

City of Knoxville  
City Council Meeting  
Monday, February 17, 2020 at 6:15 p.m.  
Municipal Building Council Chambers

1. Call To Order

**MEMBERS PRESENT:**

Mayor Brian Hatch \_\_\_\_, Council Member Megan Suhr \_\_\_\_, Council Member John Gotta \_\_\_\_, Council Member Dylan Morse \_\_\_\_, Council Member Justin Plum \_\_\_\_, Council Member Jyl DeJong \_\_\_\_\_.

2. Citizen/Public Comments  
Discussion

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3. Consent Agenda

3.I. Approve City Council Meeting Minutes Of February 4, 2020

Documents:

[02-04-20 COUNCIL MINUTES.PDF](#)

3.II. Approve Special Meeting Minutes Of January 30, 2020

Documents:

[SPECIAL COUNCIL SESSION 01-30-20.PDF](#)

3.III. Accept Water Board Minutes Of February 11, 2020

Documents:

[WATER MINUTES.PDF](#)

3.IV. Approve Class C Liquor License For Dollar General Store #3540

3.V. Approve Class C Liquor License For Hy-Vee Food Store

3.VI. Approve Resolution Accepting Easement For The Highway 14 Resurfacing Project In The City Of Knoxville, Iowa

Documents:

[RES 02-18-20 MOTTET INVESTMENT EASEMENT.PDF](#)  
[TEMPORARY EASEMENT-SIGNED.PDF](#)

3.VII. Accept January 2020 CSO Report

Documents:

[CSO JANUARY 2020 MEMO.PDF](#)

3.VIII. Accept January 2020 SRO Report

Documents:

4. Item Agenda

4.I. Public Hearing - FY 2020-21 City Budget

- A. Open Hearing
- B. Filing of Affidavit of Publications- 02/06/20
- C. Written Comments or Objections
- D. Oral Comments or Objections
- E. Close Hearing

4.I.i. Approve Resolution Adopting The 2020-21 Budget For The City Of Knoxville, Iowa

Documents:

[RES 02-15-20 ADOPT BUDGET.PDF](#)  
[CITY BUDGET FY2020-21.PDF](#)

4.II. Approve Resolution Approving An Agreement Between The City Of Knoxville, Iowa And The Marion County Humane Society Related To Animal Shelter And Control Services

Documents:

[RES 02-16-20 HUMANE SOCIETY.PDF](#)  
[HUMANE SOCIETY AGREEMENT.PDF](#)

4.III. Approve Resolution Approving Final Plans, Specifications, Form Of Contract And Estimate Of Cost For The 2020 Roche Street Culvert Replacement Project

Documents:

[RES 02-17-20 FINAL PLANS ROCHE ST PROJECT.PDF](#)  
[CONTRACTDOCS\\_2020-02-13\\_ROCHECULVERT.PDF](#)  
[PLANS\\_2020-02-13\\_FINALPLANS\\_ROCHECULVERT.PDF](#)  
[COSTEST\\_2020-02-13\\_FINALPLANS\\_ROCHESTCULVERT.PDF](#)  
[SCHEDULE\\_2020-02-13\\_ROCHECULVERT.PDF](#)

4.IV. Approve Payment Of Claims

5. Reports

- A. Mayor's Report
- B. City Manager's Report

6. Adjourn

Motion \_\_\_\_\_ Second \_\_\_\_\_  
Vote \_\_\_\_\_ Time \_\_\_\_\_

\_\_\_\_\_  
Tricia Kincaid, City Clerk



# COUNCIL MINUTES

## February 4, 2020

The City Council of the City of Knoxville, Iowa convened in regular session Tuesday, February 4, 2020 at 6:15p.m. in the City Hall Council Chambers. Mayor Brian Hatch presided and the following Council Members were present: Megan Suhr, John Gotta, Dylan Morse, Justin Plum and Jyl DeJong. Staffs present were City Manager Aaron Adams, City Clerk Tricia Kincaid,, Police Chief Dan Losada, Fire Chief Cal Wyman, Parks and Rec Director Brandon Nemmers, Cemetery and Street Supervisor Kevin DeLong.

Mayor Hatch asked for Citizen/Public Comments regarding items not on the agenda. There were none.

Motion by Suhr; seconded by Plum to approve the consent agenda as follows, all ayes.

1. Approve City Council Meeting Minutes of January 20, 2020
2. Approve Special Council Meeting of January 15, 2020
3. Approve Special Council Meeting of January 23, 2020
4. Accept Airport Commission Meeting Minutes of December 14, 2019
5. Accept Housing Board Meeting Minutes of December 16, 2019
6. Approve December 2019 Financials
7. Approve Resolution to approve tax abatement application for construction of a new single-family dwelling at 1401 Deer Run Drive
8. Approve Resolution accepting easement for the Highway 14 Resurfacing Project in the City of Knoxville, Iowa
9. Accept Fire Department 2019 End of Year Activity Report

Mayor Hatch announced now is the time and place for a public hearing for Maximum Property Tax Dollars for Fiscal Year 2020/2021. The hearing was opened at 6:16 p.m., the affidavit of publication was filed on 1/23/2020. City Manager Aaron Adams explained this is part of a new state requirement passed through the legislature last year. There were no written comments or objections and no oral comments or objections. Motion by Gotta; seconded by Morse to close the hearing at 6:18 p.m., all ayes.

Motion by Suhr; seconded by DeJong to approve Resolution approving Fiscal Year 2020-2021 Maximum Property Tax Dollars, all ayes.

Motion by Morse; seconded by Gotta to set a public hearing for February 17, 2020 at 6:15 p.m. to approve Fiscal Year 2020/2021 Budget, all ayes.

Resident Tab Mart of 1314 Woodland Drive in Knoxville stood before council and voiced his concerns on snow removal from the January 17<sup>th</sup> snow storm. He felt the snow should have been removed sooner than it was. In the past crews have been out during the day and the night getting snow cleared. The Mayor explained that when that occurred staffing was different. We currently do not have the staffing for the city to be able to remove snow in that same manner. We try and take on the snow the best we can and each snow is handled differently. Council Member Suhr asked Kevin to tell council how he made the decision he did. Kevin explained the weather forecast was predicting a quarter of an inch of ice overnight and the highs the following three days were supposed to be 10-11 degrees. If the snow would have been removed then ice on top with the colder temperatures putting salt/sand down would not have melted it. It would have made the conditions worse. The decision was made that it would be better to have to drive in the snow than to drive on ice.

Motion by Morse; seconded by Suhr to approve Resolution accepting bid, awarding contract and approving the certificate of insurance for the Competine Creek Trail Phase 2 with Absolute Concrete Construction, Inc in the amount of \$969,976.98. all ayes.

Hannah Vander Veer from the Knoxville Chamber of Commerce gave a 2019 year in review presentation.

Motion by Suhr; seconded by Morse to remove from the table the December 2019 SRO Report, all ayes.

Motion by Suhr, seconded by Gotta to approve the December 2019 SRO Report. Police Chief Losada explained the numbers were correct on the SRO Report and explained that while the report showed the officer working the streets, he would still handle issues that would arise at the school. All ayes.

Motion by Suhr; seconded by Morse to approve Marion County using East Elementary while they are under a renovation at the Courthouse. There would be a lease and hold harmless agreement in place. all ayes.

Motion by Morse; seconded by Suhr to approve payment of claims; all ayes.

89518	AFLAC	AFLAC-DIS/POST	\$310.13
89519	COLLECTION SERVICES CENTER	CHILD SUPPORT	\$1,928.62
89520	ICMA RETIREMENT TRUST	ICMA	\$1,079.71
89521	MUNICIPAL FIRE & POLICE	MFPRSI	\$19,886.58
89522	KNOXVILLE FIRE & RESCUE ASSC	FIRE DUES	\$53.76
89523	CITY OF KNOXVILLE	SLF FND BEN-F	\$12,879.94
89524	DELTA DENTAL OF IOWA	DELTA DENTAL	\$578.62
89525	PLIC-SBD GRAND ISLAND	LIFE INSURANCE	\$670.07
89526	EMPLOYEE BENEFIT SYSTEMS	HEALTH FAM BEN	\$34,486.84
89592	ACCO UNLIMITED CORPORATION	ACID AND CHLORINE	\$822.20
89593	ACCOUNTING CONSULTANTS	GEMT COST REPORTING	\$2,500.00
89594	ALEX AIR APPARATUS INC.	LADDER TRUCK EQUIP	\$1,880.80
89595	ALEXIS FIRE EQUIPMENT	QUICK FIST CLAMP BRACKETS	\$335.38
89596	ALLIANT ENERGY	800 S PARK LN REC CENTER	\$6,058.80
89597	ALLIED OIL & TIRE COMPANY	DEF WINDSHIELD FLUID	\$114.22
89598	AMERICAN MILLING SERVICES	MILLING AT MAIN AND 2ND	\$1,500.00
89599	BINDER LIFT LLC	BINDER LIFT FOR AMBULANCE	\$2,836.00
89600	BOUND TREE MEDICAL LLC	EMS SUPPLIES	\$382.20
89601	BRINDLEE MOUNTAIN	BROKER FOR SALE OF 311	\$1,200.00
89602	BRUENING ROCK PRODUCTS INC	SAND	\$336.49
89603	CANON FINANCIAL SERVICES INC.	COPIER MAINTENANCE	\$676.08
89604	CAPITAL CITY	BROOM BRISTLE X 34	\$704.44
89605	CENTRAL IOWA DISTRIBUTING INC	TILE BRITE	\$583.72
89606	COFFEE CONNECTION	PRESS CONFERENCE	
89607	SHANNON COLLYAR	REFRESHMENTS	\$131.61
89608	DAN'S PLUMBING	REFUND FOR SWIM LESSONS	\$62.00
89609	DANKO EMERGENCY EQUIP	NEW TOILET	\$338.60
89610	EMBLEM ENTERPRISES INC	NAME PATCH	\$68.00
89610	EMBLEM ENTERPRISES INC	KNOXVILLE POLICE PATCHES	\$629.98
89611	EMPLOYEE BENEFIT SYSTEMS	SAFE-T FUND	\$5,379.61
89612	GALLS INC	UNIFORM PANTS/SHIRTS	\$63.98

89613	HAWKEYE TRUCK EQUIPMENT	SALT SPREADER AND INSTALL	\$2,333.01
89614	HICKLIN DOOR SERVICES	GARAGE DOOR INSTALL	\$1,563.73
89615	HUBES GARAGE	SERVICE ON 2018 TAHOE	\$47.26
89616	IOWA DIVISION OF LABOR SERVICE	BOILER INSPECTION	\$160.00
	IOWA LAW ENFORCEMENT	EVALUATION OF MMPI CODY	
89617	ACADEMY	NICHOL	\$150.00
89618	ISLEY WELDING & REPAIR	36 1/2 IN HOSE AND FITTINGS	\$63.80
89619	JOURNAL EXPRESS	12/2/19 MEETING MINUTES	\$270.99
89620	JUMP START WELLNESS & FITNESS	LGI AND LIFEGUARD RECERTIFICA	\$113.00
		MONTHLY TESTING FOR DEC	
89621	KEYSTONE LABORATORIES INC	WWTP	\$1,206.00
89622	JOEL KIMPSTON-BURKGREN	BOOT REIMBURSEMENT	\$100.00
89623	KNOXVILLE HOSPITAL & CLINICS	DECEMBER MEDS	\$164.50
89624	KNOXVILLE WATER WORKS	SEWER RENT COLLECTION	\$4,166.67
89625	MARION COUNTY RECORDER	QUIT CLAIM DEED SANGER	\$53.00
89626	MENARDS	WORKSHOP VISE	\$109.97
	MICHAEL TODD AND COMPANY		
89627	INC	PLOW MARKERS	\$182.40
89629	MIDAMERICAN ENERGY COMPANY	1703 E PLEASANT ST TRT PLT	\$15,914.64
	MIDWEST OFFICE TECHNOLOGY		
89630	INC	COPIER	\$191.91
89631	CROSSROADS 5/92 NAPA	5 GAL HYDAULIC FLUID	\$269.43
89632	BRANDON NEMMERS	MILEAGE TO AMES	\$82.36
89633	NORRIS ASPHALT PAVING INC	COLD PATCH	\$939.30
89634	O'REILLY AUTOMOTIVE INC	WIPER BLADES X 2	\$149.06
89635	OFFICE DEPOT	PAPER	\$142.32
		REMOVE/REPAIR TUBE HEAT	
89636	PLUMB TECH MECHANICAL INC.	GARAGE	\$2,637.94
89637	PROVANTAGE LLC	EXCHANGE SERVER SOFTWARE	\$10,677.99
		REPROGRAM RADIO FOR LADDER	
89638	RACOM CORPORATION INC	TRK	\$105.00
89639	RED LION RENEWABLES LLC	STREET SHOP	\$75.97
89640	ROMAR	BRAKE PADS	\$56.36
		UPDATE PHONES FOR NEW	
89641	SCI COMMUNICATIONS INC	OFFICERS	\$95.00
89642	K & L THOMPSON, LLC	TIRE FOR FALCON	\$132.35
89643	SNYDER & ASSOCIATES INC	ROCHE ST CULVERT	\$23,897.50
89644	SPAHN & ROSE LUMBER	1X2X6 X3	\$86.87
89645	STRYKER SALES CORPORATION	GATEWAY DATA SUBSCRIPTION	\$897.00
89646	STUYVESANT,BENTON & JUDISCH	MONTHLY RETAINER	\$2,000.00
89647	US CELLULAR	GPS CELL PHONE	\$52.47
89648	VERIZON	PD CELL PHONES DEC-JAN	\$450.77
89649	WEX BANK	RESCUE	\$5,320.74
13169197	MASSMUTUAL	HARTFORD	\$104.42
	IA PUBLIC EMPLOYEES		
13169198	RETIREMENT	IPERS - REGULAR	\$23,265.88
13169199	TREASURER STATE OF IOWA	STATE TAXES	\$8,216.00

13169200	IRS WITHHOLDING PAYMENTS	FED/FICA TAX	\$21,134.87
13169201	TOTAL ADMINISTRATIVE SERVICES	FLEX- MEDICAL	\$1,329.96
13169202	TOTAL ADMINISTRATIVE SERVICES	WATER DEPT TASC	\$254.61

Under Mayor's Report - None

Under City Manager Report, City Manager Aaron Adams stated, planning to have a work session on Monday, January 17<sup>th</sup> at 5:00 p.m. in the council chambers to discuss some of the council's priorities and potential projects.

Police Chief Dan Losada, testing of officer applicants is scheduled for Friday, February 14, 2020.

Motion by Gotta; seconded by DeJong to adjourn at 6.55 p.m., all ayes.

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Brian Hatch, Mayor

ATTEST:

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Tricia Kincaid, City Clerk

**COUNCIL MINUTES**  
**January 30, 2020**

The City Council of the City of Knoxville, Iowa convened in special session Thursday, January 30, 2020 at 5:00 pm. at 1001 N Harlan Street. Mayor Brian Hatch presided and the following Council Members were present: Megan Suhr, John Gotta, Dylan Morse, Justin Plum and Jyl DeJong. Staffs present were City Manager Aaron Adams, Assistant City Manager Heather Ussery and City Clerk Tricia Kincaid

Bob Wims gave a presentation on Knoxville Economic Development Corporation and a tour of the home at 1001 N Harlan Street.

Motion by Gotta; seconded by Morse to adjourn at 5:30 p.m., all ayes.

ATTEST:

\_\_\_\_\_  
Brian Hatch, Mayor

\_\_\_\_\_  
Tricia Kincaid, City Clerk

Regular Meeting  
Knoxville Water Works  
Board of Trustees  
February 11, 2020

The Board of Trustees of the Knoxville Water Works met in a regular session at 5:30 P.M. on February 11, 2020 at the Water Works office. The meeting was called to order by Chairman Merle Vickroy, with Trustee Dwight Sommar present. Trustee Kathy Caviness was absent.

Trustee Sommar motioned and Vickroy seconded to approve the agenda as presented.

Roll Call- AYES: Vickroy, Sommar    NAYS: None    ABSENT: Caviness

A motion was made by Sommar and seconded by Vickroy to approve the Consent Agenda items as follows:

1. Approval of the minutes of the January 14, 2020 regular Board Meeting.
2. Approval of the audited claims.
3. Approval of the financial reports for January.

Summary of receipts for January-

Operating Funds = \$	150,667.16
Trust Funds = \$	<u>700.00</u>
	\$ 151,367.16

Summary of disbursements for January-

Operating Funds = \$	89,827.61
Trust Funds = \$	<u>1,255.00</u>
	\$ 91,082.61

Roll Call- AYES: Vickroy, Sommar    NAYS: None    ABSENT: Caviness

The General Manager reported to the Board on operational and personnel issues.

Trustee Sommar made a motion to adjourn the meeting. Trustee Vickroy seconded.

Roll Call- AYES: Vickroy, Sommar NAYS: None ABSENT: Caviness

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Merle Vickroy  
Chairman

Attest:

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Brian W. Bailey  
Secretary and General Manager

RESOLUTION NO. 02-18-20

RESOLUTION ACCEPTING EASEMENT FOR THE HIGHWAY 14 RESURFACING PROJECT IN  
THE CITY OF KNOXVILLE, IOWA

WHEREAS, as part of the City of Knoxville Highway 14 Resurfacing Project in the City of Knoxville, Marion County, Iowa, the City and its Engineers have determined that the construction of the project will require obtaining certain easements in order to complete said construction; and,

WHEREAS, the City has received an easement from the following person as follows:

- A. Mottet Investments, LLC.

WHEREAS, it is necessary for the City to accept this easement and proceed with recording of same.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Knoxville, Iowa, that the above referenced easement for the Highway 14 Resurfacing Project is hereby accepted by the City and the City Clerk is authorized to record said easement with the Marion County Recorder.

PASSED AND APPROVED by the City Council this 17<sup>th</sup> day of February 2020.

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Brian J. Hatch, MAYOR

ATTEST:

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Tricia Kincaid, CITY CLERK

Prepared by: Robert L. Stuyvesant	P.O. Box 517, Carlisle, IA 50047	515/989-3263
Name	Address	Phone
When Recorded Return to:		
City of Knoxville	305 S. Third St., Knoxville, IA 50138	641/828-0550
Name	Address	Phone

**TEMPORARY CONSTRUCTION EASEMENT**

KNOW ALL PERSONS BY THESE PRESENTS that the undersigned property owner (hereinafter called "Grantor"), for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, does hereby convey unto the CITY OF KNOXVILLE, IOWA, a municipal corporation (hereinafter called "City"), a temporary construction easement over, on, through, across and within the following described real estate:

See attached Exhibit "A"

(hereinafter called "Easement Area"), for the purpose of the City using said real estate, as described, during the construction of the improvements over, on, through, across and within said Easement Area.

This Easement shall be subject to the following terms and conditions:

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 during the City's use of said Temporary Easement.
  
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 during the City's use of said Temporary Easement. 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. **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.
4. **MAINTENANCE.** The City shall not be responsible for any maintenance of the land located within the Easement Area whatsoever and that responsibility shall remain with the Grantor, its grantees, assigns or transferees. The City may, however, perform such maintenance should it determine in its sole discretion such maintenance is needed.
5. **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.
6. **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 to 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.
7. **EASEMENT BENEFIT.** This Easement shall be for the benefit of the City, its successors and assigns, and its permittees and licensees.
8. **APPROVAL BY THE 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.

Grantor does HEREBY COVENANT with the City that (i) Grantor holds said real estate described in this Easement by title in fee simple; (ii) that Grantor has good and lawful authority to convey the same; and (iii) said Grantor covenants to WARRANT AND DEFEND the said premises against the claims of all persons whomsoever.

Each of the undersigned hereby relinquishes all rights of dower, homestead and distributive share, if any, in and to the interests conveyed by this Easement.

Words and phrases herein, including acknowledgment hereof, shall be construed as in the singular or plural number, and as masculine or feminine gender, according to the context.

Signed this 13 day of ~~November~~ <sup>February</sup>, ~~2019~~ <sup>2020</sup>.

MOTTET INVESTMENTS, LLC

By: AJ MOTTET

Name: AJ MOTTET

Title: PRESIDENT

STATE OF IOWA            )  
  )ss  
COUNTY OF MARION    )

This record was acknowledged before me on ~~November 13~~ <sup>February</sup>, ~~2019~~ <sup>2020</sup>, by AJ Mottet as President of Mottet Investments, LLC

Heather Ussery  
Notary Public in and for the State of Iowa



ACCEPTANCE BY CITY

STATE OF IOWA            )  
  )ss  
COUNTY OF MARION    )

I, \_\_\_\_\_, City Clerk of the City of Knoxville, Iowa, do hereby certify that the within and foregoing Easement was duly approved and accepted by the City Council of said City of Knoxville by Resolution No. \_\_\_\_\_, passed on the \_\_\_\_ day of \_\_\_\_\_, 2019, and this certificate is made pursuant to authority contained in said Resolution.

Signed this \_\_\_\_ day of \_\_\_\_\_, 2019

\_\_\_\_\_  
City Clerk of Knoxville, Iowa

This record was acknowledged before me on \_\_\_\_\_, 2019, by Tricia Kincaid as CITY CLERK of Knoxville, Iowa.

\_\_\_\_\_  
Notary Public in and for the State of Iowa

DESCRIPTION OF TEMPORARY CONSTRUCTION EASEMENTS FOR PARCEL NO. 11

MARION COUNTY

PROJECT NO. NHSN-014-3(52)--2R-63

THE TEMPORARY EASEMENT GRANTED FOR CONSTRUCTION IS TO LAND DESCRIBED AS FOLLOWS:

A PART OF BLOCK 27, BAKER AND JONES ADDITION TO THE CITY OF KNOXVILLE, IOWA, AN OFFICIAL PLAT NOW INCLUDED IN AND FORMING A PART OF THE CITY OF KNOXVILLE, MARION COUNTY, IOWA, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID BLOCK 27; THENCE SOUTH 89°50'30" EAST ALONG THE NORTH LINE OF SAID BLOCK 27, A DISTANCE OF 11.50 FEET; THENCE SOUTH 00°19'02" WEST, 15.00 FEET; THENCE NORTH 89°50'30" WEST, 11.50 FEET TO THE WEST LINE OF SAID BLOCK 27; THENCE NORTH 00°19'02" EAST ALONG SAID WEST LINE, 15.00 FEET TO THE POINT OF BEGINNING AND CONTAINING 173 S.F.

NOTE: THE NORTH LINE OF SAID BLOCK 27 IS ASSUMED TO BEAR SOUTH 89°50'30" EAST.





# Memo

**To:** City Council  
**From:** Chief Dan Losada  
**Date:** February 17, 2020  
**Re:** January CSO Report

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In January 2020 Community Service Officer Arlene Worrall spent 78 hours on Code Enforcement issues 98 hours in the Police Department. Part Time CSO II Patrick Marti worked 84 hours this month. The following issues were dealt with in January.

Debris Storage	4	
Exterior Walls	2	
Junk Vehicle	4	
Mandatory Garbage	0	
Snow on Sidewalks		127
Vehicle Parked in Yard	1	
Vehicle Parked in Street more than 24 hrs		12
Citations Issued	5	
Court Dates		0
Parking Citations Total	51	
Properties Inspected:		136
Property Owners/Residents Contacted:		137
Work Hired Out		60 Properties for Snow Removal



# Memo

**To:** City Council  
**From:** Chief Dan Losada  
**Date:** February 17, 2020  
**Re:** January SRO Report

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In January 2012 SRO Keller did the following.

Truancy/Welfare Checks:	6
Investigations/Investigation Assists:	7
Parent Meetings/Phone Calls:	25
Juvenile Court Referrals:	1
Administration Meetings:	4
Teacher/Faculty Assists:	22
Education Programs:	6
Staff Training:	0
Safety Planning:	1
Event Supervision:	0
Information – Leads:	7
Student Mentoring:	24
Misc. Other Calls:	7
Patrol Hours:	11.5

SRO off: 2, 6, 9, 10, 31

SRO working patrol: 3, 20, 21, 23, 27, 28

SRO at training: 16

SRO out sick: 14, 15

No School: 1, 13, 17, 24

**RESOLUTION NO. 02-15-20**

**RESOLUTION ADOPTING THE 2020-21 BUDGET FOR THE CITY OF  
KNOXVILLE, IOWA**

WHEREAS, the City Council of Knoxville, Iowa, has prepared a detailed budget for the fiscal year 2020-21; and

WHEREAS, the City Council has held a public hearing to review said budget and to receive written and oral comments or objections from the public to said budget, and

WHEREAS, the City Council, pursuant to Chapter 384.16(5) of the Code, desires to adopt said budget.

NOW, THEREFORE, BE IT RESOLVED by the City Council of Knoxville, Iowa that the budget for the 2020-21 fiscal year is hereby adopted.

PASSED AND APPROVED this 17th day of February, 2020.

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Brian Hatch, Mayor

ATTEST:

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Tricia Kincaid, City Clerk

# 63-597

## Adoption of Budget and Certification of City Taxes

FISCAL YEAR BEGINNING JULY 1, 2020 - ENDING JUNE 30, 2021

Resolution No.: 2/15/2020

The City of: Knoxville

County Name: MARION

Date Budget Adopted: 2/17/2020

The below signed certifies that the City Council, on the date stated above, lawfully approved the named resolution adopting a budget for next fiscal year, as summarized on this and the supporting pages. Attached is Long Term Debt Schedule Form 703 which lists any and all of the debt service obligations of the City.

(641) 828-0550  
Telephone Number

Signature

County Auditor Date Stamp

### January 1, 2019 Property Valuations

	With Gas & Electric	Without Gas & Electric	Last Official Census
Regular	2a <u>217,737,596</u>	2b <u>213,772,008</u>	7,313
DEBT SERVICE	3a <u>236,944,157</u>	3b <u>232,978,569</u>	
Ag Land	4a <u>517,981</u>		

### TAXES LEVIED

Code Sec.	Dollar Limit	Purpose	(A) Request with Utility Replacement	(B) Property Taxes Levied	(C) Rate
384.1	8 10000	Regular General levy	5 <u>1,763,675</u>	<u>1,731,553</u>	43 <u>8.10000</u>
(384)		Non-Voted Other Permissible Levies			
12(8)	0 67500	Contract for use of Bridge	6	0	44 0
12(10)	0 95000	Opr & Maint publicly owned Transit	7	0	45 0
12(11)	Amt Nec	Rent, Ins. Maint of Civic Center	8	0	46 0
12(12)	0 13500	Opr & Maint of City owned Civic Center	9	0	47 0
12(13)	0 06750	Planning a Sanitary Disposal Project	10	0	48 0
12(14)	0 27000	Aviation Authority (under sec.330A.15)	11	0	49 0
12(15)	0 06750	Levee Impr. fund in special charter city	13	0	51 0
12(17)	Amt Nec	Liability, property & self insurance costs	14 <u>46,400</u>	<u>45,555</u>	52 <u>0.21310</u>
12(21)	Amt Nec	Support of a Local Emerg. Mgmt. Comm.	462	0	465 0
(384)		Voted Other Permissible Levies			
12(1)	0 13500	Instrumental/Vocal Music Groups	15	0	53 0
12(2)	0 81000	Memorial Building	16	0	54 0
12(3)	0 13500	Symphony Orchestra	17	0	55 0
12(4)	0 27000	Cultural & Scientific Facilities	18	0	56 0
12(5)	As Voted	County Bridge	19	0	57 0
12(6)	1 35000	Missi or Missouri River Bridge Const.	20	0	58 0
12(9)	0 03375	Aid to a Transit Company	21	0	59 0
12(16)	0 20500	Maintain Institution received by gift/devise	22	0	60 0
12(18)	1 00000	City Emergency Medical District	463	0	466 0
12(20)	0 27000	Support Public Library	23 <u>58,789</u>	<u>57,718</u>	61 <u>0.27000</u>
28E.22	1 50000	Unified Law Enforcement	24	0	62 0
		<b>Total General Fund Regular Levies (5 thru 24)</b>	25 <u>1,868,864</u>	<u>1,834,826</u>	
384.1	3 00375	Ag Land	26 <u>1,556</u>	<u>1,556</u>	63 <u>3.00375</u>
		<b>Total General Fund Tax Levies (25 + 26)</b>	27 <u>1,870,420</u>	<u>1,836,382</u>	Do Not Add
		Special Revenue Levies			
384.8	0 27000	Emergency (if general fund at levy limit)	28	0	64 0
384.6	Amt Nec	Police & Fire Retirement	29 <u>202,000</u>	<u>198,321</u>	0.92772
	Amt Nec	FICA & IPERS (if general fund at levy limit)	30 <u>366,803</u>	<u>360,122</u>	1.68461
Rules	Amt Nec	Other Employee Benefits	31 <u>535,769</u>	<u>526,012</u>	2.46062
		<b>Total Employee Benefit Levies (29,30,31)</b>	32 <u>1,104,572</u>	<u>1,084,455</u>	65 <u>5.07295</u>
		<b>Sub Total Special Revenue Levies (28+32)</b>	33 <u>1,104,572</u>	<u>1,084,455</u>	
		Valuation			
386	As Req	With Gas & Elec	Without Gas & Elec		
		SSMID 1 (A)	(B)	34	66 0
		SSMID 2 (A)	(B)	35	67 0
		SSMID 3 (A)	(B)	36	68 0
		SSMID 4 (A)	(B)	37	69 0
		SSMID 5 (A)	(B)	555	565 0
		SSMID 6 (A)	(B)	556	566 0
		SSMID 7 (A)	(B)	1177	### 0
		SSMID 8 (A)	(B)	1185	### 0
		<b>Total Special Revenue Levies</b>	39 <u>1,104,572</u>	<u>1,084,455</u>	
384.4	Amt Nec	Debt Service Levy	40 <u>76.10(6)</u>	<u>1,143,156</u>	70 <u>4.90670</u>
384.7	0 67500	Capital Projects (Capital Improv. Reserve)	41	0	71 0
		<b>Total Property Taxes (27+39+40+41)</b>	42 <u>4,137,606</u>	<u>4,063,993</u>	72 <u>18.56275</u>

**COUNTY AUDITOR - I certify the budget is in compliance with ALL the following:**  
Budgets that DO NOT meet ALL the criteria below are not statutorily compliant & must be returned to the city for correction.

- 1) The prescribed Notice of Public Hearing Budget Estimate (Form 631.1) was lawfully published, or posted if applicable, filed proof was evidenced
- 2) Budget hearing notices were published or posted not less than 10 days, nor more than 20 days, prior to the budget hearing
- 3) Adopted property taxes do not exceed published or posted amounts
- 4) Adopted expenditures do not exceed published or posted amounts in each of the nine program areas, or in total
- 5) Number of the resolution adopting the budget has been included at the top of this form
- 6) The budget file uploaded to the SUBMIT Area matched the paper copy certified by the city to this office
- 7) The long term debt schedule (Form 703) shows sufficient payment amounts to pay the G.O. debt certified by the city to this office

(County Auditor)

<b>CITY NAME</b> Knoxville	<b>NOTICE OF PUBLIC HEARING -PROPOSED PROPERTY TAX LEVY</b> Fiscal Year July 1, 2020 - June 30, 2021	<b>CITY CODE</b> 63-597
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The City Council will conduct a public hearing on the proposed Fiscal Year City property tax levy as follows:

<b>Meeting Date:</b> 2/4/2020	<b>Meeting Time:</b> 6:15 p.m.	<b>Meeting Location:</b> City Hall 305 S. Third, Knoxville, IA 50138
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At the public hearing any resident or taxpayer may present objections to, or arguments in favor of the proposed tax levy. After adoption of the proposed tax levy, the Council will publish notice and hold a hearing on the proposed city budget.

City Web Site (if available):		City Telephone Number:			
Iowa Department of Management		Current Year Certified Property Tax 2019/2020	Budget Year Effective Property Tax 2020/2021**	Budget Year Proposed Maximum Property Tax 2020/2021	Annual % CHG
Regular Taxable Valuation	1	198,447,107	217,737,596	217,737,596	
Tax Levies:					
Regular General	2	\$1,607,422	\$1,607,422	\$1,763,675	
Contract for Use of Bridge	3	\$0	\$0		
Opr & Maint Publicly Owned Transit	4	\$0	\$0		
Rent, Ins. Maint. Of Non-Owned Civ. Ctr.	5	\$0	\$0		
Opr & Maint of City-Owned Civic Center	6	\$0	\$0		
Planning a Sanitary Disposal Project	7	\$0	\$0		
Liability, Property & Self-Insurance Costs	8	\$46,400	\$46,400	\$46,400	
Support of Local Emer. Mgmt. Commission	9	\$0	\$0		
Emergency	10	\$0	\$0		
Police & Fire Retirement	11	\$225,000	\$225,000	\$202,000	
FICA & IPERS	12	\$308,576	\$308,576	\$366,803	
Other Employee Benefits	13	\$522,505	\$522,505	\$535,769	
<b>*Total 384.15A Maximum Tax Levy</b>	14	\$2,709,903	\$2,709,903	\$2,914,647	<b>7.56%</b>
<b>Calculated 384.15A Maximum Tax Rate</b>	15	\$13.65554	\$12.44573	\$13.38605	

Explanation of significant increases in the budget:  
Increased property valuations.

If applicable, the above notice also available online at:  
[www.knoxvilleia.gov](http://www.knoxvilleia.gov)

\*Total city tax rate will also include voted general fund levy, debt service levy, and capital improvement reserve levy

\*\*Budget year effective property tax rate is the rate that would be assessed for these levies if the dollars requested is not changed in the coming budget year



Fund Balance Worksheet for City of **Knoxville**

		(1) <b>Annual Report FY 2019</b>		(2) <b>Re-Estimated FY 2020</b>		(3) <b>Budget FY 2021</b>							
		General (A)	Special Rev (B)	TIF Special Rev (C)	Debt Serv (D)	Capt Proj (E)	Permanent (G)	Total Government (H)	Proprietary (I)	Grand Total (J)			
1	Beginning Fund Balance July 1 (pg 5, line 134) *	1,741,277	1,890,147	32,266	121,708	7,978,028	276,354	12,039,780	3,764,830	15,804,610			
2	Actual Revenues Except Beg Bal (pg 5, line 132) *	3,901,465	3,228,566	798,635	1,528,253	1,229,517	4,208	10,690,644	3,471,947	14,162,591			
3	Actual Expenditures Except End Bal (pg 9, line 136) *	3,787,419	2,938,281	464,212	1,566,779	5,558,079	0	14,314,770	2,613,315	16,928,085			
4	Ending Fund Balance June 30 (pg 9, line 147) *	1,855,323	2,180,432	366,689	83,182	3,649,466	280,562	8,415,654	4,623,462	13,039,116			
		<b>General</b>	<b>Spec Rev</b>	<b>TIF Special Rev</b>	<b>Debt Serv</b>	<b>Capt Proj</b>	<b>Permanent</b>	<b>Tot Govt</b>	<b>Proprietary</b>	<b>Grand Total</b>			
5	Beginning Fund Balance	1,855,323	2,180,432	366,689	83,182	3,649,466	280,562	8,415,654	4,623,462	13,039,116			
6	Re-Est Revenues	3,777,459	2,925,930	712,475	1,739,625	2,420,292	4,925	11,580,706	6,507,474	18,088,180			
7	Re-Est Expenditures	3,735,856	2,723,082	0	1,696,526	3,880,200	0	12,035,664	6,698,241	18,733,905			
8	Ending Fund Balance	1,896,926	2,383,280	1,079,164	126,281	2,189,558	285,487	7,960,696	4,432,695	12,393,391			
		<b>General</b>	<b>Spec Rev</b>	<b>TIF Special Rev</b>	<b>Debt Serv</b>	<b>Capt Proj</b>	<b>Permanent</b>	<b>Tot Govt</b>	<b>Proprietary</b>	<b>Grand Total</b>			
9	Beginning Fund Balance	1,896,926	2,383,280	1,079,164	126,281	2,189,558	285,487	7,960,696	4,432,695	12,393,391			
10	Revenues	4,399,870	2,985,693	689,475	1,563,495	2,178,024	4,925	11,821,482	4,846,442	16,667,924			
11	Expenditures	4,122,293	2,825,934	448,475	1,525,484	3,016,000	0	11,938,186	5,926,396	17,864,582			
12	Ending Fund Balance	2,174,503	2,543,039	1,320,164	164,292	1,351,582	290,412	7,843,992	3,352,741	11,196,733			

\* The figures in section (1) are taken from FORM F-66(A-2) STATE OF IOWA FINANCIAL REPORT FOR FISCAL YEAR ENDED JUNE 30, 2019

\*\* The remaining two sections are filled in by the software once ALL worksheets are completed.

RE-ESTIMATED EXPENDITURES SCHEDULE PAGE 1

RE-ESTIMATED Fiscal Year Ending 2020

Fiscal Years

GOVERNMENT ACTIVITIES (A)	(B)	GENERAL (C)	SPECIAL REVENUE (D)	TIF SPECIAL REVENUES (E)	DEBT SERVICE (F)	CAPITAL PROJECTS (G)	PERMANENT (H)	PROPRIETARY (I)	RE-ESTIMATED 2020 (J)	ACTUAL 2019 (K)
<b>PUBLIC SAFETY</b>										
Police Department/Crime Prevention	1	1,188,550	449,760						1,638,310	1,526,688
Jail	2								0	0
Emergency Management	3								0	0
Flood Control	4								0	0
Fire Department	5	177,950	34,560						212,510	122,400
Ambulance	6	550,620	132,245						682,865	677,123
Building Inspections	7								0	0
Miscellaneous Protective Services	8								0	0
Animal Control	9	20,100							20,100	15,837
Other Public Safety	10								0	-1
<b>TOTAL (lines 1 - 10)</b>	<b>11</b>	<b>1,937,220</b>	<b>616,565</b>				<b>0</b>		<b>2,553,785</b>	<b>2,342,047</b>
<b>PUBLIC WORKS</b>										
Roads, Bridges, & Sidewalks	12	0	762,608						762,608	988,598
Parking - Meter and Off-Street	13								0	0
Street Lighting	14	35,000							35,000	30,972
Traffic Control and Safety	15		42,700						42,700	27,868
Snow Removal	16								0	0
Highway Engineering	17								0	0
Street Cleaning	18								0	0
Airport (if not Enterprise)	19								0	0
Garbage (if not Enterprise)	20		0						0	0
Other Public Works	21	50	26,285						26,335	25,295
<b>TOTAL (lines 12 - 21)</b>	<b>22</b>	<b>35,050</b>	<b>831,593</b>				<b>0</b>		<b>866,643</b>	<b>1,072,733</b>
<b>HEALTH &amp; SOCIAL SERVICES</b>										
Welfare Assistance	23								0	0
City Hospital	24								0	0
Payments to Private Hospitals	25								0	0
Health Regulation and Inspection	26								0	0
Water, Air, and Mosquito Control	27								0	0
Community Mental Health	28								0	0
Other Health and Social Services	29								0	0
<b>TOTAL (lines 23 - 29)</b>	<b>30</b>	<b>0</b>	<b>0</b>				<b>0</b>		<b>0</b>	<b>0</b>
<b>CULTURE &amp; RECREATION</b>										
Library Services	31	323,940	66,587						390,527	395,974
Museum, Band and Theater	32								0	0
Parks	33	119,994	16,427						136,421	111,037
Recreation	34	422,129	84,068						506,197	530,880
Cemetery	35	169,094	45,471						214,565	183,559
Community Center, Zoo, & Marina	36								0	0
Other Culture and Recreation	37								0	0
<b>TOTAL (lines 31 - 37)</b>	<b>38</b>	<b>1,035,157</b>	<b>212,553</b>				<b>0</b>		<b>1,247,710</b>	<b>1,221,450</b>

**RE-ESTIMATED EXPENDITURES SCHEDULE PAGE 2**  
**RE-ESTIMATED Fiscal Year Ending 2020**

Fiscal Years

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
GOVERNMENT ACTIVITIES CONT.	GENERAL	SPECIAL	TIF	DEBT	CAPITAL	PERMANENT	PROPRIETARY	RE-ESTIMATED	ACTUAL	
	REVENUES	REVENUES	SPECIAL	SERVICE	PROJECTS			2020	2019	
	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	
<b>GOVERNMENT ACTIVITIES CONT.</b>										
<b>COMMUNITY &amp; ECONOMIC DEVELOPMENT</b>										
39	Community Beautification							0	0	0
40	Economic Development	90,000	0	0				90,000	68,486	68,486
41	Housing and Urban Renewal	5,000	0					5,000	31,962	31,962
42	Planning & Zoning	131,653	24,724					156,377	139,838	139,838
43	Other Com & Econ Development							0	0	0
44	TIF Rebates							0	0	0
45	<b>TOTAL (lines 39 - 44)</b>	226,653	24,724	0		0		251,377	240,306	240,306
<b>GENERAL GOVERNMENT</b>										
46	Mayor, Council, & City Manager	139,400	21,222					160,622	139,151	139,151
47	Clerk, Treasurer, & Finance Adm.	75,580	23,358					98,938	100,754	100,754
48	Elections							0	0	0
49	Legal Services & City Attorney	12,000						12,000	13,084	13,084
50	City Hall & General Buildings	165,796	33,382					199,178	184,919	184,919
51	Tort Liability	35,000						35,000	34,828	34,828
52	Other General Government	0						0	309	309
53	<b>TOTAL (lines 46 - 52)</b>	427,776	77,962	0		0		505,738	473,045	473,045
<b>DEBT SERVICE</b>										
54	Gov Capital Projects				1,696,526			1,696,526	2,025,269	2,025,269
55	TIF Capital Projects					3,880,200		3,880,200	5,792,977	5,792,977
56	<b>TOTAL CAPITAL PROJECTS</b>					3,880,200		3,880,200	5,792,977	5,792,977
57	<b>TOTAL Governmental Activities Expenditures</b> <i>(lines 11+22+30+39+44+52+53+54)</i>	3,661,856	1,763,397	0	1,696,526	0		11,001,979	13,167,827	13,167,827
<b>BUSINESS TYPE ACTIVITIES</b>										
<b>Proprietary: Enterprise &amp; Budgeted ISF</b>										
59	Water Utility							0	0	0
60	Sewer Utility							2,264,395	1,291,743	1,291,743
61	Electric Utility							0	0	0
62	Gas Utility							0	0	0
63	Airport							3,870,950	357,110	357,110
64	Landfill/Garbage							0	0	0
65	Transit							0	0	0
66	Cable TV, Internet & Telephone							0	0	0
67	Housing Authority							0	0	0
68	Storm Water Utility							150,000	12,285	12,285
69	Other Business Type (city hosp., ISF, parking, etc.)							0	174,049	174,049
70	Enterprise DEBT SERVICE							0	369,657	369,657
71	Enterprise CAPITAL PROJECTS							0	0	0
72	Enterprise TIF CAPITAL PROJECTS							0	0	0
73	<b>TOTAL BUSINESS TYPE EXPENDITURES</b> <i>(lines 56 - 68)</i>							6,285,345	2,204,844	2,204,844
74	<b>TOTAL ALL EXPENDITURES</b> <i>(lines 58+74)</i>	3,661,856	1,763,397	0	1,696,526	3,880,200		17,287,324	15,372,671	15,372,671
75	Regular Transfers Out	74,000	959,685	0	0	0		1,446,581	1,315,414	1,315,414
76	Internal TIF Loan Transfers Out			0		0		0	240,000	240,000
77	<b>Total ALL Transfers Out</b>	74,000	959,685	0	0	0		412,896	1,555,414	1,555,414
78	<b>Total Expenditures and Other Fin Uses</b> <i>(lines 73+74)</i>	3,735,856	2,723,082	0	1,696,526	3,880,200		18,733,905	16,928,085	16,928,085
79	<b>Ending Fund Balance June 30</b>	1,896,926	2,383,280	1,079,164	126,281	2,189,558	285,487	4,432,695	13,039,116	13,039,116

THE USE OF THE CONTINUING APPROPRIATION IS VOLUNTARY. SUCH EXPENDITURES DO NOT REQUIRE AN AMENDMENT. HOWEVER THE ORIGINAL AMOUNT OF THE CAPITAL PROJECT MUST HAVE APPEARED ON A PREVIOUS YEAR'S BUDGET TO OBTAIN THE SPENDING AUTHORITY. THE CONTINUING APPROPRIATION CAN NOT BE FOR A YEAR PRIOR TO THE ACTUAL YEAR. CONTINUING APPROPRIATIONS END WITH THE ACTUAL YEAR. SEE INSTRUCTIONS.

		RE-ESTIMATED REVENUES DETAIL						2020		Fiscal Years		
(A)	(B)	GENERAL REVENUES (C)	SPECIAL REVENUES (D)	TIF SPECIAL REVENUES (E)	DEBT SERVICE (F)	CAPITAL PROJECTS (G)	PERMANENT (H)	PROPRIETARY (I)	RE-ESTIMATED 2020 (J)	ACTUAL 2019 (K)		
<b>REVENUES &amp; OTHER FINANCING SOURCES</b>												
1	Taxes Levied on Property	1,676,275	1,043,416		1,308,832				4,028,523	3,725,934		
2	Less: Uncollected Property Taxes - Levy Year								0	0		
3	Net Current Property Taxes (line 1 minus line 2)	1,676,275	1,043,416		1,308,832				4,028,523	3,725,934		
4	Delinquent Property Taxes								0	0		
5	TIF Revenues			711,475					711,475	554,290		
<b>Other City Taxes</b>												
6	Utility Tax Replacement Excise Taxes	33,588	22,268		25,244				81,100	75,396		
7	Utility franchise tax (Iowa Code Chapter 164.2)	620,000							620,000	651,675		
8	Parimutuel wager tax								0	0		
9	Gaming wager tax								0	0		
10	Mobile Home Taxes	7,000	4,000		3,000				14,000	16,656		
11	Hotel/Motel Taxes	90,000							90,000	62,018		
12	Other Local Option Taxes		860,000						860,000	976,999		
13	Subtotal - Other City Taxes (lines 6 thru 12)	750,588	886,268		28,244				1,665,100	1,782,744		
14	Licenses & Permits	37,800							37,800	73,028		
15	Use of Money & Property	47,750	115	1,000	0	2,010	125	98,284	149,284	439,812		
<b>Intergovernmental</b>												
16	Federal Grants & Reimbursements	5,000	0			0		3,370,500	3,375,500	4,354		
17	Road Use Taxes		950,000						950,000	944,735		
18	Other State Grants & Reimbursements	80,215	34,931		40,599	143,461		0	299,205	428,364		
19	Local Grants & Reimbursements	95,500							95,500	74,477		
20	Subtotal - Intergovernmental (lines 16 thru 19)	180,715	984,931	0	40,599	143,461		3,370,500	4,720,205	1,451,930		
<b>Charges for Fees &amp; Service</b>												
21	Water Utility								0	0		
22	Sewer Utility								0	2,352,241		
23	Electric Utility								0	0		
24	Gas Utility								0	0		
25	Parking								0	0		
26	Airport								0	0		
27	Landfill/Garbage								0	0		
28	Hospital								0	0		
29	Transit								0	0		
30	Cable TV, Internet & Telephone								0	0		
31	Housing Authority								0	0		
32	Storm Water Utility								0	0		
33	Other Fees & Charges for Service	957,131						275,000	275,000	289,202		
34	Subtotal - Charges for Service (lines 21 thru 33)	957,131	0					275,000	957,131	1,053,847		
35	Special Assessments	7,000						2,606,880	3,584,011	3,695,290		
36	Miscellaneous	85,200	11,200			127,000	4,800	30,000	258,200	861,472		
<b>Other Financing Sources</b>												
37	Regular Operating Transfers In	35,000	0		361,950	647,821		401,810	1,446,581	1,315,414		
38	Internal TIF Loan Transfers In			0					0	240,000		
39	Subtotal ALL Operating Transfers In	35,000	0	0	361,950	647,821		401,810	1,446,581	1,555,414		
40	Proceeds of Debt (Excluding TIF Internal Borrowing)					1,500,000			1,500,000	0		
41	Proceeds of Capital Asset Sales	0							0	0		
42	Subtotal-Other Financing Sources (lines 36 thru 39)	35,000	0	0	361,950	2,147,821	0	401,810	2,946,581	1,555,414		
<b>Total Revenues except for beginning fund balance</b>												
43	(lines 3, 4, 5, 12, 13, 14, 19, 33, 34, 35, & 39)	3,777,459	2,925,930	712,475	1,739,625	2,420,292	4,925	6,507,474	18,088,180	14,162,591		
44	Beginning Fund Balance July 1	1,855,323	2,180,432	366,689	83,182	3,649,466	280,562	4,623,462	13,039,116	15,804,610		
<b>TOTAL REVENUES &amp; BEGIN BALANCE (lines 43-44)</b>												
45		5,632,782	5,106,362	1,079,164	1,822,807	6,069,758	285,487	11,130,936	31,127,296	29,967,201		

EXPENDITURES SCHEDULE PAGE 1

Fiscal Year Ending 2021

Fiscal Years

(A)	(B)	(C)	(D)	TIF			(H)	(I)	(J)	(K)	(L)
				(E)	(F)	(G)					
<b>GOVERNMENT ACTIVITIES</b>											
<b>PUBLIC SAFETY</b>											
Police Department/Crime Prevention	1	1,234,850	441,950						1,638,310	1,526,688	
Jail	2								0	0	
Emergency Management	3								0	0	
Flood Control	4								0	0	
Fire Department	5	179,450	37,658						212,510	122,400	
Ambulance	6	815,950	161,748						682,865	677,123	
Building Inspections	7								0	0	
Miscellaneous Protective Services	8								0	0	
Animal Control	9	25,100							20,100	15,837	
Other Public Safety	10								0	-1	
<b>TOTAL (lines 1 - 10)</b>	<b>11</b>	<b>2,255,350</b>	<b>641,356</b>				<b>0</b>		<b>2,553,785</b>	<b>2,342,047</b>	
<b>PUBLIC WORKS</b>											
Roads, Bridges, & Sidewalks	12	0	756,208						762,608	988,598	
Parking - Meter and Off-Street	13								0	0	
Street Lighting	14	35,000							35,000	30,972	
Traffic Control and Safety	15		37,700						42,700	27,868	
Snow Removal	16								0	0	
Highway Engineering	17								0	0	
Street Cleaning	18								0	0	
Airport	19								0	0	
Garbage (if not Enterprise)	20		0						0	0	
Other Public Works	21	50	26,749						26,335	25,295	
<b>TOTAL (lines 12 - 21)</b>	<b>22</b>	<b>35,050</b>	<b>820,657</b>				<b>0</b>		<b>866,643</b>	<b>1,072,733</b>	
<b>HEALTH &amp; SOCIAL SERVICES</b>											
Welfare Assistance	23								0	0	
City Hospital	24								0	0	
Payments to Private Hospitals	25								0	0	
Health Regulation and Inspection	26								0	0	
Water, Air, and Mosquito Control	27								0	0	
Community Mental Health	28								0	0	
Other Health and Social Services	29								0	0	
<b>TOTAL (lines 23 - 29)</b>	<b>30</b>	<b>0</b>	<b>0</b>				<b>0</b>		<b>0</b>	<b>0</b>	
<b>CULTURE &amp; RECREATION</b>											
Library Services	31	336,367	74,210						410,577	395,974	
Museum, Band and Theater	32								0	0	
Parks	33	112,060	22,966						136,421	111,037	
Recreation	34	436,450	85,675						522,125	530,880	
Cemetery	35	177,879	46,480						224,359	183,559	
Community Center, Zoo, & Marina	36								214,565	0	
Other Culture and Recreation	37								0	0	
<b>TOTAL (lines 31 - 37)</b>	<b>38</b>	<b>1,062,756</b>	<b>229,331</b>				<b>0</b>		<b>1,247,710</b>	<b>1,221,450</b>	

EXPENDITURES SCHEDULE PAGE 2  
Fiscal Year Ending 2021

Fiscal Years

	(B)	(A)	2021									
			(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
GOVERNMENT ACTIVITIES CONT.			GENERAL	SPECIAL	TIF	DEBT	CAPITAL	PERMANENT	PROPRIETARY	BUDGET	RE-ESTIMATED	ACTUAL
			(C)	(D)	(E)	(F)	(G)	(H)	(I)	2021	2020	2019
			(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
<b>COMMUNITY &amp; ECONOMIC DEVELOPMENT</b>												
	39	Community Beautification								0	0	0
	40	Economic Development	65,260	0	0					65,260	90,000	68,486
	41	Housing and Urban Renewal	5,000	0						5,000	5,000	31,962
	42	Planning & Zoning	140,260	26,160						166,420	156,377	139,838
	43	Other Com & Econ Development								0	0	0
	44	TIF Rebates								0	0	0
	45	TOTAL (lines 39 - 44)	210,520	26,160	0			0		236,680	251,377	240,306
<b>GENERAL GOVERNMENT</b>												
	46	Mayor, Council, & City Manager	155,400	23,641						179,041	160,622	139,151
	47	Clerk, Treasurer, & Finance Adm.	81,285	25,464						106,749	98,938	100,754
	48	Elections								0	0	0
	49	Legal Services & City Attorney	12,000							12,000	12,000	13,084
	50	City Hall & General Buildings	173,932	36,236						210,168	199,178	184,919
	51	Tort Liability	35,000							35,000	35,000	34,828
	52	Other General Government	0							0	0	309
	53	TOTAL (lines 46 - 52)	457,617	85,341	0			0		542,958	505,738	473,045
	54	<b>DEBT SERVICE</b>			448,475	1,525,484				1,973,959	1,696,526	2,025,269
	55	Gov Capital Projects		175,000			3,016,000			3,191,000	3,880,200	5,792,977
	56	TIF Capital Projects								0	0	0
	57	TOTAL CAPITAL PROJECTS	0	175,000	0		3,016,000	0		3,191,000	3,880,200	5,792,977
	58	TOTAL Government Activities Expenditures (lines 11+22+30+38+45+53+54+57)	4,021,293	1,977,845	448,475	1,525,484	3,016,000	0		10,989,097	11,001,979	13,167,827
<b>BUSINESS TYPE ACTIVITIES</b>												
<b>Proprietary: Enterprise &amp; Budgeted ISF</b>												
	59	Water Utility								0	0	0
	60	Sewer Utility								0	0	0
	61	Electric Utility								1,906,094	2,264,395	1,291,743
	62	Gas Utility								0	0	0
	63	Airport								2,379,800	3,870,950	357,110
	64	Landfill/Garbage								0	0	0
	65	Transit								0	0	0
	66	Cable TV, Internet & Telephone								0	0	0
	67	Housing Authority								0	0	0
	68	Storm Water Utility								0	0	0
	69	Other Business Type (city hosp., ISF, parking, etc.)								620,000	150,000	12,285
	70	Enterprise DEBT SERVICE								153,018	0	174,049
	71	Enterprise CAPITAL PROJECTS								445,759	0	369,657
	72	Enterprise TIF CAPITAL PROJECTS								0	0	0
	73	TOTAL Business Type Expenditures (lines 59 - 73)								5,504,671	6,285,345	2,204,844
	74	TOTAL ALL EXPENDITURES (lines 58+74)	4,021,293	1,977,845	448,475	1,525,484	3,016,000	0		16,493,768	17,287,324	15,372,671
	75	Regular Transfers Out	101,000	848,089	0		0	0		1,370,814	1,446,581	1,315,414
	76	Internal TIF Loan / Repayment			0			0		0	0	240,000
	77	Total ALL Transfers Out	101,000	848,089	0		0	0		1,370,814	1,446,581	1,555,414
	78	Total Expenditures & Fund Transfers Out (lines 75-78)	4,122,293	2,825,934	448,475	1,525,484	3,016,000	0		17,864,582	18,733,905	16,928,085
	79	Ending Fund Balance June 30	2,174,503	2,543,039	1,320,164	164,292	1,351,582	290,412	3,352,741	11,196,733	12,393,391	13,039,116

\* A continuing appropriation is the unexpended budgeted amount from a prior year's capital project. The entry is made on the Com Approps page that must accompany the budget forms if used. SEE INSTRUCTIONS FOR USE.



CITY OF

Knoxville

ADOPTED BUDGET SUMMARY  
YEAR ENDED JUNE 30, 2021

Fiscal Years

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
		GENERAL REVENUES	SPECIAL REVENUES	TIF SPECIAL REVENUES	DEBT SERVICE	CAPITAL PROJECTS	PERMANENT	PROPRIETARY	BUDGET 2021	RE-ESTIMATED 2020	ACTUAL 2019
		(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
Revenues & Other Financing Sources											
Taxes Levied on Property	1	1,836,382	1,084,455		1,143,156	0			4,063,993	4,028,523	3,725,934
Less: Uncollected Property Taxes-Levy Year	2	0	0		0	0			0	0	0
Net Current Property Taxes	3	1,836,382	1,084,455		1,143,156	0			4,063,993	4,028,523	3,725,934
Delinquent Property Taxes	4	0	0		0	0			0	0	0
TIF Revenues	5			688,475					688,475	711,475	554,290
Other City Taxes	6	761,038	904,317		22,458	0			1,687,813	1,665,100	1,782,744
Licenses & Permits	7	38,400	0						38,400	37,800	73,028
Use of Money and Property	8	60,550	872	1,000	0	2,570	125	89,794	154,911	149,284	439,812
Intergovernmental	9	162,462	984,849	0	34,511	0		1,665,000	2,846,822	4,720,206	1,451,930
Charges for Fees & Service	10	1,427,188	0		0	0	0	2,657,658	4,084,846	3,564,011	3,695,290
Special Assessments	11	7,000	0		0	0		7,000	7,000	7,000	22,677
Miscellaneous	12	66,850	11,200		0	112,000	4,800	30,000	224,850	258,200	861,472
Sub-Total Revenues	13	4,359,870	2,985,693	689,475	1,200,125	114,570	4,925	4,442,452	13,797,110	15,141,599	12,607,177
Other Financing Sources:											
Total Transfers In	14	40,000	0	0	363,370	563,454	0	403,990	1,370,814	1,446,581	1,555,414
Proceeds of Debt	15	0	0	0	0	1,500,000	0	0	1,500,000	1,500,000	0
Proceeds of Capital Asset Sales	16	0	0	0	0	0	0	0	0	0	0
Total Revenues and Other Sources	17	4,399,870	2,985,693	689,475	1,563,495	2,178,024	4,925	4,846,442	16,667,924	18,088,190	14,162,591
Expenditures & Other Financing Uses											
Public Safety	18	2,255,350	641,356	0			0		2,896,706	2,553,785	2,342,047
Public Works	19	35,050	820,657	0			0		855,707	866,643	1,072,733
Health and Social Services	20	0	0	0			0		0	0	0
Culture and Recreation	21	1,062,756	229,331	0			0		1,292,087	1,247,710	1,221,450
Community and Economic Development	22	210,520	26,160	0			0		236,680	251,377	240,306
General Government	23	457,617	85,341	0			0		542,958	505,738	473,045
Debt Service	24	0	0	448,475	1,525,484		0		1,973,959	1,696,526	2,025,269
Capital Projects	25	0	175,000	0		3,016,000	0		3,191,000	3,880,200	5,792,977
Total Government Activities Expenditures	26	4,021,293	1,977,845	448,475	1,525,484	3,016,000	0		10,989,097	11,001,979	13,167,827
Business Type Proprietary Enterprise & ISF	27							5,504,671	5,504,671	6,285,345	2,204,844
Total Gov & Bus Type Expenditures	28	4,021,293	1,977,845	448,475	1,525,484	3,016,000	0	5,504,671	16,493,768	17,287,324	15,372,671
Total Transfers Out	29	101,000	848,089	0	0	0	0	421,725	1,370,814	1,446,581	1,555,414
Total ALL Expenditures/Fund Transfers Out	30	4,122,293	2,825,934	448,475	1,525,484	3,016,000	0	5,926,396	17,864,582	18,733,905	16,928,085
Excess Revenues & Other Sources Over (Under) Expenditures/Transfers Out	31	277,577	159,759	241,000	38,011	-837,976	4,925	-1,079,954	-1,196,658	-645,725	-2,765,494
Beginning Fund Balance July 1	33	1,896,926	2,363,280	1,079,164	126,261	2,189,558	285,487	4,432,695	12,393,391	13,039,116	15,804,610
Ending Fund Balance June 30	34	2,174,503	2,543,039	1,320,164	164,292	1,351,582	290,412	3,352,741	11,196,733	12,393,391	13,039,116





RESOLUTION NO. 02-16-20

RESOLUTION APPROVING AN AGREEMENT BETWEEN THE CITY OF KNOXVILLE, IOWA  
AND THE MARION COUNTY HUMANE SOCIETY RELATED TO  
ANIMAL SHELTER AND CONTROL SERVICES

BE IT ENACTED BY THE COUNCIL OF THE CITY OF KNOXVILLE, IOWA:

WHEREAS, the City of Knoxville and the Marion County Humane Society entered into an Agreement on the 5<sup>th</sup> day of May 2008 whereby the Humane Society would provide animal shelter and control services for stray animals located in the City limits; and

WHEREAS, City Staff has entered into discussions with the Humane Society to enter into a new Agreement for the same services; and

WHEREAS, City Staff has reviewed the proposed Agreement and now recommends that City Council enter into said Agreement with the Humane Society.

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Knoxville, Iowa that the Agreement between the City of Knoxville and the Marion County Humane Society be hereby approved and the Mayor and City Clerk are hereby authorized and directed to execute the Agreement on behalf of the City of Knoxville.

PASSED AND APPROVED by the City Council this 17<sup>th</sup> day of February,  
2020.

\_\_\_\_\_  
Brian J. Hatch, MAYOR

ATTEST:

\_\_\_\_\_  
Tricia Kincaid, CITY CLERK



## AGREEMENT

This Agreement is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2020 by and between the City of Knoxville, a governmental unit of the State of Iowa, (hereinafter referred to as "City"), and the Marion County Humane Society, a non-profit corporation that provides animal shelter and control services (hereinafter referred to as "MCHS").

### WITNESSETH

In consideration of the mutual covenants and Agreements hereinafter set forth, the City and MCHS agree as follows:

- 1) MCHS has provided the City with a copy of its Organizational Charter, the Minutes and/or Resolutions showing who has the power to execute a contract on its behalf. MCHS agrees that it will provide the City with any Amendments to these documents and will also provide the City with the Resolution approving this contract and any future contracts between the City and MCHS.
- 2) The City previously budgeted the sum of \$20,000 for payment to MCHS for use during the 2019-2020 fiscal year. The City currently has approximately \$11,000 left from this budgeted amount as of the date of this Agreement. The City agrees that upon the parties entering into this Agreement that the City will issue a check to MCHS for the balance in that account. In conjunction therewith, MCHS will no longer charge the City a per animal fee.

In consideration of MCHS no longer charging the City a per animal fee, the City agrees to pay MCHS an annual fee beginning July of 2020 and each July thereafter until either party terminates this Agreement. The payment in July of 2020 shall be in the sum of \$25,000, that sum will be \$30,000 in July 2021 and for each July thereafter the sum shall increase by 2%.

In return, MCHS agrees to no longer charge a per animal fee, to provide all services currently in place and as set out in paragraph #3 of this agreement and as set out in paragraph #3 of the previous Agreement. MCHS will also continue to collect any fines for animals at large.

- 3) MCHS agrees to provide the following services:
  - a) Provide an animal shelter for animals collected or impounded which will comply in all respects with Iowa Administrative Code Chapter 20, Iowa Department of Agriculture Section 20.2 (1) entitled Housing Facilities, Section 20.2 entitled Housing Facilities, and Section 20.2 (2) entitled Primary Enclosures.
  - b) Provide adequate personnel to comply with mandates of this Agreement and all applicable ordinances, statutes, and administrative rules for the certification and registration as an animal welfare shelter under the Iowa Department of Agriculture.

MCHS of said default or lack of fulfillment, along with a Notice that said Agreement shall be terminated within thirty (30) days if said default or breach is not remedied.

City of Knoxville

The Marion County Humane Society

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Executor Director

ATTEST:

\_\_\_\_\_  
City Clerk

\_\_\_\_\_  
Executive Director

**RESOLUTION NO. 02-17-20**

**RESOLUTION APPROVING FINAL PLANS, SPECIFICATIONS, FORM OF CONTRACT AND ESTIMATE OF COST FOR THE 2020 ROCHE STREET CULVERT REPLACEMENT PROJECT**

WHEREAS, the final plans, specifications, form of contract and estimate of cost for the 2020 Roche Street Culvert Replacement Project have been filed with the City Clerk of Knoxville, Iowa; and

WHEREAS, said plans and specifications are consistent with and in compliance with the project as envisioned by the City Council and the City Staff; and

WHEREAS, the form of contract and estimate of cost for said project have been reviewed by the City staff and they are in order and it is necessary to order bids.

NOW, THEREFORE, Be It Resolved by the City Council of the City of Knoxville, Iowa, that the final plans, specifications and estimate of cost as prepared by the City's engineers for the 2020 Roche Street Culvert Replacement Project and the form of contract and notice to bidders, as approved by the engineer be and the same are hereby approved, subject to hearing thereon and are hereby ordered placed on file in the office of City Clerk for public inspection.

Passed and approved this 17<sup>th</sup> day of February 2020.

\_\_\_\_\_  
Brian Hatch, Mayor

Attest:

\_\_\_\_\_  
Tricia Kincaid, City Clerk

**CITY OF KNOXVILLE**

**ROCHE STREET CULVERT REPLACEMENT**

**Project No. 119.0729.01**

 <p>LICENSED PROFESSIONAL ENGINEER ANDREW G. BURKE P19498 IOWA</p>	<p>I hereby certify that this Engineering Document 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.</p> <p><i>Andrew G. Burke</i> _____ Andrew G. Burke, P.E. <span style="float: right;">02/12/20 Date</span></p> <p>License Number P19498 My License Renewal Date is December 31, 2020 Pages or sheets covered by this seal: <u>ALL</u></p> <p>_____ _____</p>
---	---

SNYDER & ASSOCIATES, INC.  
2727 SW Snyder Blvd  
Ankeny, IA 50023  
515-964-2020

ROCHE STREET CULVERT REPLACEMENT  
KNOXVILLE, IOWA  
S&A PROJECT NO. 119.0729

**The following documents are a part of this contract:**

<u>Document</u>	<u>Pages</u>
Notice to Bidders .....	NTB - 1 to NTB – 3
Notice of Hearing.....	NH - 1
Instruction to Bidders .....	ITB - 1 to ITB - 3
Proposal .....	P - 1 to P – 8
Identity of Subcontractors .....	P - 9
Bid Bond .....	BB - 1 to BB - 2
Contract .....	C - 1 to C - 8
Performance, Payment and Maintenance Bond .....	PM - 1 to PM - 5
Notice to Proceed .....	NP – 1 to NP - 2
Plan Sheets.....	1 – 28

Special Provisions

Part 1 - General Requirements .....	SP1 - 1 to SP1 - 7
Part 2 - Special Construction.....	SP2 - 1 to SP2 - 10

Appendix

Geotechnical Exploration (ABE PN 191306, August 30, 2019)

Specifications

The Iowa Statewide Urban Standard Specifications for Public Improvements, 2020 Edition, referred to in the plans and specifications as SUDAS, shall apply to construction work on this project, except as modified in the plans and special provisions.

Bid Date March 10, 2020  
Time 2:00 p.m.

## **INSTRUCTIONS TO BIDDERS**

Project Name Roche Street Culvert Replacement  
Knoxville, Iowa

S&A Project No. 119.0729

The work comprising the above referenced project shall be constructed in accordance with the 2020 edition of the Statewide Urban Design and Specifications (SUDAS), and as further modified by supplemental specifications and special provisions included in the contract documents. The terms used in the contract revision of the documents are defined in said Standard Specifications. The City of Knoxville is the Contracting Authority on this project and shall hereinafter be referred to as the "Jurisdiction." Before submitting your bid, please review the requirements of Division One, General Provisions and Covenants, in particular the sections regarding proposal requirements, bonding, contract execution and insurance requirements. Please be certain that all documents have been completed properly, and submit them to the Knoxville City Clerk, Knoxville City Hall, 305 S. Third Street, Knoxville, Iowa 50138.

### **I. BID SECURITY**

The bid security must be in the minimum amount of 10% of the total bid. Bid security shall be in the form of a cashier's check, a certified check, or a bank money order drawn on a FDIC insured bank in Iowa or drawn on a FDIC insured bank chartered under the laws of the United States; or a certified share draft drawn on a credit union in Iowa or chartered under the laws of the United States; or a bid bond executed by a corporation authorized to contract as a surety in Iowa or satisfactory to the Jurisdiction. The bid bond must be submitted on the enclosed bid bond form as no other bid bond forms are acceptable. All signatures on the bid bond must be original signatures in ink; facsimile (fax) of any signature on the bid bond is not acceptable. Bid security other than said bid bond shall be made payable to the City of Knoxville, Iowa. "Miscellaneous Bank Checks," and personal checks, as well as "Money Orders" and "Traveler's Checks" issued by persons, firms or corporations licensed under Chapter 533B of the Iowa Code, are not acceptable bid security.

### **II. SUBMISSION OF THE PROPOSAL AND IDENTITY OF BIDDER**

A. The proposal shall be sealed in an envelope, properly identified as the Proposal with the project title and the name and address of the bidder, and deposited with the Jurisdiction at or before the time and at the place provided in the Notice to Bidders. It is the sole responsibility of the bidder to see that its proposal is delivered to the Jurisdiction prior to the time for opening bids, along with the appropriate bid security sealed in the separate envelope identified as Bid Security and attached to the outside of the bid proposal envelope. Any proposal received after the scheduled time for the receiving of proposals will be returned to the bidder unopened and will not be considered.

B. The following documents shall be completed, signed and returned in the Proposal envelope. The bid cannot be read if any of these documents are omitted from the Proposal envelope.

1. PROPOSAL – Complete each of the following parts:

- Part B – Acknowledgment of Addenda, if any have been issued;
- Part C – Bid Items, Quantities and Prices;
- Part F – Additional Requirements;

The following documents, which are proposal attachments, must be completed and attached:

<u>ITEM NO.</u>	<u>DESCRIPTION OF ATTACHMENT</u>
1.	<u>Identity of Subcontractors</u>
2.	_____
3.	_____
4.	_____
5.	_____
6.	_____

- Part G – Identity of Bidder;

Sign the proposal and have the signature notarized. The signature on the proposal and all proposal attachments must be an original signature in ink signed by the same individual who is the Company Owner or an authorized Officer of the Company; copies or facsimile of any signature will not be accepted.

The documents must be submitted as printed. No alterations, additions, or deletions are permitted. If the Bidder notes a requirement in the contract documents which the Bidder believes will require a conditioned or unsolicited alternate bid, the Bidder must immediately notify the Jurisdictional Engineer in writing. The Jurisdictional Engineer will issue any necessary interpretation by an addendum.

### III. PROSECUTION AND PROGRESS OF THE WORK

- A. The Work is located in the City of Knoxville. Work on Sundays or legal holidays require approval of the City.
- B. Time is of the essence in this project.
- C. Allowable working hours are between sunrise and sunset.
- D. Work on the improvements shall commence any time after a written Notice to Proceed is issued, **no later than June 15, 2020**, and shall be completed as stated below. The Notice to Proceed will be issued after the preconstruction conference, which is expected to occur in April 2020.

The Contractor shall substantially complete the overall project **within seventy (70) working days**. For this project, substantial completion for the overall project shall be defined as all utility, grading, backfill, topsoil, finish grading, pavement, trail, and traffic control work completed with

the new streets, driveways, and sidewalks/trails fully open to traffic. Should the Contractor fail to substantially complete the work within this timeframe, liquidated damages of **Five Hundred Dollars (\$500.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

The Contractor shall fully complete the overall project within **fifteen (15) working days** after substantial completion is met. For this project, fully completion shall be defined as completion and approval by City and Engineer of all punchlist items, surface restoration, and submittal of final payment application. Should the Contractor fail to fully complete the work within this timeframe, liquidated damages of **Two Hundred Fifty (\$250.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

#### IV. SUBLETTING

- A. The Contractor shall perform, with its own organization and forces, work amounting in no less than 20% of the total contract cost.

#### V. TAXES

- A. The City will issue a sales tax exemption certificate to the Contractor for all materials purchased on the project. The City will issue the appropriate exemption certificates and authorization letters to the Contractor and all subcontractors completing work on the project. Tax exemption certificates are applicable only for the specific project for which the tax exemption certificate is issued.
- B. The Contractor shall provide a listing to the City identifying all appropriate subcontractors qualified for use of the tax exemption certificate. The Contractor and subcontractors may make copies of the certificate and provide to each supplier providing construction material a copy of the tax exemption certificate.

#### VI. ELECTRONIC DOCUMENTS AND FILES AVAILABILITY

- A. Electronic contract documents are available by clicking on the “BIDS” link at [www.snyder-associates.com](http://www.snyder-associates.com) and choosing “Roche Street Culvert Replacement” on the left. Project information and planholder information is available at no cost at this website. Downloads require the user to register for a free membership at QuestCDN.com.
- B. Digital CAD files of the proposed project may be requested following the completion and receipt of the “Snyder & Associates Electronic Media Transfer Agreement.” Request CAD files directly from Snyder & Associates, Inc.

TO: The Honorable Mayor and  
Members of the City Council  
City of Knoxville, Iowa

**PROPOSAL**

**PROPOSAL: PART A – SCOPE**

The City of Knoxville, hereinafter called the “Jurisdiction,” has need of a qualified contractor to complete the work comprising the below referenced improvements. The undersigned Bidder hereby proposes to complete the work comprising the below referenced improvements as specified in the contract documents, which are officially on file with the Jurisdiction, in the office of the City Manager, at the prices hereinafter provided in Part C of the Proposal, for the following described improvements:

**ROCHE STREET CULVERT REPLACEMENT**

General Nature of Public Improvement. The work includes all materials, equipment, transportation, and labor necessary to complete the improvements. The proposed project includes, pavement removal, grading, excavation, 74 LF of twin 8’x6’ precast box culvert with end sections, 134 linear feet of 15-inch RCP storm sewer, 46 linear feet of 8-inch PVC sanitary sewer, 137 linear feet of 8-inch C900 PVC water main, PC concrete pavement, PC concrete trail, channel shaping, rip-rap, traffic control, surface restoration, erosion control, and other miscellaneous work.

**PROPOSAL: PART B – ACKNOWLEDGEMENT OF ADDENDA**

The Bidder hereby acknowledges that all addenda become a part of the contract documents when issued, and that each such addendum has been received and utilized in the preparation of this bid. The Bidder hereby acknowledges receipt of the following addenda by inserting the number of each addendum in the blanks below:

ADDENDUM NUMBER \_\_\_\_\_ ADDENDUM NUMBER \_\_\_\_\_  
ADDENDUM NUMBER \_\_\_\_\_ ADDENDUM NUMBER \_\_\_\_\_

and certifies that said addenda were utilized in the preparation of this bid.

**PROPOSAL: PART C – BID ITEMS, QUANTITIES AND PRICES**

UNIT BID PRICE CONTRACTS: The Bidder must provide the Unit Bid Prices and Total Bid Price on the Proposal Attachment labeled "BID SCHEDULE." In case of discrepancy, the Unit Bid Price governs. The quantities shown on the Proposal Attachment are approximate only, but are considered sufficiently adequate for the purpose of comparing bids. The Total Base Bid shall be used only for comparison of bids. The Total Bid shall be used for determining the sufficiency of the bid security.

**PROPOSAL: PART D – GENERAL**

The Bidder hereby acknowledges that the Jurisdiction, in advertising for public bids for this project reserves the right to:

1. Reject any or all bids. Award of the contract, if any, to be to the lowest responsible, responsive bidder; and
2. Reject any or all alternates in determining the items to be included in the contract. Designation of the lowest responsible, responsive bidder to be based on comparison of the total base bid; and
3. Make such alterations in the documents or in the proposal quantities as it determines necessary in accordance with the contract documents after execution of the contract. Such alterations shall not be considered a waiver of any conditions of the contract documents, and shall not invalidate any of the provisions thereof; and

The Bidder hereby agrees to:

1. Enter into a contract, if this proposal is selected, in the form approved by the Jurisdiction, provide proof of registration with the Iowa Division of Labor in accordance with Chapter 91C of the Iowa Code, and furnish a performance, maintenance, and payment bond; and
2. Forfeit bid security, not as a penalty but as liquidated damages, upon failure to enter into such contract and/or to furnish said bond; and
3. Commence the work on this project on or before the date specified in a written Notice to Proceed, **no later than June 15, 2020**. The anticipated date for written Notice to Proceed date is expected to occur in April 2020.
4. Work on the project is on Roche Street at the crossing of Competine Creek just north of Terrace Lane. Work on the improvements shall commence any time after a written Notice to Proceed is issued, **no later than June 15, 2020**, and shall be completed as stated below. The Notice to Proceed will be issued after the preconstruction conference, which is expected to occur in April 2020.

The Contractor shall substantially complete the overall project **within seventy (70) working days**. For this project, substantial completion for the overall project shall be defined as all utility, grading, backfill, topsoil, finish grading, pavement, trail, and traffic control work completed with the new streets, driveways, and sidewalks/trails fully open to traffic. Should the Contractor fail to substantially complete the work within this

timeframe, liquidated damages of **Five Hundred Dollars (\$500.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

The Contractor shall fully complete the overall project **within fifteen (15) working days** after substantial completion is met. For this project, fully completion shall be defined as completion and approval by City and Engineer of all punchlist items, surface restoration, and submittal of final payment application. Should the Contractor fail to fully complete the work within this timeframe, liquidated damages of **Two Hundred Fifty (\$250.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

**PROPOSAL: PART E – NON-COLLUSION AFFIDAVIT**

The Bidder hereby certifies:

1. That this proposal is not affected by, contingent on, or dependent on any other proposal submitted for any improvement with the Jurisdiction; and
2. That no individual employed by the Bidder has employed any person to solicit or procure the work on this project, nor will any employee of the Bidder make any payment or agreement for payment of any compensation in connection with the procurement of this project; and
3. That no part of the bid price received by the Bidder was or will be paid to any person, corporation, firm, association, or other organization for soliciting the bid, other than the payment of their normal compensation to persons regularly employed by the Bidder whose services in connection with the construction of the project were in the regular course of their duties for the Bidder; and
4. That this proposal is genuine and not collusive or sham; that the Bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to submit a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought, by agreement or collusion, or communication or conference, with any person, to fix the bid price of the Bidder or of any other bidder, and that all statements in this proposal are true; and
5. That the individual(s) executing this proposal have the authority to execute this proposal on behalf of the Bidder.

**PROPOSAL: PART F – ADDITIONAL REQUIREMENTS**

The Bidder hereby agrees to comply with the additional requirements listed below, which are included in this proposal:

<u>ITEM NO.</u>	<u>DESCRIPTION OF ATTACHMENT</u>
1.	Identity of Subcontractors
2.	_____
3.	_____
4.	_____
5.	_____
6.	_____

(CON'T - PROPOSAL)

S&A Project No. 119.0729.01

**PROPOSAL: PART G – IDENTITY OF BIDDER**

The Bidder shall indicate whether the bid is Submitted by a/an:

- Individual, Sole Proprietorship
- Partnership
- Corporation
- Joint-venture: all parties must join-in and execute all documents
- Other

By \_\_\_\_\_  
Bidder

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (Print/Type)

\_\_\_\_\_  
Title

The Bidder shall enter its Public Registration Number \_\_\_\_ - \_\_\_\_ issued By the Iowa Commissioner of Labor Pursuant Section 91C.5 of the Iowa Code.

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Telephone Number

In the event the above signature is not that of the company's owner, president, CEO, etc., provide the Chief Official's Name and Title below.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

**NOTE: The signature on this proposal must be an original signature in ink; copies or facsimile of any signature will not be accepted.**

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public in and for

State of \_\_\_\_\_  
County of \_\_\_\_\_

My commission expires \_\_\_\_\_.

**PROPOSAL ATTACHMENT: PART C****BID SCHEDULE**

The Bidder must provide the Unit Bid Prices and the Total Bid; in case of discrepancy, the Unit Bid Price governs. This is a Unit Bid Price Contract. The quantities shown on the Bid Schedule are approximate only, but are considered sufficiently adequate for the purpose of comparing bids. The Total Bid shall be used only for comparison of bids. The Total Bid shall be used for determining the sufficiency of the bid security.

Item No.	Item Code	Item Description	Unit	Total Quantities	Unit Price	Total Costs
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2.02	2010-108-D-1	Topsoil, On-site	CY	150		
2.03	2010-108-E-0	Excavation, Class 10	CY	1125		
2.04	2010-108-G-0	Subgrade Preparation	SY	341		
2.05	2010-108-I-0	Subbase, Modified, 6 Inches	SY	341		
2.06	2010-108-L-0	Compaction Testing	LS	1		
3.01	3010-108-F-0	Trench Compaction Testing	LS	1		
4.01	4010-108-A-1	Sanitary Sewer Gravity Main, Trenched, PVC, 8 In.	LF	46		
4.02	4010-108-H-0	Removal of Sanitary Sewer, 8 In.	LF	46		
4.03	4020-108-A-1	Storm Sewer, Trenched, RCP, 15 In.	LF	134		
4.04	4020-108-C-0	Removal of Storm Sewer, RCP, 15 In.	LF	141		
4.05	4040-108-A-0	Subdrain, HDPE, 4 In.	LF	220		
4.06	4040-108-C-0	Subdrain Cleanout, Type A-1, 6 In.	EA	4		
4.07	4040-108-E-0	Subdrain Outlets and Connections	EA	4		
5.01	5010-108-A-1	Water Main, Trenched, C900 PVC, 8 In.	LF	137		
5.02	5010-109-C-1	Fitting, 8" x 45° Bend	EA	8		
5.03	5010-109-C-1	Fitting, 8" x 6" Reducer	EA	1		
5.04	5010-108-D-0	Water Service Stub	EA	1		
5.05	5010-999-9-9	Water Main, Insulation	LF	22		
5.06	5010-999-9-9	Water Main, Abandon or Remove, 6 In.	LF	127		
5.07	5010-999-9-9	Water Main, Connection to Existing	EA	2		
6.01	6010-108-B-0	Intake, SW-501	EA	1		
6.02	6010-108-B-0	Intake, SW-503	EA	1		
6.03	6010-108-E-0	Manhole Adjustment, Major	EA	1		

Item No.	Item Code	Item Description	Unit	Total Quantities	Unit Price	Total Costs
6.04	6010-108-H-0	Remove Intake	EA	2		
7.01	7010-108-A-0	Pavement, PCC, 7 In.	SY	293		
7.02	7010-108-D-0	Special Subgrade Compaction for Shared Use Path	SY	307		
7.03	7010-108-I-0	PCC Pavement Samples and Testing	LS	1		
7.04	7030-108-I-0	Shared Use Path, PCC, 6 In.	SY	221		
7.05	7030-108-G-0	Detectable Warning, Cast Iron	SF	24		
7.06	7030-108-H-1	Driveway, Paved, PCC, 6 In.	SY	10		
7.07	7030-999-9-9	Temporary Surfacing, 12 In.	TON	150		
7.08	7040-108-H-0	Pavement Removal	SY	305		
8.01	8030-108-A-0	Temporary Traffic Control	LS	1		
8.02	8030-999-9-9	Temporary Barrier Rail	LF	300		
9.01	9040-108-D-1	Filter Sock, 12 Inch.	LF	410		
9.02	9040-108-D-2	Filter Sock, Removal	LF	410		
9.03	9040-108-J-0	Rip Rap	TON	262		
9.04	9040-108-Q-0	Erosion Control Mulching, Hydromulching with Temporary Seed	AC	0.3		
9.05	9040-108-Q-0	Hydroseeding, Fertilizer, Hydromulch, Type 1 Seeding	AC	0.3		
11.01	11,010-108-A	Construction Survey	LS	1		
11.02	11,020-108-A	Mobilization	LS	1		
11.03	11,030-108-A-0	Maintenance of Postal Service	LS	1		
11.04	11,030-108-B-0	Maintenance of Solid Waste Collection	LS	1		
11.05	11,050-108-A-0	Concrete Washout	LS	1		
99.01	2102-0425071	Special Backfill	CY	39		
99.02	2107-3825025	Granular Material for Blanket and Subdrain	CY	72		
99.03	2401-6745650	Removal of Existing Structures	LS	1		
99.04	2402-2720000	Excavation, Class 20	CY	902		
99.05	2415-2100000	Precast Concrete Box Culvert	LF	74		
99.06	2415-2200000	Precast Concrete Box Culvert End Section	EA	2		
99.07	2501-8400172	Temporary Shoring	LS	1		
99.08	2519-1001000	Fence, Chain-Link, Vinyl Coated	LF	75		

**TOTAL BID:** \$ \_\_\_\_\_  
(NUMBERS)

**TOTAL BID:** \_\_\_\_\_ DOLLARS  
(WORDS)

NOTE:

IT IS UNDERSTOOD THAT THE ABOVE QUANTITIES ARE ESTIMATED FOR THE PURPOSE OF THIS BID. ALL QUANTITIES ARE SUBJECT TO REVISION BY THE JURISDICTION. QUANTITY CHANGES THAT AMOUNT TO TWENTY (20) PERCENT OR LESS OF THE TOTAL BID SHALL NOT AFFECT THE UNIT BID PRICE.

**PROPOSAL: PART F – ADDITIONAL REQUIREMENTS**  
**ITEM 2 – IDENTITY OF SUBCONTRACTORS**

In all instances in which the bidder intends to assign, sublet, or subcontract any portion of the work exceeding \$25,000, the Bidder shall mark the appropriate box and shall provide a description of the work to be done by each subcontractor or assignee, the amount of each subcontract or the value of the work to be assigned, and the identity of each subcontractor or assignee below. The Bidder certifies that said subcontractors or assignees shall be utilized on this project, if acceptable to the City of Knoxville. If the Bidder does not intend to utilize any subcontractors or assignees, or if each subcontract or assignment is less than \$25,000; the Bidder shall so indicate by marking the appropriate box below. The Bidder need not identify material suppliers or manufacturers who do not provide labor at the worksite to incorporate such material or manufactured goods into the improvement.

The Bidder shall indicate the proposed use of subcontractors by completing the following:

**The Bidder does not intend to utilize any subcontractors or assignees**, or the value of each subcontract or assignment is less than \$25,000. The Bidder shall so indicate by marking the box at the left.

**The Bidder intends to utilize subcontractors or assignees**, and the value of the subcontract or assignment is \$25,000 or greater. The Bidder shall so indicate by marking the box at the left and shall report below only those subcontracts or assignments with a value of \$25,000 or greater by providing a description of the work to be done by each subcontractor or assignee, the amount of each subcontract or the value of the work to be assigned, and the identity of each subcontractor or assignee in the space provided below. The Bidder certifies that said subcontractors or assignees shall be utilized on this project as stated below, if acceptable to the City of Knoxville. The Bidder need not identify material suppliers or manufacturers who do not provide labor at the worksite to incorporate such material or manufactured goods into the improvement.

<u>DESCRIPTION</u>	<u>AMOUNT</u>	<u>SUBCONTRACTOR IDENTITY</u> <u>(name, address, including zip)</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The Bidder may attach additional contact sheets, if necessary.

**BID BOND**

KNOW ALL BY THESE PRESENTS:

That we, \_\_\_\_\_, as Principal, and \_\_\_\_\_, as Surety, are held and Firmly bound unto \_\_\_\_\_ the City of Knoxville, Iowa As Obligee, (hereinafter referred to as “the Jurisdiction”), in the penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), lawful money of the United States, for which payment said Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents.

The condition of the above obligation is such that whereas the Principal has submitted to the Jurisdiction a certain proposal, in a separate envelope, and hereby made a part hereof, to enter into a contract in writing, for the following described improvements;

**ROCHE STREET CULVERT REPLACEMENT**

General Nature of Public Improvement. The work includes all materials, equipment, transportation, and labor necessary to complete the improvements. The proposed project includes, pavement removal, grading, excavation, 74 LF of twin 8’x6’ precast box culvert with end sections, 134 linear feet of 15-inch RCP storm sewer, 46 linear feet of 8-inch PVC sanitary sewer, 137 linear feet of 8-inch C900 PVC water main, PC concrete pavement, PC concrete trail, channel shaping, rip-rap, traffic control, surface restoration, erosion control, and other miscellaneous work.

The Surety hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Jurisdiction may accept such bid or execute such Contract; and said Surety does hereby waive notice of any such extension.

In the event that any actions or proceedings are initiated with respect to this bond, the parties agree that the venue thereof shall be Marion County, State of Iowa. If legal action is required by the Jurisdiction against the Surety or Principal to enforce the provisions of the bond or to collect the monetary obligation incurring to the benefit of the Jurisdiction, the Surety or Principal agrees to pay the Jurisdiction all damages, costs, and attorney fees incurred by enforcing any of the provisions of this bond. All rights, powers, and remedies of the Jurisdiction hereunder shall be cumulative and not alternative and shall be in addition to all rights, powers and remedies given to the Jurisdiction, by law. The Jurisdiction may proceed against Surety for any amount guaranteed hereunder whether action is brought against Principal or whether Principal is joined in any such action or actions or not.

NOW, THEREFORE, if said proposal by the Principal be accepted, and the Principal shall enter into a contract with Jurisdiction in accordance with the terms of such proposal, including the provision of insurance and of a bond as may be specified in the contract documents, with good and sufficient surety for the faithful performance of such contract, for the prompt payment of labor and material furnished in the prosecution thereof, and for the maintenance of said improvements as may be required therein, then this obligation shall become null and void; otherwise, the Principal shall pay to the Jurisdiction the full amount of the bid bond, together with court costs, attorney’s fees, and any other expense of recovery.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

**SURETY:**

**PRINCIPAL:**

\_\_\_\_\_

Surety Company

BY \_\_\_\_\_

Signature Attorney-in-Fact/Officer

\_\_\_\_\_

Name of Attorney-in-Fact/Officer

\_\_\_\_\_

Company Name

\_\_\_\_\_

Company Address

\_\_\_\_\_

City, State, Zip Code

\_\_\_\_\_

Company Telephone Number

\_\_\_\_\_

Bidder

By \_\_\_\_\_

Signature

\_\_\_\_\_

Name (Print/Type)

\_\_\_\_\_

Title

\_\_\_\_\_

Address

\_\_\_\_\_

City, State, Zip Code

\_\_\_\_\_

Telephone Number

NOTE: All signatures on this bid bond must be original signatures in ink; copies or facsimile of any signature will not be accepted. This bond must be sealed with the Surety's raised, embossing seal. The Certificate or Power of Attorney accompanying this bond must be valid on its face and sealed with the Surety's raised, embossing seal.

CONTRACT

DATE \_\_\_\_\_

THIS CONTRACT, made and entered into at Knoxville, Iowa this \_\_\_\_\_ day of \_\_\_\_\_, 2020, by and between the City of Knoxville by its Mayor upon order of its City Council hereinafter Called the "Jurisdiction", and \_\_\_\_\_ Hereinafter called the "Contractor".

WITNESSETH:

The Contractor hereby agrees to complete the work comprising the below referenced improvements as specified in the contract documents, which are officially on file with the Jurisdiction, in the office of the City Administrator. This contract includes all contract documents. The work under this contract shall be constructed in accordance with the 2020 edition of the Iowa Statewide Urban Specifications for Public Improvements (SUDAS), and as further modified by supplemental specifications and special provisions included in the contract documents, and the Contract Attachment which is attached hereto. The Contractor further agrees to complete the work in strict accordance with said contract documents, and guarantee the work as required by law, for the time required in said contract documents, after its acceptance by the Jurisdiction.

This contract is awarded and executed for completion of the work specified in the contract documents for the bid prices shown on the Contract Attachment: "Bid Items, Quantities and Prices," which were proposed by the Contractor in its proposal submitted in accordance with the Notice to Bidders and Notice of Public Hearing for the following described improvements:

ROCHE STREET CULVERT REPLACEMENT

Nature of Public Improvement. The work includes all materials, equipment, transportation, and labor necessary to complete the improvements. The proposed project includes, pavement removal, grading, excavation, 74 LF of twin 8'x6' precast box culvert with end sections, 134 linear feet of 15-inch RCP storm sewer, 46 linear feet of 8-inch PVC sanitary sewer, 137 linear feet of 8-inch C900 PVC water main, PC concrete pavement, PC concrete trail, channel shaping, rip-rap, traffic control, surface restoration, erosion control, and other miscellaneous work.

The Contractor agrees to perform said work for and in consideration of the Jurisdiction's payment of the bid \_\_\_\_\_ DOLLARS

(\$ \_\_\_\_\_), which amount shall constitute the required amount of the performance, payment, and maintenance bond. The Contractor hereby agrees to commence work under this contract on or before a date to be specified in a written Notice to Proceed by the Jurisdiction, **no later than June 15, 2020**. The anticipated date for written Notice to Proceed date is April 2020. Work on the project is on Roche Street at the crossing of Competine Creek just north of Terrace Lane. Work on the improvements shall commence any time after a written Notice to Proceed is issued, **no later than June 15, 2020**, and shall be completed as stated below. The Notice to Proceed will be issued after the preconstruction conference, which is expected to occur in April 2020.

The Contractor shall substantially complete the overall project within **seventy (70) working days**. For this project, substantial completion for the overall project shall be defined as all utility, grading, backfill, topsoil, finish grading, pavement, trail, and traffic control work completed with the new streets, driveways, and sidewalks/trails fully open to traffic. Should the Contractor fail to substantially complete

the work within this timeframe, liquidated damages of **Five Hundred Dollars (\$500.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

The Contractor shall fully complete the overall project within **fifteen (15) working days** after substantial completion is met. For this project, fully completion shall be defined as completion and approval by City and Engineer of all punchlist items, surface restoration, and submittal of final payment application. Should the Contractor fail to fully complete the work within this timeframe, liquidated damages of **Two Hundred Fifty (\$250.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

IN WITNESS WHEREOF, the Parties hereto have executed this instrument, in triplicate on the date first shown written.

JURISDICTION

CONTRACTOR:

By \_\_\_\_\_  
Mayor

\_\_\_\_\_  
Contractor

(Seal)  
ATTEST:

By \_\_\_\_\_  
Signature

\_\_\_\_\_  
City Manager

\_\_\_\_\_  
Title

FORM APPROVED BY:

\_\_\_\_\_  
Attorney for Jurisdiction

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Telephone

CONTRACTOR PUBLIC REGISTRATION INFORMATION to be provided by:

1. All Contractors: The Contractor shall enter its Public Registration Number \_ \_ \_ \_ \_ - \_ \_ issued by the Iowa Commissioner of Labor pursuant to Section 91C.5 of the Iowa Code.
2. Out-of-State Contractors:
  - A. Pursuant to Section 91C.7 of the Iowa Code, an out-of-state contractor, before commencing a contract in excess of five thousand dollars in value in Iowa, shall file a bond with the division of labor services of the department of workforce development. The contractor should contact 515-242-5871 for further information. Prior to contract execution, the City Engineer may forward a copy of this contract to the Iowa Department of Workforce Development as notification of pending construction work. It is the contractor's responsibility to comply with said Section 91C.7 before commencing this work.
  - B. Prior to entering into contract, the designated low bidder, if it be a corporation organized under the laws of a state other than Iowa, shall file with the Jurisdictional Engineer a certificate from the Secretary of the State of Iowa showing that it has complied with all the provisions of Chapter 490 of the Code of Iowa, or as amended, governing foreign corporations. For further information, contact the Iowa Secretary of State Office at 515-281-5204.

NOTE: All signatures on this contract must be original signatures in ink; copies or facsimile of any signature will not be accepted.

CORPORATE ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
 ) SS  
\_\_\_\_\_ County)

On this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ and \_\_\_\_\_, to me known, who, being by me duly sworn, did say that they are the \_\_\_\_\_, and \_\_\_\_\_, respectively, of the corporation executing the foregoing instrument; that (no seal has been procured by) (the seal affixed thereto is the seal of) the corporation; that said instrument was signed (and sealed) on behalf of the corporation by authority of this Board of Directors; that \_\_\_\_\_ and \_\_\_\_\_ acknowledged the execution of the instrument to be the voluntary act and deed of the corporation, by it and by them voluntarily executed.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My commission expires \_\_\_\_\_

INDIVIDUAL ACKNOWLEDGEMENT

State of \_\_\_\_\_ )  
 ) SS  
\_\_\_\_\_ County)

On this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ and \_\_\_\_\_, to me known, who, being by me duly sworn, did say that they are the \_\_\_\_\_, and \_\_\_\_\_, respectively, of the corporation executing the foregoing instrument; that (no seal has been procured by) (the seal affixed thereto is the seal of) the corporation; that said instrument was signed (and sealed) on behalf of the corporation by authority of this Board of Directors; that \_\_\_\_\_ and \_\_\_\_\_ acknowledged the execution of the instrument to be the voluntary act and deed of the corporation, by it and by them voluntarily executed.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My commission expires \_\_\_\_\_

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
 ) SS  
\_\_\_\_\_ County)

On this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ and \_\_\_\_\_, to me known, who, being by me duly sworn, did say that they are the \_\_\_\_\_, and \_\_\_\_\_, respectively, of the corporation executing the foregoing instrument; that (no seal has been procured by) (the seal affixed thereto is the seal of) the corporation; that said instrument was signed (and sealed) on behalf of the corporation by authority of this Board of Directors; that \_\_\_\_\_ and \_\_\_\_\_ acknowledged the execution of the instrument to be the voluntary act and deed of the corporation, by it and by them voluntarily executed.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My commission expires \_\_\_\_\_

**CONTRACT ATTACHMENT: PART C****BID SCHEDULE**

The Bidder must provide the Unit Bid Prices and the Total Bid; in case of discrepancy, the Unit Bid Price governs. This is a Unit Bid Price Contract. The quantities shown on the Bid Schedule are approximate only, but are considered sufficiently adequate for the purpose of comparing bids. The Total Bid shall be used only for comparison of bids. The Total Bid shall be used for determining the sufficiency of the bid security.

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4.07	4040-108-E-0	Subdrain Outlets and Connections	EA	4		
5.01	5010-108-A-1	Water Main, Trenched, C900 PVC, 8 In.	LF	137		
5.02	5010-109-C-1	Fitting, 8" x 45° Bend	EA	8		
5.03	5010-109-C-1	Fitting, 8" x 6" Reducer	EA	1		
5.04	5010-108-D-0	Water Service Stub	EA	1		
5.05	5010-999-9-9	Water Main, Insulation	LF	22		
5.06	5010-999-9-9	Water Main, Abandon or Remove, 6 In.	LF	127		
5.07	5010-999-9-9	Water Main, Connection to Existing	EA	2		
6.01	6010-108-B-0	Intake, SW-501	EA	1		
6.02	6010-108-B-0	Intake, SW-503	EA	1		
6.03	6010-108-E-0	Manhole Adjustment, Major	EA	1		

Item No.	Item Code	Item Description	Unit	Total Quantities	Unit Price	Total Costs
6.04	6010-108-H-0	Remove Intake	EA	2		
7.01	7010-108-A-0	Pavement, PCC, 7 In.	SY	293		
7.02	7010-108-D-0	Special Subgrade Compaction for Shared Use Path	SY	307		
7.03	7010-108-I-0	PCC Pavement Samples and Testing	LS	1		
7.04	7030-108-I-0	Shared Use Path, PCC, 6 In.	SY	221		
7.05	7030-108-G-0	Detectable Warning, Cast Iron	SF	24		
7.06	7030-108-H-1	Driveway, Paved, PCC, 6 In.	SY	10		
7.07	7030-999-9-9	Temporary Surfacing, 12 In.	TON	150		
7.08	7040-108-H-0	Pavement Removal	SY	305		
8.01	8030-108-A-0	Temporary Traffic Control	LS	1		
8.02	8030-999-9-9	Temporary Barrier Rail	LF	300		
9.01	9040-108-D-1	Filter Sock, 12 Inch.	LF	410		
9.02	9040-108-D-2	Filter Sock, Removal	LF	410		
9.03	9040-108-J-0	Rip Rap	TON	262		
9.04	9040-108-Q-0	Erosion Control Mulching, Hydromulching with Temporary Seed	AC	0.3		
9.05	9040-108-Q-0	Hydroseeding, Fertilizer, Hydromulch, Type 1 Seeding	AC	0.3		
11.01	11,010-108-A	Construction Survey	LS	1		
11.02	11,020-108-A	Mobilization	LS	1		
11.03	11,030-108-A-0	Maintenance of Postal Service	LS	1		
11.04	11,030-108-B-0	Maintenance of Solid Waste Collection	LS	1		
11.05	11,050-108-A-0	Concrete Washout	LS	1		
99.01	2102-0425071	Special Backfill	CY	39		
99.02	2107-3825025	Granular Material for Blanket and Subdrain	CY	72		
99.03	2401-6745650	Removal of Existing Structures	LS	1		
99.04	2402-2720000	Excavation, Class 20	CY	902		
99.05	2415-2100000	Precast Concrete Box Culvert	LF	74		
99.06	2415-2200000	Precast Concrete Box Culvert End Section	EA	2		
99.07	2501-8400172	Temporary Shoring	LS	1		
99.08	2519-1001000	Fence, Chain-Link, Vinyl Coated	LF	75		

**TOTAL BID:** \$ \_\_\_\_\_  
(NUMBERS)

**TOTAL BID:** \_\_\_\_\_ DOLLARS  
(WORDS)

**NOTE:**

IT IS UNDERSTOOD THAT THE ABOVE QUANTITIES ARE ESTIMATED FOR THE PURPOSE OF THIS BID. ALL QUANTITIES ARE SUBJECT TO REVISION BY THE JURISDICTION. QUANTITY CHANGES THAT AMOUNT TO TWENTY (20) PERCENT OR LESS OF THE TOTAL BID SHALL NOT AFFECT THE UNIT BID PRICE.

SURETY BOND NO. \_\_\_\_\_

**PERFORMANCE, PAYMENT AND MAINTENANCE BOND**

KNOW ALL BY THESE PRESENTS:

That we, \_\_\_\_\_, as Principal (hereinafter the “Contractor” or “Principal”) and \_\_\_\_\_, as Surety are held and firmly bound unto \_\_\_\_\_, as Obligee (hereinafter referred to as “the Jurisdiction”), and to all persons who may be injured by any breach of any of the conditions of this Bond in the penal sum of \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_), lawful money of the United States, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, legal representatives and assigns, jointly or severally, firmly by these presents.

The conditions of the above obligations are such that whereas said Contractor entered into a contract with the Jurisdiction, bearing date the \_\_\_\_ day of \_\_\_\_\_, 2020, hereinafter the “Contract” wherein said Contractor undertakes and agrees to construct the following described improvements:

**ROCHE STREET CULVERT REPLACEMENT**

General Nature of Public Improvement. The work includes all materials, equipment, transportation, and labor necessary to complete the improvements. The proposed project includes, pavement removal, grading, excavation, 74 LF of twin 8’x6’ precast box culvert with end sections, 134 linear feet of 15-inch RCP storm sewer, 46 linear feet of 8-inch PVC sanitary sewer, 137 linear feet of 8-inch C900 PVC water main, PC concrete pavement, PC concrete trail, channel shaping, rip-rap, traffic control, surface restoration, erosion control, and other miscellaneous work.

Work includes commitment to faithfully perform all the terms and requirements of said Contract within the time therein specified, in a good and workmanlike manner, and in accordance with the Contract Documents.

It is expressly understood and agreed by the Contractor and Surety in this bond that the following provisions are a part of this Bond and are binding upon said Contractor and Surety, to-wit:

1. **PERFORMANCE:** The Contractor shall well and faithfully observe, perform, fulfill and abide by each and every covenant, condition and part of said Contract and Contract Documents, by reference made a part hereof, for the above referenced improvements, and shall indemnify and save harmless the Jurisdiction from all outlay and expense incurred by the Jurisdiction by reason of the Contractor’s default of failure to perform as required. The Contractor shall also be responsible for the default or failure to perform as required under the Contract and Contract Documents by all its subcontractors, suppliers, agents, or employees furnishing materials or providing labor in the performance of the Contract.
2. **PAYMENT:** The Contractor and the Surety on this Bond are hereby agreed to pay all just claims submitted by persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the performance of the Contract on account of which this Bond is given, including but not limited to claims for all amounts due for labor, materials, lubricants, oil, gasoline, repairs on machinery, equipment and tools, consumed or used by the Contractor or any subcontractor, wherein the same are not satisfied out of the portion of the contract price which the Jurisdiction is required to retain until completion of the improvement, but the Contractor and

(CON'T – PERFORMANCE, PAYMENT AND MAINTENANCE BOND)

Surety shall not be liable to said persons, firms, or corporations unless the claims of said claimants against said portion of the contract price shall have been established as provided by law. The Contractor and Surety hereby bind themselves to the obligations and conditions set forth in Chapter 573, Code of Iowa, which by this reference is made a part hereof as though fully set out herein.

3. MAINTENANCE: The Contractor and the Surety on this Bond hereby agree, at their own expense:
  - A. To remedy any and all defects that may develop in or result from work to be performed under the Contract within the period **four (4) years** from the date of acceptance of the work under the Contract, by reason of defects in workmanship or materials used in construction of said work;
  - B. To keep all work in continuous good repair; and
  - C. To pay the Jurisdiction's reasonable costs of monitoring and inspection to assure that any defects are remedied, and to repay the Jurisdiction all outlay and expense incurred as a result of Contractor's and Surety's failure to remedy any defect as required by this section.

Contractor's and Surety's agreement herein made extend to defects in workmanship or materials not discovered or known to the Jurisdiction at the time such work was accepted.

4. GENERAL: Every Surety on this Bond shall be deemed and held bound, any contract to the contrary notwithstanding, to the following provisions:
  - A. To consent without notice to any extension of time to the Contractor in which to perform the Contract;
  - B. To consent without notice to any change in the Contract or Contract Documents, which thereby increases the total contract price and the penal sum of this bond, provided that all such changes do not, in the aggregate, involve an increase of more than twenty percent of the total contract price, and that this bond shall then be released as to such excess increase; and
  - C. To consent without notice that this Bond shall remain in full force and effect until the Contract is completed, whether completed within the specified contract period, within an extension thereof, or within a period of time after the contract period has elapsed and the liquidated damage penalty is being charged against the Contractor.

The Contractor and every Surety on the bond shall be deemed and held bound, any contract to the contrary notwithstanding, to the following provisions:

(CON'T – PERFORMANCE, PAYMENT AND MAINTENANCE BOND)

- D. That no provision of this Bond or of any other contract shall be valid which limits to less than five years after the acceptance of the work under the Contract the right to sue on this Bond.
  
- E. That as used herein, the phrase “all outlay and expense” is not to be limited in any way, but shall include the actual and reasonable costs and expenses incurred by the Jurisdiction including interest, benefits and overhead where applicable. Accordingly, “all outlay and expense” would include but not be limited to all contract or employee expense, all equipment usage or rental, materials, testing, outside experts, attorney’s fees (including overhead expenses of the Jurisdiction’s staff attorneys), and all costs and expenses of litigation as they are incurred by the Jurisdiction. It is intended the Contractor and Surety will defend and indemnify the Jurisdiction on all claims made against the Jurisdiction on account of Contractor’s failure to perform as required in the Contract and Contract Documents, that all agreements and promises set forth in the Contract and Contract Documents, in approved change orders, and in this Bond will be fulfilled, and that the Jurisdiction will be fully indemnified so that it will be put into the position it would have been in had the Contract been performed in the first instance as required.

In the event the Jurisdiction incurs any “outlay and expense” in defending itself with respect to any claim as to which the Contractor or Surety should have provided the defense, or in the enforcement of the promises given by the Contractor in the Contract, Contract Documents, or approved change orders, or in the enforcement of the promises given by the Contractor and Surety in this Bond, the Contractor and Surety agree that they will make the Jurisdiction whole for all such outlay and expense, provided that the Surety’s obligation under this bond shall not exceed 125% of the penal sum of this bond.

In the event that any actions or proceedings are initiated with respect to this Bond, the parties agree that the venue thereof shall be Marion County, State of Iowa. If legal action is required by the Jurisdiction to enforce the provisions of this Bond or to collect the monetary obligation incurring to the benefit of the Jurisdiction, the Contractor and the Surety agree, jointly and severally, to pay the Jurisdiction all outlay and expense incurred therefore by the Jurisdiction. All rights, powers, and remedies of the Jurisdiction hereunder shall be cumulative and not alternative and shall be in addition to Surety for any amount guaranteed hereunder whether action is brought against the Contractor or whether Contractor is joined in any such action or actions or not.

NOW THEREFORE, the condition of this obligation is such that if said Principal shall faithfully perform all the promises of the Principal, as set forth and provided in the Contract, in the Contract Documents, and in this Bond, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

(CON'T – PERFORMANCE, PAYMENT AND MAINTENANCE BOND)

When a work, term, or phrase is used in this Bond, it shall be interpreted or construed first as defined in this Bond, the Contract, or the Contract Documents; second, if not defined in the Bond, Contract, or Contract Documents, it shall be interpreted or construed as defined in applicable provisions of the Iowa Code; third, if not defined in the Iowa Code, it shall be interpreted or construed according to its generally accepted meaning in the construction industry; and fourth, if it has no generally accepted meaning in the construction industry, it shall be interpreted or construed according to its common or customary usage.

Failure to specify or particularize shall not exclude terms or provisions not mentioned and shall not limit liability hereunder. The Contract and Contract Documents are hereby made a part of this Bond.

(CON'T – PERFORMANCE, PAYMENT AND MAINTENANCE BOND)

Witness our hands, in triplicate, this \_\_\_\_\_ day of \_\_\_\_\_, 2020 .

Surety Countersigned By:

**PRINCIPAL:**

\_\_\_\_\_  
Signature of Iowa Resident Commission Agent as  
Prescribed by Chapter 515.52-57, Iowa Code.  
(Require only if Attorney-in-Fact is not also an  
Iowa Resident Commission Agent).

\_\_\_\_\_  
Contractor

By: \_\_\_\_\_

Signature

\_\_\_\_\_  
Name of Resident Commission Agent

\_\_\_\_\_  
Title

\_\_\_\_\_  
Company Name

**SURETY:**

\_\_\_\_\_  
Company Address

\_\_\_\_\_  
Surety Company

\_\_\_\_\_  
City, State, Zip Code

By: \_\_\_\_\_

Signature Attorney-in-Fact

\_\_\_\_\_  
Company Telephone Number

\_\_\_\_\_  
Name of Attorney-in-Fact

\_\_\_\_\_  
Company Name

**FORM APPROVED BY:**

\_\_\_\_\_  
Company Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Attorney for Jurisdiction

\_\_\_\_\_  
Company Telephone Number

NOTE: All signatures on this performance, payment & maintenance bond must be original signatures in ink; copies or facsimile of any signature will not be accepted. This bond must be sealed with the Surety's raised, embossing seal. The Certificate or Power of Attorney accompanying this bond must be valid on its face and sealed with the Surety's raised, embossing seal.

**NOTICE TO BIDDERS**  
**JURISDICTION OF CITY OF KNOXVILLE**  
**ROCHE STREET CULVERT REPLACEMENT**

Time and Place for Filing Sealed Proposals. Sealed bids for the work comprising the improvements as stated below must be filed before 2:00 p.m., Tuesday, March 10, 2020 in the office of the City Clerk, Knoxville City Hall, 305 S. Third Street, Knoxville, Iowa 50138.

Time and Place Sealed Proposals Will be Opened and Considered. Sealed proposals will be opened and bids tabulated at 2:00 p.m., Tuesday, March 10, 2020 in the Council Chambers of the City Hall, for consideration by the Knoxville City Council at its meeting on Monday, March 16, 2020.

The City of Knoxville reserves the right to reject any and all bids. The City of Knoxville reserves the right to defer acceptance of any bid for a period of sixty (60) calendar days after receipt of bids and no bid may be withdrawn during this period.

Time for Commencement and Completion of Work. Work on the improvements shall commence any time after a written Notice to Proceed is issued, **no later than June 15, 2020**, and shall be completed as stated below. The Notice to Proceed will be issued after the preconstruction conference, which is expected to occur in April 2020.

The Contractor shall substantially complete the overall project within **seventy (70) working days**. For this project, substantial completion for the overall project shall be defined as all utility, grading, backfill, topsoil, finish grading, pavement, trail, and traffic control work completed with the new streets, driveways, and sidewalks/trails fully open to traffic. Should the Contractor fail to substantially complete the work within this timeframe, liquidated damages of **Five Hundred Dollars (\$500.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

The Contractor shall fully complete the overall project within **fifteen (15) working days** after substantial completion is met. For this project, fully completion shall be defined as completion and approval by City and Engineer of all punchlist items, surface restoration, and submittal of final payment application. Should the Contractor fail to fully complete the work within this timeframe, liquidated damages of **Two Hundred Fifty (\$250.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

Bid Security. Each bidder shall accompany its bid with bid security as defined in Iowa Code Section 26.8, as security that the successful bidder will enter into a contract for the work bid upon and will furnish after the award of contract a corporate surety bond, in a form acceptable to the Jurisdiction, for the faithful performance of the contract, in an amount equal to 100% of the amount of the contract. The bidder's security shall be in the amount fixed in the Instruction to Bidders and shall be in the form of a cashier's check or a certified check drawn on an FDIC insured bank in Iowa or on an FDIC insured bank chartered under the laws of the United States; or a certified share draft drawn on a credit union in Iowa or chartered under the laws of the United States; or a bid bond on the form provided in the contract documents with corporate surety satisfactory to the Jurisdiction. The bid shall contain no condition except as provided in the specifications.

Contract Documents. The contract documents are available with the City Manager and may be examined at the Knoxville City Hall, 305 S Third Street, Knoxville, Iowa 50138. Hard copies of the project documents may be obtained from Snyder & Associates, Inc. 2727 SW Snyder Blvd, Ankeny, Iowa 50023 at no charge.

Electronic contract documents are available by clicking on the “BIDS” link at [www.snyder-associates.com](http://www.snyder-associates.com) and choosing “Roche Street Culvert Replacement” on the left. Project information, engineer’s cost opinion, and planholder information is available at no cost at this website. Downloads require the user to register for a free membership at QuestCDN.com.

Iowa Preference. By virtue of statutory authority, preference will be given to products and provisions grown and coal produced within the State of Iowa, and to Iowa domestic labor, to the extent lawfully required under Iowa statutes.

In accordance with Iowa statutes, a resident bidder shall be allowed a preference as against a nonresident bidder from a state or foreign country if that state or foreign country gives or requires any preference to bidders from that state or foreign country, including but not limited to any preference to bidders, the imposition of any type of labor force preference, or any other form of preferential treatment to bidders or laborers from that state or foreign country. The preference allowed shall be equal to the preference given or required by the state or foreign country in which the nonresident bidder is a resident. In the instance of a resident labor force preference, a nonresident bidder shall apply the same resident labor force preference to a public improvement in this state as would be required in the construction of a public improvement by the state or foreign country in which the nonresident bidder is a resident.

Sales Tax Exemption. A sales tax exemption certificate will be available for all materials purchased for incorporation in the project.

Public Hearing on Proposed Contract Documents and Estimated Costs for Improvements. A public hearing will be held by the City of Knoxville on the proposed contract documents (plans, specifications and form of contract) and estimated cost for the improvements at its meeting at 6:15 p.m., Monday, March 16, 2020 in said **Council Chambers of the City Hall, 305 S Third Street, Knoxville, Iowa 50138.**

General Nature of Public Improvement. The work includes all materials, equipment, transportation, and labor necessary to complete the improvements. The proposed project includes, pavement removal, grading, excavation, 74 LF of twin 8’x6’ precast box culvert with end sections, 134 linear feet of 15-inch RCP storm sewer, 46 linear feet of 8-inch PVC sanitary sewer, 137 linear feet of 8-inch C900 PVC water main, PC concrete pavement, PC concrete trail, channel shaping, rip-rap, traffic control, surface restoration, erosion control, and other miscellaneous work.

Surety Bond. Each successful bidder will be required to furnish a corporate surety bond in an amount equal to 100% of its contract price. Said bond shall be issued by a responsible surety approved by **the City of Knoxville** and shall guarantee the faithful performance of the contract and the terms and conditions therein contained and shall guarantee the prompt payment of all material and labor, and protect and save harmless **City of Knoxville** from claims and damages of any kind caused by the operations of the contract and shall also guarantee the maintenance of the improvement caused by failures in materials and construction for a period of two years from and after acceptance of the contract. The guaranteed maintenance period for new paving shall be four years.

Nondiscrimination. The **City of Knoxville**, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

This Notice is given by authority of the *City of Knoxville*.

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Tricia Kincaid, City Clerk

## NOTICE OF HEARING

NOTICE OF PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS, FORM OF CONTRACT, AND ESTIMATE OF COST FOR THE **Roche Street Culvert Replacement** FOR THE **City of Knoxville, Iowa.**

Public Notice is hereby given that at **6:15 P.M.** on the **16<sup>th</sup>** day of **March, 2020**, the **City of Knoxville City Council** will, in the **Council Chambers of the City Hall, 305 S Third Street, Knoxville, Iowa 50138**, hold a hearing whereat said **Council** will resolve to adopt plans, specifications, form of contract and estimate of cost for the construction of the **Roche Street Culvert Replacement** and, at the time, date and place specified above, or at such time, date and place as then may be fixed, to act upon proposals and enter into contract for the construction of said improvements.

### General Nature of the Public Improvement

The work includes all materials, equipment, transportation, and labor necessary to complete the improvements. The proposed project includes, pavement removal, grading, excavation, 74 LF of twin 8'x6' precast box culvert with end sections, 134 linear feet of 15-inch RCP storm sewer, 46 linear feet of 8-inch PVC sanitary sewer, 137 linear feet of 8-inch C900 PVC water main, PC concrete pavement, PC concrete trail, channel shaping, rip-rap, traffic control, surface restoration, erosion control, and other miscellaneous work.

At said hearing, the **Council** will consider the proposed plans, specifications, form of contract and estimate of cost for said project, the same now being on file in the **City Hall, 305 S Third Street, Knoxville, Iowa 50138**, reference to which is made for a more detailed and complete description of the proposed improvements, and at said time and place the said Council will also receive and consider any comments/objections to said plans, specifications and form of contract or to the estimated cost of said improvements made by any interested party.

This Notice is given by authority of the **City of Knoxville**

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**City of Knoxville**

Published in the **Knoxville Journal Express**

NOTICE TO PROCEED

TO: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DATE: \_\_\_\_\_  
PROJECT: ROCHE STREET CULVERT  
REPLACEMENT  
KNOXVILLE, IOWA  
Project #119.0729

You are hereby notified to commence work in accordance with the Contract dated \_\_\_\_\_ 2020, and you are to begin construction work as soon as possible to complete the project prior to the date noted below and you are to complete the work as follows: The work includes all materials, equipment, transportation, and labor necessary to complete the improvements. The proposed project includes, pavement removal, grading, excavation, 74 LF of twin 8’x6’ precast box culvert with end sections, 134 linear feet of 15-inch RCP storm sewer, 46 linear feet of 8-inch PVC sanitary sewer, 137 linear feet of 8-inch C900 PVC water main, PC concrete pavement, PC concrete trail, channel shaping, rip-rap, traffic control, surface restoration, erosion control, and other miscellaneous work.

Work on the project is on Roche Street at the crossing of Competine Creek just north of Terrace Lane and shall begin upon notice to proceed. Work on the improvements shall commence any time after a written Notice to Proceed is issued, **no later than June 15, 2020**, and shall be completed as stated below. The Notice to Proceed will be issued after the preconstruction conference, which is expected to occur in April 2020.

The Contractor shall substantially complete the overall project within **seventy (70) working days**. For this project, substantial completion for the overall project shall be defined as all utility, grading, backfill, topsoil, finish grading, pavement, trail, and traffic control work completed with the new streets, driveways, and sidewalks/trails fully open to traffic. Should the Contractor fail to substantially complete the work within this timeframe, liquidated damages of **Five Hundred Dollars (\$500.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

The Contractor shall fully complete the overall project within **fifteen (15) working days** after substantial completion is met. For this project, fully completion shall be defined as completion and approval by City and Engineer of all punchlist items, surface restoration, and submittal of final payment application. Should the Contractor fail to fully complete the work within this timeframe, liquidated damages of **Two Hundred Fifty (\$250.00) per calendar day** will be assessed for the work not completed within the designated Contract term(s).

Dated this \_\_\_\_\_ day of April, 2020.

\_\_\_\_\_ CITY OF KNOXVILLE \_\_\_\_\_

By: \_\_\_\_\_

Title: Project Engineer \_\_\_\_\_

Snyder and Associates, Inc.

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged by \_\_\_\_\_ on this  
the \_\_\_\_\_ day of \_\_\_\_\_, 2020.

By: \_\_\_\_\_

Title: \_\_\_\_\_

SPECIAL PROVISIONS

FOR

PART 1 - GENERAL REQUIREMENTS

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1.	DEFINITION AND INTENT	8.	MATERIALS TESTS
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3.	SALVAGE OF MATERIALS AND EQUIPMENT	10.	CONSTRUCTION STAKING
4.	PLANS AND SPECIFICATIONS	11.	PAVEMENT POST PLACEMENT, TESTING, AND ACCEPTANCE
5.	CONSTRUCTION FACILITIES	12.	MEASUREMENT AND PAYMENT
6.	SUBMITTALS	13.	INCIDENTAL CONTRACT ITEMS
7.	STANDARDS AND CODES		

1. DEFINITION AND INTENT

A. The Technical Specifications that apply to the materials and construction practices for this project are defined as follows:

1. The 2020 edition of the Iowa Statewide Urban Specifications for Public Improvements (SUDAS), except as modified by these Special Provisions to the Technical Specifications.
2. The intent of the Technical Specifications is to describe the construction desired, performance requirements, and standards of materials and construction.

A. Engineer: Snyder & Associates, Inc., 2727 S.W. Snyder Blvd., Ankeny, Iowa 50023; Phone (515) 964-2020.

2. WORK REQUIRED

A. Work under this contract includes all materials, equipment, transportation, and labor necessary to complete the improvements. The work includes all materials, equipment, transportation, and labor necessary to complete the improvements. The proposed project includes, pavement removal, grading, excavation, 74 LF of twin 8'x6' precast box culvert with end sections, 134 linear feet of 15-inch RCP storm sewer, 46 linear feet of 8-inch PVC sanitary sewer, 137 linear feet of 8-inch C900 PVC water main, PC concrete pavement, PC concrete trail, channel shaping, rip-rap, traffic control, surface restoration, erosion control, and other miscellaneous work.

B. This project consists of one contract for all work described.

- C. Schedule and coordinate the construction work to facilitate timely construction of the improvements.

3. SALVAGE OF MATERIALS AND EQUIPMENT

- A. The City of Knoxville retains first right of refusal for retaining any existing materials removed by the contractor during the course of construction.
- B. The Contractor shall carefully remove, in a manner to prevent damage, all materials and equipment specified or indicated to be salvaged. The Contractor shall protect and store items as specified.
- C. Any items damaged in removal, storage, or handling through carelessness or improper procedures shall be replaced by the Contractor in kind with new items.

4. PLANS AND SPECIFICATIONS

- A. The City will furnish 5 sets of plans and specifications to the Contractor after award of the contract. The Contractor shall compensate the City for printing costs for additional copies required.
- B. Provide one complete set of plans and specifications for each foreman and superintendent in charge of each crew on the job.

5. CONSTRUCTION FACILITIES

- A. Provide telephone numbers where Contractor's representative can be reached during work days and on nights and weekends in the event of an emergency.
- B. Provide and maintain suitable sanitary facilities for construction personnel for duration of work; remove upon completion of work.
- C. Do not store construction equipment, employee's vehicles, or materials on streets open to traffic. Location for storage of equipment by Contractors is subject to approval by the City and Engineer.
- D. The Contractor shall provide suitable storage facilities necessary for proper storage of materials and equipment.
- E. Provide fence, barricades, and/or workers to prevent access of unauthorized persons to site where work is in progress and to ensure the safety of the public when allowed on site. No trenches shall be left open overnight and during non-working hours.
- F. Provide an access for EMS vehicles and workers at all times to and through the construction site.
- G. Compressed air, sanitary facilities, storage areas, and other services shall be furnished by the Contractor to meet their own requirements and at their own cost.

## 6. SUBMITTALS

- A. Provide construction schedule showing dates of starting and completing various portions of work.
- B. Provide 3 copies plus copies required by Contractor. This information shall be submitted to the Engineer at the preconstruction conference or at least 14 days prior to utilization of the particular item on this project. Submit the following information for Engineer's review:
  - 1. Testing reports as outlined in Sections 8 & 9.
  - 2. Manufacturer's data for materials that are to be permanently incorporated into the project.
  - 3. Details of proposed methods of any special construction required.
  - 4. Submit purchase orders and subcontracts without prices.
  - 5. Such other information as the Engineer may request to ensure compliance with contract documents.
  - 6. Certificate of Insurance to the Engineer which includes the Jurisdiction and Engineer as additional insured.

## 7. STANDARDS AND CODES

- A. Construct improvements with best present day construction practices and equipment.
- B. Conform with and test in accordance with applicable sections of the following standards and codes.
  - 1. American Association of State Highway and Transportation Officials (AASHTO).
  - 2. American Society for Testing and Materials (ASTM).
  - 3. Iowa Department of Transportation Standard Specifications (Iowa DOT).
  - 4. American National Standards Institute (ANSI).
  - 5. American Water Works Association (AWWA).
  - 6. American Welding Society (AWS).

7. Federal Specifications (FS).
8. Iowa Occupational Safety and Health Act of 1972 (IOSHA).
9. Manual of Accident Prevention in Construction by Associated General Contractors of America, Inc. (AGC).
10. SUDAS Standard Specification, 2016 Edition
11. Iowa DOT Standard Specifications, Most Recent Edition
12. Iowa DOT Materials I.M.s, Most Recent Edition
13. Standards and Codes of the State of Iowa and the ordinances of the City of Knoxville, Iowa.
14. Other standards and codes which may be applicable to acceptable standards of the industry for equipment, materials and installation under the contract.

8. MATERIALS TESTS

- A. Material testing is incidental to construction and will be completed by an independent testing laboratory retained by the Contractor and approved by the Engineer. Testing shall meet the requirements of SUDAS.
- B. Coordinate all material testing with the Engineer.
- C. Provide transportation of all samples to the laboratory.
- D. Do not ship materials to the project site until laboratory tests have been furnished showing compliance of materials with specifications.
- E. Provide gradation and materials certifications for all granular materials. Certify that sources of Portland Cement and aggregates are Iowa DOT approved.
- F. Certify that materials and equipment are manufactured with applicable specifications.

9. FIELD TESTS

- A. Field testing is incidental to construction and will be completed by an independent testing laboratory retained by the Contractor and approved by the Engineer. Testing shall meet the requirements of SUDAS.

- B. Coordinate all field testing with the Engineer.
- C. The Contractor is responsible for meeting the specified testing requirements in the SUDAS for construction relating to Divisions 2, 3, 4, 6, 7, and 9 of said specification, if deemed necessary for the completion of the work specified.
1. Trench backfill: Section 3010, Part 2 and Section 3010, Part 3.06 and Special Provisions of these specifications
    - a. Compact trench and structure backfill to not less than 95% of maximum Standard Proctor Density in a street or road right-of-way and under any granular or paved surfaces.
    - b. Compact to not less than 90% maximum Standard Proctor Density in all other areas.
    - c. Compaction requirements remain in effect during cold weather.
- D. If test results do not meet those specified, the Contractor shall make necessary corrections and repeat testing to demonstrate compliance with the specifications. Contractor shall pay all costs for retesting.

## 10. MEASUREMENT AND PAYMENT

- A. Contract unit or lump sum prices are full compensation for furnishing all materials, equipment, tools, transportation and labor necessary to construct and complete each item of work as specified. No separate payment will be made for work included in this project except as set forth in the bid item reference notes. Refer to Plans for bid item reference notes. All other items of work are incidental to construction.

## 11. INCIDENTAL CONTRACT ITEMS

- A. The following list includes major items that are incidental to the project and will not be paid for as separate bid items. Other items may be designated as incidental under certain bid items.
- Cold weather protection for PCC Pavement
  - Construction fencing
  - Construction staging & phasing
  - Coordination and cooperation with utility companies
  - Coordination and cooperation with affected property owners
  - Coordination and cooperation with the City of Knoxville
  - Curb and pavement backfill
  - Dewatering and handling storm water flow during construction

- Dust control measures
- Excavation, verification, and protection of existing utilities (public and private)
- Finish grading
- Flaggers
- Granular backfill and bedding for storm sewer installation
- Granular surfacing removal
- Handbill notification of street closures & utility disruption to affected Residents
- Locate of existing utilities, potholing if necessary
- Maintaining garbage and utility service to users
- Maintenance and watering for seeding and sodding
- All material & field testing
- Monitoring weather conditions
- Mowing – to maintain grass height below 18 inches
- Proof rolling
- Protection of existing utilities and light poles
- Protection of existing trees and plantings not removed
- Repair of field tiles, if encountered
- Reseeding and/or resodding
- Safety closures
- Full depth sawcutting
- Site cleanup
- Temporary sheeting and shoring
- Working backfill to reduce moisture content or addition of moisture and incorporating into backfill
- Special care to protect existing features to remain
- Special backfill and compaction around structures

## SPECIAL PROVISIONS

### FOR

#### PART 2 - SPECIAL CONSTRUCTION

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5.	CONSTRUCTION LIMITS	16.	RESPONSIBILITY OF CONTRACTOR
6.	CONSTRUCTION SCHEDULE	17.	CONCRETE PAVEMENT (PCC)
7.	CONSTRUCTION STAKING	18.	EXCAVATION AND BACKFILL
8.	GARBAGE COLLECTION	19.	STORM SEWERS AND STRUCTURES
9.	POSTAL SERVICE	20.	WATER MAINS AND APPURTENANCES
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11.	EROSION/POLLUTION PREVENTION PLAN	22.	SURFACE RESTORATION

#### 1. GENERAL

- A. Procedures outlined herein are not intended to fully cover all special construction procedures but are offered as an aid to the Contractor in planning work.
- B. Cooperate with the City of Knoxville and the Engineer to minimize inconvenience to property owners and motorists and to prevent delays in construction and interruption to continuous operation of utility services and site access.
- C. Notify City of Knoxville, impacted residents & businesses, police, and fire department at least three (3) business days in advance of closing any street or entrance for construction.
- D. The Contractor is expected to provide adequate personnel and equipment to perform work within specified time of construction. **Once work within a specified area has commenced the Contractor shall put full and continuous workforce to complete the area as soon as possible to minimize inconvenience to traveling public, property owners, and EMT service.**
- E. Install and maintain orange safety fence around all open trenches or open structures when left unattended. No trenches shall be left open during non-working hours and at night.
- F. Provide an access for EMS vehicles during construction. Existing and temporary sidewalks may be used for access of EMS vehicles during construction.

G. Provide surface restoration and clean up as construction progresses.

## 2. EXISTING UTILITIES

- A. Location of utility lines, mains, cables and appurtenances shown on plans are from information provided by utility companies and records of the Owner.
- B. Prior to construction, contact all utility companies and have all utility lines and services located. Some utility companies are planning to relocate their facilities during this Project. The Contractor is responsible for excavating and exposing underground utilities in order to confirm their locations ahead of the work.
- C. Contractor is solely responsible for damage to utilities or private or public property due to utility disruption.
- D. The Contractor shall notify utility company immediately if utility infrastructure is damaged during construction.
- E. In general, utility companies will relocate utility infrastructure in direct conflict with line and grade of the work during construction. Some utility infrastructure will not be relocated and the Contractor shall support and protect all utilities that are not moved.
- F. Utility services are not generally shown on plans; protect and maintain services during construction. Notify Owner and affected property owners 48 hours prior to any planned utility service interruptions.
- G. If utility work does occur during the construction period, work schedules from the contractor and from the utility companies will be submitted to the Engineer for coordination to obtain mutual acceptable schedules, if possible.
- H. Existing utilities shall remain in substantially continuous operation during construction. Select the order and methods of construction that will not interfere with the operation of the utility systems. Interrupt utility services only with approval of Owner and Engineer.
- I. No claims for additional compensation or time extensions will be allowed to the Contractor for interference or delay caused by utility companies.

## 3. PROJECT SUPERVISION

- A. The Prime Contractor shall be represented in person at the construction site at all times that construction operations are proceeding by a qualified superintendent or other designated, qualified representative capable of providing adequate supervision. The superintendent or representative must be duly authorized to receive and execute instructions, notices and written orders from the Engineer.

- B. Issues that arise during construction relating to traffic control, construction staging, resident notifications, mail service, garbage service, access to residences, etc. are the responsibility of the Prime Contractor.
- C. A meeting with the Contractor, Engineer and Owner will be held at the project site before construction to coordinate the construction work.
- D. Refer to Division 1 – General Provisions and Covenants, Section 1080 – Contractual Provisions, Prosecution and Progress, Section 1.10 Contractor’s Employees, Methods and Equipment for additional requirements.

4. COORDINATION WITH OTHERS

- A. Cooperate and coordinate construction with the City of Knoxville, adjacent businesses, utility companies, affected property owners and other contractors working in vicinity of this project.
- B. It is the Contractor’s responsibility to schedule and coordinate work to minimize construction delays and conflicts.

5. CONSTRUCTION LIMITS

- A. Confine the construction operations within the construction limits shown on the plans, consisting of public right-of way and temporary easements, if available.
- B. Do not store equipment, vehicles or materials within the right-of-way of any streets open to traffic at any time without approval of the City.

6. CONSTRUCTION SCHEDULE

- A. The Contractor will prepare and submit to the Engineer for approval a project schedule that will assure the completion of the project within the time specified.
- B. The Contractor shall be required to meet the final completion date as specified in the written Notice to Proceed.
- C. Notify the City and property owners at least three (3) business days prior to any street or driveway closures.

7. CONSTRUCTION STAKING

- A. Construction Staking will be provided by the Contractor. The Contractor shall be responsible for the preservation of stakes and marks. The costs of replacing damaged stakes and marks will be solely borne by the Contractor.

8. GARBAGE AND RECYCLING COLLECTION

- A. If work does or does not take place on a normal garbage or recycling collection day, coordinate collection of garbage and recycling from individual properties with the local collection agencies operating in the project areas.
- B. Refer to Plans for other requirements for coordination of garbage and recycling collection.

9. POSTAL SERVICE

- A. Coordinate delivery of mail with U.S. Postal Service. Coordinate temporary mailbox locations with U.S. Postal Service, if roadway mailboxes exist.
- B. Maintain postal service at all times. Provide access to all residences along the project for mail carriers. If access cannot be maintained, provide and install temporary mail boxes at the end of each street or as required by the U.S. Postal Service so that mail delivery is maintained on a daily basis.

10. DISPOSAL

- A. Remove from project site and dispose of trees, shrubs, vegetation, excess soil excavation, rubbish, concrete, granular materials and other materials encountered as shown on plans and as specified.
- B. Dispose of materials in accordance with applicable laws and ordinances. Disposal sites are subject to the review and approval of the Engineer.
  - 1. Burning of brush and other debris is not permitted. Contractor responsible for selecting disposal site.
  - 2. Dispose of broken concrete, asphalt, granular material, rubble, excess or unsuitable excavated material. Contractor is responsible for selecting disposal site.
  - 2. Cooperate with all applicable City, State and Federal agencies concerning disposal of materials.
  - 3. The Owner has the first right to any excess materials from construction.

11. EROSION/POLLUTION PREVENTION PLAN

- A. The Owner will provide the pollution prevention plan and NPDES permit, if required. The contractor is responsible for maintaining the pollution prevention plan, co-permittee signature, and providing NPDES management.

## 12. DEWATERING

- A. Perform all construction work in dry conditions.
- B. Submit dewatering methods to the Engineer for review. Obtain the Engineer's approval on methods prior to construction.
- C. Groundwater levels are subject to variation. No additional compensation will be permitted due to high groundwater conditions.
- D. If excavation encounters only cohesive soils with no wet sand seams or layers, it may be possible to control water seepage by draining groundwater to temporary construction sumps and pumping it outside the perimeter of the excavation.
- E. Do not pump water from open excavation in sand and gravel below the natural ground water level.
- F. Maintain water levels 2 feet or more below the bottom of excavations in saturated cohesionless (sand and/or gravel) soils to prevent upward seepage, which could reduce subgrade support.
  - 1. Install dewatering system (well points or shallow wells) when working in cohesionless soils.
  - 2. Costs of installing and operating dewatering system are incidental.
- G. Provide for handling surface water encountered during construction.
  - 1. Prevent surface water from flowing into excavation, remove water as it accumulates.
  - 1. Divert storm sewer flow around areas of construction.
  - 2. Do not use sanitary sewers for the disposal of trench water.
- H. Backfill pipe and structures prior to stopping dewatering operations. Do not lay pipe or construct concrete structures on excessively wet soils.
- I. The costs of handling both surface water and groundwater are incidental.

## 13. TRAFFIC CONTROL

- A. Furnish, erect and maintain traffic control devices as specified in the construction drawings and directed by the Engineer including signs, barrels, cones, and barricades to direct traffic and separate traffic from work areas.

- B. Provide traffic control devices in accordance with the Iowa DOT Standard Specification, Section 2528, Traffic Control, and the latest edition of the Manual on Uniform Traffic control Devices (MUTCD).
- C. Adjustments to the traffic control or the addition of flaggers will be required if, in the opinion of the Engineer, undue traffic congestion occurs.
- B. Provide continuous access for police, fire, and other emergency vehicles.
- C. Do not store construction equipment or materials on street open to traffic.
- D. Contractor shall check traffic control devices daily. Repair or replace damaged traffic control devices promptly.

#### 14. REMOVALS

- A. Pavement Removal
  - 1. Includes existing street, driveway, sidewalk and curb & gutter concrete as shown in the construction drawings. Includes temporary street and temporary sidewalk.
  - 2. Full-depth saw-cut the concrete at the removal limits is considered incidental.
- B. Miscellaneous Removals
  - 1. Do not remove any items within the street right-of-way that are not specifically marked for removal on the construction drawings.

#### 15. TEMPORARY FENCES

- A. Install temporary fencing around open excavations or material storage areas and as directed by Engineer to prevent access of unauthorized persons to construction areas.
- B. Provide orange plastic mesh safety fence with a nominal height of 48". Support fence securely on driven posts in vertical position without sagging.
  - 1. Materials: Iowa DOT Section 4188.03.
  - 2. Use unless required otherwise.
- C. Temporary fencing installed around open excavations or material storage areas is incidental to construction and will not be measured for payment.
- D. Remove temporary fencing upon completion of construction.

16. RESPONSIBILITY OF CONTRACTOR

- A. Supervision of the work.
- B. Protection of all property from injury or loss resulting from construction operations.
- C. Replace or repair objects sustaining any such damage, injury or loss to satisfaction of Owner and Engineer.
- D. Cooperate with Owner, Engineer, and representatives of utilities in locating underground utility lines and structures. Incorrect, inaccurate or inadequate information concerning location of utilities or structures shall not relieve the Contractor of responsibility for damage thereto caused by construction operations.
- E. Keep cleanup current with construction operations.
- F. Comply with all Federal, State of Iowa, and City of Knoxville, Iowa laws and ordinances.

17. CONCRETE PAVEMENT (PCC)

- A. Comply with IOWA URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, Sections 7010 and 7030, except as modified herein.
- B. Coarse Aggregate: USE CLASS 3 DURABILITY LIMESTONE, Iowa DOT, SECTION 4115.04.
- C. Mix Design: Iowa DOT C-4 mix shall be used for all concrete as specified on the construction drawings.
- D. Restore core holes by tamping non-shrink cement grout into hole; finish and texture surface.
- E. The use of maturity testing as per Iowa DOT IM 383 will be allowed with a minimum of one set of cylinders made each day to verify compressive strength.
- F. Each truck load of concrete must be identified by an acceptable plant charge ticket showing plant name, contractor, project name, date, quantity, class, and time batched.
- G. Provide cold weather protection as specified in the Contract Documents. Costs associated with cold weather protection shall be considered incidental.

- H. Special care should be taken when forming at intersections so that the profiles and elevations shown on the cross sections, plan and profile, and intersection detail sheets are obtained. Short lengths of forms or flexible forms may be necessary at these locations.
- I. Maturity testing can be utilized to expedite street opening.

18. EXCAVATION AND BACKFILL

- A. Comply with IOWA URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, Sections 2010, 3010, and 3020, except as modified herein.
- B. Excavate all materials encountered to depth indicated or specified; comply with OSHA safety rules and other state and federal government regulations.
- C. Pile excavated material suitable for backfill in an orderly manner sufficient distance back from edge of excavation to avoid slides or cave-ins; 2' minimum clear distance.
- D. Remove excavated material not suitable for backfill; waste at disposal area approved by Engineer; removal is incidental to construction.
- E. Where new work crosses existing utilities or utility services, excavate in advance of pipe laying; determine crossing arrangement including exact construction line and grade.
- F. Storm Sewer: Type R-2 pipe embedment per SUDAS detail 3010.102 is required for all RCP storm sewer pipes within roadway right-of-way, including pipes beneath pavement.
- G. Sanitary Sewer: Type F-3 pipe embedment per SUDAS detail 3010.103 is required for all sanitary sewers.
- I. Compact backfill with pneumatic or mechanical tampers adjacent to or within 12" over pipe. Rollers or vibrating plate compactors may be used after sufficient backfill has been placed to assure that such equipment will not damage or disturb the pipe.

19. SANITARY SEWERS AND STRUCTURES

- A. Comply with IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS, Section 4010 and Division 6, except as modified herein.
- B. The pipe material used for the sanitary sewers shall be Solid Wall PVC at locations shown on the plans.

1. The pipe materials must conform to the material requirements stipulated as follows:
  1. Solid Wall PVC: As per Section 4010, 2.01A.
  2. Provide bedding for the sanitary sewers and as detailed on the plans or specified herein.

20. STORM SEWERS AND STRUCTURES

- A. Comply with IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS, Section 4020 and Division 6, except as modified herein.
- B. Subdrain: corrugated exterior, smooth interior, corrugated PVC or corrugated HDPE as per Section 4040, 2.02. Subdrain pipe shall be slotted.
- C. Backfill with porous backfill for subdrain and granular material for pipe bedding.
- D. The pipe material used for the storm sewers shall be RCP in locations shown on the plans.
  1. The pipe materials must conform to the material requirements stipulated as follows:
    1. Reinforced Concrete Pipe (RCP): As per Section 4020, 2.01A.
    2. Reinforced Concrete Arch Pipe (RCAP): As per Section 4020, 2.01B.
    3. Bituminous Jointing Material: As per Section 4020, 2.01L.
    4. Bituminous Joint Primer: As per Section 4020, 2.01M.
    5. Reinforced Concrete Flared End Section: As per Section 4030, 2.02.
    6. Apron Guards: As per Section 4030, 2.04.
  2. Provide bedding for the storm sewers and as detailed on the plans.
- E. Intake grates: All roadway intake grates shall be Type "R" (vaned). All SW-512 intake castings shall be Type 3B, unless otherwise noted.
- F. Special compaction around structures shall be performed to minimize settling.

## 21. FIXTURE ADJUSTMENTS

- A. Adjust existing manholes as indicated on the construction drawings to finished grade in accordance with the SUDAS. Adjustments include providing new castings, adjusting rings, and installing a new internal chimney seal infiltration barrier (sanitary sewer).
- B. Adjust existing valve boxes as indicated in the construction drawings to finished grade in accordance with the SUDAS. Utilize the existing valve boxes, or install new valve boxes provided by the Knoxville Water Works. This work is incidental to construction.
- C. Locate the existing water curb stop boxes for the residences along the proposed construction and protect or adjust to finished grade as necessary. This work is incidental to construction.

## 22. SURFACE RESTORATION

- A. Finish grade all disturbed areas to smooth, uniform lines without large clods, lumps, or debris. Remove all debris. Remove all rocks and provide grade for positive drainage.
- B. Prepare the finished surface for sodding or seeding as designated in the Contract Documents. Provide and place additional clean topsoil on any disturbed areas that, in the opinion of the Engineer, are lacking in natural topsoil. Provide organic material that is free of vegetation, rubble or other debris. Additional topsoil import to meet Specification Section 2010 shall be considered incidental to the Project.
- C. All areas to be sodded or seeded shall be prepared, fertilized, watered, maintained, and warranted in accordance with SUDAS Section 9020.
- D. Any areas disturbed by construction that are outside of the construction limits shall be repaired and restored at the Contractor's expense. No extra payment will be allowed for surface restoration on these areas.
- E. Install silt fences and other erosion control structures at the locations directed by the Engineer during construction and any locations needed to prevent soil erosion.
- F. Sodding or seeding work completed after the specified sodding / seeding dates in SUDAS Section 9020, Part 3.03 shall be at the risk of the contractor. Warranty period will not begin and payment will not be made until sodding / seeding has taken and healthy, weed-free vegetation has established.



**August 30, 2019**

**PN 191306**

**GEOTECHNICAL EXPLORATION**

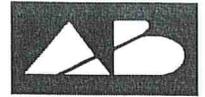
**ROCHE STREET CULVERT REPLACEMENT  
SOUTH ROCHE STREET AND TERRACE LANE  
KNOXVILLE, IOWA**

**PERFORMED FOR**

**SNYDER AND ASSOCIATES, INC.  
2727 SW SNYDER BOULEVARD  
ANKENY, IOWA 50023**

# ALLENDER BUTZKE ENGINEERS INC.

GEOTECHNICAL • ENVIRONMENTAL • CONSTRUCTION Q. C.



August 30, 2019

Snyder and Associates, Inc.  
2727 Snyder Boulevard  
Ankeny, Iowa 50023  
Attn: Andy Burke, P.E.

RE: Geotechnical Exploration  
Roche Street Culvert Replacement  
South Roche Street and Terrace Lane  
Knoxville, Iowa  
PN 191306

Dear Mr. Burke:

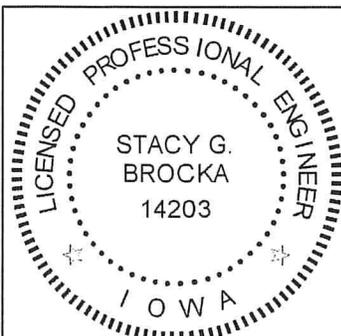
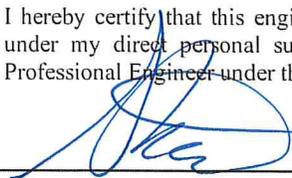
As authorized by David Moeller, P.E. with Snyder and Associates, Inc., Allender Butzke Engineers Inc. (ABE) has completed the geotechnical exploration for the above referenced project. The geotechnical exploration was conducted to evaluate physical characteristics of subsurface conditions with respect to design and construction of this project. The enclosed report summarizes the project characteristics as we understand them, presents the findings of the boring and laboratory tests, discusses the observed subsurface conditions, and provides geotechnical engineering recommendations for this project.

We appreciate the opportunity to provide our geotechnical engineering services for this project. If you have any questions or need further assistance, please contact us at your convenience. We are also staffed and equipped to provide construction testing and inspection services on this project as well as environmental site assessments.

Respectfully submitted,  
ALLENDER BUTZKE ENGINEERS INC.

  
Anton J. Schneider Jr., P.E.  
Staff Engineer

  
Stacy G. Brocka, P.E.  
Senior Project Engineer

	<p>I hereby certify that this engineering document 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.</p> <p></p> <p style="text-align: right;">8/30/19</p>
	<p>Stacy G. Brocka, P.E. License Number 14203 Date</p> <p>My license renewal date is December 31, 2019.</p> <p>Pages covered by this seal: <u>    All Pages    </u></p>

1 Email and 1 PC Above

**GEOTECHNICAL EXPLORATION**

**ROCHE STREET CULVERT REPLACEMENT  
SOUTH ROCHE STREET AND TERRACE LANE  
KNOXVILLE, IOWA**

**PN 191306**

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    Boring Log

    Site Plan

## **GEOTECHNICAL EXPLORATION**

### **ROCHE STREET CULVERT REPLACEMENT SOUTH ROCHE STREET AND TERRACE LANE KNOXVILLE, IOWA**

**PN 191306**

**August 30, 2019**

#### **PROJECT INFORMATION**

Snyder and Associates, Inc. is designing a new culvert located approximately 60 feet north of the Terrace Lane intersection under South Roche Street in Knoxville, Iowa. The proposed project will consist of replacing the existing 6'x6' culvert and presumably some of pavement sections on either side of the culvert. Based on proposed and existing grades, we assume the roadway alignment and profile will not change significantly, but fill depths on the order of 5 to 10 feet may be required near the culvert edges and outside of the existing roadway to achieve desired final grades. We expect the flowline of the new culvert to match that of the existing culvert, which is near elevation 832.9 feet at the upstream end and near 832.6 feet at the downstream end. To accommodate the new culvert, excavation and backfill depths on the order of 15 may be required.

#### **FIELD EXPLORATION**

One boring was conducted at this site to a depth of 25 feet below existing grades on August 15, 2019. The approximate location of the boring is shown on the enclosed Site Plan and was measured in the field from existing landmarks. The boring surface elevation, indicated on the enclosed Boring Log, was determined by differential leveling and referenced to an existing manhole to the north of the culvert with a reported rim elevation of 847.11 feet. Methods of drilling, sampling, standard laboratory testing, and classifying of subsurface materials are discussed in the Boring Log Description/Legend pages of the Appendix.

## SUBSURFACE CONDITIONS

### Soil Profile

Detailed descriptions of soils and depictions of the relative deposit elevations in the boring encountered by this exploration are provided on the Boring Log enclosed in the Appendix. Following is a discussion of the subsurface materials encountered in the boring. Unless otherwise indicated, the depths of soil stratum and groundwater levels are referenced from below existing grade at the individual boring locations at the time of drilling.

Approximately 5.5 inches of Portland cement concrete (PCC) was encountered at the surface in the boring. Existing fill was encountered underlying the pavement and consisted of brown to gray fat clay shale (CH) material with trace gravel, brown fat clay (CH) with sand, and crushed concrete near the bottom of the fill. The variable soft to stiff and damp to moist fill extended to a depth of 9.5 feet.

Very dark gray fat clay (CH) cohesive alluvium was encountered below the existing fill. The moist to very moist and medium stiff cohesive alluvium extended to a depth of 16.8 feet.

Weathered bedrock consisting of dark gray with gray weathered clay shale was encountered underlying the cohesive alluvium. The weathered bedrock transitioned to intact light gray shale bedrock near a depth of 21 feet. Carbonaceous shale and coal was encountered from 22.5 to 24 feet. The boring terminated in the hard, damp bedrock near a depth of 25 feet.

### Groundwater Level Observations

The boring was monitored during and shortly after drilling operations to detect moisture seepage and groundwater accumulation. The results of our water level observations are noted on the Boring Logs enclosed in the Appendix.

During drilling operations, moisture seepage was noted near a depth of 14 feet below existing grade. Groundwater accumulation was observed near a depth of 24.5 feet at the completion of drilling operations. It should be recognized that these short-term water levels are not necessarily a true indication of the groundwater table. Long-term observations would be necessary to accurately define the groundwater variations at this site. Fluctuation of groundwater levels can occur due to seasonal variations in the amount of rainfall, surface drainage, subsurface drainage, site topography, irrigation practices, stage level of the creek and ground cover (pavement or vegetation).

## ANALYSES AND RECOMMENDATIONS

### Site Preparation

Cut-and-fill construction will be performed at this site to achieve the desired final grades. Prior to the placing of pavements on this site, or before any fill is placed, the organic and loose materials in addition to all vegetation must be stripped. We expect that a minimum stripping depth of 6 inches will be required. Deeper stripping depths of 1 to 2 feet may be necessary within the existing ditches, existing creek bottom, or in the isolated areas at the toes of the proposed sideslope in order to remove surficial softer or organic deposits. The stripping depths may vary due to localized variations in vegetation cover and subgrade stability. The strippings could be used for landscaping purposes in non-critical areas where future support for structures and pavements is not required. The subgrade should then be proof rolled to delineate zones of soft soils present near the surface which may require additional removal or compaction. Trees and rootballs from large trees should be completely removed prior to filling operations, where present.

Existing embankment sideslopes should be adequately benched in order to integrate the new fill sections on the existing slopes. Typically, benches on the order of 3 to 5 feet tall and 8 to 10 feet wide are required to accommodate construction equipment traffic. The subgrade should then be proof-rolled to delineate zones of soft soils present near the surface which may require additional removal or compaction. Depending upon subgrade conditions encountered prior to filling operations, it may be necessary to construct a coarse granular working mat in the lower lying areas to provide a stable working platform for earthmoving equipment and to facilitate filling operations.

### Embankment and Roadway Fill Construction

We recommend that cohesive or cohesionless soils, free of rubble and organics, be used as compacted fill. Inorganic existing soil such as the existing fill and cohesive alluvium (CH) soils would be suitable soil types for general fill applications. It should be noted that the fat clay (CH) soils encountered in the soil profile are typically considered highly expansive and not recommended for use below streets without chemical modification. However, if the existing street performance near the boring is considered acceptable, the owner may wish to continue to utilize this material untreated.

The following Table A lists recommended minimum compaction requirements for cohesive and cohesionless fill materials in specific applications. For cohesive soils, moisture contents within a range of -1 to +4 percent of the material's optimum moisture content are necessary to achieve the desired fill qualities. The expansive soils should be compacted within a

moisture content range of +1 to +4 percent of the material's optimum moisture content to achieve a semi-swelled condition. However, soils compacted closer to optimum moisture content will exhibit greater stability under construction traffic loading. Consequently, a compromise is often required to have a lower moisture content for constructability purposes as compared to a higher moisture content to potentially reduce future heaving.

**TABLE A  
RECOMMENDED DEGREE OF COMPACTION GUIDELINES**

<b>Construction Application</b>	<b>Standard Proctor (ASTM D698) Cohesive Soil</b>	<b>Standard Proctor (ASTM D698) Cohesionless Soil</b>	<b>*Relative Density (D4253 &amp; D4254) Cohesionless Soil</b>
Class 1	95%	98%	70%
Class 2	90%	93%	45%
Class 3	85%	88%	20%

Class 1 - Subgrade for building foundations, slabs-on-grade, pavements and other critical backfill areas.

Class 2 - Backfill adjacent to structures not supporting other structures - Minor subsidence possible.

Class 3 - Backfill in non-critical areas - Moderate subsidence possible.

\*Use Relative Density technique (ASTM D4253 & D4254) where Standard Proctor technique (ASTM D698) does not result in a definable maximum dry density and optimum moisture content.

The on-site soils can be excavated utilizing conventional excavation equipment. Granular soils can generally be suitably compacted with vibratory compaction equipment whereas cohesive soils are more suitable for compaction with sheepsfoot or pneumatic type compactors. Care should be exercised in properly backfilling and compacting all trenches, especially utility trenches under or adjacent to the pavement. Loosely compacted or sand backfilled trenches can collect surface water and inadvertently direct it to the pavement subgrade and cause softening of the soil as well as increasing frost heave potential.

At the time of this geotechnical exploration, moisture content of the upper portion the existing fill was below the recommended moisture content range for compaction whereas the deeper existing fill and cohesive alluvium was generally near or above the recommended moisture. Depending upon precipitation levels prior to and during construction, adjustment of soil moisture content may be required in order to lower or raise the moisture to within the recommended moisture content range. Discing and aeration is generally the most economical method to lower soil moisture content, if the construction schedule and climatic conditions allow. Chemical modification of very moist soils with Portland cement, quicklime, or Class C fly

ash can be accomplished if construction scheduling does not permit field drying. Chemical modification of the soils would also be useful for mitigating the expansive nature of the existing soils, as previously mentioned in this section. If grading or fill placement at the site will be conducted during colder weather, it should be noted that common chemical modification methods may be ineffective when temperatures are near or below 40° Fahrenheit.

**Excavation, Stability and Dewatering**

Excavations at this site will encounter predominately cohesive soils with no wet sand seams or layers. However, granular soils could be present in other unexplored areas of the site. If excavations encounter only cohesive soils with no wet sand seams or layers, it is expected that the water seepage can be controlled by permitting it to drain into temporary construction sumps and be pumped outside the perimeter of the excavations. More extensive dewatering such as sand points and wells may be required for excavations which extend down into water bearing sand layers. We recommend that prior to excavating in saturated sand, water levels be maintained 2 feet or more below the bottom of excavations in saturated sand to prevent upward seepage forces which could reduce subgrade support.

The extent of bracing or sloping of open cut excavations will be dependent upon depth of cut, groundwater conditions, soils encountered, length of time the excavation will be open, area available for excavation and local governing regulations. Predominately cohesive soils may appear to stand nearly vertical in shallow excavations for short periods of time. However, soil creep, surcharge loads, precipitation, subsurface moisture seepage, construction activity vibrations and other factors may cause these soils to cave within an unpredictable period of time. Excavations encountering sand may tend to cave rapidly, especially if water is flowing through the sand. Unstable granular excavation walls may also cause surrounding cohesive soils to become unstable. Temporary shoring, flattening of the excavation slopes or use of trench boxes may be required to maintain a safe condition. Determining the appropriate OSHA classifications of the soil types encountered and implementing the required provisions for sloping, shoring, and bracing of excavations throughout the project during construction are the responsibility of the contractor per OSHA.

**Embankment and Roadway Fill Area Settlement**

Based on boring information and assumed fill depths on the order of 15 feet, the weight of the earth fill may consolidate the underlying compressible cohesive alluvium soils causing embankments to settle if the new culvert will be extended beyond the existing roadway embankment. We estimate long-term total settlement due to the new fill sections will be on the order of 1 to 2 inches. We estimate 75 percent of the soil consolidation will occur within a month of final fill placement. We recommend a minimum waiting period of 4 weeks after final

embankment construction prior to paving or final road surfacing outside the existing roadway section. This waiting period could be reduced if closely monitored settlement monuments are installed in deep fill areas to determine when a majority of soil consolidation has occurred.

### **Culvert Support**

The underlying cohesive alluvium soils expected below the proposed flow line elevation of 832.6 to 832.9 feet (approximately 12 feet below existing grades) will be easily disturbed by construction traffic. Therefore, a granular blanket of clean coarse crushed rock (similar to or coarser than Iowa DOT 4115) of 18 inches thick is recommended below the culvert bottom to provide a uniform bearings surface and a stable working platform. The coarse crushed rock layer and underlying cohesive alluvium would be capable of supporting a maximum net allowable bearing pressure of 2,000 pounds per square foot. If soft areas are encountered or a higher bearing pressure is desired, a deeper over-excavation and crushed rock backfill procedure will be required. The over-excavation and crushed rock backfill should extend 9 inches laterally for every foot of over-excavation depth. We recommend visual observations and test probing be conducted by an ABE representative at the time of construction to confirm removal of all unsuitable soils

### **Lateral Earth Pressures**

Culvert walls constructed to retain soil should be designed to accommodate unbalanced lateral earth pressures. Estimated lateral earth pressures for cohesive and cohesionless (granular) backfill are presented in the following Table B.

Active earth pressure design assumes that the wall can rotate and deflect at the top. If the wall is rigidly fixed, higher lateral earth pressures will develop against the wall and at-rest pressure parameters should be used for design. Increased earth pressures can also develop from restricted soil drainage, surcharge loads adjacent to the wall, and compaction of the adjacent backfill. Expansive materials (CH), either natural or backfill, should not be within 3 feet of below grade walls.

Coefficient of sliding friction values of 0.3 and 0.7 may be used for P.C. concrete on cohesive and crushed rock subgrades, respectively. This ultimate value assumes no safety factor and design with this ultimate value should include a minimum factor of safety of 1.5.

**TABLE B  
LATERAL EARTH PRESSURE PARAMETERS**

Condition	Cohesive Soil (non-expansive clay)	Cohesionless Soil (Crushed Rock)
Assumed Backfill Characteristics		
Approximate Total Density	130 pcf	130 pcf
Approximate Friction Angle	15° - 20°	40° - 45°
Active Pressure Coefficient, $K_a$	0.5	0.2
At-Rest Pressure Coefficient, $K_o$	0.7	0.3
Passive Pressure Coefficient, $K_p$	2	5.8
Estimated Lateral Earth Pressure <sup>1</sup> (Equivalent Fluid Pressures)		
Active - Drained	65 pcf	20 pcf
Active - Undrained <sup>2</sup>	95 pcf	75 pcf
At-Rest - Drained	90 pcf	40 pcf
At-Rest - Undrained <sup>2</sup>	110 pcf	80 pcf
Passive - Drained	260 pcf	760 pcf
Passive - Undrained <sup>3</sup>	135 pcf	395 pcf

- 1) Assumes no safety factor, negligible wall friction, vertical wall, level backfill, zero surcharge loads and ignores cohesion shear strength.
- 2) Combined buoyant backfill unit weight and hydrostatic (water @ 62.4 pcf) loading.
- 3) Excludes hydrostatic loading.

**Frost Heave**

Key elements contributing to frost heave including freezing temperatures, available water, and fine-grained frost susceptible soils are generally present at sites in Iowa. As a result, frost heave problems are generally common (and most noticeable) in pavements or sidewalks adjacent to non-frost susceptible elements such as manholes, light poles, and exterior doors or frost protected stoops. Frost heave can cause pavement cracks to develop parallel to and several feet from curbs. This generally occurs where cleared paved areas exposed to freezing temperatures heave more than adjoining paved areas insulated by piled snow. Areas cleared of snow not exposed to periodic sunshine during the winter, such as under canopies, on the north shaded side of buildings and other shaded areas may experience more frost heave than other sunshine exposed areas. Sometimes it is not readily apparent why frost heave problems occur at one location and not at another seemingly similar location.

While it is appropriate to implement measures to reduce frost heave such as insulation, replacing frost susceptible soils with less frost susceptible soils, void forms, sealing cracks/joints to reduce surface water infiltration, or drainage improvements (surface and subsurface), these measures may simply move the frost heave problem to a different location where preventative measures have not been implemented. Having a smooth transition between heaved and non-

heaved areas is desirable, but may be difficult and/or costly to accomplish. We are available to meet with you to discuss options for your consideration to reduce frost heave potential on this project.

**GENERAL**

The analyses and recommendations in this report are based in part upon the data obtained from the soil boring performed at the indicated location and from any other information discussed in this report. This report does not reflect any variations which may occur from the boring across the site. The nature and extent of such variations may not become evident until construction. If variations then appear evident, it will be necessary to reevaluate the recommendations of this report.

It is recommended that the geotechnical engineer be provided the opportunity to review the plans and specifications so that comments can be made regarding the interpretation and implementation of our geotechnical recommendations in the design and specifications. It is further recommended that the geotechnical engineer be retained for testing and observation during earthwork and foundation construction phases to help determine that the design requirements are fulfilled.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranty, expressed or implied, is made. In the event that any changes in the nature, design or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report modified or verified in writing by the geotechnical engineer.

The scope of our service was not intended to include any environmental assessment or exploration for the presence of hazardous or toxic materials in the soil, surface water, groundwater or air on, below or adjacent to this site.

# APPENDIX

## BORING LOG DESCRIPTION/LEGEND

(page 1 of 3)

The material types encountered during the drilling operations were recorded on field logs. The profile represented on the Boring Log is based on final classification performed by a geotechnical engineer using the field logs, laboratory observation and testing. The material stratigraphy demarcation lines shown on the Boring Logs indicate changes in soil characteristics, however, actual soil changes or variations may occur as a gradual transition. Soil profile discussion, Log Boring information, water levels and recommendations presented in this report are based upon measured depths below ground levels existing at time of the field exploration, unless otherwise specified.

### DRILLING AND SAMPLING

The borings were conducted with either a truck or all-terrain rotary drill rig using the drilling methods indicated on each Boring Log. Soil sampling and/or in-situ testing such as Shelby Tube (ST), split-spoon (SS), drive cone (DC), or core (C) was conducted at depth intervals which were selected in consideration of the characteristics of the proposed construction. Generally undisturbed soil samples are taken at 5 foot depth intervals or change in soil types. Disturbed soil samples from the auger, either jar size or bulk size samples, may be taken at intermediate intervals for the purpose of soil classification or laboratory testing. Borings conducted for soil classification only, will show no designation of sampling although disturbed sampling is performed. Soil samples obtained in the field were identified and sealed for transportation to the laboratory for performance of pertinent physical testing and engineering classification.

#### Drilling Methods

- CFA - Continuous Flight Auger: 4, 6, or 8-inch diameter (ASTM D1452).
- RD - Rotary Drilling: Using drilling fluid in cased or uncased boring (ASTM D2113).
- HSA - Hollow Stem Auger: 6 or 8-inch diameter, continuous flight auger remains in boring with soil removed from the hollow stem through which undisturbed sampling is conducted.
- HA - Hand Auger: 4-inch or less diameter.

#### Sample Types

- ST - Shelby Tube: Thin-walled tube samples of cohesive soils (ASTM D1587).
- SS - Split Spoon with 140 lb. manual hammer: Standard penetration test and split-barrel samples (ASTM D1586).
- SSA - Split Spoon with 140 lb. automatic hammer: Standard penetration test and split-barrel samples (ASTM D1586).
- DC - Drive Cone: Dynamic in-place testing of soil using a 2-inch diameter cone with a 60 degree point driven into the soil for continuous 1-foot intervals in the same manner as Split Spoon, no sample is obtained.
- C - Core: Sampling hard soil or bedrock with a diamond core barrel in a rotary drill boring (ASTM D2113).
- SPT - Standard Penetration Test: Number of blows required to drive sampler (split spoon or drive cone) into the soil with a 140-pound weight dropping a distance of 30-inches (ASTM D1586), number of blows recorded for each 6-inch interval in an 18-inch (or more) penetration depth, values shown are for each 6-inch interval (if series of number sets are shown) or a total of the last two 6-inch intervals (if only one number is shown) which is commonly referred to as "N" in blows per foot. High resistance is indicated by a high number of blows for a lesser penetration depth listed in inches.
- BS - Bulk Sample: Disturbed.
- CPT - Cone Penetration Test: Quasi-static in-place testing of soils using a 60 degree cone and friction sleeve which are steadily pushed into the soil and measure skin friction and end bearing (ASTM D3441).

### STANDARD LABORATORY TESTING

Representative undisturbed soil samples obtained by the Shelby Tube sampler were tested for moisture content (ASTM D2216), density (dry) and unconfined compressive strength (ASTM D2166) in the laboratory. Results of these tests appear on the respective Boring Logs. Additional soil testing including particle size analysis (ASTM D422) and Atterberg Limits (ASTM D4318) may be conducted, if necessary, to define in more detail pertinent soil characteristics for classification in accordance with the Unified Soil Classification System. Specialized laboratory tests (if conducted) to determine pertinent soil characteristics are discussed in the "Laboratory Testing" section of the report.

### WATER LEVEL MEASUREMENT

Water levels indicated on the Boring Logs are the levels measured in the borings at the times indicated. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels is not possible with short term observations.

## BORING LOG DESCRIPTION/LEGEND

(page 2 of 3)

### DESCRIPTIVE SOIL CLASSIFICATION

Soil description is based on the Unified Classification System as outlined in ASTM Designations D-2487 and D-2488. This classification is primarily based upon visual and apparent physical soil characteristics, comparison with other soil samples, and our experience with the soil. Additional laboratory testing may be conducted, if necessary to define in more detail pertinent soil characteristics. The Unified Soil Classification group symbol shown on the boring logs corresponds with the group names listed below. The description includes soil constituents, moisture conditions, color and any other appropriate descriptive terms.

Group Symbol	Group Name	Group Symbol	Group Name	Group Symbol	Group Name	Group Symbol	Group Name
GW	Well-Graded Gravel	SW	Well-Graded Sand	CL	Lean Clay	CH	Fat Clay
GP	Poorly-Graded Gravel	SP	Poorly-Graded Sand	ML	Silt	MH	Elastic Silt
GM	Silty Gravel	SM	Silty Sand	OL	Organic Clay Organic Silt	OH	Organic Clay Organic Silt
GC	Clayey Gravel	SC	Clayey Sand			PT	Peat

RELATIVE PROPORTIONS			GRAIN SIZE TERMINOLOGY	
Descriptive Term(s) (Of components also present in sample)	Sand and Gravel % of Dry Weight	Fines % of Dry Weight	Major Component of Sample	Size Range
Trace	<15	<5	Cobbles	12 in. to 3 in. (300mm to 75mm)
With	15-30	5-12	Gravel	3 in. to #4 sieve (75mm to 4.75mm)
Modifier	>30	>12	Sand	#4 to #200 sieve (4.75mm to 0.074mm)
			Silt or Clay	Passing #200 sieve (.074 mm)

CONSISTENCY OF FINE-GRAINED SOILS			RELATIVE DENSITY OF COARSE-GRAINED SOILS	
Unconfined Compressive Strength, Qu, psf	Consistency	SPT, bpf	SPT, bpf	Relative Density
< 500	Very Soft	0-2	0-4	Very Loose
500-1,000	Soft	2-4	4-10	Loose
1,000-2,000	Medium Stiff	4-8	10-30	Medium Dense
2,000-4,000	Stiff	8-15	30-50	Dense
4,000-8,000	Very Stiff	15-30	50-80	Very Dense
8,000-16,000	Hard	30-100	80+	Extremely Dense
> 16,000	Very Hard	>100		

## BORING LOG DESCRIPTION/LEGEND

(page 3 of 3)

### ABBREVIATIONS

COMMONLY USED ABBREVIATIONS	
ft. or ' - feet	elev. - Elevation
in. or " - inches	% - Percent
psf - pounds per square foot	No. - Number
plf - pound per lineal foot	TB - Test Boring
pcf - pounds per cubic feet	N - blow count (SPT, bpf)
kip - 1000 pounds	USCS - Unified Soil Classification System
ksf - 1000 pounds per square foot	LL - Liquid Limit
klf - 1000 pounds per lineal foot	PL - Plastic Limit
tsf - tons per square foot	PI - Plasticity Index
bpf - blows per foot (SPT, N)	

# BORING LOG NO. 1

Project No.: **191306**

**Project:** Roche Street Culvert Replacement  
S. Roche Street and Terrace Lane  
Knoxville, Iowa

**Client:** Snyder and Associates, Inc.  
2727 SW Snyder Boulevard  
Ankeny, Iowa 50023



Surface Elevation: 844.7'  
 Datum: Existing Manhole = 847.11'

Date Drilled: 8/15/2019  
 Drilling Depth, ft.: 25

Drilling Method: 4" CFA  
 Page: 1 of 1

Elevation ft.	Depth ft.	Sample No.	Type	SPT bpf	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength psf	Material Description *	Graphic Log	USCS	Water Level	Depth Elevation ft.
844	0							<b>PC CONCRETE (5.5"±)</b>				0.5
								Brown to brown-gray fat clay shale with sand, trace gravel, damp Moist after 1.5'		CH		844.2
840	4	1	SSA	4	20.7			<b>FILL</b>		CH		
								Brown fat clay with sand, trace gravel after 5.5'		CH		
836	8	2	SSA	16	20.7			Very dark brown after 7.8' With crushed concrete from 8.5' to 9.5'		CH		9.5
					25.2			Very dark gray fat clay, trace sand, moist		CH		835.2
832	12	6	ST		21.8	92	1960	Very moist after 13'				
					20.9		2630	<b>COHESIVE ALLUVIUM</b>				
								Moisture seepage near 14'				
828	16	7	SSA	10	26.0			Dark gray with gray weathered clay shale, moist				16.8
					16.0			<b>WEATHERED BEDROCK</b>				827.9
824	20							Light gray shale, damp				21
								Very dark gray carbonaceous shale with coal from 22.5' to 24'				823.7
								<b>BEDROCK</b>				
820	24	5	SSA	55	20.8			End of Boring				25
818												819.7

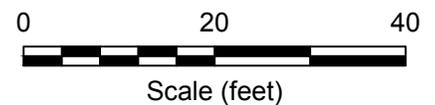
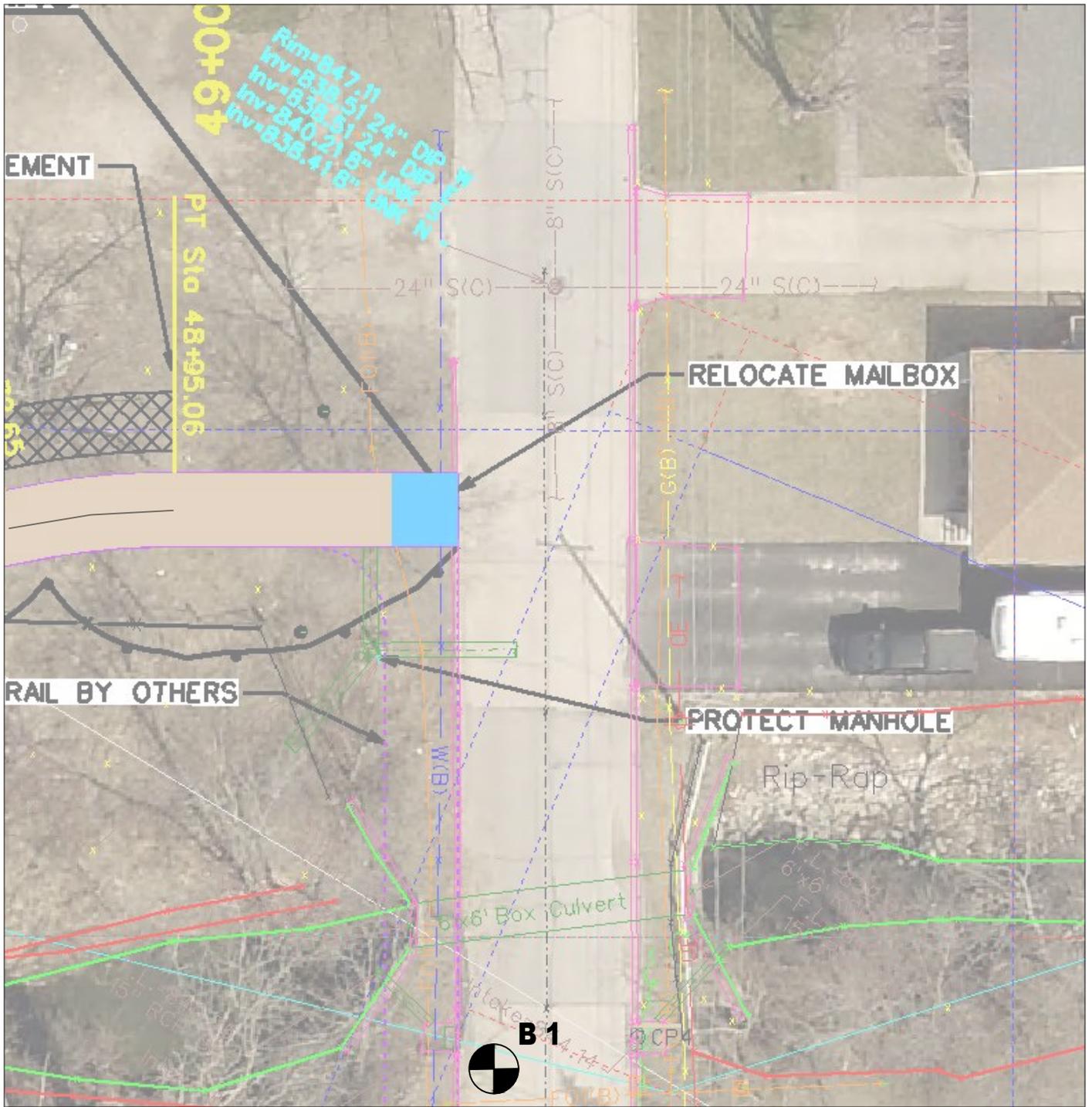
\*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.

**Water Level Observation**

Time: at completion \_\_\_\_\_ hrs. \_\_\_\_\_ days  
 Depth to water: **24.5CW** ft. \_\_\_\_\_ ft. \_\_\_\_\_ ft.

**ALLENDER BUTZKE ENGINEERS, INC.**

Geotechnical | Environmental | Construction Q.C.



**B #**  
 **Approximate Soil Boring Location**

**Base Plan by Snyder**

**ALLENDER BUTZKE ENGINEERS INC.**

3660 - 109th Street  
 Urbandale, IA 50322



**Roche Street Culvert Replacement**  
**South Roche St & Terrace Ln**  
**Knoxville, Iowa**

**PN 191306**

**Site Plan**

# NOTES

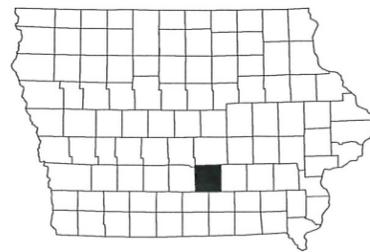
# CONSTRUCTION PLANS FOR CITY OF KNOXVILLE

## MARION COUNTY, IOWA

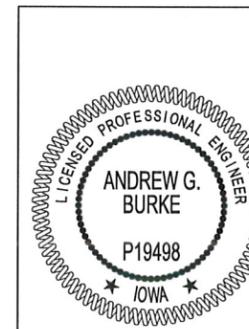
### ROCHE ST CULVERT REPLACEMENT



VICINITY MAP



IOWA



I hereby certify that this engineering document 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.

*Andrew G. Burke* 02/12/20  
Andrew G. Burke, P.E. Date

License Number P19498  
My License Renewal Date is December 31, 2020

Pages or sheets covered by this seal:  
A.1, A.2, B.1, C.1-C.3, C.4, D.1, E.1, G.1, J.1-J.5, L.1, U.1

APPROVED FOR CONSTRUCTION  
CITY OF KNOXVILLE

*Heather Wessery* 2-11-20  
Assistant City Manager Date

- INDEX OF SHEETS**
- A.1 TITLE SHEET
  - A.2 GENERAL NOTES AND LEGEND
  - B.1 TYPICAL SECTIONS AND DETAILS
  - C.1-C.3 GENERAL NOTES AND QUANTITIES
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  - D.1 SOUTH ROCHE STREET PLAN AND PROFILE SHEET
  - E.1 CULVERT PLAN AND PROFILE SHEET
  - G.1 HORIZONTAL AND VERTICAL CONTROL
  - J.1-J.5 STAGING AND TRAFFIC CONTROL PLAN
  - L.1 INTERSECTION DETAILS
  - U.1 SPECIAL DETAILS
  - V.1-V.11 CULVERT STRUCTURE DETAILS

MARK	REVISION	DATE	BY
Engineer: JDS <td>Checked By: ACB <td>Scale: 1"=100' <td></td> </td></td>	Checked By: ACB <td>Scale: 1"=100' <td></td> </td>	Scale: 1"=100' <td></td>	
Technician: DSS <td>Date: 01/24/20 <td>Field Bk: <td>Page:</td> </td></td>	Date: 01/24/20 <td>Field Bk: <td>Page:</td> </td>	Field Bk: <td>Page:</td>	Page:
Project No: 1190729			Sheet A.1

**ROCHE ST CULVERT REPLACEMENT**

**TITLE SHEET**

**KNOXVILLE, IOWA**

**SNYDER & ASSOCIATES, INC.**

2727 S.W. SNYDER BLVD.  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

Project No: 1190729

Sheet A.1

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### LEGEND

Features	Existing	Proposed
Spot Elevation	93.0	93.0
Contour Elevation	93	93
Fence (Barbed, Field, Hog)	-x-x-	-x-x-
Fence (Chain Link)	- _ -	- _ -
Fence (Wood)	-o-o-	-o-o-
Fence (Silt)	- _ -	- _ -
Tree Line	- _ -	- _ -
Tree Stump	- _ -	- _ -
Deciduous Tree \ Shrub		
Coniferous Tree \ Shrub		
Communication	-C(x)-	-C-
Overhead Communication	-OC(x)-	-OC-
Fiber Optic	-FO(x)-	-FO-
Underground Electric	-E(x)-	-E-
Overhead Electric	-OE(x)-	-OE-
Gas Main with Size	-4" G(x)-	-4" G-
High Pressure Gas Main with Size	--4" HPG(x)--	--4" HPG--
Water Main with Size	--8" W(x)--	--8" W--
Sanitary Sewer with Size	--8" S(x)--	--8" S--
Duct Bank	-DUCT(x)-	-DUCT-
Test Hole Location for SUE w/ID	⊕	⊕
(*) Denotes the survey quality service level for utilities		
Sanitary Manhole		
Storm Sewer with Size		
Storm Manhole		
Single Storm Sewer Intake		
Double Storm Sewer Intake		
Fire Hydrant		
Fire Hydrant on Building		
Water Main Valve		
Water Service Valve		
Well		
Utility Pole		
Guy Anchor		
Utility Pole with Light		
Utility Pole with Transformer		
Street Light		
Yard Light		
Electric Box		
Electric Transformer		
Traffic Sign		
Communication Pedestal		
Communication Manhole		
Communication Handhole		
Fiber Optic Manhole		
Fiber Optic Handhole		
Gas Valve		
Gas Manhole		
Gas Apparatus		
Fence Post or Guard Post		
Underground Storage Tank		
Above Ground Storage Tank		
Sign		
Satellite Dish		
Mailbox		
Soil Boring		

### UTILITY QUALITY SERVICE LEVELS

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI/ ASCE 38-02 STANDARD.

QUALITY LEVEL (D) INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS.

QUALITY LEVEL (C) INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH QUALITY D INFORMATION.

QUALITY LEVEL (B) INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

QUALITY LEVEL (A) IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

### UTILITY WARNING

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

### UTILITY NOTES:

- THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE UTILITY COMPANIES WITH RESPECT TO RELOCATING AND CONSTRUCTING THEIR FACILITIES. CALL IOWA ONE CALL FOR UTILITY LOCATIONS 48 HOURS BEFORE CONSTRUCTION, 1-800-292-8989.
- CONTACT THE CITY AND DESIGN ENGINEER AT LEAST 24 HOURS PRIOR TO STARTING WORK.
- BEFORE STARTING CONSTRUCTION IN EACH STAGE, THE CONTRACTOR SHALL EXCAVATE ALL UTILITIES WHICH MAY BE IN CONFLICT WITH PROPOSED CONSTRUCTION. THE CONTRACTOR PROVIDED SURVEYOR SHALL OBTAIN ELEVATIONS OF THE UTILITIES AND NOTIFY THE ENGINEER.
- THE CONTRACTOR SHALL EXERCISE CAUTION AND USE CONSTRUCTION METHODS AND EQUIPMENT TO COMPLETE THE WORK WITHOUT DAMAGING UTILITIES.
- THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.
- IT IS ANTICIPATED THAT UTILITY RELOCATION WORK BY VARIOUS UTILITY COMPANIES WILL BE DONE IN CONJUNCTION WITH CONSTRUCTION OF THIS PROJECT. CONTRACTOR IS REQUIRED TO COORDINATE AND COOPERATE WITH THESE UTILITY COMPANIES DURING CONSTRUCTION.

### UTILITY CONTACT INFORMATION

UTILITY CONTACT FOR MAPPING INFORMATION SHOWN AS RECEIVED FROM THE IOWA ONE CALL DESIGN REQUEST SYSTEM, TICKET NUMBERS 551705185, 551705186, 551705187, 551705188 AND 551705189.

G-GAS	ALLIANT ENERGY CHAD BEAN 319-286-1302 locate IPL@alliantenergy.com
F01-FIBER OPTIC	WINDSTREAM COMMUNICATIONS LOCATE DESK 800-289-1901 LOCATE_DESK@WINDSTREAM.COM
NO MAPS RECEIVED	KNOXVILLE COMMUNITY SCHOOLS DR. RANDY A. FLACK ElackRan@knoxville.k12.ia.us
W-WATER	KNOXVILLE WATER WORKS BRIAN BAILEY 641-828-0557 knoxvillewater@cmhcsi.com
E-UNDERGROUND ELECTRIC OE-OVERHEAD ELECTRIC	MIDAMERICAN ELECTRIC ENERGY JASON SANDIFER 641-672-7008 jwsandifer@midamerican.com
NO MAPS RECEIVED	MARION COUNTY RURAL WATER DIST RANDALL BRANSON 641-842-3304 mcrwmgr@iowatelecom.net
C1-COMMUNICATION FO2-FIBER OPTIC	MEDIACOM L.L.C. PATRICK ZEIMET 845-867-0963 pzeimet@mediacomll.com

### GENERAL NOTES:

- NOTIFY THE OWNER AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO OCCUR BETWEEN 7:00 AM AND 7:00 PM MONDAY THROUGH SATURDAY. NO CONSTRUCTION ACTIVITIES ARE ALLOWED ON SUNDAYS WITHOUT THE APPROVAL OF THE OWNER
- PROTECT EXISTING DRIVEWAYS AND STREET SURFACING UNLESS SPECIFICALLY NOTED OTHERWISE. REMOVE AND REPLACE DAMAGED SURFACING WITHOUT ADDITIONAL COMPENSATION.
- THE CONTRACTOR SHALL CONFINE CONSTRUCTION OPERATIONS TO WITHIN THE CONSTRUCTION LIMITS AS SHOWN ON THE PLANS UNLESS AUTHORIZED BY THE ENGINEER TO DO OTHERWISE. THE CONTRACTOR SHALL COMPENSATE THE PROPERTY OWNER FOR DAMAGES OUTSIDE OF THE AUTHORIZED CONSTRUCTION LIMITS.
- DRAINAGE SHALL BE MAINTAINED AT ALL TIMES. EXISTING STORM SEWER THAT IS DESIGNATED TO BE REMOVED SHALL BE REMOVED ONLY WHEN CONSTRUCTION HAS PROGRESSED TO THAT LOCATION.
- THE CONTRACTOR SHALL PROTECT ALL STORM SEWER INLETS AND UTILITY ACCESSES FROM SILTATION AND DEBRIS DURING CONSTRUCTION. REFER TO POLLUTION PREVENTION PLAN.
- ALL REMOVAL AND DISPOSAL OF ABANDONED UTILITY LINES INCLUDING GAS MAINS, WATER MAINS, TELEPHONE CONDUITS, SERVICE LINES, ETC., REQUIRED TO COMPLETE THE WORK SHALL BE INCIDENTAL TO THIS PROJECT.
- ALL HOLES RESULTING FROM OPERATIONS OF THE CONTRACTOR, INCLUDING REMOVAL OF FENCE POSTS AND SIGNAL EQUIPMENT, SHALL BE FILLED AND CONSOLIDATED TO FINISHED GRADE TO PREVENT FUTURE SETTLEMENT. THE VOIDS SHALL BE FILLED AS SOON AS PRACTICAL - PREFERABLY THE DAY CREATED AND NOT LATER THAN THE FOLLOWING DAY. ANY PORTION OF THE RIGHT OF WAY OR PROJECT LIMITS DISTURBED BY ANY SUCH OPERATIONS SHALL BE RESTORED TO AN ACCEPTABLE CONDITION. THESE OPERATIONS SHALL BE CONSIDERED INCIDENTAL TO THIS PROJECT.
- UNLESS OTHERWISE DIRECTED OR AUTHORIZED, ALL REMOVED ASPHALTIC CEMENT CONCRETE AND OTHER BITUMINOUS MATERIALS WHICH ARE NOT SPECIFICALLY ADDRESSED OR DESCRIBED IN THE PLANS SHALL BECOME PROPERTY OF THE CONTRACTOR. THE CONTRACTOR MAY REMOVE THE MATERIAL FROM THE PROJECT AND STOCKPILE FOR FUTURE USE, OR DISPOSE OF THE MATERIAL IN A LICENSED LANDFILL, IN ACCORDANCE WITH CURRENT RULES AND REGULATIONS OF THE IOWA DEPARTMENT OF NATURAL RESOURCES.
- UNLESS OTHERWISE NOTED ON THE PLANS, ALL PARKING AREAS, BACKSLOPES, AND EASEMENT AREAS DISTURBED BY CONSTRUCTION SHALL BE SHAPED TO FINISHED GRADE AND SEEDED. PAYMENT SHALL BE FOR THOSE DISTURBED AREAS WITHIN THE GRADING LIMITS OR EASEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREA(S) WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- UNLESS OTHERWISE APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL ORGANIZE WEEKLY CONSTRUCTION MEETINGS DURING THE DURATION OF THE PROJECT. THIS INCLUDES NOTIFYING SUBCONTRACTORS, CITY AND UTILITY COMPANIES AS NECESSARY.
- THE CONTRACTOR WILL BE REQUIRED TO HAVE A REPRESENTATIVE AT THE FINAL INSPECTION AND WILL BE RESPONSIBLE TO OPEN ALL MANHOLES AND INTAKES FOR INSPECTION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE) WHICH IS NOT DESIRABLE TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT AREAS (INCLUDING HAUL ROADS) SELECTED FOR WASTE OR DISPOSAL NOT IMPACT 1) CULTURALLY SENSITIVE SITES OR GRAVES OR 2) WETLANDS OR "WATERS OF THE U.S."; INCLUDING STREAMS OR STREAM BANKS BELOW THE "ORDINARY HIGH WATER MARK", WITHOUT AN APPROVED U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO WASTE MATERIAL SHALL BE PLACED WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY STATED IN THE PLANS.
- SPECIAL CARE SHALL BE TAKEN WHEN FORMING AT INTERSECTIONS SO THAT THE PROFILES AND ELEVATIONS SHOWN ON THE CROSS SECTIONS, STREET RETURN PROFILE SHEETS, AND STAKING DIAGRAM SHEETS ARE OBTAINED. SHORT LENGTHS OF FORMS OR FLEXIBLE FORMS MAY BE NECESSARY AT THESE LOCATIONS.
- THE TOP SIX (6) INCHES OF THE DISTURBED AREAS SHALL BE FREE OF ROCK AND DEBRIS AND SHALL BE SUITABLE FOR THE ESTABLISHMENT OF VEGETATION, SUBJECT TO THE APPROVAL OF THE ENGINEER.
- THE CONTRACTOR IS EXPECTED TO HAVE MATERIALS, EQUIPMENT, AND LABOR AVAILABLE ON A DAILY BASIS TO INSTALL AND MAINTAIN EROSION CONTROL FEATURES ON THE PROJECT. THIS MAY INVOLVE SEEDING, SILT FENCE, ROCK DITCH CHECKS, SILT BASINS, OR SILT DIKES.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ACCESS TO INDIVIDUAL PROPERTIES DURING CONSTRUCTION. RELOCATED ACCESS SHALL BE COMPLETED TO INDIVIDUAL PROPERTIES PRIOR TO REMOVAL OF EXISTING ACCESS. IF THE PERMANENT ACCESS CANNOT BE COMPLETED PRIOR TO REMOVAL OF THE EXISTING ACCESS, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AN ALTERNATE ACCESS. TEMPORARY GRANULAR SURFACING WILL BE PAID FOR AS A CONTRACT ITEM OR BY EXTRA WORK.
- THE CONTRACTOR IS HEREBY NOTIFIED THAT REMOVAL OF ANY EXISTING TRAFFIC MARKERS, WARNING DEVICES OR GUARDRAIL BARRIERS SHALL BE SCHEDULED SUBJECT TO THE APPROVAL OF THE ENGINEER. THE CONTRACTOR MAY BE REQUIRED TO PLACE TEMPORARY WARNING DEVICES AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY DURING WHICH ANY SUCH REMOVALS TAKE PLACE.
- A PLAN FOR STAGE CONSTRUCTION OF LOCAL ACCESSES WHICH ARE REQUIRED TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
- PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED.
- CONTRACTOR TO REMOVE AND REINSTALL ALL TRAFFIC SIGNAGE. COORDINATE WITH CITY AT LEAST 72 HOURS PRIOR TO SIGNAGE REMOVAL. THIS WORK IS INCIDENTAL TO THE PROJECT.
- PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS EXPECTED TO PROVIDE ADEQUATE PERSONNEL AND EQUIPMENT TO PERFORM WORK WITHIN SPECIFIED TIME OF CONSTRUCTION. ONCE WORK WITHIN A SPECIFIED AREA HAS COMMENCED, THE CONTRACTOR SHALL PUT FULL AND CONTINUOUS WORKFORCE TO COMPLETE THE AREA AS SOON AS POSSIBLE TO MINIMIZE INCONVENIENCE TO TRAVELING PUBLIC, AND TO ADJACENT PROPERTY OWNERS.
- ALL HAND POURS REQUIRE REINFORCEMENT TO BE PLACED ON SUPPORT CHAIRS AND APPROVED BY CITY PRIOR TO CONSTRUCTION.
- NO 3D SURFACE FILES OR CROSS SECTIONS WERE PREPARED FOR THIS PROJECT AS THE EXISTING ROADWAY PAVEMENT WILL BE REPLACED TO CONDITIONS THAT NEARLY MATCH EXISTING. DESIGN FILES ARE AVAILABLE FOR REFERENCE AND USE.
- OVERHEAD POWER LINES ALONG THE EAST SIDE OF ROCHE STREET ARE PLANNED TO BE RELOCATED UNDERGROUND FOR THIS PROJECT. ANTICIPATED SCHEDULE FOR THE RELOCATION WORK IS BETWEEN MARCH 2020 TO APRIL 2020. COORDINATION WITH MIDAMERICAN ENERGY IS REQUIRED.

ROCHE ST CULVERT REPLACEMENT

GENERAL NOTES AND LEGEND

KNOXVILLE, IOWA

SNYDER & ASSOCIATES, INC. I



Project No: 1190729

Sheet A.2

MARK	REVISION	DATE	BY
	Checked By: ACB	AS SHOWN	
	Engineer: JDS	Scale: AS SHOWN	
	Technical: DSS	Date: 01/24/20	Field By: Sheet A.2
		Date: 11/07/29	Project No: 1190729



**ESTIMATED ROADWAY QUANTITIES**

100-1C  
MODIFIED

Item No.	SUDAS No.	Item	Unit	Estimated		As-Built	
				Division 1	Division 2	Division 1	Division 2
				Total	Total	Total	Total
<b>DIVISION 1: CITY OF KNOXVILLE</b>							
<b>DIVISION 2: KNOXVILLE WATER WORKS</b>							
<b>2</b>							
Earthwork, Subgrade, and Subbase							
2.01	2010-108-A-0	Clearing and Grubbing	LS	1			
2.02	2010-108-D-1	Topsoil, On-site	CY	150			
2.03	2010-108-E-0	Excavation, Class 10	CY	1125			
2.04	2010-108-G-0	Subgrade Preparation	SY	340			
2.05	2010-108-I-0	Subbase, Modified, 6 Inches	SY	341			
2.06	2010-108-L-0	Compaction Testing	LS	1			
<b>3</b>							
Trench and Trenchless Construction							
3.01	3010-108-F-0	Trench Compaction Testing	LS	1			
<b>4</b>							
Sewers and Drains							
4.01	4010-108-A-1	Sanitary Sewer Gravity Main, Trenched, PVC, 8 In.	LF	46			
4.02	4010-108-H-0	Removal of Sanitary Sewer, 8 In.	LF	46			
4.03	4020-108-A-1	Storm Sewer, Trenched, RCP, 15 In.	LF	50	84		
4.04	4020-108-C-0	Removal of Storm Sewer, RCP, 15 In.	LF	53	88		
4.05	4040-108-A-0	Subdrain, HDPE, 4 In.	LF	220			
4.06	4040-108-C-0	Subdrain Cleanout, Type A-1, 6 In.	EA	4			
4.07	4040-108-e-0	Subdrain Outlets and Connections	EA	4			
<b>5</b>							
Water Mains and Appurtenances							
5.01	5010-108-A-1	Water Main, Trenched, C900 PVC, 8 In.	LF		137		
5.02	5010-109-C-1	Fitting, 8" x 45° Bend	EA		8		
5.03	5010-109-C-1	Fitting, 8" x 6" Reducer	EA		1		
5.04	5010-108-D-0	Water Service Stub	EA		1		
5.05	5010-999-9-9	Water Main, Insulation	LF		22		
5.06	5010-999-9-9	Water Main, Abandon or Remove, 6 In.	LF		127		
5.07	5010-999-9-9	Water Main, Connection to Existing	EA		2		
<b>6</b>							
Structures for Sanitary and Storm Sewers							
6.01	6010-108-B-0	Intake, SW-501	EA	1			
6.02	6010-108-B-0	Intake, SW-503	EA	1			
6.03	6010-108-E-0	Manhole Adjustment, Major	EA	1			
6.04	6010-108-H-0	Remove Intake	EA	2			
<b>7</b>							
Streets and Related Work							
7.01	7010-108-A-0	Pavement, PCC, 7 In.	SY	293			
7.02	7010-108-D-0	Special Subgrade Preparation for Shared Use Path	SY	307			
7.03	7010-108-I-0	PCC Pavement Samples and Testing	LS	1			
7.04	7030-108-I-0	Shared Use Path, PCC, 6 In.	SY	221			
7.05	7030-108-G-0	Detectable Warning, Cast Iron	SF	24			
7.06	7030-108-H-1	Driveway, Paved, PCC, 6 In.	SY	10			
7.07	7030-999-9-9	Temporary Surfacing, 12 In.	TON	150			
7.08	7040-108-H-0	Pavement Removal	SY	305			
<b>8</b>							
Traffic Control							
8.01	8030-108-A-0	Temporary Traffic Control	LS	1			
8.02	8030-999-9-9	Temporary Barrier Rail	LF	300			
<b>9</b>							
Site Work and Landscaping							
9.01	9040-108-D-1	Filter Sock, 12 Inch.	LF	410			
9.02	9040-108-D-2	Filter Sock, Removal	LF	410			
9.03	9040-108-J-0	Rip Rap, Class A	TON	262			
9.04	9040-108-Q-0	Erosion Control Mulching, Hydromulching with Temporary Seed	AC	0.3			
9.05	9040-108-Q-0	Hydroseeding, Fertilizer, Hydromulch, Type 1 Seeding	AC	0.3			
<b>11</b>							
Miscellaneous							
11.01	11,010-108-A	Construction Survey	LS	0.93	0.07		
11.02	11,020-108-A	Mobilization	LS	0.93	0.07		
11.03	11,030-108-A-0	Maintenance of Postal Service	LS	1			
11.04	11,030-108-B-0	Maintenance of Solid Waste Collection	LS	1			
11.05	11,050-108-A-0	Concrete Washout	LS	1			

**REFER TO V-SHEETS FOR CULVERT QUANTITIES**

**ESTIMATE REFERENCE INFORMATION**

100-4A  
MODIFIED

Item No.	Item Code	Description
<b>2</b>		
<b>EARTHWORK</b>		
2.01	2010-108-A-0	<b>Clearing and Grubbing</b> Quantity includes clearing and grubbing within the project grading limits. Payment will be made for plan quantity only and no measurements will be made. Bidders shall familiarize themselves with site conditions prior to submittal of the bid.
2.02	2010-108-D-1	<b>Topsoil, On-site</b> Quantity includes stripping of all topsoil to a depth of 6 inches from the area within the grading limits. Material to be stockpiled and spread at a depth no less than 6 inches. Bidders shall determine quantities and satisfy themselves for all conditions of earthwork requirements in the submittal of the bid. Contractor is responsible for stockpiling and transporting of materials. Payment will be made for plan quantity only. No additional compensation shall be made for export of waste material.  Total topsoil stripping quantity comprises 150 CY. Total topsoil placement quantity comprises 130 CY, including 30% shrink.
2.03	2010-108-E-0	<b>Excavation, Class 10</b> Bidders shall determine quantities and satisfy themselves for all conditions of earthwork requirements in the submittal of the bid. Compacted fill quantities include an assumed 30% shrink factor.  Total Class 10 Cut quantity comprises 150 CY. Total Class 10 fill quantity comprises 1125 CY including 30% shrink. Fill quantity includes material used for backfill of twin RCB culvert. Suitable Material to be used in fill. Class 20 excavation may be used on culvert backfill if deemed suitable. Payment shall be made at plan quantity and no adjustments will be made. No additional compensation shall be made for the overhaul of material.
2.04	2010-108-G-0	<b>Subgrade Preparation</b> Compaction testing is required for this bid item and paid under the Compaction Testing bid item. Contractor to notify City 48 hours prior to proof rolling subgrade. Refer to B-sheets for details and locations.
2.05	2010-108-I-0	<b>Subbase, Modified, 6 Inches</b> Refer to B-sheets for locations and additional information.
2.06	2010-108-L-0	<b>Compaction Testing</b> Compaction testing shall be performed by an independent testing laboratory approved by the Engineer. Compaction testing shall be performed on subgrade, subbase, and in placing earth fill. Perform compaction testing per Section 2010, 3.09. Coordinate testing results with the Engineer.
<b>3</b>		
<b>Trench and Trenchless Construction</b>		
3.01	3010-108-F-0	<b>Trench Compaction Testing</b> Trench compaction testing shall be performed by an independent testing laboratory approved by the Engineer. Includes testing for all storm sewer, water main, and culvert utility construction. Perform trench compaction testing per Section 3010, 3.05. Coordinate testing with Engineer. Testing required for backfill of each structure on alternating sides of structure. Each pipe segment requires testing per Specifications regardless of length.
<b>4</b>		
<b>Sewers and Drains</b>		
4.01	4010-108-A-1	<b>Sanitary Sewer Gravity Main, Trenched, PVC, 8 In.</b> Refer to D-sheets for additional information. Connection to existing made by pre-approved non-shear couplings. Bypass pumping or similar approved means to maintain sewer service shall be incidental to this item.
4.02	4010-108-H-0	<b>Removal of Sanitary Sewer, 8 In.</b> Refer to D-sheets for locations and additional information.
4.03	4020-108-A-1	<b>Storm Sewer, Trenched, RCP, 15 In.</b> Refer to the D-sheets for locations and elevations. All pipe joints to include profile gaskets per Section 4020, 2.01, A.3. Pipe lengths shown are from inside wall of structure to inside wall of structure. Trench compaction testing is required for this item. Use Class I Granular Bedding Material complying with Section 3010, 2.02. Bedding per SW-102 Type R-2.
4.04	4020-108-C-0	<b>Removal of Storm Sewer, RCP, 15 In.</b> Refer to D-sheets for locations and additional information.
4.05	4040-108-A-0	<b>Subdrain, HDPE, 4 In.</b>
4.06	4040-108-C-0	<b>Subdrain Cleanout, Type A-1, 6 In.</b>
4.07	4040-108-e-0	<b>Subdrain Outlets and Connections</b> Refer to D-sheets for locations. No engineering fabric shall be used. Type A-1, Case B installation shall be used. HPDE shall have smooth interior and corrugated exterior. Subdrain equal to be pre-approved by the Engineer. Assure rock interaction between porous backfill and modified subbase.

**ROCHE ST CULVERT REPLACEMENT**

**GENERAL NOTES AND QUANTITIES**

**SNYDER & ASSOCIATES, INC.**



**KNOXVILLE, IOWA**  
2727 S.W. SNYDER BLVD.  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	AS SHOWN	Scale:
Technician: DSS	Date: 01/24/20	Field Bc:	Project No: 1190729
			Sheet C.1

**ESTIMATE REFERENCE INFORMATION**

100-4A  
MODIFIED

Item No.	Item Code	Description
<b>5</b>		
<b>Water Mains and Appurtenances</b>		
5.01	5010-108-A-1	<b>Water Main, Trenched, C900 PVC, 8 In.</b> Refer to the D-sheets for locations and additional information. Contractor shall coordinate time period for the water main disconnection with Knoxville Water Works and impacted businesses and residences. Testing and disinfecting shall be completed prior to final acceptance. Class P-2 embedment is required for all water main pipe per SUDAS Figure 3010.104. Minimum of 1.5' cover must be provided between water main and storm sewer. Minimum of 0.5' cover must be provided between water main and culvert. Coordinate outages and connections to water system with Knoxville Water Works and impacted business and residences one (1) week in advance of planned outages. Prior to construction, verify connection location with Knoxville Water Works. No additional compensation is allowed for varying lengths of installed water main.
5.02	5010-109-C-1	<b>Fitting, 8" x 45° Bend</b>
5.03	5010-109-C-1	<b>Fitting, 8" x 6" Reducer</b> Refer to D-sheets for locations and additional information. No additional compensation is allowed for reduced number of fittings.
5.04	5010-108-D-0	<b>Water Service Stub</b> Refer to D-sheets for location. Each water service disconnected from a removed water main and reconnected to a new water main will be counted for payment. Extended pipe material shall be 1 inch-Type K copper. Item shall include all excavation, backfill, disinfection, installation of corporation tap, corporation elbow, water service saddle, additional pipe and fittings necessary to reconnect the water service to new in-service water main. Work shall be completed by a licensed plumber and the contractor shall obtain all permits necessary to complete the required work. Payment will be based on the contract unit price of each water service connected.
5.05	5010-999-9-9	<b>Water Main, Insulation</b> Refer to B-sheets for detail. Refer to D-sheets for locations and additional information. Insulation shall be nominal dimensions at the water main crossing. Install insulation on water main over proposed culvert. Item includes minimum 3" XPS foam board and sand layer for interior and exterior backfill of insulation. Measurement shall be based on each linear foot of insulation protection installed at the water main crossing per details. Payment shall be made at the contract unit price for each linear foot of insulation protection installed at the water main crossing. Water main pipe installation costs to be paid under item 5.01.
5.06	5010-999-9-9	<b>Water Main, Abandon or Remove, 6 In.</b> Contractor may abandon or remove existing main depending on construction sequencing. If abandonment, capping of existing water main ends is required. Measurement shall be made for each linear foot of abandoned or removed water main. Exploratory excavation, backfill, and capping of the water main is considered incidental to this bid item. Payment shall be made at the contract unit price of each linear foot of abandoned or removed water main.
5.07	5010-999-9-9	<b>Water Main, Connection to Existing</b> Refer to the D-sheets for locations and plan and profile information. Contractor shall perform exploratory excavation prior to shutdown to verify pipe sizes, material, and locations. Item shall be measured and paid per each connection made to the existing water main service. Unit prices includes materials, equipment, labor, excavation, thrust restraint, backfilling, compaction, testing, and disinfection. Handbills and notifications are incidental to this bid item. Prior to construction, verify connection location with Knoxville Water Works.
<b>6</b>		
<b>Structures for Sanitary and Storm Sewers</b>		
6.01	6010-108-B-0	<b>Intake, SW-501</b>
6.02	6010-108-B-0	<b>Intake, SW-503</b> Refer to the D-sheets for locations and plan and profile information. Furnishing, installing, and removal of structural sheeting for staged construction is incidental to this work.
6.03	6010-108-E-0	<b>Manhole Adjustment, Major</b> Refer to D-sheets for location. Item includes adjustment of manhole to final grade, furnish and installation of new casting and infiltration barrier, excavation of vent pipe, removal of vent pipe and capping of pipe by approved method, placement of backfill material, and compaction of backfill. Vent pipe is anticipated to be within 36-inches of existing grade.
6.04	6010-108-H-0	<b>Remove Intake</b> Refer to the D-sheets for locations and additional information.
<b>7</b>		
<b>Streets and Related Work</b>		
7.01	7010-108-A-0	<b>Pavement, PCC, 7 In.</b> Refer to the B-sheets for typical sections. Refer to the D-sheets and L-sheets for locations and additional information. Includes all curb and gutter placement. Class C concrete shall be used.
7.02	7010-108-D-0	<b>Special Subgrade Preparation for Shared Use Path</b> Compaction testing is required for this bid item and paid under the Compaction Testing bid item. Contractor to notify Engineer prior to proof rolling subgrade. Refer to B-sheets for details and locations.
7.03	7010-108-I-0	<b>PCC Pavement Samples and Testing</b> Item includes samples, field, and laboratory testing for all concrete work including but not limited to trail, sidewalks, driveways, and roadway.
7.04	7030-108-I-0	<b>Shared Use Path, PCC, 6 In.</b> Refer to B-sheets for typical section. Refer to D-sheets and L-sheets for locations and additional information. Class C concrete shall be used.

**ESTIMATE REFERENCE INFORMATION**

100-4A  
MODIFIED

Item No.	Item Code	Description
7.05	7030-108-G-0	<b>Detectable Warning, Cast Iron</b> Refer to D-sheets for locations. Detectable warnings shall be cast iron. Install per manufacturer recommendations. Refer to L-sheets for radii information for detectable warnings. Radial panels are required for this bid item. Refer to L-sheets for additional information.
7.06	7030-108-H-1	<b>Driveway, Paved, PCC, 6 In.</b> Refer to D-sheets for locations.
7.07	7030-999-9-9	<b>Temporary Surfacing, 12 In.</b> Refer to J-sheets for locations. Contractor shall be responsible for maintenance of temporary surfacing during staged construction. Maintenance of temporary surfacing considered incidental to this bid item. Placement shall be on subgrade that passes proof roll. Measurement shall be based on truck tickets collected onsite. Payment shall be made at the contract unit price of temporary surfacing installed and maintained following completion of Stage 1 and Stage 2 construction.
7.08	7040-108-H-0	<b>Pavement Removal</b> Refer to D-sheets for removal locations. Existing PCC Pavement is estimated at 7" of pavement. No additional payment or earthwork adjustments will be made for variances in pavement depth. Full depth saw cuts are considered incidental to this item. Pavement removal include curb and gutter. Coordinate with City of Knoxville prior to performing saw cuts.
<b>8</b>		
<b>Traffic Control</b>		
8.01	8030-108-A-0	<b>Temporary Traffic Control</b> Refer to J-sheets for Traffic Control and Staging information. This item shall be measured and paid for as a percentage of the total project completed at each monthly payment. Lump sump price includes furnishing, erecting, operating, maintaining, cleaning, moving, and removing all traffic control devices as shown on the plans and as directed by the City.
8.02	8030-999-9-9	<b>Temporary Barrier Rail</b> Refer to J-sheets for temporary concrete barrier rail (TBR) locations. Included in this item are all materials, labor, equipment, and other associated work required to furnish, place, pin (if noted), maintain, and remove TBR as needed to comply with staged construction within the Contract Documents. Construction, material requirements, method of measurement, and basis of payment shall comply with Iowa DOT Specification Section 2528. Iowa DOT Standard Road Plan BA-401 shall apply to this item.
<b>9</b>		
<b>Site Work and Landscaping</b>		
9.01	9040-108-D-1	<b>Filter Sock, 12 Inch.</b>
9.02	9040-108-D-2	<b>Filter Sock, Removal</b> Items to be used for erosion control at intakes, perimeter control, intermediate control, and other locations as required by the Pollution Prevention Plan or directed by the Engineer. Refer to C Sheets for the PPP.
9.03	9040-108-J-0	<b>Rip Rap, Class A</b> Refer to the D-sheets, L-sheets, and V-sheets for rip rap locations. Refer to SUDAS Figures 9040.110 and 9040.111 for construction details. Rip rap shall be installed at a depth of 2 feet. Engineering fabric and excavation of embedment shall be considered incidental to this bid item.
9.04	9040-108-Q-0	<b>Erosion Control Mulching, Hydromulching with Temporary Seed</b> Apply hydro-mulch per Section 9040, 3.21B. Mulching areas outside of the construction limit shall be the responsibility of the Contractor at no additional cost to the owner. Contractor shall provide mulch and seed bags for quality and quantity verification after each application. Use this item for temporary application to meet NPDES requirements.
9.05	9040-108-Q-0	<b>Hydroseeding, Fertilizer, Hydromulch, Type 1 Seeding</b> Apply hydro-mulch per Section 9040, 3.21B. Install Type 1 Seeding. Mulching areas outside of the construction limits shall be the responsibility of the Contractor at no additional cost to the owner. Contractor shall provide mulch and seed bags for quality and quantity verification after each application. Mulching agent to meet Mechanical Bonded Fiber Matrix.

**ROCHE ST CULVERT REPLACEMENT**

**GENERAL NOTES AND QUANTITIES**

**SNYDER & ASSOCIATES, INC.**

MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	AS SHOWN	Scale:
Technician: DSS	Date: 01/24/20	Field Bc:	Project No: 1190729
			Sheet C-2

**KNOXVILLE, IOWA**  
2727 S.W. SNYDER BLVD.  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com



Project No: 1190729  
Sheet C.2

100-4A  
 MODIFIED

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
<b>11</b>		<b>Miscellaneous</b>
11.01	11,010-108-A	Construction Survey
11.02	11,020-108-A	Mobilization
11.03	11,030-108-A-0	<b>Maintenance of Postal Service</b> Final locations shall be coordinated with Engineer, Property Owner, and United States Postal Service prior to construction. Contractor to notify USPS 10 days prior to construction of temporary mailboxes on requirements and coordination of location. Contractor shall notify property owners prior to construction with a mail flyer and handbill to inform them the date and location of the temporary mailbox. Temporary mailboxes to be constructed prior to removal of existing mailboxes. Items including maintaining postal service include property owners within the project limits throughout the duration of the project. Item includes all materials, labor, and equipment required to provide postal services. Reinstallation of impacted mailboxes, per USPS standards, are incidental to this item.
11.04	11,030-108-B-0	<b>Maintenance of Solid Waste Collection</b> Item includes maintaining garbage and recycling services to property owners within the project limits through the duration of the project. Item includes all materials, labor, and equipment required to haul garbage and recycling containers from the property owners to a local pick-up point and back to the property within 24 hours following collection. Contractor shall coordinate a local pick-up location with the garbage and recycling services. A removable sticker shall be placed on each container to ensure that the containers are returned to the appropriate property owner. Contractor shall coordinate with the Owner, Engineer, property owners, and garbage and recycling services.
11.05	11,050-108-A-0	<b>Concrete Washout</b> Item includes implementing concrete washout at locations approved by the Engineer prior to construction. Included in this item is removal of hardened concrete following construction. Placement of concrete washout shall be within the right-of-way and not impede pedestrian or vehicular traffic. Progressive payments will be made throughout construction depending on stage of concrete work.

ROCHE ST CULVERT REPLACEMENT

GENERAL NOTES AND QUANTITIES

SNYDER & ASSOCIATES, INC. |



Project No: 1190729

Sheet C.3

KNOXVILLE, IOWA

2727 S.W. SNYDER BLVD.  
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MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	Scale: AS SHOWN	
Technician: DSS	Date: 01/24/20	Field Bc:	Pg:
Project No: 1190729	Sheet	C.3	

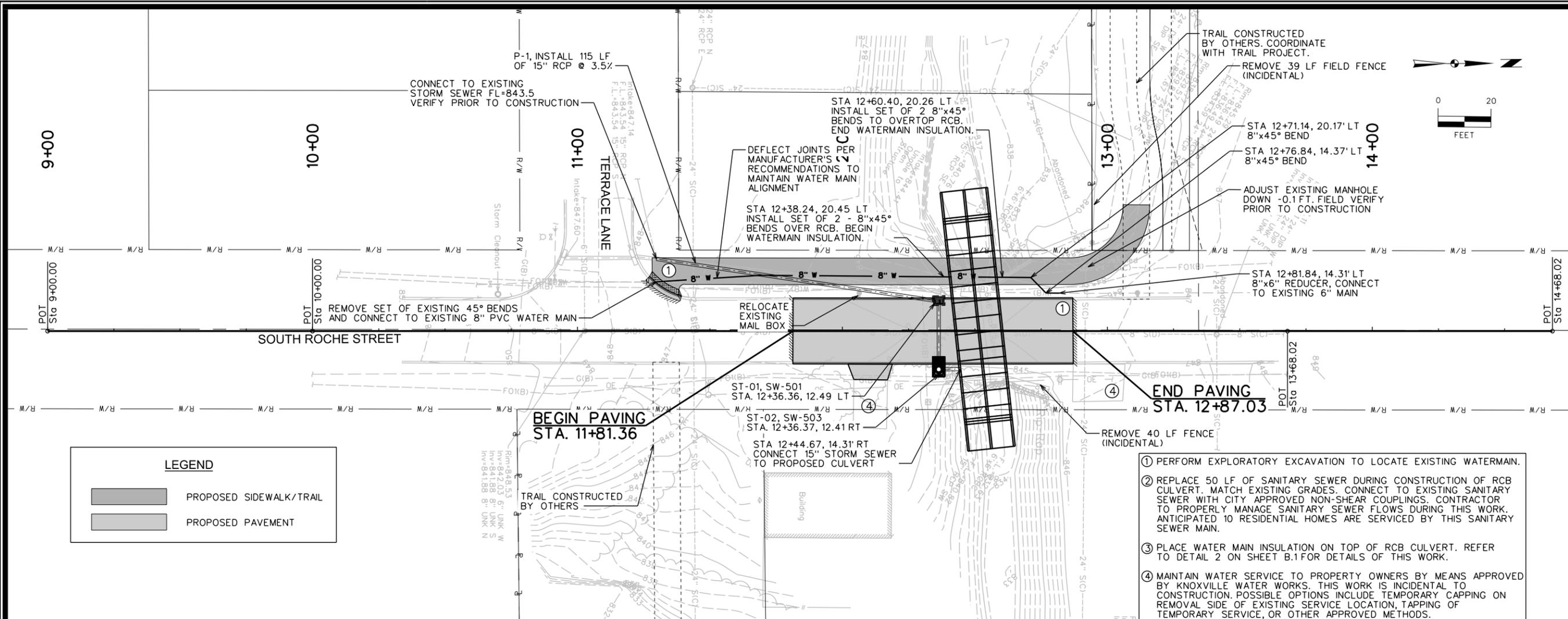


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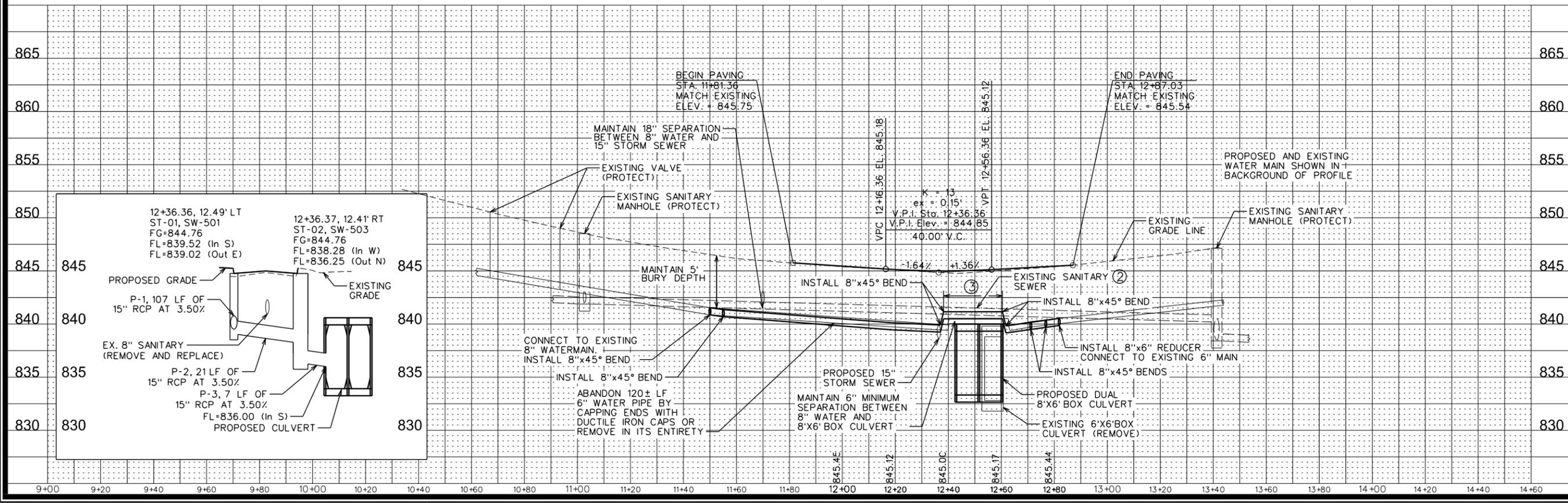
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- PERFORM EXPLORATORY EXCAVATION TO LOCATE EXISTING WATERMAIN.
- REPLACE 50 LF OF SANITARY SEWER DURING CONSTRUCTION OF RCB CULVERT. MATCH EXISTING GRADES. CONNECT TO EXISTING SANITARY SEWER WITH CITY APPROVED NON-SHEAR COUPLINGS. CONTRACTOR TO PROPERLY MANAGE SANITARY SEWER FLOWS DURING THIS WORK. ANTICIPATED 10 RESIDENTIAL HOMES ARE SERVICED BY THIS SANITARY SEWER MAIN.
- PLACE WATER MAIN INSULATION ON TOP OF RCB CULVERT. REFER TO DETAIL 2 ON SHEET B.1 FOR DETAILS OF THIS WORK.
- MAINTAIN WATER SERVICE TO PROPERTY OWNERS BY MEANS APPROVED BY KNOXVILLE WATER WORKS. THIS WORK IS INCIDENTAL TO CONSTRUCTION. POSSIBLE OPTIONS INCLUDE TEMPORARY CAPPING ON REMOVAL SIDE OF EXISTING SERVICE LOCATION, TAPPING OF TEMPORARY SERVICE, OR OTHER APPROVED METHODS.



MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	11/20/20	
Technician: DSS	Date: 01/24/20	Field Bk:	Proj:
Project No:	1190729	Sheet	D.1

**KNOXVILLE, IOWA**

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**ROCHE ST CULVERT REPLACEMENT**

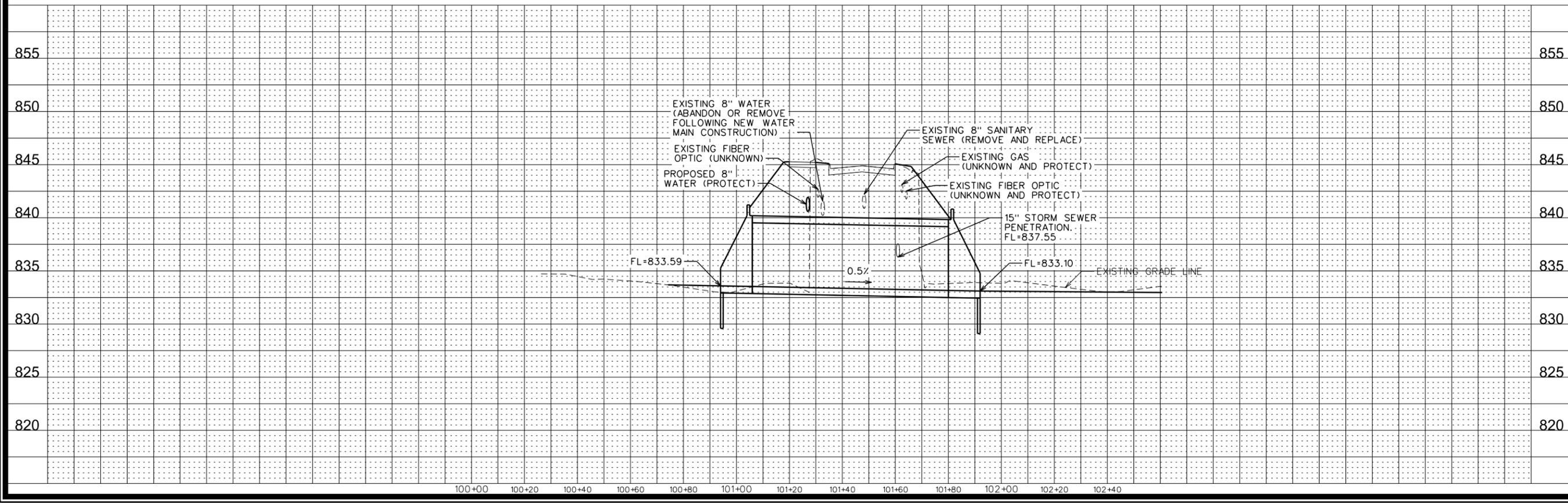
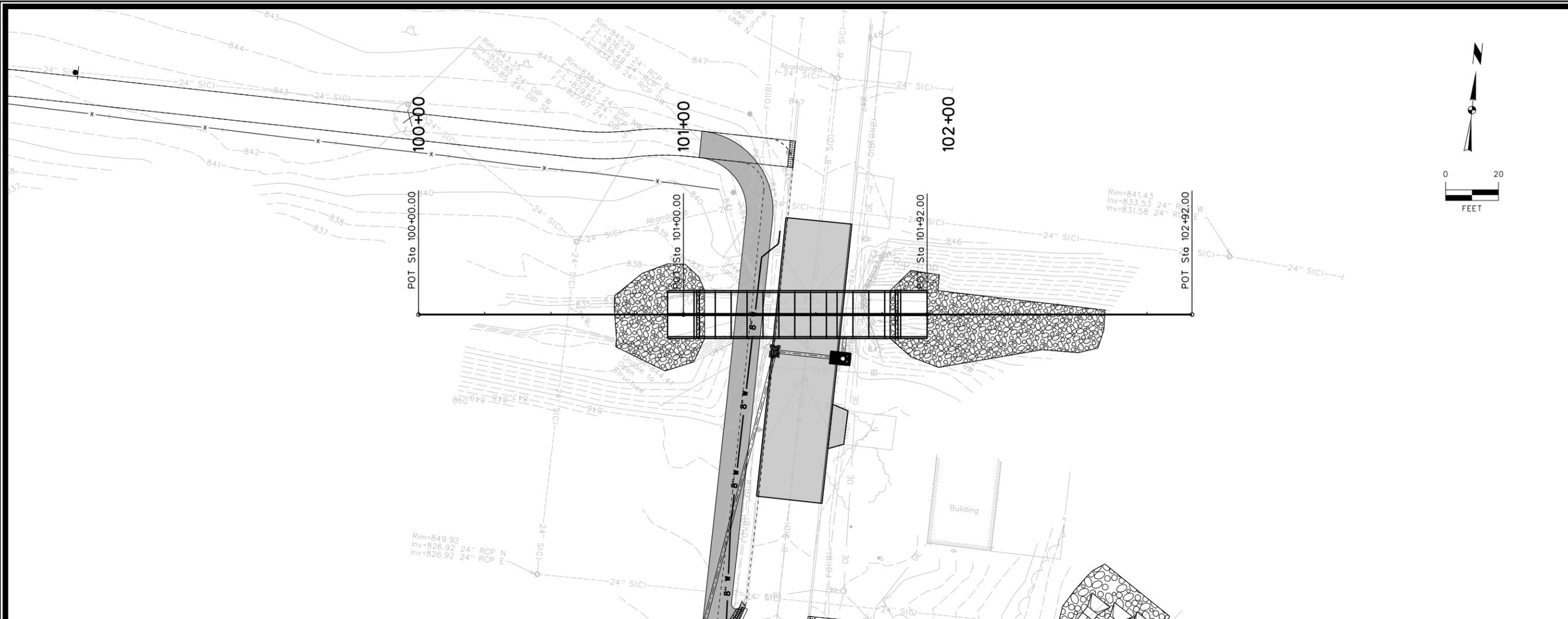
**SOUTH ROCHE STREET PLAN AND PROFILE SHEET**

**SNYDER & ASSOCIATES, INC.**

**SNYDER & ASSOCIATES**

Project No: 1190729

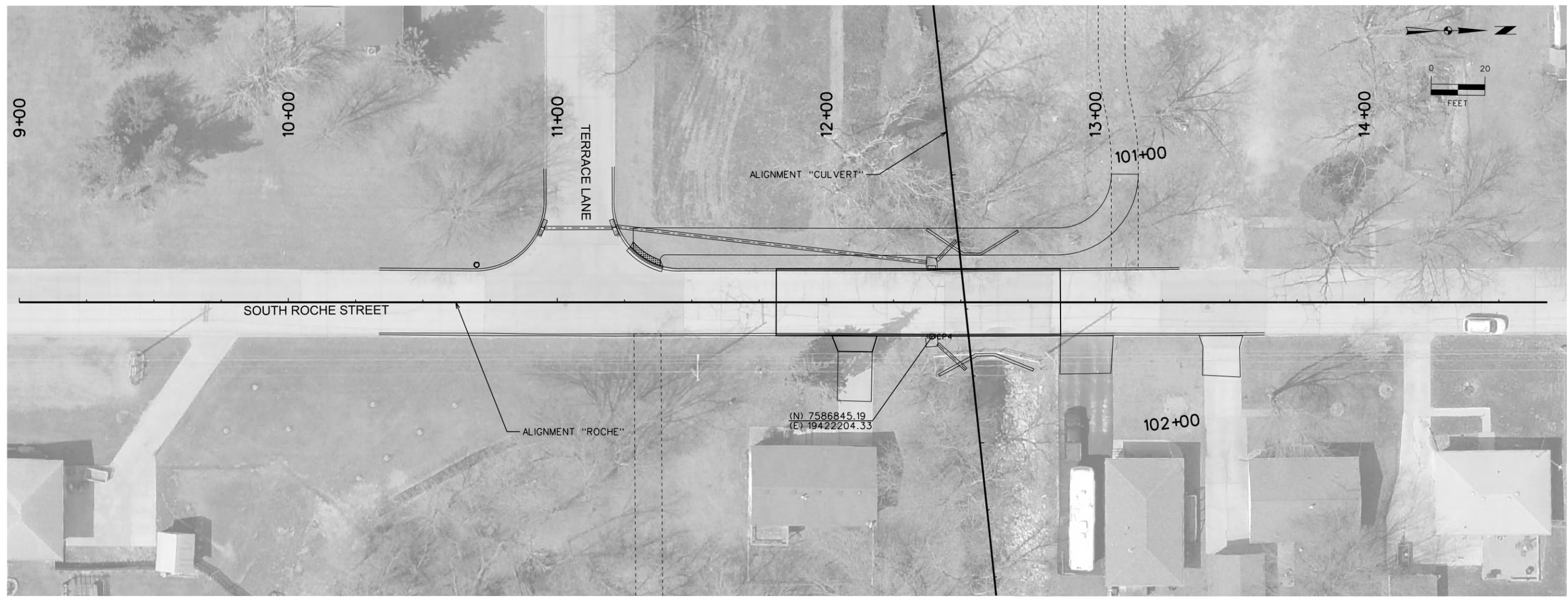
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MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	Scale: 1"=20'	Field Bk:
Technician: DSS	Date: 01/24/20	Project No: 1190729	Sheet E.1

**ROCHE ST CULVERT REPLACEMENT**  
**CULVERT PLAN PROFILE SHEET**  
**SNYDER & ASSOCIATES, INC.**  
 KNOXVILLE, IOWA  
 2727 S.W. SNYDER BLVD.  
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 515-964-2020 | www.snyder-associates.com

Project No: 1190729  
 Sheet E.1



**BENCHMARKS**

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 - GEOID12A)  
IARTN DERIVED - US SURVEY FEET

BM1 ELEV=867.32  
CUT 'X' AT INTAKE AT SOUTHEAST QUAD GORDON DRIVE & STREETER STREET.

BM2 ELEV=832.96  
CUT 'X' AT DOUBLE INTAKE, EAST SIDE OF FIFTH STREET AT CREEK CROSSING RCBC.

**CONTROL POINTS**

IOWA REGIONAL COORDINATE SYSTEM ZONE 9 (NEWTON)  
NAD83(2011)(EPOCH 2010.00) IARTN DERIVED - US SURVEY FEET

CP1 N=7586312.48 E=19419067.99  
MAG NAIL IN C/L ASPHALT TRAIL AT C/L SIDEWALK NORTH TO GAZEBO AT WEST END OF PROJECT.

CP2 N=7586475.37 E=19420171.96  
CUT 'X' AT INTAKE AT SE QUAD GORDON DRIVE & STREETER STREET.

CP3 N=7587088.78 E=19420452.99  
MAG NAIL IN C/L DAYTON STREET AT SOUTH END OF STREET.

CP4 N=7586845.19 E=19422204.33  
CUT 'X' AT INTAKE ON EAST SIDE OF SOUTH ROCHE STREET, APPROXIMATELY 130' NORTH OF C/L TERRACE LANE.

CP5 N=7586760.35 E=19423784.33  
MAG NAIL AT C/L SOUTH FIFTH STREET AT C/L CREEK RCBC.

CP6 N=7586768.81 E=19423796.98  
CUT 'X' AT DOUBLE INTAKE, EAST SIDE OF FIFTH STREET AT CREEK CROSSING RCBC.

**DESCRIBE CHAIN "ROCHE"**

Chain ROCHE contains:  
1 2 3 4

Beginning chain ROCHE description  
=====

Point 1	N	7,586,505.98 E	19,422,189.69 Sta	9+00.00
Course from 1 to 2 N 0° 19' 23.52" E Dist 100.00				
Point 2	N	7,586,605.98 E	19,422,190.26 Sta	10+00.00
Course from 2 to 3 N 0° 19' 23.52" E Dist 368.02				
Point 3	N	7,586,973.99 E	19,422,192.33 Sta	13+68.02
Course from 3 to 4 N 0° 19' 23.52" E Dist 100.00				
Point 4	N	7,587,073.99 E	19,422,192.90 Sta	14+68.02

=====

Ending chain "ROCHE" description

**DESCRIBE CHAIN "CULVERT"**

Chain CULVERT contains:  
CULVERT1 CULVERT2 CULVERT3 CULVERT4

Beginning chain CULVERT description  
=====

Point CULVERT1	N	7,586,842.64 E	19,422,044.96 Sta	100+00.00
Course from CULVERT1 to CULVERT2 N 84° 13' 11.87" E Dist 100.00				
Point CULVERT2	N	7,586,852.71 E	19,422,144.45 Sta	101+00.00
Course from CULVERT2 to CULVERT3 N 84° 13' 11.87" E Dist 92.00				
Point CULVERT3	N	7,586,861.98 E	19,422,235.98 Sta	101+92.00
Course from CULVERT3 to CULVERT4 N 84° 13' 11.87" E Dist 100.00				
Point CULVERT4	N	7,586,872.05 E	19,422,335.47 Sta	102+92.00

=====

Ending chain "CULVERT" description

MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	Scale: 1"=20'	
Technician: DSS	Date: 01/24/20	Field Bk:	Pt:
Project No:	1190729	Sheet	G.1

**ROCHE ST CULVERT REPLACEMENT**

**HORIZONTAL AND VERTICAL CONTROL**

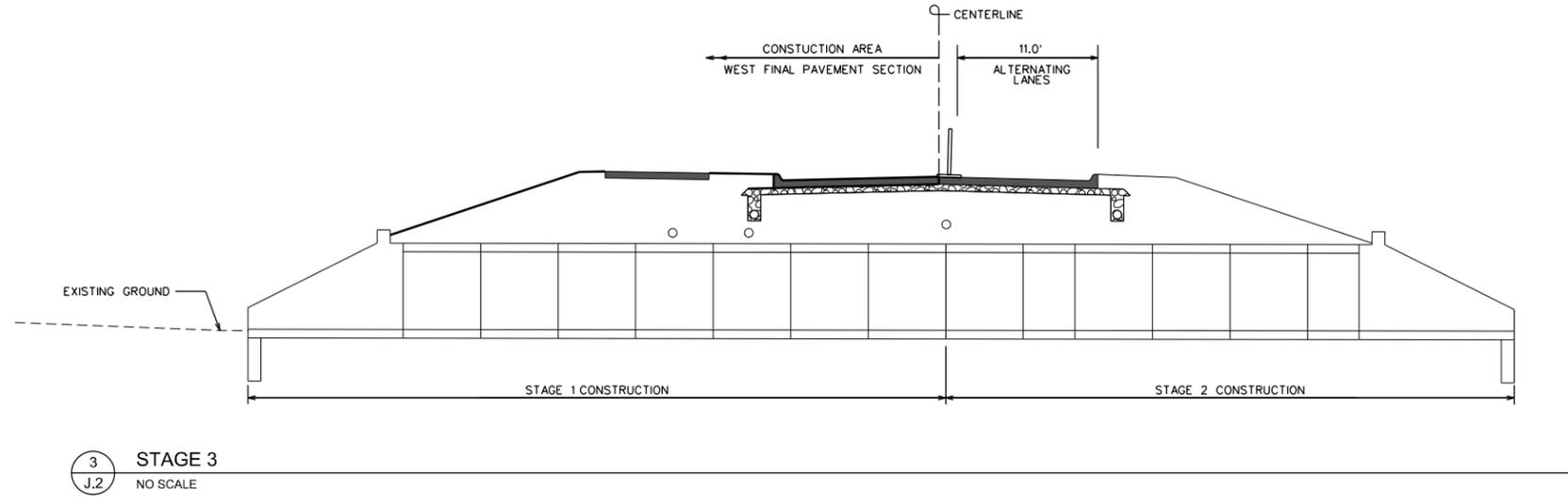
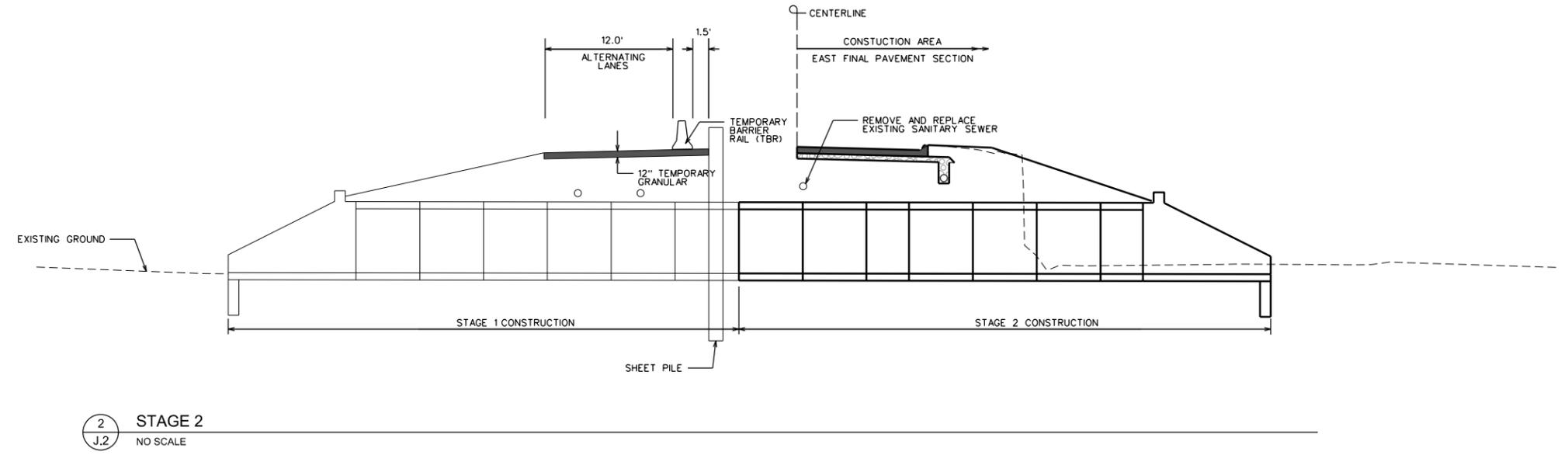
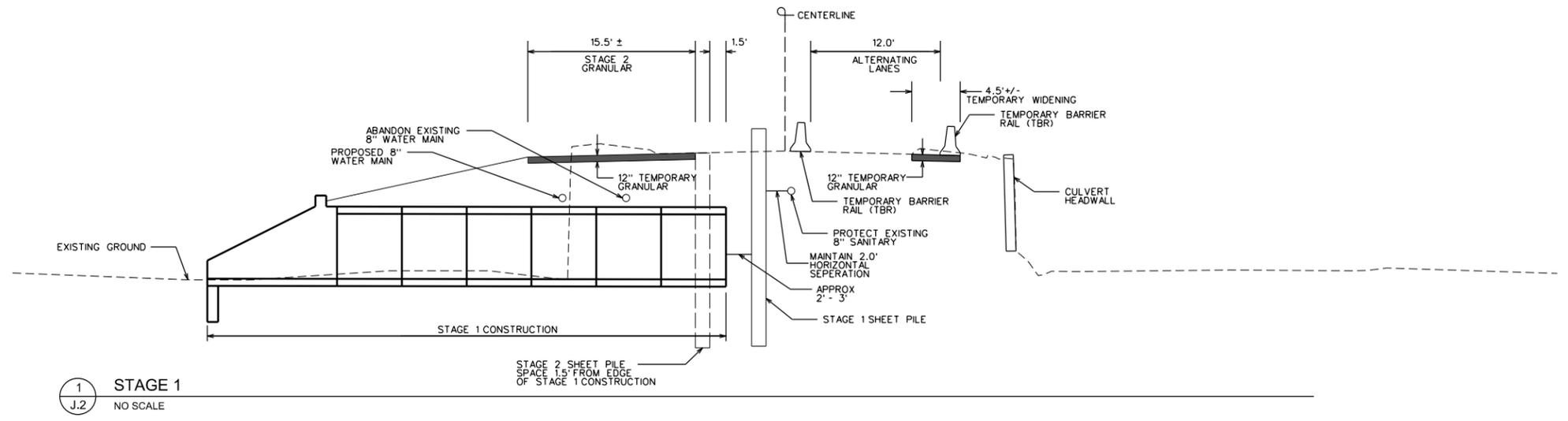
**KNOXVILLE, IOWA**

**SNYDER & ASSOCIATES, INC.**

2727 S.W. SNYDER BLVD.  
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MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	Scale: AS SHOWN	
Technician: DSS	Date: 01/24/20	Field Bk:	Pg:
Project No: 1190729	Sheet	J.2	

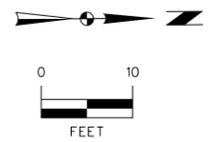
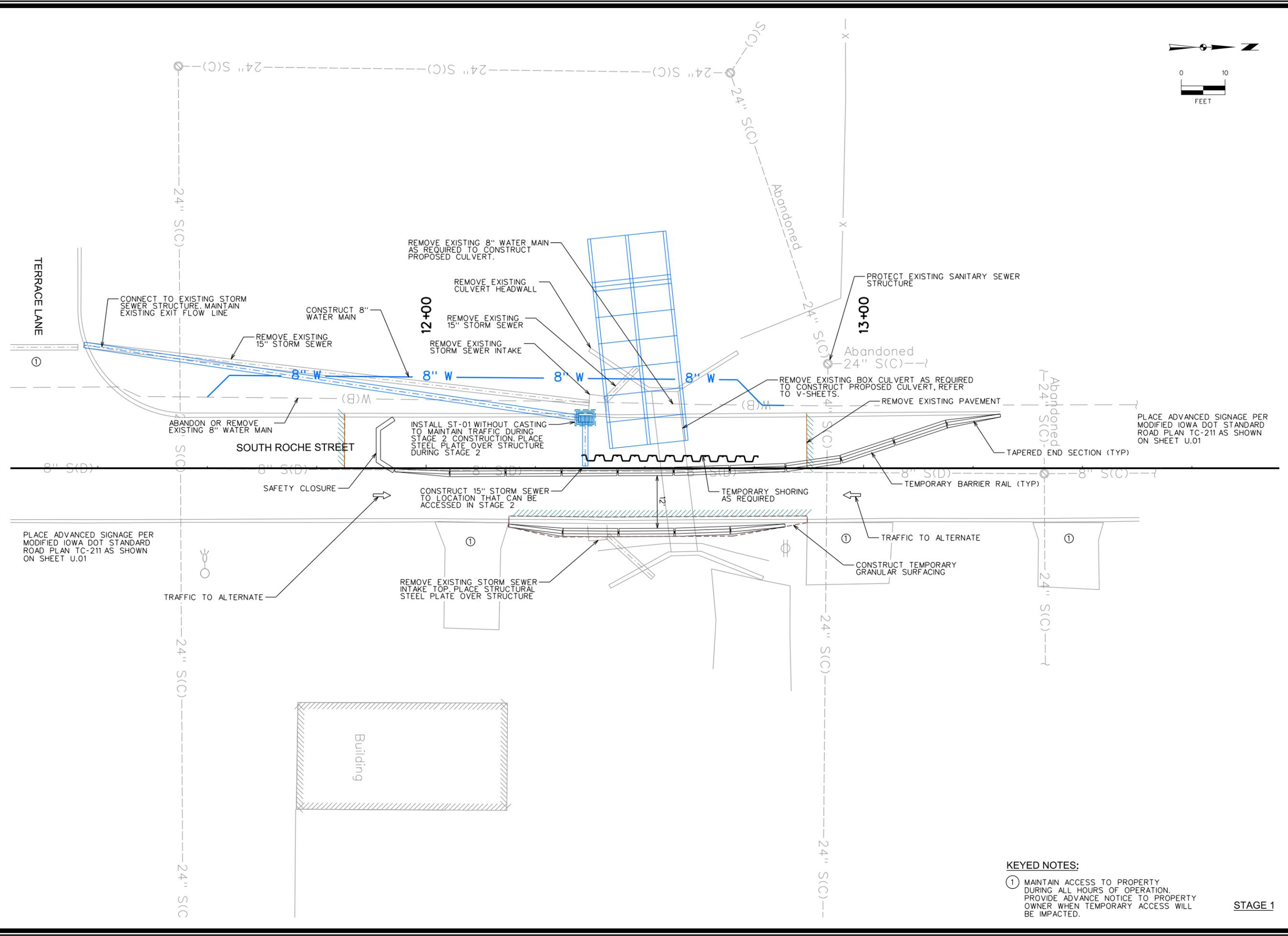
**ROCHE ST CULVERT REPLACEMENT**  
**STAGING AND TRAFFIC CONTROL PLAN**  
**SNYDER & ASSOCIATES, INC.**

KNOXVILLE, IOWA

2727 S.W. SNYDER BLVD.  
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MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	Scale: 1" = 10'	Field Bc:
Technician: DSS	Date: 01/24/20	Project No: 1190729	Sheet J.3

**ROCHE ST CULVERT REPLACEMENT**  
**STAGING AND TRAFFIC CONTROL PLAN**  
**SNYDER & ASSOCIATES, INC.**  
 KNOXVILLE, IOWA  
 2727 S.W. SNYDER BLVD.  
 ANKENY, IOWA 50023  
 515-964-2020 | www.snyder-associates.com

**KEYED NOTES:**  
 ① MAINTAIN ACCESS TO PROPERTY DURING ALL HOURS OF OPERATION. PROVIDE ADVANCE NOTICE TO PROPERTY OWNER WHEN TEMPORARY ACCESS WILL BE IMPACTED.

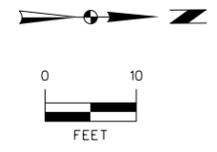
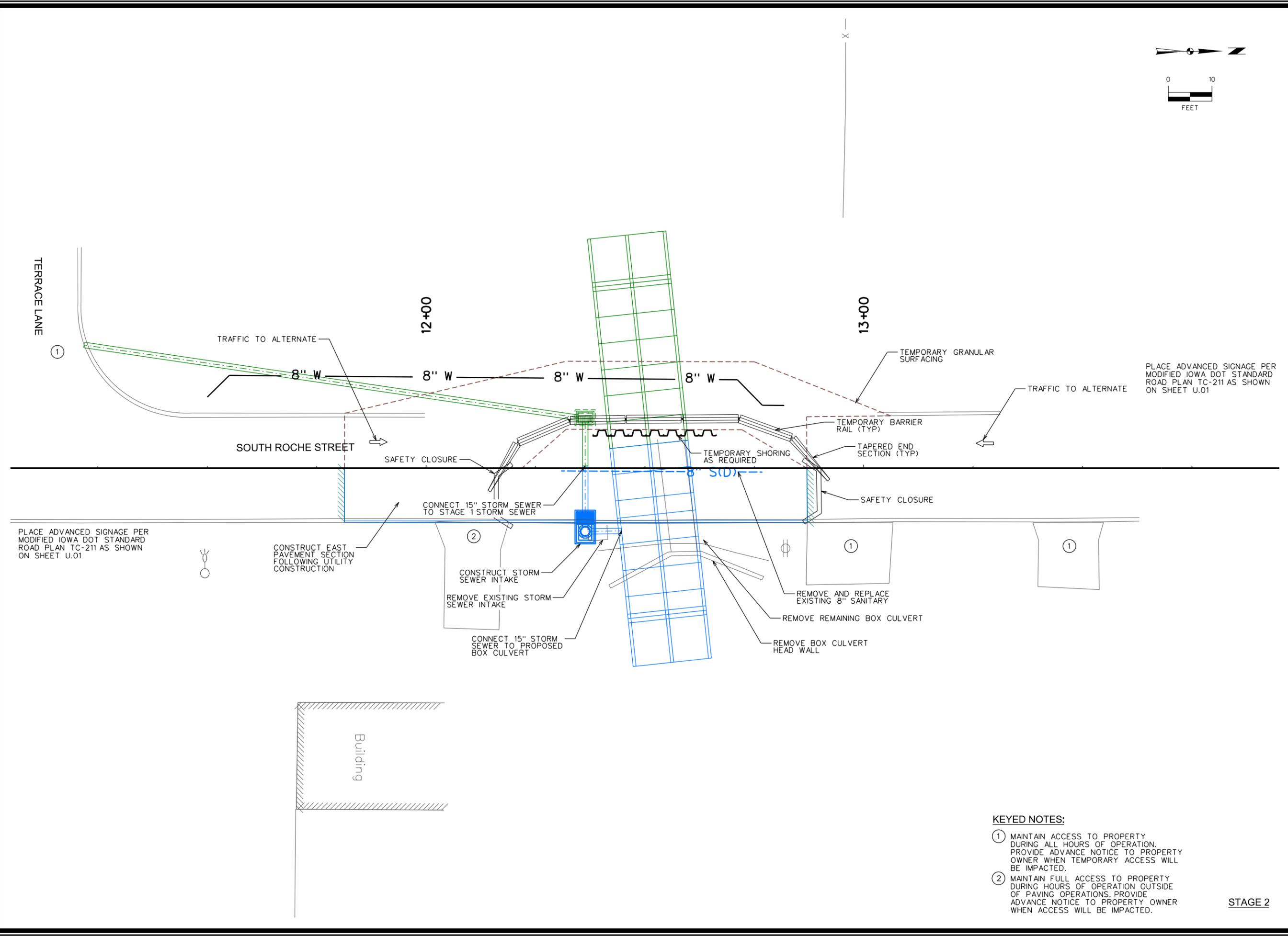
**STAGE 1**

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MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	Scale: 1" = 10'	Field Bc:
Technician: DSS	Date: 01/24/20	Project No: 1190729	Sheet J.4

**ROCHE ST CULVERT REPLACEMENT**

**STAGING AND TRAFFIC CONTROL PLAN**

**KNOXVILLE, IOWA**

**SNYDER & ASSOCIATES, INC.**

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Project No: 1190729

Sheet J.4

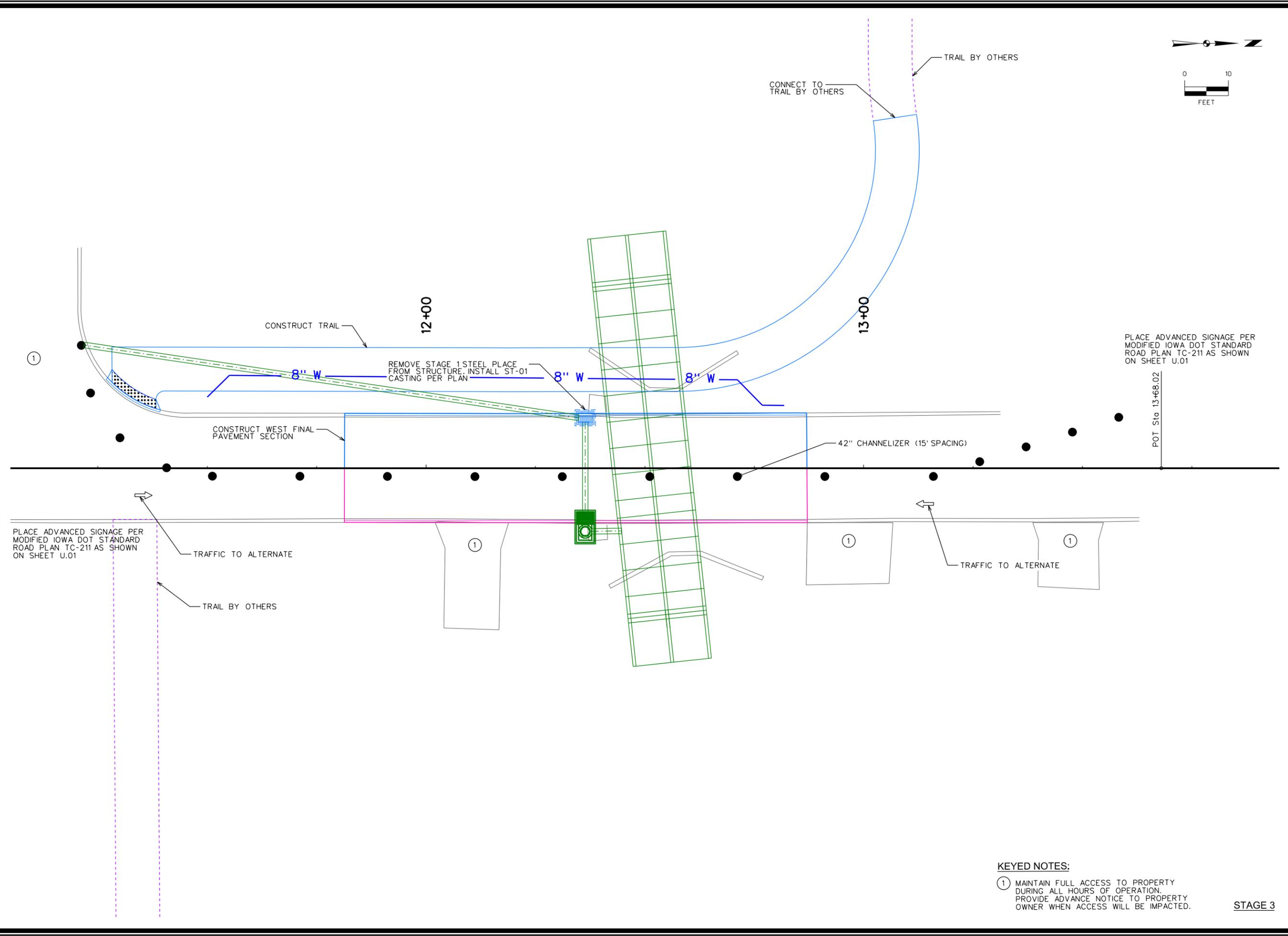
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**KEYED NOTES:**

- ① MAINTAIN FULL ACCESS TO PROPERTY DURING ALL HOURS OF OPERATION. PROVIDE ADVANCE NOTICE TO PROPERTY OWNER WHEN ACCESS WILL BE IMPACTED.

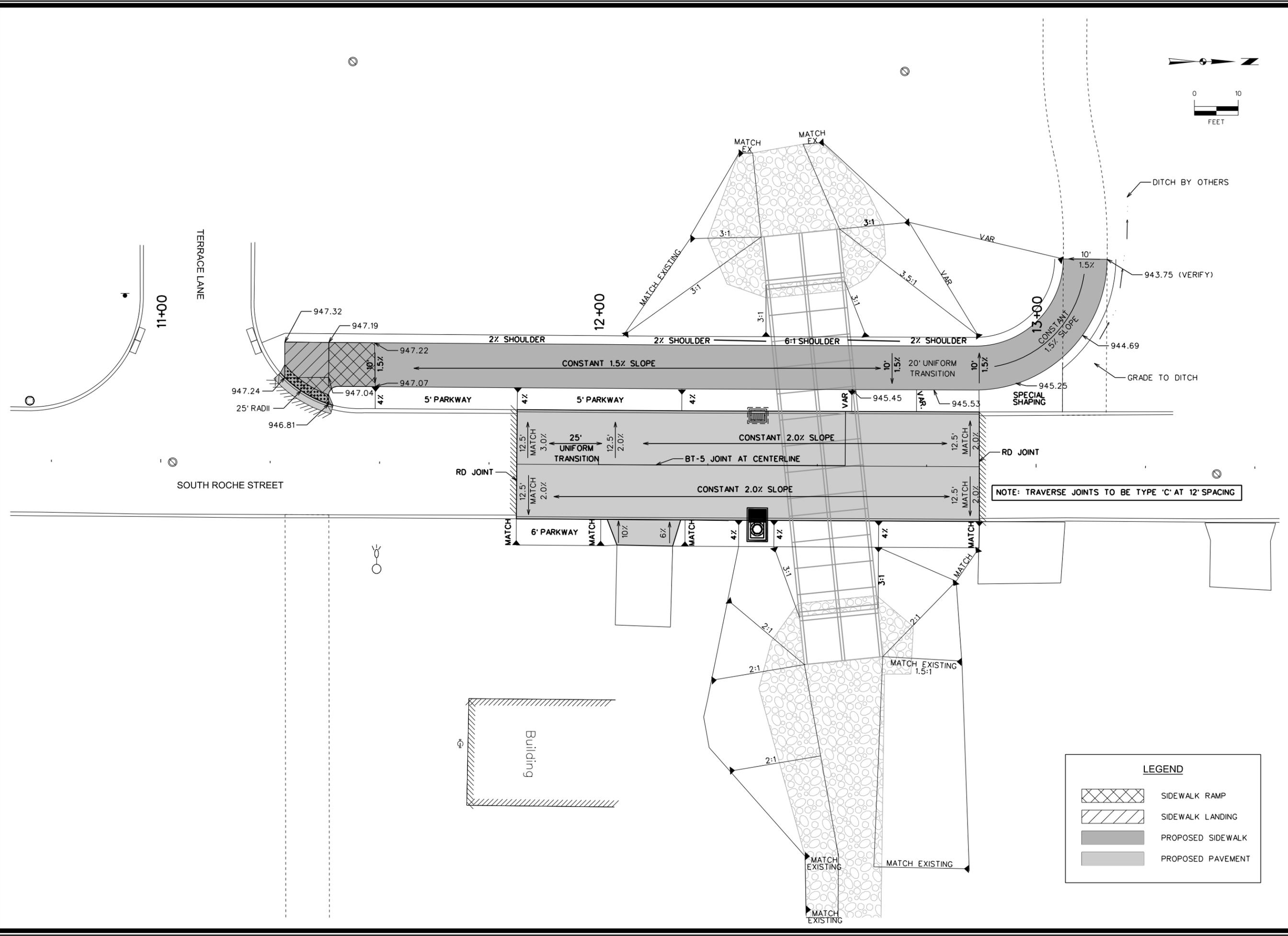
STAGE 3

MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	Scale: 1" = 10'	Field Bc:
Technician: DSS	Date: 01/24/20	Project No: 1190729	Sheet J.5

**ROCHE ST CULVERT REPLACEMENT**  
**STAGING AND TRAFFIC CONTROL PLAN**  
**SNYDER & ASSOCIATES, INC.**  
 KNOXVILLE, IOWA  
 2727 S.W. SNYDER BLVD.  
 ANKENY, IOWA 50023  
 515-964-2020 | www.snyder-associates.com

**SNYDER & ASSOCIATES**  
 Project No: 1190729  
 Sheet J.5

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MARK	REVISION	DATE	BY
Engineer: JDS	Checked By: ACB	Scale: 1" = 10'	Field Bk: Pg:
Technician: DSS	Date: 01/24/20	Project No: 1190729	Sheet L.1

**ROCHE ST CULVERT REPLACEMENT**  
**SIDEWALK SHEET**  
**SNYDER & ASSOCIATES, INC.**

Project No: 1190729  
 Sheet L.1

KNOXVILLE, IOWA  
 2727 S.W. SNYDER BLVD.  
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**LEGEND**

	SIDEWALK RAMP
	SIDEWALK LANDING
	PROPOSED SIDEWALK
	PROPOSED PAVEMENT



**ESTIMATED PRECAST CULVERT QUANTITIES**

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QTY.
1	2102-0425071	SPECIAL BACKFILL	CY	38.8	
2	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	CY	72.4	
3	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1.00	
4	2402-2720000	EXCAVATION, CLASS 20	CY	902	
5	2415-2100000	PRECAST CONCRETE BOX CULVERT	LF	74.0	
6	2415-2200000	PRECAST CONCRETE BOX CULVERT STRAIGHT END SECTION	EACH	2	
7	2501-8400172	TEMPORARY SHORING	LS	1.00	
8	2519-1001000	FENCE, CHAIN LINK, VINYL COATED	LF	75.3	

**ESTIMATE REFERENCE INFORMATION**

ITEM NO.	ITEM CODE	DESCRIPTION
1	2102-0425071	SPECIAL BACKFILL INCLUDES COST OF 6" GRANULAR BEDDING.  RECLAIMED ASPHALT PAVEMENT (RAP) AND RECLAIMED HMA SHALL NOT BE USED FOR THE SPECIAL BACKFILL.
2	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN INCLUDES COST OF 1'-0 THICK GRANULAR BLANKET BELOW THE 6" GRANULAR BEDDING.  GRANULAR MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 4118, GRADATION NO. 3 OF THE STANDARD SPECIFICATIONS.  RECLAIMED ASPHALT PAVEMENT (RAP) AND RECLAIMED HMA SHALL NOT BE USED FOR THE GRANULAR BLANKET.
3	2401-6745650	REMOVAL OF EXISTING STRUCTURES INCLUDES ALL WORK FOR REMOVAL AND OFF-SITE DISPOSAL OF THE EXISTING 6'x6' RCB CULVERT BARREL SECTION AND HEADWALLS. REMOVALS SHALL BE PERFORMED AS NEEDED TO ACCOMPLISH THE NEW CULVERT STAGED CONSTRUCTION AS DETAILED IN THESE PLANS. DRAINAGE THROUGH THE EXISTING CULVERTS/CHANNEL SHALL BE MAINTAINED DURING STAGED REMOVALS AND CONSTRUCTION. REMOVAL OF SCHEDULED ITEMS SHALL BE IN ACCORDANCE WITH SECTION 2401 OF THE STANDARD SPECIFICATIONS. ANY DAMAGE TO MATERIAL NOT TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRED AT NO EXTRA COST TO THE CITY.
4	2402-2720000	EXCAVATION, CLASS 20 INCLUDES EXCAVATION NECESSARY TO PLACE THE 6" GRANULAR BEDDING AND 1'-0 GRANULAR BLANKET.  INCLUDES FILLING AND COMPACTING LOW AREAS AROUND PROPOSED CULVERT.
5	2415-2100000	PRECAST CONCRETE BOX CULVERT INCLUDES ALL COSTS ASSOCIATED WITH THE DESIGN AND FABRICATION OF THE PRECAST REINFORCED CONCRETE BARREL SECTIONS AS INDICATED IN THESE PLANS.  INCLUDES MATERIAL AND LABOR ASSOCIATED WITH PROVIDING AND INSTALLING THE CULVERT TIES, LIFTING HOLE PLUGS, ENGINEERING FABRIC, JOINT MATERIAL, AND GROUT AS REQUIRED.
6	2415-2200000	PRECAST CONCRETE BOX CULVERT STRAIGHT END SECTION INCLUDES ALL COSTS ASSOCIATED WITH THE DESIGN AND FABRICATION OF THE PRECAST REINFORCED CONCRETE END SECTIONS AS INDICATED IN THESE PLANS.  INCLUDES MATERIAL AND LABOR ASSOCIATED WITH PROVIDING AND INSTALLING THE CULVERT TIES, LIFTING HOLE PLUGS, ENGINEERING FABRIC, JOINT MATERIAL, AND GROUT AS REQUIRED.  INCLUDES 0° SKEW, 2 PRECAST END SECTIONS, 2 PRECAST PARAPETS, AND 2 PRECAST CURTAIN WALLS.
7	2501-8400172	TEMPORARY SHORING SEE GENERAL NOTES ON SHEET V.2 FOR MORE INFORMATION.
8	2519-1001000	FENCE, CHAIN LINK, VINYL COATED SEE SHEETS V.9 AND V.10 FOR DETAILS. CHAIN LINK FENCE IS 3'-6 IN HEIGHT.

NOTE:  
ROADWAY QUANTITIES SHOWN  
ELSEWHERE IN THESE PLANS.

**SPECIFICATIONS:**

DESIGN:  
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH ED., SERIES OF 2017, EXCEPT AS NOTED IN THE CURRENT IOWA BRIDGE DESIGN MANUAL.

CONSTRUCTION:

IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2015, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

**DESIGN STRESSES:**

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH ED., SERIES OF 2017:  
BAR REINFORCEMENT IN ACCORDANCE WITH AASHTO LRFD SECTION 5, GRADE 60.  
WELDED WIRE REINFORCEMENT IN ACCORDANCE WITH AASHTO LRFD SECTION 5.  
CONCRETE IN ACCORDANCE WITH AASHTO LRFD SECTION 5,  $f'c = 5$  KSI MIN.

**STRUCTURAL DESIGN**



I hereby certify that this engineering document 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: Jordan A. Gustafson Date: 02-12-2020  
Printed or Typed Name: Jordan A. Gustafson

My license renewal date is December 31, 2021

Pages or sheets covered by this seal: SHEETS V.1 THRU V.11  
(SHEETS V.3 & V.4 EXCLUDING HYDRAULIC DATA, CHANNEL GRADING AND REVETMENT)

**HYDRAULIC DESIGN**



I hereby certify that this engineering document 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: Steven A. Klocke Date: 2/12/2020  
Printed or Typed Name: Steven A. Klocke

My license renewal date is December 31, 2021

Pages or sheets covered by this seal: SHEETS V.3 AND V.4  
(HYDRAULIC DATA AND CHANNEL GRADING AND REVETMENT)

DESIGN FOR 0° SKEW ROTATED 6.1032° (R.A.)  
**TWIN 8' x 6' x 74'-0**  
**PRECAST R.C.B. CULVERT**  
**ESTIMATED QUANTITIES**  
STA. 12+51.52 (☺ SOUTH ROCHE STREET) FEBRUARY, 2020  
**MARION COUNTY**



## GENERAL PROJECT NOTES:

IT IS THE INTENT OF THIS DESIGN TO REPLACE THE EXISTING 6' X 6' REINFORCED CONCRETE BOX CULVERT SKEWED 0° AT STATION 12+57 WITH A TWIN 8' X 6' X 74' PRECAST REINFORCED CONCRETE BOX CULVERT 0° SKEW ROTATED 6.1032° RIGHT AHEAD AT STATION 12+51.52.

NEW PRECAST CULVERT CONSTRUCTION SHALL BE COMPLETED IN STAGES AS SPECIFIED ON THE SITUATION PLANS AND IN THE STAGING NOTES ON THE J SHEETS. NEW PRECAST CULVERT CONSTRUCTION TAKES PLACE IN STAGES 1 AND 2 OF THE PROJECT. TRAFFIC IS TO BE MAINTAINED AS SHOWN IN THE STAGING J SHEETS OF THESE PLANS.

FAINT LINES ON PLANS INDICATE EXISTING STRUCTURE.

UTILITY COMPANIES AND MUNICIPALITIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS SHALL BE NOTIFIED BY THE CONTRACTOR OF THE CONSTRUCTION STARTING DATE.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED OR SHOWN.

THE "ENGINEER", AS REFERENCED IN THESE PLANS IS THE CITY OF KNOXVILLE OR A DESIGNATED REPRESENTATIVE.

EXCESS CLASS 20 EXCAVATION MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED AT THE CONSTRUCTION SITE, AS DIRECTED BY THE ENGINEER.

IT SHALL BE THE CULVERT CONTRACTOR'S RESPONSIBILITY TO PROVIDE SITES FOR EXCESS EXCAVATED MATERIAL. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES.

THE BID ITEM "REMOVAL OF EXISTING STRUCTURES" SHALL INCLUDE ALL COSTS ASSOCIATED WITH REMOVING THE EXISTING 6' X 6' REINFORCED CONCRETE BOX CULVERT BARREL SECTION AND HEADWALLS. REMOVALS SHALL BE IN ACCORDANCE WITH SECTION 2401 OF THE STANDARD SPECIFICATIONS.

## GENERAL PRECAST BARREL NOTES:

- THE PRECAST RCB CULVERT SECTIONS ARE TO BE DESIGNED FOR HL-93 LIVE LOAD AND EARTH FILLS OF 6 FEET MAX. AND 2 FEET MIN.
- VERTICAL EARTH PRESSURE,  $E_v = 0.120 \text{ kcf}$ .  
HORIZONTAL EARTH PRESSURE,  $E_{hmax} = 0.060 \text{ kcf MAX}$ ,  $E_{hmin} = 0.030 \text{ kcf}$ .
- THE PRECAST RCB CULVERT SECTIONS ARE TO BE DESIGNED FOR CLASS 2 EXPOSURE CONDITIONS.
- THE CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR EDGE OR END OF REINFORCING BAR TO BE 1 1/2" MIN. AND 2" MAX. UNLESS OTHERWISE NOTED.
- THE REINFORCEMENT SUPPLIED FOR THIS STRUCTURE SHALL BE PLAIN AND/OR DEFORMED WELDED WIRE REINFORCEMENT (WWR)  $F_y = 65 \text{ ksi}$ , AND/OR GRADE 60 REINFORCING STEEL IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- ANY OF THE FOLLOWING COMBINATIONS OF REINFORCEMENT MAY BE USED:
  - 1 OR 2 LAYERS OF WELDED WIRE REINFORCEMENT OR
  - 1 LAYER OF WELDED WIRE REINFORCEMENT AND 1 LAYER OF REINFORCEMENT BARS OR
  - 1 LAYER OF REINFORCEMENT BARS.
 THE REINFORCEMENT SHALL BE DEVELOPED IN ACCORDANCE WITH AASHTO LRFD SPECIFICATIONS.
- THE MAXIMUM SIZE OF REINFORCEMENT BARS SHALL BE #6.
- THE MAXIMUM WELDED WIRE REINFORCEMENT SIZE SHALL BE A W23/D23 PER LAYER (MAXIMUM OF 2 LAYERS).
- THE SPACING CENTER TO CENTER OF THE TRANSVERSE WIRES OR BARS SHALL NOT BE LESS THAN 2" NOR MORE THAN 4". THE SPACING CENTER TO CENTER OF THE LONGITUDINAL WIRES OR BARS SHALL NOT BE MORE THAN 8".
- WELDING WILL NOT BE ALLOWED ON REINFORCEMENT BARS OR WELDED WIRE REINFORCEMENT, EXCEPT THAT THE ORIGINAL WELDING REQUIRED TO MANUFACTURE THE WIRE REINFORCEMENT IS ACCEPTABLE.
- WHEN REINFORCEMENT IS CUT, ADDITIONAL REINFORCEMENT SHALL BE ADDED ON BOTH SIDES OF THE CUT MEMBER TO REPLACE OR EXCEED THE CUT REINFORCEMENT.
- ET CULVERT SOFTWARE VERSION 4.0.2 OR AN APPROVED EQUAL MAY BE USED FOR THE DESIGN OF THE PRECAST SECTIONS.
- THESE CULVERT PLANS LABEL ALL REINFORCING STEEL WITH ENGLISH NOTATION (#3 IS 3/8" INCH DIAMETER BAR). ENGLISH REINFORCING STEEL RECEIVED AT THE PRECAST PLANT MAY DISPLAY THE FOLLOWING "BAR DESIGNATION". THE "BAR DESIGNATION" IS THE STAMPED IMPRESSION ON THE REINFORCING BARS, AND IS EQUIVALENT TO THE BAR DIAMETER IN MILLIMETERS.

ENGLISH SIZE	3	4	5	6	7	8	9	10	11
BAR DESIGNATION	10	13	16	19	22	25	29	32	36

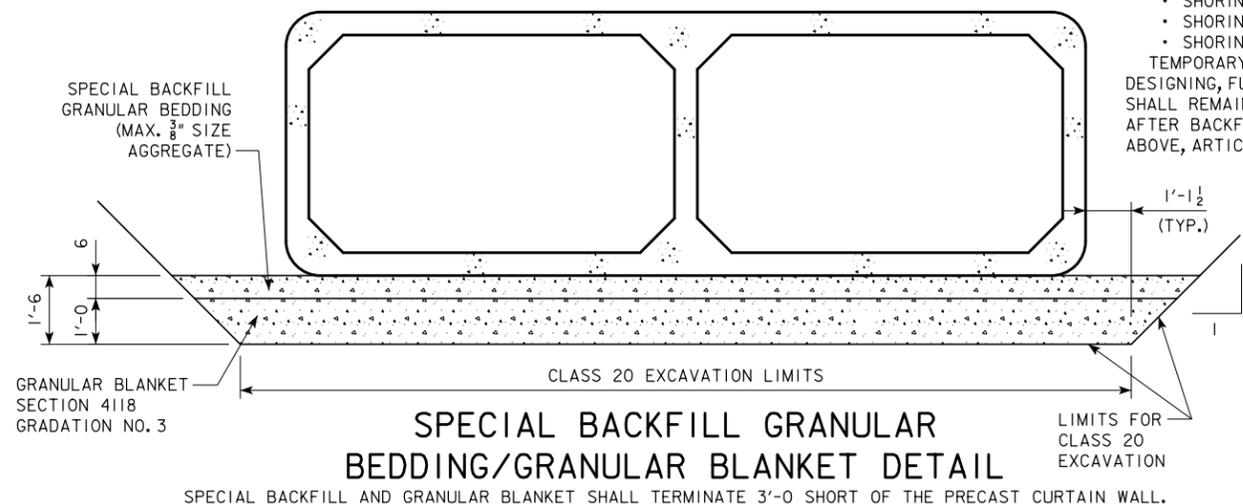
- ALL REINFORCING BARS AND BARS NOTED AS DOWELS SUPPLIED FOR THIS STRUCTURE SHALL BE DEFORMED REINFORCEMENT UNLESS OTHERWISE NOTED OR SHOWN.
- THE FIRST PRECAST BARREL SECTION ADJACENT TO THE OUTLET STRAIGHT END SECTION MAY BE A DOUBLE GROOVE BARREL TO FACILITATE PLACEMENT OF OUTLET END SECTIONS AND ALLOW INLET AND OUTLET END SECTIONS TO BE SIMILAR.

POLLUTION PREVENTION PLAN SHOWN ELSEWHERE IN THESE PLANS.

### TRAFFIC CONTROL PLAN

THE ROADWAY WILL BE OPEN TO ONE LANE. REFER TO THE TRAFFIC CONTROL PLAN INCLUDED IN THE ROAD PLANS.

- THE LENGTH IN LINEAR FEET OF PRECAST REINFORCED CONCRETE BOX CULVERT WILL BE BASED ON THE PLAN QUANTITY. FOR THE NUMBER OF LINEAR FEET GIVEN ON THE PLAN, THE CONTRACTOR WILL BE PAID THE CONTRACT UNIT PRICE PER LINEAR FOOT. THE PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE WORK EXCEPT FOR BID ITEMS "PRECAST CONCRETE BOX CULVERT STRAIGHT END SECTION", "CLASS 20 EXCAVATION", "FENCE, CHAIN LINK, VINYL COATED", "TEMPORARY SHORING", "SPECIAL BACKFILL", AND "GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN".
- FOR EACH PRECAST BOX CONCRETE CULVERT STRAIGHT END SECTION INSTALLED THE CONTRACTOR WILL BE PAID THE CONTRACT PRICE PER EACH. THE PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL (INCLUDING LINTEL BEAMS AND CURTAIN WALLS), LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE WORK EXCEPT FOR BID ITEMS "PRECAST CONCRETE BOX CULVERT", "CLASS 20 EXCAVATION", "FENCE, CHAIN LINK, VINYL COATED", "TEMPORARY SHORING", "SPECIAL BACKFILL" AND "GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN".
- THE CURTAIN WALL AND PARAPET SHALL BE PRECAST.
- THE CONTRACTOR SHALL FURNISH AND INSTALL CULVERT TIES FOR ALL JOINTS. THE MAIN SECTION JOINTS WILL HAVE ONE TIE ON EACH SIDE OF THE BARREL AND THE LAST BARREL SECTION WILL BE ATTACHED TO THE END SECTIONS WITH TWO TIES PER SIDE. THE END SECTION JOINTS WILL HAVE TWO TIES PER SIDE.
- CULVERT TIES SHALL BE INCLUDED IN THE COST FOR PRECAST CONCRETE BOX CULVERT. TIE RODS WILL BE 1 INCH DIAMETER STEEL AND SHALL MEET REQUIREMENTS OF ASTM A709 GRADE 36 OR EQUAL.
- CULVERT TIE ASSEMBLIES SHALL BE GALVANIZED AFTER FABRICATION.
- THE CLASS 20 EXCAVATION QUANTITY IS BASED ON THE ASSUMPTION THAT AT THE START OF CULVERT CONSTRUCTION, THE EXISTING GROUNDLINE SHOWN ON THE "SITUATION PLAN" SHEETS HAS REMAINED UNDISTURBED. THE CLASS 20 EXCAVATION QUANTITY IS MEASURED FROM THE EXISTING GROUNDLINE SHOWN ON THE "SITUATION PLAN" SHEETS DOWN TO THE LIMIT SHOWN IN THE SPECIAL BACKFILL GRANULAR BEDDING/GRANULAR BLANKET DETAIL ON THIS SHEET.
- A MINIMUM OF 6 INCHES OF SPECIAL BACKFILL WITH A MAXIMUM AGGREGATE SIZE OF 3/8" INCH SHALL BE USED AS BEDDING FOR THE PRECAST CONCRETE BOX CULVERT. THE BEDDING SHALL BE SHAPED TO A FLAT BASE USING A TEMPLATE.
- A MINIMUM OF 12" OF A GRANULAR BLANKET IN ACCORDANCE WITH SECTION 4118, GRADATION NO. 3 OF THE STANDARD SPECIFICATIONS SHALL BE PLACED UNDER THE SPECIAL BACKFILL AS INDICATED IN THE SPECIAL BACKFILL GRANULAR BEDDING/GRANULAR BLANKET DETAIL SHOWN ON THIS SHEET.
- THE PRECAST BOX CULVERT SHALL BE BUILT TO THE DIMENSIONS AND SPECIFICATIONS SHOWN IN THESE PLANS.
- THE CONTRACTOR SHALL SUBMIT DETAILS OF THE PROPOSED PRECAST CONCRETE BOX SECTIONS FOR THIS PROJECT. THE DETAILS SHALL INCLUDE THE FOLLOWING INFORMATION AS FOUND ON THE "SUBMITTAL SHOP DRAWING" SHEET ON SHEET V.6:
  - A SITUATION PLAN DRAWING SHOWING THE BACK TO BACK PARAPET DIMENSION FOR THE LINE OF THE CULVERT SECTIONS.
  - DIMENSION THE NUMBER OF PRECAST SECTIONS AND SECTION LENGTHS.
  - A DETAIL OF THE PRECAST BARREL SECTIONS SHOWING A CROSS SECTION VIEW OF THE SECTION, STEEL LOCATIONS, DIMENSIONS, ETC.
  - A DETAIL OF THE PRECAST CONCRETE CULVERT END SECTION SHOWING A CROSS SECTION VIEW OF THE SECTIONS, STEEL LOCATIONS, DIMENSIONS, ETC.
  - DETAILS OF REINFORCING AROUND PIPE PENETRATION IN CULVERT BARREL WALL. SEE STAGE 2 SITUATION PLAN FOR LOCATION AND SIZE OF PIPE PENETRATION.
- THE CONTRACTOR SHALL PROVIDE ALL INFORMATION SHOWN ON THE SUBMITTAL SHOP DRAWING SHEET. SHOP DRAWINGS SHALL BE SUBMITTED WITH THE FOLLOWING NAMING CONVENTION:  
City\_Project\_SubmittalDescription.pdf  
Example: Knoxville\_SouthRocheStreetCulvert\_PrecastBarrel.pdf
- THE DETAILS SHALL BE RECEIVED AND REVIEWED BY THE ENGINEER PRIOR TO THE START OF FABRICATION.



SPECIAL BACKFILL AND GRANULAR BLANKET SHALL TERMINATE 3'-0 SHORT OF THE PRECAST CURTAIN WALL.

## PRECAST INSTALLATION NOTES:

- PRECAST CONCRETE BOX CULVERT SECTIONS SHALL BE LAID WITH THE GROOVE END OF EACH SECTION UP-GRADE, AND THE SECTIONS SHALL BE TIGHTLY JOINED. CONCRETE TIES TO BE USED ONLY TO HOLD BOX SECTIONS TOGETHER, NOT FOR PULLING SECTIONS TIGHT. JOINT OPENINGS BETWEEN SECTIONS SHOULD BE AS TIGHT AS PRACTICABLE AND LIMITED TO A MAXIMUM OF 3/4 INCH OPENINGS. THE JOINTS OF THE CULVERT SHALL BE SEALED WITH A FLEXIBLE WATER TIGHT 1 INCH BUTYL ROPE GASKET AS PER MATERIALS I.M. 491.09.
- BUTYL ROPE GASKET SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER AND AS DETAILED ON SHEET V.5 AND SHALL EXTEND AROUND THE WALLS, SLAB, AND FLOOR OF THE PRECAST BARREL JOINTS. ALL JOINTS SHALL BE TRIMMED CLEAN ON THE INSIDE AFTER SEALING.
- THE CONTRACTOR SHALL PLACE A 2 FOOT WIDE PIECE OF ENGINEERING FABRIC AROUND THE TOP AND SIDES OF EACH PRECAST JOINT. THE FABRIC SHALL BE CENTERED WITH 1 FOOT ON EACH SIDE OF THE JOINT, THE FABRIC SHALL BE ATTACHED TO THE WALLS AND TOP OF EACH SECTION TO PREVENT THE FABRIC FROM SLIPPING OFF THE JOINT DURING BACKFILLING OPERATIONS. ATTACHMENT METHODS SHALL BE APPROVED BY THE ENGINEER. ALL COSTS INCLUDING MATERIAL AND LABOR ASSOCIATED WITH PROVIDING THE ENGINEERING FABRIC AND INSTALLING IT AS REQUIRED SHALL BE INCLUDED IN THE BID ITEMS "PRECAST CONCRETE BOX CULVERT" AND "PRECAST CONCRETE BOX CULVERT STRAIGHT END SECTION". THE ENGINEERING FABRIC SHALL BE IN ACCORDANCE WITH ARTICLE 4196.01, B, 3, OF THE STANDARD SPECIFICATIONS.
- CLASS A REVETMENT WILL BE PLACED AROUND BOTH PRECAST CONCRETE BOX CULVERT END SECTIONS, AS SHOWN IN THESE PLANS.
- DURING BACKFILLING THE COMPACTION ADJACENT TO THE BOTTOM CORNER RADIUS OR CHAMFER SHALL BE ACCOMPLISHED WITH A MECHANICAL HAND COMPACTOR.
- THE CONTRACTOR SHALL FURNISH AND INSTALL LIFTING HOLE PLUGS FOR EACH SECTION. LIFTING HOLES SHALL BE PLUGGED WITH A PRECAST CONCRETE PLUG OR PLASTIC PLUG APPROVED BY THE ENGINEER, SEALED AND COVERED WITH A 2'-0 X 2'-0 PIECE OF ENGINEERING FABRIC CENTERED OVER THE HOLE AND ATTACHED TO THE SECTION TO PREVENT THE FABRIC FROM SLIPPING.

## SHOP DRAWING SUBMITTALS

SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS SHOWN IN THE TABLE BELOW. (NOTE ADDITIONAL SHOP DRAWINGS MAY BE REQUIRED IN ACCORDANCE WITH ARTICLE 1105.03 OF THE STANDARD SPECIFICATIONS.)

SUBMITTAL REQUIREMENTS FOR SHOP DRAWINGS SHOULD BE IN ACCORDANCE WITH ARTICLE 1105.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION OF THE IOWA DEPARTMENT OF TRANSPORTATION.

SHOP DRAWINGS SHALL BE SUBMITTED WITH THE FOLLOWING NAMING CONVENTION:

City\_Project\_SubmittalDescription.pdf  
Example: Knoxville\_SouthRocheStreetCulvert\_PrecastBarrel.pdf

1	TEMPORARY SHORING
2	PRECAST BOX CULVERT SUBMITTAL
3	CHAIN LINK FENCE

## TEMPORARY SHORING NOTES:

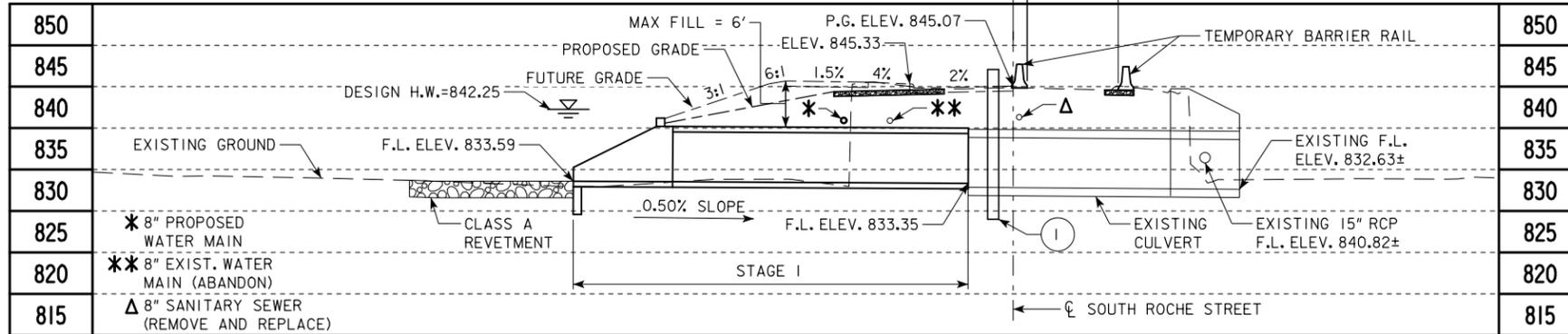
TEMPORARY SHORING (SHEET PILE OR OTHER) SHALL BE REQUIRED AS NECESSARY TO PREVENT THE EARTH UNDER THE TRAFFIC LANE FROM SLOUGHING IN DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A TEMPORARY SHORING PLAN FOR REVIEW. THE TEMPORARY SHORING PLAN SHALL BE DESIGNED AND CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF IOWA. THE CONTRACTOR SHALL NOT PROCEED WITH INSTALLATION OF THE TEMPORARY SHORING WITHOUT NOTICE TO PROCEED FROM THE ENGINEER.

- THE TEMPORARY SHORING SUBMITTAL SHALL INCLUDE:
- DESIGN CALCULATIONS (INCLUDING A GLOBAL STABILITY ANALYSIS)
  - SOIL PROPERTIES
  - SHORING MATERIAL PROPERTIES
  - SHORING PLAN LAYOUT (SHOWING LOCATION OF TRAFFIC)
  - SHORING DETAILS

TEMPORARY SHORING SHALL BE PAID FOR AS A LUMP SUM INCLUDING ALL COST FOR DESIGNING, FURNISHING, INSTALLING, AND REMOVAL. ALL MATERIAL USED FOR SHORING SHALL REMAIN THE PROPERTY OF THE CONTRACTOR. SHORING IS TO BE REMOVED ONLY AFTER BACKFILLING HAS BEEN COMPLETED. IN ADDITION TO THE REQUIREMENTS NOTED ABOVE, ARTICLE 1107.07 OF THE STANDARD SPECIFICATIONS STILL APPLIES.

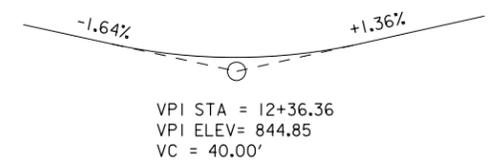
DESIGN FOR 0° SKEW ROTATED 6.1032° (R.A.)  
**TWIN 8' X 6' X 74'-0**  
**PRECAST R.C.B. CULVERT**

**GENERAL NOTES**  
STA. 12+51.52 (☺ SOUTH ROCHE STREET) FEBRUARY, 2020  
**MARION COUNTY**



LONGITUDINAL SECTION ALONG PRECAST CULVERT  
ANTICIPATED SETTLEMENT = 2"

NOTES:  
NEW PRECAST CULVERT CONSTRUCTION SHALL BE DONE IN STAGES AS SPECIFIED ON THE SITUATION PLANS AND IN THE STAGING NOTES ON THE J SHEETS. TRAFFIC IS TO BE MAINTAINED AS SHOWN IN THE STAGING J SHEETS OF THESE PLANS.  
SEE ROADWAY PLANS FOR STAGED ROADWAY ITEMS AND UTILITY DETAILS.



PROPOSED PROFILE GRADE SOUTH ROCHE STREET

NOTES:

- TEMPORARY SHORING AS REQUIRED FOR STAGED CONSTRUCTION. MAINTAIN 2'-0" MIN. HORIZONTAL CLEAR DISTANCE FROM 8" SANITARY SEWER.
- STA. 12+50.94, 5.43' RT. EXIST. F.L. ELEV. = 833.35
- REMOVE EXISTING INLET HEADWALL AND A PORTION OF THE 6'x6' BARREL SECTION.
- CONSTRUCT TWIN 8'x6'x74'-0" PRECAST RCBC WITH 0° SKEW HEADWALLS, ROTATED 6° (R.A.) IN STAGES (36'-0" FOR STAGE I)
- MAINTAIN DRAINAGE THROUGHOUT CONSTRUCTION.
- MAINTAIN EXISTING OUTLET HEADWALL AND BARREL SECTION.

TRAFFIC ESTIMATE

NO TRAFFIC DATA

HYDRAULIC DATA

DRAINAGE AREA = 1.08 SQ. MI.  
STREAM SLOPE = 41 FT./MI.  
DESIGN DISCHARGE Q<sub>50</sub> = 1045 CFS  
STAGE = EL. 842.25  
BACKWATER = 2.55 FT.  
OUTLET VELOCITY = 10.89 FPS  
DESIGN DISCHARGE Q<sub>100</sub> = 1261 CFS  
STAGE = EL. 843.93  
BACKWATER = 1.64 FT.  
OUTLET VELOCITY = 13.14 FPS

REVETMENT LAYOUT:

- (R1) 12+61.09, 42.87' LT.
- (R2) 12+65.35, 48.49' LT.
- (R3) 12+64.89, 55.15' LT.
- (R4) 12+60.33, 64.24' LT.
- (R5) 12+50.74, 73.81' LT.
- (R6) 12+31.66, 71.29' LT.
- (R7) 12+24.67, 51.85' LT.
- (R8) 12+29.18, 41.42' LT.

UTILITIES LEGEND:

W - WATER - CITY OF KNOXVILLE  
S - SANITARY SEWER - CITY OF KNOXVILLE  
G - GAS - ALLIANT ENERGY  
FO1 - FIBER OPTIC - WINDSTREAM COMMUNICATIONS  
FO2 - FIBER OPTIC - MEDIACOM L.L.C.  
CI - COMMUNICATION - MEDIACOM L.L.C.  
OE - OVERHEAD ELECTRIC - MIDAMERICAN ENERGY

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

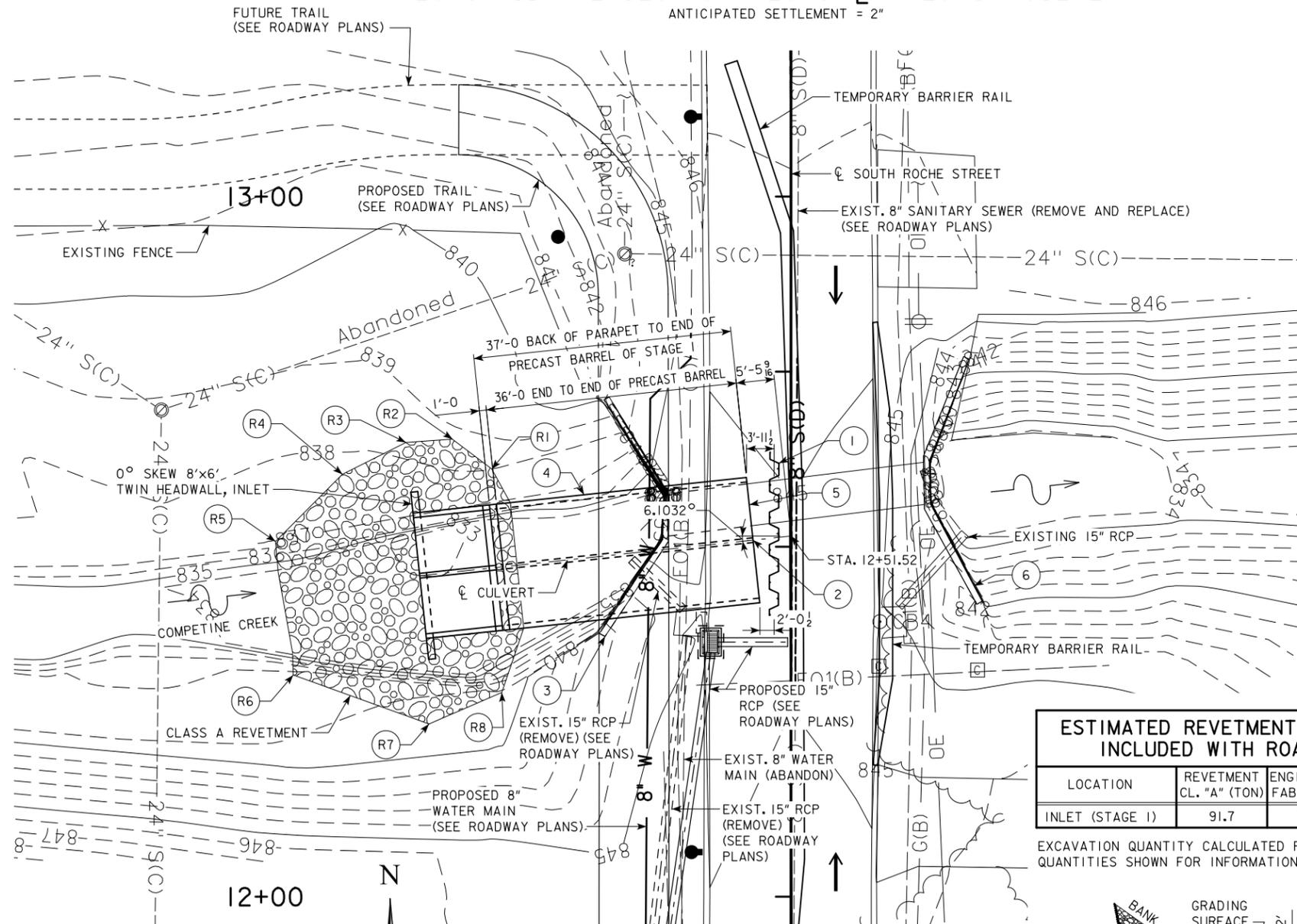
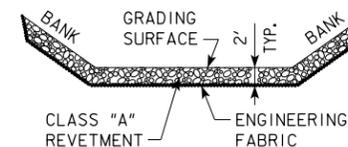
LOCATION

SOUTH ROCHE ST. OVER COMPETINE CREEK  
T-75N R-19W/R-20W  
SECTIONS 7/12  
KNOXVILLE TOWNSHIP  
CITY OF KNOXVILLE  
MARION COUNTY  
LATITUDE 41.311440°  
LONGITUDE -93.099876°

ESTIMATED REVETMENT QUANTITIES INCLUDED WITH ROAD PLANS

LOCATION	REVETMENT CL. "A" (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET (STAGE I)	91.7	136.0	64.7

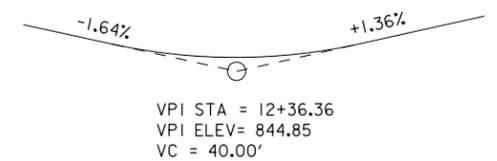
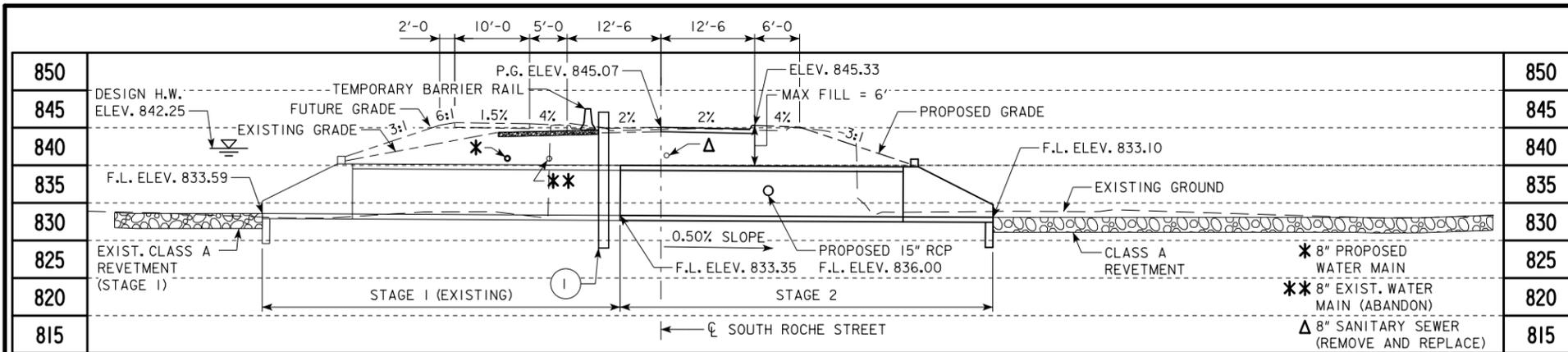
EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.



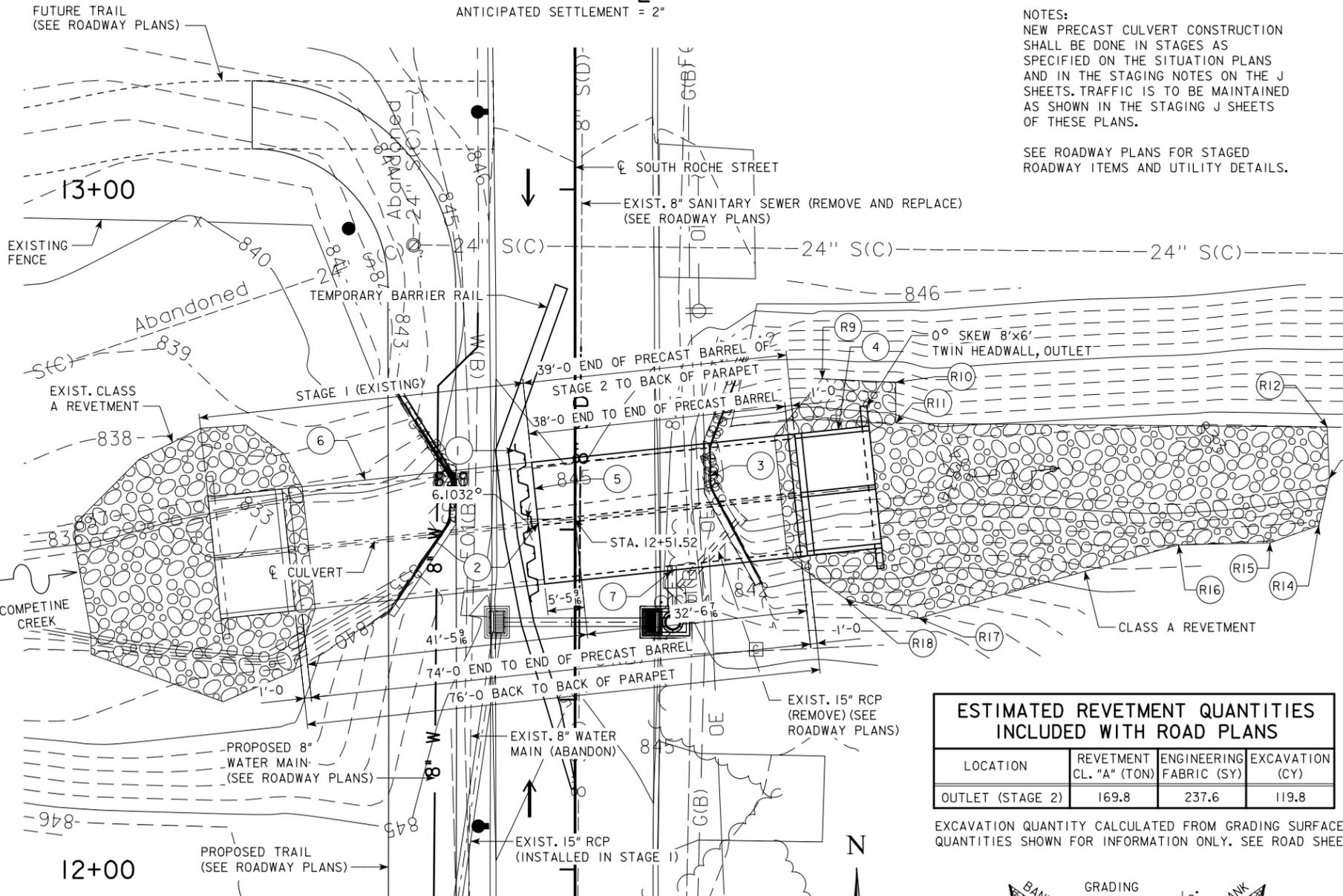
SITUATION PLAN - STAGE I

DESIGN FOR 0° SKEW ROTATED 6.1032° (R.A.)  
**TWIN 8' x 6' x 36'-0" PRECAST R.C.B. CULVERT**  
SITUATION PLAN - STAGE I  
STA. 12+51.52 (CL SOUTH ROCHE STREET) FEBRUARY, 2020  
MARION COUNTY





**LONGITUDINAL SECTION ALONG CL PRECAST CULVERT**



NOTES:  
NEW PRECAST CULVERT CONSTRUCTION SHALL BE DONE IN STAGES AS SPECIFIED ON THE SITUATION PLANS AND IN THE STAGING NOTES ON THE J SHEETS. TRAFFIC IS TO BE MAINTAINED AS SHOWN IN THE STAGING J SHEETS OF THESE PLANS.

SEE ROADWAY PLANS FOR STAGED ROADWAY ITEMS AND UTILITY DETAILS.

**NOTES:**

- 1 TEMPORARY SHORING AS REQUIRED FOR STAGED CONSTRUCTION. MAINTAIN 1'-6" MIN. HORIZONTAL CLEARANCE FROM START OF STAGE 2 CULVERT BARREL.
- 2 STA. 12+50.94, 5.43' RT. EXIST. F.L. ELEV. = 833.35
- 3 REMOVE EXISTING OUTLET HEADWALL AND THE REMAINING 6'x6' BARREL SECTION.
- 4 CONSTRUCT TWIN 8'x6'x74'-0 PRECAST RCBC WITH 0° SKEW HEADWALLS, ROTATED 6° (R.A.) IN STAGES (38'-0 FOR STAGE 2)
- 5 MAINTAIN DRAINAGE THROUGHOUT CONSTRUCTION.
- 6 MAINTAIN EXISTING PRECAST TWIN 8'x6' OUTLET HEADWALL AND BARREL SECTION.
- 7 STA. 12+44.00, 14.31' RT. PROPOSED 15" RCP TO BARREL WALL F.L. ELEV. 836.00

**TRAFFIC ESTIMATE**

NO TRAFFIC DATA

**HYDRAULIC DATA**

DRAINAGE AREA = 1.08 SQ. MI.  
STREAM SLOPE = 41 FT./MI.  
DESIGN DISCHARGE Q<sub>50</sub> = 1045 CFS  
STAGE = EL. 842.25  
BACKWATER = 2.55 FT.  
OUTLET VELOCITY = 10.89 FPS  
DESIGN DISCHARGE Q<sub>100</sub> = 1261 CFS  
STAGE = EL. 843.93  
BACKWATER = 1.64 FT  
OUTLET VELOCITY = 13.14 FPS

**UTILITIES LEGEND:**

- W - WATER - CITY OF KNOXVILLE
- S - SANITARY SEWER - CITY OF KNOXVILLE
- G - GAS - ALLIANT ENERGY
- FO1 - FIBER OPTIC - WINDSTREAM COMMUNICATIONS
- FO2 - FIBER OPTIC - MEDIACOM L.L.C.
- CI - COMMUNICATION - MEDIACOM L.L.C.
- OE - OVERHEAD ELECTRIC - MIDAMERICAN ENERGY

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

**REVETMENT LAYOUT:**

- R9 12+72.17, 36.45' RT.
- R10 12+71.64, 47.27' RT.
- R11 12+65.63, 47.30' RT.
- R12 12+65.07, 110.89' RT.
- R13 12+57.51, 111.20' RT.
- R14 12+50.59, 109.64' RT.
- R15 12+48.03, 102.44' RT.
- R16 12+47.74, 88.96' RT.
- R17 12+36.95, 50.72' RT.
- R18 12+39.79, 39.90' RT.

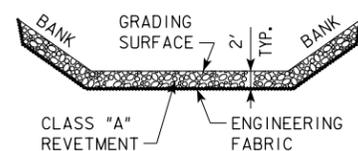
**LOCATION**

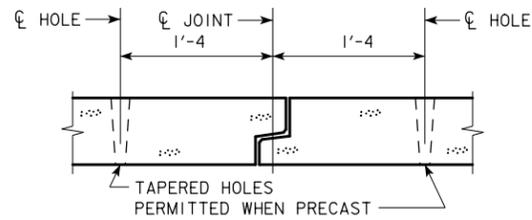
SOUTH ROCHE ST. OVER COMPETINE CREEK  
T-75N R-19W/R-20W  
SECTIONS 7/12  
KNOXVILLE TOWNSHIP  
CITY OF KNOXVILLE  
MARION COUNTY  
LATITUDE 41.311440°  
LONGITUDE -93.099876°

**ESTIMATED REVETMENT QUANTITIES INCLUDED WITH ROAD PLANS**

LOCATION	REVETMENT CL. "A" (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
OUTLET (STAGE 2)	169.8	237.6	119.8

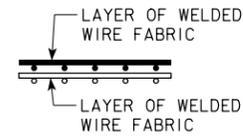
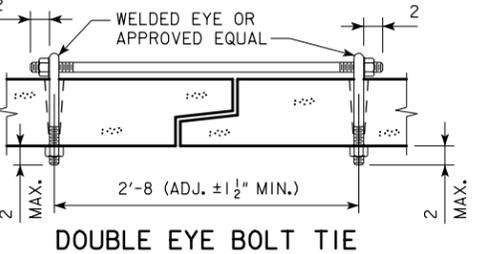
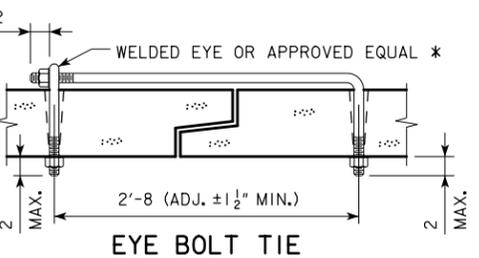
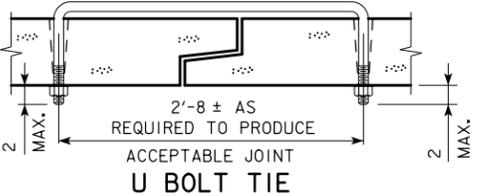
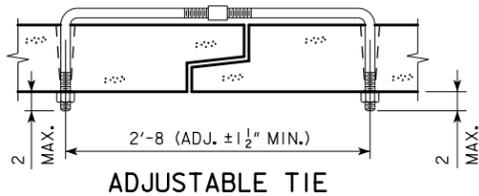
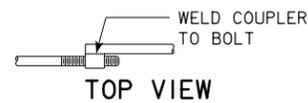
EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.





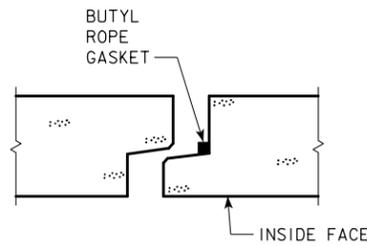
**TYPICAL TIE LAYOUT**

NOTE: HOLES SHALL BE CAST OR DRILLED 1'-4 FROM CENTERLINE OF JOINTS AS SHOWN ABOVE, UNLESS FORMS ARE SET UP FOR 1'-4 SPACING FROM OUTSIDE OF JOINT.

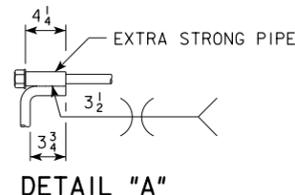


**FABRIC LAYER DETAIL**

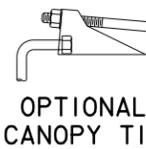
NOTE: WHEN MORE THAN ONE LAYER OF WELDED WIRE FABRIC IS USED TO OBTAIN THE REQUIRED REINFORCEMENT AREAS, THE WIRES OF THE WELDED WIRE FABRIC SHALL BE PLACED AS SHOWN.



**JOINT DETAIL**

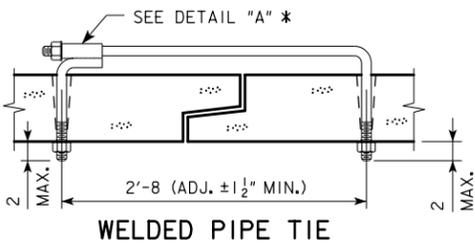


DETAIL "A"

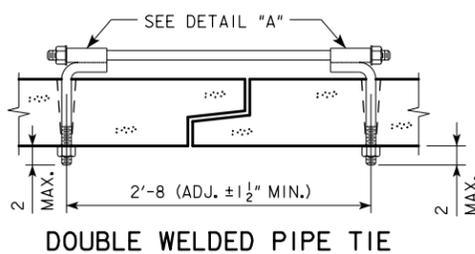


OPTIONAL CANOPY TIE

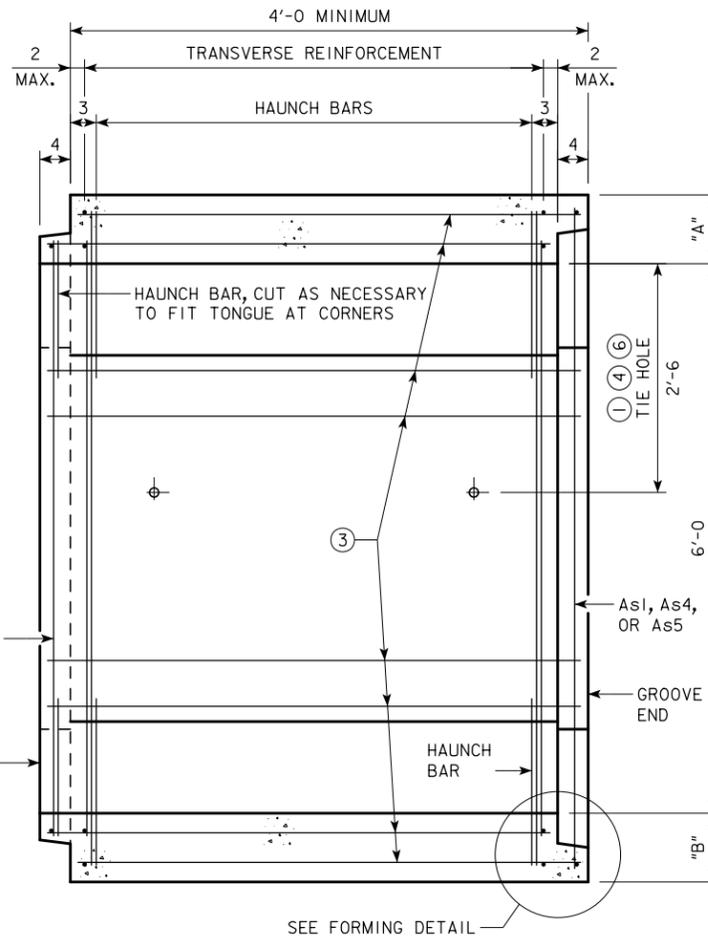
\* THE CONNECTIONS SHALL BE PLACED AT THE DOWNSTREAM END WHEN THE CONNECTIONS ARE PLACED INSIDE OF STRUCTURE.



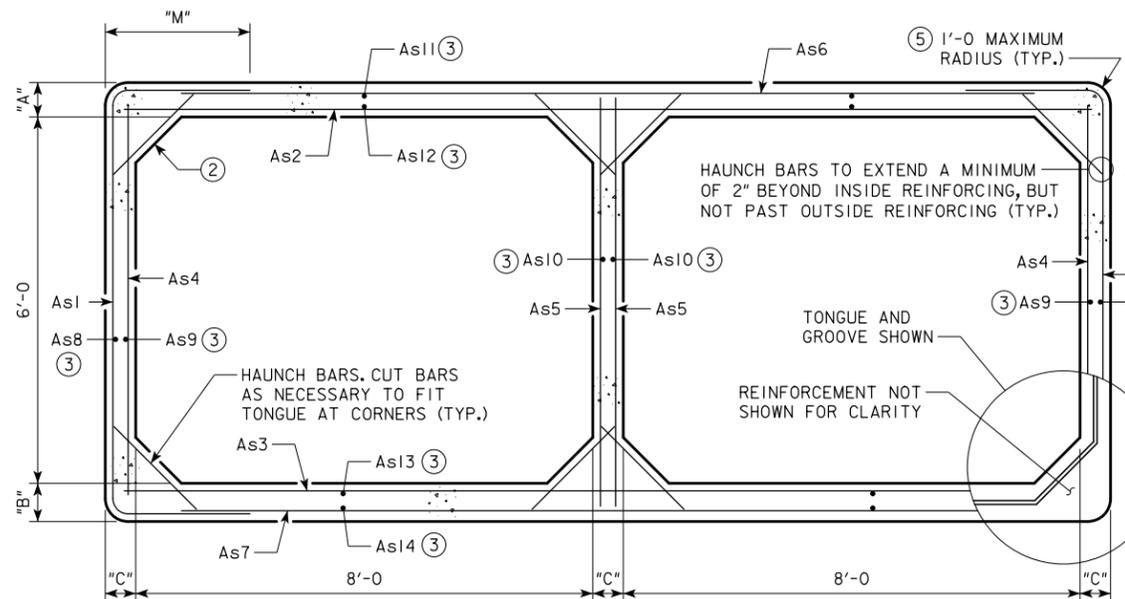
WELDED PIPE TIE



DOUBLE WELDED PIPE TIE



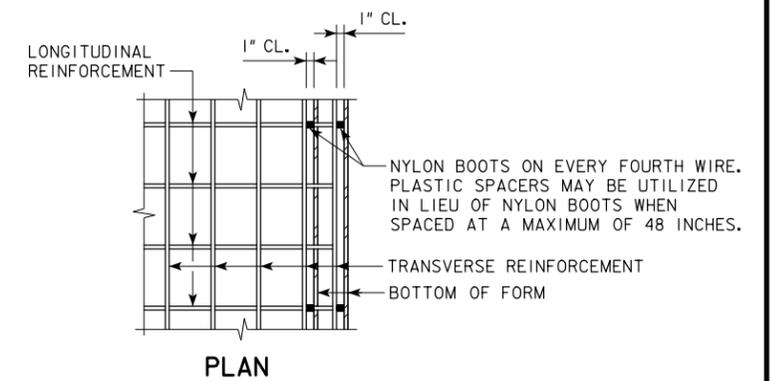
**LONGITUDINAL BARREL SECTION**  
(REINFORCEMENT BAR OPTION SHOWN)



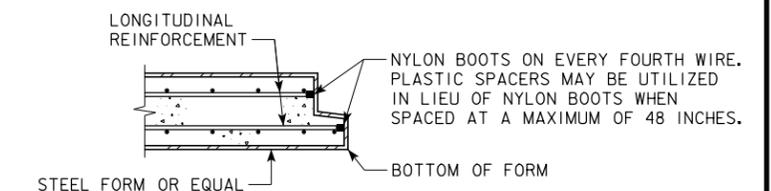
**TRANSVERSE BARREL SECTION**  
(REINFORCEMENT BAR OPTION SHOWN)

**NOTES:**

- ① CULVERT TIES ARE TO BE 1"  $\phi$  RODS. SEE THIS SHEET FOR CONNECTION DETAILS.
- ② HAUNCH SIZES ARE TO BE 12" VERTICAL, 12" HORIZONTAL.
- ③ LONGITUDINAL REINFORCEMENT DENOTED AS As8 THRU As14 MUST BE PLACED IN SLAB, FLOOR, AND WALLS AND MUST BE 0.06 IN<sup>2</sup>/FT. MIN.
- ④ REFER TO END SECTION DETAIL SHEET FOR BARREL TO END SECTION CONNECTION TIE HOLE LOCATIONS.
- ⑤ OPTIONAL SQUARED CORNERS WITH 3/4" TO 2" CHAMFER.

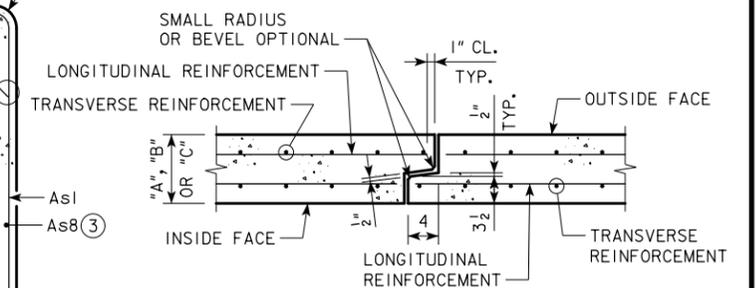


PLAN



SECTION

**FORMING DETAIL**

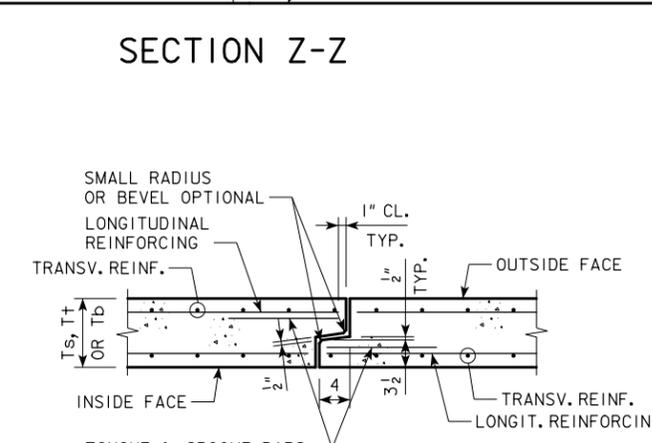
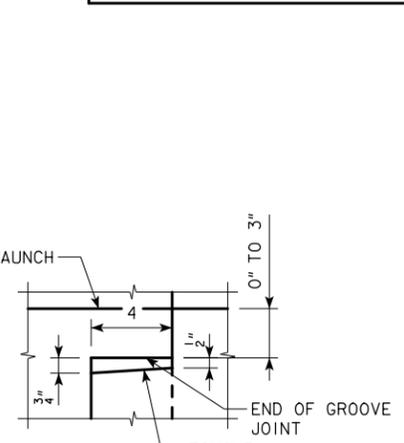
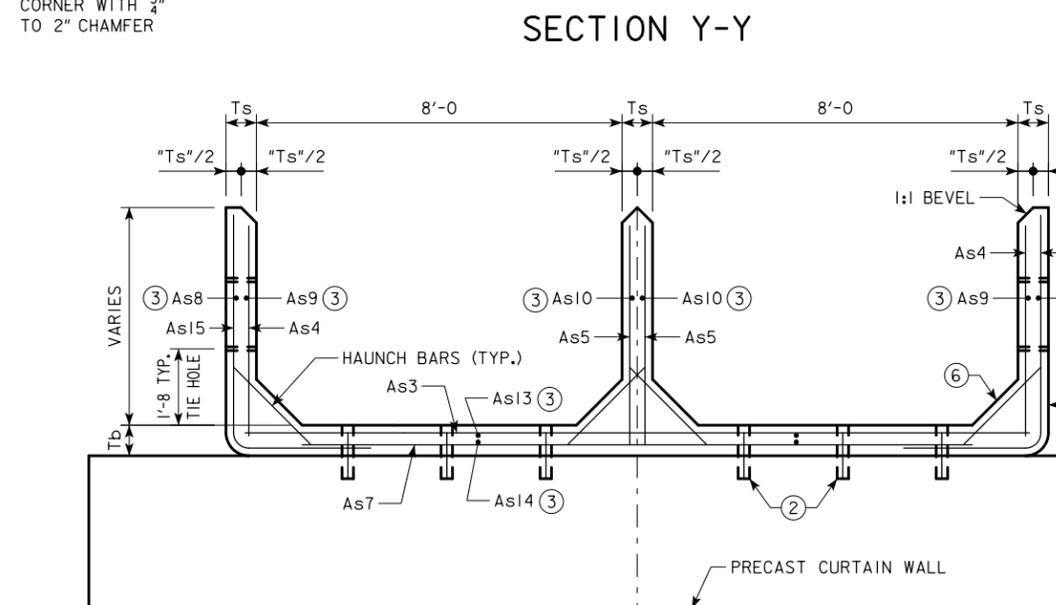
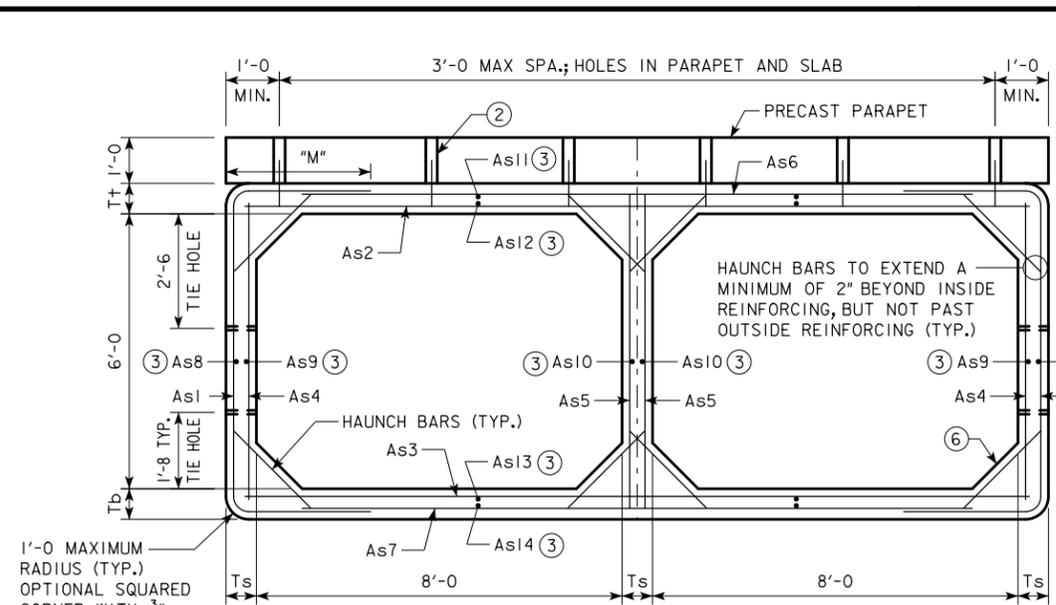
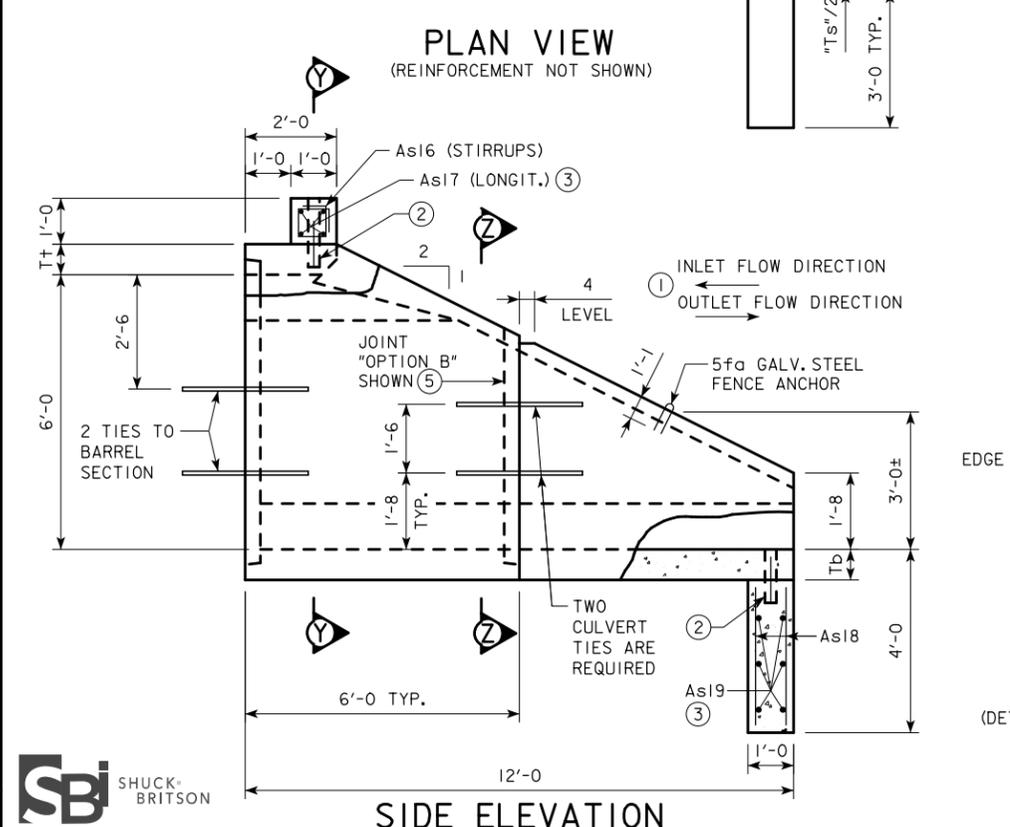
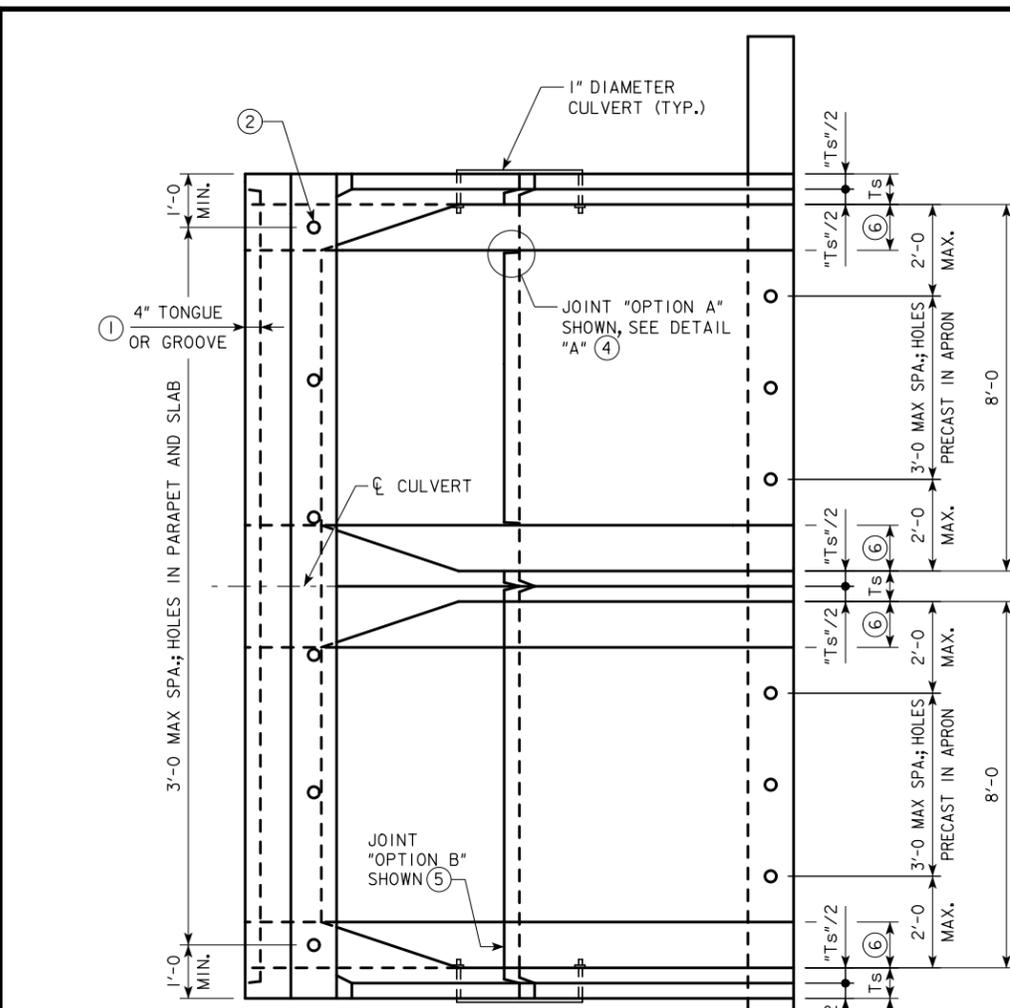


**TONGUE AND GROOVE JOINT DETAIL**

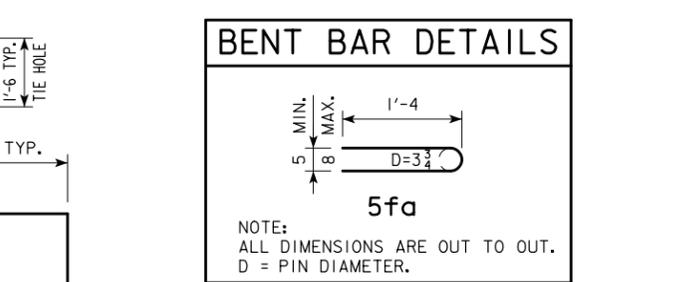
DESIGN FOR 0° SKEW ROTATED 6.1032° (R.A.)  
**TWIN 8' x 6' x 74'-0**  
**PRECAST R.C.B. CULVERT**  
**CULVERT BARREL DETAILS**  
 STA. 12+51.52 (C SOUTH ROCHE STREET)      FEBRUARY, 2020  
**MARION COUNTY**



**APPROVED CONCRETE BOX TIES**

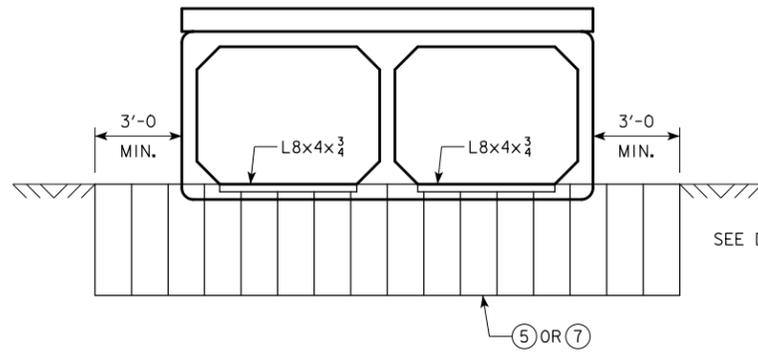


- ### CONSTRUCTION NOTES:
- PRECAST BOX CULVERT END SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AND NOTES, AS SHOWN BELOW:
- REINFORCING FOR PRECAST END SECTIONS & CURTAIN WALLS SHALL BE WELDED WIRE REINFORCING (WWR) MEETING THE REQUIREMENTS OF AASHTO LRFD SECTION 5. THE CONCRETE COVER OVER THE REINFORCING STEEL SHALL NOT BE LESS THAN 1.5 INCHES OR GREATER THAN 2.0 INCHES.
- REFER TO SHEET V.2 FOR ADDITIONAL NOTES.
- REFER TO FABRIC DETAIL ON SHEET V.5 FOR MULTIPLE WWR LAYERS.
- LAP SPLICES SHALL BE CLASS B AND SHALL BE DESIGNED ACCORDING TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- USE TONGUE ON INLET END SECTION AND GROOVE ON OUTLET END SECTION.
  - HOLES WITH DOWEL BAR, FILL HOLES WITH GROUT. GROUT SHALL CONSIST OF 1 PART CEMENT AND 2 PARTS SAND. USE AIR ENTRAINED PORTLAND CEMENT. GROUT MIX SHALL HAVE A MAXIMUM SLUMP OF 4 INCHES.
  - MINIMUM LONGITUDINAL REINFORCEMENT SHALL BE 0.06 SQ. INCHES PER PERIPHERAL FOOT ON ALL FACES OF THE END SECTION, EXCEPT IN THE TONGUE AND GROOVE AREA.
  - JOINT "OPTION A": PROVIDE JOINT IN WALLS AND FLOOR. TERMINATE JOINT AT HAUNCH. SEE DETAIL "A" ON THIS SHEET.
  - JOINT "OPTION B": PROVIDE JOINT IN WALLS, FLOOR AND HAUNCH.
  - HAUNCH DIMENSION TO MATCH BARREL HAUNCH SIZE.

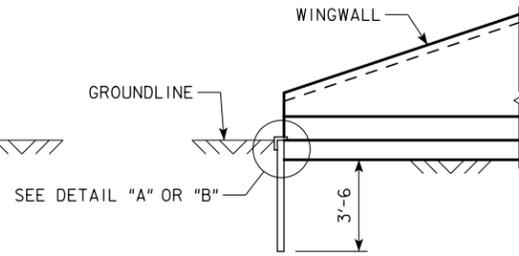


- ### DOWEL SETTING NOTE :
- THE 5fa BARS MAY BE SET AS DOWELS IN DRILLED HOLES. HOLES SHALL BE DRILLED TO THE DEPTH REQUIRED TO ACHIEVE BAR EMBEDMENT AS SHOWN IN THE "SIDE ELEVATION" DETAIL. THE DOWELS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. EITHER OF THE FOLLOWING SYSTEMS MAY BE USED AS A BONDING AGENT:
- POLYMER GROUT SYSTEM SHALL BE IN ACCORDANCE WITH ARTICLE 2301.03, E, OF THE STANDARD SPECIFICATIONS.
  - HYDRAULIC CEMENT GROUT SYSTEMS. DRILLED HOLES ARE TO BE 2 1/2 TIMES THE DOWEL DIAMETER AND ARE TO BE BLOWN CLEAN WITH COMPRESSED AIR IMMEDIATELY PRIOR TO PLACING GROUT. THE HYDRAULIC CEMENT GROUT SHALL BE ONE OF THOSE APPROVED IN MATERIALS 1.M. 491.13.

DESIGN FOR 0° SKEW ROTATED 6.1032° (R.A.)  
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**CULVERT END SECTION DETAILS**  
 STA. 12+51.52 (C SOUTH ROCHE STREET) FEBRUARY, 2020  
**MARION COUNTY**

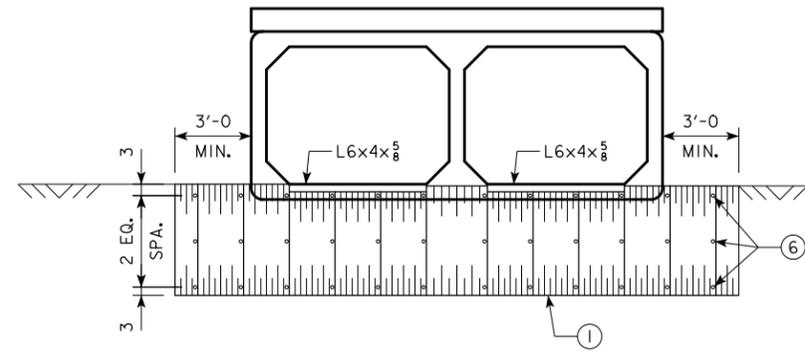


END VIEW

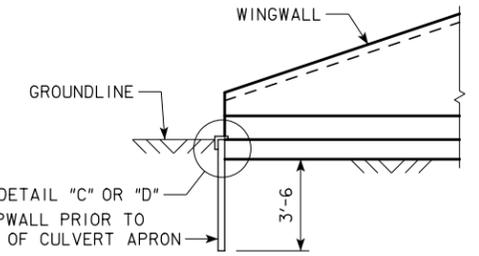


ELEVATION

ALTERNATES 1 & 2 (GALVANIZED STEEL SHEET PILING)

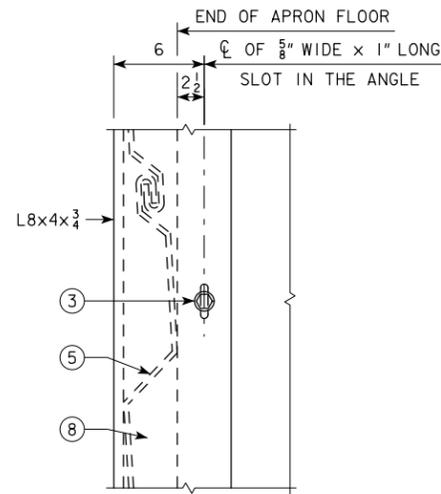


END VIEW

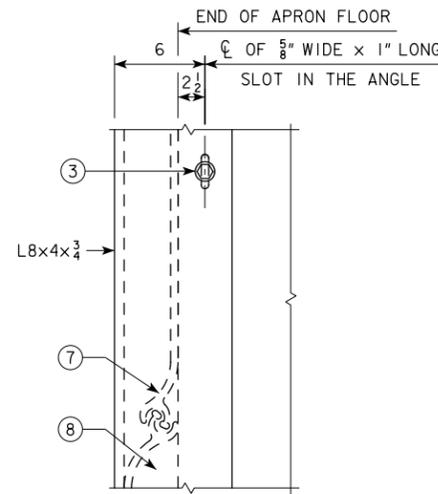


ELEVATION

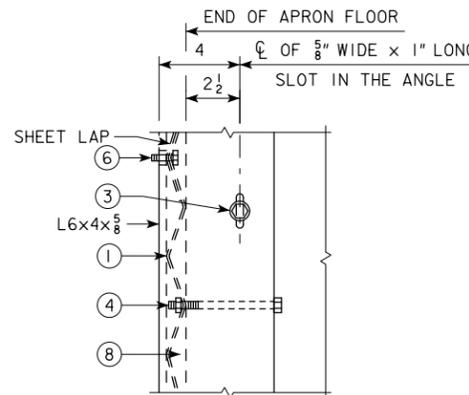
ALTERNATES 3 & 4 (GALVANIZED STEEL SHEETS)



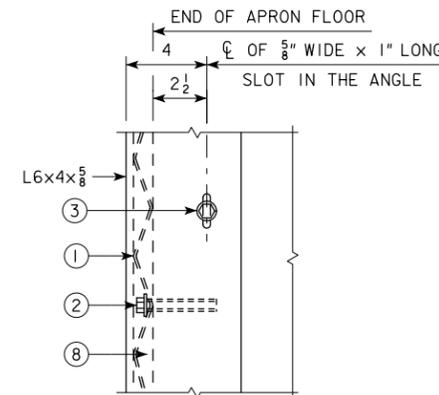
PLAN



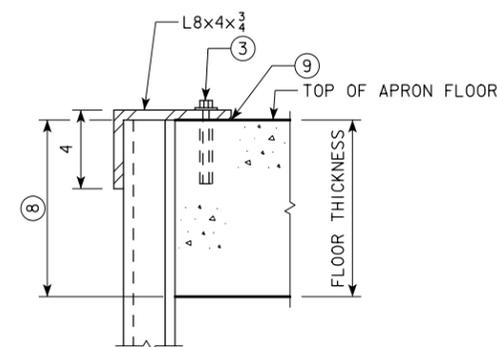
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PLAN

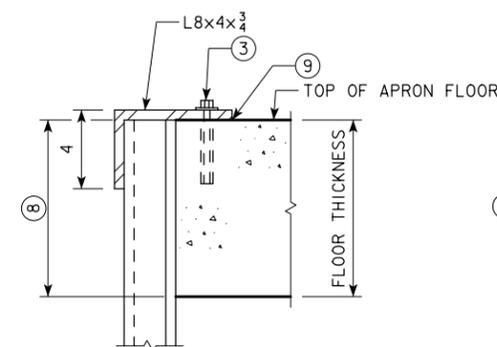


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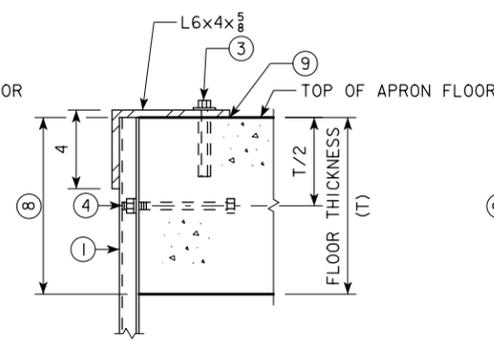
ELEVATION

DETAIL "A"  
ALTERNATE 1  
STEEL SHEET PILING SHOWN



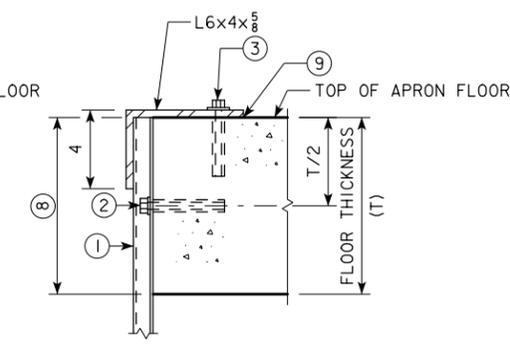
ELEVATION

DETAIL "B"  
ALTERNATE 2  
STEEL SHEET PILING SHOWN



ELEVATION

DETAIL "C"  
ALTERNATE 3  
ON NEW CONSTRUCTION ONLY



ELEVATION

DETAIL "D"  
ALTERNATE 4  
ON NEW OR OLD CONSTRUCTION

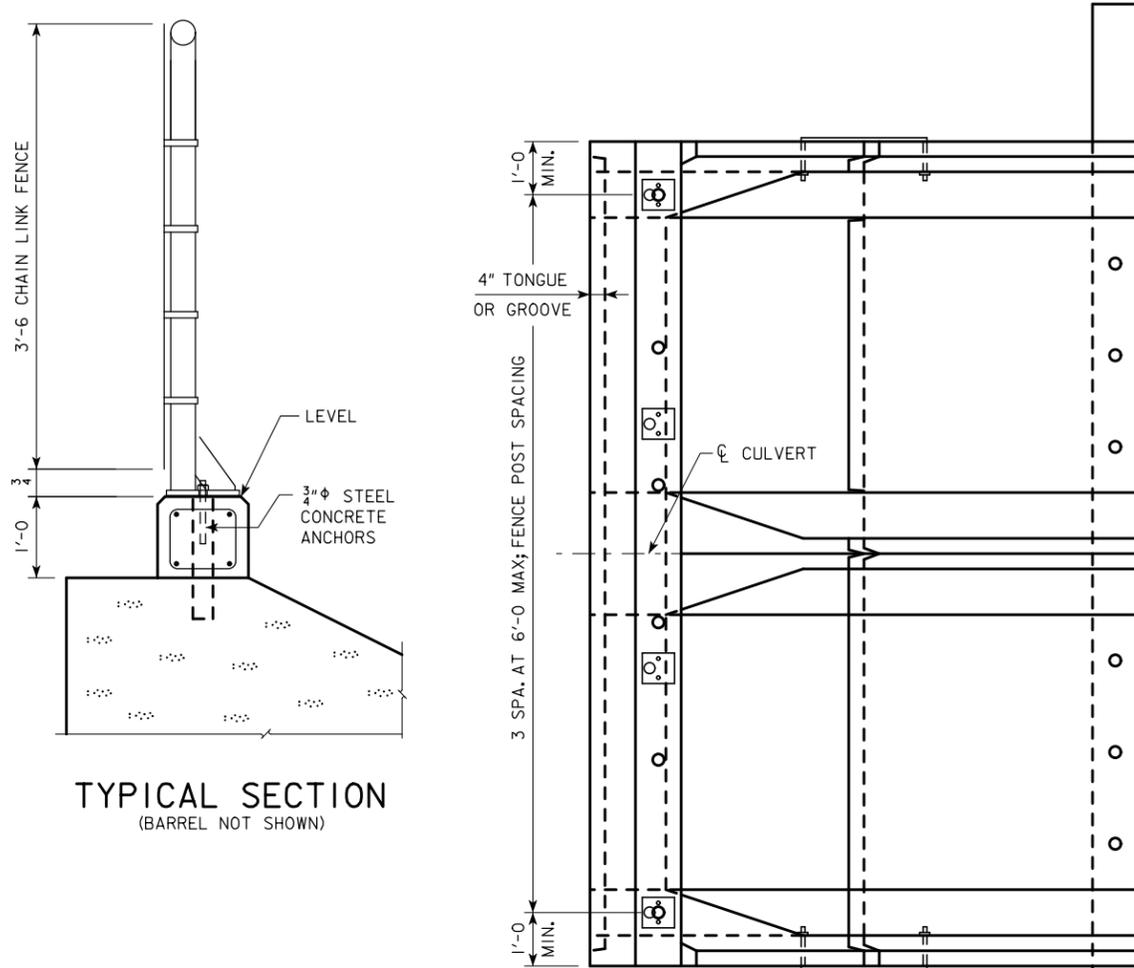
NOTES:

- USE OF ALTERNATE CURTAIN WALLS SHALL BE APPROVED BY THE ENGINEER.
- ALL CURTAIN WALL MATERIAL, INCLUDING BOLTS, NUTS, WASHERS, AND ANGLES SHALL BE GALVANIZED.
- ① 2 1/2" x 1/2" OR 2" x 1/2" CORRUGATED (12 GAGE OR HEAVIER) GALVANIZED STEEL SHEETS.
- ② FASTEN THE STEEL SHEETS TO THE FRONT EDGE OF THE APRON WITH 3/8" x 0'-4 BOLTS AND APPROVED ANCHORAGES (10" CENTER TO CENTER, TO THE NEAREST VALLEY).
- ③ FASTEN THE L8x4x3/4 OR L6x4x5/8 WITH 3/8" x 0'-4 BOLTS, 1" O.D. WASHER AND AN APPROVED ANCHORAGE (2'-0 SPACING).
- ④ FASTEN THE STEEL SHEETS TO THE FRONT EDGE OF THE APRON WITH 3/8" x 0'-5 BOLTS WITH NUT AND LOCK WASHER (10" CENTER TO CENTER, TO THE NEAREST VALLEY).
- ⑤ GALVANIZED CORRUGATED (12 GAUGE OR HEAVIER) STEEL SHEET PILING, INTERLOCKING TYPE A.
- ⑥ 3/8" x 0'-1 BOLT WITH NUT, TO LAP STEEL SHEETS.
- ⑦ GALVANIZED STEEL SHEET PILING, SECTION PS 27.5 OR EQUAL.
- ⑧ FILL THE VOIDS AS SHOWN, WITH CONCRETE OR CONCRETE GROUT, AS APPROVED BY THE ENGINEER.
- ⑨ CAULK JOINT BETWEEN TOP OF APRON FLOOR AND ANGLE. CAULKING MATERIAL SHALL BE NEUTRAL CURE AND NON-SAG SILICONE. THREE PRODUCTS MEETING THESE CRITERIA ARE DOW 888, CSL 342 JOINT SEALANT, AND CRAFTCO ROAD SAVER SILICONE.

DESIGN FOR 0° SKEW ROTATED 6.1032° (R.A.)  
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**PRECAST R.C.B. CULVERT**  
 ALTERNATE CURTAIN WALL DETAILS  
 STA. 12+51.52 (C SOUTH ROCHE STREET) FEBRUARY, 2020  
**MARION COUNTY**

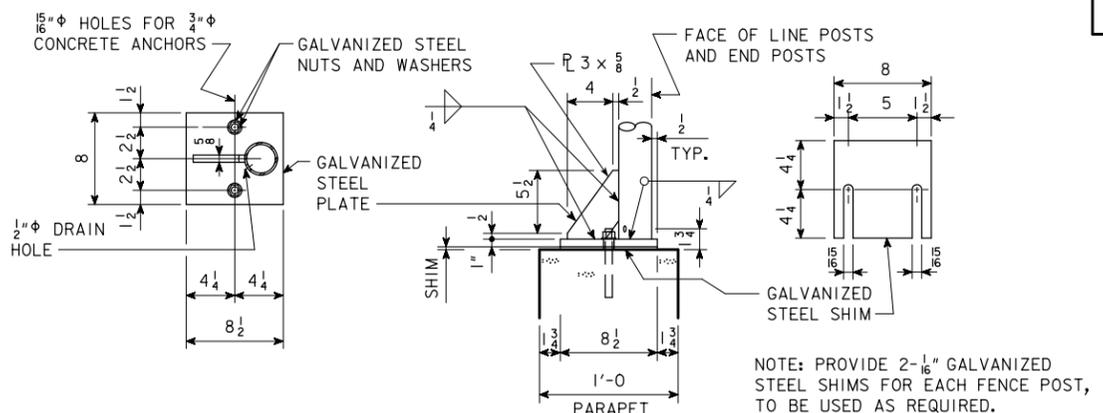






**TYPICAL SECTION**  
(BARREL NOT SHOWN)

**PLAN VIEW**  
(REINFORCEMENT NOT SHOWN)



**BASE PLATE DETAILS FOR END POST AND LINE POSTS**

NOTE: POSTS AND BASE PLATES SHALL BE GALVANIZED, AFTER FABRICATION, IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A123.

NOTE: PROVIDE 2-1/16" GALVANIZED STEEL SHIMS FOR EACH FENCE POST, TO BE USED AS REQUIRED.

**QUANTITIES**

ITEM	UNITS	AMOUNT
FENCE, CHAIN LINK, VINYL COATED	LIN. FT.	75.3

NOTE: FOR ESTIMATED QUANTITY PURPOSES, PRECAST CULVERT WALL THICKNESSES HAVE BEEN ESTIMATED AT 8" THICK. THE QUANTITY FOR "FENCE, CHAIN LINK, VINYL COATED" MAY BE ADJUSTED BASED ON ACTUAL PRECAST CULVERT WALL THICKNESSES.

**CONCRETE ANCHOR NOTES:**

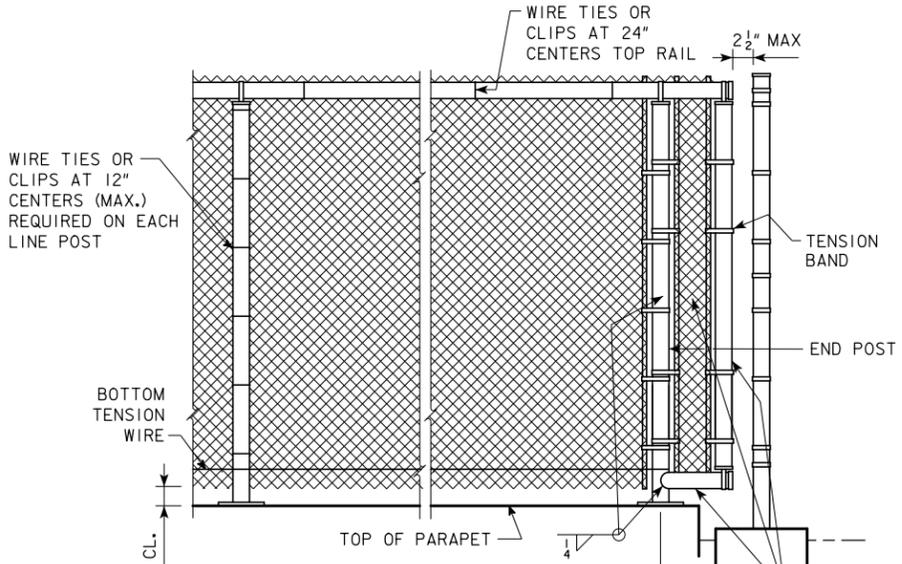
CAST-IN-PLACE THREADED CONCRETE ANCHORS SHALL BE INCORPORATED IN PRECAST ELEMENTS TO ACCOMMODATE THE CHAIN LINK FENCE POSTS AT THE LOCATIONS SHOWN ON THIS PLAN SHEET. THE PARAPET REINFORCING STEEL SHALL BE PLACED WITH 1 1/2" CLEAR TO ACCOMMODATE THE THREADED CONCRETE ANCHORS.

THE THREADED CONCRETE ANCHORS SHALL BE STAINLESS STEEL AND HAVE A MINIMUM PULLOUT STRENGTH OF 8000 POUNDS BASED ON 4000 PSI CONCRETE.

THE PRECAST CULVERT FABRICATOR SHALL DELINEATE THREADED CONCRETE ANCHOR LOCATIONS DURING FABRICATION TO DETERMINE PLACEMENT OF ANCHORS. THE ANCHORS SHALL BE TIED SECURELY IN PLACE PRIOR TO PLACEMENT OF CONCRETE, AND SHALL NOT CONTACT REINFORCING STEEL AT ANY LOCATION. REINFORCING BARS MAY BE SHIFTED SLIGHTLY TO PREVENT CONTACT WITH ANCHORS.

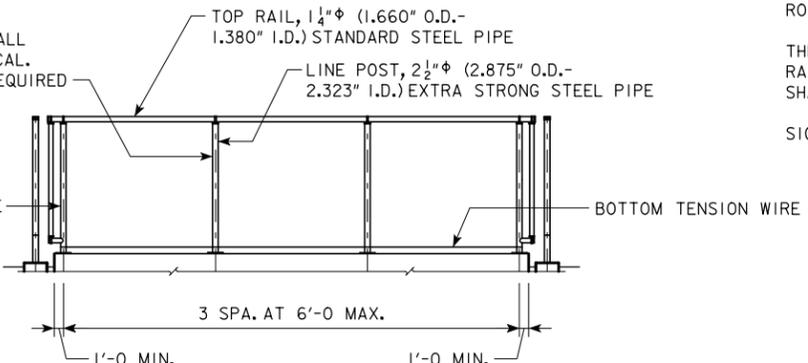
THE FABRICATOR SHALL SUBMIT THE PROPOSED ANCHOR TYPE FOR USE IN FABRICATION AS A PART OF THE SHOP DRAWINGS FOR THE PRECAST CULVERTS FOR REVIEW BY THE ENGINEER. THE ANCHORS SHALL BE STRAIGHT LOOP FERRULE TYPE, TYPE 304 STAINLESS STEEL, 3/4"-11 NC INTERNAL THREAD, MINIMUM LENGTH OF 6 1/2" INCH. APPROVED MANUFACTURERS AND ITEMS ARE AS FOLLOWS:

DAYTON SUPERIOR - F64  
MEADOW BURKE FX-2  
NATIONAL CONCRETE ACCESSORIES SLF-4W



**FENCE DETAILS**  
(SYMMETRICAL ABOUT  $\phi$  FENCE)

ALL POSTS SHALL BE SET VERTICAL. SHIM WHERE REQUIRED.



**ELEVATION OF FENCE**

**STEEL CHAIN LINK FENCE NOTES:**

THE CHAIN LINK FENCE IS TO BE BID ON A LINEAR FOOT BASIS MEASURED FROM  $\phi$  TO  $\phi$  OF END POSTS. THE PRICE BID FOR "FENCE, CHAIN LINK, VINYL COATED" SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, INCLUDING CONCRETE ANCHORS AND SHIMS, AND ALL OF THE EQUIPMENT AND LABOR REQUIRED TO ERECT THE FENCE ON THE PRECAST PARAPET AND IN THE GROUND ALONG THE PRECAST HEADWALLS IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.

THE CHAIN LINK FENCE SHALL BE EITHER ZINC (ASTM A392) OR ALUMINUM (ASTM A491) COATED FABRIC, 2" MESH, No. 9 WIRES, 3'-6" HEIGHT WITH KNUCKLED SELVAGES TOP AND BOTTOM.

THE MATERIAL FOR POSTS, BRACES, AND RAILS SHALL BE STEEL PIPE IN ACCORDANCE WITH ARTICLE 4154.10, A, OF THE STANDARD SPECIFICATIONS. BASE PLATES AND SHIMS SHALL MEET THE REQUIREMENTS OF ASTM A-36. POSTS, BASE PLATES, AND RAILS SHALL BE GALVANIZED, AFTER FABRICATION, IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A-123.

CHAIN LINK FABRIC, RAILS, AND FENCE ACCESSORIES ARE TO BE PVC COATED IN ACCORDANCE WITH ASTM F 668, CLASS 2B. COLOR SHALL BE BLACK IN ACCORDANCE WITH ASTM F 934. THE COST OF PVC COATING IS TO BE INCLUDED IN THE PRICE BID FOR "FENCE, CHAIN LINK, VINYL COATED."

STEEL FENCE POST ASSEMBLIES SHALL BE ABRASIVE BLAST CLEANED TO A MINIMUM OF SSPC-SP6 "COMMERCIAL BLAST CLEANING" PRIOR TO HOT-DIP GALVANIZING. GALVANIZE COMPONENTS IN ACCORDANCE WITH ASTM A-123. DO NOT QUENCH OR APPLY CHROMATE CONVERSION COATINGS TO ANY GALVANIZED COMPONENTS THAT WILL RECEIVE POWDER COATING. FOLLOWING GALVANIZING, POWDER COAT COMPONENTS IN ACCORDANCE WITH MATERIALS I.M. 568.

PREPARATION OF GALVANIZED SURFACES FOR PAINT SHALL BE IN ACCORDANCE WITH MATERIALS I.M. 568, APPENDIX F. COMPLETE "PAINT OVER GALVANIZED SURFACE TRAVEL LOG" IN APPENDIX E.

ALL POWDER COATING EXCEPT FIELD TOUCH-UP SHALL BE PERFORMED IN AN APPROVED SHOP IN ACCORDANCE WITH MATERIALS I.M. 568.

SUBMIT PROPOSED PREPARATION METHODS AND PRODUCT DATA FOR ALL COATINGS PROPOSED FOR USE TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO POWDER COATING. POWDER COATING SHALL MATCH SAE AMS-STD-595 COLOR NUMBER 27038 (BLACK).

IF AVAILABLE, VINYL COATED FENCE POST ASSEMBLIES MAY BE SUBSTITUTED FOR POWDER COATED COMPONENTS PROVIDED THE MATERIAL IS IN COMPLIANCE WITH ALL OTHER REQUIREMENTS LISTED IN THESE PLANS AND THE STANDARD SPECIFICATIONS. PVC COATING SHALL COMPLY WITH ASTM F 668, CLASS 2B AND SHALL BE BLACK IN ACCORDANCE WITH ASTM F 934. THE COST OF PVC COATED FENCE POST ASSEMBLIES SHALL BE INCLUDED IN THE PRICE BID FOR "FENCE, CHAIN LINK, VINYL COATED."

PROTECT ALL POWDER COATED RAILING SURFACES FROM DAMAGE DURING SHIPPING, HANDLING, AND INSTALLATION.

FOLLOWING FENCE INSTALLATION, REPAIR ANY DAMAGE TO THE POWDER COATED FINISH IN ACCORDANCE WITH THE COATING MANUFACTURER'S RECOMMENDATIONS. ALL COSTS ASSOCIATED WITH POWDER COATING SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM, "FENCE, CHAIN LINK, VINYL COATED."

SPECIAL FITTINGS SHALL BE AS SPECIFIED IN ARTICLE 4154.11 OF THE STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED. SIMILAR FENCE PARTS AND FITTINGS WITH DIFFERENT SHAPES OR CONFIGURATIONS SHALL NOT BE INTERMINGLED WITHIN THE PROJECT LIMITS.

RAIL MEMBERS SHALL BE CUT SQUARE AT ALL POST CONNECTION LOCATIONS. CUT EDGES SHALL BE FILLED OR GROUND SMOOTH TO REMOVE SHARP EDGES AT CORNER LOCATIONS. DAMAGED PAINT OR VINYL COATING SHALL BE PAINTED BLACK TO MATCH FENCE.

CAULK FOR BASE PLATES SHALL BE BLACK NONSAG LATEX CAULK MARKETED FOR OUTDOOR USE. NO TESTING OR CERTIFICATION IS REQUIRED. EXCESS CAULK SHALL BE COMPLETELY REMOVED FROM SURROUNDING CONCRETE SURFACES.

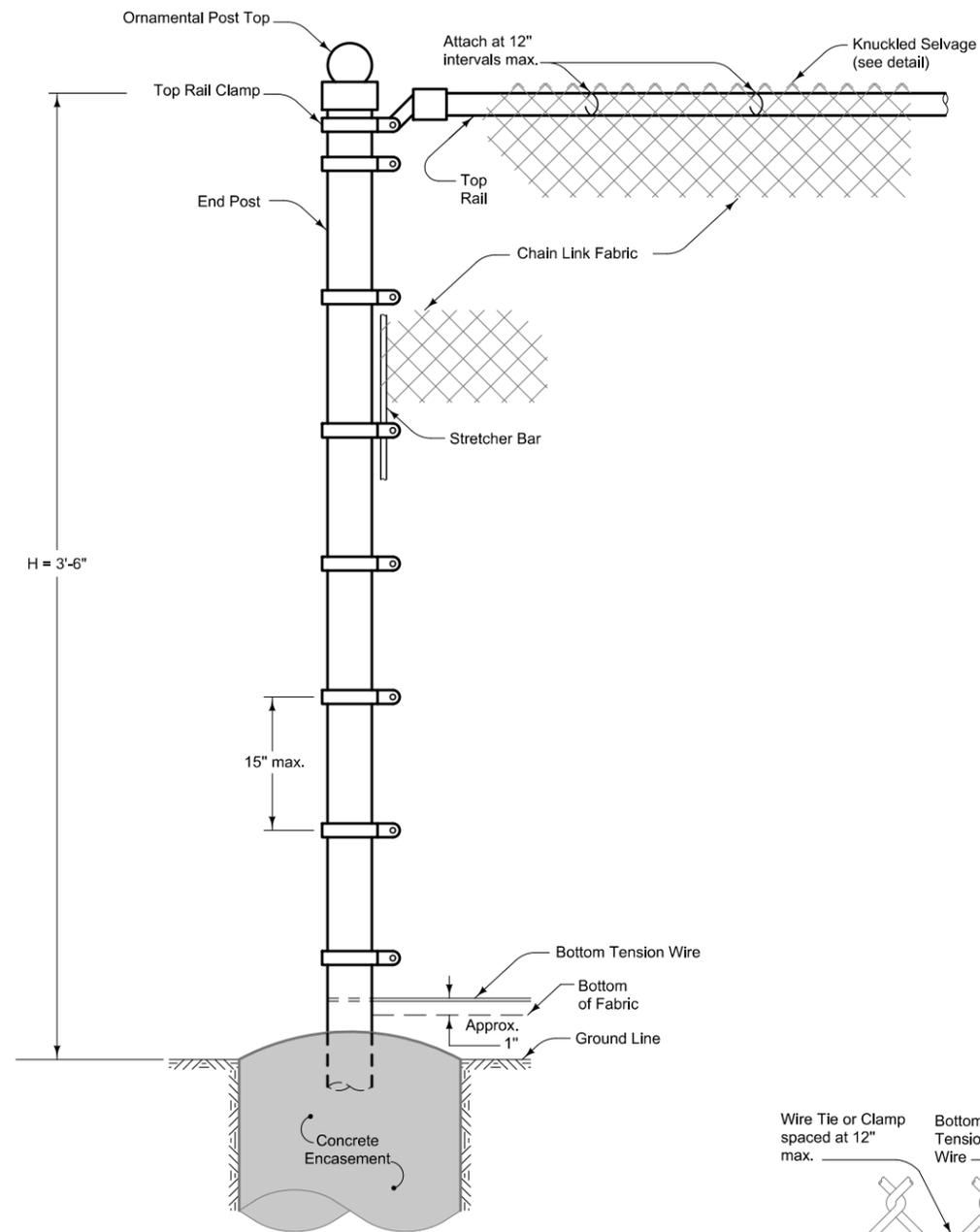
THE FENCE SHALL BE TRUE TO LINE, TAUT, AND COMPLY WITH THE BEST PRACTICE FOR FENCE CONSTRUCTION OF THIS TYPE. ALL ENDS OF WIRES SHALL BE TURNED SO THAT THEY EXTEND AWAY FROM THE ROADWAY SIDE OF THE FENCE.

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL SHOP DRAWINGS OF THE FENCE, SHOWING LAYOUT OF POSTS AND FABRICATION DETAILS OF RAILS, BRACING, ANCHORAGES, AND HARDWARE. ALTERNATE DETAILS, IF ANY, SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.

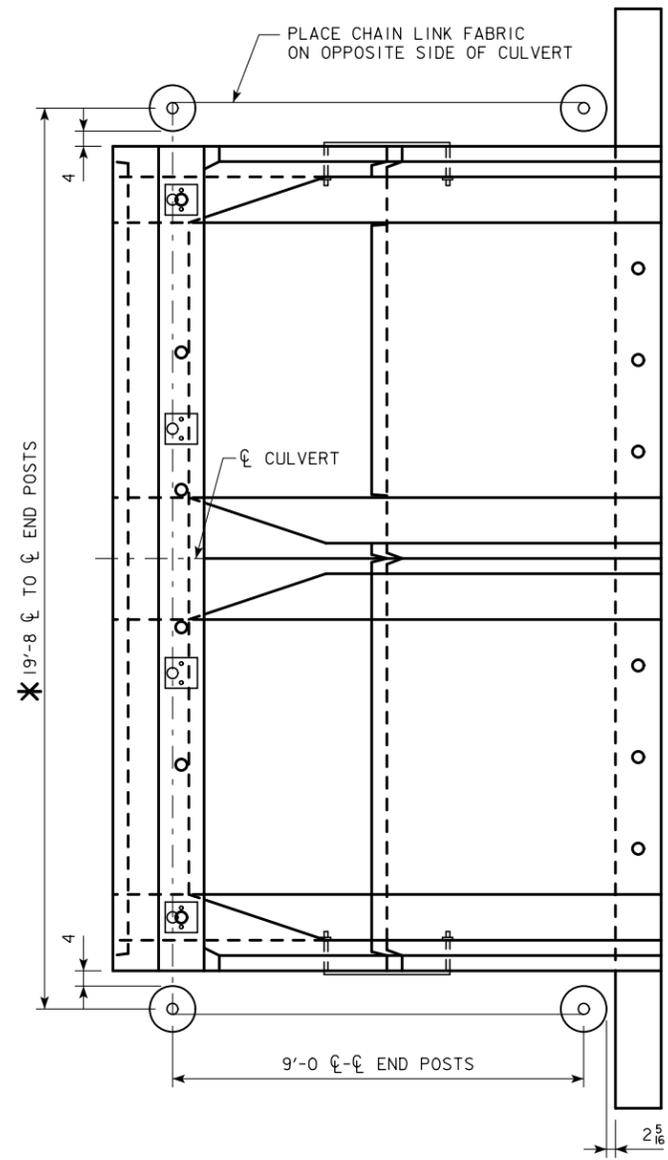
THE CONTRACTOR SHALL NOT INSTALL ANY NAMEPLATES OR OTHER SIGNAGE ON THE FENCE.

DESIGN FOR 0° SKEW ROTATED 6.1032° (R.A.)  
**TWIN 8' x 6' x 74'-0"**  
**PRECAST R.C.B. CULVERT**  
**PARAPET FENCE DETAILS**  
STA. 12+51.52 (C SOUTH ROCHE STREET) FEBRUARY, 2020  
**MARION COUNTY**

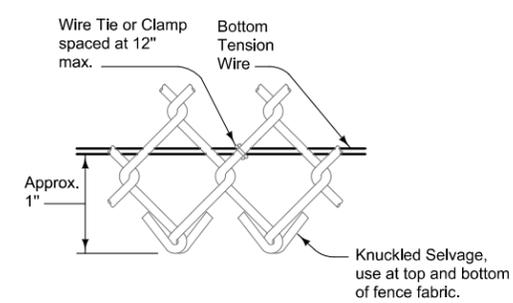




**END POST ASSEMBLY**



**GROUND FENCE PLAN VIEW**  
(REINFORCEMENT NOT SHOWN)

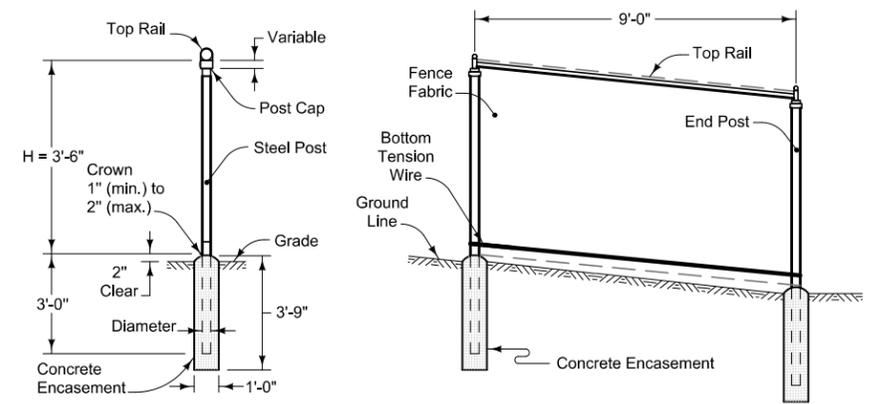


**BOTTOM TENSION WIRE AND KNUCKLED SELVAGE**

**STEEL CHAIN LINK FENCE NOTES:**

SEE CHAIN LINK FENCE NOTES AND QUANTITY ON SHEET V.9 FOR FENCE DETAILS AND SPECIFICATIONS.  
 ATTACH CHAIN LINK FABRIC TO TOP RAIL, TENSION WIRE, AND END POSTS AT INTERVALS OF 12" MAXIMUM.  
 CONNECT BOTTOM TENSION WIRE TO END POSTS.  
 SECURE EACH END OF EACH RUN OF FABRIC USING A STRETCHER BAR INSERTED IN THE FINAL LINKS OF THE FABRIC. USE A BAR THAT IS AS LONG AS THE FABRIC IS WIDE.

\* FOR ESTIMATED QUANTITY PURPOSES, PRECAST CULVERT WALL THICKNESSES HAVE BEEN ESTIMATED AT 8" THICK. THE QUANTITY FOR "FENCE, CHAIN LINK, VINYL COATED" MAY BE ADJUSTED BASED ON ACTUAL PRECAST CULVERT WALL THICKNESSES.

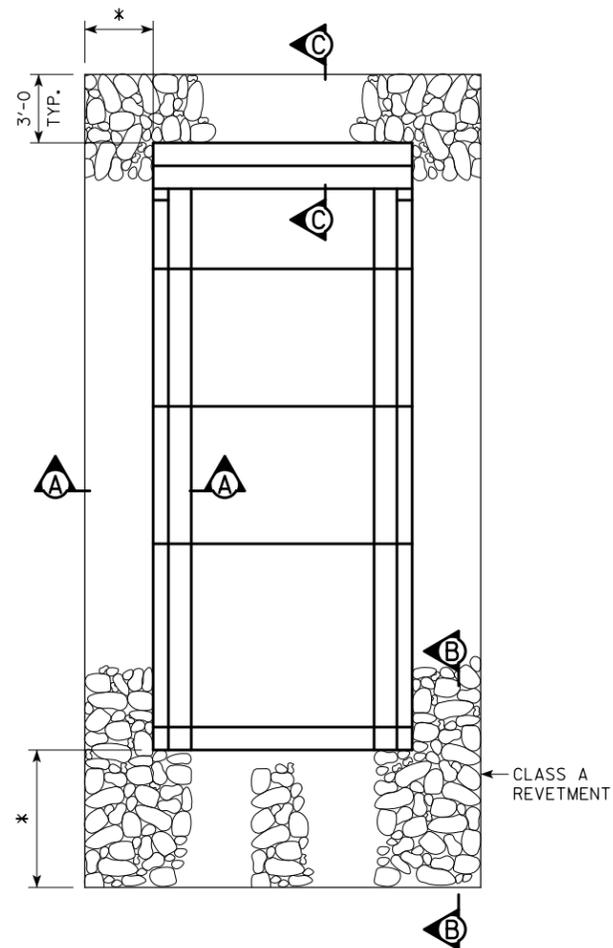


**POST INSTALLATION DETAILS**

ITEM	POST SIZE		
	Nominal Pipe Size, in.	Outside Diameter, in.	Weight, lb./ft.
Rail	1 1/2	1.660	2.27
End Post	2 1/2	2.875	5.79

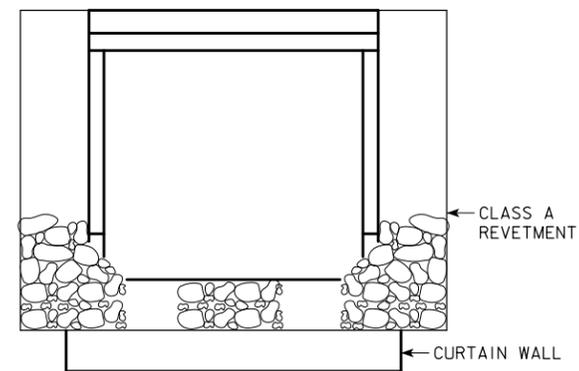
DESIGN FOR 0° SKEW ROTATED 6.1032° (R.A.)  
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**GROUND FENCE DETAILS**  
 STA. 12+51.52 (C SOUTH ROCHE STREET) FEBRUARY, 2020  
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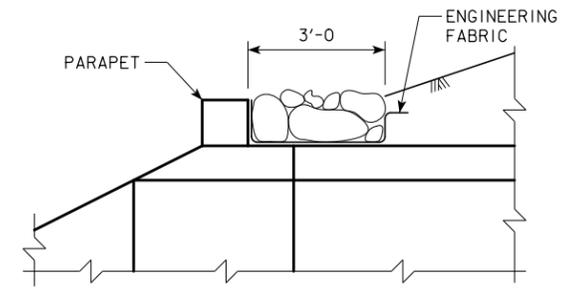


PLAN VIEW

\* = SEE SITUATION PLANS FOR LIMITS OF REVETMENT AND ENGINEERING FABRIC.

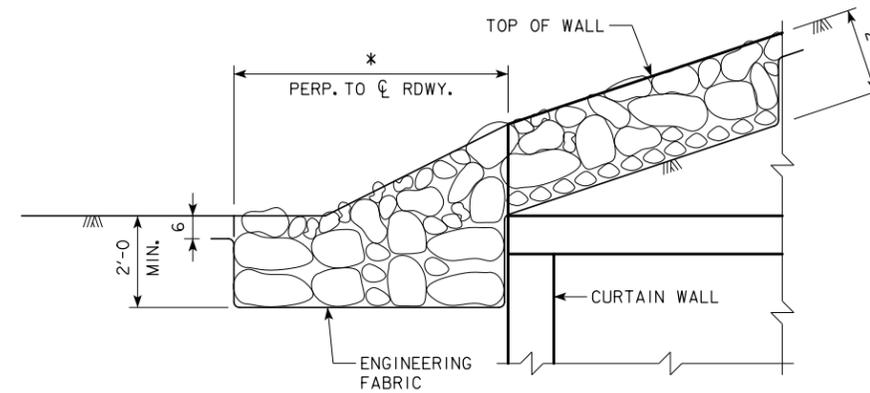


ELEVATION VIEW  
NON-SKEW END SECTIONS

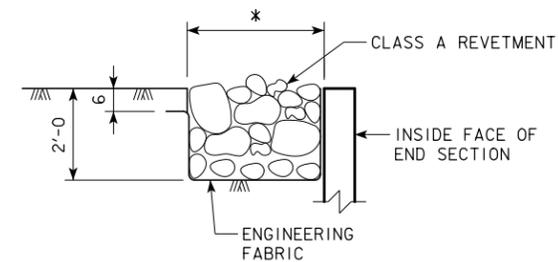


SECTION C-C

\* = SEE SITUATION PLANS FOR LIMITS OF REVETMENT AND ENGINEERING FABRIC.



SECTION B-B



SECTION A-A  
TYPICAL DETAILS

**CONSTRUCTION NOTES:**

CLASS A REVETMENT SHOULD BE USED AND PLACED ACCORDING TO ARTICLE 2507.03 OF THE STANDARD SPECIFICATIONS.

THE ENGINEERING FABRIC SHALL MEET THE MATERIAL REQUIREMENTS IN ACCORDANCE WITH ARTICLE 4196.01, B, 3 OF THE STANDARD SPECIFICATIONS.

DESIGN FOR 0° SKEW ROTATED 6.1032° (R.A.)

**TWIN 8' x 6' x 74'-0**  
**PRECAST R.C.B. CULVERT**

**EMBANKMENT PROTECTION DETAILS**  
STA. 12+51.52 (CL SOUTH ROCHE STREET) FEBRUARY, 2020  
**MARION COUNTY**



**OPINION OF PROBABLE CONSTRUCTION COSTS**

**ROCHE STREET CULVERT REPLACEMENT**



**Final Plan Submittal**

Knoxville, Iowa

Snyder Project Number: 119.0729

Division 1: City of Knoxville

Division 2: Knoxville Water Works

ITEM	ITEM NUMBER	ITEM DESCRIPTION	UNIT	UNIT PRICE	DIVISION 1 QUANTITY	DIVISION 2 QUANTITY	DIVISION 1 EXTENDED PRICE	DIVISION 2 EXTENDED PRICE	TOTAL EXTENDED PRICE
2.01	2010-108-A-0	Clearing and Grubbing	LS	\$ 5,000	1		\$ 5,000	\$ -	\$ 5,000
2.02	2010-108-D-1	Topsoil, On-site	CY	\$ 40	150		\$ 6,000	\$ -	\$ 6,000
2.03	2010-108-E-0	Excavation, Class 10	CY	\$ 15	1125		\$ 16,875	\$ -	\$ 16,875
2.04	2010-108-G-0	Subgrade Preparation	SY	\$ 5	341		\$ 1,705	\$ -	\$ 1,705
2.05	2010-108-I-0	Subbase, Modified, 6 Inches	SY	\$ 20	341		\$ 6,820	\$ -	\$ 6,820
2.06	2010-108-L-0	Compaction Testing	LS	\$ 1,500	1		\$ 1,500	\$ -	\$ 1,500
3.01	3010-108-F-0	Trench Compaction Testing	LS	\$ 2,000	0.93	0.07	\$ 1,860	\$ 140	\$ 2,000
4.01	4010-108-A-1	Sanitary Sewer Gravity Main, Trenched, PVC, 8 In.	LF	\$ 100	46		\$ 4,600	\$ -	\$ 4,600
4.02	4010-108-H-0	Removal of Sanitary Sewer, 8 In.	LF	\$ 30	46		\$ 1,380	\$ -	\$ 1,380
4.03	4020-108-A-1	Storm Sewer, Trenched, RCP, 15 In.	LF	\$ 100	50	84	\$ 5,000	\$ 8,400	\$ 13,400
4.04	4020-108-C-0	Removal of Storm Sewer, RCP, 15 In.	LF	\$ 20	53	88	\$ 1,060	\$ 1,760	\$ 2,820
4.05	4040-108-A-0	Subdrain, HDPE, 4 In.	LF	\$ 20	220		\$ 4,400	\$ -	\$ 4,400
4.06	4040-108-C-0	Subdrain Cleanout, Type A-1, 6 In.	EA	\$ 500	4		\$ 2,000	\$ -	\$ 2,000
4.07	4040-108-E-0	Subdrain Outlets and Connections	EA	\$ 300	4		\$ 1,200	\$ -	\$ 1,200
5.01	5010-108-A-1	Water Main, Trenched, C900 PVC, 8 In.	LF	\$ 80		137	\$ -	\$ 10,960	\$ 10,960
5.02	5010-109-C-1	Fitting, 8" x 45° Bend	EA	\$ 750		8	\$ -	\$ 6,000	\$ 6,000
5.03	5010-109-C-1	Fitting, 8" x 6" Reducer	EA	\$ 750		1	\$ -	\$ 750	\$ 750
5.04	5010-108-D-0	Water Service Stub	EA	\$ 1,000		1	\$ -	\$ 1,000	\$ 1,000
5.05	5010-999-9-9	Water Main, Insulation	LF	\$ 125		22	\$ -	\$ 2,750	\$ 2,750
5.06	5010-999-9-9	Water Main, Abandon or Remove, 6 In.	LF	\$ 20		127	\$ -	\$ 2,540	\$ 2,540
5.07	5010-999-9-9	Water Main, Connection to Existing	EA	\$ 1,500		2	\$ -	\$ 3,000	\$ 3,000
6.01	6010-108-B-0	Intake, SW-501	EA	\$ 3,000	1		\$ 3,000	\$ -	\$ 3,000
6.02	6010-108-B-0	Intake, SW-503	EA	\$ 6,000	1		\$ 6,000	\$ -	\$ 6,000
6.03	6010-108-E-0	Manhole Adjustment, Major	EA	\$ 1,500	1		\$ 1,500	\$ -	\$ 1,500
6.04	6010-108-H-0	Remove Intake	EA	\$ 500	2		\$ 1,000	\$ -	\$ 1,000
7.01	7010-108-A-0	Pavement, PCC, 7 In.	SY	\$ 70	293		\$ 20,510	\$ -	\$ 20,510
7.02	7010-108-D-0	Special Subgrade Compaction for Shared Use Path	SY	\$ 5	307		\$ 1,535	\$ -	\$ 1,535
7.03	7010-108-I-0	PCC Pavement Samples and Testing	LS	\$ 2,000	1		\$ 2,000	\$ -	\$ 2,000
7.04	7030-108-I-0	Shared Use Path, PCC, 6 In.	SY	\$ 55	221		\$ 12,155	\$ -	\$ 12,155
7.05	7030-108-G-0	Detectable Warning, Cast Iron	SF	\$ 50	24		\$ 1,200	\$ -	\$ 1,200
7.06	7030-108-H-1	Driveway, Paved, PCC, 6 In.	SY	\$ 100	10		\$ 1,000	\$ -	\$ 1,000
7.07	7030-999-9-9	Temporary Surfacing, 12 In.	TON	\$ 40	150		\$ 6,000	\$ -	\$ 6,000
7.08	7040-108-H-0	Pavement Removal	SY	\$ 20	305		\$ 6,100	\$ -	\$ 6,100
8.01	8030-108-A-0	Temporary Traffic Control	LS	\$ 10,000	0.93	0.07	\$ 9,300	\$ 700	\$ 10,000
8.02	8030-999-9-9	Temporary Barrier Rail	LF	\$ 30	300		\$ 9,000	\$ -	\$ 9,000
9.01	9040-108-D-1	Filter Sock, 12 Inch.	LF	\$ 5	410		\$ 2,050	\$ -	\$ 2,050
9.02	9040-108-D-2	Filter Sock, Removal	LF	\$ 2	410		\$ 820	\$ -	\$ 820
9.03	9040-108-J-0	Rip Rap	TON	\$ 60	262		\$ 15,720	\$ -	\$ 15,720
9.04	9040-108-Q-0	Erosion Control Mulching, Hydromulching with Temporary Seed	AC	\$ 5,000	0.3		\$ 1,500	\$ -	\$ 1,500
9.05	9040-108-Q-0	Hydroseeding, Fertilizer, Hydromulch, Type 1 Seeding	AC	\$ 10,000	0.3		\$ 3,000	\$ -	\$ 3,000
11.01	11,010-108-A	Construction Survey	LS	\$ 7,000	0.93	0.07	\$ 6,510	\$ 490	\$ 7,000

OPINION OF PROBABLE CONSTRUCTION COSTS

ROCHE STREET CULVERT REPLACEMENT



Final Plan Submittal

Knoxville, Iowa

Snyder Project Number: 119.0729

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ITEM	ITEM NUMBER	ITEM DESCRIPTION	UNIT	UNIT PRICE	DIVISION 1 QUANTITY	DIVISION 2 QUANTITY	DIVISION 1 EXTENDED PRICE	DIVISION 2 EXTENDED PRICE	TOTAL EXTENDED PRICE
11.02	11,020-108-A	Mobilization	LS	\$ 40,000	0.93	0.07	\$ 37,200	\$ 2,800	\$ 40,000
11.03	11,030-108-A-0	Maintenance of Postal Service	LS	\$ 1,000	1		\$ 1,000	\$ -	\$ 1,000
11.04	11,030-108-B-0	Maintenance of Solid Waste Collection	LS	\$ 1,000	1		\$ 1,000	\$ -	\$ 1,000
11.05	11,050-108-A-0	Concrete Washout	LS	\$ 2,500	1		\$ 2,500	\$ -	\$ 2,500
<b>Structural Quantities</b>									
99.01	2102-0425071	SPECIAL BACKFILL	CY	\$ 35	38.8		\$ 1,358	\$ -	\$ 1,358
99.02	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	CY	\$ 50	72.4		\$ 3,620	\$ -	\$ 3,620
99.03	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	\$ 10,000	1		\$ 10,000	\$ -	\$ 10,000
99.04	2402-2720000	EXCAVATION, CLASS 20	CY	\$ 28	902		\$ 25,256	\$ -	\$ 25,256
99.05	2415-2100000	PRECAST CONCRETE BOX CULVERT	LF	\$ 1,800	74		\$ 133,200	\$ -	\$ 133,200
99.06	2415-2200000	PRECAST CONCRETE BOX CULVERT STRAIGHT END SECTION	EA	\$ 24,000	2		\$ 48,000	\$ -	\$ 48,000
99.07	2501-8400172	TEMPORARY SHORING	LS	\$ 30,000	1		\$ 30,000	\$ -	\$ 30,000
99.08	2519-1001000	FENCE, CHAIN LINK, VINYL COATED	LF	\$ 115	75.3		\$ 8,660	\$ -	\$ 8,660

CONSTRUCTION TOTAL (Rounded): \$ 471,090 \$ 41,290 \$ 512,380



**City of Knoxville - Roche Culvert Replacement - 119.0729**

**Date - February 13, 2020**

Item #	Item	Responsibility	Lead	Start Date	Completion Date	Date Completed	Comments
1	Topographic and Boundary Survey	S&A	EJM	August 1, 2019	August 31, 2019	September 6, 2019	
2	Hydraulic and Hydrologic Review and Report / Memo	S&A	SK	September 10, 2019	October 18, 2019	October 18, 2019	
3	Final Culvert Sizing	S&A and City of Knoxville			October 30, 2019	November 1, 2019	
4	Environmental - Wetland and Stream delineation	S&A	JW	October 1, 2019	December 17, 2019	December 13, 2019	Field work completed. Report / findings to be forwarded soon.
5	Preliminary design and plan preparation	S&A	AGB	October 31, 2019	December 13, 2019	December 13, 2019	
6	Preliminary plan submittal to City	S&A	AGB		December 13, 2019	December 13, 2019	
7	Preliminary plan review	City of Knoxville		December 14, 2019	December 20, 2019	December 30, 2019	
8	Utility Meeting #1	S&A	AGB		December 16, 2019	January 3, 2020	TEAMS meeting
9	ACOE Environmental Review	ACOE		January 29, 2020	March 13, 2020		Anticipated 6 week review time
10	Receive ACOE 404 Permit	ACOE			March 13, 2020		
11	Final design and plan preparation	S&A	AGB	December 17, 2019	January 24, 2020	January 27, 2020	
12	Final plan submittal to City	S&A			January 24, 2020	January 27, 2020	
13	Final plan review	City of Knoxville		January 27, 2020	February 3, 2020	January 28, 2020	
14	Bid Document Plan Preparation	S&A	AGB	February 4, 2020	February 14, 2020	February 13, 2020	
15	Bid Document Submittal (signed 100%) to City	S&A	AGB		February 14, 2020	February 13, 2020	
16	City set bid date and public hearing date	City of Knoxville			February 17, 2020		
17	Post Plans to QuestCDN & Post Notice to bidder/PH to MBI & City Website	S&A and City of Knoxville	AGB		February 20, 2020		
18	Bid Period and Letting	S&A	AGB	February 20, 2020	March 10, 2020		
19	Project Award	City of Knoxville			March 16, 2020		
20	Begin Construction	S&A and City of Knoxville	AGB		May 1, 2020		

Summary of Out of Scope Items

Estimated Cost

- Item completed
- Item added to original schedule (Only highlighted on one schedule update)
- Date revised from original schedule (Only highlighted on one schedule update)
- Critical Item

Estimated Total

\$0