



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

December 3, 2013

MEMORANDUM TO: Mr. John Rouse, P.E.
Division 2 Engineer

FROM: Philip S. Harris, III, P.E., Manager
Natural Environment Section
Project Development and Environmental Analysis Unit

SUBJECT: Beaufort County; Construction of a new Rest Area on US 17; Federal
Aid Project Number NHS-17(32). WBS 38748.1.1; **TIP K-3800.**

E. J. Fusk

Attached are the US Army Corps of Engineers Section 404 Nationwide Permit, N.C. Division of Water Resources (NC DWR) Water Quality Certification, NC DWR Riparian Buffer Authorization, and NC DWR Central Coastal Plain Capacity Use Area Permit for the above referenced project. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:
<https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>
Quick Links>Permit Documents> Issued Permits.

cc: w/o attachment (see website for attachments):

Mr. Randy Garris, P.E. State Contract Officer
Mr. Jay Johnson, Division Environmental Officer
Mr. Majed Alghandour, P. E., Program. and TIP
Mr. Jay Bennett, P.E., Roadway Design
Mr. Dewayne Sykes, P.E. Utilities Unit
Mr. Art McMillan, P.E., Hydraulics
Mr. Tom Koch, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Mike Robinson, P.E., State Bridge Construction Engineer
Mr. Rob Hanson, P.E., PDEA Eastern Section
Ms. Leilani Paugh, NES
Mr. Randy Griffin, P.E., NES

PROJECT COMMITMENTS

T.I.P. Project No. K-3800
Construction of New US 17 Rest Area
Beaufort County
Federal Aid Project No. NHS-17(32)
W.B.S. No. 38748.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Roadway Design Unit/ Roadside Environmental Unit

Since this project is also located in the Tar-Pamlico River Basin, sedimentation and erosion control measures shall adhere to the Design Standards in Sensitive Watersheds [15A NCAC 04B.0124 (b)-(e)].

COMMITMENTS FROM PERMITTING

Division 2 Construction/ PDEA Natural Environment Section/ Roadside Environmental Unit

It is understood that you wish to perform on-site stream mitigation for the unavoidable impact to 269 linear feet of intermittent stream. The on-site stream mitigation proposal included in your application constitutes Enhancement Level II. Therefore, compensatory mitigation for impacts to 269 linear feet of stream is required at a replacement ratio of 1:1.5 or as directed by the U.S. Army Corps of Engineers per 15A NCAC 2H .0506(h)(1). The onsite stream mitigation shall be constructed in accordance with the design submitted in your June 19, 2013 application. All on-site mitigation sites shall be protected in perpetuity by a conservation easement or through NCDOT fee-simple acquisition and recorded in the NCDOT Natural Environment Unit mitigation geodatabase. Please be reminded that as-builts for the completed streams shall be submitted to the North Carolina Division of Water Resources 401 Wetlands Unit with the as-builts for the rest of the project. If the parameters of this condition are not met, then the permittee shall supply additional stream mitigation for the 269 linear feet of impacts. To receive mitigation credit, a 50-foot wide native wooded buffer shall be planted on both sides of the stream unless otherwise authorized by this Certification.

Compensatory mitigation for impacts to 12,021 square feet of protected riparian buffers in Zone land 8,747square feet of protected riparian buffers in Zone 2 shall be required. In accordance with 15A NCAC 02B .0260(9) riparian vegetation reestablishment shall include a minimum of at least 2 native hardwood tree species planted at a density sufficient to provide 320 trees per acre at maturity. The planting plan you submitted with your application dated June 19, 2013 was not sufficient in meeting the required density. Submittal of a buffer restoration plan meeting the requirements of 15A NCAC 02B .0260 (9)(d) for approval by the Division is required prior to construction activities. All on-site mitigation sites shall be protected in perpetuity by a conservation easement or through NCDOT fee simple acquisition and recorded in the NCDOT Natural Environment Section mitigation geodatabase.

The permittee shall monitor the stream and buffer mitigation site. Monitoring shall consist of visual review and viable stem counts. An annual report shall be submitted to NCDWR for a period of 5 years showing monitoring results including: bank stability, survival rate/ success of tree and vegetation establishment, and that diffuse flow through the riparian buffer has been maintained. The first annual report shall be submitted within one year of final planting. Failure to achieve a buffer density of 320 trees per acre after 5 years will require the annual report to provide appropriate remedial actions to be implemented and a schedule for implementation. Approval of the final annual report, and a formal "close out" of the mitigation site by NCDWR is required.

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

Action Id. SAW-2013-02202 County: Beaufort U.S.G.S. Quad: NC-HACKNEY

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Permittee: NC Department of Transportation

Richard Hancock

Address: 1598 Mail Service Center

Raleigh, NC, 27699-1598

Telephone Number:

Size (acres) 8.5 acres

Nearest Town Chocowinity

Nearest Waterway Chapel Branch

River Basin Pamlico, North Carolina.

USGS HUC 3020104

Coordinates Latitude: 35.4912670451807

Longitude: -77.1061329411386

Location description: Facility located on US 17 North, south of Chocowinity, Beaufort County, NC

Description of projects area and activity: Construct a new rest area on an 8.5 acres parcel adjacent to US 17, near Chocowinity, NC. 269 linear feet of permanent intermittent stream impacts, 60 linear feet of temporary stream impacts and 0.00 acres of wetland impacts are authorized by this verification.

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

Authorization: Regional General Permit Number or Nationwide Permit Number: NWP 23 Approved Categorical

Exclusions.

SEE ATTACHED RGP or NWP GENERAL, REGIONAL AND 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 06/19/2013. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide 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 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 permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

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

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

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

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact Thomas Steffens at 910-251-4615 or Thomas.A.Steffens@usace.army.mil.

STEFFENS.THOMAS.ANCRUM.1284706273

Corps Regulatory Official: 2013.11.13 15:47:18 -05'00' Date: 11/13/2013

Expiration Date of Verification: 03/18/2017

Determination of Jurisdiction:

- A. Based on preliminary information, there appear to be waters of the US including wetlands within the above described project area. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).
- B. There are Navigable Waters of the United States within the above described project area subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- C. There are waters of the US and/or wetlands within the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- D. The jurisdictional areas within the above described project area have been identified under a previous action. Please reference jurisdictional determination issued . Action ID: **SAW-** .

Basis For Determination: This waterbody exhibits an Ordinary High Water Mark as indicated by changes in soil character and absence of terrestrial vegetation and is hydrologically connected to Maple Branch, a tributary of the Pamlico River, a TNW.

Remarks:

E. Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

F. Appeals Information (This information applies only to approved jurisdictional determinations as indicated in B and C above).

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

US Army Corps of Engineers
South Atlantic Division
Attn: Jason Steele, Review Officer
60 Forsyth Street SW, Room 10M15
Atlanta, Georgia 30303-8801
Phone: (404) 562-5137

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

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

STEFFENS.THOMAS.ANCRUM.1284706273

Corps Regulatory Official: 2013.11.13 15:47:43 -05'00'

Thomas Steffens

Date of JD: **11/13/2013**

Expiration Date of JD:

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 online at <http://per2.nwp.usace.army.mil/survey.html>.

SAW-2013-02202

SPECIAL CONDITIONS

1. CONSTRUCTION PLANS: All work authorized by this permit must be performed in strict compliance with the attached plans June 19, 2013, which are a part of this permit. Any modification to these plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation.

2. UNAUTHORIZED DREDGE OR FILL: Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. 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 this project.

3. MAINTAIN CIRCULATION AND FLOW OF WATERS: Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.

4. DEVIATION FROM PERMITTED PLANS: The permittee shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Written verification shall be provided that the final construction drawings comply with the attached permit drawings prior to any active construction in waters of the United States, including wetlands. Any deviation in the construction design plans will be brought to the attention of the Corps of Engineers, Tom Steffens, Washington Regulatory Field Office prior to any active construction in waters or wetlands.

5. PRECONSTRUCTION MEETING: The Permittee shall schedule an onsite preconstruction meeting between its representatives, the contractor's representatives and the appropriate Corps of Engineers Project Manager prior to undertaking any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all terms and conditions contained within the Department of the Army permit. The Permittee shall notify the Corps of Engineers Project Manager a minimum of thirty (30) days in advance of the scheduled meeting in order to provide that individual with ample opportunity to schedule and participate in the required meeting.

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

7. REPORTING VIOLATIONS OF THE CLEAN WATER ACT AND RIVERS AND HARBORS ACT: Violation of these conditions or violation of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the permittee's discovery of the violation.

8. COMPLIANCE INSPECTION: A representative of the Corps of Engineers will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is resolved to the satisfaction of the Corps.

9. PERMITTEE-RESPONSIBLE MITIGATION:

The Permittee shall fully implement the compensatory mitigation plan, entitled "US 17 Rest Area Onsite Stream and Buffer Mitigation Plan", and dated June 19, 2013. Activities prescribed by this plan shall be initiated prior to, or concurrently with, commencement of any construction activities within jurisdictional areas authorized by this permit.

The mitigation project proposes to restore 815 linear feet of intermittent stream by removing the [stream] degrading factors on the site and preserve an additional 623 feet of intermittent stream downstream from the project as onsite mitigation for impacts associated with the project. In review of the mitigation plan, the Corps finds removing the stream degrading factors without modifying the channel profile and dimension to be enhancement rather than restoration. As such, the proposed work is inappropriate as stream restoration and finds stream enhancement a better description of the proposed mitigation project.

To compensate for the unavoidable impacts to 269 linear feet of intermittent stream associated with this project, the permittee shall enhance 403 linear feet of intermittent stream (1.5:1 ratio). The remaining 412 linear feet of intermittent stream enhancement and 623 linear feet of intermittent stream preservation as mitigation assets may be available, subject to Corps and agency approval.

The permittee will, in accordance with the plan, adhere to the following conditions:

- 1) The permittee, NCDOT, is the party responsible for the implementation, performance and long term management of the compensatory mitigation project.
- 2) Any changes or modifications to your mitigation plan shall be approved by the Corps.
- 3) The permittee shall maintain the entire mitigation site in its natural condition, as altered by the work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: Filling; grading; excavating; earth movement of any kind; construction of roads, walkways, buildings, signs, or any other structure; any activity that may alter the drainage patterns on the property; the destruction, cutting, removal, mowing, or other alteration of vegetation on the property; disposal or storage of any garbage, trash, debris or other waste material; graze or water animals, or use for any agricultural or horticultural purpose; or any other activity which would result in the property being adversely impacted or destroyed, except as specifically authorized by this permit.
- 4) In accordance with the mitigation plan, the permittee will identify the proposed preservation mechanism to be used to maintain the entire mitigation site in perpetuity, subject to the approval of the Wilmington District. The District considers preservation of property for compensatory mitigation purposes to consist of maintaining the property in its natural condition, or, if restoration, creation, or enhancement work has been performed on the property, in its mitigated condition. The permittee shall not sell or otherwise convey any interest in the mitigation property used to satisfy the mitigation requirements for this permit to any third party, without prior written approval from the Wilmington District Corps of Engineers.
- 5) All mitigation areas shall be monitored for a minimum of 3 years or until deemed successful by the Corps in accordance with the monitoring requirements included in the mitigation plan.
- 6) If the compensatory mitigation fails to meet the performance standards 3 years after completion of the compensatory mitigation objectives, the compensatory mitigation will be deemed unsuccessful. Within 60 days of notification by the Corps that the compensatory mitigation is unsuccessful, the Permittee shall submit to the Corps an alternate compensatory mitigation proposal to fully offset the functional loss that occurred as a result of the project. The alternate compensatory mitigation proposal may be required to include additional mitigation to compensate for the temporal loss of wetland function associated with the unsuccessful compensatory mitigation activities. The Corps reserves the right to fully evaluate, amend, and approve or reject the alternate compensatory mitigation proposal. Within 120 days of Corps approval, the Permittee will complete the alternate compensatory mitigation proposal.

10. INSTALLATION OF CULVERTS: For construction of culverts, measures will be included in the construction that will promote the safe passage of fish and other aquatic organisms. For all culvert construction activities, the dimension, pattern, and profile of the stream, (above and below a pipe or culvert), should not be modified by widening the stream channel or by reducing the depth of the stream. Culvert inverts will be buried at least one foot below the bed of the stream for culverts greater than 48 inches in diameter. For culverts 48 inches in diameter or smaller, culverts must be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert.

Action ID Number: SAW-2013-02202 County: Beaufort

Permittee: NC Department of Transportation
Richard Hancock

Project Name: NCDOT K-3800 SR 1150 US 17 Rest Stop UT to Maple Branch

Date Verification Issued: 11/13/2013

Project Manager: Thomas Steffens STEFFENS.THOMAS.ANCRUM.1284706273
2013.11.13 15:48:04 -05'00'

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: Thomas Steffens
Washington Regulatory Field Office
2407 West 5th Street
Washington, North Carolina
27889

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

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

**NATIONWIDE PERMIT 23
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS
FEDERAL REGISTER
AUTHORIZED MARCH 19, 2012**

Approved Categorical Exclusions. Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where:

(a) That agency or department has determined, pursuant to the Council on Environmental Quality's implementing regulations for the National Environmental Policy Act (40 CFR part 1500 et seq.), that the activity is categorically excluded from environmental documentation, because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment; and

(b) The Office of the Chief of Engineers (Attn: CECW-CO) has concurred with that agency's or department's determination that the activity is categorically excluded and approved the activity for authorization under NWP 23.

The Office of the Chief of Engineers may require additional conditions, including pre-construction notification, for authorization of an agency's categorical exclusions under this NWP.

Notification: Certain categorical exclusions approved for authorization under this NWP require the permittee to submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 31). The activities that require pre-construction notification are listed in the appropriate Regulatory Guidance Letters. (Sections 10 and 404)

Note: The agency or department may submit an application for an activity believed to be categorically excluded to the Office of the Chief of Engineers (Attn: CECW-CO). Prior to approval for authorization under this NWP of any agency's activity, the Office of the Chief of Engineers will solicit public comment. As of the date of issuance of this NWP, agencies with approved categorical exclusions are the: Bureau of Reclamation, Federal Highway Administration, and U.S. Coast Guard. Activities approved for authorization under this NWP as of the date of this notice are found in Corps Regulatory Guidance Letter 05-07, which is available at:

<http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/GuidanceLetters.aspx> . Any future approved categorical exclusions will be announced in Regulatory Guidance Letters and posted on this same web site.

NATIONWIDE PERMIT CONDITIONS

The following General Conditions must be followed in order for any authorization by a NWP to be valid:

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States 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 of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. 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).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River 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 River 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, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP 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 any NWP which “may affect” a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees 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 NWP activity, or whether additional ESA consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification 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 and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant 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 applicant shall not begin work until the Corps has provided notification the proposed activities will have “no effect” on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP 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 U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States 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.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any “take” permits required under the U.S. Fish and Wildlife Service’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 U.S. Fish and Wildlife Service to determine if such “take” permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees 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 section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification 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 or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. 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. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. 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)). If NHPA

section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant 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 would 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 applicant. 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 applicant, 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.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of

the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWP.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(1)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the

vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific

conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

FURTHER INFORMATION

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

DEFINITIONS

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water’s surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence

of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or

flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through

which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. 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 crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent

mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWP, a waterbody is a jurisdictional water of the United States. If a jurisdictional wetland is adjacent – meaning bordering, contiguous, or neighboring – to a waterbody determined to be a water of the United States under 33 CFR 328.3(a)(1)-(6), that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of “waterbodies” include streams, rivers, lakes, ponds, and wetlands.

Final Regional Conditions 2012

NOTICE ABOUT WEB LINKS IN THIS DOCUMENT:

The web links (both internal to our District and any external links to collaborating agencies) in this document are valid at the time of publication. However, the Wilmington District Regulatory Program web page addresses, as with other agency web sites, may change over the timeframe of the five-year Nationwide Permit renewal cycle, in response to policy mandates or technology advances. While we will make every effort to check on the integrity of our web links and provide re-direct pages whenever possible, we ask that you report any broken links to us so we can keep the page information current and usable. We apologize in advanced for any broken links that you may encounter, and we ask that you navigate from the regulatory home page (wetlands and stream permits) of the Wilmington District Corps of Engineers, to the “Permits” section of our web site to find links for pages that cannot be found by clicking directly on the listed web link in this document.

Final 2012 Regional Conditions for Nationwide Permits (NWP) in the Wilmington District

1.0 Excluded Waters

The Corps has identified waters that will be excluded from the use of all NWP’s during certain timeframes. These waters are:

1.1 Anadromous Fish Spawning Areas

Waters of the United States identified by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are excluded during the period between February 15 and June 30, without prior written approval from NCDMF or NCWRC and the Corps.

1.2 Trout Waters Moratorium

Waters of the United States in the twenty-five designated trout counties of North Carolina are excluded during the period between October 15 and April 15 without prior written approval from the NCWRC. (See Section 2.7 for a list of the twenty-five trout counties).

1.3 Sturgeon Spawning Areas as Designated by the National Marine Fisheries Service (NMFS)

Waters of the United States designated as sturgeon spawning areas are excluded during the period between February 1 and June 30, without prior written approval from the NMFS.

2.0 Waters Requiring Additional Notification

The Corps has identified waters that will be subject to additional notification requirements for activities authorized by all NWP's. These waters are:

2.1 Western NC Counties that Drain to Designated Critical Habitat

For proposed activities within Waters of the U.S. that require a Pre-Construction Notification pursuant to General Condition 31 (PCN) and are located in the sixteen counties listed below, applicants must provide a copy of the PCN to the US Fish and Wildlife Service, 160 Zillicoa Street, Asheville, North Carolina 28801. This PCN must be sent concurrently to the US Fish and Wildlife Service and the Corps Asheville Regulatory Field Office. Please see General Condition 18 for specific notification requirements related to Federally Endangered Species and the following website for information on the location of designated critical habitat.

Counties with tributaries that drain to designated critical habitat that require notification to the Asheville US Fish and Wildlife Service: Avery, Cherokee, Forsyth, Graham, Haywood, Henderson, Jackson, Macon Mecklenburg, Mitchell, Stokes, Surry, Swain, Transylvania, Union and Yancey.

Website and office addresses for Endangered Species Act Information:

The Wilmington District has developed the following website for applicants which provides guidelines on how to review linked websites and maps in order to fulfill NWP general condition 18 requirements: <http://www.saw.usace.army.mil/wetlands/ESA>

Applicants who do not have internet access may contact the appropriate US Fish and Wildlife Service offices listed below or the US Army Corps of Engineers at (910) 251- 4633:

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

Asheville US Fish and Wildlife Service Office counties: All counties west of and including Anson, Stanly, Davidson, Forsyth and Stokes Counties

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

Raleigh US Fish and Wildlife Service Office counties: all counties east of and including Richmond, Montgomery, Randolph, Guilford, and Rockingham Counties.

2.2 Special Designation Waters

Prior to the use of any NWP in any of the following identified waters and contiguous wetlands in North Carolina, applicants must comply with Nationwide Permit General Condition 31 (PCN). The North Carolina waters and contiguous wetlands that require additional notification requirements are:

“Outstanding Resource Waters” (ORW) or “High Quality Waters” (HQW) as designated by the North Carolina Environmental Management Commission; “Inland Primary Nursery Areas” (IPNA) as designated by the NCWRC; “Contiguous Wetlands” as defined by the North Carolina Environmental Management Commission; or “Primary Nursery Areas” (PNA) as designated by the North Carolina Marine Fisheries Commission.

2.3 Coastal Area Management Act (CAMA) Areas of Environmental Concern

Non-federal applicants for any NWP in a designated “Area of Environmental Concern” (AEC) in the twenty (20) counties of Eastern North Carolina covered by the North Carolina Coastal Area Management Act (CAMA) must also obtain the required CAMA permit. Development activities for non-federal projects may not commence until a copy of the approved CAMA permit is furnished to the appropriate Wilmington District Regulatory Field Office (Wilmington Field Office – 69 Darlington Avenue, Wilmington, NC 28403 or Washington Field Office – 2407 West 5th Street, Washington, NC 27889).

2.4 Barrier Islands

Prior to the use of any NWP on a barrier island of North Carolina, applicants must comply with Nationwide Permit General Condition 31 (PCN).

2.5 Mountain or Piedmont Bogs

Prior to the use of any NWP in a Bog classified by the North Carolina Wetland Assessment Methodology (NCWAM), applicants shall comply with Nationwide Permit General Condition 31 (PCN). The latest version of NCWAM is located on the NC DWQ web site at: <http://portal.ncdenr.org/web/wq/swp/ws/pdu/ncwam> .

2.6 Animal Waste Facilities

Prior to use of any NWP for construction of animal waste facilities in waters of the US, including wetlands, applicants shall comply with Nationwide Permit General Condition 31 (PCN).

2.7 Trout Waters

Prior to any discharge of dredge or fill material into streams or waterbodies within the twenty-five (25) designated trout counties of North Carolina, the applicant shall comply with Nationwide Permit General Condition 31 (PCN). The applicant shall also provide a copy of the notification to the appropriate NCWRC office to facilitate the determination of any potential

impacts to designated Trout Waters. Notification to the Corps of Engineers will include a statement with the name of the NCWRC biologist contacted, the date of the notification, the location of work, a delineation of wetlands, a discussion of alternatives to working in the mountain trout waters, why alternatives were not selected, and a plan to provide compensatory mitigation for all unavoidable adverse impacts to mountain trout waters.

NCWRC and NC Trout Counties

Western Piedmont Region Coordinator	Alleghany	Caldwell	Watauga
20830 Great Smoky Mtn. Expressway	Ashe	Mitchell	Wilkes
Waynesville, NC 28786	Avery	Stokes	
Telephone: (828) 452-2546	Burke	Surry	

Mountain Region Coordinator	Buncombe	Henderson	Polk
20830 Great Smoky Mtn. Expressway	Cherokee	Jackson	Rutherford
Waynesville, NC 28786	Clay	Macon	Swain
Telephone: (828) 452-2546	Graham	Madison	Transylvania
Fax: (828) 452-7772	Haywood	McDowell	Yancey

3.0 List of Corps Regional Conditions for All Nationwide Permits

The following conditions apply to all Nationwide Permits in the Wilmington District:

3.1 Limitation of Loss of Perennial Stream Bed

NWPs may not be used for activities that may result in the loss or degradation of greater than 300 total linear feet of perennial, intermittent or ephemeral stream, unless the District Commander has waived the 300 linear foot limit for ephemeral and intermittent streams on a case-by-case basis and he determines that the proposed activity will result in minimal individual and cumulative adverse impacts to the aquatic environment. Loss of stream includes the linear feet of stream bed that is filled, excavated, or flooded by the proposed activity. Waivers for the loss of ephemeral and intermittent streams must be in writing and documented by appropriate/accepted stream quality assessments*. This waiver only applies to the 300 linear feet threshold for NWPs.

*NOTE: Applicants should utilize the most current methodology prescribed by Wilmington District to assess stream function and quality. Information can be found at:

<http://www.saw.usace.army.mil/wetlands/permits/nwp/nwp2012> (see “Quick Links”)

3.2 Mitigation for Loss of Stream Bed

For any NWP that results in a loss of more than 150 linear feet of perennial and/or ephemeral/intermittent stream, the applicant shall provide a mitigation proposal to compensate for more than minimal individual and cumulative adverse impacts to the aquatic environment. For stream losses less than 150 linear feet, that require a PCN, the District Commander may determine, on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effect on the aquatic environment.

3.3 Pre-construction Notification for Loss of Streambed Exceeding 150 Feet.

Prior to use of any NWP for any activity which impacts more than 150 total linear feet of perennial stream or ephemeral/ intermittent stream, the applicant must comply with Nationwide Permit General Condition 31 (PCN). This applies to NWPs that do not have specific notification requirements. If a NWP has specific notification requirements, the requirements of the NWP should be followed.

3.4 Restriction on Use of Live Concrete

For all NWPs which allow the use of concrete as a building material, live or fresh concrete, including bags of uncured concrete, may not come into contact with the water in or entering into waters of the US. Water inside coffer dams or casings that has been in contact with wet concrete shall only be returned to waters of the US when it is no longer poses a threat to aquatic organisms.

3.5 Requirements for Using Riprap for Bank Stabilization

For all NWPs that allow for the use of riprap material for bank stabilization, the following measures shall be applied:

3.5.1. Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters.

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

3.5.3. The riprap material shall be clean and free from loose dirt or any pollutant except in trace quantities that would not have an adverse environmental effect.

3.5.4. It shall be of a size sufficient to prevent its movement from the authorized alignment by natural forces under normal conditions.

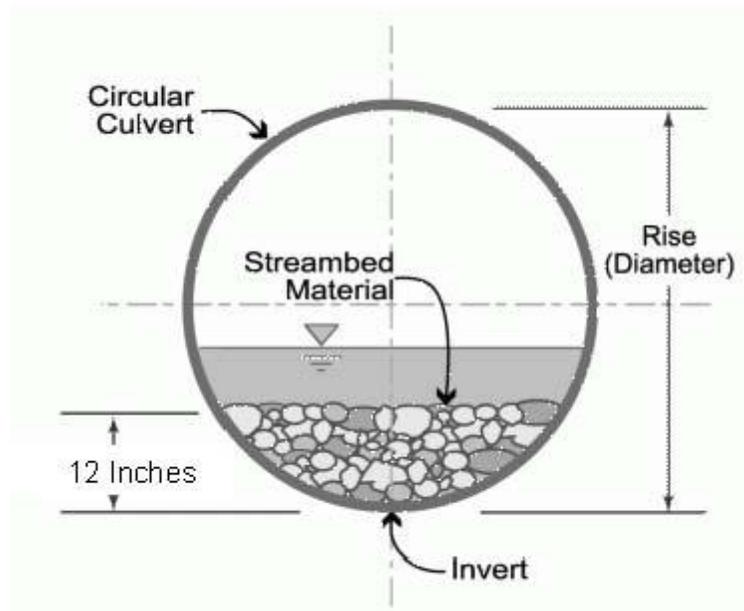
3.5.5. The riprap material shall consist of clean rock or masonry material such as, but not limited to, granite, marl, or broken concrete.

3.5.6. A waiver from the specifications in this Regional Condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this Regional condition would result in greater adverse impacts to the aquatic environment.

3.6 Safe Passage Requirements for Culvert Placement

For all NWP's that involve the construction/installation of culverts, measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gage data, if available. In the absence of such data, bankfull flow can be used as a comparable level.

In the twenty (20) counties of North Carolina designated as coastal counties by the Coastal Area Management Act (CAMA): All pipes/culverts must be sufficiently sized to allow for the burial of the bottom of the pipe/culvert at least one foot below normal bed elevation when they are placed within the Public Trust Area of Environmental Concern (AEC) and/or the Estuarine Waters AEC as designated by CAMA, and/or all streams appearing as blue lines on United States Geological Survey (USGS) 7.5-minute quadrangle maps.



In all other counties: Culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter or less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain the existing channel slope. The bottom of the culvert must be placed at a

depth below the natural stream bottom to provide for passage during drought or low flow conditions.

Culverts are to be designed and constructed in a manner that minimizes destabilization and head cutting. Destabilizing the channel and head cutting upstream should be considered and appropriate actions incorporated in the design and placement of the culvert.

A waiver from the depth specifications in this condition may be requested in writing. The waiver will be issued if it can be demonstrated that the proposal would result in the least impacts to the aquatic environment.

All counties: Culverts 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 United States. Culverts placed across wetland fills purely for the purposes of equalizing surface water do not have to be buried.

3.7 Notification to NCDENR Shellfish Sanitation Section

Applicants shall notify the NCDENR Shellfish Sanitation Section prior to dredging in or removing sediment from an area closed to shell fishing where the effluent may be released to an area open for shell fishing or swimming in order to avoid contamination from the disposal area and cause a temporary shellfish closure to be made. Such notification shall also be provided to the appropriate Corps of Engineers Regulatory Field Office. Any disposal of sand to the ocean beach should occur between November 1 and April 30 when recreational usage is low. Only clean sand should be used and no dredged sand from closed shell fishing areas may be used. If beach disposal were to occur at times other than stated above or if sand from a closed shell fishing area is to be used, a swimming advisory shall be posted, and a press release shall be issued by the permittee.

3.8 Preservation of Submerged Aquatic Vegetation

Adverse impacts to Submerged Aquatic Vegetation (SAV) are not authorized by any NWP within any of the twenty coastal counties defined by North Carolina's Coastal Area Management Act of 1974 (CAMA).

3.9 Sedimentation and Erosion Control Structures and Measures

3.9.1. All PCNs will identify and describe sedimentation and erosion control structures and measures proposed for placement in waters of the US. The structures and measures should be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams.

4.0 Additional Regional Conditions for Specific Nationwide Permits

4.1 NWP #23 – Approved Categorical Exclusions

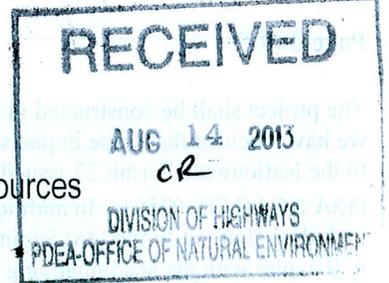
4.1.1. No development activities authorized by this NWP may begin until the permittee obtains a consistency concurrence or a CAMA permit from the North Carolina Division of Coastal Management, if either is required.



North Carolina Department of Environment and Natural Resources
 Division of Water Resources
 Water Quality Programs

Pat McCrory
 Governor

Thomas A. Reeder
 Director



John E. Skvarla, III
 Secretary

August 9, 2013
 Beaufort County
 DWR Project No. 20130649
 TIP K-3800

APPROVAL of 401 WATER QUALITY CERTIFICATION and TAR-PAMLICO BUFFER AUTHORIZATION with ADDITIONAL CONDITIONS

Dr. Greg Thorpe, PhD., Manager
 Project Development and Environmental Analysis
 North Carolina Department of Transportation
 1598 Mail Service Center
 Raleigh, North Carolina, 27699-1598

Dear Dr. Thorpe:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of constructing a new rest area along US 17 near Chocowinity in Beaufort County:

Stream Impacts in the Tar-Pamlico Basin

Site:	Stream Permanent (linear ft)	Stream Temporary (linear ft)	Permanent Surface Water Impacts (ac)	Temporary Surface Water Impacts (ac)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1	128	30	<0.01	<0.01	158	128
2	141	30	<0.01	<0.01	171	141
TOTAL:	269	60	0.01	<0.01	329	269

Total Stream Impact: 329 linear feet

Buffer Impacts in the Tar-Pamlico Basin

Site:	Zone 1 Impact (sq ft)	minus Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	minus Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
1	5304	0	5304	15,912	3462	0	3462	5,193
2	6717	0	6717	20,151	4304	0	4304	6,456
3	0	0	0	0	981	0	981	1,472
Totals	12,021	0	12,021	36,063	8,747	0	8,747	13,121

Total buffer impacts: 20,768 sq ft. All buffer impacts are on the same stream. Impacts > 1/3 ac = mitigation required.

The project shall be constructed in accordance with your application dated received June 21, 2013. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 3891. This certification corresponds to the Nationwide Permit 23 issued by the Corps of Engineers. This approval is also valid for the Tar-Pamlico Riparian Buffer Rules (15A NCAC 2B .0259). In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the DWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). Additionally, impacts to riparian buffers may require mitigation as described in 15A NCAC 2B .0259 (10) For this approval to remain valid, you must adhere to the conditions listed in the attached certification.

Project Specific Conditions

1. It is understood that you wish to perform on-site stream mitigation for the unavoidable impact to 269 linear feet of intermittent stream. The on-site stream mitigation proposal included in your application constitutes Enhancement Level II. Therefore, compensatory mitigation for impacts to 269 linear feet of stream is required at a replacement ratio of 1:1.5 or as directed by the U.S. Army Corps of Engineers per 15A NCAC 2H .0506(h)(1). The onsite stream mitigation shall be constructed in accordance with the design submitted in your June 19, 2013 application. All on-site mitigation sites shall be protected in perpetuity by a conservation easement or through NCDOT fee simple acquisition and recorded in the NCDOT Natural Environment Unit mitigation geodatabase. Please be reminded that as-builts for the completed streams shall be submitted to the North Carolina Division of Water Resources 401 Wetlands Unit with the as-builts for the rest of the project. If the parameters of this condition are not met, then the permittee shall supply additional stream mitigation for the 269 linear feet of impacts. To receive mitigation credit, a 50-foot wide native wooded buffer shall be planted on both sides of the stream unless otherwise authorized by this Certification.
2. Compensatory mitigation for impacts to 12,021 square feet of protected riparian buffers in Zone 1 and 8,747 square feet of protected riparian buffers in Zone 2 shall be required. In accordance with 15A NCAC 02B .0260(9) riparian vegetation reestablishment shall include a minimum of at least 2 native hardwood tree species planted at a density sufficient to provide 320 trees per acre at maturity. The planting plan you submitted with your application dated June 19, 2013 was not sufficient in meeting the required density. Submittal of a buffer restoration plan meeting the requirements of 15A NCAC 02B .0260 (9)(d) for approval by the Division is required prior to construction activities. All on-site mitigation sites shall be protected in perpetuity by a conservation easement or through NCDOT fee simple acquisition and recorded in the NCDOT Natural Environment Unit mitigation geodatabase.
3. The permittee shall monitor the stream and buffer mitigation site. Monitoring shall consist of visual review and viable stem counts. An annual report shall be submitted to NCDWQ for a period of 5 years showing monitoring results including: bank stability, survival rate/ success of tree and vegetation establishment, and that diffuse flow through the riparian buffer has been maintained. The first annual report shall be submitted within one year of final planting. Failure to achieve a buffer density of 320 trees per acre after 5 years will require the annual report to provide appropriate remedial actions to be implemented and a schedule for implementation. Approval of the final annual report, and a formal "close out" of the mitigation site by NCDWQ is required.

General Conditions

1. 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.
2. The Permittee shall ensure that the final design drawings adhere to the certification and to the drawings submitted for approval.
3. 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.

4. 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.
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.
6. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification.
7. The outside buffer, wetland or water boundary located within the construction corridor approved by this certification 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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:
 - 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.
13. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.
14. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
15. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
16. Native riparian vegetation (ex. list trees and shrubs native to your geographic region) must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
17. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this certification 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.
18. All stormwater runoff shall be directed as sheetflow through stream buffers at nonerosive velocities, unless otherwise approved by this certification.

19. Pursuant to 15A NCAC 2B .0259(6), sediment and erosion control devices shall not be placed in Zone 1 of any Tar-Pamlico Buffer without prior approval by NCDWR. At this time, NCDWR has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.
20. New roadside ditches must be in compliance with the nitrogen control and diffuse flow requirements outlined in 15A NCAC 2B .0259.
21. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For the purpose of this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular NCDOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated with native woody species before the next growing season following completion of construction.
22. 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 DWR 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, DWR may reevaluate and modify this certification.
23. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery.
24. Upon completion of the project (including any impacts at associated borrow or waste site), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify DWR when all work included in the 401 Certification has been completed.
25. A copy of this Water Quality Certification shall be maintained on site at 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.

If you do not accept any of the conditions of this certification, you may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. To ask for a hearing, send a written petition that conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699. This certification and its conditions are final and binding unless you ask for a hearing. This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact Garcy Ward at (252) 948-3922.

Sincerely,



for Thomas A. Reeder

Attachments (General Certification and Certificate of Completion form)

cc: Tom Steffens, US Army Corps of Engineers, Washington Field Office
Jay Johnson, NC DOT, Division 2
Sonia Carrillo, DWQ, Transportation Permitting Unit
File Copy

DWQ Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to DWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____

Water Quality Certification No. 3891

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT NUMBER 23 (APPROVED CATEGORICAL EXCLUSIONS) AND RIPARIAN AREA PROTECTION RULES (BUFFER RULES)

Water Quality Certification Number 3891 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to waters and wetland areas as described in 33 CFR 330 Appendix A (B) (23) and for the Riparian Area Protection Rules (Buffer Rules) in 15A NCAC 02B .0200.

The category of activities shall include only Federally-approved Categorical Exclusion projects.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Activities meeting any one (1) of the following thresholds or circumstances require *written approval* for a 401 Water Quality Certification from the Division of Water Quality (the "Division"):

- a) Stream impacts (temporary or permanent) equal or greater than 40 linear feet; or
- b) Any stream relocation; or
- c) Impacts equal to or greater than one-tenth (1/10) acre of wetlands or open waters; or
- d) Any impacts to wetlands adjacent to waters designated as: ORW, SA, WS-I, WS-II, or Trout, or wetlands contiguous to waters designated as a North Carolina or National Wild and Scenic River.
- e) Any impacts to coastal wetlands [15A NCAC 7H .0205)], or Unique Wetlands (UWL) [15A NCAC 2H .0506].
- f) Any impact associated with a Notice of Violation or an enforcement action for violation(s) of DWQ Wetland Rules (15A NCAC 02H .0500), Isolated Wetland Rules (15A NCAC 02H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 02B .0200); or
- g) Any impacts to streams and/or buffers in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman, Jordan or Goose Creek Watersheds (or any other basin or watershed with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless* the activities are listed as "EXEMPT" from these rules or a Buffer Authorization Certificate is issued through N.C. Division of Coastal Management (DCM) delegation for "ALLOWABLE" activities.

In accordance with North Carolina General Statute 143-215.3D(e), written approval for a 401 Water Quality General Certification must include the appropriate fee. If a project also requires a CAMA Permit, then one payment to both agencies shall be submitted and will be the higher of the two fees.

Activities included in this General Certification that do not meet one of the thresholds listed above do not require written approval from the Division as long as they comply with the Conditions of Certification listed below. If any of these Conditions cannot be met, then written approval from the Division is required.

Conditions of Certification:

1. No Impacts Beyond those Authorized in the Written Approval or Beyond the Threshold of Use of this Certification

No waste, spoil, solids, or fill of any kind shall occur in wetlands, waters, or riparian areas beyond the footprint of the impacts depicted in the Pre-Construction Notification, as

Water Quality Certification No. 3891

authorized in the written approval from the Division or beyond the thresholds established for use of this Certification without written authorization, including incidental impacts. All construction activities, including the design, installation, operation, and maintenance of sediment and erosion control Best Management Practices shall be performed so that no violations of state water quality standards, statutes, or rules occur. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of this permit.

2. Standard Erosion and Sediment Control Practices

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 and if applicable, comply with the specific conditions and requirements of the NPDES Construction Stormwater Permit issued to the site:

- a. 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.
- b. 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*.
- c. Reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.
- d. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.
- e. If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality (HQW), or Outstanding Resource (ORW) waters, then the sedimentation and erosion control designs must comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*.

3. No Sediment and Erosion Control Measures in Wetlands or Waters

Sediment and erosion control measures shall not be placed in wetlands or waters. Exceptions to this condition require application submittal to and written approval by the Division. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, then design and placement of temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands, stream beds, or banks, adjacent to or upstream and downstream of the above structures. All sediment and erosion control devices shall be removed and the natural grade restored within two (2) months of the date that the Division of Land Resources (DLR) or locally delegated program has released the specific area within the project.

4. Construction Stormwater Permit NCG010000

Water Quality Certification No. 3891

An NPDES Construction Stormwater Permit is required for construction projects that disturb one (1) or more acres of land. This Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If your project is covered by this permit, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. A copy of the general permit (NCG010000), inspection log sheets, and other information may be found at <http://portal.ncdenr.org/web/wq/ws/su/npdcssw#tab-w>.

The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their individual NPDES (NCS000250) stormwater permit.

5. Construction Moratoriums and Coordination

If activities must occur during periods of high biological activity (i.e. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities.

All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) to lessen impacts on trout, anadromous fish, larval/post-larval fishes and crustaceans, or other aquatic species of concern shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium.

Work within the twenty-five (25) designated trout counties or identified state or federal endangered or threatened species habitat shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

6. Work in the Dry

All work in or adjacent to stream waters shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the NC Sediment and Erosion Control Manual, or the NC DOT Construction and Maintenance Activities Manual, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. Exceptions to this condition require application submittal to and written approval by the Division.

7. Riparian Area Protection (Buffer) Rules

Activities located in the protected riparian areas (whether jurisdictional wetlands or not), within the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman, Jordan, or Goose Creek Watersheds (or any other basin or watershed with buffer rules) shall be limited to "uses" identified within and constructed in accordance with 15A NCAC 02B .0233, .0259, .0243, .0250, .0267 and .0605, and shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices. All buffer rule requirements, including diffuse flow requirements, must be met.

8. If concrete is used during the construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state due to the potential for elevated pH and possible aquatic life/ fish kills.

Water Quality Certification No. 3891

9. 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. Please refer to the most current version of *Stormwater Best Management Practices*. Exceptions to this condition require written approval by the Division.
10. Relocated stream designs should include the same dimensions, patterns, and profiles as the existing channel (or a stable reference reach if the existing channel is unstable), to the maximum extent practical. The new channel should be constructed in the dry and water shall not be turned into the new channel until the banks are stabilized. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30-foot wide wooded and an adjacent 20-foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. A transitional phase incorporating appropriate erosion control matting materials and seedling establishment is allowable, however matting that incorporates plastic mesh and/or plastic twine shall not be used in wetlands, riparian buffers or floodplains as recommended by the North Carolina Sediment and Erosion Control Manual. Rip-rap, A-Jacks, concrete, gabions or other hard structures may be allowed if it is necessary to maintain the physical integrity of the stream; however, the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage. Please note that if the stream relocation is conducted as a stream restoration as defined in the US Army Corps of Engineers Wilmington District, April 2003 *Stream Mitigation Guidelines* (or its subsequent updates), the restored length may be used as compensatory mitigation for the impacts resulting from the relocation.

11. Placement of Culverts and Other Structures in Waters and Wetlands

Culverts required for this project shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. Existing stream dimensions (including the cross section dimensions, pattern, and longitudinal profile) must be maintained above and below locations of each culvert.

Placement of culverts and other structures in waters and streams must be 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 or equal to 48 inches, to allow low flow passage of water and aquatic life.

When topographic constraints indicate culvert slopes of greater than 5%, culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/ connectivity has been provided when possible (rock ladders, crossvanes, etc). Notification to the Division including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations shall be provided to the Division 60 days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required provided that there is sufficient documentation of the presence of bedrock. Notification to the Division including supporting documentation such as, but not limited to, a location map of the culvert, geotechnical reports, photographs, etc shall be provided to the Division a minimum of 60 days prior to the installation of the culvert. If bedrock is discovered during construction, then the Division shall be notified by phone or email within 24 hours of discovery.

If other site-specific topographic constraints preclude the ability to bury the culverts as described above and/or it can be demonstrated that burying the culvert would result in destabilization of the channel, then exceptions to this condition require application submittal to, and written approval by, the Division of Water Quality, regardless of the total impacts to streams or wetlands from the project.

Water Quality Certification No. 3891

Installation of culverts in wetlands must ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. Additionally, when roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges must be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native, woody vegetation and other soft stream bank stabilization techniques must be used where practicable instead of riprap or other bank hardening methods.

12. Compensatory Mitigation

In accordance with 15A NCAC 02H .0506 (h), compensatory mitigation may be required for losses of equal to or greater than 150 linear feet of streams (intermittent and perennial) and/or equal to or greater than one (1) acre of wetlands. For linear public transportation projects, impacts equal to or exceeding 150 linear feet per stream shall require mitigation.

Buffer mitigation may be required for any project with Buffer Rules in effect at the time of application for activities classified as "Allowable with Mitigation" or "Prohibited" within the Table of Uses.

A determination of buffer, wetland, and stream mitigation requirements shall be made for any General Water Quality Certification for this Nationwide and/or Regional General Permit. Design and monitoring protocols shall follow the US Army Corps of Engineers Wilmington District *Stream Mitigation Guidelines* (April 2003) or its subsequent updates. Compensatory mitigation plans shall be submitted to the Division for written approval as required in those protocols. The mitigation plan must be implemented and/or constructed before any impacts occur on site. Alternatively, the Division will accept payment into an in-lieu fee program or a mitigation bank. In these cases, proof of payment shall be provided to the Division before any impacts occur on site.

13. If an environmental document is required under the National or State Environmental Policy Act (NEPA or SEPA), then this General Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse.
14. In the twenty (20) coastal counties, the appropriate DWQ Regional Office must be contacted to determine if Coastal Stormwater Regulations will be required.
15. This General Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals.
16. The applicant/permittee and their authorized agents shall conduct all 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 Division determines that such standards or laws are not being met, including 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, then the Division may reevaluate and modify this General Water Quality Certification.

Water Quality Certification No. 3891

17. When written authorization is required for use of this certification, upon completion of all permitted impacts included within the approval and any subsequent modifications, the applicant shall be required to return the certificate of completion attached to the approval. One copy of the certificate shall be sent to the DWQ Central Office in Raleigh at 1650 Mail Service Center, Raleigh, NC, 27699-1650.
18. Additional site-specific conditions, including monitoring and/or modeling requirements, may be added to the written approval letter for projects proposed under this Water Quality Certification in order to ensure compliance with all applicable water quality and effluent standards.
19. This certification grants permission to the director, an authorized representative of the Director, or DENR staff, upon the presentation of proper credentials, to enter the property during normal business hours.

This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide and/or Regional General Permit. The conditions in effect on the date of issuance of Certification for a specific project shall remain in effect for the life of the project, regardless of the expiration date of this Certification.

Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.

The Director of the North Carolina Division of Water Quality may require submission of a formal application for Individual Certification for any project in this category of activity if it is determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or degrade the waters so that existing uses of the wetland or downstream waters are precluded.

Public hearings may be held for specific applications or group of applications prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Quality.

Effective date: March 19, 2012

DIVISION OF WATER QUALITY

By



Charles Wakild, P.E.

Director

History Note: Water Quality Certification (WQC) Number 3891 issued March 19, 2012 replaces WQC 3701 issued November 1, 2007; WQC Number 3632 issued March 2007; WQC Number 3403 issued March 2003; WQC Number 3361 issued March 18, 2002; WQC Number 3107 issued February 11, 1997; WQC Number 2734 issued May 1 1993; and WQC Number 2670 issued on January 21, 1992. This General Certification is rescinded when the Corps of Engineers reauthorizes any of the corresponding Nationwide and/or Regional General Permits or when deemed appropriate by the Director of the Division of Water Quality.

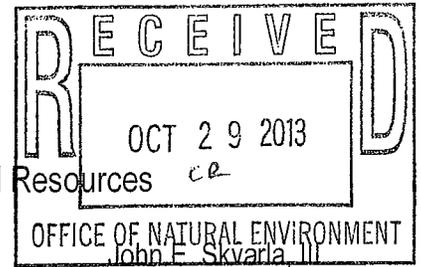


North Carolina Department of Environment and Natural Resources

Division of Water Resources

Thomas A. Reeder

Director



Pat McCrory
Governor

OFFICE OF NATURAL ENVIRONMENT
John F. Skvarla, III

Secretary

October 22, 2013

Mr. Bob Holman
NCDOT
1598 MSC
Raleigh, NC 27699-1598

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7011 1570 0000 6989 3717

Subject: CCPCUA Permit No. CU4031
NCDOT - K-3800
Beaufort County

Dear Mr. Holman:

In accordance with your application dated September 9, 2013 and associated documentation, we are forwarding Permit No. CU4031 for water use in the Central Coastal Plain Capacity Use Area in Beaufort County. This permit allow for the withdrawal of water for the purpose of mine dewatering.

Enclosed with this package are forms DWR CCPCUA-4 and DWR CCPCUA-6. Form DWR CCPCUA-4 is for reporting water withdrawals, in accordance with Sections I. C. and IV. A. of your permit. Form DWR CCPCUA-6 is for reporting ground water levels, in accordance with Sections II. B. and IV. B. of your permit.

If you are not already doing so, DWR requests you submit your monthly water withdrawal and water level information using our online system. By doing so you will not need to mail the Division a signed hard copy. The CCPCUA online permit renewal application, water withdrawal and levels reporting forms are at:

<http://www.ncwater.org/CCPCUAreportonline>

If you do not have internet access then please make as many copies as necessary and send forms on a monthly basis to the address on the top of the forms.

This permit is effective from the date of issuance until October 31, 2018, and is subject to the conditions and/or limitations contained therein. In order for this permit to continue uninterrupted, please apply for permit renewal at least three (3) months before the expiration date.

Sincerely,


Nathaniel C. Wilson, Chief
Ground Water Management Branch

**North Carolina
Environmental Management Commission
Department of Environment and Natural Resources**

**Permit For The Withdrawal And Use Of Water
In The Central Coastal Plain Capacity Use Area**

In accordance with the provisions of Part 2, Article 21 of Chapter 143, General Statutes of North Carolina as amended, and any other applicable Laws, Rules and Regulations,

Permission Is Hereby Granted To

NC Department of Transportation

Project No. K-3800
US 17 Rest Area

FOR THE

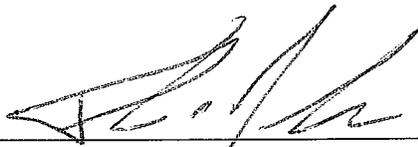
Withdrawal and Use of Water in Beaufort County, North Carolina in accordance with the grantee's application dated September 9, 2013, and any supporting data submitted with the application, all of which are filed with the Department of Environment and Natural Resources and are considered part of this Permit.

This Permit shall be effective from the date of its issuance until October 31, 2018, and shall be subject to the specified conditions and/or limitations contained in Sections I - X of this Permit.

Permit issued this the 22nd day of October, 2013.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

BY _____



**Thomas A. Reeder
Director, Division of Water Resources**

By Authority of the Secretary of the Department of Environment and Natural Resources

PERMIT #CU4031

I. WITHDRAWALS

A. USE

This Permit allows the withdrawal of water for the purpose of dewatering borrow pits to extract material for road construction.

B. RATES OF WITHDRAWALS

The maximum quantity of water that may be withdrawn shall not exceed what is established in the Reclamation Plan as specified in NCDOT's CCPCUA Special Provisions document.

C. SOURCE(S) OF WITHDRAWALS

Ground Water Source(s): Withdrawals shall be made from sumps in borrow pits in the surficial aquifer.

D. MONITORING OF WITHDRAWALS

Withdrawals from each source, whether well or sump, shall be measured by an approved metering device equipped with a totalizing indicator, and having an accuracy within plus or minus five percent.

II. WATER LEVELS

A. MAXIMUM DRAWDOWN LEVELS

1. Pump intakes for the well(s) shall not be set below the depth specified in the permit application or associated documentation without prior approval of the Division of Water Resources.
2. In the event that data from the permitted wells or other wells within the zone influenced by pumping of the permitted wells indicates a deterioration of quality or quantity in surrounding aquifers or the source aquifer, an alternate maximum pumping level may be established by the Division of Water Resources.

B. MONITORING OF WATER LEVELS

1. The pumping water level in each supply well shall be measured once a month:
 - a. by a steel or electric tape from a fixed reference point, or by using the air-line method
 - b. within accuracy limits of plus or minus one percent,
 - c. just prior to shutting off the pump, or after sufficient time of pumping, so that a maximum drawdown may be obtained, and
 - d. during the last planned pumping day of the month, or within the last five days of the month.

2. The static water level in each supply well shall be measured once a month:
 - a. by a steel or electric tape from a fixed reference point, or by using the air-line method
 - b. within accuracy limits of plus or minus one percent,
 - c. after the pump is shut off for approximately 12 hours, and
 - d. within the last five days of the month.
3. Unused supply wells or other suitable wells that may be available shall be monitored when such monitoring is specified by the Division of Water Resources and when pertinent to observation or evaluation of the effects of withdrawals made under this permit.

III. OTHER PROVISIONS

A. WELL CONSTRUCTION APPROVAL

A Well Construction Permit shall be required prior to the construction of any well that will be used to withdraw any portion of the water regulated under this Permit. Application for these permits must be submitted to the Washington Regional Office, Division of Water Quality, P.O. Box 2188, Washington, NC 27889.

B. ACCESS TO FACILITIES

The Environmental Management Commission and employees of the Department of Environment and Natural Resources shall have reasonable access to areas owned and under control of the permittee for observation and inspection of water use and related facilities pertinent to the provisions of this permit and other regulations.

IV. REPORTS REQUIRED

A. WITHDRAWALS

Monthly reports of daily withdrawal totals from each well or sump shall be furnished to the Division on a quarterly basis, within 30 days after the end of March, June, September and December.

B. WATER LEVELS

Water level measurements for each supply well shall be measured in accordance with Condition II. B. 1. of this permit and submitted to the Division not later than 30 days after the end of the calendar month in which the measurement was taken.

V. MODIFICATION OR REVOCATION

A. MODIFICATION

1. The Permittee must notify the Director of any proposed major changes in usage and apply for a modification of the permit for such changes or for any revisions of the terms of this permit.
2. The Director may modify the terms of the permit, after 60 days written notice to the permittee, if he finds that the terms of the permit and/or the resulting water use are found to be contrary to the purposes of the Water Use Act of 1967 or contrary to public interest or having an unreasonably adverse effect upon other water uses in the capacity use area. Modifications may include, but are not limited to, requirements for alternate pumping levels or the collection, analysis, and reporting of ground or surface water quality samples.

B. REVOCATION

The Director may revoke the permit if he finds that:

1. the Permittee has violated the terms of the permit; or
2. the terms of the Permit and/or the resulting water use are contrary to the purpose of the Water Use Act of 1967 or contrary to the public interest or having an unreasonably adverse effect upon other water uses in the capacity use area and cannot be cured by modification; or
3. the Permittee made false or fraudulent statements in the application for the water use permit; or
4. water withdrawn under the terms of the permit is used for purposes other than those set forth in the permit.

VI. CONSTRUCTION OF PERMIT

- A. The terms and conditions shall not be construed to relieve the Permittee of any legal obligation or liability, which it owes or may incur to third parties as the result of the conduct of its operations in conformity with this Permit.
- B. When under the terms hereof, any provision of this Permit requires approval of the Department or becomes effective at the discretion of the Department, the notice of approval or the exercise of such discretion shall be evidenced by written instrument issued by the Department.
- C. The terms and conditions of this Permit shall not be construed as a limitation of the powers, duties, and authority vested in the Environmental Management Commission or any other State, Federal, or local agency, or any applicable laws hereafter enacted.

VII. ADDITIONAL CONDITIONS

- A. This Permit shall be subject to any limitations or conditions in other State permits, including but not limited to permits required pursuant to North Carolina General Statutes §143-215.1.
- B. Issuance of this Permit shall have no bearing on subsequent State decision(s) regarding any other water use or other permit application(s) submitted or which may be submitted by the Permittee, its successors or assigns.
- C. Compliance with the terms and conditions in this permit does not relieve the permittee of compliance with any provision, now in force or hereafter enacted or promulgated, of the Water Use Act of 1967, the regulations promulgated thereunder, or any other provision of State law.

VIII. PENALTIES

Violations of the terms and conditions of this Permit are subject to penalties as set forth in North Carolina General Statutes §143-215.17.

IX. PERMIT NONTRANSFERABLE

Water Use Permits shall not be transferred except with approval of the Environmental Management Commission.

X. RENEWAL OF PERMIT

The Permittee, at least three (3) months prior to the expiration of this permit, shall request its extension. Upon receipt of the request, the Commission will review the adequacy of the facilities described therein, and if warranted, will extend the permit for such period of time and under such conditions and limitations as it may deem appropriate.

**Report of
Water Withdrawals
from Each Source**

North Carolina Department of Environment and Natural Resources

Mail To: Division of Water Resources - NC DENR
1611 Mail Service Center
Raleigh, North Carolina 27699-1611
Attention : Capacity Use Administration

Check Box If No Use This Month

For month of: _____ Year: _____ Facility: **NCDOT (K-3800)** Permit #: **CU4031** Sheet ___ of ___

Well/Sump ID	meter readings	gallons per day	meter readings	gallons per day	meter readings	gallons per day	Total Withdrawn
	Previous Month's Last Day reading						
Day 1							
Day 2							
Day 3							
Day 4							
Day 5							
Day 6							
Day 7							
Day 8							
Day 9							
Day 10							
Day 11							
Day 12							
Day 13							
Day 14							
Day 15							
Day 16							
Day 17							
Day 18							
Day 19							
Day 20							
Day 21							
Day 22							
Day 23							
Day 24							
Day 25							
Day 26							
Day 27							
Day 28							
Day 29							
Day 30							
Day 31							

**Report of Weekly or Monthly
Water Levels
Pumping (P) and (S)**

North Carolina Department Of Environmental and Natural Resources

Mail to: Division of Water Resources- NC DENR
1611 Mail Service Center
Raleigh, NC 27699-1611
Attention: Capacity Use Administration

Name: _____
Signature: _____
Date: _____

Month _____ Year _____ Facility Name: **NCDOT (K-3800)** Permit #: **CU4031** Sheet # _____ of _____

Well ID _____ Land Surface Elev. (ft) _____				Well ID _____ Land Surface Elev. (ft) _____				Well ID _____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

Well ID _____ Land Surface Elev. (ft) _____				Well ID _____ Land Surface Elev. (ft) _____				Well ID _____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

Well ID _____ Land Surface Elev. (ft) _____				Well ID _____ Land Surface Elev. (ft) _____				Well ID _____ Land Surface Elev. (ft) _____			
Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S	Date	Time	Feet Below Land Surface	P or S

US 17 Rest Area Onsite Stream and Buffer Mitigation Plan
Beaufort County
K-3800
WBS 38748.1.1

The proposed roadway project, K-3800, is to construct a new rest area along US 17 in Beaufort County. The project is located on the east side of US 17 at the intersection with Harding Road, south of Chocowinity. NCDOT proposes to provide onsite mitigation by restoring an estimated 815 feet of intermittent stream, preserving 623 feet of stream, and restoring 81,457.2 sq. feet of buffer on site. Mitigation is required for 269 feet of intermittent stream impact (1:1 ratio) and 961 sq. feet of Zone 2 buffer impact (1.5:1 ratio). This will leave approximately 546 feet of intermittent stream restoration, 623 feet of stream preservation, and 80,015.7 sq. feet of buffer mitigation assets available subject to agency approval.

Existing Conditions

The project site is approximately 20 acres and consists mainly of agricultural fields. The intermittent channel enters the southern end of the site through a culvert under Harding Road, flowing generally northward through the agricultural field for 1000 feet. The channel flows for 600 feet in a small wooded area before exiting the northern end of the site. A ditch carrying flow from US 17 enters the site from the west and flows directly into the channel 650 feet downstream of Harding Road.

The channel was determined to be jurisdictional approximately 50 feet downstream of the culvert under Harding Road. The channel is 1 – 2 feet wide at the base and highly incised. The channel has been straightened, dredged, and regularly mowed in the past for agricultural purposes.

The primary degrading factors of the channel are direct runoff from the agricultural field, mowing of the buffer, and dredging of the channel. Even though the channel is incised, the banks are not experiencing major erosion, most likely due to the heavy herbaceous growth, lack of flow in the channel and lack of direct impacts to the bank.

Proposed Conditions

NCDOT proposes to restore the intermittent channel to more natural conditions by removing the degrading factors on the site.

The proposed design removes the agricultural inputs into the channel and redirects flow away from the channel through a fore bay and stormwater retention system. The flow will exit the stormwater system over a berm and sheetflow through a vegetated buffer before entering the channel. The ditch carrying flow from US 17 will also be redirected into a 250 feet grassed swale before entering the channel.

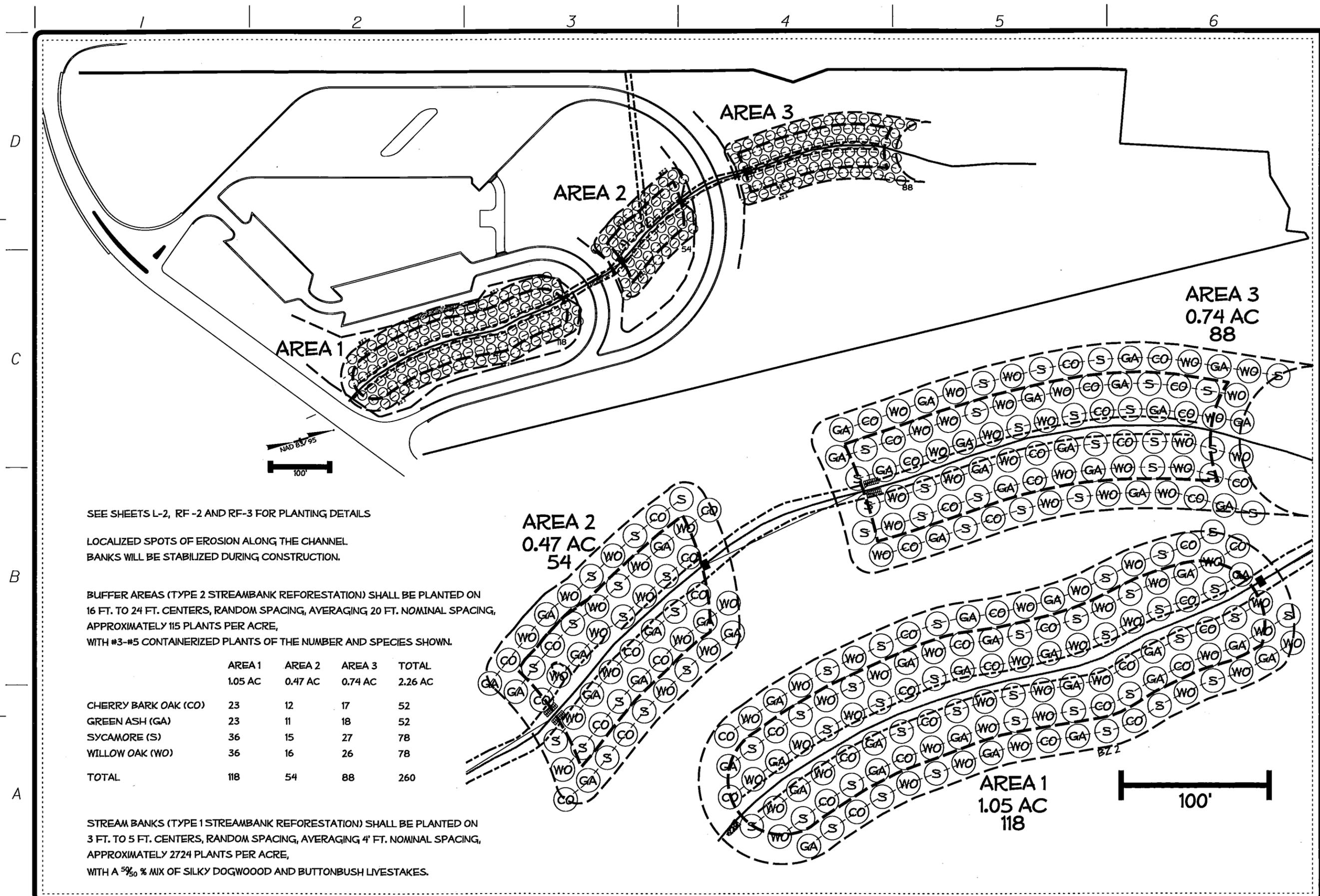
Localized spots of erosion along the channel banks will be stabilized during construction. The banks will be planted on 4 foot centers with a mix of silky dogwood and buttonbush livestakes. The buffer areas on both sides of the channel will be planted on 20 foot centers with 3 to 5 gallon containerized trees from a mix of cherrybark oak, sycamore, green ash, and willow oak.

Monitoring and Success Criteria

NCDOT shall monitor the site by visual observation and photo points for survival and aerial cover of vegetation. NCDOT shall monitor the site for a minimum of three years or until the site is deemed successful. Monitoring will be initiated upon completion of the site planting.

Long term Management

The site will be removed from agricultural use and protected in perpetuity in its restored state. The site will be held by NCDOT and placed on the NES mitigation geodatabase. Once monitoring is completed and the site is closed out, it will be managed according to NCDOT's Stewardship process for long term maintenance and protection.



SEE SHEETS L-2, RF -2 AND RF-3 FOR PLANTING DETAILS

LOCALIZED SPOTS OF EROSION ALONG THE CHANNEL BANKS WILL BE STABILIZED DURING CONSTRUCTION.

BUFFER AREAS (TYPE 2 STREAMBANK REFORESTATION) SHALL BE PLANTED ON 16 FT. TO 24 FT. CENTERS, RANDOM SPACING, AVERAGING 20 FT. NOMINAL SPACING, APPROXIMATELY 115 PLANTS PER ACRE, WITH #3-#5 CONTAINERIZED PLANTS OF THE NUMBER AND SPECIES SHOWN.

	AREA 1	AREA 2	AREA 3	TOTAL
	1.05 AC	0.47 AC	0.74 AC	2.26 AC
CHERRY BARK OAK (CO)	23	12	17	52
GREEN ASH (GA)	23	11	18	52
SYCAMORE (S)	36	15	27	78
WILLOW OAK (WO)	36	16	26	78
TOTAL	118	54	88	260

STREAM BANKS (TYPE 1 STREAMBANK REFORESTATION) SHALL BE PLANTED ON 3 FT. TO 5 FT. CENTERS, RANDOM SPACING, AVERAGING 4' FT. NOMINAL SPACING, APPROXIMATELY 2724 PLANTS PER ACRE, WITH A 50% MIX OF SILKY DOGWOOD AND BUTTONBUSH LIVESTAKES.

STATE W.B.S. # 38748JJ
 T.I.P. # K-3800
 FED. PROJ. # 85-02-000000



LANDSCAPE DESIGN & DEVELOPMENT SECTION
 NCDOT ROADSIDE ENVIRONMENTAL UNIT
 1557 MAIL SERVICE CENTER
 RALEIGH NC 27699 919-707-2920

PLAN : **Stream Buffer Reforestation**
 PROJECT DESCRIPTION : US 17, Beaufort County, Rest Area

DESIGNED BY: *dlw*
 DRAWN BY: *dlw*
 DATE: 05/28/13
 SCALE: as shown

SHEET #	OF
-	-

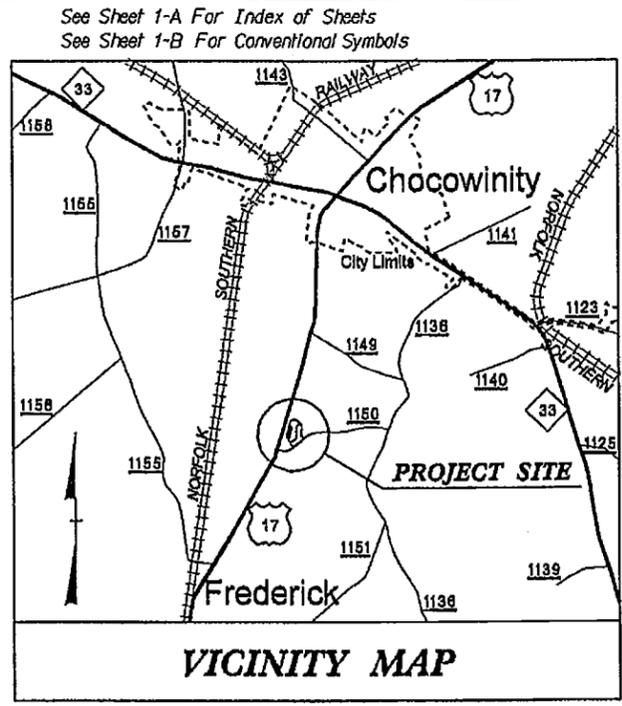
09/08/14

TIP PROJECT: K-3800

4/22/13
Incidents
E:\hydro\med\PERMITS_Environmental\Drawings\wetland&stream_pkg\k3800_hyd_wet_bld.dgn

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$SDGN\$\$\$\$\$
\$\$\$\$\$SERNAME\$\$\$\$\$

CONTRACT:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
BEAUFORT COUNTY

LOCATION: US 17 REST AREA

TYPE OF WORK: GRADING, PAVING, DRAINAGE, LIGHTING, REST AREA AND FACILITIES

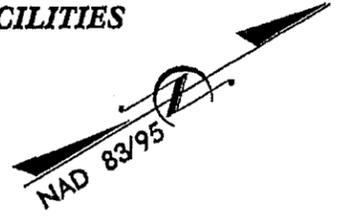
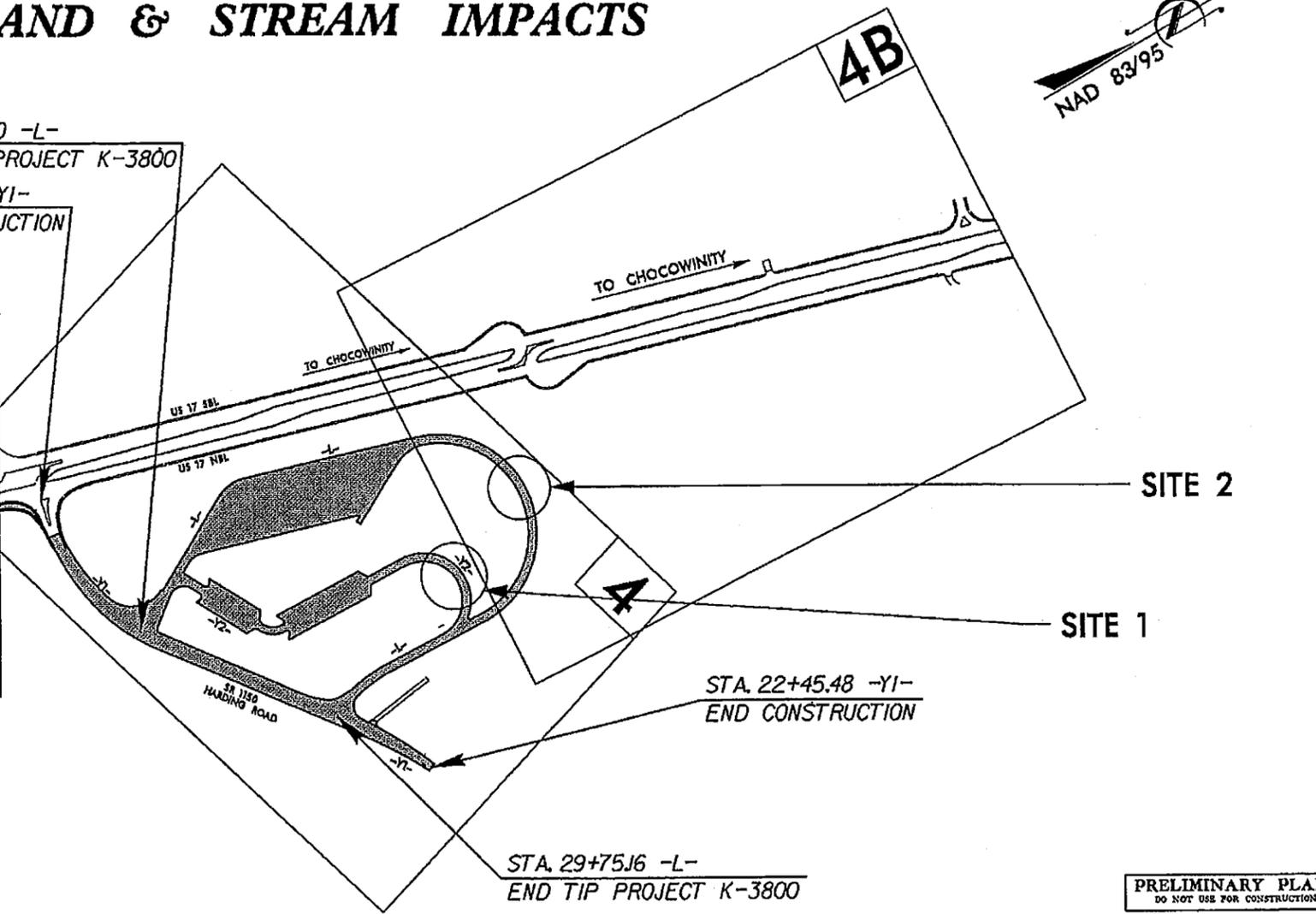
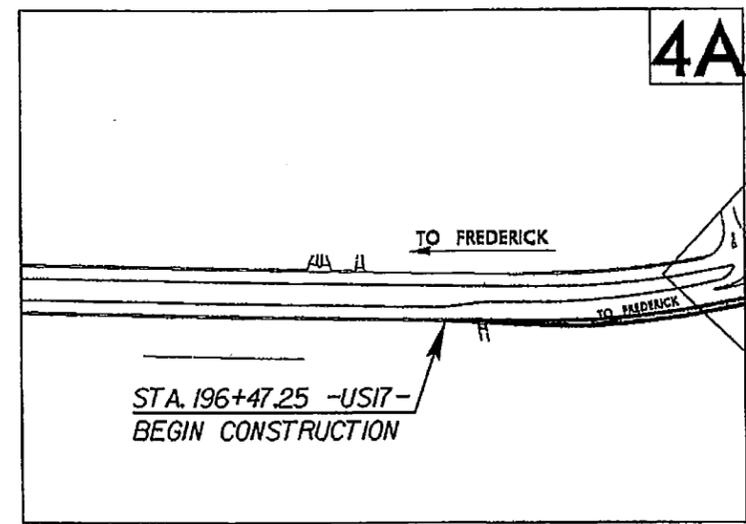
WETLAND & STREAM IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	K-3800	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38748.1.1	NHS-17(32)	PE	
38748.2.1	NHS-17(32)	ROW, UTIL	
Permit Drawing			
Sheet 1 of 10			

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING SHEET 1 OF 10

STA. 10+00.00 -L-
BEGIN TIP PROJECT K-3800
STA. 10+47.13 -Y1-
BEGIN CONSTRUCTION

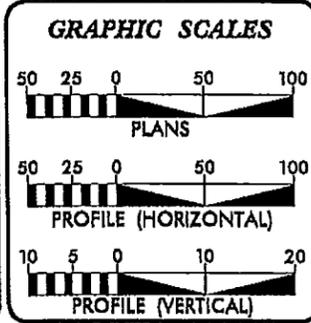


THIS IS A PARTIAL CONTROL OF ACCESS PROJECT WITH ACCESS BEING LIMITED TO THE POINTS AS SHOWN ON THE PLANS.

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2011 =	864
ADT 2031 =	1,352
DHV =	N/A %
D =	N/A %
T =	12 %
V =	20 MPH

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT K-3800 =	0.374 MILES
TOTAL LENGTH TIP PROJECT K-3800 =	0.374 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 20, 2009

LETTING DATE:
JANUARY 21, 2014

G. E. BREW, PE
PROJECT ENGINEER

THAD F. DUNCAN, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

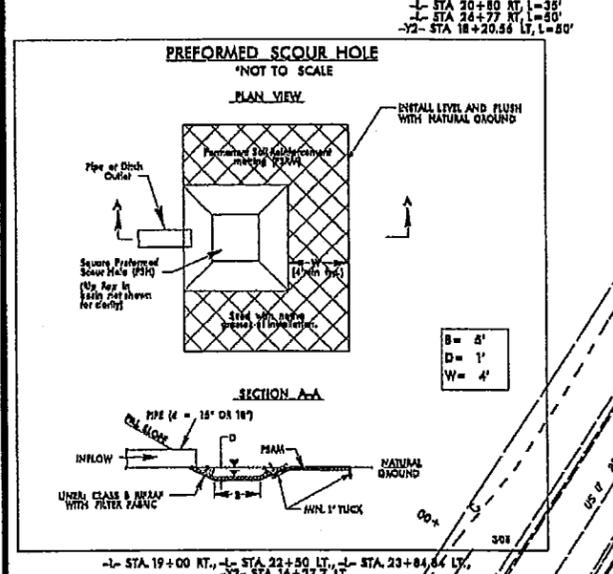
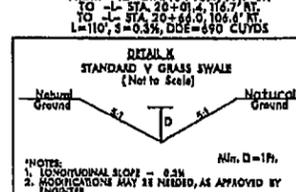
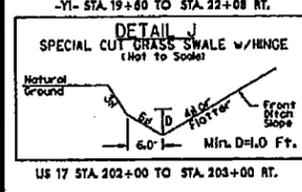
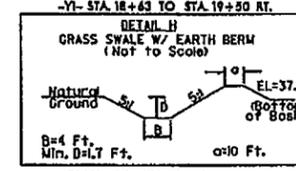
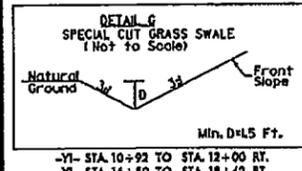
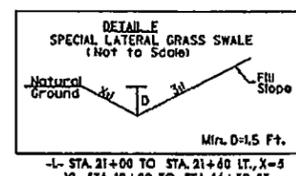
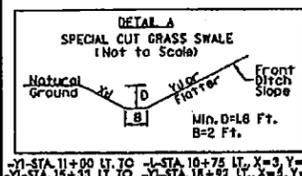
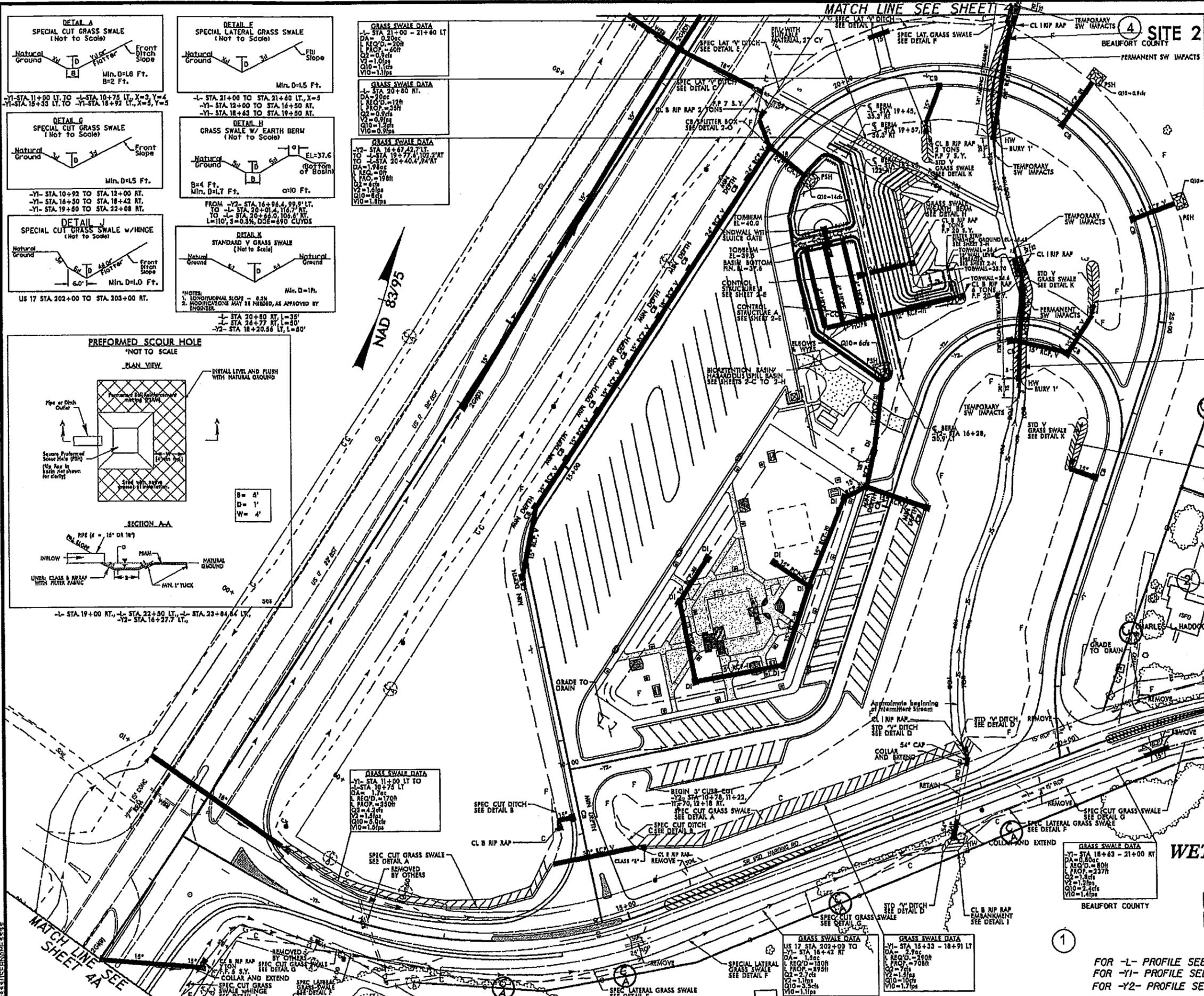
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

8/17/95



GRASS SWALE DATA
-L- STA. 21+00 - 21+40 LT
DA = 0.20pc
L REQ'D = 30H
I. PROP. = 60H
C2 = 0.94ft
V2 = 1.01ps
V1 = 1.12ps
V10 = 1.12ps

GRASS SWALE DATA
-L- STA. 20+80 RT.
DA = 0.20pc
L REQ'D = 30H
I. PROP. = 60H
C2 = 0.94ft
V2 = 1.01ps
V1 = 1.12ps
V10 = 0.97ps

GRASS SWALE DATA
-Y2- STA. 16+57.42, 71.7' LT.
TO -L- STA. 19+77.4, 102.2' RT.
TO -L- STA. 20+40.4, 94' RT.
DA = 1.98pc
L REQ'D = 30H
I. PROP. = 60H
C2 = 0.94ft
V2 = 1.01ps
V1 = 1.12ps
V10 = 1.12ps

GRASS SWALE DATA
-Y1- STA. 11+00 LT TO -Y1- STA. 18+92 LT
DA = 1.76pc
L REQ'D = 170H
I. PROP. = 350H
C2 = 1.81ft
V2 = 1.12ps
V1 = 1.12ps
V10 = 0.94ft

GRASS SWALE DATA
-Y1- STA. 21+00 - 22+08 RT
DA = 0.80pc
L REQ'D = 90H
I. PROP. = 100H
C2 = 1.81ft
V2 = 1.12ps
V1 = 1.12ps
V10 = 1.12ps

GRASS SWALE DATA
-Y1- STA. 15+33 - 18+91 LT
DA = 2.99pc
L REQ'D = 200H
I. PROP. = 700H
C2 = 2.74ft
V2 = 1.12ps
V1 = 1.12ps
V10 = 1.12ps

PROJECT REFERENCE NO. **K-3800** SHEET NO. **4**

R/W SHEET NO. **4**

ROADWAY DESIGN ENGINEER **CHARLES L. HADDOCK, ET UX** HYDRAULICS ENGINEER

Permit Drawing
Sheet 2 of 10
PROLIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING SHEET 2 OF 10

GRASS SWALE DATA
-Y2- STA. 18+21 LT.
DA = 0.46pc
L REQ'D = 38H
I. PROP. = 50H
C2 = 1.12ps
V2 = 0.81ps
V1 = 0.92ps
V10 = 0.79ps

GRASS SWALE DATA
-L- STA. 24+77 RT.
DA = 0.21pc
L REQ'D = 21H
I. PROP. = 30H
C2 = 0.74ft
V2 = 0.81ps
V1 = 0.92ps
V10 = 0.79ps

GRASS SWALE DATA
-L- STA. 24+77 RT.
DA = 0.21pc
L REQ'D = 21H
I. PROP. = 30H
C2 = 0.74ft
V2 = 0.81ps
V1 = 0.92ps
V10 = 0.79ps

GRASS SWALE DATA
-Y1- STA. 21+00 - 22+08 RT
DA = 0.80pc
L REQ'D = 90H
I. PROP. = 100H
C2 = 1.81ft
V2 = 1.12ps
V1 = 1.12ps
V10 = 1.12ps

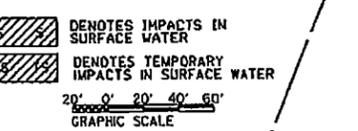
GRASS SWALE DATA
-Y1- STA. 18+63 - 21+00 RT
DA = 0.80pc
L REQ'D = 90H
I. PROP. = 100H
C2 = 1.81ft
V2 = 1.12ps
V1 = 1.12ps
V10 = 1.12ps

GRASS SWALE DATA
-Y1- STA. 21+00 - 22+08 RT
DA = 0.80pc
L REQ'D = 90H
I. PROP. = 100H
C2 = 1.81ft
V2 = 1.12ps
V1 = 1.12ps
V10 = 1.12ps

GRASS SWALE DATA
-Y1- STA. 21+00 - 22+08 RT
DA = 0.80pc
L REQ'D = 90H
I. PROP. = 100H
C2 = 1.81ft
V2 = 1.12ps
V1 = 1.12ps
V10 = 1.12ps

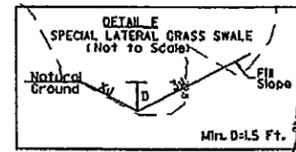
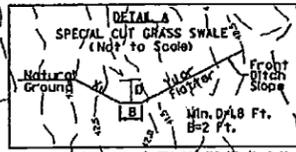
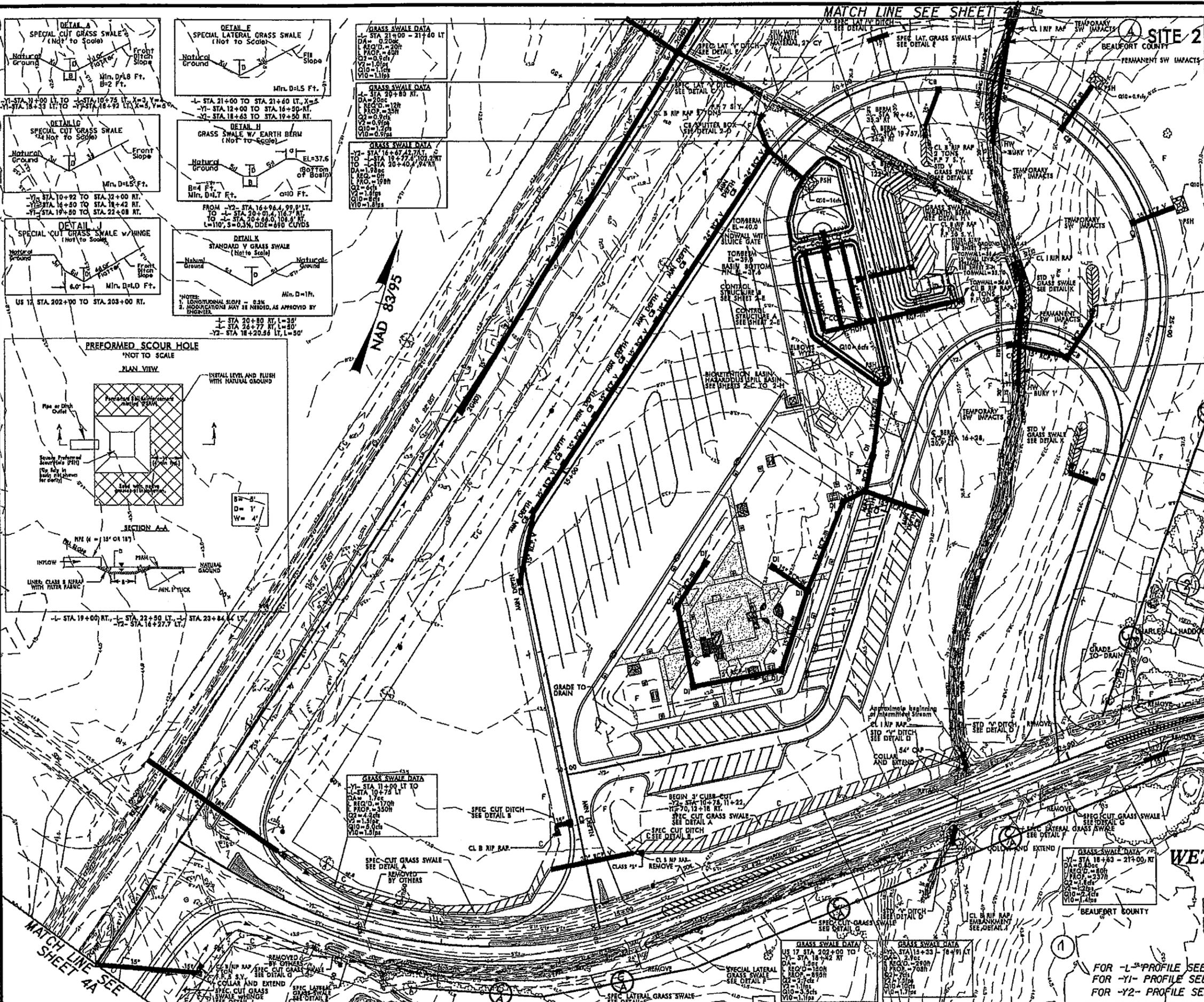
GRASS SWALE DATA
-Y1- STA. 21+00 - 22+08 RT
DA = 0.80pc
L REQ'D = 90H
I. PROP. = 100H
C2 = 1.81ft
V2 = 1.12ps
V1 = 1.12ps
V10 = 1.12ps

WETLAND & STREAM IMPACTS



FOR -L- PROFILE SEE SHEET 5
FOR -Y1- PROFILE SEE SHEET 6
FOR -Y2- PROFILE SEE SHEET 6

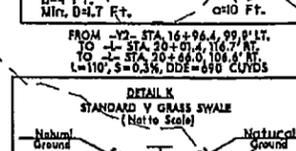
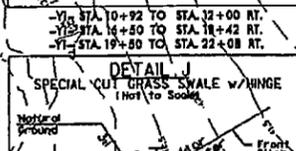
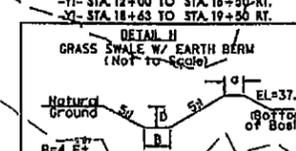
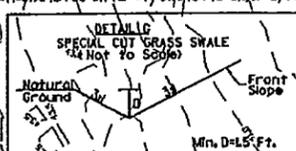
8/17/93
MATCH LINE SEE SHEET 4A
MATCH LINE SEE SHEET 4A



GRASS SWALE DATA
-L- STA 21+00 TO 21+40 LT
DA = 0.20%
V1 = 1.1%
V2 = 0.9%
V3 = 0.9%
V4 = 0.9%
V5 = 0.9%

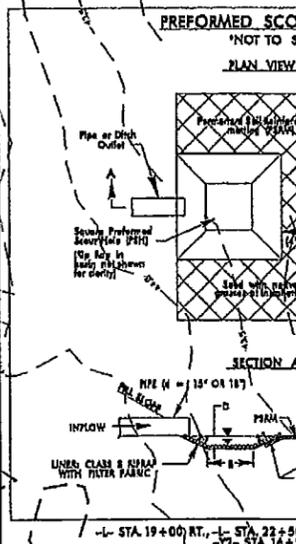
GRASS SWALE DATA
-L- STA 20+80 RT
DA = 0.20%
V1 = 1.1%
V2 = 0.9%
V3 = 0.9%
V4 = 0.9%
V5 = 0.9%

GRASS SWALE DATA
-Y1- STA 16+00 TO 21+40 RT, X=2
-Y1- STA 12+00 TO 21+50 RT
-Y1- STA 18+45 TO 21+50 RT
DA = 0.20%
V1 = 1.1%
V2 = 0.9%
V3 = 0.9%
V4 = 0.9%
V5 = 0.9%



US 17 STA 202+00 TO 203+00 RT.

FROM -Y2- STA 16+96.4 TO 17+11.0
TO -L- STA 20+01.4 TO 20+16.7 RT
L=110', S=0.3%, DDE=810 CUBYDS
-Y2- STA 18+20.36 LT, L=50'



GRASS SWALE DATA
-Y1- STA 11+00 LT TO
-Y1- STA 10+75 LT
DA = 0.20%
V1 = 1.1%
V2 = 0.9%
V3 = 0.9%
V4 = 0.9%
V5 = 0.9%

GRASS SWALE DATA
-Y1- STA 18+50 - 21+00 RT
DA = 0.20%
V1 = 1.1%
V2 = 0.9%
V3 = 0.9%
V4 = 0.9%
V5 = 0.9%

WETLAND & STREAM IMPACTS

BEAUFORT COUNTY

FOR -L- PROFILE SEE SHEET 5
FOR -Y1- PROFILE SEE SHEET 6
FOR -Y2- PROFILE SEE SHEET 5

PROJECT REFERENCE NO. K-3800 SHEET NO. 4
ANY SHEET NO. 4
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
Permit Drawing
Sheet 3 of 10
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

WETLAND AND SURFACE WATER IMPACTS PERMIT DRAWING SHEET 3 OF 10

GRASS SWALE DATA
-L- STA 18+77 RT
DA = 0.20%
V1 = 1.1%
V2 = 0.9%
V3 = 0.9%
V4 = 0.9%
V5 = 0.9%

GRASS SWALE DATA
-L- STA 24+77 RT
DA = 0.20%
V1 = 1.1%
V2 = 0.9%
V3 = 0.9%
V4 = 0.9%
V5 = 0.9%

5/26/99

4/9/2013
 R:\Hydraulics\PERMITS_Environmental\Drawings\3800_FSR_Bioret_Schematic_Outlet_Control_Sht_2C.dwg
 *****SYSTEMTIME*****

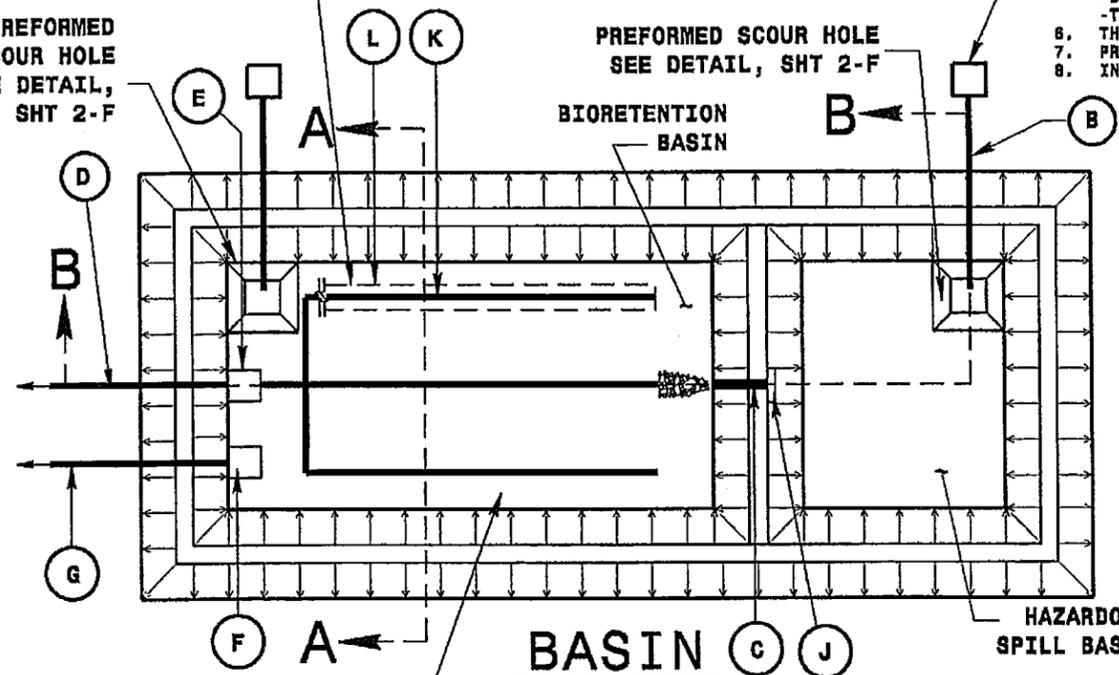
MATERIALS	
(A)	GEOTEXTILE FOR SUBSURFACE DRAINS, TYPE 1
(B)	24" RCP INLET PIPE
(C)	18" RCP EQUALIZER PIPE
(D)	12" RCP OUTFALL PIPE TO LEVEL SPREADER (SHT 2-H)
(E)	OUTLET CONTROL STRUCTURE A W/ SLUICE GATE (SHT 2-E)
(F)	OUTLET CONTROL BYPASS STRUCTURE B W/ SLUICE GATE (SHT 2-E)
(G)	24" RCP BYPASS OUTLET PIPE TO GRASS SWALE (SHT 2-F, DETAIL H)
(H)	TOP SOIL AND 1/2 CUT BERMUDA SOD
(I)	CLASS B RIP RAP
(J)	END WALL WITH 18" SLUICE GATE (STD 83B.02)
(K)	4" UNDERDRAIN PERFORATED PIPE 3 @ 80', 20' SPACING WRAPPED IN FILTER FABRIC
(L)	CLEAN WASHED #57 STONE ENVELOPE (SHT 2-G, DETAIL A)
(M)	30MIL IMPERVIOUS MEMBRANE LINER (SHT 2-G DETAIL A)
(N)	CLEAN SAND (SHT 2-G DETAIL A)

FILTER AREA 3.5' X 80' (TYP)
SEE DETAIL, SHT 2-G

PREFORMED SCOUR HOLE
SEE DETAIL, SHT 2-F

CB SPLITTER BOX
SEE DETAIL, SHT 2-D

PREFORMED SCOUR HOLE
SEE DETAIL, SHT 2-F



- NOTES:**
- SEE PLAN SHEET #4 FOR SHAPE AND SIZE OF BASIN.
 - BOTTOM OF BIORETENTION BASIN SURFACE AREA AT EL 37.6 = 6,858 SF.
 - SEE SHT 4 FOR HSB GRADING PLAN
 - ALL FILL MATERIAL SHALL BE COMPACTED AND TESTED IN ACCORDANCE WITH NCDOT STD SPEC 235.
 - INSTALL SOD ON BERM AND BASIN BOTTOM AND ANY EXPOSED SURFACE THAT NEEDS TO BE PROTECTED AGAINST IMMEDIATE POTENTIAL STORM EVENT.
 - THE SURVEYOR SHALL CREATE A DTM FILE SUITABLE TO VERIFY BASIN CAPACITY TO THE ENGINEER, INCLUDING VERIFICATION OF INVERTS AND ELEVATIONS AT THE FOLLOWING POINTS:
 -CB SPLITTER BOX WEIR ELEVATION.
 -TOP OF DRAINAGE STRUCTURE AND PIPE INVERT ELEVATIONS.
 -BOTTOM OF BASIN AREA, LOCATION AND ELEVATIONS.
 -TOP OF BERM WIDTH, LOCATION AND ELEVATIONS.
 - THE BERM SHALL BE CONSTRUCTED WITH SUITABLE FILL MATERIAL PER THE ENGINEER.
 - PREFORMED SCOUR HOLE AND SPLITTER BOX REQUIRES REGULAR MAINTENANCE TO REMAIN EFFECTIVE.
 - INSTALL UNDERDRAIN CLEANOUTS, WYES, AND ELBOWS PER LOCATIONS ON SHT 4

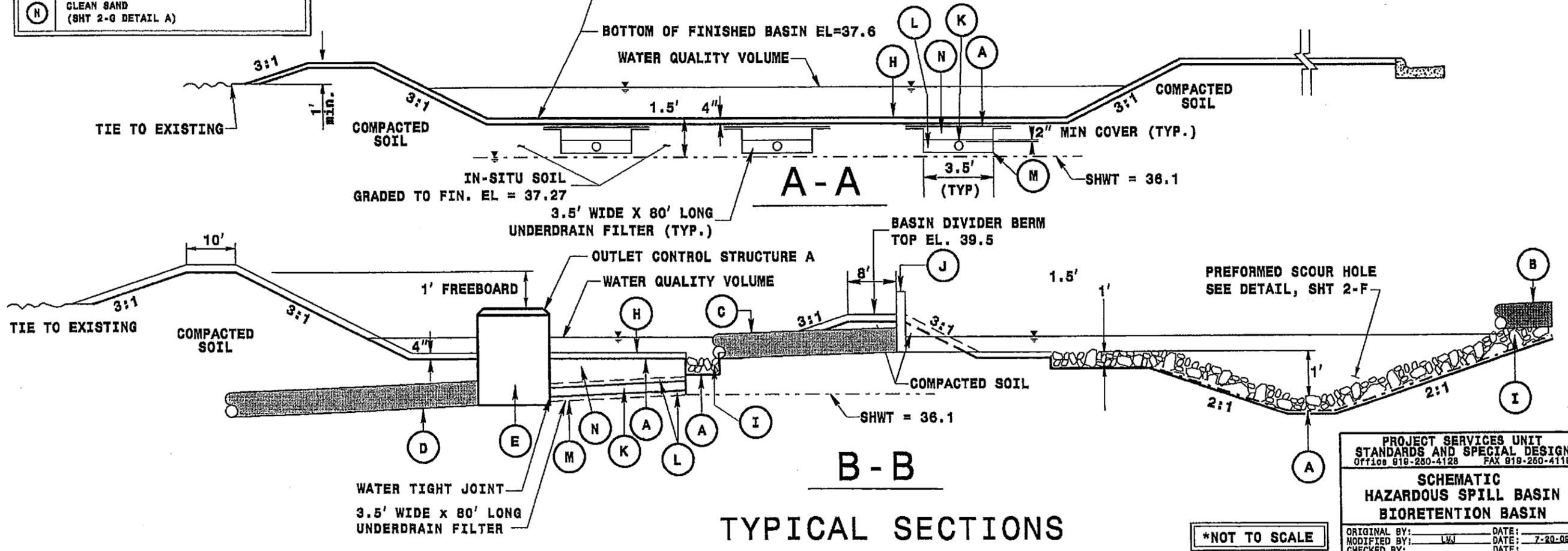
Permit Drawing
Sheet 4 of 10

CONSTRUCTION SEQUENCE:

- RELOCATE UTILITY LINES.
- PUT IN ALL EROSION CONTROL MEASURES (AS NEEDED THROUGH CONSTRUCTION STAGES).
- CONSTRUCT AND INSTALL BOXES, CREATE OPENINGS IN BOXES AND INSTALL PIPES.
- EXCAVATE FOR THE BASIN AND PREPARE THE BASIN FLOOR AT THE GIVEN ELEVATION TO ALLOW FOR 4" SOIL AND BERMUDA SOD.
- EXCAVATE AND CONSTRUCT PREFORMED SCOUR HOLE.
- CONSTRUCT BERM AROUND BASIN.
- INSTALL PREFORMED SCOUR HOLE RIP RAP.
- LAY SOD.
- ADD GRATES ON ALL BOXES.
- TEMPORARILY BYPASS USAGE OF BASINS DURING CONSTRUCTION UNTIL VEGETATION IS ESTABLISHED AND CONSTRUCTION IS COMPLETE. (CAN BE OBTAINED BY BLOCKING PIPE IN SPLITTER BOX)

HAZARDOUS SPILL BIORETENTION BASIN

- BIORETENTION BASIN FINISHED BOTTOM EL = 37.6
- BASIN TOP OF BERM EL = 40.00
- BASIN DIVIDER TOP OF BERM EL = 39.50
- SPLITTER BOX WEIR EL = 40.03
- DESIGN STORM = RUNOFF GENERATED BY FIRST 1.5" RAINFALL
- DESIGN VOLUME = 13,191 CF
- VOLUME PROVIDED = 13,242 CF
- DOE = 725 CY
- BERM FILL = 220 CY
- UNDERDRAIN FILTER SURFACE AREA NOT TO EXCEED 840 SF



TYPICAL SECTIONS

*NOT TO SCALE

PROJECT SERVICES UNIT STANDARDS AND SPECIAL DESIGN Offices 919-260-4128 FAX 919-260-4118	
SCHEMATIC HAZARDOUS SPILL BASIN BIORETENTION BASIN	
ORIGINAL BY: LWJ	DATE: 7-20-09
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC:	

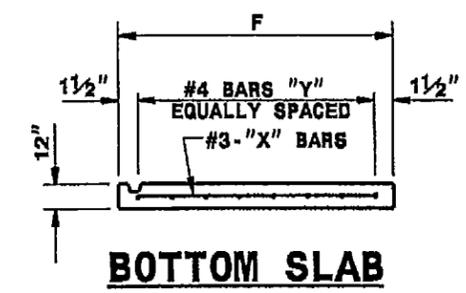
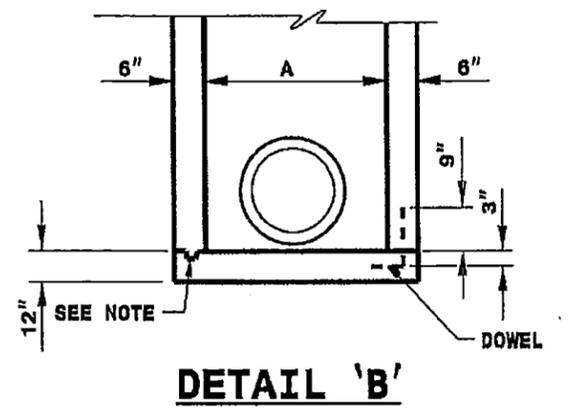
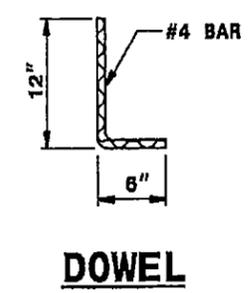
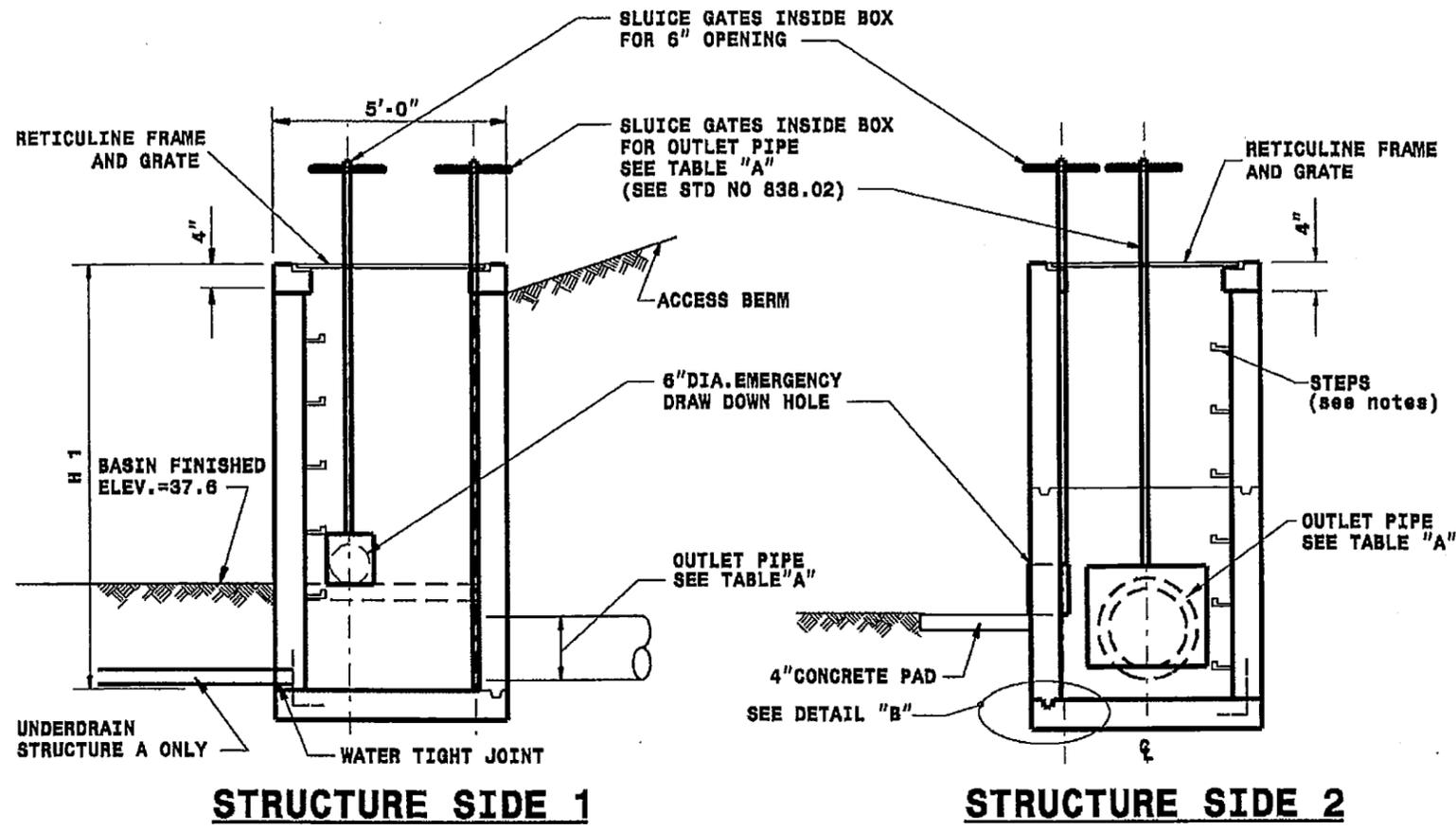


TABLE "A"

MINIMUM DIMENSIONS FOR OUTLET CONTROL STRUCTURE									
CONTROL STRUCT.	BASIN	PIPE D	OUTLET PIPE INVERT	BOX HEIGHT H1	TOP OF GRATE ELEV.	UNDER DRAIN INVERT	UNDERDRAIN PIPE D	POOL BASIN ELEV. @ ORFICE PAD	OUTLET PIPE SLUICE GATE
A	-Y2- 8TA 18+58.5, 88' LT	12"	36.25	2.92	39.0	36.25	4"	37.6	12"
B	-Y2- 3TA 16+71, 126.7' LT	24"	34.25	4.50	38.50	N/A	N/A	37.6	24"

CONTROL STRUCT.	PIPE D	"A" BARS-X		BARS-Y		"F"	TOTAL CONCRETE QUANTITIES	
		QTY.	LENGTH	QTY.	LENGTH			
A	12"	4'-0"	6	4'-9"	6	4'-9"	5'-0"	2.0 CU.YDS.
B	24"	4'-0"	6	4'-9"	6	4'-9"	5'-0"	2.5 CU.YDS.

GENERAL NOTES:

- * CHANGES IN ELEVATIONS MUST BE APPROVED BY THE ENGINEER.
- * CLASS 'B' CONCRETE TO BE USED THROUGHOUT. PRECAST CONCRETE STRUCTURES TO BE SUBMITTED FOR APPROVAL. USE STD 840.45.
- * OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2 INCH KEYWAY, OR #4 BAR DOWELS AT 12 INCH CENTERS, AS DIRECTED BY THE ENGINEER.
- * FORMS ARE TO BE USED FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
- * IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD 840.00.
- * ALL DRAWDOWN STRUCTURES OVER 3 FEET IN DEPTH TO BE PROVIDED WITH STEPS 12 INCH ON CENTERS. STEPS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD 840.66.
- * FOR 8'-0" IN HEIGHT OR LESS USE 6 INCH WALLS AND BOTTOM SLAB. OVER 8'-0" IN HEIGHT USE 12" WALLS TO 8'-0" FROM TOP OF WALL AND USE 6 INCH THICK WALLS FOR THE REMAINING 6'-0". ADJUST QUANTITIES ACCORDINGLY
- * RETICULINE FRAME AND GRATE TO BE APPROVED BY THE ENGINEER.

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 819-250-4128 FAX 819-250-4119

DETAIL OF OUTLET CONTROL STRUCTURES A AND B

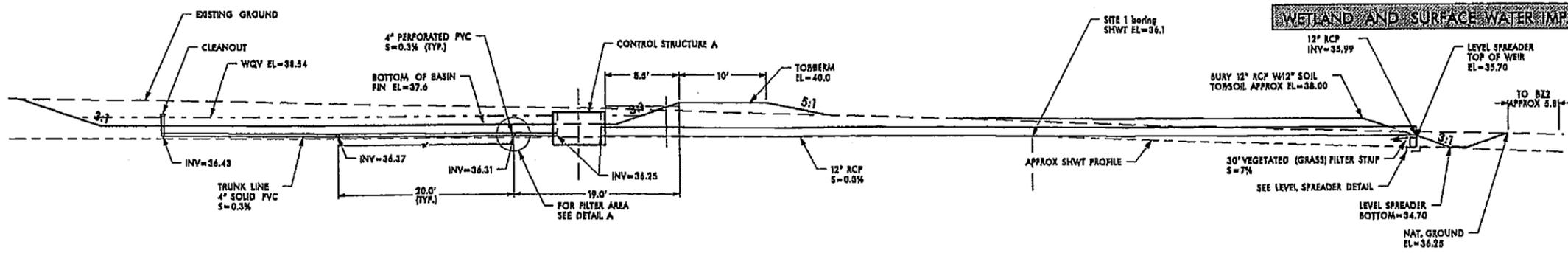
ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: LWJ DATE: 7-20-09
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: kkep7/english/k3800_hsbandoutlet_control

3/28/2013
 kkep7/english/k3800_hsbandoutlet_control.dgn
 R:\Hydraulics\PERMITS_Environmental\Drawings\k3800_HSB_Bionet_Schematic_Outlet_Control_S1_2C_2E.dgn
 3/28/2013 10:58:58 AM
 kkep7/english/k3800_hsbandoutlet_control.dgn
 kkep7/english/k3800_hsbandoutlet_control.dgn

B.17/99

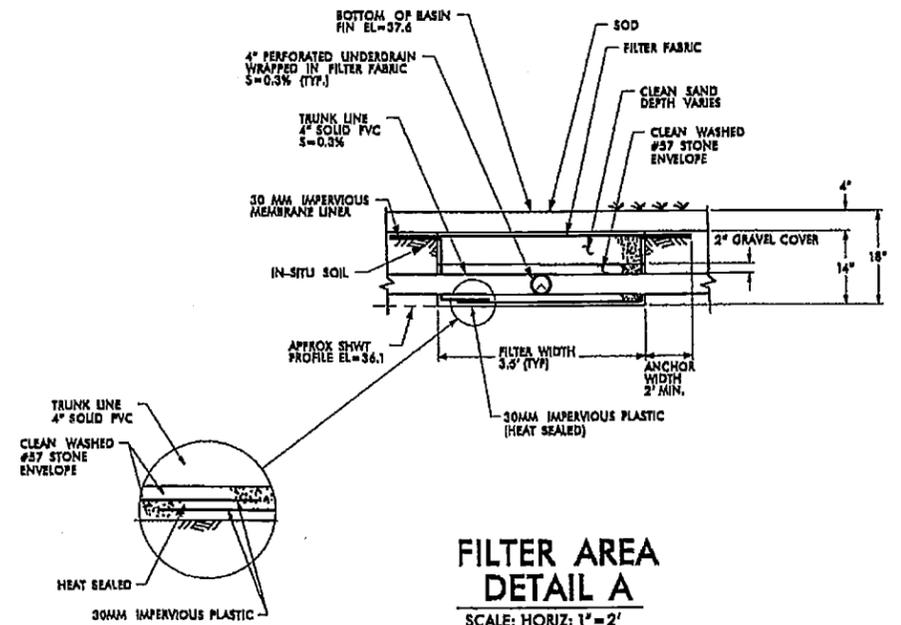
BIORETENTION/HAZARDOUS SPILL BASIN

PROJECT REFERENCE NO. K-3800	SHEET NO. 2-6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Permit Drawing	
Sheet 8 of 10	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



CROSS SECTION AT CONTROL STRUCTURE A

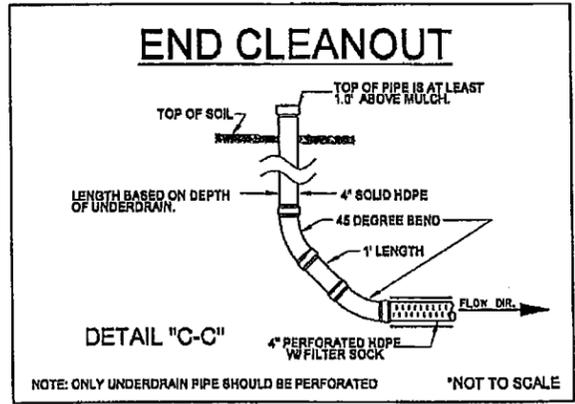
SCALE: HORIZ: 1"=10'
VERT: 1"=10'



FILTER AREA DETAIL A

SCALE: HORIZ: 1"=2'
VERT: 1"=2'

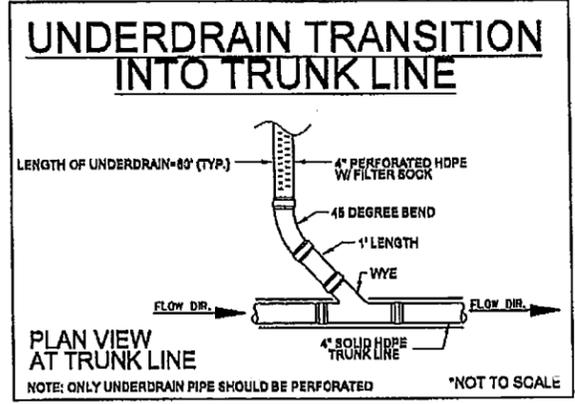
- NOTES:
1. 4" PERFORATED PIPE MINIMUM INLET AREA = 4.0sq In/ft
 2. EDGE OF PLASTIC LINING SHOULD BE ANCHORED IN TO THE GROUND A MINIMUM OF 2.0'
 3. IF A JOINT IN THE PLASTIC LINING IS REQUIRED, IT SHOULD BE HEAT SEALED TO PREVENT LEAKAGE.



END CLEANOUT

DETAIL "C-C"

NOTE: ONLY UNDERDRAIN PIPE SHOULD BE PERFORATED *NOT TO SCALE



UNDERDRAIN TRANSITION INTO TRUNK LINE

PLAN VIEW AT TRUNK LINE

NOTE: ONLY UNDERDRAIN PIPE SHOULD BE PERFORATED *NOT TO SCALE

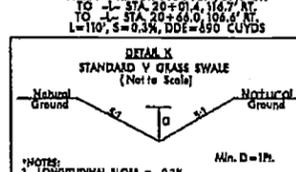
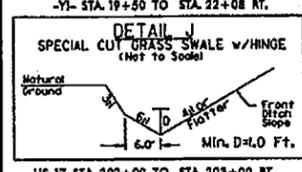
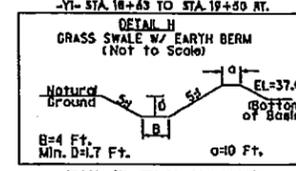
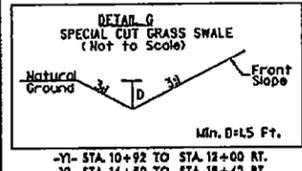
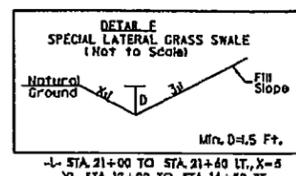
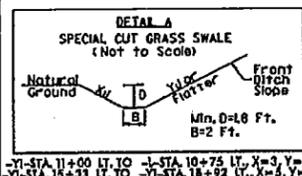
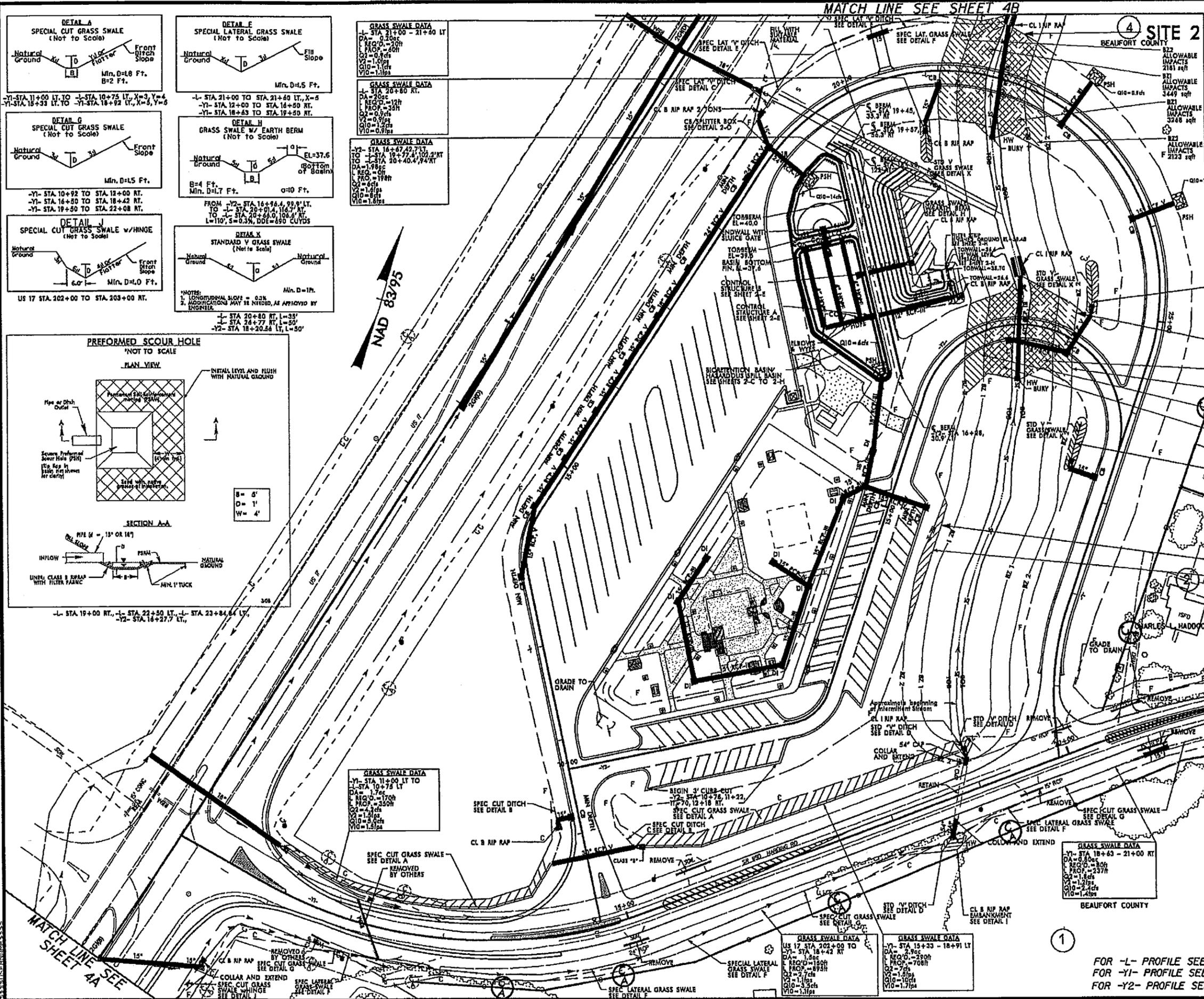
SAND SPECIFICATIONS

WASHED ASTM C33 OR AASHTO M-6 FINE AGGREGATE CONCRETE SAND. IN ADDITION TO THESE SPECIFICATIONS, SAND MUST MEET ALL THE FOLLOWING CONDITIONS:

1. SAND MUST BE SILICA BASED. NO LIMESTONE BASED PRODUCTS MAY BE USED. IF THE MATERIAL IS WHITE OR GRAY IN COLOR, IT IS PROBABLY NOT ACCEPTABLE.
2. SAND MUST BE CLEAN. NATURAL UNWASHED SAND DEPOSITS MAY NOT BE USED. LIKEWISE, SAND THAT HAS BECOME CONTAMINATED BY IMPROPER STORAGE OR INSTALLATION PRACTICES SHALL BE REJECTED.
3. MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE UNDER ANY CIRCUMSTANCES.

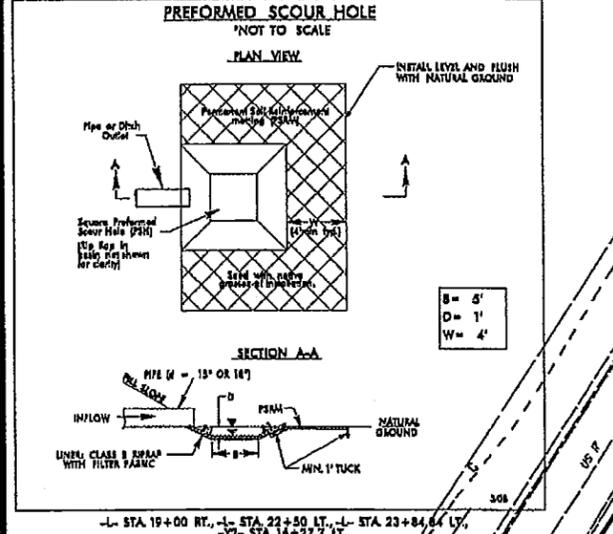
SYSTEMS

8/17/99
SYSTEMTIME: 8/17/99 10:00:00 AM
C:\Users\jw\Documents\Drawings\Buffer\proj\133000\buf_dwg_1.dwg
2007/03/13 10:00:00 AM
C:\Users\jw\Documents\Drawings\Buffer\proj\133000\buf_dwg_1.dwg



*NOTES:
1. LONGITUDINAL SLOPE = 0.3%
2. MODIFICATIONS MAY BE NEEDED, AS APPROVED BY ENGINEER.

-L- STA 20+80 RT, L=35'
-L- STA 28+77 RT, L=50'
-Y2- STA 18+20.56 LT, L=50'



GRASS SWALE DATA
-L- STA 21+00 - 21+30 LT
DA=0.200c
I. REQ'D=170h
L. REQ'D=170h
Q2=0.9cfs
Q10=1.1cfs
V10=1.1ft/s

GRASS SWALE DATA
-L- STA 20+80 RT
DA=0.200c
I. REQ'D=170h
L. REQ'D=170h
Q2=0.9cfs
Q10=1.1cfs
V10=1.1ft/s

GRASS SWALE DATA
-Y2- STA 18+47.42 LT
TO -L- STA 19+77.41 101.21 RT
TO -L- STA 20+40.47 RT
DA=1.980c
I. REQ'D=150h
L. REQ'D=150h
Q2=0.8cfs
Q10=0.9cfs
V10=0.9ft/s

GRASS SWALE DATA
-Y1- STA 11+00 LT TO -L- STA 10+75 LT, Y=3, Y=4
-Y1- STA 15+33 LT TO -L- STA 18+92 LT, X=3, Y=5

GRASS SWALE DATA
-Y1- STA 10+92 TO STA 12+00 RT.
-Y1- STA 16+30 TO STA 18+42 RT.
-Y1- STA 19+50 TO STA 22+08 RT.

GRASS SWALE DATA
-Y1- STA 18+21 LT
DA=0.800c
I. REQ'D=28h
L. REQ'D=28h
Q2=1.1cfs
Q10=0.8cfs
V10=0.7ft/s

GRASS SWALE DATA
-L- STA 26+77 RT
DA=0.210c
I. REQ'D=21h
L. REQ'D=21h
Q2=0.7cfs
Q10=0.9cfs
V10=0.9ft/s

GRASS SWALE DATA
-Y1- STA 21+00 - 22+08 RT
DA=0.900c
I. REQ'D=90h
L. REQ'D=90h
Q2=2.0cfs
Q10=1.3cfs
V10=1.3ft/s

GRASS SWALE DATA
-Y1- STA 18+63 - 21+00 RT
DA=0.800c
I. REQ'D=80h
L. REQ'D=80h
Q2=1.1cfs
Q10=1.1cfs
V10=1.1ft/s

GRASS SWALE DATA
-Y1- STA 15+33 - 18+91 LT
DA=0.900c
I. REQ'D=150h
L. REQ'D=150h
Q2=2.0cfs
Q10=1.3cfs
V10=1.3ft/s

GRASS SWALE DATA
-Y1- STA 11+00 LT TO -L- STA 10+75 LT
-L- STA 15+33 LT TO -L- STA 18+92 RT
DA=1.100c
I. REQ'D=110h
L. REQ'D=110h
Q2=1.1cfs
Q10=1.1cfs
V10=1.1ft/s

GRASS SWALE DATA
-Y1- STA 11+00 LT TO -L- STA 10+75 LT
-L- STA 15+33 LT TO -L- STA 18+92 RT
DA=1.100c
I. REQ'D=110h
L. REQ'D=110h
Q2=1.1cfs
Q10=1.1cfs
V10=1.1ft/s

GRASS SWALE DATA
-Y1- STA 11+00 LT TO -L- STA 10+75 LT
-L- STA 15+33 LT TO -L- STA 18+92 RT
DA=1.100c
I. REQ'D=110h
L. REQ'D=110h
Q2=1.1cfs
Q10=1.1cfs
V10=1.1ft/s

GRASS SWALE DATA
-Y1- STA 11+00 LT TO -L- STA 10+75 LT
-L- STA 15+33 LT TO -L- STA 18+92 RT
DA=1.100c
I. REQ'D=110h
L. REQ'D=110h
Q2=1.1cfs
Q10=1.1cfs
V10=1.1ft/s

GRASS SWALE DATA
-Y1- STA 11+00 LT TO -L- STA 10+75 LT
-L- STA 15+33 LT TO -L- STA 18+92 RT
DA=1.100c
I. REQ'D=110h
L. REQ'D=110h
Q2=1.1cfs
Q10=1.1cfs
V10=1.1ft/s

GRASS SWALE DATA
-Y1- STA 11+00 LT TO -L- STA 10+75 LT
-L- STA 15+33 LT TO -L- STA 18+92 RT
DA=1.100c
I. REQ'D=110h
L. REQ'D=110h
Q2=1.1cfs
Q10=1.1cfs
V10=1.1ft/s

PROJECT REFERENCE NO. SHEET NO.
K-3800 4

R/W SHEET NO. HYDRAULICS ENGINEER
Buffer Drawing

Sheet 2 of 10

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER IMPACTS
SHEET 2 OF 10

GRASS SWALE DATA
-Y1- STA 18+21 LT
DA=0.800c
I. REQ'D=28h
L. REQ'D=28h
Q2=1.1cfs
Q10=0.8cfs
V10=0.7ft/s

GRASS SWALE DATA
-L- STA 26+77 RT
DA=0.210c
I. REQ'D=21h
L. REQ'D=21h
Q2=0.7cfs
Q10=0.9cfs
V10=0.9ft/s

GRASS SWALE DATA
-Y1- STA 21+00 - 22+08 RT
DA=0.900c
I. REQ'D=90h
L. REQ'D=90h
Q2=2.0cfs
Q10=1.3cfs
V10=1.3ft/s

GRASS SWALE DATA
-Y1- STA 18+63 - 21+00 RT
DA=0.800c
I. REQ'D=80h
L. REQ'D=80h
Q2=1.1cfs
Q10=1.1cfs
V10=1.1ft/s

GRASS SWALE DATA
-Y1- STA 15+33 - 18+91 LT
DA=0.900c
I. REQ'D=150h
L. REQ'D=150h
Q2=2.0cfs
Q10=1.3cfs
V10=1.3ft/s

BUFFER IMPACTS

- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2
- MITIGABLE IMPACTS ZONE 2

FOR -L- PROFILE SEE SHEET 5
FOR -Y1- PROFILE SEE SHEET 6
FOR -Y2- PROFILE SEE SHEET 6

20' 0" 20' 40' 60'
GRAPHIC SCALE

5/28/09

4/9/2013
 Impetus
 P:\Hydro\Projects\Environmental\Drawings\3800_158_Biorot_Schematic_Outlet_Sht_2C.dwg
 4/9/2013
 Impetus
 P:\Hydro\Projects\Environmental\Drawings\3800_158_Biorot_Schematic_Outlet_Sht_2C.dwg

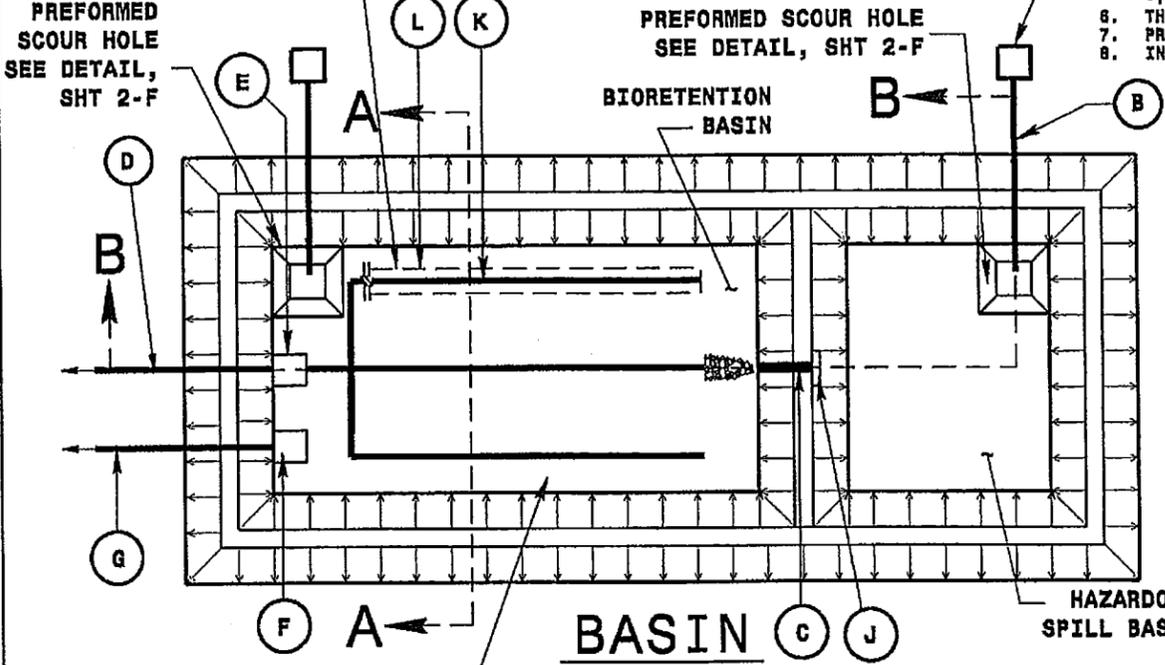
MATERIALS	
(A)	GEOTEXTILE FOR SUBSURFACE DRAINS, TYPE 1
(B)	24" RCP INLET PIPE
(C)	18" RCP EQUALIZER PIPE
(D)	12" RCP OUTFALL PIPE TO LEVEL SPREADER (SHT 2-H)
(E)	OUTLET CONTROL STRUCTURE A W/ SLUICE GATE (SHT 2-E)
(F)	OUTLET CONTROL BYPASS STRUCTURE B W/ SLUICE GATE (SHT 2-E)
(G)	24" RCP BYPASS OUTLET PIPE TO GRASS SWALE (SHT 2-F, DETAIL H)
(H)	TOP SOIL AND 1/2 CUT BERMUDA SOD
(I)	CLASS B RIP RAP
(J)	END WALL WITH 18" SLUICE GATE (STD 838.02)
(K)	4" UNDERDRAIN PERFORATED PIPE 3 @ 80', 20' SPACING WRAPPED IN FILTER FABRIC
(L)	CLEAN WASHED #57 STONE ENVELOPE (SHT 2-G, DETAIL A)
(M)	30MIL IMPERVIOUS MEMBRANE LINER (SHT 2-G DETAIL A)
(N)	CLEAN SAND (SHT 2-G DETAIL A)

FILTER AREA 3.5' X 80' (TYP)
SEE DETAIL, SHT 2-G

PREFORMED SCOUR HOLE
SEE DETAIL, SHT 2-F

CB SPLITTER BOX
SEE DETAIL, SHT 2-D

PREFORMED SCOUR HOLE
SEE DETAIL, SHT 2-F



- NOTES:**
- SEE PLAN SHEET #4 FOR SHAPE AND SIZE OF BASIN.
 - BOTTOM OF BIORETENTION BASIN SURFACE AREA AT EL 37.6 = 6,888 SF.
 - SEE SHT 4 FOR HSB GRADING PLAN
 - ALL FILL MATERIAL SHALL BE COMPACTED AND TESTED IN ACCORDANCE WITH NCDOT STD SPEC 235.
 - INSTALL SOD ON BERM AND BASIN BOTTOM AND ANY EXPOSED SURFACE THAT NEEDS TO BE PROTECTED AGAINST IMMEDIATE POTENTIAL STORM EVENT.
 - THE SURVEYOR SHALL CREATE A DTM FILE SUITABLE TO VERIFY BASIN CAPACITY TO THE ENGINEER, INCLUDING VERIFICATION OF INVERTS AND ELEVATIONS AT THE FOLLOWING POINTS:
-CB SPLITTER BOX WEIR ELEVATION.
-ALL TOP OF DRAINAGE STRUCTURE AND PIPE INVERT ELEVATIONS.
-BOTTOM OF BASIN AREA, LOCATION AND ELEVATIONS.
-TOP OF BERM WIDTH, LOCATION AND ELEVATIONS.
 - THE BERM SHALL BE CONSTRUCTED WITH SUITABLE FILL MATERIAL PER THE ENGINEER.
 - PREFORMED SCOUR HOLE AND SPLITTER BOX REQUIRES REGULAR MAINTENANCE TO REMAIN EFFECTIVE.
 - INSTALL UNDERDRAIN CLEANOUTS, WYES, AND ELBOWS PER LOCATIONS ON SHT 4

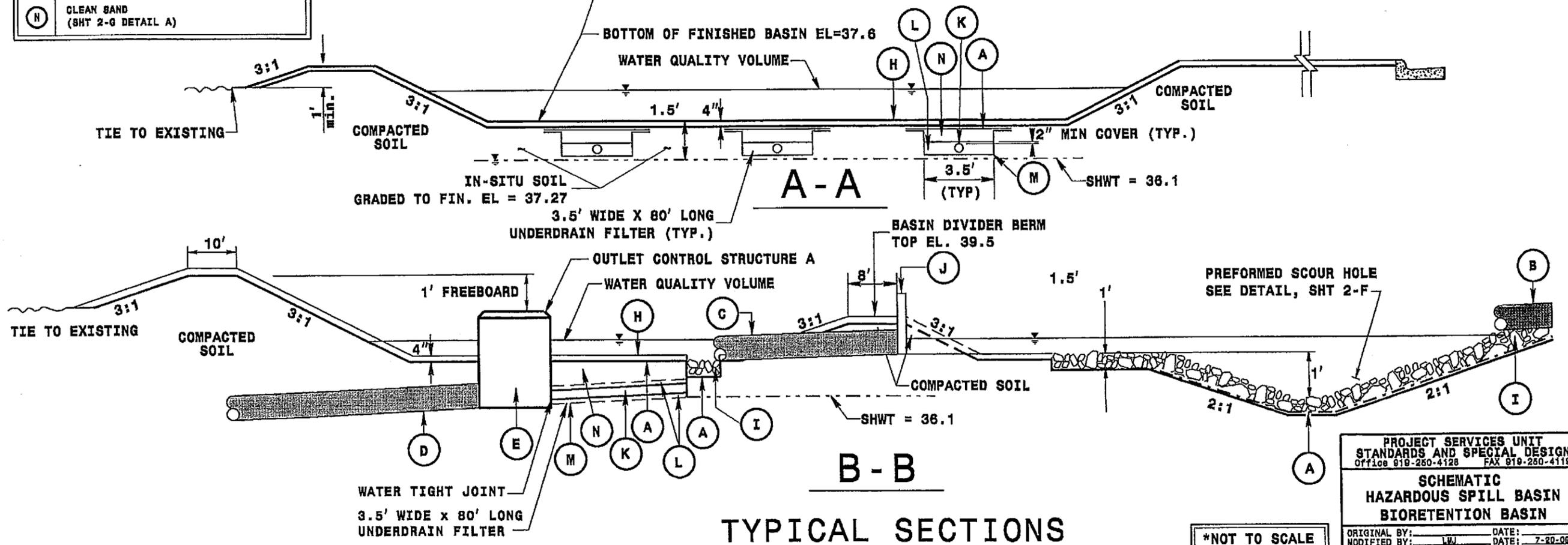
Buffer Drawing
Sheet 4 of 10

CONSTRUCTION SEQUENCE:

- RELOCATE UTILITY LINES.
- PUT IN ALL EROSION CONTROL MEASURES (AS NEEDED THROUGH CONSTRUCTION STAGES).
- CONSTRUCT AND INSTALL BOXES, CREATE OPENINGS IN BOXES AND INSTALL PIPES.
- EXCAVATE FOR THE BASIN AND PREPARE THE BASIN FLOOR AT THE GIVEN ELEVATION TO ALLOW FOR 4" SOIL AND BERMUDA SOD.
- EXCAVATE AND CONSTRUCT PREFORMED SCOUR HOLE.
- CONSTRUCT BERM AROUND BASIN.
- INSTALL PREFORMED SCOUR HOLE RIP RAP.
- LAY SOD.
- ADD GRATES ON ALL BOXES.
- TEMPORARILY BYPASS USAGE OF BASINS DURING CONSTRUCTION UNTIL VEGETATION IS ESTABLISHED AND CONSTRUCTION IS COMPLETE. (CAN BE OBTAINED BY BLOCKING PIPE IN SPLITTER BOX)

HAZARDOUS SPILL BIORETENTION BASIN

- BIORETENTION BASIN FINISHED BOTTOM EL = 37.6
- BASIN TOP OF BERM EL = 40.00
- BASIN DIVIDER TOP OF BERM EL = 39.50
- SPLITTER BOX WEIR EL = 40.93
- DESIGN STORM = RUNOFF GENERATED BY FIRST 1.5" RAINFALL
- DESIGN VOLUME = 13,191 CF
- VOLUME PROVIDED = 13,242 CF
- DDE = 725 CY
- BERM FILL = 220 CY
- UNDERDRAIN FILTER SURFACE AREA NOT TO EXCEED 840 SF



TYPICAL SECTIONS

*NOT TO SCALE

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

SCHEMATIC HAZARDOUS SPILL BASIN BIORETENTION BASIN

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: LWJ DATE: 7-20-09
 CHECKED BY: _____ DATE: _____
 FILE SPEC: _____

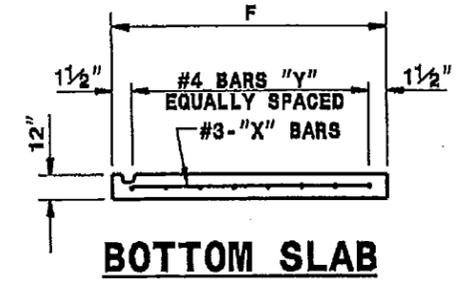
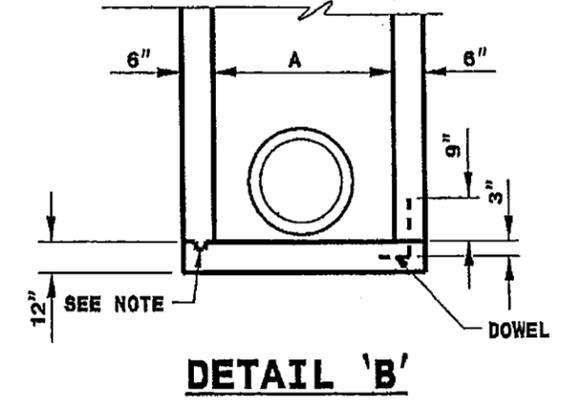
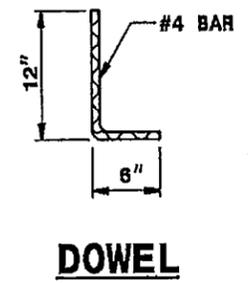
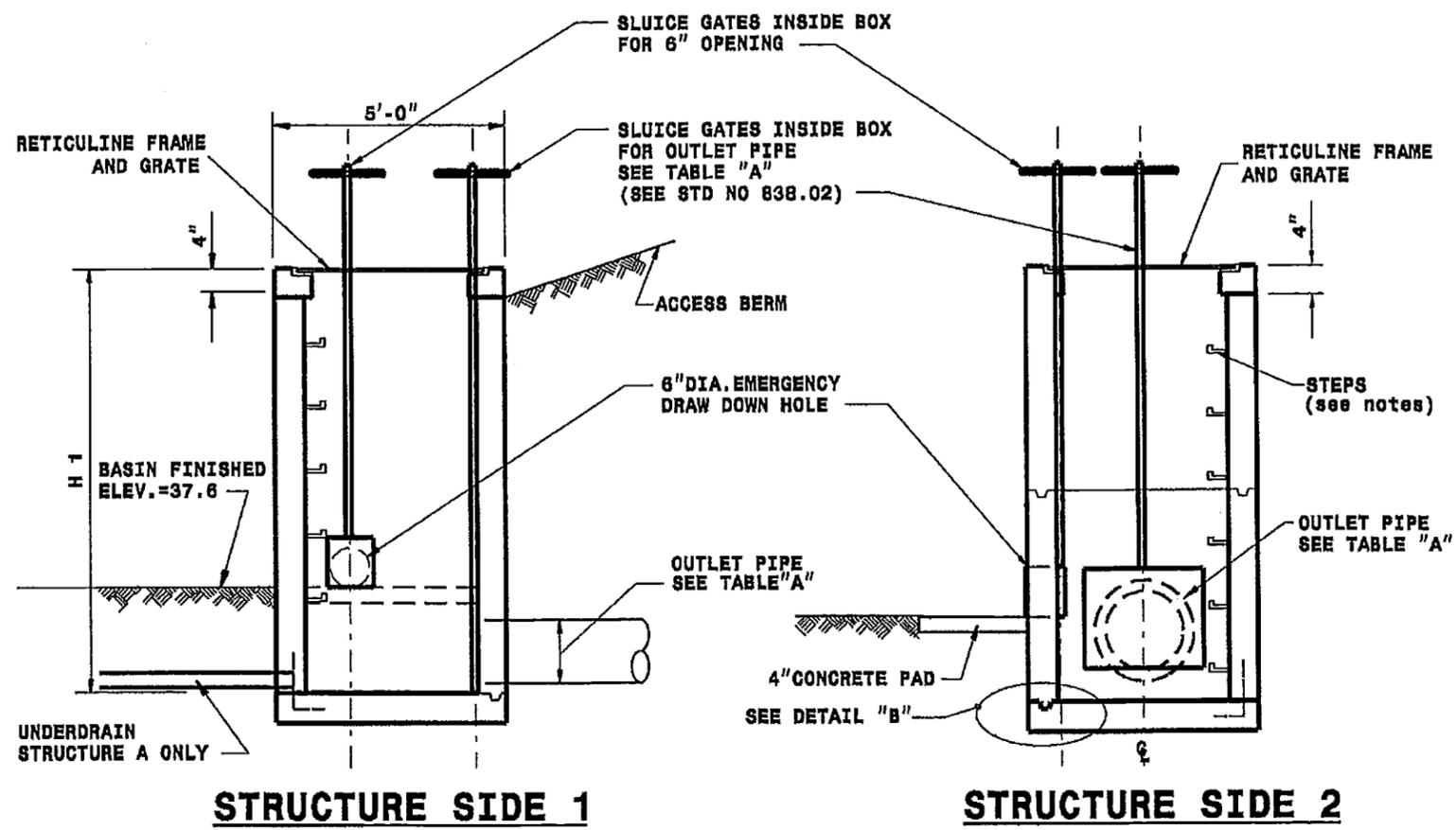


TABLE "A"

MINIMUM DIMENSIONS FOR OUTLET CONTROL STRUCTURE									
CONTROL STRUCT.	BASIN	PIPE D	OUTLET PIPE INVERT	BOX HEIGHT H1	TOP OF GRATE ELEV.	UNDER DRAIN INVERT	UNDERDRAIN PIPE D	POOL BASIN ELEV. @ ORFICE PAD	OUTLET PIPE SLUICE GATE
A	-Y2- STA 18+38.5, 88' LT	12"	36.25	2.92	39.0	36.25	4"	37.6	12"
B	-Y2- STA 16+71, 126.7' LT	24"	34.25	4.50	38.50	N/A	N/A	37.6	24"

CONTROL STRUCT.	PIPE D	"A" BARS-X		BARS-Y		"F"	TOTAL CONCRETE QUANTITIES	
		QTY.	LENGTH	QTY.	LENGTH			
A	12"	4'-0"	6	4'-9"	6	4'-9"	5'-0"	2.0 CU.YDS.
B	24"	4'-0"	6	4'-9"	6	4'-9"	5'-0"	2.5 CU.YDS.

GENERAL NOTES:

- * CHANGES IN ELEVATIONS MUST BE APPROVED BY THE ENGINEER.
- * CLASS 'B' CONCRETE TO BE USED THROUGHOUT. PRECAST CONCRETE STRUCTURES TO BE SUBMITTED FOR APPROVAL. USE STD 840.45.
- * OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2 INCH KEYWAY, OR #4 BAR DOWELS AT 12 INCH CENTERS, AS DIRECTED BY THE ENGINEER.
- * FORMS ARE TO BE USED FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
- * IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD 840.00.
- * ALL DRAWDOWN STRUCTURES OVER 3 FEET IN DEPTH TO BE PROVIDED WITH STEPS 12 INCH ON CENTERS. STEPS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD 840.68.
- * FOR 8'-0" IN HEIGHT OR LESS USE 6 INCH WALLS AND BOTTOM SLAB. OVER 8'-0" IN HEIGHT USE 12" WALLS TO 6'-0" FROM TOP OF WALL AND USE 6 INCH THICK WALLS FOR THE REMAINING 6'-0". ADJUST QUANTITIES ACCORDINGLY
- * RETICULINE FRAME AND GRATE TO BE APPROVED BY THE ENGINEER.

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 818-250-4128 FAX 818-250-4119

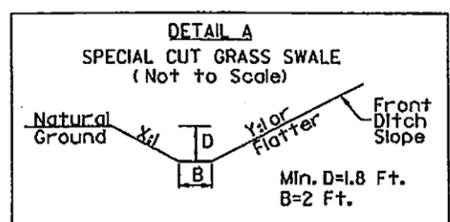
DETAIL OF OUTLET CONTROL STRUCTURES A AND B

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: LMJ DATE: 7-20-09
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: _____

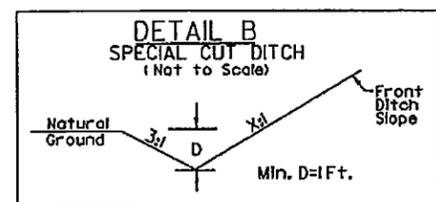
 C:\P\3800\3800.DWG

8/17/93

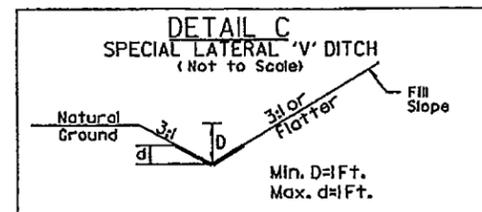
PROJECT REFERENCE NO. K-3800	SHEET NO. 2-F
RW SHEET NO.	
ROADWAY DESIGN	HYDRAULICS ENGINEER
Buffer Drawing	
Sheet 7 of 10	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



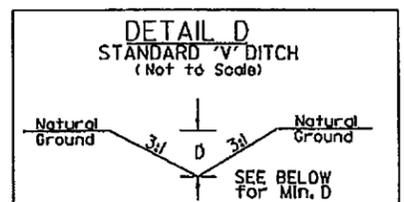
-Y1- STA. 11+00 LT. TO -L- STA. 10+75 LT., X=3, Y=4
-Y1- STA. 15+33 LT. TO -Y1- STA. 18+92 LT., X=5, Y=5



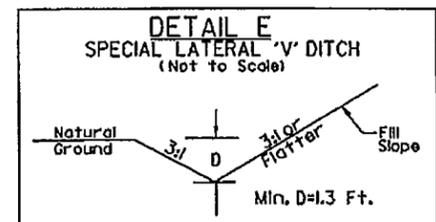
-L- STA. 10+75 TO STA. 11+50 LT., X=4
-L- STA. 10+75 TO STA. 11+22.5 RT., X=4
-Y1- STA. 22+08 TO STA. 22+54 RT., X=3



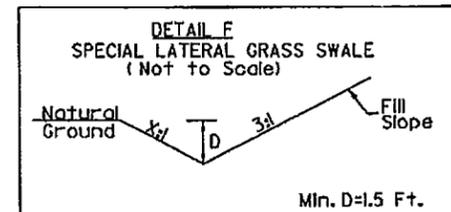
Type of Liner= PSRM
-L- STA. 19+13 TO STA. 19+36.74 LT.



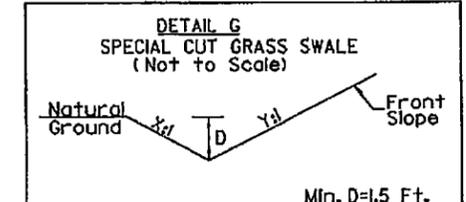
-Y1- STA. 18+37.49' TO STA. 18+54.38' RT.,
D=1.5', L=20', s=5.15%, DDE=40 CY
-Y1- STA. 18+97.6, 35' TO STA. 18+97.4, 55' LT.,
D=1.8', L=20', s=0.75%, DDE=11 CY



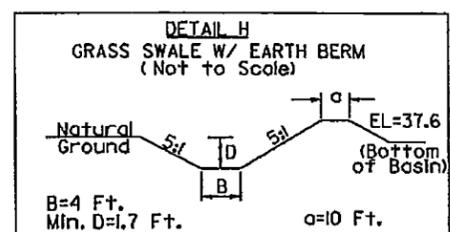
-L- STA. 19+36.74 TO STA. 21+00 LT.



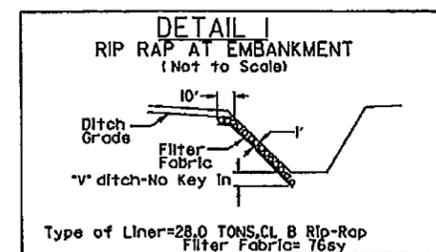
-L- STA. 21+00 TO STA. 21+60 LT., X=5
-Y1- STA. 12+00 TO STA. 16+50 RT., X=3
-Y1- STA. 18+63 TO STA. 19+50 RT., X=3



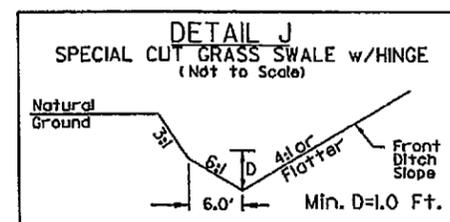
-Y1- STA. 10+92 RT. TO -Y1- STA. 12+00 RT., X=3, Y=4
-Y1- STA. 16+50 TO STA. 18+42 RT., X=3, Y=3
-Y1- STA. 19+50 TO STA. 22+08 RT., X=3, Y=3



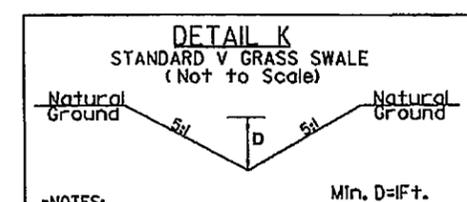
FROM -Y2- STA. 16+96.4, 99.9' LT.
TO -L- STA. 20+01.4, 116.7' RT.
TO -L- STA. 20+66.0, 106.6' RT.
L=110', S=0.3%, DDE=690 CUYDS



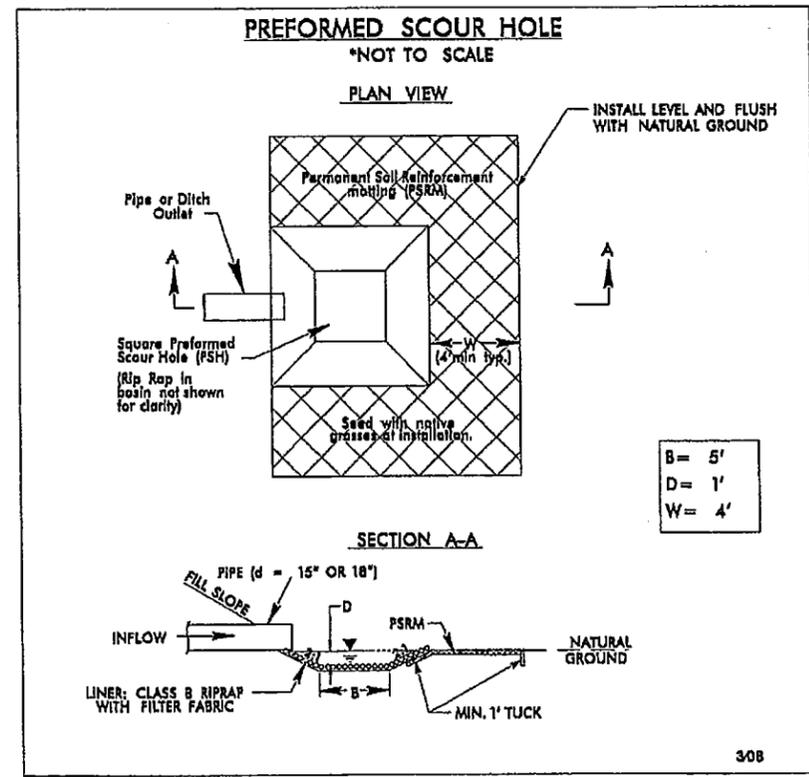
-Y1- STA. 18+31 TO STA. 18+73 RT.



US 17 STA. 202+00 TO STA. 203+00 RT.



NOTES:
1. LONGITUDINAL SLOPE = 0.3%
2. MODIFICATIONS MAY BE NEEDED, AS APPROVED BY ENGINEER.
-L- STA 20+80 RT, L=35'
-L- STA 26+77 RT, L=50'
-Y2- STA 18+20.56 LT, L=50'



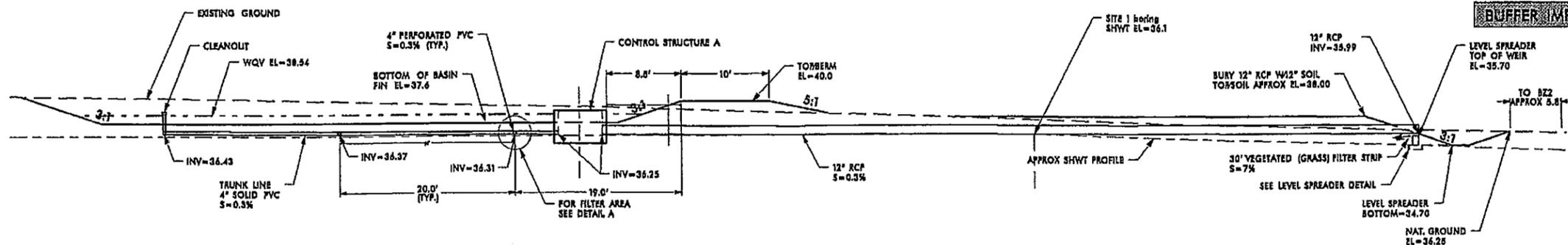
-L- STA. 19+00 RT., -L- STA. 22+50 LT., -L- STA. 23+84.84 LT.,
-Y2- STA. 16+27.7 LT.

3/28/2013
 C:\Users\jv\Documents\Projects\K-3800_rpt_04_21.dgn
 *****SYTIME*****
 *****DON*****

8/17/99

BIORETENTION/HAZARDOUS SPILL BASIN

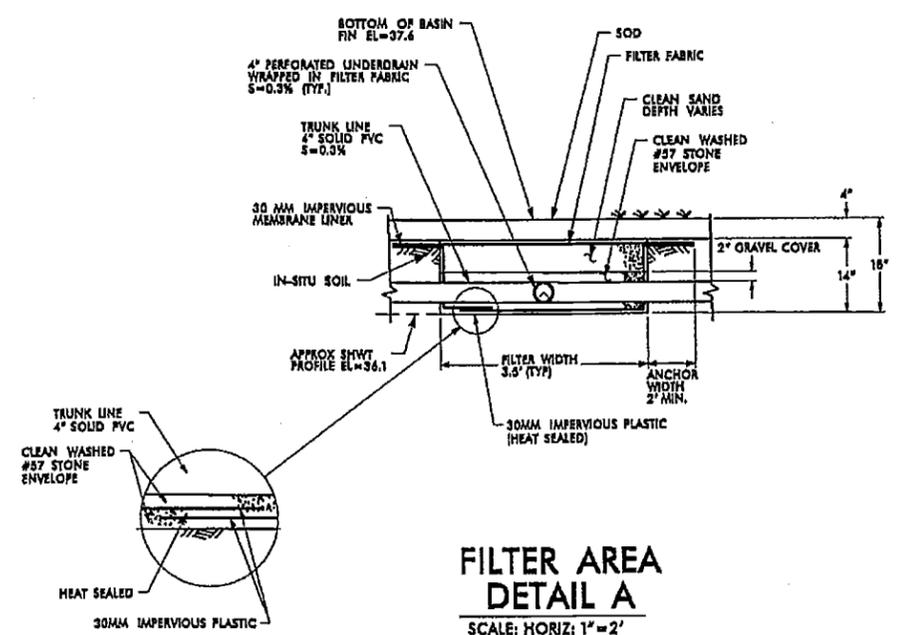
PROJECT REFERENCE NO. K-3800	SHEET NO. 2-6
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Buffer Drawing Sheet 8 of 10	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



CROSS SECTION AT CONTROL STRUCTURE A
SCALE: HORIZ: 1"=10'
VERT: 1"=10'

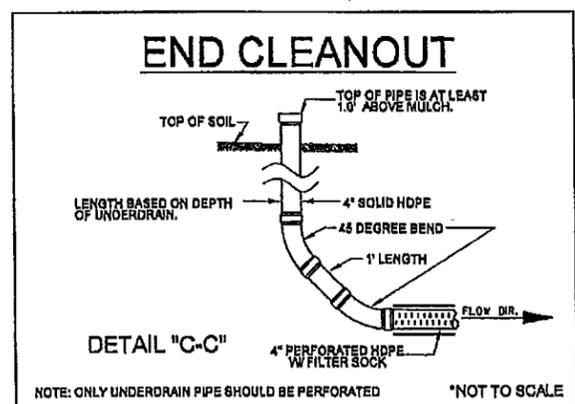
BUFFER IMPACTS PERMIT

BUFFER DRAWING SHEET 8 OF 10

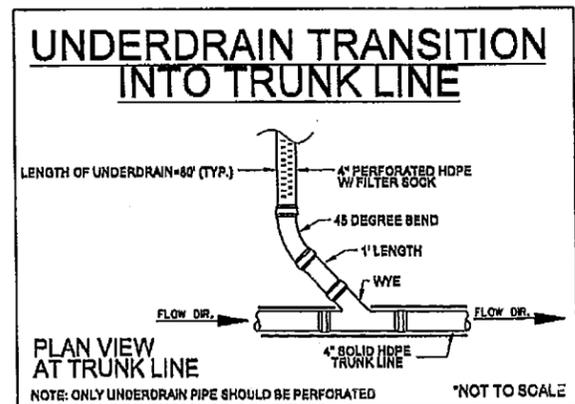


**FILTER AREA
DETAIL A**
SCALE: HORIZ: 1"=2'
VERT: 1"=2'

- NOTES:
1. 4" PERFORATED PIPE MINIMUM INLET AREA = 4.0sq In/ft
 2. EDGE OF PLASTIC LINING SHOULD BE ANCHORED IN TO THE GROUND A MINIMUM OF 2.0'
 3. IF A JOINT IN THE PLASTIC LINING IS REQUIRED, IT SHOULD BE HEAT SEALED TO PREVENT LEAKAGE.



DETAIL "C-C"
NOTE: ONLY UNDERDRAIN PIPE SHOULD BE PERFORATED *NOT TO SCALE



PLAN VIEW AT TRUNK LINE
NOTE: ONLY UNDERDRAIN PIPE SHOULD BE PERFORATED *NOT TO SCALE

SAND SPECIFICATIONS

WASHED ASTM C33 OR AASHTO M-6 FINE AGGREGATE CONCRETE SAND. IN ADDITION TO THESE SPECIFICATIONS, SAND MUST MEET ALL THE FOLLOWING CONDITIONS:

1. SAND MUST BE SILICA BASED. NO LIMESTONE BASED PRODUCTS MAY BE USED. IF THE MATERIAL IS WHITE OR GRAY IN COLOR, IT IS PROBABLY NOT ACCEPTABLE.
2. SAND MUST BE CLEAN. NATURAL UNWASHED SAND DEPOSITS MAY NOT BE USED. LIKEWISE, SAND THAT HAS BECOME CONTAMINATED BY IMPROPER STORAGE OR INSTALLATION PRACTICES SHALL BE REJECTED.
3. MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE UNDER ANY CIRCUMSTANCES.

BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)		
1	60" RCP	-Y2- 17+59	X			5304	3462	8766					
2	60" RCP	-L- 21+66	X			6717	4304	11021					
3	Roadway Fill in BZ 2	-Y2- 13+81 to 15+29, Rt			X					961	961		
TOTAL:						12,021	7,766	19,787	0	961	961		

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 BEAUFORT COUNTY
 PROJECT: 38748.1.1 (K-3800)

 3/28/2013
 SHEET 10 OF 10

Rev. May 2006