

# **TOWN OF ST. PAULS FLOOD IMPROVEMENTS**

## **EARLY NOTICE FLOODPLAIN AND WETLANDS MAPS**

- **Proposed Project Location Maps**
- **USFWS National Wetlands Inventory Maps  
(showing Big Marsh Swamp and USFWS  
confirmation no PUBFh wetland present at  
Parcel 1 - Calvary Cornerstone Holiness Church)**
- **FEMA FIRMettes**
- **USACE NWP 18 Permit Verification and  
Jurisdictional Determination with Site Plans  
showing Wetland Impacts**

## **Proposed Project Location Maps**

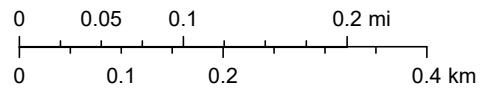
# St. Pauls Flood Improvements - Aerial Map



June 8, 2023

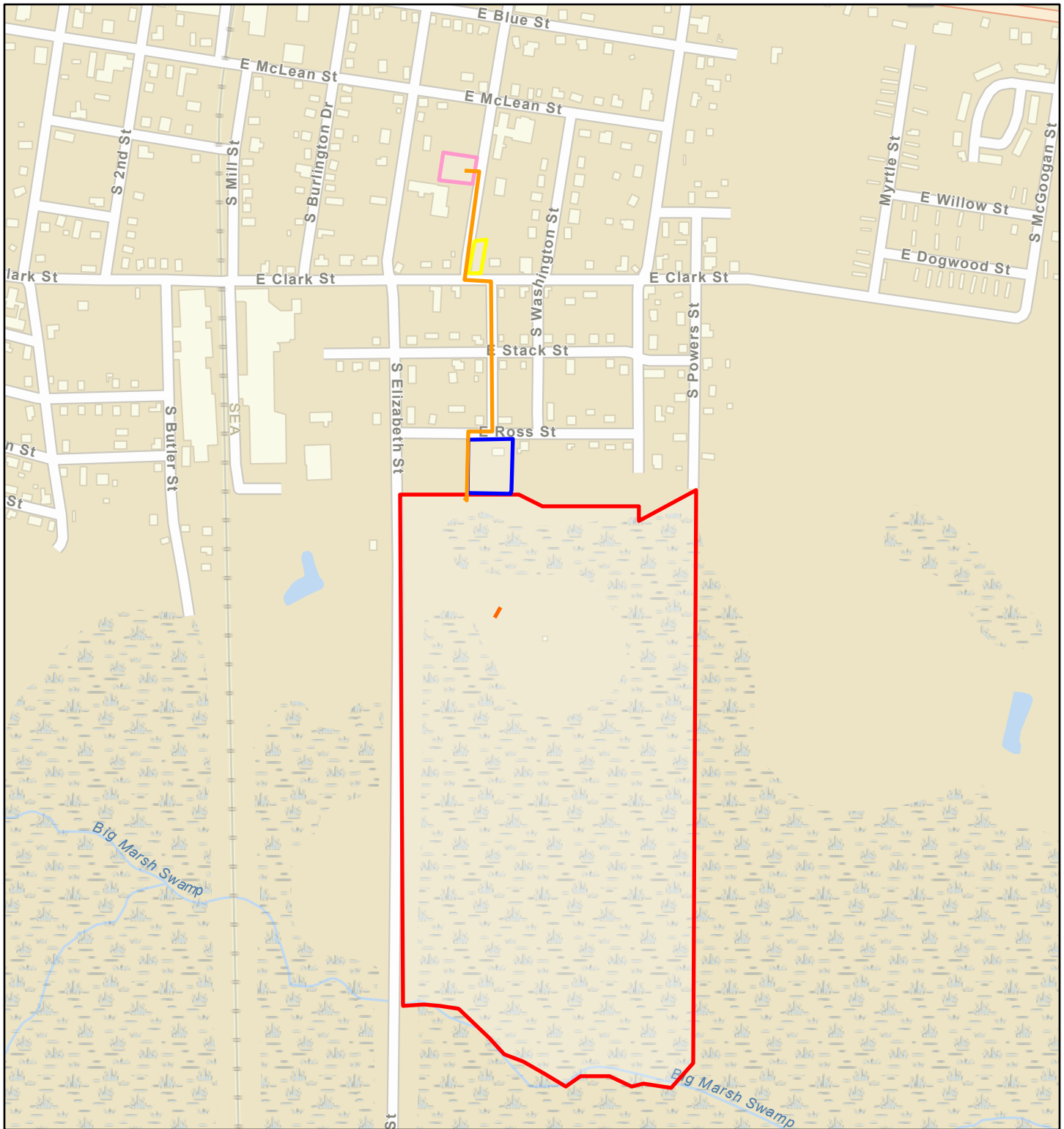
1:9,028

- St. Pauls' Southern Project
- St. Pauls' Northern Project
- Calvary Cornerstone Holiness Church
- 401 East Clark Street
- 400 East Ross Street
- St. Pauls' WWTP



NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

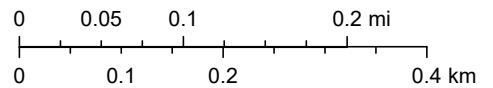
# St. Pauls Flood Improvements - Street Map



June 8, 2023

1:9,028

- St. Pauls' Southern Project
- St. Pauls Northern Project
- Calvary Cornerstone Holiness Church
- 401 East Clark Street
- 400 East Ross Street
- St. Pauls' WWTP

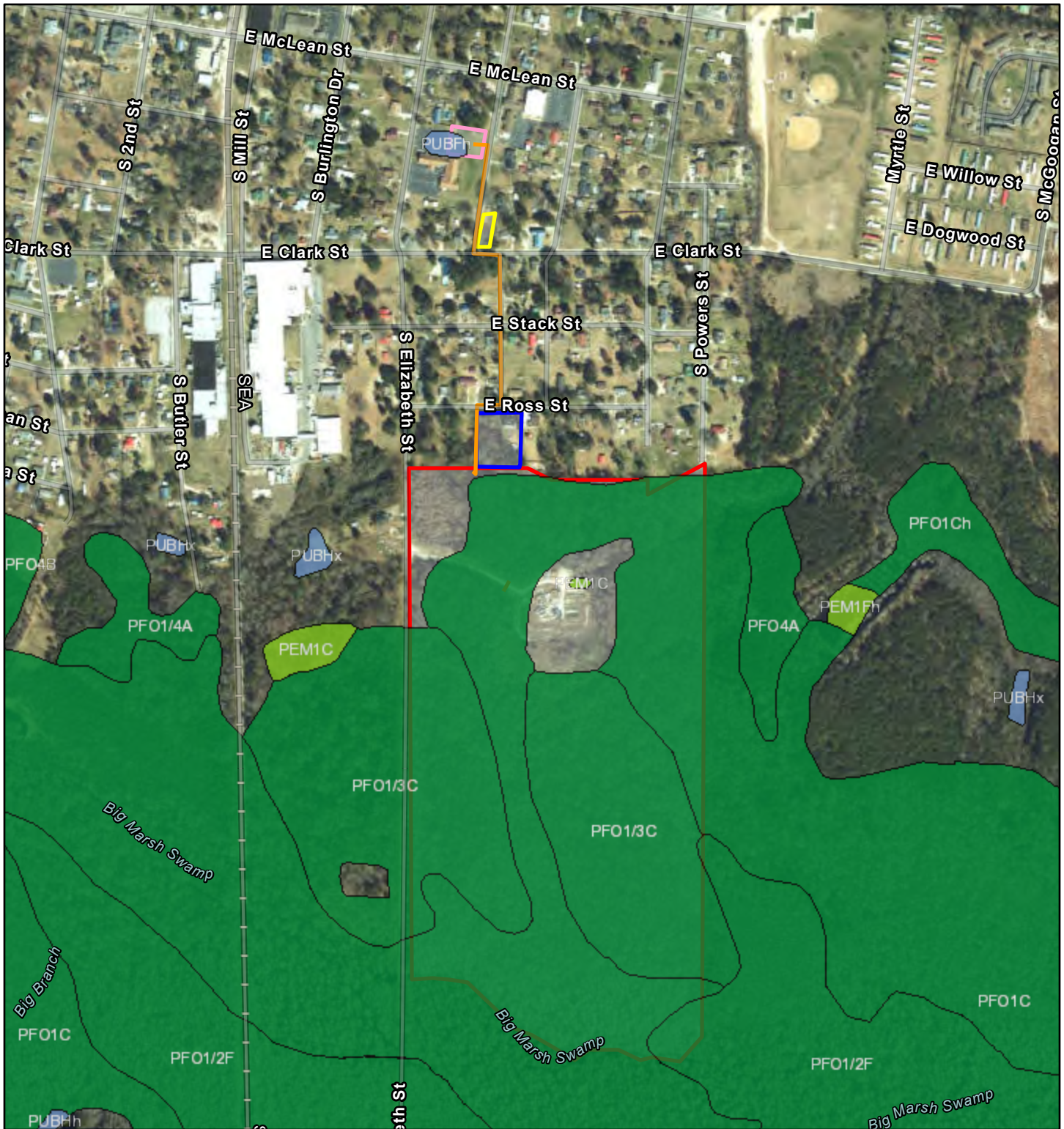


Esri Community Maps Contributors, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA



**USFWS National Wetlands Inventory Maps  
(showing Big Marsh Swamp and USFWS  
confirmation no PUBFh wetland present at  
Parcel 1 - Calvary Cornerstone Holiness  
Church)**

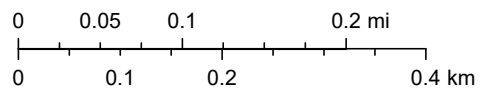
# St. Pauls Flood Improvements - NWI Map



June 8, 2023

1:9,028

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| <b>Wetlands</b>                   | Other                               |
| Estuarine and Marine Deepwater    | Riverine                            |
| Estuarine and Marine Wetland      | St. Pauls' Southern Project         |
| Freshwater Emergent Wetland       | St. Pauls Northern Project          |
| Freshwater Forested/Shrub Wetland | Calvary Cornerstone Holiness Church |
| Freshwater Pond                   | 401 East Clark Street               |
| Lake                              | 400 East Ross Street                |
|                                   | St. Pauls' WWTP                     |






U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_team@fws.gov, NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA





July 18, 2022

**Wetlands**

- |   |                                |   |                                   |   |          |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake     |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other    |
|   |                                |  | Freshwater Pond                   |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

## Gievers, Andrea

---

**From:** Hunt, Gary <Gary\_Hunt@fws.gov>  
**Sent:** Thursday, March 23, 2023 11:27 AM  
**To:** Gievers, Andrea  
**Subject:** Re: [EXTERNAL] St. Pauls Flood Improvement - NWI Map inconsistency

**CAUTION:** External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

TO: Andrea Gievers, JD, MSEL, ERM  
Environmental SME  
Community Development  
NC Office of Recovery and Resiliency  
845/682-1700

RE: Analysis of wetland features at South Johnson Street, East Clark Street, Elizabeth Street; and Calvary Cornerstone Holiness Church, Johnson Street, Parcel ID 381404009.

After reviewing current available aerial imagery and your investigation of the above-mentioned parcel, it is clear that the wetland feature (Coded PUBFh) is no longer present.

The U.S. Fish & Wildlife Service National Wetlands Inventory has been collecting and maintaining wetlands data for more than forty years. Due to budget and manpower limitations, some areas originally mapped in the 1970's and 1980's never got updated. Therefore, as in this case, features that once existed when the original data was collected may be altered or in some cases gone all together. This is a common issue with the database, especially in areas of rapid growth or change.

The data for this area was collected in 1983, and has not been updated.

It should also be noted that the National Wetlands Inventory (NWI) is an inventorying and classifying agency, which *only* provides reconnaissance-level wetland maps and information. The National Wetlands Inventory is not a regulatory agency. Federal, State and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. Entities should not rely solely on this inventory for current wetland status. Modern aerial imagery and on-the-ground investigations may supersede data appearing on the online NWI Wetlands Mapper. For Federally-based jurisdictional determinations, the U.S. Army Corps of Engineers should be consulted.

Feel free to call or email if you have any further questions or concerns.

Sincerely,  
*Gary H Hunt*  
*National Wetlands Inventory Coordinator*  
*Ecological Services*  
*U.S. Fish & Wildlife Service*  
*500 Gold Ave. SW Room 6056*  
*Albuquerque, NM 87102*  
*505-248-6776 (office)*  
*505-248-6922 (fax)*  
[gary\\_hunt@fws.gov](mailto:gary_hunt@fws.gov)



---

**From:** Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>  
**Sent:** Tuesday, March 21, 2023 11:25 AM  
**To:** Hunt, Gary <Gary\_Hunt@fws.gov>  
**Subject:** [EXTERNAL] St. Pauls Flood Improvement - NWI Map inconsistency

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Hello:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is considering funding this Infrastructure Recovery Program project, St. Pauls Flood Improvement. The proposed project location is at South Johnson Street, East Clark Street, Elizabeth Street; and Calvary Cornerstone Holiness Church, Johnson Street, Parcel ID 381404009; 400 East Ross Street, St. Pauls, NC 28384, Parcel ID 38160204101; 401 East Clark Street, St. Pauls, NC 28384, Parcel ID 38140401401; and Town of St. Pauls, Elizabeth Street, Parcel ID 30890981900, Robeson County, NC 28364. During the Hurricane Matthew storm event, the Town of Saint Pauls experienced widespread flood damage, especially in areas surrounding South Johnson and East Clark Streets, causing residents in these areas to be stranded and in need of assistance by emergency responders. The Town proposes a system of stormwater improvements that will carry future stormwater events south of these residential areas and connect with the Town’s stormwater processing infrastructure.

Per HUD regulations at 24 CFR 55.2(b)(11), I am reaching out to you regarding an NWI-mapped wetland that is no longer wetland. The project starts at one parcel with NWI-mapped wetland which is currently a church parking lot and lawn with a catch basin, see attached and below. I have asked USACE Gary Beecher who sent me the Lidar map if he could confirm for me that it is no longer a wetland. Mr. Beecher is working on the PCN submittal for the Big Marsh Swamp portion of the project. *Is it possible to get a sign-off from USFWS that this is no longer a wetland?* Please feel free to contact me if you have any questions. Thank you so much!



1: S. Johnson\_Facing West



5: South Johnson Street Catch Basin, Facing West

Sincerely,

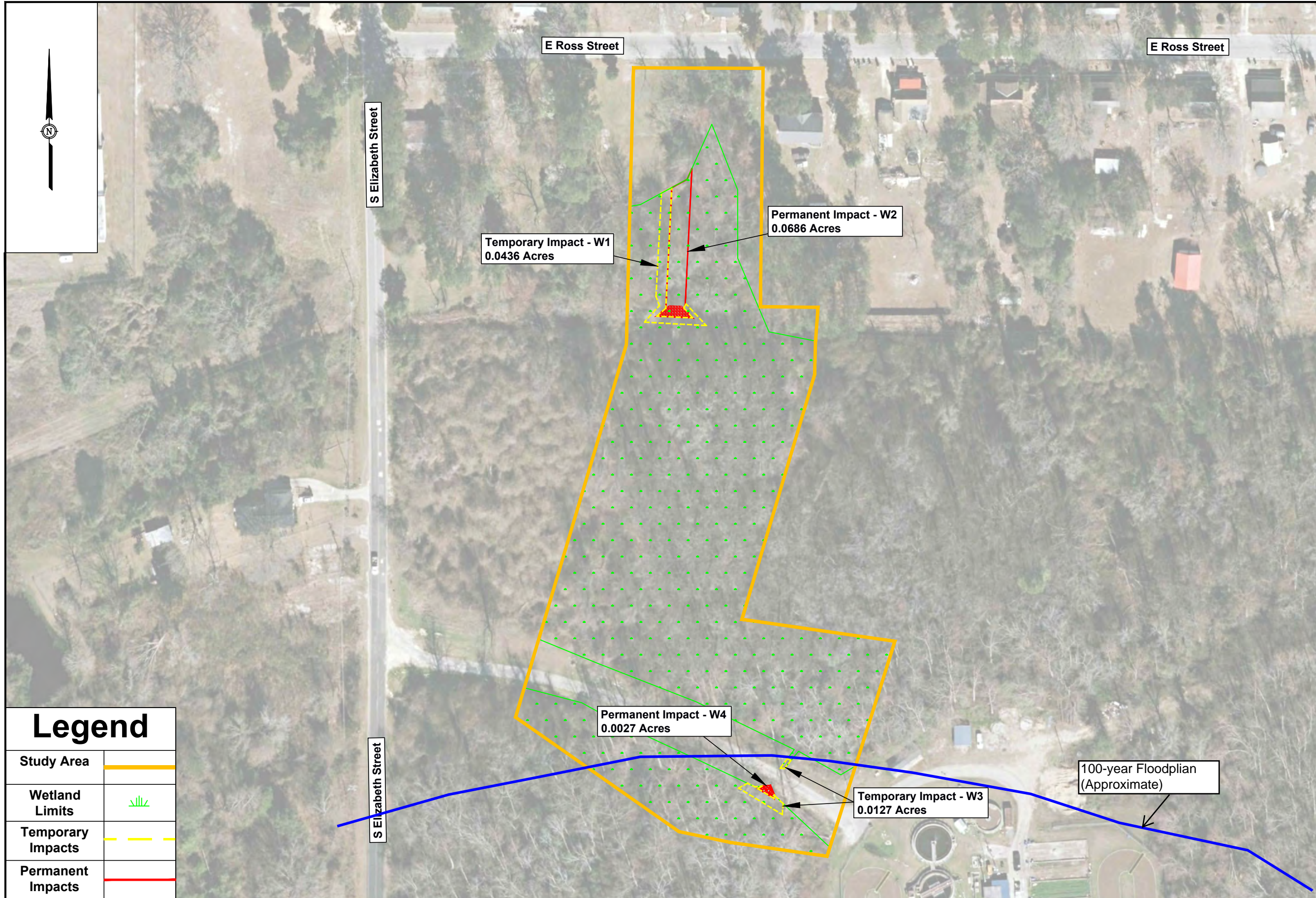
Andrea

Andrea Gievers, JD, MSEL, ERM  
Environmental SME  
Community Development  
NC Office of Recovery and Resiliency  
[Andrea.L.Gievers@Rebuild.NC.Gov](mailto:Andrea.L.Gievers@Rebuild.NC.Gov)  
(845) 682-1700

# **FEMA FIRMettes**



P:\2021\21-04016-STPAULS-NC-ELIZABETH-JOHNSON STREET STORM DRAINAGE\DESIGN\PERMITS\404-40\IPCN\IMPACTS MAP\_2\_7\_2023.DWG PLOT DATE 2/8/2023 10:02 AM ALEX LOWDERMILK



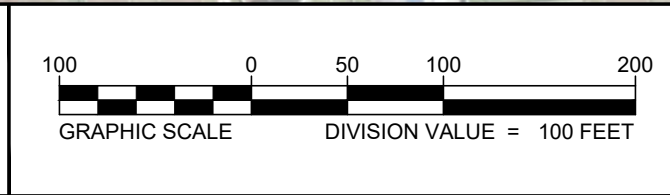
Impacts Table	
Temporary Impact - W1 (Wetland A)	0.0436 Acres
Permanent Impact - W2 (Wetland A)	0.0686 Acres
Temporary Impact - W3 (Wetland A)	0.0127 Acres
Permanent Impact - W4 (Wetland A)	0.0027 Acres

Legend	
Study Area	
Wetland Limits	
Temporary Impacts	
Permanent Impacts	

1240 19th Street Lane NW  
Hickory, NC 28601  
828.328.2024  
NC Firm License # C-0459  
mcgillassociates.com

DATE 2/8/2023	PROJECT # 21.04018
OFFICE MANAGER DC	DESIGNER AL
PROJECT MANAGER DS	REVIEWER JS

ELIZABETH-JOHNSON STREET  
STORM DRAINAGE  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

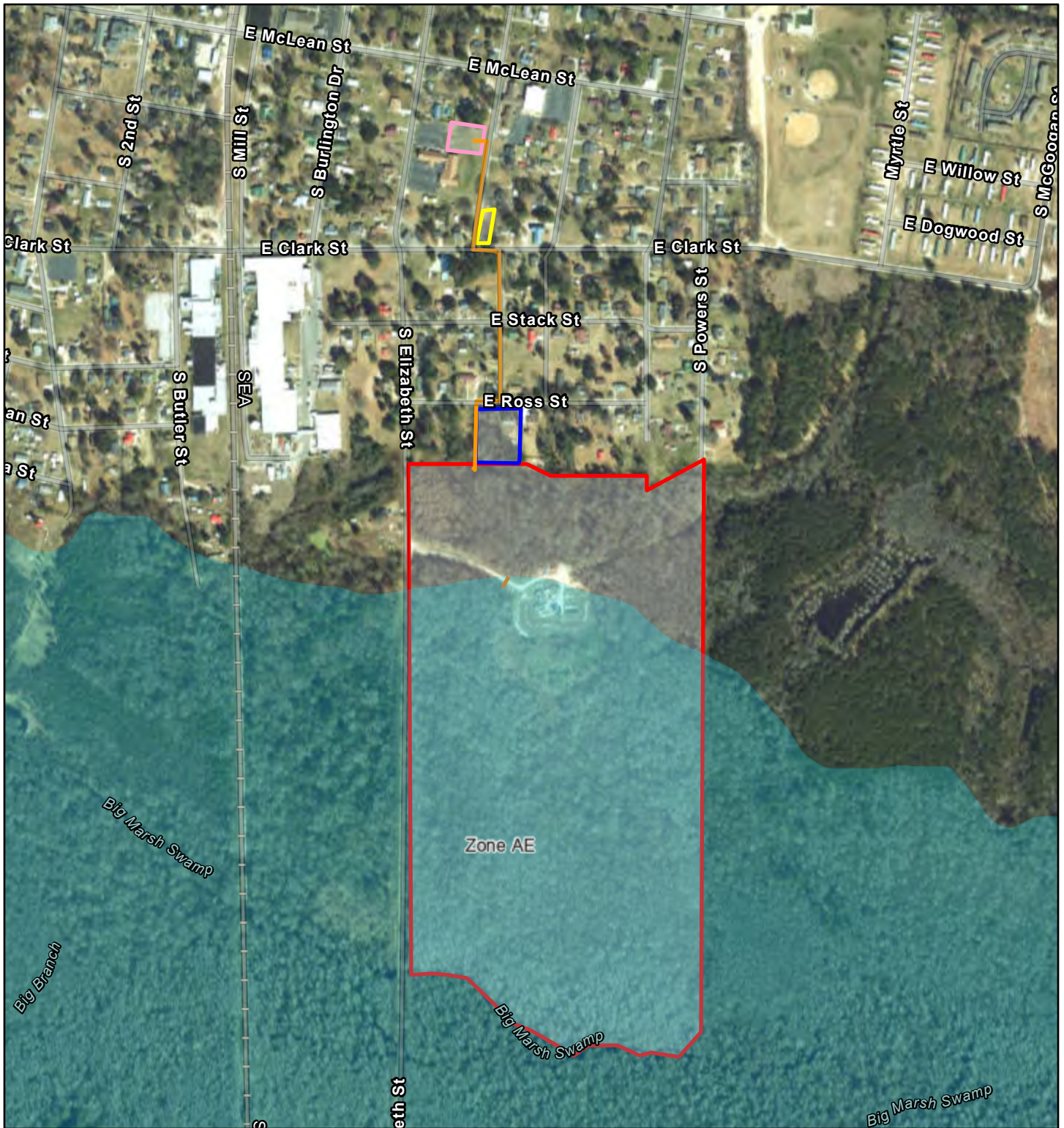


IMPACTS MAP

FIGURE  
**1**



# St. Pauls Flood Improvements - FEMA FIRM

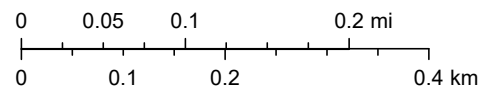


June 8, 2023

1:9,028

## Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard



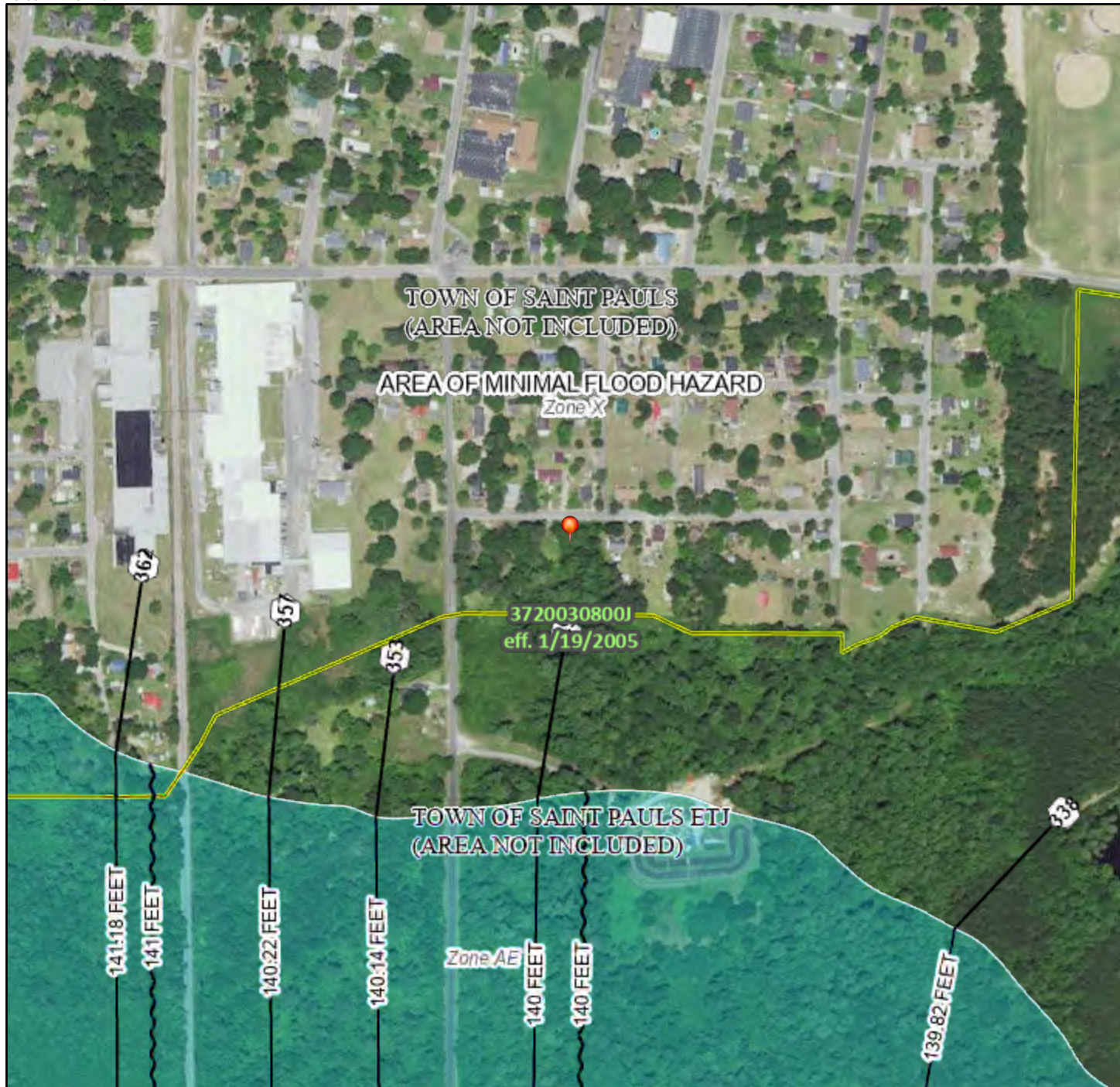
NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA



# National Flood Hazard Layer FIRMette



78°58'24"W 34°48'14"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

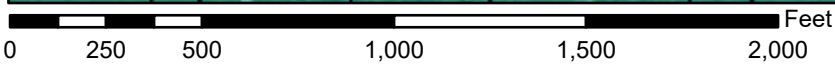


The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/8/2023 at 10:06 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



1:6,000

78°57'46"W 34°47'45"N

Basemap Imagery Source: USGS National Map 2023

**USACE NWP 18 Permit Verification and  
Jurisdictional Determination with Site Plans  
showing Wetland Impacts**

**U.S. ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT**

Action Id. **SAW-2023-00404** County: **Robeson County** U.S.G.S. Quad: **Saint Pauls**

**GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION**

Permittee: **Town of St. Pauls**  
**Attn: Mayor Elbert Gibson**

Address: **210 West Blue Street**  
**St. Pauls, NC**

Telephone Number: **(910) 865-5165**

E-mail Address: **[debra@stpaulsnc.gov](mailto:debra@stpaulsnc.gov)**

Size (acres)	<b><u>4.03</u></b>	Nearest Town	<b><u>St. Pauls, NC</u></b>
Nearest Waterway	<b><u>Big Branch</u></b>	River Basin	<b><u>Lower Pee Dee</u></b>
USGS HUC	<b><u>03040203</u></b>	Coordinates Latitude:	<b><u>34.7989</u></b>
		Longitude:	<b><u>-78.9681</u></b>

Location description: **This project will take place in the vicinity of South Johnson Street, East Clark Street and East Ross Street in the Town of St. Pauls, Robeson County, NC (Parcel ID: 030890981900).**

Description of projects area and activity: **A NWP 18 will be used to permanently impact 0.072-acres of 404 wetlands for the use in flood and drainage improvements for the Town of St. Pauls.**

Applicable Law:  Section 404 (Clean Water Act, 33 USC 1344);  
 Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: Regional General Permit Number and/or Nationwide Permit Number: **18**  
***SEE ATTACHED RGP or NWP GENERAL, REGIONAL AND/OR SPECIAL CONDITIONS***

**Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached conditions and your submitted application and attached information dated February 13, 2023 & March 17, 2023 Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.**

This verification will remain valid until the expiration date identified below unless the nationwide and/or regional general permit authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide and/or regional general permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide and/or regional general permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide and/or regional general permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide and/or regional general permit's



expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 919-807-6300) to determine Section 401 requirements.

For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management in Morehead City, NC, at (252) 808-2808.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact **Gary Beecher at (910) 251-4694 or Gary.H.Beecher@usace.army.mil.**

Corps Regulatory Official: \_\_\_\_\_ Date: **April 11, 2023**  
Expiration Date of Verification: **NWP 18 expires on March 14, 2026**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at <https://regulatory.ops.usace.army.mil/customer-service-survey/>

Copy furnished via e-mail to:

**Consultant:**

**Jon Swaim**  
**McGill Associates, PA**  
**(828) 328-2024**  
**[Jon.swaim@mcgillassociates.com](mailto:Jon.swaim@mcgillassociates.com)**

U.S. ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT

Action Id. SAW-2023-00404

County: Robeson County

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Permittee: Town of St. Pauls  
Attn: Mayor Elbert Gibson

Address: 210 West Blue Street  
St. Pauls, NC

Telephone Number: (910) 865-5165

E-mail Address: [debra@stpaulsnc.gov](mailto:debra@stpaulsnc.gov)

Size (acres) 4.03  
Nearest Waterway Big Branch  
USGS HUC 03040203

Nearest Town St. Pauls, NC  
River Basin Lower Pee Dee  
Coordinates Latitude: 34.7989  
Longitude: -78.9681

Indicate Which of the Following Apply:

A. Preliminary Determination

**X** There appear to be waters, including wetlands, on the above described property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). The waters, including wetlands, have been delineated, and the delineation has been verified by the Corps to be sufficiently accurate and reliable. Therefore this preliminary jurisdiction determination may be used in the permit evaluation process, including determining compensatory mitigation. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction.

**-** There appear to be waters, including wetlands, on the above described property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). The waters, including wetlands, have been delineated, and the delineation has been verified by the Corps to be sufficiently accurate and reliable. Therefore this preliminary jurisdiction determination may be used in the permit evaluation process, including determining compensatory mitigation. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. This

preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction.

- There appear to be waters, including wetlands, on the above described property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). However, since the waters, including wetlands, have not been properly delineated, this preliminary jurisdiction determination may not be used in the permit evaluation process. Without a verified wetland delineation, this preliminary determination is merely an effective presumption of CWA/RHA jurisdiction over all of the waters, including wetlands, at the project area, which is not sufficiently accurate and reliable to support an enforceable permit decision. We recommend that you have the waters of the U.S., including wetlands, on your property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

## ***B. Approved Determination***

- There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403) and Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- There are waters of the U.S., including wetlands, on the above described property subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
  - We recommend you have the waters of the U.S., including wetlands, on your property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.
  - The waters of the U.S., including wetlands, on your property have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, unless there is a change in law or our published regulations, may be relied upon for a period not to exceed five years from the date of this notification.
  - The waters of the U.S., including wetlands, have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on \_\_\_\_\_. Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

- The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Morehead City, NC, at (252) 808-2808 to determine their requirements.

Placement of dredged or fill material within waters of the US, including wetlands, without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). Placement of dredged or fill material, construction or placement of structures, or work within navigable waters of the United States without a Department of the Army permit may constitute a violation of Sections 9 and/or 10 of the Rivers and Harbors Act (33 USC § 401 and/or 403). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Gary Beecher at (910) 251-4694 or Gary.H.Beecher@usace.army.mil.**

***C. Basis For Determination: N/A. An Approved JD has not been completed.***

**D. Remarks: A desk top review was conducted on this application using information obtained from the consultant (McGill Associates, P.A.) and from Corps generated Lidar and soils Maps.**

#### **E. Attention USDA Program Participants**

The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

#### **F. Appeals Information for Approved Jurisdiction Determinations (as indicated in Section B. above)**

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers  
South Atlantic Division  
Attn: Mr. Philip A. Shannin  
Administrative Appeal Review Officer  
60 Forsyth Street SW, Floor M9  
Atlanta, Georgia 30303-8803

**AND**

**[PHILIP.A.SHANNIN@USACE.ARMY.MIL](mailto:PHILIP.A.SHANNIN@USACE.ARMY.MIL)**

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **N/A.**



**It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.**

Corps Regulatory Official: \_\_\_\_\_

Date of JD: **April 11, 2023**      Expiration Date: **PJD does not expire**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at <https://regulatory.ops.usace.army.mil/customer-service-survey/>.

Copy Furnished via email to:

**Consultant:**

**Jon Swaim**

**McGill Associates, PA**

**(828) 328-2024**

**[Jon.swaim@mcgillassociates.com](mailto:Jon.swaim@mcgillassociates.com)**

**SPECIAL CONDITIONS**

1. Erosion Control: The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

2. Work Limits: All work authorized by this permit shall be performed in strict compliance with the attached permit plans dated February 13, 2023 & March 17, 2023, which are a part of this permit. The Permittee shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Any modification to the attached permit plans must be approved by the U.S. Army Corps of Engineers (Corps) prior to any active construction in waters or wetlands.

3. Temporary Impacts Restoration Measures: Within thirty (30) days of the date of completing the authorized work, the Permittee shall remove all temporary fills in waters of the United States and restore the affected areas to pre-construction contours and elevations. The affected areas shall be re-vegetated with native, non-invasive vegetation as necessary to minimize erosion and ensure site stability.

Action ID Number: SAW-2023-00404

County: Robeson County

Permittee: Town of St. Pauls, Attn: Mayor Elbert Gibson

Project Name: Elizabeth-Johnson St Storm Drainage Improvements

Date Verification Issued: April 11, 2023

Project Manager: Gary Beecher

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT  
Attn: Gary Beecher

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

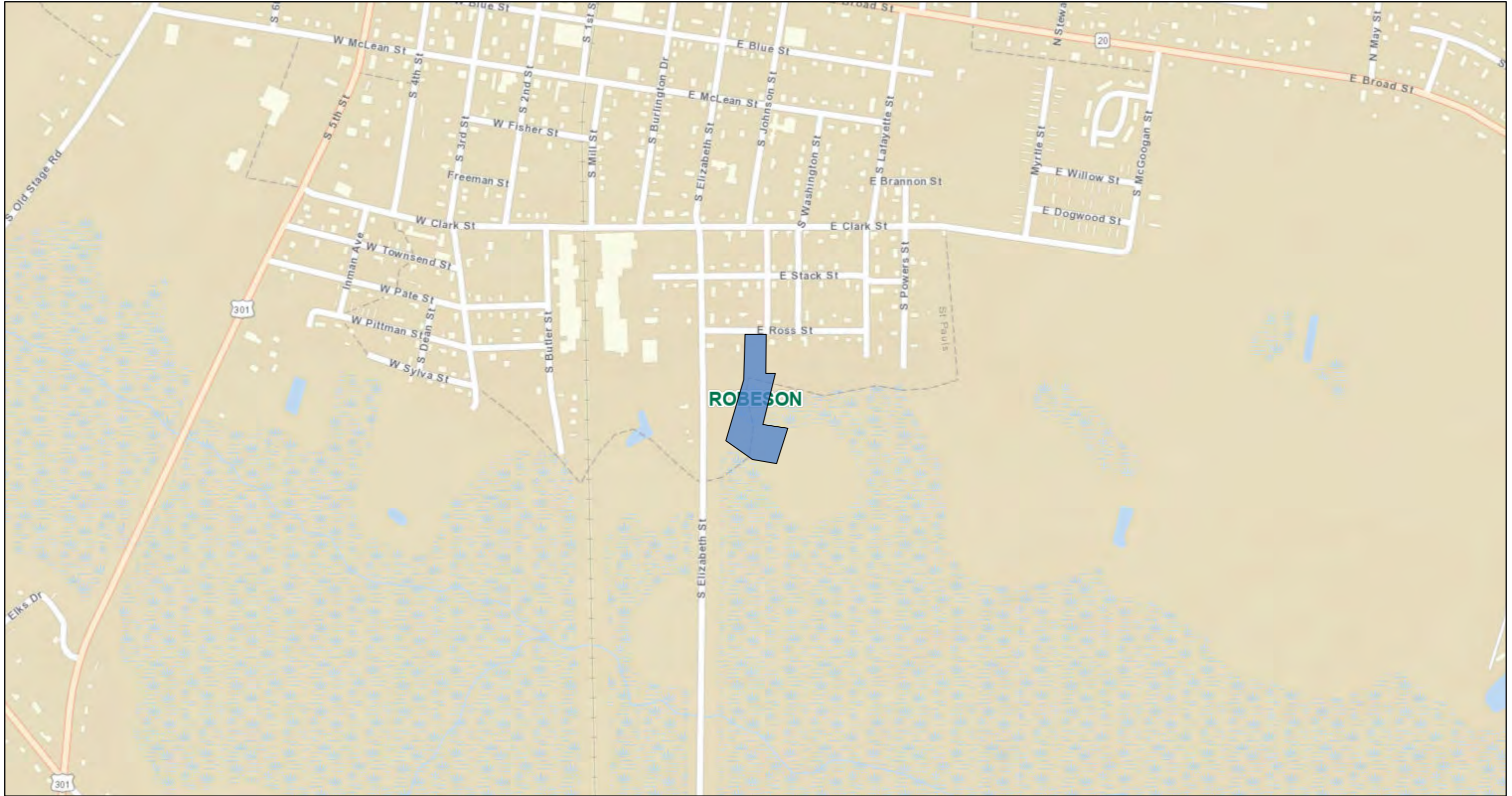
I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

\_\_\_\_\_  
Signature of Permittee



\_\_\_\_\_  
Date



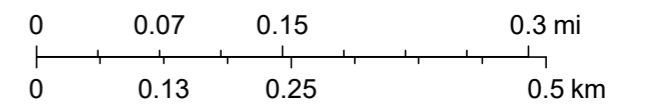
# NCHPO HPOWEB Map



2/7/2023, 11:43:49 AM

-  Study Area\_2\_6\_2023
-  Counties (outline)

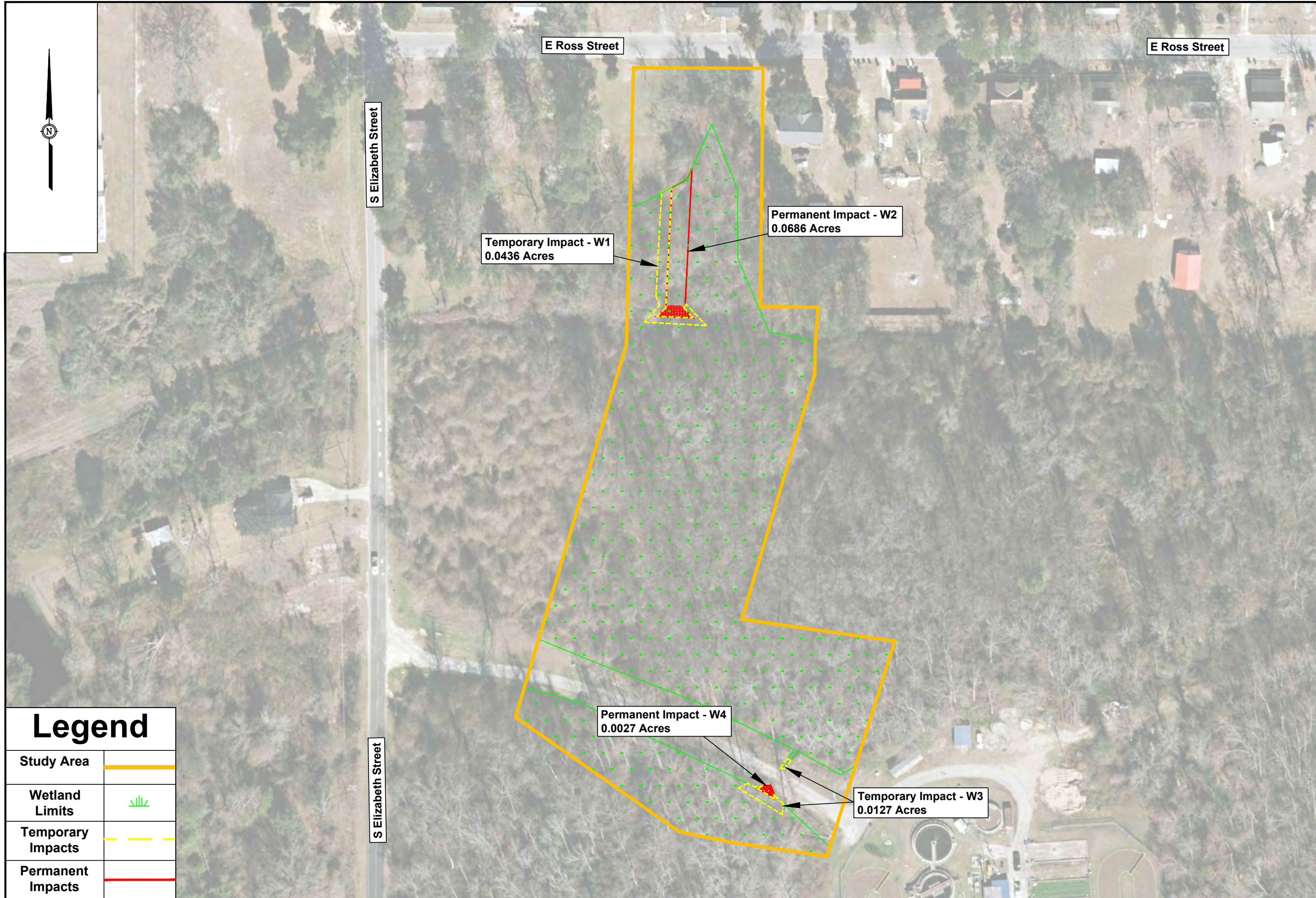
1:9,028



State of North Carolina DOT, Esri, HERE, Garmin, INCREMENT P, Intermap, NGA, USGS



P:\2021\21\_04016-STPAULS-NC-ELIZABETH-JOHNSON STREET STORM DRAINAGE\DESIGN\PERMITS\404-40\IPCN\IMPACTS MAP\_2\_7\_2023.DWG PLOT DATE 2/8/2023 10:02 AM ALEX LOWDERMILK



Impacts Table	
Temporary Impact - W1 (Wetland A)	0.0436 Acres
Permanent Impact - W2 (Wetland A)	0.0686 Acres
Temporary Impact - W3 (Wetland A)	0.0127 Acres
Permanent Impact - W4 (Wetland A)	0.0027 Acres

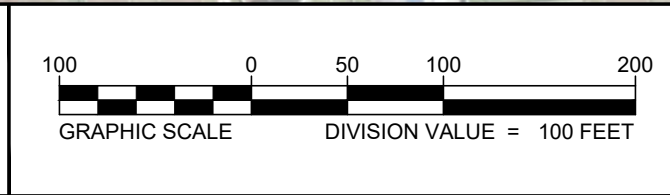
Legend	
Study Area	
Wetland Limits	
Temporary Impacts	
Permanent Impacts	



1240 19th Street Lane NW  
Hickory, NC 28601  
828.328.2024  
NC Firm License # C-0459  
mcgillassociates.com

DATE 2/8/2023	PROJECT # 21.04018
OFFICE MANAGER DC	DESIGNER AL
PROJECT MANAGER DS	REVIEWER JS

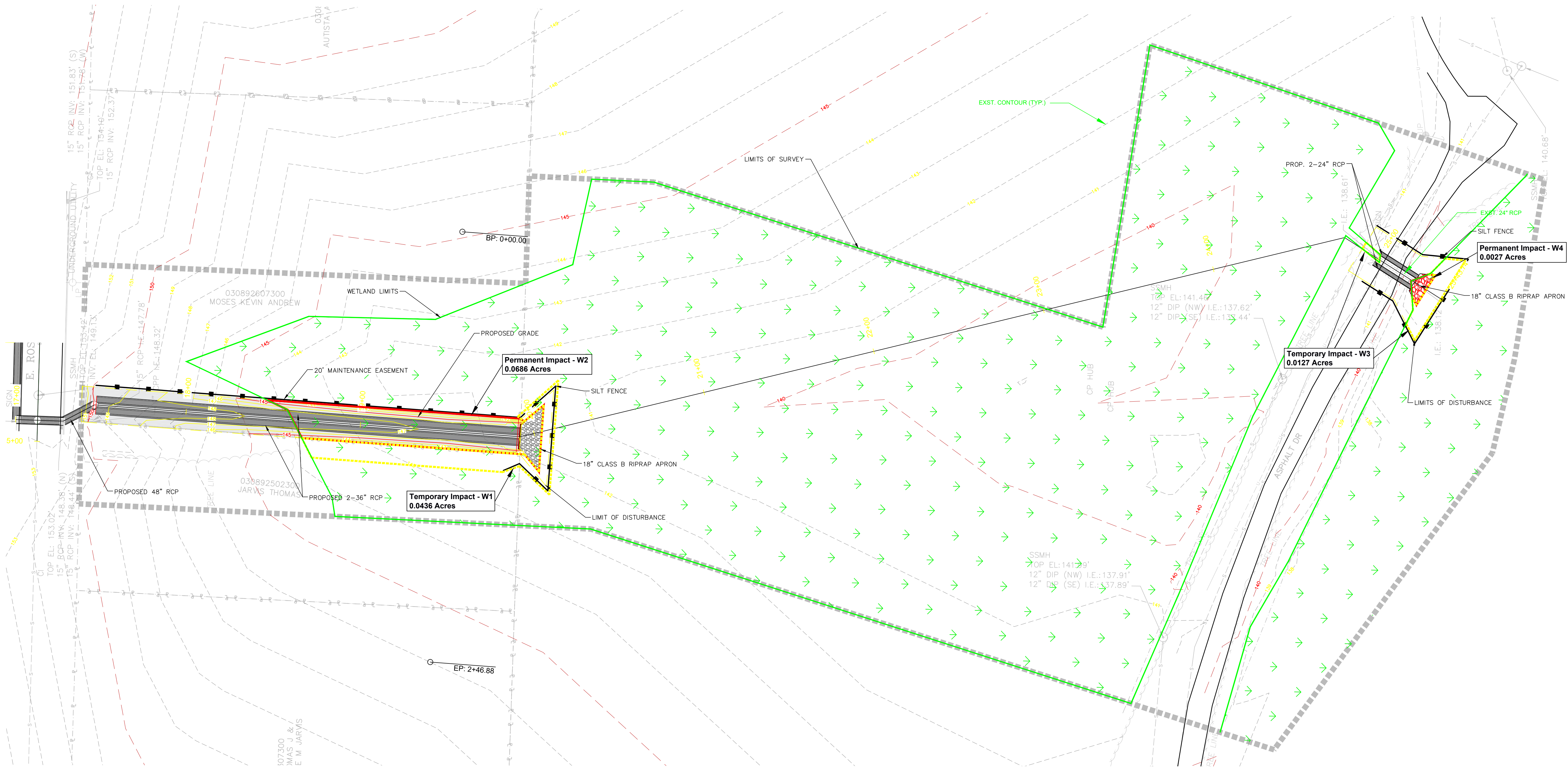
ELIZABETH-JOHNSON STREET  
STORM DRAINAGE  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA



IMPACTS MAP

FIGURE  
**1**





PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION

P:\2021\12\10\STPAULS\ELIZABETH-JOHNSON STREET STORM DRAINAGE\DRAWINGS\SHEETSC-10 PROPOSED.DWG PLOT DATE 3/17/2023 1:51 PM JON SWAIM

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS

55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

PRELIMINARY



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

<p>GRAPHIC SCALE DIVISION VALUE = 30 FEET</p>	
OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

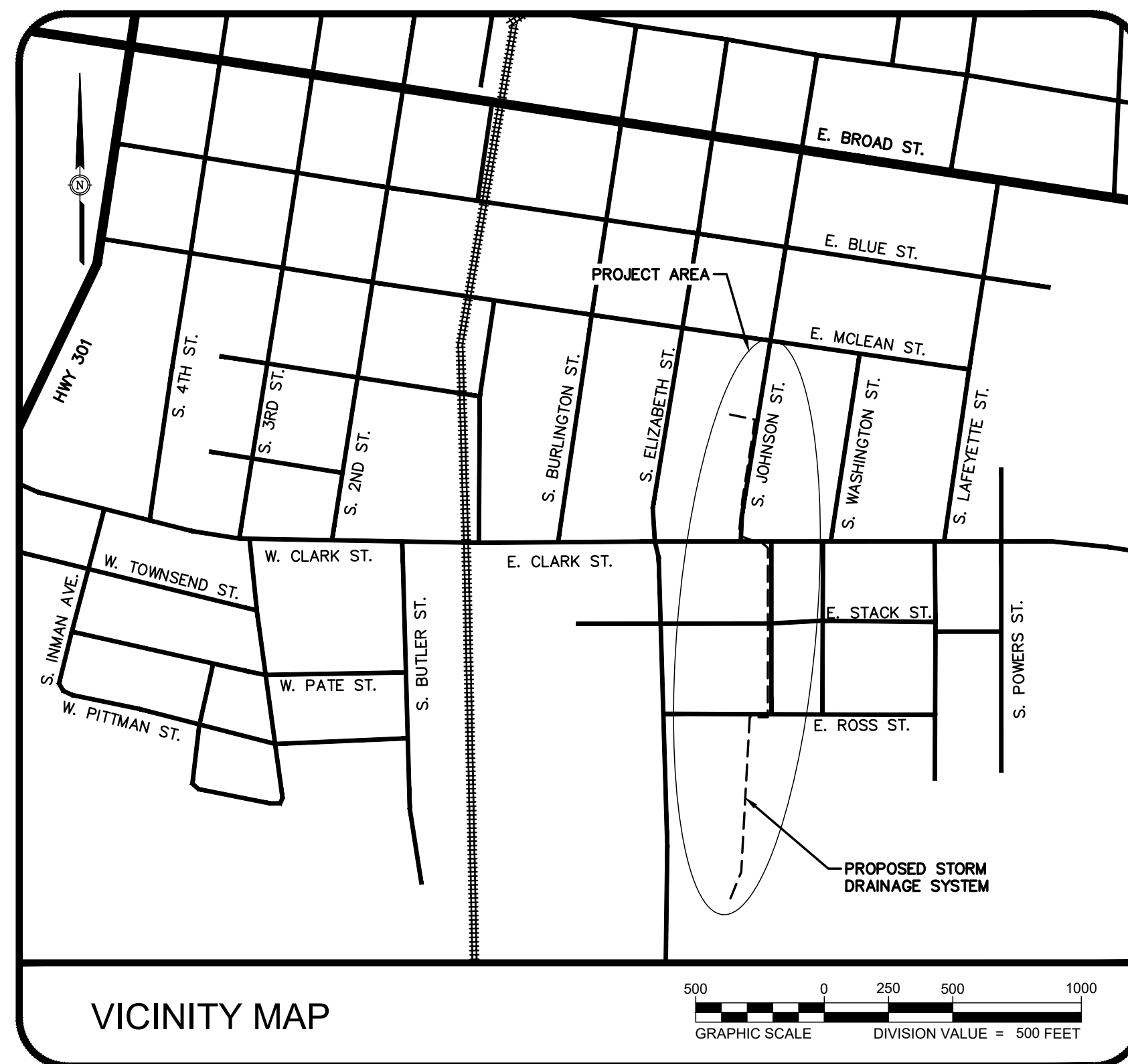
OVERVIEW OF WETLAND IMPACTS STA. 17+00-25+50		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**C-17**



# ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS TOWN OF ST. PAULS

## ROBESON COUNTY, NORTH CAROLINA



### SCHEDULE OF DRAWINGS

- G-01 Cover
- G-02 Notes & Legend
- G-03 NCDEQ General Permit Notes
- G-04 NCDEQ General Permit Notes
- CE-01 Existing Conditions 1 of 4
- CE-02 Existing Conditions 2 of 4
- CE-03 Existing Conditions 3 of 4
- CE-04 Existing Conditions 4 of 4
- C-10 Proposed Plan and Profile S. Johnson St. Sta. 0+00-5+50
- C-11 Proposed Plan and Profile E. Clark St. Sta. 6+00-7+50
- C-12 Proposed Plan and Profile S. Johnson St. Sta. 8+00-12+00
- C-13 Proposed Plan and Profile S. Johnson St. Sta. 12+00-15+00
- C-14 Proposed Plan and Profile E. Ross St. Sta. 15+00-16+50
- C-15 Proposed Plan and Profile Sta. 17+00-22+00
- C-16 Proposed Plan and Profile Sta. 22+00-25+50
- C-17 Overview of Wetland Impacts Sta. 17+00-25+50
- C-20 Cross Sections Sta. 17+50-20+00
- C-30 Erosion Control Details 1 of 2
- C-31 Erosion Control Detail 2 of 2
- C-32 Miscellaneous Details 1 of 2
- C-33 Miscellaneous Details 2 of 2

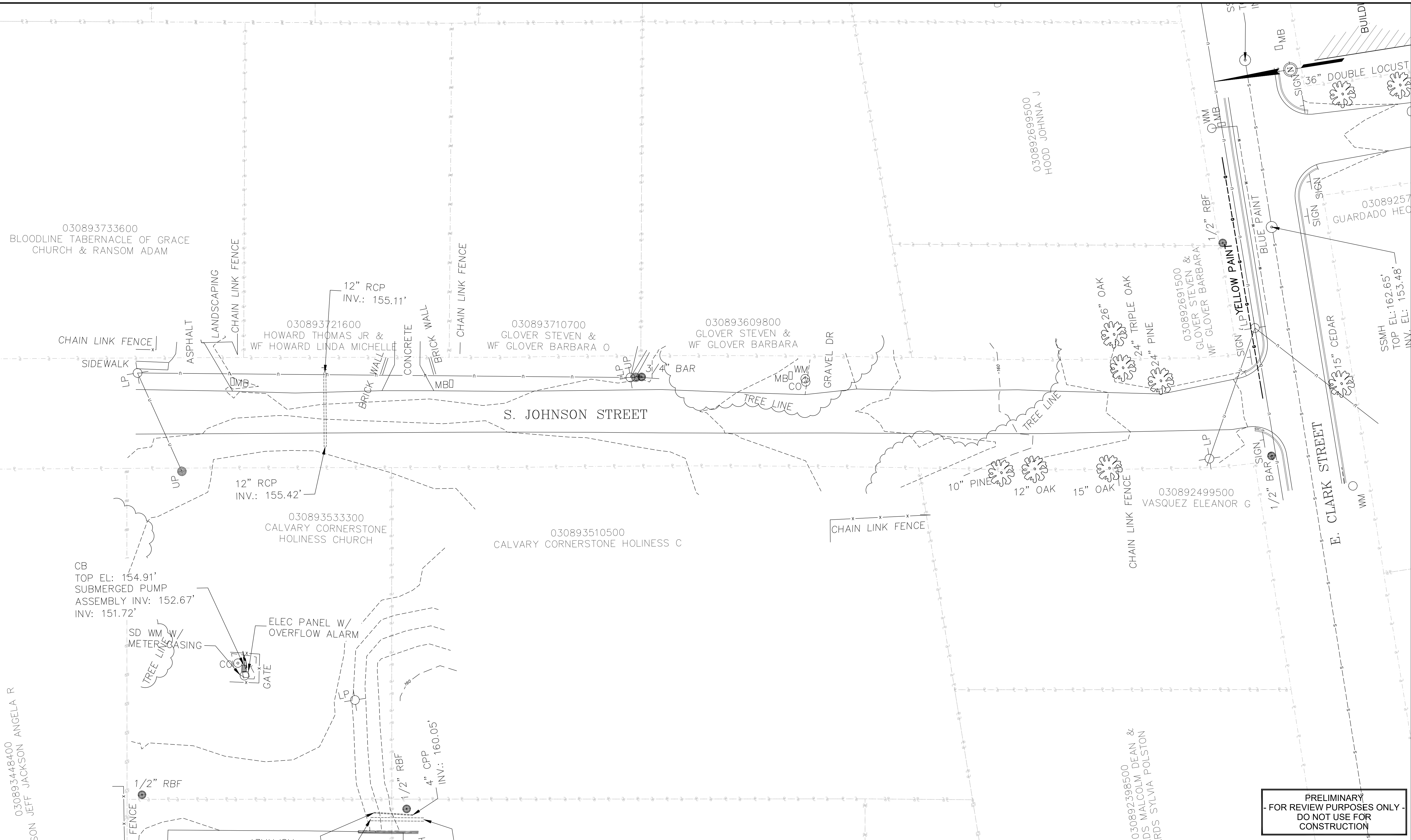


PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION

PRELIMINARY

FEBRUARY 2023

V:\D.MCGILLEN\ENGINEERS.COM\COMPANYS\HARE\MCGILL PROJECTS\2021\21.04018-STPAULS-NC-ELIZABETH-JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAWINGS\SHEETS\CE-01 EXISTING CONDITIONS DWG PLOT DATE 2/1/2023 10:03 AM KALIA BEESLEY

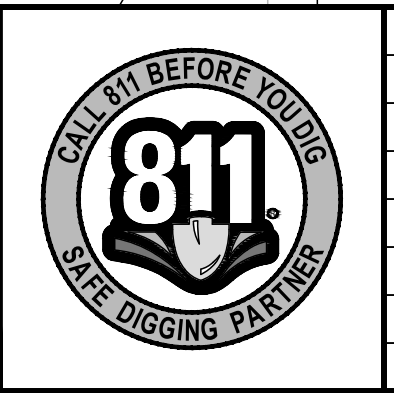


PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION



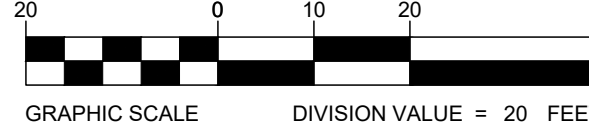
55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

	
OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

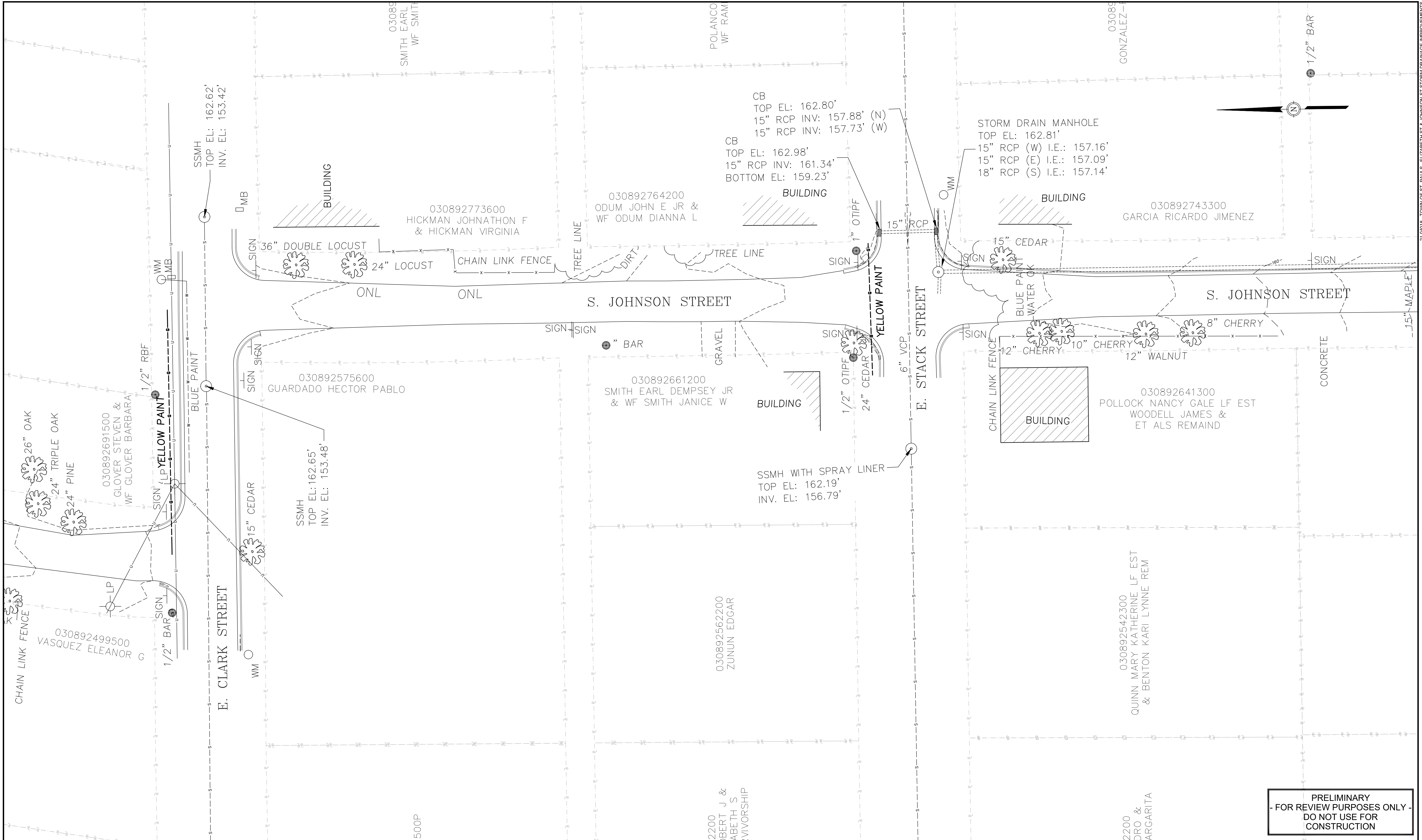
EXISTING CONDITIONS 1 OF 4		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**CE-01**

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS



V:\04\ENGINEERS\COMPCOMPANY\SHARE\MCGILL\PROJECTS\2021\21\_04018-STPAULS-ELIZABETH-JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAWINGS\SHEETS\CE-01 EXISTING CONDITIONS DWG PLOT DATE 2/1/2023 10:04 AM KALIA BEESLEY



PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION



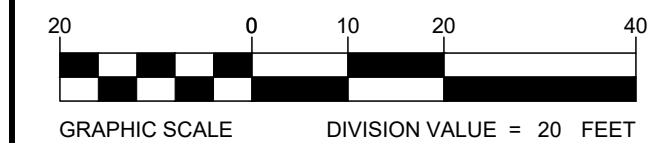
55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA



GRAPHIC SCALE DIVISION VALUE = 20 FEET

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

EXISTING CONDITIONS 2 OF 4

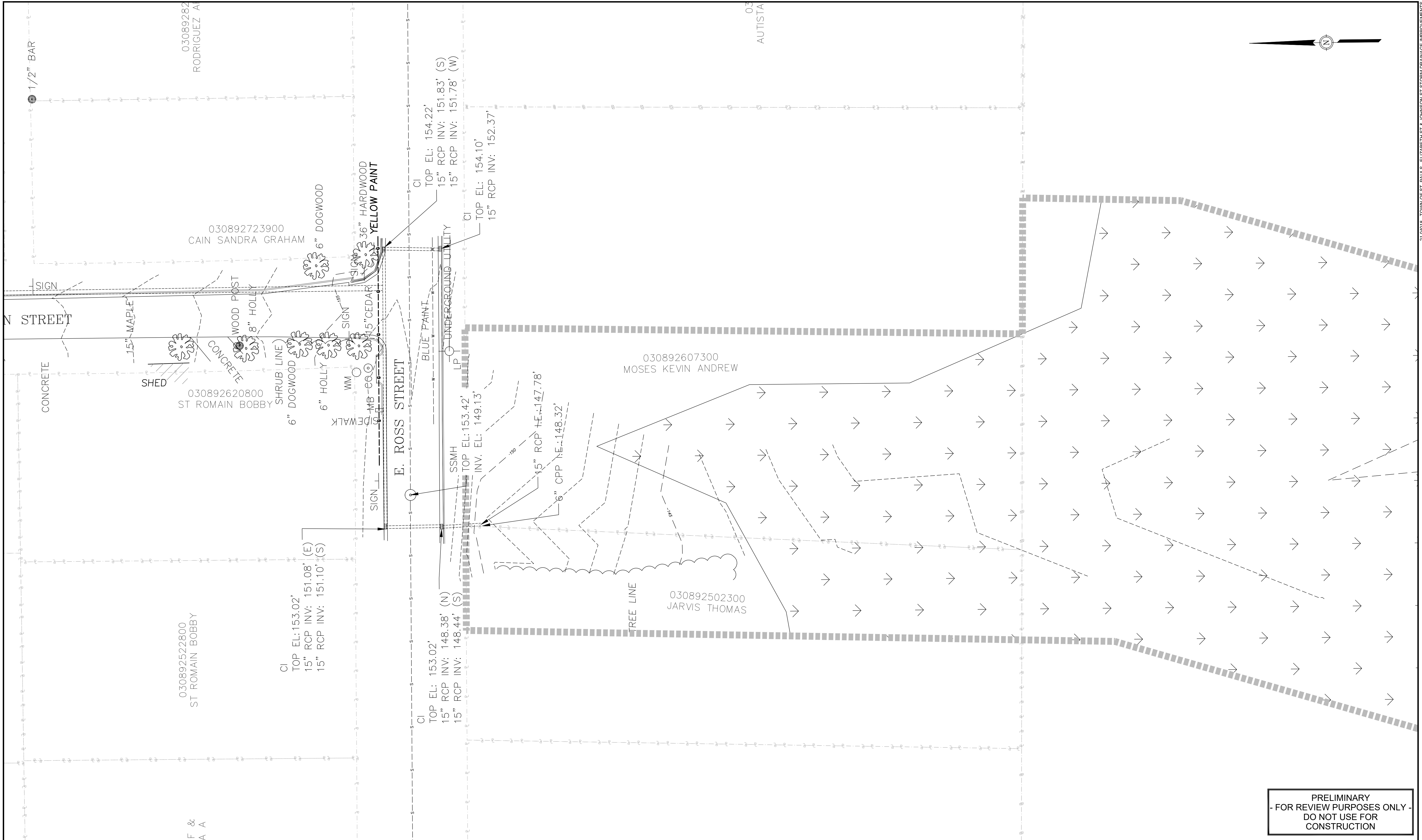
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A
-----------------------	-----------------------	------------------

SHEET  
**CE-02**

21\_04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS



V:\D.MCGILL\ENGINEERS\COMPANY\SHARE\MCGILL PROJECTS\2021\21.04018-STPAULS-NC-ELIZABETH-JOHNSON STREET STORM DRAINAGE DRAWINGS\SHEETS\CE-01 EXISTING CONDITIONS DWG PLOT DATE 2/8/2023 3:33 PM KAJIA BEESLEY



PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION

55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

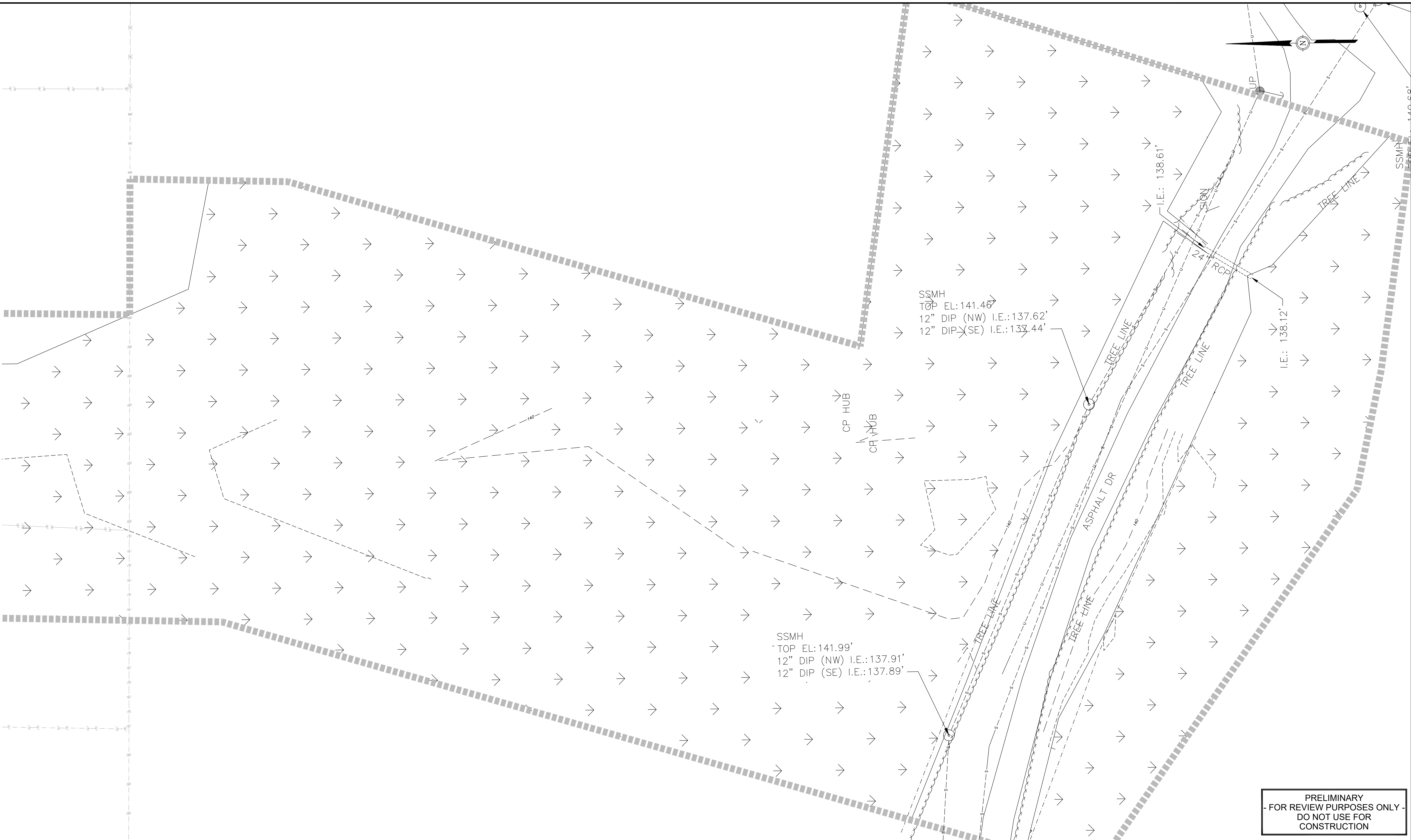
OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

EXISTING CONDITIONS 3 OF 4		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**CE-03**

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS

V:\0418-ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS\DRAWINGS\SSHEETS\CE-01 EXISTING CONDITIONS.DWG PLOT DATE 2/8/2023 3:35 PM KALIA BEESLEY

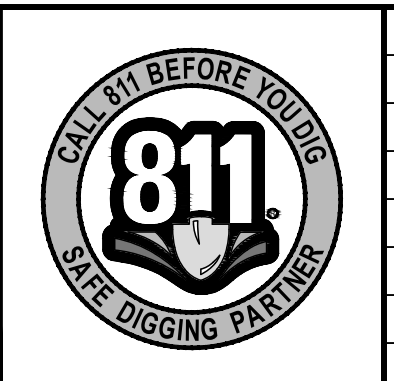


PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION



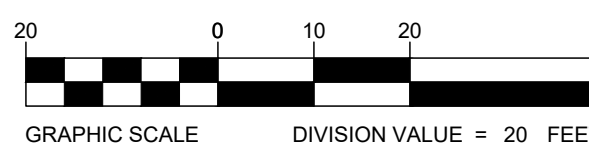
55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

PRELIMINARY



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

	
OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

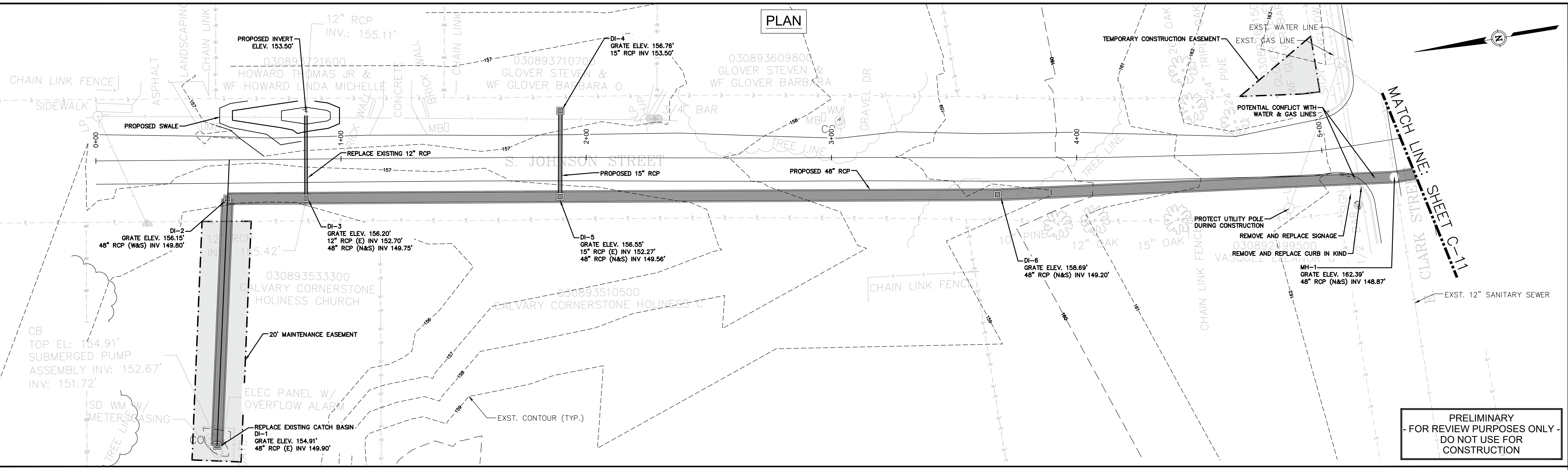
EXISTING CONDITIONS 4 OF 4		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**CE-04**

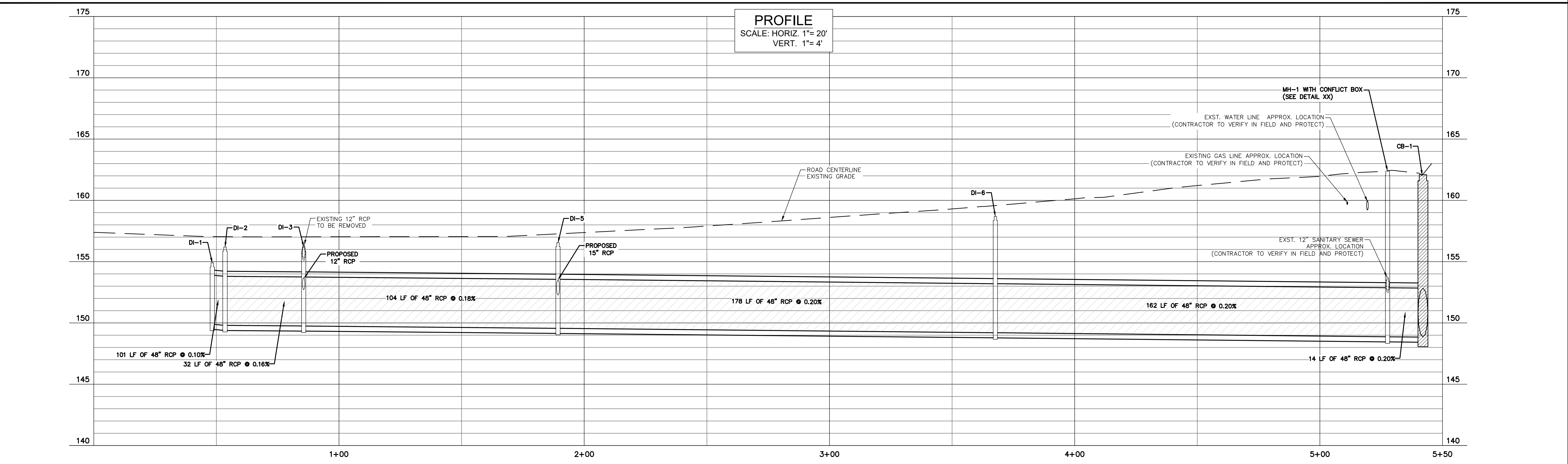
21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS



V:\MCGILLENINERS\COMPANYSHARE\MCGILL PROJECTS\2021\21.04018-STPAULS-ELIZABETH-JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAINAGE\SS\SS-C-10 PROPOSED DWG PLOT DATE 2/22/2023 3:25 PM KALIA BEESLEY

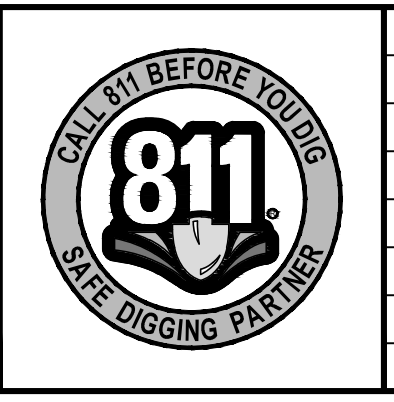


**PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION**



55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

PROPOSED PLAN AND PROFILE S. JOHNSON ST. STA. 0+00-5+50		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

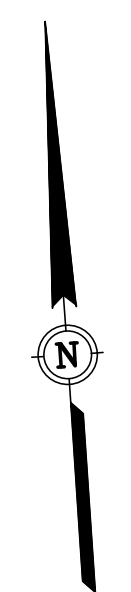
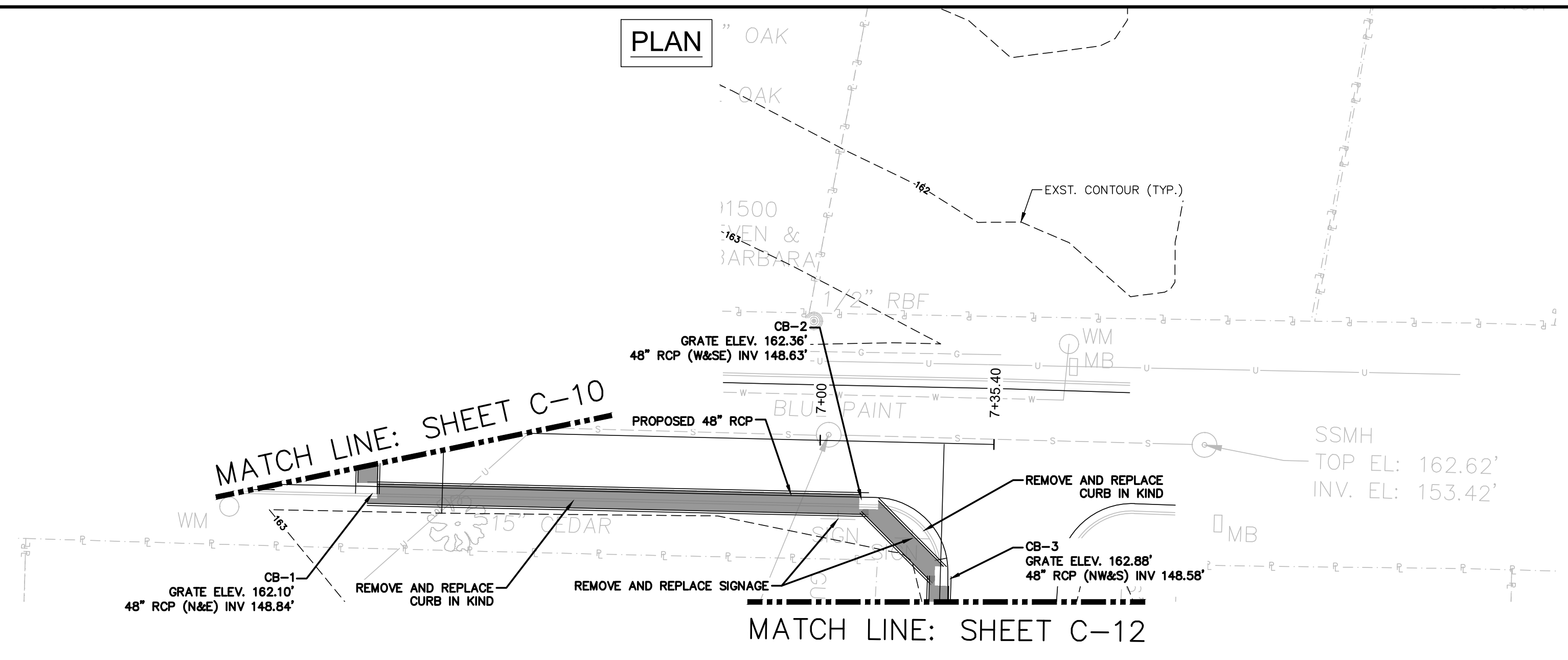
SHEET  
**C-10**

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS

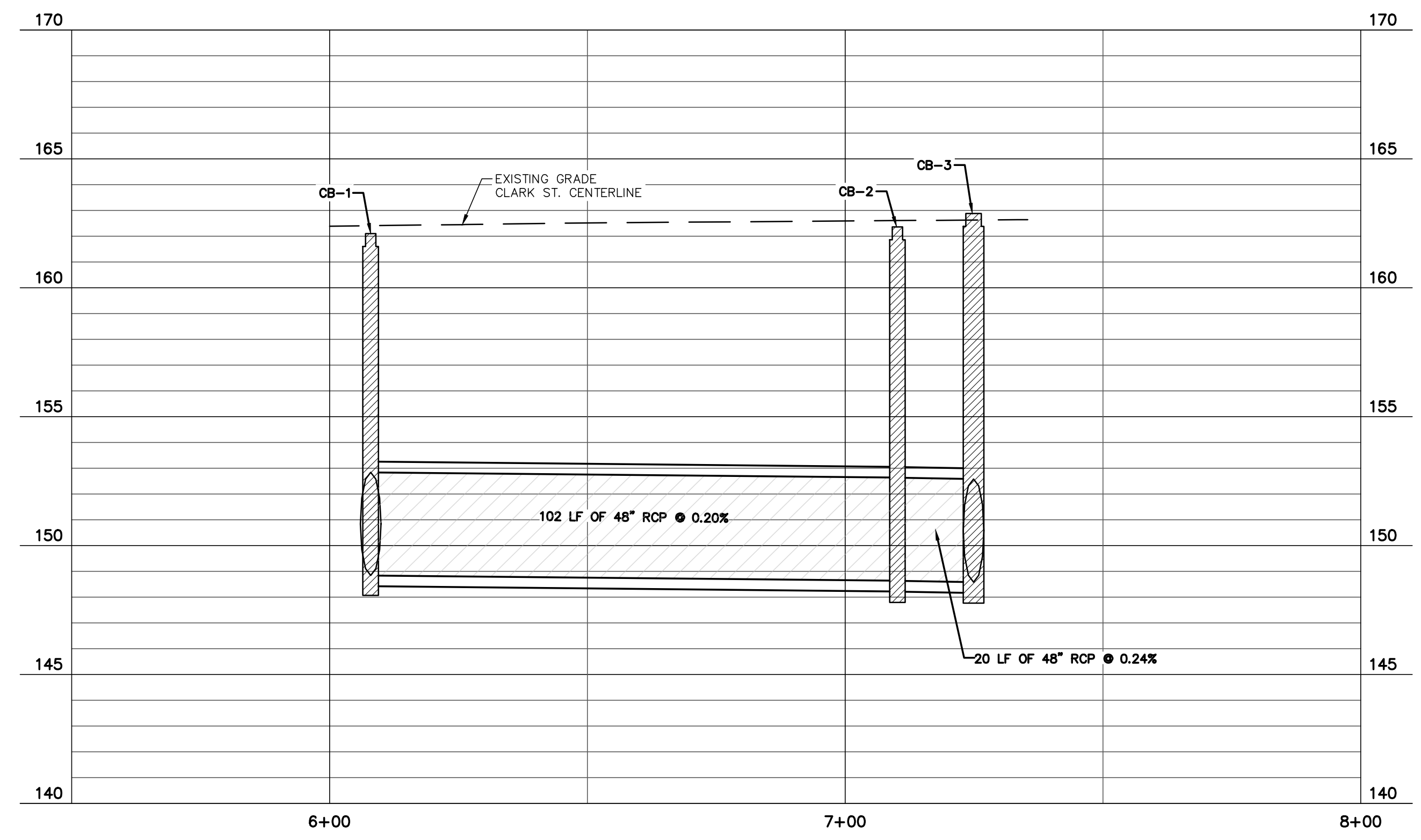


V:\PROJECTS\2021\21.04018-STPAULS-ELIZABETH+JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAWINGS\SHEETS\C-10 PROPOSED DWG PLOT DATE 2/22/2023 3:27 PM KALIA BEESLEY

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS



**PROFILE**  
SCALE: HORIZ. 1"= 20'  
VERT. 1"= 4'



PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION

55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

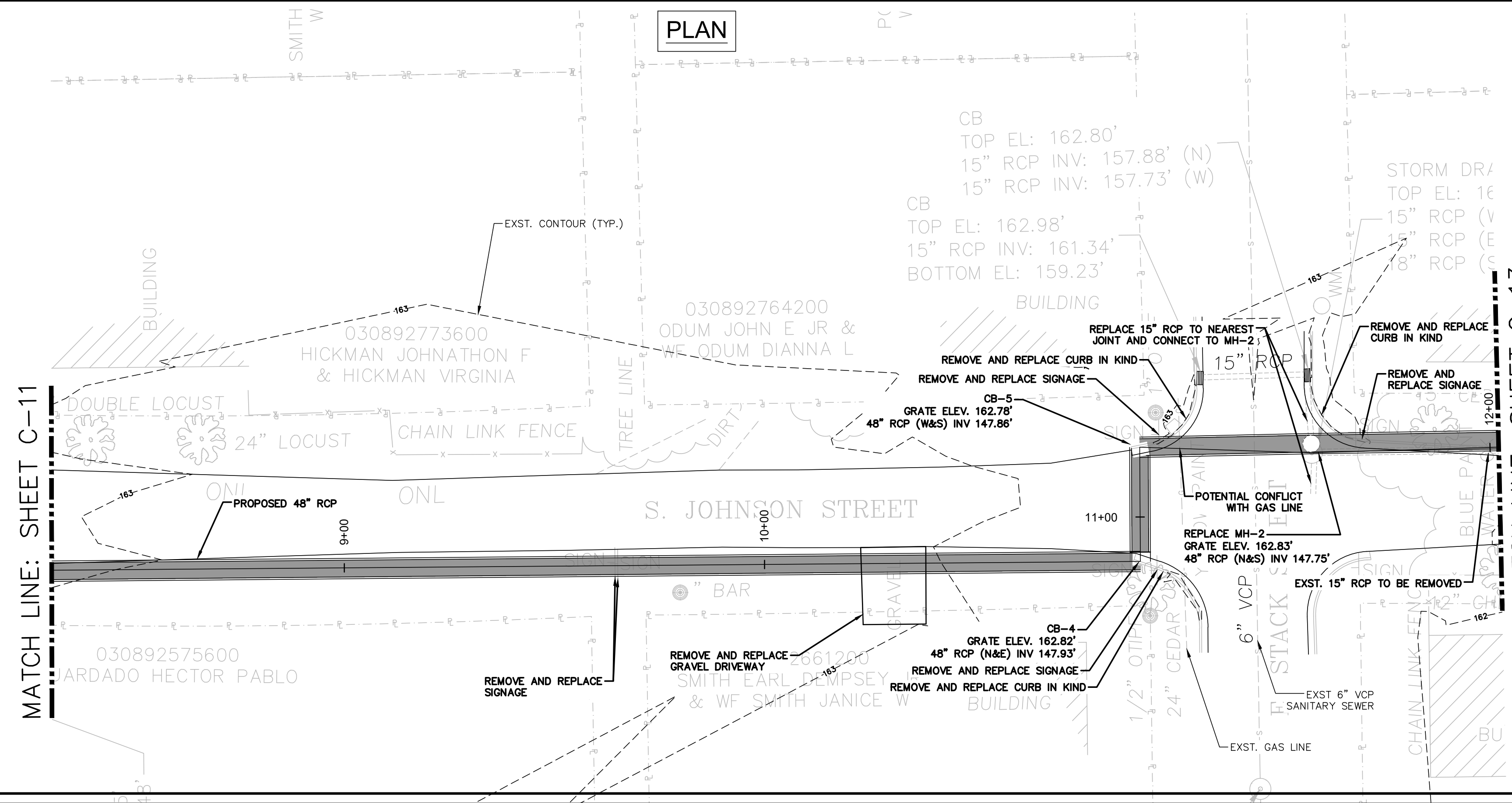
ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

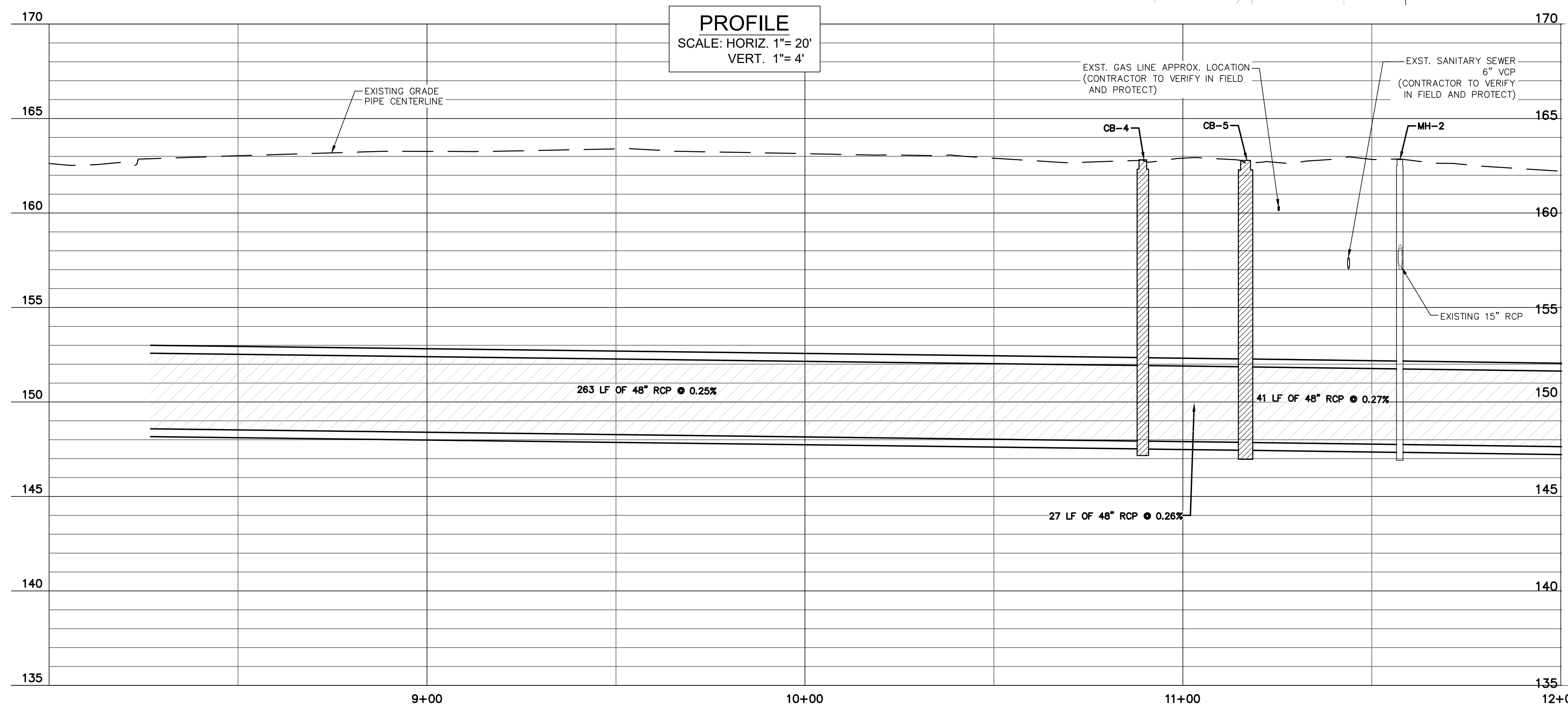
PROPOSED PLAN AND PROFILE E. CLARK ST. STA. 6+00-7+50		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**C-11**

V:\D\MCGILLENINERS.COM\COMPANYSHARE\MCGILL PROJECTS\2021\21.04018-STPAULS-ELIZABETH+JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAWINGS\SHEETS\C-10 PROPOSED DWG PLOT DATE 2/22/2023 3:30 PM KALIA BEESLEY



PRELIMINARY  
FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION



55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

PRELIMINARY



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

GRAPHIC SCALE DIVISION VALUE = 20 FEET

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

PROPOSED PLAN AND PROFILE S. JOHNSON ST. STA. 8+00-12+00		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**C-12**

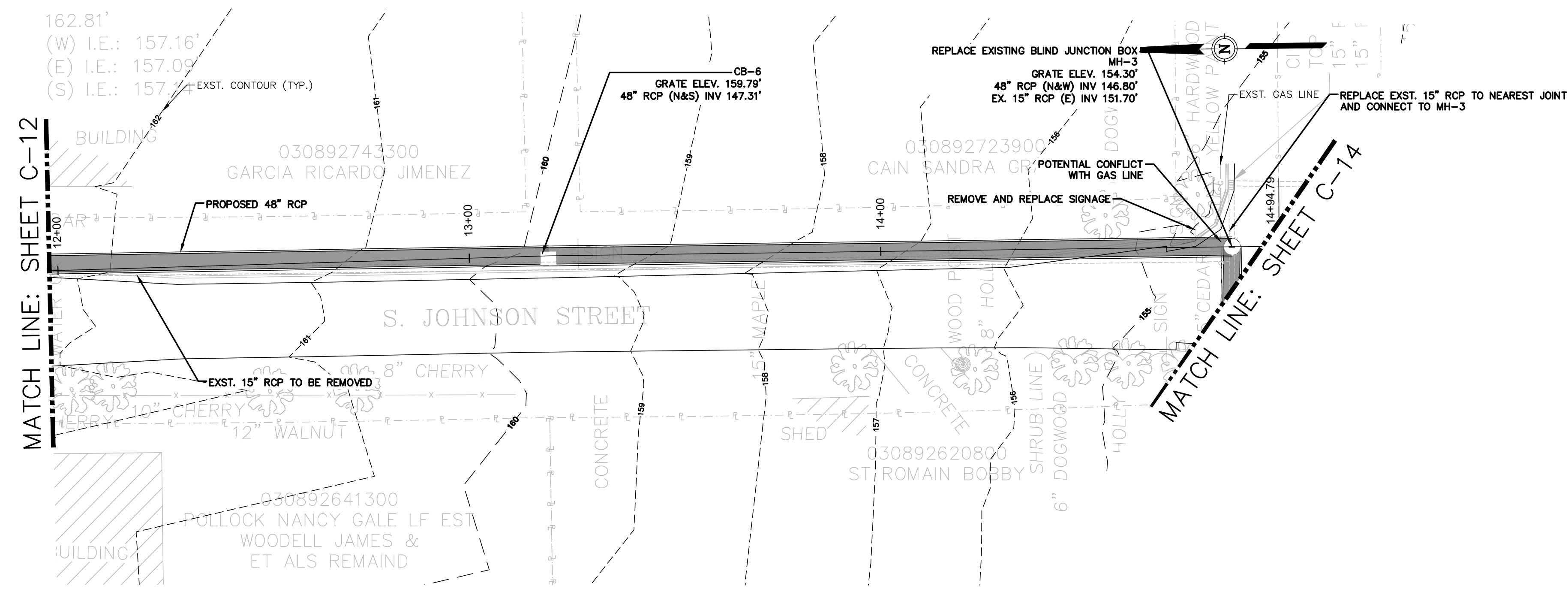
21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS



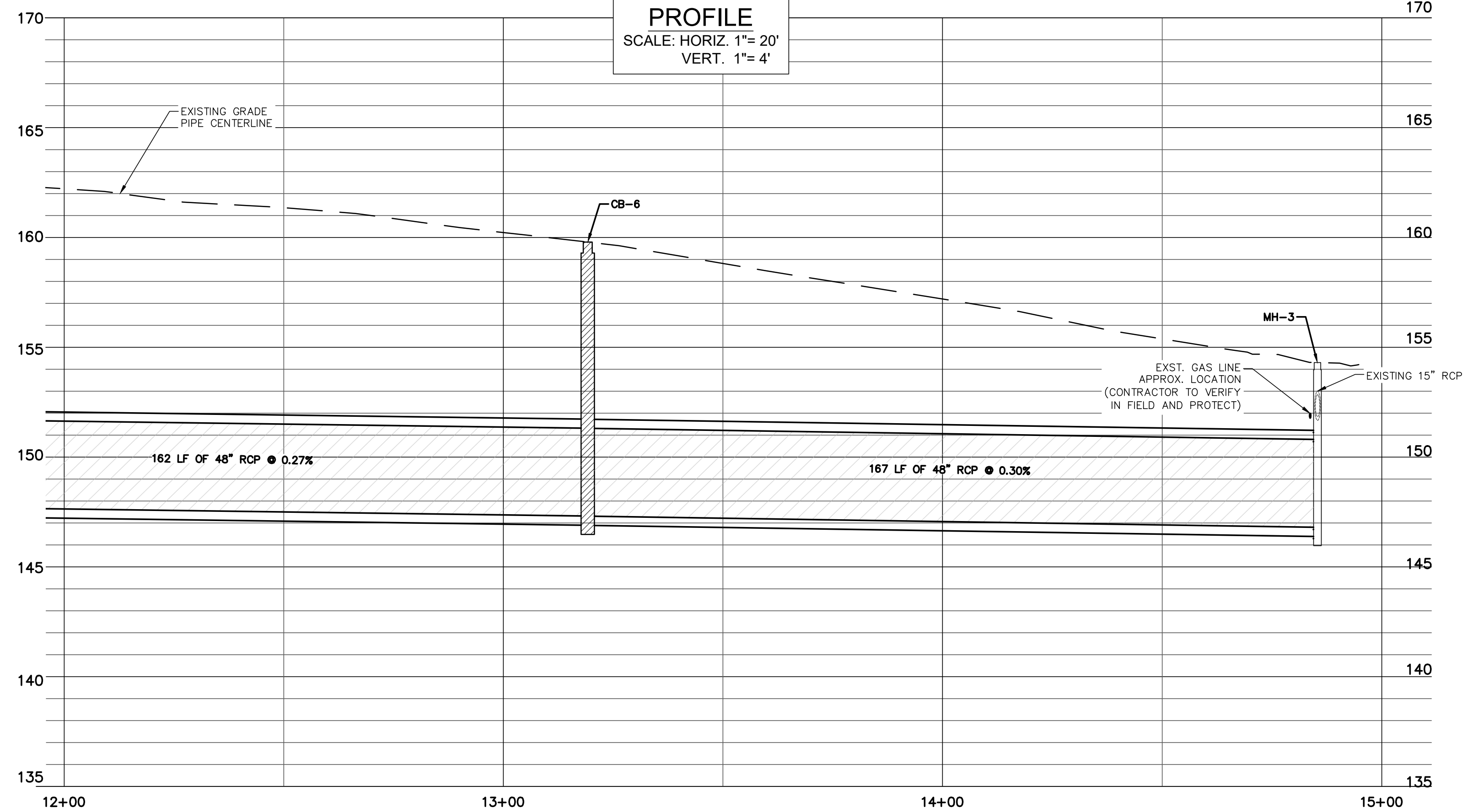
V:\D\MCGILLEN\ENGINEERS\COMPANY\SHARE\MCGILL PROJECTS\2021\21.04018-STPAULS-ELIZABETH+JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAWINGS\SHEETS\C-10 PROPOSED DWG PLOT DATE 2/22/2023 3:31 PM KALIA BEESLEY

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS

**PLAN**



**PROFILE**  
SCALE: HORIZ. 1"= 20'  
VERT. 1"= 4'



PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION

55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

PROPOSED PLAN AND PROFILE S. ST. STA. 12+00-15+00		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

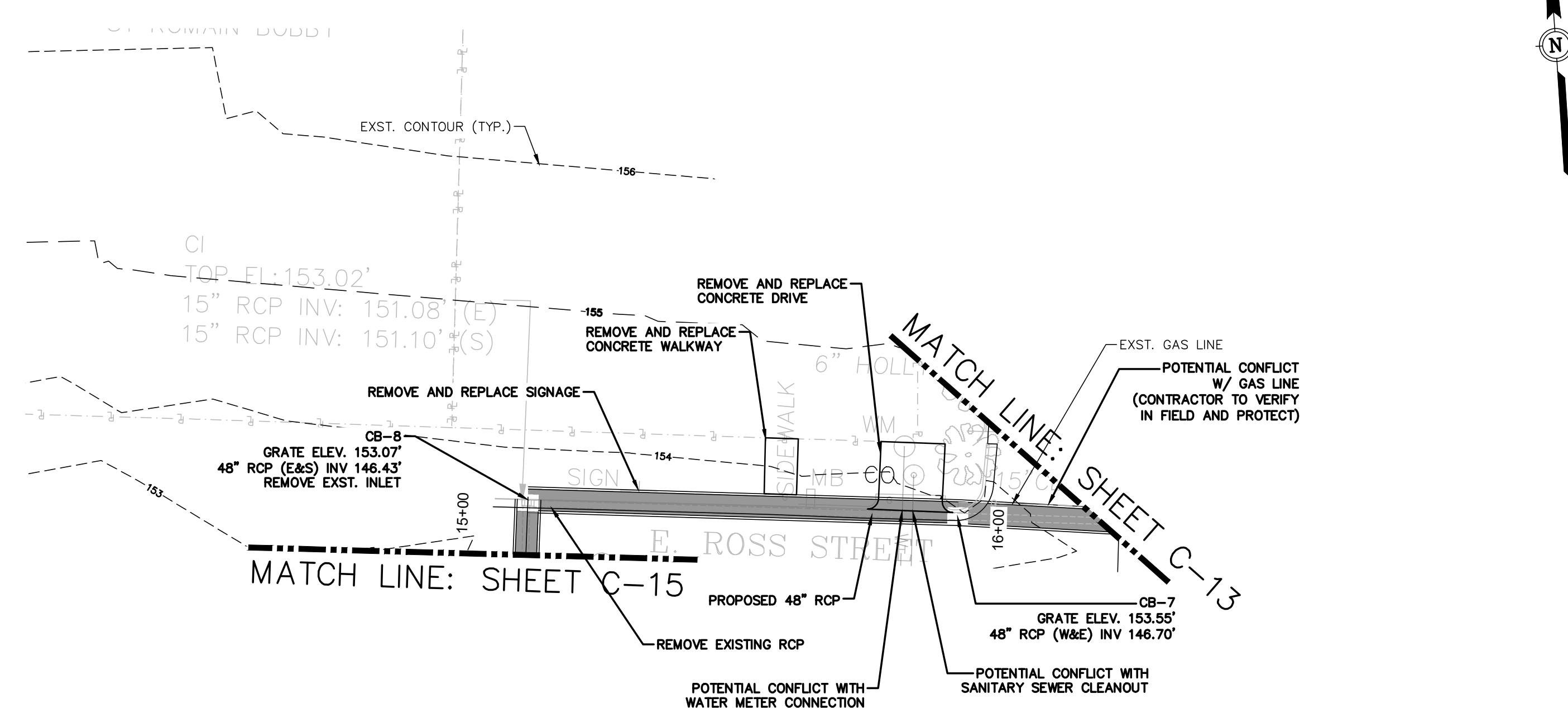
SHEET  
**C-13**



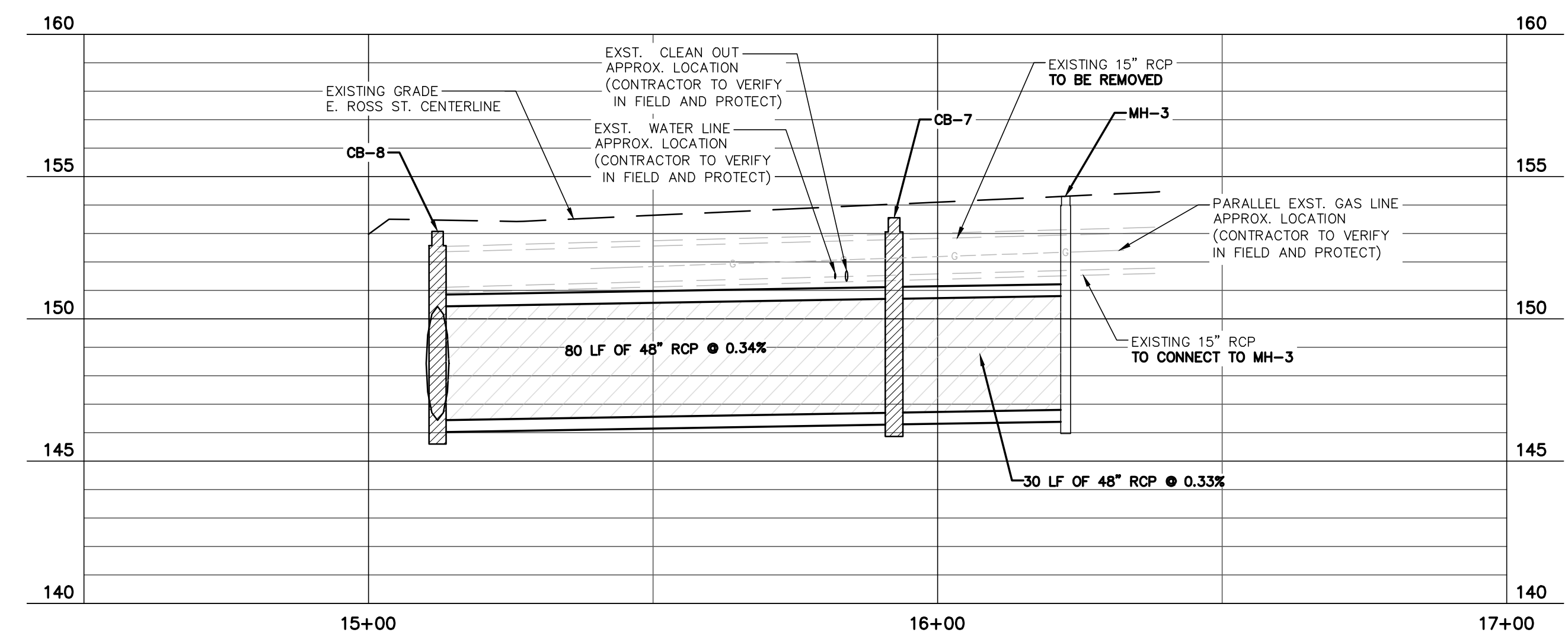
V:\MCGILLENINERS.COM\COMPANYSHARE\MCGILL PROJECTS\2021\21.04018-STPAULS-ELIZABETH+JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAINAGE\DWG\2023\3:33 PM KALIA BEESLEY

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS

**PLAN**



**PROFILE**  
SCALE: HORIZ. 1"= 20'  
VERT. 1"= 4'



PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION

55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

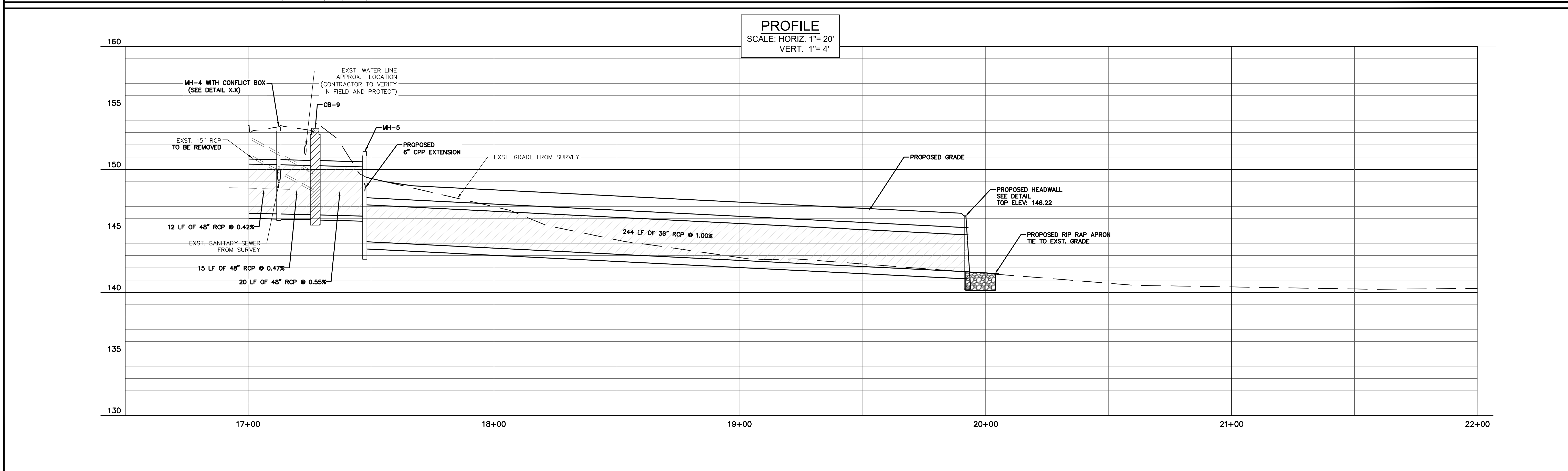
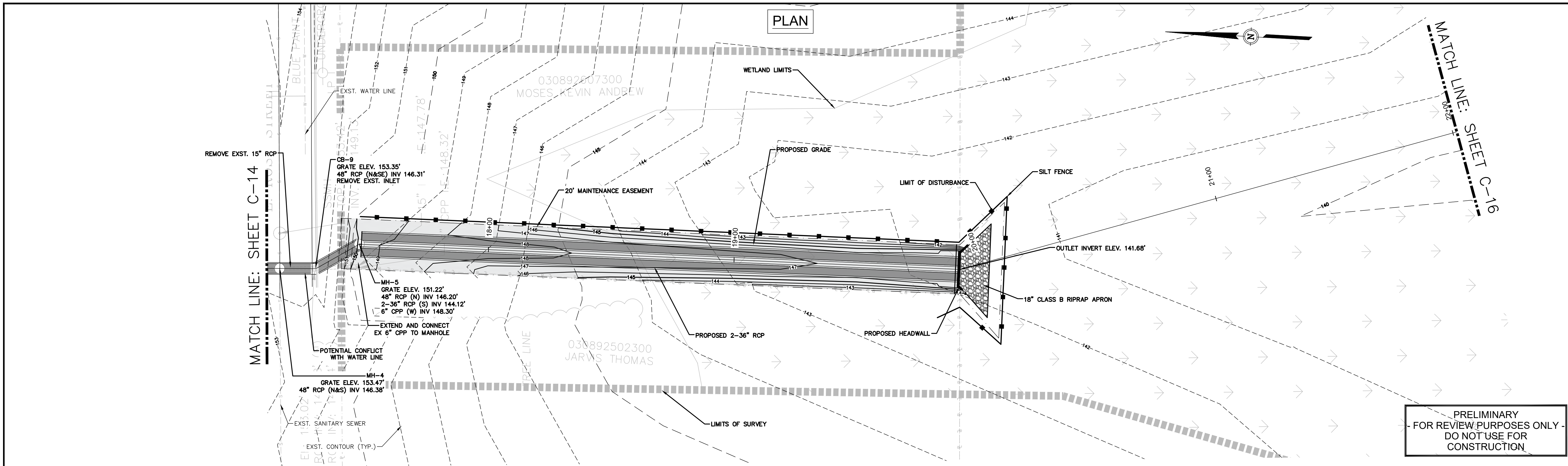
OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

PROPOSED PLAN AND PROFILE E. ROSS ST. STA. 15+00-16+50		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**C-14**

V:\D.MCGILLEN\ENGINEERS\COMPANYSHARE\MCGILL PROJECTS\2021\21.04018-STPAULS-ELIZABETH-ST-DRAINAGE\DRAWINGS\SHEETS\C-10 PROPOSED DWG PLOT DATE 2/8/2023 4:34 PM KALIA BEESLEY

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS



55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

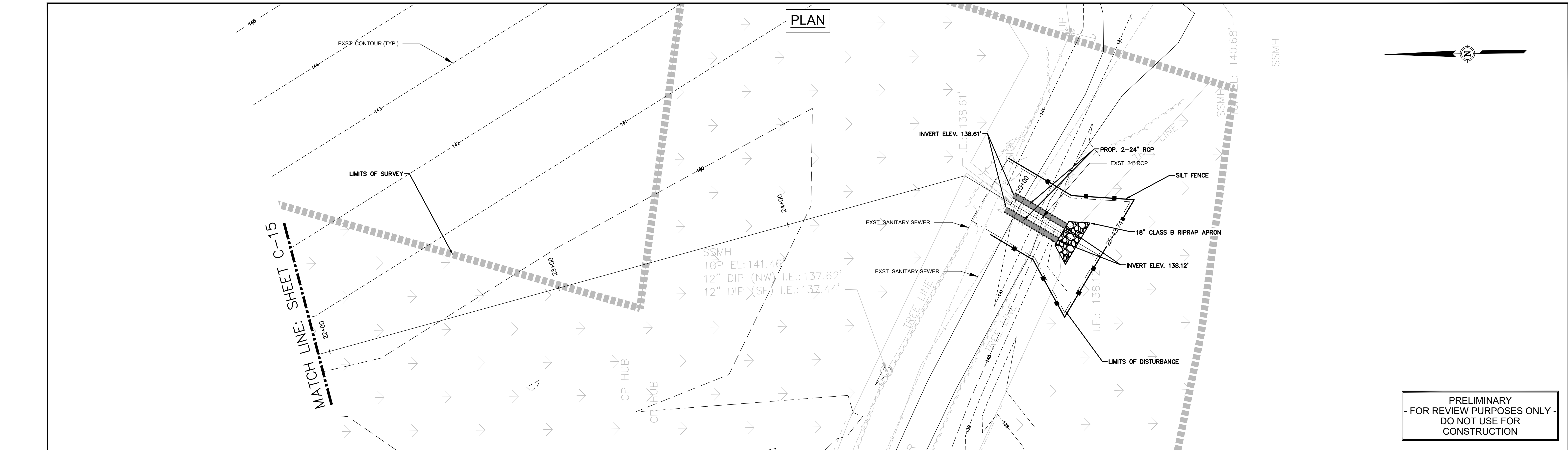
ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

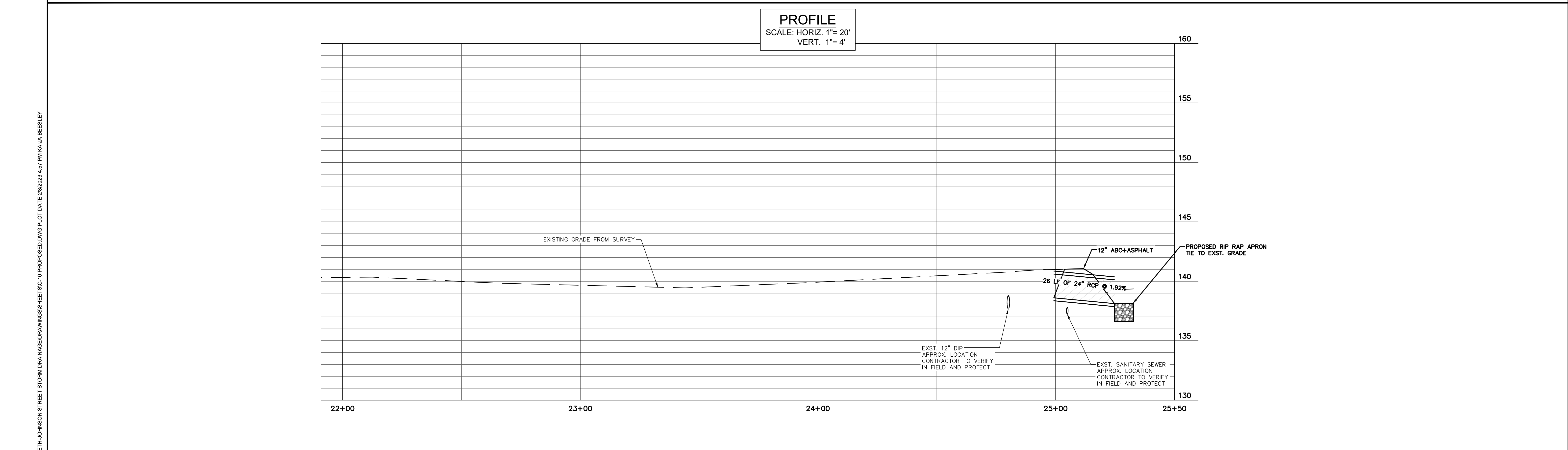
PROPOSED PLAN AND PROFILE STA. 17+00-22+00		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**C-15**





PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION



P:\2021\21-04\018-ST.PAULS-NC-ELIZABETH-JOHNSON STREET STORM DRAINAGE DRAWINGS\SHEETSC-10 PROPOSED.DWG PLOT DATE 2/8/2023 4:57 PM KAJA BEESLEY

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS

55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

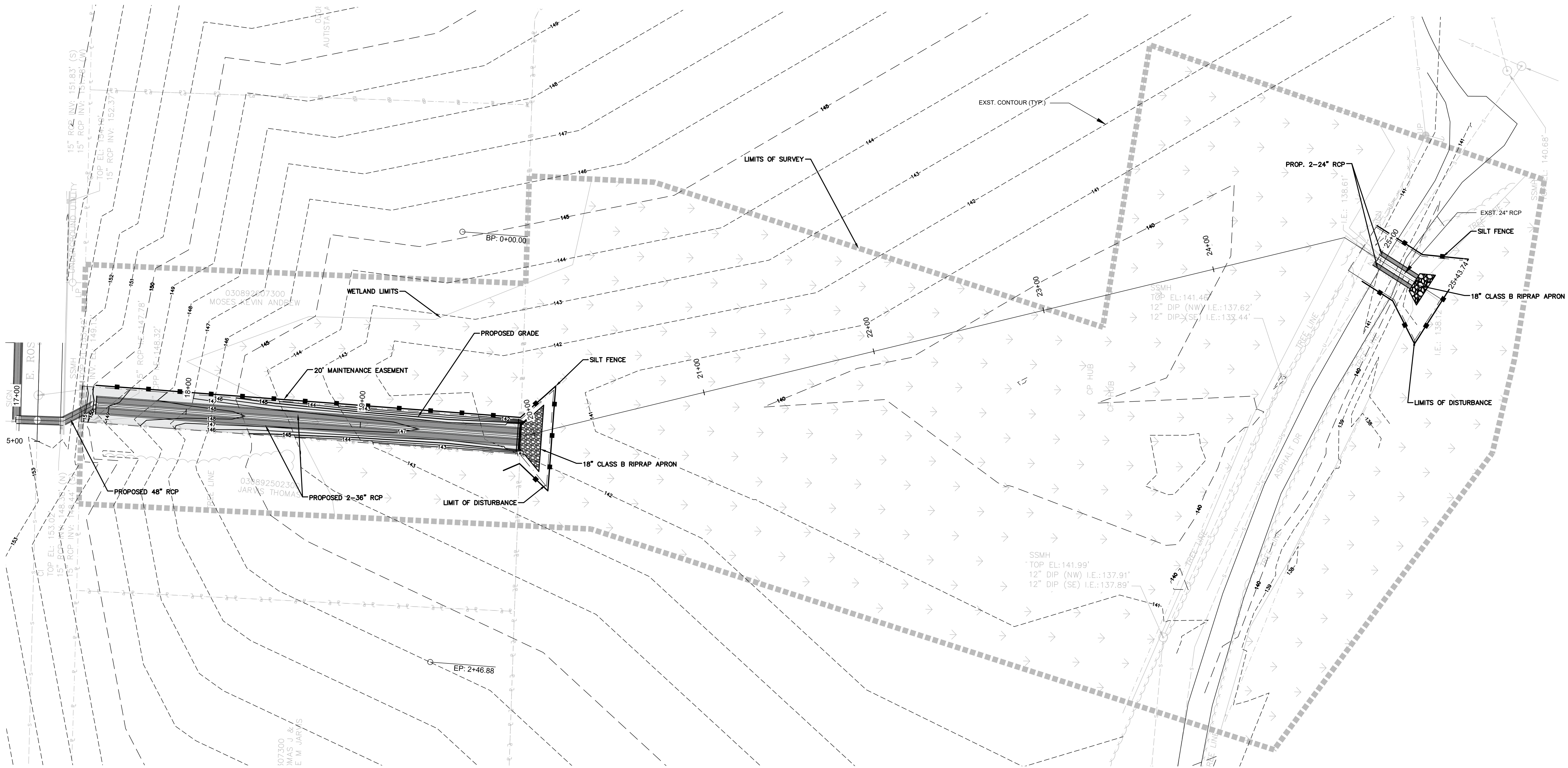
<p>GRAPHIC SCALE DIVISION VALUE = 20 FEET</p>	
OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

PROPOSED PLAN AND PROFILE STA. 22+00-25+50		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**C-16**



PLAN



PRELIMINARY  
FOR REVIEW PURPOSES ONLY  
DO NOT USE FOR  
CONSTRUCTION

P:\2021\104018-ST.PAULS-NC-ELIZABETH-JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\10 PROPOSED.DWG PLOT DATE 2/8/2023 5:21 PM KALIA BEESLEY

55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

PRELIMINARY



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

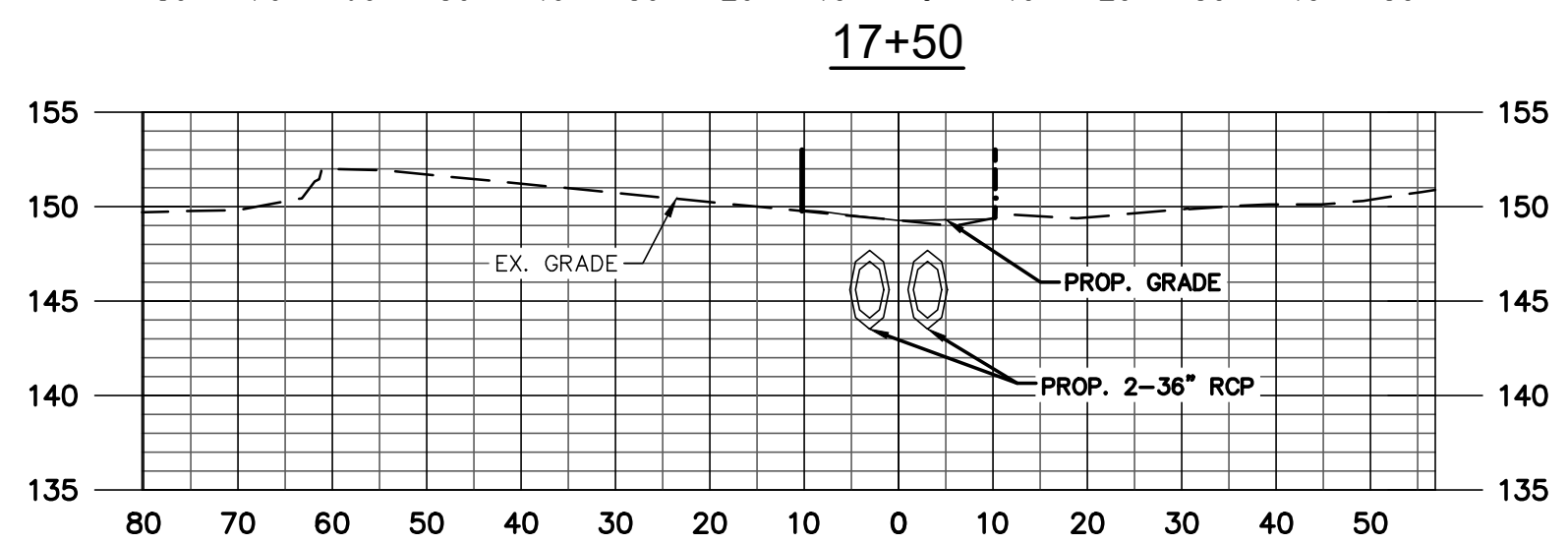
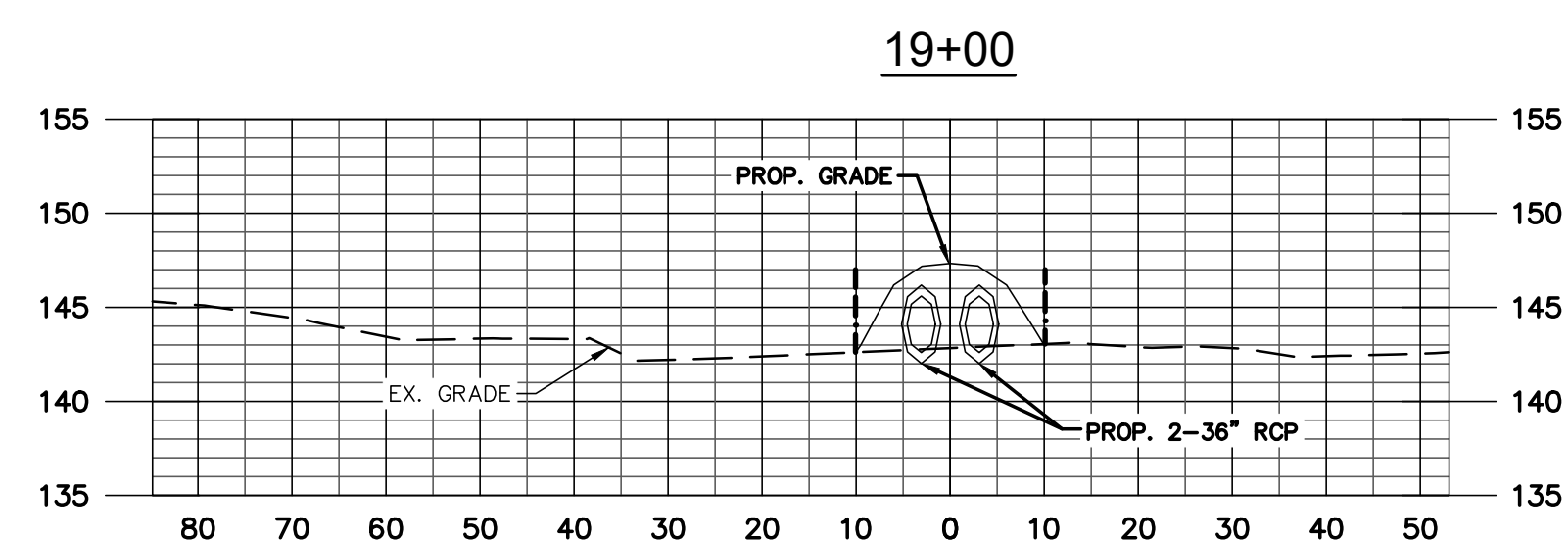
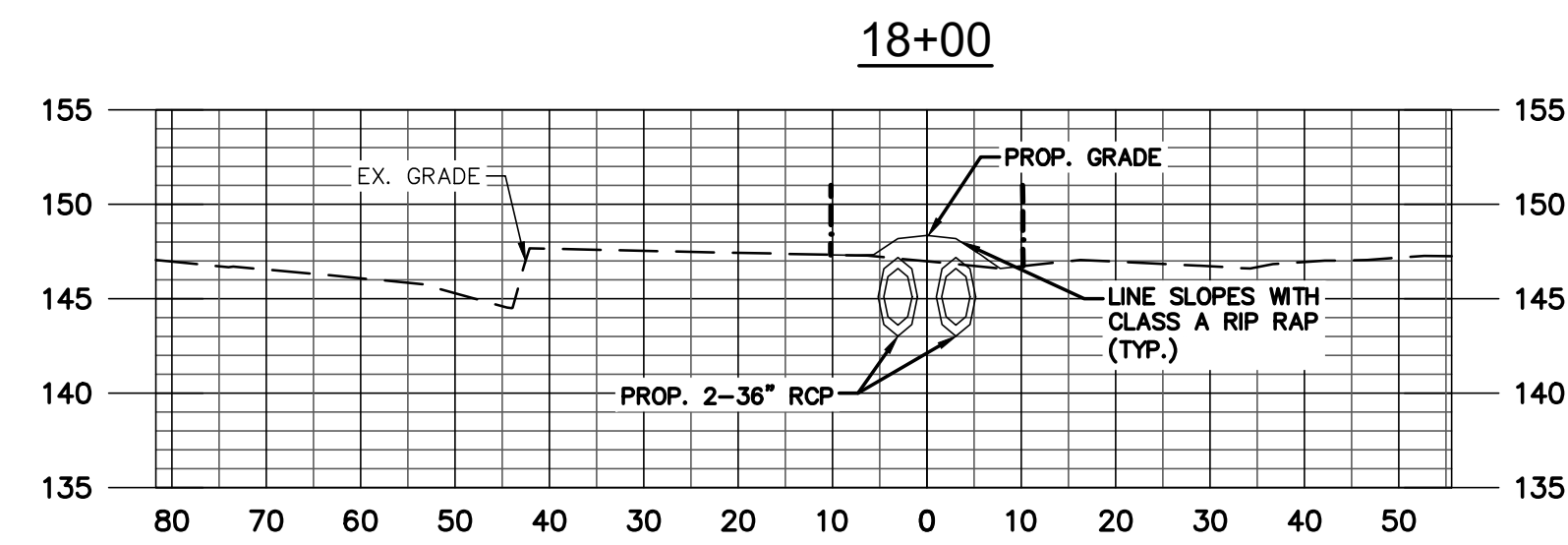
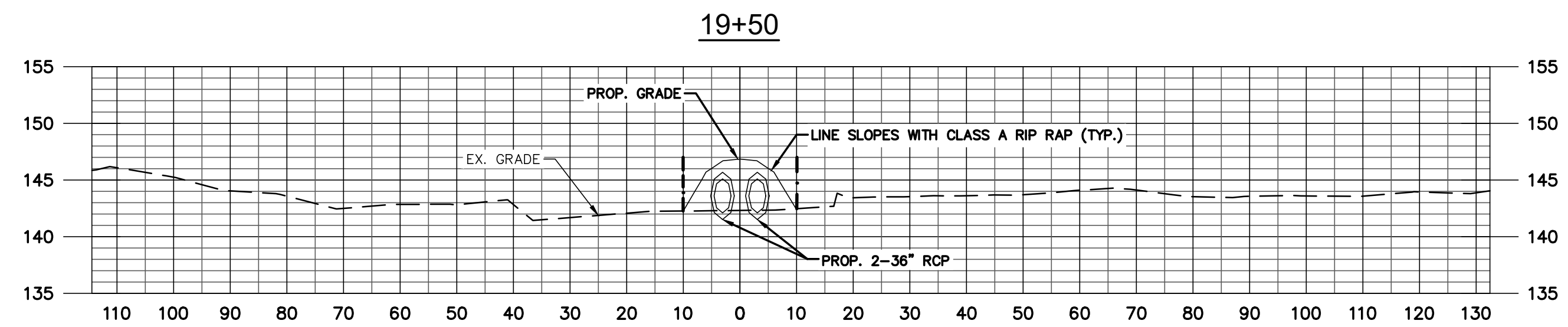
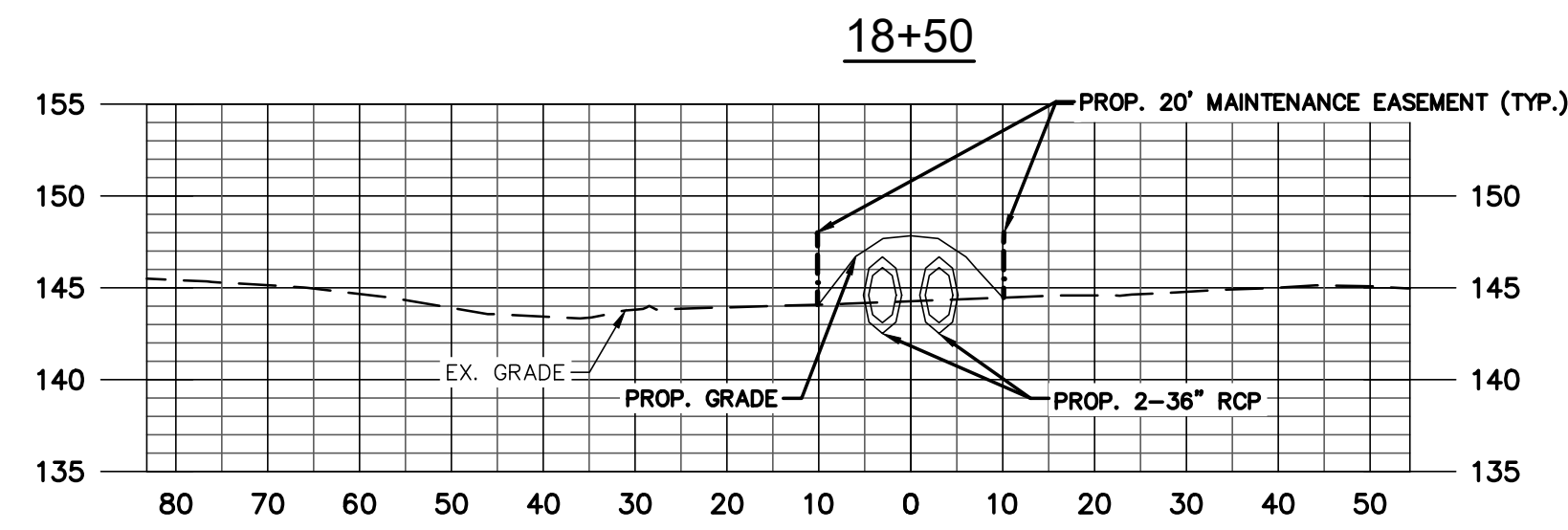
OVERVIEW OF WETLAND IMPACTS STA. 17+00-25+50		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**C-17**

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS



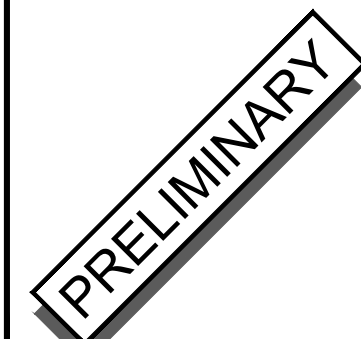
**SECTION**  
SCALE: HORIZ. 1"= 20'  
VERT. 1"= 2'



PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION

V:\D\MCGILLENINERS.COM\COMPANYSHARE\MCGILL PROJECTS\2021\21.04018-STPAULS-ELIZABETH+JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAWINGS\SHEETS\C-10 PROPOSED DWG PLOT DATE 2/22/2023 11:41 AM KAJIA BEESLEY

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS



NO.	DATE	BY	DESCRIPTION

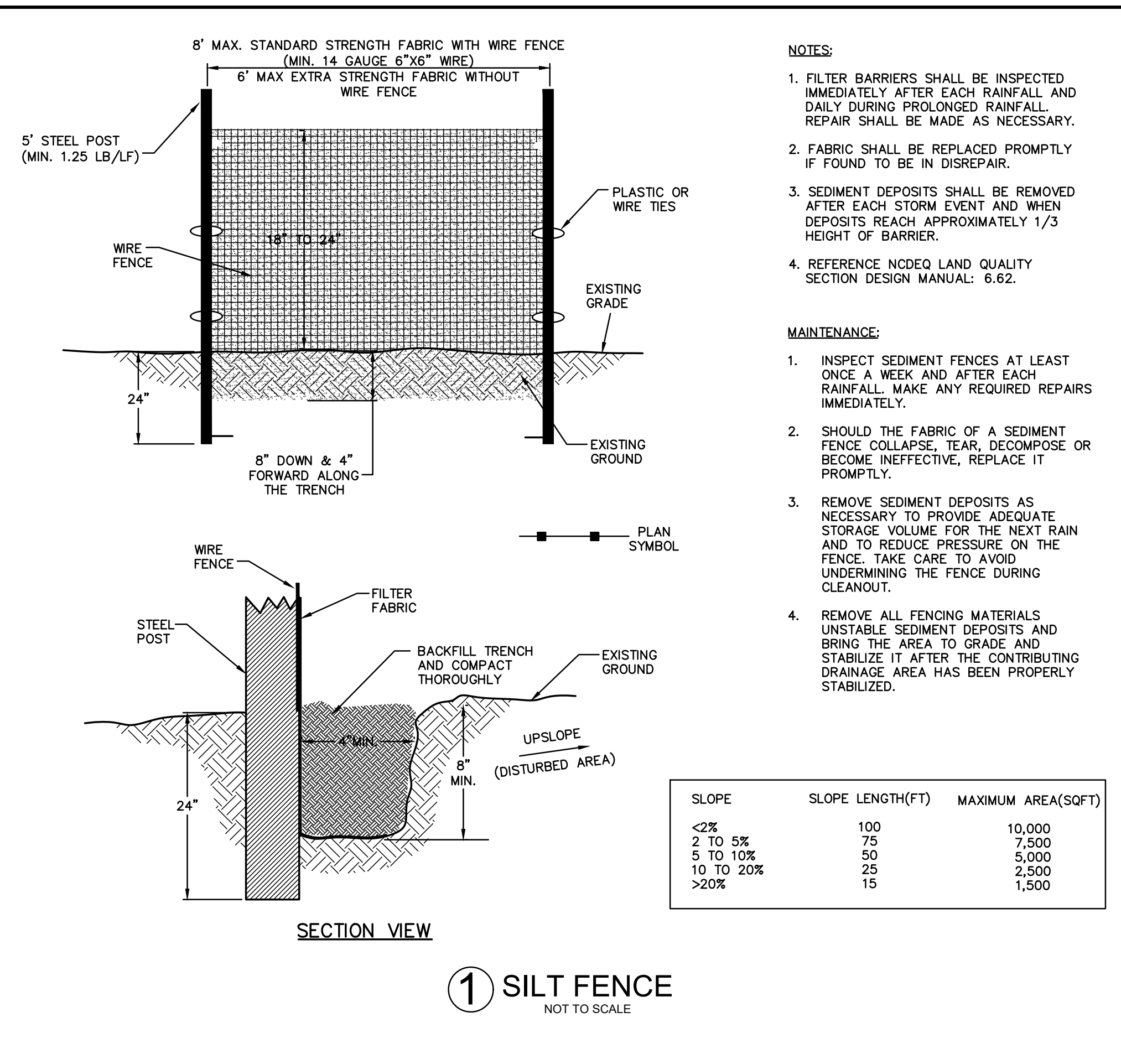
ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

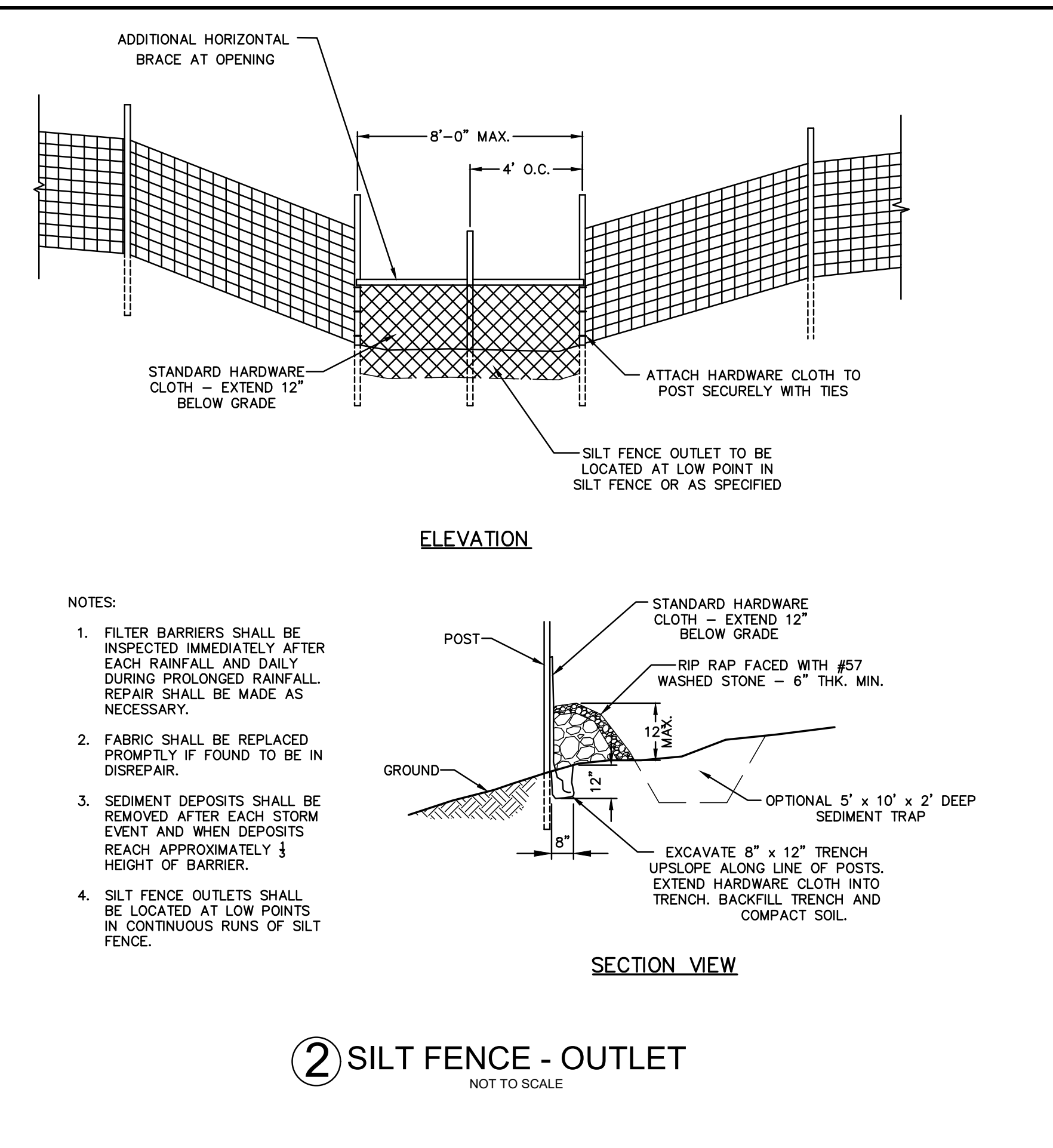
CROSS SECTIONS 17+50-20+00		
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A

SHEET  
**C-20**

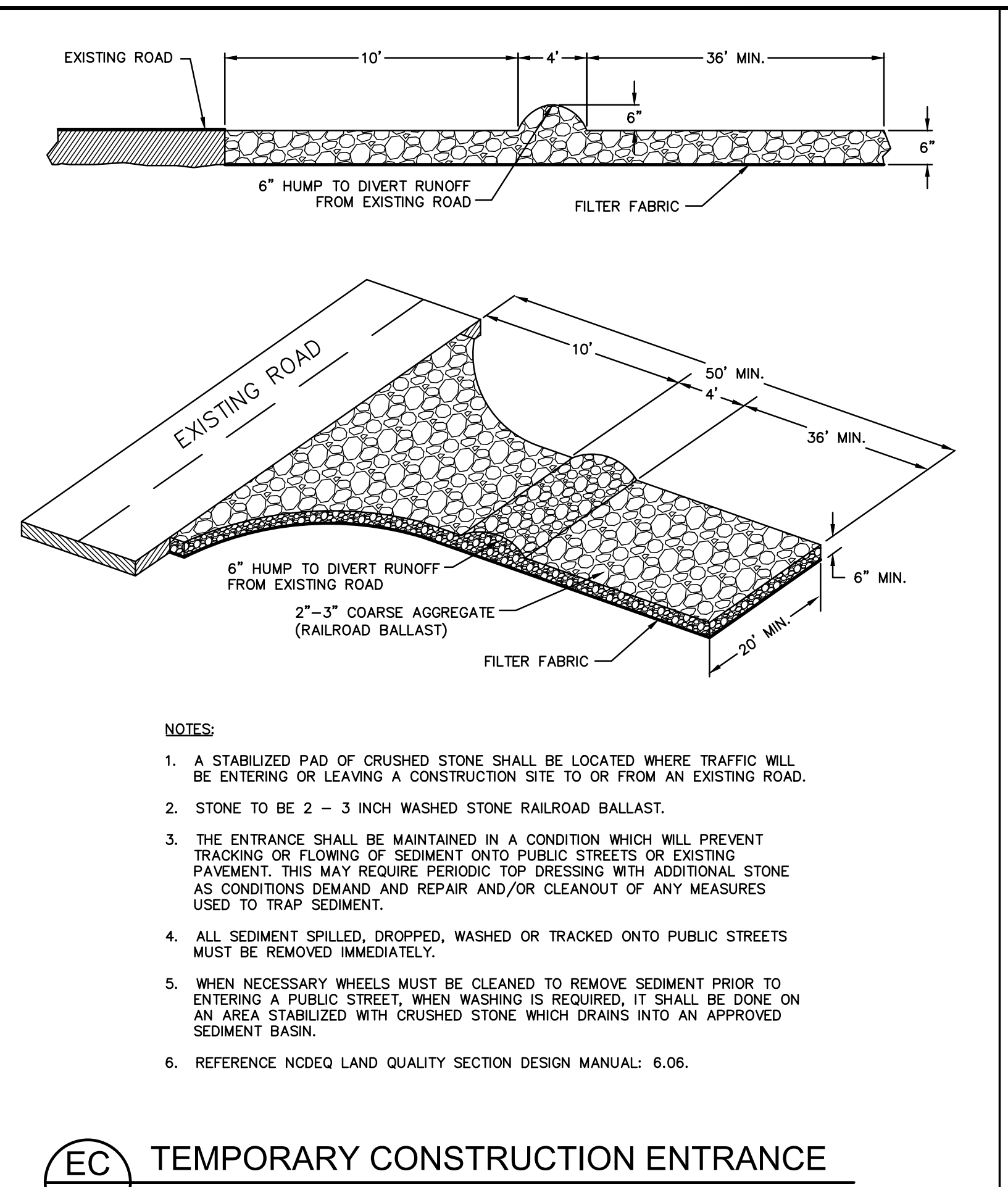
V:\D.MCGILLEN\ENGINEERS\COMPANY\SHARE\MCGILL PROJECTS\2021\21.04018-STPAULS-NC-ELIZABETH-JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAWINGS\SHEETS\C-30 EROSION CONTROL DETAIL DWG PLOT DATE 2/1/2023 9:57 AM KAJIA BEESLEY



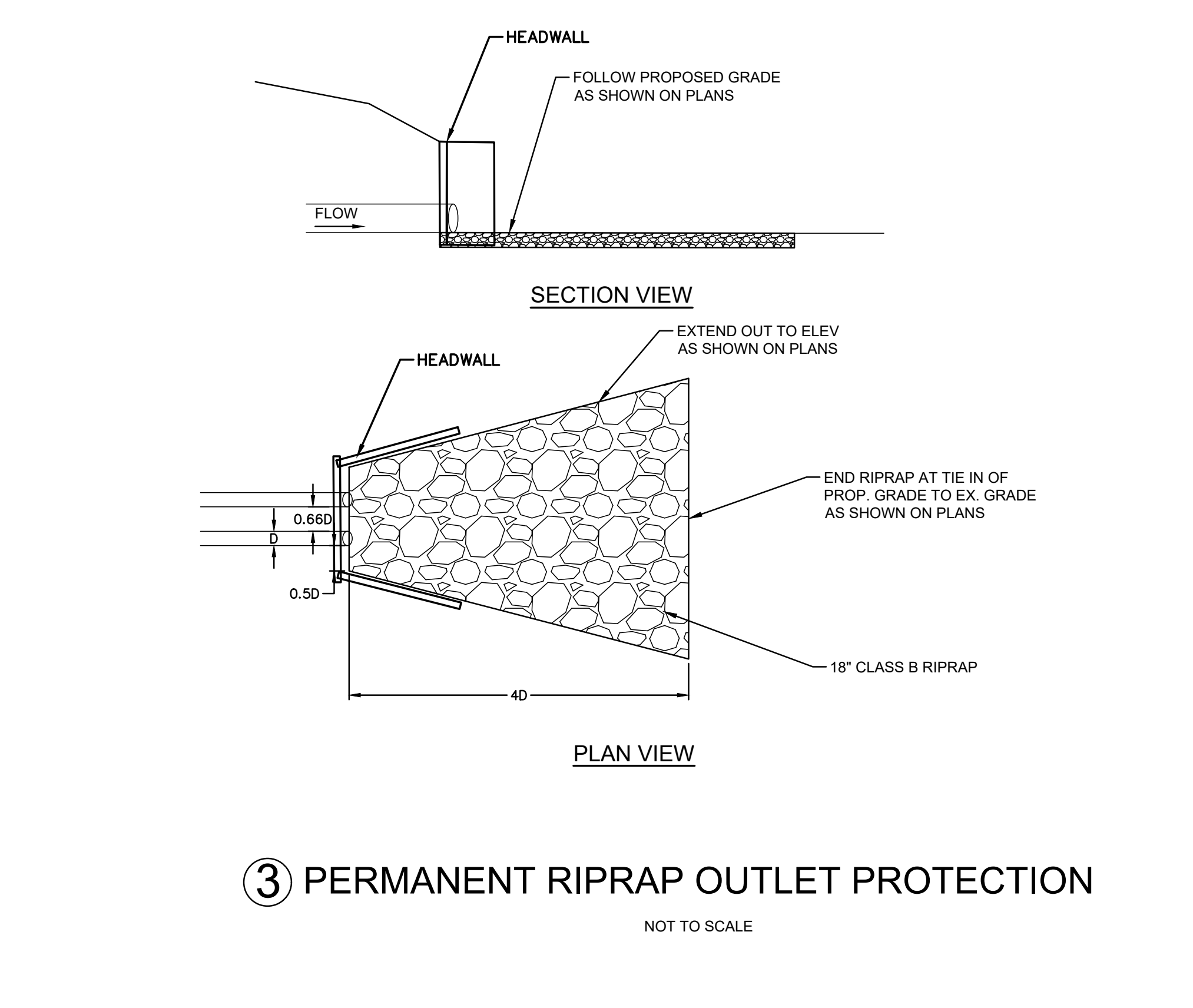
**1 SILT FENCE**  
NOT TO SCALE



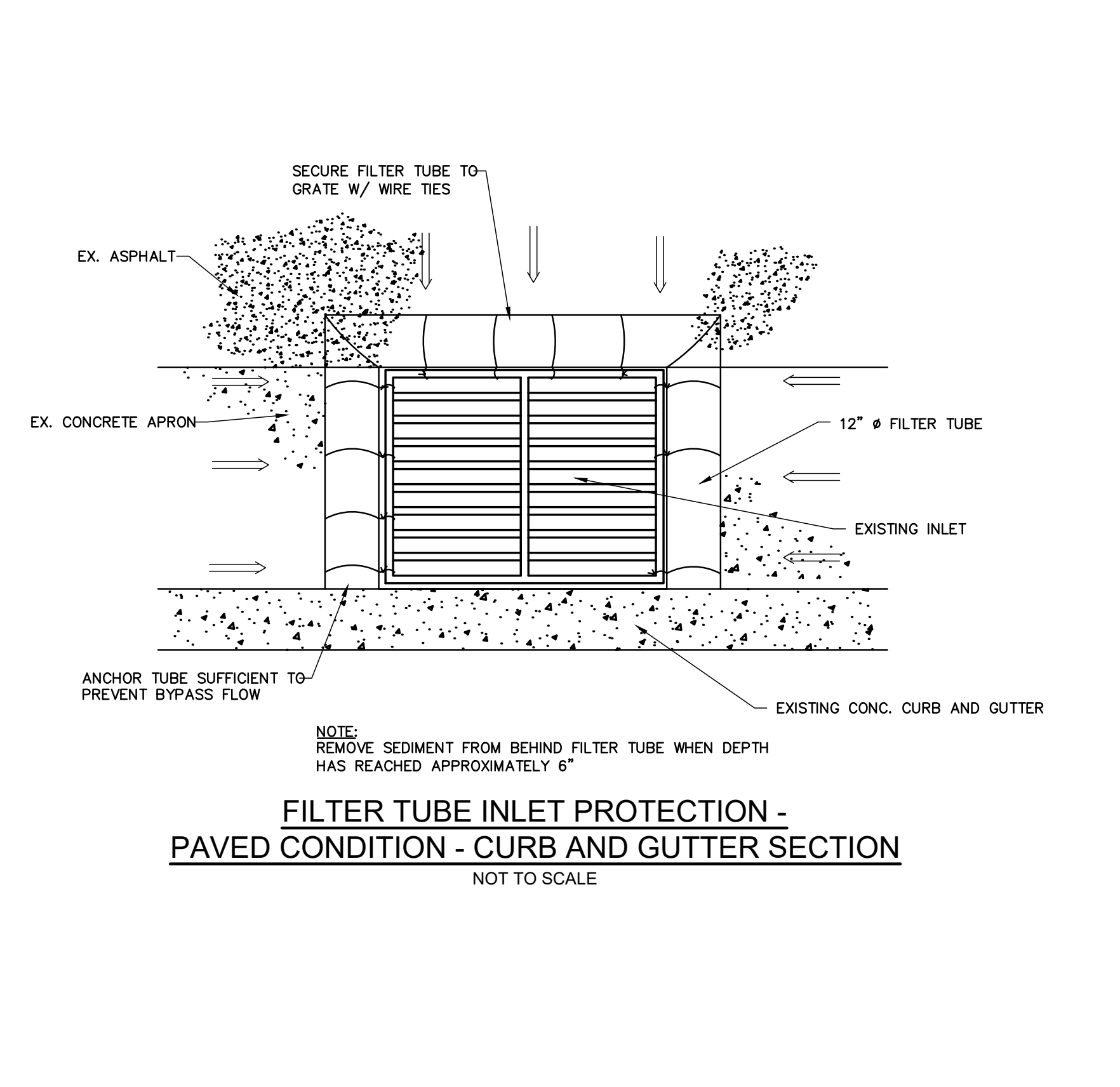
**2 SILT FENCE - OUTLET**  
NOT TO SCALE



**EC 24 TEMPORARY CONSTRUCTION ENTRANCE**  
UPDATED MARCH, 2017  
NOT TO SCALE



**3 PERMANENT RIPRAP OUTLET PROTECTION**  
NOT TO SCALE



**FILTER TUBE INLET PROTECTION - PAVED CONDITION - CURB AND GUTTER SECTION**  
NOT TO SCALE

PRELIMINARY  
FOR REVIEW PURPOSES ONLY  
DO NOT USE FOR CONSTRUCTION

**mcgill**  
55 Broad Street  
Asheville, NC 28801  
828.252.0575  
NC Firm License # C-0459  
mcgillassociates.com

PRELIMINARY



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

GRAPHIC SCALE: 0 25 50 100  
DIVISION VALUE = 50 FEET

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

EROSION CONTROL DETAILS 1 OF 2

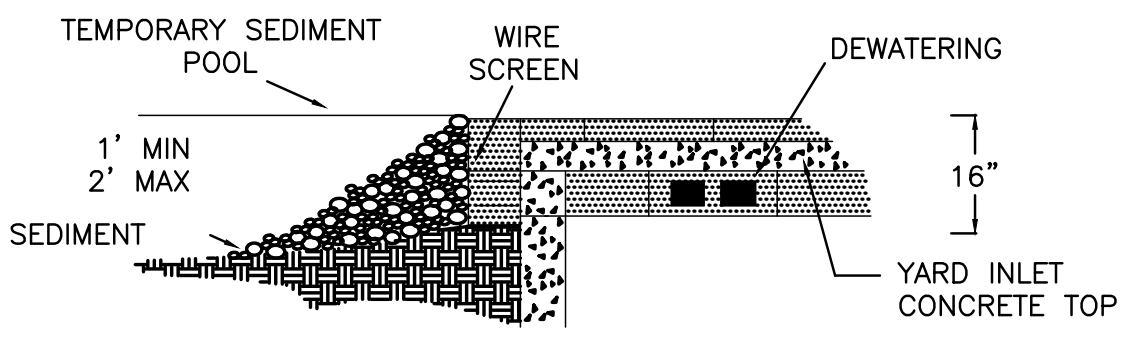
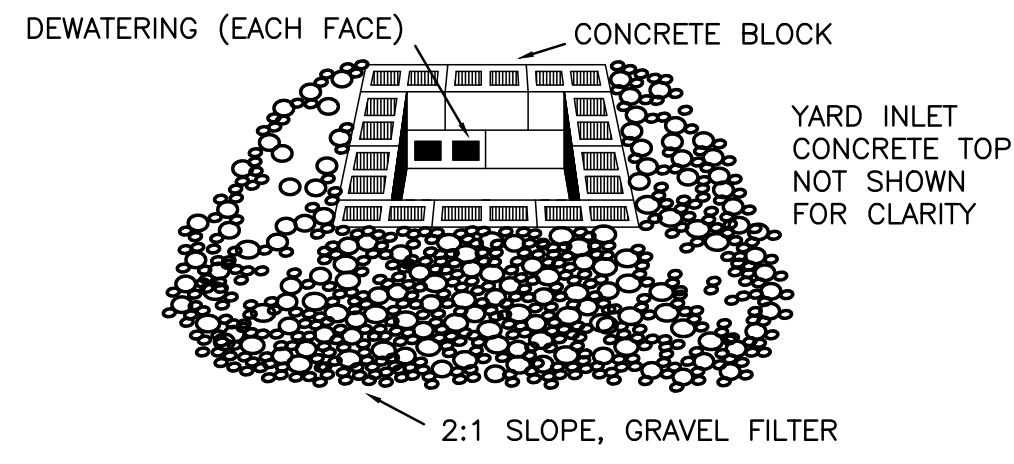
DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A
-----------------------	-----------------------	------------------

SHEET  
**C-30**

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS



VAD.MCGILLENGINERS.COM\COMPANYSHARE\MCGILL\PROJECTS\2021\21.04018-STPAULS-NC-ELIZABETH-JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRAWINGS\SHEETS\C-30 EROSION CONTROL DETAIL DWG.PLOT DATE: 1/31/2023 8:22 PM KALIA BEESLEY

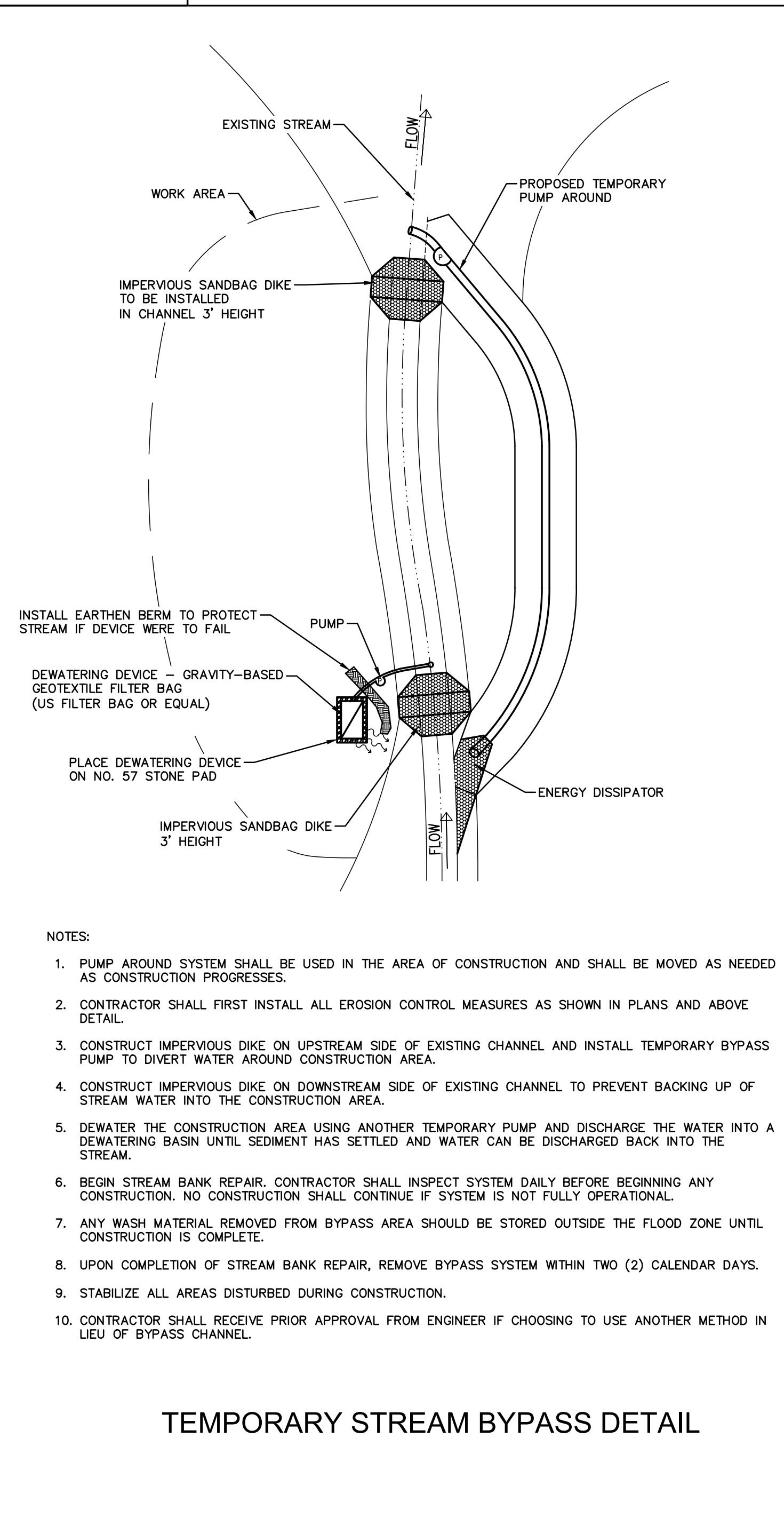


**MAINTENANCE REQUIREMENTS:**

1. CONTRACTOR SHALL INSPECT THE GRAVEL FILTER AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL AND MAKE REPAIRS AS NEEDED.
2. CONTRACTOR SHALL REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.
3. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, CONTRACTOR SHALL REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL. CONTRACTOR SHALL BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT AND APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

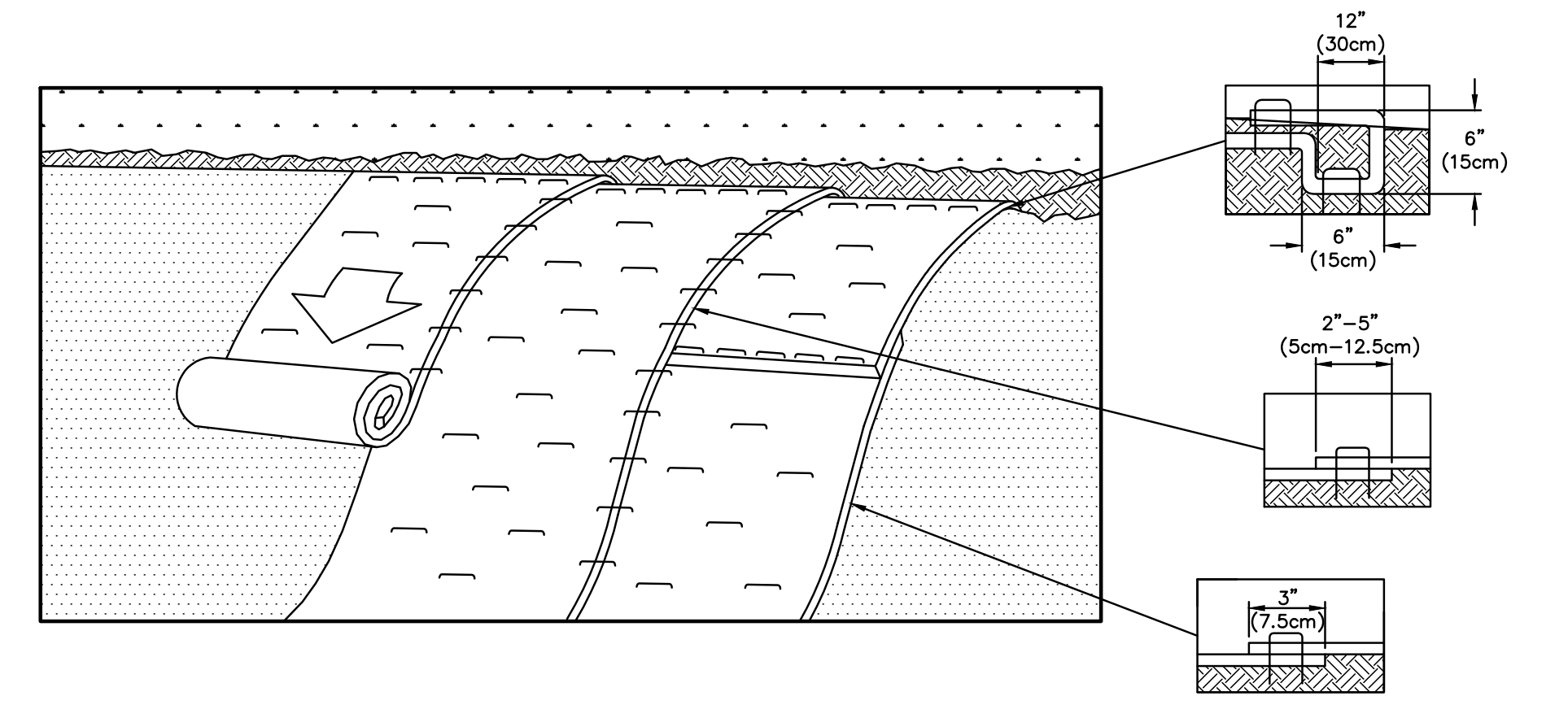
**4 TYPICAL GRATE INLET PROTECTION DETAIL (TEMPORARY)**

NOT TO SCALE



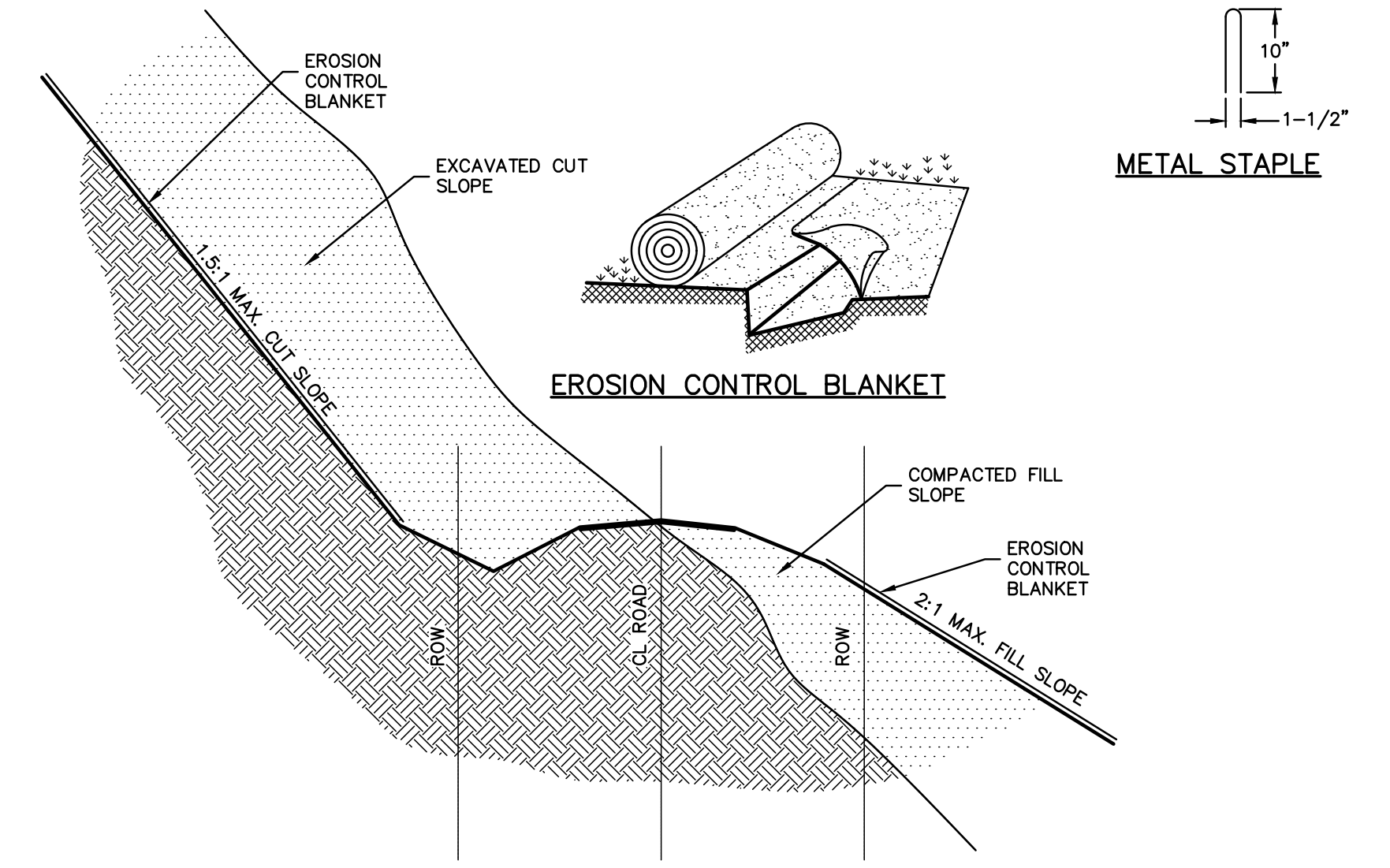
- NOTES:**
1. PUMP AROUND SYSTEM SHALL BE USED IN THE AREA OF CONSTRUCTION AND SHALL BE MOVED AS NEEDED AS CONSTRUCTION PROGRESSES.
  2. CONTRACTOR SHALL FIRST INSTALL ALL EROSION CONTROL MEASURES AS SHOWN IN PLANS AND ABOVE DETAIL.
  3. CONSTRUCT IMPERVIOUS DIKE ON UPSTREAM SIDE OF EXISTING CHANNEL AND INSTALL TEMPORARY BYPASS PUMP TO DIVERT WATER AROUND CONSTRUCTION AREA.
  4. CONSTRUCT IMPERVIOUS DIKE ON DOWNSTREAM SIDE OF EXISTING CHANNEL TO PREVENT BACKING UP OF STREAM WATER INTO THE CONSTRUCTION AREA.
  5. DEWATER THE CONSTRUCTION AREA USING ANOTHER TEMPORARY PUMP AND DISCHARGE THE WATER INTO A DEWATERING BASIN UNTIL SEDIMENT HAS SETTLED AND WATER CAN BE DISCHARGED BACK INTO THE STREAM.
  6. BEGIN STREAM BANK REPAIR. CONTRACTOR SHALL INSPECT SYSTEM DAILY BEFORE BEGINNING ANY CONSTRUCTION. NO CONSTRUCTION SHALL CONTINUE IF SYSTEM IS NOT FULLY OPERATIONAL.
  7. ANY WASH MATERIAL REMOVED FROM BYPASS AREA SHOULD BE STORED OUTSIDE THE FLOOD ZONE UNTIL CONSTRUCTION IS COMPLETE.
  8. UPON COMPLETION OF STREAM BANK REPAIR, REMOVE BYPASS SYSTEM WITHIN TWO (2) CALENDAR DAYS.
  9. STABILIZE ALL AREAS DISTURBED DURING CONSTRUCTION.
  10. CONTRACTOR SHALL RECEIVE PRIOR APPROVAL FROM ENGINEER IF CHOOSING TO USE ANOTHER METHOD IN LIEU OF BYPASS CHANNEL.

**TEMPORARY STREAM BYPASS DETAIL**



**NOTES:**

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S DOWN OR HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING AND SPACING STAPLES/STAKES IN APPROPRIATE LOCATIONS PER MANUFACTURER RECOMMENDATIONS.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
6. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.
7. INSTALLATION OF MATTING SHALL CONFORM TO MANUFACTURER'S REQUIREMENTS.
8. SEE GRADING PLAN FOR LOCATIONS OF CUT AND FILL SLOPES.
9. MATTING SHALL BE : NORTH AMERICAN GREEN SC150, AMERICAN EXCELSIOR EROSION CONTROL BLANKET, OR EQUAL. INSTALL ON ALL DISTURBED SLOPES (CHOSEN PRODUCT MUST BE RATED FOR SLOPES OF 2:1 OR 1:1). SEE PLAN FOR PRODUCT TYPE THAT MAY BE SPECIFIED
10. ALLOW 3" MIN. OVERLAP BETWEEN PARALLEL STRIPS.
11. BURY THE TOP OF THE MAT IN A TRENCH 4" OR MORE IN DEPTH. TAMP THE TRENCH FULL SOIL. SECURE WITH ROW OF STAPLES, 10" SPACING, 4" DOWN FROM THE TRENCH. OVERLAP END OF TOP STRIP 4" AND STAPLE.



**EC 11 SLOPE MATTING INSTALLATION**  
UPDATED MARCH, 2017  
NOT TO SCALE

**PRELIMINARY  
- FOR REVIEW PURPOSES ONLY -  
DO NOT USE FOR  
CONSTRUCTION**

**PRELIMINARY**



NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
ROBESON COUNTY, NORTH CAROLINA

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

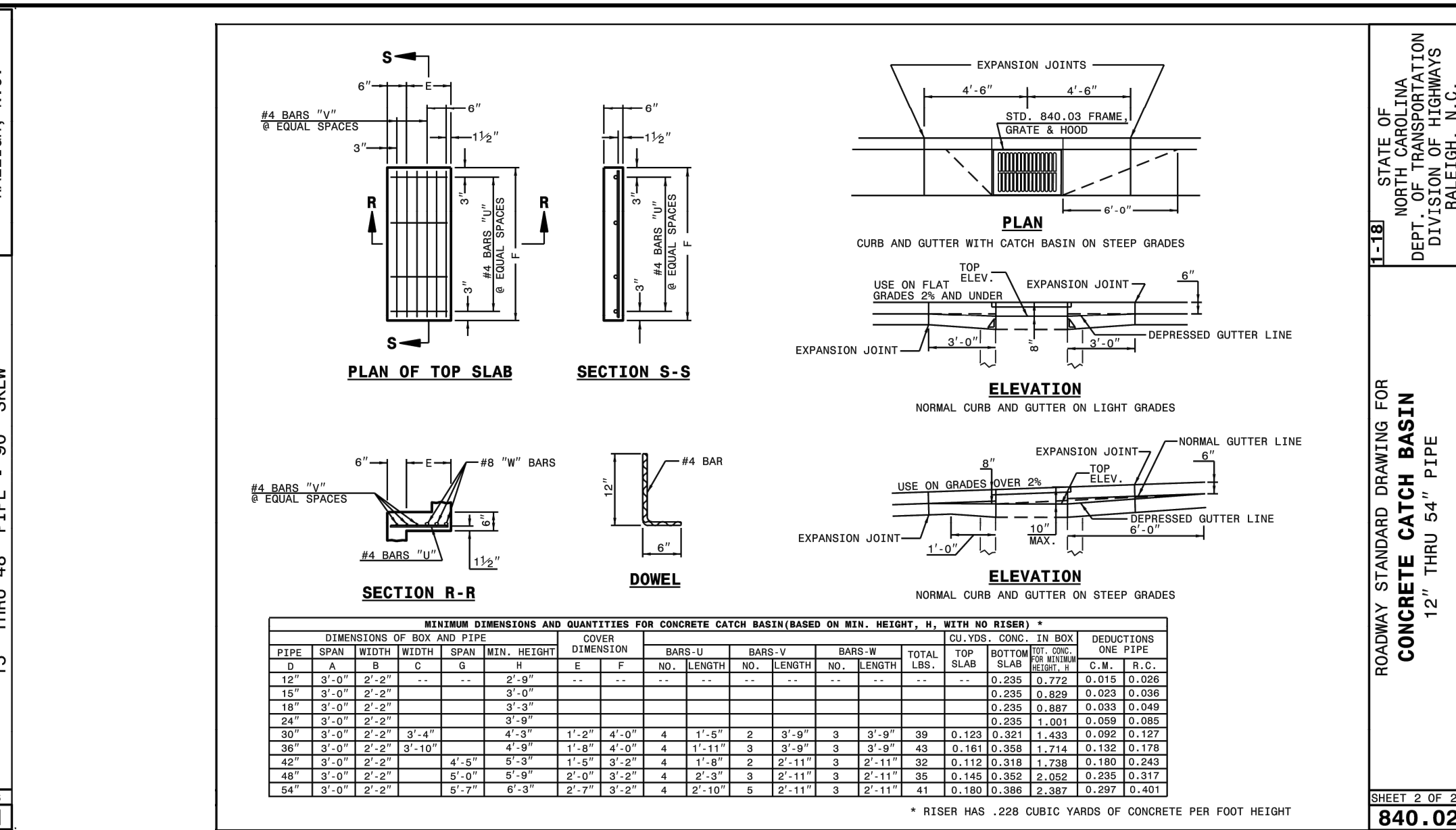
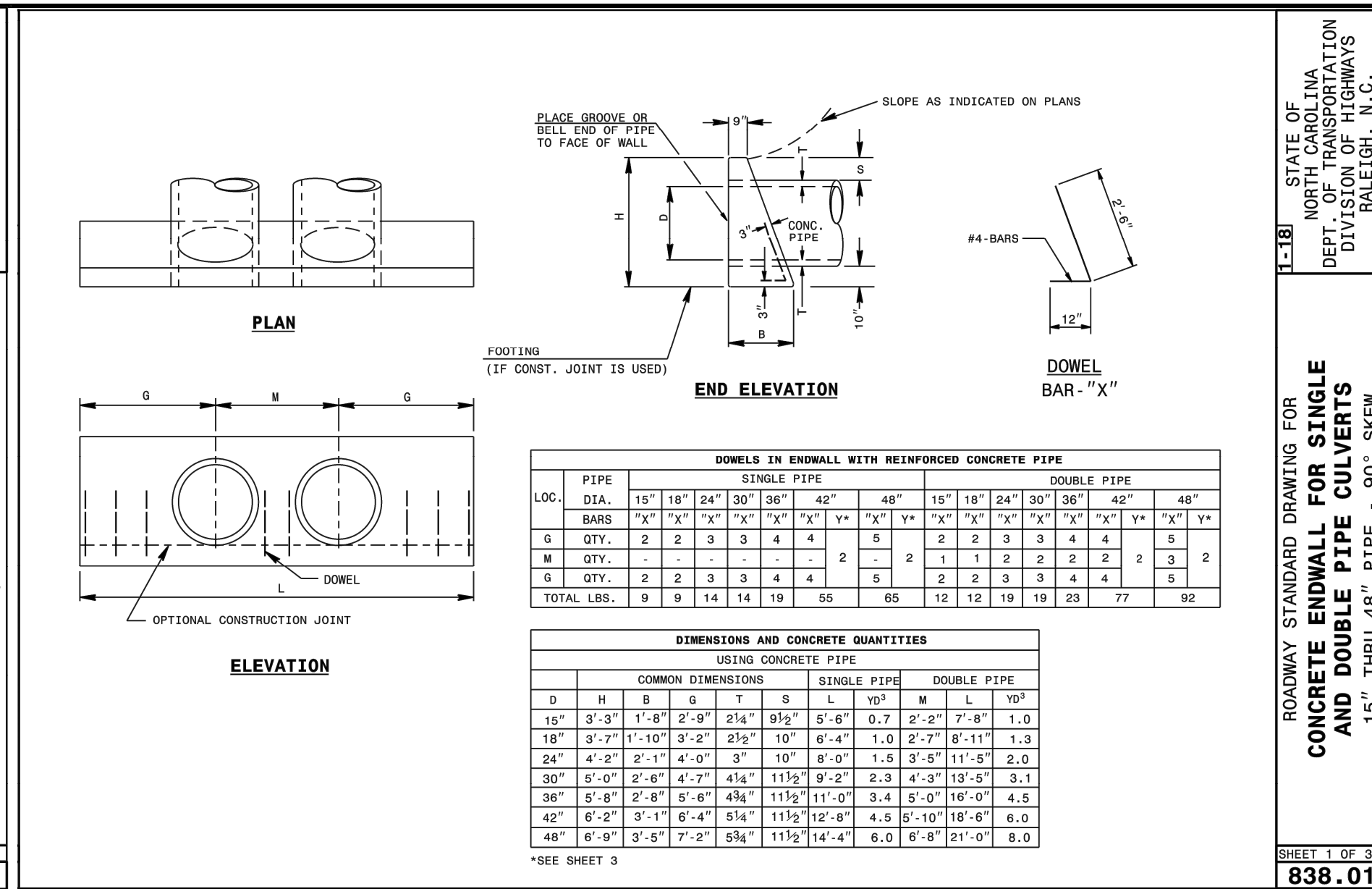
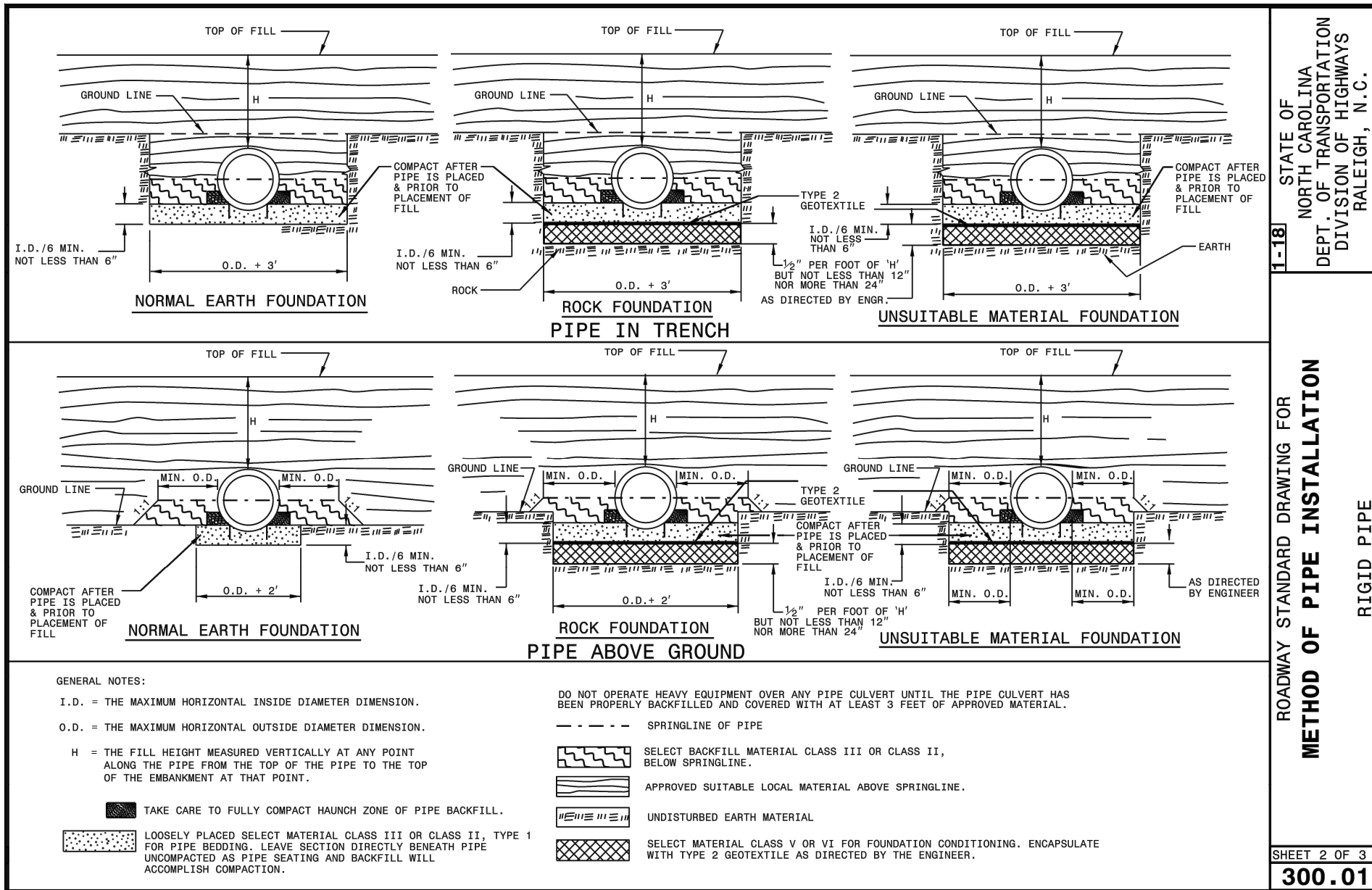
EROSION CONTROL DETAIL 2 OF 2

DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A
-----------------------	-----------------------	------------------

SHEET  
**C-31**

21.04018 - TOWN OF ST. PAULS - ELIZABETH ST & JOHNSON ST STORM DRAINAGE IMPROVEMENTS





**STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.**

**ROADWAY STANDARD DRAWING FOR METHOD OF PIPE INSTALLATION FILL HEIGHT TABLES**

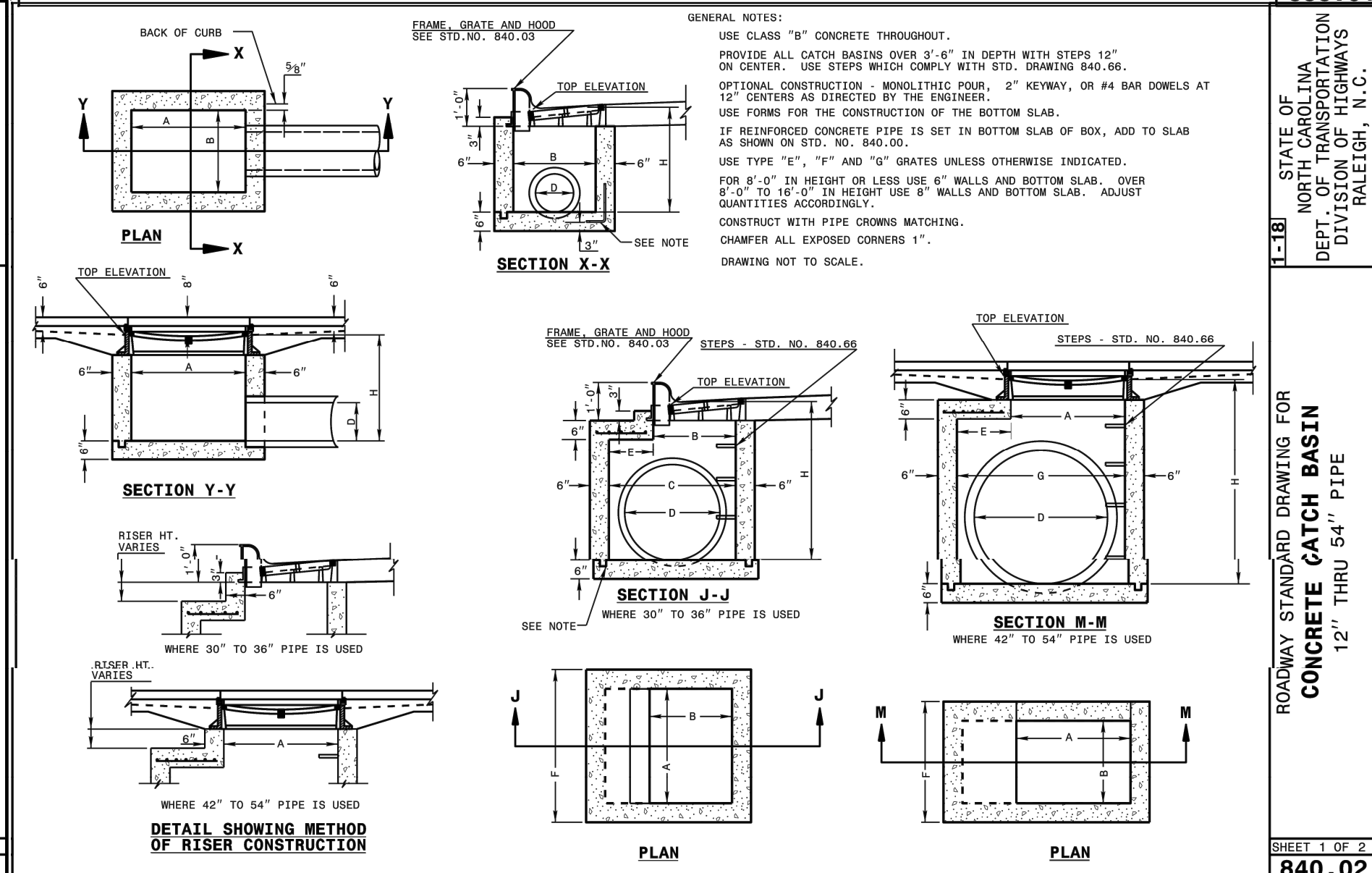
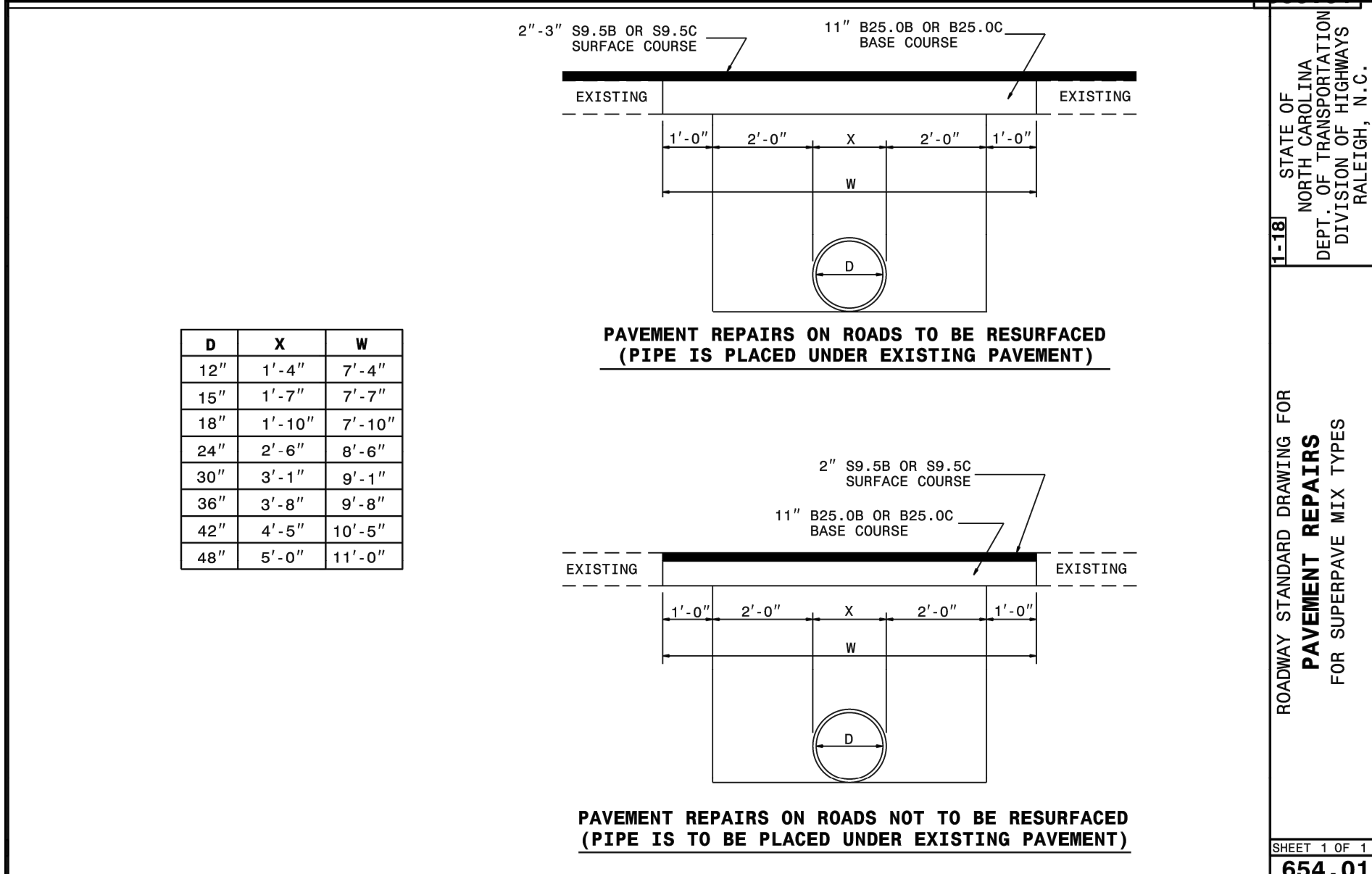
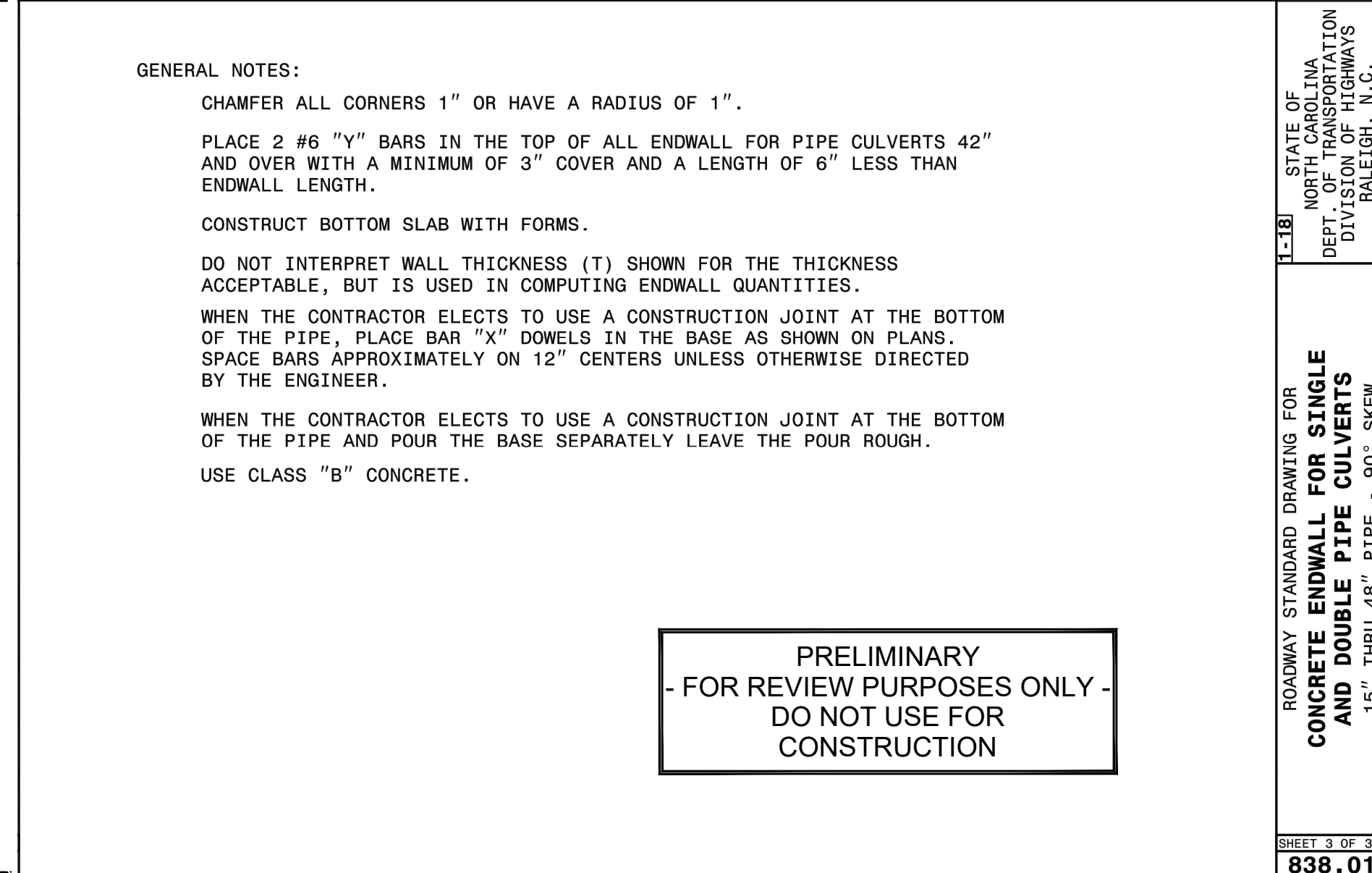
**SHEET 3 OF 3 300.01**

**FLEXIBLE PIPE**

Diameter (Inches)	Round Corrugated Steel Pipe 2 2/3 x 1/8 corrugation		Round Corrugated Aluminum Pipe 2 2/3 x 1/8 corrugation	
	Min. cover (feet)	Max. height of cover (feet)	Min. cover (feet)	Max. height of cover (feet)
12	12	204	12	204
15	12	162	12	162
18	12	135	12	135
21	12	115	12	115
24	12	100	12	100
30	12	79	12	79
36	12	65	12	65
42	12	55	12	55
48	12	48	12	48
54	12	54	12	54
60	12	60	12	60
66	12	66	12	66
72	12	72	12	72
78	12	78	12	78
84	12	84	12	84

**RIGID PIPE**

Diameter (Inches)	Class III or Class II		Class IV	
	Min. cover (feet)	Max. height of cover (feet)	Min. cover (feet)	Max. height of cover (feet)
10'	10'	10'	10'	10'
20'	20'	20'	20'	20'
30'	30'	30'	30'	30'
40'	40'	40'	40'	40'



NO.	DATE	BY	DESCRIPTION



WAD.MCGILLENGINEERS.COM\COMPANYSHARE\MCGILL PROJECTS\2021\1.04018-STPAULS-ELIZABETH-JOHNSON STREET STORM DRAINAGE IMPROVEMENTS\DRWG SHEETS\C31 MISCELLANEOUS DETAILS DWG PLOT DATE 1/31/2023 6:25 PM KAJIA BEESLEY

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' 12" THRU 72" PIPE

GENERAL NOTES:  
 USE CLASS "B" CONCRETE THROUGHOUT.  
 PROVIDE ALL GRATED DROP INLETS OVER 3'-8" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.  
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.  
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.  
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.05.  
 CONSTRUCT WITH PIPE CROWNS MATCHING.  
 USE STANDARD FRAMES AND GRATES 840.22 (SHOWN), 840.24 (SHOWN), 840.25 (NOT SHOWN) OR 840.29 (NOT SHOWN).  
 SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES. CHAMFER ALL EXPOSED CORNERS 1".  
 DRAWING NOT TO SCALE.  
 MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 15 FEET.

ADDITIONAL INLETS	CONCRETE CU. YDS.	NO. 4 BARS	NO. 6 BARS	NO. 8 BARS	NO. 10 BARS	NO. 12 BARS
2'-0"	0.191	0.417	0.666	0.897	1.144	1.380
4'-0"	0.074	0.148	0.222	0.296	0.370	0.444

QUANTITY TO BE ADDED FOR EACH 2' INCREMENT INLET OPENING

PIPE	SPAN	WIDTH	SPAN	WIDTH	HEIGHT	NO. BARS E	NO. BARS F	NO. BARS G	NO. BARS H	TOTAL	NO. FT. H <sub>T</sub>	APRON	TOTAL	REDUCTIONS FOR ONE PIPE	C.S.	R.C.			
12"	3'-8"	2'-0"	3'-8"	2'-0"	3'-9"	—	—	—	—	—	—	—	0.362	0.926	0.247	0.395	1.663	0.015	0.024
15"	3'-8"	2'-0"	3'-8"	2'-0"	4'-0"	—	—	—	—	—	—	—	0.362	0.988	0.247	0.395	1.745	0.023	0.036
18"	3'-8"	2'-0"	3'-8"	2'-0"	4'-3"	—	—	—	—	—	—	—	0.362	1.050	0.247	0.395	1.827	0.033	0.048
24"	3'-8"	2'-0"	3'-8"	2'-0"	4'-9"	—	—	—	—	—	—	—	0.362	1.214	0.247	0.395	2.051	0.059	0.085
30"	3'-8"	2'-0"	3'-8"	2'-0"	5'-3"	—	—	—	—	—	—	—	0.362	1.378	0.247	0.395	2.275	0.085	0.111
36"	3'-8"	2'-0"	3'-8"	2'-0"	5'-9"	—	—	—	—	—	—	—	0.362	1.542	0.247	0.395	2.500	0.111	0.137
42"	3'-8"	2'-0"	3'-8"	2'-0"	6'-3"	—	—	—	—	—	—	—	0.362	1.706	0.247	0.395	2.724	0.137	0.163
48"	3'-8"	2'-0"	3'-8"	2'-0"	6'-9"	—	—	—	—	—	—	—	0.362	1.870	0.247	0.395	2.948	0.163	0.189
54"	3'-8"	2'-0"	3'-8"	2'-0"	7'-3"	—	—	—	—	—	—	—	0.362	2.034	0.247	0.395	3.173	0.189	0.215
60"	3'-8"	2'-0"	3'-8"	2'-0"	7'-9"	—	—	—	—	—	—	—	0.362	2.198	0.247	0.395	3.397	0.215	0.241
66"	3'-8"	2'-0"	3'-8"	2'-0"	8'-3"	—	—	—	—	—	—	—	0.362	2.362	0.247	0.395	3.621	0.241	0.267
72"	3'-8"	2'-0"	3'-8"	2'-0"	8'-9"	—	—	—	—	—	—	—	0.362	2.526	0.247	0.395	3.845	0.267	0.293

MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE GRATED DROP INLET (BASED ON MIN. HEIGHT, H)

REINFORCING STEEL - NO. 4 BARS

CONCRETE APRON CU. YDS.

NO. THIS CONC. IN BOX

REDUCTIONS FOR ONE PIPE

C.S. R.C.

SHEET 2 OF 2 840.17

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST MANHOLE 4'-5" AND 6' DIAMETER 12" THRU 48" PIPE

GENERAL NOTES:  
 USE 4000 PSI MINIMUM COMPRESSIVE STRENGTH CONCRETE.  
 USE ASTM A615 GRADE 60 REINFORCING STEEL. USE ASTM A1064 WELDED WIRE FABRIC (W.W.F.).  
 FABRICATE, ASSEMBLE AND REASON PRECAST MANHOLE COMPONENTS ACCORDANCE WITH ASHTO M19.  
 ASSEMBLE RISER AND GRADE RINGS WITH THE STEPS SPACED 12" FROM THE TOP TO THE BOTTOM OF THE MANHOLE.  
 WHERE THE MANHOLE IS EXPOSED TO ROAD TRAFFIC, CONSTRUCT THE TOP OF THE MANHOLE FLUSH WITH THE GROUND AND A MINIMUM OF 6" ABOVE THE GROUND AT OTHER LOCATIONS.  
 LIMIT DEPTH OF FILL TO 30'-0" FROM FINISH GRADE TO TOP OF BOTTOM SLAB.  
 THE MIN. SLAB THICKNESS "T" IS THE DIMENSION OF THE THINNEST PORTION OF THE TOP/BOTTOM SLAB.  
 TOP MAT OF REINFORCEMENT MAY BE NEGLECTED IF TOP SLAB HAS A DISTINGUISHABLE TOP AND BOTTOM.

FRAME AND GRATE	NO. 4 BARS	NO. 6 BARS	NO. 8 BARS	NO. 10 BARS	NO. 12 BARS
FRAMES	840.22	840.24	840.25	840.29	840.30
GRATES	840.22	840.24	840.25	840.29	840.30

MINIMUM WEIGHTS - LBS.  
 FRAME - 180  
 COVER - 150  
 TOTAL - 300

SHEET 1 OF 1 840.52

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE CURB & GUTTER AND CURB & GUTTER

SHEET 2 OF 3 846.01

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' 12" THRU 72" PIPE

GENERAL NOTES:  
 USE CLASS "B" CONCRETE THROUGHOUT.  
 PROVIDE ALL GRATED DROP INLETS OVER 3'-8" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.  
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.  
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.  
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.05.  
 CONSTRUCT WITH PIPE CROWNS MATCHING.  
 USE STANDARD FRAMES AND GRATES 840.22 (SHOWN), 840.24 (SHOWN), 840.25 (NOT SHOWN) OR 840.29 (NOT SHOWN).  
 SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES. CHAMFER ALL EXPOSED CORNERS 1".  
 DRAWING NOT TO SCALE.  
 MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 15 FEET.

SHEET 1 OF 2 840.17

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR MANHOLE FRAME AND COVER

SOLID COVER SHOWN PERFORATED. PERFORATED AVAILABLE IF SPECIFIED.  
 STATE USE OF SYSTEM ON COVER (I.E.: SEWER, STORM DRAIN, ELECTRICAL)

MINIMUM WEIGHTS - LBS.  
 FRAME - 180  
 COVER - 150  
 TOTAL - 300

SHEET 1 OF 1 840.54

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE CURB & GUTTER AND CURB & GUTTER

NOTES:  
 IN THE TRANSITION FROM 4'-0" CONCRETE EXPRESSWAY GUTTER TO 2'-6" CONCRETE CURB AND GUTTER, PLACE 1/2" EXPANSION JOINTS AT 25' INTERVALS.  
 PLACE GROOVE JOINTS 1' DEEP AT 12'-6" INTERVALS BETWEEN EXPANSION JOINTS.  
 FILL AND SEAL THE TOP 1/2" OF THE EXPANSION JOINTS AND 1" OF CONTRACTION JOINTS WITH APPROVED JOINT SEALING COMPOUND.

SHEET 3 OF 3 846.01

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR FRAMES AND WIDE SLOT SAG GRATES

NOTE:  
 SEE STD. DWG. 840.25 FOR FRAME ANCHORAGE.

SHEET 1 OF 1 840.22

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE CURB, GUTTER AND CURB & GUTTER

GENERAL NOTES:  
 PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.  
 JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.  
 CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.  
 CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1 1/2" DEEP.  
 FILL ALL CONTRACTION JOINTS, EXCEPT IN 8" X 6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.  
 SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.

FILL 3/8" x 1" DEEP GROOVED OR SAWN JOINT WITH JOINT SEALER

SHEET 1 OF 3 846.01

PRELIMINARY - FOR REVIEW PURPOSES ONLY - DO NOT USE FOR CONSTRUCTION

55 Broad Street  
 Asheville, NC 28801  
 828.252.0575  
 NC Firm License # C-0459  
 mcgillassociates.com

CALL 811 BEFORE YOU DIG  
 SAFE DIGGING PARTNER

NO.	DATE	BY	DESCRIPTION

ELIZABETH ST & JOHNSON ST  
 STORM DRAINAGE IMPROVEMENTS  
**TOWN OF ST. PAULS**  
 ROBESON COUNTY, NORTH CAROLINA

NOT TO SCALE

OFFICE MANAGER B. ROARK	DESIGNER C. HEATHCOAT
PROJECT MANAGER D. SABEH	REVIEWER D. SABEH

MISCELLANEOUS DETAILS 2 OF 2

DATE FEBRUARY 2023	PROJECT # 21.04018	FUNDING # N/A
-----------------------	-----------------------	------------------

SHEET  
**C-33**