



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

June 29, 2022

MEMORANDUM TO: Mr. Brett D. Canipe, P.E.
Division 10 Division Engineer

FROM: *mat* for Philip S. Harris, III, P.E., Manager
Environmental Analysis Unit

SUBJECT: **Environmental Permits for TIP: B-5810** – Replacement of Bridge 22 on
NC 24/27 over Rocky River in Cabarrus County, Division 10, WBS No.
45764.1.1.

Please find enclosed the following permits for this project:

Agency	Permit Type	Permit Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Regional General Permit 50	May 25, 2025
NC Division of Water Resources Section 401 Water Quality Certification	General Certification No. 4135 [RGP50]	May 25, 2025

Please feel free to contact our Unit for any questions.

ec:
NCDOT Permit Website (<https://xfer.services.ncdot.gov/pdea/PermIssued/>)

TIP B-5810
Bridge No. 22 over Rocky River on NC 24/NC 27 EBL
in Cabarrus County
WBS No. 45764.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Structures Management Unit, Project Manager
FEMA Coordination

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

Memorandum of Agreement (MOA) has been approved as of May 6, 2022.

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

Division Ten, Division Bridge Program Manager
Northern-Long Eared Bat (NLEB)

The USACE has developed a Standard Local Operations Procedure for Endangered Species (SLOPES) to address NLEB when they are the lead agency, which NCDOT will follow for this project. This procedure applies to projects in NCDOT Divisions 9-14. The requirements of the SLOPES for the NLEB will be completed prior to Let and will be submitted to the USACE. *A Biological Conclusion is not required.*

A survey completed in 2021 found roosting habitat on the bridge but no evidence of bat use.

Division Ten, Division Bridge Program Manager, NCDOT Environmental Analysis Unit (EAU) – Bald Eagle Surveys

Due to the presence of habitat within the study area, the EAU will conduct surveys of the study area within 660 feet of the project limits for the Bald Eagle. These surveys will be conducted prior to project construction.

Survey was completed on February 1, 2022. No eagles or nests were observed.

Division Ten, Roadside Environmental

Rocky River is listed on the North Carolina 2022 Final 303(d) list of impaired water for turbidity at the bridge site; therefore, Design Standards in Sensitive Watersheds will be implemented for this project.

COMMITMENTS FROM PERMITTING

Division Ten Construction

In adherence to the Migratory Bird Treaty Act (MBTA) demolition activities should occur between September and March of any given year. If demolition activities must occur outside of those months, the Division Environmental Officer should be consulted to advise on nesting exclusion activities to prevent birds from nesting in the structure.

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

Action Id. **SAW-2022-01188** County: **Cabarrus County** U.S.G.S. Quad: **Locust**

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Permittee: **Philip Harris III**
North Carolina Department of Transportation
Address: **1598 Mail Service Center**
Raleigh NC, 27699
Telephone Number: **(919) 707- 6126 (Jeff Hemphill)**

Size (acres) **N/A** Nearest Town **Midland**

Nearest Waterway **Rocky River** River Basin **Upper Pee Dee**
USGS HUC **03040105** Coordinates Latitude: **35.2547**; Longitude: **-80.4727**
Location description: **Bridge No. 22 over Rocky River, on NC 24/27, northeast of Midland, NC.**

Description of projects area and activity: **TIP B-5810; bridge replacement impacting a total of 157 linear feet of tributaries (61 linear feet of permanent loss of hydrology; 81 linear feet of bank stabilization; 15 linear feet of workpad/causeway).**

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

Authorization: Regional General Permit Number: 50

SEE ATTACHED RGP 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 May 24, June 7, and June 9, 2022. 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.

Special Condition: In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility transfer form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization.

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
Action Id. **SAW-2022-01188**

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.

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 **Eric Alsmeyer at (919) 554-4884 X 23 or Eric.C.Alsmeier@usace.army.mil.**

Corps Regulatory Official: Monte Matthews Date: 2022.06.13
Expiration Date of Verification: 13:00:53 -04'00' Date: **June 13, 2022**

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 (by email):

Beth Harmon, NCDMS

B-5810 Temporary riprap fill RE: NCDOT Question; DA# SAW-2022-01188.

Hemphill, Jeffrey L <jhemphill@ncdot.gov>

Wed 8/10/2022 3:04 PM

To: Renn, Jeffrey J <jrenn@ncdot.gov>; Hackler, Nicole M <nmhackler@ncdot.gov>; Turchy, Michael A <maturchy@ncdot.gov>; Jason.Griscom@stvinc.com <Jason.Griscom@stvinc.com>; Howard, Joel M <jmhoward@ncdot.gov>; Baucom, Richard W <rwbaucom@ncdot.gov>; Haywood, Luther G <ghaywood@ncdot.gov>; Fischer, Kevin <wkfischer@ncdot.gov>; Cole, Adam A <aacole@ncdot.gov>

All

This gives us the go ahead – permitting issues are satisfied for B-5810.

Jeff Hemphill

Environmental Coordinator

Environmental Coordination & Permitting

North Carolina Department of Transportation

From: Alsmeyer, Eric C CIV USARMY CESAW (USA) <Eric.C.Alsmeier@usace.army.mil>

Sent: Wednesday, August 10, 2022 2:53 PM

To: Hemphill, Jeffrey L <jhemphill@ncdot.gov>; Chapman, Amy <amy.chapman@ncdenr.gov>

Cc: Turchy, Michael A <maturchy@ncdot.gov>

Subject: B-5810 RE: Temporary riprap fill RE: NCDOT Question; DA# SAW-2022-01188.

Jeff: I will add the revised drawings to the official record for this project. No mod is needed.

Eric

Eric Alsmeyer

Project Manager

From: Hemphill, Jeffrey L <jhemphill@ncdot.gov>

Sent: Wednesday, August 10, 2022 12:24 PM

To: Alsmeyer, Eric C CIV USARMY CESAW (USA) <Eric.C.Alsmeier@usace.army.mil>; Chapman, Amy <amy.chapman@ncdenr.gov>

Cc: Turchy, Michael A <maturchy@ncdot.gov>

Subject: B-5810 RE: Temporary riprap fill RE: NCDOT Question; DA# SAW-2022-01188.

All

The attached Revised Final Permit Drawings for B-5810 in Cabarrus County replace the permit drawings originally issued with the permit application on June 5, 2022. Minor technical changes to the drawing were made – these changes did not affect impacts from the project.

Thank you

Jeff Hemphill

Environmental Coordinator

Environmental Coordination & Permitting

North Carolina Department of Transportation

Action ID Number: SAW-2022-01188

County: Cabarrus County

Permittee: Philip Harris III
North Carolina Department of Transportation

Project Name: NCDOT / B-5810 / Bridge No. 22 / eastbound NC 24/27 / Rocky River / Cabarrus County / Div 10

Date Verification Issued: June 13, 2022

Project Manager: Eric Alsmeyer

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: Eric Alsmeyer
Raleigh Regulatory Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587
919.554.4884, Ext. 23

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

DEPARTMENT OF THE ARMY
Wilmington District, Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403-1343

Regional General Permit No. SAW-2019-02350 (RGP 50)
Name of Permittee: North Carolina Department of Transportation
Effective Date: May 26, 2020
Expiration Date: May 25, 2025

**DEPARTMENT OF THE ARMY
REGIONAL GENERAL PERMIT**

A regional general permit (RGP) to perform work in or affecting navigable waters of the United States and waters of the United States, upon recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 403), and Section 404 of the Clean Water Act (33 U.S.C. 1344), is hereby issued by authority of the Secretary of the Army by the

District Commander
U.S. Army Engineer District, Wilmington
Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403-1343

TO AUTHORIZE THE DISCHARGE OF DREDGED OR FILL MATERIAL IN WATERS OF THE UNITED STATES (U.S.), INCLUDING WETLANDS, ASSOCIATED WITH MAINTENANCE, REPAIR, AND CONSTRUCTION PROJECTS CONDUCTED BY THE VARIOUS DIVISIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT), INCLUDING THE NCDOT DIVISION OF HIGHWAYS, RAIL, BICYCLE/PEDESTRIAN, ETC.

Activities authorized by this RGP:

- a. (1) Road widening, and/or (2) construction, maintenance, and/or repair of bridges. For bridge projects, work can include the approaches.
- b. (1) Improvement of interchanges or intersections, or (2) construction of interchanges or intersections over, on, existing roads.

Full descriptions/terms of “a” and “b”:

a. (1) Road widening, and/or (2) construction, maintenance, and/or repair of bridges. For bridge projects, work can include the approaches.

Permanent impacts that result in a loss of waters of the U.S., excluding stream relocation(s), must be less than or equal to 500 linear feet (lf) of stream and/or one (1) acre of wetland/open water for each single and complete linear project.

Single and complete linear project. As noted in 33 CFR 330.2(i), for linear projects, the “single and complete project” (i.e., single and complete crossing) will apply to each crossing of a separate water of the U.S. (i.e., single waterbody) at that location; except that for linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly-shaped wetland or lake, etc., are not separate waterbodies and crossing of such features cannot be considered separately.

Also authorized under “a”: (1) stream relocation(s) and (2) temporary impacts, such as those from temporary structures, fills, dewatering, and other work necessary to conduct the activities listed under “a”. Stream relocation(s) and temporary impacts will be evaluated independently and are not limited to the permanent loss limits of 500 lf of stream and/or 1 acre of wetland/open water (i.e., stream relocations and/or temporary impacts do not factor into these limits) for each single and complete linear project; however, if the Corps determines that the proposed stream relocation(s) and/or temporary impacts are of such magnitude that they cannot be authorized under this section (“a”) of RGP 50, even if the permanent losses from road widening, and/or construction, maintenance, and repair of bridges do not exceed the impact limits for this section (“a”) of RGP 50, an Individual Permit will be required.

If the Corps determines, on a case-by-case basis, that the concerns for the aquatic environment so indicate, he/she may exercise discretionary authority to override this RGP and require an Individual Permit.

b. (1) Improvement of interchanges or intersections, or (2) construction of interchanges or intersections, over or, on existing roads.

For activities authorized under “b”, the limits for permanent impacts that result in a loss of waters of the U.S. depend on the location of the impacts, as described below:

- In the coastal plain of North Carolina (both inner coastal plain and outer coastal plain) - permanent impacts that result in a loss of waters of the U.S., excluding stream relocation(s), must be less than or equal to 1,000 lf of stream and/or 3 acres of wetland/open water for the entire interchange or intersection project.

- All other areas of North Carolina - permanent impacts that result in a loss of waters of the U.S., excluding stream relocation(s), must be less than or equal to 1,000 lf of stream and/or 2 acres of wetland/open water for the entire interchange or intersection project.

Coastal plain – See http://saw-reg.usace.army.mil/JD/LRRs_PandT.pdf for Land Resource Areas LRRP (inner coastal plain) and LRRT (outer coastal plain).

When proposed impacts to waters of the U.S. are located both inside AND outside of the coastal plain, the Corps will determine, based on the location(s) of proposed impacts to waters of the U.S., if a project is a “coastal plain project”.

Single and complete project. For permitting purposes, each interchange or intersection is considered to be one single and complete project. For example, an interchange project cannot result in a permanent loss (excluding stream relocation), of (1) greater than 1,000 lf of stream and/or 3 acres of wetland/open water in the coastal plain OR (2) greater than 1,000 lf of stream and/or 2 acres of wetland/open water in all other areas of North Carolina.

Approach fills may be considered to be part of an interchange or intersection project if the Corps determines that inclusion of these areas meet the terms of this section (“b”) of RGP 50. Early coordination with the Corps is encouraged.

Intersections, regardless of the mode of transportation (e.g., railroad, other roadways, etc.), may be at grade or grade separated if the Corps determines that the project would meet the terms of this section (“b”) of RGP 50. Early coordination with the Corps is encouraged.

Also authorized under “b”: (1) stream relocation(s) and (2) temporary impacts, such as those from temporary structures, fills, dewatering, and other work necessary to conduct the activities listed under “b”. Stream relocation(s) and temporary impacts will be evaluated independently and are not limited to the permanent loss limits of (1) 1,000 lf of stream and/or 3 acres of wetland/open water in the coastal plain OR (2) 1,000 lf of stream and/or 2 acres of wetland/open water in all other areas of North Carolina (i.e., stream relocations and/or temporary impacts do not factor into these limits) for each interchange or intersection project; however, if the Corps determines that the proposed stream relocation(s) and/or temporary impacts are of such magnitude that they cannot be authorized under this section (“b”) of RGP 50, even if the permanent losses from improvement of interchanges or intersections, or construction of interchanges or intersections over, or on, existing roads do not exceed the impact limits for this section (“b”) of RGP 50, an Individual Permit will be required.

If the Corps determines, on a case-by-case basis, that the concerns for the aquatic environment so indicate, he/she may exercise discretionary authority to override this RGP and require an Individual Permit.

1. Special Conditions.

a. The prospective permittee must submit a pre-construction notification (PCN) and applicable supporting information to the District Engineer and receive written verification from the Corps that the proposed work complies with this RGP prior to commencing any activity authorized by this RGP.

b. If the project will not impact a designated “Area of Environmental Concern” (AEC) in the twenty* (20) counties of North Carolina covered by the North Carolina Coastal Area Management Act (CAMA) (“CAMA counties”), a consistency submission is not required. If the project will impact a designated AEC and meets the definition of “development”, the prospective permittee must obtain the required CAMA permit. Development activities shall not commence until a copy of the approved CAMA permit is furnished to the appropriate Corps Regulatory Field Office (Wilmington Field Office – 69 Darlington Avenue, Wilmington, NC 28403 or Washington Field Office – 2407 West 5th Street, Washington, NC 27889).

***The 20 CAMA counties in North Carolina include Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Hertford, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrrell, and Washington.**

c. No work shall be authorized by this RGP within the 20* CAMA counties without prior consultation with the National Oceanic and Atmospheric Administration’s (NOAA) Habitat Conservation Division. For each activity reviewed by the Corps where it is determined that the activity may affect Essential Fish Habitat (EFH) for federally managed species, an EFH Assessment shall be prepared by the prospective permittee and forwarded to the Corps and NOAA Fisheries for review and comment prior to authorization of work.

d. Culverts and pipes. The following conditions [(1)-(8)] apply to the construction of culverts/pipes, and work on existing culverts/pipes.

Additionally, if the proposed work would affect an existing culvert/pipe (e.g., culvert/pipe extensions), the prospective permittee must include actions (in the PCN) to correct any existing deficiencies that are located:

- At the inlet and/or outlet of the existing culvert/pipe, IF these deficiencies are/were caused by the existing culvert/pipe, or
- Near the inlet or outlet of the existing culvert/pipe, IF these deficiencies are/were caused by the existing culvert/pipe.

These deficiencies may include, but are not limited to, stream over-widening, bank erosion, streambed scour, perched culvert/pipes, and inadequate water depth in culvert(s). Also note if the proposed work would address the existing deficiency or eliminate it – e.g., bank erosion on left bank, but the culvert extension will be placed in this eroded area. If the prospective permittee is unable to correct the deficiencies caused by the existing culvert/pipe, they must document the reasons in the PCN for Corps consideration.

(1) No activity may result in substantial, permanent disruption of the movement of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area. Measures will be included that will promote the safe passage of fish and other aquatic organisms.

(2) The dimension, pattern, and profile of the stream above and below a culvert/pipe shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. It is acceptable to use rock vanes at culvert/pipe outlets to ensure, enhance, or maintain aquatic passage. Pre-formed scour holes are acceptable when designed for velocity reduction. The width, height, and gradient of a proposed opening shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow will be determined from gauge data, if available. In the absence of such data, bankfull flow will be used as a comparable level.

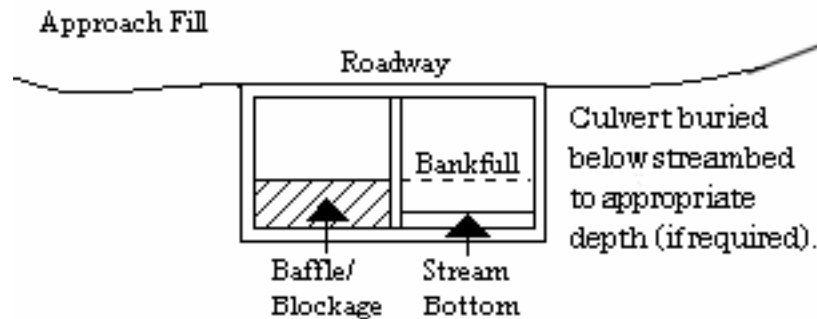
(3) Burial/depth specifications: If the project is located within any of the 20* CAMA counties, culvert/pipe inverts will be buried at least one foot below normal bed elevation when they are placed within the Public Trust AEC and/or the Estuarine Waters AEC as designated by CAMA. If the project is located outside of the 20* CAMA counties, culvert/pipe inverts will be buried at least one foot below the bed of the stream for culverts/pipes that are greater than 48 inches in diameter. Culverts/pipes that are 48 inches in diameter or less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, to include passage during drought or low flow conditions. Every effort shall be made to maintain the existing channel slope. A waiver from the burial/depth specifications in this condition may be requested in writing. The prospective permittee is encouraged to request agency input about waiver requests as early as possible, and prior to submitting the PCN for a specific project; this will allow the agencies time to conduct a site visit, if necessary, and will prevent time delays and potential project revisions for the prospective permittee. The waiver will only be issued by the Corps if it can be demonstrated that the impacts of complying with burial requirements would result in more adverse impacts to the aquatic environment.

(4) Appropriate actions to prevent destabilization of the channel and head cutting upstream shall be incorporated in the design and placement of culverts/pipes.

(5) Culverts/pipes placed within riparian and/or riverine wetlands must be installed in a manner that does not restrict the flow and circulation patterns of waters of the U.S. Culverts/pipes placed across wetland fills purely for the purposes of equalizing surface

water do not have to be buried, but must be of adequate size and/or number to ensure unrestricted transmission of water.

(6) Bankfull flows (or less) shall be accommodated through maintenance of the existing bankfull channel cross sectional area in no more than one culvert/pipe or culvert/pipe barrel. Additional culverts/pipes or barrels at such crossings shall be allowed only to receive flows exceeding the bankfull flow. A waiver from this condition may be requested in writing; this request must be specific as to the reason(s) for the request. The waiver will be issued if it can be demonstrated that it is not practicable to comply with this condition.



(7) Where adjacent floodplain is available, flows exceeding bankfull will be accommodated by installing culverts/pipes at the floodplain elevation. When multiple culverts/pipes are used, baseflow must be maintained at the appropriate width and depth by the construction of floodplain benches, sills, and/or construction methods to ensure that the overflow culvert(s)/pipe(s) is elevated above the baseflow culvert(s)/pipe(s).

(8) The width of the baseflow culvert/pipe shall be comparable to the width of the bankfull width of the stream channel. If the width of the baseflow culvert/pipe is wider than the stream channel, the culvert/pipe shall include baffles, benches and/or sills to maintain the width of the stream channel. A waiver from this condition may be requested in writing; this request must be specific as to the reason(s) for the request. The waiver will be issued if it can be demonstrated that it is not practicable or necessary to include baffles, benches or sills.

See the remaining special conditions for additional information about culverts/pipes in specific areas.

e. Discharges into waters of the U.S. designated by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are prohibited during the period between February 15th and June 30th, without prior written approval from the Corps and the appropriate wildlife agencies (NCDMF, NCWRC, and/or the National Marine Fisheries Service (NMFS)). Discharges into waters of the U.S. designated by NCWRC as primary nursery areas in inland waters are prohibited during the period between February 15th and September 30th, without prior written approval from the Corps and the appropriate wildlife agencies. Discharges into waters of the U.S. designated by NCDMF as primary nursery areas shall be coordinated with NCDMF prior to being authorized by

this RGP. Coordination with NCDMF may result in a required construction moratorium during periods of significant biological productivity or critical life stages.

The prospective permittee should contact:

NC Division of Marine Fisheries
3441 Arendell Street
Morehead City, NC 28557
Telephone 252-726-7021
or 800-682-2632

North Carolina Wildlife Resources Commission
Habitat Conservation Division
1721 Mail Service Center
Raleigh, NC 27699-1721
Telephone (919) 707-0220

f. This permit does not authorize the use of culverts in areas designated as anadromous fish spawning areas by the NCDMF or the NCWRC.

g. No in-water work shall be conducted in Waters of the U.S. designated as Atlantic sturgeon critical habitat during the periods between February 1st and June 30th. No in-water work shall be conducted in Waters of the U.S. in the Roanoke River designated as Atlantic sturgeon critical habitat during the periods between February 1st and June 30th, and between August 1st to October 31st, without prior written approval from NMFS.

h. Before discharging dredged or fill material into waters of the U.S. in designated trout watersheds in North Carolina, the PCN will be sent to the NCWRC and the Corps concurrently. See <https://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx> for the designated trout watersheds. The PCN shall summarize alternatives to conducting work in waters of the U.S. in trout watersheds that were considered during the planning process and detail why alternatives were or were not selected. For proposals where (1) a bridge in a trout stream will be replaced with a culvert, or (2) a culvert will be placed in a trout stream, the PCN must also include a compensatory mitigation plan for all loss of stream bed, and details of any on-site evaluations that were conducted to determine that installation of a culvert will not adversely affect passage of fish or other aquatic biota at the project site. The evaluation information must include factors such as the proposed slope of the culvert and determinations of how the slope will be expected to allow or impede passage, the necessity of baffles and/or sills to ensure passage, design considerations to ensure that expected baseflow will be maintained for passage and that post-construction velocities will not prevent passage, site conditions that will or will not allow proper burial of the culvert, existing structures (e.g., perched culverts, waterfalls, etc.) and/or stream patterns up and downstream of the culvert site that could affect passage and bank stability, and any other considerations regarding passage. The level of detail for this information shall be based on site conditions (i.e., culverts on a slope over 3% will most likely require more information than culverts on a slope that is less than 1%, etc.). Also, in order to evaluate potential impacts, the prospective permittee will describe bedforms that will be impacted by the proposed culvert – e.g., pools, glides, riffles, etc. The NCWRC will respond to both the prospective permittee and the Corps.

i. For all activities authorized by this RGP that involve the use of riprap material for bank stabilization, the following measures shall be applied:

(1) Where bank stabilization is conducted as part of an activity, natural design, bioengineering, and/or geoengineering methods that incorporate natural durable materials, native seed mixes, and native plants and shrubs are to be utilized, as appropriate to site conditions, to the maximum extent practicable.

(2) Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters; however, the prospective permittee may request a waiver from this requirement. The waiver request must be in writing. The Corps will only issue a waiver if the prospective permittee demonstrates that the impacts of complying with this requirement would result in greater adverse impacts to the aquatic environment. Note that filter fabric is not required if the riprap will be pushed or “keyed” into the bank of the waterbody.

(3) The placement of riprap shall be limited to the areas depicted on submitted work plan drawings.

(4) Riprap shall not be placed in a manner that prevents or impedes fish passage.

(5) Riprap shall be clean and free from loose dirt or any pollutant except in trace quantities that will not have an adverse environmental effect.

(6) Riprap shall be of a size sufficient to prevent its movement from the authorized alignment by natural forces under normal conditions.

(7) Riprap material shall consist of clean rock or masonry material such as, but not limited to, granite, marl, or broken concrete.

j. Discharges of dredged or fill material into waters of the U.S., including wetlands, must be minimized or avoided to the maximum extent practicable.

k. Generally, off-site detours are preferred to avoid and minimize impacts to the human and natural environment; however, if an off-site detour is considered impracticable, then an on-site detour may be considered as a necessary component of the actions authorized by this RGP. Impacts from the detour may be considered temporary and may not require compensatory mitigation if the impacted area is restored to pre-construction elevations and contours after construction is complete. The permittee shall also restore natural hydrology and stream corridors (if applicable), and reestablish native vegetation/riparian corridors. If the construction of a detour (on-site or off-site) includes standard undercutting methods, removal of all material and backfilling with suitable material is required. See special condition “s” for additional information.

l. All activities authorized by this RGP shall, to the maximum extent practicable, be

conducted "in the dry", with barriers installed between work areas and aquatic habitat to protect that habitat from sediment, concrete, and other pollutants. Where concrete is utilized, measures will be taken to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with waters of the U.S. until the concrete has set and cured. All water in the work area that has been in contact with concrete shall only be returned to waters of the U.S. when it no longer poses a threat to aquatic organisms (concrete is set and cured).

m. In cases where new alignment approaches are to be constructed and the existing approach fill in waters of the U.S. is to be abandoned and no longer maintained as a roadway, the abandoned fill shall be removed and the area will be restored to pre-construction elevations and contours. The permittee shall also restore natural hydrology and stream corridors (if applicable), and reestablish native vegetation/riparian corridors, to the extent practicable. This activity may qualify as compensatory mitigation credit for the project and will be assessed on a case-by-case basis in accordance with Special Conditions "q" and "r" in this document. Any proposed on-site wetland restoration area must be void of utility conflicts and/or utility maintenance areas. A restoration plan detailing this activity will be required with the submittal of the PCN.

n. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

o. The project must be implemented and/or conducted so that all reasonable and practicable measures to ensure that equipment, structures, fill pads, and work associated with the project do not adversely affect upstream and/or downstream reaches. Adverse effects include, but are not limited to, channel instability, scour, flooding, and/or shoreline/streambank erosion. During construction, the permittee shall routinely monitor for these effects, cease all work if/when detected, take initial corrective measures to correct actively eroding areas, and notify the Corps immediately. Permanent corrective measures may require additional authorization from the Corps.

p. All PCNs will describe sedimentation and erosion control structures and measures proposed for placement in waters of the U.S. To the maximum extent practicable, structures and measures will be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams. In addition, appropriate soil and erosion control measures must be established and maintained during construction. All fills, temporary and permanent, must be adequately stabilized at the earliest practicable date to prevent erosion of fill material into adjacent waters or wetlands.

q. Compensatory mitigation will be required for permanent impacts resulting in a loss of waters of the U.S. due to culvert/pipe installation and other similar activities. Mitigation may be required for stream relocation projects (see Special Condition “r” below). When compensatory mitigation is required, the prospective permittee will attach a proposed mitigation plan to the PCN. Compensatory mitigation proposals will be written in accordance with currently approved Wilmington District guidance and Corps mitigation regulations, unless the purchase of mitigation credits from an approved mitigation bank or the North Carolina Division of Mitigation Services (NCDMS) is proposed to address all compensatory mitigation requirements. The Corps Project Manager will make the final determination concerning the appropriate amount and type of mitigation.

r. Stream Relocations (non-tidal only) - for the purposes of permitting, stream relocations are considered a loss of waters of the U.S. Depending on the condition and location of (1) the existing stream, and (2) the relocated channel, stream relocation(s) may provide a functional uplift. The Corps will determine if an uplift is possible based on the information submitted with the PCN. If the anticipated uplift(s) occurs, it may offset, either partially or fully, the loss associated with a stream relocation(s) - (i.e., due to the uplift, either no compensatory mitigation would be required for the stream relocation itself, or compensatory mitigation would be required at a reduced ratio).

Because the amount of potential uplift is dependent upon the condition (or quality) of the channel to be relocated, there is no pre-determined amount of uplift needed to satisfy the requirements for a successful relocation project. After performing the evaluation(s) noted in this document, the prospective permittee will propose a certain amount of uplift potential and the Corps project manager will make the final determination. Baseline conditions and subsequent monitoring must show that the relocated channel is providing/will provide aquatic function at, or above, the level provided by the baseline (pre-project) condition. If the required uplift is not achieved, the work will not be in compliance with this special condition of RGP 50 and remediation will be required through repair (and continued monitoring), or by the permittee providing compensatory mitigation (e.g., mitigation credit through an approved bank, mitigation credit through NCDMS, etc.).

Compensatory mitigation, in addition to the stream relocation activity, may be required if the Corps determines that (a) no uplift in stream function is achievable, (b) the proposed uplift in stream function is not sufficient, by itself, (c) the risks associated with achieving potential uplifts in stream function are excessive, and/or (d) the time period for achieving the potential uplifts/functional success is too great.

On-site compensatory mitigation is not the same as stream relocation. While stream relocation simply moves a stream to a nearby, geographically similar area, it does not generate mitigation credits. If NCDOT proposes to generate compensatory mitigation on a project site, NCDOT must submit a mitigation plan that complies with 33 CFR 332.4.

The prospective permittee is required to submit the following information for any proposed project that involves stream relocation, regardless of the size/length of the stream relocation (note that 1-5 below only apply to stream relocations and not to compensatory mitigation):

- (1) A statement detailing why relocating the stream is unavoidable. In order to ensure that this action is separate from a compensatory mitigation project, the need for the fill must be related to road/interchange/intersection construction or improvement, and the project must meet the requirements set forth in the full descriptions/terms of “a” and “b” on pages 2 and 3 of this permit.
- (2) An evaluation of effects on the relocated stream and buffer from utilities, or potential for impact from utility placement in the future.
- (3) An evaluation of the baseline condition of the stream to be relocated. In order to demonstrate a potential uplift, the prospective permittee must provide the baseline (pre-impact) condition of the stream that is proposed for relocation. The prospective permittee will document the baseline condition of the stream by using the Corps’ (Wilmington District’s) current functional assessment method - e.g., the North Carolina Stream Assessment Method (NCSAM). The functional assessment must be used to identify specific areas where an uplift would reasonably be expected to occur, and also show important baseline functions that will remain after the relocation.
- (4) An evaluation of the potential uplifts to stream function for the relocated channel. The amount of detail required in the plan will be commensurate with the functional capacity of the original stream and proposed uplift(s). Low functional capacity will warrant less monitoring and less detail in the plan in order to ensure that the relocated channel provides the same, or better/increased, suite of aquatic functions as the existing channel.
- (5) A proposed monitoring plan for the relocated channel (and buffer, if applicable), will be prepared in accordance with current District guidance. The level of detail needed in the plan will be directly related to the quality of baseline functions and the anticipated uplift, therefore it is recommended that a pre-application discussion occur with the Corps Project Manager as early as possible. For example, if the risk for achieving the anticipated functional uplift is moderate or low, or if there is a low amount of proposed uplift, less information and monitoring will be required in the proposed relocation plan; similar to the requirements found in the "2003 Stream Mitigation Guidelines". If the risk for uplift is higher, or if there is a high amount of proposed uplift, additional monitoring and information will be required, trending toward the prescriptions found in the most recent Wilmington District Compensatory Mitigation Guidance – e.g., the 2016 Wilmington District Stream and Wetland Compensatory Mitigation Update. All monitoring will be for at least 5 years unless the Corps project manager determines that (a) a specific project requires less than 5 years due to site conditions or limited risk/uplift potential, and/or complexity (or simplicity) of the existing channel and/or the

relocation work, or (b) the Corps project manager determines (during the monitoring period) that the 5 years of monitoring may be reduced (or that no further monitoring is required) based on monitoring information received once the stream relocation has been completed.

s. Upon completion of any work authorized by this RGP, all temporary fills (to include culverts, pipes, causeways, etc.) will be completely removed from waters of the U.S. and the areas will be restored to pre-construction elevations and contours. The permittee shall also restore natural hydrology and stream corridors (if applicable), and reestablish native vegetation/riparian corridors. This work will be completed within 60 days of completion of project construction. If this timeframe occurs while a required moratorium of this permit is in effect, the temporary fill shall be removed in its entirety within 60 days of the moratorium end date. If vegetation cannot be planted due to the time of the year, all disturbed areas will be seeded with a native mix appropriate for the impacted area, and vegetation will be planted during the next appropriate time frame. A native seed mix may contain non-invasive small grain annuals (e.g. millet and rye grain) to ensure adequate cover while native vegetation becomes established. The PCN must include a restoration plan showing how all temporary fills and structures will be removed and how the area will be restored to pre-project elevations and contours.

t. Once the authorized work in waters of the U.S. is complete, the permittee shall sign and return the compliance certificate that is attached to the RGP verification letter.

u. The District Engineer will consider any comments from Federal and/or State agencies concerning the proposed activity's compliance with the terms and conditions of this RGP.

v. The Corps may place additional special conditions, limitations, or restrictions on any verification of the use of RGP 50 on a project-by-project basis.

2. General Conditions.

a. Except as authorized by this RGP or any Corps approved modification to this RGP, no excavation, fill or mechanized land-clearing activities shall take place within waters or wetlands, at any time during construction or maintenance of the project. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with the project.

b. Authorization under this RGP does not obviate the need to obtain other federal, state, or local authorizations.

c. All work authorized by this RGP must comply with the terms and conditions of the applicable CWA Section 401 Water Quality Certification for this RGP issued by the North Carolina Division of Water Resources (NCDWR).

d. The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside of 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).

e. The activities authorized by this RGP must not interfere with the public's right to free navigation on all navigable waters of the U.S. No attempt will be made by the permittee to prevent the full and free use by the public of all navigable waters at, or adjacent to, the authorized work for a reason other than safety.

f. The permittee understands and agrees that if future operations by the U.S. require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

g. The permittee, upon receipt of a notice of revocation of this RGP for the verified individual activity, may apply for an individual permit, or will, without expense to the U.S. and in such time and manner as the Secretary of the Army or his/her authorized representative may direct, restore the affected water of the U.S. to its former conditions.

h. This RGP does not authorize any activity that would conflict with a federal project's congressionally authorized purposes, established limitations or restrictions, or limit an agency's ability to conduct necessary operation and maintenance functions. Per Section 14 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. 408), no project that has the potential to take possession of or make use of for any purpose, or build upon, alter, deface, destroy, move, injure, or obstruct a federally constructed work or project, including, but not limited to, levees, dams, jetties, navigation channels, borrow areas, dredged material disposal sites, flood control projects, etc., shall be permitted unless the project has been reviewed and approved by the appropriate Corps approval authority. Permittees shall not begin the activity authorized by this RGP until notified by the Corps that the activity may proceed.

i. The permittee shall obtain a Consent to Cross Government Easement from the appropriate Corps District's Land Use Coordinator prior to any crossing of a Corps easement and/or prior to commencing construction of any structures, authorized dredging, or other work within the right-of-way of, or in proximity to, a federally designated disposal area.

j. The permittee will allow the Wilmington District Engineer or his/her representative to inspect the authorized activity at any time deemed necessary to ensure that the activity is being performed or maintained in strict accordance with the Special and General Conditions of this permit.

k. This RGP does not grant any property rights or exclusive privileges.

l. This RGP does not authorize any injury to the property or rights of others.

m. This RGP does not authorize the interference with any existing or proposed federal project.

n. In issuing this permit, the Federal Government does not assume any liability for the following:

(1) Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

(2) Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest.

(3) Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

(4) Design or construction deficiencies associated with the permitted work.

(5) Damage claims associated with any future modification, suspension, or revocation of this permit.

o. Authorization provided by this RGP may be modified, suspended or revoked in whole, or in part, if the Wilmington District Engineer, acting for the Secretary of the Army, determines that such action would be in the best public interest. The term of this RGP shall be five (5) years unless subject to modification, suspension, or revocation. Any modification, suspension, or revocation of this authorization will not be the basis for any claim for damages against the U.S. Government.

p. No activity may occur in a component of the National Wild and Scenic Rivers System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or "study river" (e.g., National Park Service, U.S. Forest Service, etc.).

q. Endangered Species.

(1) No activity is authorized under this RGP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under this RGP which “may affect” a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(2) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal prospective permittees (and when FHWA is the lead federal agency) must provide the District Engineer with the appropriate documentation to demonstrate compliance with those requirements. The District Engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the RGP activity, or whether additional ESA consultation is necessary.

(3) Non-federal prospective permittees - for activities that might affect federally-listed endangered or threatened species or designated critical habitat, the PCN must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The District Engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat. In cases where the non-federal prospective permittee has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the prospective permittee shall not begin work until the Corps has provided notification that the proposed activities will have “no effect” on listed species or critical habitat, or until Section 7 consultation has been completed.

(4) As a result of formal or informal consultation with the U.S. Fish and Wildlife Service (USFWS) or NMFS, the District Engineer may add species-specific endangered species conditions to the RGP verification letter for a project.

(5) Authorization of an activity by a RGP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the USFWS or the NMFS, the ESA prohibits any person subject to the jurisdiction of the U.S. to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(6) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS in North Carolina at the addresses provided below, or from the USFWS and NMFS via their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

USFWS offices in North Carolina:

The Asheville USFWS Office covers all NC counties west of, and including, Anson, Stanly, Davidson, Forsyth and Stokes Counties.

US Fish and Wildlife Service
Asheville Field Office
160 Zillicoa Street
Asheville, NC 28801
Telephone: (828) 258-3939

The Raleigh USFWS Office covers all NC counties east of, and including, Richmond, Montgomery, Randolph, Guilford, and Rockingham Counties.

US Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Telephone: (919) 856-4520

r. The Wilmington District, USFWS, NCDOT, and the FHWA have conducted programmatic Section 7(a)(2) consultation for a number of federally listed species and habitat, and programmatic consultation concerning other federally listed species and/or habitat may occur in the future. The result of completed programmatic consultation is a Programmatic Biological Opinion (PBO) issued by the USFWS. These PBOs contain mandatory terms and conditions to implement the reasonable and prudent measures that are associated with “incidental take” of whichever species or critical habitat is covered by a specific PBO. Authorization under RGP 50 is conditional upon the permittee’s compliance with all the mandatory terms and conditions associated with incidental take of the applicable PBO (or PBOs), which are incorporated by reference in RGP 50. Failure to comply with the terms and conditions associated with incidental take of an applicable PBO, where a take of the federally listed species occurs, would constitute an unauthorized take by the permittee, and would also constitute permittee non-compliance with the authorization under RGP 50. If the terms and conditions of a specific PBO (or PBOs) apply to a project, the Corps will include this/these requirements in any RGP 50 verification that may be issued for a project. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PBO, and with the ESA.

s. Northern long-eared bat (NLEB) (*Myotis septentrionalis*). Standard Local Operating Procedures for Endangered Species (SLOPES) for the NLEB have been approved by the Corps and the U.S. Fish and Wildlife Service. See <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/ESA/>. This SLOPES details how the Corps will make determinations of effect to the NLEB when the Corps is the lead federal agency for an NCDOT project that is located in the western 41 counties of North Carolina. This SLOPES does not address NCDOT projects (either federal or state funded) in the eastern 59 counties in North Carolina. Note that if another federal agency is the lead federal agency for a project in the western 41 counties, procedures for satisfying the requirements of Section 7(a)(2) of the ESA will be dictated by that agency and will not be applicable for consideration under the SLOPES; however, information that demonstrates the lead federal agency's (if other than the Corps) compliance with Section 7(a)(2) / 4(d) Rule for the NLEB, will be required in the PCN. Note that at the time of issuance of RGP 50, the federal listing status of the NLEB as "Threatened" is being litigated at the National level. If, as a result of litigation, the NLEB is federally listed as "Endangered", this general condition ("s") will no longer be applicable because the 4(d) Rule, and this NLEB SLOPES, will no longer apply/be valid.

t. For proposed activities the sixteen (16) counties listed below, prospective permittees must provide a copy of the PCN to the USFWS, 160 Zillicoa Street, Asheville, North Carolina 28801. This PCN must be sent concurrently to the USFWS and the Corps Project Manager for that specific county.

The 16 counties with tributaries that drain to designated critical habitat that require notification to the Asheville USFWS are: Avery, Cherokee, Forsyth, Graham, Haywood, Henderson, Jackson, Macon Mecklenburg, Mitchell, Stokes, Surry, Swain, Transylvania, Union and Yancey.

u. If the permittee discovers or observes any live, damaged, injured or dead individual of an endangered or threatened species during construction, the permittee shall immediately notify the Wilmington District Engineer so that required coordination can be initiated with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service.

v. Historic Properties.

(1) In cases where the District Engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places (NRHP), the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(2) Federal prospective permittees (or when FHWA is the lead federal agency) should follow their own procedures for complying with the requirements of Section 106 of the NHPA. Federal prospective permittees must provide the District Engineer with the appropriate documentation to demonstrate compliance with those requirements; this includes copies of correspondence sent to all interested, federally recognized tribes and a summary statement about

tribal consultation efforts or, if the Corps enters into a Programmatic Agreement (PA) with the FHWA/NCDOT, documentation that the FHWA/NCDOT has complied with PA requirements. The District Engineer will review the documentation and determine whether it is sufficient to address Section 106 compliance for this RGP activity, or whether additional Section 106 consultation is necessary.

(3) Non-federal prospective permittees - the PCN must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO), as appropriate, and the NRHP (see 33 CFR 330.4(g)). When reviewing PCNs, the District Engineer will comply with the current procedures for addressing the requirements of Section 106 of the NHPA. The District Engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the District Engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties.

(4) Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)).

(5) Section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to a prospective permittee who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit will relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the prospective permittee. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the prospective permittee, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

w. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this general permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

x. Permittees are advised that development activities in or near a floodway may be subject to the National Flood Insurance Program that prohibits any development, including fill, within a floodway that results in any increase in base flood elevations. This general permit does not authorize any activity prohibited by the National Flood Insurance Program.

y. The permittee must install and maintain, at his/her expense, any signal lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on authorized facilities. For further information, the permittee should contact Coast Guard Sector North Carolina at (910) 772-2191 or email Coast Guard Fifth District at cgd5waterways@uscg.mil.

z. The permittee must maintain any structure or work authorized by this general permit in good condition and in conformance with the terms and conditions of this general permit. The permittee is not relieved of this requirement if the permittee abandons the structure or work. Transfer in fee simple of the work authorized by this general permit will automatically transfer this general permit to the property's new owner, with all of the rights and responsibilities enumerated herein. The permittee must inform any subsequent owner of all activities undertaken under the authority of this general permit and provide the subsequent owner with a copy of the terms and conditions of this general permit.

aa. At his or her sole discretion, any time during the processing cycle, the Wilmington District Engineer may determine that this general permit will not be applicable to a specific proposal. In such case, the procedures for processing an individual permit in accordance with 33 CFR 325 will be available.

bb. Except as authorized by this general permit or any Corps approved modification to this general permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used.

cc. Except as authorized by this general permit or any Corps approved modification to this general permit, all excavated material will be disposed of in approved upland disposal areas.

dd. Activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon this general permit will remain authorized provided the activity is completed within twelve months of the date of the general permit's expiration, modification, or revocation. Activities completed under the authorization of this general permit that were in effect at the time the activity was completed continue to be authorized by the general permit.

ee. The permittee is responsible for obtaining any "take" permits required under the USFWS's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the USFWS to determine if such "take" permits are required for a particular activity.

ff. The activity must comply with applicable FEMA approved state or local floodplain management requirements.

gg. There will be no unreasonable interference with navigation or the right of the public to riparian access by the existence or use of activities authorized by this RGP.

hh. Unless authorization to fill those specific wetlands or mudflats has been issued by the Corps, heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

ii. This RGP will not be applicable to proposed construction when the Wilmington District Engineer determines that the proposed activity will significantly affect the quality of the human environment and determines that an EIS must be prepared.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Robert J. Clark
Colonel, U. S. Army
District Commander

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: NCDOT

Project Name: B-5810_eastbound NC 24-27_BR22_Rocky River

Action ID: SAW-2022-01188

County: Cabarrus

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that Wilmington District Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one Mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate Mitigation Sponsors.

Instructions to Sponsor: The Sponsor verifies that the mitigation requirements (credits) shown below have been released and are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated ledger to the Permittee, the Project Manager who issued the permit, the Bank Project Manager, and the District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements

Permitted Impacts Requiring Mitigation*:

8-digit HUC and Basin: 03040105, Yadkin River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
61						

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements:

8-digit HUC and Basin: 03040105, Yadkin River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
122						

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

Statement of Mitigation Liability Acceptance: I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the Wilmington District, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: NCDEQ - DMS

Name of Sponsor's Authorized Representative: Beth Harmon

Beth Harmon

Signature of Sponsor's Authorized Representative

06/13/2022

Date of Signature

**USACE Wilmington District
Compensatory Mitigation Responsibility Transfer Form, Page 2**

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the District is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the District is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. When NCDMS provides mitigation for authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by NCDMS must be provided to the District within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the District has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the District Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the District, the Sponsor must obtain case-by-case approval from the District Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the District administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions:

This form is not valid unless signed below by the District Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the District Project Manager at the address below, 3) the Bank Manager listed in RIBITS, and 4) the Wilmington District Mitigation Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (or by email to SAWMIT@usace.army.mil).*** Questions regarding this form or any of the permit conditions may be directed to the District Mitigation Office.

USACE Project Manager: Eric Alsmeyer
USACE Field Office: Raleigh Regulatory Field Office
US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587
Email: eric.c.alsmeyer@usace.army.mil



Wilmington District Project Manager Signature

June 13, 2022

Date of Signature

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.

Hemphill, Jeffrey L

From: Youngman, Holland J <holland_youngman@fws.gov>
Sent: Friday, June 10, 2022 8:25 AM
To: Alsmeyer, Eric C CIV USARMY CESAW (USA)
Cc: Hemphill, Jeffrey L; Wilson, Lauren B
Subject: Re: [EXTERNAL] NLEB Coordination: NCDOT; B-5810 / Bridge No. 22 / eastbound NC 24/27 / Rocky River / Cabarrus County; AID SAW-2022-01188.

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

Thank you for the notification, Eric. It has been reviewed and filed.

The following language regarding northern long-eared bat is provided for your/NCDOT's awareness:

On March 23, 2022, the U.S. Fish and Wildlife Service (Service) published a proposal to reclassify the norther long-eared bat (NLEB) as endangered under the Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome, a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEBs, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to be addressed in an updated consultation that includes an incidental take statement. If your project may require re-initiation of consultation, please contact our office for additional guidance .

Regarding Schweinitz's sunflower, in instances where suitable habitat is present within the action area and botanical surveys within the suitable seasonal window return negative results, we would concur with a biological determination of "May Affect, Not Likely to Adversely Affect".

Please let me know if you have any questions or would like to discuss further.
Best,

Holland Youngman
(she/her)
Wildlife Biologist
U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street, Asheville, North Carolina, 28801
Cell: 828-575-3920 Office: 828-258-3939 x42235

From: Alsmeyer, Eric C CIV USARMY CESAW (USA) <Eric.C.Alsmeier@usace.army.mil>
Sent: Thursday, June 2, 2022 9:13 AM
To: Youngman, Holland J <holland_youngman@fws.gov>
Cc: jhemphill@ncdot.gov <jhemphill@ncdot.gov>; Wilson, Lauren B <lauren_wilson@fws.gov>
Subject: [EXTERNAL] NLEB Coordination: NCDOT; B-5810 / Bridge No. 22 / eastbound NC 24/27 / Rocky River / Cabarrus County; AID SAW-2022-01188.

Holland: This email serves as the USACE notification for the NLEB (Situation 1), Action ID No. SAW-2022-01188.

1) Brief project description (note percussive activities if applicable): TIP Number B-5810; The North Carolina Department of Transportation (NCDOT) proposes to replace bridge number 22 (East bound lane bridge) on NC 24 & NC 27 over Rocky River in Cabarrus County with a 6-span bridge with a span arrangement of 4@95' and 2@70' (54" Girder) on the existing alignment. The West bound lane bridge (which is not being replaced) will be utilized as an onsite detour during construction. This action will result in 61 lf of permanent impacts to streams from a channel relocation, 81 lf of permanent impacts from bank stabilization and 0.12 ac of temporary impacts to streams from causeways. Mitigation credits for the permanent stream impacts from the channel relocation will be requested from the North Carolina Division of Mitigation Services.

There will be tree cutting and percussive activities at the project location;

2) Project latitude and longitude in decimal degrees: Latitude: 35.254731; Longitude: - 80.472735.

3) Estimate of tree clearing in the USACE action area in either acreage or number of trees cleared: less than 0.2 acre

Species: Northern long-eared bat (NLEB) (*Myotis septentrionalis*)

This project qualifies for Situation 1 –

the action area is located outside of a red HUC and there are no pile driving, blasting, or other percussive activities within 0.25 mile of a red HUC;

USACE Rationale and Determination: The USACE conducted a GIS review of the project and surrounding areas and also reviewed the most current maps of confirmed/known hibernation and maternity (tree) sites for the NLEB - via SimSuite -

<https://www.sciencebase.gov/catalogMaps/mapping/ows/56c499e4e4b0946c652192ab>;

and has determined that the action area for this project is located outside of the highlighted areas/red 12-digit HUCs and activities in the action area do not require prohibited incidental

take; as such, this project meets the criteria for the 4(d) rule and any associated take is exempted/excepted.

U.S. Fish and Wildlife Service (Service) Concurrence: This notice is being sent to the Service in accordance with the surrogate consultation procedure/SLOPES that was established between the Service's Asheville and Raleigh Ecological Offices and the USACE, Wilmington District, for the NLEB. This project does not require prohibited intentional take of the NLEB and meets the criteria for the 4(d) rule; therefore any associated take is exempt and it is not necessary for the USACE to wait 30 days for the Service to object or concur.

Also, based on the information presented in the PCN and from our GIS database, the USACE is not aware of any other issues concerning listed species and/or critical habitat and has determined that the project would have no effect on any other species and/or critical habitat.

Note: Based on the attached IPAC Species Report, MCDC, Sunflower Survey Report, Mussel Survey Report, and other available information, , the Corps has determined No Effect for Schweinitz's sunflower and Carolina heelsplitter.

Please reply or call if you have any questions or if I may serve you in any other way. 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 the Customer Satisfaction Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0.

Thank you,

Eric

Eric Alsmeyer
Work Cell: 919.817.1570

Project Manager
Regulatory Division Office
US Army Corps of Engineers, Wilmington District
3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587
Office Tel: (919) 554-4884, x23 (I am working out of the office, but I try to check my voicemails daily)
Regulatory Homepage:
<http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>

Thanks!

Eric

Work Cell: 919.817.1570

In Office: 1st Mon. and 2nd Friday of pay period.

ROY COOPER

Governor

ELIZABETH S. BISER

Secretary

RICHARD E. ROGERS, JR.

Director



NORTH CAROLINA
Environmental Quality

May 31, 2022

DWR # 20220713
Cabarrus County

Mr. Philip S. Harris, III, P.E., CPM
Environmental Analysis Unit Head
1598 Mail Service Center
Raleigh, NC 27699-1598

Subject: APPROVAL OF 401 WATER QUALITY CERTIFICATION WITH ADDITIONAL CONDITIONS

NCDOT B-22(Eastbound Lane Bridge) on NC 24 and 27 over Rocky River, Cabarrus County
Rocky River [Yadkin-PeeDee, 13-17, Rocky River, Class C, Impaired]

Dear Mr. Harris:

You have our approval for the impacts listed below for the purpose described in your application dated May 24, 2022, received by the Division of Water Resources (Division) May 24, 2022 and payment received on the same day. These impacts are covered by the attached Water Quality General Certification Number 4135 and the conditions listed below. This certification is associated with the use of Regional General Permit Number 201902350 once it is issued to you by the U.S. Army Corps of Engineers. Please note that you are required by (but not limited to) Sediment and Erosion Control, Non-Discharge, and Water Supply Watershed regulations.

The Division has determined that the proposed project will comply with water quality requirements provided that you adhere to the conditions listed in the enclosed certification and the additional conditions itemized below. The following proposed impacts are hereby approved. No other impacts are approved, including incidental impacts. [15A NCAC 02H .0506(b)]

Stream Impacts in the Yadkin-PeeDee River Basin

Site	Bank Stabilization on a Perennial Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
S1			61		61	0
S2	81				81	0
S3				15		
					142	
Total					157	0

Total Stream Impact for Project: 157 linear feet.



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

This approval is for the purpose and design described in your application. The plans and specifications for this project are incorporated by reference as part of this Certification. If you change your project, you must notify the Division and you may be required to submit a new application package with the appropriate fee. If the property is sold, the new owner must be given a copy of this Certification and is responsible for complying with all conditions. [15A NCAC 02H .0507(d)(2)].

If you are unable to comply with any of the conditions of the attached Water Quality General Certification or with the additional conditions itemized below, you must notify the DWR Transportation Permitting Branch within 24 hours (or the next business day if a weekend or holiday) from the time the permittee becomes aware of the circumstances.

The permittee shall report to the Mooresville Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200] including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances.

Additional Conditions:

1. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the potential issues with stream and pipe alignment at the permitted site. NCDWR staff shall be invited to the pre-construction meeting. [15A NCAC 02H.0506(b)(2) and (b)(3)]
2. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species. [15A NCAC 02H .0506(b)(2)]
3. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. To meet the requirements of NCDOT's NPDES permit NCS000250, please refer to the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual for approved measures. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
4. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from the NCDWR first. [15A NCAC 02H.0506(b)(2)]
5. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly. [15A NCAC 02H .0506(b)(3)]
6. A turbidity curtain will be installed in the stream if driving or drilling activities occur within the stream channel, on the stream bank, or within 5 feet of the top of bank, or during the removal of bents from an old bridge. This condition can be waived with prior approval from the NCDWR. [15A NCAC 02H .0506(b)(3)]
7. All bridge construction shall be performed from the existing bridge, temporary work bridges, temporary causeways, or floating or sunken barges. If work conditions require barges, they shall be floated into position and then sunk. The barges shall not be sunk and then dragged into position. Under no circumstances should barges be dragged along the bottom of the surface water. [15A NCAC 02H .0506(b)(3)]
8. All portions of the proposed project draining to 303(d) listed watersheds that are impaired due to turbidity shall be designed, constructed, and operated with sediment and erosion control measures that meet Design Standards in Sensitive Watersheds (15A NCAC 4B .0124). However, due to the size of the project, NC DOT shall not be required to meet 15A NCAC 4B .0124(a) regarding the maximum amount of uncovered acres.



9. All portions of the proposed project draining to 303(d) listed watersheds that are impaired due to biological criteria exceedances shall not discharge stormwater directly to surface waters. Stormwater shall be treated using appropriate best management practices (e.g., vegetated conveyances, constructed wetlands, detention ponds, etc.) prior to discharging to surface waters.

General Conditions:

1. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
2. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]
Justification: Surface water quality standards require that conditions of waters be suitable for all best uses (including aquatic life propagation, survival, and maintenance of biological integrity) provided for in state rule and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.
3. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
4. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
5. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
6. Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507 (c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
7. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
8. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
9. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
10. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]



11. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
12. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0200]
13. Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *NCDOT Sediment and Erosion Control Manual*.
14. All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.
15. For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.
16. If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watershed*. [15A NCAC 02H.0506(b)(3) and (c)(3); GC 4135]
17. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
18. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
19. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
20. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization, including all non-commercial borrow and waste sites associated with the project, shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
21. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
22. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]



23. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
24. Native riparian vegetation (**ex. Salix nigra, Juncus (spp), Carex (spp), et al.**) must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02B.0231(b)(6)]
25. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities. [15A NCAC 02H.0506(b)(3) and (c)(3)]
26. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3):
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
27. Sediment and erosion control measures shall not be placed in wetlands or surface waters, or within 5 feet of the top of bank, without prior approval from DWR. [15A NCAC 02H.0506(b)(3) and (c)(3)]

This approval and its conditions are final and binding unless contested [G.S. 143-215.5]. Please be aware that impacting waters without first applying for and securing the issuance of a 401 Water Quality Certification violates Title 15A of the North Carolina Administrative Code (NCAC) 2H .0500. Title 15A NCAC 2H .0500 requires certifications pursuant to Section 401 of the Clean Water Act whenever construction or operation of facilities will result in a discharge into navigable waters, including wetlands, as described in 33 Code of Federal Regulations (CFR) Part 323. It also states any person desiring issuance of the State certification or coverage under a general certification required by Section 401 of the Federal Water Pollution Control Act shall file with the Director of the North Carolina Division of Water Quality. Pursuant to G.S. 143-215.6A, these violations and any future violations are subject to a civil penalty assessment of up to a maximum of \$25,000.00 per day for each violation.

This Certification can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) within sixty (60) calendar days. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000.

A party filing a Petition must serve a copy of the Petition on:

William F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

Raleigh, NC 27699-1601

If the party filing the Petition is not the permittee, then the party must also serve the recipient of the Certification in accordance with N.C.G.S 150B-23(a).

This letter completes the review of the Division under section 401 of the Clean Water Act and 15A NCAC 02H .0500. Please contact Amy Chapman at 919-707-3871 or amy.chapman@ncdenr.gov if you have any questions or concerns.

Sincerely,

DocuSigned by:

Amy Chapman

Richard E. Rogers, Jr., Director
Division of Water Resources

cc: Eric Alsmeyer, Raleigh Regulatory Field Office (via email)
Joel Howard, Division 10 Environmental Officer
Holland Youngman, US Fish and Wildlife Service
Dave McHenry, NC Wildlife Resources Commission



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS



(Version 2.08; Released April 2018)

WBS Element: 45764.1.1 TIP No.: B-5810 County(ies): Cabarrus Page 1 of 1

General Project Information

WBS Element:	45764.1.1	TIP Number:	B-5810	Project Type:	Bridge Replacement	Date:	1/21/2019
NCDOT Contact:	Marc Shown	Contractor / Designer:	STV Engineers, Inc. / Shirshant Sharma				
Address:	1020 Birch Ridge Drive Raleigh, NC 27610			Address:	900 West Trade Street, Ste. 715 Charlotte, NC 28202		
	Phone: (919) 707-6751				Phone: (704) 816-2556		
	Email: mshown@ncdot.gov				Email: Shirshant.Sharma@stvinc.com		
City/Town:	Locust.NC			County(ies):	Cabarrus		
River Basin(s):	Yadkin-Pee Dee			CAMA County?	No		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.22	Surrounding Land Use:	Wooded		
	Proposed Project		Existing Site		
Project Built-Up Area (ac.)	1.0	ac.	0.8	ac.	
Typical Cross Section Description:	Bridge : Two 12' lanes, 8' to the right and 5' to the left paved shoulders Approach: Two 12' lanes, variable paved shoulders		Bridge: Two 12' lanes, 3.2' to the right and 3.5' to the left shoulders Approach: Two 12' lanes, variable shoulders		

Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	13300	Year:	2040	Existing:	10000	Year:	2016
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General Project Narrative:
(Description of Minimization of Water Quality Impacts)

The existing 525', 10 span bridge over Rocky River on NC 24 & NC 27 EBL is being replaced with 6 span bridge with a span arrangement of 4@95' and 2@70' (54" Girder). The bridge will have 1.5:1 sloping abutments. The bridge will have a normal crown slope at 2% with 12' travel lanes with 8' to the right and 5' to the left shoulders, 37' clear width and 40'-3" OTO width. The existing bridge structure will be removed. Overall drainage patterns will be maintained. There are roadside ditches that flow towards the bridge on both sides of the structure which will be maintained in the proposed condition. On either side of begin and end bridge two (four in total) traffic bearing grated drop inlet with double frame and grates (2GI) will be placed on either side of the road to pick up the stormwater from the bridge. Class-II rip rap abutment protection on both banks of the stream is also proposed to prevent future erosion and stream migration. 6" circular slot deck drains at 5' and 10' centers are used to meet spread criteria but the drains will not discharge directly above water. Impervious dikes and stilling basin are proposed to prevent the sediment inflow directly into the stream during the construction phase.

Waterbody Information

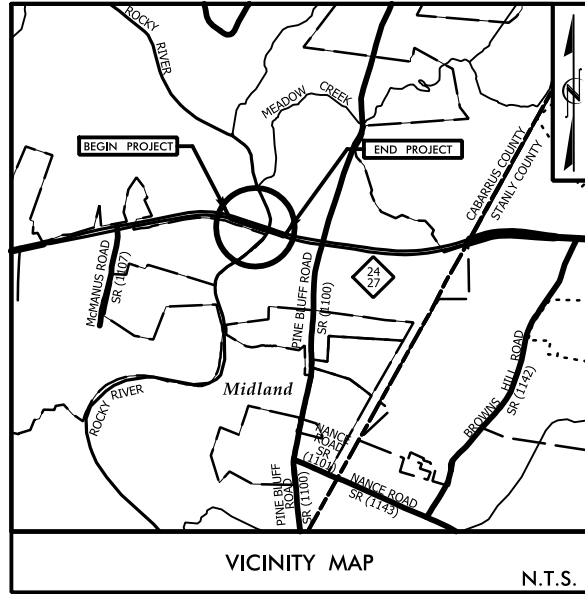
Surface Water Body (1):	Rocky River		NCDWR Stream Index No.:	13-17	
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C			
	Supplemental Classification:	None			
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:				Buffer Rules in Effect:	N/A
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					

8/10/2022
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kotrelj

CONTRACT:

TIP PROJECT: B-5810

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CABARRUS COUNTY

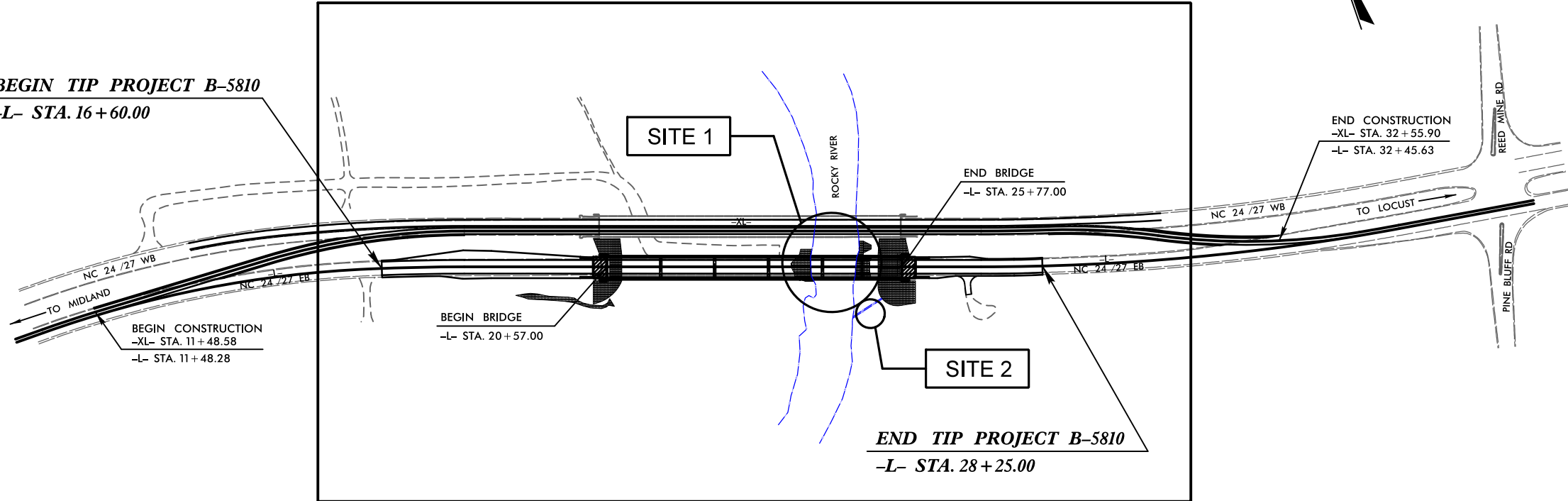
LOCATION: BRIDGE #022 OVER ROCKY RIVER ON (EASTBOUND NC 24/27)
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5810	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45764.1.1		P.E.	
45764.2.1		ROW & UTILITIES	



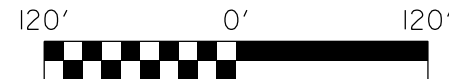
BEGIN TIP PROJECT B-5810
-L- STA. 16 + 60.00



END TIP PROJECT B-5810
-L- STA. 28 + 25.00

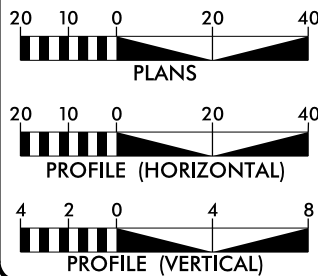
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED
TO THE LIMITS ESTABLISHED BY METHOD II.

Permit Drawing
Sheet 1 of 11



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2016 = 10,000
ADT 2040 = 13,300
K = 9 %
D = 6.5 %
T = 14 %*
V = 60 MPH
FUNC. CLASSIFICATION:
MINOR ARTERIAL
* (TTST 6% + DUALS 8%)

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-5810 = 0.123 MILES
LENGTH OF STRUCTURE TIP PROJECT B-5810 = 0.098 MILES
TOTAL LENGTH OF TIP PROJECT B-5810 = 0.221 MILES

NCDOT CONTACT: KEITH PASCHAL, PE
Structure Management Unit

PLANS PREPARED FOR THE NCDOT BY:

STV 100 Years
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 15, 2019

LETTING DATE:
APRIL 19, 2022

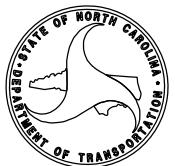
NIKKI T. HONEYCUTT, PE
PROJECT ENGINEER

MAAMOON K. ABDELAZIZ
PROJECT DESIGNER

HYDRAULICS
ENGINEER


SIGNATURE: _____ P.E.
ROADWAY
DESIGN
ENGINEER


SIGNATURE: _____ P.E.



8/17/99
8/10/2022
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Kathleen

LEGEND

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

 DENOTES IMPACTS IN SURFACE WATER

DECK DRAINS (TYP.) 6" CIRCULAR SLOTS
10' CENTER FROM STA. 20+65 TO STA.
21+45 LT, STA. 21+60 TO 22+40 LT, STA.
22+54 TO 22+80 LT

DECK DRAINS (TYP.) 6" CIRCULAR SLOTS 5'
CENTER FROM STA. 22+90 TO STA. 23+35
LT, STA. 23+50 TO 23+90 LT, STA. 25+23
TO 25+68 LT

THOMAS L. PRICE
DORIS W. PRICE
DB 7082 PG 20

 STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO. B-5810		SHEET NO. 2
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



RML/FBN ENTERPRISES LLC
DB 1746 PG 256

ROCK CAUSEWAY FOR
DEMOLITION OF EXISTING
PIER AND FOOTINGS.
THIS CAUSEWAY WILL
NEED TO BE REMOVED
AS SOON AS DEMOLITION
IS COMPLETED IN ORDER
TO ALLOW FOR MORE
STREAM FLOW.

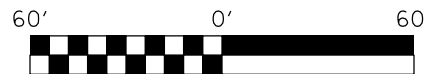
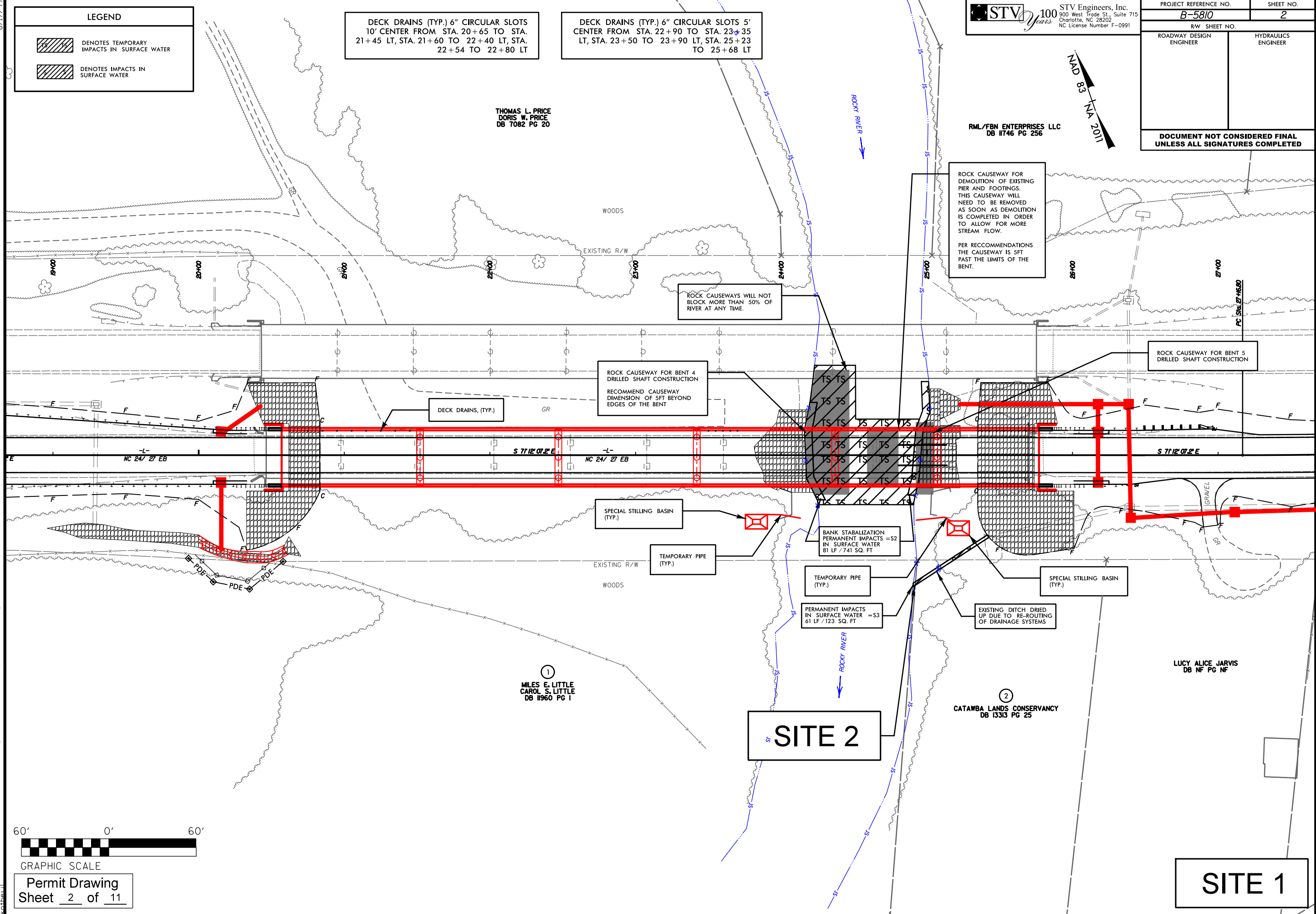
PER RECOMMENDATIONS
THE CAUSEWAY IS 5 FT
PAST THE LIMITS OF THE
BENT.

ROCK CAUSEWAYS WILL NOT
BLOCK MORE THAN 50% OF
RIVER AT ANY TIME.

ROCK CAUSEWAY FOR BENT 4
DRILLED SHAFT CONSTRUCTION

RECOMMEND CAUSEWAY
DIMENSION OF 5 FT BEYOND
EDGES OF THE BENT

ROCK CAUSEWAY FOR BENT 5
DRILLED SHAFT CONSTRUCTION



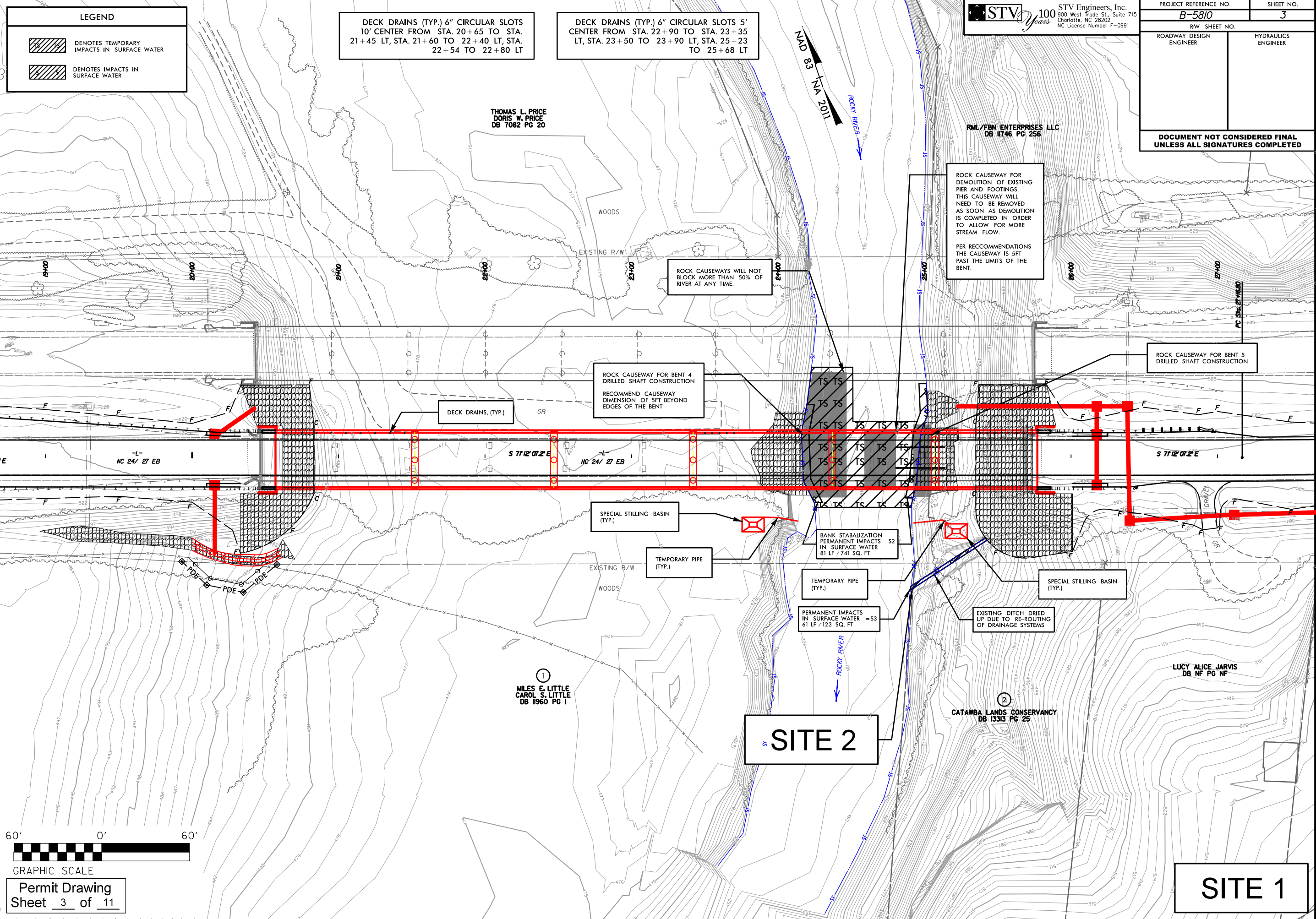
GRAPHIC SCALE

Permit Drawing
Sheet 2 of 11

SITE 2

SITE 1

8/17/99
8/10/2022
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Kathie L



LEGEND

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER

DECK DRAINS (TYP.) 6" CIRCULAR SLOTS
10' CENTER FROM STA. 20+65 TO STA.
21+45 LT, STA. 21+60 TO 22+40 LT, STA.
22+54 TO 22+80 LT

DECK DRAINS (TYP.) 6" CIRCULAR SLOTS 5'
CENTER FROM STA. 22+90 TO STA. 23+35
LT, STA. 23+50 TO 23+90 LT, STA. 25+23
TO 25+68 LT

STV 100 years
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.		SHEET NO.	
B-5810		3	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

ROCK CAUSEWAY FOR DEMOLITION OF EXISTING PIER AND FOOTINGS. THIS CAUSEWAY WILL NEED TO BE REMOVED AS SOON AS DEMOLITION IS COMPLETED IN ORDER TO ALLOW FOR MORE STREAM FLOW.

PER RECOMMENDATIONS THE CAUSEWAY IS 5 FT PAST THE LIMITS OF THE BENT.

ROCK CAUSEWAYS WILL NOT BLOCK MORE THAN 50% OF RIVER AT ANY TIME.

ROCK CAUSEWAY FOR BENT 4 DRILLED SHAFT CONSTRUCTION
RECOMMEND CAUSEWAY DIMENSION OF 5 FT BEYOND EDGES OF THE BENT

ROCK CAUSEWAY FOR BENT 5 DRILLED SHAFT CONSTRUCTION

SPECIAL STILLING BASIN (TYP.)

TEMPORARY PIPE (TYP.)

BANK STABILIZATION PERMANENT IMPACTS = S2
81 LF / 741 SQ. FT

TEMPORARY PIPE (TYP.)

PERMANENT IMPACTS IN SURFACE WATER = S3
61 LF / 123 SQ. FT

SPECIAL STILLING BASIN (TYP.)

EXISTING DITCH DRIED UP DUE TO RE-ROUTING OF DRAINAGE SYSTEMS

SITE 2

SITE 1

60' 0' 60'

GRAPHIC SCALE

Permit Drawing
Sheet 3 of 11

5/14/99

8/10/2022
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kathleen

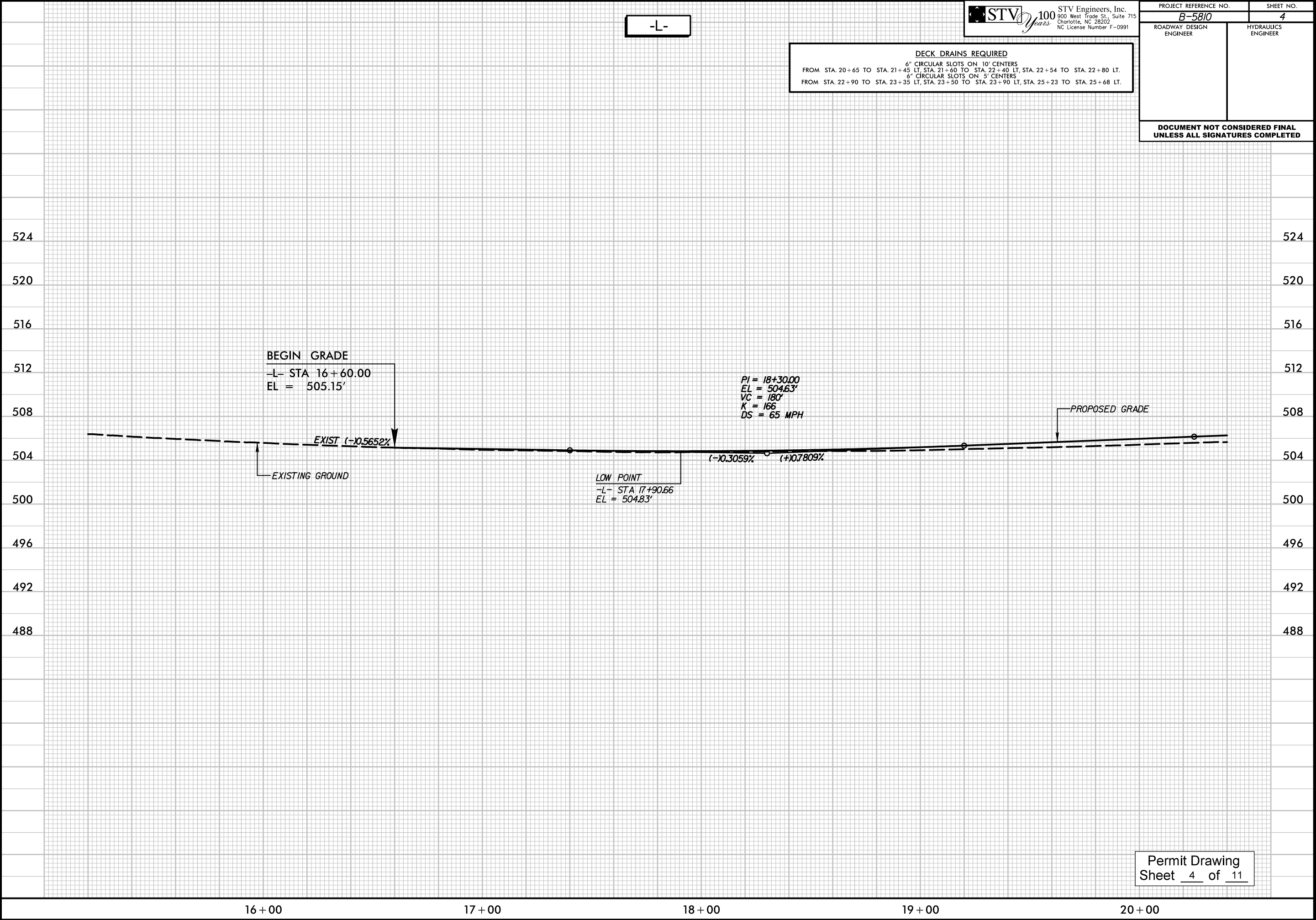
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STV Engineers, Inc.
800 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

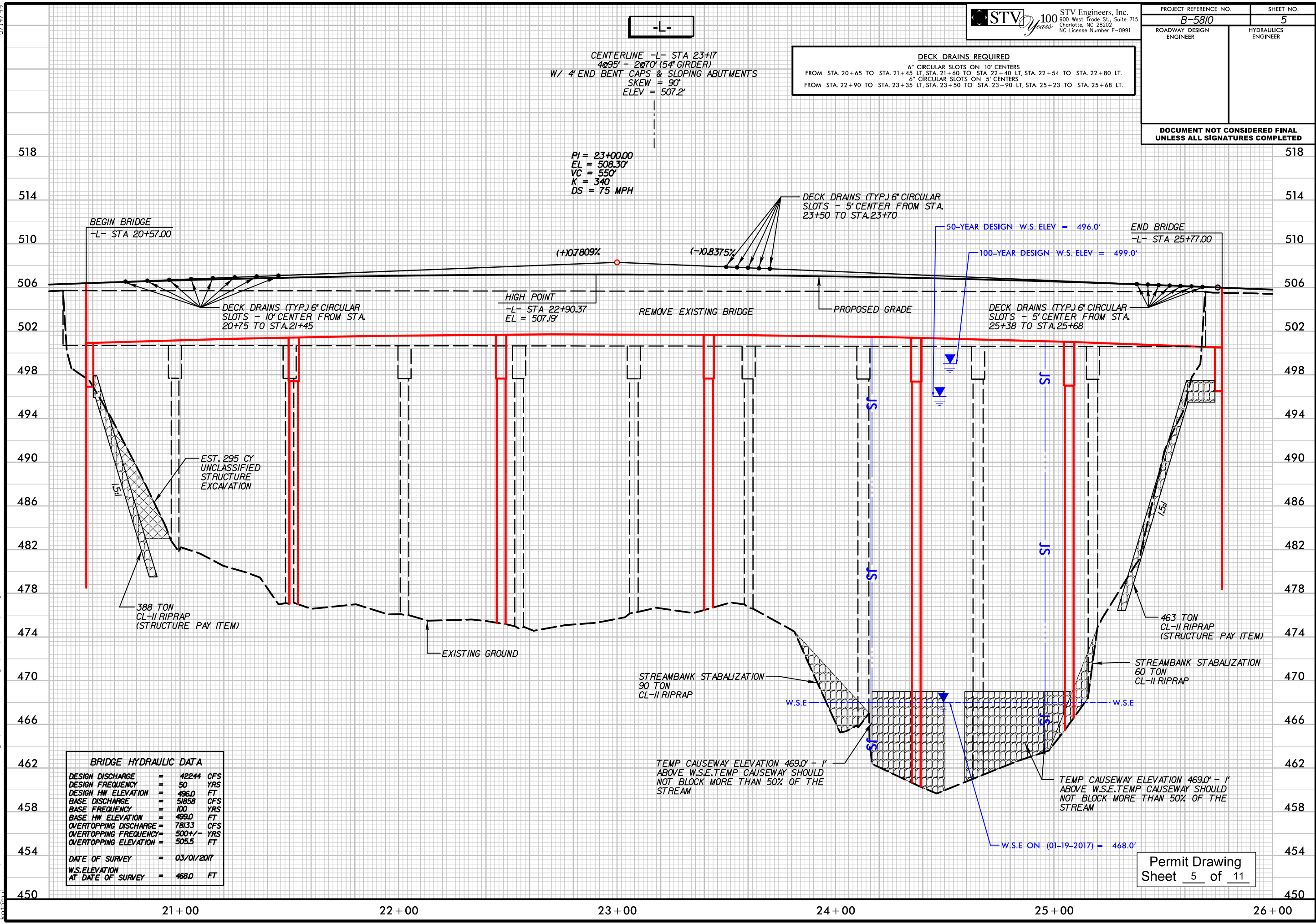
DECK DRAINS REQUIRED
6" CIRCULAR SLOTS ON 10' CENTERS
FROM STA. 20+65 TO STA. 21+45 LT, STA. 21+60 TO STA. 22+40 LT, STA. 22+54 TO STA. 22+80 LT.
6" CIRCULAR SLOTS ON 5' CENTERS
FROM STA. 22+90 TO STA. 23+35 LT, STA. 23+50 TO STA. 23+90 LT, STA. 25+23 TO STA. 25+68 LT.

PROJECT REFERENCE NO.		SHEET NO.
B-5810		4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



Permit Drawing
Sheet 4 of 11

5/14/99
8/10/2022
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kathleen



BRIDGE HYDRAULIC DATA	
DESIGN DISCHARGE	= 42244 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 496.0 FT
BASE DISCHARGE	= 51858 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 499.0 FT
OVERTOPPING DISCHARGE	= 78133 CFS
OVERTOPPING FREQUENCY	= 500+/- YRS
OVERTOPPING ELEVATION	= 505.5 FT
DATE OF SURVEY	= 03/01/2017
W.S. ELEVATION AT DATE OF SURVEY	= 468.0 FT

5/14/99

8/10/2022
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ksh06

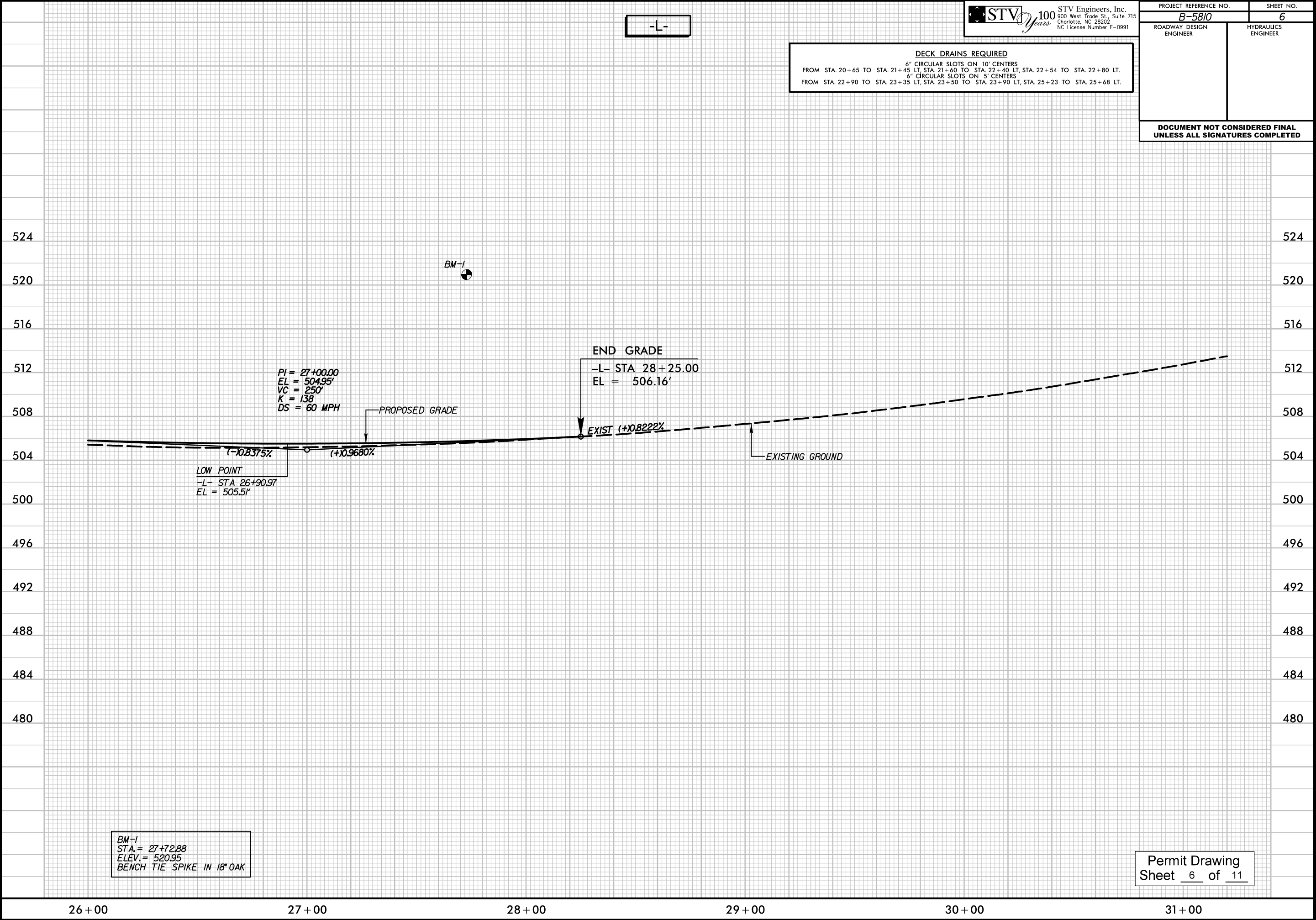
STV

100 Years

STV Engineers, Inc.
800 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.		SHEET NO.
B-5810		6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

DECK DRAINS REQUIRED
6" CIRCULAR SLOTS ON 10' CENTERS
FROM STA. 20+65 TO STA. 21+45 LT. STA. 21+60 TO STA. 22+40 LT. STA. 22+54 TO STA. 22+80 LT.
6" CIRCULAR SLOTS ON 5' CENTERS
FROM STA. 22+90 TO STA. 23+35 LT. STA. 23+50 TO STA. 23+90 LT. STA. 25+23 TO STA. 25+68 LT.



BM-I
STA. = 27+72.88
ELEV. = 520.95
BENCH TIE SPIKE IN 18" OAK

Permit Drawing
Sheet 6 of 11

8/17/99

NOTE:

1. AT NO TIME WILL THE CONTRACTOR BE PERMITTED TO BLOCK MORE THAN HALF OF THE CHANNEL AT ANY ONE TIME.



STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.

B-5810

SHEET NO.

7

RW SHEET NO.

ROADWAY DESIGN
ENGINEER

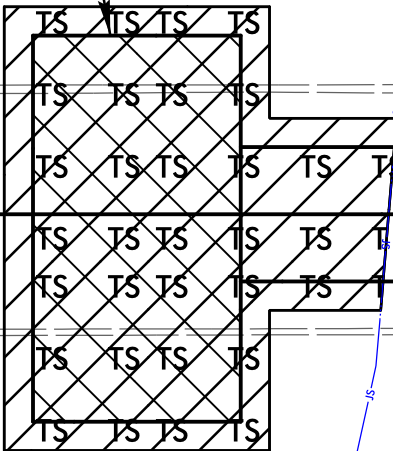
HYDRAULICS
ENGINEER

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



ROCK CAUSEWAY FOR
DEMOLITION OF EXISTING
PIER AND FOOTINGS.
THIS CAUSEWAY WILL
NEED TO BE REMOVED
AS SOON AS DEMOLITION
IS COMPLETED IN ORDER
TO ALLOW FOR MORE
STREAM FLOW.

PER RECOMMENDATIONS
THE CAUSEWAY IS 5FT
PAST THE LIMITS OF THE
BENT.



TEMPORARY IMPACTS
IN SURFACE WATER =S1
46 LF /1527 SQ. FT

NC 24/ 27 EB

EXISTING R/W

①
MILES E. LITTLE
CAROL S. LITTLE
DB 11960 PG 1



GRAPHIC SCALE

Permit Drawing
Sheet 7 of 11

②
CATAWBA LANDS CONSERVANCY
DB 13313 PG 25

DEMOLITION STAGE 1

8/10/2022
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kathleen

8/17/99

NOTE:

1. AT NO TIME WILL THE CONTRACTOR BE PERMITTED TO BLOCK MORE THAN HALF OF THE CHANNEL AT ANY ONE TIME.



STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.

B-5810

SHEET NO.

8

RW SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

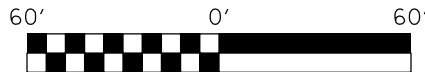
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ROCK CAUSEWAY FOR BENT 5
DRILLED SHAFT CONSTRUCTION
RECOMMEND CAUSEWAY
DIMENSION OF 5FT BEYOND
EDGES OF THE BENT

TEMPORARY IMPACTS
IN SURFACE WATER = S2
59 LF / 376 SQ. FT

TEMPORARY PIPE
(TYP.)

SPECIAL STILLING BASIN
(TYP.)



GRAPHIC SCALE

Permit Drawing
Sheet 8 of 11

①
MILES E. LITTLE
CAROL S. LITTLE
DB 11960 PG 1

②
CATAWBA LANDS CONSERVANCY
DB 13313 PG 25

CONSTRUCTION CAUSEWAY STAGE 2

8/10/2022
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kathia

8/17/99
8/10/2022
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kathia

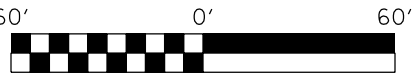
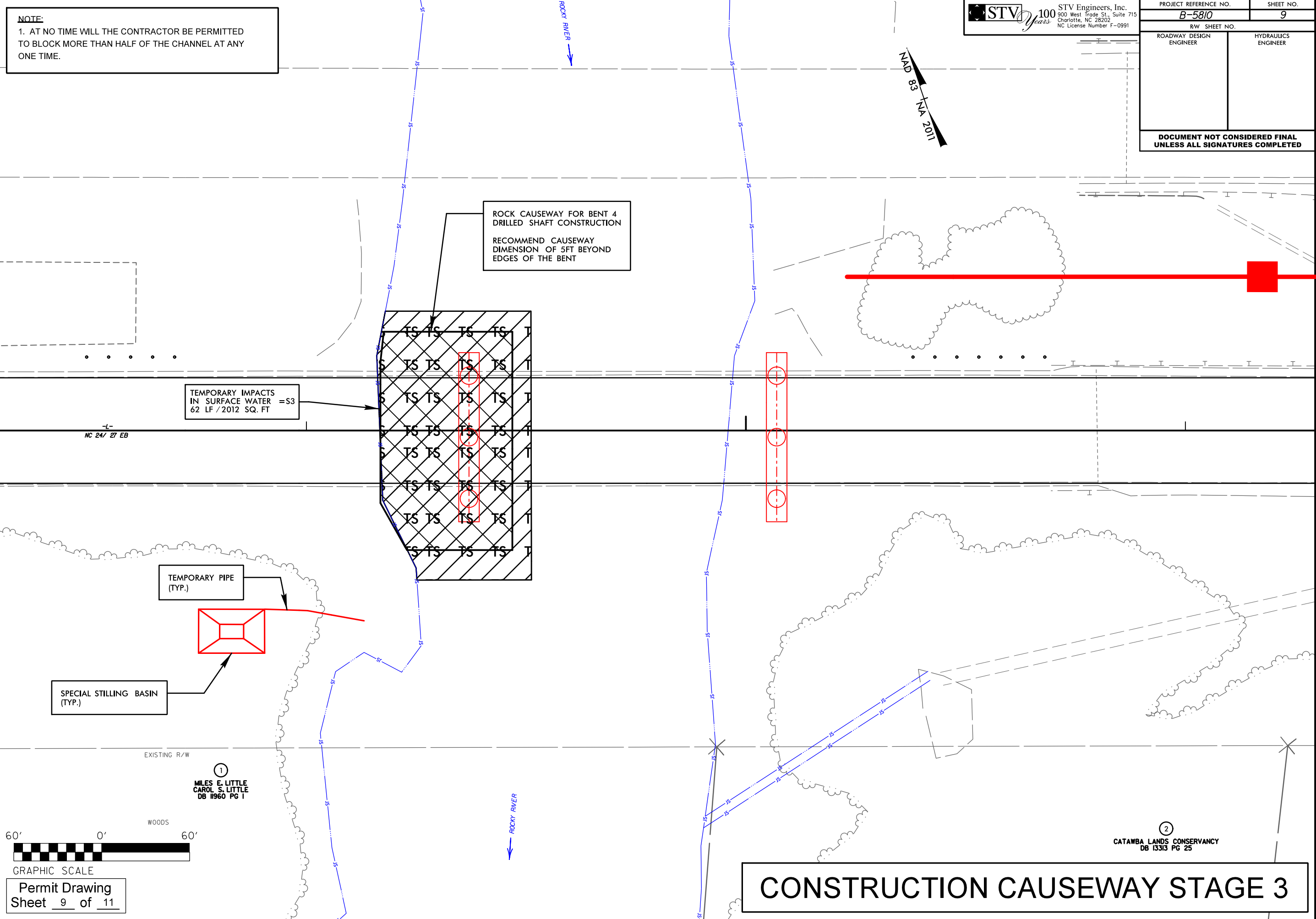
NOTE:
1. AT NO TIME WILL THE CONTRACTOR BE PERMITTED TO BLOCK MORE THAN HALF OF THE CHANNEL AT ANY ONE TIME.



STV
100
years

STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO. <i>B-5810</i>		SHEET NO. <i>9</i>
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



GRAPHIC SCALE
Permit Drawing
Sheet 9 of 11

①
MILES E. LITTLE
CAROL S. LITTLE
DB 11960 PG 1

②
CATAWBA LANDS CONSERVANCY
DB 13313 PG 25

CONSTRUCTION CAUSEWAY STAGE 3

8/17/99
8/10/2022
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kathal

NOTE:
1. AT NO TIME WILL THE CONTRACTOR BE PERMITTED TO BLOCK MORE THAN HALF OF THE CHANNEL AT ANY ONE TIME.



STV
100 years

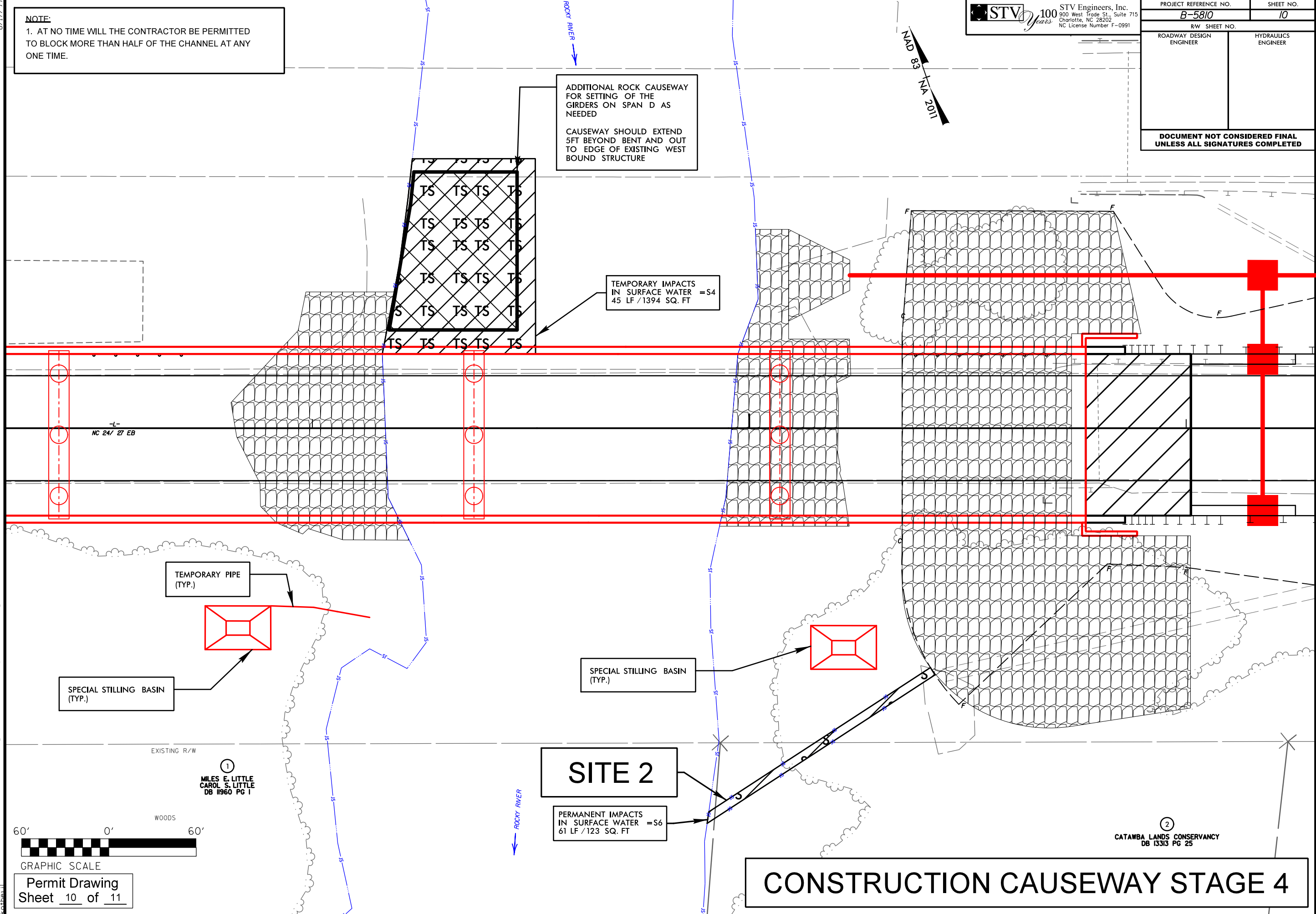
STV Engineers, Inc.

900 West Trade St., Suite 715

Charlotte, NC 28202

NC License Number F-0991

PROJECT REFERENCE NO. B-5810		SHEET NO. 10
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



CONSTRUCTION CAUSEWAY STAGE 4

WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	20+57.00 / 25+77.00	4 @ 95' CAUSEWAYS, 2 @ 70' (54" GIRDER) - OAL = 520'							0.12		15	
		BANK STABILIZATION						0.02		81		
2	24+90.36 / 25+42.53	FILL IMPACT						<0.01		61		
TOTALS:								0.02	0.12	142	15	

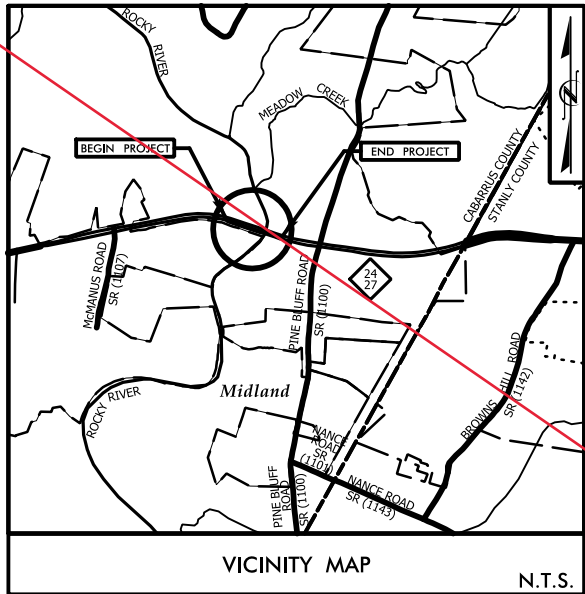
NOTES:

¹TEMP. IMPACTS LENGTH TOTAL = 96 FT. (81 FT. COVERED UNDER PERMANENT IMPACTS)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE #022 OVER ROCKY RIVER
ON (EASTBOUND NC 24/27)
CABARRUS COUNTY
B-5810

TIP PROJECT: B-5810

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet



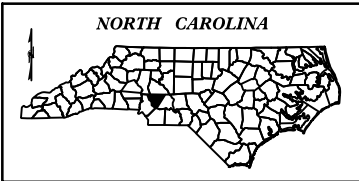
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CABARRUS COUNTY

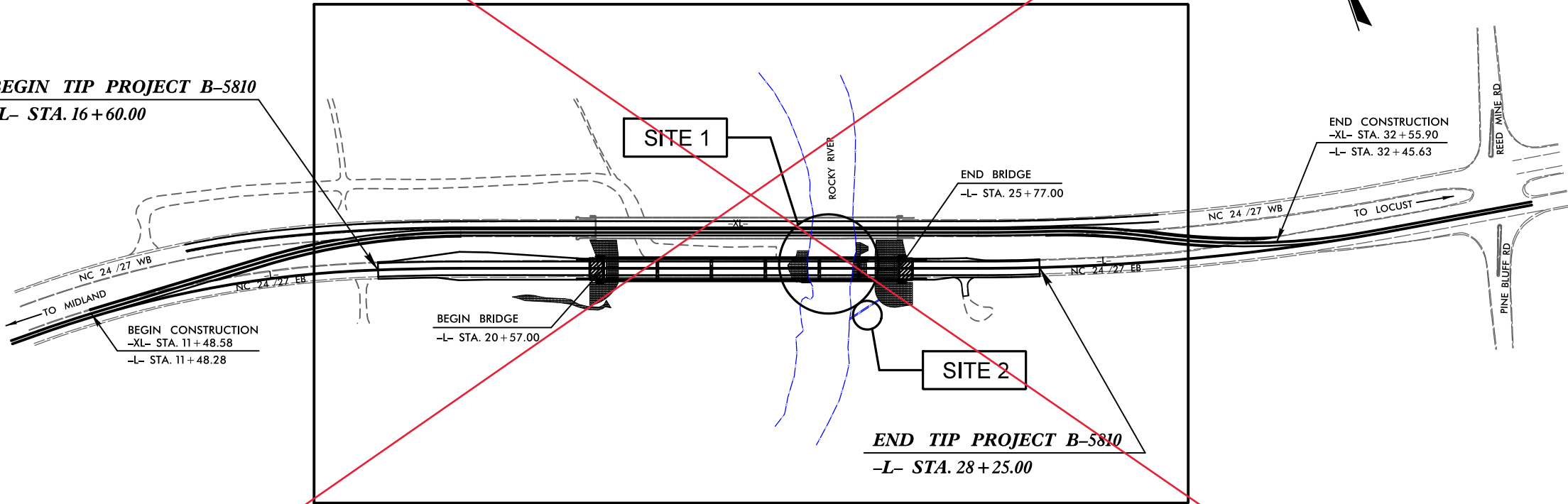
LOCATION: BRIDGE #022 OVER ROCKY RIVER ON (EASTBOUND NC 24/27)
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5810	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45764.1.1		P.E.	
45764.2.1		ROW & UTILITIES	

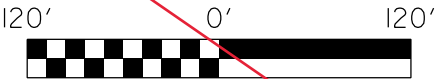


BEGIN TIP PROJECT B-5810
-L- STA. 16 + 60.00



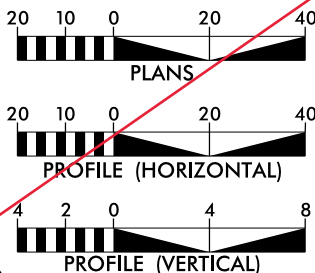
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED
TO THE LIMITS ESTABLISHED BY METHOD II.

Permit Drawing
Sheet 1 of 11



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2016 = 10,000
ADT 2040 = 13,300
K = 9 %
D = 65 %
T = 14 %*
V = 60 MPH
FUNC. CLASSIFICATION:
MINOR ARTERIAL
* (TTST 6% + DUALS 8%)

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-5810 = 0.123 MILES
LENGTH OF STRUCTURE TIP PROJECT B-5810 = 0.098 MILES
TOTAL LENGTH OF TIP PROJECT B-5810 = 0.221 MILES

NCDOT CONTACT: KEITH PASCHAL, PE
Structure Management Unit

PLANS PREPARED FOR THE NCDOT BY:

STV 100 Years
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 15, 2019

LETTING DATE:
APRIL 19, 2022

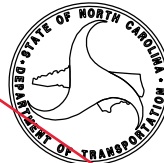
NIKKI T. HONEYCUTT, PE
PROJECT ENGINEER

MAAMOON K. ABDELAZIZ
PROJECT DESIGNER


HYDRAULICS
ENGINEER


SIGNATURE: _____ P.E.
ROADWAY
DESIGN
ENGINEER

SIGNATURE: _____ P.E.



**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

 DENOTES IMPACTS IN SURFACE WATER

DECK DRAINS (TYP.) 6" CIRCULAR SLOTS 5'
CENTER FROM STA. 22+90 TO STA. 23+30
LT, STA. 23+50 TO 23+90 LT, STA. 25+20
TO 25+68 L'

RML/FBN ENTERPRISES LLC
DB I1746 PG 256

ROCK CAUSEWAY FOR
DEMOLITION OF EXISTING
PIER AND FOOTINGS.
THIS CAUSEWAY WILL
NEED TO BE REMOVED
AS SOON AS DEMOLITION
IS COMPLETED IN ORDER
TO ALLOW FOR MORE
STREAM FLOW.

PER RECOMMENDATIONS
THE CAUSEWAY IS 5FT
PAST THE LIMITS OF THE
BENT.

ROCK CAUSEWAYS WILL NOT
BLOCK MORE THAN 50% OF
RIVER AT ANY TIME.

 IMPERVIOUS DIKE, (TYP.)

IMPERVIOUS DIKE, (TYP.)

ROCK CAUSEWAY FOR BENT 5 DRILLED SHAFT CONSTRUCTION

ROCK CAUSEWAY FOR BENT 4
DRILLED SHAFT CONSTRUCTION

RECOMMEND CAUSEWAY
DIMENSION OF 5FT BEYOND
EDGES OF THE BENT

DECK DRAINS, (TYP.)

NC 24/ 27 EB

NC 24/ 27 EB

3 11 12 01 2 E

SPECIAL STILLING BASIN
(TYP.)

TEMPORARY PIPE
(TYP.)

IMPERVIOUS DIKE, (TYP.)

BANK STABILIZATION
PERMANENT IMPACTS = 52
IN SURFACE WATER
81 LF / 741 SQ. FT

~~TEMPORARY PIPE
(TYP.)~~

PERMANENT IMPACTS
IN SURFACE WATER = S
61 LF / 123 SQ. FT

SPECIAL STILLING BASIN
(TYP.)

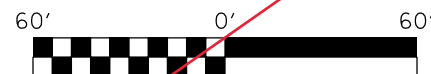
EXISTING DITCH DRIED
UP DUE TO RE-ROUTING
OF DRAINAGE SYSTEMS

LUCY ALICE JARVIS
DB NF PG NF

CATAWBA LANDS CONSERVANCY
DB 13313 PG 25

JS SITE 2

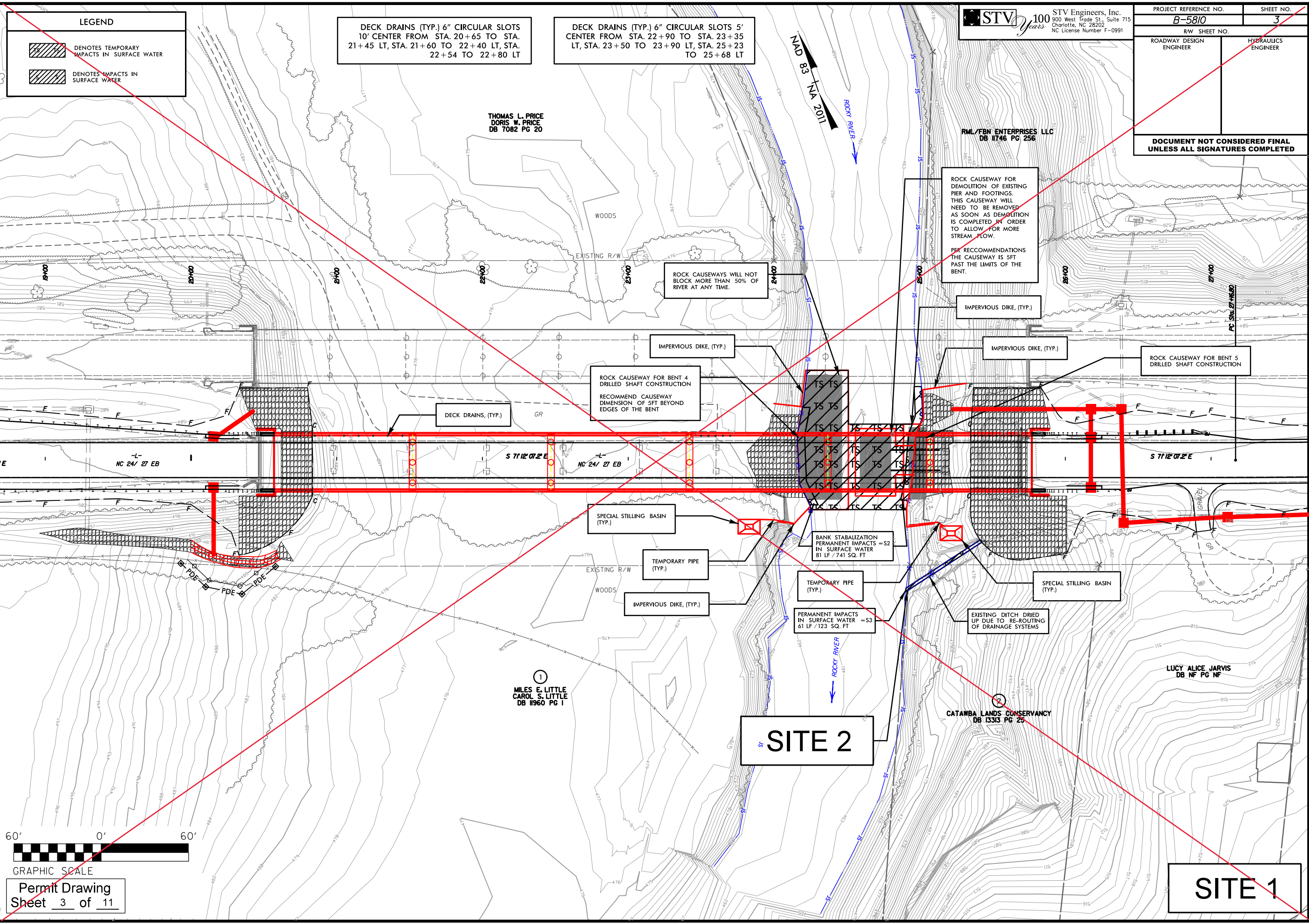
~~SITE 1~~



~~GRAPHIC SCALE~~

Permit Drawing
Sheet 2 of 11

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LEGEND

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER

DECK DRAINS (TYP.) 6" CIRCULAR SLOTS
10' CENTER FROM STA. 20+65 TO STA.
21+45 LT, STA. 21+60 TO 22+40 LT, STA.
22+54 TO 22+80 LT

DECK DRAINS (TYP.) 6" CIRCULAR SLOTS 5'
CENTER FROM STA. 22+90 TO STA. 23+35
LT, STA. 23+50 TO 23+90 LT, STA. 25+23
TO 25+68 LT

STV 100 years
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO. <i>B-5810</i>		SHEET NO. <i>3</i>
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

60' 0' 60'

GRAPHIC SCALE

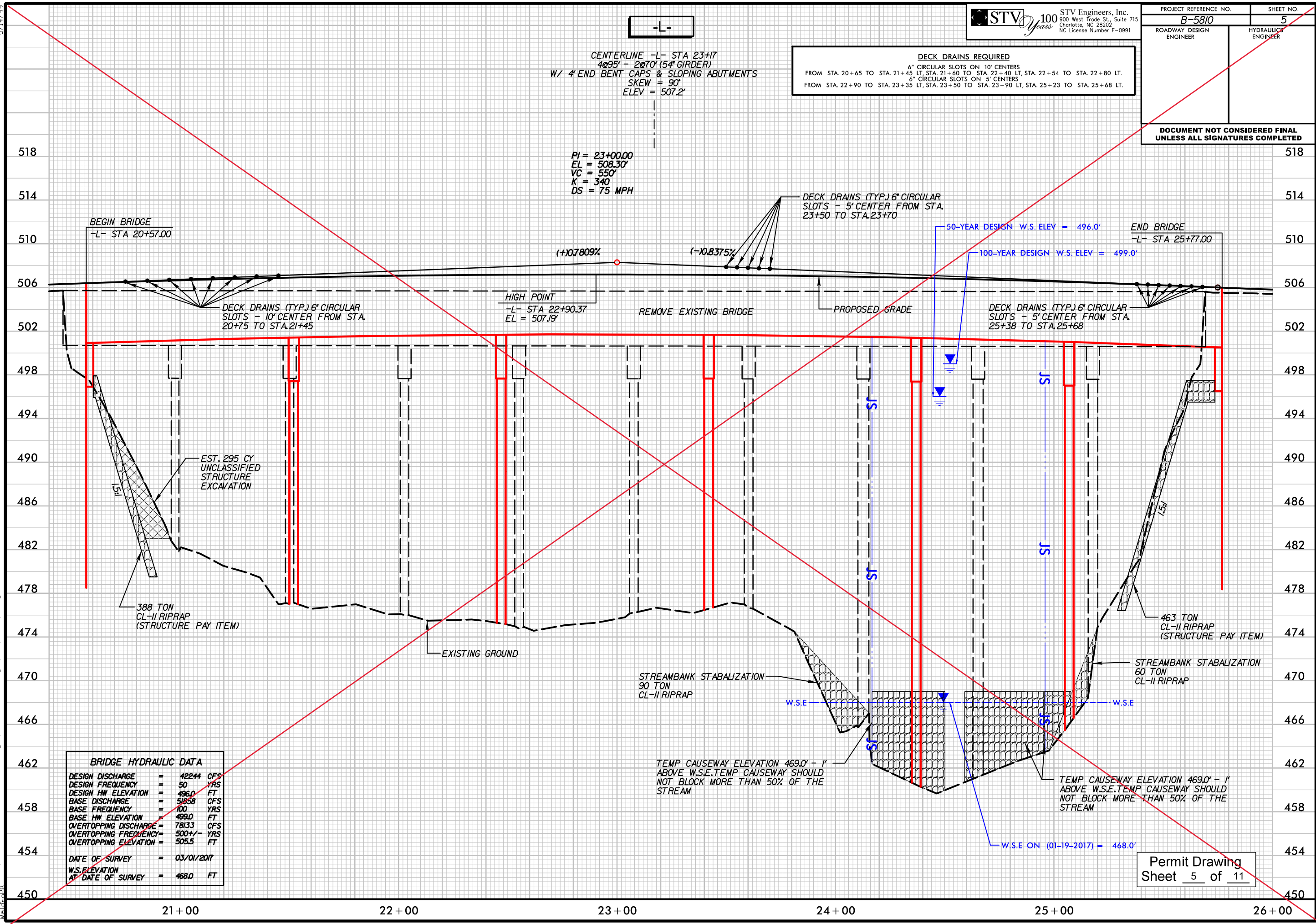
Permit Drawing
Sheet **3** of **11**

5/14/99
12/17/2021
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Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.		SHEET NO.
B-5810		5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



Permit Drawing
Sheet 5 of 11

1. AT NO TIME WILL THE CONTRACTOR BE PERMITTED TO BLOCK MORE THAN HALF OF THE CHANNEL AT ANY ONE TIME.

2. CONTRACTOR SHALL DEWATER AND PLACE GEOTEXTILE PRIOR TO CONSTRUCTING CAUSEWAYS.

ROCK CAUSEWAY FOR
DEMOLITION OF EXISTING
PIER AND FOOTINGS.
THIS CAUSEWAY WILL
NEED TO BE REMOVED
AS SOON AS DEMOLITION
IS COMPLETED IN ORDER
TO ALLOW FOR MORE
STREAM FLOW.

~~PER RECOMMENDATIONS
THE CAUSEWAY IS 5FT
PAST THE LIMITS OF THE
BENT.~~

**IMPERVIOUS DIKE, (TYP.)
& DEWATERING**

TEMPORARY IMPACTS
IN SURFACE WATER = S1
46 LF / 1527 SQ. FT

GRAPHIC ~~SCALE~~

Permit Drawing
Sheet 7 of 11



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Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.

B-5810

SHEET NO.

7

RW SHEET NO.

ROADWAY DESIGN
ENGINEER

~~HYDRAULICS
ENGINEER~~

**DOCUMENT NOT CONSIDERED FINAL
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EXISTING R/W

MILES E. LITTLE
CAROL S. LITTLE
DB 11960 PG 1

2
CATAWBA LANDS CONSERVANCY
DB 13313 PG 25

DEMOLITION STAGE 1

8/17/99

2/17/2021
S:\Hydraulics\PERMITS_Environmental\Drawings\Prm SHT\B5810_hyd_prm_psh07.dgn

- ~~1. AT NO TIME WILL THE CONTRACTOR BE PERMITTED TO BLOCK MORE THAN HALF OF THE CHANNEL AT ANY ONE TIME.~~
- ~~2. CONTRACTOR SHALL DEWATER AND PLACE GEOTEXTILE PRIOR TO CONSTRUCTING CAUSEWAYS.~~

ROCK CAUSEWAY FOR BENT 5
DRILLED SHAFT CONSTRUCTION

RECOMMEND CAUSEWAY
DIMENSION OF 5FT BEYOND
EDGES OF THE BENT

TEMPORARY IMPACTS
IN SURFACE WATER = S2
59 LF / 376 SQ. FT

**IMPERVIOUS DIKE, (TYP.)
& DEWATERING**

IMPERVIOUS DIKE, (TYP.)

SPECIAL STILLING BASIN
(TYP.)

~~TEMPORARY PIPE
(TYP.)~~

MILES E. LITTLE
CAROL S. LITTLE
DB 11960 PG 1

2
CATAWBA LANDS CONSERVANCY
DB 13313 PG 25

CONSTRUCTION CAUSEWAY STAGE 2

A horizontal scale bar representing 60 feet. The bar is divided into two main sections: a checkered section on the left and a solid black section on the right. The checkered section is labeled '60'' at its left end. The solid black section is labeled '0'' at its left end (which is the boundary with the checkered section) and '60'' at its right end. A red diagonal line starts from the bottom left and extends upwards and to the right, crossing the boundary between the checkered and solid black sections.

GRAPHIC ~~SCALE~~

Permit Drawing
Sheet 8 of 11

PROJECT REFERENCE NO.		SHEET NO.	
B-5810		8	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

8/17/99

NOTE:

1. AT NO TIME WILL THE CONTRACTOR BE PERMITTED TO BLOCK MORE THAN HALF OF THE CHANNEL AT ANY ONE TIME.
2. CONTRACTOR SHALL DEWATER AND PLACE GEOTEXTILE PRIOR TO CONSTRUCTING CAUSEWAYS.



STV Engineers, Inc.
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Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.		SHEET NO.
B-5810		9
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

IMPERVIOUS DIKE, (TYP.)
& DEWATERING

ROCK CAUSEWAY FOR BENT 4
DRILLED SHAFT CONSTRUCTION
RECOMMEND CAUSEWAY
DIMENSION OF 5FT BEYOND
EDGES OF THE BENT

TEMPORARY IMPACTS
IN SURFACE WATER =S3
62 LF / 2012 SQ. FT

NC 24/ 27 EB

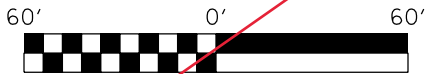
TEMPORARY PIPE
(TYP.)

IMPERVIOUS DIKE, (TYP.)
& DEWATERING

SPECIAL STILLING BASIN
(TYP.)

EXISTING R/W

MILES E. LITTLE
CAROL S. LITTLE
DB 11960 PG 1



GRAPHIC SCALE

Permit Drawing
Sheet 9 of 11

ROCKY RIVER

NAD 83 NA 2011

CATAWBA LANDS CONSERVANCY
DB 13313 PG 25

CONSTRUCTION CAUSEWAY STAGE 3

I:\Hydro\PERMITS\Environmental\Drawings\Prm SHT\B5810_hyd_prm_psh09.dgn
12/17/2021
W:\Hydro\PERMITS\Environmental\Drawings\Prm SHT\B5810_hyd_prm_psh09.dgn

1. AT NO TIME WILL THE CONTRACTOR BE PERMITTED TO BLOCK MORE THAN HALF OF THE CHANNEL AT ANY ONE TIME.

2. CONTRACTOR SHALL DEWATER AND PLACE GEOTEXTILE PRIOR TO CONSTRUCTING CAUSEWAYS.

CAUSEWAY SHOULD EXTEND
5FT BEYOND BENT AND OUT
TO EDGE OF EXISTING WEST
BOUND STRUCTURE

TEMPORARY IMPACTS
IN SURFACE WATER =S4
45 LF /1394 SQ. FT

TEMPORARY PIPE
(TYP.)

SPECIAL STILLING BASIN
(TYP.)

PERMANENT IMPACTS
IN SURFACE WATER = S6
61 LF / 123 SQ. FT

CONSTRUCTION CAUSEWAY STAGE 4

B-5810

10

RW SHEET NO.

~~HYDRAULICS
ENGINEER~~

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GRAPHIC SCALE

Permit Drawing
Sheet 10 of 11

2
CATAWBA LANDS CONSERVANCY
DB 13313 PG 25

WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	20+57.00 / 25+77.00	4 @ 95' 2 @ 70' (54" GIRDER) - OAL = 520', W/CAUSEWAYS							0.12		15	
		BANK STABILIZATION						0.02		81		
2	24+90.36 / 25+42.53	FILL IMPACT						<0.01		61		
TOTALS:								0.02	0.12	142	15	

NOTES:

¹TEMP. IMPACTS LENGTH TOTAL = 96 FT. (81 FT. COVERED UNDER PERMANENT IMPACTS)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE #022 OVER ROCKY RIVER
ON (EASTBOUND NC 24/27)
CABARRUS COUNTY
B-5810
SHEET 11 of 11
12/19/2021