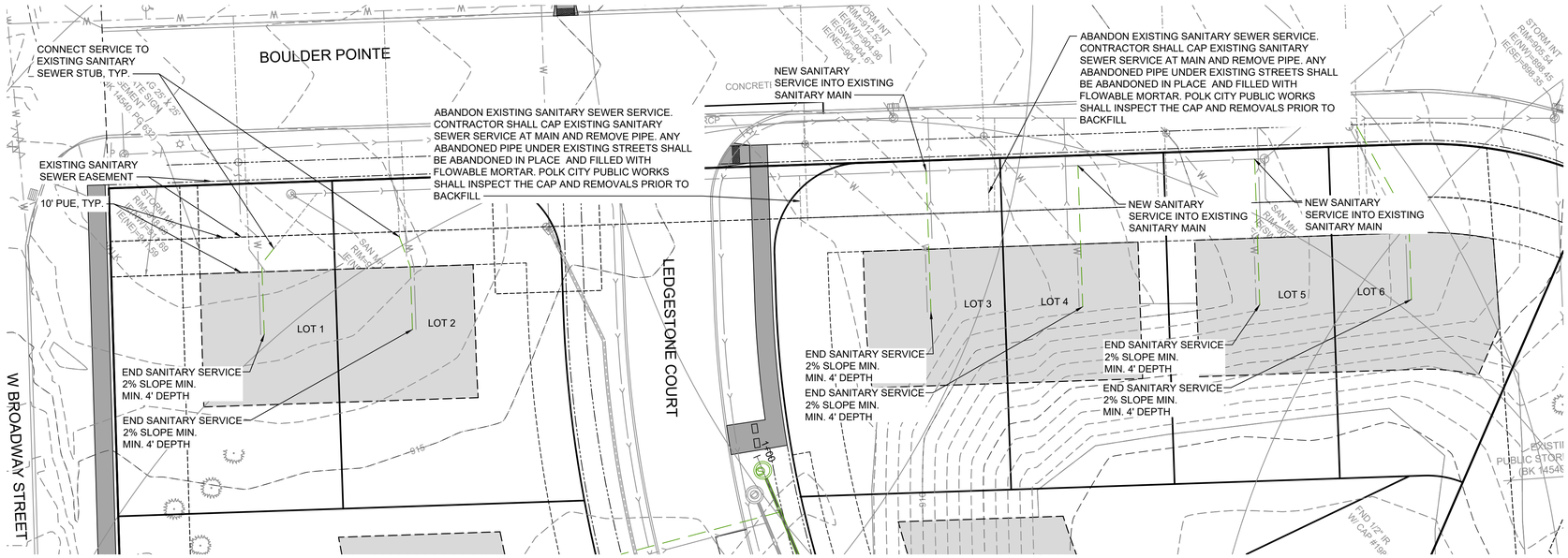
SANITARY SEWER PLAN & PROFILE

C302



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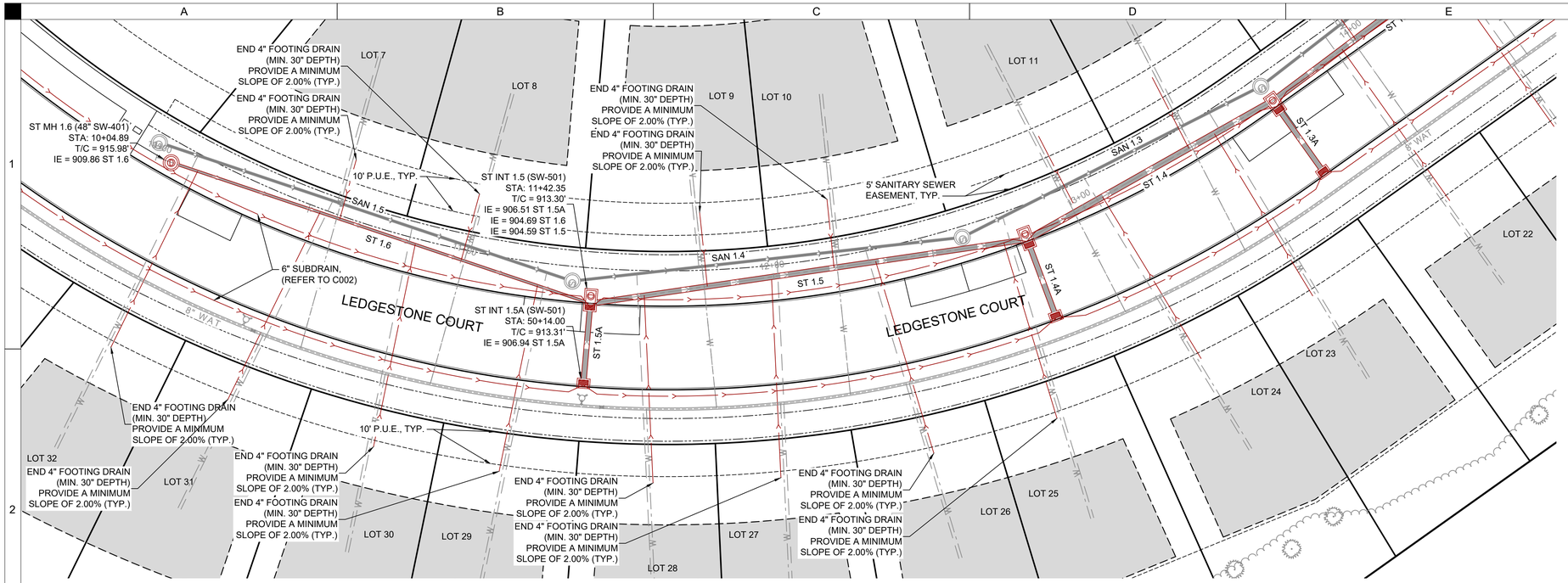
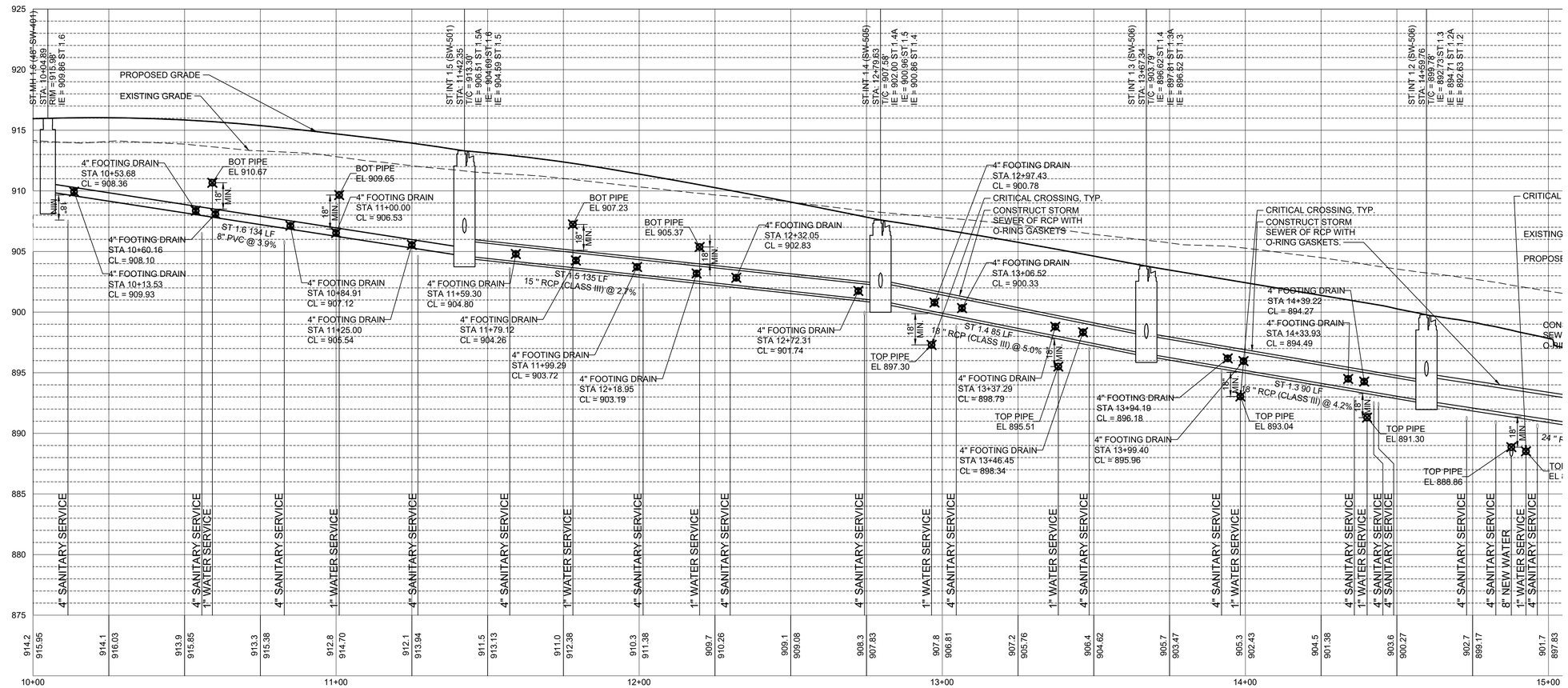
SANITARY SEWER PLAN & PROFILE

C303





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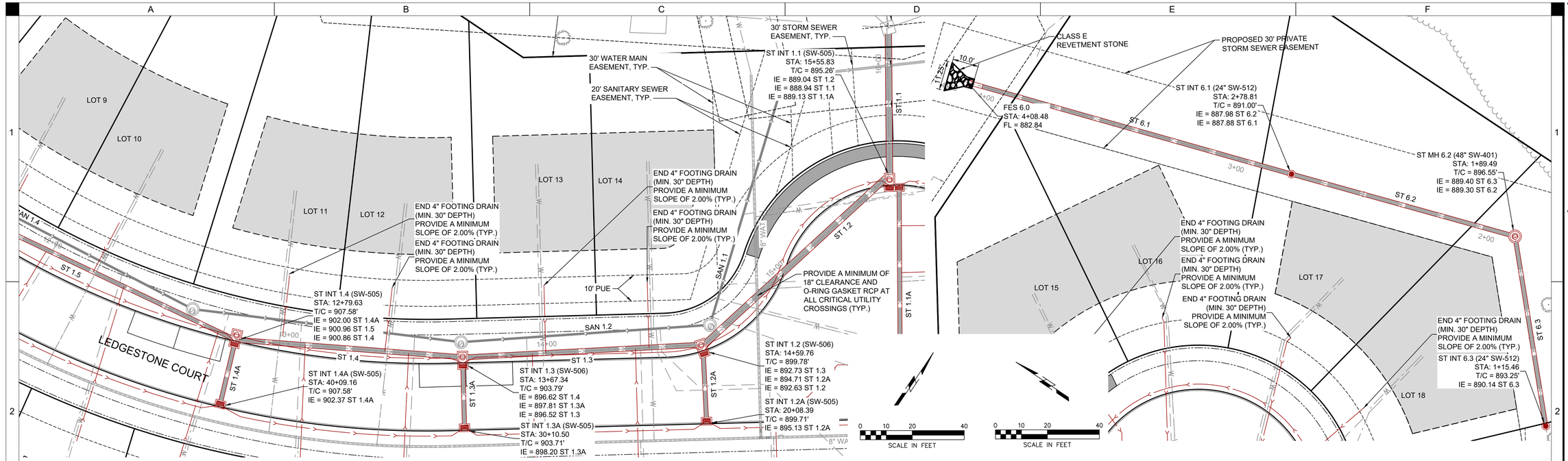
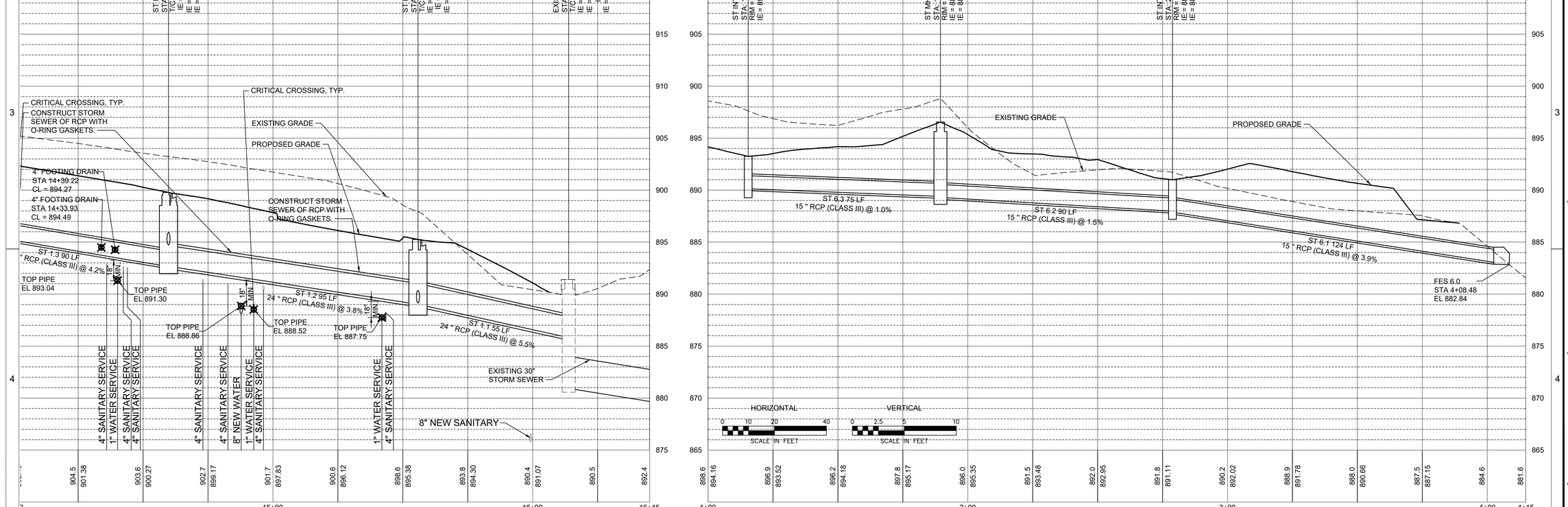
STORM SEWER PLAN & PROFILE

C304





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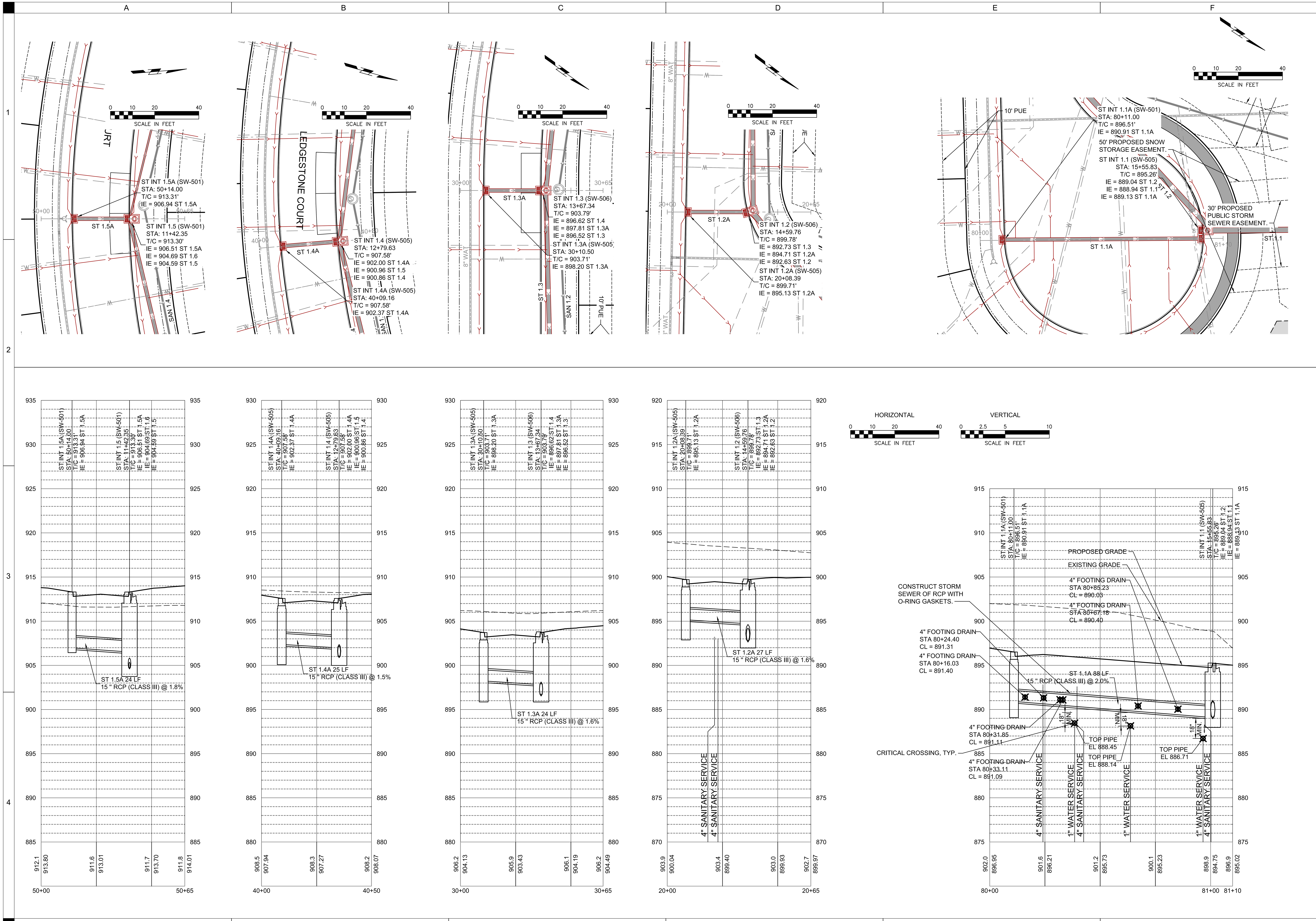
STORM SEWER PLAN & PROFILE

C305



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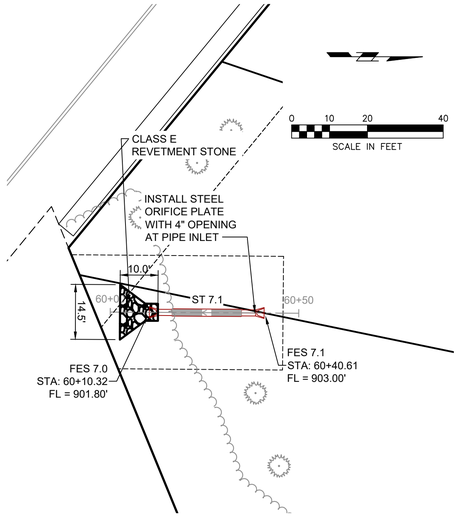
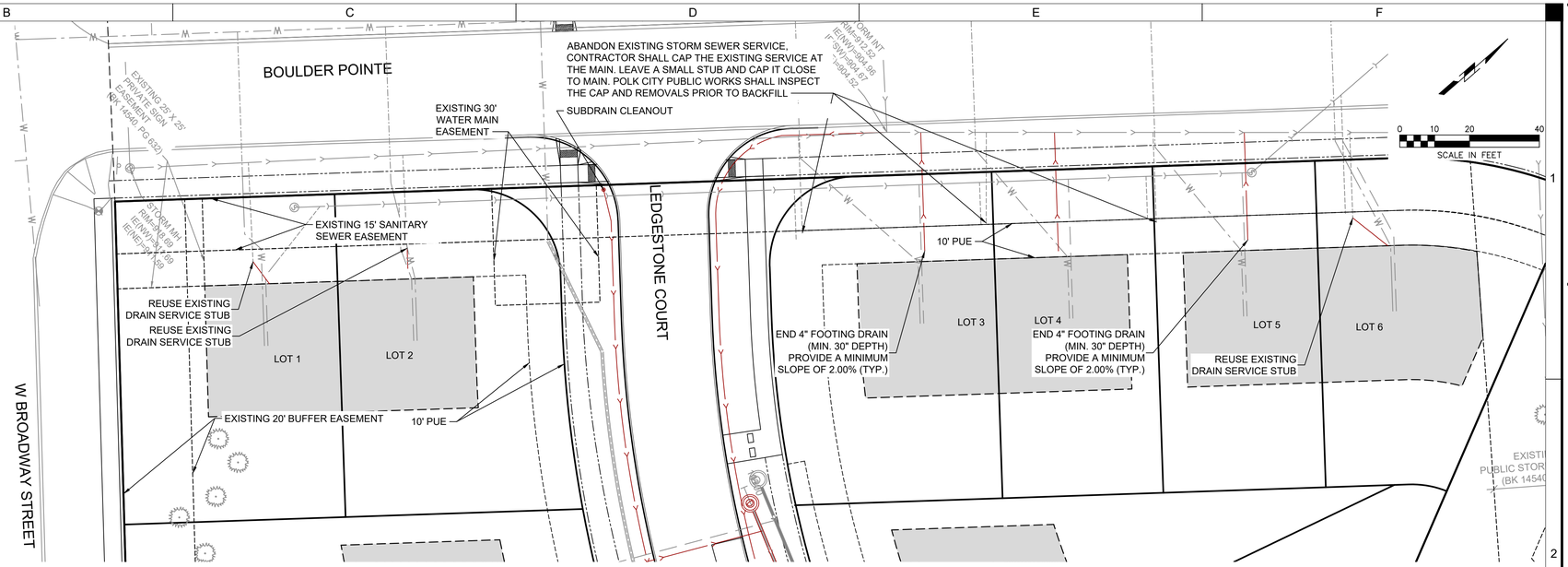
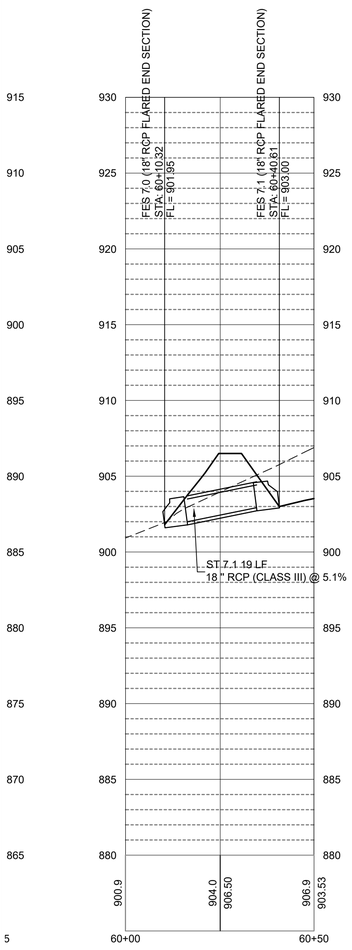
C306







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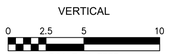

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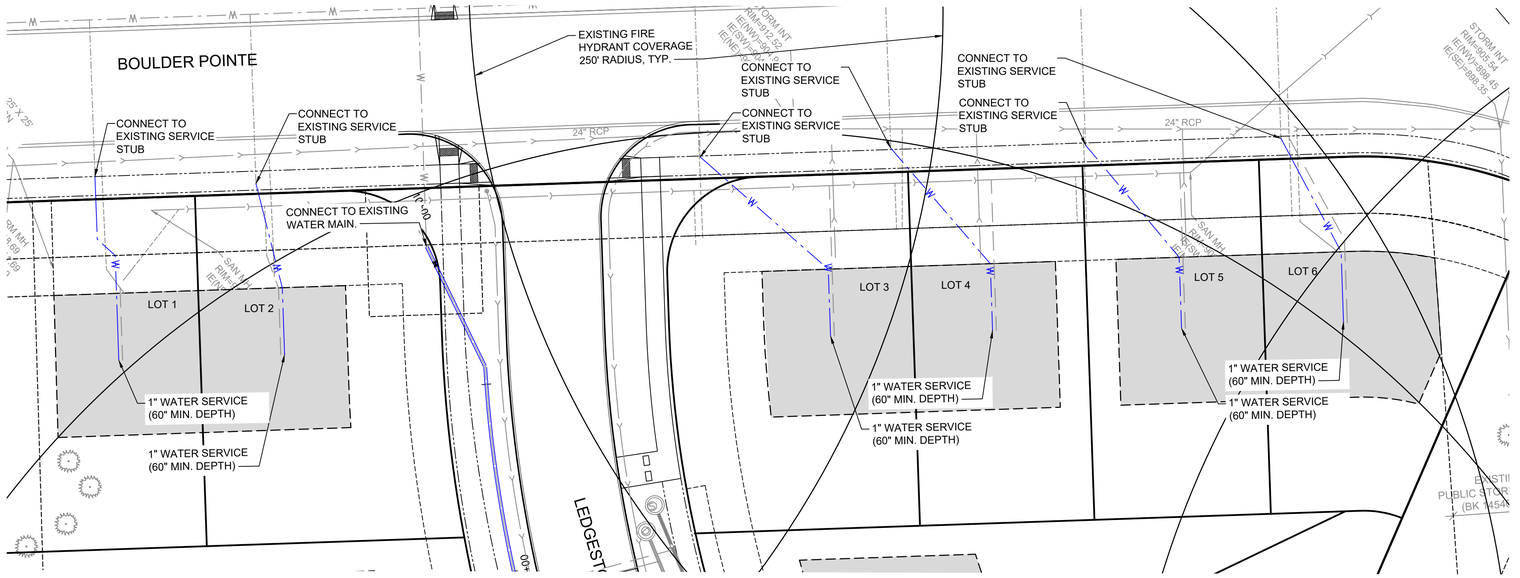
STORM SEWER PLAN & PROFILE

C307



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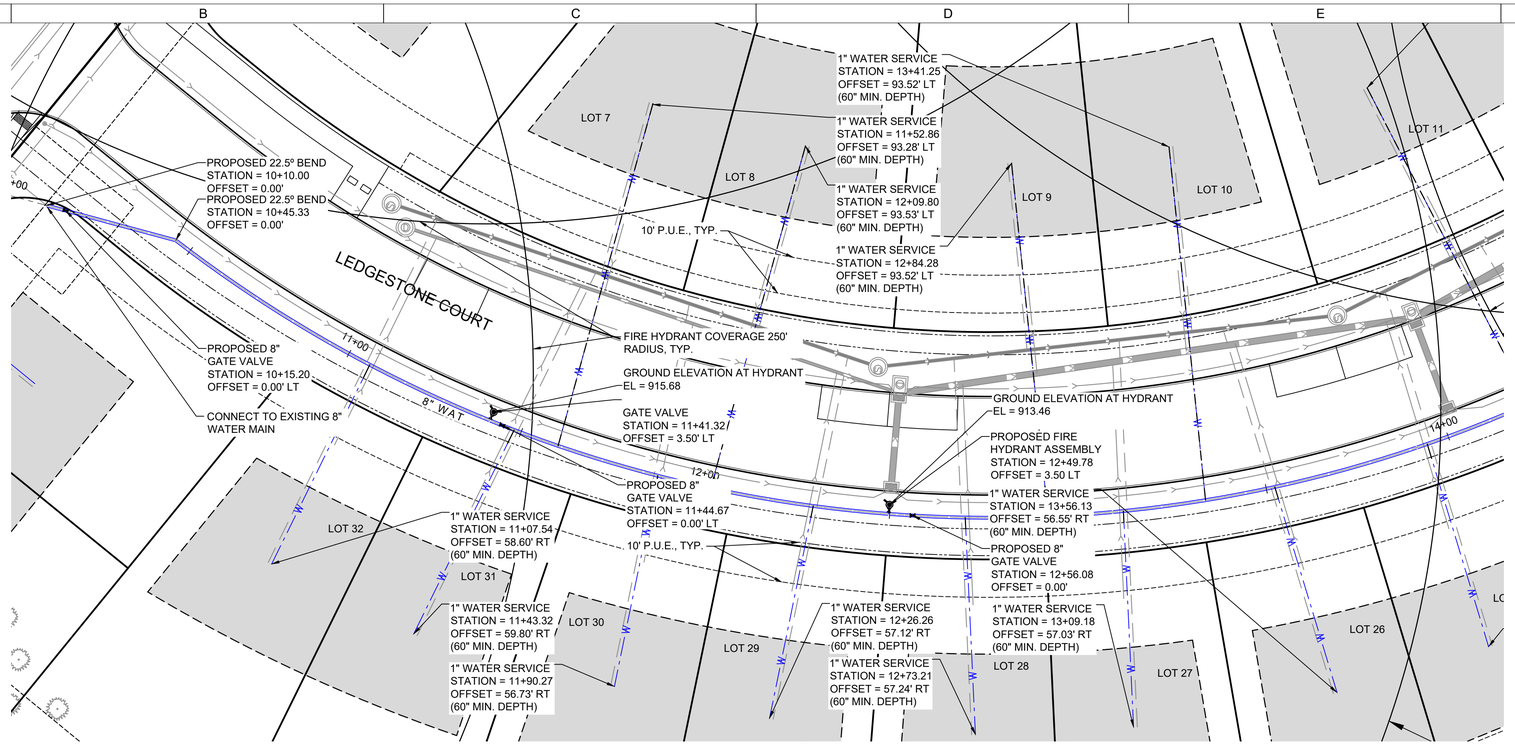
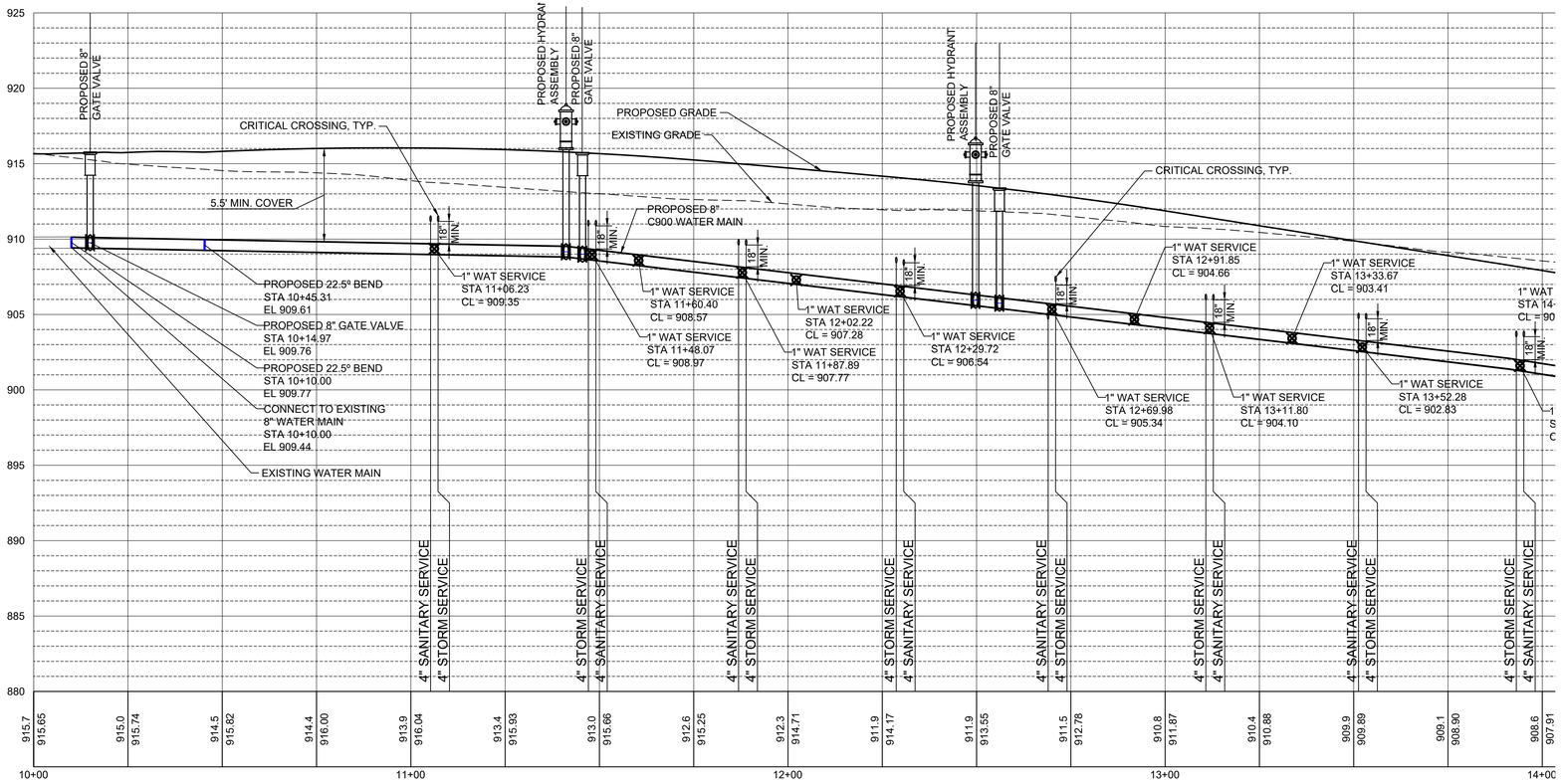
WATER PLAN & PROFILE

C308





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WATER PLAN & PROFILE

C309

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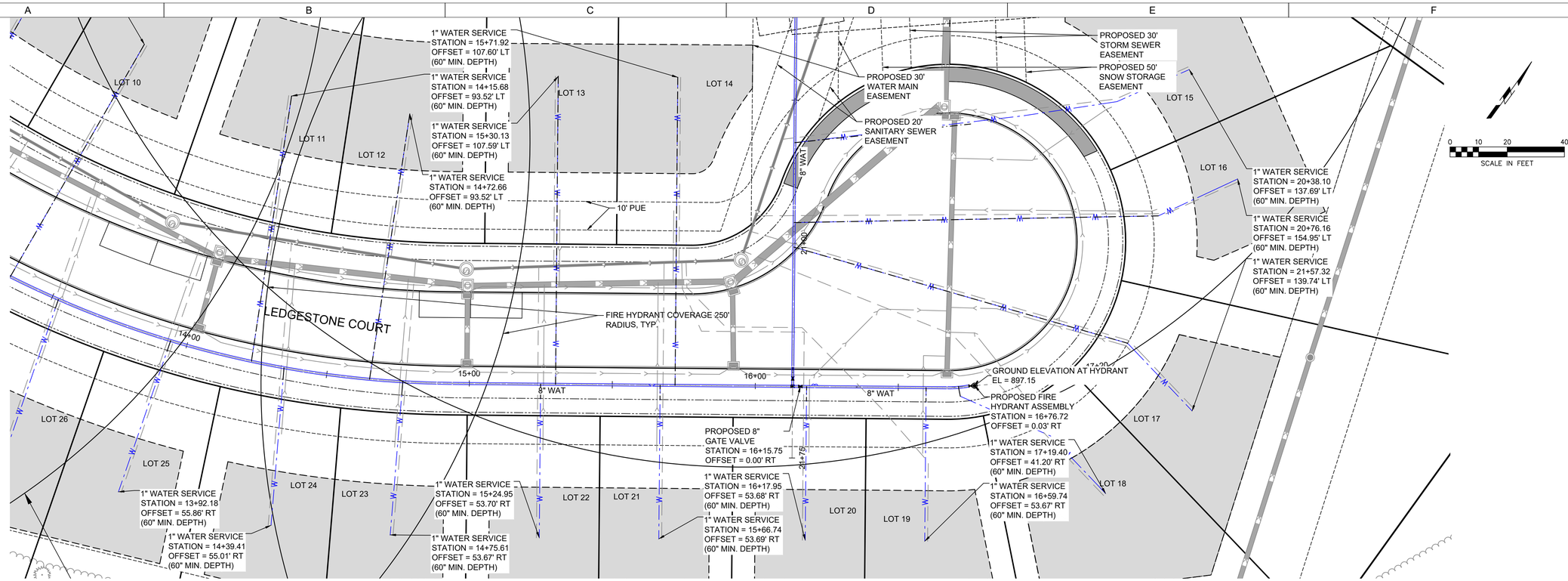

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WATER PLAN & PROFILE

C310

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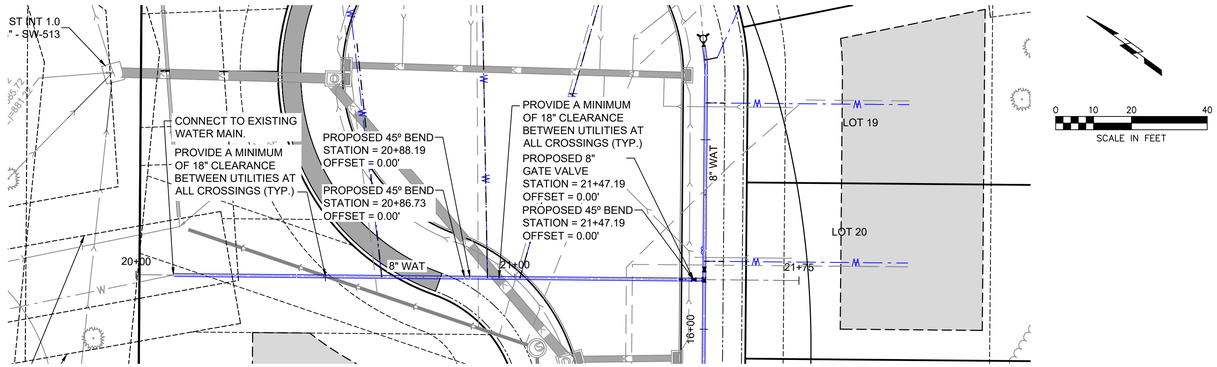

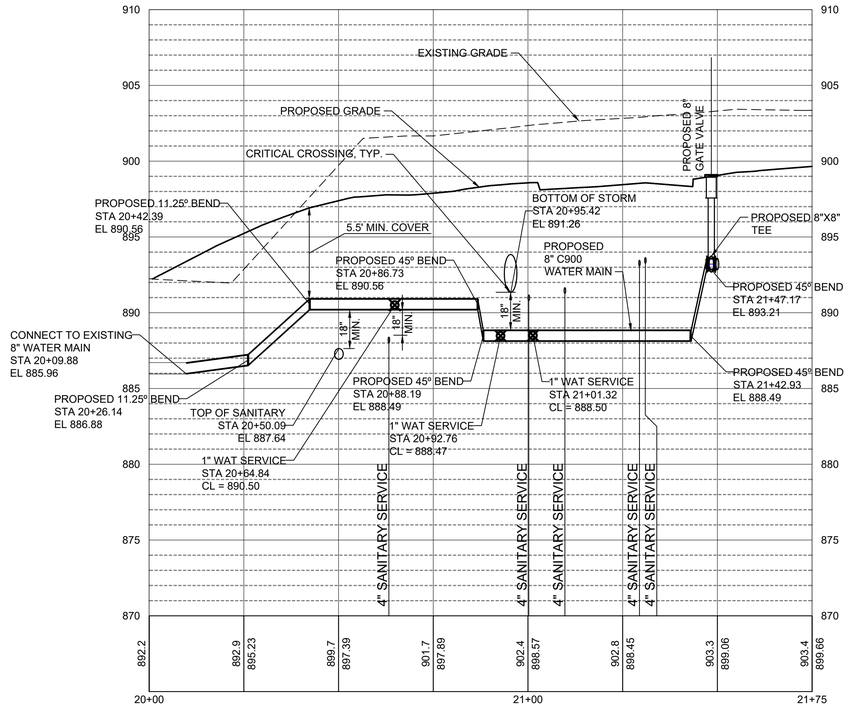

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WATER PLAN & PROFILE

C311

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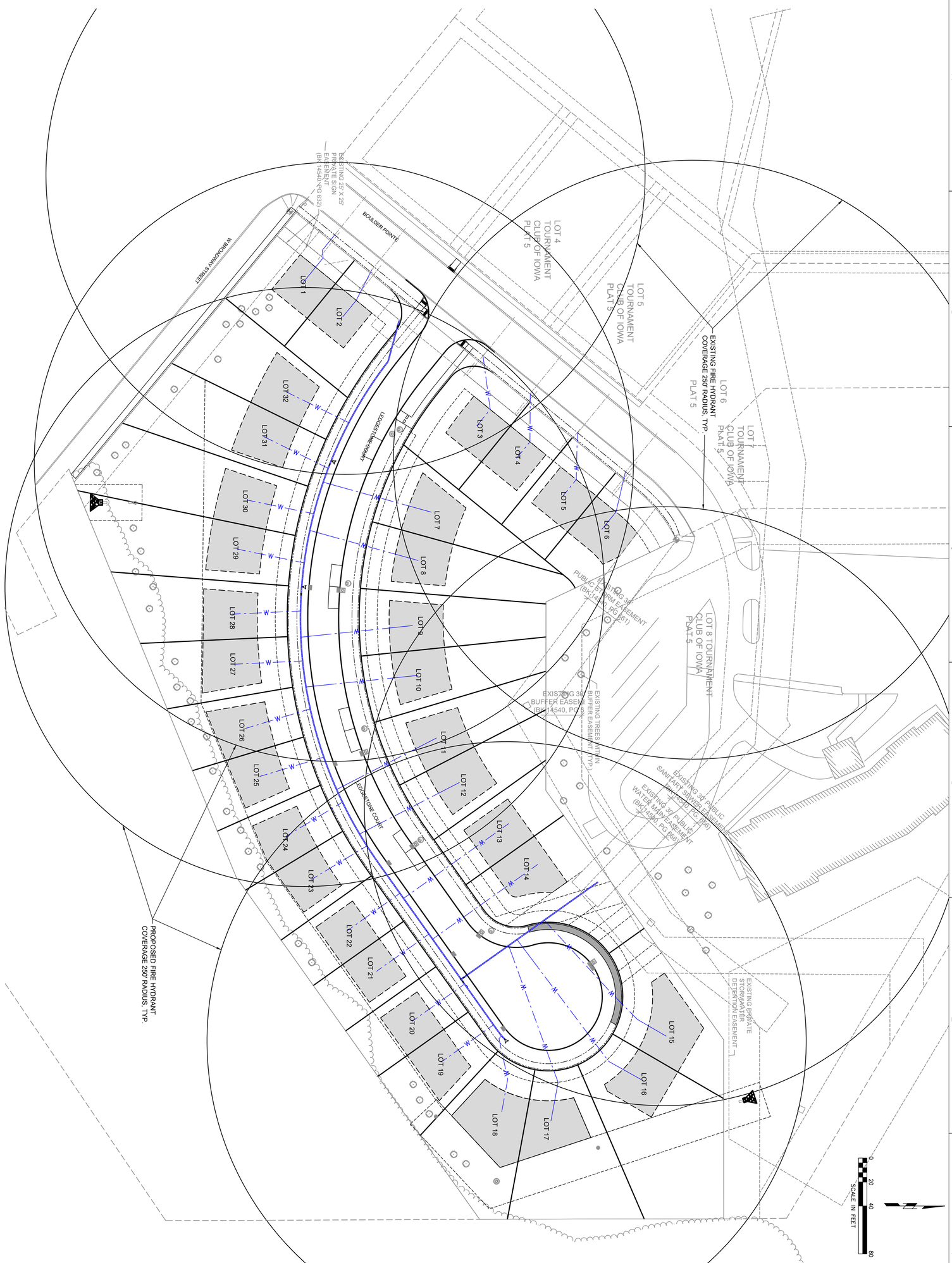

C312

FIRE HYDRANT COVERAGE MAP

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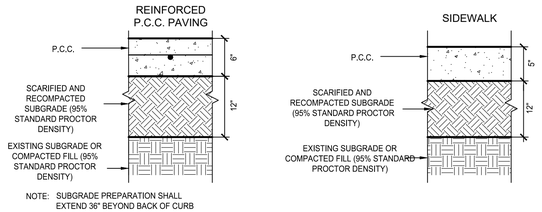
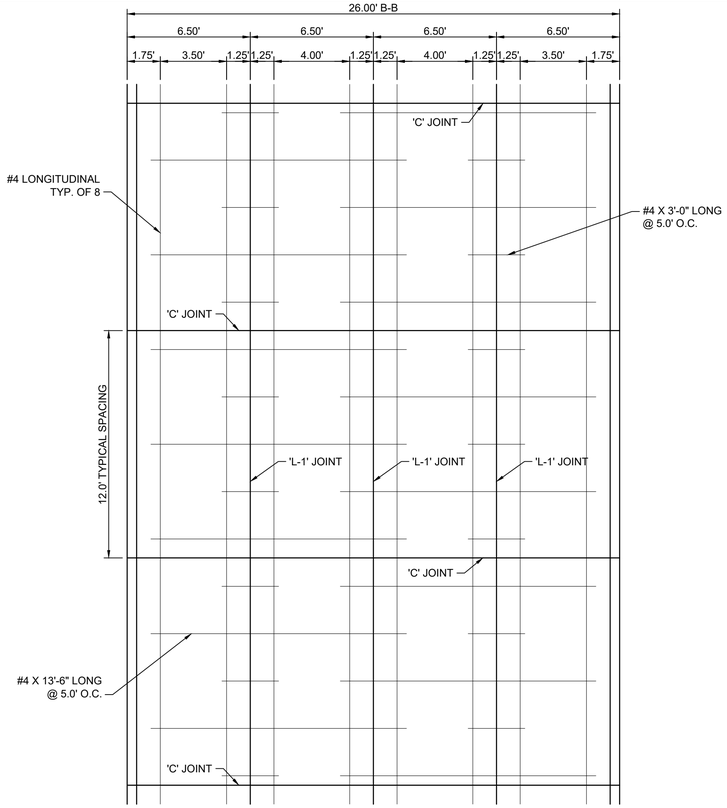
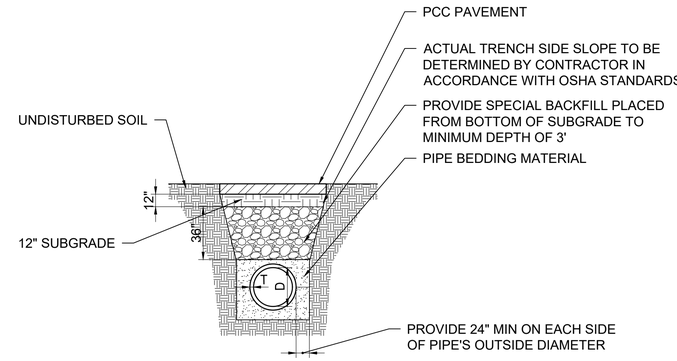


A1 PAVEMENT SECTIONS
NOT TO SCALE



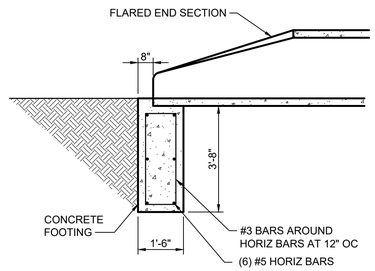
NOTES:
1. ALL REINFORCING SHALL BE PLACED AT T/2, WHERE T REPRESENTS THE THICKNESS SPECIFIED FOR PAVEMENT.

C3 PAVEMENT REINFORCING - 26' B/B
NOT TO SCALE

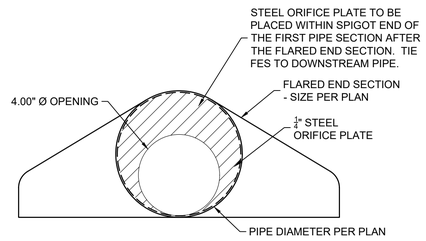


NOTE:
SUBGRADE SHALL BE EXCAVATED OR OVEREXCAVATED, IF NECESSARY, SO A UNIFORM FOUNDATION FREE OF PROTRUDING ROCKS MAY BE PROVIDED. FOLLOW SUDAS FOR ALL OTHER PIPE PLACEMENT REQUIREMENTS

E2 SPECIAL BACKFILL FOR CROSSING PIPES
NOT TO SCALE



FLARED END SECTION FOOTING



ORIFICE PLATE IN FLARED END SECTION

A4 FLARED END SECTION AND ORIFICE PLATE
NOT TO SCALE

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LEDGESTONE RIDGE
PUBLIC IMPROVEMENTS

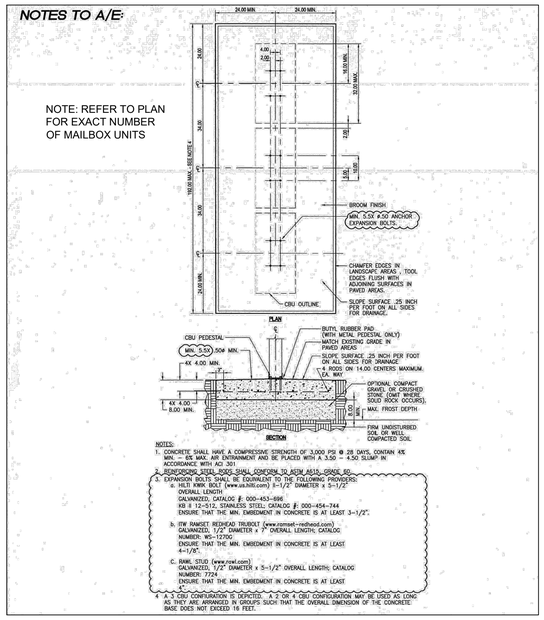
MJR DEVELOPMENTS LLC

POLK CITY, IOWA

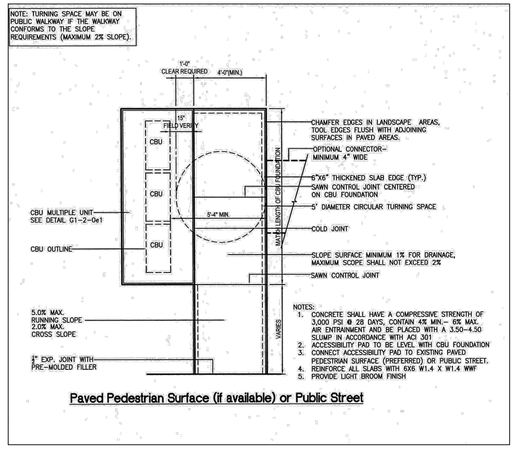
DRAWN: LCH
APPROVED: CRB
ISSUED FOR: SUBMITTAL 03
DATE: 04/23/2021
PROJECT NO: 4211030
FIELD BOOK: ---
CLIENT NO: ---

CONSTRUCTION
DETAILS

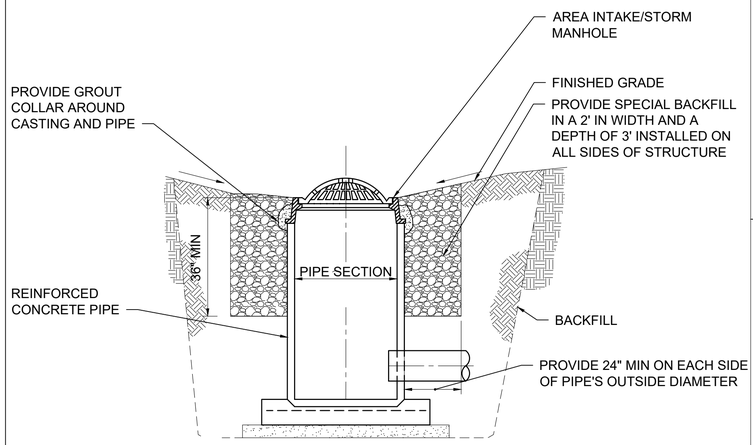
C501



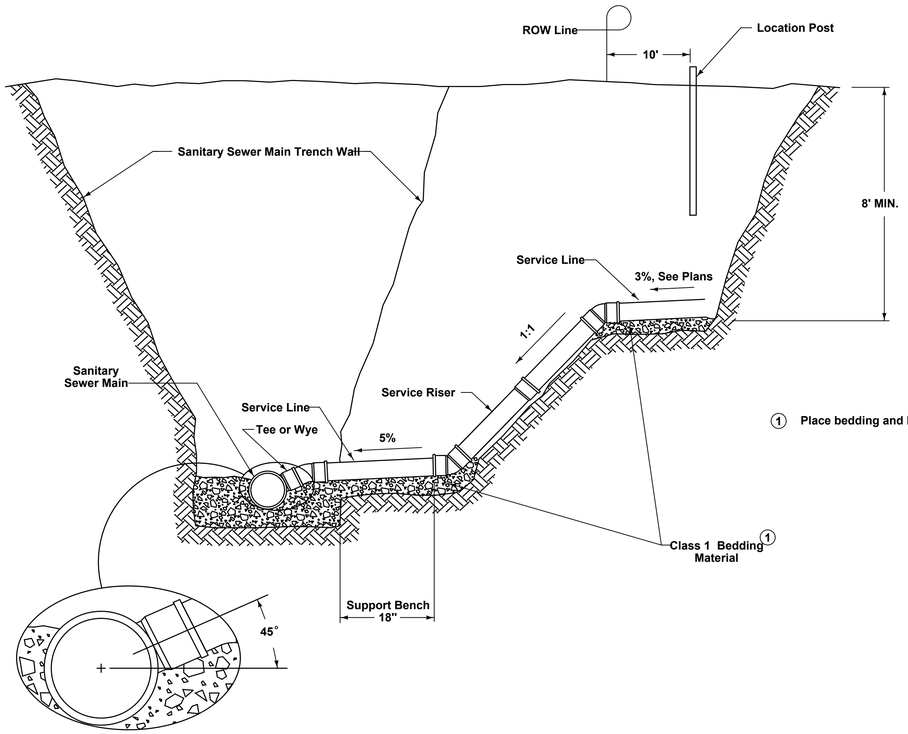
E2 CLUSTER BOX UNIT (CBU) INSTALLATION - MULTIPLE UNIT (USPS DETAIL G1-2-0E1)
NOT TO SCALE



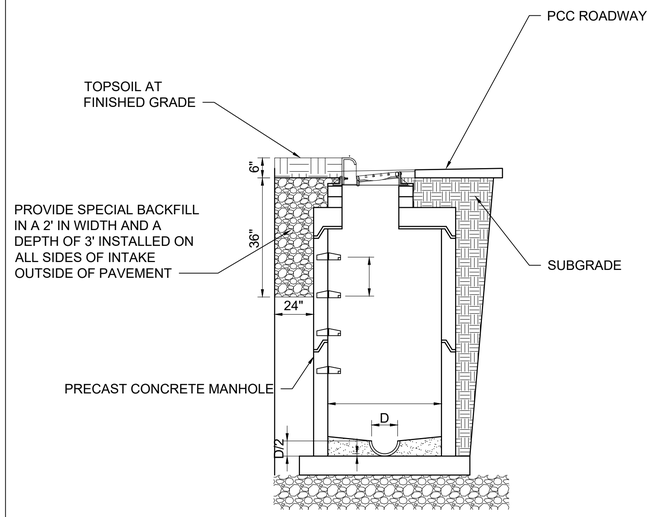
E4 CLUSTER BOX UNIT (CBU) ACCESS MANUVERING SPACE (USPS DETAIL G1-2-0E3)
NOT TO SCALE



E2 SPECIAL BACKFILL FOR AREA INTAKE OR STORM MANHOLE
NOT TO SCALE



A4 SANITARY SEWER SERVICE WITH RISER
NOT TO SCALE



E4 SPECIAL BACKFILL AROUND CURB INTAKES
NOT TO SCALE

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LEDGESTONE RIDGE
PUBLIC IMPROVEMENTS

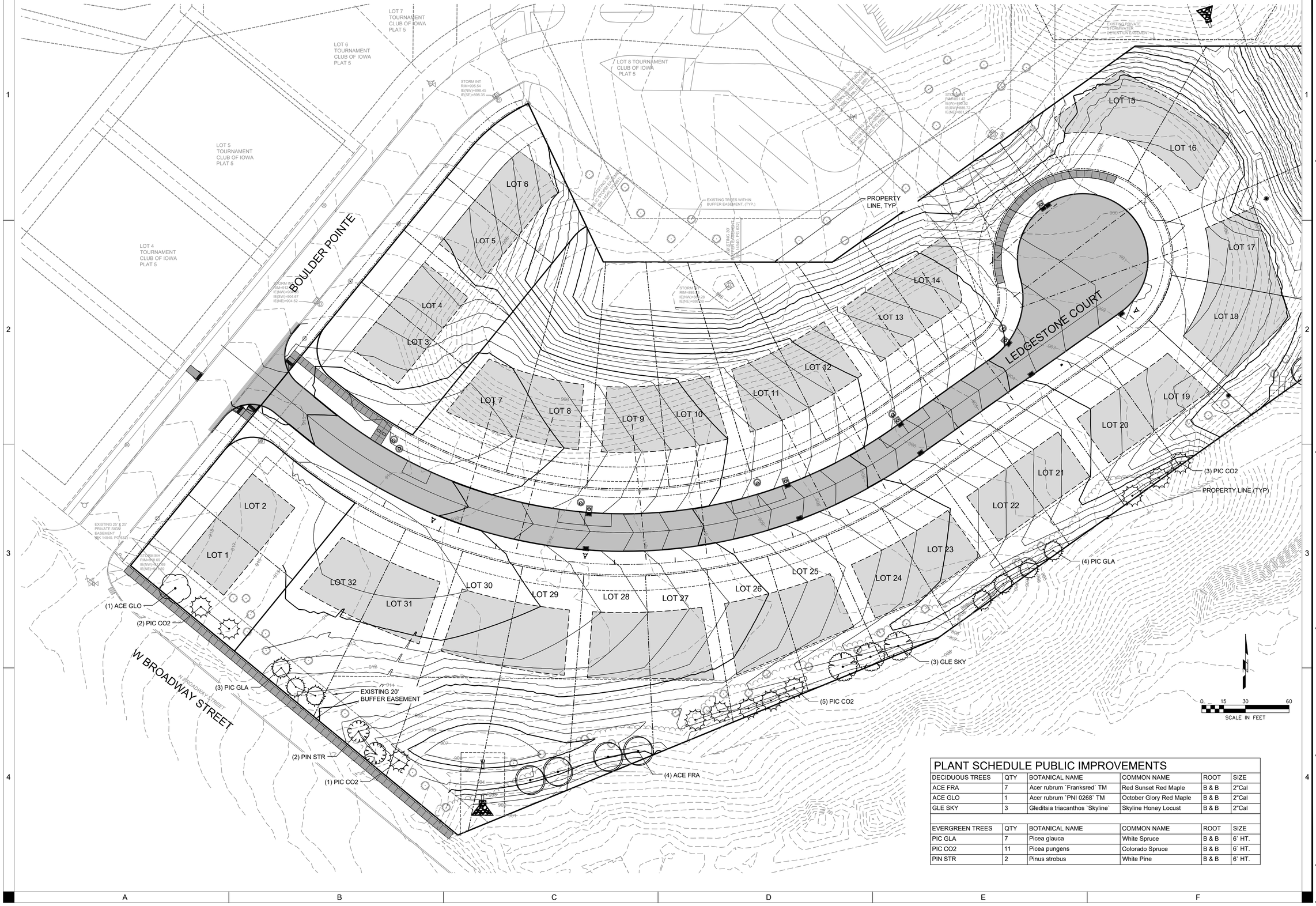
MJR DEVELOPMENTS LLC

POLK CITY, IOWA

DRAWN: LCH
APPROVED: CRB
ISSUED FOR: SUBMITTAL 03
DATE: 04/23/2021
PROJECT NO: 4211030
FIELD BOOK: ---
CLIENT NO: ---

CONSTRUCTION DETAILS

C502



PLANT SCHEDULE PUBLIC IMPROVEMENTS

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE
ACE FRA	7	Acer rubrum `Franksred` TM	Red Sunset Red Maple	B & B	2"Cal
ACE GLO	1	Acer rubrum `PNI 0268` TM	October Glory Red Maple	B & B	2"Cal
GLE SKY	3	Gleditsia triacanthos `Skyline`	Skyline Honey Locust	B & B	2"Cal
EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE
PIC GLA	7	Picea glauca	White Spruce	B & B	6` HT.
PIC CO2	11	Picea pungens	Colorado Spruce	B & B	6` HT.
PIN STR	2	Pinus strobus	White Pine	B & B	6` HT.

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LEDGESTONE RIDGE PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC

POLK CITY, IOWA

DRAWN: EDR
APPROVED: KAS
ISSUED FOR: SUBMITTAL 03
DATE: 04/23/2021
PROJECT NO: 4211030
FIELD BOOK: ---
CLIENT NO: ---

LANDSCAPE PLAN

L101

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Printed: 4/23/2021 4:34:45 PM

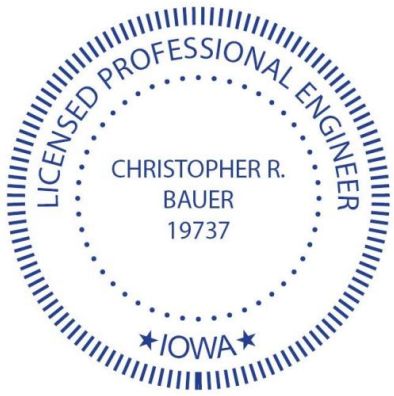
STORM WATER MANAGEMENT PLAN

Ledgestone Ridge Preliminary Plat
(Revision1)

Polk City, Iowa

S-H Project # 421103-0

March 5, 2021
(Revised April 12, 2021)



I hereby certify that the portion of this technical submission described below was prepared by me or under my direct personal supervision. I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: _____

Name: Christopher R. Bauer, PE

Date: 04/12/2021 License Number: 19737

My license renewal date is December 31, 2021.

Pages, sheets, or divisions covered by this certification: _____

All sheets

Prepared by

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

4125 Westown Parkway, Suite 100 – West Des Moines, Iowa 50266

SHEET INDEX

PROJECT INFORMATION

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

PROJECT:	Ledgestone Ridge Preliminary Plat	**JOB NO.:**	4211030	**COMPILED BY:**	AJH
SUBJECT:	Project Information	**DATE:**	04/12/2021	**APPROVED BY:**	CRB

Master Plan Site Description:

The existing site is an approximately 5.7 acre parcel of land located east of the intersection of Boulder Pointe and W Broadway Street in Polk City, Iowa. Runoff from the site ultimately flows east to an existing ravine, which drains to Big Creek. Further discussion of the existing site and detention calculations for the parcel were originally included in an approved Stormwater Management Plan for The Tournament Club of Iowa Pod K Development, which is included with this report for reference.

The previously approved SWMP for the Tournament Club of Iowa Pod K Development assumed 14.84 acres within the original development would be captured and detained by the existing detention basin located on Lot 8 Tournament Club of Iowa Plat 5. This drainage area included approximately 1.33 additional acres of paved and residential area in the calculations for the stormwater detention basin when compared to the proposed site layout included in this submittal. Since the proposed tributary area to the basin within Outlot Z is now smaller than that assumed in the approved SWMP no additional stormwater detention calculations for the existing basin or the areas draining to it are included in this submittal. Pipe and intake calcuations are included in the appendix.

Furthermore, the writer of the previous report assumed that the entire property would be able to be directed to the detention basin. This is not the case however as shown by the undetained areas on the Proposed Drainage Exhibit included with this submittal. The intent is for runoff from drainage area DA 7.0 to be over-detained in order to offset flows from DA 7.1 and DA 7.2. No detention or offsets are proposed for the undetained area in the NE corner of the site, since no substantial changes are being made to this area's land use or grades. The existing site is currently grass and runs off site undetained, exactly as is proposed for the new development. It is impractical to detain for this area given that the existing elevations in this NE corner of the project are lower than the existing detention basin located on Lot 8, where runoff from this corner was originally assumed to be directed for detention purposes. Furthermore, this proposed area matches the area excluded from Swale Area 5 in the inital report, as can be seen on the McClure Swale Drainage Areas map.

Detention provided at the southwest corner of the site is intended to limit flows leaving the site in storms ranging from the 5-year up to and including the 100-year event in the proposed condition so as to not exceed the peak flow generated by the same area in a natural condition (i.e. meadow) in the same storm (5-year - 100 year). Proposed detention and drainage areas for the developed condition are shown on the Proposed Drainage Exhibit. The areas of DA 2, DA 4, and DA 7 are added together, to create the "existing" drainage area for calculation of the allowable release rate.

Rainfall Data:

The existing facility is located in the Central (Section 05) climatic section of Iowa.

Hydrologic Soil Group:

Hydrologic Soil Group B has been assumed for the property based on the previously approved SWMP.

Times of Concentration:

Times of Concentration of 10 minutes were used for all existing and proposed drainage areas, the minimum recommended by SUDAS. Areas are small enough that detailed calculations yielded times lower than 10 minutes. This also matches the TOCs used in the previously approved 2013 SWMP.

2. DRAINAGE COEFFICIENTS

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

PROJECT: Ledgestone Ridge Preliminary Plat **JOB NO.:** 4207540 **COMPILED BY:** AJH
SUBJECT: Drainage Coefficients **DATE:** 04/12/2021 **APPROVED BY:** CRB

Curve Number (CN) and C-Value Calculations:

The existing site is primarily shown as Hydrologic Soil Group B according to the Web Soil Survey map.

	CN Values	Runoff Coefficients		
		C_5	C_{10}	C_{100}
Meadow	58	0.10	0.15	0.30
Pervious Areas (Grass, Good Condition)	61	0.15	0.20	0.35
Impervious Areas	98	0.95	0.95	0.98
Residential Area (Town Homes)	85	--	--	--

Drainage Area Summary:

Drainage Area	Meadow (SF)	Pervious Area (SF)	Impervious Area (SF)	Residential Area Town Homes (SF)	Total Area (SF)	Total Area (Acres)		CN	C_5	C_{10}	C_{100}		T_c
Existing Drainage Areas													
Existing Drainage Area	41,555	0	0	0	41,555	0.95		58	0.10	0.15	0.30		10.00

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

PROJECT: Ledgestone Ridge Preliminary Plat **JOB NO.:** 4207540 **COMPILED BY:** AJH
SUBJECT: Drainage Coefficients **DATE:** 04/12/2021 **APPROVED BY:** CRB

Curve Number (CN) and C-Value Calculations:

The existing site is primarily shown as Hydrologic Soil Group B according to the Web Soil Survey map.

	CN Values	Runoff Coefficients		
		C_5	C_{10}	C_{100}
Meadow	58	0.10	0.15	0.30
Pervious Areas (Grass, Good Condition)	61	0.15	0.20	0.35
Impervious Areas	98	0.95	0.95	0.98
Residential Area (Town Homes)	85	--	--	--

Drainage Area Summary:

Drainage Area	Meadow (SF)	Pervious Area (SF)	Impervious Area (SF)	Residential Area Town Homes (SF)	Total Area (SF)	Total Area (Acres)		CN	C_5	C_{10}	C_{100}		T_c
Proposed Drainage Areas													
7.0		25,686	7,673	0	33,359	0.77		70	0.33	0.37	0.49		10.00
7.1		5,835	0	0	5,835	0.13		61	0.15	0.20	0.35		10.00
7.2		1,511	648	0	2,159	0.05		72	0.39	0.43	0.54		10.00

3. RELEASE RATES

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

PROJECT: Ledgestone Ridge Preliminary Plat **JOB NO.:** 4211030 **COMPILED BY:** AJH
SUBJECT: Release Rates **DATE:** 04/12/2021 **APPROVED BY:** CRB

Allowable and Proposed Release Rates:

	Flows (cfs)					
Storm Interval	**South Pond**	**DA 7.1**	**DA 7.2**	**Proposed Total (FES 7.0) ***	**Pre-Settlement**	**Pre-settlement Minus Proposed**
5 Year	0.4	0.11	0.09	0.54	0.61	0.07
10 Year	0.36	0.18	0.12	0.68	1.61	0.93
25 Year	0.51	0.29	0.17	0.90	1.73	0.83
50 Year	0.57	0.39	0.22	1.08	2.42	1.34
100 Year	0.62	0.51	0.27	1.29	3.20	1.91

*The Proposed Total release rate is the combined total of the release rates from the South Pond, DA 7.1, and DA 7.2. Since the pond peak release rate lags behind the undetained drainage areas, the Proposed Total release rate is lower than the sum of the peak flows (i.e., they happen at different times). See SewerGEMS output.

DA 7.0 drains to and is detained by the South Pond.

Detention Summary

South Pond

Orifice Diameter:	4	in. diameter
Outlet Pipe Diameter:	18	in. diameter
Outlet Pipe Flowline (US):	903.00	
Outlet Pipe Flowline (DS):	901.80	
Outlet Pipe Slope:	4.00	%
100-Year Orifice Area:	0.087	ft^2
100-Year Detention Volume:	3,845	ft^3
100-Year Detention Elevation:	905.49	
Emergency Overflow Elevation from Basin:	905.50	
100-Year Proposed Release Rate from Basin:	0.60	cfs

4. DRAINAGE MAPS

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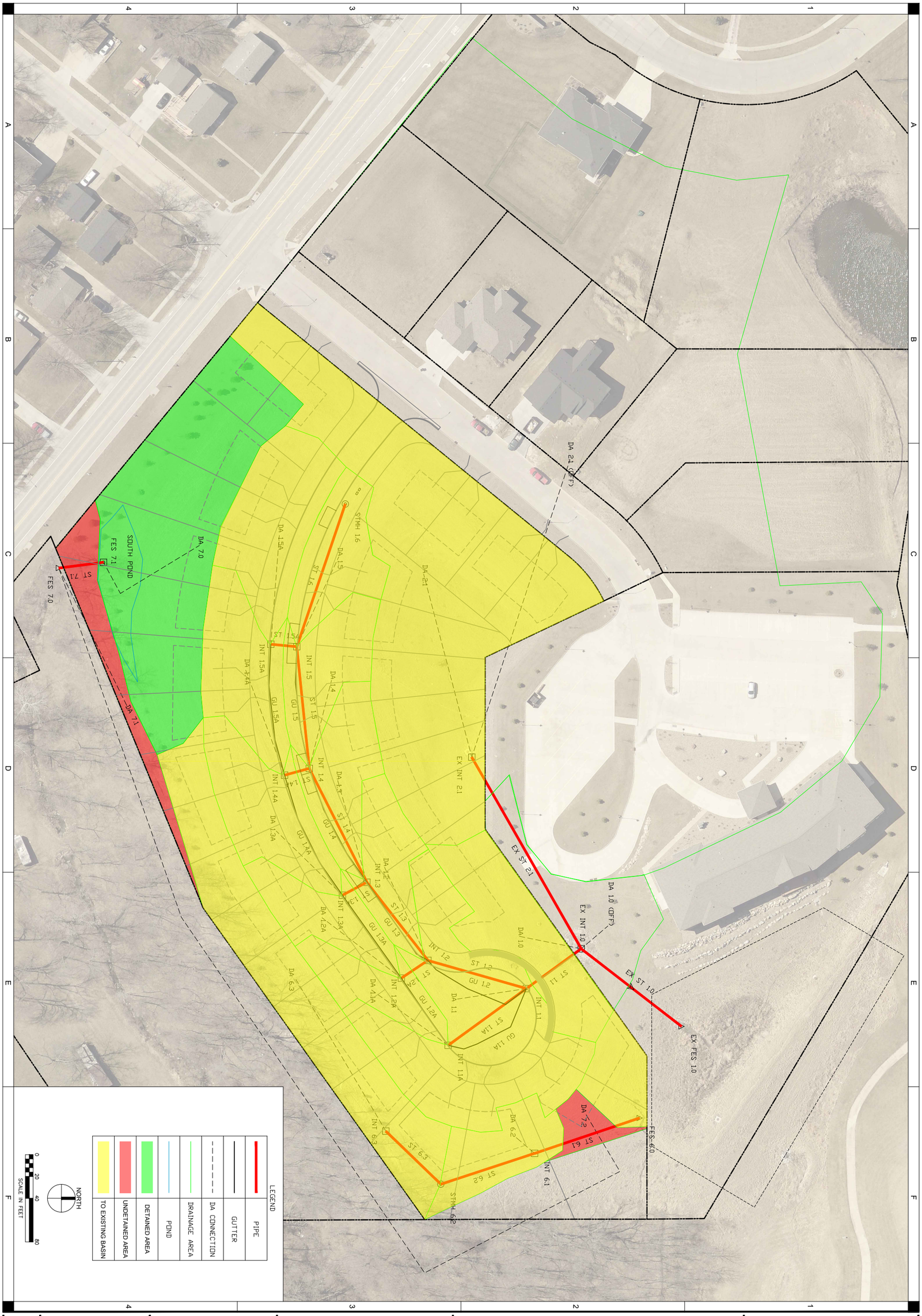

CX01

DRAINAGE MAP - SEWERGEMS SCHEMATIC

DRAWN:	AJH
APPROVED:	KAS
ISSUED FOR:	SUBMITTAL 02
DATE:	04/12/2021
PROJECT NO:	4211030
FIELD BOOK:	---
CLIENT NO:	---

PRELIMINARY - NOT FOR CONSTRUCTION

LEDGESTONE RIDGE PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC

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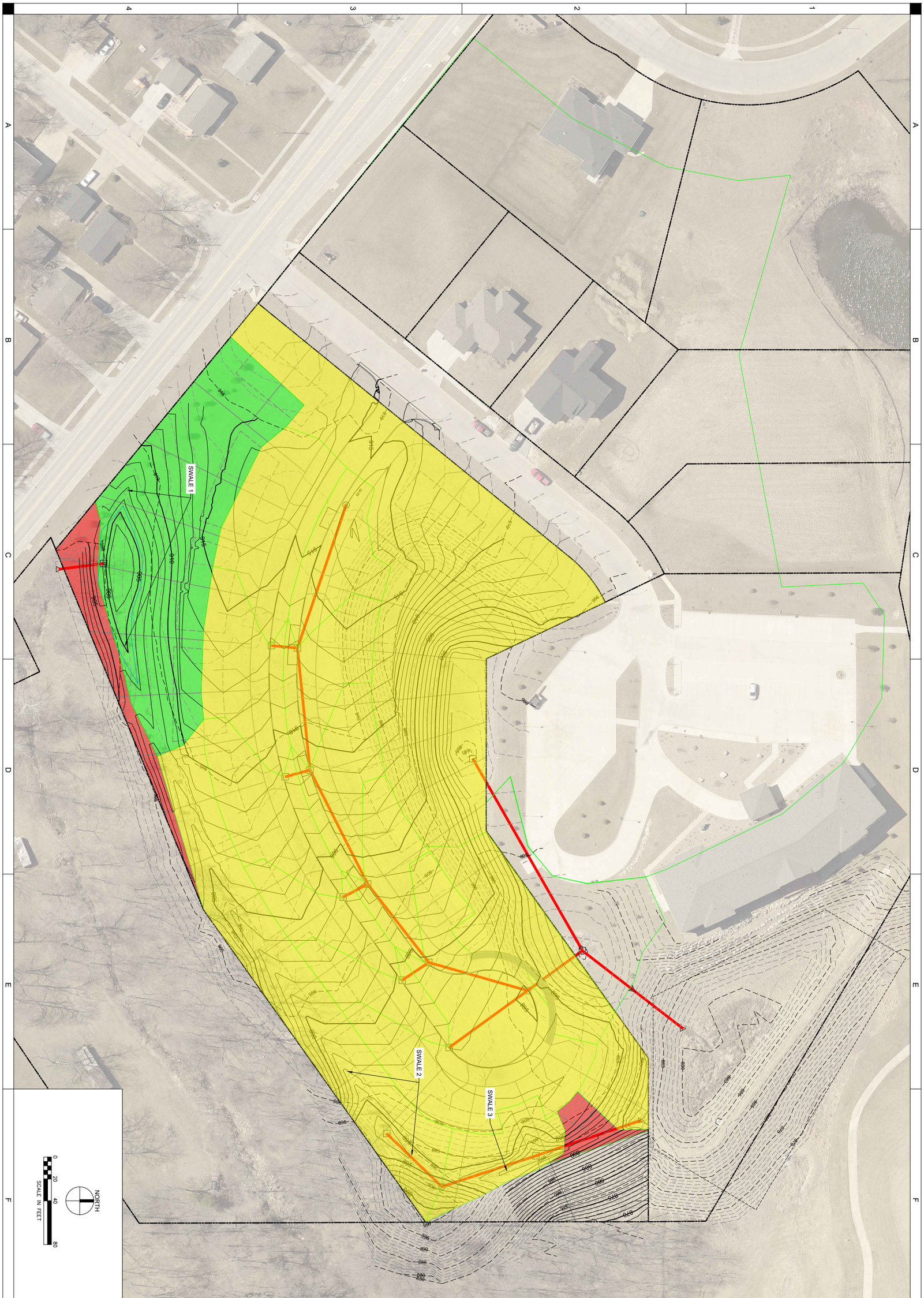

CX02

DRAINAGE MAP - CONTOUR MAP

DRAWN:	AJH
APPROVED:	KAS
ISSUED FOR:	SUBMITTAL 02
DATE:	04/12/2021
PROJECT NO:	4211030
FIELD BOOK:	---
CLIENT NO:	---

PRELIMINARY - NOT FOR CONSTRUCTION

LEDGESTONE RIDGE
PUBLIC IMPROVEMENTS

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APPENDIX

A. HYDROLOGIC AND HYDRAULIC MODELING OUTPUT

SEWERGEMS
MODEL OUTPUT

5 YEAR

Ledgestone Ridge
5 YEAR

Catchment Table - Time: 12.00 hours

Label	Outflow Element	Use Scaled Area?	Scaled Area (ft²)	Time of Concentration (Composite) (min)	Time of Concentration (min)	SCS CN	Flow (Maximum) (cfs)	Time (Maximum Flow) (min)	Notes
DA 1.0	EX INT 1.0	True	11,687.407	10.000	10.000	0.000	0.38	721.000	
DA 1.0 (OFF)	EX INT 1.0	True	10,997.636	10.000	10.000	74.000	0.50	720.000	
DA 1.1	INT 1.1	True	25,052.853	10.000	10.000	90.000	1.79	719.000	
DA 1.1A	INT 1.1A	True	5,564.490	10.000	10.000	90.000	0.40	719.000	
DA 1.2	INT 1.2	True	6,718.514	10.000	10.000	90.000	0.48	719.000	
DA 1.2A	INT 1.2A	True	6,426.390	10.000	10.000	90.000	0.46	719.000	
DA 1.3	INT 1.3	True	8,013.073	10.000	10.000	90.000	0.57	719.000	
DA 1.3A	INT 1.3A	True	10,205.246	10.000	10.000	90.000	0.73	719.000	
DA 1.4	INT 1.4	True	7,749.542	10.000	10.000	90.000	0.55	719.000	
DA 1.4A	INT 1.4A	True	9,756.215	10.000	10.000	90.000	0.70	719.000	
DA 1.5	INT 1.5	True	7,744.834	10.000	10.000	90.000	0.55	719.000	
DA 1.5A	INT 1.5A	True	12,139.632	10.000	10.000	90.000	0.87	719.000	
DA 2.1	EX INT 2.1	True	56,115.042	10.000	10.000	0.000	2.30	720.000	
DA 2.1 (OFF)	EX INT 2.1	True	217,101.718	10.000	10.000	0.000	11.36	720.000	
DA 6.2	INT 6.1	True	6,659.084	10.000	10.000	90.000	0.30	720.000	
DA 6.3	INT 6.3	True	23,251.672	10.000	10.000	90.000	1.06	720.000	
DA 7.0	SOUTH POND	True	33,358.990	10.000	10.000	90.000	1.23	721.000	
DA 7.1	FES 7.0	True	5,834.879	10.000	10.000	61.000	0.11	722.000	
DA 7.2	FES 7.0	True	2,158.625	10.000	10.000	0.000	0.09	720.000	
Existing Drainage Area	O-Existing Release	False	114,434.634	10.000	10.000	58.000	0.61	723.000	

Ledgestone Ridge

5 YEAR

Conduit Table - Time: 12.00 hours

Label	Start Node	Invert (Start) (ft)	Invert (Stop) (ft)	Stop Node	Has User Defined Length?	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Manning's n	Velocity (In) (ft/s)	Depth/Rise (%)	Capacity (Full Flow) (cfs)	Flow (Maximum) (cfs)	Flow (Maximum) / Full Flow (%)
EX ST 1.0	EX INT 1.0	881.22	879.77	EX FES 1.0	False	0.0	116.3	0.012	30.0	Concrete	0.013	9.19	48.3	45.80	21.66	47.3
EX ST 2.1	EX INT 2.1	888.38	885.72	EX INT 1.0	False	0.0	202.3	0.013	30.0	Concrete	0.013	8.29	36.8	47.04	13.64	29.0
ST 1.1	INT 1.1	888.94	885.90	EX INT 1.0	True	55.0	62.1	0.055	24.0	Concrete	0.013	11.75	24.7	53.18	7.15	13.4
ST 1.1A	INT 1.1A	890.91	889.13	INT 1.1	True	88.0	88.6	0.020	15.0	Concrete	0.013	3.12	59.6	9.19	0.54	5.9
ST 1.2	INT 1.2	892.63	889.04	INT 1.1	True	95.0	93.9	0.038	24.0	Concrete	0.013	9.00	60.8	43.97	4.47	10.2
ST 1.2A	INT 1.2A	895.13	894.71	INT 1.2	True	27.0	29.3	0.016	15.0	Concrete	0.013	3.80	18.1	8.06	0.58	7.2
ST 1.3	INT 1.3	896.52	892.73	INT 1.2	True	90.0	90.9	0.042	18.0	Concrete	0.013	8.89	57.9	21.55	3.39	15.7
ST 1.3A	INT 1.3A	898.20	897.81	INT 1.3	True	24.0	25.4	0.016	15.0	Concrete	0.013	4.07	19.6	8.23	0.69	8.4
ST 1.4	INT 1.4	900.86	896.62	INT 1.3	True	85.0	116.9	0.050	18.0	Concrete	0.013	8.28	44.8	23.46	2.15	9.2
ST 1.4A	INT 1.4A	902.37	902.00	INT 1.4	True	25.0	25.0	0.015	15.0	Concrete	0.013	3.86	19.4	7.86	0.65	8.2
ST 1.5	INT 1.5	904.59	900.96	INT 1.4	True	135.0	112.2	0.027	15.0	Concrete	0.013	5.44	60.4	10.59	1.01	9.5
ST 1.5A	INT 1.5A	906.94	906.51	INT 1.5	True	24.0	23.9	0.018	15.0	Concrete	0.013	4.03	17.7	8.65	0.59	6.9
ST 1.6	STMH 1.6	909.86	904.59	INT 1.5	True	134.0	138.1	0.039	8.0	Corrugated HDPE 8 inch (Corrugated Interior)	0.016	0.00	43.7	1.95	0.00	0.0
ST 6.1	INT 6.1	887.88	882.81	FES 6.0	True	130.0	101.6	0.039	15.0	Concrete	0.013	7.41	26.0	12.76	2.02	15.9
ST 6.2	STMH 6.2	889.30	887.98	INT 6.1	True	90.0	90.5	0.015	15.0	Concrete	0.013	4.49	38.3	7.82	1.34	17.2
ST 6.3	INT 6.3	890.14	889.40	STMH 6.2	True	75.0	70.0	0.010	15.0	Concrete	0.013	3.84	29.8	6.42	1.43	22.3
ST 7.1	FES 7.1	902.40	901.80	FES 7.0	True	15.0	41.3	0.040	18.0	Concrete	0.013	5.52	7.3	21.01	0.40	1.3

Ledgestone Ridge
5 YEAR
Conduit - Velocity - Time: 11.90 hours

Label	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Manning's n	Velocity (In) (ft/s)
EX ST 1.0	EX INT 1.0	EX FES 1.0	881.22	879.77	116.3	0.012	30.0	Concrete	0.013	8.35
EX ST 2.1	EX INT 2.1	EX INT 1.0	888.38	885.72	202.3	0.013	30.0	Concrete	0.013	7.45
ST 1.1	INT 1.1	EX INT 1.0	888.94	885.90	55.0	0.055	24.0	Concrete	0.013	10.73
ST 1.1A	INT 1.1A	INT 1.1	890.91	889.13	88.0	0.020	15.0	Concrete	0.013	3.59
ST 1.2	INT 1.2	INT 1.1	892.63	889.04	95.0	0.038	24.0	Concrete	0.013	8.30
ST 1.2A	INT 1.2A	INT 1.2	895.13	894.71	27.0	0.016	15.0	Concrete	0.013	3.49
ST 1.3	INT 1.3	INT 1.2	896.52	892.73	90.0	0.042	18.0	Concrete	0.013	8.26
ST 1.3A	INT 1.3A	INT 1.3	898.20	897.81	24.0	0.016	15.0	Concrete	0.013	3.78
ST 1.4	INT 1.4	INT 1.3	900.86	896.62	85.0	0.050	18.0	Concrete	0.013	7.71
ST 1.4A	INT 1.4A	INT 1.4	902.37	902.00	25.0	0.015	15.0	Concrete	0.013	3.60
ST 1.5	INT 1.5	INT 1.4	904.59	900.96	135.0	0.027	15.0	Concrete	0.013	5.09
ST 1.5A	INT 1.5A	INT 1.5	906.94	906.51	24.0	0.018	15.0	Concrete	0.013	3.79
ST 1.6	STMH 1.6	INT 1.5	909.86	904.59	134.0	0.039	8.0	Corrugated HDPE 8 inch (Corrugated Interior)	0.016	0.00
ST 6.1	INT 6.1	FES 6.0	887.88	882.81	130.0	0.039	15.0	Concrete	0.013	6.79
ST 6.2	STMH 6.2	INT 6.1	889.30	887.98	90.0	0.015	15.0	Concrete	0.013	4.21
ST 6.3	INT 6.3	STMH 6.2	890.14	889.40	75.0	0.010	15.0	Concrete	0.013	3.67
ST 7.1	FES 7.1	FES 7.0	902.40	901.80	15.0	0.040	18.0	Concrete	0.013	5.01

Gutter Table - Time: 12.00 hours

Label	Start Node	Stop Node	Slope (Calculated) (ft/ft)	Length (Scaled) (ft)	Flow (Maximum) (cfs)	Time (Maximum Flow) (min)	Notes
GU 1.1A	INT 1.1A	INT 1.1	0.013	100.2	0.17	719.100	
GU 1.2	INT 1.2	INT 1.1	0.042	106.9	0.19	719.100	
GU 1.2A	INT 1.2A	INT 1.1A	0.043	75.1	0.25	719.100	
GU 1.3	INT 1.3	INT 1.2	0.043	92.0	0.22	719.073	
GU 1.3A	INT 1.3A	INT 1.2A	0.043	93.3	0.36	719.073	
GU 1.4	INT 1.4	INT 1.3	0.033	117.6	0.19	719.073	
GU 1.4A	INT 1.4A	INT 1.3A	0.032	123.9	0.33	719.073	
GU 1.5	INT 1.5	INT 1.4	0.051	112.7	0.14	719.046	
GU 1.5A	INT 1.5A	INT 1.4A	0.047	120.8	0.27	719.046	

Ledgestone Ridge

5 YEAR

Catch Basin Table - Time: 12.00 hours

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Road Cross Slope (ft/ft)	Longitudinal Slope (Inlet) (ft/ft)	Inlet Location	Clogging Factor (%)	Headloss Coefficient (Standard)	Manning's n (Inlet)	Inlet	Flow (Surface Maximum) (cfs)	Flow (Captured Maximum) (cfs)	Flow (Bypassed) (cfs)	Capture Efficiency (Calculated) (%)	Spread / Top Width (ft)	Depth (Gutter) (in)	Hydraulic Grade (Maximum) (ft)	Time To Maximum Captured Flow (min)
EX INT 1.0	891.39	881.22	0.020	(N/A)	In Sag	0.0	1.000	0.013	SW-505 Curb	0.88	0.88	0.00	100.0	(N/A)	(N/A)	882.43	721.011
EX INT 2.1	895.83	888.38	0.020	(N/A)	In Sag	0.0	0.500	0.013	SW-501	13.67	13.67	0.00	100.0	(N/A)	(N/A)	889.30	720.034
INT 1.1	894.73	888.94	0.020	(N/A)	In Sag	20.0	0.800	0.013	SW-505 Curb	1.79	2.16	(N/A)	(N/A)	5.3	4.0	889.44	719.981
INT 1.1A	896.01	890.91	0.020	0.035	On Grade	10.0	0.500	0.013	SW-501	0.64	0.47	0.17	72.9	4.4	1.1	891.16	719.100
INT 1.2	899.18	892.63	0.020	0.045	On Grade	10.0	0.800	0.013	SW-501	0.70	0.51	0.19	72.4	4.4	1.0	893.06	719.100
INT 1.2A	899.21	895.13	0.020	0.045	On Grade	10.0	0.500	0.013	SW-501	0.82	0.58	0.24	70.2	4.6	1.1	895.36	719.100
INT 1.3	903.18	896.52	0.020	0.040	On Grade	10.0	0.600	0.013	SW-501	0.77	0.54	0.22	70.9	4.6	1.1	896.92	719.073
INT 1.3A	903.21	898.20	0.020	0.040	On Grade	10.0	0.500	0.013	SW-501	1.06	0.69	0.36	65.6	5.2	1.3	898.45	719.073
INT 1.4	907.08	900.86	0.020	0.035	On Grade	10.0	1.000	0.013	SW-501	0.69	0.50	0.19	71.9	4.5	1.1	901.17	719.073
INT 1.4A	907.18	902.37	0.020	0.035	On Grade	10.0	0.500	0.013	SW-501	0.97	0.65	0.33	66.4	5.2	1.2	902.61	719.073
INT 1.5	912.80	904.59	0.020	0.035	On Grade	10.0	0.700	0.013	SW-501	0.55	0.42	0.14	75.2	4.2	1.0	904.85	719.046
INT 1.5A	912.81	906.94	0.020	0.035	On Grade	10.0	0.500	0.013	SW-501	0.87	0.59	0.27	68.4	5.0	1.2	907.16	719.046
INT 6.1	891.00	887.88	0.020	(N/A)	In Sag	0.0	0.500	0.013	SW-512, 24"	0.30	1.47	(N/A)	(N/A)	0.0	0.0	888.22	720.034
INT 6.3	893.25	890.14	0.020	(N/A)	In Sag	0.0	0.500	0.013	SW-512, 24"	1.06	2.37	(N/A)	(N/A)	0.5	0.1	890.56	718.126

Ledgestone Ridge
5 YEAR
Manhole Table - Time: 12.00 hours

Label	Elevation (Ground) (ft)	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Headloss Method	Headloss Coefficient (Standard)	Flow (Total In Maximum) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Depth (Maximum) (ft)	Time to Maximum Depth (min)	Notes
STMH 6.2	896.61	896.61	889.30	Standard	0.600	1.43	889.80	889.62	0.35	719.421	
STMH 1.6	915.98	915.98	909.86	Standard	0.500	0.00	909.86	909.86	0.00	0.000	

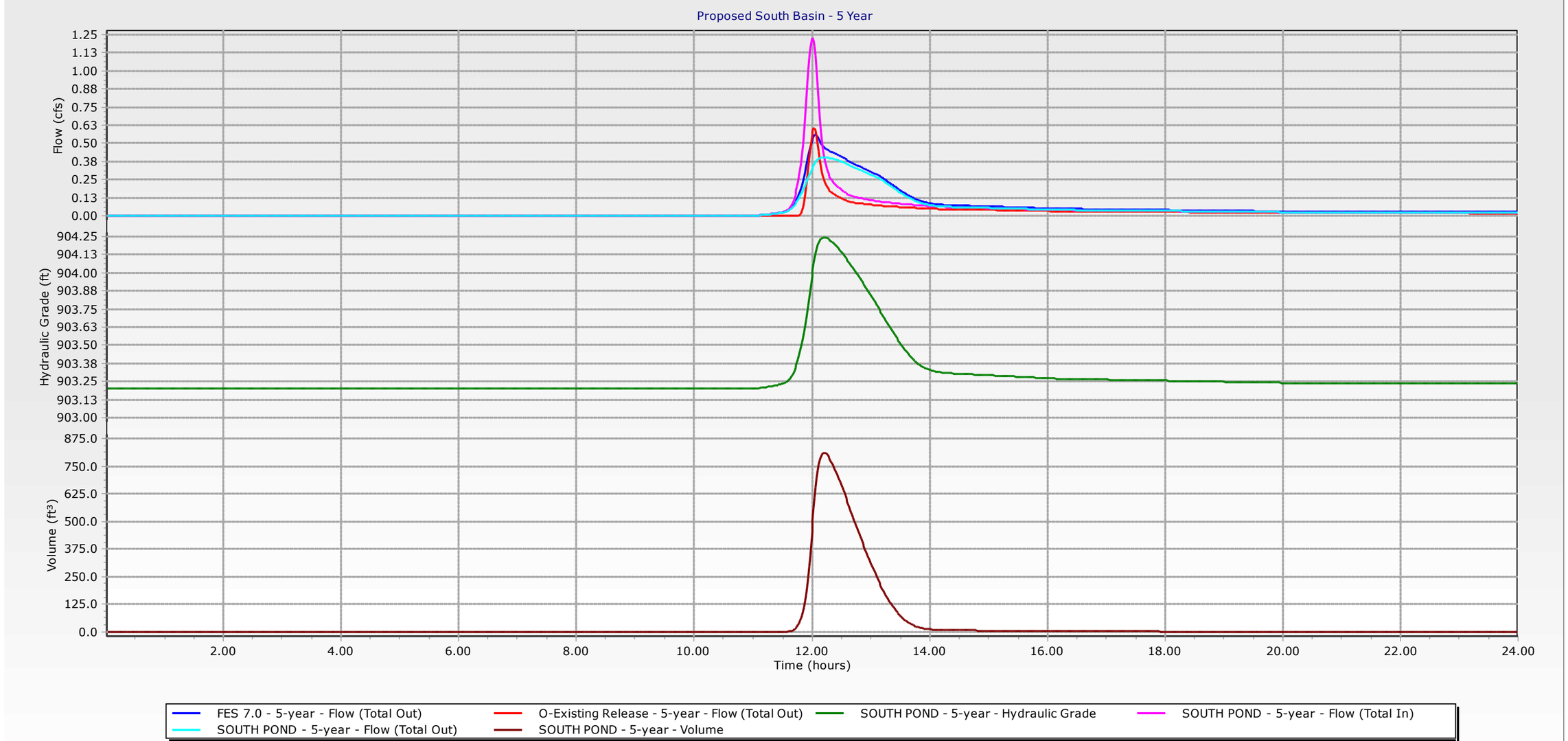
Outfall Table - Time: 12.00 hours

Label	Flow (Total In Maximum) (cfs)	Time to Local Inflow (Maximum) (min)	Local Inflow (Total Volume) (ft^3)	Notes
EX FES 1.0	21.66	0.000	0.0	
FES 6.0	2.02	0.000	0.0	
FES 7.0	0.56	721.037	586.0	
O-Existing Release	0.61	723.006	2,002.9	

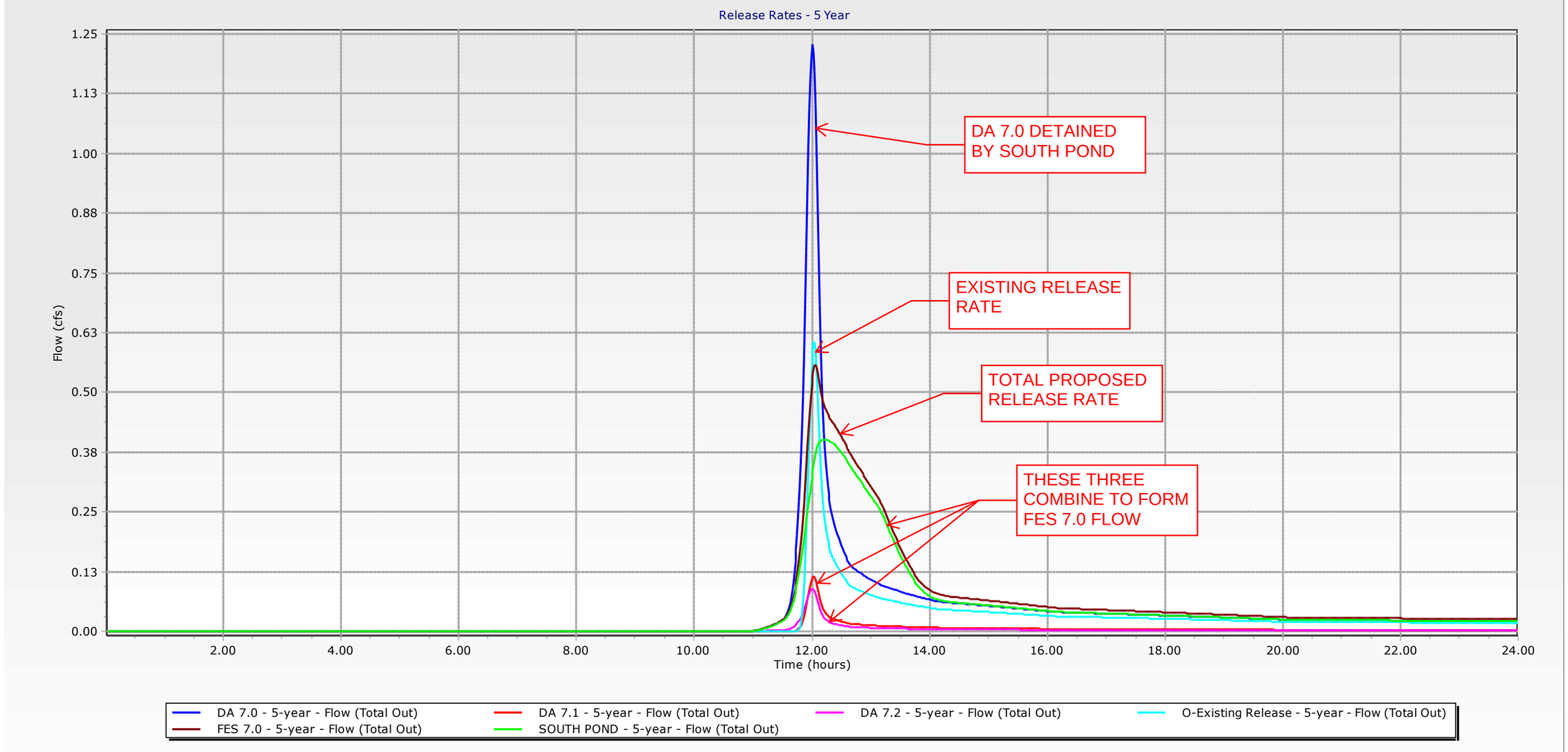
Pond Table - Time: 12.00 hours

Label	Time to Maximum Inflow (min)	Flow (Total In Maximum) (cfs)	Time to Maximum Hydraulic Grade (min)	Hydraulic Grade (Maximum) (ft)	Depth (Maximum) (ft)	Storage (Maximum) (ft^3)	Is Ever Overflowing?
SOUTH POND	721.011	1.23	732.418	904.24	1.04	809.6	False

Ledgestone Ridge
5 YEAR

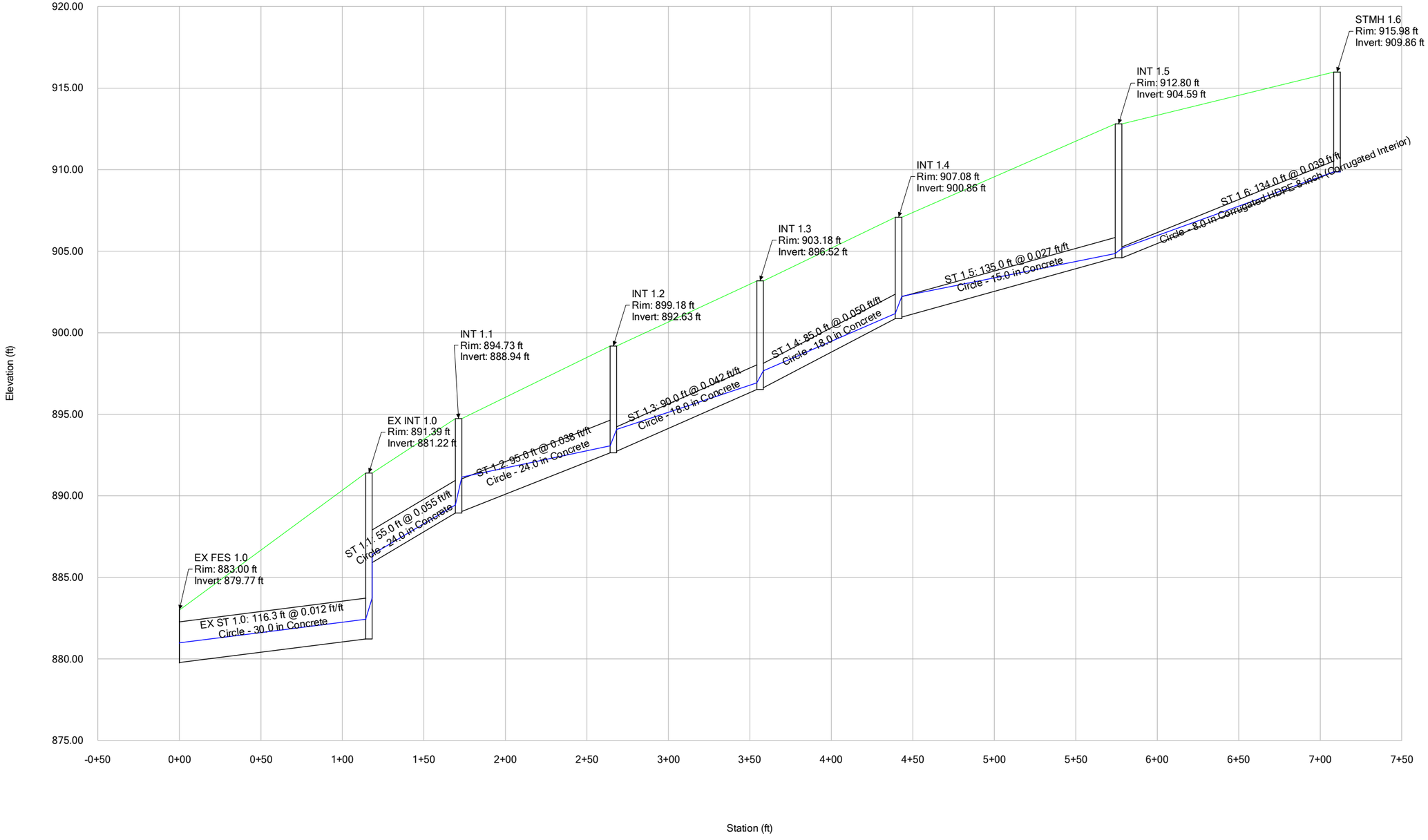


Ledgestone Ridge
5 YEAR



5-YEAR PROFILE

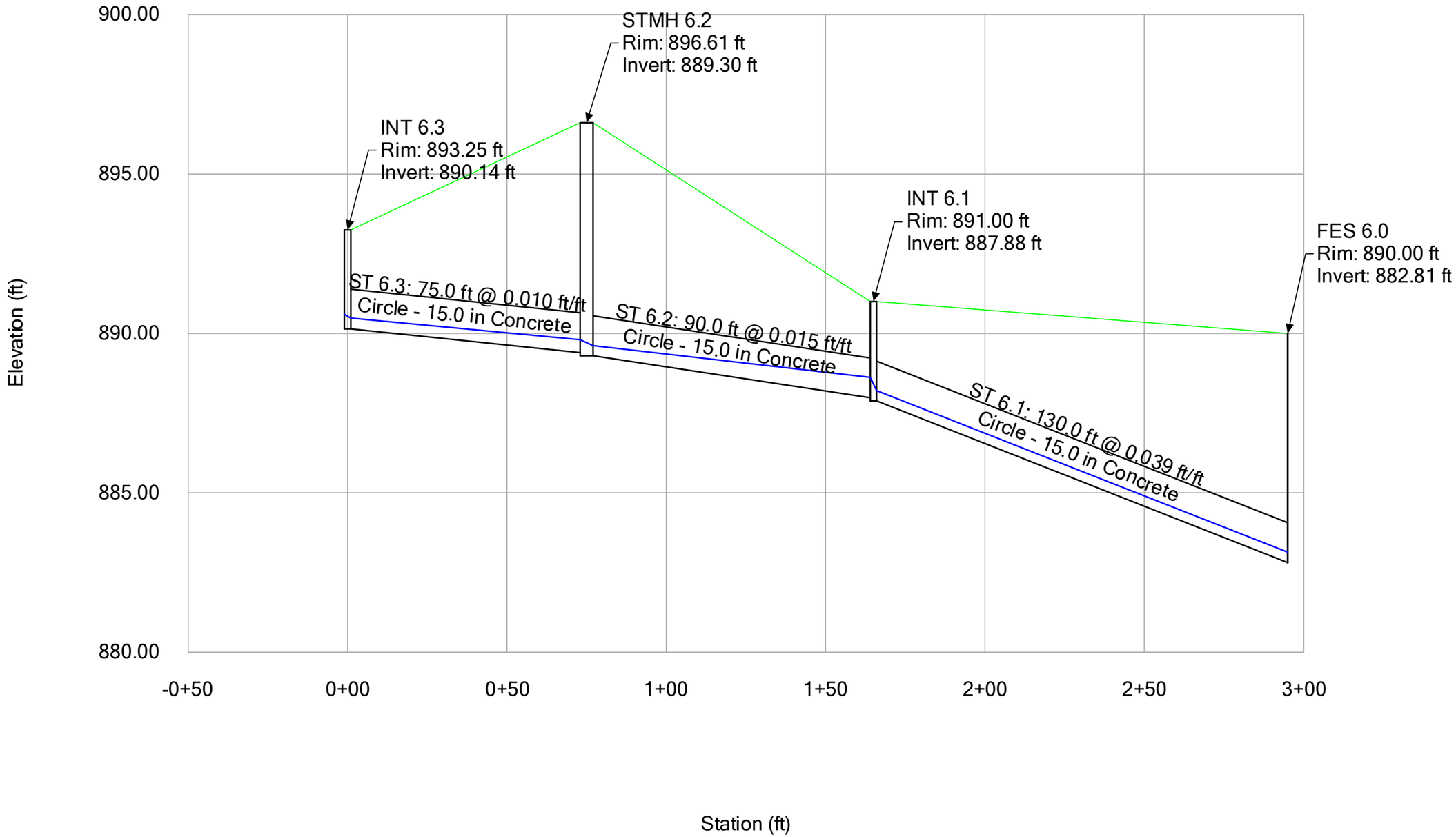
Profile Report
Engineering Profile - EX FES 1.0 to STMH 1.6 (4211030 - Proposed.stsw)



5-YEAR PROFILE

Profile Report

Engineering Profile - FES 6.0 - INT 6.3 (4211030 - Proposed.stsw)



SEWERGEMS
MODEL OUTPUT

10 YEAR

Catchment Table - Time: 12.00 hours

Label	Outflow Element	Use Scaled Area?	Scaled Area (ft²)	Time of Concentration (Composite) (min)	Time of Concentration (min)	SCS CN	Flow (Maximum) (cfs)	Time (Maximum Flow) (min)	Notes
DA 1.0	EX INT 1.0	True	11,687.407	10.000	10.000	0.000	0.54	721.000	
DA 1.0 (OFF)	EX INT 1.0	True	10,997.636	10.000	10.000	74.000	0.67	720.000	
DA 1.1	INT 1.1	True	25,052.853	10.000	10.000	90.000	2.23	719.000	
DA 1.1A	INT 1.1A	True	5,564.490	10.000	10.000	90.000	0.50	719.000	
DA 1.2	INT 1.2	True	6,718.514	10.000	10.000	90.000	0.60	719.000	
DA 1.2A	INT 1.2A	True	6,426.390	10.000	10.000	90.000	0.57	719.000	
DA 1.3	INT 1.3	True	8,013.073	10.000	10.000	90.000	0.71	719.000	
DA 1.3A	INT 1.3A	True	10,205.246	10.000	10.000	90.000	0.91	719.000	
DA 1.4	INT 1.4	True	7,749.542	10.000	10.000	90.000	0.69	719.000	
DA 1.4A	INT 1.4A	True	9,756.215	10.000	10.000	90.000	0.87	719.000	
DA 1.5	INT 1.5	True	7,744.834	10.000	10.000	90.000	0.69	719.000	
DA 1.5A	INT 1.5A	True	12,139.632	10.000	10.000	90.000	1.08	719.000	
DA 2.1	EX INT 2.1	True	56,115.042	10.000	10.000	0.000	3.15	720.000	
DA 2.1 (OFF)	EX INT 2.1	True	217,101.718	10.000	10.000	0.000	14.90	720.000	
DA 6.2	INT 6.1	True	6,659.084	10.000	10.000	90.000	0.41	720.000	
DA 6.3	INT 6.3	True	23,251.672	10.000	10.000	90.000	1.42	720.000	
DA 7.0	SOUTH POND	True	33,358.990	10.000	10.000	90.000	1.71	720.000	
DA 7.1	FES 7.0	True	5,834.879	10.000	10.000	61.000	0.18	721.000	
DA 7.2	FES 7.0	True	2,158.625	10.000	10.000	0.000	0.12	720.000	
Existing Drainage Area	O-Existing Release	False	114,434.634	10.000	10.000	58.000	1.02	722.000	

Ledgestone Ridge

10 YEAR

Conduit Table - Time: 12.00 hours

Label	Start Node	Invert (Start) (ft)	Invert (Stop) (ft)	Stop Node	Has User Defined Length?	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Manning's n	Velocity (In) (ft/s)	Depth/Rise (%)	Capacity (Full Flow) (cfs)	Flow (Maximum) (cfs)	Flow (Maximum) / Full Flow (%)
EX ST 1.0	EX INT 1.0	881.22	879.77	EX FES 1.0	False	0.0	116.3	0.012	30.0	Concrete	0.013	9.80	70.9	45.80	28.09	61.3
EX ST 2.1	EX INT 2.1	888.38	885.72	EX INT 1.0	False	0.0	202.3	0.013	30.0	Concrete	0.013	8.94	42.9	47.04	18.02	38.3
ST 1.1	INT 1.1	888.94	885.90	EX INT 1.0	True	55.0	62.1	0.055	24.0	Concrete	0.013	12.53	27.6	53.18	8.87	16.7
ST 1.1A	INT 1.1A	890.91	889.13	INT 1.1	True	88.0	88.6	0.020	15.0	Concrete	0.013	1.28	70.8	9.19	0.79	8.6
ST 1.2	INT 1.2	892.63	889.04	INT 1.1	True	95.0	93.9	0.038	24.0	Concrete	0.013	9.53	61.9	43.97	5.45	12.4
ST 1.2A	INT 1.2A	895.13	894.71	INT 1.2	True	27.0	29.3	0.016	15.0	Concrete	0.013	4.06	20.2	8.06	0.72	9.0
ST 1.3	INT 1.3	896.52	892.73	INT 1.2	True	90.0	90.9	0.042	18.0	Concrete	0.013	9.38	64.7	21.55	4.09	19.0
ST 1.3A	INT 1.3A	898.20	897.81	INT 1.3	True	24.0	25.4	0.016	15.0	Concrete	0.013	4.32	21.6	8.23	0.85	10.3
ST 1.4	INT 1.4	900.86	896.62	INT 1.3	True	85.0	116.9	0.050	18.0	Concrete	0.013	8.73	49.9	23.46	2.58	11.0
ST 1.4A	INT 1.4A	902.37	902.00	INT 1.4	True	25.0	25.0	0.015	15.0	Concrete	0.013	4.08	25.8	7.86	0.78	9.9
ST 1.5	INT 1.5	904.59	900.96	INT 1.4	True	135.0	112.2	0.027	15.0	Concrete	0.013	5.72	61.3	10.59	1.20	11.3
ST 1.5A	INT 1.5A	906.94	906.51	INT 1.5	True	24.0	23.9	0.018	15.0	Concrete	0.013	4.23	19.2	8.65	0.70	8.1
ST 1.6	STMH 1.6	909.86	904.59	INT 1.5	True	134.0	138.1	0.039	8.0	Corrugated HDPE 8 inch (Corrugated Interior)	0.016	0.00	47.9	1.95	0.00	0.0
ST 6.1	INT 6.1	887.88	882.81	FES 6.0	True	130.0	101.6	0.039	15.0	Concrete	0.013	7.91	29.0	12.76	2.63	20.6
ST 6.2	STMH 6.2	889.30	887.98	INT 6.1	True	90.0	90.5	0.015	15.0	Concrete	0.013	4.93	45.0	7.82	1.79	22.9
ST 6.3	INT 6.3	890.14	889.40	STMH 6.2	True	75.0	70.0	0.010	15.0	Concrete	0.013	4.18	36.8	6.42	1.81	28.2
ST 7.1	FES 7.1	902.40	901.80	FES 7.0	True	15.0	41.3	0.040	18.0	Concrete	0.013	5.84	8.0	21.01	0.46	1.5

Ledgestone Ridge
10 YEAR
Conduit - Velocity - Time: 11.90 hours

Label	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Manning's n	Velocity (In) (ft/s)
EX ST 1.0	EX INT 1.0	EX FES 1.0	881.22	879.77	116.3	0.012	30.0	Concrete	0.013	9.02
EX ST 2.1	EX INT 2.1	EX INT 1.0	888.38	885.72	202.3	0.013	30.0	Concrete	0.013	8.13
ST 1.1	INT 1.1	EX INT 1.0	888.94	885.90	55.0	0.055	24.0	Concrete	0.013	11.50
ST 1.1A	INT 1.1A	INT 1.1	890.91	889.13	88.0	0.020	15.0	Concrete	0.013	3.87
ST 1.2	INT 1.2	INT 1.1	892.63	889.04	95.0	0.038	24.0	Concrete	0.013	8.85
ST 1.2A	INT 1.2A	INT 1.2	895.13	894.71	27.0	0.016	15.0	Concrete	0.013	3.76
ST 1.3	INT 1.3	INT 1.2	896.52	892.73	90.0	0.042	18.0	Concrete	0.013	8.77
ST 1.3A	INT 1.3A	INT 1.3	898.20	897.81	24.0	0.016	15.0	Concrete	0.013	4.03
ST 1.4	INT 1.4	INT 1.3	900.86	896.62	85.0	0.050	18.0	Concrete	0.013	8.18
ST 1.4A	INT 1.4A	INT 1.4	902.37	902.00	25.0	0.015	15.0	Concrete	0.013	3.83
ST 1.5	INT 1.5	INT 1.4	904.59	900.96	135.0	0.027	15.0	Concrete	0.013	5.38
ST 1.5A	INT 1.5A	INT 1.5	906.94	906.51	24.0	0.018	15.0	Concrete	0.013	4.00
ST 1.6	STMH 1.6	INT 1.5	909.86	904.59	134.0	0.039	8.0	Corrugated HDPE 8 inch (Corrugated Interior)	0.016	0.00
ST 6.1	INT 6.1	FES 6.0	887.88	882.81	130.0	0.039	15.0	Concrete	0.013	7.13
ST 6.2	STMH 6.2	INT 6.1	889.30	887.98	90.0	0.015	15.0	Concrete	0.013	4.39
ST 6.3	INT 6.3	STMH 6.2	890.14	889.40	75.0	0.010	15.0	Concrete	0.013	3.84
ST 7.1	FES 7.1	FES 7.0	902.40	901.80	15.0	0.040	18.0	Concrete	0.013	5.30

Gutter Table - Time: 12.00 hours

Label	Start Node	Stop Node	Slope (Calculated) (ft/ft)	Length (Scaled) (ft)	Flow (Maximum) (cfs)	Time (Maximum Flow) (min)	Notes
GU 1.1A	INT 1.1A	INT 1.1	0.013	100.2	0.28	719.059	
GU 1.2	INT 1.2	INT 1.1	0.042	106.9	0.30	719.059	
GU 1.2A	INT 1.2A	INT 1.1A	0.043	75.1	0.39	719.059	
GU 1.3	INT 1.3	INT 1.2	0.043	92.0	0.33	719.059	
GU 1.3A	INT 1.3A	INT 1.2A	0.043	93.3	0.54	719.059	
GU 1.4	INT 1.4	INT 1.3	0.033	117.6	0.28	719.033	
GU 1.4A	INT 1.4A	INT 1.3A	0.032	123.9	0.47	719.059	
GU 1.5	INT 1.5	INT 1.4	0.051	112.7	0.19	719.033	
GU 1.5A	INT 1.5A	INT 1.4A	0.047	120.8	0.38	719.033	

Ledgestone Ridge

10 YEAR

Catch Basin Table - Time: 12.00 hours

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Road Cross Slope (ft/ft)	Longitudinal Slope (Inlet) (ft/ft)	Inlet Location	Clogging Factor (%)	Headloss Coefficient (Standard)	Manning's n (Inlet)	Inlet	Flow (Surface Maximum) (cfs)	Flow (Captured Maximum) (cfs)	Flow (Bypassed) (cfs)	Capture Efficiency (Calculated) (%)	Spread / Top Width (ft)	Depth (Gutter) (in)	Hydraulic Grade (Maximum) (ft)	Time To Maximum Captured Flow (min)
EX INT 1.0	891.39	881.22	0.020	(N/A)	In Sag	0.0	1.000	0.013	SW-505 Curb	1.21	1.21	0.00	100.0	(N/A)	(N/A)	882.64	720.019
EX INT 2.1	895.83	888.38	0.020	(N/A)	In Sag	0.0	0.500	0.013	SW-501	18.04	18.04	0.00	100.0	(N/A)	(N/A)	889.45	720.019
INT 1.1	894.73	888.94	0.020	(N/A)	In Sag	20.0	0.800	0.013	SW-505 Curb	2.23	2.80	(N/A)	(N/A)	6.9	4.4	889.49	719.717
INT 1.1A	896.01	890.91	0.020	0.035	On Grade	10.0	0.500	0.013	SW-501	0.88	0.60	0.28	68.2	5.0	1.2	891.45	719.059
INT 1.2	899.18	892.63	0.020	0.045	On Grade	10.0	0.800	0.013	SW-501	0.93	0.64	0.29	68.4	4.9	1.2	893.11	719.059
INT 1.2A	899.21	895.13	0.020	0.045	On Grade	10.0	0.500	0.013	SW-501	1.11	0.72	0.38	65.3	5.2	1.2	895.38	719.059
INT 1.3	903.18	896.52	0.020	0.040	On Grade	10.0	0.600	0.013	SW-501	1.00	0.66	0.33	66.6	5.1	1.2	896.96	719.059
INT 1.3A	903.21	898.20	0.020	0.040	On Grade	10.0	0.500	0.013	SW-501	1.38	0.85	0.53	61.3	5.8	1.4	898.47	719.059
INT 1.4	907.08	900.86	0.020	0.035	On Grade	10.0	1.000	0.013	SW-501	0.88	0.60	0.28	68.1	5.0	1.2	901.20	719.033
INT 1.4A	907.18	902.37	0.020	0.035	On Grade	10.0	0.500	0.013	SW-501	1.25	0.78	0.47	62.4	5.7	1.4	902.64	719.059
INT 1.5	912.80	904.59	0.020	0.035	On Grade	10.0	0.700	0.013	SW-501	0.69	0.50	0.19	72.0	4.5	1.1	904.87	719.033
INT 1.5A	912.81	906.94	0.020	0.035	On Grade	10.0	0.500	0.013	SW-501	1.08	0.70	0.38	64.8	5.4	1.3	907.18	719.033
INT 6.1	891.00	887.88	0.020	(N/A)	In Sag	0.0	0.500	0.013	SW-512, 24"	0.41	1.66	(N/A)	(N/A)	0.0	0.0	888.27	719.059
INT 6.3	893.25	890.14	0.020	(N/A)	In Sag	0.0	0.500	0.013	SW-512, 24"	1.42	2.80	(N/A)	(N/A)	0.1	0.0	890.61	719.313

Ledgestone Ridge
10 YEAR
Manhole Table - Time: 12.00 hours

Label	Elevation (Ground) (ft)	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Headloss Method	Headloss Coefficient (Standard)	Flow (Total In Maximum) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Depth (Maximum) (ft)	Time to Maximum Depth (min)	Notes
STMH 6.2	896.61	896.61	889.30	Standard	0.600	1.81	889.90	889.67	0.41	717.981	
STMH 1.6	915.98	915.98	909.86	Standard	0.500	0.00	909.86	909.86	0.00	0.000	

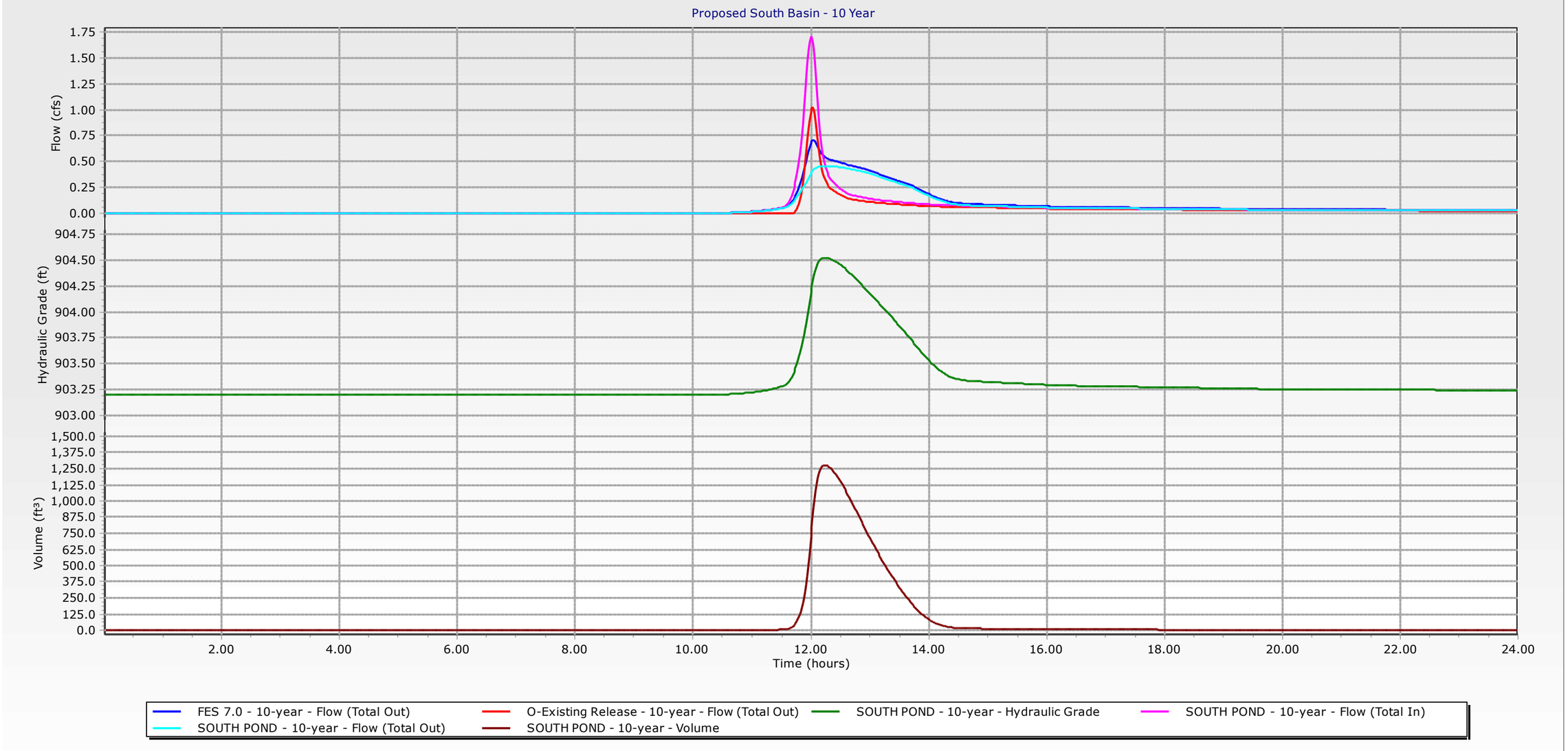
Outfall Table - Time: 12.00 hours

Label	Flow (Total In Maximum) (cfs)	Time to Local Inflow (Maximum) (min)	Local Inflow (Total Volume) (ft^3)	Notes
EX FES 1.0	28.09	0.000	0.0	
FES 6.0	2.63	0.000	0.0	
FES 7.0	0.71	721.017	833.4	
O-Existing Release	1.02	722.008	3,052.0	

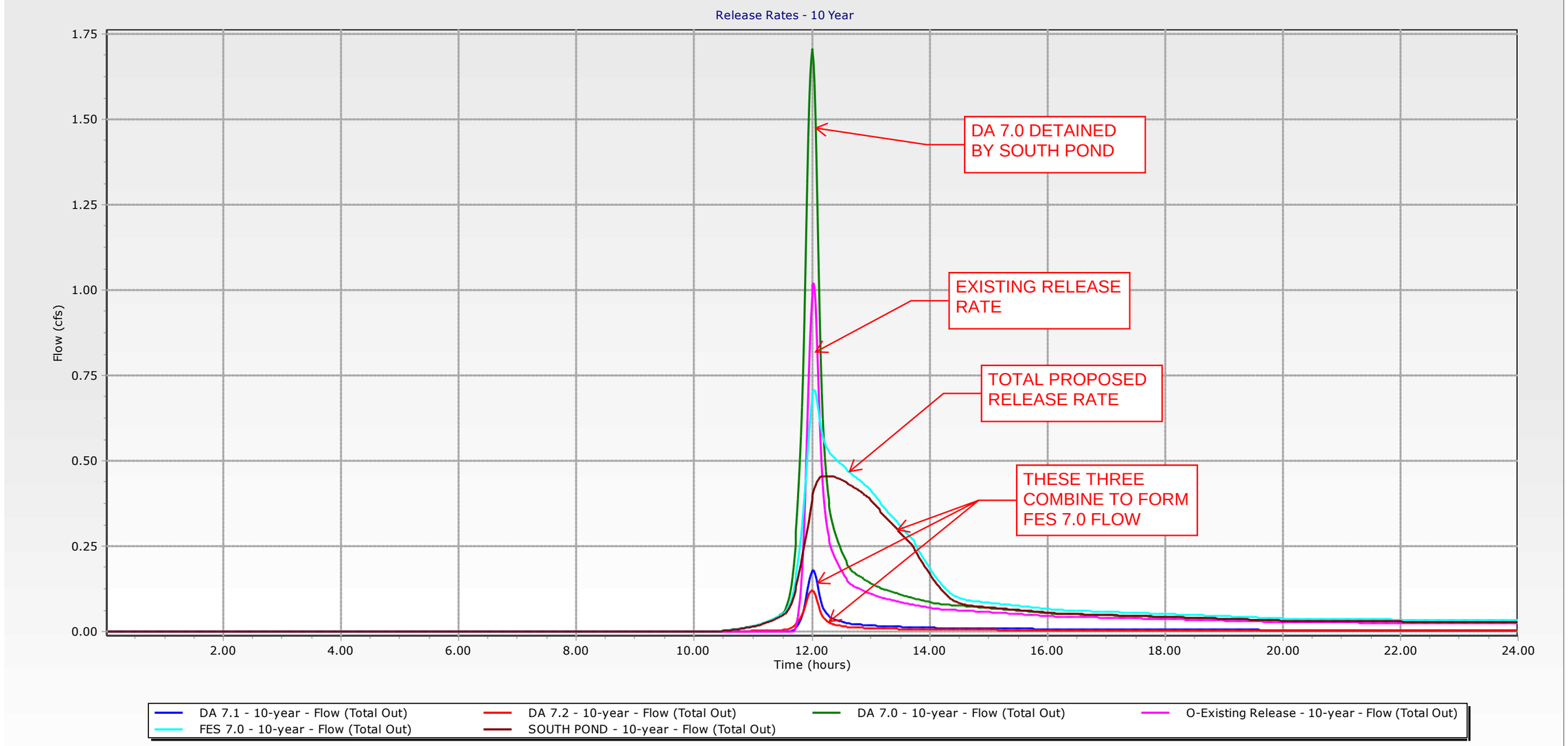
Pond Table - Time: 12.00 hours

Label	Time to Maximum Inflow (min)	Flow (Total In Maximum) (cfs)	Time to Maximum Hydraulic Grade (min)	Hydraulic Grade (Maximum) (ft)	Depth (Maximum) (ft)	Storage (Maximum) (ft^3)	Is Ever Overflowing?
SOUTH POND	720.044	1.71	734.438	904.52	1.32	1,277.6	False

Ledgestone Ridge
10 YEAR



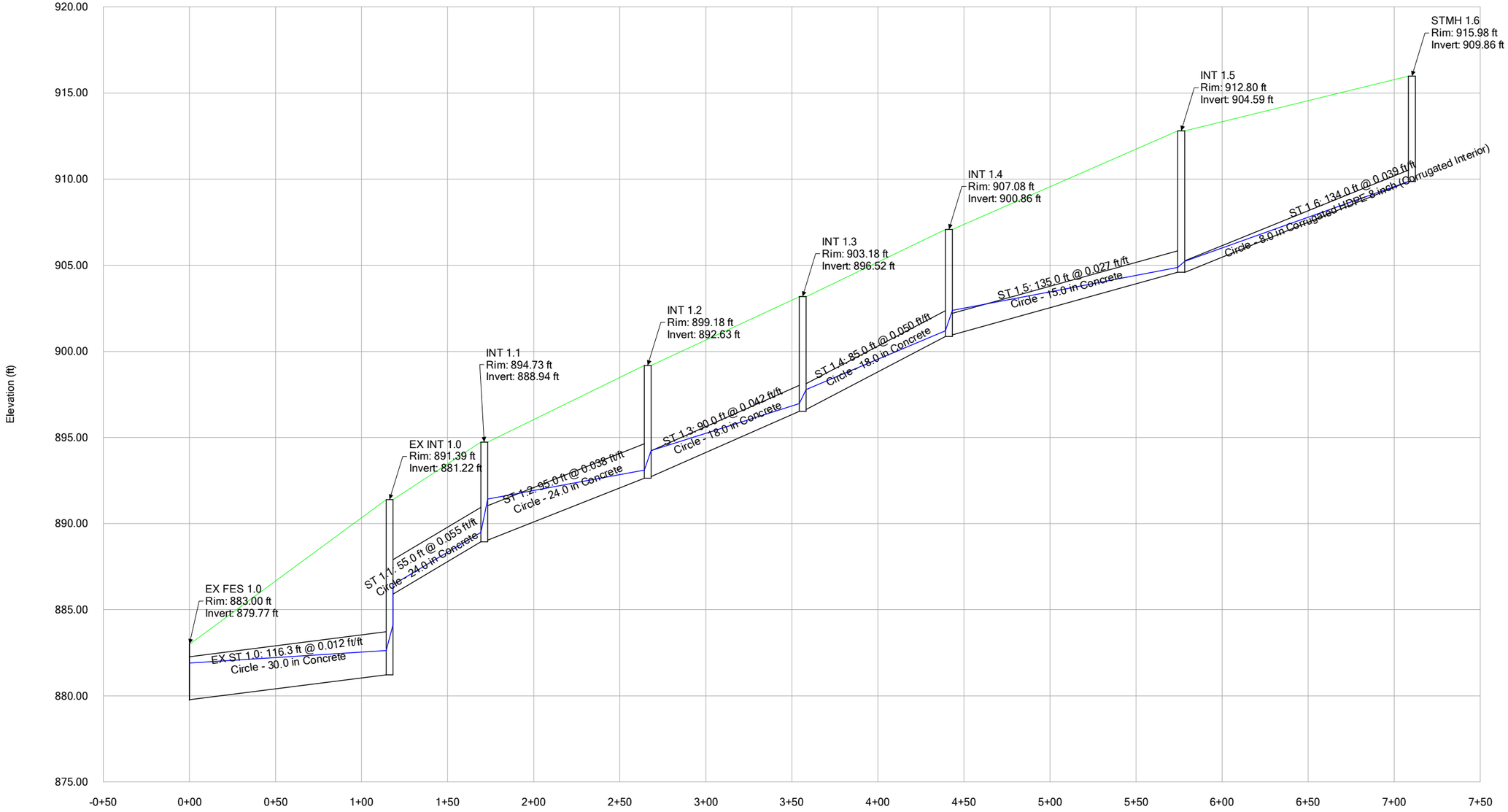
Ledgestone Ridge
10 YEAR



10-YEAR PROFILE

Profile Report

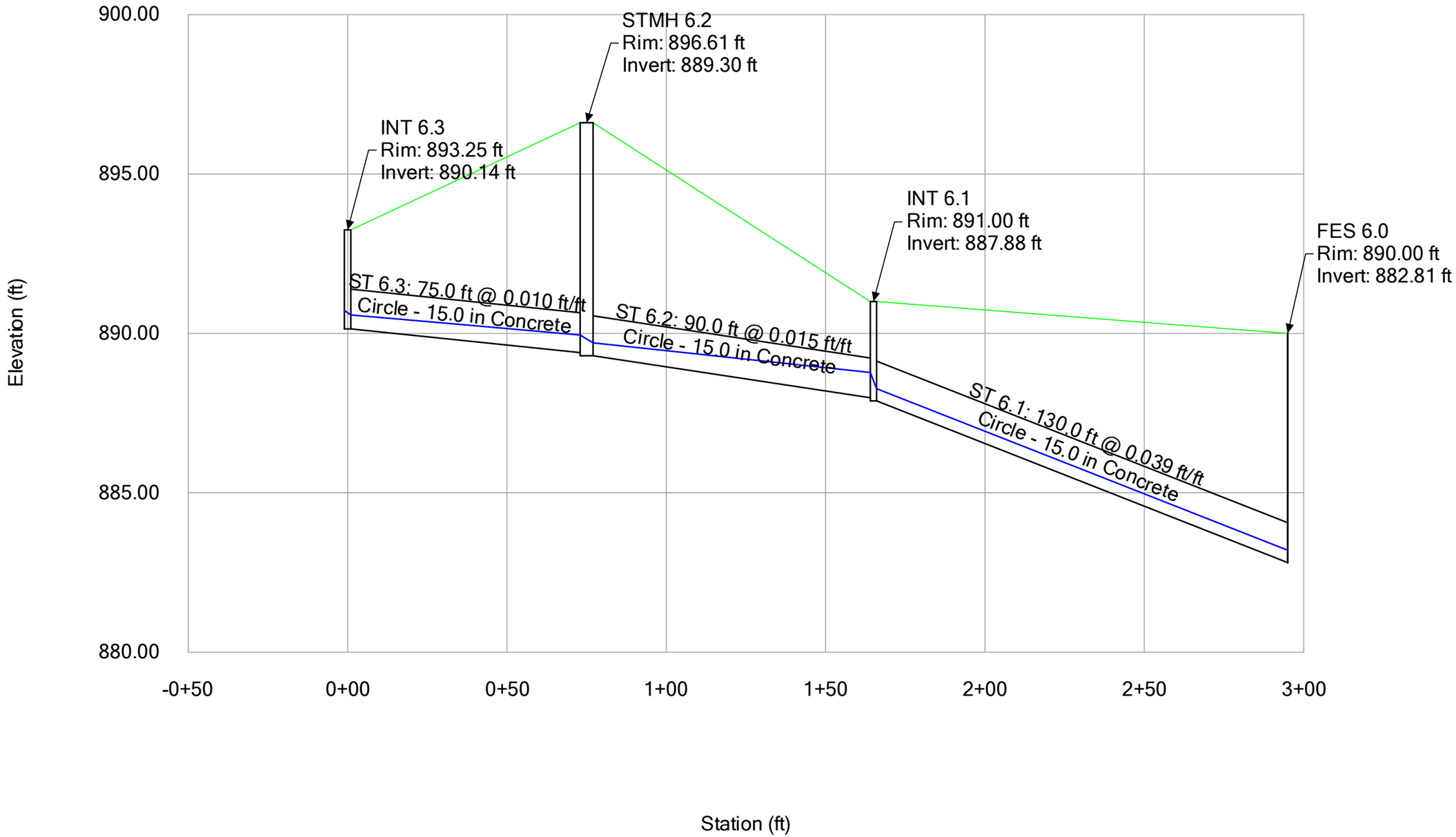
Engineering Profile - EX FES 1.0 to STMH 1.6 (4211030 - Proposed.stsw)



10-YEAR PROFILE

Profile Report

Engineering Profile - FES 6.0 - INT 6.3 (4211030 - Proposed.stsw)



SEWERGEMS
MODEL OUTPUT

100 YEAR

Catchment Table - Time: 12.00 hours

Label	Outflow Element	Use Scaled Area?	Scaled Area (ft²)	Time of Concentration (Composite) (min)	Time of Concentration (min)	SCS CN	Flow (Maximum) (cfs)	Time (Maximum Flow) (min)	Notes
DA 1.0	EX INT 1.0	True	11,687.407	10.000	10.000	0.000	1.29	720.000	
DA 1.0 (OFF)	EX INT 1.0	True	10,997.636	10.000	10.000	74.000	1.43	720.000	
DA 1.1	INT 1.1	True	25,052.853	10.000	10.000	90.000	4.07	719.000	
DA 1.1A	INT 1.1A	True	5,564.490	10.000	10.000	90.000	0.90	719.000	
DA 1.2	INT 1.2	True	6,718.514	10.000	10.000	90.000	1.09	719.000	
DA 1.2A	INT 1.2A	True	6,426.390	10.000	10.000	90.000	1.04	719.000	
DA 1.3	INT 1.3	True	8,013.073	10.000	10.000	90.000	1.30	719.000	
DA 1.3A	INT 1.3A	True	10,205.246	10.000	10.000	90.000	1.66	719.000	
DA 1.4	INT 1.4	True	7,749.542	10.000	10.000	90.000	1.26	719.000	
DA 1.4A	INT 1.4A	True	9,756.215	10.000	10.000	90.000	1.58	719.000	
DA 1.5	INT 1.5	True	7,744.834	10.000	10.000	90.000	1.26	719.000	
DA 1.5A	INT 1.5A	True	12,139.632	10.000	10.000	90.000	1.97	719.000	
DA 2.1	EX INT 2.1	True	56,115.042	10.000	10.000	0.000	6.93	720.000	
DA 2.1 (OFF)	EX INT 2.1	True	217,101.718	10.000	10.000	0.000	30.23	719.000	
DA 6.2	INT 6.1	True	6,659.084	10.000	10.000	90.000	0.86	720.000	
DA 6.3	INT 6.3	True	23,251.672	10.000	10.000	90.000	3.02	720.000	
DA 7.0	SOUTH POND	True	33,358.990	10.000	10.000	90.000	3.90	720.000	
DA 7.1	FES 7.0	True	5,834.879	10.000	10.000	61.000	0.51	720.000	
DA 7.2	FES 7.0	True	2,158.625	10.000	10.000	0.000	0.27	720.000	
Existing Drainage Area	O-Existing Release	False	114,434.634	10.000	10.000	58.000	3.20	720.000	

Ledgestone Ridge

100 YEAR

Conduit Table - Time: 12.00 hours

Label	Start Node	Invert (Start) (ft)	Invert (Stop) (ft)	Stop Node	Has User Defined Length?	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Manning's n	Velocity (In) (ft/s)	Depth/Rise (%)	Capacity (Full Flow) (cfs)	Flow (Maximum) (cfs)	Flow (Maximum) / Full Flow (%)
EX ST 1.0	EX INT 1.0	881.22	879.77	EX FES 1.0	False	0.0	116.3	0.012	30.0	Concrete	0.013	11.31	100.0	45.80	55.58	121.3
EX ST 2.1	EX INT 2.1	888.38	885.72	EX INT 1.0	False	0.0	202.3	0.013	30.0	Concrete	0.013	7.56	100.0	47.04	37.15	79.0
ST 1.1	INT 1.1	888.94	885.90	EX INT 1.0	True	55.0	62.1	0.055	24.0	Concrete	0.013	14.72	68.6	53.18	15.71	29.5
ST 1.1A	INT 1.1A	890.91	889.13	INT 1.1	True	88.0	88.6	0.020	15.0	Concrete	0.013	0.90	100.0	9.19	1.57	17.1
ST 1.2	INT 1.2	892.63	889.04	INT 1.1	True	95.0	93.9	0.038	24.0	Concrete	0.013	11.01	65.4	43.97	9.07	20.6
ST 1.2A	INT 1.2A	895.13	894.71	INT 1.2	True	27.0	29.3	0.016	15.0	Concrete	0.013	4.81	27.0	8.06	1.30	16.1
ST 1.3	INT 1.3	896.52	892.73	INT 1.2	True	90.0	90.9	0.042	18.0	Concrete	0.013	10.73	69.0	21.55	6.66	30.9
ST 1.3A	INT 1.3A	898.20	897.81	INT 1.3	True	24.0	25.4	0.016	15.0	Concrete	0.013	5.01	28.2	8.23	1.42	17.2
ST 1.4	INT 1.4	900.86	896.62	INT 1.3	True	85.0	116.9	0.050	18.0	Concrete	0.013	9.97	64.1	23.46	4.13	17.6
ST 1.4A	INT 1.4A	902.37	902.00	INT 1.4	True	25.0	25.0	0.015	15.0	Concrete	0.013	4.20	48.0	7.86	1.31	16.7
ST 1.5	INT 1.5	904.59	900.96	INT 1.4	True	135.0	112.2	0.027	15.0	Concrete	0.013	6.49	64.2	10.59	1.86	17.6
ST 1.5A	INT 1.5A	906.94	906.51	INT 1.5	True	24.0	23.9	0.018	15.0	Concrete	0.013	4.80	23.8	8.65	1.08	12.5
ST 1.6	STMH 1.6	909.86	904.59	INT 1.5	True	134.0	138.1	0.039	8.0	Corrugated HDPE 8 inch (Corrugated Interior)	0.016	0.00	50.0	1.95	0.00	0.0
ST 6.1	INT 6.1	887.88	882.81	FES 6.0	True	130.0	101.6	0.039	15.0	Concrete	0.013	9.24	69.4	12.76	4.15	32.5
ST 6.2	STMH 6.2	889.30	887.98	INT 6.1	True	90.0	90.5	0.015	15.0	Concrete	0.013	5.99	64.0	7.82	3.07	39.3
ST 6.3	INT 6.3	890.14	889.40	STMH 6.2	True	75.0	70.0	0.010	15.0	Concrete	0.013	5.18	55.6	6.42	3.11	48.4
ST 7.1	FES 7.1	902.40	901.80	FES 7.0	True	15.0	41.3	0.040	18.0	Concrete	0.013	6.30	9.1	21.01	0.60	2.0

Ledgestone Ridge
100 YEAR
Conduit - Velocity - Time: 11.80 hours

Label	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Manning's n	Velocity (In) (ft/s)
EX ST 1.0	EX INT 1.0	EX FES 1.0	881.22	879.77	116.3	0.012	30.0	Concrete	0.013	4.52
EX ST 2.1	EX INT 2.1	EX INT 1.0	888.38	885.72	202.3	0.013	30.0	Concrete	0.013	8.41
ST 1.1	INT 1.1	EX INT 1.0	888.94	885.90	55.0	0.055	24.0	Concrete	0.013	11.59
ST 1.1A	INT 1.1A	INT 1.1	890.91	889.13	88.0	0.020	15.0	Concrete	0.013	3.90
ST 1.2	INT 1.2	INT 1.1	892.63	889.04	95.0	0.038	24.0	Concrete	0.013	8.91
ST 1.2A	INT 1.2A	INT 1.2	895.13	894.71	27.0	0.016	15.0	Concrete	0.013	3.78
ST 1.3	INT 1.3	INT 1.2	896.52	892.73	90.0	0.042	18.0	Concrete	0.013	8.82
ST 1.3A	INT 1.3A	INT 1.3	898.20	897.81	24.0	0.016	15.0	Concrete	0.013	4.06
ST 1.4	INT 1.4	INT 1.3	900.86	896.62	85.0	0.050	18.0	Concrete	0.013	8.23
ST 1.4A	INT 1.4A	INT 1.4	902.37	902.00	25.0	0.015	15.0	Concrete	0.013	3.85
ST 1.5	INT 1.5	INT 1.4	904.59	900.96	135.0	0.027	15.0	Concrete	0.013	5.41
ST 1.5A	INT 1.5A	INT 1.5	906.94	906.51	24.0	0.018	15.0	Concrete	0.013	4.02
ST 1.6	STMH 1.6	INT 1.5	909.86	904.59	134.0	0.039	8.0	Corrugated HDPE 8 inch (Corrugated Interior)	0.016	0.00
ST 6.1	INT 6.1	FES 6.0	887.88	882.81	130.0	0.039	15.0	Concrete	0.013	7.60
ST 6.2	STMH 6.2	INT 6.1	889.30	887.98	90.0	0.015	15.0	Concrete	0.013	4.66
ST 6.3	INT 6.3	STMH 6.2	890.14	889.40	75.0	0.010	15.0	Concrete	0.013	4.06
ST 7.1	FES 7.1	FES 7.0	902.40	901.80	15.0	0.040	18.0	Concrete	0.013	5.54

Gutter Table - Time: 12.00 hours

Label	Start Node	Stop Node	Slope (Calculated) (ft/ft)	Length (Scaled) (ft)	Flow (Maximum) (cfs)	Time (Maximum Flow) (min)	Notes
GU 1.1A	INT 1.1A	INT 1.1	0.013	100.2	0.96	719.018	
GU 1.2	INT 1.2	INT 1.1	0.042	106.9	0.90	719.042	
GU 1.2A	INT 1.2A	INT 1.1A	0.043	75.1	1.18	719.042	
GU 1.3	INT 1.3	INT 1.2	0.043	92.0	0.93	719.018	
GU 1.3A	INT 1.3A	INT 1.2A	0.043	93.3	1.44	719.042	
GU 1.4	INT 1.4	INT 1.3	0.033	117.6	0.75	719.018	
GU 1.4A	INT 1.4A	INT 1.3A	0.032	123.9	1.20	719.018	
GU 1.5	INT 1.5	INT 1.4	0.051	112.7	0.47	719.018	
GU 1.5A	INT 1.5A	INT 1.4A	0.047	120.8	0.89	719.018	

Ledgestone Ridge

100 YEAR

Catch Basin Table - Time: 12.00 hours

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Road Cross Slope (ft/ft)	Longitudinal Slope (Inlet) (ft/ft)	Inlet Location	Clogging Factor (%)	Headloss Coefficient (Standard)	Manning's n (Inlet)	Inlet	Flow (Surface Maximum) (cfs)	Flow (Captured Maximum) (cfs)	Flow (Bypassed) (cfs)	Capture Efficiency (Calculated) (%)	Spread / Top Width (ft)	Depth (Gutter) (in)	Hydraulic Grade (Maximum) (ft)	Time To Maximum Captured Flow (min)
EX INT 1.0	891.39	881.22	0.020	(N/A)	In Sag	0.0	1.000	0.013	SW-505 Curb	2.72	2.72	0.00	100.0	(N/A)	(N/A)	887.89	720.017
EX INT 2.1	895.83	888.38	0.020	(N/A)	In Sag	0.0	0.500	0.013	SW-501	37.15	37.15	0.00	100.0	(N/A)	(N/A)	893.10	719.042
INT 1.1	894.73	888.94	0.020	(N/A)	In Sag	20.0	0.800	0.013	SW-505 Curb	4.07	5.51	(N/A)	(N/A)	16.2	6.6	889.68	717.208
INT 1.1A	896.01	890.91	0.020	0.035	On Grade	10.0	0.500	0.013	SW-501	2.09	1.13	0.95	54.1	6.9	1.7	892.42	719.018
INT 1.2	899.18	892.63	0.020	0.045	On Grade	10.0	0.800	0.013	SW-501	2.02	1.12	0.89	55.6	6.5	1.6	893.25	719.042
INT 1.2A	899.21	895.13	0.020	0.045	On Grade	10.0	0.500	0.013	SW-501	2.48	1.30	1.17	52.4	7.0	1.7	895.47	719.042
INT 1.3	903.18	896.52	0.020	0.040	On Grade	10.0	0.600	0.013	SW-501	2.05	1.12	0.92	54.8	6.7	1.6	897.09	719.018
INT 1.3A	903.21	898.20	0.020	0.040	On Grade	10.0	0.500	0.013	SW-501	2.86	1.42	1.42	49.8	7.6	1.8	898.55	719.042
INT 1.4	907.08	900.86	0.020	0.035	On Grade	10.0	1.000	0.013	SW-501	1.73	0.99	0.74	57.1	6.4	1.5	901.29	719.018
INT 1.4A	907.18	902.37	0.020	0.035	On Grade	10.0	0.500	0.013	SW-501	2.47	1.27	1.19	51.6	7.4	1.8	902.74	719.018
INT 1.5	912.80	904.59	0.020	0.035	On Grade	10.0	0.700	0.013	SW-501	1.26	0.78	0.47	62.5	5.7	1.4	904.94	719.018
INT 1.5A	912.81	906.94	0.020	0.035	On Grade	10.0	0.500	0.013	SW-501	1.97	1.08	0.88	55.0	6.7	1.6	907.24	719.018
INT 6.1	891.00	887.88	0.020	(N/A)	In Sag	0.0	0.500	0.013	SW-512, 24"	0.86	2.27	(N/A)	(N/A)	0.0	0.0	888.37	713.685
INT 6.3	893.25	890.14	0.020	(N/A)	In Sag	0.0	0.500	0.013	SW-512, 24"	3.02	4.10	(N/A)	(N/A)	1.3	0.3	890.75	716.567

Ledgestone Ridge
100 YEAR
Manhole Table - Time: 12.00 hours

Label	Elevation (Ground) (ft)	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Headloss Method	Headloss Coefficient (Standard)	Flow (Total In Maximum) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Depth (Maximum) (ft)	Time to Maximum Depth (min)	Notes
STMH 6.2	896.61	896.61	889.30	Standard	0.600	3.11	890.18	889.84	0.54	720.132	
STMH 1.6	915.98	915.98	909.86	Standard	0.500	0.00	909.86	909.86	0.00	0.000	

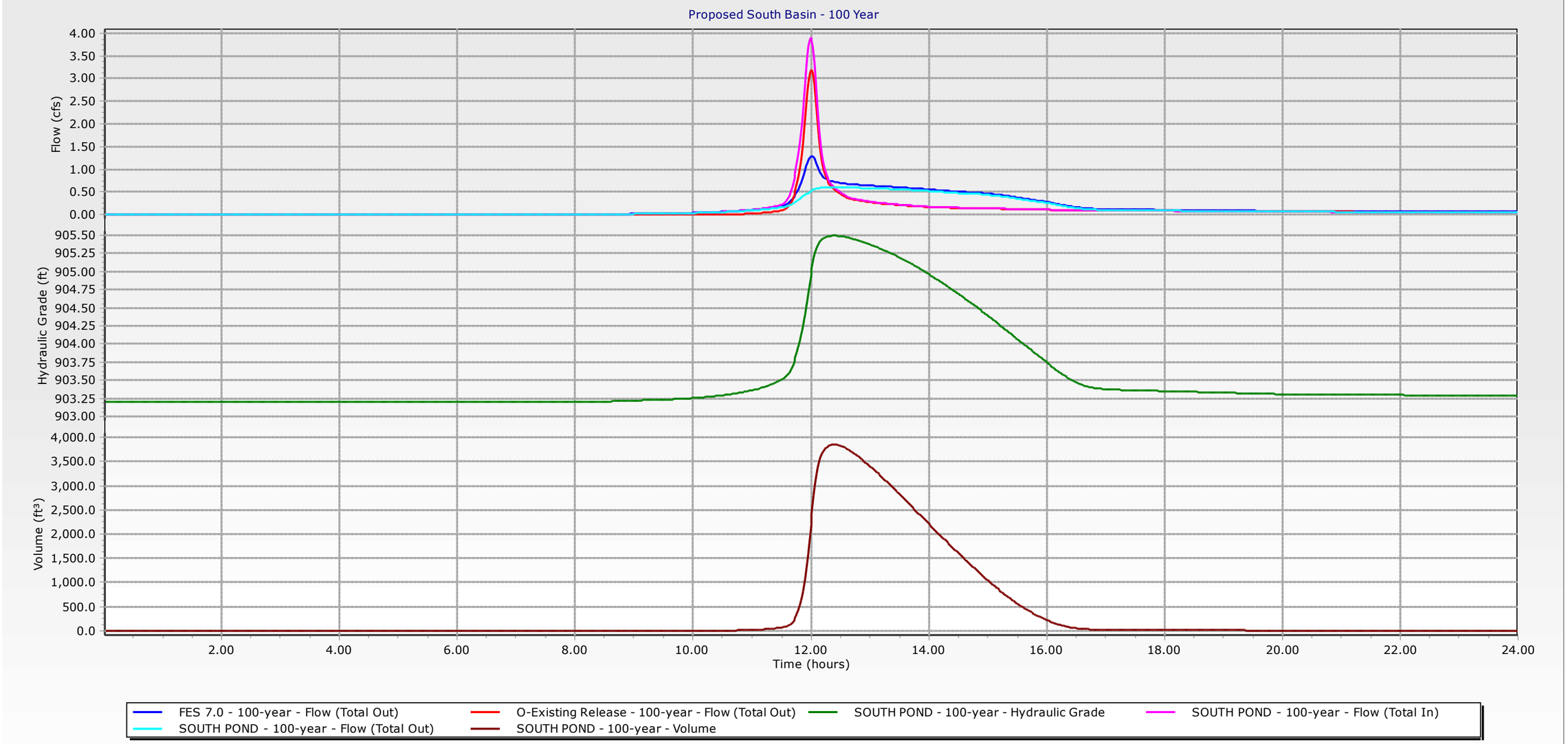
Outfall Table - Time: 12.00 hours

Label	Flow (Total In Maximum) (cfs)	Time to Local Inflow (Maximum) (min)	Local Inflow (Total Volume) (ft^3)	Notes
EX FES 1.0	55.58	0.000	0.0	
FES 6.0	4.15	0.000	0.0	
FES 7.0	1.30	720.017	2,057.8	
O-Existing Release	3.20	720.040	8,601.3	

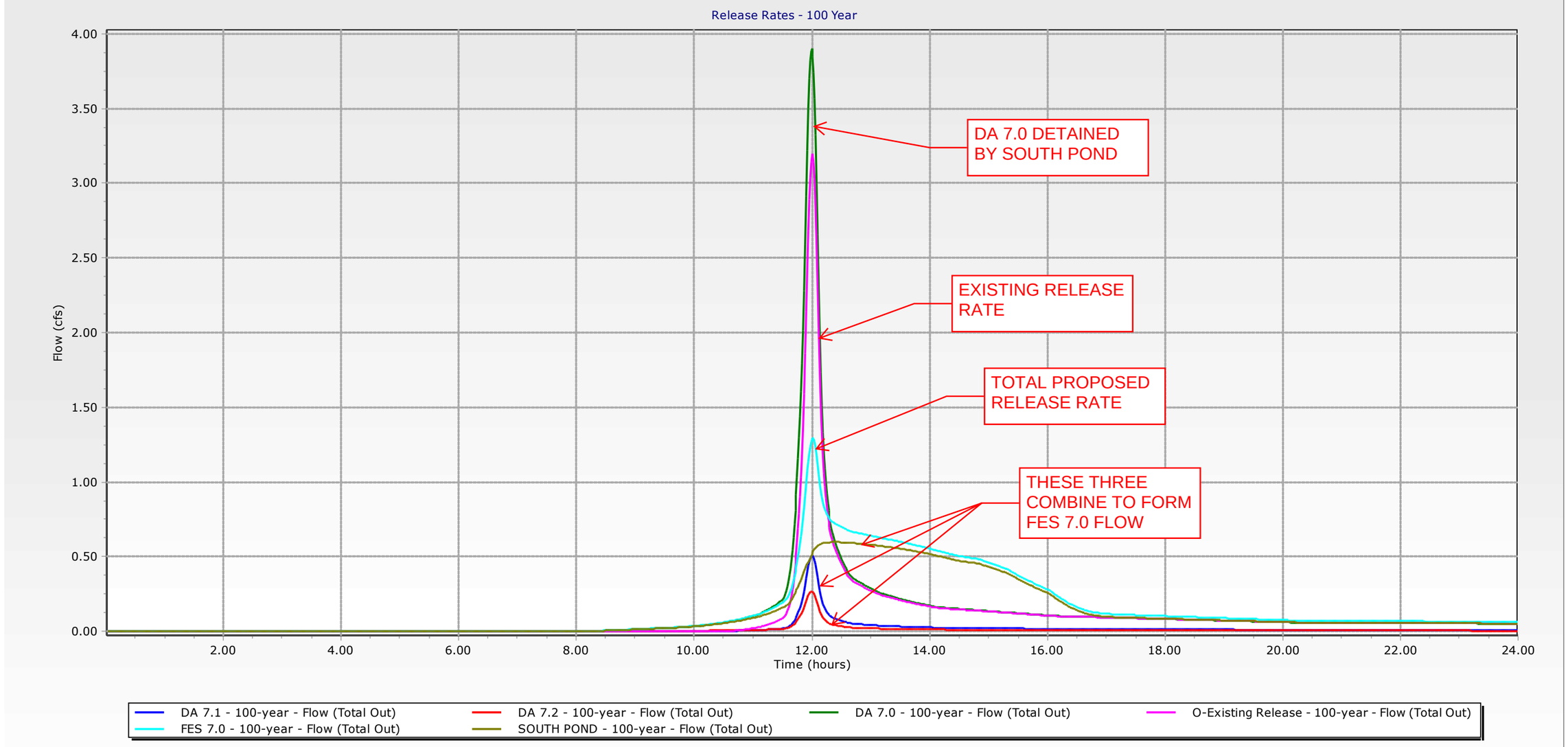
Pond Table - Time: 12.00 hours

Label	Time to Maximum Inflow (min)	Flow (Total In Maximum) (cfs)	Time to Maximum Hydraulic Grade (min)	Hydraulic Grade (Maximum) (ft)	Depth (Maximum) (ft)	Storage (Maximum) (ft^3)	Is Ever Overflowing?
SOUTH POND	720.017	3.90	743.805	905.49	2.29	3,845.0	False

Ledgestone Ridge
100 YEAR

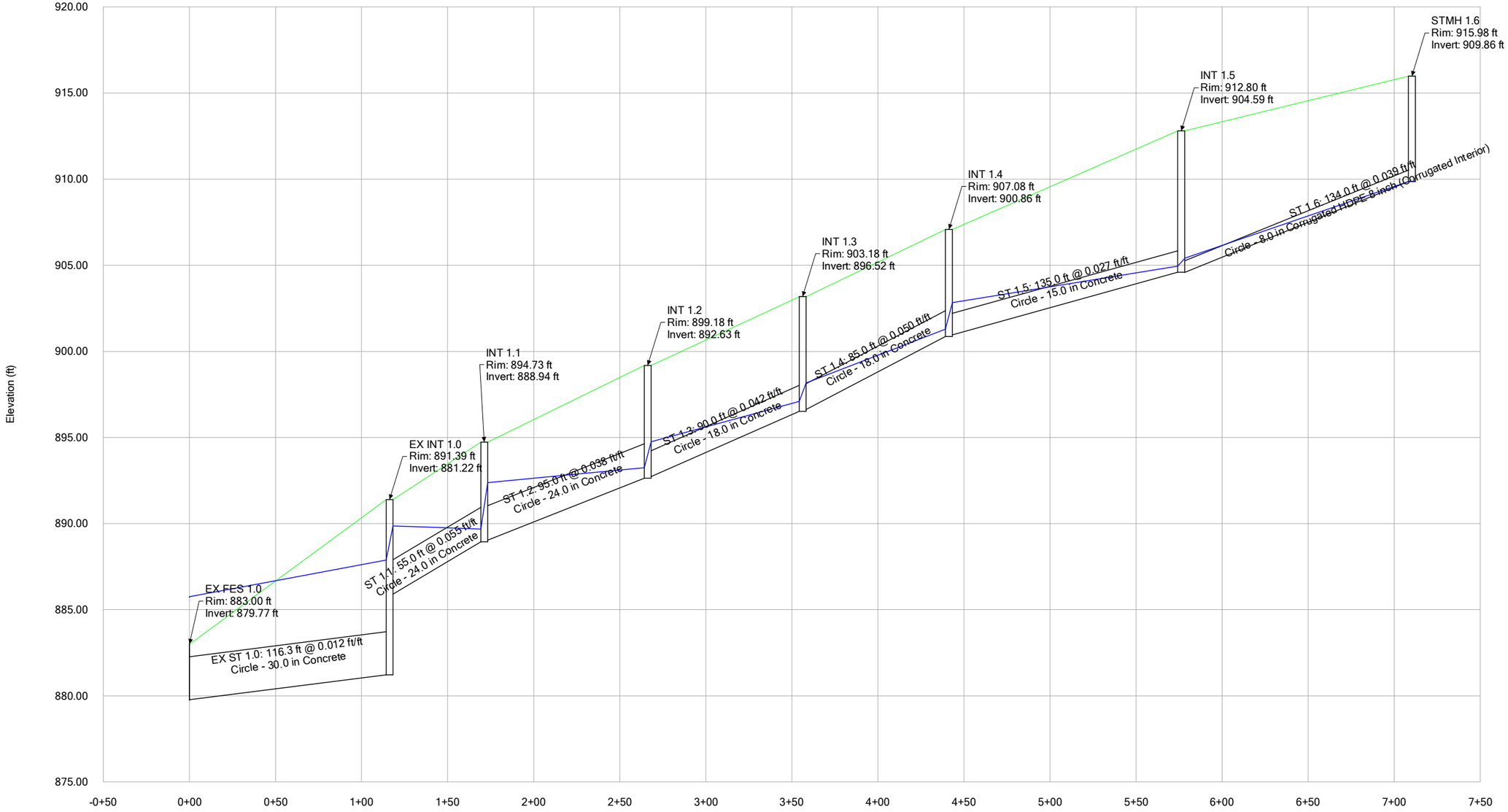


Ledgestone Ridge
100 YEAR



100-YEAR PROFILE

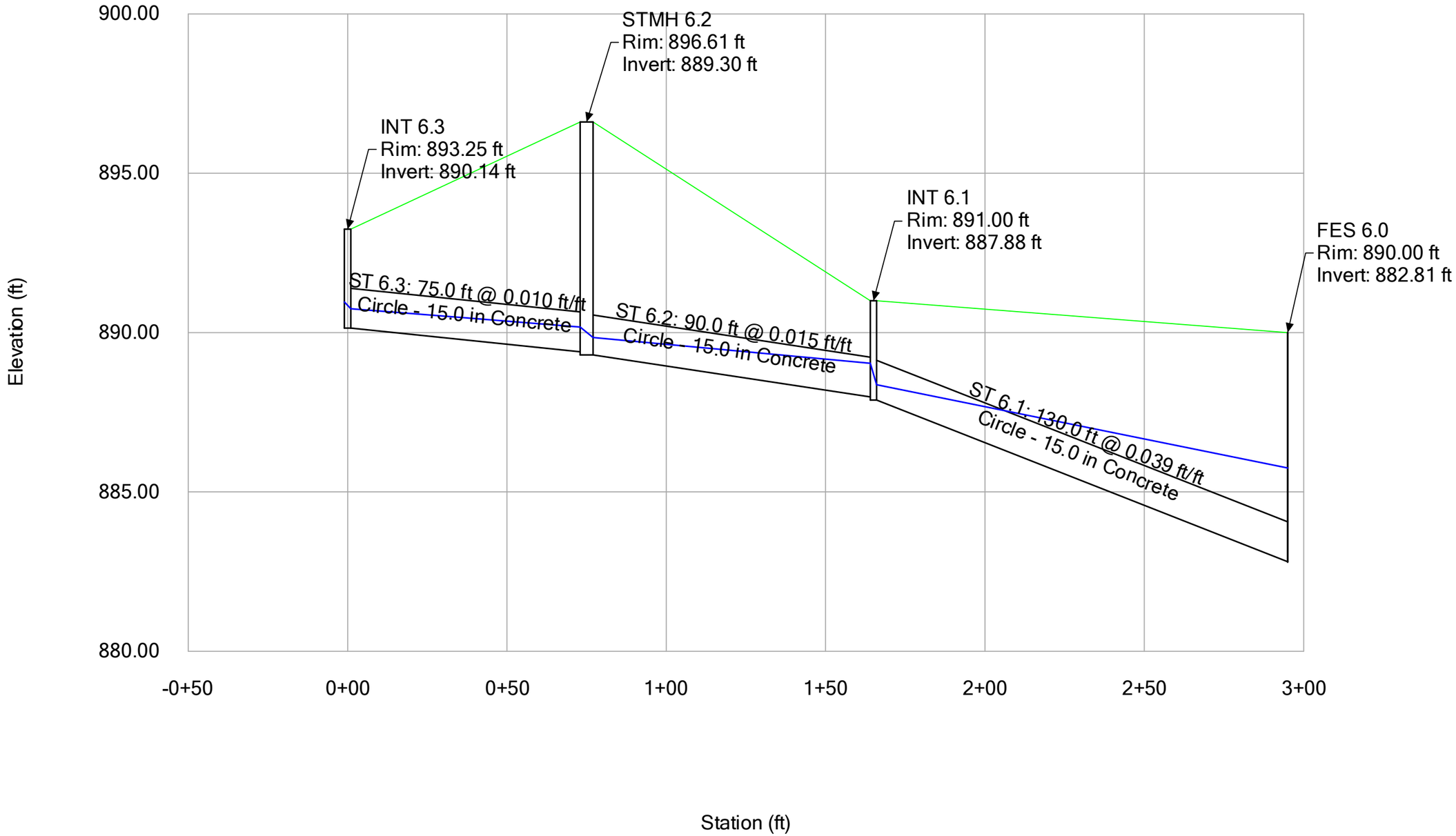
Profile Report
Engineering Profile - EX FES 1.0 to STMH 1.6 (4211030 - Proposed.stsw)



100-YEAR PROFILE

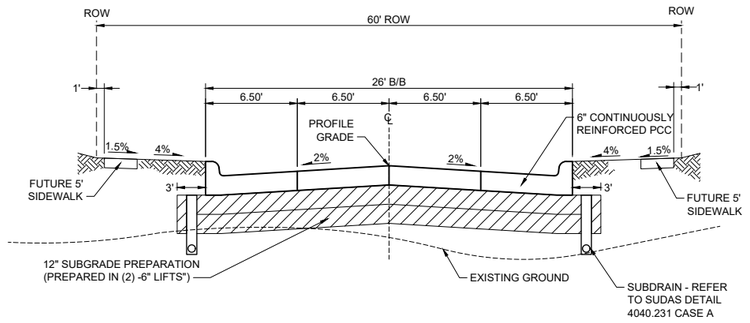
Profile Report

Engineering Profile - FES 6.0 - INT 6.3 (4211030 - Proposed.stsw)

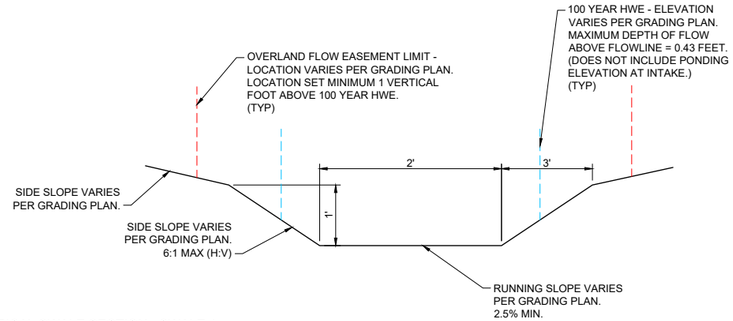


B. SWALE CALCULATIONS

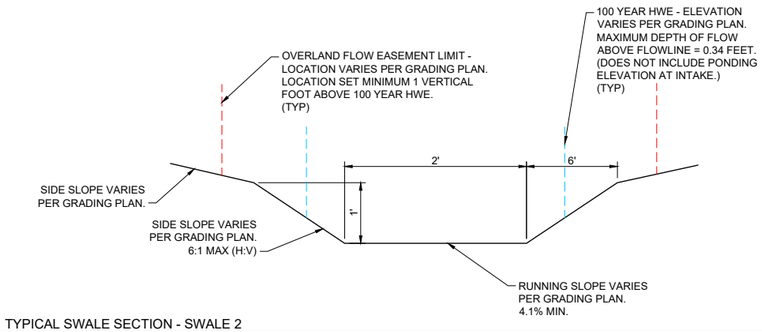
ESTIMATED PROJECT QUANTITIES		
ITEM	UNIT	TOTAL
EARTHWORK AND PAVING		
TOPSOIL STRIP, SALVAGE, AND RESPREAD	CY	5700
SUBGRADE PREPARATION	SY	3000
EXCAVATION CLASS 10	CY	15000
REINFORCED PAVEMENT, PCC, 6 IN.	SY	2640
SIDEWALK, PCC, 5 IN.	SY	323
DETECTABLE WARNINGS	SF	40
STORM SEWER		
STORM SEWER, TRENCHED, PVC, 8 IN.	LF	140
STORM SEWER, TRENCHED, RCP, 15 IN.	LF	519
STORM SEWER, TRENCHED, RCP, 18 IN.	LF	200
STORM SEWER, TRENCHED, RCP, 24 IN.	LF	162
PIPE APRON, RCP, 15 IN.	EA	1
PIPE APRON, RCP, 18 IN.	EA	2
FOOTING FOR CONCRETE PIPE APRON	EA	3
PIPE APRON GUARD	EA	3
SUBDRAIN, LONGITUDINAL, 6 IN.	LF	1560
FOOTING DRAIN COLLECTOR, 4 IN.	LF	1618
SUBDRAIN CLEANOUT, TYPE A-2	EA	1
SUBDRAIN OUTLETS AND CONNECTIONS	EA	22
FOOTING DRAIN CONNECTIONS, INSERT-A-TEE	EA	32
MANHOLE, SW-401, 48 IN.	EA	2
INTAKE, SW-501	EA	5
INTAKE, SW-503	EA	4
INTAKE, SW-506	EA	1
INTAKE, SW-512, 24"	EA	2
RIP RAP, CLASS 'E'	TON	50
CONNECTION TO EXISTING MANHOLE	EA	1
SANITARY SEWER		
SANITARY SEWER, GRAVITY MAIN, TRENCHED, 8 IN.	LF	550
SANITARY SEWER MANHOLE, SW-301, 48"	EA	5
SANITARY SEWER SERVICE STUB, PVC, 4 IN.	LF	2750
SANITARY SEWER SERVICE WYE, PVC	EA	29
CONNECTION TO EXISTING MANHOLE	EA	1
WATER MAIN		
WATER MAIN, TRENCHED, PVC, 8 IN.	LF	835
WATER MAIN FITTINGS, PVC	EA	10
FIRE HYDRANT ASSEMBLY	EA	3
WATER MAIN SERVICE STU, COPPER, 1IN.	EA	32
CONNECTION TO EXISTING WATER MAIN	EA	2
GATE VALVE	EA	4



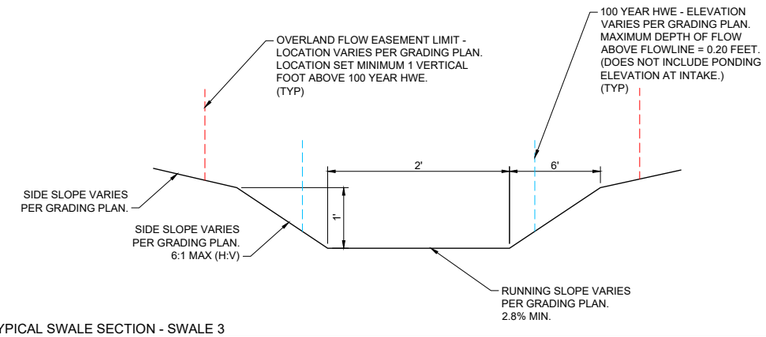
1 TYPICAL ROADWAY SECTION - LEDGESTONE CT
NOT TO SCALE



2 TYPICAL SWALE SECTION - SWALE 1
NOT TO SCALE



3 TYPICAL SWALE SECTION - SWALE 2
NOT TO SCALE



4 TYPICAL SWALE SECTION - SWALE 3
NOT TO SCALE

SHIVEHATTERY
ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.8104 | fax: 515.223.0622 | www.shive-hattery.com
Iowa | Illinois | Indiana

LEDGESTONE RIDGE PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC

POLK CITY, IOWA

DRAWN: LCH
APPROVED: CRB
ISSUED FOR: SUBMITTAL 02
DATE: 04/12/2021
PROJECT NO: 421030
FIELD BOOK: --
CLIENT NO: --

ESTIMATE QUANTITIES AND TYPICAL SECTIONS

C002

Worksheet for Swale 1

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.050	
Channel Slope	0.02500	ft/ft
Left Side Slope	6.00	ft/ft (H:V)
Right Side Slope	6.00	ft/ft (H:V)
Bottom Width	2.00	ft
Discharge	3.90	ft³/s

Q100 from DA 7.0

Results

Normal Depth	0.43	ft
Flow Area	1.97	ft²
Wetted Perimeter	7.24	ft
Hydraulic Radius	0.27	ft
Top Width	7.17	ft
Critical Depth	0.35	ft
Critical Slope	0.06010	ft/ft
Velocity	1.98	ft/s
Velocity Head	0.06	ft
Specific Energy	0.49	ft
Froude Number	0.66	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.43	ft
Critical Depth	0.35	ft
Channel Slope	0.02500	ft/ft

Worksheet for Swale 1

GVF Output Data

Critical Slope	0.06010	ft/ft

Worksheet for Swale 2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.050	
Channel Slope	0.04120	ft/ft
Left Side Slope	6.00	ft/ft (H:V)
Right Side Slope	6.00	ft/ft (H:V)
Bottom Width	2.00	ft
Discharge	3.02	ft³/s

Q100 from DA 6.3

Results

Normal Depth	0.34	ft
Flow Area	1.36	ft²
Wetted Perimeter	6.11	ft
Hydraulic Radius	0.22	ft
Top Width	6.06	ft
Critical Depth	0.31	ft
Critical Slope	0.06234	ft/ft
Velocity	2.22	ft/s
Velocity Head	0.08	ft
Specific Energy	0.41	ft
Froude Number	0.82	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.34	ft
Critical Depth	0.31	ft
Channel Slope	0.04120	ft/ft

Worksheet for Swale 2

GVF Output Data

Critical Slope	0.06234	ft/ft

Worksheet for Swale 3

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.050	
Channel Slope	0.02800	ft/ft
Left Side Slope	6.00	ft/ft (H:V)
Right Side Slope	6.00	ft/ft (H:V)
Bottom Width	2.00	ft
Discharge	0.86	ft³/s

Q100 from DA 6.2

Results

Normal Depth	0.20	ft
Flow Area	0.63	ft²
Wetted Perimeter	4.41	ft
Hydraulic Radius	0.14	ft
Top Width	4.38	ft
Critical Depth	0.15	ft
Critical Slope	0.07530	ft/ft
Velocity	1.36	ft/s
Velocity Head	0.03	ft
Specific Energy	0.23	ft
Froude Number	0.63	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.20	ft
Critical Depth	0.15	ft
Channel Slope	0.02800	ft/ft

Worksheet for Swale 3

GVF Output Data

Critical Slope	0.07530	ft/ft

C. RIP RAP CALCULATIONS

Figure 7E-10.02: Rip Rap Apron for Pipe Outlet onto Flat Ground
(SUDAS Specifications Figure 9040.110)

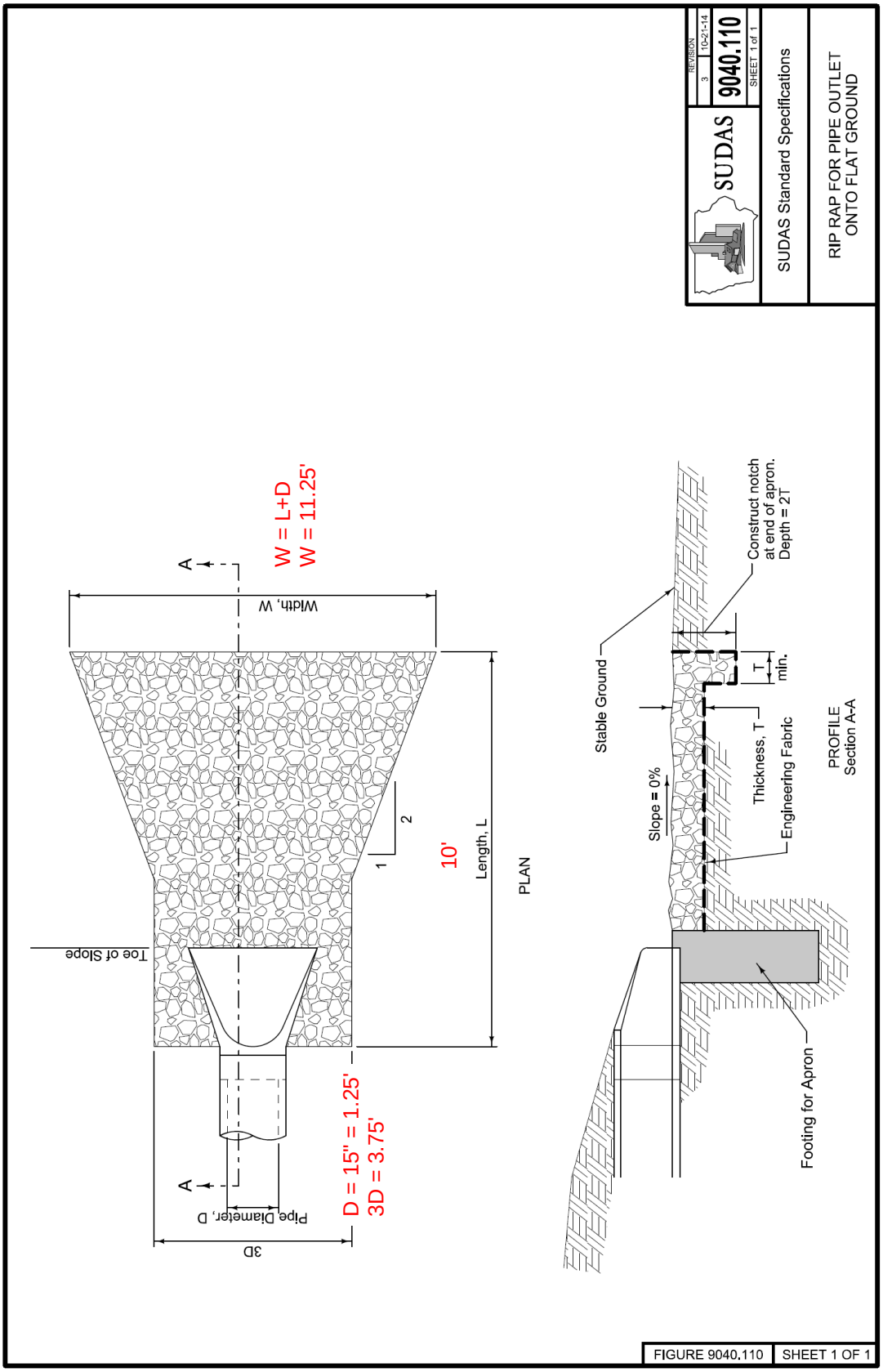
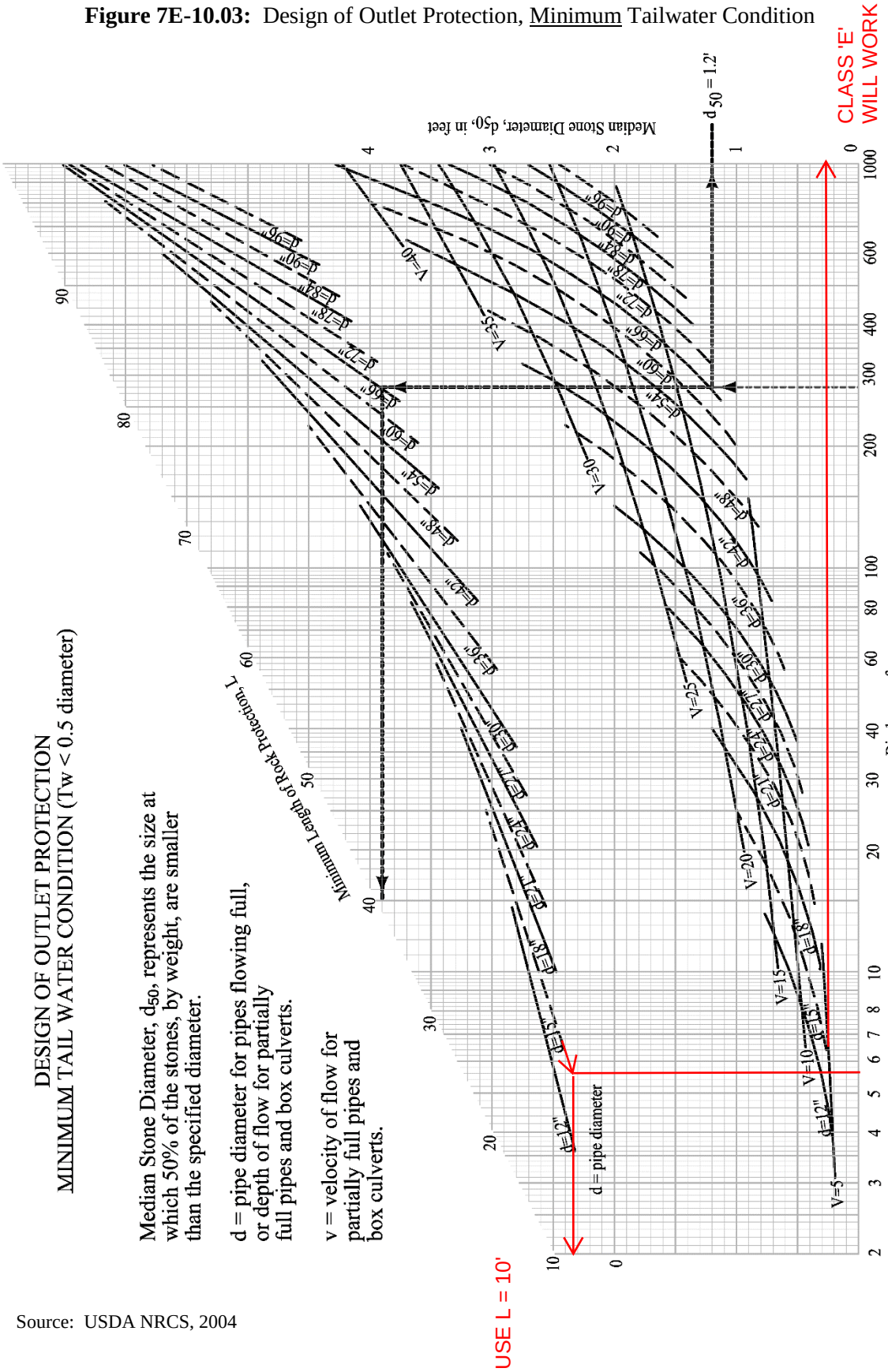


Figure 7E-10.03: Design of Outlet Protection, Minimum Tailwater Condition



Source: USDA NRCS, 2004

Figure 7E-10.02: Rip Rap Apron for Pipe Outlet onto Flat Ground
(SUDAS Specifications Figure 9040.110)

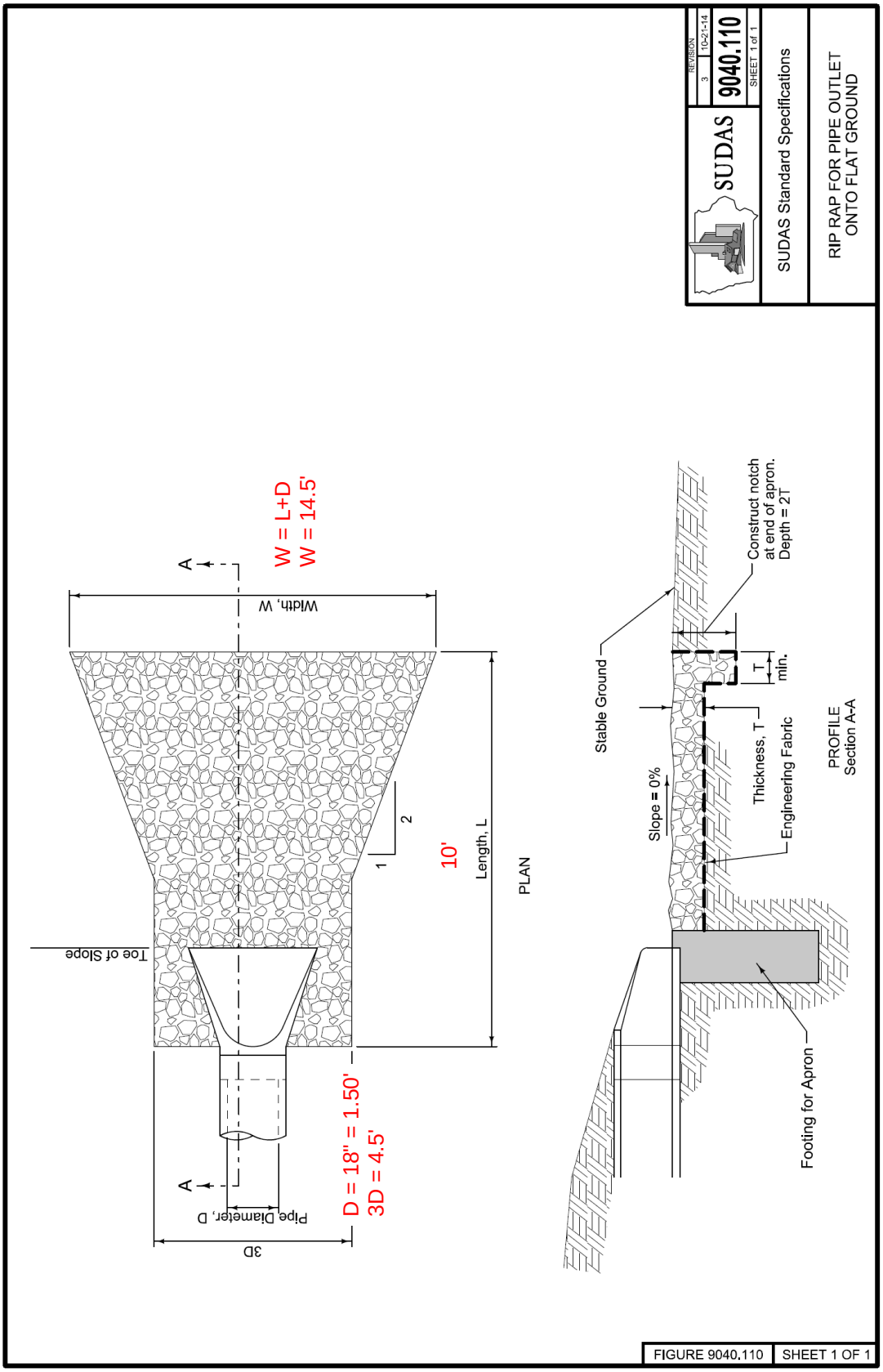
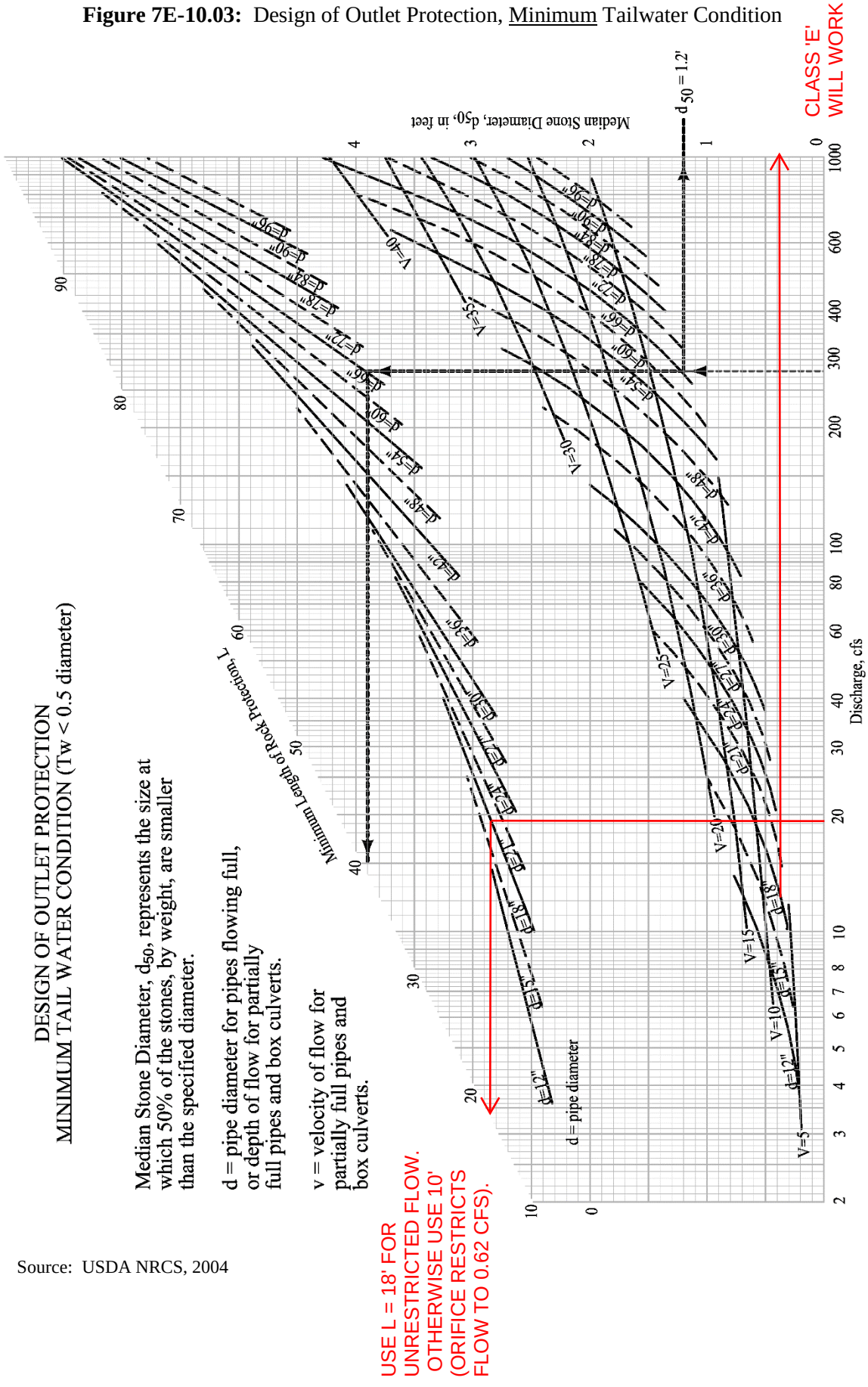


Figure 7E-10.03: Design of Outlet Protection, Minimum Tailwater Condition

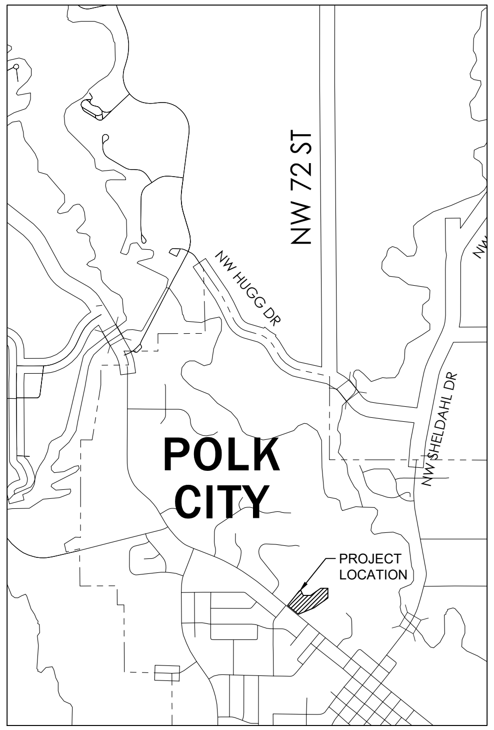


Source: USDA NRCS, 2004

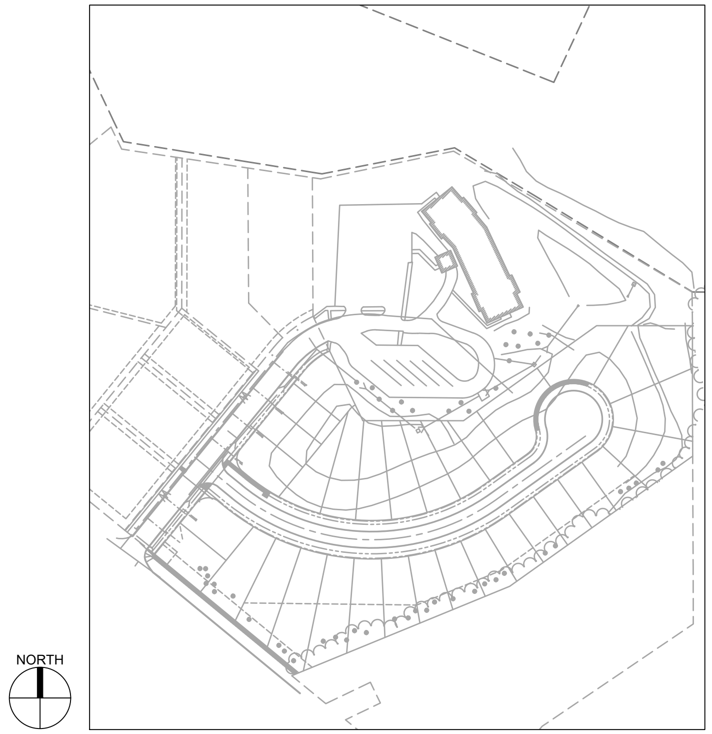
D. CONSTRUCTION PLANS

LEDGESTONE RIDGE PUBLIC IMPROVEMENTS
PUBLIC IMPROVEMENTS

W BROADWAY ST, POLK CITY, IOWA



VICINITY MAP
1" = 2000'



PROJECT MAP
1" = 150'

DEVELOPER
MJR DEVELOPMENTS LLC
ATTN: JARROD RUCKLE
1425 NW HUGG DRIVE
POLK CITY, IOWA 50226
EMAIL: JARROD@MJRIOWA.COM
PHONE: 515-419-2462

ENGINEER
SHIVE-HATTERY, INC.
ATTN: KELSEY SCALLON
4125 WESTOWN PARKWAY, SUITE 100
WEST DES MOINES, IA 50266
EMAIL: KSCALLON@SHIVE-HATTERY.COM
PHONE: 515-223-8104

PROPERTY OWNER
MJR DEVELOPMENTS LLC
ATTN: JARROD RUCKLE
1425 NW HUGG DRIVE
POLK CITY, IOWA 50226
EMAIL: JARROD@MJRIOWA.COM
PHONE: 515-419-2462

BENCHMARKS
446.46' S OF NW CORNER OF PARCEL 'B', MAG NAIL AT PC OF CENTERLINE CURVE
ELEVATION = 934.93 (NAVD 88)

NOTE:
ALL REQUIRED TEMPORARY CONSTRUCTION EASEMENTS, AND PERMANENT UTILITY EASEMENTS SHALL BE PROVIDED TO THE CITY PRIOR TO THE CONSTRUCTION OF SAID PUBLIC IMPROVEMENTS.

LEGEND:

EXISTING	DESCRIPTION	PROPOSED
	STORM STRUCTURES	
	FLARED END SECTION	
	STORM SEWER	
	STORM SERVICE	
Ⓢ	SANITARY MANHOLE	
	SANITARY SEWER	
	SANITARY SERVICE	
W	WATER MAIN	
	WATER SERVICE	
	WATER VALVE	
	FIRE HYDRANT ASSEMBLY	
OE	OVERHEAD ELECTRIC	
	PROPERTY LINE	
	EASEMENT LINE	
850	MAJOR CONTOUR	850
849	MINOR CONTOUR	849
	BASE FLOOD ELEVATION	BFE
	MINIMUM OPENING ELEVATION	MOE

PUBLIC IMPROVEMENT CONSTRUCTION SCHEDULE (PLAT 1 & PLAT 2)

PUBLIC IMPROVEMENTS & GRADING	- SPRING/SUMMER/FALL 2021
TELEPHONE, CABLE, AND OTHER UTILITIES	- FALL 2021

NO.	REVISION	
1	CITY SUBMITTAL #1	03/05/2021
2	CITY SUBMITTAL #2	04/12/2021

Sheet List Table

CITY APPROVAL

THE 2021 EDITION OF THE IOWA STATEWIDE URBAN DESIGN SPECIFICATIONS FOR PUBLIC IMPROVEMENTS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.

CIVIL ENGINEER

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Signature: ____________ -
Date

Printed or typed name: CHRISTOPHER R. BAUER
License Number: 19737
My License Renewal Date is: DECEMBER 31, 2021
PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL:
ALL SHEETS

SHIVE-HATTERY
ARCHITECTURE + ENGINEERING
4125 Westown Pkwy, Suite 100 | West Des Moines, Iowa 50266
515.223.8104 | www.shive-hattery.com
Iowa | Illinois | Indiana | Nebraska

LEDGESTONE RIDGE PUBLIC IMPROVEMENTS
MJR DEVELOPMENTS LLC
POLK CITY, IOWA

PRELIMINARY - NOT FOR CONSTRUCTION

04/12/2021
SUBMITTAL 02
PROJECT NO: 4211030
CLIENT NO: ----

C000

GENERAL NOTES:

1. ONE WEEK PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY:
   - 1.1. SNYDER & ASSOCIATES
   - 1.2. CITY OF POLK CITY
   - 1.3. DEVELOPER
   - 1.4. ENGINEER
   - 1.5. IOWA ONE-CALL
2. THE CONTRACTOR SHALL NOTIFY THE POLK CITY PUBLIC WORKS DIRECTOR AND SNYDER & ASSOCIATES PRIOR TO COMMENCING CONSTRUCTION AND PRIOR TO UTILITY CONSTRUCTION, SUBGRADE PREPARATION, MAIN LINE PAVING, AND BOX-OUT PAVING.
3. ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, CURRENT AT THE COMMENCEMENT OF CONSTRUCTION.
4. THE CONTRACTOR, DEVELOPER, AND DEVELOPER'S ENGINEER SHALL ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY AND SNYDER & ASSOCIATES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. ALL IOWA DNR AND IOWA DOT PERMITS SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING THE NECESSARY NPDES STORM WATER DISCHARGE PERMIT AND FOR MAINTAINING EROSION CONTROL MEASURES IN CONFORMANCE WITH THE SWPPP.
6. THE CONTRACTOR SHALL PROVIDE ALL SHOP DRAWINGS AND MATERIALS SUBMITTALS TO THE DEVELOPER'S ENGINEER FOR REVIEW AND APPROVAL. THE DEVELOPER'S ENGINEER THEN SHALL PROVIDE TO SNYDER & ASSOCIATES PRIOR TO THE PRE-CONSTRUCTION CONFERENCE. MATERIAL SUBMITTALS SHALL INCLUDE MANUFACTURER'S CUT SHEETS, OR SIMILAR, OF PIPE MATERIALS FOR ALL UTILITIES AND UTILITY SERVICE LINES; FIRE HYRANTS, VALVES, CURB STOPS, SUBDRAIN PIPE MATERIALS, CLEAN-OUTS, APRON GUARDS, CONCRETE MIX, MATURITY CURVES, OR OTHER ACCEPTABLE TESTING. SHOP DRAWINGS SHALL INCLUDE MANHOLES, INTAKES, BOX CULVERTS, FENCING/GUARD RAILS, AND OTHER SPECIALTY ITEMS.
7. THE DEVELOPER'S ENGINEER SHALL IMMEDIATELY NOTIFY SNYDER & ASSOCIATES AND THE CONSTRUCTION OBSERVER IF FIELD CONDITIONS DO NOT MATCH THE APPROVED CONSTRUCTION DRAWINGS. THESE CONDITIONS MAY INCLUDE, BUT ARE NOT LIMITED TO, STAKING DISCREPANCIES OF MORE THAN 0.2' VERTICAL OR 1.0' HORIZONTAL, DISCOVERY OF PIPES AND/OR FIELD TILES NOT SHOWN ON PLANS, ELEMENTS SHOWN ON PLANS THAT ARE MISSING IN THE FIELD, OR OTHER DISCREPANCIES BETWEEN THE APPROVED PLANS AND FIELD CONDITIONS.
8. THE CONTRACTOR SHALL VERIFY THE LOCATION AND PROTECT ALL EXISTING UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CITY AND THE OWNER.
9. THE CONTRACTOR SHALL CONDUCT CLEAN-UP OPERATIONS ON EXISTING STREETS AND ADJACENT PRIVATE PROPERTY AT THE END OF EACH WORKING DAY OR MORE OFTEN AS DIRECTED BY THE CITY.
10. THE CONTRACTOR SHALL PROVIDE 4-YEAR MAINTENANCE BONDS, IN AN AMOUNT EQUAL TO THE COST OF CONSTRUCTION, FOR THE PAVING AND FOR WATER MAINS, SANITARY SEWERS, STORM SEWERS, INCLUDING ALL UTILITY SERVICES. THE MAINTENANCE BONDS SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE AS-BUILT LOCATION OF ALL SANITARY SEWER, SUMP AND WATER MAIN SERVICES. A TABLE DIMENSIONING THE DISTANCE FROM THE NEAREST PROPERTY CORNER TO EACH SERVICE SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
13. THE DEVELOPER'S ENGINEER SHALL PROVIDE AS-BUILT MYLARS, CAD FILES IN ELECTRONIC FORMAT, AND PDF FILES OF THE FULL RECORD DRAWING SET TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. RECORD DRAWINGS SHALL INCLUDE FLOW LINE ELEVATIONS OF ALL SWALES AT EACH PROPERTY LINE PER CITY CODE.
14. THE DEVELOPER'S SURVEYOR SHALL PROVIDE A STATEMENT TO THE CITY ENGINEER CERTIFYING THAT ALL PROPERTY CORNERS HAVE BEEN SET PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
15. THE LOCATIONS OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS PLOTTED ON THE DRAWINGS ARE APPROXIMATE ONLY AND WERE OBTAINED FROM RECORDS MADE AVAILABLE TO SHIVE-HATTERY, INC. THERE MAY BE OTHER EXISTING UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS NOT KNOWN TO SHIVE-HATTERY, INC. AND NOT SHOWN ON THIS DRAWING. THE UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR.
16. THE MEANS OF THE WORK AND THE SAFETY OF THE CONTRACTOR'S EMPLOYEES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
17. NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION FROM THE OWNER'S REPRESENTATIVE.
18. HANDICAP RAMPS, IF ANY, FOR DESIGNATED BIKE TRAILS SHALL HAVE BRICK RED TRUNCATED DOMES; ALL OTHER HANDICAP RAMPS SHALL BE CHARCOAL GRAY TRUNCATED DOMES FOR DETECTABLE WARNINGS.
19. THE DEVELOPER SHALL BE RESPONSIBLE FOR REIMBURSING THE CITY OF POLK CITY FOR MATERIAL COSTS FOR ALL STREET SIGNS WITHIN THIS PLAT.
20. MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.
21. ALL OPEN EXCAVATIONS SHALL BE PROTECTED.
22. ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THE COMPLETION OF THIS WORK.
23. WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSE, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY SHIVE-HATTERY, INC. AT THE CONTRACTOR'S EXPENSE. WORK DONE CONTRARY TO THE INSTRUCTIONS OF SHIVE-HATTERY, INC., WORK DONE BEYOND THE LINES SHOWN ON THE PLANS OR ANY EXTRA WORK DONE WITHOUT AUTHORITY WILL NOT BE PAID FOR.
24. STAGING LOCATION FOR CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER.
25. ALL AREAS DISTURBED BY CONSTRUCTION, NOT DESIGNATED AS PLANTED, SHALL BE SODDED OR SEEDED. REFER TO PLANS.
26. NOTIFY UTILITY COMPANIES WHO HAVE FACILITIES THAT ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS OF THE SCHEDULE PRIOR TO EACH STAGE OF CONSTRUCTION.
27. CONTROL DUST SPREADING FROM ALL WORK AND STAGING AREAS.
28. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.

STANDARD DETAILS

STATEWIDE URBAN DESIGN AND SPECIFICATIONS

FIGURE	DATE	TITLE
3010.101	04-17-18	TRENCH BEDDING AND BACKFILL ZONES
3010.102	04-20-21	RIGID GRAVITY PIPE TRENCH BEDDING
3010.103	04-20-21	FLEXIBLE GRAVITY PIPE TRENCH BEDDING
3010.104	04-20-21	PRESSURE PIPE TRENCH BEDDING
4030.222	10-18-16	CIRCULAR CONCRETE APRONS
4030.224	10-18-16	CONCRETE PIPE APRON GUARD
5010.101	10-18-16	THRUST BLOCKS
5010.102	10-18-16	TRACER SYSTEM
5020.201	04-20-21	FIRE HYDRANT ASSEMBLY
6010.301	04-20-21	CIRCULAR SANITARY SEWER MANHOLE
6010.401	04-20-21	CIRCULAR STORM SEWER MANHOLE
6010.501	04-21-20	SINGLE GRATE INTAKE
6010.503	04-21-20	SINGLE GRATE INTAKE WITH MANHOLE
6010.505	04-21-20	DOUBLE GRATE INTAKE
6010.601	04-21-20	CASTINGS FOR SANITARY SEWER MANHOLES
6010.602	04-21-20	CASTINGS FOR STORM SEWER MANHOLES
6010.603	10-16-18	CASTINGS FOR GRATE INTAKES
6010.604	04-21-20	CASTINGS FOR AREA INTAKES
7010.905	10-19-10	PCC CUL-DE-SAC JOINTING LOCATIONS
9040.110	10-21-14	RIP RAP FOR PIPE OUTLET ONTO FLAT GROUND
9040.119	10-21-14	SILT FENCE

GRADING/BACKFILL NOTES:

1. RECONNECT ANY FIELD TILE THAT ARE INTERCEPTED DURING UTILITY CONSTRUCTION.
2. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE PROPER UTILITY IMMEDIATELY UPON DAMAGING ANY UTILITY LINE OR APPURTENANCE, OR IF THERE IS ANY INTERRUPTION OF THEIR SERVICE. IF EXISTING UTILITY LINES ARE ENCOUNTER THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED AND APPROVED BY CITY.
3. STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT.
4. STOCKPILE SUFFICIENT TOPSOIL TO RESPREAD TO MINIMUM DEPTH OF 4-INCHES ON UNPAVED AREAS, INCLUDING FRONT, REAR, AND SIDE YARDS OF ALL LOTS.
5. ALL AREAS TO RECEIVE FILL ARE TO BE BENCHED. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO A DEPTH OF 6-INCHES.
6. ALL SITE GRADING FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95% STANDARD PROCTOR DENSITY.
7. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL FALL WITH IN A RANGE OF OPTIMUM MOISTURE TO 4% ABOVE OPTIMUM MOISTURE.
8. THE CONTRACTOR SHALL PROTECT AND BACKFILL AROUND UNDERGROUND UTILITIES. BACKFILL SHALL BE IN 6-INCH LIFTS, COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
10. FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.
11. A MINIMUM OF ONE FOOT OF COMPACTED COHESIVE SUBGRADE SHALL BE PROVIDED BENEATH ALL PAVEMENTS.
12. ALL SLOPES WITHIN PUBLIC EASEMENTS, RIGHT-OF-WAY, PARKS, OR LAND TO BE PUBLICLY OWNED SHALL BE GRADED TO A 4:1 MAXIMUM SLOPE.
13. ALL SLOPES ON PRIVATE PROPERTY SHALL BE 4:1 MAXIMUM, UNLESS THE SPECIFIC LOCATION(S) HAVE BEEN LABELED AS 3:1 MAXIMUM.
14. ALL EXISTING ROADSIDE DITCHES SHALL BE GRADED TO DRAIN.
15. ALL SWALES WITHIN DRAINAGE OR SURFACE WATER FLOWAGE EASEMENTS SHALL BE GRADED TO A 2% MINIMUM SLOPE, MEASURED ALONG THE FLOWLINE OF SAID SWALE. IF THE AS-BUILT CONDITION OF ANY SWALE HAS LESS THAN 2% MINIMUM SLOPE, A 6" SUBDRAIN WILL BE REQUIRED. THE SUBDRAIN SHALL HAVE CLEAN-OUTS LOCATED NEAR PROPERTY LINES WHERE POSSIBLE, BUT IN NO CASE HAVING A SPACING GREATER THAN 200 FEET.
16. HYDRANTS, MANHOLE COVERS, AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED PAVEMENT ELEVATIONS.
17. EXISTING TREES SHALL BE SAVED TO THE EXTENT POSSIBLE TO ACCOMMODATE GRADING, UTILITY AND STREET CONSTRUCTION.
18. EXISTING TREES SHALL BE REMOVED FROM EXISTING AND PROPOSED PUBLIC RIGHT-OF-WAY UNLESS THE PUBLIC WORKS DIRECTOR PROVIDES SPECIFIC APPROVAL TO MAINTAIN CERTAIN TREES WITHIN SAID RIGHT-OF-WAY.
19. CONTRACTOR SHALL OBTAIN A GRADING PERMIT PRIOR TO COMMENCING CONSTRUCTION.
20. THE GEOTECHNICAL ENGINEER SHALL BE PRESENT FOR ALL SUBGRADE PREPARATION OPERATIONS TO DETERMINE APPROPRIATE SUBGRADE STABILIZATION MEASURES TO BE USED PRIOR TO PAVING OPERATIONS

PAVING NOTES:

1. THE CONTRACTOR SHALL ATTEND A PRE-POUR MEETING WITH THE CITY AND SNYDER & ASSOCIATES PRIOR TO COMMENCING PAVING OPERATIONS. NO PAVING OPERATIONS SHALL BEGIN UNTIL CONTRACTOR HAS RECEIVED AUTHORIZATION FROM SNYDER & ASSOCIATES.
2. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL TEST RESULTS, INCLUDING BUT NOT LIMITED TO COMPACTION TEST MAP, STORM SEWER AND SANITARY SEWER TELEVISING, TO SNYDER & ASSOCIATES FOR REVIEW PRIOR TO REQUESTING THE PRE-POUR MEETING.
3. ALL ELEVATIONS ARE PROPOSED FINISHED GRADE AT TOP OF CURB UNLESS OTHERWISE NOTED.
4. PAVEMENTS SHALL BE 6" CONTINUOUSLY-REINFORCED PCC PAVEMENT, UNLESS OTHERWISE NOTED ON THE PLANS.
5. ALL REINFORCING SHALL BE EPOXY-COATED REINFORCING STEEL.
6. ALL STREETS SHALL HAVE 6" INTEGRAL CURBS.
7. PROVIDE CURB DROPS FOR SIDEWALKS AT INTERSECTIONS.
8. CONSTRUCTION OF HANDICAPPED ACCESSIBLE RAMPS, WITH DETECTIBLE WARNINGS AND INCLUDING COMMON SQUARE, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.
9. CONSTRUCTION OF 4-FT SIDEWALK SHALL BE THE RESPONSIBILITY OF THE HOMEOWNER UNLESS OTHERWISE NOTED IN THE PLANS.

STORM SEWER NOTES:

1. PROVIDE SUBDRAIN BEHIND BACK OF CURB ON BOTH SIDES FOR ALL PUBLIC STREETS. ANY SUBDRAIN CROSSING UNDER THE PAVEMENT SHALL BE RCP PIPE.
2. ADDITIONAL RIP-RAP MAY BE REQUIRED AT ANY FES BASED UPON FIELD REVIEW BY THE CITY OF POLK CITY.
3. ALL CURB INTAKES SHALL HAVE TYPE "R" VANE GRATES.
4. ALL INTAKES SHALL BE POURED-IN-PLACE CONCRETE OR PRECAST CONCRETE.
5. 12" AND LARGER STORM SEWERS SHALL BE RCP. WRAP PIPE JOINTS WITH ENGINEERING FABRIC.
6. 8-INCH FOOTING DRAINS TO BE PVC, SDR 35.
7. FOOTING DRAIN SERVICES TO BE 4-INCH PVC, SDR 35. EXTEND SERVICES 10' INSIDE LOT UNLESS OTHERWISE NOTED.
8. ALL INTAKES SHALL BE LOCATED A MINIMUM OF 7.5 FEET FROM END OF RETURNS.
9. CORE DRILL ALL CONNECTIONS TO EXISTING STRUCTURES.
10. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3'-6" COVER ON ALL STORM SEWER, INCLUDING SUMP SERVICES.
11. INSTALL CONTINUOUS PERFORATED SUBDRAIN IN LOCATIONS SHOWN ON ALL PLANS.
12. ALL SUBDRAIN, 6-INCHES OR SMALLER, SHALL HAVE CRITTER GUARDS.
13. ALL CLEAN-OUTS SHALL BE SET IN A 24" ROUND CONCRETE PAD.
14. FLARED END SECTIONS AND LAST 3 PIPE SECTIONS MUST BE TIED. ALL FLARED END SECTIONS SHALL HAVE 48-INCH FOOTINGS AND APRON GUARD.
15. THE CONTRACTOR SHALL JET CLEAN AND VACUUM ANY SECTION OF PIPE, FROM MANHOLE TO MANHOLE, WITH MUD OR DEBRIS MORE THAN 1" DEEP, ALONG WITH ANY DOWNSTREAM SEGMENTS AS REQUIRED DUE TO THIS CONSTRUCTION.
16. THE CONTRACTOR SHALL TELEVISE EVERY STORM SEWER LINE AND PROVIDE A COPY OF THE VIDEO IN DIGITAL FORMAT TO SNYDER & ASSOCIATES. USING A 500 GALLON TANK AND GARDEN HOSE, THE CONTRACTOR SHALL GRAVITY FLOW WATER DOWN THE PIPE JUST PRIOR TO TELEVISING SO DIPS AND SAGS CAN BE IDENTIFIED. THE CITY SHALL NOTIFY THE CONTRACTOR OF ANY NECESSARY REPAIRS AND/OR CLEANING REQUIRED PRIOR TO COMMENCING PAVING. THE SEGMENTS SHALL THEN BE RE-TELEVISED TO DEMONSTRATE PIPES ARE CLEAN. REPAIRS, IF NECESSARY, AND RE-TELEVISING SHALL BE AT THE CONTRACTORS EXPENSE.
17. ALL RCP STORM SEWER SHALL BE CLASS 3 (2000D) WITH R-2 BEDDING.
18. ALL LOTS WILL HAVE SUMP CONNECTIONS TO STORM SEWER MAIN AS SHOWN IN PLAN VIEW.

SANITARY SEWER NOTES:

1. ALL 8" SANITARY SEWER SHALL BE PVC PIPE WITH CLASS 'F-3' BEDDING UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. PROVIDE SANITARY SEWER SERVICE RISES AS REQUIRED.
3. THE CONTRACTOR SHALL INSTALL SEWER TAPE AT THE END OF EACH SANITARY SEWER SERVICE.
4. ALL INVERTS LOCATED AT AN ELEVATION ABOVE THE CENTERLINE OF THE EXISTING THROUGH PIPE AND LESS THAN 2.0' ABOVE THE MANHOLE FLOOR SHALL HAVE A POURED-IN-PLACE SLOPED INVERT.
5. ALL MANHOLES WITHIN PAVEMENT SHALL HAVE TYPE 'B' ADJUSTABLE CASTINGS. ALL MANHOLES NOT WITHIN PAVEMENT SHALL HAVE TYPE 'A' NON-ADJUSTABLE CASTINGS.
6. ALL MANHOLES SHALL HAVE I/I BARRIERS.
7. CORE DRILL ALL CONNECTIONS TO EXISTING MANHOLES AND PROVIDE SLOPE INVERT.
8. ALL 4" AND 6" SANITARY SEWER SERVICES SHALL BE SDR 23.5 IN ACCORDANCE WITH URBAN STANDARD SPECIFICATIONS. ALL SERVICE LINES SHALL BE EXTENDED 10' INSIDE LOT LINES UNLESS OTHERWISE NOTED ON PLANS.
9. ALL SERVICES AND 8-INCH STUB OUTS SHALL BE CAPPED.
10. MANHOLE STEPS ARE REQUIRED IN ALL SANITARY SEWER MANHOLES.
11. MANHOLE COVERS SHALL HAVE RAISED DIAMOND ROUGHNESS PATTERN.
12. THE CONTRACTOR SHALL JET CLEAN AND VACUUM ANY SECTION OF PIPE, FROM MANHOLE TO MANHOLE, WITH MUD OR DEBRIS MORE THAN 1" DEEP, ALONG WITH ANY DOWNSTREAM SEGMENTS AS REQUIRED DUE TO THIS CONSTRUCTION.
13. THE CONTRACTOR SHALL TELEVISE EVERY SANITARY SEWER LINE AND PROVIDE A COPY OF THE VIDEO FILE IN DIGITAL FORMAT TO SNYDER & ASSOCIATES. USING A 500 GALLON TANK AND GARDEN HOSE, THE CONTRACTOR SHALL GRAVITY FLOW WATER DOWN THE PIPE JUST PRIOR TO TELEVISING SO DIPS AND SAGS CAN BE IDENTIFIED. THE CITY SHALL NOTIFY THE CONTRACTOR OF ANY NECESSARY REPAIRS AND/OR CLEANING REQUIRED PRIOR TO COMMENCING PAVING. THE SEGMENTS SHALL THEN BE RE-TELEVISED TO DEMONSTRATE PIPES ARE CLEAN. REPAIRS, IF NECESSARY, AND RE-TELEVISING SHALL BE AT THE CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL SWEEP ALL JOINTS TO REMOVE ROCKS AND DEBRIS FROM THE ENDS OF PIPE PRIOR TO MAKING THE JOINT CONNECTION. REPAIRS, IF NECESSARY, DUE TO ROCKS AND/OR DEBRIS IN JOINT(S) SHALL BE AT THE CONTRACTOR'S EXPENSE.
15. SAGS IN PIPE SHALL NOT EXCEED TOLERANCES AS SPECIFIED BY SUDAS. REPAIRS, IF NECESSARY, AND RE-TELEVISING SHALL BE AT THE CONTRACTOR'S EXPENSE.
16. THE CONTRACTOR SHALL INSTALL ⅝" X 12" REBAR 6" BELOW FINISHED GROUND TO LOCATE SERVICES. A TEMPORARY STEEL POST SHALL BE PLACED AT EACH LOCATION FOR AS-BUILTS.
17. THE CONTRACTOR IS RESPONSIBLE FOR RETESTING EXISTING SANITARY SEWER TO THE CLOSEST DOWNSTREAM STRUCTURE FOR ALL LINES THAT HAVE ADDED SERVICES.

WATER MAIN NOTES:

1. PIPE MATERIALS SHALL BE AWWA C900, CLASS 150 PVC.
2. INSTALL NO. 10 THIN STANDARD COPPER TRACER WIRE UNDER PIPE, BRING TRACER WIRE TO SURFACE AT HYDRANTS, TERMINATING IN RECEPTACLE BOX.
3. CONNECT NEW TRACER TO EXISTING USING APPROVED SPLICE KIT AND PROVIDE A GROUND ROD AT END OF TRACER WIRE FOR LOCATION AND EXTENSION IN FUTURE. THE CITY WILL TEST THE TRACER WIRE PRIOR TO ACCEPTANCE OF PLAT AND REPAIRS, IF ANY, SHALL BE AT THE CONTRACTOR'S EXPENSE.
4. HYDRANTS SHALL BE SET 3.5 FEET FROM THE WATER MAIN.
5. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY THAT FIRE HYDRANTS WILL NOT CONFLICT WITH SIDEWALK CONSTRUCTION.
6. HYDRANTS, MANHOLE COVERS AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED PAVEMENT ELEVATIONS.
7. HYDRANTS TO BE WATROUS PRODUCTS, OPEN LEFT, PAINTED YELLOW.
8. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.
9. SERVICES TO BE 1-INCH COPPER.
10. RISER RODS ARE REQUIRED AT ALL CURB STOPS.
11. STOP BOXES FOR 1" THROUGH 2" WATER SERVICE LINES SHALL INCLUDE A STAINLESS STEEL SELF-CENTERING ROD WITH STAINLESS STEEL COTTER PIN WITHIN A STOP BOX HOUSING. ALL STOP BOX INSTALLATIONS SHALL BE COMPLETED IN SUCH A MANNER THAT THE LID IS ALLOWED TO RAISE WITH THE FROST AND LOWER IF DRIVEN OVER WITHOUT DAMAGE TO CURB VALVE. FINISH GRADE OF THE LID SHALL BE LEVEL WITH THE SURROUNDING SURFACE AND DOES NOT PRESENT A HAZARD TO THE PUBLIC.
12. WATER MAIN TO HAVE 5 ½ FEET BURY, TYPICAL EXCEPT AT CRITICAL CROSSINGS.
13. ALL VALVES SHALL HAVE A VALVE BOX ADAPTER INSTALLED TO MAINTAIN ALIGNMENT.
14. THE CONTRACTOR SHALL REMOVE CHAINS ON ALL HYDRANTS.
15. THE CONTRACTOR SHALL WORK WITH THE CITY OF POLK CITY WATER DEPARTMENT AND SNYDER & ASSOCIATES WHEN OPERATING EXISTING VALVES. WATER SHALL NOT BE TURNED ON WITHOUT PRIOR APPROVAL OF THE CITY OF POLK CITY.
16. WATER CANNOT BE USED BY THE CONTRACTOR UNLESS IT IS PART OF THE PURIFICATION PROCESS OF THE NEW MAIN. WATER NEEDED FOR ANY REASON AFTER BACTERIA TESTING HAS BEEN COMPLETED AND PASSED WILL NEED PRIOR APPROVAL FROM THE CITY OF POLK CITY.
17. PROVIDE 2" BLOW-OFF AT THE TERMINAL END OF THE 8" WATER LINE UNLESS HYDRANT HAS BEEN PROVIDED.
18. WATER MAIN SHALL BE PRESSURE TESTED AND CHLORINATED WITH THE CONSTRUCTION OBSERVER PRESENT. RESULTS OF THE TEST SHALL BE PROVIDED TO PUBLIC WORKS. IF ANY TESTS DO NOT PASS, THE CONTRACTOR SHALL REIMBURSE THE CITY FOR THE COST OF THE WATER ASSOCIATED WITH RE-TESTING.
19. THE CONTRACTOR SHALL INSTALL ½" X 12" REBAR 6" BELOW FINISHED GROUND TO LOCATE SERVICES. A TEMPORARY STEEL POST SHALL BE PLACED AT EACH LOCATION FOR AS-BUILTS.
20. WATER VALVES SHALL BE SPACED AT A MAXIMUM SPACING OF 400 FEET.

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LEDGESTONE RIDGE PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC

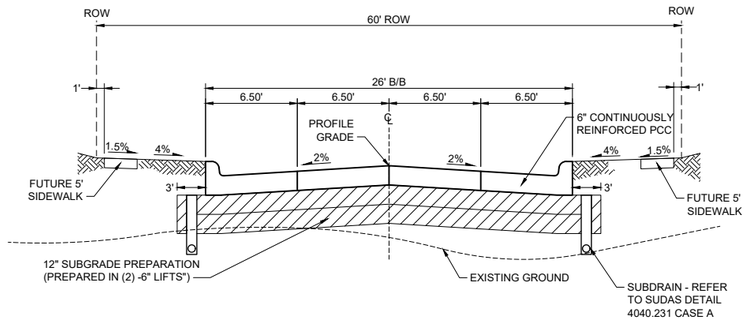
POLK CITY, IOWA

DRAWN: LCH
APPROVED: CRB
ISSUED FOR: SUBMITTAL 02
DATE: 04/12/2021
PROJECT NO: 4211030
FIELD BOOK: --
CLIENT NO: --

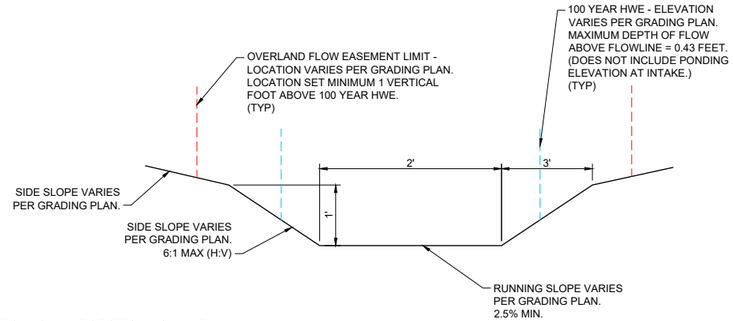
GENERAL INFORMATION

C001

ESTIMATED PROJECT QUANTITIES		
ITEM	UNIT	TOTAL
EARTHWORK AND PAVING		
TOPSOIL STRIP, SALVAGE, AND RESPREAD	CY	5700
SUBGRADE PREPARATION	SY	3000
EXCAVATION CLASS 10	CY	15000
REINFORCED PAVEMENT, PCC, 6 IN.	SY	2640
SIDEWALK, PCC, 5 IN.	SY	323
DETECTABLE WARNINGS	SF	40
STORM SEWER		
STORM SEWER, TRENCHED, PVC, 8 IN.	LF	140
STORM SEWER, TRENCHED, RCP, 15 IN.	LF	519
STORM SEWER, TRENCHED, RCP, 18 IN.	LF	200
STORM SEWER, TRENCHED, RCP, 24 IN.	LF	162
PIPE APRON, RCP, 15 IN.	EA	1
PIPE APRON, RCP, 18 IN.	EA	2
FOOTING FOR CONCRETE PIPE APRON	EA	3
PIPE APRON GUARD	EA	3
SUBDRAIN, LONGITUDINAL, 6 IN.	LF	1560
FOOTING DRAIN COLLECTOR, 4 IN.	LF	1618
SUBDRAIN CLEANOUT, TYPE A-2	EA	1
SUBDRAIN OUTLETS AND CONNECTIONS	EA	22
FOOTING DRAIN CONNECTIONS, INSERT-A-TEE	EA	32
MANHOLE, SW-401, 48 IN.	EA	2
INTAKE, SW-501	EA	5
INTAKE, SW-503	EA	4
INTAKE, SW-506	EA	1
INTAKE, SW-512, 24"	EA	2
RIP RAP, CLASS 'E'	TON	50
CONNECTION TO EXISTING MANHOLE	EA	1
SANITARY SEWER		
SANITARY SEWER, GRAVITY MAIN, TRENCHED, 8 IN.	LF	550
SANITARY SEWER MANHOLE, SW-301, 48"	EA	5
SANITARY SEWER SERVICE STUB, PVC, 4 IN.	LF	2750
SANITARY SEWER SERVICE WYE, PVC	EA	29
CONNECTION TO EXISTING MANHOLE	EA	1
WATER MAIN		
WATER MAIN, TRENCHED, PVC, 8 IN.	LF	835
WATER MAIN FITTINGS, PVC	EA	10
FIRE HYDRANT ASSEMBLY	EA	3
WATER MAIN SERVICE STU, COPPER, 1IN.	EA	32
CONNECTION TO EXISTING WATER MAIN	EA	2
GATE VALVE	EA	4



1 TYPICAL ROADWAY SECTION - LEDGESTONE CT
NOT TO SCALE



2 TYPICAL SWALE SECTION - SWALE 1
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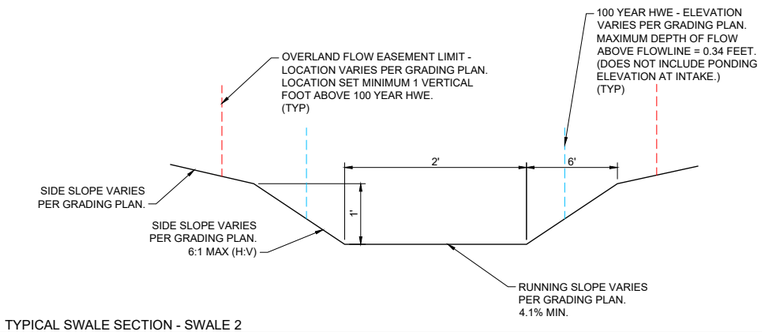

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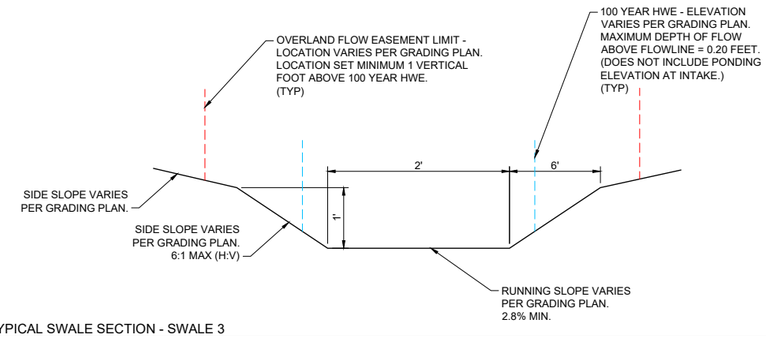

4 TYPICAL SWALE SECTION - SWALE 3
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LEDGESTONE RIDGE PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC

POLK CITY, IOWA

DRAWN: LCH
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DATE: 04/12/2021
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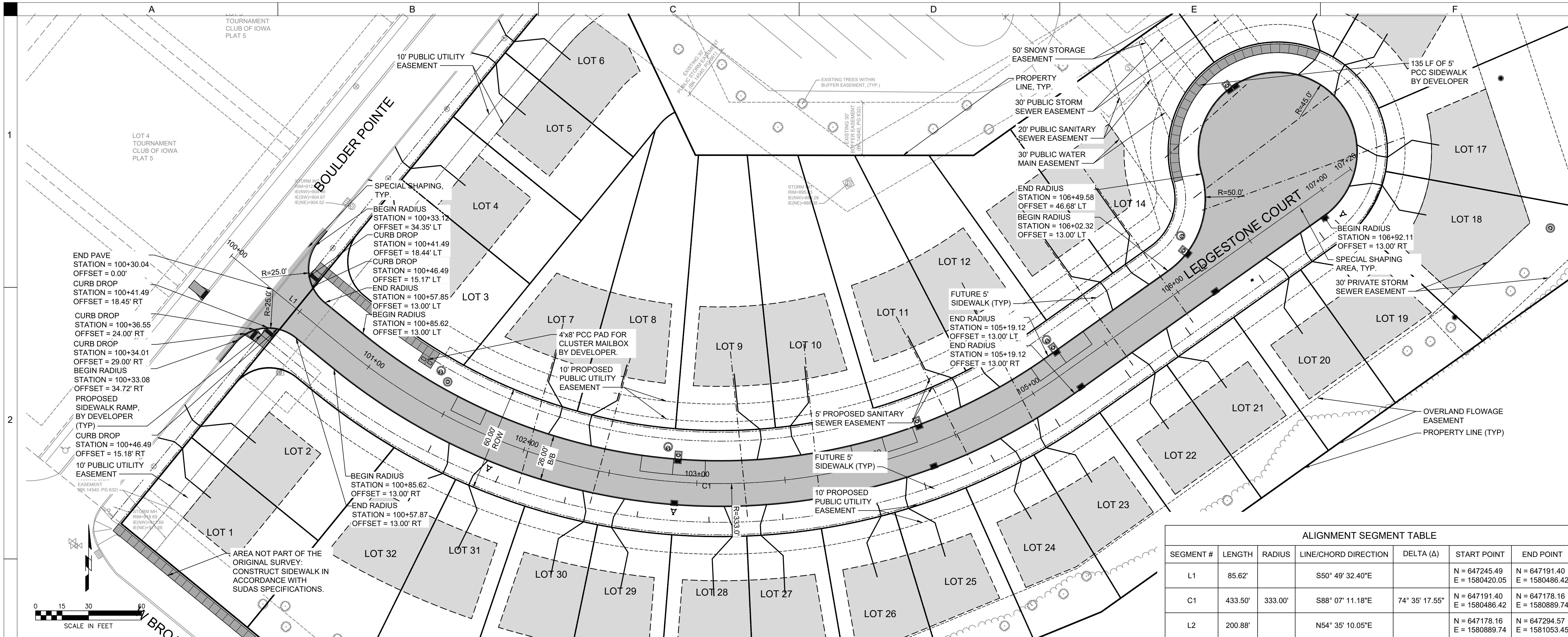
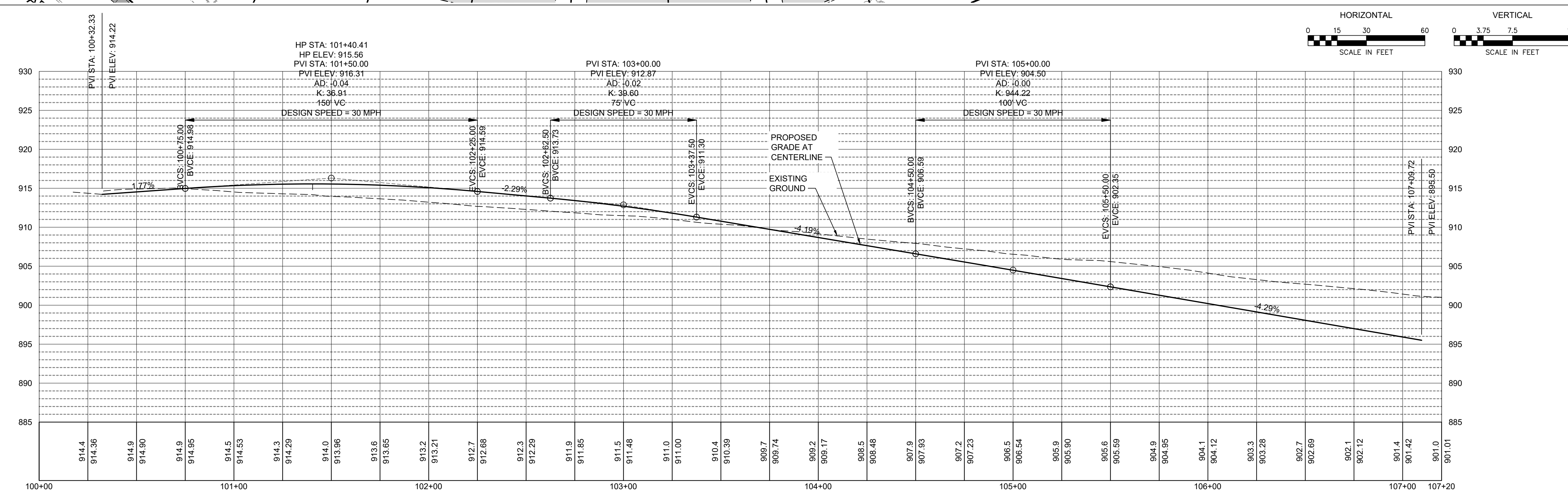
CLIENT NO: --

ESTIMATE QUANTITIES AND TYPICAL SECTIONS

C002



ALIGNMENT SEGMENT TABLE						
SEGMENT #	LENGTH	RADIUS	LINE/CHORD DIRECTION	DELTA (Δ)	START POINT	END POINT
L1	85.62'		S50° 49' 32.40"E		N = 647245.49 E = 1580420.05	N = 647191.40 E = 1580486.42
C1	433.50'	333.00'	S88° 07' 11.18"E	74° 35' 17.55"	N = 647191.40 E = 1580486.42	N = 647178.16 E = 1580889.74
L2	200.88'		N54° 35' 10.05"E		N = 647178.16 E = 1580889.74	N = 647294.57 E = 1581053.45



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ROADWAY PLAN & PROFILE

C101

BOULDER POINTE

LEDGESTONE COURT

SPECIAL SHAPING

CONTRACTOR TO SAWCUT EXISTING PAVEMENT TO PROVIDE A CLEAN EDGE AT TIE-IN POINT

TIE INTO EXISTING SIDEWALK, MATCH ELEVATION IN FIELD

CURB GRINDING LOCATIONS TO ACCOMMODATE PROPOSED CURB RAMP. ALIGN WITH PROPOSED CURB RAMP ACROSS STREET.

PROPOSED SIDEWALK RAMP, BY DEVELOPER (TYP)

TRANSITION AREA

FUTURE 5' SIDEWALK BY DEVELOPER, TYP.

FUTURE 5' SIDEWALK BY DEVELOPER (TYP)

FUTURE 5' SIDEWALK (TYP)

LOT 1

LOT 2

LOT 3

LOT 7

LOT 8

LOT 32

SCALE IN FEET

0 5 10 20

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JOINTING PLAN

C121

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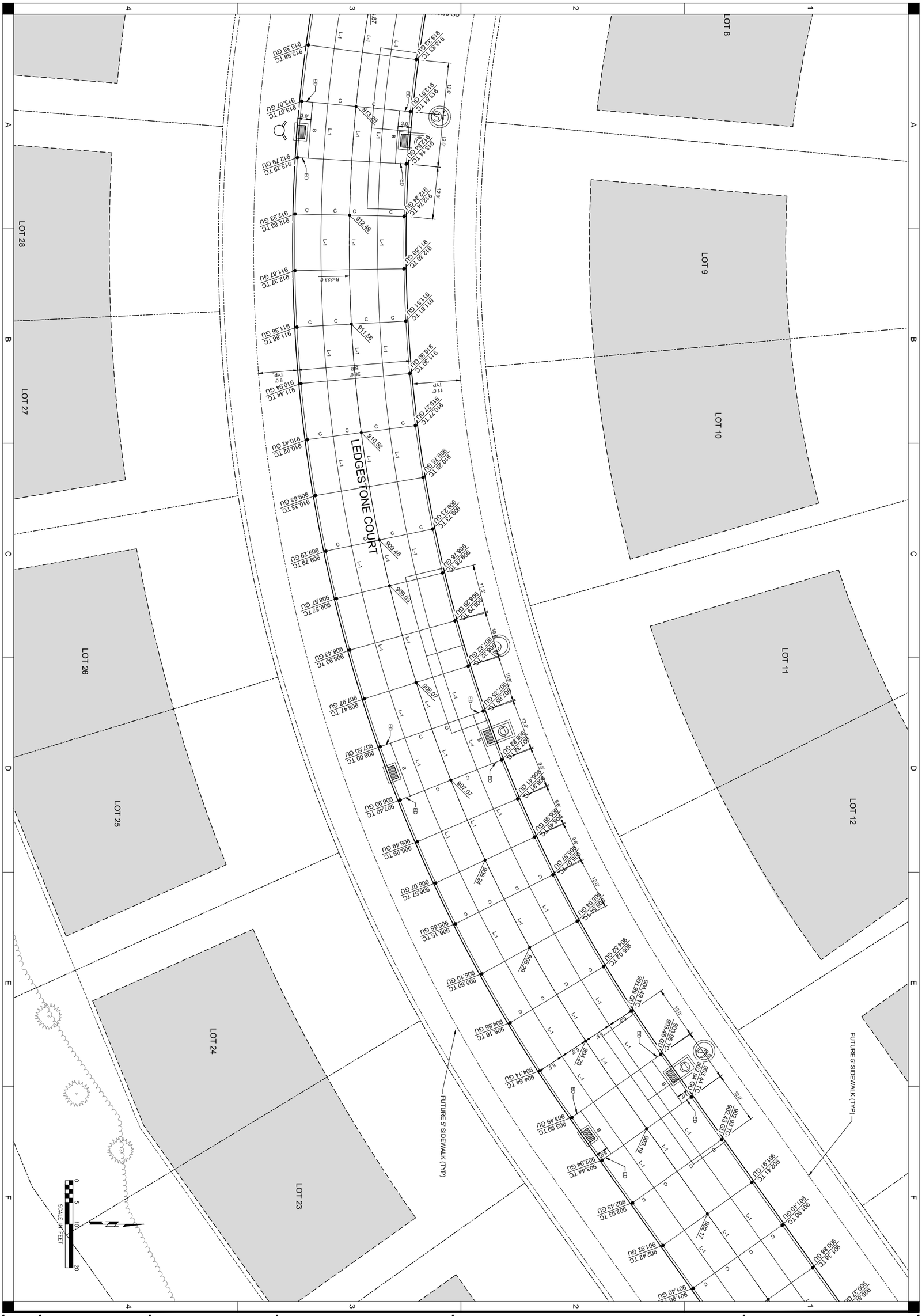

C122

JOINTING PLAN

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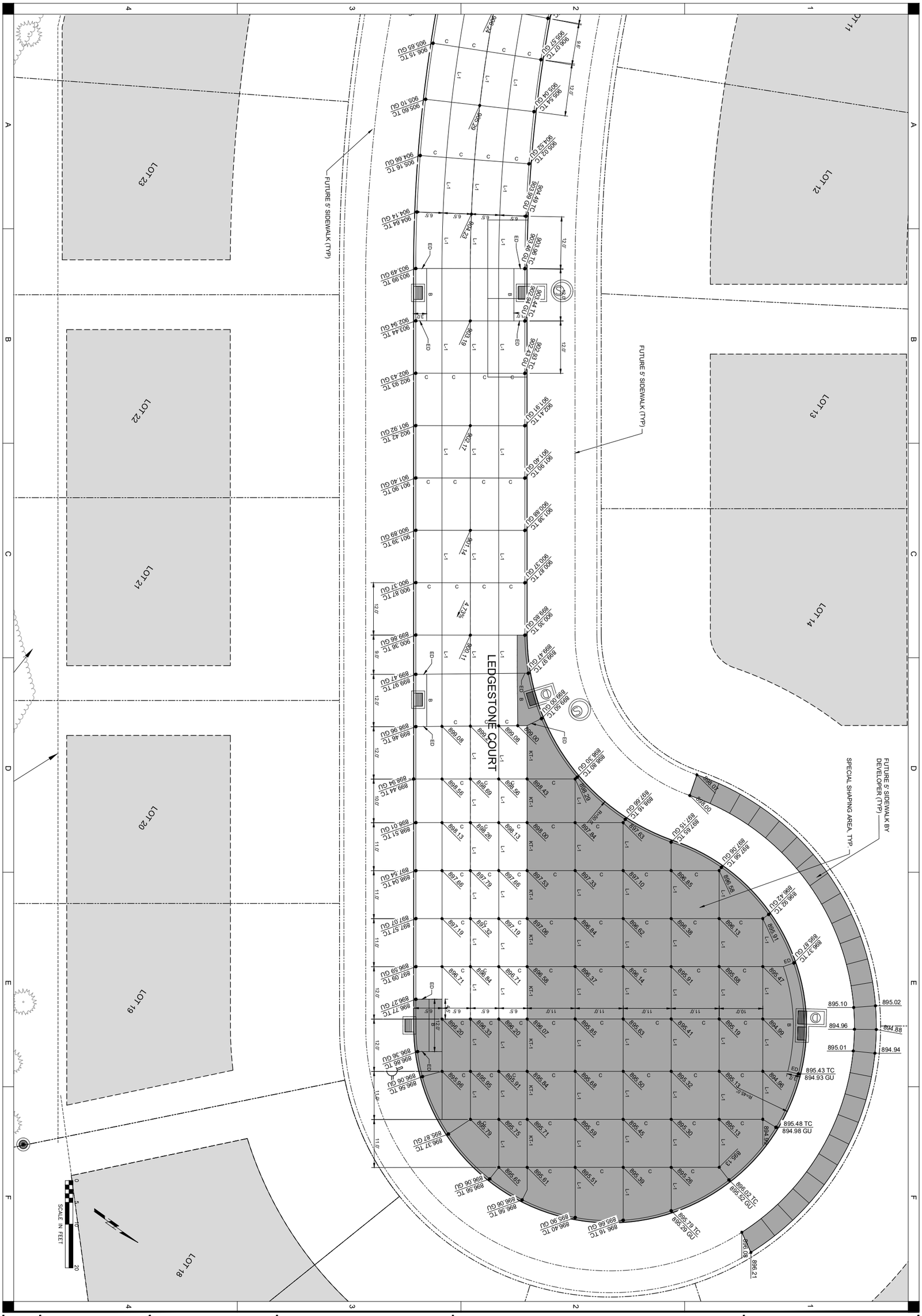

C123

JOINTING PLAN

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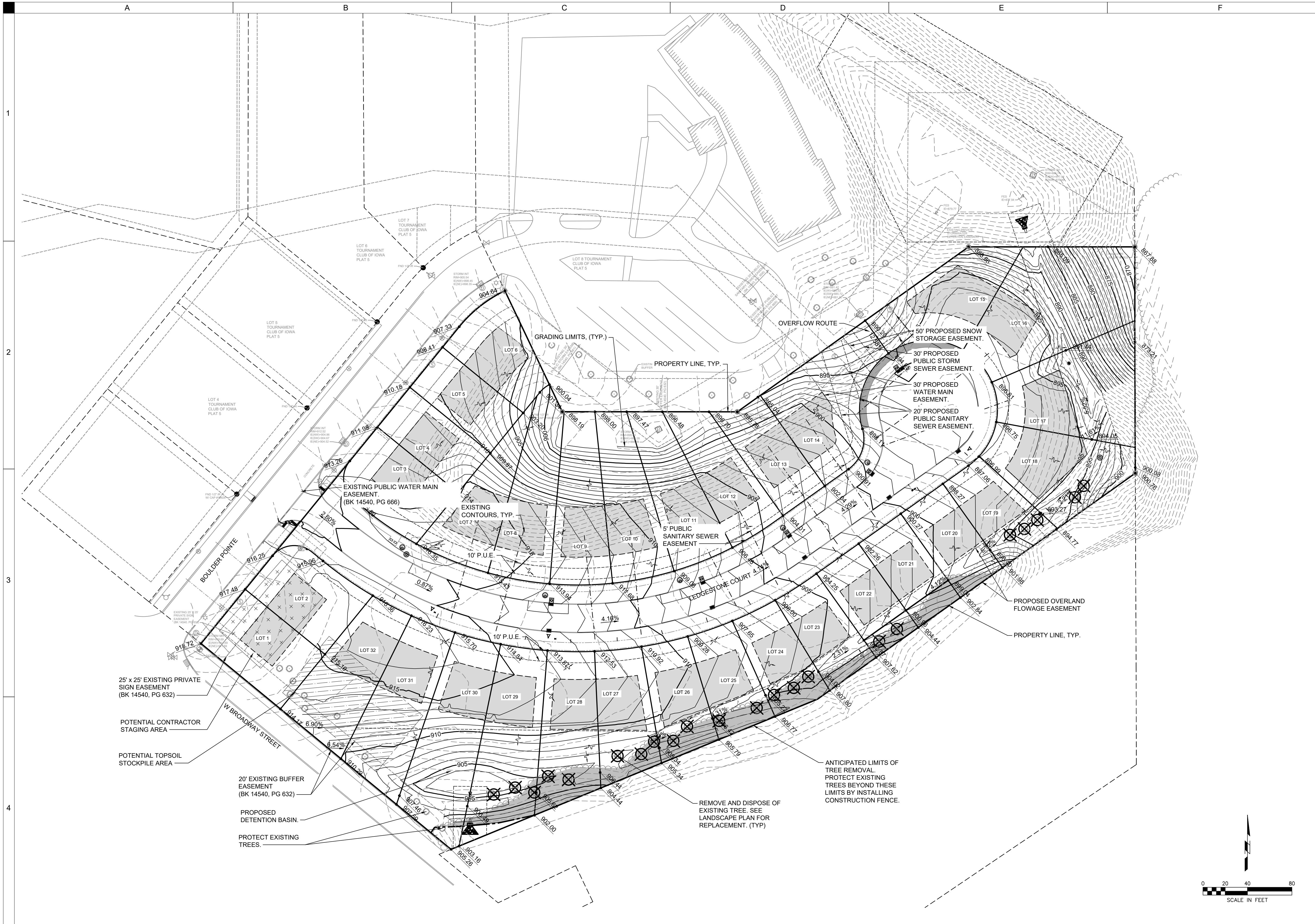

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GRADING LIMITS, (TYP.)
PROPERTY LINE, TYP.
OVERFLOW ROUTE
50' PROPOSED SNOW STORAGE EASEMENT.
30' PROPOSED PUBLIC STORM SEWER EASEMENT.
30' PROPOSED WATER MAIN EASEMENT.
20' PROPOSED PUBLIC SANITARY SEWER EASEMENT.
EXISTING PUBLIC WATER MAIN EASEMENT. (BK 14540, PG 666)
EXISTING CONTOURS, TYP.
5' PUBLIC SANITARY SEWER EASEMENT
10' P.U.E.
LEDGESTONE COURT
BOULDER POINTE
W BROADWAY STREET
PROPOSED OVERLAND FLOWAGE EASEMENT
PROPERTY LINE, TYP.
25' x 25' EXISTING PRIVATE SIGN EASEMENT (BK 14540, PG 632)
POTENTIAL CONTRACTOR STAGING AREA
POTENTIAL TOPSOIL STOCKPILE AREA
20' EXISTING BUFFER EASEMENT (BK 14540, PG 632)
PROPOSED DETENTION BASIN.
PROTECT EXISTING TREES.
REMOVE AND DISPOSE OF EXISTING TREE. SEE LANDSCAPE PLAN FOR REPLACEMENT. (TYP)
ANTICIPATED LIMITS OF TREE REMOVAL. PROTECT EXISTING TREES BEYOND THESE LIMITS BY INSTALLING CONSTRUCTION FENCE.
LOT 5 TOURNAMENT CLUB OF IOWA PLAT 5
LOT 4 TOURNAMENT CLUB OF IOWA PLAT 5
LOT 6 TOURNAMENT CLUB OF IOWA PLAT 5
LOT 7 TOURNAMENT CLUB OF IOWA PLAT 5
LOT 8 TOURNAMENT CLUB OF IOWA PLAT 5
0 20 40 80
SCALE IN FEET

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POLK CITY, IOWA

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GRADING PLAN

C201

INLET PROTECTION - GRATED CURB INTAKE TO REMAIN UNTIL THE SITE HAS BEEN STABILIZED AND APPROVED BY THE OWNER'S REPRESENTATIVE, TYP

EXISTING PCC ROADWAY, TYP

STORE SWPPP DOCUMENTS IN MAILBOX NEAR EDGE OF CONSTRUCTION

CLEANUP OF DIRT AND DEBRIS IS REQUIRED. CONTRACTOR SHALL USE ALL METHODS NECESSARY TO PREVENT TRACKING OFF-SITE AT ALL TIMES AND AS REQUIRED BY THE OWNER. CONTRACTOR SHALL ANTICIPATE THE USE OF DUST CONTROL MEASURES.

STABILIZED CONSTRUCTION ENTRANCE. DRESS WITH ADDITIONAL STONE AS REQUIRED TO PREVENT TRACKING OFF-SITE. IF MODIFIED OR REPAIRED, SEE DETAIL 3/C251, TYP.

CONTRACTOR TO DETERMINE PREFERRED LOCATION DURING EACH PHASE OF CONSTRUCTION. LOCATION TO BE CONFIRMED BY THE OWNER, TYP.

SILT FENCE ALONG EDGE OF DISTURBED AREA. SEE DETAIL 1/C251, TYP

8" FILTER SOCK ALONG EDGE OF DISTURBED AREA. SEE DETAIL 2/C251, TYP.

8" FILTER SOCK AROUND OPEN SIDED AREA INTAKE . SEE DETAIL 2/C252, TYP.

EXISTING STORM SEWER AND INTAKE, TYP

EXISTING GRADE CONTOUR, TYP

STORM INT RIM=905.54 IE(NW)=898.45 IE(SE)=898.35

STORM INT RIM=912.52 IE(NW)=904.96 IE(SW)=904.67 IE(NE)=904.52

STORM INT RIM=891.52 IE(W)=885.72 IE(SE)=885.72 IE(NE)=885.72

STORM INT RIM=884.74 IE(SW)=877.04 IE(NW)=877.09

FES IE=877.94

FES IE=[illegible]

CONCRETE SIDEWALK

CONCRETE

N BROADWAY STREET

0 20 40 80
SCALE IN FEET

LEGEND

- DISTURBED AREA/ PROJECT SITE
- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- 8" FILTER SOCK
- INLET PROTECTION - GRATED CURB INTAKE
- 6.0% EXISTING GRADE
- DIRECTION OF DRAINAGE
- SPILL KIT TO BE INSTALLED AND RELOCATED AS REQUIRED FOR CONSTRUCTION
- CONTRACTOR STAGING AREA FOR PORTABLE RESTROOM FACILITIES, TEMPORARY FUEL TANKS, WASTE CONTAINERS AND OTHER HAZARDOUS CHEMICALS. PROTECT WITH (1) 8" FILTER SOCK. RELOCATE AS REQUIRED FOR CONSTRUCTION.
- CONCRETE, PAINT AND GROUT WASHOUT AREA. PROTECT WITH (2) 18" STACKED FILTER SOCKS LINED WITH AN IMPERMEABLE PLASTIC LINER OR A METAL ROLL-OFF DUMPSTER. CONTRACTOR TO HAUL OFF WASTE MATERIAL. RELOCATE AS REQUIRED FOR CONSTRUCTION.

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LEDGESTONE RIDGE
PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC

POLK CITY, IOWA

PRELIMINARY - NOT FOR CONSTRUCTION

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EROSION AND SEDIMENT CONTROL PLAN - PRE - CONSTRUCTION

C250

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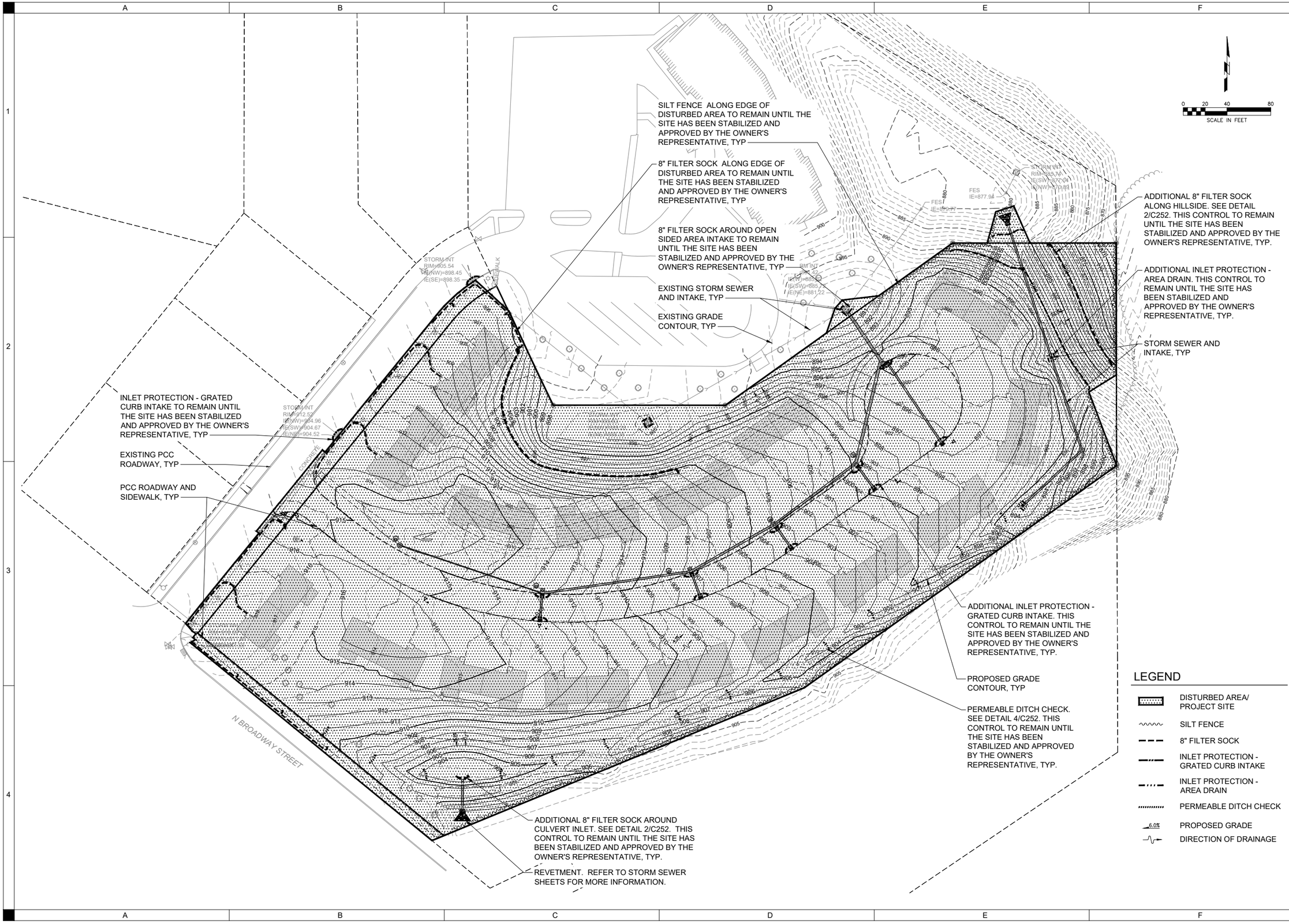

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POLK CITY, IOWA

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EROSION AND SEDIMENT CONTROL PLAN - POST - CONSTRUCTION

C251

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EROSION AND SEDIMENT CONTROL NOTES

1. EROSION/SEDIMENT CONTROL MEASURES ARE REQUIRED REGARDLESS OF THE TIME OF YEAR. THIS PLAN AND ITS ASSOCIATED REQUIREMENTS FOR THE PERMIT MUST BE IMPLEMENTED DURING WINTER MONTHS AS WELL.

2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTROL EROSION/SEDIMENT ON THE SITE AT ALL TIMES. THE CONTROL MEASURES IDENTIFIED ON THE PLAN ARE A MINIMUM. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS NECESSARY AND BY CONSTRUCTION PHASE, TO FULFILL THIS REQUIREMENT.

3. EXCEPT AS PRECLUDED BY SNOW COVER, THE CONTRACTOR IS REQUIRED TO USE STABILIZATION CONTROLS ON ALL DISTURBED AREAS OF THE SITE REGARDLESS OF THE TIME PERIOD BEFORE THEY WILL BE DISTURBED AGAIN. IN THE EVENT THAT CONSTRUCTION ACTIVITY WITHIN A DISTURBED AREA WILL NOT OCCUR FOR A PERIOD OF 14 OR MORE CALENDAR DAYS, THE CONTRACTOR IS REQUIRED TO INSTALL STABILIZATION MEASURES IMMEDIATELY AFTER CONSTRUCTION ACTIVITY CEASED IN THAT AREA.

4. IN THE EVENT THAT SOILS LEAVE THE SITE, CLEANUP OF ALL SURROUNDING ROADS, DRIVES AND PARKING LOTS SHALL BE PERFORMED IMMEDIATELY AND UPON REQUEST BY OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST. PAVEMENT IS TO BE SCRAPED OF DEBRIS AND MUD AND BROOMED CLEAN. MUD TRACKS ARE TO BE REMOVED AS THEY ARE CREATED.

5. MAINTAIN SILT FENCING AT ALL TIMES IN AN UPRIGHT POSITION. CLEAN SILT FROM FENCING/FILTER SOCKS ON A REGULAR BASIS AS PER THE SPECIFICATIONS. SILT FENCES MUST BE CLEANED OUT WHEN THEY ARE 50% FULL. FILTER SOCKS MUST BE CLEANED OUT WHEN THEY ARE 33% FULL.

6. CONTRACTOR TO LOCATE/RELOCATE SILT FENCING/ FILTER SOCKS AS NECESSARY THROUGHOUT THE PROJECT TO CONTROL EROSION/SEDIMENT.

7. REMOVE ALL TEMPORARY EROSION/SEDIMENT CONTROLS, NOT CALLED OUT TO REMAIN, AFTER SITE HAS BEEN STABILIZED AND APPROVED BY THE OWNER'S REPRESENTATIVE.

8. ALL STORM INTAKES/CULVERTS, WITHIN AND ADJACENT TO THE PROJECT AREA, MUST BE PROTECTED THROUGHOUT THE DURATION OF THE PROJECT AS IDENTIFIED ON THE DRAWINGS. THESE PROTECTION MEASURES ARE TO REMAIN IN PLACE UNTIL THE SITE HAS BEEN STABILIZED AND APPROVED BY THE OWNER'S REPRESENTATIVE.

9. CONTRACTOR TO USE EXTREME CAUTION WHILE INSTALLING SILT FENCE OR OTHER EROSION/SEDIMENT CONTROL DEVICES TO NOT DAMAGE UNDERGROUND UTILITIES.

10. WHERE WATER IS PUMPED FROM EXCAVATIONS ON SITE, PROVISIONS SHALL BE MADE TO REMOVE SEDIMENT FROM THE WATER BEFORE IT IS RELEASED INTO THE STORM SEWER SYSTEM. METHODS INCLUDE: DEWATERING BAGS, ADDING FLOCCULANTS TO SILTY WATER AND PLACING A FILTER FABRIC BARRIER AROUND THE PUMP INLET. THE COMBINATION OF THESE METHODS HELPS TO REMOVE SEDIMENT FROM THE WATER. THE MOST COMMON METHOD INCLUDES PLACING CHITOSAN GEOTEXTILE TREATMENT BAGS WITHIN THE DEWATERING BAG AND INSTALLING AN ADDITIONAL INTAKE PROTECTION BAG AT THE NEAREST DOWNSTREAM INTAKE.

11. WHERE WATER IS RELEASED FROM A DEWATERING SYSTEM, PRECAUTIONS SHALL BE TAKEN TO ENSURE THAT EROSION GULLIES DO NOT FORM. ONE METHOD IS TO PIPE THE WATER DIRECTLY INTO A STORM SEWER STRUCTURE. WATER MUST BE FREE OF SEDIMENT PRIOR TO DISCHARGING INTO THE STORM SEWER.

12. CONTRACTOR TO CLEAN OUT ALL INTAKES WITHIN THE PROJECT SITE AT COMPLETION OF WORK. THIS INCLUDES ALL CURB INTAKES, AREA DRAINS AND CULVERTS.

13. CONCRETE SLURRY AND DUST FROM SAWCUTTING ACTIVITIES IS PROHIBITED FROM ENTERING THE STORM SEWER SYSTEM. ALL STORM INTAKES LOCATED NEAR SAWCUTTING ACTIVITIES ARE REQUIRED TO BE PROTECTED. SAWCUT SLURRY AND DUST MUST BE CONTAINED, CLEANED UP, AND DISPOSED OF OFF-SITE. A TEMPORARY 8" FILTER SOCK IS REQUIRED.

14. SANITARY WASTE DISPOSAL: ALL LOCATIONS OF PORTABLE RESTROOM FACILITIES MUST BE IDENTIFIED ON THE PLAN. IN THE EVENT THAT PORTABLE RESTROOM FACILITIES ARE USED ON-SITE, THE CONTRACTOR IS REQUIRED TO INSTALL AN 8" FILTER SOCK AROUND THE FACILITY TO MINIMIZE THE RADIUS OF THE AFFECTED ZONE IN THE EVENT OF A SPILL. WASTES SHALL BE COLLECTED AND DISPOSED OF IN COMPLETE COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. PORTABLE RESTROOM FACILITIES MUST NOT BE LOCATED NEAR DRAINAGE WAYS. RELOCATE AS REQUIRED FOR CONSTRUCTION.

15. IDENTIFICATION OF ALLOWABLE NON-STORMWATER DISCHARGES: DURING CONSTRUCTION THE NON-STORMWATER DISCHARGES, WHICH INCLUDE WATER FLUSHED FROM WATER LINES, PAVEMENT WASHING (WHERE NO SPILLS OR LEAKS HAVE OCCURRED, UNLESS THE SPILLED MATERIAL HAS BEEN CLEANED UP), VEHICLE WASHING, AND GROUNDWATER (DEWATERING), SHOULD BE DIRECTED AS MUCH AS POSSIBLE TOWARDS VEGETATED AREAS AND AWAY FROM DRAINAGE WAYS. REFER TO THE IDNR NPDES GENERAL PERMIT NO. 2 FOR ALLOWABLE NON-STORMWATER DISCHARGES.

16. POLLUTION AND SPILL PREVENTION PLANNING: POTENTIALLY HAZARDOUS MATERIALS ON THE CONSTRUCTION SITE INCLUDE FUEL, LUBRICANTS, CURING COMPOUNDS, FERTILIZERS, GREASE AND CLEANING SOLVENTS. THE CONTRACTOR STAGING AREA FOR PORTABLE RESTROOM FACILITIES, TEMPORARY FUEL TANKS, WASTE CONTAINERS AND OTHER HAZARDOUS CHEMICALS MUST BE PROTECTED BY AN 8" FILTER SOCK AT ALL TIMES. ALL REASONABLE PRECAUTIONS WILL BE TAKEN TO PREVENT SPILLS. ANY SPILLED MATERIAL WILL IMMEDIATELY BE DIRECTED AWAY FROM STORMWATER INTAKES, DETENTION BASINS, OR DRAINAGE WAYS. SPILLED MATERIALS WILL BE CLEANED AND, IF NECESSARY, SOIL REMEDIATION PRACTICES WILL BE USED. A RECORD OF SPILLS WILL BE MAINTAINED BY THE PRIME CONTRACTOR. RELOCATE AS REQUIRED FOR CONSTRUCTION.

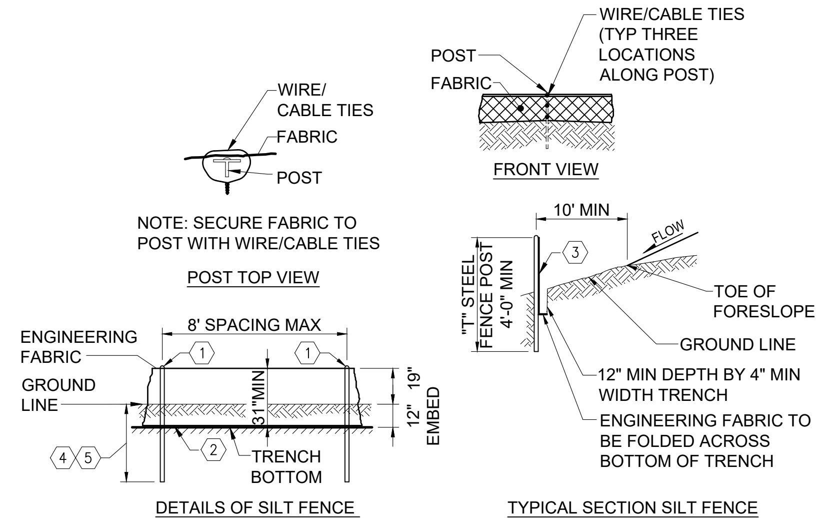
19. CONCRETE, PAINT AND GROUT WASHOUT AREA: PROTECT WITH (2) 18" STACKED FILTER SOCKS LINED WITH AN IMPERMEABLE PLASTIC LINER OR A METAL ROLL-OFF DUMPSTER. CLEAN OUT AND MAINTENANCE OF THE WASHOUT SHALL BE INCIDENTAL TO SWPPP MANAGEMENT. IF A PUMP TRUCK IS USED ON-SITE AND UNABLE TO USE THE WASHOUT AREA, THE CONTRACTOR SHALL DIG A PIT FOR WASTE MATERIAL AND LINE IT WITH AN IMPERMEABLE PLASTIC LINER. CONTRACTOR TO HAUL OFF ALL WASTE MATERIAL. ALL LOCATIONS OF CONCRETE, PAINT AND GROUT WASHOUT AREAS MUST BE PROVIDED BY THE CONTRACTOR AND IDENTIFIED ON THE PLAN. THE CONTRACTOR IS REQUIRED TO INSTALL A SIGN THAT DESIGNATES THE WASHOUT AREA. RELOCATE AS REQUIRED FOR CONSTRUCTION.

20. SPILL KIT: THE LOCATION OF THE SPILL KIT MUST BE IDENTIFIED ON THE PLAN. THE SPILL KIT SHALL BE A SEALED STORAGE SHED LOCATED NEAR THE CONSTRUCTION TRAILER OR FUELING AREA. THE SPILL KIT SHALL CONTAIN, BUT NOT BE LIMITED TO THE FOLLOWING ITEMS: A GARBAGE CAN, GLOVES, SAFETY GOGGLES, BROOM AND DUST PAN AND OIL ABSORBENT CLAY CHIPS OR PADS. THE SPILL KIT SHALL BE RESTOCKED AS SUPPLIES ARE USED. THE CONTRACTOR SHALL INSTALL A SIGN THAT DESIGNATES THE SPILL KIT. RELOCATE AS REQUIRED FOR CONSTRUCTION.

21. STOCKPILED MATERIALS: CONTRACTOR TO IDENTIFY ALL LOCATIONS OF STOCKPILED MATERIALS ON THE PLAN. CONTRACTOR SHALL PROVIDE ALL EROSION/SEDIMENT CONTROLS AS REQUIRED TO CONTAIN MATERIALS ON-SITE. AT A MINIMUM, THE CONTRACTOR IS REQUIRED TO PROVIDE SILT FENCE/8" FILTER SOCKS AROUND THE PERIMETER OF STOCKPILED SOILS BEFORE STOCKPILE IS RE-SPREAD. FOR STOCKPILES THAT REMAIN FOR 14 DAYS OR MORE, CONTRACTOR TO PROVIDE COVER OR TEMPORARY STABILIZATION CONTROLS.

22. DUST CONTROL: THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES WHERE DUST IS GENERATED. FREQUENT WATERING OF THE SITE, SPRINKLING/IRRIGATION, VEGETATIVE COVER, MULCH, WINDBREAKS, TILLAGE, STONE AND SPRAY-ON CHEMICAL SOIL TREATMENTS (PALLIATIVES) ARE POSSIBLE DUST CONTROL MEASURES. IF THE DUST CONTROL IS NOT ACCEPTABLE IT SHALL BE CHANGED AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

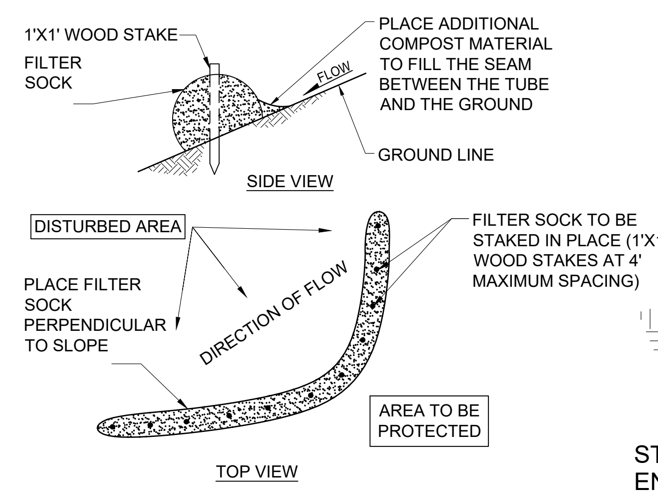
23. SEQUENCE OF MAJOR ACTIVITIES: INCORPORATE ALL TEMPORARY STABILIZING AND PERMANENT EROSION/SEDIMENT CONTROL FEATURES AT THE EARLIEST TIME PRACTICABLE.



GENERAL NOTES:

1. SECURE ENGINEERING FABRIC USING WIRE OR CABLE TIES AT TOP, MIDDLE AND BOTTOM OF EXPOSED STEEL POST.
2. FOR MANUAL/TRENCH INSTALLATION, ENGINEERING FABRIC TO BE FOLDED ACROSS BOTTOM OF TRENCH. SEE TYPICAL SECTION OF SILT FENCE.
3. ENGINEERING FABRIC SHALL HAVE A MINIMUM 36" WIDTH.
4. FOR MACHINE INSTALLATION, POSTS SHALL BE EMBEDDED 28" BELOW GROUND LINE. ALL COMPACTION SHALL BE ACCOMPLISHED BY DRIVING OVER EACH SIDE OF SILT FENCE 2-4 TIMES WITH A RUBBER-TIRED VEHICLE.
5. FOR MANUAL/TRENCH INSTALLATION, POSTS SHALL BE EMBEDDED 28" BELOW THE TRENCH BOTTOM. ALL COMPACTION SHALL BE ACCOMPLISHED WITH A MECHANICAL OR PNEUMATIC TAMPER.

1 SILT FENCE DETAIL
NOT TO SCALE



2 FILTER SOCK DETAIL
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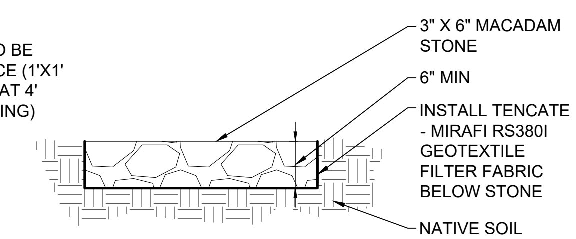
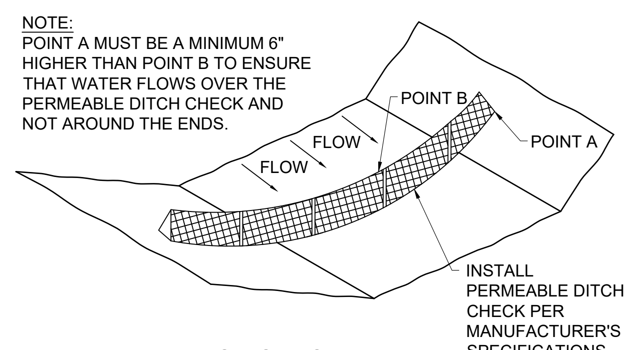


3 STABILIZED CONSTRUCTION ENTRANCE/ CONTRACTOR STAGING AND LAYDOWN AREA (AS REQUIRED)
NOT TO SCALE

NOTE:
POINT A MUST BE A MINIMUM 6" HIGHER THAN POINT B TO ENSURE THAT WATER FLOWS OVER THE PERMEABLE DITCH CHECK AND NOT AROUND THE ENDS.



4 PERMEABLE DITCH CHECK
NOT TO SCALE

SITE INFORMATION:
PROJECT SITE/DISTURBED AREA = 5.9 AC
PRE-DEVELOPMENT COEFFICIENT= 0.20
POST-DEVELOPMENT COEFFICIENT= 0.45
NEAREST SURFACE WATER ACCEPTING SITE DISCHARGE: DES MOINES RIVER

SEQUENCING AND PHASING NOTES

1. THIS PROJECT WILL BE CONSTRUCTED OVER SEVERAL PHASES. EROSION/SEDIMENT CONTROL DEVICES IDENTIFIED ON THE PLAN WILL BE IMPLEMENTED ON A PER PHASE BASIS TO ALLOW FOR MAXIMUM PEDESTRIAN ACCESS AND EASE OF CONSTRUCTION.
2. INSTALL INTAKE PROTECTION AND DOWN SLOPE AND SIDE SLOPE PERIMETER CONTROLS BEFORE LAND DISTURBING ACTIVITY OCCURS.
3. STRIP TOPSOIL TO A DEPTH OF 6" AND STOCKPILE. DO NOT MIX TOPSOIL WITH SUBSOIL.
4. GRADE SUBSOIL TO CONFORM WITH THE GRADES, CONTOURS AND LEVELS IDENTIFIED ON THE DRAWINGS.
5. ROUGH GRADE FOR ROADWAY, WALKS, CURBS, GUTTERS, AND LANDSCAPED AREAS.
6. COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.
7. SCARIFY AREAS TO RECEIVE TOPSOIL TO A DEPTH OF 4". REMOVE ALL STONES, WOOD AND OTHER DEBRIS LARGER THAN 1" FROM AREAS TO RECEIVE TOPSOIL. DO NOT COMPACT TOPSOIL.
8. OUTSIDE LANDSCAPED AREAS, ALL DISTURBED AREAS NOT PAVED, OR HARD SURFACED ON THE SITE SHALL RECEIVE A MINIMUM 6" OF TOPSOIL AND PERMANENT SEEDING. SEE SHEET CE.3 FOR SITE RESTORATION INFORMATION.
9. UPON COMPLETION OF EACH PHASE AND APPROVAL BY THE OWNER'S REPRESENTATIVE, EROSION/SEDIMENT CONTROL DEVICES MAY BE REMOVED/RELOCATED.

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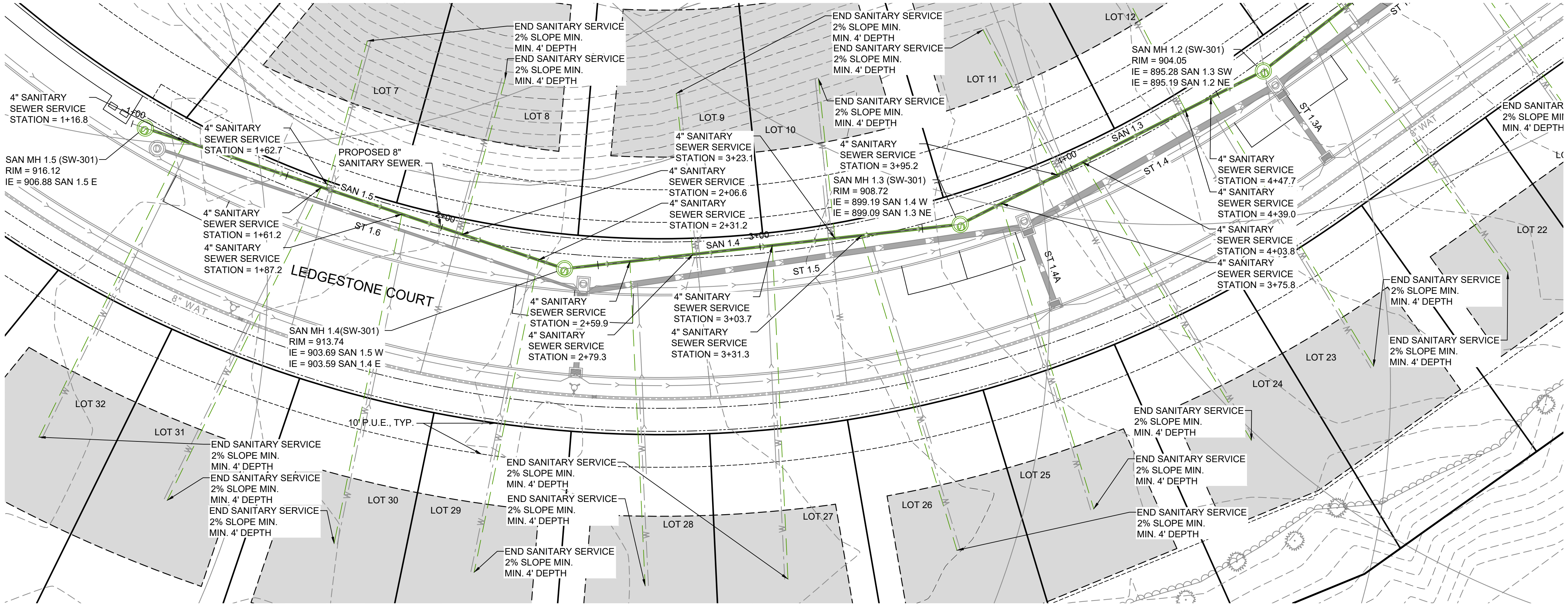
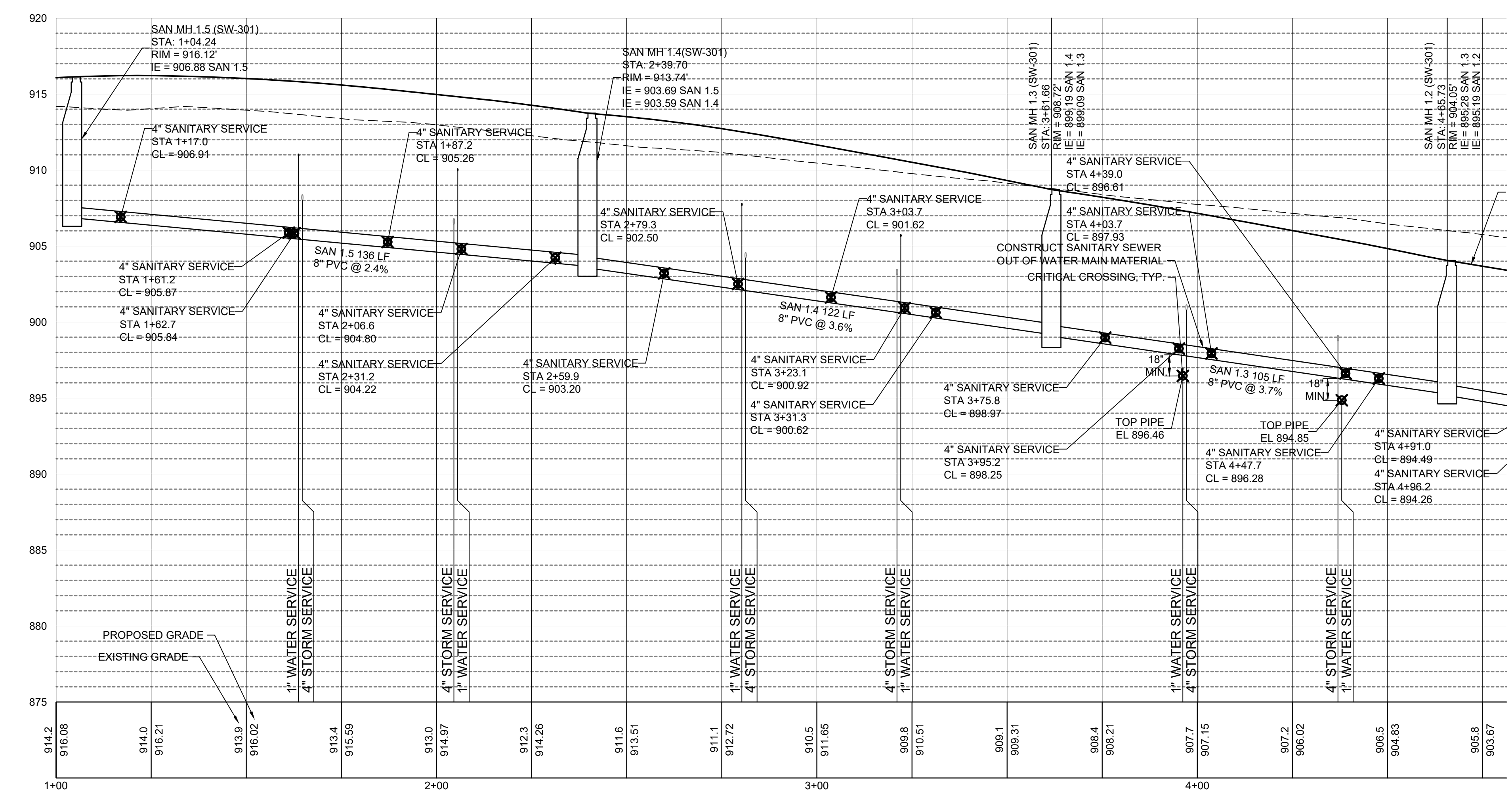
EROSION AND SEDIMENT NOTES AND DETAILS

C252





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SANITARY SEWER PLAN & PROFILE

C301

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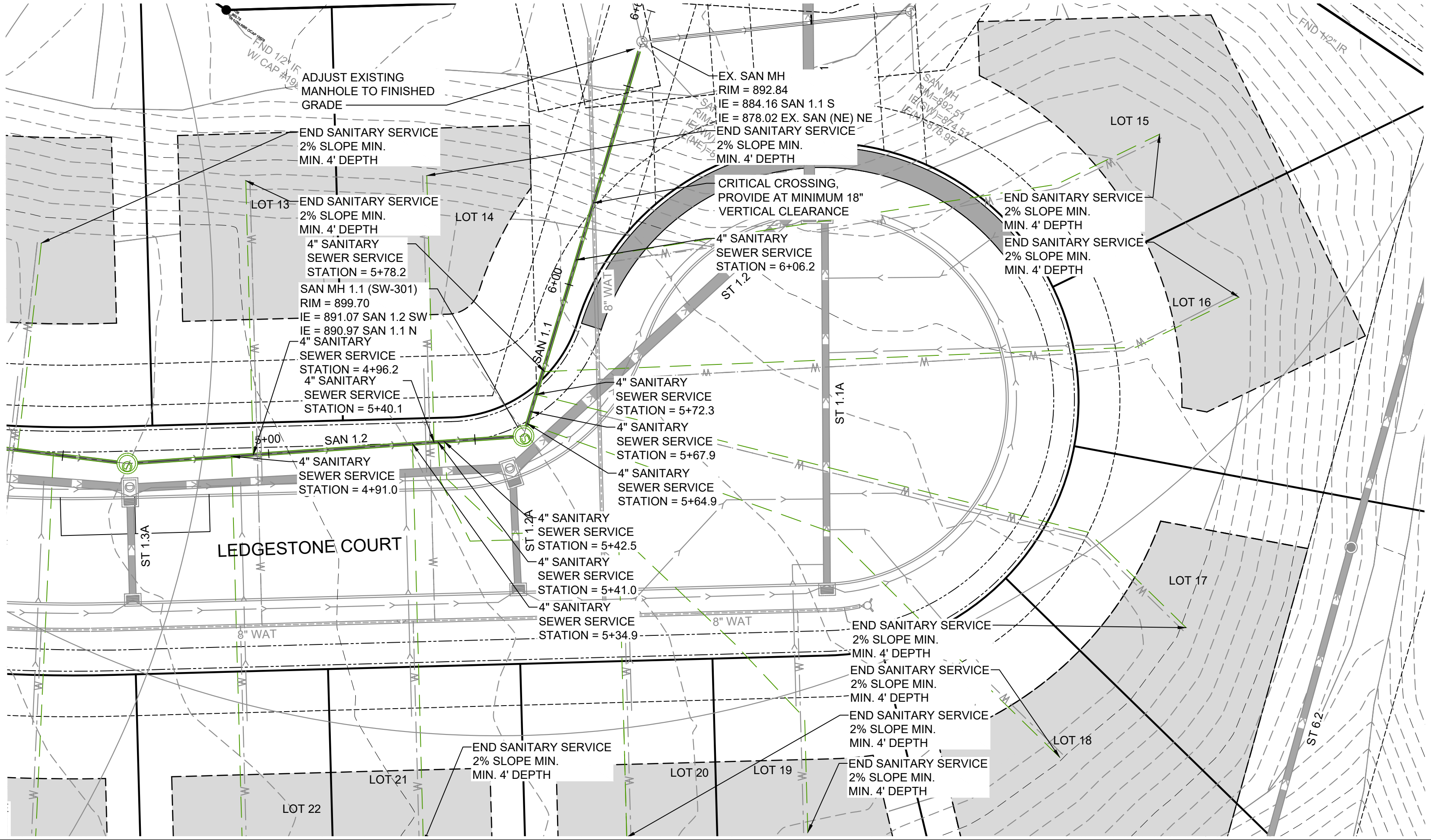

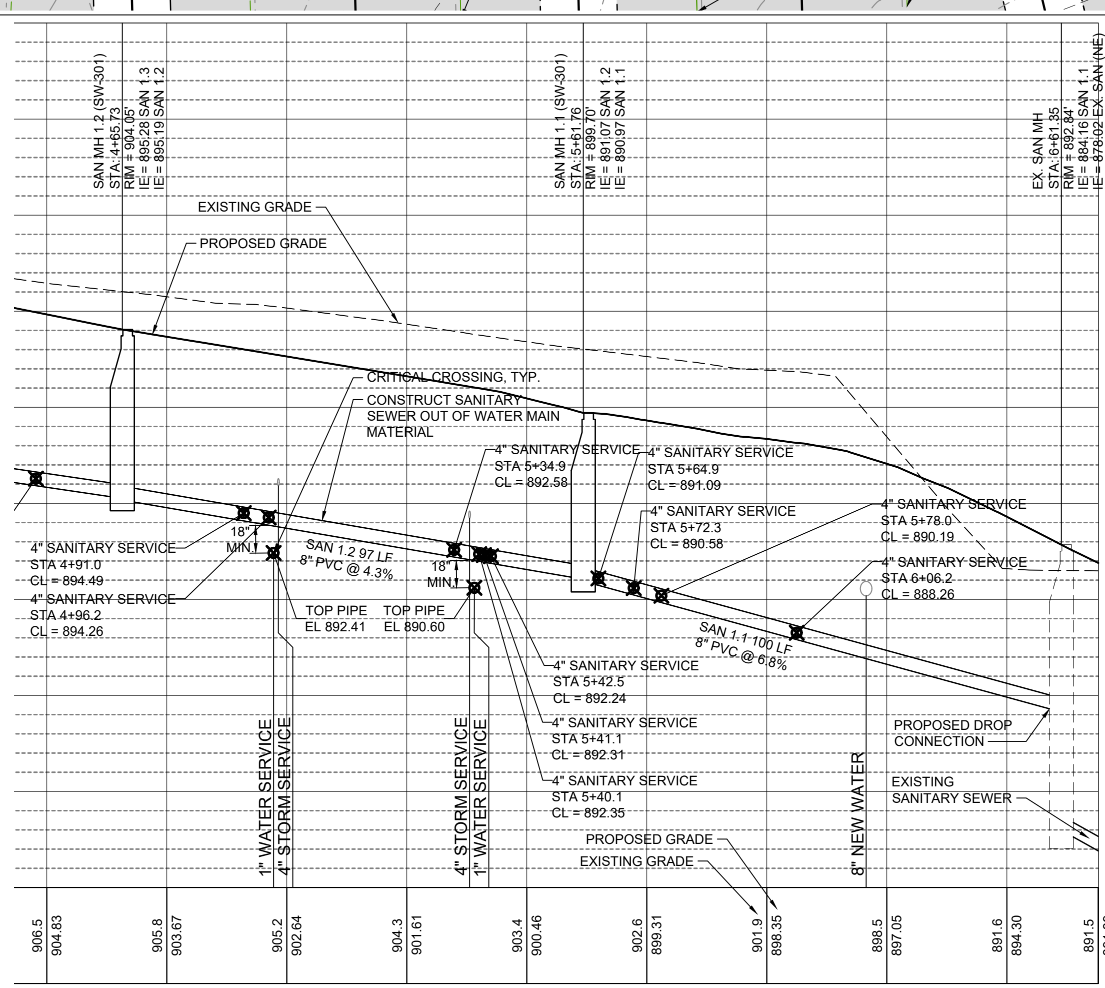

HORIZONTAL

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VERTICAL

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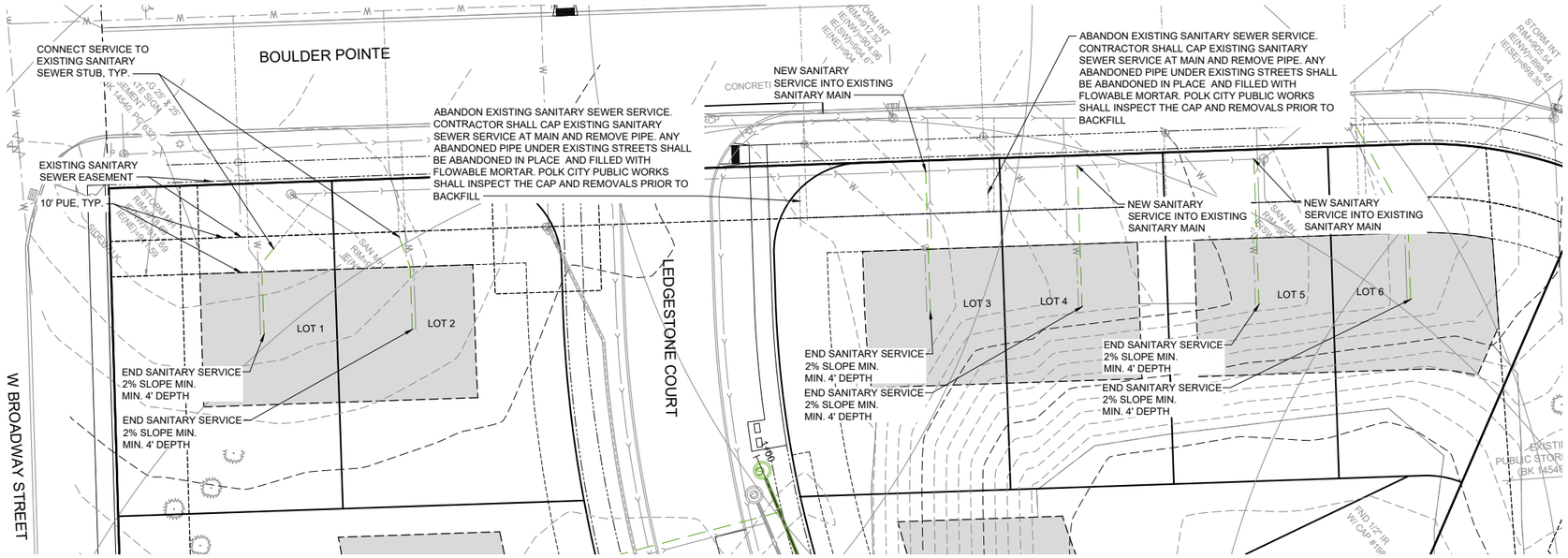
SANITARY SEWER PLAN & PROFILE

C302



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SANITARY SEWER PLAN & PROFILE

C303

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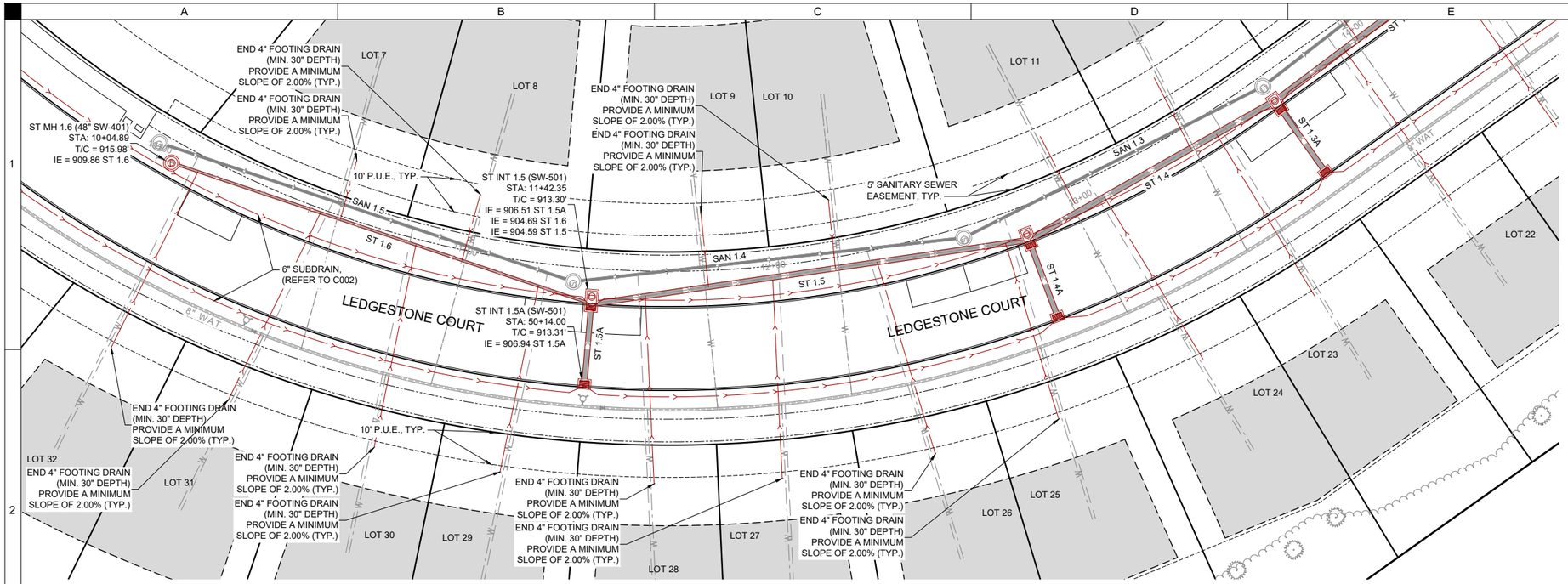

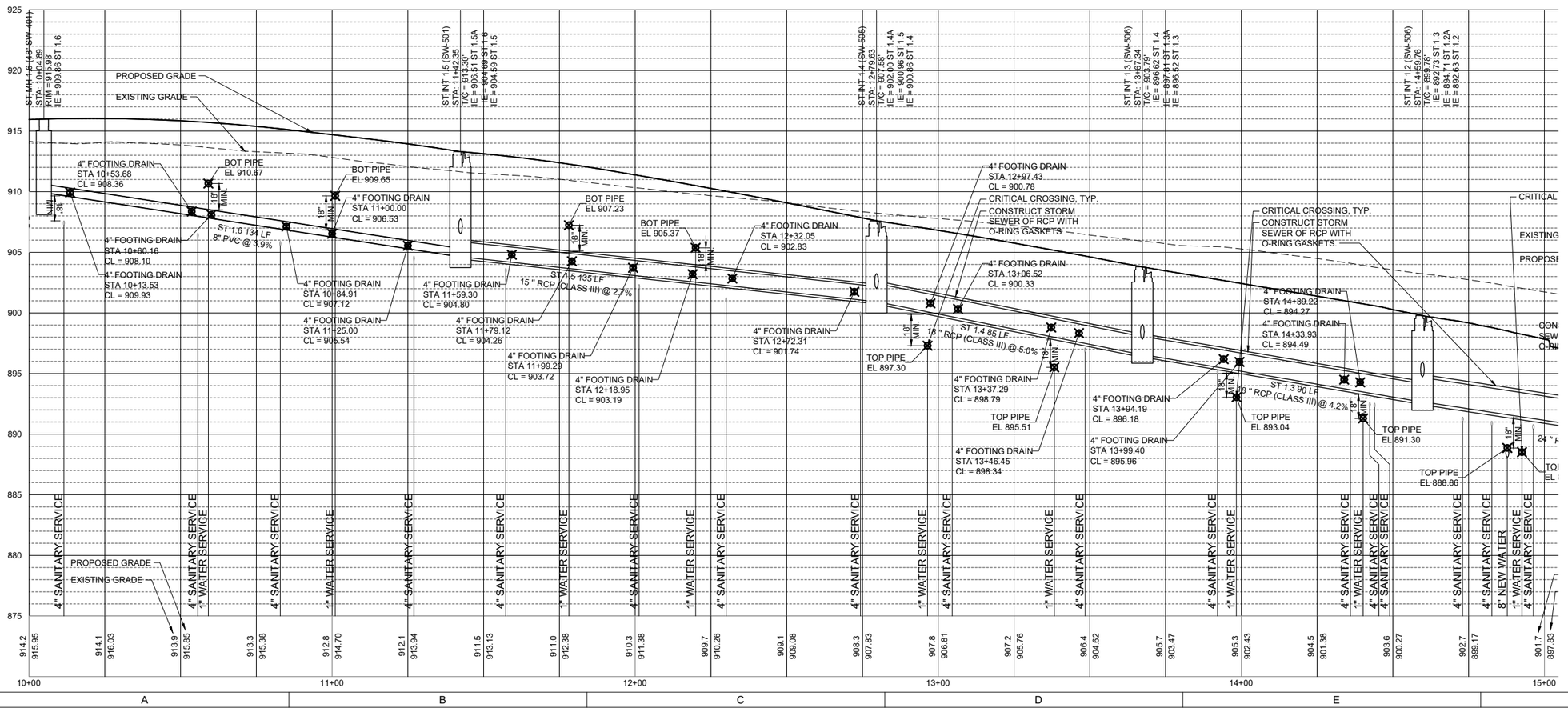

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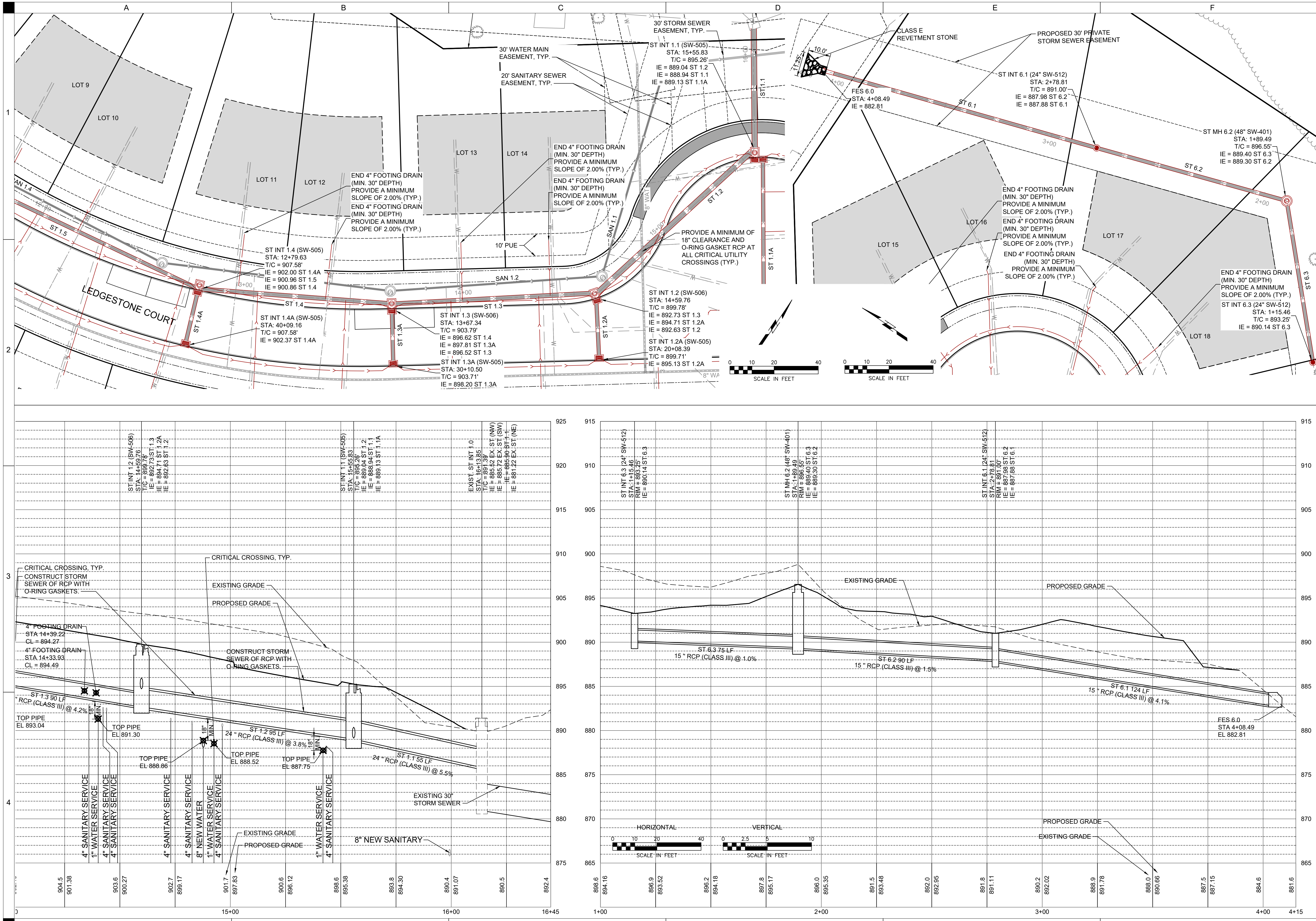
STORM SEWER PLAN & PROFILE

C304



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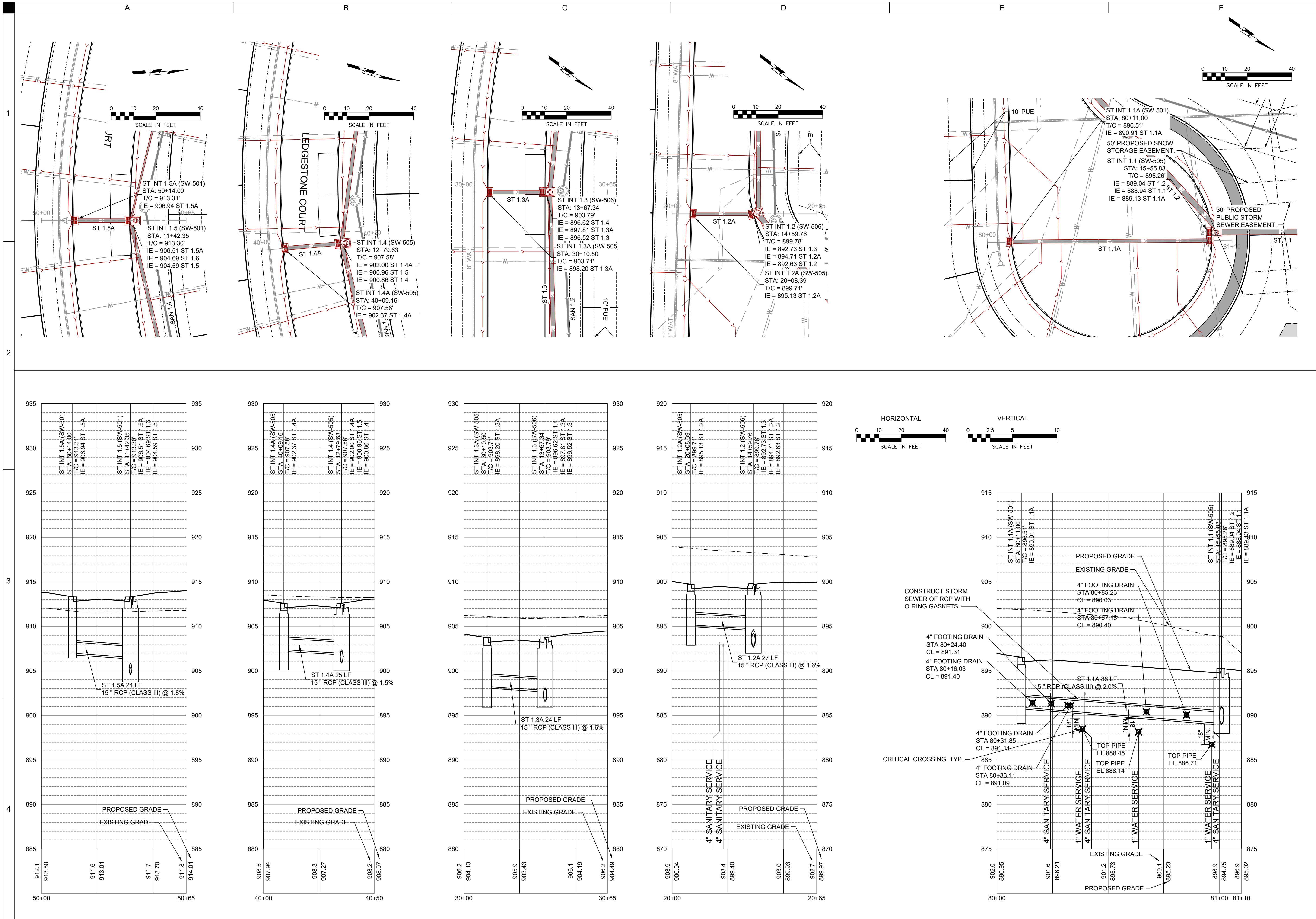
STORM SEWER PLAN & PROFILE

C305



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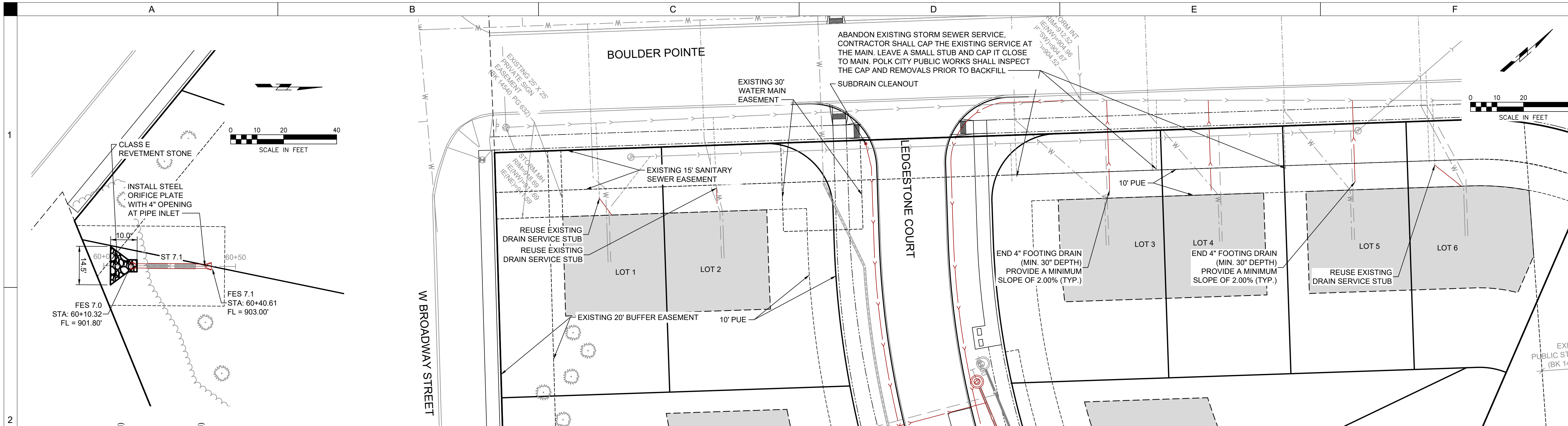
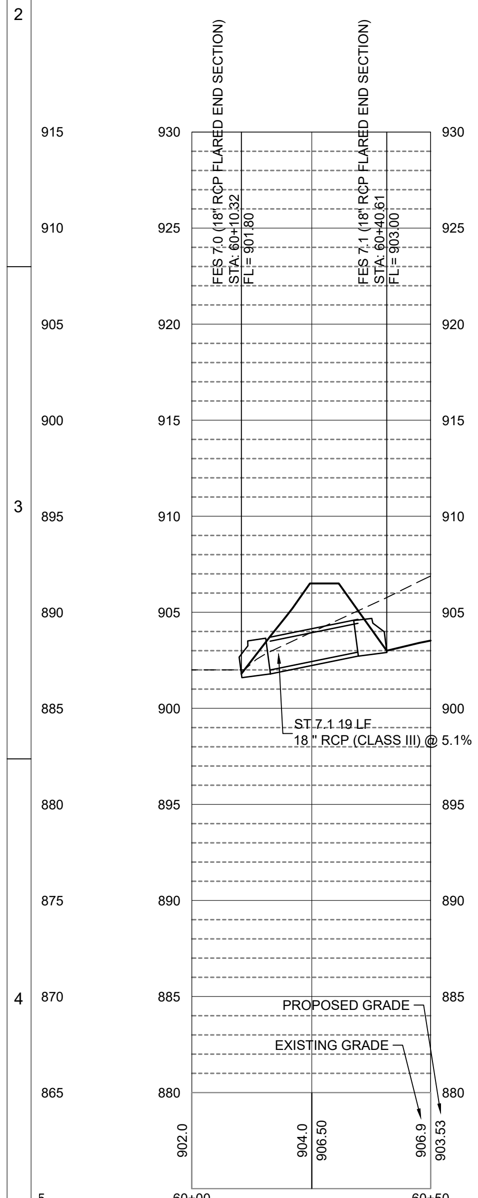
STORM SEWER PLAN & PROFILE

C306





HORIZONTAL — SCALE IN FEET (0, 10, 20, 40)

VERTICAL — SCALE IN FEET (0, 2.5, 5, 10)

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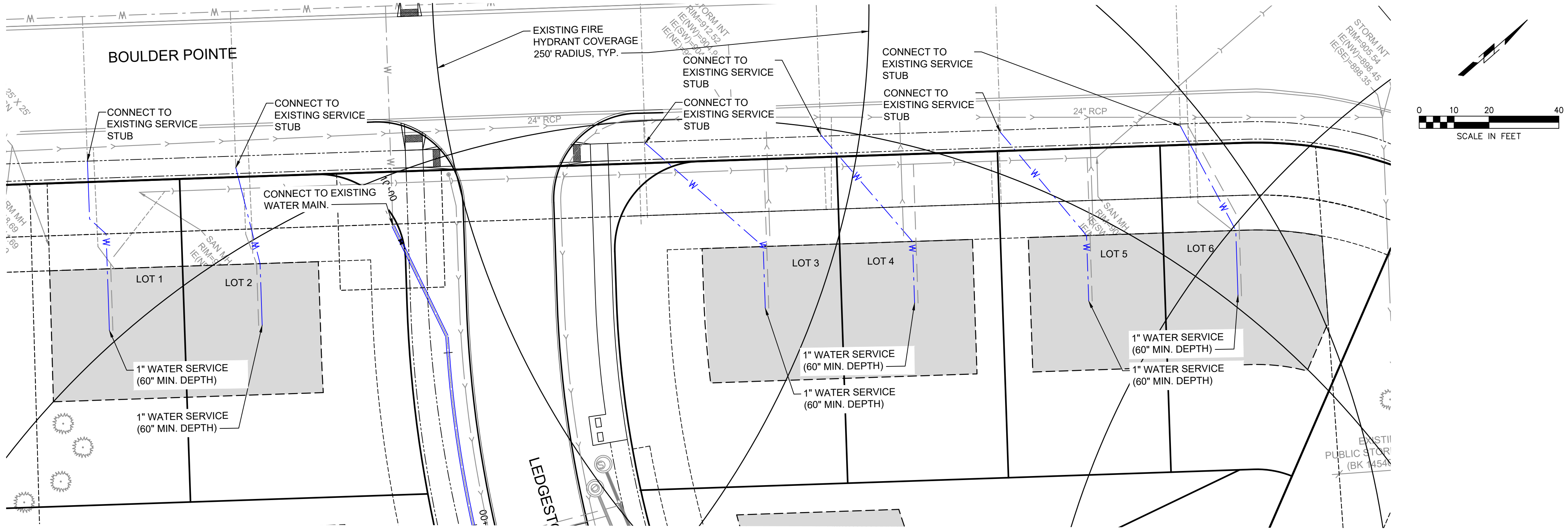
STORM SEWER PLAN & PROFILE

C307



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WATER PLAN & PROFILE

C308

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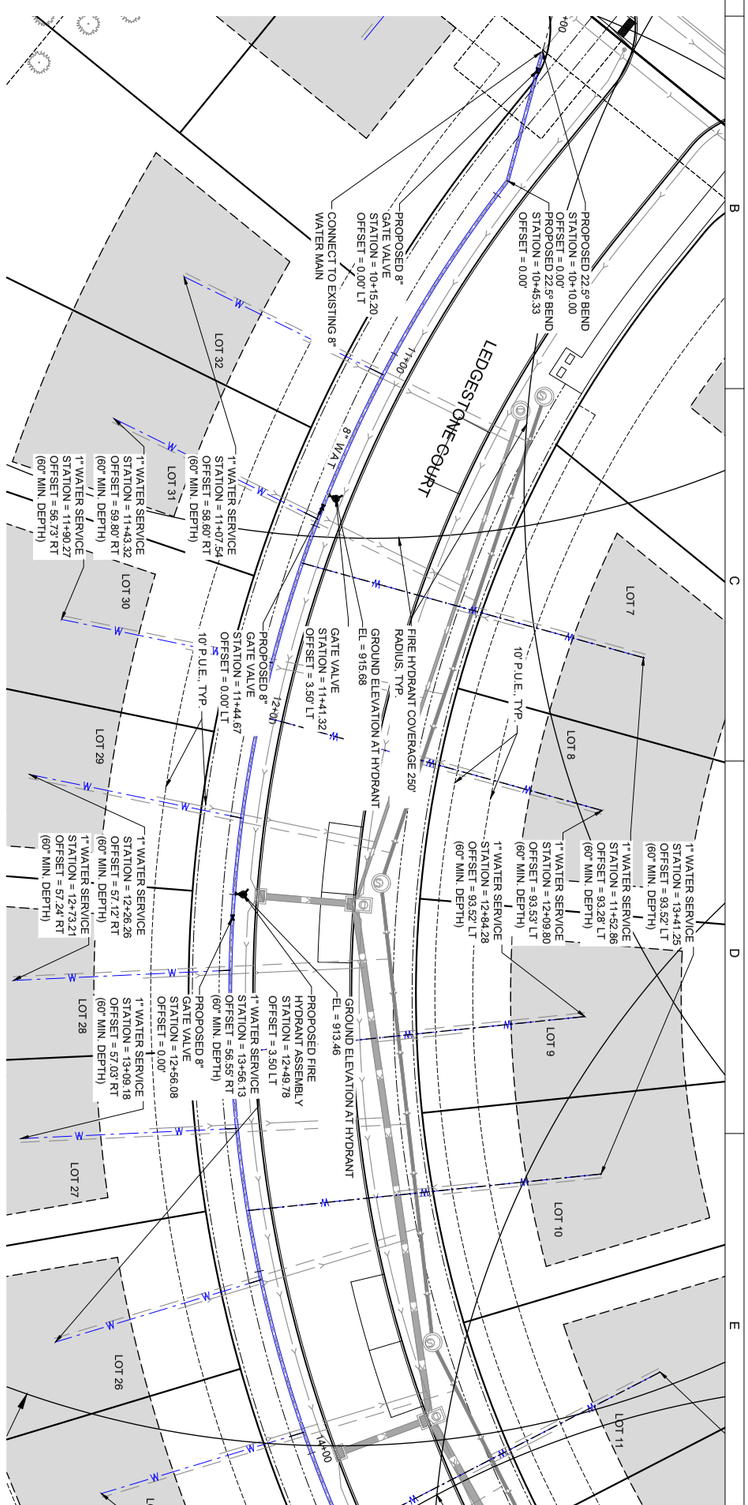

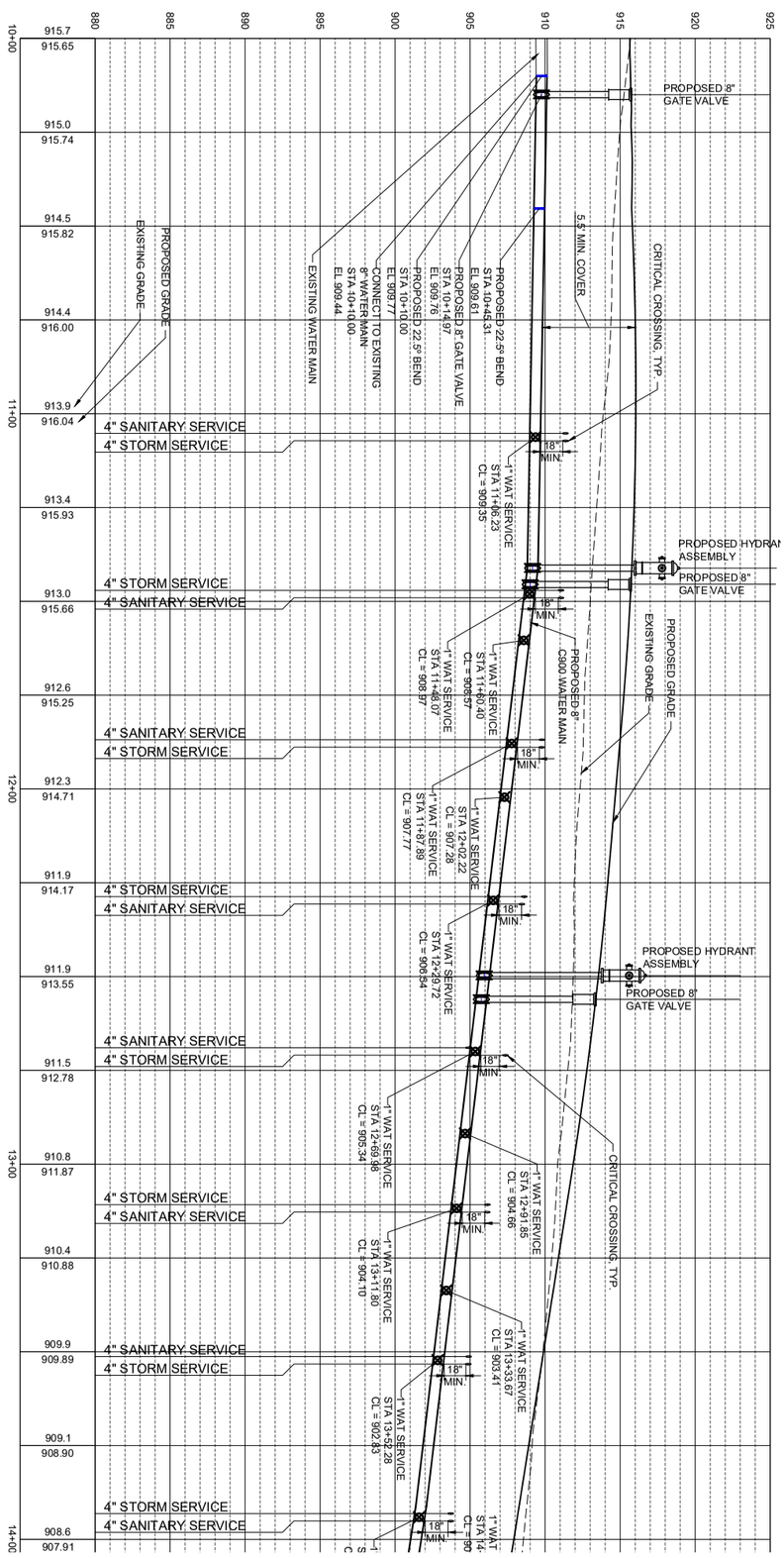

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WATER PLAN & PROFILE

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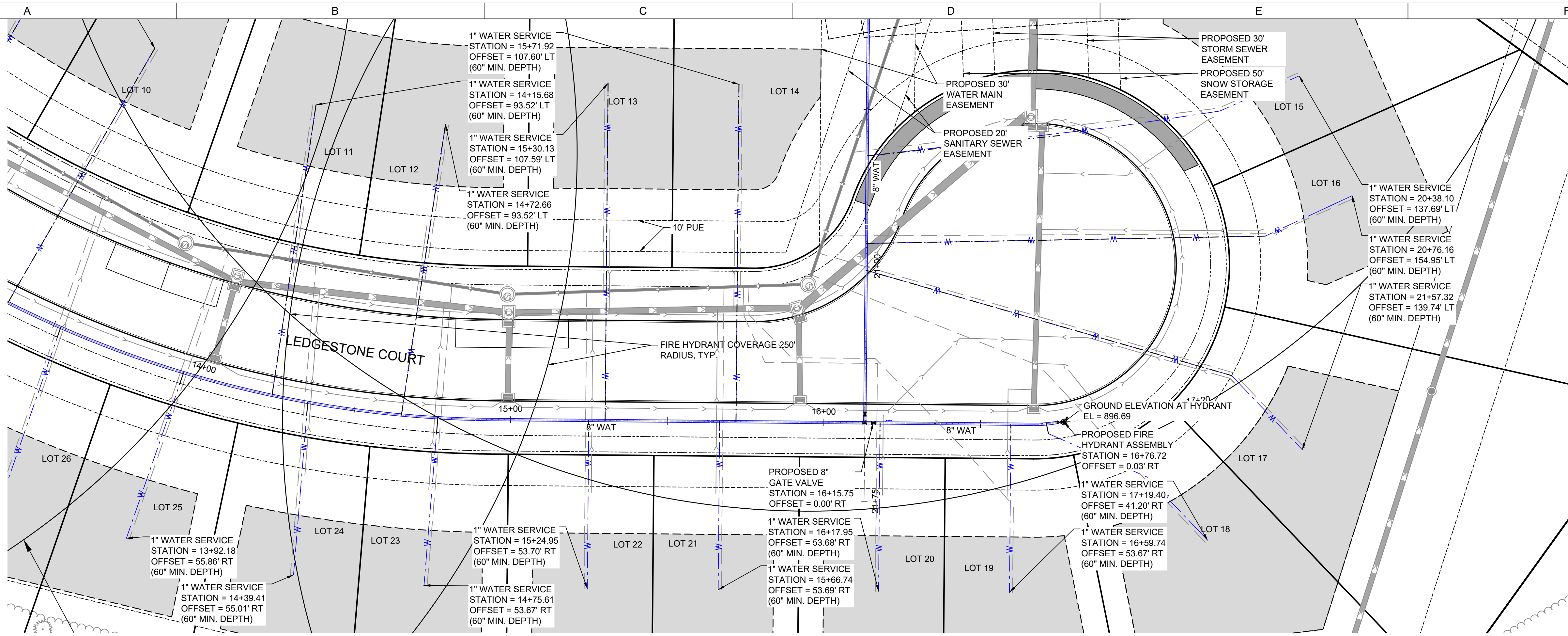

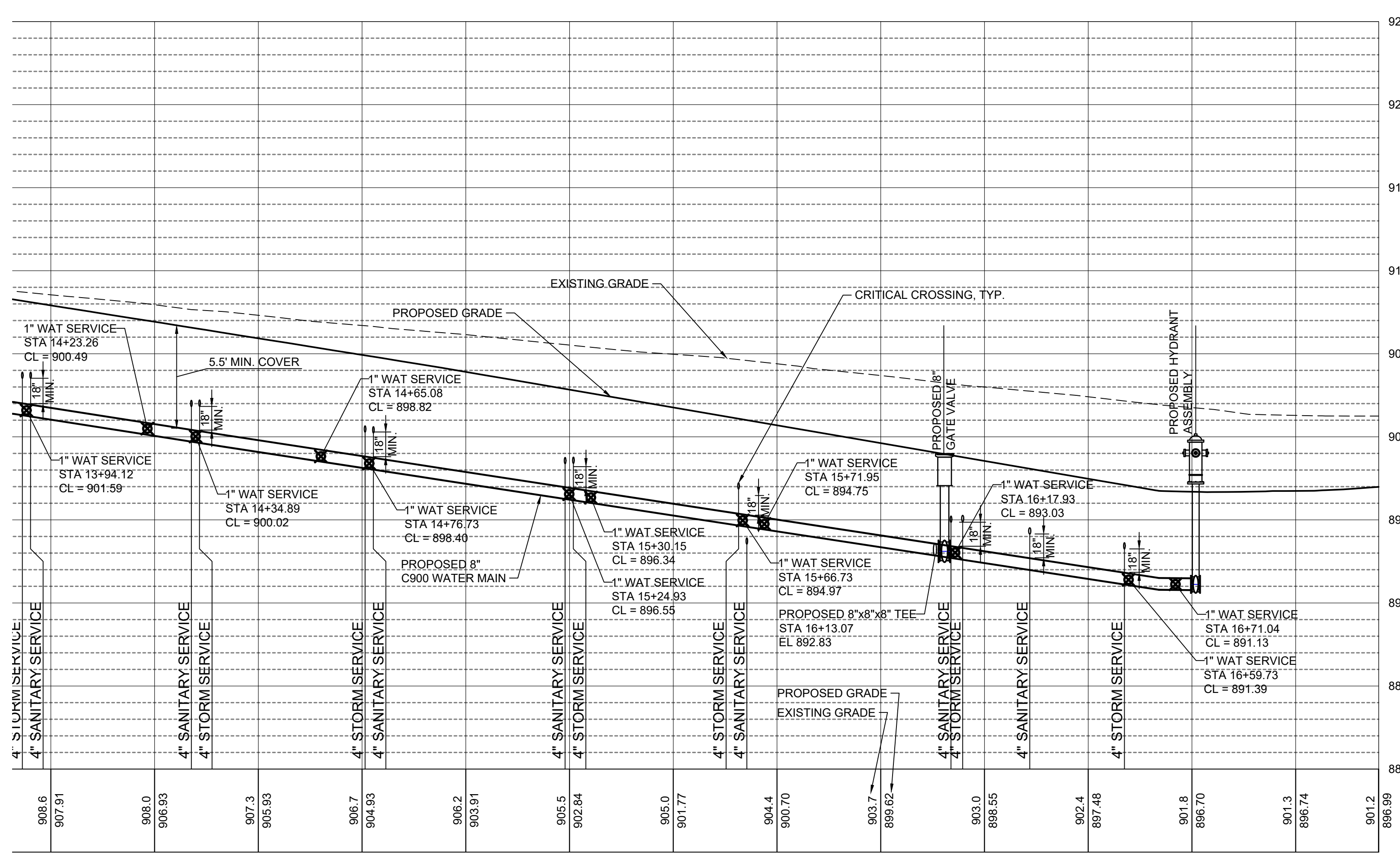

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0 10 20 40
SCALE IN FEET

VERTICAL
0 2.5 5 10
SCALE IN FEET

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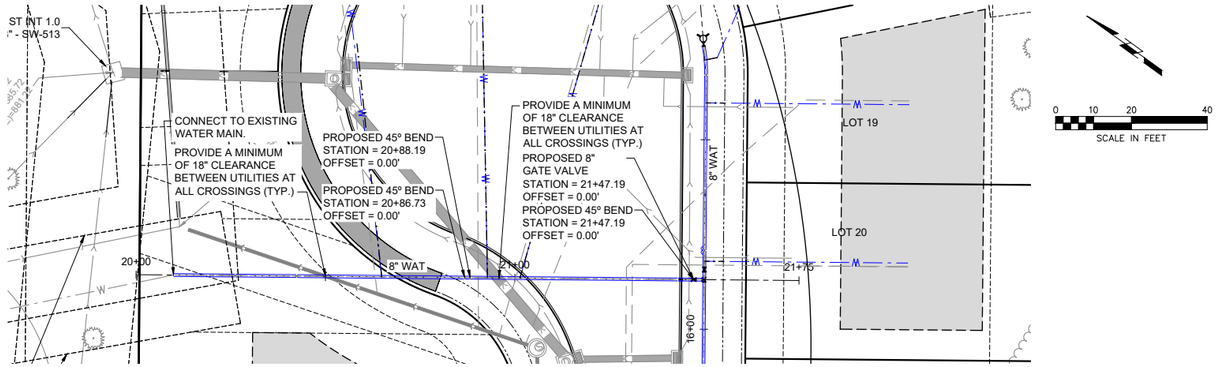
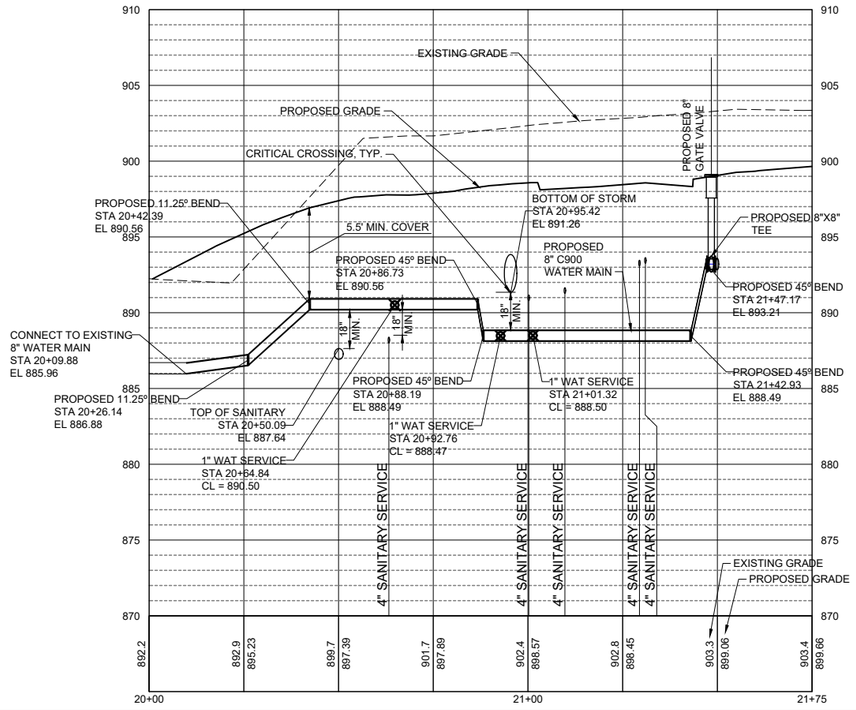
WATER PLAN & PROFILE

C310





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0 10 20 40
SCALE IN FEET

VERTICAL
0 2.5 5 10
SCALE IN FEET

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WATER PLAN &
PROFILE

C311

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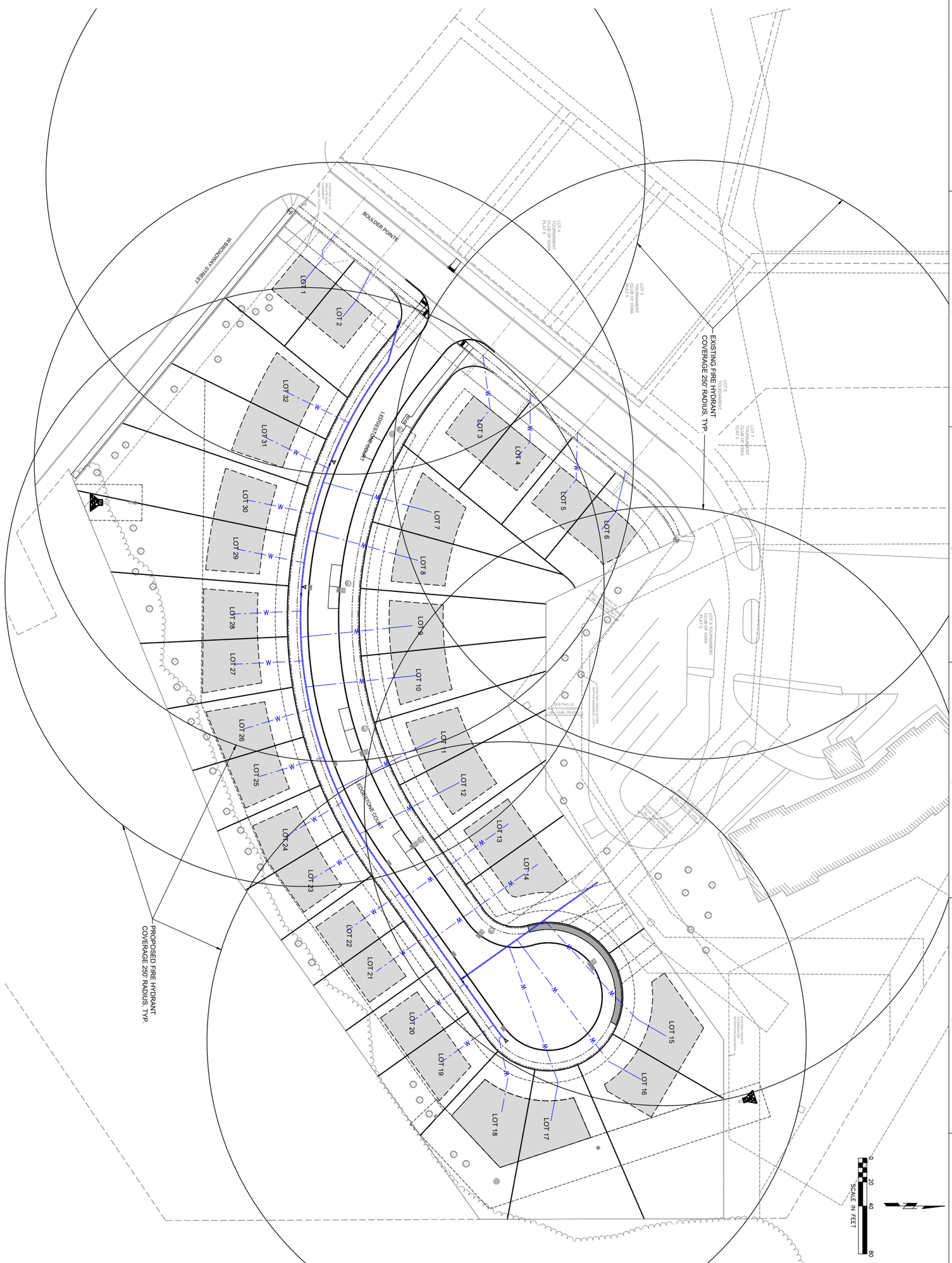

C312

FIRE HYDRANT COVERAGE MAP

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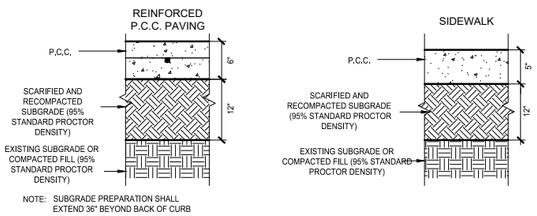
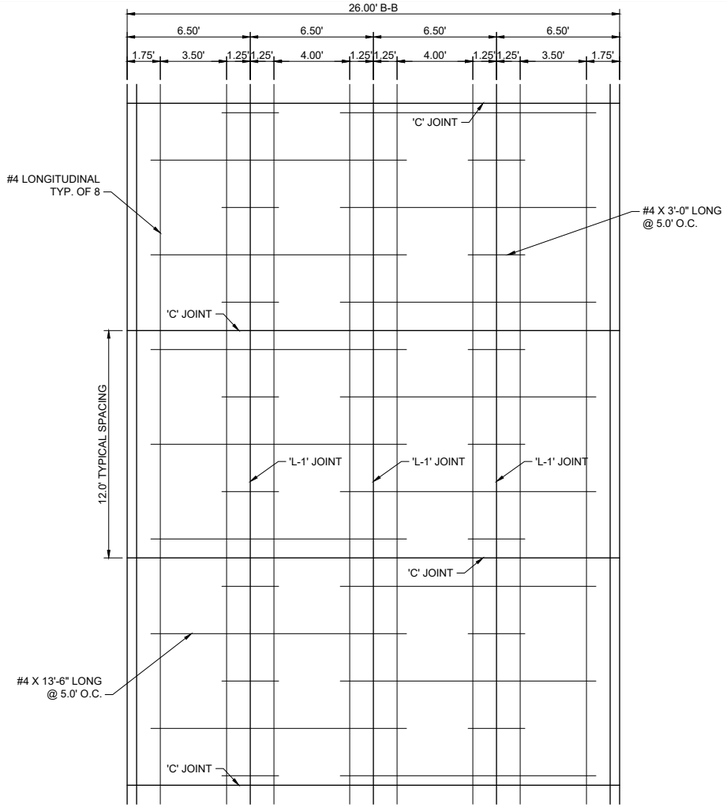
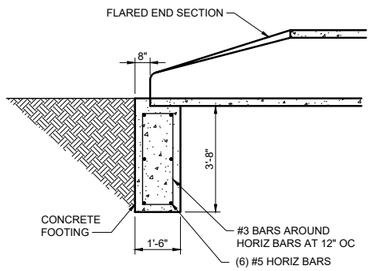


A1 PAVEMENT SECTIONS
NOT TO SCALE

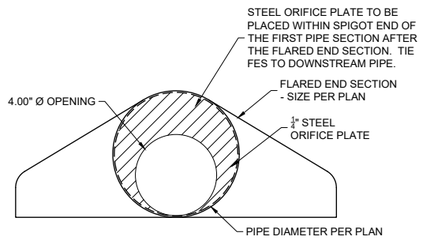


NOTES:
1. ALL REINFORCING SHALL BE PLACED AT T/2, WHERE T REPRESENTS THE THICKNESS SPECIFIED FOR PAVEMENT.

C3 PAVEMENT REINFORCING - 26' B/B
NOT TO SCALE



FLARED END SECTION FOOTING



ORIFICE PLATE IN FLARED END SECTION

A4 FLARED END SECTION AND ORIFICE PLATE
NOT TO SCALE

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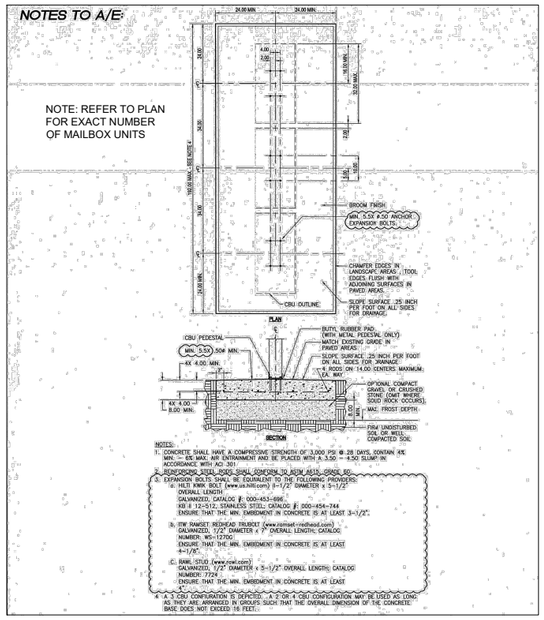
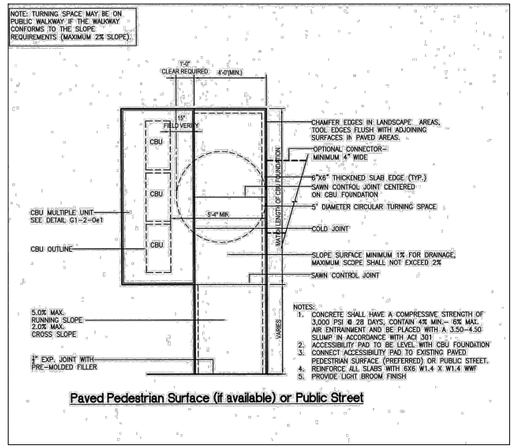
CONSTRUCTION DETAILS

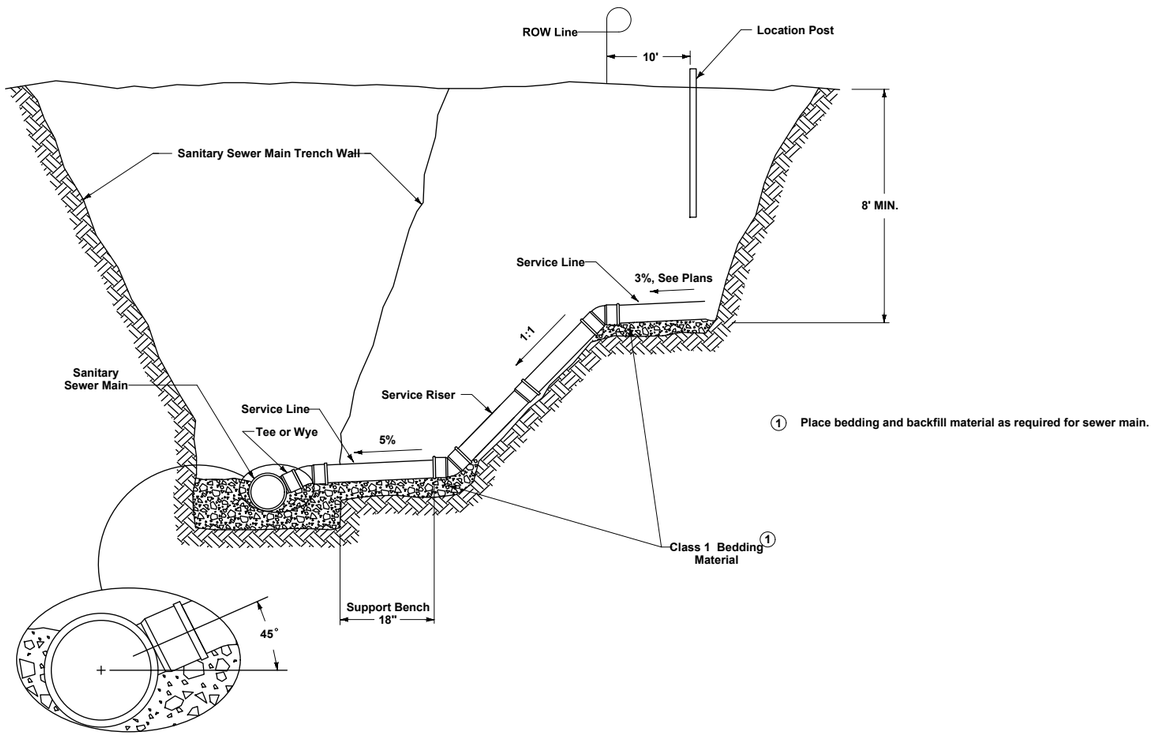
C501



E2 CLUSTER BOX UNIT (CBU) INSTALLATION - MULTIPLE UNIT (USPS DETAIL G1-2-0E1)
NOT TO SCALE



E4 CLUSTER BOX UNIT (CBU) ACCESS MANUVERING SPACE (USPS DETAIL G1-2-0E3)
NOT TO SCALE



A4 SANITARY SEWER SERVICE WITH RISER
NOT TO SCALE

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CONSTRUCTION DETAILS

C502

PLANT SCHEDULE PUBLIC IMPROVEMENTS

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE
ACE FRA	7	Acer rubrum `Franksred` TM	Red Sunset Red Maple	B & B	2"Cal
ACE GLO	1	Acer rubrum `PNI 0268` TM	October Glory Red Maple	B & B	2"Cal
GLE SKY	3	Gleditsia triacanthos `Skyline`	Skyline Honey Locust	B & B	2"Cal
EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE
PIC GLA	7	Picea glauca	White Spruce	B & B	6` HT.
PIC CO2	11	Picea pungens	Colorado Spruce	B & B	6` HT.
PIN STR	2	Pinus strobus	White Pine	B & B	6` HT.

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LEDGESTONE RIDGE PUBLIC IMPROVEMENTS

MJR DEVELOPMENTS LLC

POLK CITY, IOWA

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LANDSCAPE PLAN

L101

E. 2013 TOURNAMENT CLUB OF IOWA POD K DEVELOPMENT SWMP

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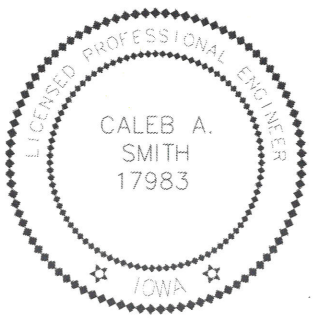
MASTER STORM WATER MANAGEMENT PLAN

Tournament Club of Iowa
Pod K Development
North of W. Broadway St., East of Tradition Dr.
Polk City, Iowa

August 7, 2013

MEC Project #: 2212018

Prepared By:
Caleb A. Smith, P.E.
McClure Engineering Company
1360 NW 121st Street
Clive, IA 50325



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Caleb A. Smith — DATE 8/7/13

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2013

TABLE OF CONTENTS

I. Introduction

This report is to demonstrate the existing and proposed Storm Water conditions for the property that is proposed to be a hotel site, as well as single and multi-family residential in Polk City, Iowa.

II. Existing Conditions

A. Location

The proposed project area is 14.84 acres total. It is located north of W. Broadway Street, east of Tradition Drive.

B. Land Use

The site is currently vacant and is used as open space bordering a golf course. A paved roadway borders the proposed development to the south and west. The site consists of wooded area, grassed open space, and an encroaching golf course water feature.

C. Drainage Patterns

Existing stormwater flow for this site is toward the east through a natural grassed drainage swale. The north and south edges flow out away from the area as shown by the drainage

arrows. After leaving the site it travel east, along the outer edge of the golf course where it meets up with Wolf Creek and travels southeast. With the existing conditions being undeveloped land, the existing 5-YR pre-developed flow rate of 7.0 cfs is being used for an allowable release rate on site. Detailed calculations have been included in Appendix B.

III. Proposed Development

The proposed development will consist of a hotel site, surrounded by residential as shown in the Proposed Drainage Map in Appendix A. The proposed grades for the paving area and front yards will direct stormwater to the streets to be collected by the proposed stormwater system, or directly to the detention basin. Detailed calculations have been included in appendix B.

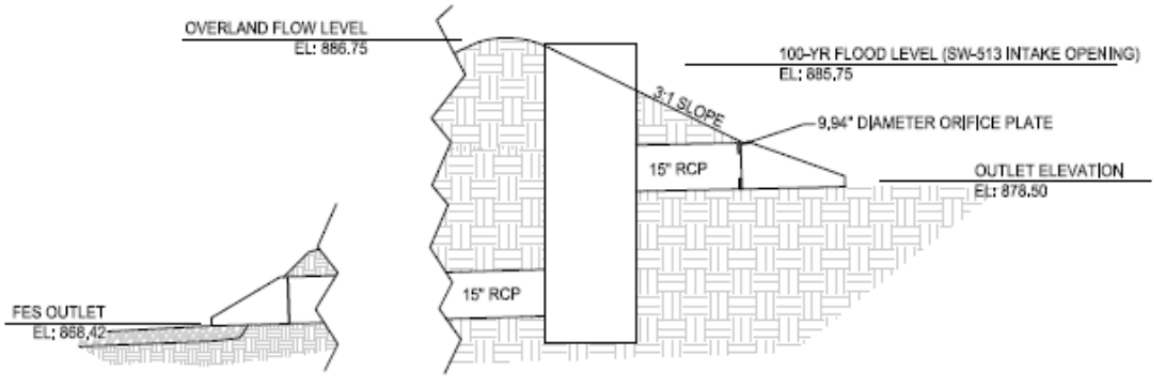
A. Drainage Plan

a) Storm Sewer Piping and Structures

Street, parking lot, and right-of-way grading for this site have been designed to collect stormwater in the piping system to be ultimately discharged to the detention pond located in the northeast corner of the site. Flow from Tyler Street will travel northeasterly along the gutter line where it will be collected by curb intakes. Flow for the private drive will travel westerly along the gutter line where it will be collected by curb intakes. A low point curb intake has also been placed at the cul-de-sac of the private drive. A proposed Drainage Map has been included in Appendix A and proposed design calculations have been included in Appendix B showing storm sewer intake and pipe capacity calculations.

b) Detention Pond

The proposed detention pond is located in the northeastern corner of the site, as shown in the proposed Drainage Map in Appendix A. This detention pond is designed to be a dry bottom, temporary storage pond with a top of berm elevation of 886.75 and a 100-YR elevation of 885.75. The 100-YR volume requirement for this pond is 75,656 cf, and the proposed provided storage volume is 75,950 cf. The outlet for this detention pond will meet the 5-YR pre-developed release rate of 7.0 cfs by utilizing an orifice plate on the outlet structure. The detention pond outlet will discharge to the existing natural drainage swale along the southern edge of the golf course.



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B. Design Criteria

This report has been designed to meet all SUDAS and City of Polk City standards. Stormwater detention and conveyance has been designed to meet the 5 year pre-developed release rate with a 100 year post-development storm event.

Method

The method used to determine all runoff and detention quantities was the rational method.

The Rational Method:

$$Q_n = C \times I \times A$$

n = return period
C = runoff coefficient
I = rainfall intensity (inches per hour)
A = drainage area (acres)

Existing site is Hydrologic Soil Group B. Soils having a moderate infiltration rate when thoroughly wet and consisting chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a have a moderate rate of water transmission. Refer to attached tables from the NRCS website for additional soil properties. A soil map has been included in Appendix A.

Time of concentration was determined using the process outlined in SUDAS section 2C-3. A combination of sheet flow and shallow concentrated flow was utilized to calculate the time of concentration for each drainage area, these calculations can be seen in Appendix B – Inlet Calculations. If total time of concentration was under 10 minutes, a value of 10 minutes was substituted for the actual value.

Runoff coefficients used (SUDAS Chapter 2, Section 2C-4, Table 1):

Residential	$C_{10} = 0.45$	$C_{100} = 0.50$
Paving	$C_{10} = 0.90$	$C_{100} = 0.95$

The total runoff coefficient was calculated using the above values for each surface type and the weighted areas of each surface type. These calculations can be seen in Appendix B.

IV. Summary

The design being submitted meets all of the requirements set forth in the SUDAS and City of Polk City design standards. New proposed storm sewer intakes, pipes, and a detention pond have been utilized to serve this site.

The existing 14.84 acre site discharges stormwater to existing drainage swales and travels east. The proposed site will control the offsite runoff by directing storm water where it can be properly detained and discharged at a controlled rate. Proposed grading onsite will direct runoff that is not detained by the detention pond to existing drainage swales.

APPENDIX A

Maps


93° 43' 18"
93° 42' 59"
41° 46' 40"
41° 46' 30"
440050
440100
440150
440200
440250
440300
440350
440400
440450
4625350
4625300
4625250
4625200
4625150
4625100
27B
236C2
135
168F
236B
236C2
Broadway St
Tyler St
Westside Dr
Map Scale: 1:2,180 if printed on A size (8.5" x 11") sheet.
N
Meters
0
30
60
120
180
Feet
0
100
200
400
600

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:2,180 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 15N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

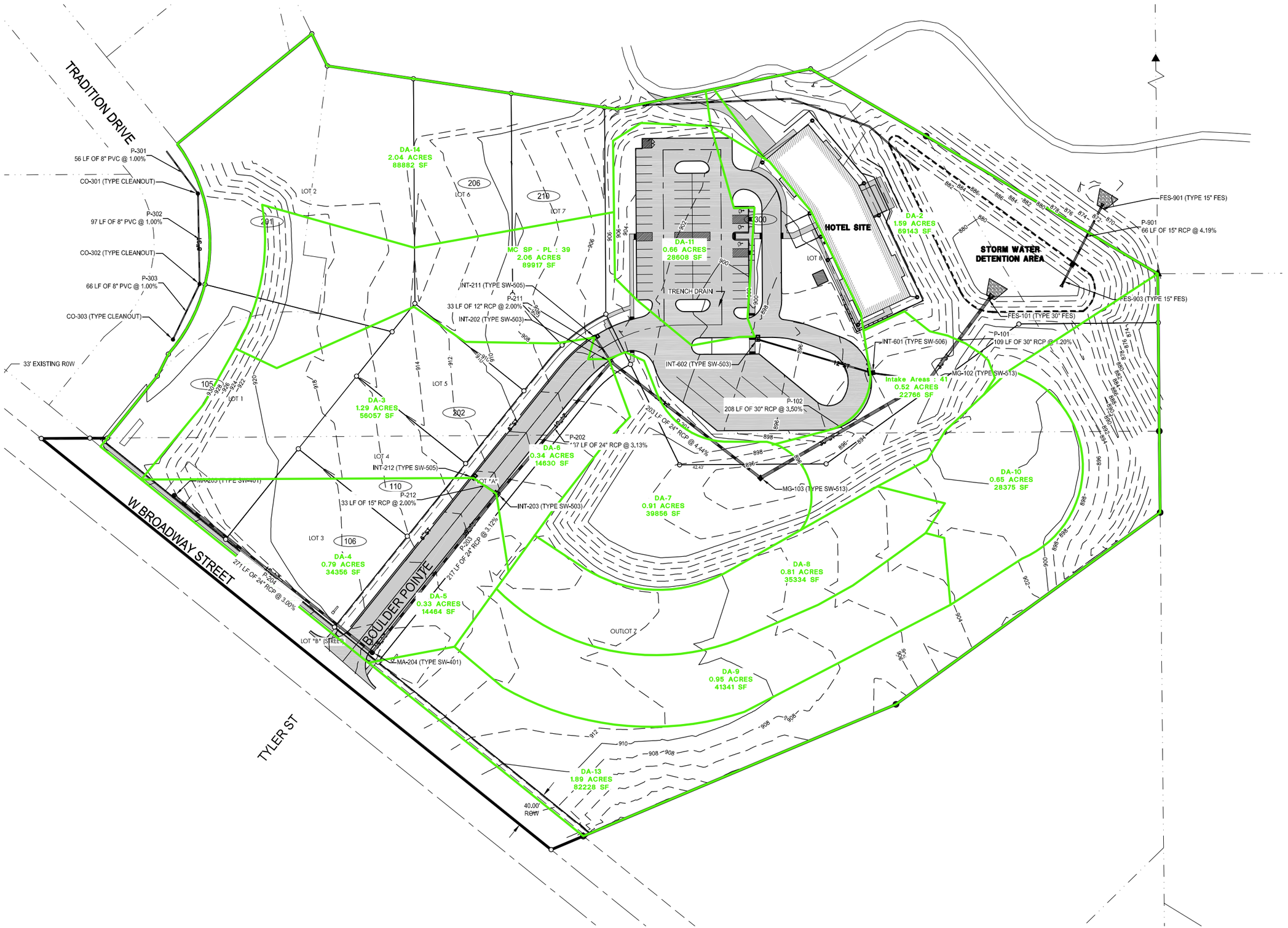
Soil Survey Area: Polk County, Iowa
Survey Area Data: Version 14, Aug 22, 2012

Date(s) aerial images were photographed: 9/6/2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Iowa (IA153)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
27B	Terril loam, 2 to 5 percent slopes	0.3	1.8%
135	Coland clay loam, 0 to 2 percent slopes, occasionally flooded	0.7	4.6%
168F	Hayden loam, 18 to 25 percent slopes	6.9	46.3%
236B	Lester loam, 2 to 5 percent slopes	4.1	27.8%
236C2	Lester loam, 5 to 9 percent slopes, moderately eroded	2.9	19.6%
Totals for Area of Interest		**14.9**	**100.0%**



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NORTH

0 25 50 100
GRAPHIC SCALE

INTAKE DRAINAGE AREAS

TOURNAMENT CLUB OF IOWA
PLAT 5
LOT 8 SITE PLAN

POLK CITY, IA
2212018
OCTOBER 24, 2012

REVISIONS
10.04.2012
10.19.2012
11.06.2012

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M. HEATH	M. HEATH
CHECKED BY	FIELD BOOK NO.
C. SMITH	-
DRAWING NO.	SHEET NO.
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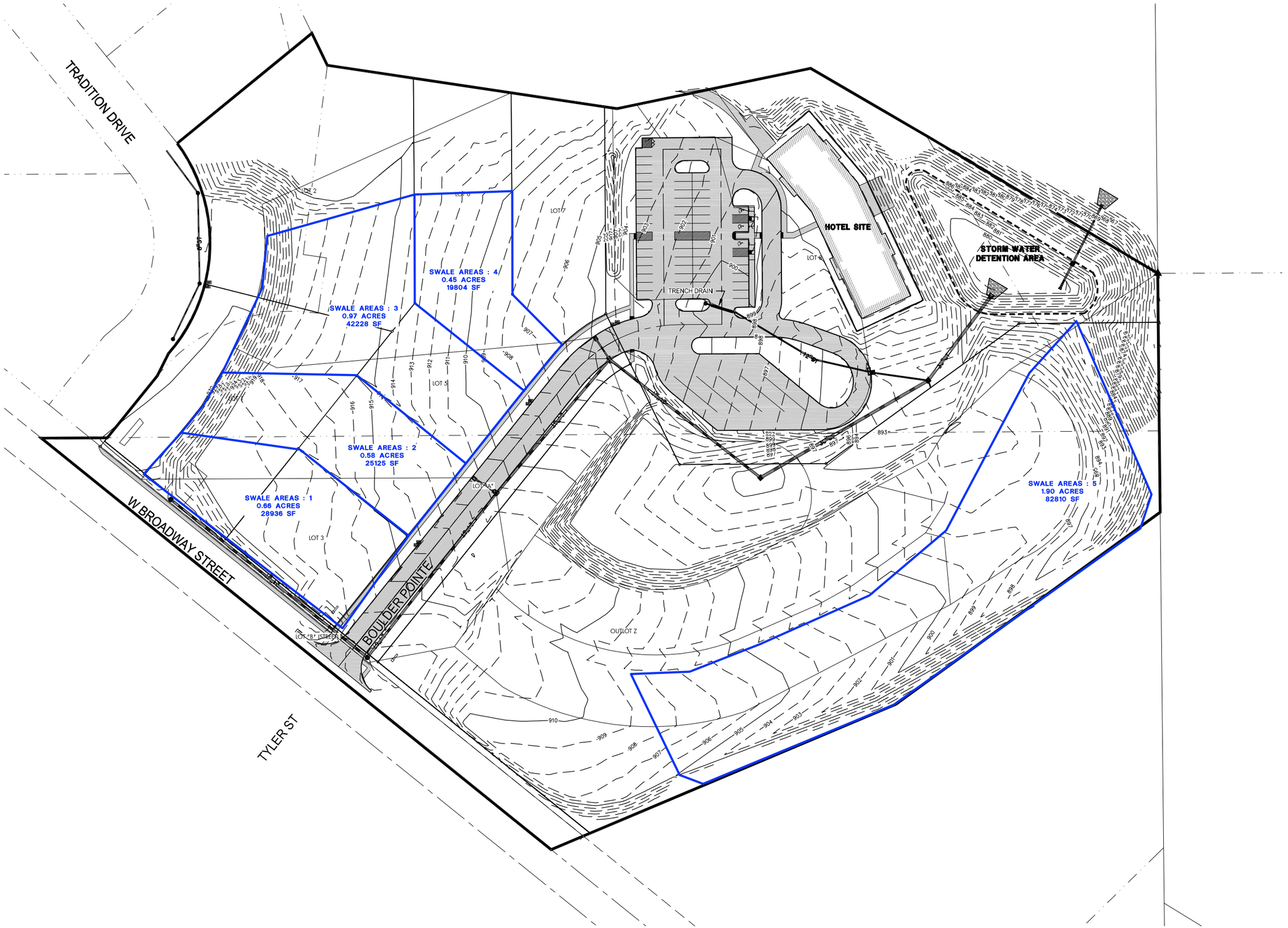

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GRAPHIC SCALE

SWALE DRAINAGE AREAS

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PLAT 5
LOT 8 SITE PLAN

POLK CITY, IA
2212018
OCTOBER 19, 2012

REVISIONS
10/4/2012

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CHECKED BY	FIELD BOOK NO.
C. SMITH	-
DRAWING NO.	SHEET NO.
	/ 12

APPENDIX B

Storm Sewer Calculations
and Pipe Design

Allowable Release Rate
TCI Pod I Development

Description: Allowable Release

Drainage Area

			Acres
A =	646597	sf	14.84

Sheet Flow

n =	0.06		refered to section 2c-3 time of concentration (pg11) roughness coefficients table
L =	140	ft	
P_2 =	2.91	in/hr	
S =	0.150	ft/ft	
T_t =	**2.89**	min	$T_t = \frac{0.007(n*L)^{(0.8)}}{P_2^{0.5}*S^{0.4}}$

Shallow Concentrated Flow

L =	993	ft	
S =	0.041	ft/ft	
V =	3.2	fps	Figure 1 SUDAS Stormwater Chapter 2
Tc =	**5.17**	**min**	

Time of Concetration

T_T =	15.00	min (using minimum of 15 minutes)

Flow Calculation

I_5 =	3.92	in/hr	
I_{100} =	7.12	in/hr	
C'_5 =	0.12		refer to sudas section 2c-4 (pg 3) table 1 runoff coeffficients for the rational method
C'_{100} =	0.17		
Q_5 =	7.0	cfs	(Q = CIA)
Q_{100} =	18.0	cfs	

Allowable Release Rate

Q_5 =	7.0	cfs

Detention Required
TCI Pod I Development

Description: Detention Required (NE pond)

C'	0.56	
A	14.8	**Ac.**
Allowable Release	7.0	**cfs**

Runoff Coefficient

	A (sf)	C_{10}	C_{100}
Paving	88662	0.90	0.95
Residential	557295	0.45	0.50
Total	**645957**	**0.51**	**0.56**

Time min	100/yr Rainfall in/hr Polk City	Runoff cfs	Allowable Release cfs	Actual Release cfs	Stored cfs	Required cf
5	9.5	79.1	7.0	7.0	72.2	21647
10	8.3	69.1	7.0	7.0	62.2	37296
15	7.1	59.1	7.0	7.0	52.2	46948
20	6.4	52.9	7.0	7.0	45.9	55099
30	4.9	40.8	7.0	7.0	33.8	60906
40	4.3	35.8	7.0	7.0	28.8	69213
50	3.7	30.8	7.0	7.0	23.8	71521
60	3.1	25.9	7.0	7.0	18.9	68131
70	2.9	24.2	7.0	7.0	17.3	72489
80	2.7	22.6	7.0	7.0	15.6	74847
90	2.5	21.0	7.0	7.0	14.0	75656
100	2.3	19.3	7.0	7.0	12.3	74065
110	2.1	17.7	7.0	7.0	10.7	70476
120	1.9	16.0	7.0	7.0	9.0	64887
180	1.4	11.7	7.0	7.0	4.7	50546
240	1.2	9.8	7.0	7.0	2.8	41003
300	1.0	8.5	7.0	7.0	1.5	27262
360	0.83	6.9	7.0	6.9	0.0	0
480	0.71	5.9	7.0	5.9	0.0	0
600	0.59	4.9	7.0	4.9	0.0	0
720	0.48	4.0	7.0	4.0	0.0	0
840	0.44	3.7	7.0	3.7	0.0	0

Storage Provided Drainage Area 2

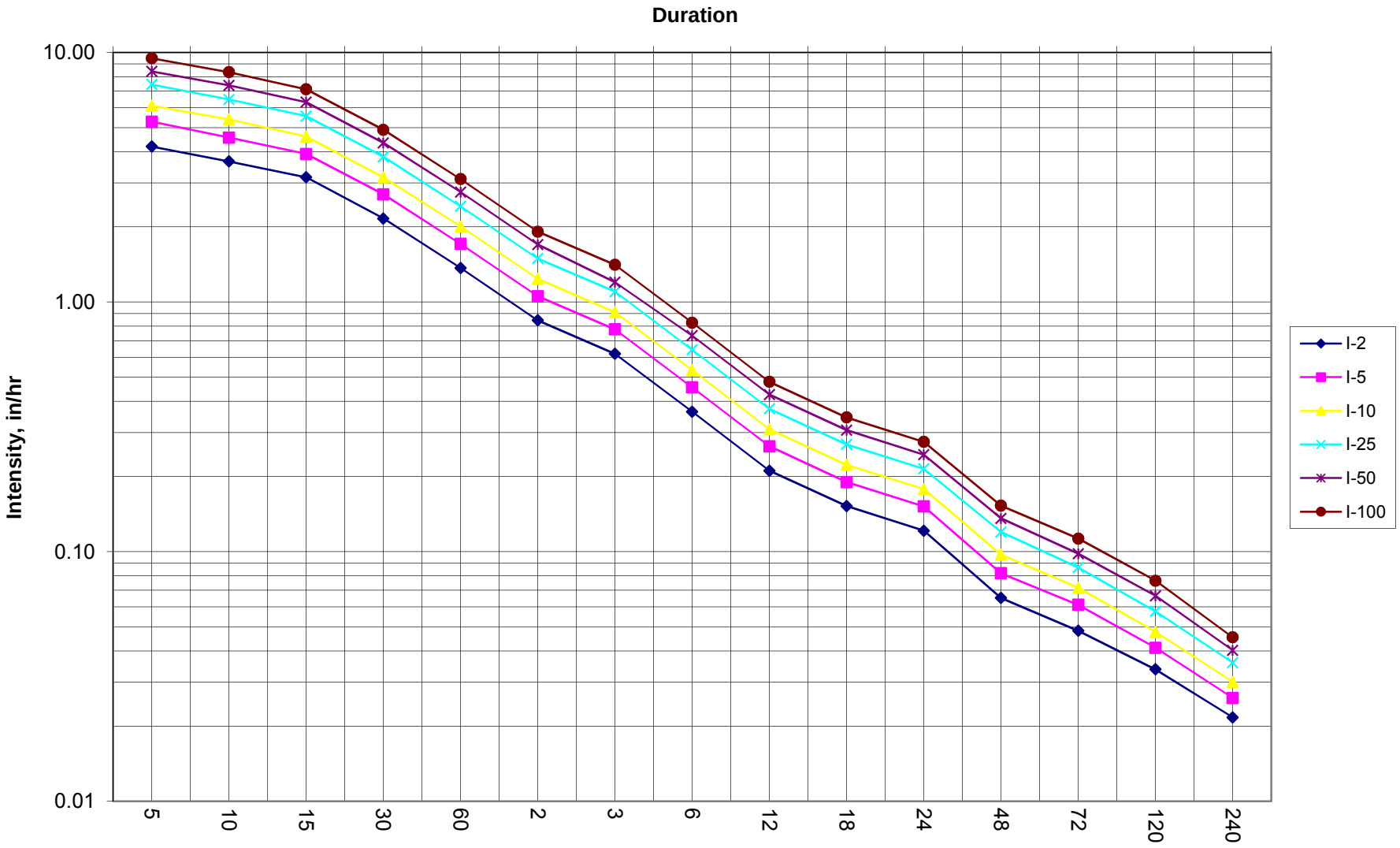
	Elev. Ft.	Area Sq./Ft.	Vol. CF	Total Vol. CF
Bottom Elev.	878.50	0	0	0
	879.00	2428	607	607
	880.00	6717	4573	5180
	881.00	9253	7985	13165
	882.00	10810	10032	23196
	884.00	14229	25039	48235
	885.75	17450	27719	75954
Top Of Dike Elev.	886.75	19369	18410	94364

Storage Required	75,656	CF
Storage Provided	94,364	CF

100-year Required Elevation 885.73 (Required Volume 100-year Elevation)

Outlet Orifice Diameter 0.83 ft, or 9.94 inches

Intensity vs. Duration



Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # INT-203

Drainage Area

			Acres
A =	14464	sf	0.33

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	87	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	916		
LP Elev.	914		
S =	0.023	ft/ft	

T_t = 12.66 min

$$T_t = \frac{0.007(n*L)^{0.8}}{P_2^{0.5}*S^{0.4}}$$

(From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	105	ft	
HP Elev.	914		
LP Elev.	910.8		
S =	0.030	ft/ft	
V =	3.5	fps	(from Chapter 2C-3 Figure 1 in SUDAS)
Tc =	**0.50**	**min**	

Time of Concetration

T_T = 13.16 min OK

Flow Calculation

I_{10} =	4.89	in/hr	(from intensity-duration graph)
I_{100} =	7.57	in/hr	
C'_{10} =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'_{100} =	0.5		
Q_{10} =	0.73	cfs	(Q = CIA)
Q_{100} =	**1.26**	**cfs**	

Depth in Gutter

St =	2.00%	ft/ft				
n =	0.016		(Manning's Coefficient)			
S =	3.28%	ft/ft				
Z =	50		(Z = 1/St)			
Z/N =	3125					
$Q_{bypass\ In\ 5}$ =	0	cfs	$Q_{bypass\ In\ 100}$ =	0.00	cfs	
$Q_{In\ 5}$=	0.73	cfs	$Q_{In\ 100}$=	1.26	cfs	
Q_5 =	0.73	cfs	Q_{100}=	1.26	cfs	
d_{10} =	**0.11**	**ft**	**d_{100} =**	**0.14**	**ft**	
T_{10} =	**5.52**	**ft**	**T_{100} =**	**6.76**	**ft**	

Intake Capacity (Type SW-501, SW-502, SW-503 Only)

On Grade

St = 2.00%
S = 3.28%

Vane or Diveway	Vane	
K=	27	(From p. 86-87 Urban Metro Standards)
R_f =	0.9	

Type SW-501 Q_A = 0.87 cfs Under Capacity Q_A = $K*(d^{(5/3)})*R_F$
Bypass = 0.39 cfs
Type M-E Q_A = 1.73 cfs OK
Bypass = 0.00 cfs

Intake Type = SW-501

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # INT-212

Drainage Area

			Acres
A =	34356	sf	0.79

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	100	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	928		
LP Elev.	918.8		
S =	0.092	ft/ft	

T_t = 8.13 min

$$T_t = \frac{0.007(n*L)^{0.8}}{P_2^{0.5}*S^{0.4}}$$

(From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	240	ft	
HP Elev.	918.8		
LP Elev.	910.9		
S =	0.033	ft/ft	
V =	3.5	fps	(from Chapter 2C-3 Figure 1 in SUDAS)
Tc =	**1.14**	**min**	

Time of Concetration

T_T = 10.00 min (Use 10 Minute Minimum)

Flow Calculation

I_{10} =	5.40	in/hr	(from intensity-duration graph)
I_{100} =	8.34	in/hr	
C'$_{10}$ =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'$_{100}$ =	0.5		
Q_{10} =	1.92	cfs	(Q = CIA)
Q_{100} =	**3.29**	**cfs**	

Depth in Gutter

St =	2.00%	ft/ft			
n =	0.016		(Manning's Coefficient)		
S =	3.28%	ft/ft			
Z =	50		(Z = 1/St)		
Z/N =	3125				
$Q_{bypass\ In\ 5}$ =	0	cfs	$Q_{bypass\ In\ 100}$ =	0.00	cfs
$Q_{In\ 5}$=	1.92	cfs	$Q_{In\ 100}$=	3.29	cfs
Q_5 =	1.92	cfs	Q_{100}=	3.29	cfs
d_{10} =	**0.16**	**ft**	**d_{100} =**	**0.19**	**ft**
T_{10} =	**7.92**	**ft**	**T_{100} =**	**9.70**	**ft**

Intake Capacity (Type SW-501, SW-502, SW-503 Only)

On Grade

St = 2.00%
S = 3.28%

Vane or Diveway

	Vane		
K=	27		(From p. 86-87 Urban Metro Standards)
R_f =	0.9		

Type SW-501 Q_A =	**1.58**	**cfs**	Under Capacity	Q_A =	K*(d^(5/3))*R_F
Bypass =	*1.71*	*cfs*			
Type M-E Q_A =	**3.16**	**cfs**	Under Capacity		
Bypass =	*0.13*	*cfs*			

Intake Type = *SW-506*

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # INT-202

Drainage Area

			Acres
A =	14630	sf	0.34

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	87	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	912.5		
LP Elev.	910.5		
S =	0.023	ft/ft	

T_t = 12.66 min

$$T_t = \frac{0.007(n*L)^{0.8}}{P_2^{0.5}*S^{0.4}}$$

(From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	180	ft	
HP Elev.	910.5		
LP Elev.	904.5		
S =	0.033	ft/ft	
V =	3.5	fps	(from Chapter 2C-3 Figure 1 in SUDAS)
Tc =	**0.86**	**min**	

Time of Concetration

T_T = 13.52 min OK

Flow Calculation

I_{10} =	4.84	in/hr	(from intensity-duration graph)
I_{100} =	7.48	in/hr	
C'$_{10}$ =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'$_{100}$ =	0.5		
Q_{10} =	0.73	cfs	(Q = CIA)
Q_{100} =	**1.26**	**cfs**	

Depth in Gutter

St =	2.00%	ft/ft			
n =	0.016		(Manning's Coefficient)		
S =	3.28%	ft/ft			
Z =	50		(Z = 1/St)		
Z/N =	3125				
$Q_{bypass\ In\ 5}$ =	0	cfs	$Q_{bypass\ In\ 100}$ =	0.39	cfs
$Q_{In\ 5}$=	0.73	cfs	$Q_{In\ 100}$=	1.26	cfs
Q_5 =	0.73	cfs	Q_{100}=	1.65	cfs
d_{10} =	**0.11**	**ft**	**d_{100} =**	**0.15**	**ft**
T_{10} =	**5.52**	**ft**	**T_{100} =**	**7.48**	**ft**

Intake Capacity (Type SW-501, SW-502, SW-503 Only)

On Grade

St = 2.00%
S = 3.28%

Vane or Diveway: Vane
K= 27 (From p. 86-87 Urban Metro Standards)
R_f = 0.9

Type SW-501 Q_A = 1.03 cfs Under Capacity Q_A = $K*(d^{5/3})*R_F$
Bypass = 0.62 cfs
Type M-E Q_A = 2.05 cfs OK
Bypass = 0.00 cfs

Intake Type = *SW-503*

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # INT-211

Drainage Area

			Acres
A =	49952	sf	1.15

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	150	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	929.5		
LP Elev.	918.5		
S =	0.073	ft/ft	
T_t =	**12.31**	min	$T_t = \frac{0.007(n*L)^{(0.8)}}{P_2^{0.5}*S^{0.4}}$ (From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	379	ft	
HP Elev.	918.5		
LP Elev.	904.5		
S =	0.037	ft/ft	
V =	3.6	fps	(from Chapter 2C-3 Figure 1 in SUDAS)
Tc =	**1.75**	**min**	

Time of Concetration

T_T =	14.06	min	OK

Flow Calculation

I_{10} =	4.75	in/hr	(from intensity-duration graph)
I_{100} =	7.35	in/hr	
C'$_{10}$ =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'$_{100}$ =	0.5		
Q_{10} =	2.45	cfs	(Q = CIA)
Q_{100} =	**4.21**	**cfs**	

Depth in Gutter

St =	2.00%	ft/ft			
n =	0.016		(Manning's Coefficient)		
S =	3.28%	ft/ft			
Z =	50		(Z = 1/St)		
Z/N =	3125				
$Q_{bypass\ In\ 5}$ =	0	cfs	$Q_{bypass\ In\ 100}$ =	0.13	cfs
$Q_{In\ 5}$=	2.45	cfs	$Q_{In\ 100}$=	4.21	cfs
Q_{5} =	2.45	cfs	Q_{100}=	4.34	cfs
d_{10} =	**0.17**	**ft**	**d_{100} =**	**0.22**	**ft**
T_{10} =	**8.68**	**ft**	**T_{100} =**	**10.76**	**ft**

Intake Capacity (Type SW-501, SW-502, SW-503 Only)

On Grade

St =	2.00%			
S =	3.28%			
Vane or Diveway	Vane			
K=	27		(From p. 86-87 Urban Metro Standards)	
R_f =	0.9			
Type SW-501 Q_A =	**1.88**	**cfs**	Under Capacity	Q_A = K*(d^(5/3))*R_F
Bypass =	*2.47*	*cfs*		
Type M-E Q_A =	**3.76**	**cfs**	Under Capacity	
Bypass =	*0.59*	*cfs*		

Intake Type = SW-505

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # MG-103

Drainage Area

			Acres
A =	39856	sf	0.91

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	90	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	912		
LP Elev.	899		
S =	0.144	ft/ft	
T_t =	**6.24**	min	

$$T_t = \frac{0.007(n*L)^{(0.8)}}{P_2^{0.5}*S^{0.4}}$$ (From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	156	ft	
HP Elev.	899		
LP Elev.	894.5		
S =	0.029	ft/ft	
V =	2.5	fps	(from Chapter 2C-3 Figure 1 in SUDAS)
Tc =	**1.04**	**min**	

Time of Concetration

T_T =	10.00	min	(Use 10 Minute Minimum)

Flow Calculation

I_{10} =	5.40	in/hr	(from intensity-duration graph)
I_{100} =	8.34	in/hr	
C'_{10} =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'_{100} =	0.5		
Q_{10} =	2.22	cfs	(Q = CIA)
Q_{100} =	**3.82**	**cfs**	

SW-513 Intake Capcacity

Intake Size =	4.00	ft
Num. of Opentings =	4	
Height of Openings =	0.75	ft
Flowline In =	894.50	
Q_{100} =	3.82	cfs
h =	0.29	ft
100-Year Elevation =	894.79	

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # MG-102

Drainage Area

			Acres
A =	22766	sf	0.52

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	100	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	904		
LP Elev.	895		
S =	0.090	ft/ft	
Tt =	**8.20**	min	

$$T_t = \frac{0.007(n*L)^{(0.8)}}{P_2^{0.5}*S^{0.4}}$$ (From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	105	ft	
HP Elev.	895		
LP Elev.	890.5		
S =	0.043	ft/ft	
V =	2.5	fps	(from Chapter 2C-3 Figure 1 in SUDAS)
Tc =	**0.70**	**min**	

Time of Concetration

T_T =	10.00	min	(Use 10 Minute Minimum)

Flow Calculation

I_{10} =	5.40	in/hr	(from intensity-duration graph)
I_{100} =	8.34	in/hr	
C'_{10} =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'_{100} =	0.5		
$Q_{BYPASS\ IN}$ =	0.00	cfs	
Q_{10} =	1.27	cfs	(Q = CIA)
Q_{100} =	**2.18**	**cfs**	

SW-513 Intake Capcacity

Intake Size =	4.00	ft
Num. of Opentings =	4	
Height of Openings =	0.75	ft
Flowline In =	891.13	
Q_{100} =	2.18	cfs
h =	0.20	ft
100-Year Elevation =	891.33	

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # INT-403

Drainage Area

			Acres
A =	35334	sf	0.81

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	100	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	912.5		
LP Elev.	910		
S =	0.025	ft/ft	

T_t = 13.69 min

$$T_t = \frac{0.007(n*L)^{0.8}}{P_2^{0.5}*S^{0.4}}$$

(From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	436	ft	
HP Elev.	910		
LP Elev.	897		
S =	0.030	ft/ft	
V =	3.5	fps	(from Chapter 2C-3 Figure 1 in SUDAS)
Tc =	**2.08**	**min**	

Time of Concetration

T_T = 15.76 min OK

Flow Calculation

I_{10} =	4.53	in/hr	(from intensity-duration graph)
I_{100} =	7.01	in/hr	
C'_{10} =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'_{100} =	0.5		
Q_{10} =	1.65	cfs	(Q = CIA)
Q_{100} =	**2.84**	**cfs**	

Depth in Gutter

St =	2.00%	ft/ft				
n =	0.016		(Manning's Coefficient)			
S =	2.82%	ft/ft				
Z =	50		(Z = 1/St)			
Z/N =	3125					
$Q_{bypass\ In\ 5}$ =	0	cfs	$Q_{bypass\ In\ 100}$ =	0.00	cfs	
$Q_{In\ 5}$=	1.65	cfs	$Q_{In\ 100}$=	2.84	cfs	
Q_5 =	1.65	cfs	Q_{100}=	2.84	cfs	
d_{10} =	**0.15**	**ft**	**d_{100} =**	**0.19**	**ft**	
T_{10} =	**7.71**	**ft**	**T_{100} =**	**9.44**	**ft**	

Intake Capacity (Type SW-501, SW-502, SW-503 Only)

On Grade

St = 2.00%
S = 2.82%

Vane or Diveway	Vane	
K=	27	(From p. 86-87 Urban Metro Standards)
R_f =	0.9	

Type SW-501 Q_A = 1.51 cfs Under Capacity Q_A = $K*(d^{(5/3)})*R_F$
Bypass = 1.33 cfs
Type M-E Q_A = 3.02 cfs OK
Bypass = 0.00 cfs

Intake Type = *Double*

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # INT-411

Drainage Area

			Acres
A =	41341	sf	0.95

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	91	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	915		
LP Elev.	910.3		
S =	0.052	ft/ft	

T_t = 9.49 min

$$T_t = \frac{0.007(n*L)^{0.8}}{P_2^{0.5}*S^{0.4}}$$

(From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	475	ft	
HP Elev.	910.3		
LP Elev.	897.7		
S =	0.027	ft/ft	
V =	3.1	fps	(from Chapter 2C-3 Figure 1 in SUDAS)
Tc =	**2.55**	**min**	

Time of Concetration

T_T = 12.05 min OK

Flow Calculation

I_{10} =	5.07	in/hr	(from intensity-duration graph)
I_{100} =	7.84	in/hr	
C'$_{10}$ =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'$_{100}$ =	0.5		
Q_{10} =	2.17	cfs	(Q = CIA)
Q_{100} =	**3.72**	**cfs**	

Depth in Gutter

St =	2.00%	ft/ft			
n =	0.016		(Manning's Coefficient)		
S =	2.82%	ft/ft			
Z =	50		(Z = 1/St)		
Z/N =	3125				
$Q_{bypass\ In\ 5}$ =	0	cfs	$Q_{bypass\ In\ 100}$ =	0.00	cfs
$Q_{In\ 5}$=	2.17	cfs	$Q_{In\ 100}$=	3.72	cfs
Q_5 =	2.17	cfs	Q_{100}=	3.72	cfs
d_{10} =	**0.17**	**ft**	**d_{100} =**	**0.21**	**ft**
T_{10} =	**8.53**	**ft**	**T_{100} =**	**10.45**	**ft**

Intake Capacity (Type SW-501, SW-502, SW-503 Only)

On Grade

St = 2.00%
S = 2.82%

Vane or Diveway	Vane		
K=	27		(From p. 86-87 Urban Metro Standards)
R_f =	0.9		

Type SW-501 Q_A =	**1.79**	**cfs**	Under Capacity	Q_A =	K*(d^(5/3))*R_F
Bypass =	*1.93*	*cfs*			
Type M-E Q_A =	**3.58**	**cfs**	Under Capacity		
Bypass =	*0.14*	*cfs*			

Intake Type = *Double*

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # INT-402

Drainage Area

			Acres
A =	28375	sf	0.65

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	79.5	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	900		
LP Elev.	897		
S =	0.038	ft/ft	
T_t =	**9.66**	min	

$$T_t = \frac{0.007(n*L)^{(0.8)}}{P_2^{0.5}*S^{0.4}}$$ (From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	100	ft
HP Elev.	897	
LP Elev.	895	
S =	0.020	ft/ft
V =	2.8	fps
Tc =	**0.60**	**min**

(from Chapter 2C-3 Figure 1 in SUDAS)

Time of Concetration

T_T =	10.26	min	OK

Flow Calculation

I_{10} =	5.36	in/hr	(from intensity-duration graph)
I_{100} =	8.28	in/hr	
C'$_{10}$ =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'$_{100}$ =	0.5		
Q_{10} =	1.57	cfs	(Q = CIA)
Q_{100} =	**2.70**	**cfs**	

Depth in Gutter

S_t =	2.00%	ft/ft			
n =	0.016		(Manning's Coefficient)		
S =	2.00%	ft/ft			
Z =	50		(Z = 1/S_t)		
Z/N =	3125				
$Q_{bypass\ In\ 5}$ =	0	cfs	$Q_{bypass\ In\ 100}$ =	0.00	cfs
$Q_{In\ 5}$=	1.57	cfs	$Q_{In\ 100}$=	2.70	cfs
Q_{5} =	1.57	cfs	Q_{100}=	2.70	cfs
d_{10} =	**0.16**	**ft**	**d_{100} =**	**0.20**	**ft**
T_{10} =	**8.06**	**ft**	**T_{100} =**	**9.88**	**ft**

Intake Capacity (Type SW-501, SW-502, SW-503 Only)

Low Point

Q =	2.70	cfs		
Vane or Diveway	Vane			
a =	0.167	ft		(From p. 88 Urban Metro Standards)
d =	0.20	ft		
R_f =	0.8			
Type M-A Q_A =	**5.53**	**cfs**	**OK**	(From M-A, M-B, M-C Equation p. 88 Urban Metro Standards)
Type M-E Q_A =	**11.05**	**cfs**	**OK**	

Intake Type = SINGLE

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # INT-500

Drainage Area

			Acres
A =	136812	sf	3.14

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	150	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	928		
LP Elev.	914		
S =	0.093	ft/ft	
T_t =	**11.18**	min	

$$T_t = \frac{0.007(n*L)^{(0.8)}}{P_2^{0.5}*S^{0.4}}$$ (From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	520	ft
HP Elev.	914	
LP Elev.	892	
S =	0.042	ft/ft
V =	3.5	fps
Tc =	**2.48**	**min**

(from Chapter 2C-3 Figure 1 in SUDAS)

Time of Concetration

T_T =	13.65	min	OK

Flow Calculation

I_{10} =	4.82	in/hr	(from intensity-duration graph)
I_{100} =	7.45	in/hr	
C'$_{10}$ =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'$_{100}$ =	0.5		
Q_{10} =	6.81	cfs	(Q = CIA)
Q_{100} =	**11.70**	**cfs**	

Depth in Gutter

St =	2.00%	ft/ft			
n =	0.016		(Manning's Coefficient)		
S =	3.28%	ft/ft			
Z =	50		(Z = 1/St)		
Z/N =	3125				
$Q_{bypass\ In\ 5}$ =	0	cfs	$Q_{bypass\ In\ 100}$ =	1.21	cfs
$Q_{In\ 5}$=	6.81	cfs	$Q_{In\ 100}$=	11.70	cfs
Q_5 =	6.81	cfs	Q_{100}=	12.91	cfs
d_{10} =	**0.25**	**ft**	**d_{100} =**	**0.32**	**ft**
T_{10} =	**12.74**	**ft**	**T_{100} =**	**16.19**	**ft**

Intake Capacity (Type SW-501, SW-502, SW-503 Only)

Low Point

Q =	12.91	cfs		
Vane or Diveway	Vane			
a =	0.167	ft		(From p. 88 Urban Metro Standards)
d =	0.32	ft		
R_f =	0.8			
Type M-A Q_A =	**7.00**	**cfs**	**Under Capacity**	(From M-A, M-B, M-C Equation p. 88 Urban Metro Standards)
Type M-E Q_A =	**13.99**	**cfs**	**OK**	

Intake Type = *SW-506*

Project: TCI Pod I Development
Description: Intake Flow Calculations
Intake # INT-602

Drainage Area

			Acres
A =	25607	sf	0.59

Sheet Flow

n =	0.24		(from Chapter 2C-3 Table 2 in SUDAS)
L =	42	ft	
P_2 =	2.91	in/hr	(from Chapter 2C-4 Table 2 in SUDAS)
HP Elev.	910		
LP Elev.	904		
S =	0.143	ft/ft	
Tt =	**3.40**	min	

$$T_t = \frac{0.007(n*L)^{0.8}}{P_2^{0.5}*S^{0.4}}$$ (From Equation 3.4 Urban Metro Standards)

Shallow Concentrated Flow

L =	194	ft	
HP Elev.	904		
LP Elev.	899.5		
S =	0.023	ft/ft	
V =	3	fps	(from Chapter 2C-3 Figure 1 in SUDAS)
Tc =	**1.08**	**min**	

Time of Concetration

T_T =	10.00	min	(Use 10 Minute Minimum)

Flow Calculation

I_{10} =	5.40	in/hr	(from intensity-duration graph)
I_{100} =	8.34	in/hr	
C'_{10} =	0.45		(from Chapter 2C-4 Table 1 in SUDAS)
C'_{100} =	0.5		
$Q_{BYPASS\ IN}$ =	0.00	cfs	
Q_{10} =	1.43	cfs	(Q = CIA)
Q_{100} =	**2.45**	**cfs**	

Depth in Gutter

St =	1.50%	ft/ft			
n =	0.016		(Manning's Coefficient)		
S =	1.50%	ft/ft			
Z =	66.66667		(Z = 1/St)		
Z/N =	4166.667				
$Q_{bypass\ In\ 5}$ =	0	cfs	$Q_{bypass\ In\ 100}$ =	0.00	cfs
$Q_{In\ 5}$=	1.43	cfs	$Q_{In\ 100}$=	2.45	cfs
Q_5 =	1.43	cfs	Q_{100}=	2.45	cfs
	0.99005				
d_{10} =	**0.15**	**ft**	**d_{100} =**	**0.18**	**ft**
T_{10} =	**9.82**	**ft**	**T_{100} =**	**12.02**	**ft**

Intake Capacity (Type SW-501, SW-502, SW-503 Only)

On Grade

St =	1.50%				
S =	1.50%				
Vane or Diveway	Vane				
K=	24		(From p. 86-87 Urban Metro Standards)		
R_f =	0.9				
Type SW-501 Q_A =	**1.24**	**cfs**	Under Capacity	Q_A =	K*(d^(5/3))*R_F
Bypass =	*1.21*	*cfs*			
Type M-E Q_A =	**2.49**	**cfs**	OK		
Bypass =	*0.00*	*cfs*			

Intake Type = SW-503

10-year PIPE FLOWS

Pipe Run ST-200

Structure	Pipes	Flow	
MA-205	-		cfs
-	**PIPE 204**	**15.00**	**cfs**
MA-204	-	0.00	cfs
-	**PIPE 203**	**15.00**	**cfs**
INT-203	-	0.73	cfs
INT-212	-	1.92	cfs
-	**PIPE 202**	**17.65**	**cfs**
INT-202	-	0.73	cfs
INT-211	-	2.45	cfs
-	**PIPE 201**	**20.83**	**cfs**

Pipe Run ST-100

Structure	Pipes	Flow	
-	**PIPE 201**	20.83	cfs
MG-103	-	2.22	cfs
-	**PIPE 102**	**23.05**	**cfs**
-	**PIPE 401**	**6.89**	**cfs**
INT-602	-	1.43	cfs
INT-601	-	6.81	cfs
MG-102	-	2.33	cfs
-	**PIPE 101**	**40.51**	**cfs**
FES-101	-	40.51	cfs

Pipe Run ST-400

Structure	Pipes	Flow	
CO-406	-	0.50	cfs
-	**PIPE 405**	**0.50**	**cfs**
MA-405	-	0.50	cfs
-	**PIPE 404**	**1.00**	**cfs**
MA-404	-	0.50	cfs
-	**PIPE 403**	**1.50**	**cfs**
INT-403	-	1.65	cfs
INT-411	-	2.17	cfs
-	**PIPE 402**	**5.32**	**cfs**
INT-402	-	1.57	cfs
-	**PIPE 401**	**6.89**	**cfs**

100-year PIPE FLOWS

Pipe Run ST-200

Structure	Pipes	Flow	
MA-205	-		cfs
-	**PIPE 204**	**30.00**	**cfs**
MA-204	-	0.00	cfs
-	**PIPE 203**	**30.00**	**cfs**
INT-203	-	1.26	cfs
INT-212	-	3.29	cfs
-	**PIPE 202**	**34.55**	**cfs**
INT-202	-	1.26	cfs
INT-211	-	4.21	cfs
-	**PIPE 201**	**40.02**	**cfs**

Pipe Run ST-100

Structure	Pipes	Flow	
-	**PIPE 201**	40.02	cfs
MG-103	-	3.82	cfs
-	**PIPE 102**	**43.83**	**cfs**
-	**PIPE 401**	**12.26**	cfs
INT-602	-	2.44	cfs
INT-601	-	12.91	cfs
MG-102	-	4.00	cfs
-	**PIPE 101**	**75.43**	**cfs**
FES-101	-	75.43	cfs

Pipe Run ST-400

Structure	Pipes	Flow	
CO-406	-	1.00	cfs
-	**PIPE 405**	**1.00**	**cfs**
MA-405	-	1.00	cfs
-	**PIPE 404**	**2.00**	**cfs**
MA-404	-	1.00	cfs
-	**PIPE 403**	**3.00**	**cfs**
INT-403	-	2.84	cfs
INT-411	-	3.72	cfs
-	**PIPE 402**	**9.56**	**cfs**
INT-402	-	2.70	cfs
-	**PIPE 401**	**12.26**	**cfs**

STORM SEWER PIPE SIZING DESIGN SHEET

No.	Material	n	Length	Slope	Flow		Diameter$_{10yr}$		Diameter$_{100yr}$				10 yr pipe properties								100 yr pipe properties								Velocity	
			ft	%	cfs_{10}	cfs_{100}	Req.	Provided	Req.	Provided	Dia	rad	d (in.)	h	y/D	Θ	A_w	P_w	R_h	n	d (in.)	h	y/D	Θ	A_w	P_w	R_h	n	10yr	100yr
204	RCP	0.013	271	3.66	15.00	30.00	16.13	24.00	20.92	24.00	2.00	1.00	11.00	0.92	0.46	2.97	1.40	2.97	0.47	0.016	16.30	0.64	0.68	2.41	2.27	3.87	0.59	0.015	10.54	13.20
203	RCP	0.013	224	3.00	15.00	30.00	16.75	24.00	21.72	24.00	2.00	1.00	11.70	0.98	0.49	3.09	1.52	3.09	0.49	0.016	17.30	0.56	0.72	2.23	2.42	4.06	0.60	0.015	9.85	12.33
202	RCP	0.013	187	3.25	17.65	34.55	17.53	24.00	22.56	24.00	2.00	1.00	12.50	0.96	0.52	3.06	1.65	3.22	0.51	0.016	18.50	0.46	0.77	2.00	2.60	4.29	0.61	0.014	10.65	13.24
201	RCP	0.013	203	3.45	20.83	40.02	18.45	24.00	23.57	24.00	2.00	1.00	13.50	0.88	0.56	2.89	1.82	3.39	0.54	0.016	20.20	0.32	0.84	1.64	2.82	4.65	0.61	0.014	11.50	14.11
402	RCP	0.013	75	4.00	5.32	9.56	10.76	15.00	13.40	15.00	1.25	0.63	7.60	0.62	0.51	3.11	0.62	1.98	0.32	0.016	10.60	0.37	0.71	2.29	0.93	2.50	0.37	0.015	8.49	10.30
401	RCP	0.013	58	4.60	6.89	12.26	11.54	15.00	14.33	15.00	1.25	0.63	8.40	0.55	0.56	2.90	0.71	2.11	0.33	0.016	12.00	0.25	0.80	1.85	1.05	2.77	0.38	0.014	9.68	11.70
102	RCP	0.013	208	3.50	23.05	43.83	19.11	30.00	24.32	30.00	2.50	1.25	12.80	1.07	0.43	2.85	2.00	3.56	0.56	0.016	18.20	0.98	0.61	2.71	3.12	4.46	0.70	0.016	11.51	14.06
101	RCP	0.013	109	1.20	40.51	75.43	28.86	30.00	36.44	30.00	2.50	1.25	24.20	0.48	0.81	1.82	4.24	5.58	0.76	0.014	30.00	0.00	1.00	0.00	4.91	7.85	0.63	0.013	9.51	9.15

Project: TCI Pod I Development
Description: Swale Flow Conditions

Swale Area	C_{10}	C_{100}	I_{10}	I_{100}	A	Q_{10}	Q_{100}
1	0.25	0.30	4.61	7.13	0.66	0.76	1.41
2	0.25	0.30	4.61	7.13	0.58	0.67	1.24
3	0.25	0.30	4.61	7.13	0.97	1.12	2.07
4	0.25	0.30	4.61	7.13	0.45	0.52	0.96
5	0.25	0.30	4.61	7.13	1.90	2.19	4.06

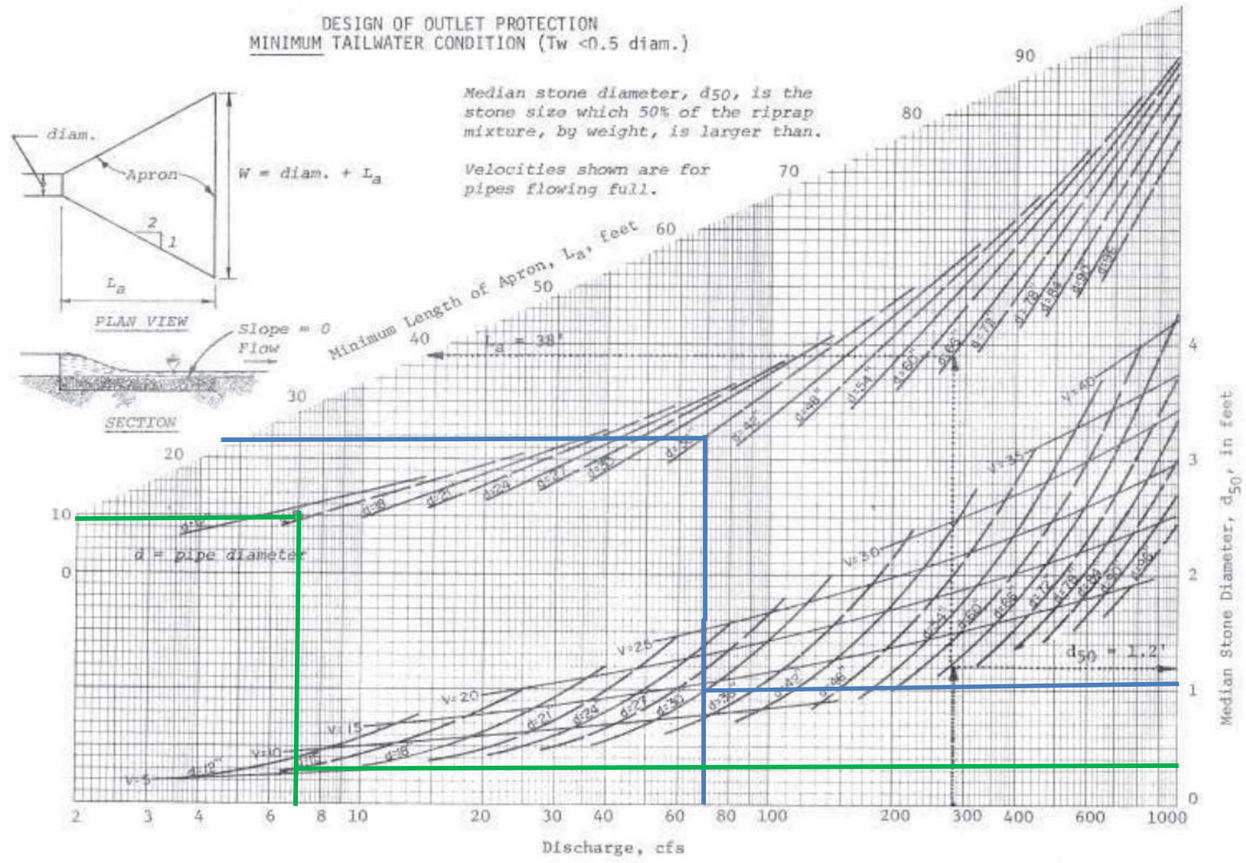
Outlet Erosion Control Calculations

FES 101

Pipe dia =	30 in	
Discharge =	75.43 cfs	
Velocity =	9.15 fps	
Stone Dia_{50} =	1.00 ft	(from graph)
Stone Selected =	Class "E"	(from SUDAS 7E-17)
Apron Length =	22 ft	(from graph)
Upstream Apron Width =	7.5 ft	(dia*3)
Downstream Apron Width =	24.5 ft	(L_A + Dia.)
Apron Depth =	2.5 ft	(from SUDAS 7E-17)

FES 901

Pipe dia =	15 in	
Discharge =	7.00 cfs	
Velocity =	7.00 fps	
Stone Dia_{50} =	0.30 ft	(from graph)
Stone Selected =	Class 'E'	(from SUDAS 7E-17)
Apron Length =	10 ft	(from graph)
Upstream Apron Width =	3.75 ft	(dia*3)
Downstream Apron Width =	11.25 ft	(dia*5)
Apron Depth =	2 ft	(from SUDAS 7E-17)



Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2011 by Autodesk, Inc. Tuesday, Oct 23 2012

Typical Swale Section (using largest Q)

Trapezoidal

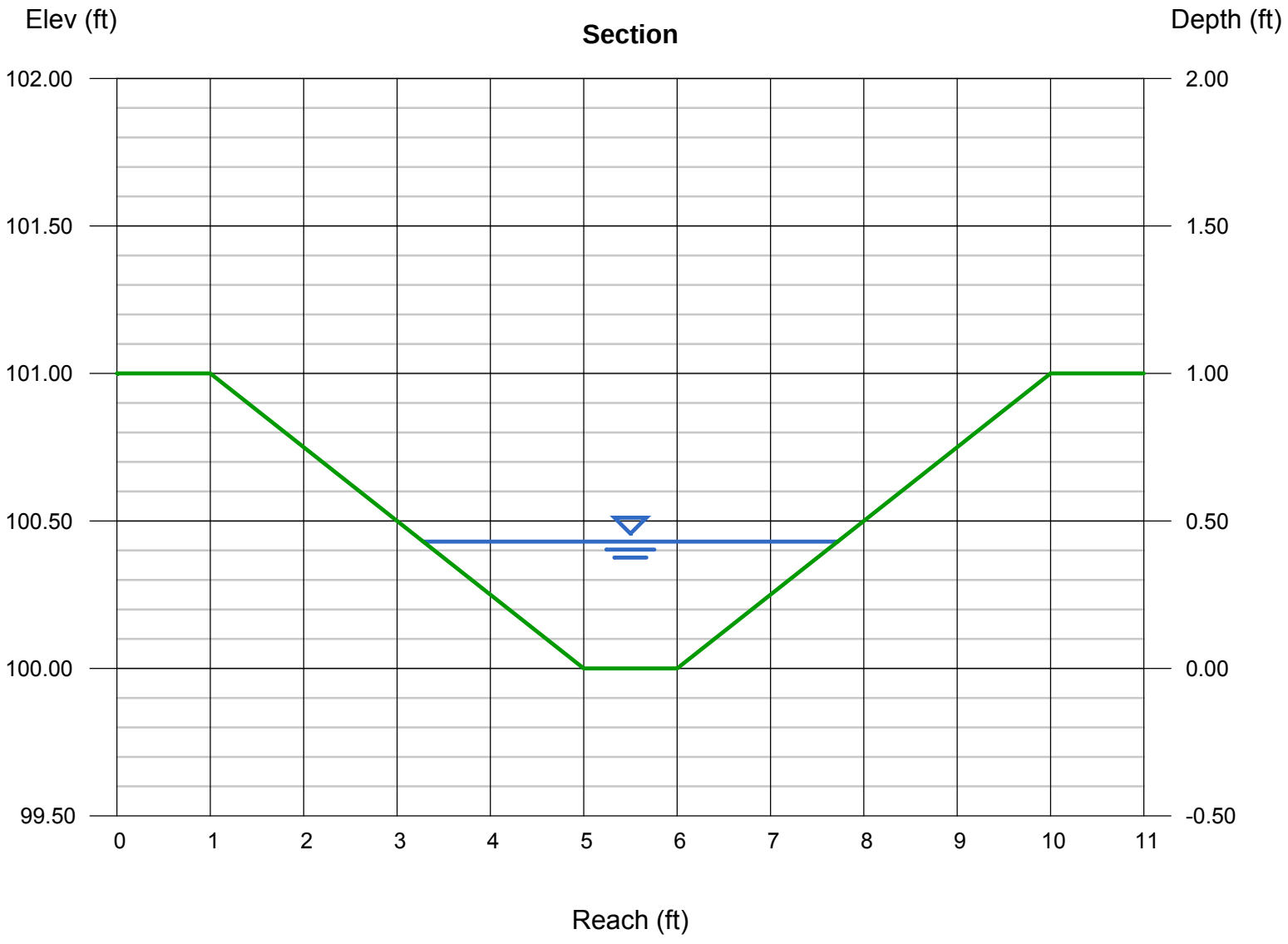
Bottom Width (ft)	= 1.00
Side Slopes (z:1)	= 4.00, 4.00
Total Depth (ft)	= 1.00
Invert Elev (ft)	= 100.00
Slope (%)	= 2.20
N-Value	= 0.025

Calculations

Compute by:	Known Q
Known Q (cfs)	= 4.06

Highlighted

Depth (ft)	= 0.43
Q (cfs)	= 4.060
Area (sqft)	= 1.17
Velocity (ft/s)	= 3.47
Wetted Perim (ft)	= 4.55
Crit Depth, Yc (ft)	= 0.47
Top Width (ft)	= 4.44
EGL (ft)	= 0.62



City of Polk City, Iowa

City Council Agenda Communication

Date: **May 10, 2021 City Council Meeting**
To: Mayor Jason Morse & City Council
From: Chelsea Huisman, City Manager

Subject: **Wellmark Small Grant application**

BACKGROUND: The Wellmark Foundation has a small grant application due May 26th for wellness programs. The maximum request accepted for this program is $25,000. We would like to apply for $25,000 for the Lost Lakes Phase II Park project.

ALTERNATIVES: Do not approve the resolution

FINANCIAL CONSIDERATIONS: The financial considerations for this project are $25,000 in potential revenue.

RECOMMENDATION: It is my recommendation that the Council approve the resolution to apply for the Wellmark Small grant program.

RESOLUTION NO. 2021-40

A RESOLUTION GIVING AUTHORIZATION TO APPLY FOR THE WELLMARK FOUNDATION GRANT

WHEREAS, the City of Polk City is desirous to apply for funding from the Wellmark Foundation Grant in the amount of $25,000; and

WHEREAS, the program grant requires a commitment of a financial contribution of a local match of 50% towards the implementation of the proposed project; and

WHEREAS, the City of Polk City has identified a need for park development at the Lost Lakes Estates Park with an estimated project cost of $203,325; and

WHEREAS, the City of Polk City has committed $178,325 towards this Lost Lakes Estates Park development project; and

WHEREAS, the Park Development project will include playground equipment, safety surfacing, landscaping, and sidewalk connection; and

NOW, THEREFORE BE IT RESOLVED, by the City Council of the City of Polk City, Iowa to authorize application to the Wellmark Foundation Grant for the proposed Lost Lakes Estates Phase II Park Project.

PASSED AND APPROVED the 10th day of May 2021.

_____
Jason Morse, Mayor

Attest:

_____
Jenny Gibbons, City Clerk

RESOLUTION NO. 2021-41

RESOLUTION SETTING A PUBLIC HEARING ON THE VACATION OF DRAINAGE EASEMENT AT LOTS 33 & 34 BIG CREEK VALLEY PLAT 1

WHEREAS, a proposal has been made for the City to vacate a drainage easement on the following described real property:

PART OF THE OVERLAND FLOWAGE EASEMENT BETWEEN LOTS 33 AND 34 OF BIG CREEK VALLEY PLAT 1, AN OFFICIAL PLAT, INCLUDED IN AND A PART OF THE CITY OF POLK CITY, POLK COUNTY, IOWA, TO BE VACATED, IS DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWESTERLY CORNER OF LOT 33 BIG CREEK VALLEY PLAT 1; THENCE ALONG A CURVE CONCAVED NORTHEASTERLY, HAVING A RADIUS OF 748.85 FEET, A DISTANCE OF 8.00 FEET, SAID CURVE HAS A CHORD BEARING OF S.73°51'27"E., WITH A CHORD DISTANCE OF 8.00 FEET;

THENCE S.16°26'55"W., A DISTANCE OF 147.19 FEET;

THENCE N.74°05'57"W., A DISTANCE OF 1 THAT 6.00 FEET;

THENCE N.16°26'55"E., A DISTANCE OF 147.34 FEET, TO THE NORTH LINE OF LOT 34, AND THE BEGINNING OF A CURVE CONCAVED NORTHEASTERLY, HAVING A RADIUS OF 748.85 FEET;

THENCE ALONG SAID CURVE, A DISTANCE OF 8.00 FEET, SAID CURVE HAS A CHORD BEARING OF S.73°14'44"E., WITH A CHORD DISTANCE OF 8.00 FEET, TO THE POINT OF BEGINNING. CONTAINING 2355.804 SQ.FT MORE OR LESS.

WHEREAS, the City Engineer has reviewed and approved said vacation; and

WHEREAS, the Code of Iowa provides that the drainage easement may be vacated only after notice and hearing as provided by law.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Polk City, Iowa, that a public hearing before this Council on the proposal set forth in the preamble to this Resolution is set for 6:00 p.m., on the 24 day of May 2021. The City Clerk is directed to publish the Notice of said hearing at the time and in the manner required by law.

DATED at Polk City, Iowa, this 10 day of May 2021.

_____
Jason Morse, Mayor

ATTEST:

_____
Jenny Gibbons, City Clerk

Roll call vote:

YES
NO
Abstain

City of Polk City, Iowa

City Council Agenda Communication

Date: **May 10, 2021 City Council Meeting**
To: Mayor Jason Morse & City Council
From: Chelsea Huisman, City Manager

Subject: **Prairie Meadows Community Betterment grant application**

BACKGROUND: Prairie Meadows annually accepts applications for Community Betterment grants ranging from $1,000-$99,999. In addition to the Wellmark Grant, we would like to apply for $75,000 for the Lost Lakes Phase II Park project.

ALTERNATIVES: Do not approve the resolution

FINANCIAL CONSIDERATIONS: The financial considerations for this project are $75,000 in potential revenue.

RECOMMENDATION: It is my recommendation that the Council approve the resolution to apply for the Prairie Meadows Community Betterment grant.

RESOLUTION NO. 2021-42

A RESOLUTION GIVING AUTHORIZATION TO APPLY FOR THE PRAIRIE MEADOWS COMMUNITY BETTERMENT GRANT

WHEREAS, the City of Polk City is desirous to apply for funding from the Prairie Meadows Community Betterment Grant for the Lost Lakes Estates Park Development in the amount of $75,000; and

WHEREAS, the City of Polk City has identified a need for park development at the Lost Lakes Estates Park with an estimated project cost of $203,325; and

WHEREAS, the Park Development project will include playground equipment, safety surfacing, landscaping, and sidewalk connection; and

NOW, THEREFORE BE IT RESOLVED, by the City Council of the City of Polk City, Iowa to authorize application to the Prairie Meadows Community Betterment Grant for the proposed Lost Lakes Estates Phase II Park Project.

PASSED AND APPROVED the 10th day of May 2021.

_____
Jason Morse, Mayor

Attest:

_____
Jenny Gibbons, City Clerk

City of Polk City, Iowa

City Council Agenda Communication

Date: **May 10, 2021 City Council Meeting**
To: Mayor Jason Morse & City Council
From: Chelsea Huisman, City Manager

Subject: **COVID-19 Relief Recreational Trails program**

BACKGROUND: There is a new funding source available for trails due to the COVID-19 pandemic. The State of Iowa has been allocated $5 million for trail projects in Iowa. The application is due May 17, 2021. The program is for requests of $500,000-$1,250,000.

I propose for the City to draft an application for the N. 3rd Street to corporate city limits trail project. This trail will go through the future Regional Park Facility and is one of 3 phases to connect to the High Trestle Trail. This grant has no match requirement; however, it will be very competitive, and I recommend the City has a local match of $196,000. Just a reminder that we do have an application to the Land and Water Conservation Fund for this project for $75,000, which can be used as matching funds for the City.

ALTERNATIVES: Do not approve the resolution

FINANCIAL CONSIDERATIONS: The financial considerations for this project are $550,000 in potential revenue.

RECOMMENDATION: It is my recommendation that the Council approve the resolution to apply for the COVID-19 Relief Recreational Trails program.

RESOLUTION NO. 2021-43

A RESOLUTION GIVING AUTHORIZATION TO APPLY FOR THE COVID-19 RELIEF RECREATIONAL TRAILS PROGRAM

WHEREAS, the City of Polk City is desirous to apply for funding from the Covid-19 Relief Recreational Trails program in the amount of $550,000; and

WHEREAS, the City of Polk City has plans to construct a 10' multi-use trail from N. 3rd Street, through the Regional Park Facility and ending at corporate city limits in FY22-23; and

WHEREAS, the City of Polk City has an estimated cost estimate for this project of $746,000.

WHEREAS, the City of Polk City has committed $196,000 for FY22-23 towards this trail project utilizing bond proceeds and local option sales tax; and

WHEREAS, the City of Polk City will commit that once the construction project is completed, the City will maintain the multi-use trail for the intended use by the public for a minimum of 20 years; and

NOW, THEREFORE BE IT RESOLVED, by the City Council of the City of Polk City, Iowa to authorize application to the Covid-19 Relief Recreational Trails program for the proposed multi-use trail from N. 3rd Street to corporate city limits.

PASSED AND APPROVED the 10th day of May 2021.

_____
Jason Morse, Mayor

Attest:

_____
Jenny Gibbons, City Clerk

City of Polk City, Iowa

City Council Agenda Communication

Date: May 10, 2021 City Council Meeting
To: Mayor Jason Morse & City Council
From: Jason Thraen, Parks & Recreation Director

Subject: **Parks & Recreation Department Updates for April 2021**

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1. Confluence presented revised regional park concepts to advisory committee on 4-29-2021. Committee reviewed concepts and provided feedback. Overall, committee shared common support of concept A with small revisions being requested based on feedback. Concept revisions will follow.

2. Staff met with Polk City Historical Society representatives to discuss potential program partnerships.

3. Staff met with Iowa DNR fisheries biologist Tyler Stubbs to discuss health of ponds at Twelve Oaks Park and Marina Cove Park. Iowa DNR will conduct fish surveys of the 2 ponds this summer, restock if needed, and provide management recommendations.

4. 2021 Parks & Rec/Library sponsorship campaign closed on April 30th. Parks & recreation department received 12 sponsorships totaling $2250.00. Sponsors include: North Polk Family Medicine, Fareway, First Continental Group, Iowa Chiropractic Clinic, P.C, Currie Engineering Associates, PLC, Ankeny Sanitation, Luana Savings Bank, Cornerstone Dental, Polk City Veterinary Hospital, Gurney Electric, LC, MidAmerican Energy, and Polk City Women.

5. No April programming to report.

6. Sports Complex baseball/softball fields had 10 reservations in April. 10 total field reservation in 2021.

7. Community Center had 1 private rental in April. 1 total rental in 2021.

8. Miller Park Shelter House had 1 private rental in April. 1 total rental in 2021.

City of Polk City

Title: Firefighter/Paramedic
Department: Fire Department
Status: Non-exempt
Reports to: Fire Chief
Supervises: Depending on responsibilities

POSITION FUNCTION:

Under the general direction of the Fire Chief performs fire suppression, rescue operations, fire prevention activities (e.g. public education, fire inspections, etc.) and patient care in emergent and non-emergent settings. Performs routine vehicle, tool and facility maintenance on a daily basis. Special assignments as assigned by the Fire Chief.

DUTIES AND RESPONSIBILITIES:

1. Responds to emergencies (e.g. fire, medical, rescue, man-made/natural disasters, etc.). May be required to evaluate the situation and assume the appropriate Incident Command Structure when appropriate, directing the response until relieved by Company Officer.
2. Provides emergency advanced medical treatment, including, but not limited to, rapid sequence intubation (RSI), chest decompression, intubation, twelve lead EKG interpretation, electrical cardioversion and intravenous initiation/maintenance, and medication administration. Provides accurate medical documentation of all emergency medical treatment provided. Provides accurate medical documentation of all emergency medical treatment provided.
3. Ensures fire code enforcement by performing fire/life safety facility inspections.
4. Performs routine truck and equipment maintenance, station maintenance and routine facility duties.
5. Performs various public education activities to enhance the reputation of the Fire Department by providing station tours, hosting community/school visits and special events, and conducting public education classes on a variety of life safety and EMS topics.
6. Maintains proper physical fitness through regular exercise.
7. Participates in Fire/EMS related training.
8. May be assigned various duties, which may include inventory and ordering of drugs, inventory and ordering of supplies, inventory and ordering of first aid supplies for City Departments, updating and maintaining Standard Operating Procedures and Protocols; maintenance of radios and vehicles.
9. If responsible for driving of emergency vehicles: Adheres to all department policies and procedures governing the safe operation of fire apparatus and complies with all applicable local, state, and federal traffic laws, and regulations.
10. Assures the City and Department's mission, goals and objectives are fully supported and initiated.
11. Performs other duties and responsibilities as assigned.
12. Performs vehicle/squad checks and completes inventory.

13. Performs annual equipment testing.
14. May provide oversight and direction to paid-on-call (POC) Fire Fighters in the absence of an officer

Any duties assigned by the Fire Chief

This job description is not intended to limit the responsibilities of an employee assigned to this position to those duties listed above. The employee is expected to follow any other reasonable instructions and perform any other reasonable duties requested by the Fire Chief.

SKILLS AND ABILITIES:

Knowledge of the principles and practices associated with administration including budgeting, personnel management, purchasing, general management and public relations. Must speak and write English in a clear and distinct manner which can be understood by a wide variety of citizens. Must apply common sense understanding to the work environment, procedures, programs, and services offered by the Fire Department and follow and carry out general written and/or verbal instructions effectively.

1. Ability to perform invasive advanced medical procedures in stressful situations
2. Ability to handle confidential information in a sensitive manner
3. Ability to take the initiative
4. Effective oral and written communication skills
5. Effective problem solving, decision making and sound judgment skills
6. Accurate mathematical skills
7. Ability to concentrate in a diverse work setting
8. Ability to work twenty-four hour shift-based schedule varying days of the week, including regular weekend and holiday work. Schedule is subject to change based on needs.
9. Excellent interpersonal skills and ability to live and work effectively with co-workers during shifts.

EDUCATION, TRAINING AND EXPERIENCE:

Education:

1. High School Diploma or equivalent with 2-3 years of post-secondary education preferred
2. Successful completion of Department orientation within three months of employment.

Training Required:

1. Fire Fighter I certification or equivalent
2. Iowa Fire Fighter II certification within 12 months of employment
3. Iowa EMT-Paramedic, prefer National Registry certification, within 3 months after hire.
4. Valid Iowa Drivers' License
5. Pediatric Advanced Life Support or equivalent
6. Advanced Cardiac Life Support
7. Advanced Medical Life Support preferred

8. Basic Life Support Certification
9. Emergency Vehicle Operator

Experience Required:

- One to three (1-3) years of Fire Fighting and Emergency Medical Services experience.

Required Special Qualifications:

- Shall generally be available for off-hour emergencies.

OTHER NECESSARY REQUIREMENTS:

1. Valid Iowa driver's license
2. Pre-employment drug testing, NFPA 1582 physical examination and criminal background history check

SNYDER & ASSOCIATES

IOWA | MISSOURI | NEBRASKA | SOUTH DAKOTA | WISCONSIN

May 5, 2021

Honorable Mayor and City Council
City of Polk City
112 S. 3rd Street
Polk City, Iowa

RE: PARTIAL PAYMENT APPLICATION NO. 2
2021 STREET REPAIRS PROJECT

Dear Honorable Mayor and City Council:

Please find the attached Partial Payment Application No. 2 for the 2021 Street Repairs Project. This pay application includes work completed by the Contractor through April 30, 2021. The initial walkthrough of the project work has been conducted.

We recommend payment of $68,914.20 to the Contractor, Caliber Concrete LLC for work completed through April 30, 2021. The project is awaiting sod establishment and completion of the punchlist items as determined on April 28, 2021. Approximately 5% of the contract work remains to be completed and 19 of the 30 working days for the project have been charged through this pay application.

Please contact me should you have any questions on this pay application. We will be in attendance at the May 10, 2021, City Council meeting to answer any questions regarding this partial payment application.

Sincerely,
SNYDER & ASSOCIATES, INC.

Laura C. Lamberty, P.E.

Enclosure

cc: Mike Schulte, City of Polk City
Chelsea Huisman, City of Polk City
Kathleen Connor, Snyder & Associates
Travis D. Thornburgh, Snyder & Associates

2727 SW SNYDER BOULEVARD | P.O. BOX 1159 | ANKENY, IA 50023-0974
P: 515-964-2020 | F: 515-964-7938 | SNYDER-ASSOCIATES.COM

APPLICATION FOR PARTIAL PAYMENT NO. 2

PROJECT: 2021 Street Repairs Project

S&A PROJECT NO.: 120.0908.01

OWNER: City of Polk City
CONTRACTOR: Caliber Concrete, LLC
ADDRESS: PO Box 248, 309 Audubon Street
Adair, IA 50002
DATE: 5/10/2021

PAYMENT PERIOD: 4/1/2021 to 4/30/2021

1. CONTRACT SUMMARY:

Original Contract Amount:	$ 144,525.60
Net Change by Change Order:	$ -
Contract Amount to Date:	$ 144,525.60

CONTRACT PERIOD: TOTAL WORKING DAYS

Original Contract Date:	February 8, 2021
Original Contract Time:	30
Added by Change Order:	0
Contract Time to Date:	30
Time Used to Date:	19
Contract Time Remaining:	11

2. WORK SUMMARY:

Total Work Performed to Date:	$ 129,709.86
Retainage: 5%	$6,485.49
Total Earned Less Retainage:	$123,224.37
Less Previous Applications for Payment:	$ 54,310.17
AMOUNT DUE THIS APPLICATION:	$68,914.20

3. CONTRACTOR'S CERTIFICATION:

The undersigned CONTRACTOR certifies that:

(1) all previous progress payments received from OWNER on account of Work done under the contract referred to above have been applied to discharge in full all obligations of CONTRACTOR incurred in connection with the Work covered by prior Applications for Payment; and
(2) title to all materials and equipment incorporated in said Work or otherwise listed in or covered by the application for Payment are free and clear of all liens, claims, security interests, and encumbrances

Caliber Concrete, LLC
CONTRACTOR

By _____ DATE: 5/6/21

4. ENGINEER'S APPROVAL:

Payment of the above AMOUNT DUE THIS APPLICATION is recommended:

Snyder & Associates, Inc.
ENGINEER

By _____ DATE: 5/6/2021

5. OWNER'S APPROVAL

City of Polk City
OWNER

By _____ DATE: _____

6. DETAILED ESTIMATE OF WORK COMPLETED:

ITEM NO.	DESCRIPTION	CONTRACT ITEMS				COMPLETED WORK		
		PLAN QTY.	UNIT	UNIT COST	COST TOTAL	QTY. TO DATE	CO #	COST TOTAL
2.1.	Below Grade Excavation (Core Out)	135	CY	$ 110.00	$ 14,850.00			$ -
2.2.	Subgrade Treatment, Geogrid, Triangular	380	SY	9.00	3,420.00			-
2.3.	Special Backfill	10	TON	50.00	500.00	10		500.00
6.1.	Remove Intake	3	EA	2,000.00	6,000.00	3		6,000.00
6.2.	Intake, SW-501, Cast In Place	2	EA	4,500.00	9,000.00	2		9,000.00
6.3.	Intake, SW-505, Cast In Place	1	EA	4,500.00	4,500.00	1		4,500.00
6.4.	Intake Adjustment, Minor	3	EA	1,500.00	4,500.00	3		4,500.00
6.5.	Manhole Adjustment, Minor	1	EA	1,500.00	1,500.00	1		1,500.00
7.1.	Full Depth Patches	700	SY	107.18	75,026.00	739		79,206.02
7.2.	Crack and Joint Cleaning and Filling, Hot Pour	280	LF	3.00	840.00	230		690.00
7.3.	Removal of Paved Driveway	30	SY	10.00	300.00	27		270.00
7.4.	Removal of Sidewalk	150	SY	10.00	1,500.00	149		1,490.00
7.5.	Driveway, Paved, PCC, 6"	30	SY	47.16	1,414.80	27		1,273.32
7.6.	Sidewalk, PCC, 6"	140	SY	67.32	9,424.80	136		9,155.52
7.7.	Detectable Warning	90	SF	25.00	2,250.00	88		2,200.00
8.1.	Temporary Traffic Control	1	LS	1,500.00	1,500.00	0.95		1,425.00
11.1.	Mobilization	1	LS	8,000.00	8,000.00	1.00		8,000.00
					-			-
		TOTAL ORIGINAL CONTRACT =			$ 144,525.60			$ 129,709.86
CHANGE ORDER SUMMARY:								
		TOTAL CHANGE ORDERS =			$ -			$ -
		TOTAL CONTRACT & CHANGE ORDERS			$144,525.60			$ 129,709.86

RESOLUTION 2021-39

A RESOLUTION APPROVING THE APPLICATION FOR PARTIAL PAYMENT NO. 2 FOR THE 2021 STREET REPAIRS PROJECT

WHEREAS, the City of Polk City, City Council, approved Resolution 2020-143 ordering construction for the 2021 Street Repairs Project on December 14, 2021; and

WHEREAS, the City Council approved Resolution 2021-07 on January 25, 2021 awarding the construction contract to Caliber Concrete, LLC of Adair, Iowa; and

WHEREAS, on February 8, 2021 the City Council approved Resolution 2021-10 approving the contract in the amount of $144,525.60; and

WHEREAS, on April 12, 2021 the City Council approved Resolution 2021-27 approving the Pay App No. 1 in the amount of $54,310.17; and

WHEREAS, Caliber Concrete LLC., and the City Engineer have submitted the Application for Partial Payment No. 2 giving a detailed estimate of work completed with an application for payment in the amount of $68,914.20

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa hereby approves the Application for Partial Payment No. 2 for the 2021 Street Repairs Project and the City Clerk/Treasurer is hereby authorized to issue a check to Caliber Concrete LLC. in the amount of $68,914.20

PASSED AND APPROVED the 10th day of May 2021.

_____
Jason Morse, Mayor

ATTEST:

_____
Jenny Gibbons, City Clerk

ORDINANCE NO. 2021-1300

AN ORDINANCE AMENDING THE MUNICIPAL CODE OF THE CITY OF POLK CITY, IOWA, BY REZONING 77.66 ACRES LOCATED NORTH AND EAST OF 220 E. VISTA LAKE AVENUE IN THE AREA KNOWN AS BIG CREEK TECHNOLOGY CAMPUS

WHEREAS, on the 15th day of March 2021, the Planning and Zoning Commission of the City of Polk City, Iowa, recommended to the City Council that the properties legally described as:

PARENT PARCEL

PARCEL 'L' BEING PART OF THE SW1/4 OF SECTION 31, TOWNSHIP 81 NORTH, RANGE 24 WEST OF THE 5TH P.M. AND PART OF THE SE1/4 & SW1/4 OF SECTION 36, TOWNSHIP 81 NORTH, RANGE 25 WEST OF THE 5TH P.M., AN OFFICIAL PARCEL RECORDED IN BOOK 12998, PAGE 269 AT THE POLK COUNTY RECORDER'S OFFICE, CITY OF POLK CITY, POLK COUNTY, IOWA.

A-1 TO R-1

A PARCEL OF LAND IN PARCEL 'L', AN OFFICIAL PARCEL RECORDED IN BOOK 12998, PAGE 269 AT THE POLK COUNTY RECORDER'S OFFICE, ALL BEING IN THE SW1/4 OF SECTION 31, TOWNSHIP 81 NORTH, RANGE 24 WEST OF THE 5TH P.M., CITY OF POLK CITY, POLK COUNTY, IOWA THAT IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AS A POINT OF REFERENCE AT THE W1/4 CORNER OF SAID SECTION 31; THENCE S00°11'32"E, 395.43 FEET ALONG THE WEST LINE OF SAID SW1/4 OF SECTION 31, TO THE POINT OF BEGINNING; THENCE S89°58'48"E, 544.99 FEET TO A POINT; THENCE S00°01'12"W, 1101.09 FEET TO A POINT; THENCE S42°51'28"W, 362.86 FEET TO A POINT; THENCE N89°58'48"W, 293.21 FEET TO A POINT ON THE WEST LINE OF SAID SW1/4 OF SECTION 31; THENCE N00°11'32"W, 1367.18 FEET ALONG SAID WEST LINE TO THE POINT OF BEGINNING AND CONTAINING 16.27 ACRES MORE OR LESS

A-1 TO R-1A

A PARCEL OF LAND IN PARCEL 'L', AN OFFICIAL PARCEL RECORDED IN BOOK 12998, PAGE 269 AT THE POLK COUNTY RECORDER'S OFFICE, ALL BEING IN THE SW1/4 OF SECTION 31, TOWNSHIP 81 NORTH, RANGE 24 WEST OF THE 5TH/ P.M., CITY OF POLK CITY, POLK COUNTY, IOWA THAT IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE W1/4 CORNER OF SAID SECTION 31; THENCE S89°33'41"E, 1297.45 FEET ALONG THE NORTH LINE OF SAID PARCEL 'L' TO THE NE CORNER OF SAID PARCEL 'L'; THENCE S00°16'27"W, 1343.52 FEET ALONG THE EAST LINE OF SAID PARCEL 'L' TO THE NE CORNER OF PARCEL 'C', AN OFFICIAL PARCEL RECORDED IN BOOK 8464, PAGE 658 AT THE POLK COUNTY RECORDER'S OFFICE; THENCE S43°53'47"W, 908.24 FEET ALONG THE EAST LINE OF SAID PARCEL 'L' COINCIDING WITH THE NORTH LINE OF SAID PARCEL 'C' TO THE NW CORNER OF SAID PARCEL 'C'; THENCE S00°15'15"E, 604.45 FEET ALONG THE EAST LINE OF SAID PARCEL 'L' COINCIDING WITH THE WEST LINE OF SAID PARCEL 'C' TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF E NORTHSIDE DRIVE AS IT IS PRESENTLY ESTABLISHED; THENCE S89°43'48"W, 59.80 FEET ALONG SAID RIGHT-OF-WAY LINE TO A POINT; THENCE N00°12'03"W, 433.50 FEET TO A POINT; THENCE N89°33'27"W, 595.34 FEET TO A POINT ON THE WEST LINE OF SAID SECTION 31; THENCE N00°11'32"W, 411.95 FEET ALONG THE WEST LINE OF SAID SECTION 31 TO A POINT; THENCE S89°58'48"E, 293.21 FEET TO A POINT; THENCE N42°51'28"E, 362.86 FEET TO A POINT; THENCE N00°01'12"E, 1101.09 FEET TO A POINT; THENCE N89°58'48"W, 544.99 FEET TO A POINT ON THE WEST LINE OF SAID SECTION 31; THENCE N00°11'32"W, 395.43 FEET ALONG SAID WEST LINE TO THE POINT OF BEGINNING AND CONTAINING 41.44 ACRES MORE OR LESS.

R-1 TO R-1A

A PARCEL OF LAND IN PARCEL 'L', AN OFFICIAL PARCEL RECORDED IN BOOK 12998, PAGE 269 AT THE POLK COUNTY RECORDER'S OFFICE, ALL BEING IN THE S1/2 OF SECTION 36, TOWNSHIP 81 NORTH, RANGE 25 WEST OF THE 5th P.M., CITY OF POLK CITY, POLK COUNTY, IOWA THAT IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AS A POINT OF REFERENCE AT THE NW CORNER OF LOT 2, BIG CREEK TECHNOLOGY CAMPUS PLAT 5, AN OFFICIAL PLAT RECORDED IN BOOK 18112, PAGE 957-971 AT THE POLK COUNTY RECORDER'S OFFICE; THENCE S89°58'42"E, 589.75 FEET ALONG THE NORTH LINE OF SAID PARCEL 'L' TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG THE NORTH LINE OF SAID PARCEL 'L' S89°58'42"E, 2048.80 FEET TO A POINT, SAID POINT BEING THE E1/4 CORNER OF SAID SECTION 36; THENCE S00°11'32"E, 395.43 FEET ALONG THE EAST LINE OF SAID SECTION 36 TO A POINT; THENCE N89°58'48"W, 1350.50 FEET TO THE NORTHEAST CORNER OF LOT 1 OF BIG CREEK TECHNOLOGY CAMPUS PLAT 4, AN OFFICIAL PLAT RECORDED IN BOOK 18111, PAGE 742 AT THE POLK COUNTY RECORDER'S OFFICE, POLK CITY, POLK COUNTY, IOWA; THENCE N89°58'48"W, 215.73 FEET ALONG THE NORTH LINE OF SAID LOT 1 TO A POINT; THENCE S71°34'40"W, 205.63 FEET ALONG THE NORTH LINE OF SAID LOT 1 TO A POINT; THENCE S70°01'12"W, 344.74 FEET ALONG THE NORTH LINE OF SAID LOT 1 TO A POINT; THENCE N89°58'48"W, 62.50 FEET ALONG THE NORTH LINE OF SAID LOT 1 TO A POINT; THENCE N07°04'29"W, 214.30 FEET TO A POINT ON THE CENTERLINE OF E. VISTA LAKE AVENUE AS IT IS PRESENTLY ESTABLISHED; THENCE NORTHEASTERLY ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 1000.00 FEET AND A CHORD BEARING N77°35'48"E, AN ARC LENGTH OF 186.01 FEET TO A POINT; THENCE N17°43'56"W, 71.37 FEET TO A POINT OF CURVATURE; THENCE NORTHERLY ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 750.00 FEET AND A CHORD BEARING N08°50'07"W, AN ARC LENGTH OF 232.92 FEET TO A POINT OF TANGENCY; THENCE N00°03'42"E, 28.63 FEET TO THE POINT OF BEGINNING AND CONTAINING 19.95 ACRES MORE OR LESS.

be considered for rezoning as follows:

1) 16.27 acres, located east of 220 E. Vista Lake Avenue in the area known as Big Creek Technology Campus from zoning classification of A-1 to R-1, Single Family Detached Residential; and
2) 41.44 acres, located east of 220 E. Vista Lake Avenue in the area known as Big Creek Technology Campus from zoning classification of A-1 to R-1A, Single Family Residential.
3) 19.95 acres, located north of 220 E. Vista Lake Avenue in the area known as Big Creek Technology Campus from zoning classification of R-1 to R-1A, Single Family Residential

WHEREAS, on the 12th day of April 2021, after due notice and hearing as provided by law, the City Council now deems it reasonable and appropriate to rezone said properties.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF POLK CITY, IOWA:

Section 1: That the Municipal Code of the City of Polk City, Iowa, be and is hereby amended by rezoning the properties described above from A-1 to R-1, Single Family Detached Residential; and from A-1 to R-1A, Single Family Residential; and from R-1 to R-1A, Single Family Residential.

Section 2: All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 3: This ordinance shall be in full force and effect after its passage, approval and publication as provided by law.

PASSED AND APPROVED this _____ of _____ 2021.

_____
Jason Morse, Mayor

ATTEST:

_____
Jenny Gibbons, City Clerk

First Reading:
Second Reading:
Third Reading:
Date of Publication:

PROCLAMATION

WHEREAS, emergency medical services are a vital public service; and

WHEREAS, the members of emergency medical services teams are ready to provide lifesaving care to those in need 24 hours a day, seven days a week; and

WHEREAS, access to quality emergency care dramatically improves the survival and recovery rate of those who experience sudden illness or injury; and

WHEREAS, emergency medical services has grown to fill a gap by providing important, out of hospital care, including preventative medicine, follow-up care, and assess to telemedicine; and

WHEREAS, the emergency medical services system consists of first responders, emergency medical technicians, paramedics, emergency medical dispatchers, firefighters, police officers, educators, administrators, pre-hospital nurses, emergency nurses, emergency physicians, trained members of the public, and other out of hospital medical care providers; and

WHEREAS, the members of emergency medical services teams, whether career or volunteer, engage in thousands of hours of specialized training and continuing education to enhance their lifesaving skills; and

WHEREAS, it is appropriate to recognize the value and the accomplishments of emergency medical services providers by designating Emergency Medical Services Week.

NOW, THEREFORE, I, Jason Morse, Mayor of Polk City, Iowa, in recognition of this event do hereby proclaim the week of May 16-22, 2021, as **EMERGENCY MEDICAL SERVICES WEEK**

Dated this 10th day of May 2021.

_____

Jason Morse, Mayor

PROCLAMATION

WHEREAS, Public Works professionals focus on infrastructure, facilities and services that are of vital importance to sustainable and resilient communities and to the public health, high quality of life and well-being of the people of Polk City, Iowa; and

WHEREAS, these infrastructure, facilities and services could not be provided without the dedicated efforts of public works professional, who are engineers, managers and employees at all levels of government and the private sector, who are responsible for rebuilding, improving and protecting our nation's transportation, water supply, water treatment, and solid waste systems, public buildings, and other structures and facilities essential for our citizens; and

WHEREAS, it is in the public interest for citizens of all ages and civic leaders in Polk City, Iowa to gain knowledge of and to maintain a progressive interest and understanding of the importance of public works and public works programs in their respective communities; and

WHEREAS, the year 2021 marks the 61st annual National Public Works Week sponsored by the American Public Works Association/Canadian Public Works Association be it now.

NOW, THEREFORE, I, Jason Morse, Mayor of Polk City, Iowa, do hereby designate the week of May 16-22, 2021 as **NATIONAL PUBLIC WORKS WEEK** in Polk City Iowa, and I urge all citizens to pay tribute to our public works professionals, engineers, managers and employees by recognizing the substantial contributions they make to protecting our national health, safety, and quality of life.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the City of Polk City, Iowa to be affixed this 10th day of May 2021.

_____

Jason Morse, Mayor