



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

May 8, 2017

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

FROM: Philip S. Harris, III, P.E., C.P.M, Manager
for Natural Environment Section 

SUBJECT: Craven County; Proposed Improvements to US 70 and Slocum Road,
City of Havelock; Federal Aid No. NHS-0070(154);
WBS 45492.1.1; **STIP R-5516.**

Attached are the U.S. Army Corps of Engineers General Permit, N.C. Division of Water Resources (NCDWR) Water Quality Certification, and Neuse Buffer Authorization. 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. Andy Gay, P.E. Contracts Management
Mr. Jay Johnson, Division Environmental Officer
Dr. Majed Al-Ghandour, P.E., Programming and TIP
Mr. Glenn Mumford, P.E., Roadway Design
Mr. Bo Hemphill, P.E., Utilities
Mr. Jay Twisdale, P.E., Hydraulics
Mr. Brian Hanks, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Jay McInnis, P.E., Project Development
Ms. Leilani Paugh, Natural Environment Section
Mr. Randy Griffin, Natural Environment Section

PROJECT COMMITMENTS

**Proposed Improvements to US 70 and Slocum Road
City of Havelock, Craven County
Federal Aid Project NHS-0070(154)
WBS 45492.1.1
STIP Project R-5516**

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Local Programs Management Unit

A municipal agreement will be executed by NCDOT and the City of Havelock to fund the construction of new sidewalks along the north side of Marsha's Way Connector. Based on NCDOT's Pedestrian Policy, the City of Havelock will fund 30% of the cost of these improvements.

The contract officer for Division 2 is in the process of working on the agreement.

Project Development & Environmental Analysis Unit - Human Environment Section

~~Pending approval of property owners, a noise wall has been recommended to mitigate noise impacts. The proposed wall is located to the east of the Hickman Hill neighborhood. A Design Noise Report will be prepared prior to construction of this project to verify the need for and refine the height and location of the noise wall, based on the NCDOT Traffic Noise Abatement Policy.~~

Following completion of the categorical exclusion, it was learned that two of the receptors which would have benefitted from the noise wall were vacant and the property owner planned to demolish them. With the removal of two benefitted receptors, the wall was no longer reasonable and was eliminated from further consideration. No noise walls are now proposed for the project.

Hydraulics Unit, Project Development & Environmental Analysis Unit - Natural Environment Section

The provisions of the Neuse River Buffer Rules apply to all jurisdictional streams in the study area and must be adhered to during the design and construction of this project. For the purposes of stream mitigation, all jurisdictional streams in the study area have been designated as warm water streams.

This will be coordinated during design and construction.

Division 2 Construction, Utilities Unit

There will be no impacts to USFS rare species since construction activities, including the placement of staging areas, in close proximity to the NFS lands west of existing US 70 near the intersection with Slocum Road have been avoided. Any encroachment by the project onto any National Forest Service (NFS) lands will require coordination with the USFS and possible further evaluation of USFS rare species for which habitat is present. Impacts to spring-flowering goldenrod on NFS lands will require coordination with USFS; impacts to the species on private

lands will not require coordination with USFS.

Any utility relocations that occur on USFS property must be processed as a separate permit action and coordinated with the USFS.

Current plans show no encroachment on US Forest Service property.

COMMITMENTS FROM PERMITTING

There were no additional commitments adding during permitting.

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

Action Id. SAW-2017-00827 County: Craven U.S.G.S. Quad: NC-HAVELOCK

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Permittee: NC DOT PDEA

Phillip Harris

Address: 1598 Mail Service Center

Raleigh, NC, 27699-1598

Telephone Number:

Size (acres) 4.7

Nearest Town Havelock

Nearest Waterway Sandy Run

River Basin Neuse

USGS HUC 03020204

Coordinates Latitude: 34.9172769748773

Longitude: -76.9392340344435

Location description: Intersection of Slocum Road and US 70 at Cherry Point MCAS in Havelock, Craven County, North Carolina.

Description of projects area and activity: Applicant proposes to construct grade separation on SR 1130 and interchange at Old NC 11/SR 1213 at the intersection with US 70 near the access of Slocum Gate on Cherry Point MCAS. This verification utilizes four RGP-31 permits (A-D) for different single and complete projects within the overall project area. A-applies to Site 1; B-applies to Sites 2 and 3; C- applies to Sites 4 and 5; and D-applies to Sites 6 and 7. Total permanent impacts of 1.26 acres of riparian wetlands, 1054 ln ft. of streams and 0.17 acres of surface waters and temporary impacts of 273 ln ft of stream and 0.06 acres of surface water are authorized by this verification.

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

Authorization: Regional General Permit Number or Nationwide Permit Number: GP 198200031 NCDOT Bridges, Widening Projects.... (Authorized 2015)

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 03/10/2017. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide 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 Resources (telephone 919-807-6300) to determine Section 401 requirements.

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

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

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

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Date: 2017.04.27 15:26:00 -0400

Corps Regulatory Official: 84706273

Expiration Date of Verification: 04/30/2020

Determination of Jurisdiction:

- A. There are waters, including wetlands, on the above described project area that may be subject to Section 404 of the Clean Water Act (CWA) (33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction. Please note, if work is authorized by either a general or nationwide permit, and you wish to request an appeal of an approved JD, the appeal must be received by the Corps and the appeal process concluded prior to the commencement of any work in waters of the United States and prior to any work that could alter the hydrology of waters of the United States.
- 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 (RHA) (33 USC § 403) and 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.
- C. There are waters, including wetlands, within the above described project area that are 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: a. 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 the Neuse River, a TNW. These sites also exhibits wetland criteria as described in the 1987 Corps Wetland Delineation Manual and Regional Supplement and are adjacent to or abutting Sandy Run, a UT to Sandy Run and/or Tucker Creek, all direct tributaries of the Neuse River, a TNW.

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 jurisdiction determinations as indicated in B and C above).

This correspondence constitutes an approved jurisdiction 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.

Corps Regulatory Official: 3 STEFFENS.THOMAS.ANCRUM.128470627
Thomas Steffens

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Date of JD: **04/27/2017**

SPECIAL CONDITIONS

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.

EROSION CONTROL MEASURES IN WETLANDS: The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.

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).

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.

CONSTRUCTION PLANS: The permittee will 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, Washington Regulatory Field Office prior to any active construction in waters or wetlands.

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.

BORROW AND FILL: To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent wetlands and streams, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material, or to dispose of dredged, fill, or waste material. The permittee shall provide the USACE with appropriate maps indicating the locations of proposed borrow or waste sites as soon as the permittee has that information. The permittee will coordinate with the USACE before approving any borrow or waste sites that are within 400 feet of any streams or wetlands.

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

In order to offset unavoidable Riparian Wetland Impacts for R-5516, the Three Swamp Site will be debited 1.26 acres of Riparian Wetland Mitigation. The Three Swamp Mitigation Site is located in Pamlico and Craven County within the USGS hydrologic unit 03020204 of the Neuse River. NCDOT acquired the 3.90 acre site to mitigate for unavoidable, jurisdictional impacts associated with TIP R-2539A/B. Monitoring requirements were performed from 2007 to 2012 and the site was closed out in 2013. The site has been placed on the NCDOT On-site Debit Ledger for use within HUC 03020204.

Action ID Number: SAW-2017-00827

County: Craven

Permittee: NC DOT PDEA
Phillip Harris

Project Name: NCDOT R-5516 US70 Slocum Road Cherry Point MCAS

Date Verification Issued: April 27, 2017

Project Manager: Thomas Steffens

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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. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

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

Signature of Permittee

Date

DEPARTMENT OF THE ARMY
Wilmington District, Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403-1343
April 30, 2015

Regional General Permit No. 198200031
Name of Permittee: North Carolina Department of Transportation
Effective Date: April 30, 2015
Expiration Date: April 30, 2020

**DEPARTMENT OF THE ARMY
REGIONAL GENERAL PERMIT**

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

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

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

Activities authorized are:

- a. Construction, maintenance, and repair of bridges, to include work on the approaches, where permanent impacts resulting in a loss of waters of the U.S. will be less than or equal to 500 linear feet (lf) of stream and/or one (1) acre of wetland/non-tidal open water for each single and complete linear project*.
- b. Best-fit widening projects that have undergone interagency review and completed the current interagency Merger Process, which merges the requirements of the National Environmental Policy Act (NEPA) with those found within Section 404 of the Clean Water Act (CWA).

While there is no impact threshold for these widening projects, the Corps has the discretion to require an individual permit if it determines that the proposed impacts will have more than a minimal impact on the aquatic environment or on other environmental factors, or if the project would normally require an Environmental Impact Statement (EIS) under current Federal Highway Administration (FHWA) guidelines. Best-fit projects may include a small amount of new location roadway for components such as interchanges or intersections, provided the new location portion has been concurred upon by the merger team.

c. Minor widening projects, such as paving and/or widening secondary roads, or interchange improvements, when permanent impacts which result in a loss of waters of the U.S. from installation and/or extension of culverts and/or pipes will be less than or equal to 500 lf of stream and/or one (1) acre of wetland/non-tidal open water for each single and complete linear project*.

d. Stream relocation(s) associated with projects identified in a-c above. Stream relocation lengths are to be evaluated independently and are not included within each respective maximum limit threshold for the authorized actions stated above.

***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 U.S. (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 this RGP. 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.

Generally, off-site detours are preferred to avoid and minimize impacts to the human and natural environment. However, if an off-site detour is considered impracticable, then an on-site detour may be considered as a necessary component of the actions described above. Impacts from the detour may be considered temporary and may not require compensatory mitigation if the impacted area is restored to its pre-project condition after construction is complete. If the construction of a detour (on-site or off-site) includes standard undercutting methods, removal of all material and backfilling with suitable material is required.

1. Special Conditions.

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

b. If the project will not impact a designated “Area of Environmental Concern” (AEC) in the twenty (20) counties of North Carolina covered by the North Carolina Coastal Area Management Act (CAMA), then a consistency submission is not required. If the project will impact a designated AEC and meets the definition of “development”, then the applicant must

obtain the required CAMA permit. Development activities 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).

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

c. Discharges into Waters of the U.S. designated by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are prohibited during the period between February 1 and June 30, without prior written approval from NCDMF, NCWRC, National Marine Fisheries Service (NMFS), and the Corps. Discharges into waters of the U.S. designated by NCDMF as primary nursery areas and discharges into waters of the U.S. designated by NCWRC as primary nursery areas in inland waters shall be coordinated with NCDMF (per existing agreement with NCDMF) and NCWRC prior to being authorized by this RGP. Coordination with NCDMF and NCWRC may result in a required construction moratorium during periods of significant biological productivity or critical life stages.

The applicant should contact:

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

North Carolina Wildlife Resources Commission
Habitat Conservation Program Manager
1721 Mail Service Center
Raleigh, NC 27699-1721
Telephone (919) 733-7638

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

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

f. If the project is located within the twenty (20) counties of North Carolina designated as coastal counties by CAMA, then all pipe and culvert inverts will be buried at least one foot below normal bed elevation when they are placed within the Public Trust AEC and/or the Estuarine Waters AEC as designated by CAMA. If the project is not located within the twenty (20) counties of North Carolina designated as coastal counties by CAMA, then culvert inverts will be buried at least one foot below the bed of the stream for culverts greater than 48 inches in diameter. 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 potential for destabilization of the channel and head cutting upstream should be considered in the placement of the culvert. A waiver from the depth specifications in this condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this condition would result in more adverse impacts to the aquatic environment. Culverts placed in wetlands do not have to be buried.

g. No work shall be authorized by this RGP within the twenty coastal counties, as defined by the NCDCM, without prior consultation with NOAA Fisheries. For each activity reviewed by the Corps where it is determined that the activity may affect Essential Fish Habitat (EFH) for federally managed species, an EFH Assessment shall be prepared by the applicant and forwarded to the Corps and NOAA Fisheries for review and comment prior to authorization of work.

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

i. No activity may result in substantial permanent disruption of the movement of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area. 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. It is acceptable to use rock vanes at culvert outlets to ensure, enhance, or maintain aquatic passage. Pre-formed scour holes are acceptable when designed for velocity reduction. The width, height, and gradient of a proposed opening 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 gauge data, if available. In the absence of such data, bankfull flow can be used as a comparable level. Where adjacent floodplain is available, flows exceeding bank-full should be accommodated by installing culverts at the floodplain elevation, if practicable. If multiple culverts are used, the construction of floodplain benches and/or sills to maintain base flow is required, if practicable.

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

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

l. In cases where new alignment approaches are to be constructed and the existing approach fill in waters of the U.S. is to be abandoned and no longer maintained as a roadway, the

abandoned fill shall be removed and the area will be restored to preexisting wetland/stream conditions and elevations, to include restoring natural hydrology and stream corridors, and reestablishing native vegetation/riparian corridors, to the extent practicable. This activity may qualify as compensatory mitigation credit for the project and will be assessed on a case-by-case basis in accordance with Special Conditions “q” and “r” below. A restoration plan detailing this activity will be required with the submittal of the PCN.

m. 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. 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).

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

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

p. Before discharging dredged or fill material into waters of the U.S. in the twenty-five (25) mountain counties of North Carolina, the applicant will submit a PCN to the NCWRC and the Corps concurrently. The PCN shall summarize alternatives to conducting work in mountain trout waters considered during the planning process, detail why alternatives were or were not selected, and contain a compensatory mitigation plan for all unavoidable adverse impacts to mountain trout waters. For proposals where a bridge is replaced with a culvert, the PCN must also include details of any on-site evaluations that were conducted to determine that installation of a culvert will not adversely affect passage of fish or other aquatic biota at the project site. This information must include factors such as the proposed slope of the culvert and determinations of how the slope will be expected to allow or impede passage, the necessity of baffles and/or sills to ensure passage, design considerations to ensure that expected baseflow will be maintained for passage and that post-construction velocities will not prevent passage, site conditions that will or will not allow proper burial of the culvert, existing structures (e.g., perched culverts, waterfalls, etc.) and/or stream patterns up and downstream of the culvert site that could affect passage and bank stability, and any other considerations regarding passage. The level of detail for this information should be based on site conditions (i.e., culverts on a slope over 3% will most likely

require more information than culverts on a slope that is less than 1%, etc.). Also, in order to evaluate potential impacts, describe bedforms that will be impacted by the proposed culvert – e.g., pools, glides, riffles, etc. The NCWRC will respond both to the proponent and directly to the Corps.

The twenty-five (25) designated trout counties of North Carolina include Alleghany, Caldwell, Watauga, Ashe, Mitchell, Wilkes, Avery, Burke, Stokes, Surry, Buncombe, Henderson, Polk, Cherokee, Jackson, Rutherford, Clay, Macon, Swain, Graham, Madison, Transylvania, Haywood, McDowell, and Yancey.

The applicant may contact NCWRC at:

North Carolina Wildlife Resources
Commission
Ms. Marla Chambers
Western NCDOT Permit Coordinator
206 Charter Street
Albemarle, NC 28001
Office: 704-982-9181

q. Compensatory mitigation will be required for permanent impacts resulting in a loss of waters of the U.S., including wetlands, from culverts/pipes and associated fill. Mitigation will also be required for stream relocation projects. The applicant will attach a proposed mitigation plan to the PCN. Mitigation proposals will be in accordance with currently approved Wilmington District and/or Corps-wide mitigation regulations and guidance. The Corps Project Manager will make the final determination concerning the appropriate amount and type of mitigation.

r. Stream relocation(s) associated with projects may be authorized under this RGP. As stated above, mitigation will be required for all relocation projects. If the stream relocation is conducted in accordance with the requirements stated below in 1-5, the relocated segment of stream may* be considered toward reducing the amount of compensatory mitigation required. A relocation plan must be submitted with the PCN that addresses all factors required within the current Wilmington District, Corps of Engineers Stream Mitigation Guidelines, which can include, but may not be limited to:

(1) The relocated stream has pattern, profile, and dimension based on natural channel design. If natural channel design construction is not possible due to site constraints, the relocated stream must have pattern, profile, and dimension similar to, or better than, the existing stream. Note that site constraints do not include those situations where NCDOT chooses not to acquire additional adjacent property that is available for purchase.

(2) The new stream meets the current buffer requirements as stated in current District stream mitigation guidance. If the required buffer widths cannot be obtained, a project-by-project decision will be completed to determine if additional compensatory mitigation is required.

(3) The new location allows the relocated stream to remain stable (e.g., in a

valley vs. on a slope, no bends that will impact stability, etc.).

(4) There is no loss of channel for any reason (e.g., old channel is 200' and new channel is 150' = 50' channel loss; part of the new channel is put in a culvert; the new channel (sides and bottom) is hardened with concrete, rip rap, etc.).

(5) The Corps will determine if monitoring and reporting will be required for a specific project and the parameters of any required monitoring and reporting. If monitoring is required, a monitoring plan must be included with the PCN and meet current requirements.

All relocation plans must clearly depict both the existing channel and the proposed (relocated) channel.

* Conducting stream relocation(s) in accordance with 1-5 above may not fully compensate for the impact and may require additional compensatory mitigation. The Corps Project Manager will determine if the proposed amount of mitigation is adequate on a project-by-project basis.

If stream relocation cannot be conducted in accordance with 1-5 above, mitigation at a 2:1 ratio will typically be required unless: (1) the applicant provides a Stream Quality Assessment Worksheet or NCSAM documentation (when available) that supports a different mitigation ratio; (2) the Corps Project Manager determines that the relocated stream, while not in full compliance with 1-5 above, warrants partial mitigation, or; (3) the Corps determines that the existing stream is an excellent quality stream, in which case a 3:1 mitigation ratio may be required. The Corps Project Manager will make the final determination concerning the appropriate amount and type of mitigation.

If the Corps determines that the proposed stream relocation is of such a magnitude that it cannot be authorized by this RGP, an Individual Permit will be required.

s. The applicant shall sign and return the compliance certificate that is attached to the RGP verification letter.

t. In the event that any Federal agency maintains an objection or any required State authorization is outstanding, no notice to proceed will be given until objections are resolved and State authorizations are issued.

u. The Corps may place additional special conditions, limitations, or restrictions on any verification of the use of RGP 31 on a project-by-project basis.

2. General Conditions.

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

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

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

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

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

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

g. The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the U.S. and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the affected water of the U.S. to its former conditions.

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

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

j. This permit does not authorize any injury to the property or rights of others.

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

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

(1) Damages to the permitted project or uses thereof as a result of other permitted

or unpermitted activities or from natural causes.

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

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

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

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

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

n. This RGP does not authorize any activity, which the District Engineer determines, after any necessary investigations, will adversely affect:

(1) Rivers named in Section 3 of the Wild and Scenic Rivers Act (15 U.S.C. 1273), those proposed for inclusion as provided by Sections 4 and 5 of the Act, and wild, scenic and recreational rivers established by state and local entities.

(2) Sites included in or determined eligible for listing in the National Registry of Natural Landmarks.

(3) NOAA designated marine sanctuaries, National Estuarine Research Reserves, and coral reefs.

(4) Submerged Aquatic Vegetation (SAV) as defined by the N.C. Division of Marine Fisheries at 15A NCAC 03I .0101(4)(i)).

o. Endangered Species.

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

(2) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees (and when FHWA is the lead federal agency) must provide the district engineer with the appropriate documentation to demonstrate compliance with

those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the RGP activity, or whether additional ESA consultation is necessary.

(3) Non-federal permittees must submit a PCN 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 PCN must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-federal applicant of the Corps’ determination within 45 days of receipt of a complete PCN 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 that 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.

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

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

(6) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS 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.

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

q. For proposed activities the sixteen counties listed below, applicants must provide a

copy of the PCN to the USFWS, 160 Zillicoa Street, Asheville, North Carolina 28801. This PCN must be sent concurrently to the USFWS and the Corps Project Manager for that specific county.

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

Applicants may contact the appropriate USFWS office listed below or the US Army Corps of Engineers:

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

Asheville USFWS 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 USFWS Office counties: all counties east of and including Richmond, Montgomery, Randolph, Guilford, and Rockingham Counties.

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

s. The permittee must make every reasonable effort to perform the work authorized herein in a manner so as to minimize any adverse impact on fish, wildlife and natural environmental values.

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

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

(2) The placement of riprap shall be limited to the areas depicted on submitted work plan drawings and not be placed in a manner that prevents or impedes fish passage.

(3) The riprap material shall be clean and free from loose dirt or any pollutant

except in trace quantities that will not have an adverse environmental effect.

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

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

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

u. The permittee must install and maintain, at his expense, any signal lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on authorized facilities. For further information, the permittee should contact the U.S. Coast Guard Marine Safety Office at (910) 772-2191.

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

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

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

y. All fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used.

z. All excavated material will be disposed of in approved upland disposal areas.

aa. Historic Properties.

(1) 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 (NRHP), the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(2) Federal permittees (or when FHWA is the lead federal agency) should follow their own procedures for complying with the requirements of Section 106 of the NHPA. Federal 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 this RGP activity, or whether additional Section 106 consultation is necessary.

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

(4) The district engineer will notify the prospective permittee within 45 days of receipt of a complete PCN 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.

(5) 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 will relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the 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.

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

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

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

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

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

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

A handwritten signature in black ink, appearing to read 'K.P. Landers Sr.', written over a horizontal line.

Kevin P. Landers Sr.
Colonel, U. S. Army
District Commander



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

S. JAY ZIMMERMAN
Director

May 8, 2017
Craven County
NCDWR Project No. 20170269
Highway 70 Improvements
TIP R-5516

APPROVAL of 401 WATER QUALITY CERTIFICATION and NEUSE BUFFER AUTHORIZATION with ADDITIONAL CONDITIONS

Mr. Philip S. Harris, III, P.E., CPM
Natural Environment Section Head
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Dear Mr. Harris:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of making improvements to U.S. Highway 70 and Slocum Road at the Cherry Point Military Base in Craven County:

Stream Impacts in the Neuse River Basin

Site	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1	--	--	329	132	461	329
2	111	--	--	--	111	*n/a
5	--	--	137	47	184	**n/a
6	--	--	166	51	217	166
7	--	--	311	43	354	311
Total	111	--	1,054	273	1,327	806

Total Stream Impact for Project: 1,327 linear feet.
*n/a= intermittent stream, no mitigation required.
**n/a=permanent impacts <150 ft., no mitigation required.

Wetland Impacts in the Neuse River Basin

Site	Wetland Type	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
1	riverine	0.10	--	0.12	0.16	--	0.38
2	riverine	--	--	--	0.02	--	0.02
3	riverine	0.16	--	0.04	--	--	0.20
4	riverine	--	--	--	0.03	--	0.03
6	riverine	0.16	--	0.06	0.03	--	0.25
7	riverine	0.28	--	0.01	0.20	--	0.49
7(utility)	riverine	0.01	0.01	--	--	--	0.02
Total		0.71	0.01	0.23	0.44	0.0	1.39

Total Wetland Impact for Project: 1.39 acres.

Neuse Riparian Buffer Impacts

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	25351	9690	15661	46983	15896	2360	13536	20304
2	4990	1231	3759	*11277	1804	0	1804	*2706
3	0	0	0	0	874	0	874	**1311
5	9538	0	9538	28614	5519	0	5519	8729
6	11717	7965	3752	11256	8272	1635	6637	9956
7	18155	16895	1260	3780	8105	2764	5341	8012
7 (utility)	215	0	215	n/a	728	0	728	n/a
Totals	69,966	35,781	34,185	101,910	41,198	6,759	34,439	51,018

*= Site 2 is on the same stream as sites 6 and 7, total impacts > 1/3 ac, mitigation required

**= Road impacts other than crossings of streams, mitigation required

Total Buffer Impact for Project: 111,164 square feet.

The project shall be constructed in accordance with your application dated received March 7, 2017 and additional information received May 8, 2017. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 3886. This certification corresponds to the Regional General Permit 198200031 issued by the Corps of Engineers. This approval is also valid for the Neuse Riparian Buffer Rules (15A NCAC 2B.0233). 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 NCDWR 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). Additional buffer impacts may require compensatory mitigation as described in 15A NCAC 2B.0233. For this approval to remain valid, you must adhere to the conditions listed in the attached certification(s) and any additional conditions listed below.

Condition(s) of Certification:

Project Specific Conditions

1. Compensatory mitigation for impacts to **1.38** acres of riverine wetlands is required. We understand that you have chosen to perform compensatory mitigation for unavoidable impacts to wetlands through debit of the Three Swamp Mitigation Site (ONEID 069-001) located in Pamlico and Craven County within the USGS hydrologic unit 03020204. The NCDOT On-site Debit Ledger for this site shall be updated to reflect the required amount of mitigation.
2. Compensatory mitigation for **806** linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Division of Mitigation Service (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. The DMS has indicated in a letter dated February 21, 2017 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the DMS Mitigation Banking Instrument signed July 28, 2010.
3. Compensatory mitigation for impacts to **33,970** square feet of protected riparian buffers in Zone 1 and **33,711** square feet of protected riparian buffers in Zone 2 shall be required. We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Division of Mitigation Services (DMS) (formerly NCEEP). Mitigation for unavoidable impacts to Neuse Riparian Buffers shall be provided in the Neuse River Basin and done in accordance with 15A NCAC .02B .0295. The DMS has indicated in a letter dated February 21, 2017 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed June 14, 2016.
4. For this authorization to be valid, DWR requires confirmation that the required buffer mitigation credits are available. If DMS cannot provide the required riparian buffer mitigation, the impacts to jurisdictional resources approved with this certification are not allowed prior to receipt of confirmation of the available buffer mitigation credits from another DWR approved source.

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 permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
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. [15A NCAC 02H.0506(b)(2)]

4. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage. [15A NCAC 02H.0506(b)(2)]
5. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
6. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]
7. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
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. [15A NCAC 02H.0506(b)(2)]
9. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
10. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
11. Channel relocations shall be completed and stabilized, and approved on site by NCDWR staff, prior to diverting water into the new channel. Stream banks shall be matted with coir-fiber matting. Vegetation used for bank stabilization shall be limited to native riparian vegetation, and should include establishment of a vegetated buffer on both sides of the relocated channel to the maximum extent practical. Also, rip-rap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage requested. Once the stream has been turned into the new channel, it may be necessary to relocate stranded fish to the new channel to prevent fish kills. [15A NCAC 02H .0506(b)(3)]
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 [15A NCAC 02H.0506(b)(3) and (c)(3)]:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

13. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]
14. Erosion control matting in riparian areas shall not contain a nylon mesh grid which can impinge and entrap small animals. Matting should be secured in place by staples, stakes, or wherever possible live stakes of native trees. Riparian areas are defined as a distance 25 feet from top of stream bank. [15A NCAC 02B.0224, .0225]
15. Pursuant to 15A NCAC 2B.0233(6), sediment and erosion control devices shall not be placed in Zone 1 of any Neuse Buffer without prior approval by the NCDWR. At this time, the 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.
16. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. To meet the requirements of NCDOT's NPDES permit NCS0000250, please refer to the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual for approved measures. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
17. All stormwater runoff shall be directed as sheetflow through stream buffers at non-erosive velocities, unless otherwise approved by this certification. (15A NCAC 2B.0233)
18. New roadside ditches that do not control for nitrogen and attenuate flow before discharging through the riparian buffer are prohibited [15A NCAC 2B.0233(6)]
19. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
20. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
21. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
22. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
23. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02H.0506(b)(2)]
24. 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. (15A NCAC 2B.0233)
25. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
26. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.[15A NCAC 02H.0506(b)(3) and (c)(3)]
27. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any

other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]

28. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
29. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
30. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission.
The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Bill Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center

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)946-6481 or garcy.ward@ncdenr.gov.

Sincerely,



S. Jay Zimmerman, Director
Division of Water Resources

Electronic copy only distribution:

Tom Steffens, US Army Corps of Engineers, Washington Field Office
Jay Johnson, Division 2 Environmental Officer
Colin Mellor, NC Department of Transportation
Chris Rivenbark, NC Department of Transportation
Travis Wilson, NC Wildlife Resources Commission
Jason Elliott, NCDOT, Natural Environment Section
Beth Harmon, Division of Mitigation Services
Garcy Ward, NC Division of Water Resources, Washington Regional Office
File Copy



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

S. JAY ZIMMERMAN
Director

NCDWR 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 Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR 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 _____

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES

WATER QUALITY GENERAL CERTIFICATION NO. 4088

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR US ARMY CORPS OF ENGINEERS

- **NATIONWIDE PERMIT NUMBER 14 (LINEAR TRANSPORTATION PROJECTS), AND**
- **REGIONAL GENERAL PERMIT 198200031 (NCDOT BRIDGES, WIDENING PROJECTS, INTERCHANGE IMPROVEMENTS)**

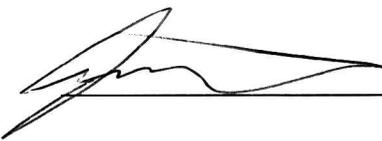
Water Quality Certification Number 4088 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to surface waters and wetland areas as described in 33 CFR 330 Appendix A (B) (14) of the US Army Corps of Engineers regulations and Regional General Permit 198200031.

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.

Effective date: March 19, 2017

Signed this day March 3, 2017

By



for S. Jay Zimmerman, P.G.
Director

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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 Resources (DWR):

- a) If any of the conditions of this Certification (listed below) cannot be met; or
- b) Any temporary or permanent impacts to wetlands, open waters and/or streams, except for construction of a driveway to a single family residential lot that are not determined to be part of a larger common plan of development as long as the driveway involves *less than 25 feet* of total stream impacts, including any in-stream stabilization needed for the crossing; or
- c) Any stream relocation or stream restoration; or
- d) Any high density project, as defined in 15A NCAC 02H .1003(2)(a) and by the density thresholds specified in 15A NCAC 02H .1017, which does not have a stormwater management plan reviewed and approved under a state stormwater program¹ or a state-approved local government stormwater program². Projects that have vested rights, exemptions, or grandfathering from state or locally-implemented stormwater programs and projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu programs **require written approval**; or
- e) Any impacts to waters, or to wetlands adjacent to waters, designated as: ORW (including SAV), HQW (including PNA), SA, WS-I, WS-II, Trout, or North Carolina or National Wild and Scenic River; or
- f) Any impacts to coastal wetlands [15A NCAC 07H .0205], or Unique Wetlands (UWL); or
- g) Any impact associated with a Notice of Violation or an enforcement action for violation(s) of NC Wetland Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), NC Surface Water or Wetland Standards (15A NCAC 02B .0200), or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200); or
- h) Any impacts to subject water bodies and/or state regulated riparian buffers along subject water bodies in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman Lake, Jordan Lake or Goose Creek Watersheds (or any other basin or watershed with State Regulated Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless*:
 - i) The activities are listed as “EXEMPT” from these rules; or
 - ii) A Buffer Authorization Certificate is issued by the NC Division of Coastal Management (DCM); or
 - iii) A Buffer Authorization Certificate or a Minor Variance is issued by a delegated or designated local government implementing a state riparian buffer program pursuant to 143-215.23

Activities included in this General Certification that do not meet one of the thresholds listed above do not require written approval.

¹ e.g. Coastal Counties, HQW, ORW, or state-implemented Phase II NPDES

² e.g. Delegated Phase II NPDES, Water Supply Watershed, Nutrient-Sensitive Waters, or Universal Stormwater Management Program

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I. ACTIVITY SPECIFIC CONDITIONS:

1. If this Water Quality Certification is used to access residential, commercial or industrial building sites, then all parcels owned by the applicant that are part of the single and complete project authorized by this Certification must be buildable without additional impacts to streams or wetlands. If required in writing by DWR, the applicant shall provide evidence that the parcels are buildable without requiring additional impacts to wetlands, waters, or state regulated riparian buffers. [15A NCAC 02H .0506(b)(4) and (c)(4)]
2. For road and driveway construction purposes, this Certification shall only be utilized from natural high ground to natural high ground. [15A NCAC 02H .0506(b)(2) and (c)(2)]
3. Deed notifications or similar mechanisms shall be placed on all lots with retained jurisdictional wetlands, waters, and state regulated riparian buffers within the project boundaries in order to assure compliance with NC Wetland Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), and/or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200). These mechanisms shall be put in place at the time of recording of the property or individual parcels, whichever is appropriate. [15A NCAC 02H .0506(b)(4) and (c)(4)]
4. For the North Carolina Department of Transportation, compliance with the NCDOT's individual NPDES permit NCS000250 shall serve to satisfy this condition. For all other projects that disturb one acre or more of land (including a project that disturbs less than one acre of land that is part of a larger common plan of development or sale); have permanent wetland, stream, or open water impacts; and are proposing new built-upon area shall comply with the following requirements: [15A NCAC 02H .0506(b)(5) and (c)(5)]
 - a. Stormwater management shall be provided throughout the entire project area in accordance with 15A NCAC 02H .1003. For the purposes of 15A NCAC 02H .1003(2)(a), density thresholds shall be determined in accordance with 15A NCAC 02H .1017.
 - b. Projects that have vested rights, exemptions, or grandfathering from state or locally-implemented stormwater programs do not satisfy this condition. Projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu programs do not satisfy this condition.
 - c. Projects that require written authorization from DWR shall submit the following with their application for review and approval:
 - i. For projects that have a stormwater management plan (SMP) reviewed under a state stormwater program¹ or a state-approved local government stormwater program² shall submit plans that show the location and approximate size of all proposed stormwater measures;

¹ e.g. Coastal Counties, HQW, ORW, or state-implemented Phase II NPDES

² e.g. Delegated Phase II NPDES, Water Supply Watershed, Nutrient-Sensitive Waters, or Universal Stormwater Management Program

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- ii. All other low density projects not covered above shall submit a completed low density supplement form with all required items; and
- iii. All other high density projects not covered above shall submit a completed SMP, including all appropriate stormwater control measure (SCM) supplemental forms and associated items, that complies with the high density development requirements of 15A NCAC 02H .1003.
- d. Projects that do not require written approval from DWR shall obtain approval of the SMP, when required, before any impacts authorized by this Certification occur.
- e. SMPs approved by DWR may be phased on a case-by-case basis. SMPs for each future phase must be approved before construction of that phase commences. Approved SMPs may not be modified without prior written authorization from DWR.

II. GENERAL CONDITIONS:

1. When written authorization is required, the plans and specifications for the project are incorporated into the authorization by reference and are an enforceable part of the Certification. Any modifications to the project require notification to DWR and may require an application submittal to DWR with the appropriate fee. [15A NCAC 02H .0501 and .0502]
2. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the impacts (including temporary impacts) as authorized in the written approval from DWR; or beyond the thresholds established for use of this Certification without written authorization. [15A NCAC 02H .0501 and .0502]

No removal of vegetation or other impacts of any kind shall occur to state regulated riparian buffers beyond the footprint of impacts approved in a Buffer Authorization or Variance or as listed as an exempt activity in the applicable riparian buffer rules. [15A NCAC 02B .0200]

3. In accordance with 15A NCAC 02H .0506(h), compensatory mitigation may be required for losses of greater than 150 linear feet of streams and/or greater than one (1) acre of wetlands. Impacts to isolated and other non-404 jurisdictional wetlands shall not be combined with 404 jurisdictional wetlands for the purpose of determining when impact thresholds trigger a mitigation requirement. For linear publicly owned and maintained transportation projects that are not determined to be part of a larger common plan of development by the US Army Corps of Engineers, compensatory mitigation may be required for losses of greater than 150 linear feet per stream.

Compensatory stream and/or wetland mitigation shall be proposed and completed in compliance with G.S. 143-214.11. For applicants proposing to conduct mitigation within a project site, a complete mitigation proposal developed in accordance with the most recent guidance issued by the US Army Corps of Engineers Wilmington District shall be submitted for review and approval with the application for impacts.

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4. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2 of Title 15A.
5. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0200]

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *NC DOT Sediment and Erosion Control Manual*.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*.

6. Sediment and erosion control measures shall not be placed in wetlands or waters except within the footprint of temporary or permanent impacts authorized under this Certification. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0501 and .0502]
7. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02B .0201]

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8. An NPDES Construction Stormwater Permit (NCG010000) is required for construction projects that disturb one (1) or more acres of land. The NCG010000 Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If the 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. [15A NCAC 02H .0506(b)(5) and (c)(5)]

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. [15A NCAC 02H .0506(b)(5) and (c)(5)]

9. All work in or adjacent to streams 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 to and written approval from DWR. [15A NCAC 02H .0506(b)(3) and (c)(3)]
10. If activities must occur during periods of high biological activity (e.g. 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. [15A NCAC 02H .0506 (b)(2) and 15A NCAC 04B .0125]

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) shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium. A copy of the approval from the resource agency shall be forwarded to DWR.

Work within a designated trout watershed of North Carolina (as identified by the Wilmington District of the US Army Corps of Engineers), or identified state or federal endangered or threatened species habitat, shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

11. Culverts 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. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall 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 shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. [15A NCAC 02H .0506(b)(2) and (c)(2)]

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Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% 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.

If multiple pipes or barrels are required, they shall be designed to mimic the existing stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided.

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 (e.g. rock ladders, cross vanes, etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to DWR 60 calendar 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, including supporting documentation such as, a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to DWR a minimum of 60 calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then DWR 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 to and written approval from DWR.

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall 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 shall be used where practicable instead of rip-rap or other bank hardening methods.

12. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(5)]

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13. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. [15A NCAC 02B .0200 and 15A NCAC 02B .0231]
14. If concrete is used during 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. [15A NCAC 02B .0200]
15. All proposed and approved temporary fill and culverts shall be removed and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross sectional dimensions, planform pattern, and longitudinal bed profile. For projects that receive written approval, no temporary impacts are allowed beyond those included in the application and authorization. All temporarily impacted sites shall be restored and stabilized with native vegetation. [15A NCAC 02H .0506(b)(2) and (c)(2)]
16. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams shall be installed as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities* so as not to restrict stream flow or cause dis-equilibrium during use of this Certification. [15A NCAC 02H .0506(b)(2) and (c)(2)]
17. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original stream elevation and streambank contours are restored and maintained. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or in a manner that precludes aquatic life passage. [15A NCAC 02H .0506(b)(2)]
18. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. [15A NCAC 02H .0506(b)(2)]
19. Applications for rip-rap groins proposed in accordance with 15A NCAC 07H .1401 (NC Division of Coastal Management General Permit for construction of Wooden and Rip-rap Groins in Estuarine and Public Trust Waters) shall meet all the specific conditions for design and construction specified in 15A NCAC 07H .1405.

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20. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication and general equipment maintenance shall not take place within 50 feet of a waterbody or wetlands to prevent contamination by fuels and oils. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0211 (12)]
21. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance. [15A NCAC 02H .0506(b)(3) and (c)(3)]
22. In accordance with 143-215.85(b), the applicant shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.
23. If an environmental document is required under the State Environmental Policy Act (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. If an environmental document is required under the National Environmental Policy Act (NEPA), then this General Certification is not valid until a Categorical Exclusion, the Final Environmental Assessment, or Final Environmental Impact Statement is published by the lead agency. [15A NCAC 01C .0107(a)]
24. This General Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.
25. The applicant 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 DWR 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 DWR may revoke or modify a written authorization associated with this General Water Quality Certification. [15A NCAC 02H .0507(d)]
26. 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 a certificate of completion (available on the DWR website <https://edocs.deq.nc.gov/Forms/Certificate-of-Completion>). [15A NCAC 02H .0502(f)]

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27. 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. [15A NCAC 02H .0507(c)]
28. If the property or project is sold or transferred, the new Permittee shall be given a copy of this Certification (and written authorization if applicable) and is responsible for complying with all conditions. [15A NCAC 02H .0501 and .0502]

III. GENERAL CERTIFICATION ADMINISTRATION:

1. 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. An applicant for a CAMA permit under Article 7 of Chapter 113A of the General Statutes for which a Water Quality Certification is required shall only make one payment to satisfy both agencies; the fee shall be as established by the Secretary in accordance with 143-215.3D(e)(7).
2. This Certification neither grants nor affirms any property right, license, or privilege in any waters, or any right of use in any waters. This Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and this Certification does not create any prescriptive right or any right of priority regarding any usage of water. This Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded.
3. This Certification grants permission to the Director, an authorized representative of the Director, or DWR staff, upon the presentation of proper credentials, to enter the property during normal business hours. [15A NCAC 02H .0502(e)]
4. This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide Permit 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. This General Certification is rescinded when the US Army Corps of Engineers reauthorizes any of the corresponding Nationwide Permits and/or Regional General Permits or when deemed appropriate by the Director of the Division of Water Resources.
5. 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.

GC4088

6. The Director of the North Carolina Division of Water Resources 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 water or downstream waters are precluded.
7. Public hearings may be held prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Resources.

History Note: Water Quality Certification (WQC) Number 4088 issued March 3, 2017 replaces WQC 3886 issued March 12, 2012; WQC Number 3820 issued April 6, 2010; WQC Number 3627 issued March 2007; WQC Number 3404 issued March 2003; WQC Number 3375 issued March 18, 2002; WQC Number 3289 issued June 1, 2000; WQC Number 3103 issued February 11, 1997; WQC Number 2732 issued May 1, 1992; WQC Number 2666 issued January 21, 1992; WQC Number 2177 issued November 5, 1987.



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

S. JAY ZIMMERMAN
Director

June 29, 2017

Chris Rivenbark
NCDOT - Natural Environment Section
1598 MSC
Raleigh, NC 27699-1598

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7017 0530 0000 5470 4973
9590 9402 1725 6074 7978 29

Subject: CCPCUA Permit No. CU4040
NCDOT TIP project: R-5516
Interchange from US 70 to Slocum Rd at Cherry Point Military Base
Craven County

Dear Mr. Rivenbark:

In accordance with your application dated May 10, 2017 and associated documentation, we are forwarding Permit No. CU4040 for water use in the Central Coastal Plain Capacity Use Area in Craven County. This permit allows for the withdrawal of water for the purpose of dewatering borrow pits associated with road construction.

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 June 30, 2022, 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
Division of Water Resources

**North Carolina
Environmental Management Commission
Department of Environmental Quality**

**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

NCDOT TIP project: **R-5516**

Interchange from US 70 to Slocum Road at Cherry Point Military Base in Craven County.
Total length of project is 1.257 miles.

FOR THE

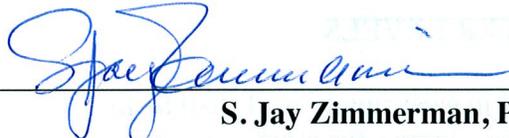
Withdrawal and Use of Water in Craven, North Carolina in accordance with the grantee's application dated May 10, 2017, and any supporting data submitted with the application, all of which are filed with the Department of Environmental Quality and are considered part of this Permit.

This Permit shall be effective from the date of its issuance until June 30, 2022, and shall be subject to the specified conditions and/or limitations contained in Sections I - X of this Permit.

Permit issued this the 29th day of June, 2017.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

BY _____



**S. Jay Zimmerman, P.G.
Director, Division of Water Resources**

By Authority of the Secretary of the Department of Environmental Quality

PERMIT #CU4040

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, Water Quality Regional Operations Section, 943 Washington Square Mall • Washington, NC 27889.

B. ACCESS TO FACILITIES

The Environmental Management Commission and employees of the Department of Environmental Quality 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 Quality

Mail To: Division of Water Resources - NC DEQ
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 (R-5516)** Permit #: **CU4040** Sheet ____ of ____

Well/Sump ID →	meter readings ↓	gallons per day	meter readings ↓	gallons per day	meter readings ↓	gallons per day	Total Withdrawn
	Beginning 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							

Name: _____ Signature: _____ Date: _____

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

North Carolina Department Of Environmental Quality

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

Name: _____
Signature: _____
Date: _____

Month _____ Year _____ Facility Name: **NCDOT (R-5516)** Permit #: **CU4040** 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

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CRAVEN COUNTY

LOCATION: INTERCHANGE FROM US 70 TO SLOCUM ROAD AT CHERRY POINT MILITARY BASE

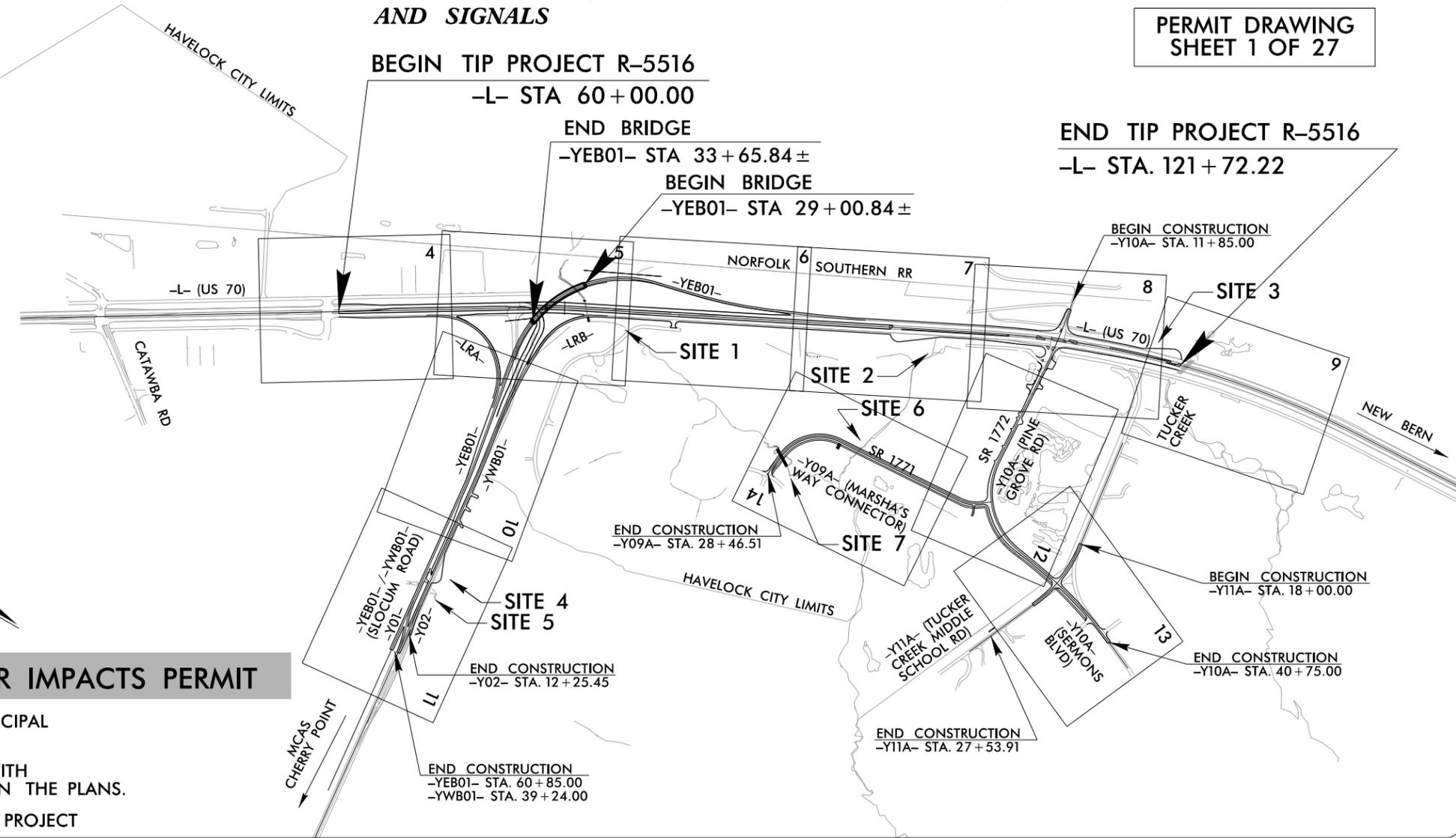
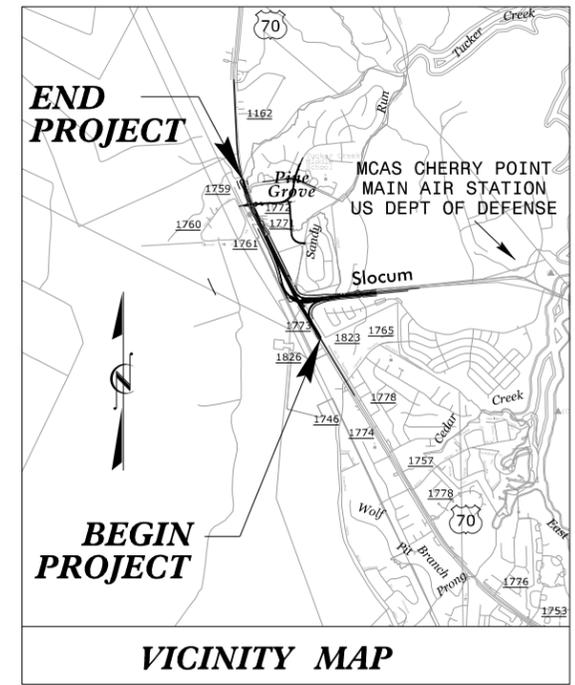
TYPE OF WORK: GRADING, PAVING, DRAINAGE, CULVERT, STRUCTURE, AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5516	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45492.1.1	NHS-0070(154)	P.E.	
45492.2.1	NHS-0070(154)	RW & UTIL.	

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 1 OF 27

TIP PROJECT: R-5516

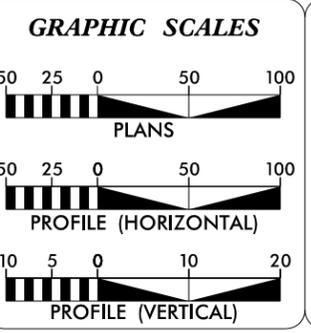


WETLAND AND SURFACE WATER IMPACTS PERMIT

PORTIONS OF THIS PROJECT ARE WITHIN THE MUNICIPAL BOUNDARY OF THE CITY OF HAVELOCK.

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

METHOD "III" CLEARING SHALL BE USED ON THIS PROJECT



DESIGN DATA

ADT 2017 =	32,900
ADT 2040 =	38,100
K =	10 %
D =	70 %
T =	12 % *
V =	60 MPH
* TTST 2 %	DUAL 10%
FUNC CLASS =	PRINCIPAL ARTERIAL STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5516 =	1.169 MILES
LENGTH STRUCTURE TIP PROJECT R-5516 =	0.000 MILES
TOTAL LENGTH TIP PROJECT R-5516 =	1.169 MILES

Prepared in the Office of:

AECOM
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
June 30, 2015

LETTING DATE:
June 20, 2017

NC FIRM LICENSE No: F-0342
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259(FAX)

LEN HILL, PE
PROJECT ENGINEER

TOM HILDEBRAND, PE
PROJECT DESIGN ENGINEER

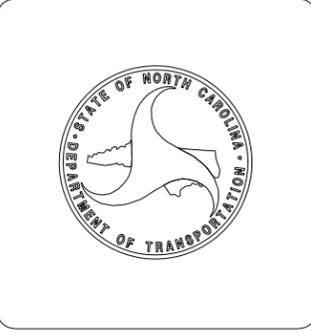
GARY LOVERING, PE
PROJECT ENGINEER
NCDOT ROADWAY DESIGN

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



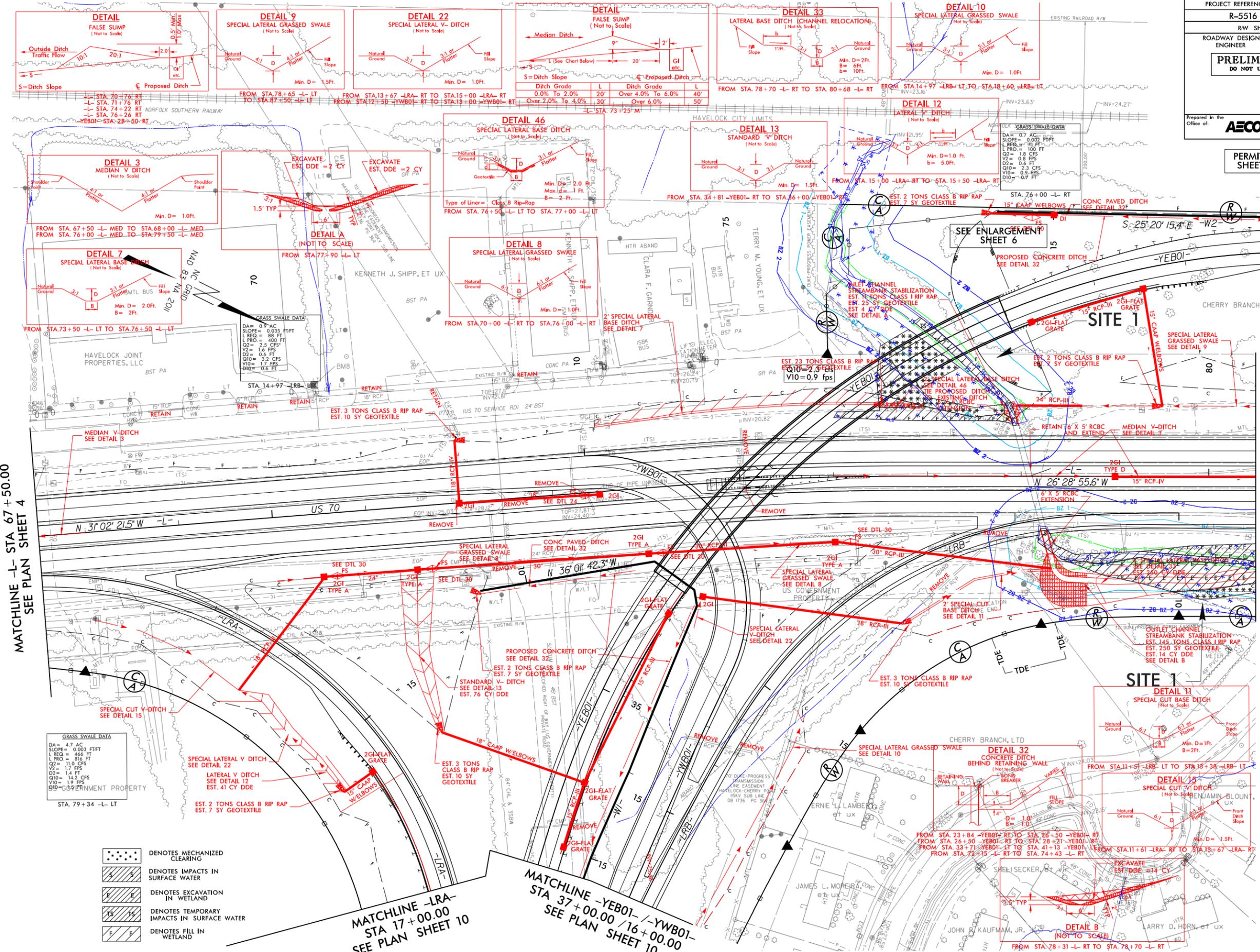
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CONTRACT:

Revised 5/5/2017

PROJECT REFERENCE NO.	SHEET NO.
R-5516	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	
AECOM	
NC FIRM LICENSE No. F-0342 70 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 FAX	

PERMIT DRAWING SHEET 2 OF 27



GRASS SWALE DATA

DA = 4.7 AC	SLOPE = 0.003 F/FT
L REQ = 466 FT	L PRO = 816 FT
Q2 = 11.0 CFS	Q10 = 1.7 CFS
D2 = 1.4 FT	Q10 = 14.2 CFS
V10 = 1.9 FPS	D10 = 0.6 FT
D10 = 0.6 FT	

STA. 79+34 -L- LT

- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES EXCAVATION IN WETLAND
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND



DATE/TIME: 11/27/16 AM
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REVISIONS

MATCHLINE -L- STA 67 + 50.00
SEE PLAN SHEET 4

MATCHLINE -LRA- STA 17 + 00.00
SEE PLAN SHEET 10

MATCHLINE -L- STA 80 + 50.00
SEE PLAN SHEET 6

MATCHLINE -YEB01- STA 26 + 00.00
SEE PLAN SHEET 6

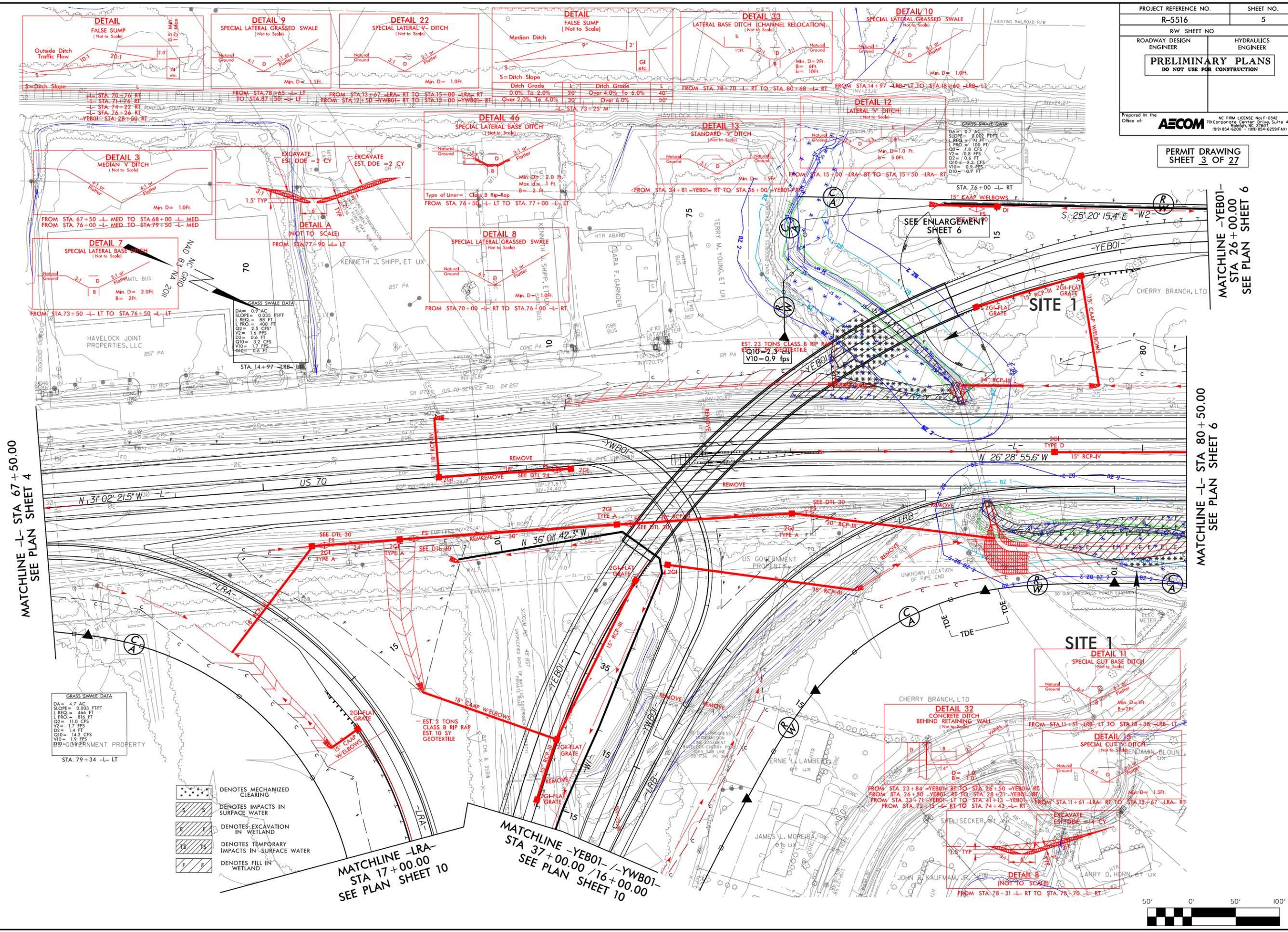
Revised 5/5/2017

REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
R-5516	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	
AECOM	NC FIRM LICENSE No. F-0342 70 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (fax)

PERMIT DRAWING SHEET 3 OF 27



MATCHLINE -L- STA 67 + 50.00
SEE PLAN SHEET 4

GRASS SWALE DATA

DA = 4.7 AC
SLOPE = 0.003 F/FT
L REQ = 466 FT
L PRO = 816 FT
Q2 = 11.0 CFS
Q2 = 1.7 FPS
Q10 = 1.4 FT
Q10 = 14.2 CFS
V10 = 1.9 FPS
D10 = 0.9 FT
D10 = 0.9 FPS

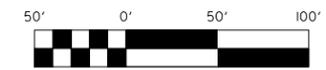
STA. 79+34 -L- LT

- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES EXCAVATION IN WETLAND
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND

MATCHLINE -LRA- STA 17 + 00.00
SEE PLAN SHEET 10

MATCHLINE -L- STA 80 + 50.00
SEE PLAN SHEET 6

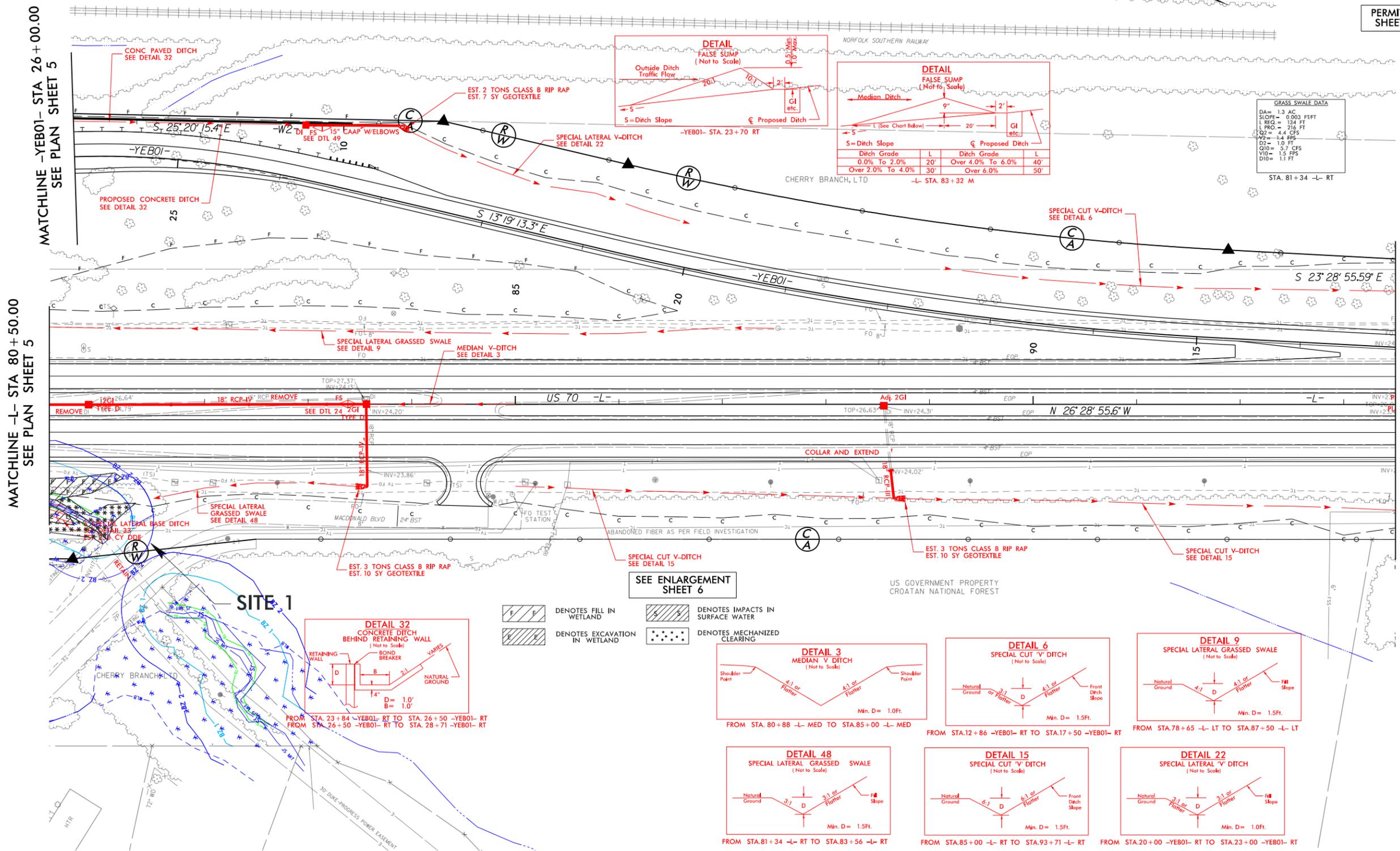
MATCHLINE -YEB01- STA 26 + 00.00
SEE PLAN SHEET 6



Revised 5/5/2017

PROJECT REFERENCE NO.	SHEET NO.
R-5516	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	
AECOM	
NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	

PERMIT DRAWING SHEET 4 OF 27



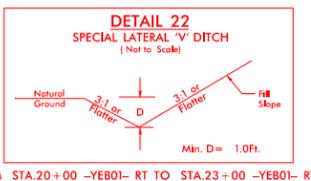
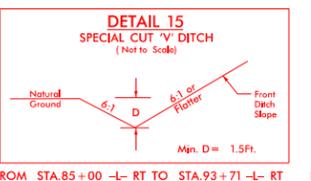
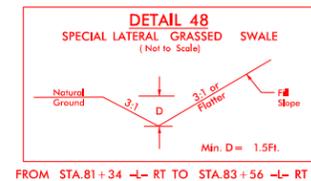
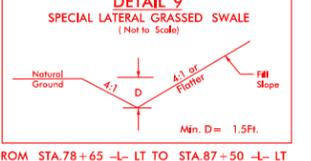
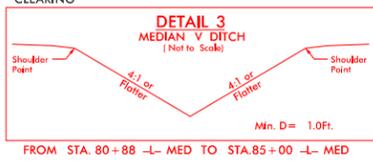
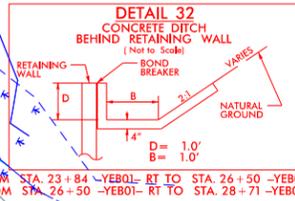
GRASS SWALE DATA

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 V2 = 1.4 FPS
 D2 = 1.0 FT
 Q10 = 5.7 CFS
 V10 = 1.5 FPS
 D10 = 1.1 FT

STA. 81+34 -L- RT

SEE ENLARGEMENT SHEET 6

	DENOTES FILL IN WETLAND		DENOTES IMPACTS IN SURFACE WATER
	DENOTES EXCAVATION IN WETLAND		DENOTES MECHANIZED CLEARING



DATE/TIME: 11/27/27 AM
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MATCHLINE -YEB01- STA 26+00.00
SEE PLAN SHEET 5

MATCHLINE -L- STA 80+50.00
SEE PLAN SHEET 5

MATCHLINE -L- /-YEB01- STA 93+50.00 /13+07.88
SEE PLAN SHEET 7

REVISIONS

Revised 5/5/2017

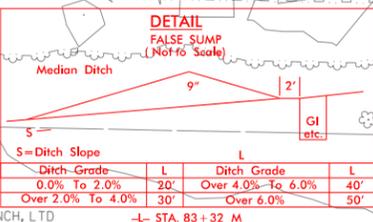
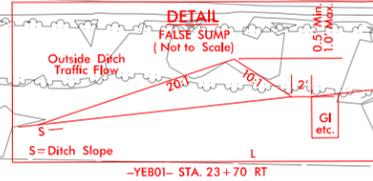
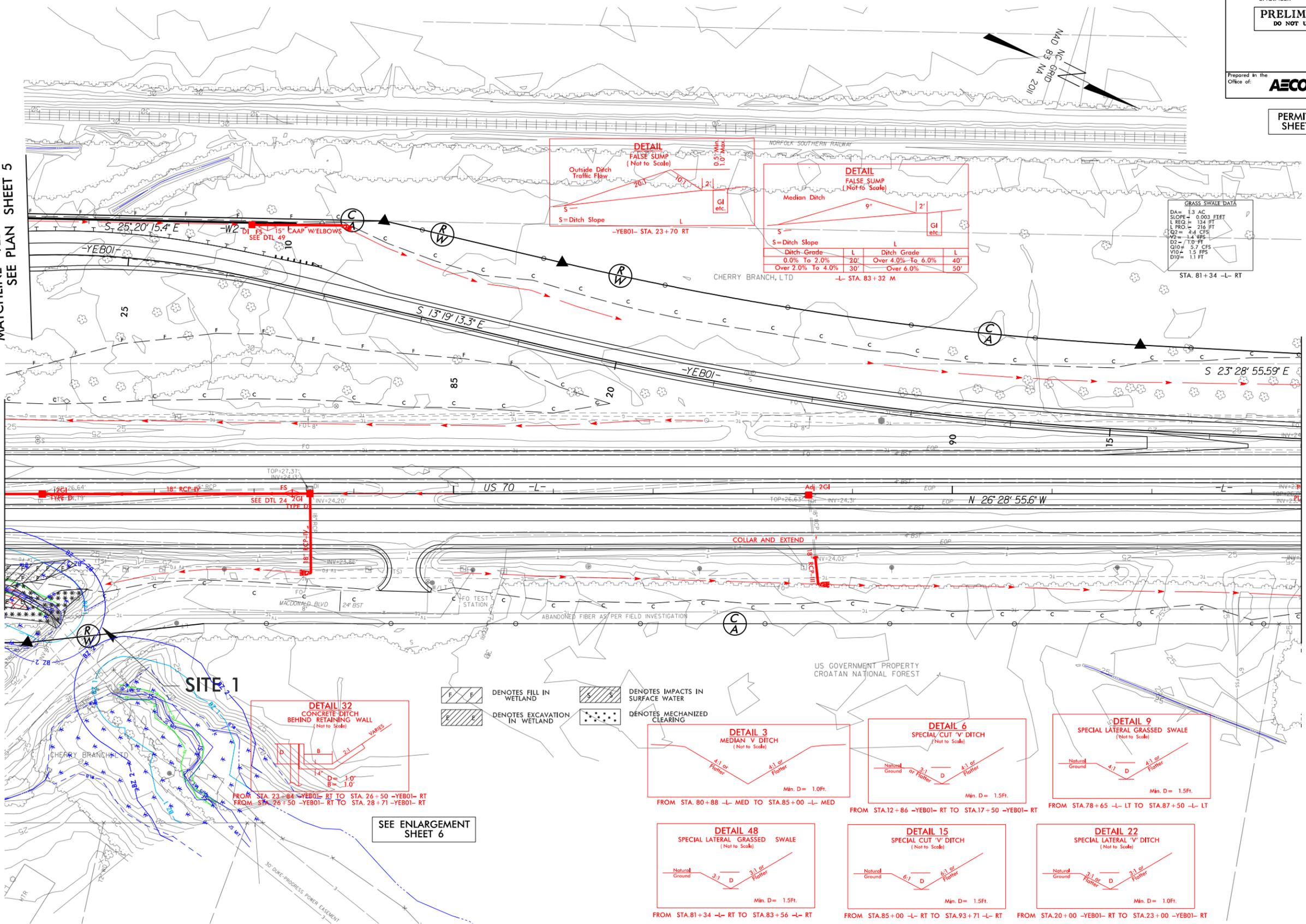
PROJECT REFERENCE NO.	SHEET NO.
R-5516	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
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Prepared in the Office of:	
AECOM	
NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (fax)	

PERMIT DRAWING SHEET 5 OF 27

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SEE PLAN SHEET 5

MATCHLINE -L- STA 80+50.00
SEE PLAN SHEET 5

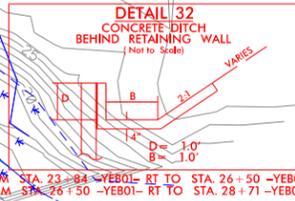
MATCHLINE -L- /-YEB01-
STA 93+50.00 /13+07.88
SEE PLAN SHEET 7



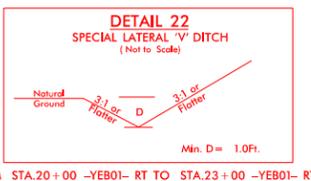
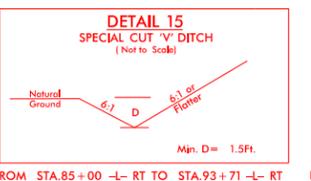
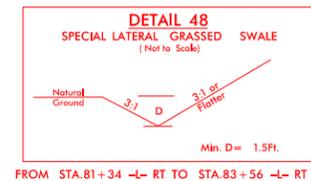
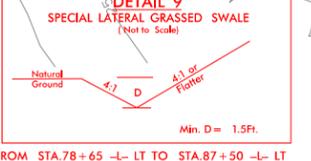
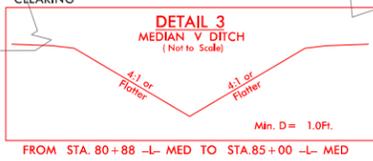
GRASS SWALE DATA

D1 = 1.3 AC
SLOPE = 0.003 E/F/F
L REQ = 134 FT
L PRO = 216 FT
D2 = 3.4 CFS
D2 = 1.4 FPS
D2 = 7.0 FT
Q10 = 5.7 CFS
Q10 = 1.5 FPS
D10 = 1.1 FT

STA. 81+34 -L- RT



- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING



SEE ENLARGEMENT SHEET 6



DATE/TIME: 11/27/13 AM
DWG: R:\Hydraulics\PERMITS\ENVIRONMENTAL\DRWINGS\5516\14_Prm_sht_06.dwg

WETLAND AND SURFACE WATER IMPACTS PERMIT

DENOTES EXCAVATION IN WETLAND

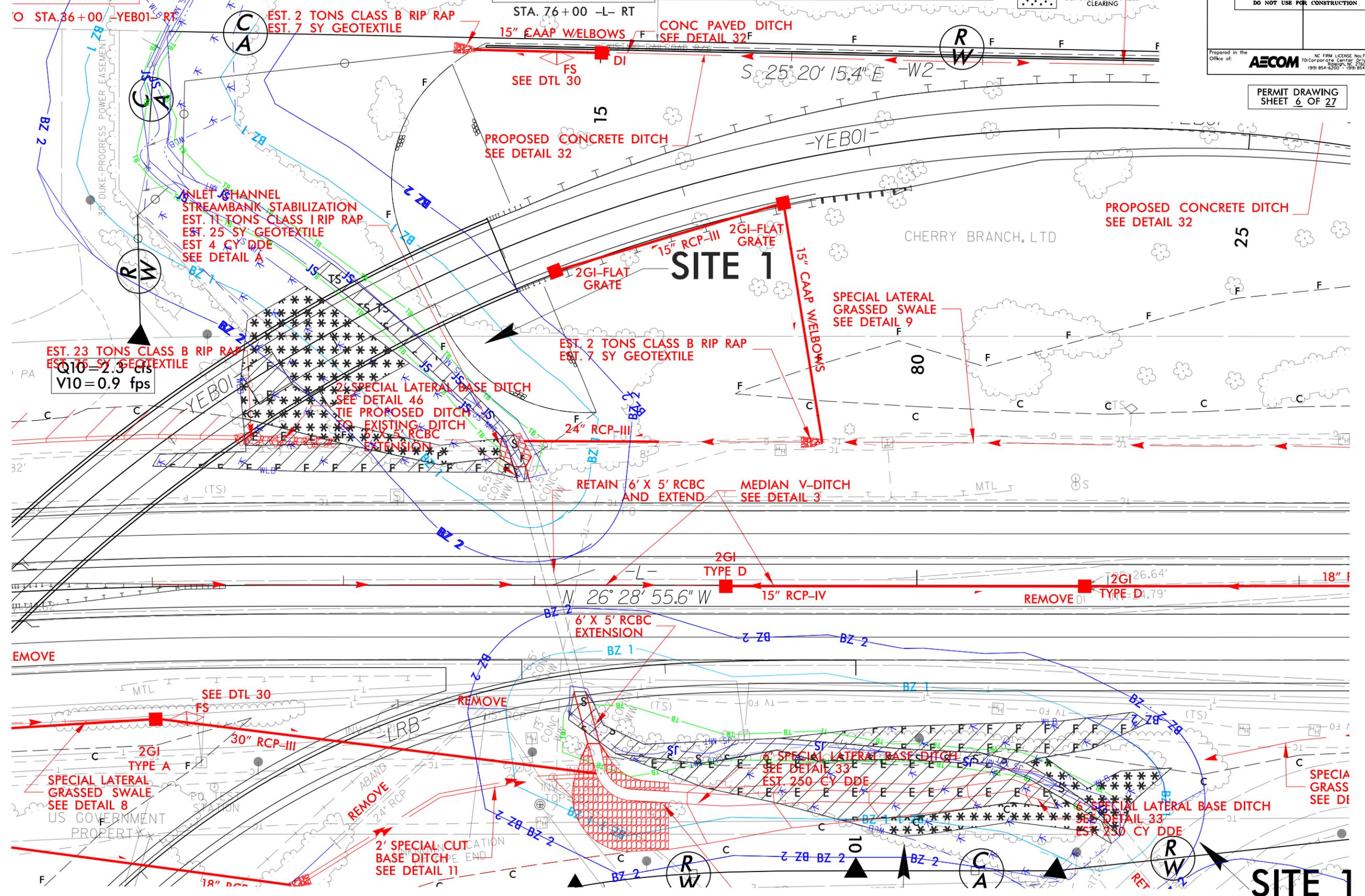
 DENOTES FILL IN WETLAND

 DENOTES IMPACTS IN SURFACE WATER

 DENOTES MECHANIZED CLEARING

PROJECT REFERENCE NO. R-5516	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING SHEET 6 OF 27



EST. 23 TONS CLASS B RIP RAP
 EST. 75 SY GEOTEXTILE
 Q10=2.3 cfs
 V10=0.9 fps

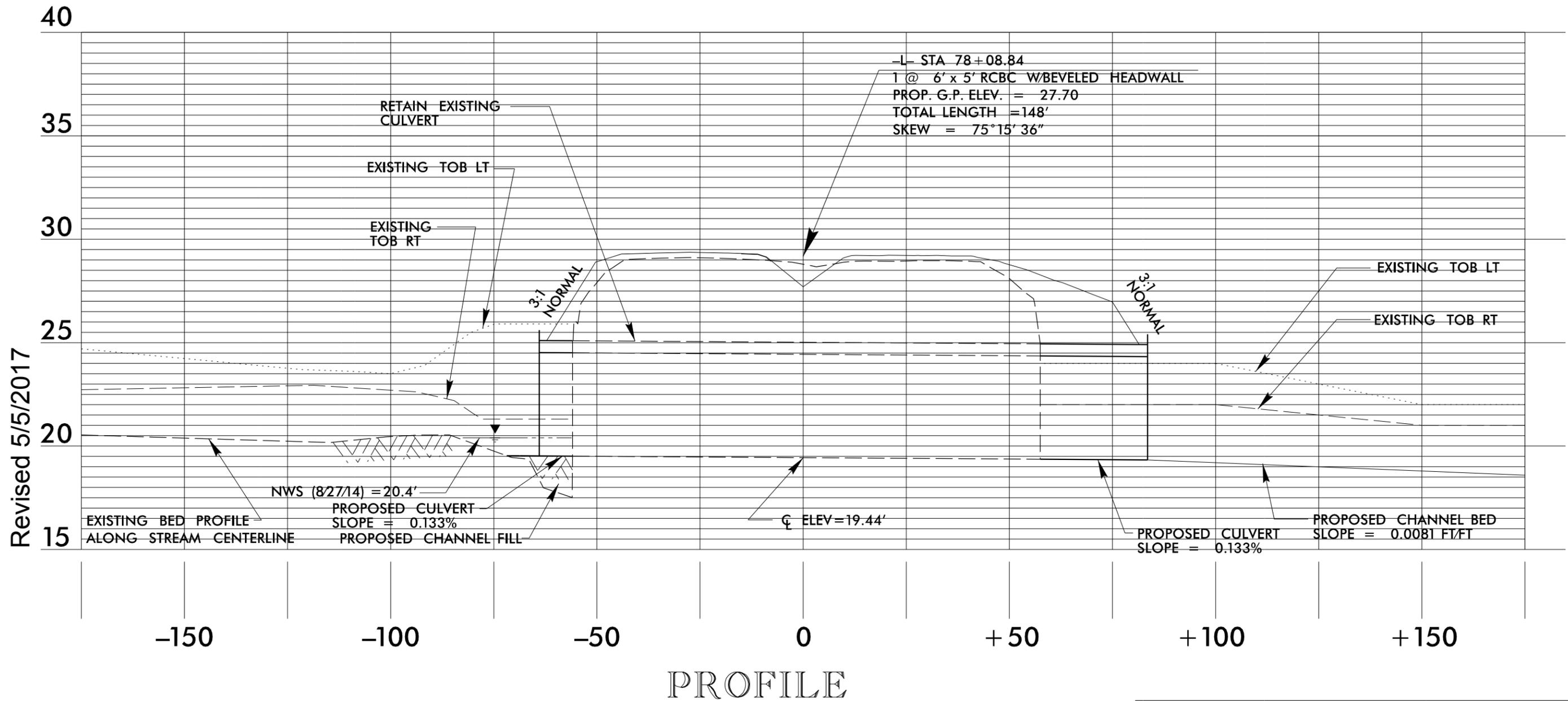
Revised 5/5/2017

REVISIONS



DATE/TIME: 11/27/14 AM
 CON: HYDRAULICS/PERMITS/5 ENVIRONMENTAL/ORD/MISS/556 Jyo Prim Job 15_2114dgp

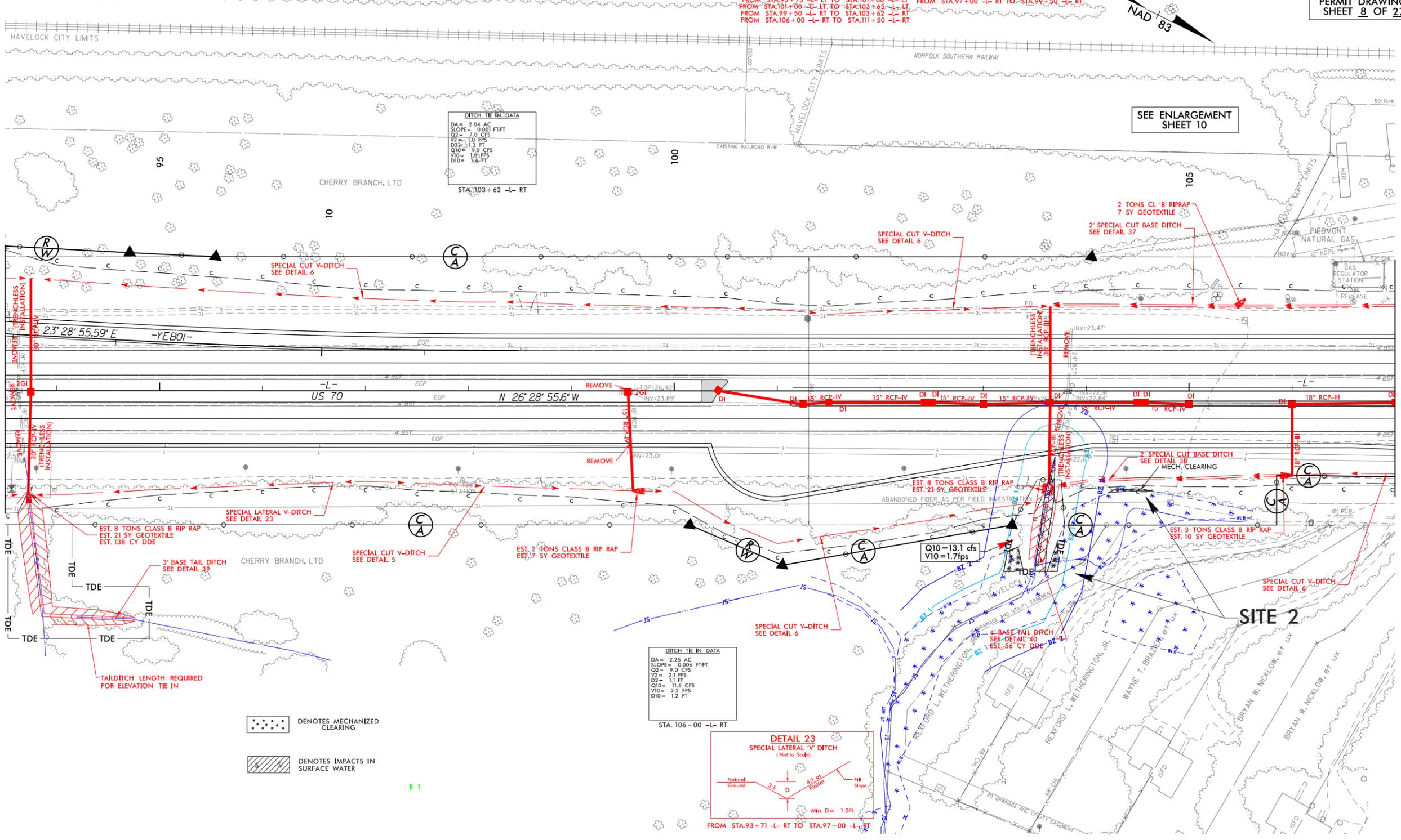
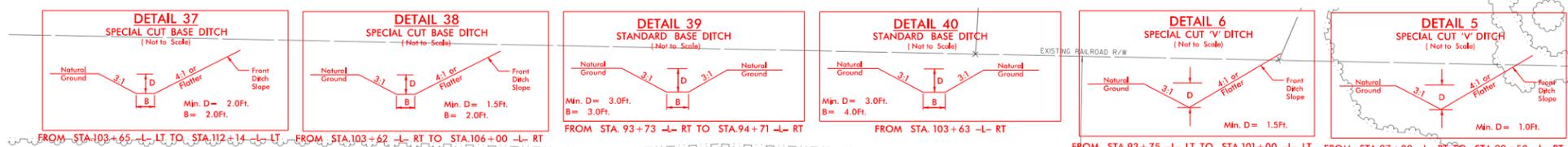
SITE 1 – PROFILE VIEW ALONG STRUCTURE



Revised 5/5/2017

Native Material consists of material that is excavated from the stream bed or floodplain at the project site during culvert construction. Only material that is excavated from the stream bed may be used to line the low flow culvert barrel. Rip rap may be used to supplement the Native Material in the high flow culvert barrel(s). If rip rap is used to line the high flow culvert barrel(s), Native Material should be placed on top to fill voids and provide a flat surface for animal passage. Native Material is subject to approval by the engineer and may be subject to permit conditions.

NCDOT
 DIVISION OF HIGHWAYS
 CRAVEN COUNTY
 PROJECT: 45492.1.1 (R-5516)
 INTERCHANGE FROM US 70 TO
 SLOCUM ROAD AT CHERRY
 POINT MILITARY BASE
 SITE 1
 PERMIT DRAWING
 SHEET 7 OF 27



MATCHLINE -L- /-YEB01-
STA 93+50.00 /STA 13+07.88
SEE PLAN SHEET 6

MATCHLINE -L- STA 107+00.00
SEE PLAN SHEET 8

- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER

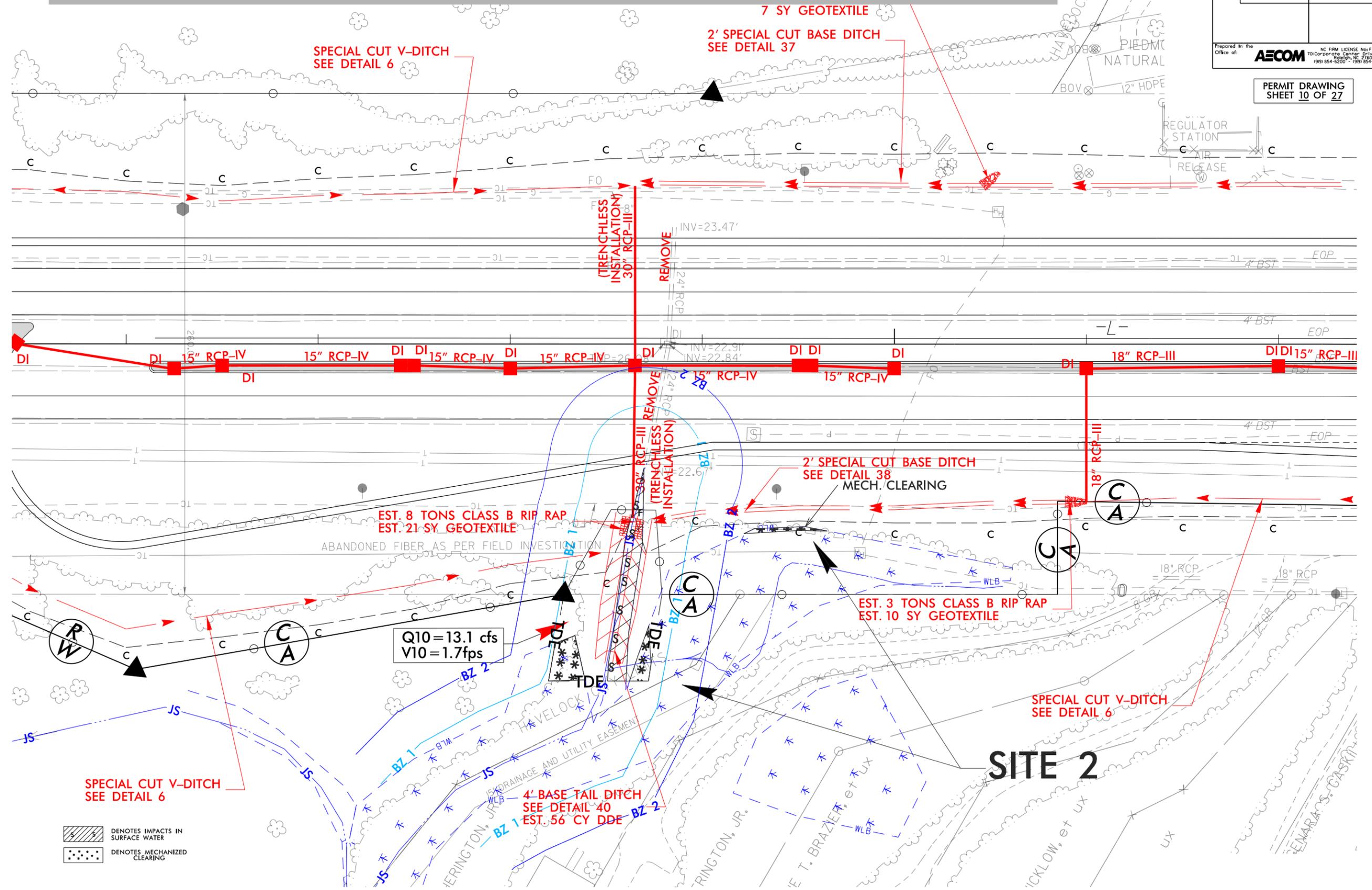


REVISIONS

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-5516	
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of: AECOM <small>NC FIRM LICENSE No. F-0342 701 Corporate Center Dr., Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259 (FAX)</small>	

PERMIT DRAWING
SHEET 10 OF 27



-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES MECHANIZED CLEARING

SITE 2



REVISIONS

DATE/TIME: 3/07/33 PM
 C:\Users\AECOM\Documents\ENVIRONMENTAL\DRWINGS\5516\10\10_Prm_10_17_17.smc.dgn

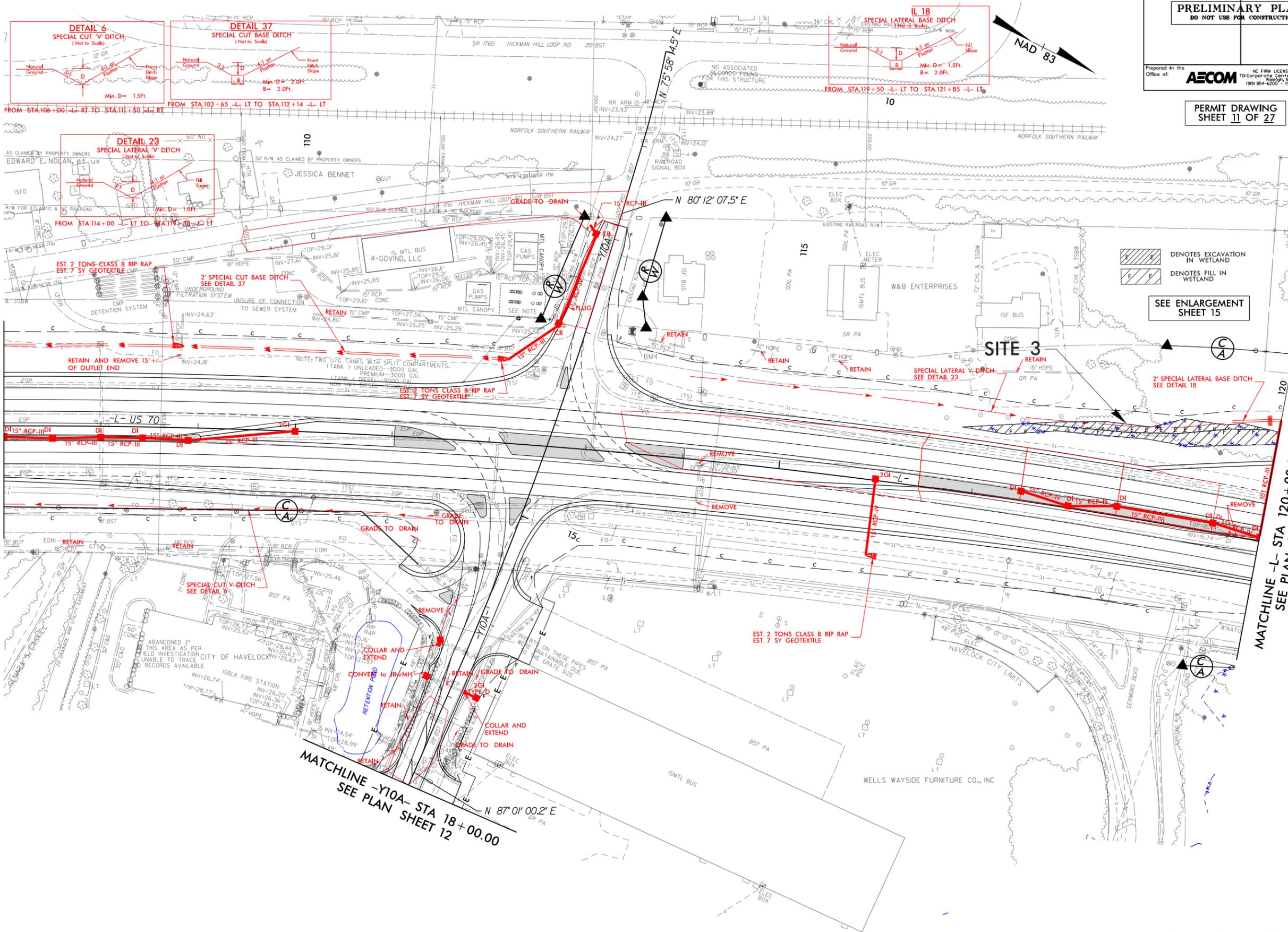
PROJECT REFERENCE NO.	SHEET NO.
R-5516	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	
AECOM	NC FIRM LICENSE No. F-0342 70 Corporate Center Blvd., Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 FAX

PERMIT DRAWING
SHEET 11 OF 27

MATCHLINE -L- STA 107+00.00
SEE PLAN SHEET 7

MATCHLINE -L- STA 120+00.00
SEE PLAN SHEET 9

MATCHLINE -Y10A- STA 18+00.00
SEE PLAN SHEET 12



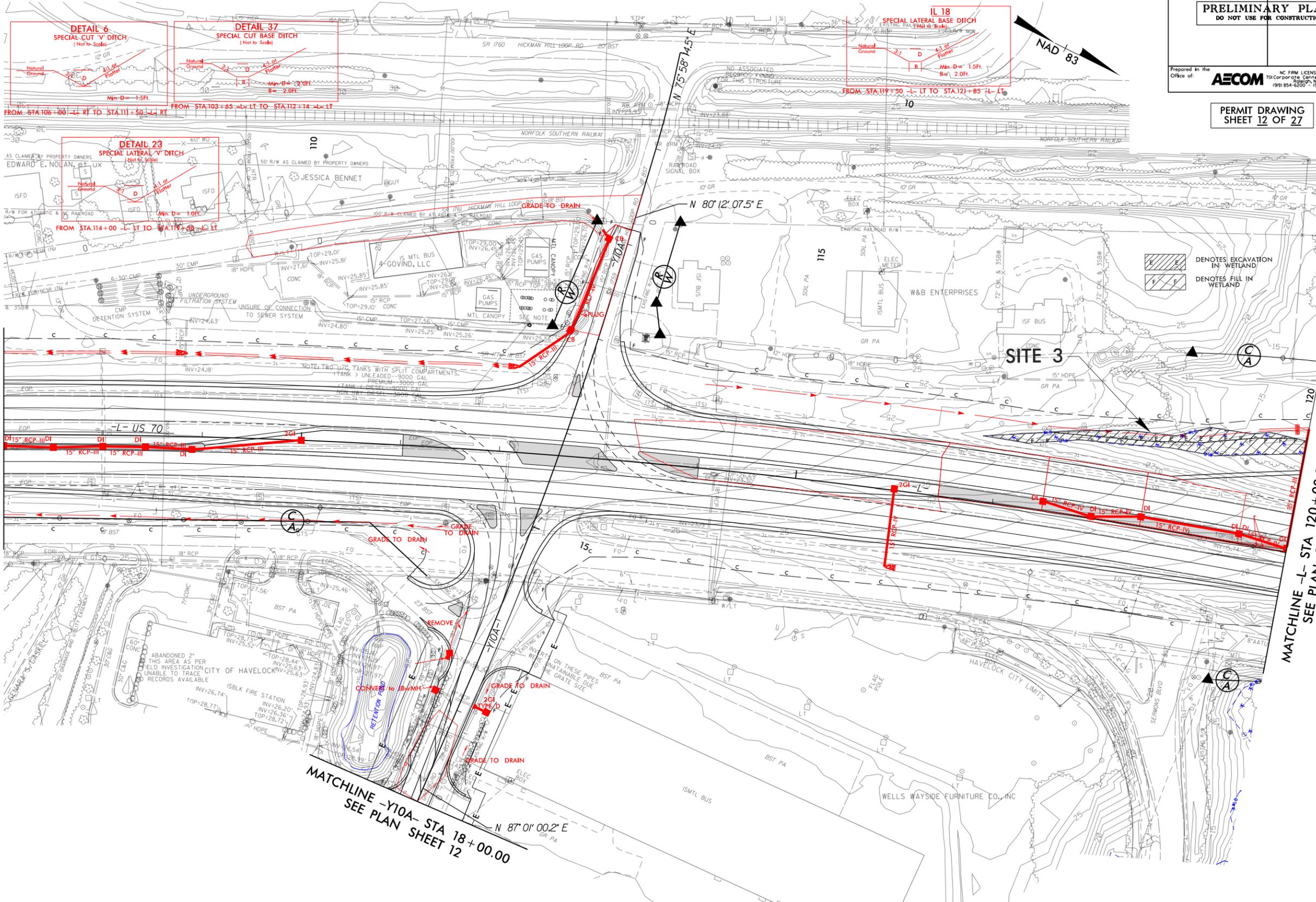
REVISIONS

DATE/TIME: 3/07/10 PM
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PROJECT REFERENCE NO.	SHEET NO.
R-5516	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	
AECOM	NC FIRM LICENSE No. F-0342 70 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 FAX

PERMIT DRAWING
SHEET 12 OF 27



MATCHLINE -L- STA 107+00.00
SEE PLAN SHEET 7

MATCHLINE -L- STA 120+00.00
SEE PLAN SHEET 9

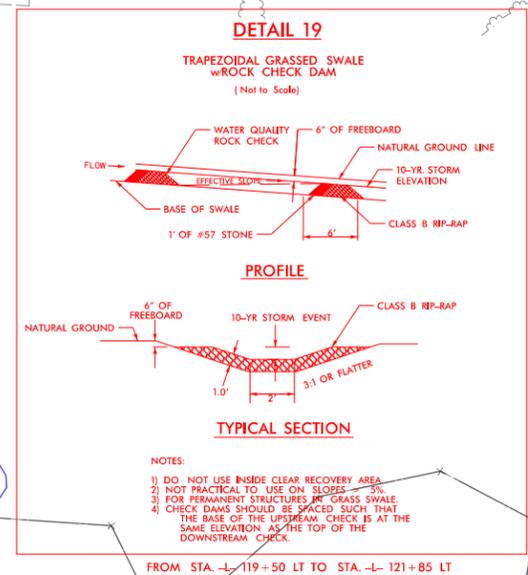
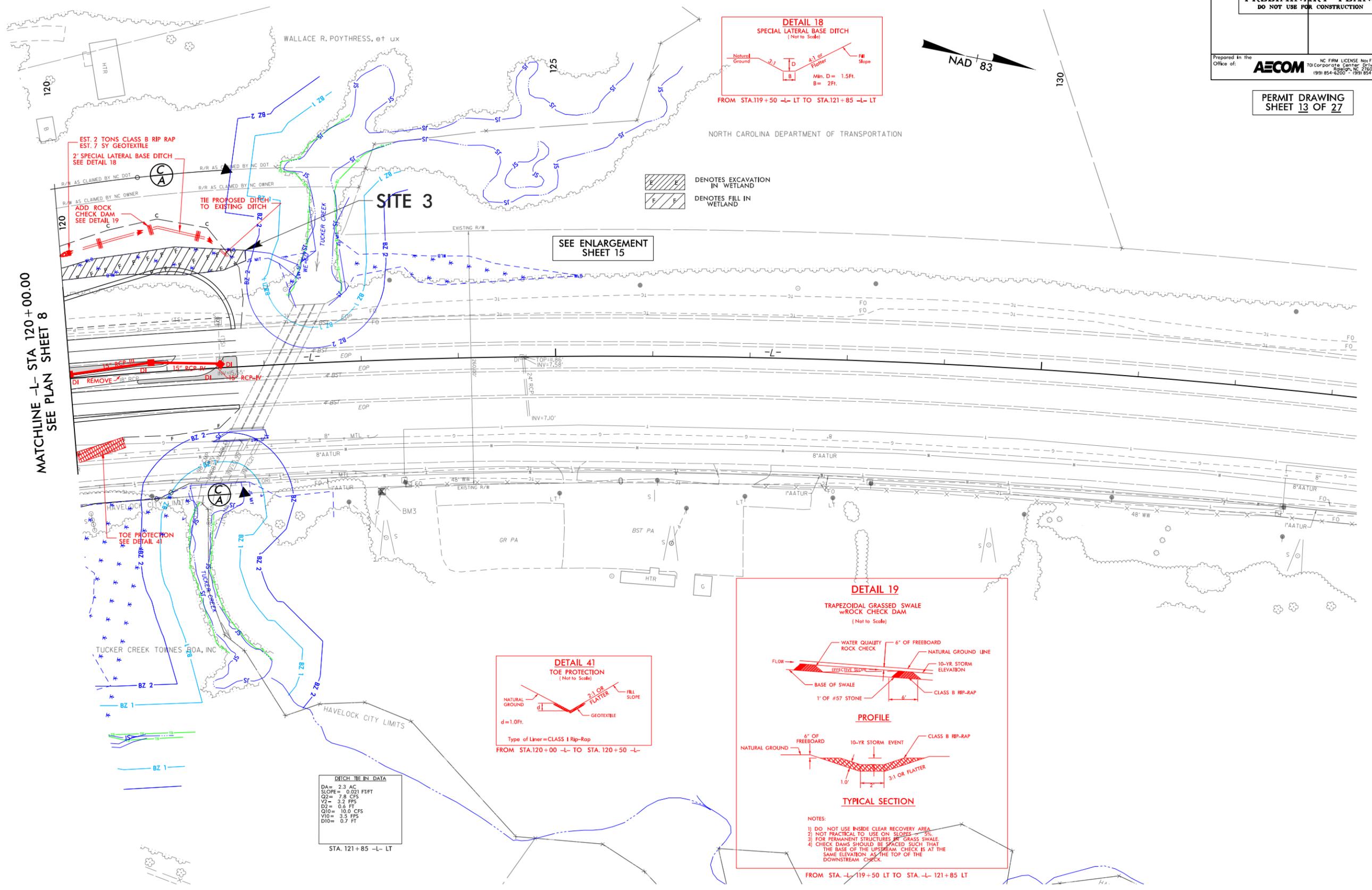
MATCHLINE -Y10A- STA 18+00.00
SEE PLAN SHEET 12

SEE ENLARGEMENT
SHEET 15



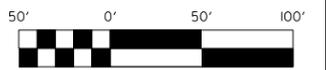
REVISIONS

DATE/TIME: 3/07/16 PM
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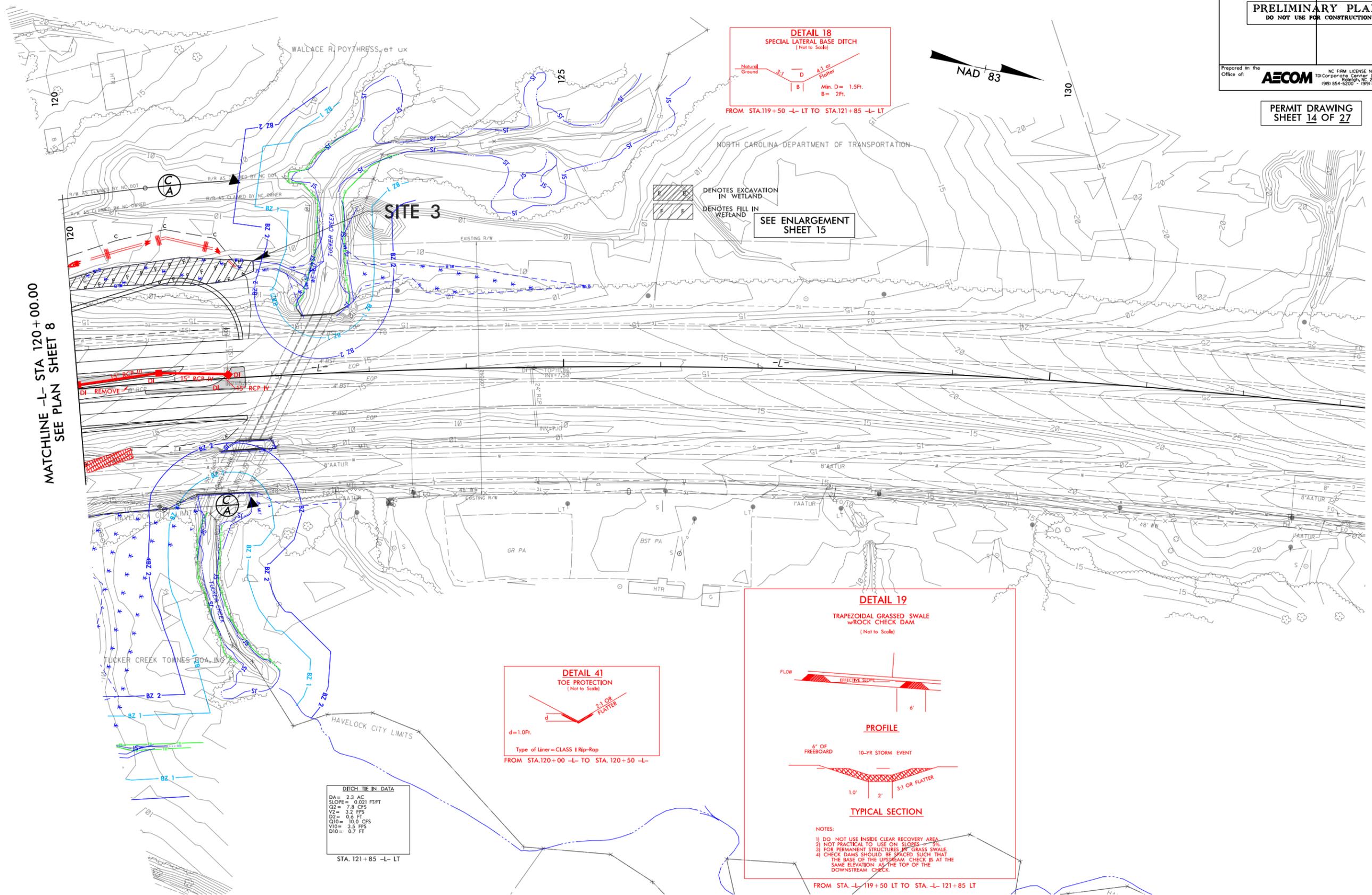


DITCH TIE-IN DATA

DAS=	2.3 AC
SLOPE=	0.021 FT/FT
Q2=	7.8 CFS
V2=	3.2 FPS
D2=	0.6 FT
Q10=	10.0 CFS
V10=	3.5 FPS
D10=	0.7 FT



REVISIONS
 DATE/TIME: 3/07/53 PM
 D:\Hydraulics\PERMITS\ENVIRONMENTAL\DRM\WINGS\5516\13.dwg P:\m\psh\13.dwg



MATCHLINE -L- STA 120+00.00
SEE PLAN SHEET 8

REVISIONS

DITCH LINE IN DATA
 DA= 2.3 AC
 SLOPE= 0.021 FT/FT
 Q2= 7.8 CFS
 V2= 3.2 FPS
 D2= 0.6 FT
 Q10= 10.0 CFS
 V10= 3.5 FPS
 D10= 0.7 FT

DETAIL 41
TOE PROTECTION
(Not to Scale)

$d = 1.0\text{ft}$

Type of Liner= CLASS 1 Rip-Rap

FROM STA. 120+00 -L- TO STA. 120+50 -L-

DETAIL 18
SPECIAL LATERAL BASE DITCH
(Not to Scale)

FROM STA. 119+50 -L- LT TO STA. 121+85 -L- LT

DETAIL 19
TRAPEZOIDAL GRASSED SWALE
w/ROCK CHECK DAM
(Not to Scale)

PROFILE

6' OF FREEBOARD
10-YR STORM EVENT

TYPICAL SECTION

1.0' 2' 3:1 OR FLATTER

NOTES:

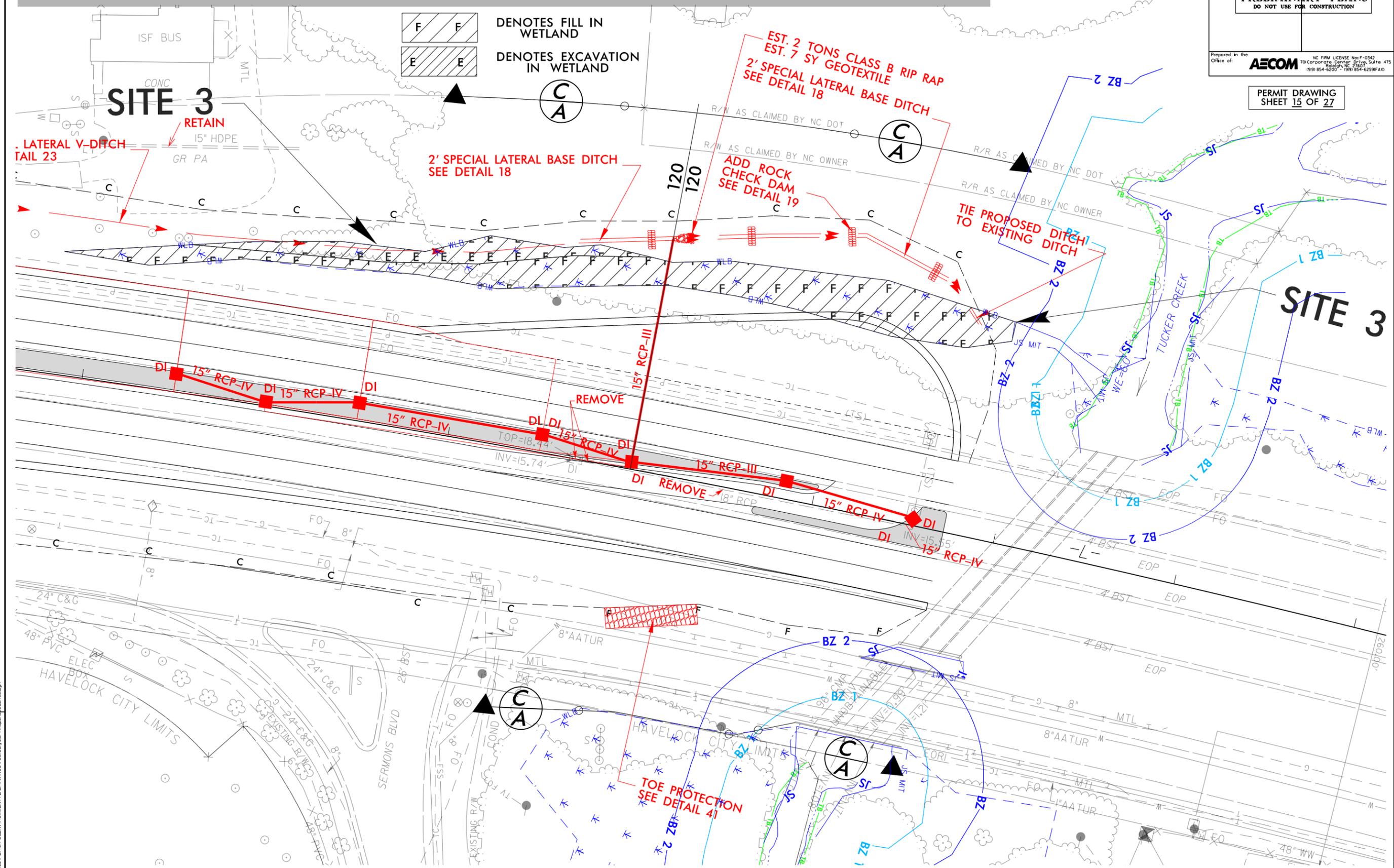
- DO NOT USE INSIDE CLEAR RECOVERY AREA
- NOT PRACTICAL TO USE ON SLOPES > 5%
- FOR PERMANENT STRUCTURES USE GRASS SWALE
- CHECK DAMS SHOULD BE SPACED SUCH THAT THE BASE OF THE UPSTREAM CHECK IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM CHECK.

FROM STA. -L- 119+50 LT TO STA. -L- 121+85 LT

WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO. R-5516	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of: AECOM NC FIRM LICENSE No. F-0342 701 Corporate Center Dr., Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (fax)	

PERMIT DRAWING
SHEET 15 OF 27



F F
DENOTES FILL IN WETLAND

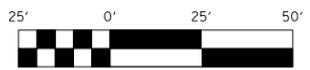
E E
DENOTES EXCAVATION IN WETLAND

EST. 2 TONS CLASS B RIP RAP
EST. 7 SY GEOTEXTILE
2' SPECIAL LATERAL BASE DITCH
SEE DETAIL 18

ADD ROCK CHECK DAM
SEE DETAIL 19

TIE PROPOSED DITCH TO EXISTING DITCH

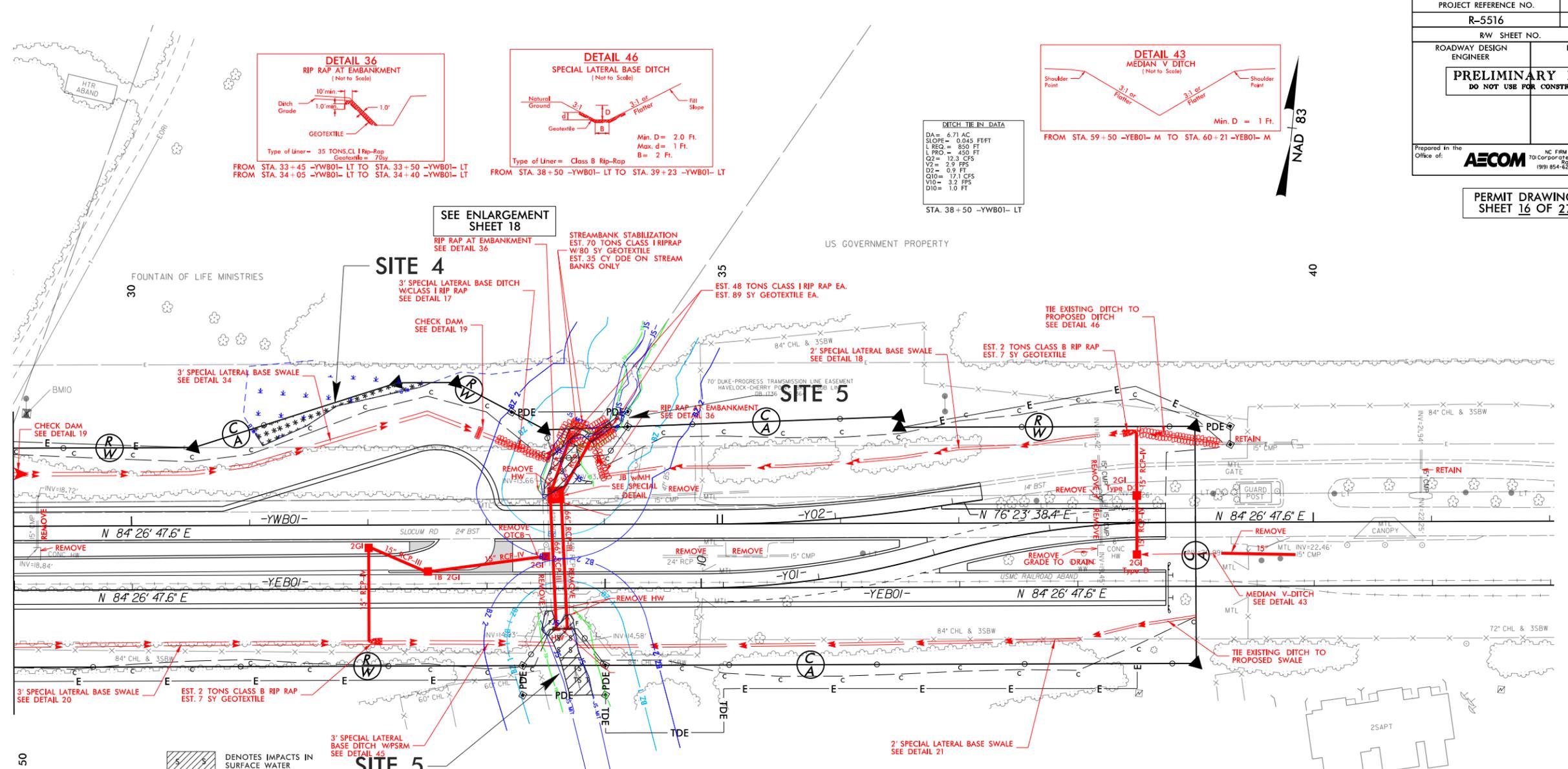
TOE PROTECTION
SEE DETAIL 41



REVISIONS

DATE/TIME: 3/26/05 PM
DRAWN: R:\Hydraulics\PERMITS\ENVIRONMENTAL\DRAWINGS\5516\15.dwg P:\m_per\15.dwg

MATCHLINE -YEB01- / -YW01-
STA 50+00.00 / 29+00.00
SEE PLAN SHEET 10



DENOTES IMPACTS IN SURFACE WATER
 DENOTES MECHANIZED CLEARING
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

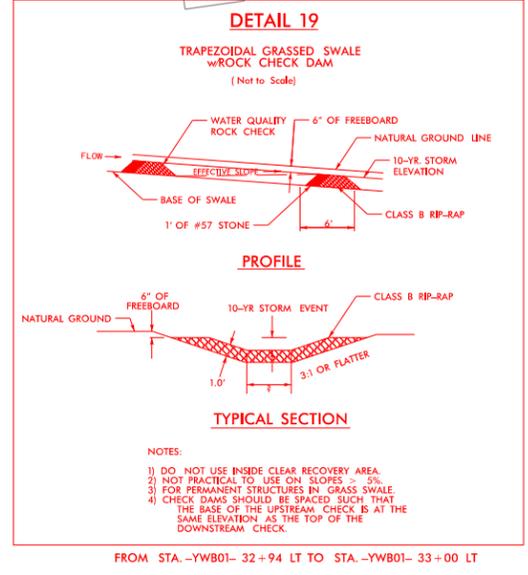
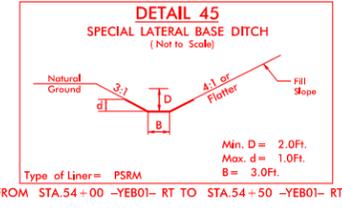
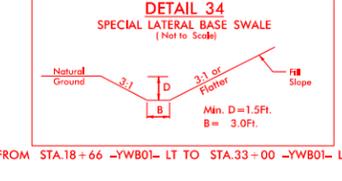
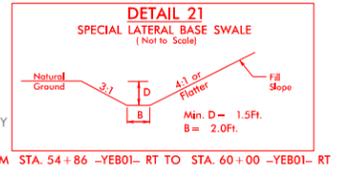
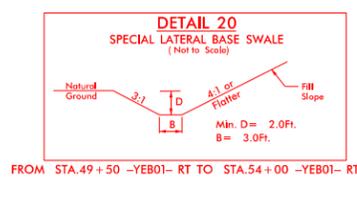
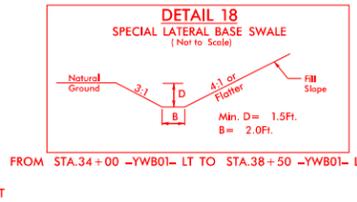
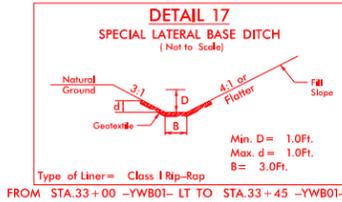
NOTE: CONTRACTOR SHALL FABRICATE AND INSTALL ANTI-PERSONNEL GATES ON NEW HEADWALLS. GATES SHALL BE SIMILAR IN MATERIAL AND CONSTRUCTION TO EXISTING GATES ON 42" AND 48" RCP.

GRASS SWALE DATA	
DA = 7.09 AC	SLOPE = 0.006 F/FT
L REQ = 150 FT	L PRO = 570 FT
Q2 = 12.3 CFS	V2 = 2.3 FPS
D2 = 0.9 FT	Q10 = 16.3 CFS
V10 = 3.0 FT	D10 = 0.9 FT

GRASS SWALE DATA	
DA = 8.46 AC	SLOPE = 0.003 F/FT
L REQ = 200 FT	L PRO = 445 FT
Q2 = 19.7 CFS	V2 = 1.9 FPS
D2 = 1.3 FT	Q10 = 21.3 CFS
V10 = 2.0 FT	D10 = 1.4 FT

GRASS SWALE DATA	
DA = 7.64 AC	SLOPE = 0.003 F/FT
L REQ = 150 FT	L PRO = 495 FT
Q2 = 19.7 CFS	V2 = 2.0 FPS
D2 = 1.3 FT	Q10 = 25.4 CFS
V10 = 2.2 FT	D10 = 1.4 FT

GRASS SWALE DATA	
DA = 2.5 AC	SLOPE = 0.014 F/FT
L REQ = 254 FT	L PRO = 514 FT
Q2 = 5.5 CFS	V2 = 2.1 FPS
D2 = 0.6 FT	Q10 = 7.2 CFS
V10 = 2.3 FT	D10 = 0.7 FT

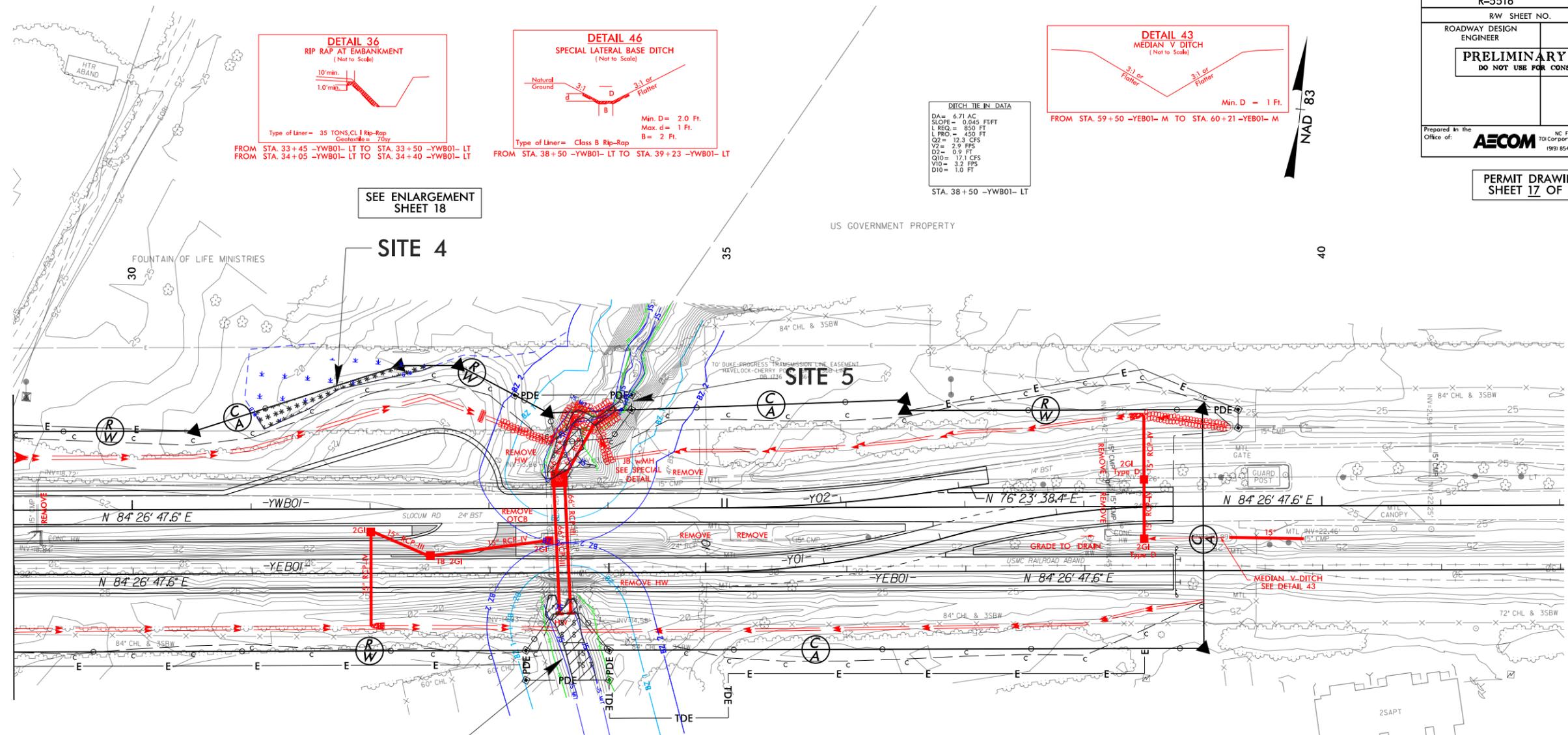


NOTES:
 1) DO NOT USE INSIDE CLEAR RECOVERY AREA.
 2) NOT PRACTICAL TO USE ON SLOPES > 5%
 3) FOR PERMANENT STRUCTURES IN GRASS SWALE
 4) CHECK DAMS SHOULD BE SPACED SUCH THAT THE BASE OF THE UPSTREAM CHECK IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM CHECK.



REVISIONS

DATE/TIME: 3/26/11 PM
 D:\Hydraulics\PERMITS\5. ENVIRONMENTAL\DRAININGS\5516\pdr\pdr.psd\1.dgn



REVISIONS

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NOTE: CONTRACTOR SHALL FABRICATE AND INSTALL ANTI-PERSONNEL GATES ON NEW HEADWALLS. GATES SHALL BE SIMILAR IN MATERIAL AND CONSTRUCTION TO EXISTING GATES ON 42" AND 48" RCP.

GRASS SWALE DATA

DA = 7.09 AC
SLOPE = 0.006 FF/FT
L REQ = 150 FT
L PRO = 570 FT
Q2 = 12.3 CFS
V2 = 2.9 FPS
D2 = 0.9 FT
Q10 = 16.9 CFS
V10 = 3.0 FT
D10 = 0.9 FT

STA. 33+00 -YWB01- LT

GRASS SWALE DATA

DA = 8.46 AC
SLOPE = 0.003 FF/FT
L REQ = 150 FT
L PRO = 495 FT
Q2 = 19.7 CFS
V2 = 2.0 FPS
D2 = 1.3 FT
Q10 = 21.3 CFS
V10 = 2.2 FT
D10 = 1.4 FT

STA. 34+00 -YWB01- LT

GRASS SWALE DATA

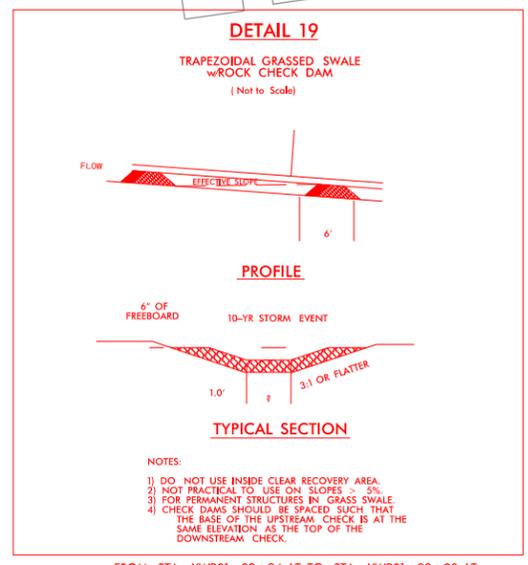
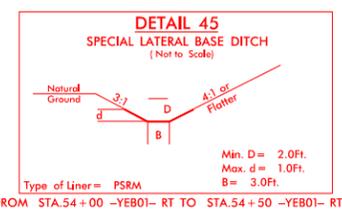
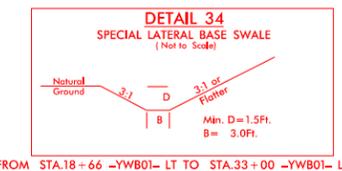
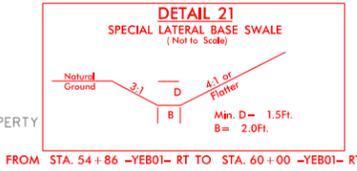
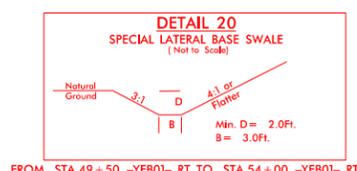
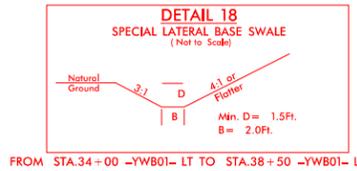
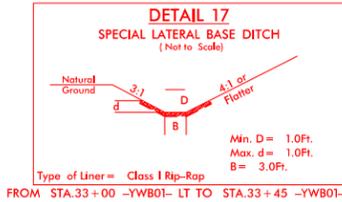
DA = 7.64 AC
SLOPE = 0.003 FF/FT
L REQ = 150 FT
L PRO = 514 FT
Q2 = 5.5 CFS
V2 = 2.1 FPS
D2 = 0.6 FT
Q10 = 7.2 CFS
V10 = 2.3 FT
D10 = 0.7 FT

STA. 54+00 -YEB01- RT

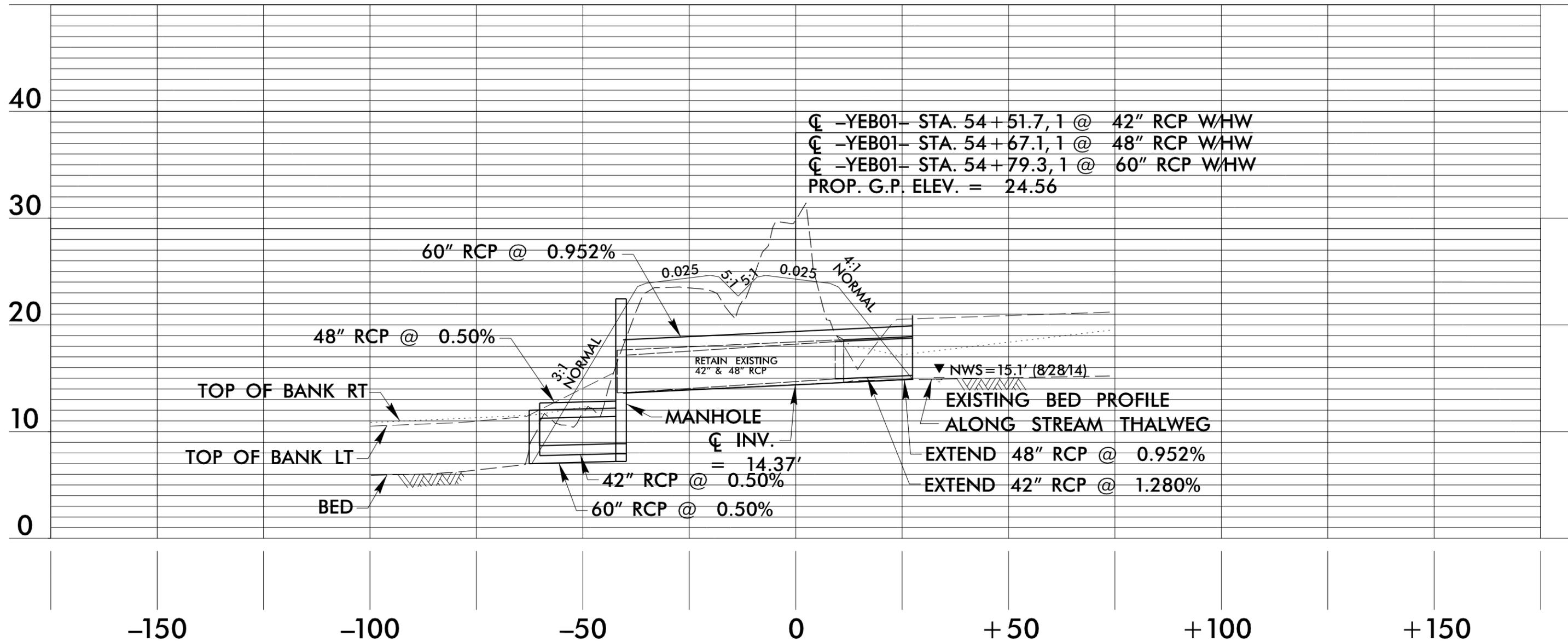
GRASS SWALE DATA

DA = 2.5 AC
SLOPE = 0.014 FF/FT
L REQ = 254 FT
L PRO = 514 FT
Q2 = 5.5 CFS
V2 = 2.1 FPS
D2 = 0.6 FT
Q10 = 7.2 CFS
V10 = 2.3 FT
D10 = 0.7 FT

US GOVERNMENT PROPERTY
STA. 545+00 -YEB01- RT



SITE 5 – PROFILE VIEW ALONG STRUCTURE



Native Material consists of material that is excavated from the stream bed or floodplain at the project site during culvert construction. Only material that is excavated from the stream bed may be used to line the low flow culvert barrel. Rip rap may be used to supplement the Native Material in the high flow culvert barrel(s). If rip rap is used to line the high flow culvert barrel(s), Native Material should be placed on top to fill voids and provide a flat surface for animal passage. Native Material is subject to approval by the engineer and may be subject to permit conditions.

NCDOT

DIVISION OF HIGHWAYS

CRAVEN COUNTY

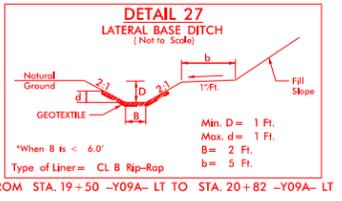
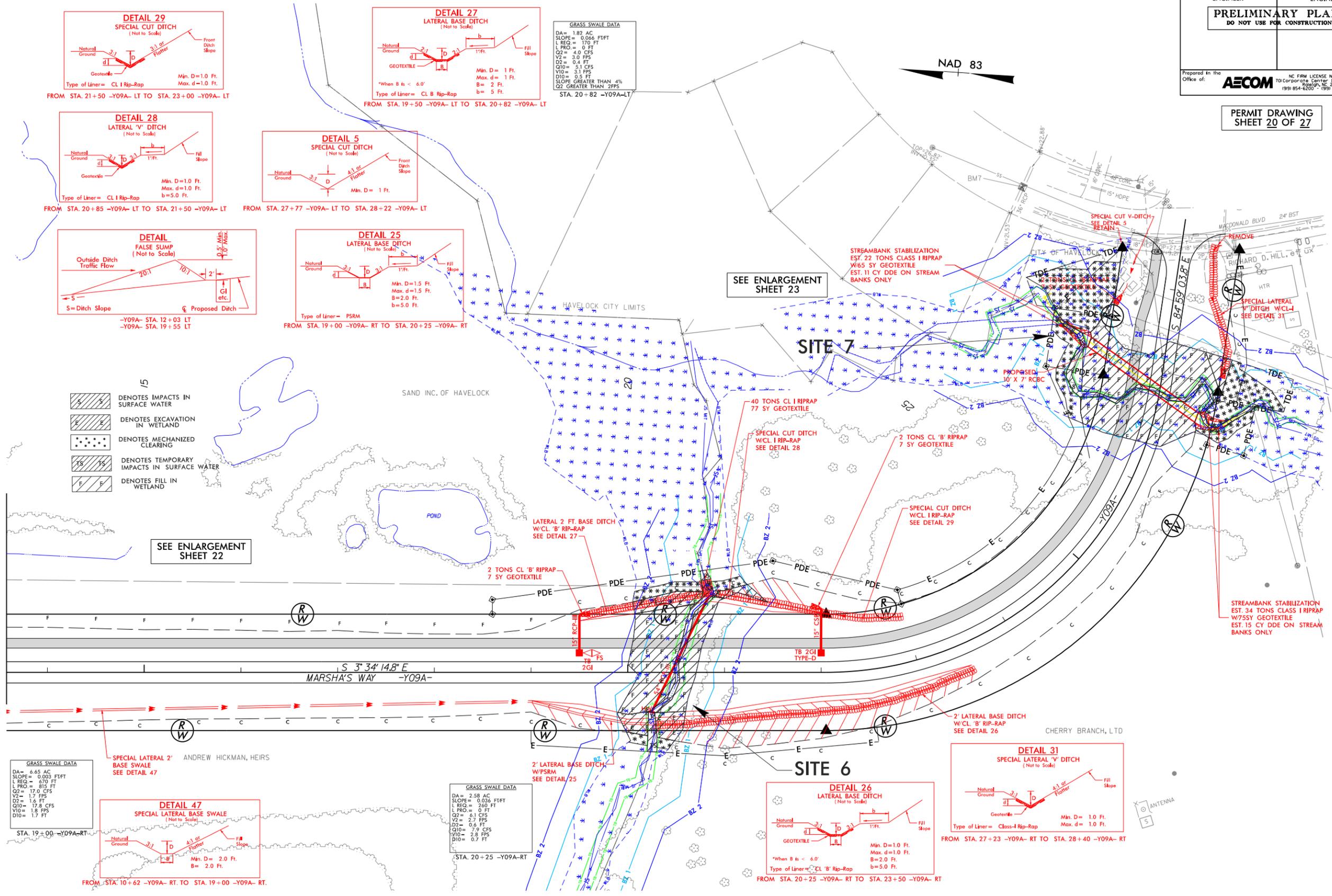
PROJECT: 45492.1.1 (R-5516)

INTERCHANGE FROM US 70 TO
SLOCUM ROAD AT CHERRY
POINT MILITARY BASE

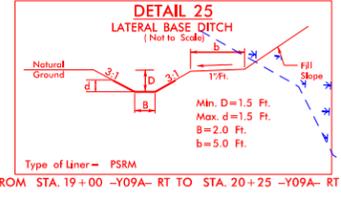
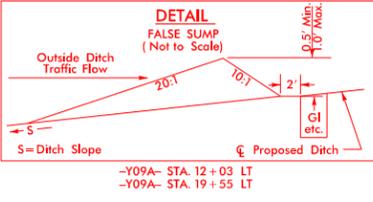
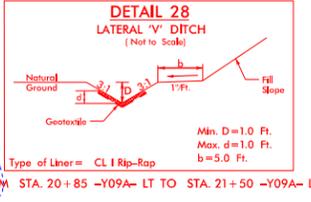
SITE 5

PERMIT DRAWING
SHEET 19 OF 27

NAD 83



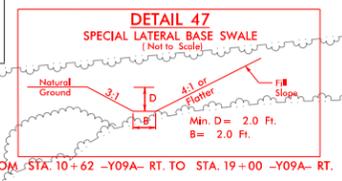
GRASS SWALE DATA
DA = 1.82 AC
SLOPE = 0.066 FF/FT
L REQ = 170 FT
L PRO = 0 FT
Q2 = 4.0 CFS
V2 = 3.0 FPS
D2 = 0.4 FT
Q10 = 5.1 CFS
V10 = 3.1 FPS
D10 = 0.5 FT
SLOPE GREATER THAN 4%
Q2 GREATER THAN 2FPS



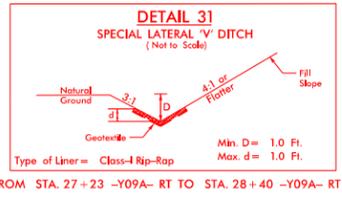
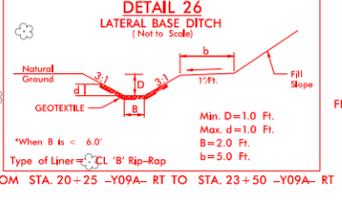
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES EXCAVATION IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND

MATCHLINE -Y09A- STA 14+00.00
SEE PLAN SHEET 12

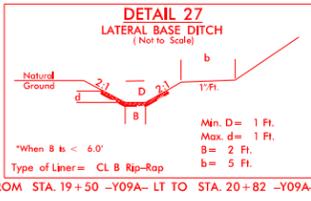
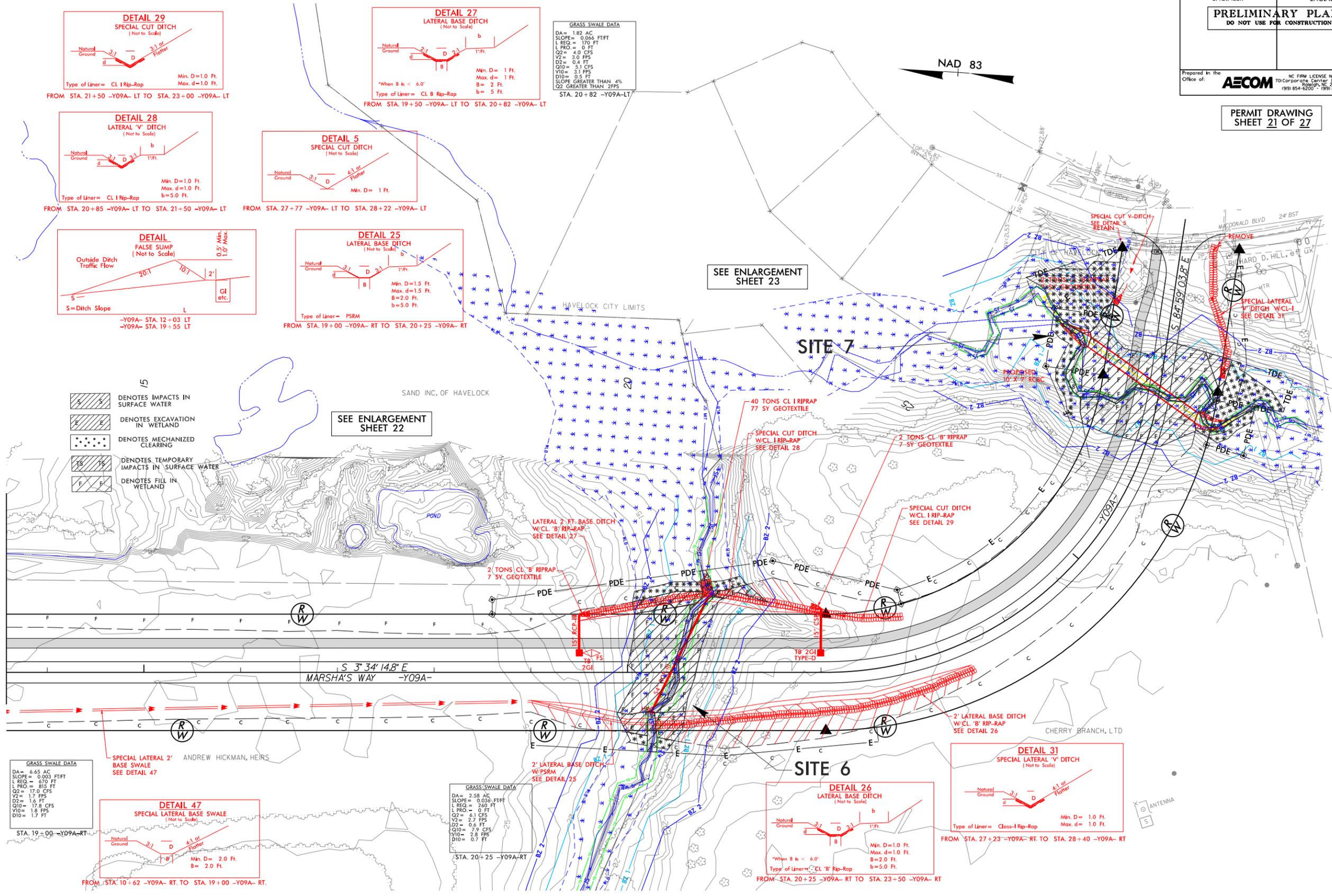
GRASS SWALE DATA
DA = 4.65 AC
SLOPE = 0.003 FF/FT
L REQ = 670 FT
L PRO = 810 FT
Q2 = 17.0 CFS
V2 = 1.7 FPS
D2 = 1.6 FT
Q10 = 17.8 CFS
V10 = 1.8 FPS
D10 = 1.7 FT



GRASS SWALE DATA
DA = 2.58 AC
SLOPE = 0.036 FF/FT
L REQ = 249 FT
L PRO = 0 FT
Q2 = 6.1 CFS
V2 = 2.7 FPS
D2 = 0.6 FT
Q10 = 7.9 CFS
V10 = 2.8 FPS
D10 = 0.7 FT



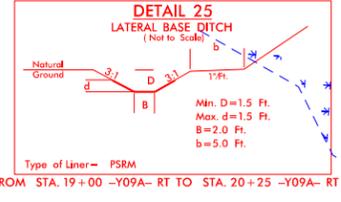
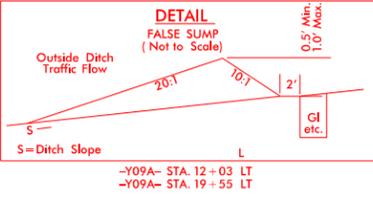
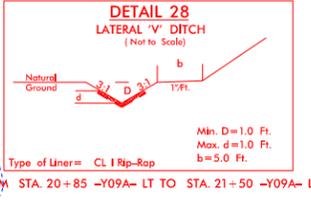
NAD 83



GRASS SWALE DATA

DA = 1.82 AC
SLOPE = 0.066 FF/FT
L REQ = 170 FT
L PRO = 0 FT
Q2 = 4.0 CFS
V2 = 3.0 FPS
D2 = 0.4 FT
Q10 = 5.1 CFS
V10 = 3.1 FPS
D10 = 0.5 FT
SLOPE GREATER THAN 4%
Q2 GREATER THAN 2FPS

STA. 20+82 -Y09A-LT



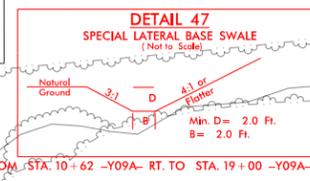
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES EXCAVATION IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND

MATCHLINE -Y09A- STA 14+00.00
SEE PLAN SHEET 12

GRASS SWALE DATA

DA = 4.65 AC
SLOPE = 0.003 FF/FT
L REQ = 670 FT
L PRO = 815 FT
Q2 = 17.0 CFS
V2 = 1.7 FPS
D2 = 1.6 FT
Q10 = 17.8 CFS
V10 = 1.8 FPS
D10 = 1.7 FT

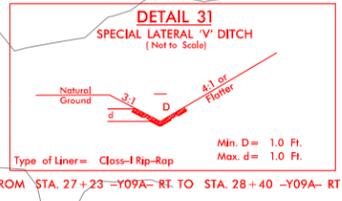
STA. 19+00 -Y09A-RT



GRASS SWALE DATA

DA = 2.58 AC
SLOPE = 0.036 FF/FT
L REQ = 249 FT
L PRO = 0 FT
Q2 = 6.1 CFS
V2 = 2.7 FPS
D2 = 0.6 FT
Q10 = 7.9 CFS
V10 = 2.8 FPS
D10 = 0.7 FT

STA. 20+25 -Y09A-RT



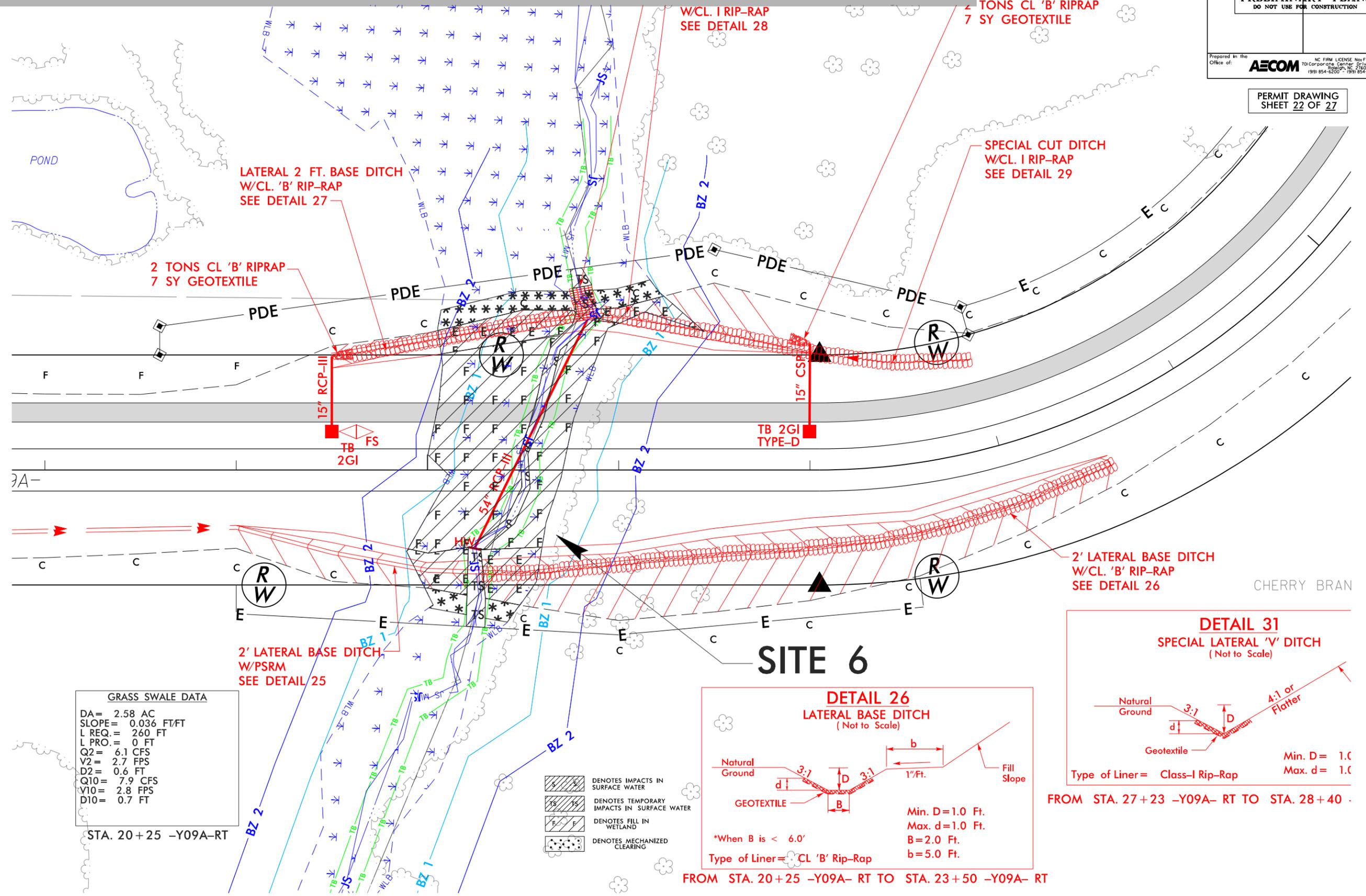
REVISIONS

DATE/TIME: 3/26/17 PM
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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-5516	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of: AECOM	
NC FIRM LICENSE No. F-0342 701 Corporate Center Dr., Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259 (FAX)	

PERMIT DRAWING
SHEET 22 OF 27

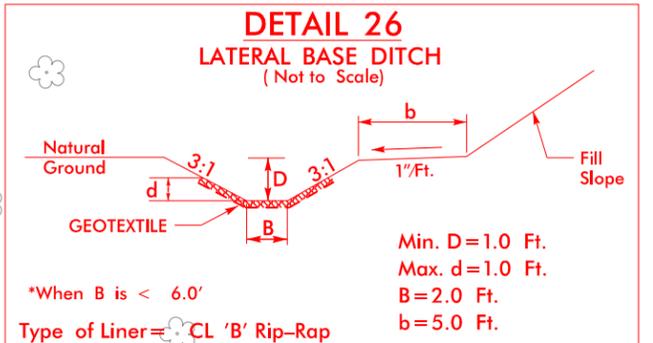


GRASS SWALE DATA

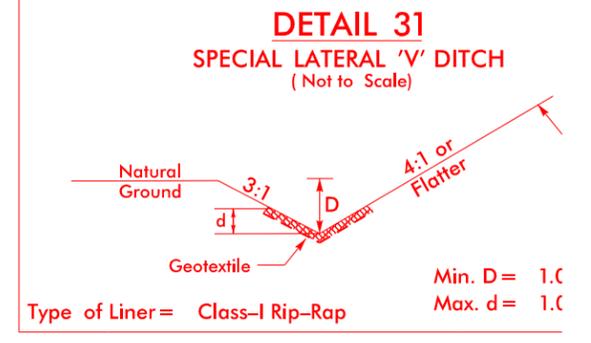
DA =	2.58 AC
SLOPE =	0.036 FT/FT
L REQ. =	260 FT
L PRO. =	0 FT
Q2 =	6.1 CFS
V2 =	2.7 FPS
D2 =	0.6 FT
Q10 =	7.9 CFS
V10 =	2.8 FPS
D10 =	0.7 FT

STA. 20+25 -Y09A-RT

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING



FROM STA. 20+25 -Y09A- RT TO STA. 23+50 -Y09A- RT



FROM STA. 27+23 -Y09A- RT TO STA. 28+40 -Y09A- RT



REVISIONS

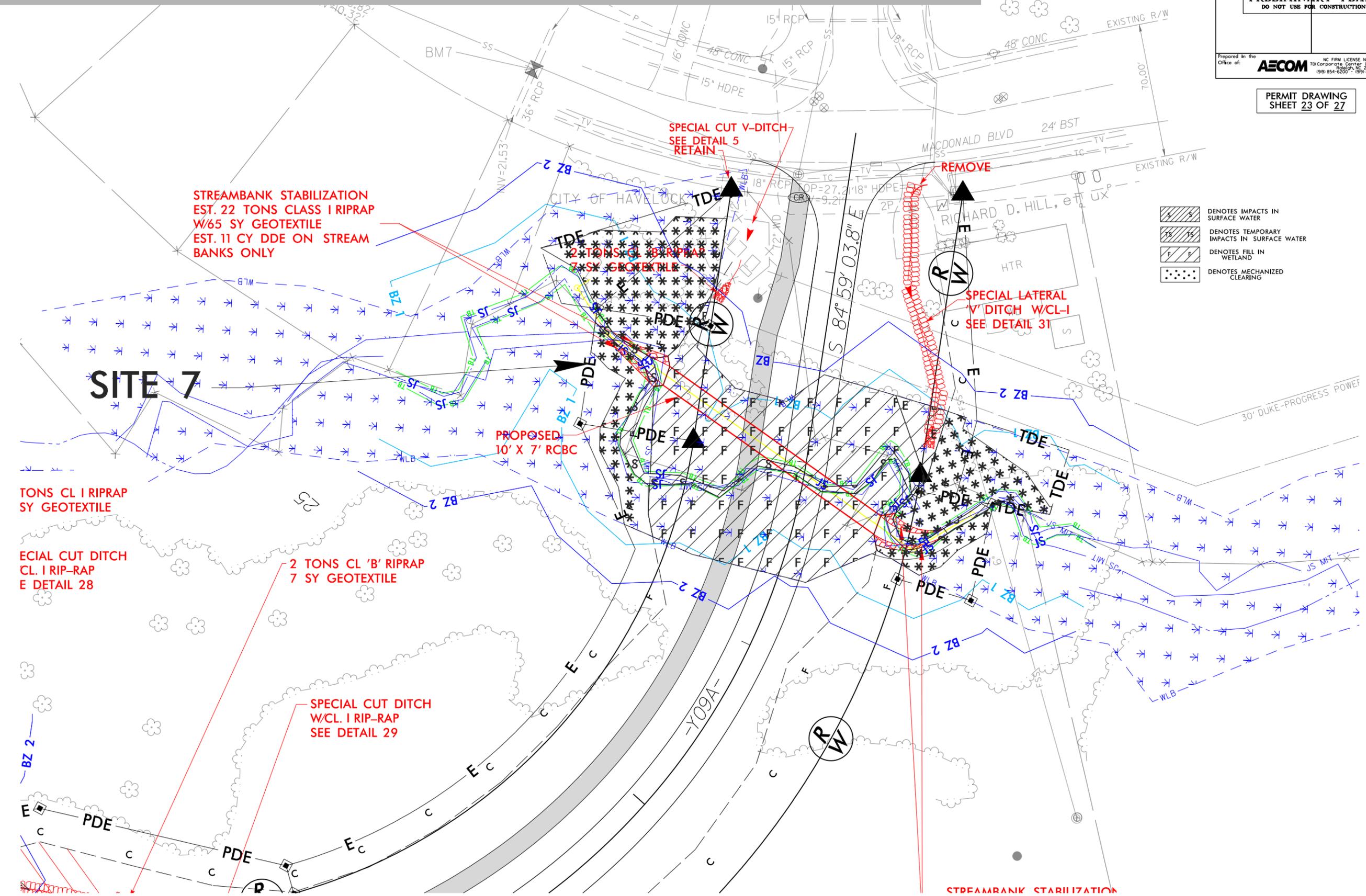
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WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-5516	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
<small>Prepared in the Office of:</small> AECOM <small>NC FIRM LICENSE No F-0342 701 Corporate Center Dr., Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)</small>	

PERMIT DRAWING
SHEET 23 OF 27

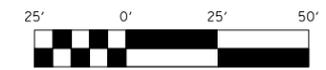
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER
-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING



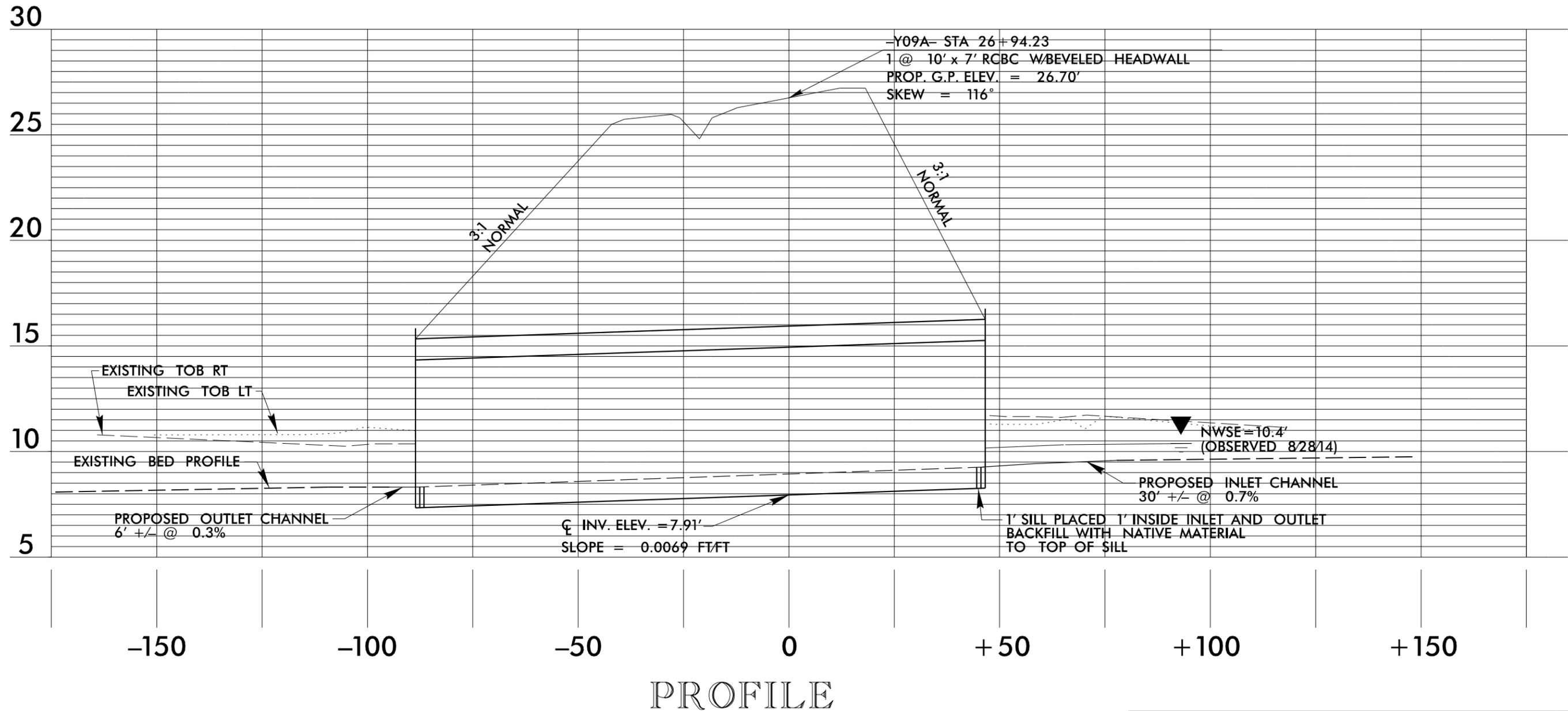
SITE 7

REVISIONS

DATE/TIME: 3/29/2017 PM
 DWN: R:\Hydraulics\PERMITS\ENVIRONMENT\ALDRIN\WGS\5516\174_Prm_psch_1_1817.dgn



SITE 7 – PROFILE VIEW ALONG STRUCTURE



Native Material consists of material that is excavated from the stream bed or floodplain at the project site during culvert construction. Only material that is excavated from the stream bed may be used to line the low flow culvert barrel. Rip rap may be used to supplement the Native Material in the high flow culvert barrel(s). If rip rap is used to line the high flow culvert barrel(s), Native Material should be placed on top to fill voids and provide a flat surface for animal passage. Native Material is subject to approval by the engineer and may be subject to permit conditions.

NCDOT

DIVISION OF HIGHWAYS

CRAVEN COUNTY

PROJECT: 45492.1.1 (R-5516)

INTERCHANGE FROM US 70 TO

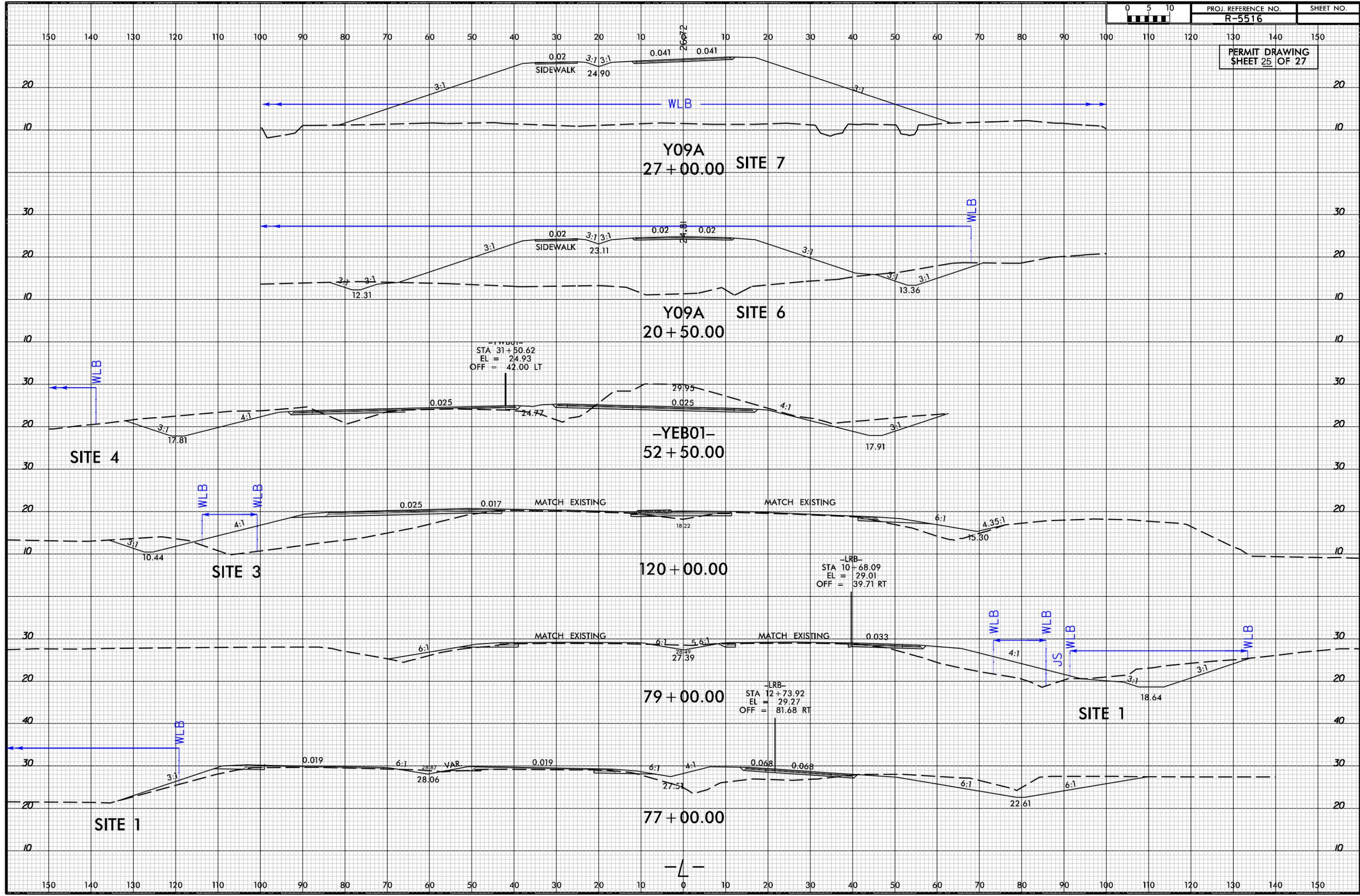
SLOCUM ROAD AT CHERRY

POINT MILITARY BASE

SITE 7

PERMIT DRAWING

SHEET 24 OF 27



26612

Y09A
27+00.00 SITE 7

Y09A
20+50.00 SITE 6

-YEB01-
52+50.00

120+00.00

79+00.00

77+00.00

STA 31+50.62
EL = 24.93
OFF = 42.00 LT

-LRB-
STA 10+68.09
EL = 29.01
OFF = 39.71 RT

-LRB-
STA 12+73.92
EL = 29.27
OFF = 81.68 RT

SYSTEMS

WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	76+47 to 76+73 -L-	Bridge Construction	< 0.01									
1	76+47 to 77+89 -L-	Bridge Construction				0.11						
1	76+02 to 77+91 -L-	Roadway Fill	0.04									
1	76+49 to 77+00 -L-	Roadway Fill			< 0.01							
1	77+10 to 77+97 -L-	6'x5' RCBC Extend (Stream)						< 0.01	0.02	26	132	
1	79+28 to 81+21 -L-	Roadway Fill	0.05									
1	78+66 to 80+74 -L-	Channel Change			0.11							
1	79+60 to 81+33 -L-	Channel Change				0.05						
1	78+18 to 81+06 -L-	6'x5' RCBC Extend (Stream)						0.05		303		
2	104+22 to 104+65 -L-	Roadway Excavation				0.01						
2	103+20 to 103+72 -L-	Proposed Ditch				0.01		0.02		111		
3	117+48 to 119+90 -L-	Roadway Excavation			0.04							
3	116+80 to 121+87-L-	Roadway Fill	0.16									
4	31+02 to 32+55 -YWB01-	Roadway Excavation				0.03						
TOTALS*:			0.26		0.16	0.21		0.07	0.02	440	132	0

*Rounded totals are sum of actual impacts

NOTES:
See page 27 for full totals

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
10/4/2016
CRAVEN
R-5516
WBS-45492.1.1
SHEET 26 OF 27

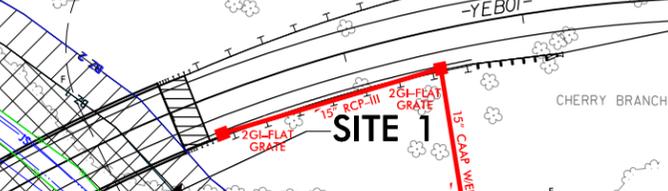
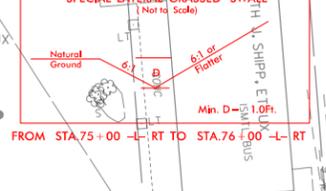
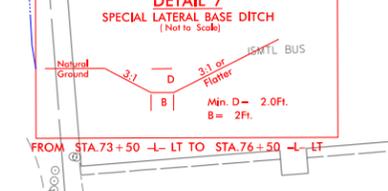
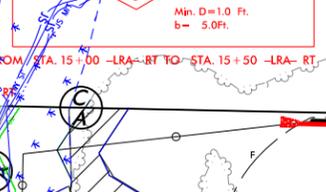
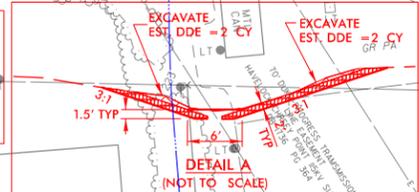
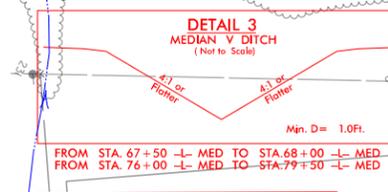
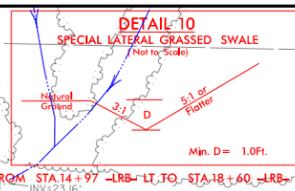
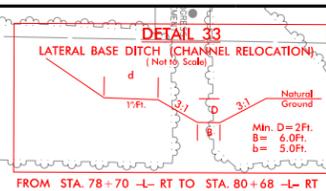
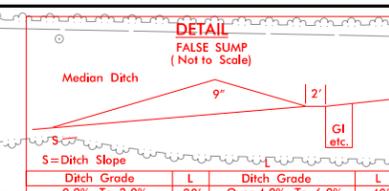
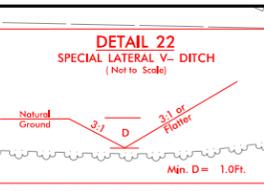
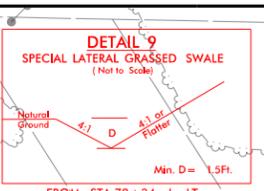
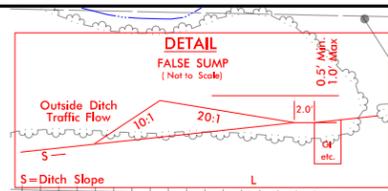
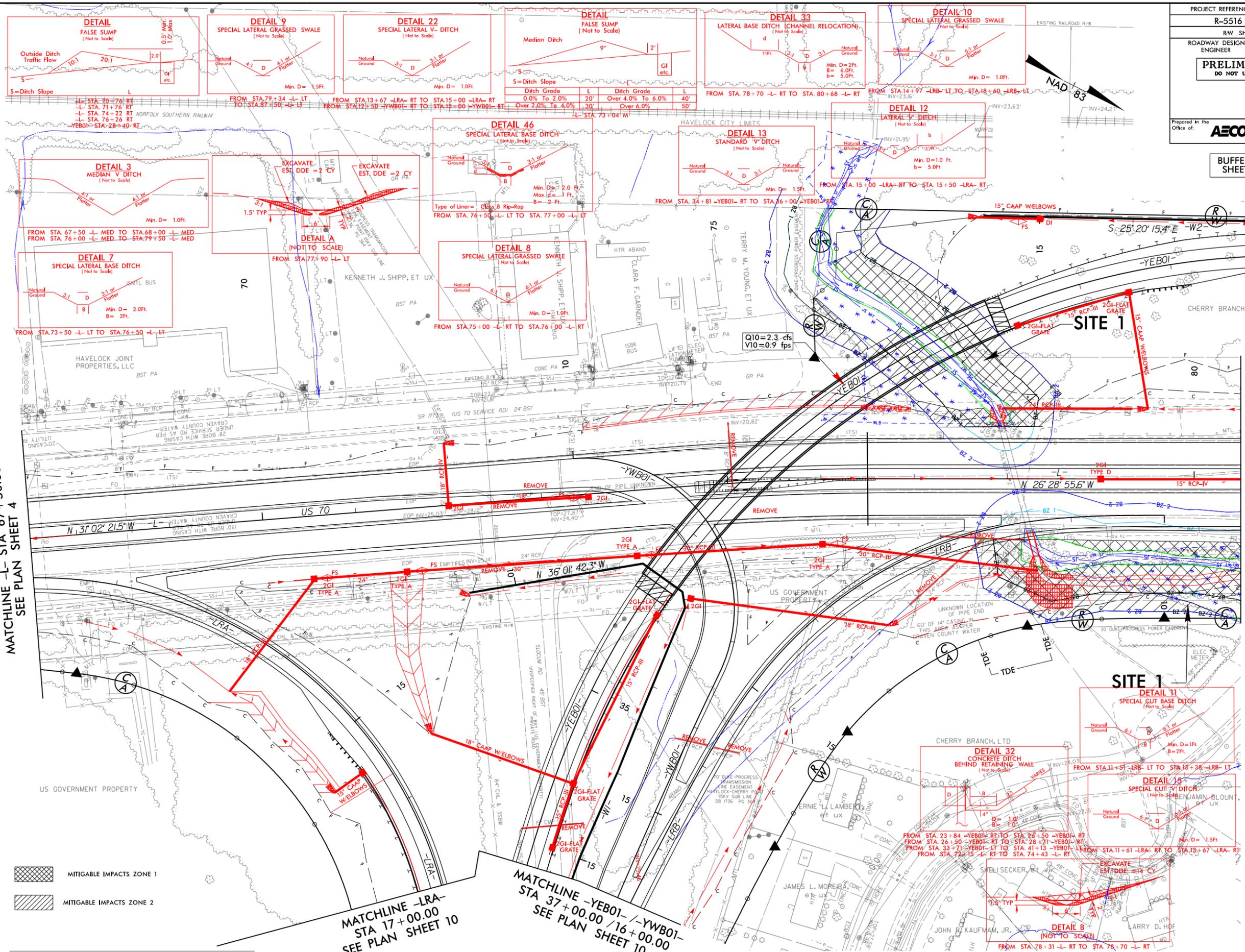
WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
5	36+46 to 33+90 -YWB01-	(2) 66" RCP (Upstream)						0.02	0.01	41	32	
5	33+48 to 34+16 -WYB01-	(2) 66" RCP (Downstream)						0.03	< 0.01	96	15	
6	19+87 to 21+44 -Y09A-	54" RCP (Stream)						0.02		166		
6	20+66 to 20+85 -Y09A-	Bank Stabilization							< 0.01		10	
6	20+21 to 20+30 -Y09A-	Roadway							< 0.01		41	
6	19+87 to 21+44 -Y09A-	Roadway	0.16		0.06	0.03						
7	26+39 to 27+96 -Y09A-	Roadway SS	0.28		0.01	0.20						
7	26+39 to 27+96 -Y09A-	10'x7' RCBC (Stream)						0.03		311		
7	26+39 to 27+96 -Y09A-	Bank Stabilization							< 0.01		18	
7	26+39 to 27+96 -Y09A-	Bank Stabilization							< 0.01		25	
N/A	Sheet 26 Totals		0.26		0.16	0.21		0.07	0.02	440	132	
TOTALS*:			0.70		0.23	0.44		0.16	0.05	1054	273	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 1/5/2017
 CRAVEN
 R-5516
 WBS-45492.1.1
 SHEET 27 OF 27

BUFFER DRAWING
SHEET 2 OF 15



MATCHLINE -L- STA 67+50.00
SEE PLAN SHEET 4

MATCHLINE -L- STA 80+50.00
SEE PLAN SHEET 6

MATCHLINE -LRA- STA 17+00.00
SEE PLAN SHEET 10

MATCHLINE -YEB01- / -YWB01- STA 37+00.00 / 16+00.00
SEE PLAN SHEET 10

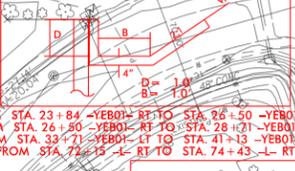
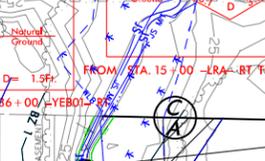
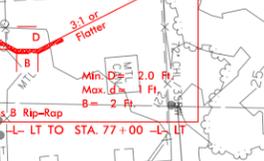
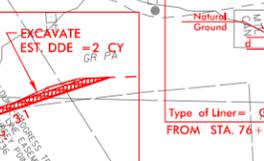
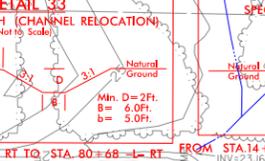
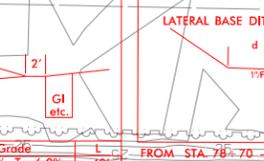
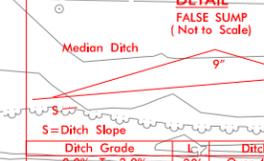
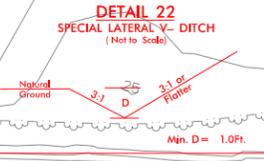
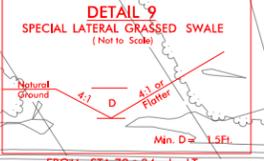
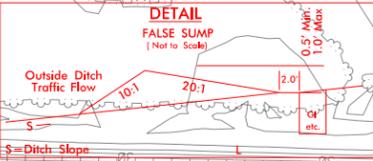
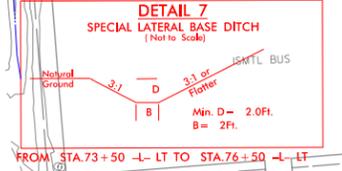
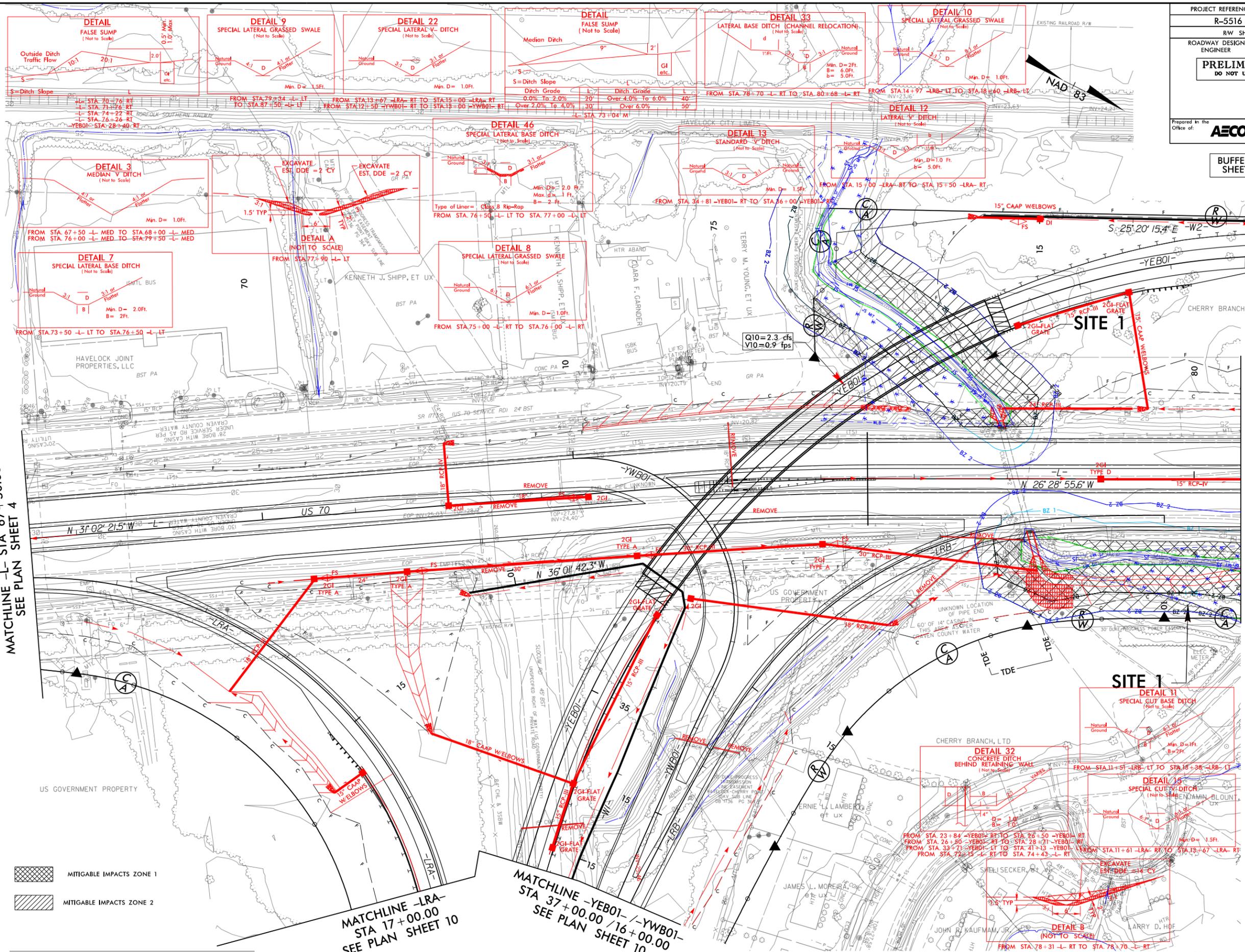


BUFFER IMPACTS PERMIT



REVISIONS

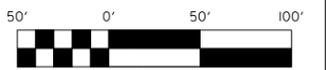
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MATCHLINE -LRA- STA 17+00.00 SEE PLAN SHEET 10

MATCHLINE -YEB01- / -YWB01- STA 37+00.00 / 16+00.00 SEE PLAN SHEET 10

BUFFER IMPACTS PERMIT



DATE/TIME: 3/29/19 PM 2:04:19
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REVISIONS

MATCHLINE -L- STA 67+50.00 SEE PLAN SHEET 4

MATCHLINE -L- STA 80+50.00 SEE PLAN SHEET 6

MATCHLINE -YEB01- STA 26+00.00 SEE PLAN SHEET 6

BUFFER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-5516	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of: AECOM	
NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 4175 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (FAX)	

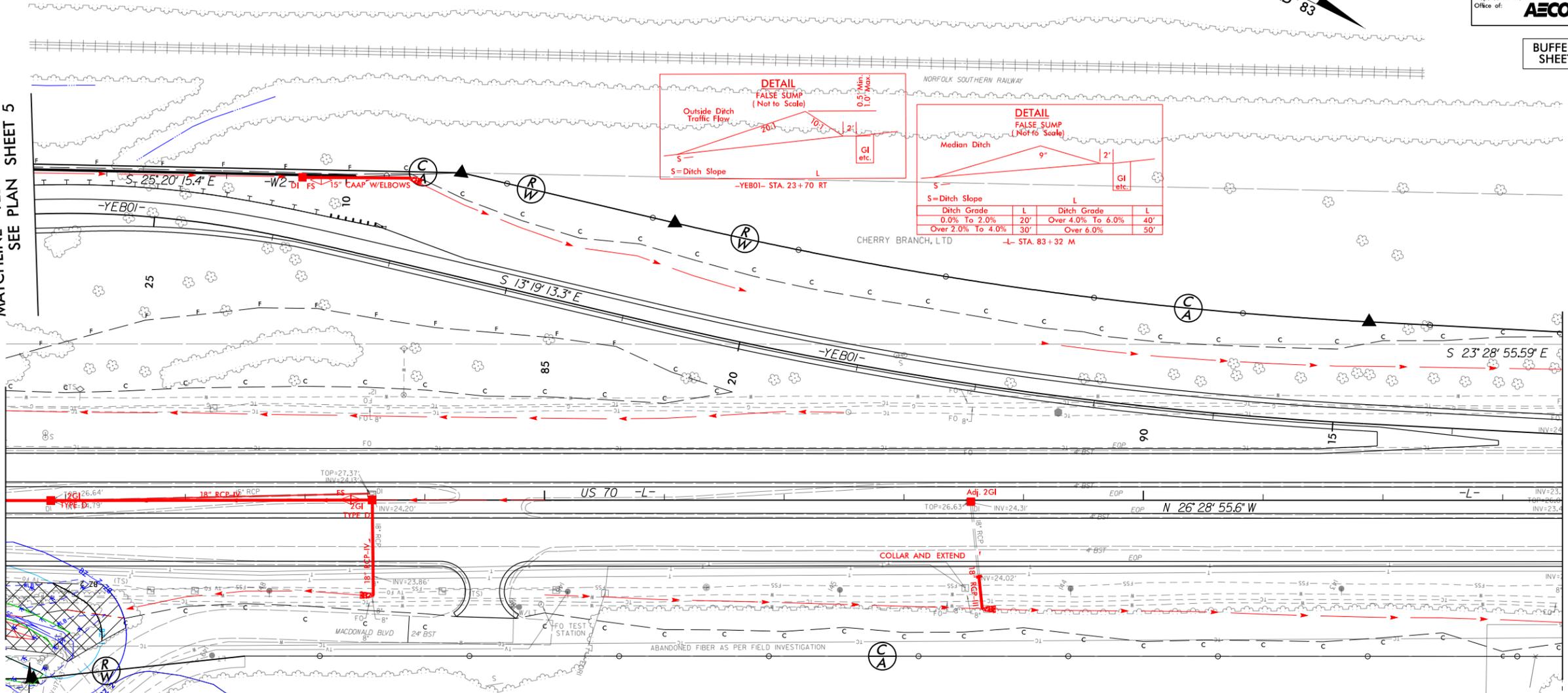
BUFFER DRAWING SHEET 4 OF 15



MATCHLINE -YEB01- STA 26+00.00
SEE PLAN SHEET 5

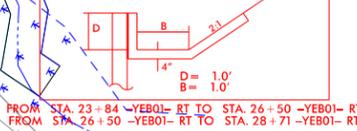
MATCHLINE -L- STA 80+50.00
SEE PLAN SHEET 5

MATCHLINE -L- /-YEB01-
STA 93+50.00 /13+07.88
SEE PLAN SHEET 7

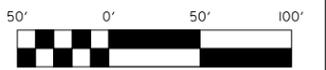
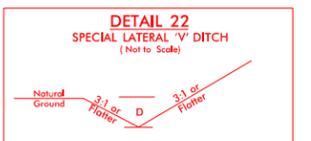
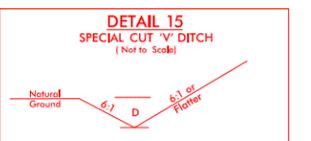
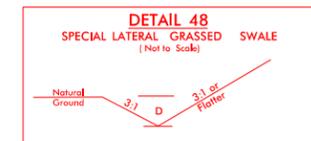
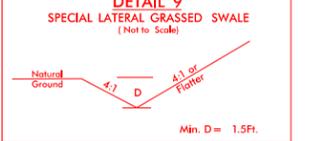
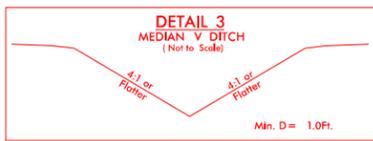


MITIGABLE IMPACTS ZONE 1
 MITIGABLE IMPACTS ZONE 2
 US GOVERNMENT PROPERTY
CROATAN NATIONAL FOREST

DETAIL 32
CONCRETE DITCH
BEHIND RETAINING WALL
(Not to Scale)



FROM STA. 23+84 -YEB01- RT TO STA. 26+50 -YEB01- RT
FROM STA. 26+50 -YEB01- RT TO STA. 28+71 -YEB01- RT



REVISIONS

DATE/TIME: 3/16/16 PM
JOB: HYDRAULICS/PERMITS/ENVIRONMENTAL/DRAININGS/5516/INT/Prm_Bldg/Jan_16.dgn

BUFFER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-5516	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	
AECOM	NC FIRM LICENSE No. F-0342 701 Corporate Center Dr., Suite 4175 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (FAX)

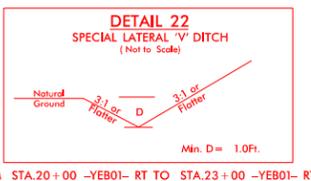
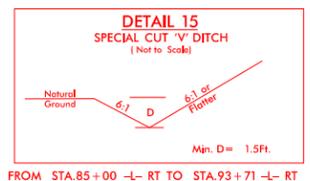
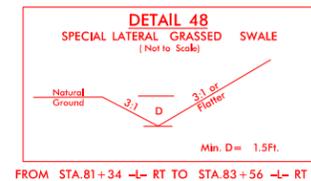
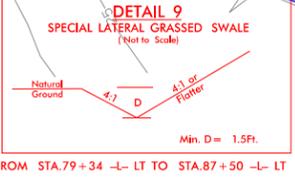
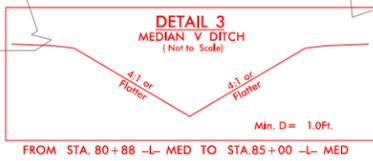
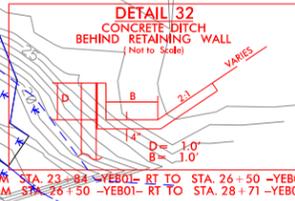
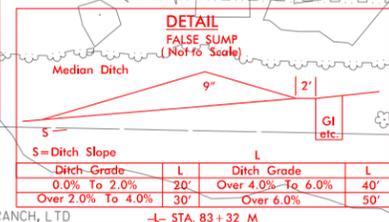
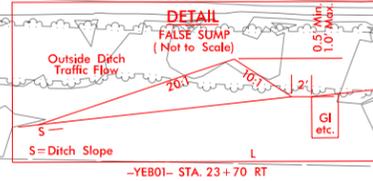
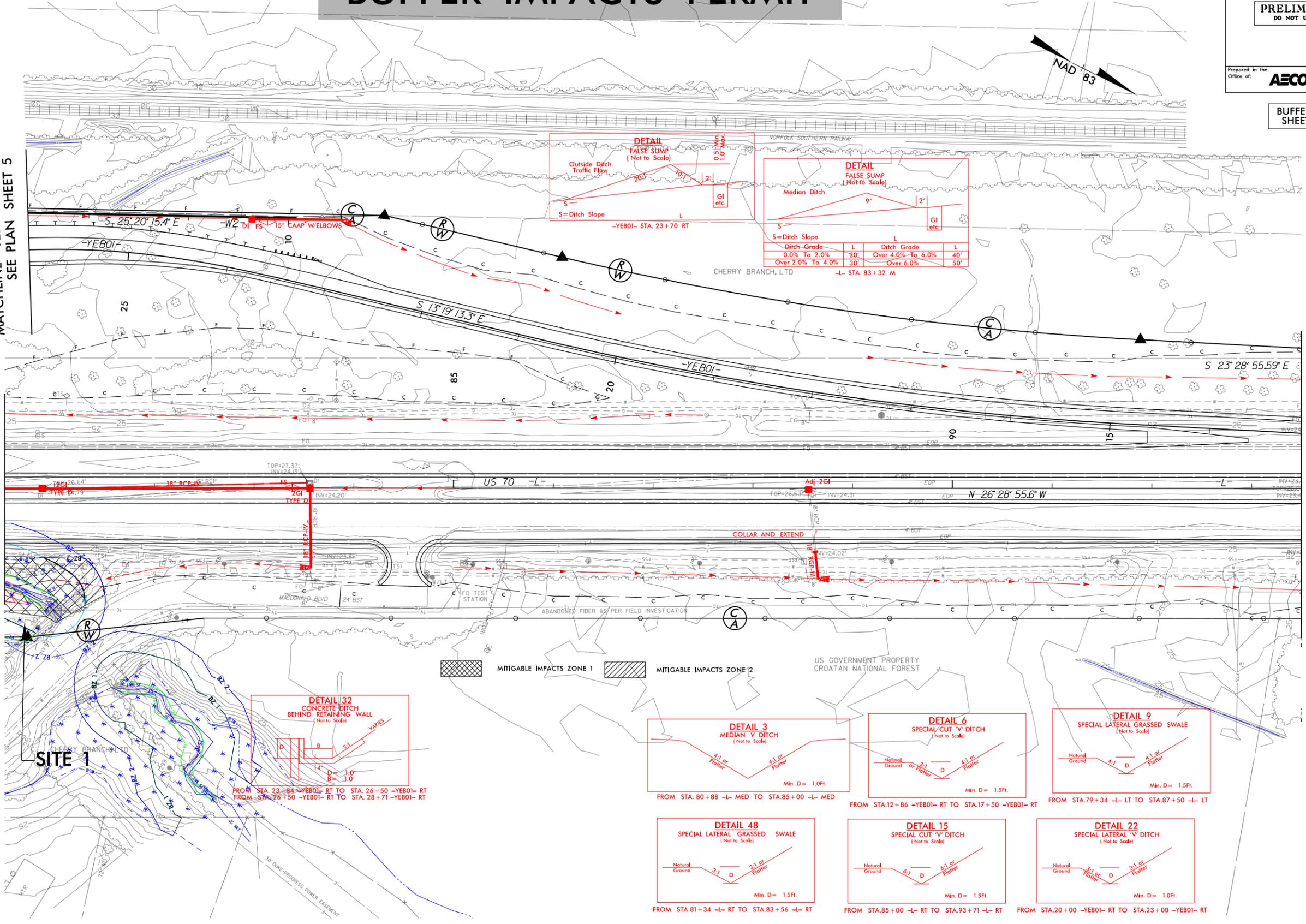
BUFFER DRAWING SHEET 5 OF 15



MATCHLINE -YEB01- STA 26+00.00
SEE PLAN SHEET 5

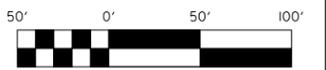
MATCHLINE -L- STA 80+50.00
SEE PLAN SHEET 5

MATCHLINE -L- /-YEB01-
STA 93+50.00 /13+07.88
SEE PLAN SHEET 7



REVISIONS

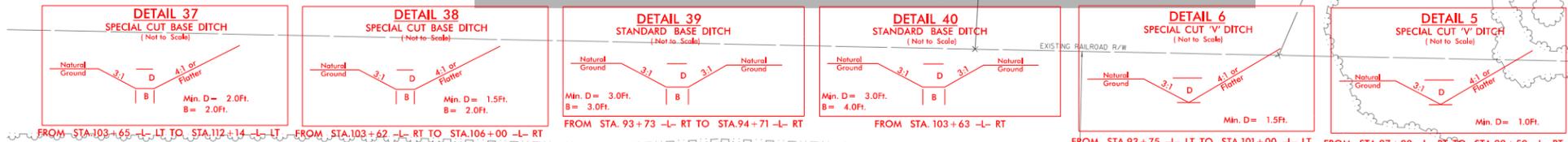
DATE/TIME: 3/29/25 PM
JOB: HYDRAULICS/PERMITS/ENVIRONMENTAL/DRWINGS/5516/INT/Prm_Bldg/Jan_25/25



BUFFER IMPACTS PERMIT

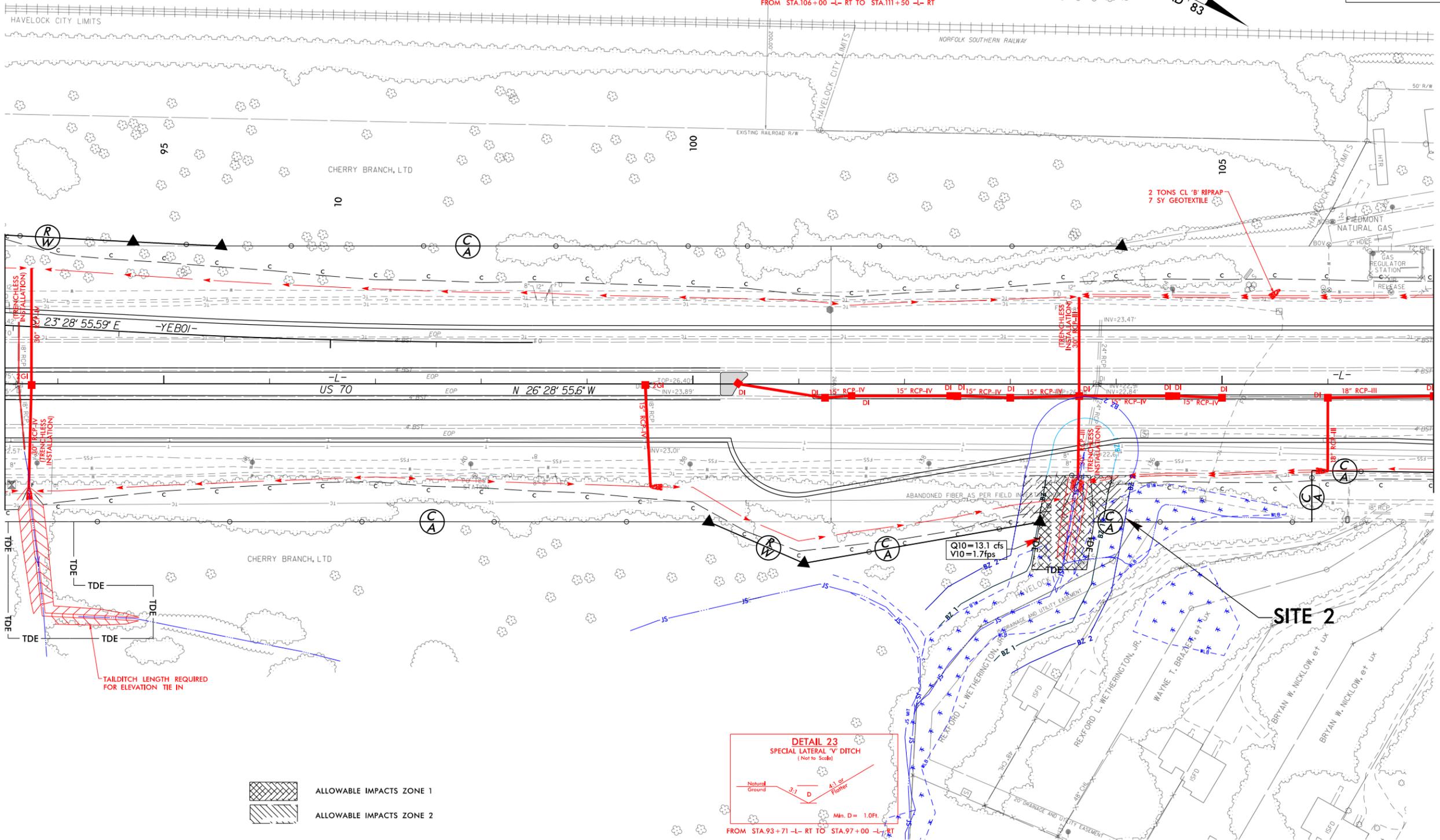
PROJECT REFERENCE NO.	SHEET NO.
R-5516	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	
AECOM	
<small>NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259 (fax)</small>	

BUFFER DRAWING SHEET 6 OF 15

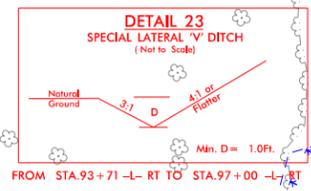


MATCHLINE -L- /-YEB01-
STA 93+50.00 /STA 13+07.88
SEE PLAN SHEET 6

MATCHLINE -L- STA 107+00.00
SEE PLAN SHEET 8



TAILDITCH LENGTH REQUIRED FOR ELEVATION TIE IN



- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2



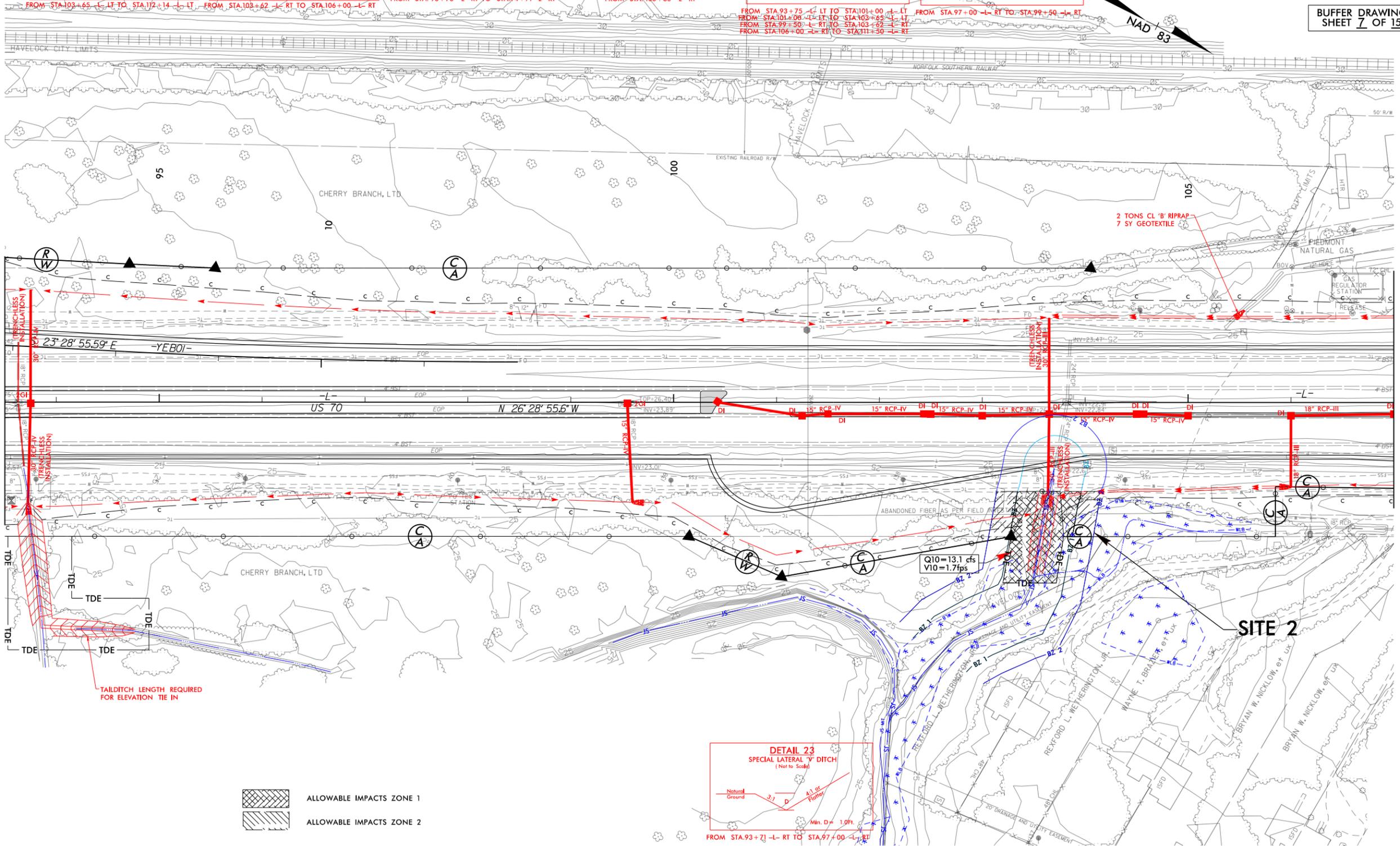
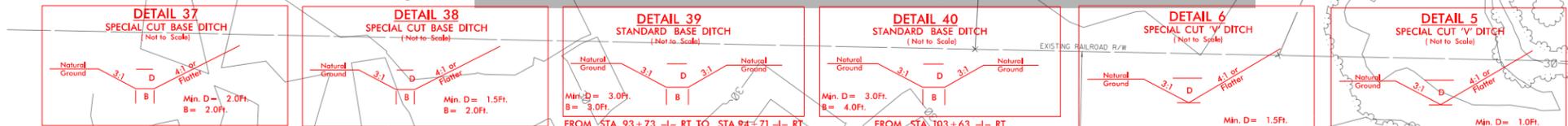
REVISIONS

DATE/TIME: 3/16/18 PM
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BUFFER IMPACTS PERMIT

PROJECT REFERENCE NO. R-5516	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	NC FIRM LICENSE No. F-0342 701 Corporate Center Dr., Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (fax)

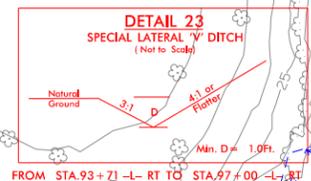
BUFFER DRAWING SHEET 7 OF 15



MATCHLINE -L- /-YEB01-
STA 93+50.00 /STA 13+07.88
SEE PLAN SHEET 6

MATCHLINE -L- STA 107+00.00
SEE PLAN SHEET 8

TAILDITCH LENGTH REQUIRED FOR ELEVATION TIE IN



Q10=13.1 cfs
V10=1.7 fps

SITE 2



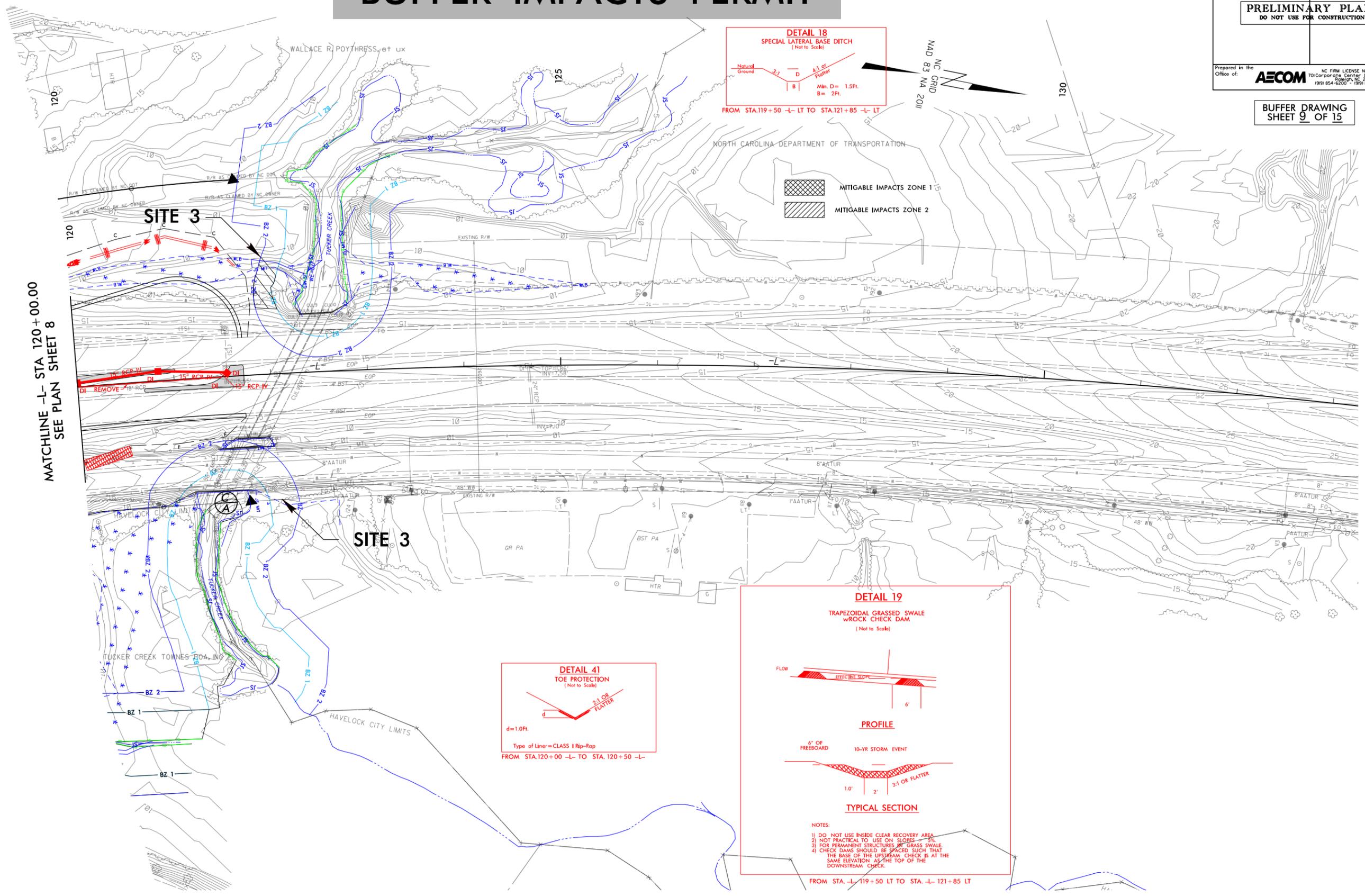
REVISIONS

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BUFFER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-5516	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of: AECOM	
NC FIRM LICENSE No. F-0342 701 Corporate Center Dr., Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (fax)	

BUFFER DRAWING
SHEET 9 OF 15



REVISIONS

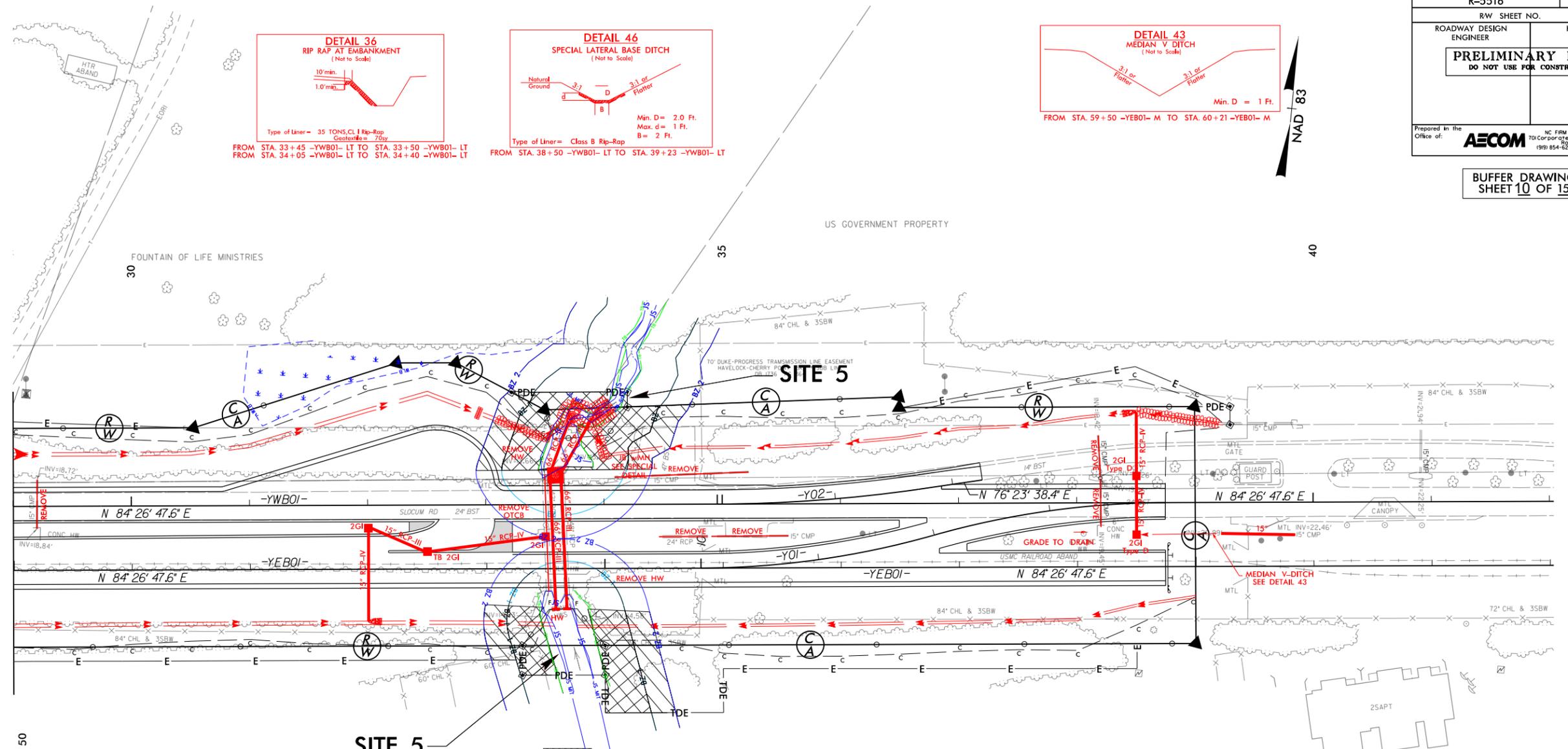
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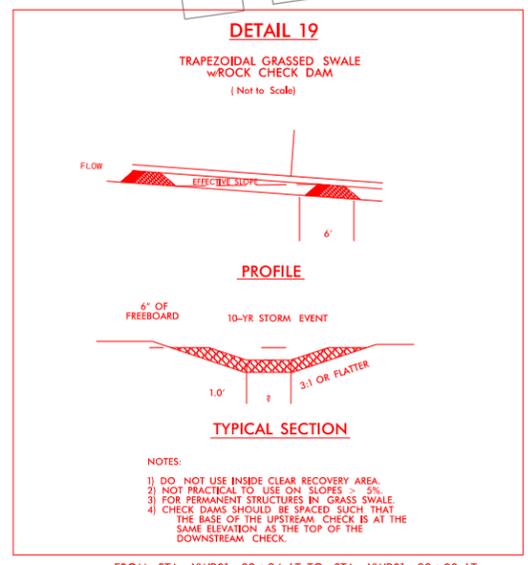
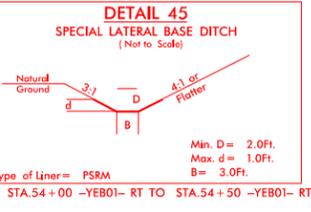
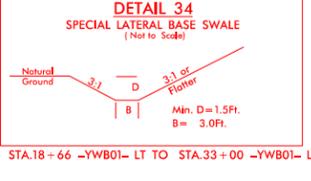
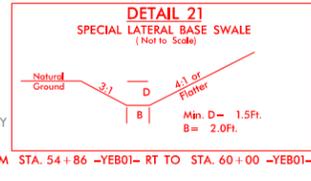
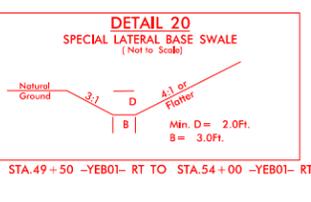
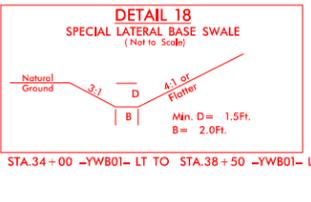
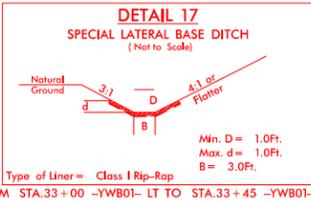
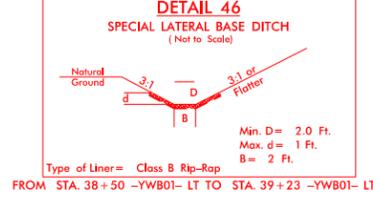
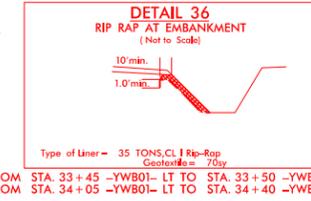
PROJECT REFERENCE NO.	SHEET NO.
R-5516	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	
AECOM	
NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (fax)	

BUFFER DRAWING
SHEET 10 OF 15

MATCHLINE -YEB01- / -YWB01-
STA 50+00.00 / 29+00.00
SEE PLAN SHEET 10



NOTE: CONTRACTOR SHALL FABRICATE AND INSTALL ANTI-PERSONNEL GATES ON NEW HEADWALLS. GATES SHALL BE SIMILAR IN MATERIAL AND CONSTRUCTION TO EXISTING GATES ON 42" AND 48" RCP.



BUFFER IMPACTS PERMIT

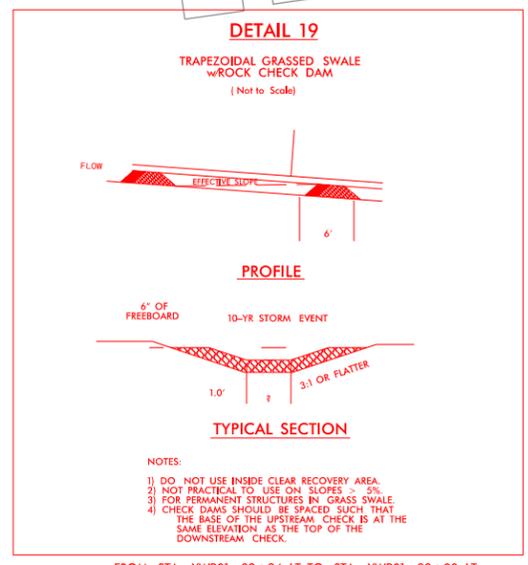
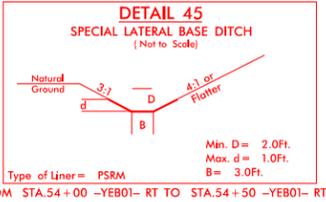
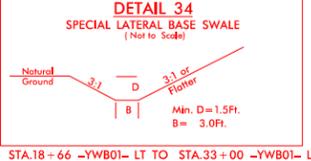
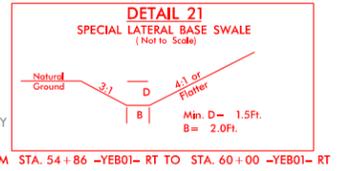
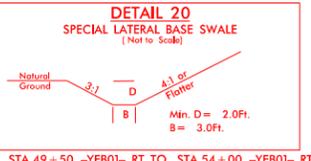
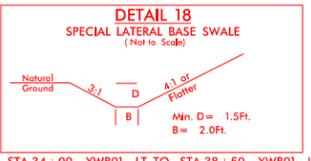
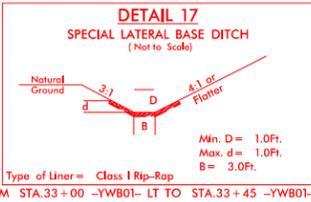
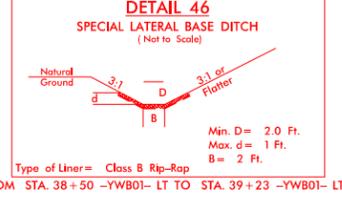
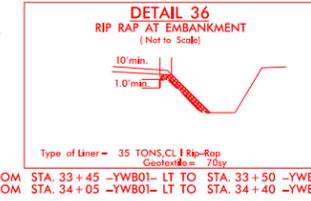
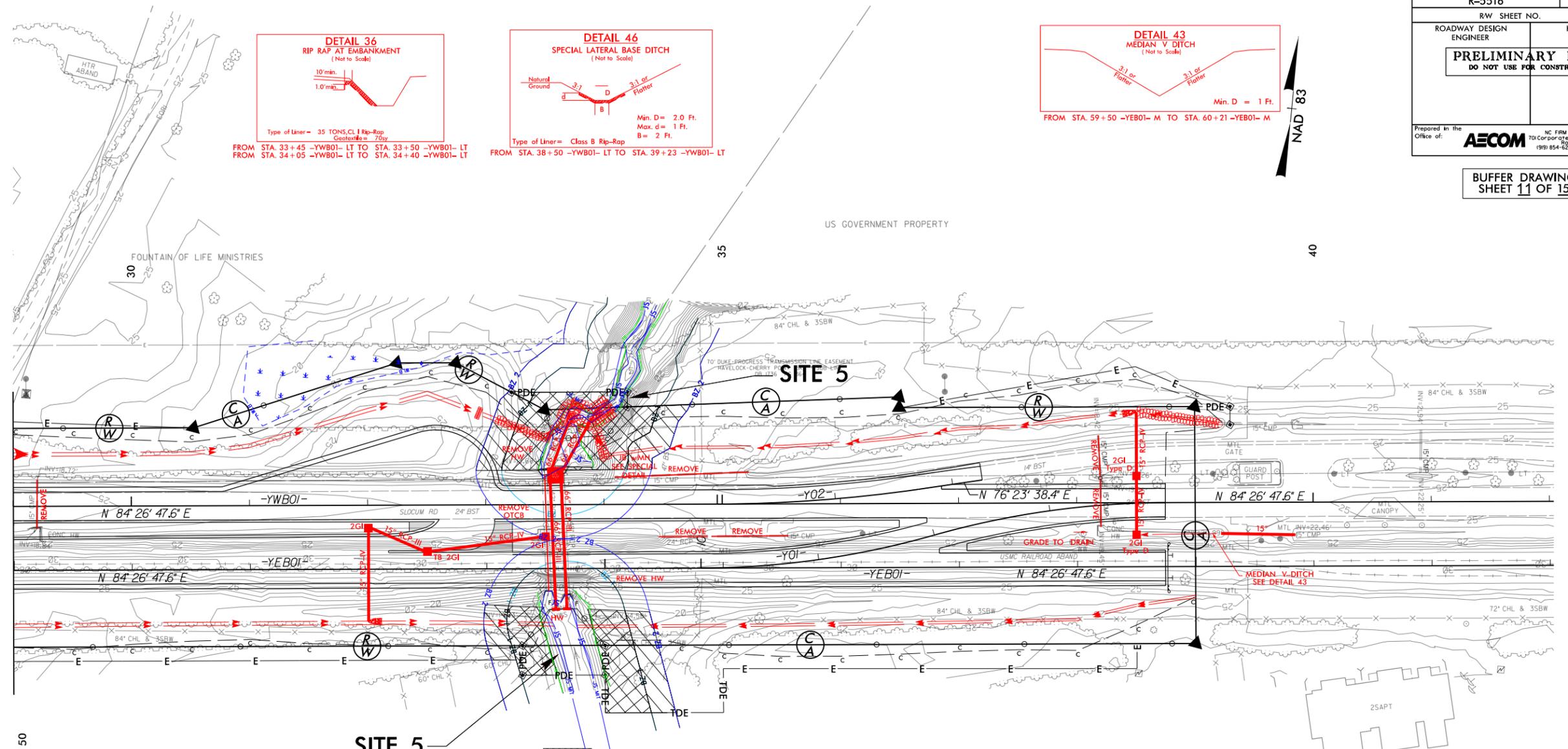


REVISIONS

DATE/TIME: 3:50:00 PM
C:\Users\AECOM\Documents\ENVIRONMENTAL\DRWINGS\5516\101_Plan_Bldg\plan_10.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-5516	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (FAX)

BUFFER DRAWING
SHEET 11 OF 15



BUFFER IMPACTS PERMIT



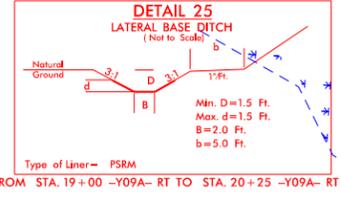
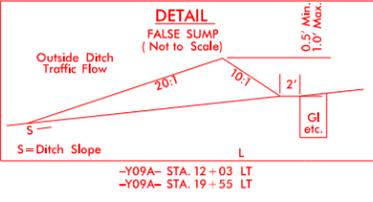
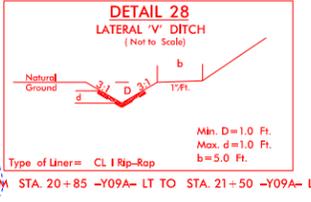
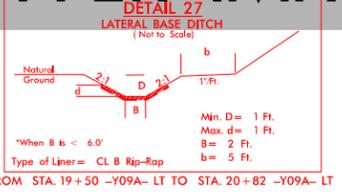
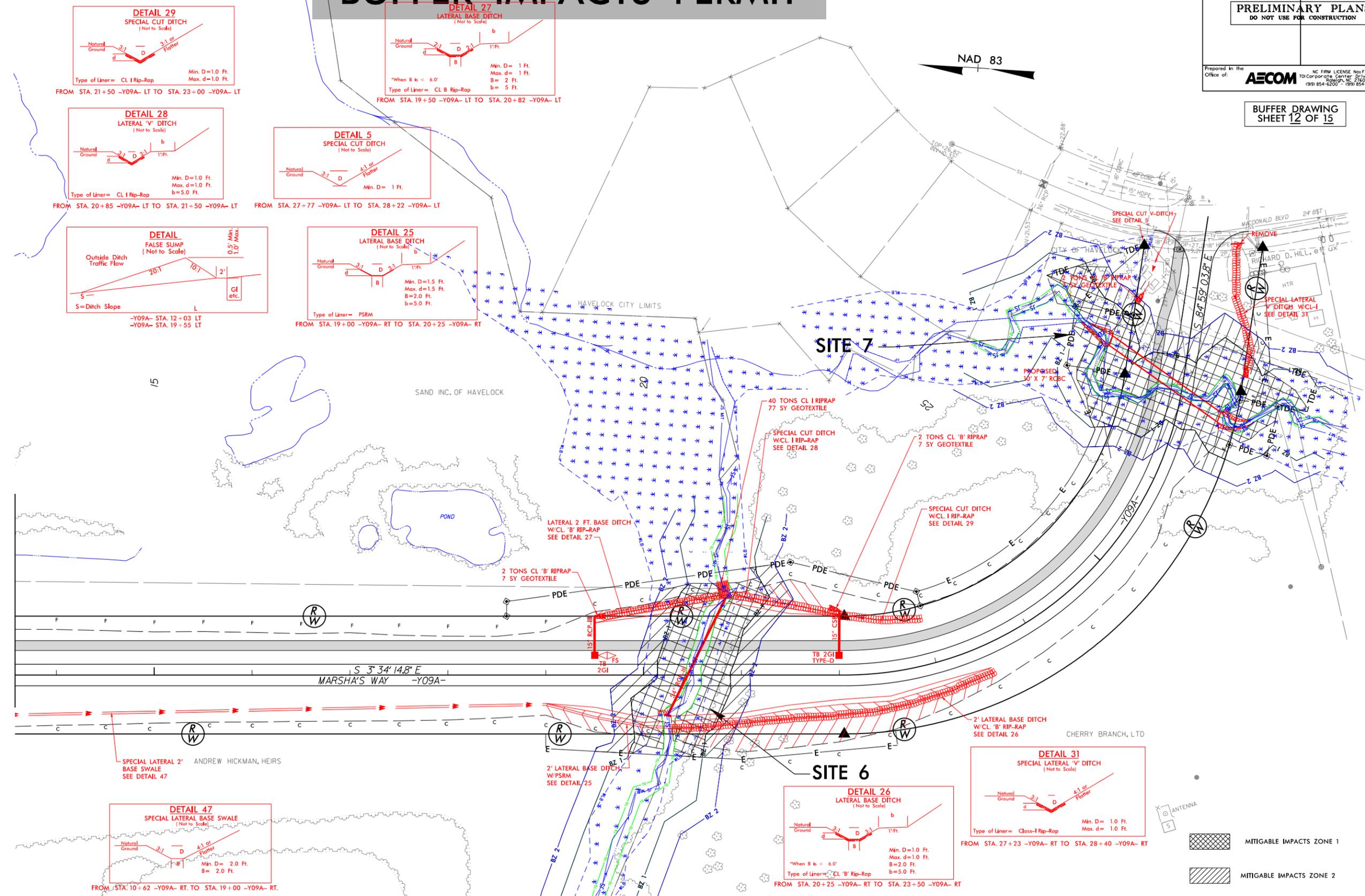
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BUFFER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
R-5516	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of:	
AECOM	
<small>NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (fax)</small>	

BUFFER DRAWING
SHEET 12 OF 15

NAD 83



MATCHLINE -Y09A- STA 14+00.00
SEE PLAN SHEET 12

REVISIONS

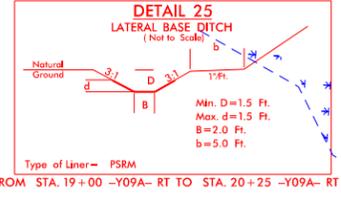
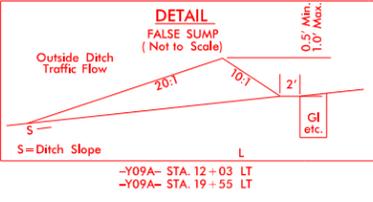
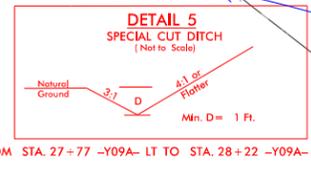
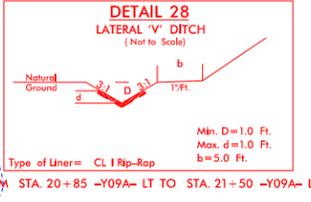
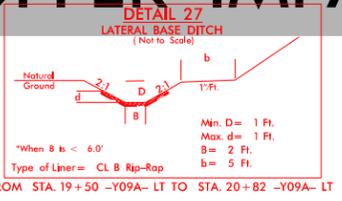
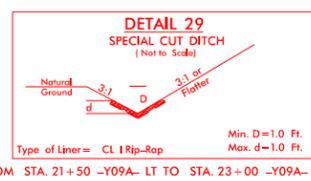
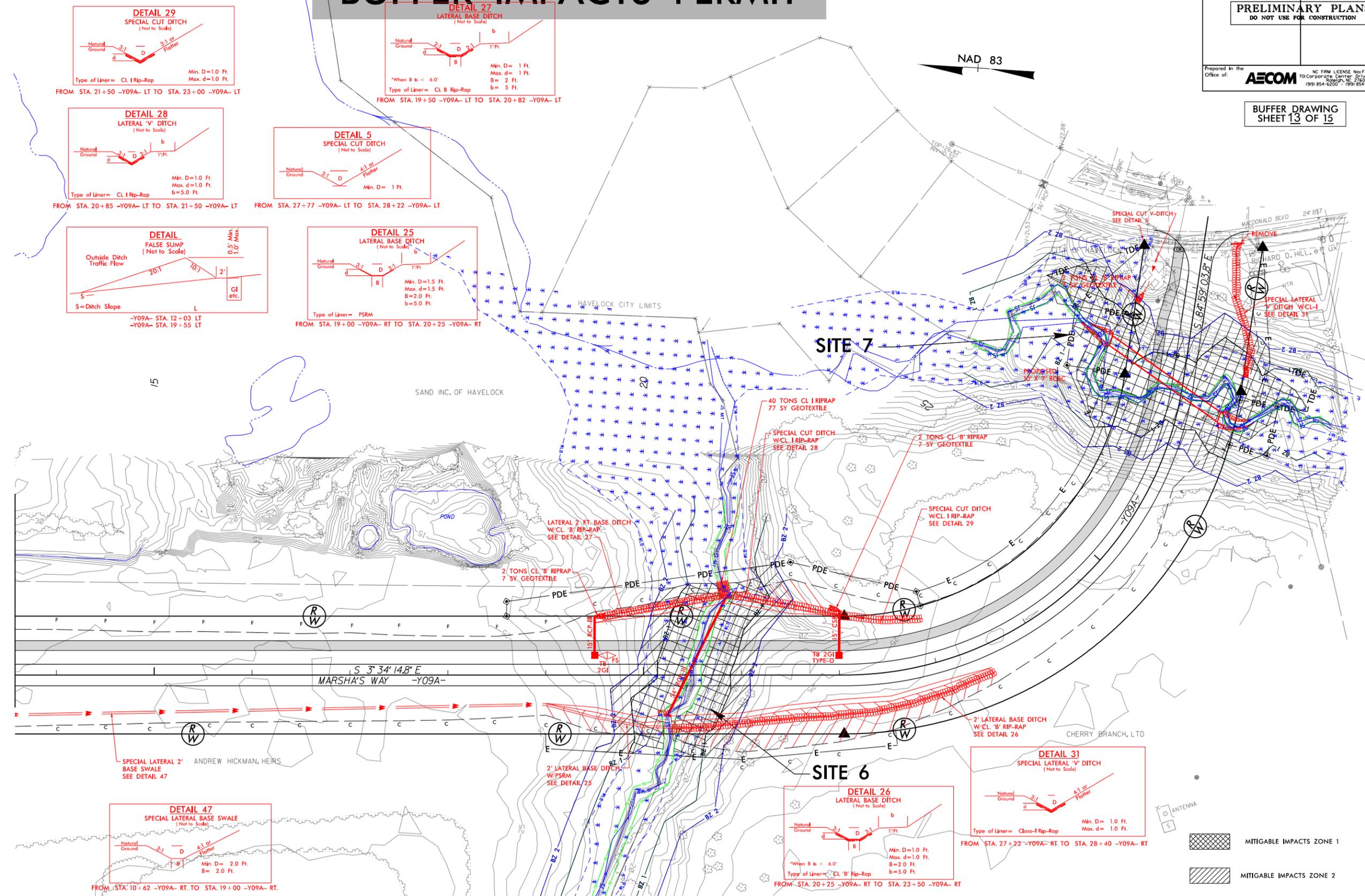


DATE/TIME: 3/30/06 PM
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BUFFER IMPACTS PERMIT

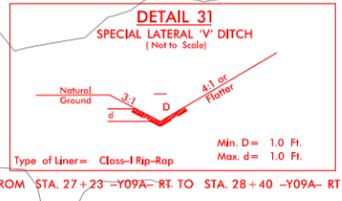
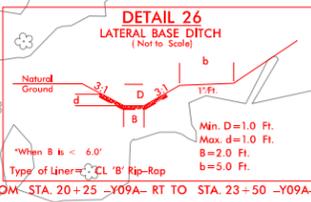
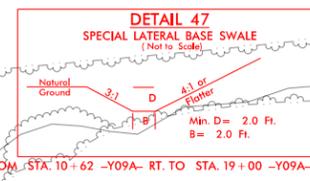
PROJECT REFERENCE NO.	SHEET NO.
R-5516	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
Prepared in the Office of: AECOM	
NC FIRM LICENSE No. F-0342 701 Corporate Center Dr., Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6299 (fax)	

BUFFER DRAWING
SHEET 13 OF 15



MATCHLINE -Y09A- STA 14+00.00
SEE PLAN SHEET 12

REVISIONS



DATE/TIME: 3/29/21 PM
DWG: R:\Hydraulics\PERMITS\ENVIRONMENTAL\ORDR\WINGS\5516\14\13\13.dwg

WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)	WETLANDS IN BUFFERS	
		ZONE 1 (ft ²)	ZONE 2 (ft ²)
1	-L- Sta. 75+50	9690	2360
	-L- Sta. 81+50		
2	-L- Sta. 103+00	1231	0
	-L- Sta. 104+00		
6	-Y09A- Sta. 20+00	7965	1635
	-Y09A- Sta. 21+50		
7	-Y09A- Sta. 26+15	16895	2764
	-Y09A- Sta. to 27+80		
TOTAL:		35781	6759

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 CRAVEN COUNTY
 PROJECT: 45492.1.1 (R-5516)

 2/6/2017
 SHEET 15 OF 15