



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

September 3, 2010

EUGENE A. CONTI, JR.
SECRETARY

MEMORANDUM TO: Mr. Mike Mills, PE
Division Seven Engineer

FORM: Philip S. Harris, III P. E., Unit Head *E. F. Harris*
Natural Environment Unit
Project Development and Environmental Analysis Branch

SUBJECT: Pleasant Garden, Guilford County; TIP Project number
R-2612 A; WBS Element Number 34483 Federal Project
Number NHF-421(11); State Project Number 8.1493301

Attached are the U.S. Army Corps of Engineers Section 404 Individual Permit and the N.C. Division of Water Quality Section 401 Individual Water Quality Certification, for the above referenced project. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:
<http://www.ncdot.gov/doh/preconstruction/pe/neu/permit.html>

PHS/chr

Attachment

CC: W/Attachment
Mr. Randy Garris, P. E., State Contract Officer
Mr. Jerry Parker, Division Environmental Officer
Mrs. Beth Harmon, EEP

CC: W/O Attachment (see website for attachments)
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Jay Benentt, P. E., Roadway Design
Dr. David Chang, P. E., Hydraulics
Mr. Art McMillan, P. E., Highway Design
Mr. Tom Koch, P. E., Structure Design
Mr. Dwayne Sykes, P. E., Utilities Unit
Mr. Mark Staley, Roadside Environmental
Mr. John F. Sullivan, FHWA
Mr. Ron Hancock, P. E., State Roadway Construction Engineer
Mr. Mike Robinson, P. E., State Bridge Construction Engineer
Mr. Eric Midkiff, P. E., PDEA Central Region Unit Head

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL
ANALYSIS
NATURAL ENVIRONMENT UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-431-2000

FAX: 919-431-2001

WEBSITE: WWW.NCDOT.ORG

LOCATION:
ENVIRONMENTAL RESOURCES CENTER
4701 ATLANTIC AVENUE, STE. 116
RALEIGH, NC 27604

PROJECT COMMITMENTS

US 421

Interchange Additions at SR 3389 (Woody Mill Road)

Pleasant Garden

Guilford County

WBS Element 34483

Federal Project Number NHF-421(11)

State Project Number 8.1493301

TIP Project Number R-2612A

Commitments Developed through Project Development and Design

Hydraulic Design Unit

- The anticipated impacts to the floodplains are minimal. The Hydraulics Unit will coordinate with the Federal Emergency Management Agency and local authorities, during the final design stage, to ensure compliance with applicable floodplain ordinances.
 - ❖ *The Hydraulics Unit will coordinate with the Federal Emergency Management Agency (FEMA) to determine if a Conditional Letter of Map Revision (CLOMR) and a subsequent final Letter of Map Revision (LOMR) are required for the project. If required, the Division will submit sealed as-built construction plans to the Hydraulics Unit upon project completion certifying the project was built as shown on construction plans.*
- The supplemental Natural Resources Report (October 12, 1998) for Alternative A-2 at Woody Mill Road identified four additional unnamed tributaries to Alamance Creek, located within the study limits. The Hydraulics Unit will provide an amended hydraulics survey report for this recommended alternative for inclusion in the anticipated Finding of No Significant Impact (FONSI).
 - ❖ *The update of hydraulic information was completed on February 21, 2006, and is included in the FONSI.*
- During preliminary plan preparation and prior to Right of Way authorization, a wetland / stream minimization meeting(s) will be held with resource agencies.
 - ❖ *These meetings were held on November 15, 2007, January 16, 2008 and April 17, 2008.*

Roadway Design Unit

- Roadway Design will attempt to avoid or limit the proposed Right of Way encroachment at hazardous waste sites, because of potential environmental liabilities for proper cleanup and remediation, if contamination exists. If the sites cannot be avoided, a "Preliminary Site Assessment" will be performed prior to right of way acquisition to determine the existence and extent of any contamination.

❖ *The geotechnical investigations on abandoned gas station within the project limits. The underground storage tanks have been removed and monitoring wells are present.*

- Upon completion of the final plans by Roadway Design, the US Army Corps of Engineers Regulatory Branch will have an opportunity to review the plans for permit requirement determinations, including the extent and location of any work within Waters of the United States and Wetlands.

❖ *These meetings were held on November 15, 2007, January 16, 2008 and April 17, 2008.*

- Construction of the proposed project will be coordinated to minimize conflict with the Greater Greensboro Open (GGO) golf tournament which is held in April at the Forest Oaks Golf Course, just east of the project. This annual event generates heavy traffic volumes in the project area.
- Paved shoulders, four feet in width, will be constructed on Woody Mill Road-Company Mill Road, Neelley Road-Williams Dairy Road and Liberty Road within the project limits. This action will accommodate future bicycle routes in Guilford County.

Roadside Environmental Unit

- Guilford County has designated US 421 as a Scenic Corridor Overlay to limit certain types of development along the corridor. The preservation of significant natural vegetation buffers directly adjacent to major transportation routes is encouraged, as stated in the Southern Guilford Area Plan, adopted April 18, 2002. In addition to preserving natural buffers, the Scenic Corridor Overlay limits outdoor signage and billboards. Berms and tree planting are required for all new construction disturbing the natural buffer 1,500 feet west of the centerline of US 421. The ordinance, including landscape provisions, also applies to roads intersecting US 421.

❖ *The Roadside Environmental Unit will coordinate appropriate landscape provisions with Guilford County.*

Commitments Developed Through the Permitting Process

Natural Environment Unit

- NC-EEP STREAM MITIGATION: Compensatory mitigation for the loss of 1487 linear feet of stream and 0.47 acres of wetlands, associated with the proposed project, shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated August 18, 2009 from William D. Gilmore, EEP Director. Pursuant to the EEP Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corp of Engineers signed July 22, 2003, the EEP will provide 2222 linear feet of warm-water stream restoration and 0.94 riparian wetland acres in the Haw River basin (Hydrologic Cataloging Unit 03030002) by one year of the date of this permit. The NCDOT shall, within 30 days of the issue date of this permit, certify that sufficient funds have been provided to EEP to complete the required mitigation, pursuant to Paragraph V. of the MOA.

❖ *The Natural Environment Unit has met this requirement.*

Hydraulic Design Unit / Structure Design Unit / Division 7 Construction

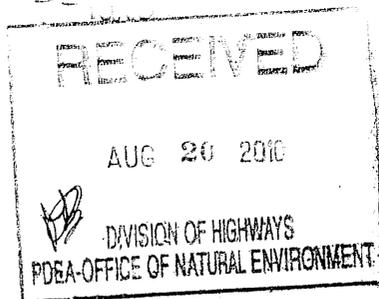
- A series of alternating sills (1' tall by 6' wide and 6" tall by 2' spanning the width of the 8' wide culvert) shall be placed approximately every 15' for the entire length of the culvert at site number five.

- ❖ *Condition has been met. See replacement Condition number five and attached detail A included with the 401 Certification dated April 1, 2010.*



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343



August 19, 2010

Regulatory Division

Action ID No: 2009-01927; Transportation Improvements Project R-2612A

Dr. Gregory J. Thorpe, PhD, Manager
Project Development and Environmental Analysis Branch
N.C. Department of Transportation
Division of Highways
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Dr. Thorpe:

Enclosed is a Department of the Army permit to authorize the proposed permanent placement of fill material into 1,487 linear feet of jurisdictional stream channel and 0.47 acre of adjacent riparian wetlands. These impacts are associated with the intersection improvement project identified as R-2612A. The project site is located at the SR 3389 (Woody Mill Road) and US 421 intersection, in and near Pleasant Garden, Guilford County, North Carolina and extends from the existing intersection northwestward approximately 5,500 feet to Minden Road (SR 3413), southeast approximately 2,700 feet along U.S. 421, northeast approximately 2,200 feet along Woody Mill Road (SR 3330) and south approximately 1,800 feet along Company Mill Road (SR 3381).

Any deviation in the authorized work will likely require modification of this permit. If a change in the authorized work is necessary, you should promptly submit revised plans to the Corps showing the proposed changes. You may not undertake the proposed changes until the Corps notifies you that your permit has been modified.

Carefully read your permit. The general and special conditions are important. Your failure to comply with these conditions could result in a violation of Federal law. Certain significant conditions require that:

- a. You must complete construction before December 31, 2015.
- b. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.
- c. You must notify this office in advance as to when you intend to commence and complete work.

You should address all questions regarding this authorization to Andrew Williams, Raleigh Regulatory Field Office, at telephone (919) 554-4884, extension 26.

Sincerely,


for Jefferson M. Ryscavage
Colonel, U.S. Army
District Commander

Enclosures

Copy furnished (with enclosures):

Chief, Source Data Unit
NOAA/National Ocean Service
ATTN: Sharon Tear N/CS261
1315 East-West Hwy., Rm 7316
Silver Spring, Maryland 20910-3282

Copies furnished (with special conditions and plans):

Mr. Ronald J. Mikulak, Chief
Wetlands Regulatory Section
61 Forsyth Street
Atlanta, Georgia 30303

Mr. Pete Benjamin
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Ron Sechler
National Marine Fisheries Service
Pivers Island
Beaufort, North Carolina 28516

Mr. Doug Huggett
Division of Coastal Management
N.C. Department of Environment
and Natural Resources
400 Commerce Avenue
Morehead City, North Carolina 28557

Mr. David Rackley
National Marine Fisheries Service
219 Fort Johnson Road
Charleston, South Carolina 29412-9110

DEPARTMENT OF THE ARMY PERMIT

Permittee: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Permit No: SAW-2009-01927

Issuing Office: USAED, WILMINGTON

NOTE: The term “you” and its derivatives, as used in this permit, means the permittee or any future transferee. The term “this office” refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of the office acting under the authority of the commanding officer.

You are authorized to perform work in the accordance with the terms and conditions specified below.

Project Description: The project, identified as R-2612A, consists of removing the Woody Mill Road and Company Road at-grade intersections with US 421. The project also consists of the construction of a bridge with access to US 421 and the realignment of the Woody Mill Road interchange with Company Mill Road. It begins immediately west of the intersection of SR 3413 (Minden Road) and US 421 in Guilford County and proceeds approximately 0.93 mile east, to east of SR 3394 (Company Mill Road). The southern terminus of the project will tie into existing SR 3394 (Company Mill Road) and the northern terminus will tie into SR 3389 (Woody Mill Road) immediately north of the intersection with SR 3549 (Liberty Road). The roadway cross-section will be a three-lane, two way shoulder facility that tapers back to the existing two-lane, two-way shoulder facility outside of the ramp junctions, north and south of US 421. The R-2612A interchange will be constructed as a modified diamond design. Total permanent impacts for the construction of this project are 1,487 linear feet of stream channel and 0.47 acre of riparian wetlands. The applicant will mitigate for unavoidable impacts to streams by payment into the North Carolina Ecosystem Enhancement Program in the amount necessary to perform the restoration of 2,222 linear feet of warm water streams and 0.94 acre of riparian wetland within the in the Cape Fear River Basin (HUC 03030002).

Project Location: The project, identified as R-2612A, is located at the SR 3389 (Woody Mill Road) and US 421 intersection, in and near Pleasant Garden, Guilford County, North Carolina. The project extends from the existing intersection northwestward approximately 5,500 feet to Minden Road (SR 3413), southeast approximately 2,700 feet along U.S. 421, northeast approximately 2,200 feet along Woody Mill Road (SR 3330) and south approximately 1,800 feet along Company Mill Road (SR 3381). Coordinates (in decimal degrees) for the site are 35.9640° N, -79.7049° W (NAD83/WGS84). The site contains five (5) unnamed tributaries to Big Alamance Creek and five (5) adjacent wetland areas, in the Cape Fear River Basin (8-Digit Cataloging Unit 03030002). Big Alamance Creek flows to the Haw River which flows to Cape Fear River, a navigable water of the United States.

Permit Conditions:

General Conditions:

1. The time Limit for completing the work authorized ends on December 31, 2015. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Conditions 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. 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 eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

SEE ATTACHED SPECIAL CONDITIONS

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S. C. 403).
 - (X) Section 404 of the clean Water Act (33 U.S.C. 1344).
 - () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

Special Conditions
Action ID. SAW-2009-01927; NC Department of Transportation/TIP R-2612A

WORK LIMITS

- a) All work authorized by this permit must be performed in strict compliance with the attached plans, which are a part of this permit. Any modification to these plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation.
- b) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.
- c) 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.
- d) 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.

RELATED LAWS

- e) All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Quality at (919) 807-6300, or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

PROJECT MAINTENANCE

- f) The permittee shall advise the Corps in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.
- g) Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used.
- h) The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

Special Conditions

Action ID. SAW-2009-01927; NC Department of Transportation/TIP R-2612A

- i) 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).
- j) 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 United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.

ENFORCEMENT

- k) Violations of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the permittee's discovery of the violation.

CULVERT

- l) All authorized culverts will be installed to allow the passage of low stream flows and the continued movement of fish and other aquatic life as well as to prevent headcutting of the streambed. For all box culverts and for pipes greater than 48 inches in diameter, the bottom of the pipe will be buried at least one foot below the bed of the stream unless burial would be impractical and the Corps of Engineers has waived this requirement. For culverts 48 inches in diameter or smaller, the bottom of the pipe 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. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to, upstream or downstream of the structures. In order to allow for the continued movement of bed load and aquatic organisms, existing stream channel widths and depths will be maintained at the inlet and outlet ends of culverts. Riprap armoring of streams at culvert inlets and outlets shall be minimized above the ordinary high water elevation in favor of bioengineering techniques such as bank sloping, erosion control matting and revegetation with deep-rooted, woody plants.

Special Conditions

Action ID. SAW-2009-01927; NC Department of Transportation/TIP R-2612A

PRECONSTRUCTION MEETING

- m) The permittee shall schedule a preconstruction meeting between its representatives, the contractor's representatives, and the Corps of Engineers, Raleigh Regulatory Field Office, Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all of the terms and conditions contained within this Department of the Army Permit. The permittee shall provide the USACE, Raleigh Regulatory Field Office, with a copy of the final plans at least two weeks prior to the preconstruction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The permittee shall schedule the preconstruction meeting for a time when the USACE and North Carolina Division of Water Quality (NCDWQ) Project Managers can attend. The permittee shall invite the Corps and NCDWQ Project Managers a minimum of thirty (30) days in advance of the scheduled meeting in order to provide those individuals with ample opportunity to schedule and participate in the required meeting.

BORROW AND WASTE

- n) 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. All jurisdictional wetland lines on borrow and waste sites shall be verified by the Corps of Engineers and shown on the approved reclamation plans. The permittee shall ensure that all such areas comply with Condition b) of this permit, and shall require and maintain documentation of the location and characteristics of all borrow and disposal sites associated with this project. This information will include data regarding soils, vegetation and hydrology sufficient to clearly demonstrate compliance with the Condition b). All information will be available to the USACE upon request. NCDOT shall require its contractors to complete and execute reclamation plans for each waste and borrow site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the Corps of Engineers within 30 days of the completion of the reclamation work.

Special Conditions

Action ID. SAW-2009-01927; NC Department of Transportation/TIP R-2612A

EEP MITIGATION

- o) NC-EEP STREAM/WETLAND MITIGATION: Compensatory mitigation for the loss of 1,487 linear feet of stream, and 0.47 acre of adjacent wetland, associated with the proposed project, shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated August 18, 2009 from William D. Gilmore, EEP Director. Pursuant to the EEP Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corps of Engineers signed on July 22, 2003, the EEP will provide 2,222 linear feet of warm-water restoration equivalent stream mitigation and 0.94 acre of restoration equivalent riparian wetlands in the Cape Fear River basin (Cataloging Unit 0303002 (Haw River basin) by one year of the date of this permit. The NCDOT shall, within 30 days of the issue date of this permit, certify that sufficient funds have been provided to EEP to complete the required mitigation, pursuant to Paragraph V. of the MOA.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL

Applicant: North Carolina Department of Transportation	File Number: SAW2009-01927	Date: July 22, 2010
Attached is:		See Section below
<input checked="" type="checkbox"/> INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
<input type="checkbox"/> PROFFERED PERMIT (Standard Permit or Letter of permission)		B
<input type="checkbox"/> PERMIT DENIAL		C
<input type="checkbox"/> APPROVED JURISDICTIONAL DETERMINATION		D
<input type="checkbox"/> PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:
Andrew Williams, Regulatory Project Manager
Raleigh Regulatory Field Office
U.S. Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587

If you only have questions regarding the appeal process you may also contact:
Mr. Mike Bell, Administrative Appeal Review Officer
CESAD-ET-CO-R
U.S. Army Corps of Engineers, South Atlantic Division
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-8801

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

<hr/> Signature of appellant or agent.	Date:	Telephone number:
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Division Engineer:
Commander
U.S. Army Engineer Division, South Atlantic,
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-8801



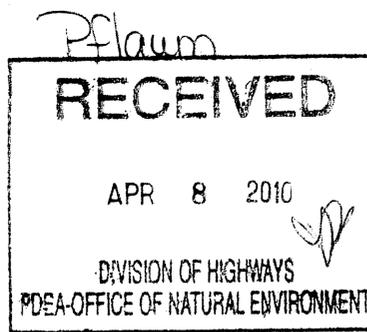
North Carolina Department of Environment and Natural Resources

Evelyn Eaves Perdue
Governor

Division of Water Quality
Coleen H. Sullins
Director

Dee Freeman
Secretary

April 1, 2010



RECEIVED
Division of Highways

APR 07 2010

Preconstruction
Project Development and
Environmental Analysis Branch

Dr. Greg Thorpe, PhD., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina, 27699-1548

Subject: Correction to 401 Water Quality Certifications for NCDWQ Project No. 20091070.

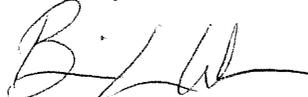
Dear Dr. Thorpe:

This letter is in regards to the Individual 401 Water Quality Certification issued for R2612A authorizing stream and wetland impacts. Condition 5, shall be replaced with the following condition:

A series of alternating sills (1' tall by 6' wide and 6" tall by 2' spanning the width of the 8' wide culvert) shall be placed approximately every 15' for the entire length of the culvert. See attached Detail A.

Please attach a copy of this letter with any copies of the original Water Quality Certifications and any subsequent modifications. All other conditions written into the previous Water Quality Certification for this project still applies, except where superseded by this correction. If you have any questions, please contact Amy Euliss at (336) 771-4959.

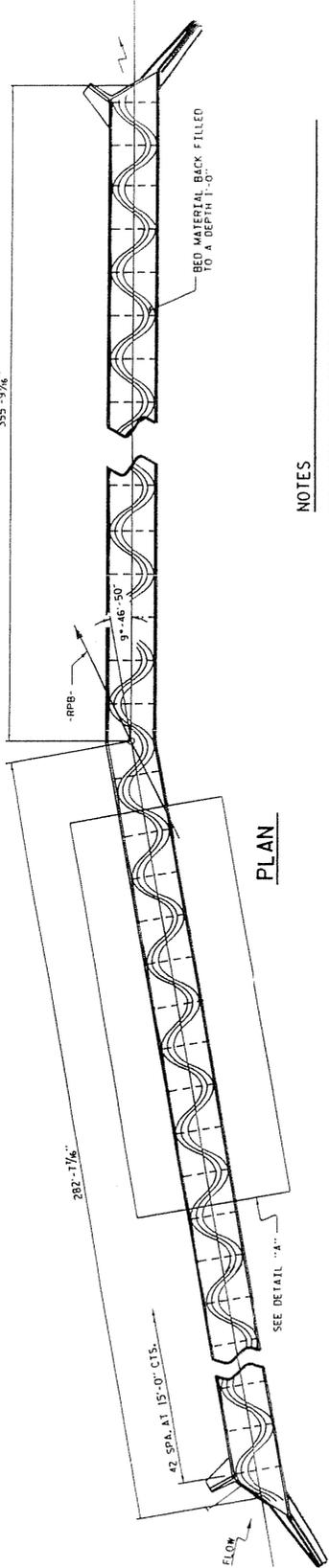
Sincerely,


for Coleen H. Sullins
Director

Attachment: Sill Detail A

cc: Andy Williams, US Army Corps of Engineers, Raleigh Field Office
Chris Militscher, Environmental Protection Agency
Travis Wilson, NC Wildlife Resources Commission
Wetlands/401 Transportation Permitting Unit
File Copy

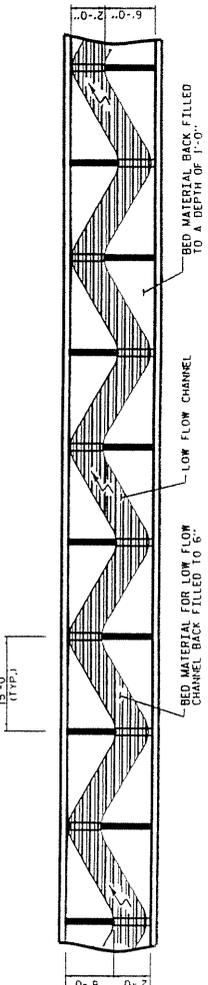
355'-9 7/8"



PLAN

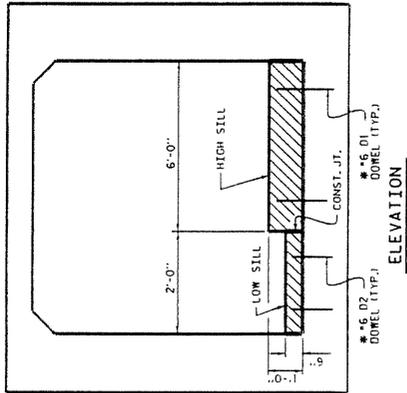
NOTES

BED MATERIAL EXCAVATED FROM THE SITE FOR BOX CULVERT SHALL BE USED FOR THE FLOOR OF THE COMPLETED CULVERT.
 BED MATERIAL PLACED BETWEEN SILLS IN THE CULVERT SHALL PROVIDE A CONTINUOUS LOW FLOW CHANNEL BETWEEN THE LOWER SILLS. BED MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER.
 MATERIAL SHALL NOT BE REMOVED UNTIL STREAM FLOW HAS BEEN PERMANENTLY CUT OFF FROM THAT PORTION OF THE STREAM.
 ALL WORK INVOLVING EXCAVATION, STOCKPILING AND PLACING OF BED MATERIAL SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "CULVERT EXCAVATION".
 THE CONTRACTOR SHALL SUBMIT A PLAN FOR SILL INSTALLATION TO THE ENGINEER.
 FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS.
 HIGH SILLS AND LOW SILLS ARE TO BE CAST SEPARATELY.



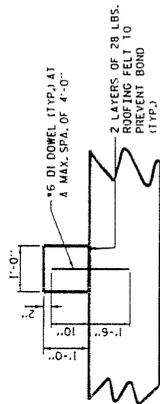
DETAIL "A"

LOW SILL
 HIGH SILL

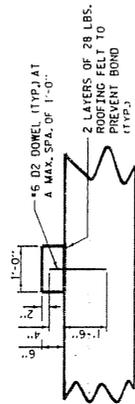


ELEVATION

*6 D2 DOWEL (TYP.)
 *6 D1 DOWEL (TYP.)
 CONST. JT.
 * DOWELS MAY BE PUSHED INTO GREEN CONCRETE AFTER SLAB HAS BEEN FLOAT FINISHED.



SECTION THRU HIGH SILL



SECTION THRU LOW SILL

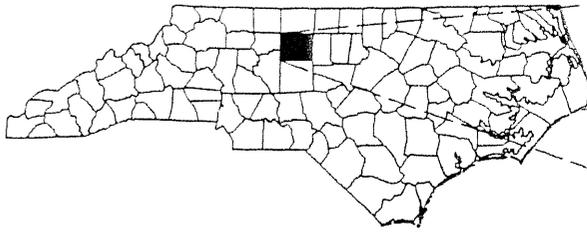
PROJECT NO. R-2612A
 GUILFORD COUNTY
 STATION: 26+05.11 - 26+11

SHEET 1 OF 7
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 DIVISION
 CULVERT SILL
 8 FT. x 8 FT.
 CONCRETE BOX CULVERT

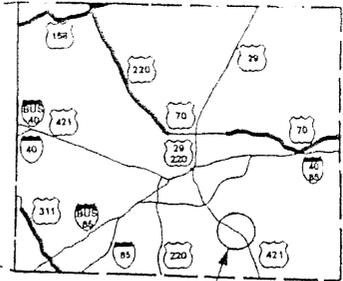
REVISIONS	
NO.	DATE

SILL DETAILS

DATE 1/25/03
 N. D. TRAN
 W. LANGRISH
 1/25/03

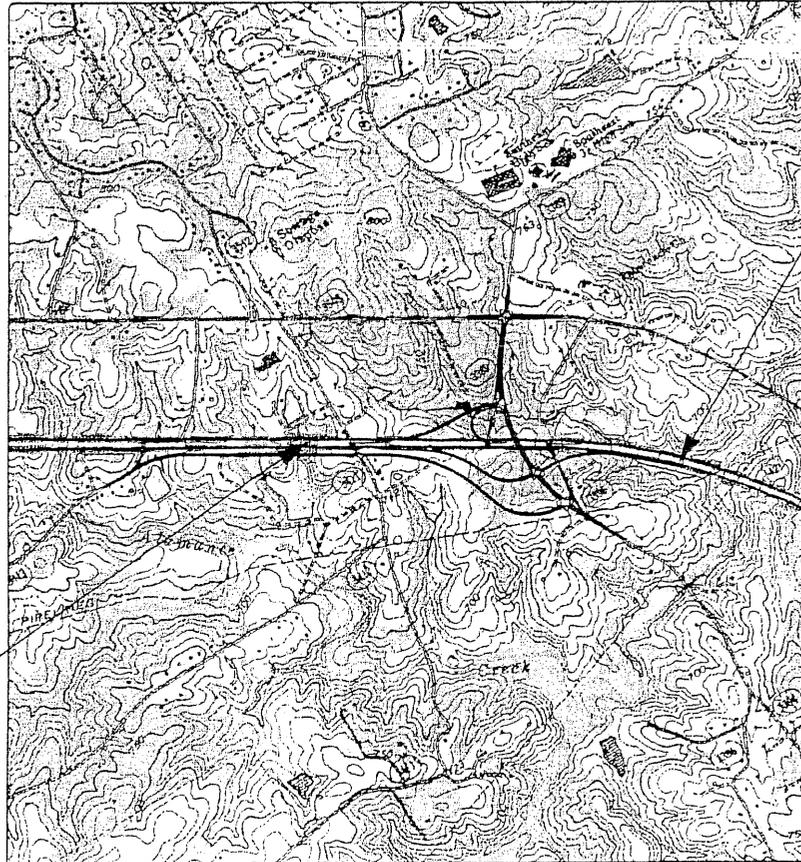


SEE INSET BELOW



SITE

GUILFORD COUNTY



END PROJECT

BEGIN PROJECT

VICINITY MAP

NTS

WETLAND/STREAM IMPACTS

NCDOT

DIVISION OF HIGHWAYS
GUILFORD COUNTY

PROJECT: 33483.1.1 (R-2612A)

US 421 AT SR 3389
(WOODY MILL ROAD)
SOUTH OF GREENSBORO

SHEET

OF

30

12/15/08



North Carolina Department of Environment and Natural Resources

Division of Water Quality

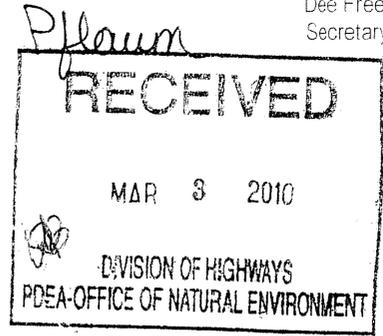
Coleen H. Sullins

Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

February 25, 2010



Dr. Greg Thorpe, PhD., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina, 27699-1548

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with
ADDITIONAL CONDITIONS for Proposed Interchange additions at SR 3389 (Woody Mill Road in
Guilford County, Federal Aid Project No. NHF-421 (11), State Project No. 8.149330, TIP R2612A.
NCDWQ Project No. 20091070.

Dear Dr. Thorpe:

Attached hereto is a copy of Certification No. WQC003818 issued to The North Carolina Department of
Transportation (NCDOT) dated February 25, 2010

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Coleen H. Sullins
for Coleen H. Sullins
Director

Attachments

- cc: Andy Williams, US Army Corps of Engineers, Raleigh Field Office
- Jerry Parker, Division 7 Environmental Officer
- Chris Militscher, Environmental Protection Agency (electronic copy only)
- Travis Wilson, NC Wildlife Resources Commission
- Beth Harmon, Ecosystem Enhancement Program
- NCDWQ, Wetlands/ 401 Transportation Permitting Unit
- File Copy

40. Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (NCDWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 0.47 acres of jurisdictional wetlands and 1487 linear feet of jurisdictional streams in Guilford County. The project shall be constructed pursuant to the application dated received December 1, 2009, with additional information received January 13, 2010, and February 12, 2010. The authorized impacts are as described below:

Stream Impacts in the Cape Fear 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	145	0	0	0	145	0
2	0	0	88	0	88	0
3	201	0	0	0	201	0
5	0	0	856	0	856	856
6	0	0	88	0	88	0
7	0	0	109	0	109	0
Total	346	0	1141	0	1487	856

Total Stream Impact for Project: 1487 linear feet

Riverine Wetland Impacts in the Cape Fear River Basin

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Total Wetland Impact (ac)
1	0.07	0	0	0.01	0.08
3	0.04	0	0	0.01	0.05
4	0.08	0	<0.005	0	0.08
5	0.21	0	0.02	0.03	0.26
Total	0.40	0	0.02	0.05	0.47

Total Wetland Impact for Project: 0.47 acres.

The application provides adequate assurance that the discharge of fill material into the waters of the **Cape Fear River Basin** in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application dated received December 1, 2009, with additional information received January 13, 2010, and February 12, 2010. Should your project change, you are required to notify the NCDWQ 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 any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional 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 02B .0268. For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water

- discharge, fill, bank, construction, and all other structures shall be placed or placed, excavated, or flowing water. No temporary impacts have been approved for dewatering. If temporary impacts are necessary, a modification to this permit will be required.
15. 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.
 16. This approval will expire with the accompanying 404 federal permit.
 17. 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.
 18. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
 19. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
 20. 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 NCDWQ 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, NCDWQ may reevaluate and modify this certification.
 21. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification..
 22. 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.
 23. 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.
 24. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
 25. 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 NCDWQ when all work included in the 401 Certification has been completed.
 26. Native riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
 27. 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.
 28. 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:
 29. 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*.
 - a. 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.
 - b. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - c. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
 - d. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

If this Certification is unacceptable to you, you may request an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 25th day of February 2010

DIVISION OF WATER QUALITY



For Coleen H. Sullins
Director

WQCN0. 003818

NCDWQ Project No.: _____

County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to NCDWQ 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: _____

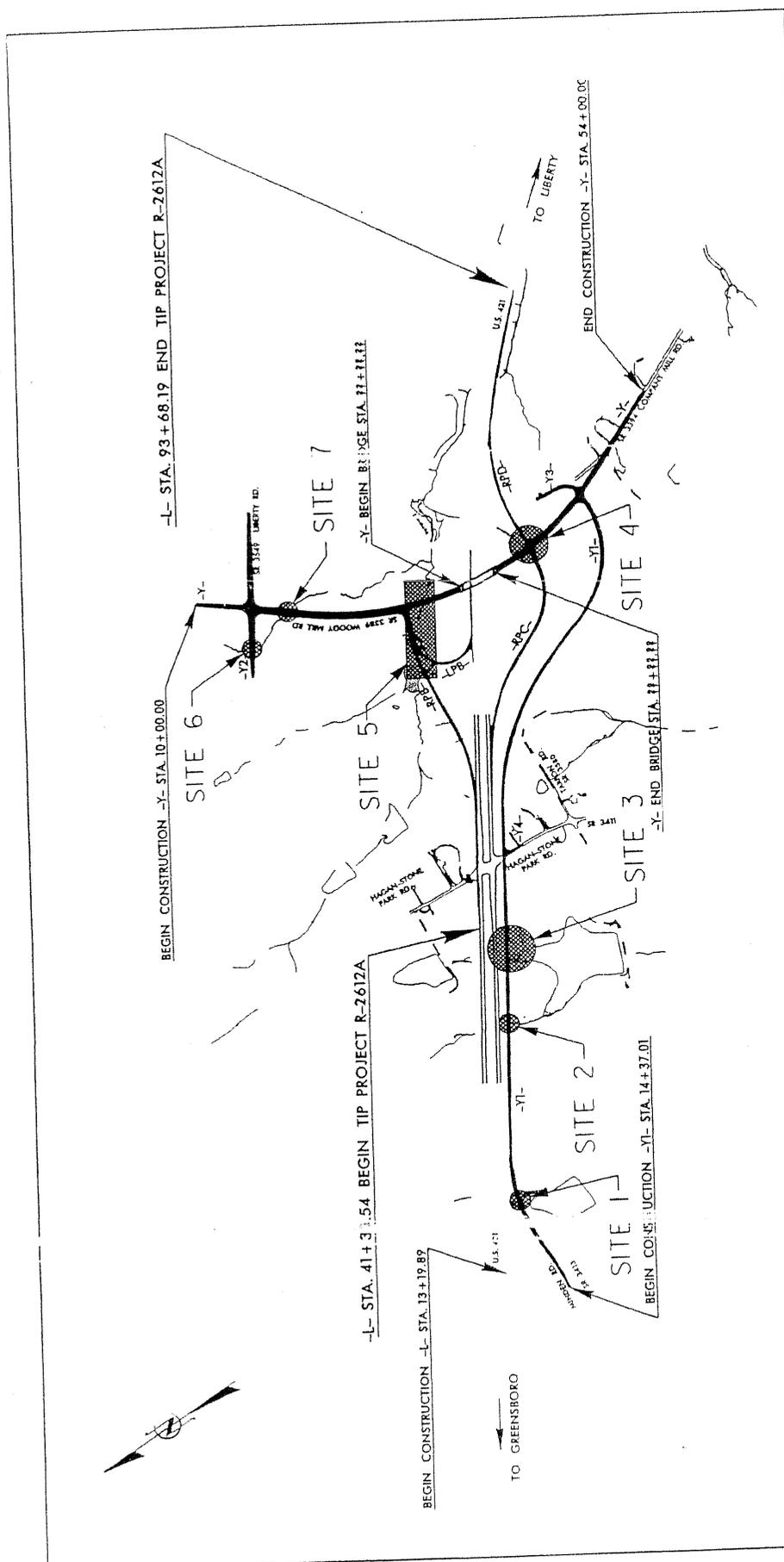
Engineer's Certification

_____ 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 _____



NCDOT
 DIVISION OF HIGHWAYS
 GUILFORD COUNTY
 PROJECT: 33483.1.1 (R-2612A)
 US 421 AT SR 3589
 (WOODY MILL ROAD)
 SOUTH OF GREENSBORO

PLAN VIEW
 WETLAND/STREAM IMPACTS

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
2	ANN S. HILLIARD & GLADYS S. BOWMAN	
6	BETTY E. SYKES, WALLACE G. FREEMAN JR. & EDNA F. HELMS	
10	ALLIE D. GREGORY	
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
13	FREDERICK WILLIAM HOLT	
14	HAROLD WAYNE & KAREN T. SMITH	
15	S. G. WOMACK & MARGUERITE T. WOMACK	
23	JOE R. & JEAN D. STAFFORD	
24	ABDULLAH ALSHANTEER & OSAMA AL YATEEM	

NCDOT
DIVISION OF HIGHWAYS
GUILFORD COUNTY
PROJECT: 33483.1.1 (R-2612A)
US 421 AT SR 3389
(WOODY MILL ROAD)
SOUTH OF GREENSBORO

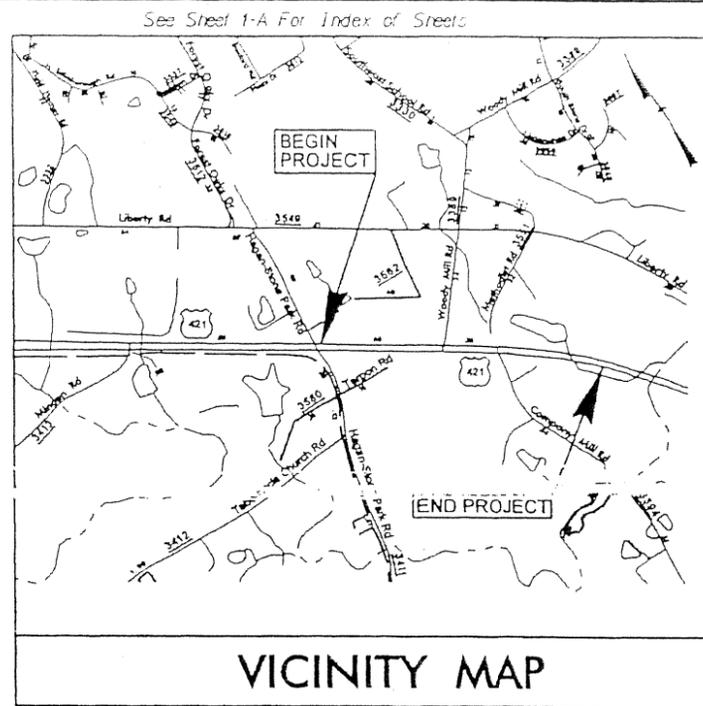
WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From / To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS						
			Permanent Fill in Wetlands (ac)	Temporary Fill in Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (Method III) (ac)	Hand Clearing in Wetlands (ac)	Permanent SW Impacts (ac)	Temporary SW Impacts (ac)	Existing Channel Impacts Permanent (ft)	Natural Stream Design (ft)	Stream Bank Stabilization (ft)		
1	-Y1- 22+10 To 23+03	42" RCP	0.07			0.01			0.02		145			
2	-Y1- 37+06	Str. No. 9 & 36" RCP							0.02		73			15
3	-Y1- 42+02 To 42+75	Str. No. 14 to 15 (36" RCP)	0.04			0.01			0.03		201			
4	-Y- 37+28 To 38+86 (-RPC- 29+01 To -RPD- 20+71)	30" Class IV RCP	0.08		< 0.01									
5	-Y- 26+27 To 29+56 (-RPB- 23+02 To 28+60 and -LPB- 15+70 To 20+90)	8' X 8' RCBC w/ 1' Sills	0.21		0.02	0.03			0.13		856			
6	-Y2- 12+22 To 12+80	Str. No. 48 To 49 (3' X 3' Box Culvert)							< 0.01		73			15
7	-Y- 16+75 To 18+21	Str. No. 52 to 53 (Exist. 48" Conc. Pipe)							0.01		94			15
TOTALS:			0.40		0.02	0.05			0.21		1442			45

NCDOT
 DIVISION OF HIGHWAYS
 GUILFORD COUNTY
 PROJECT: 33483.1.1 (R-2612A)
 US 421 AT SR 3389
 (WOODY MILL ROAD)
 SOUTH OF GREENSBORO

09/08/09

TIP PROJECT: R-2612A



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

LOCATION: US 421 AT SR 3389 (WOODY MILL ROAD)

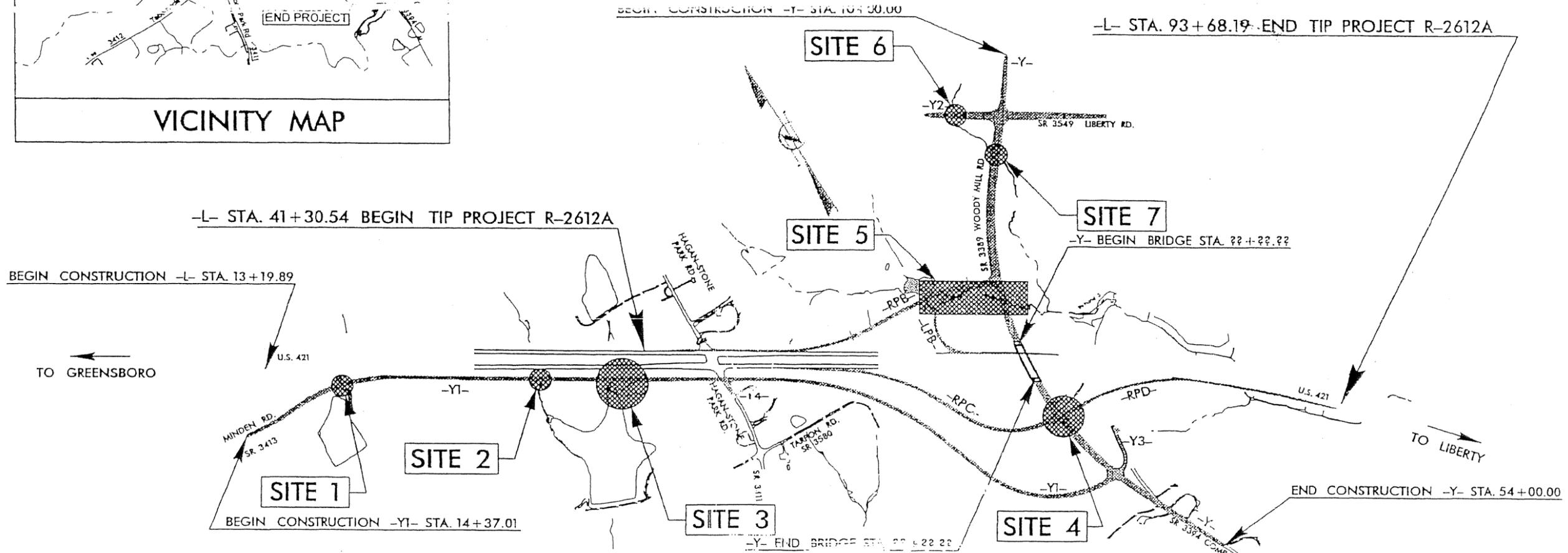
SOUTH OF GREENSBORO

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURES

Action Id: 2009-01927
Applicant: NCDOT
Project Name: TIP R-2612A
Sheet 1 of 27

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2612A	1	10
DATE	DATE PROJECT APPEARED	DESCRIPTION	
13.1.1	NHE-42181	P.E.	
	DEC 07 2009		
Permit Drawing			
Sheet 1 of 10			

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



THIS PROJECT HAS FULL AND PARTIAL CONTROLLED ACCESS.
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD

WETLAND/STREAM IMPACTS

<p>GRAPHIC SCALES</p> <p>50 25 0 50 100 PLANS</p> <p>50 25 0 50 100 PROFILE (HORIZONTAL)</p> <p>10 5 0 10 20 PROFILE (VERTICAL)</p>	<p>DESIGN DATA</p> <p>ADT 2010 = 25,900 ADT 2030 = 41,200 DHV = 11 % D = 70 % T = 14 % * V = 55 MPH * (TTST 9% + DUAL 5%) FUNCTIONAL CLASS = FREEWAY</p>	<p>PROJECT LENGTH</p> <p>LENGTH ROADWAY TIP PROJECT R-2612A = 0.925 MI TOTAL LENGTH TIP PROJECT R-2612A = 0.925 MI</p>	<p>Prepared in the Office of: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr., Raleigh NC, 27618</p>	<p>HYDRAULICS ENGINEER</p> <p>_____ P.E. ROADWAY DESIGN ENGINEER</p>	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA</p> <p>STATE HIGHWAY DESIGN ENGINEER</p>
			<p>2006 STANDARD SPECIFICATIONS</p> <p>RIGHT OF WAY DATE: OCTOBER 17, 2008</p> <p>LETTING DATE: MAY 18, 2010</p>	<p>_____ GLENN W. MUMFORD, PE PROJECT ENGINEER</p> <p>_____ SUSAN C. LANCASTER, PE PROJECT DESIGN ENGINEER</p>	

7/15/2009 R:\Drawings\Permit Drawings\R-2612a_rdy_1sh_permit_1.sh5.dgn
elen_rlgos

CONTRACT:

PROJECT REFERENCE NO. R-2612A	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

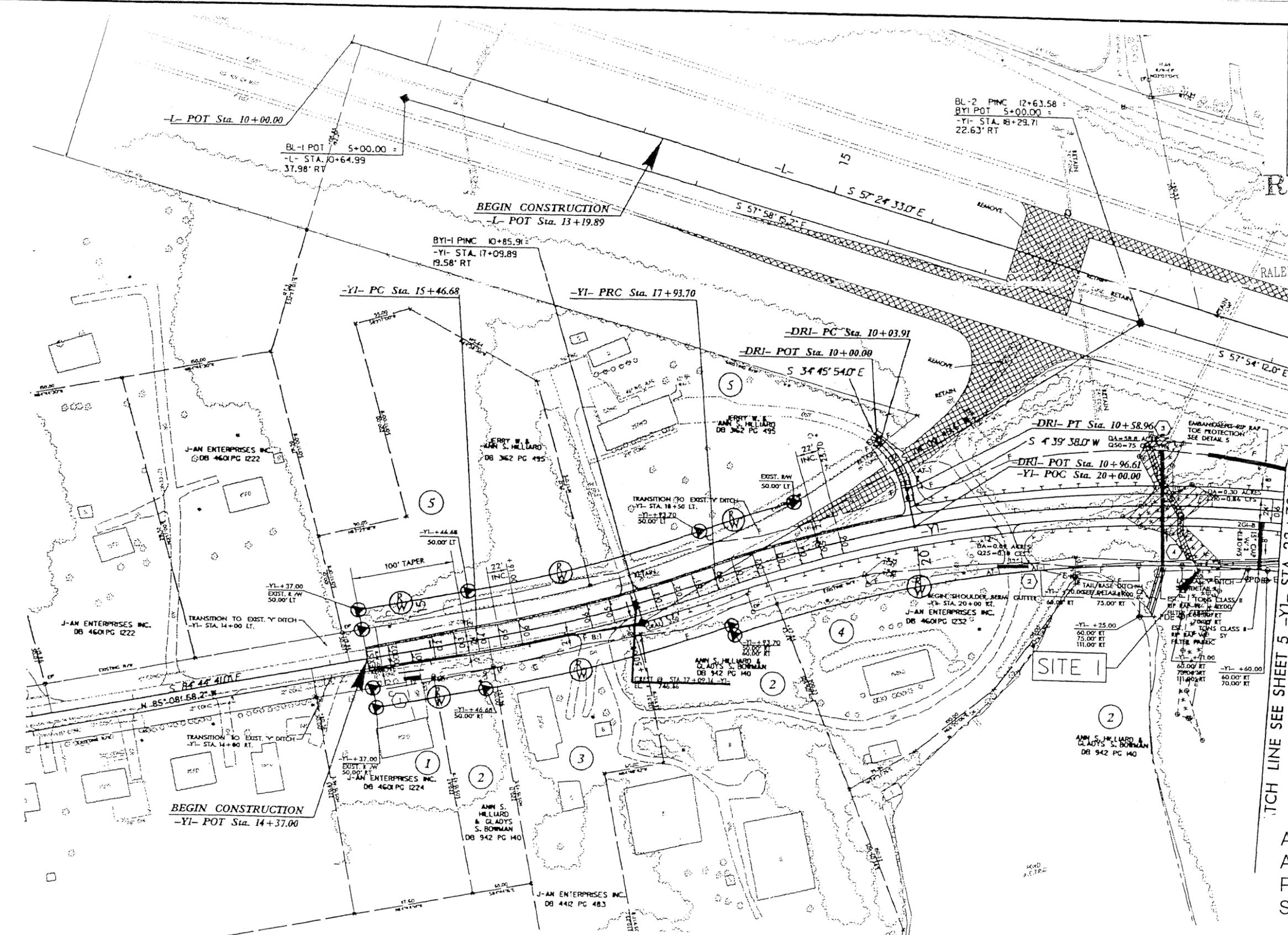
Permit Drawing
Sheet 6 of 36

RECEIVED

DEC 17 2009

RALEIGH REGULATORY FIELD OFFICE

ROAD BOUNDARY



-YI-		-DRI-
PI Sta 16+70.46	PI Sta 22+43.7	PI Sta 10+32.57
$\Delta = 9^{\circ} 16' 51.0" (LT)$	$\Delta = 36^{\circ} 49' 45.7" (RT)$	$\Delta = 39^{\circ} 25' 32.0" (RT)$
$D = 3^{\circ} 45' 25.6"$	$D = 4^{\circ} 14' 38.9"$	$D = 7^{\circ} 37' 11.0"$
$L = 247.02'$	$L = 867.77'$	$L = 55.05'$
$T = 123.78'$	$T = 449.47'$	$T = 28.66'$
$R = 1525.00'$	$R = 1350.00'$	$R = 80.00'$

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

PAVEMENT REMOVAL

- NOTES
- 1) FOR -L- PROFILE, SEE SHEET 14
 - 2) FOR -YI- PROFILE, SEE SHEETS 19 AND 20
 - 3) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED

7/15/2009 R:\v\concep\Permit_Drawing\2612a\permit_atb\dgn

PROJECT REFERENCE NO. R-2612A	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing Sheet <u>7</u> of <u>30</u>	

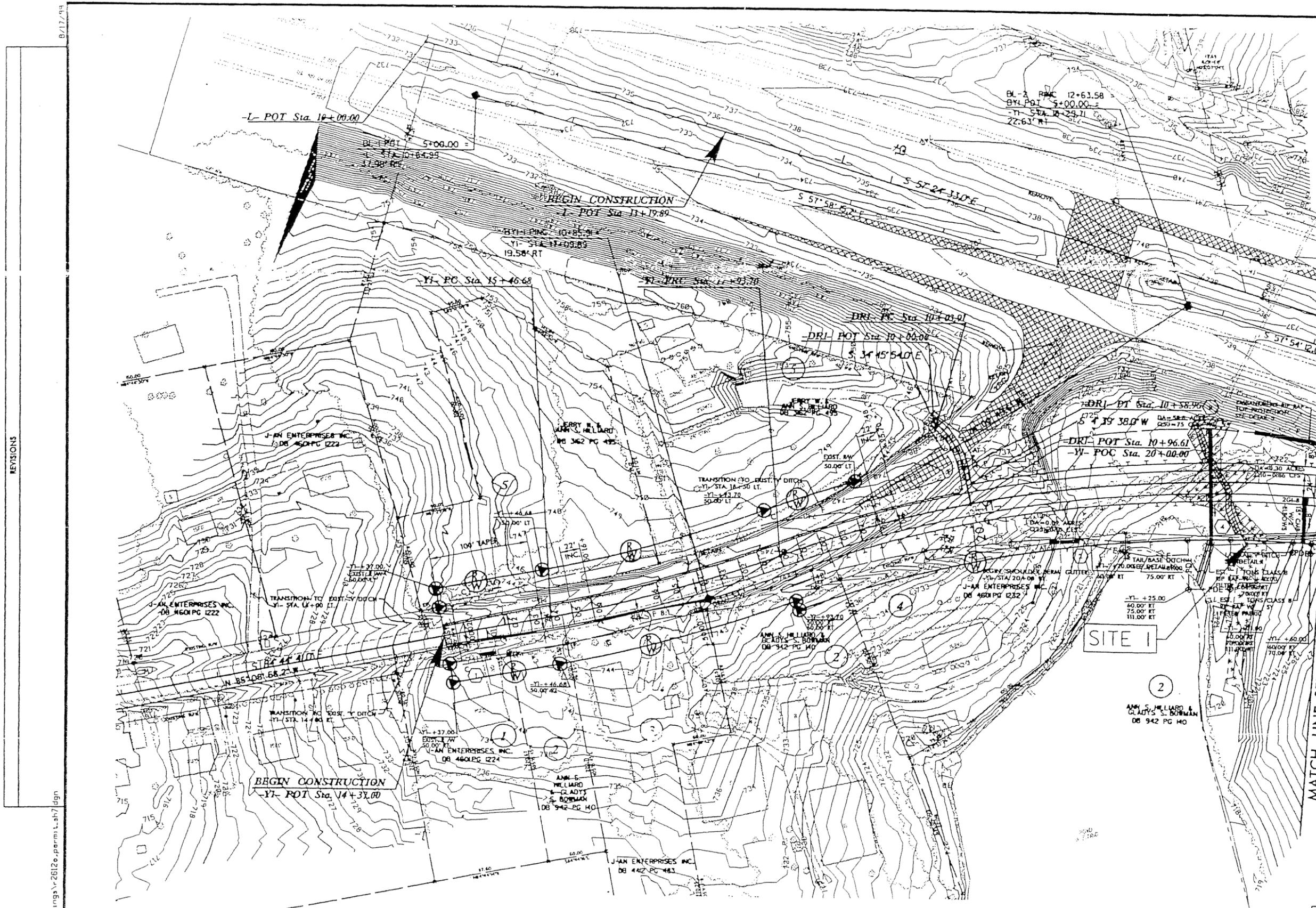
RECEIVED
 DEC 02 2009
 HIGH REGULATORY FIELD OFFICE

Action Id: 2009-01927
 Applicant: NCDOT
 Project Name: TIP R-2612A
 Sheet 3 of 27

-YI-		-DRI-	
PI Sta 16+70.46	PI Sta 22+43.17	PI Sta 10+32.57	
$\Delta = 9' 16" 51.0" (LT)$	$\Delta = 36' 49" 45.7" (RT)$	$\Delta = 39' 25" 32.0" (RT)$	
$D = 3' 45" 25.6"$	$D = 4' 14" 38.9"$	$D = 7' 37" 11.0"$	
$L = 247.02'$	$L = 867.77'$	$L = 55.05'$	
$T = 123.78'$	$T = 449.47'$	$T = 28.66'$	
$R = 1525.00'$	$R = 1350.00'$	$R = 80.00'$	

- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING
- PAVEMENT REMOVAL

- NOTES
- FOR -L- PROFILE, SEE SHEET 14
 - FOR -YI- PROFILE, SEE SHEETS 19 AND 20
 - DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED



REVISIONS

1/15/2009
 R:\10_Orange\Permit Drawings\2612a\perm\1.sh7.dgn

17+93.70

-DRI- PC Sta. 10+03.91

-DRI- POT Sta. 10+00.00

S 34° 45' 54.0" E

JERRY W. &
ANN S. HILLIARD
DB 3162 PG 495

EXIST. RW
50.00' LT

ADJUSTMENT TO EXIST. 'V' DITCH
TA. 18+50 LT.
+93.70
0' LT

-DRI- PT Sta. 10+58.96

S 4° 39' 38.0" W DA=58.8 ACRES
Q50=75 CFS

-DRI- POT Sta. 10+96.61

-YI- POC Sta. 20+00.00

EMBANKMENT-RIP RAP
TOE PROTECTION
SEE DETAIL 5

DA=0.30 ACRES
Q10=0.86 CFS

DA=0.09 ACRES
Q25=0.10 CFS

BEGIN SHOULDER BERM
-YI+ STA. 20+00 RT.
J-AN ENTERPRISES INC.
DB 4601 PG 1232

ANN S. HILLIARD &
GLADYS S. BOWMAN
DB 942 PG 140

SITE I

F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

. . . DENOTES MECHANIZED CLEARING

XXXXXXXXXX PAYEMENT REMOVAL

- NOTES
- 1) FOR -L- PROFILE, SEE SHEET 14
 - 2) FOR -YI- PROFILE, SEE SHEETS 19 AND 20
 - 3) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED

RECEIVED

DEC 02 2009

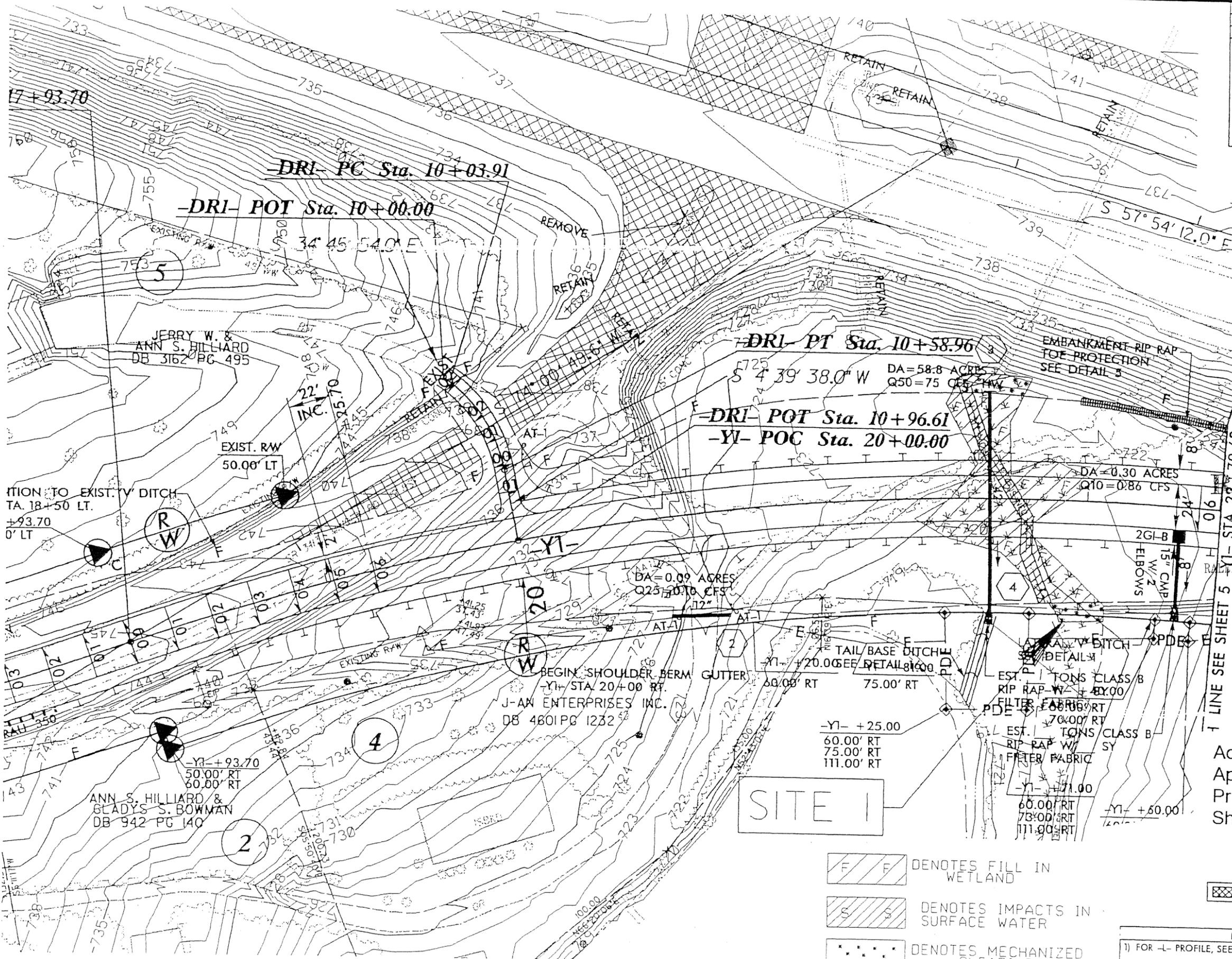
RALEIGH REGULATORY FIELD OFFICE

Action Id: 2009-01927
Applicant: NCDOT
Project Name: TIP R-2612A
Sheet 4 of 27

REVISIONS

7/16/2009 R:\In-charge_Permit Drawings\R-2612a_permit.tbl.dgn
 8/17/09

PROJECT REFERENCE NO. R-2612A	SHEET NO. 4
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER.	HYDRAULICS ENGINEER.
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing Sheet 9 of 30	



RECEIVED

DEC 02 2009

RAIL HIGH REGULATORY FIELD OFFICE

Action Id: 2009-01927
 Applicant: NCDOT
 Project Name: TIP R-2612A
 Sheet 5 of 27

SITE I

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

PAVEMENT REMOVAL

- NOTES
- 1) FOR -L- PROFILE, SEE SHEET 14
 - 2) FOR -YI- PROFILE, SEE SHEETS 19 AND 20
 - 3) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED

1/18/2009
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 User: jgagnier

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FEB 12 2010

REVISIONS
052008 - DESIGN REVISION; REMOVED ALIGNMENT -RPA-; ADDED ALIGNMENT -LPB- AND ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR -RFB- TO ACCOMMODATE -LPB-. SCL

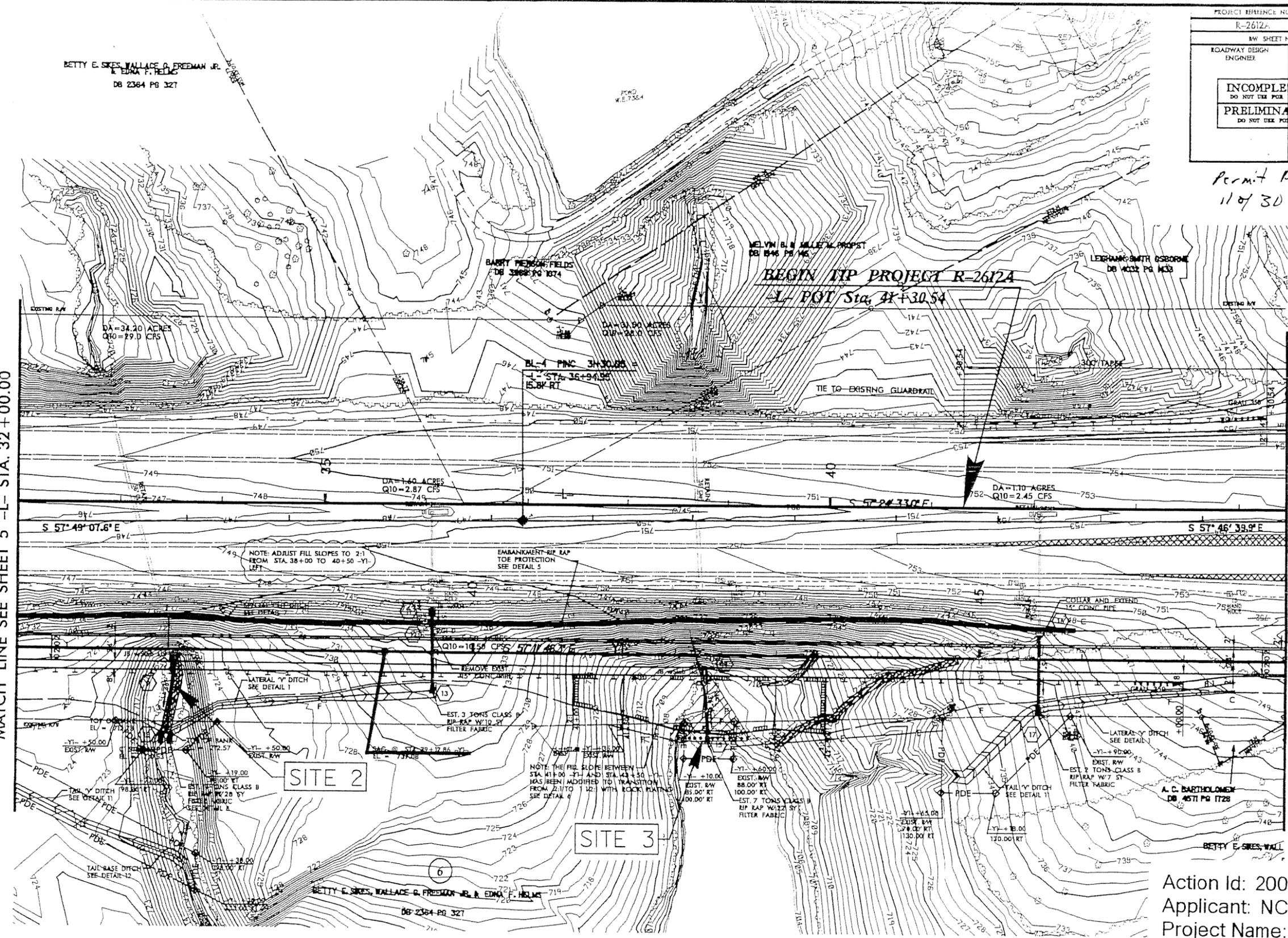
2/10/2010
R:\05-Design\Permit Drawings\2612a\2612a-permit-sh1.dgn

B.17/01

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

MATCH LINE SEE SHEET 5 -L- STA. 32 + 00.00

MATCH LINE SEE SHEET 7 -L- STA. 44 + 50.00



PROJECT REFERENCE NO. R-2612A		SHEET NO. 7	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR A/E/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

Permit Drawing
11/4/30
EB+OYN

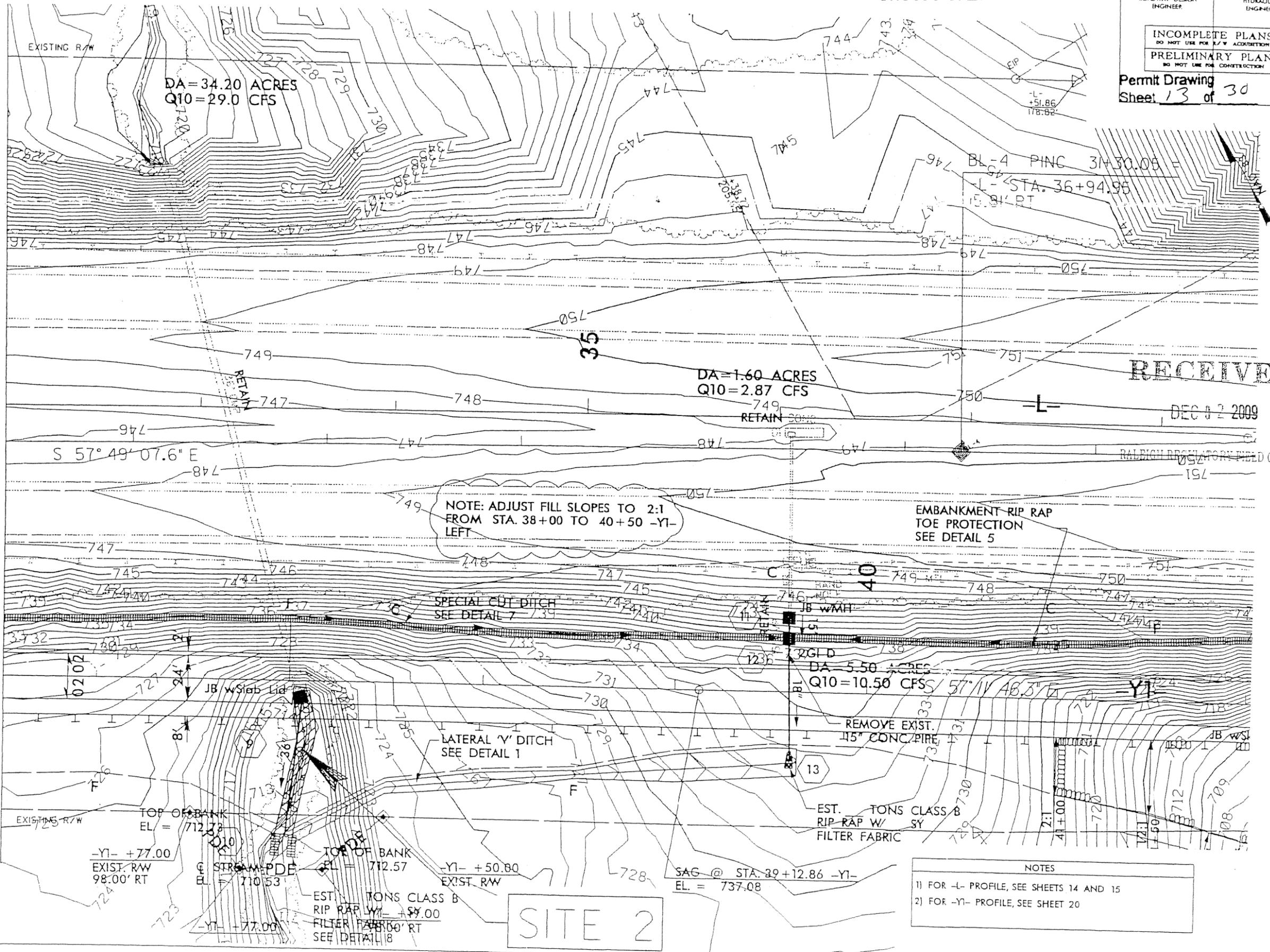
Action Id: 2009-01927
 Applicant: NCDOT
 Project Name: TIP R-2612A
 Sheet 7 of 27

- NOTES
- 1) FOR -L- PROFILE, SEE SHEETS 14 AND 15
 - 2) FOR -Y1- PROFILE, SEE SHEET 20

PROJECT REFERENCE NO. R-2612A	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing Sheet 13 of 30	

 DENOTES IMPACTS IN SURFACE WATER

MATCH LINE SEE SHEET 5 -L- STA. 32 + 00.00



NOTE: ADJUST FILL SLOPES TO 2:1 FROM STA. 38+00 TO 40+50 -Y1- LEFT

- NOTES
- 1) FOR -L- PROFILE, SEE SHEETS 14 AND 15
 - 2) FOR -Y1- PROFILE, SEE SHEET 20

SITE 2

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 DEC 02 2009
 RALEIGH REGULATORY FIELD OFFICE

REVISIONS
 05/20/08 - DESIGN REVISION: REMOVED ALIGNMENT -RPA-; ADDED ALIGNMENT -LPB-; AND ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR -RPA- TO ACCOMMODATE -LPB-. SCL

7/5/2009
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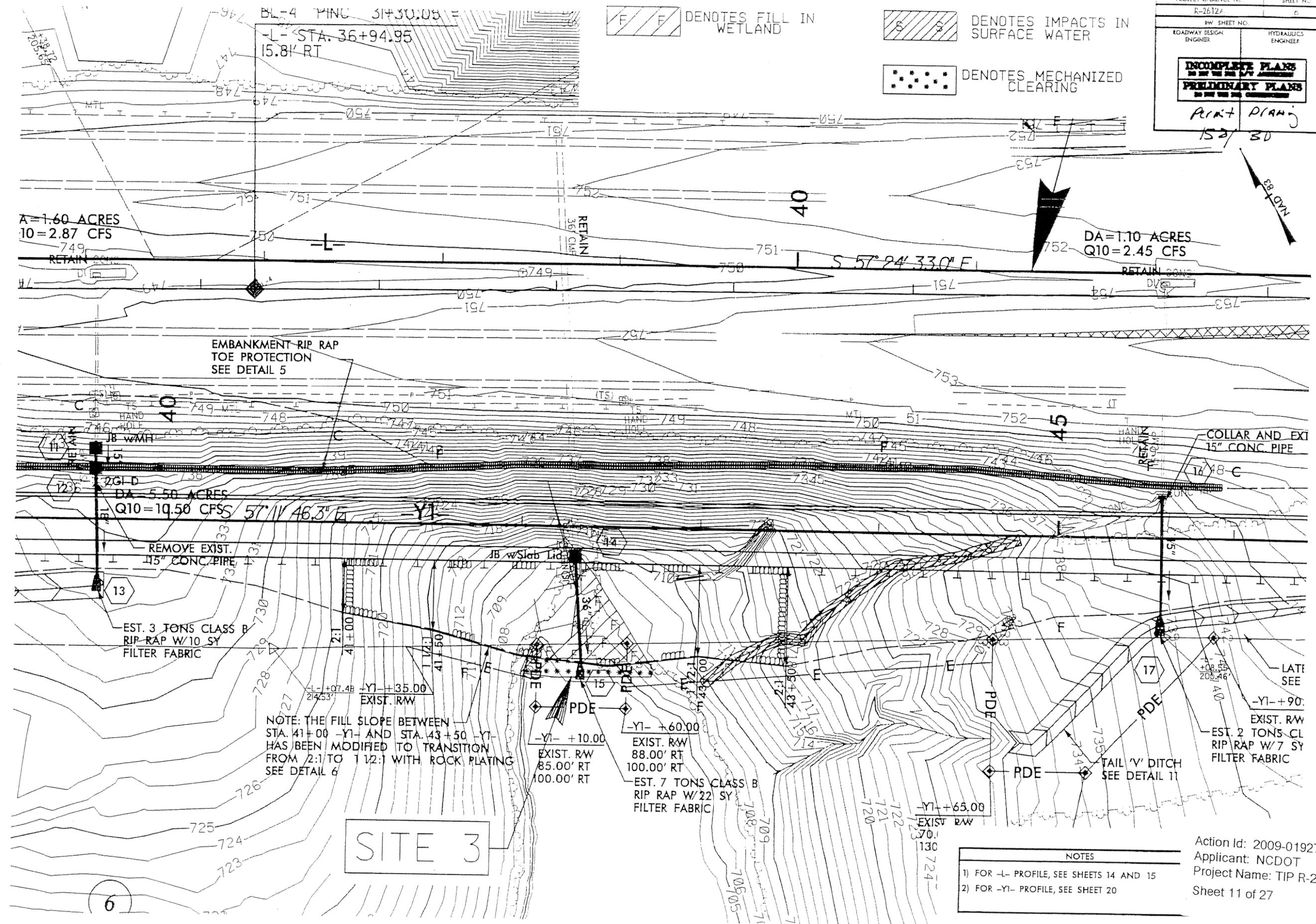
RECEIVED

FEB 12 2010

Regulatory Branch

REVISIONS
08/2008 - DESIGN REVISION: REMOVED ALIGNMENT -RPA-; ADDED ALIGNMENT -LPB-; AND ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR -RFB- TO ACCOMMODATE -LPB-, SCL

PROJECT REFERENCE NO. R-2612A	SHEET NO. 6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR CONSTRUCTION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
PRINT DRAWING 152/30	



F F DENOTES FILL IN WETLAND

S S DENOTES IMPACTS IN SURFACE WATER

••••• DENOTES MECHANIZED CLEARING

A=1.60 ACRES
Q10=2.87 CFS

DA=1.10 ACRES
Q10=2.45 CFS

EMBANKMENT RIP RAP
TOE PROTECTION
SEE DETAIL 5

DA=5.50 ACRES
Q10=10.50 CFS
57°11'46.3"E

REMOVE EXIST.
15" CONC. PIPE

EST. 3 TONS CLASS B
RIP RAP W/10 SY
FILTER FABRIC

NOTE: THE FILL SLOPE BETWEEN
STA. 41+00 -Y1- AND STA. 43+50 -Y1-
HAS BEEN MODIFIED TO TRANSITION
FROM 2:1 TO 1 1/2:1 WITH ROCK PLATING
SEE DETAIL 6

SITE 3

-Y1- +10.00
EXIST. RW
85.00' RT
100.00' RT

-Y1- +60.00
EXIST. RW
88.00' RT
100.00' RT
EST. 7 TONS CLASS B
RIP RAP W/22 SY
FILTER FABRIC

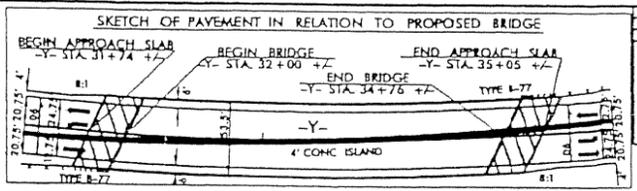
-Y1- +65.00
EXIST. RW
130
724

LATE SEE
-Y1- +90:
EXIST. RW
EST. 2 TONS CL
RIP RAP W/7 SY
FILTER FABRIC

- NOTES
- 1) FOR -L- PROFILE, SEE SHEETS 14 AND 15
 - 2) FOR -Y1- PROFILE, SEE SHEET 20

Action Id: 2009-01927
Applicant: NCDOT
Project Name: TIP R-2612A
Sheet 11 of 27

REVISIONS
 05/20/08 - DESIGN REVISION: REMOVED ALIGNMENT -LPA- ADDED ALIGNMENT -LFB- ADJUSTED THE HORIZONTAL ANGLE VERTICAL ALIGNMENTS FOR
 -LFB- TO ACCOMMODATE -LFB- AND RAISED THE VERTICAL ALIGNMENT FOR -LFB- TO PROVIDE ADEQUATE CLEARANCE FOR FUTURE WIDENING
 OF THE BRIDGE. SCL

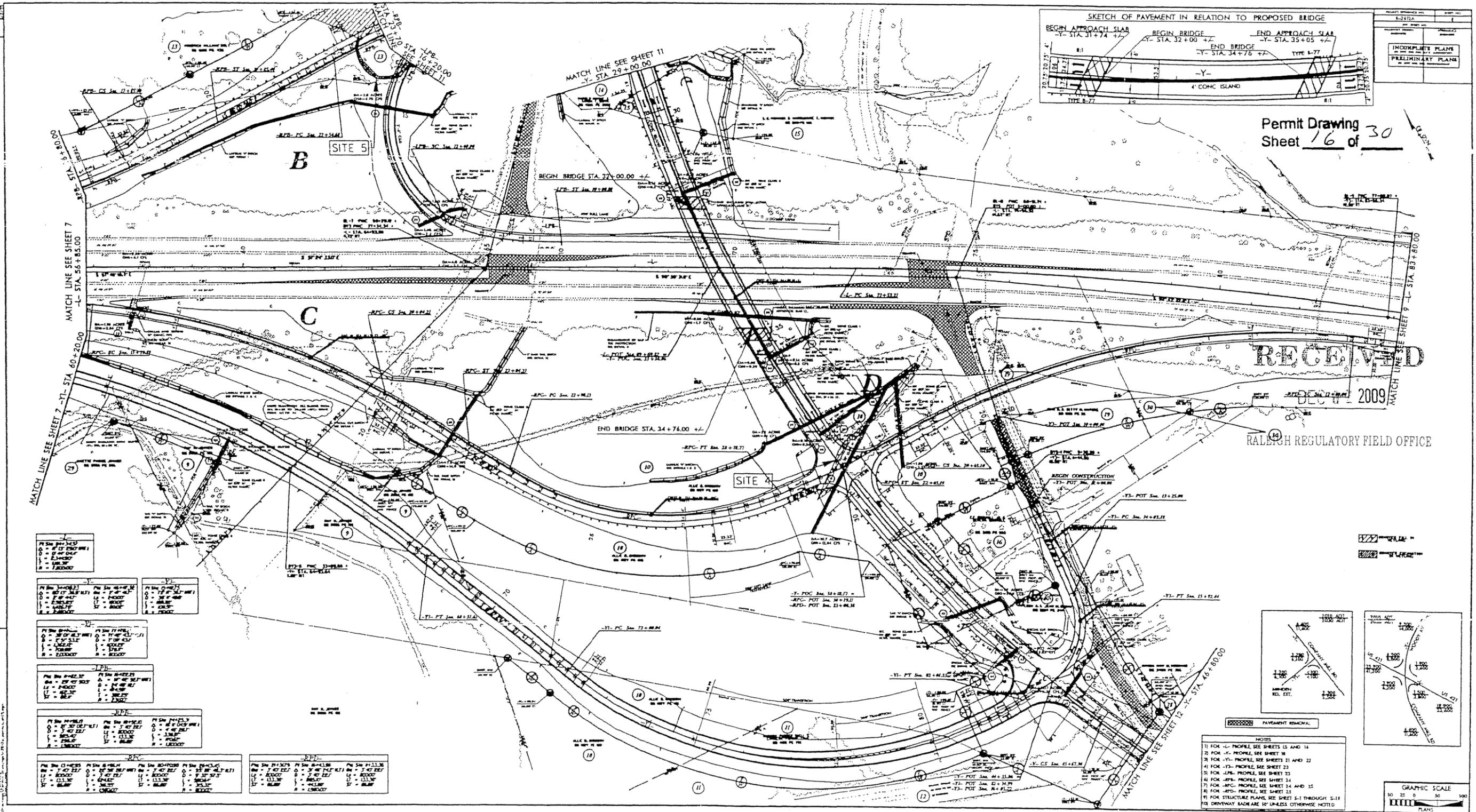


INCOMPLETE PLANS
 PRELIMINARY PLANS

Permit Drawing
 Sheet 16 of 30

RECEIVED
 2009

RALEIGH REGULATORY FIELD OFFICE

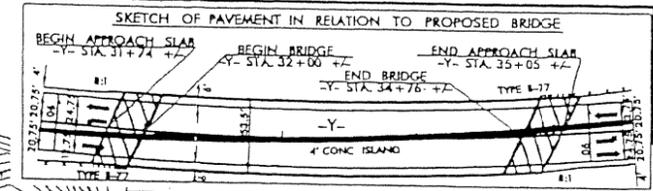


-LFB-		-LPA-		-RFB-		-RPA-	
1	ADD	1	ADD	1	ADD	1	ADD
2	REMOVE	2	REMOVE	2	REMOVE	2	REMOVE
3	REVISE	3	REVISE	3	REVISE	3	REVISE
4	ADD	4	ADD	4	ADD	4	ADD
5	REMOVE	5	REMOVE	5	REMOVE	5	REMOVE
6	REVISE	6	REVISE	6	REVISE	6	REVISE
7	ADD	7	ADD	7	ADD	7	ADD
8	REMOVE	8	REMOVE	8	REMOVE	8	REMOVE
9	REVISE	9	REVISE	9	REVISE	9	REVISE
10	ADD	10	ADD	10	ADD	10	ADD
11	REMOVE	11	REMOVE	11	REMOVE	11	REMOVE
12	REVISE	12	REVISE	12	REVISE	12	REVISE
13	ADD	13	ADD	13	ADD	13	ADD
14	REMOVE	14	REMOVE	14	REMOVE	14	REMOVE
15	REVISE	15	REVISE	15	REVISE	15	REVISE
16	ADD	16	ADD	16	ADD	16	ADD
17	REMOVE	17	REMOVE	17	REMOVE	17	REMOVE
18	REVISE	18	REVISE	18	REVISE	18	REVISE
19	ADD	19	ADD	19	ADD	19	ADD
20	REMOVE	20	REMOVE	20	REMOVE	20	REMOVE
21	REVISE	21	REVISE	21	REVISE	21	REVISE
22	ADD	22	ADD	22	ADD	22	ADD
23	REMOVE	23	REMOVE	23	REMOVE	23	REMOVE
24	REVISE	24	REVISE	24	REVISE	24	REVISE
25	ADD	25	ADD	25	ADD	25	ADD
26	REMOVE	26	REMOVE	26	REMOVE	26	REMOVE
27	REVISE	27	REVISE	27	REVISE	27	REVISE
28	ADD	28	ADD	28	ADD	28	ADD
29	REMOVE	29	REMOVE	29	REMOVE	29	REMOVE
30	REVISE	30	REVISE	30	REVISE	30	REVISE
31	ADD	31	ADD	31	ADD	31	ADD
32	REMOVE	32	REMOVE	32	REMOVE	32	REMOVE
33	REVISE	33	REVISE	33	REVISE	33	REVISE
34	ADD	34	ADD	34	ADD	34	ADD
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37	ADD	37	ADD	37	ADD	37	ADD
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41	REMOVE	41	REMOVE	41	REMOVE	41	REMOVE
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43	ADD	43	ADD	43	ADD	43	ADD
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45	REVISE	45	REVISE	45	REVISE	45	REVISE
46	ADD	46	ADD	46	ADD	46	ADD
47	REMOVE	47	REMOVE	47	REMOVE	47	REMOVE
48	REVISE	48	REVISE	48	REVISE	48	REVISE
49	ADD	49	ADD	49	ADD	49	ADD
50	REMOVE	50	REMOVE	50	REMOVE	50	REMOVE

- NOTES
- 1) FOR -L- PROFILES, SEE SHEETS 13 AND 14
 - 2) FOR -Y- PROFILES, SEE SHEET 18
 - 3) FOR -Y- PROFILES, SEE SHEETS 21 AND 22
 - 4) FOR -Y- PROFILES, SEE SHEET 23
 - 5) FOR -LPA- PROFILES, SEE SHEET 25
 - 6) FOR -RFB- PROFILES, SEE SHEET 34
 - 7) FOR -RPA- PROFILES, SEE SHEETS 14 AND 15
 - 8) FOR -RFB- PROFILES, SEE SHEET 25
 - 9) FOR STRUCTURE PLANS, SEE SHEETS 5-1 THROUGH 5-11
 - 10) DRIVEWAY SIZES ARE 10' UNLESS OTHERWISE NOTED.



REVISIONS
 03/20/08 - DESIGN REVISION: REMOVED ALIGNMENT -RPA- ADDED ALIGNMENT -LFB- ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR
 THE BRIDGE TO ACCOMMODATE LFB- AND RAISED THE VERTICAL ALIGNMENT FOR -L- TO PROVIDE ADEQUATE CLEARANCE FOR FUTURE WIDENING
 OF THE BRIDGE. SCL

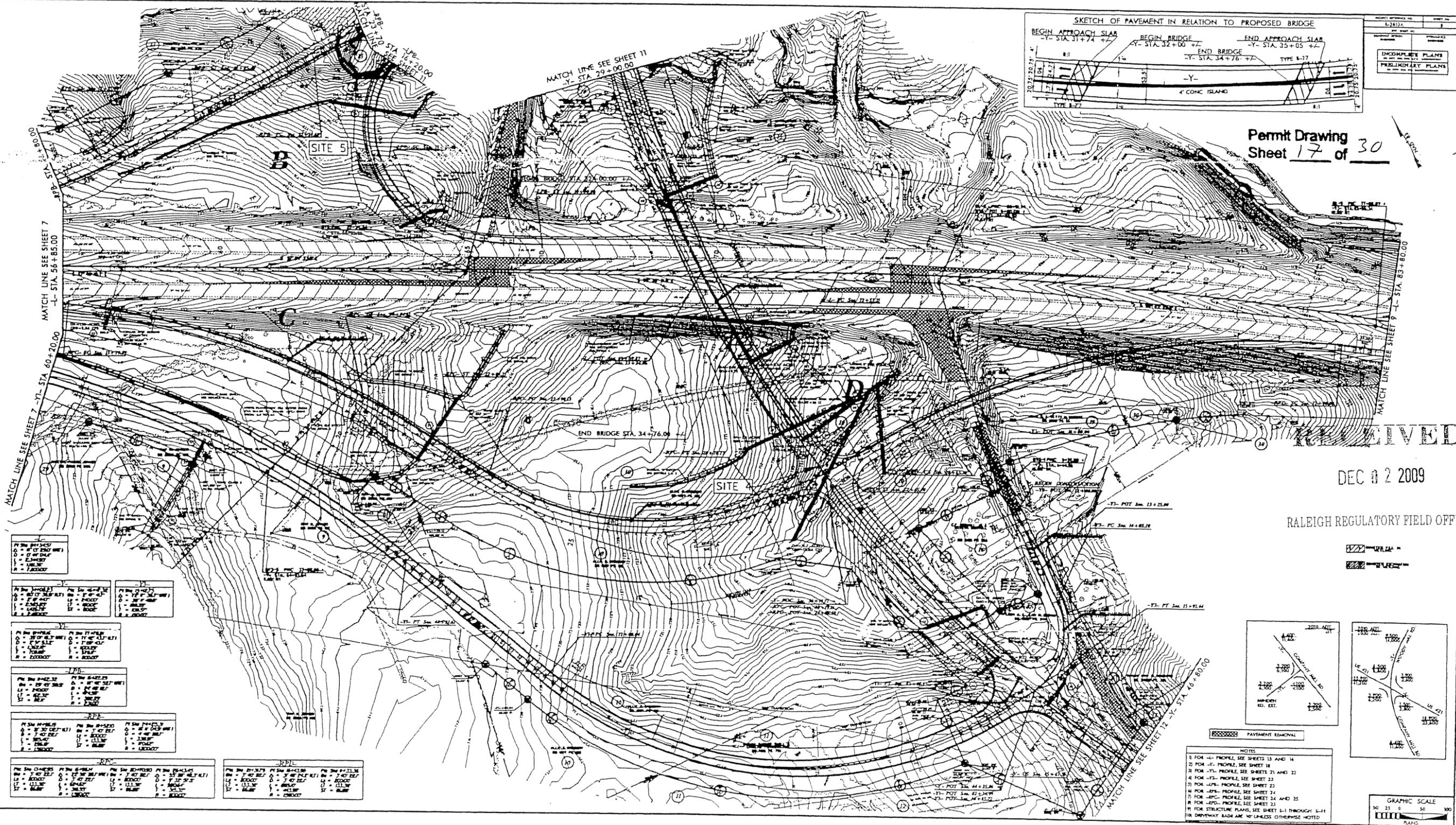


Permit Drawing
 Sheet 17 of 30

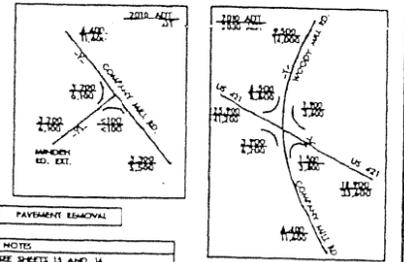
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RALEIGH REGULATORY FIELD OFFICE

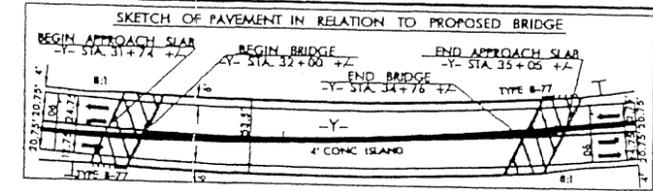


LFB		RPA		RPL	
1. 1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.
2. 1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.
3. 1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.
4. 1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.
5. 1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.
6. 1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.
7. 1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.
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10. 1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.	1" = 20' HORIZ.	1" = 20' VERT.

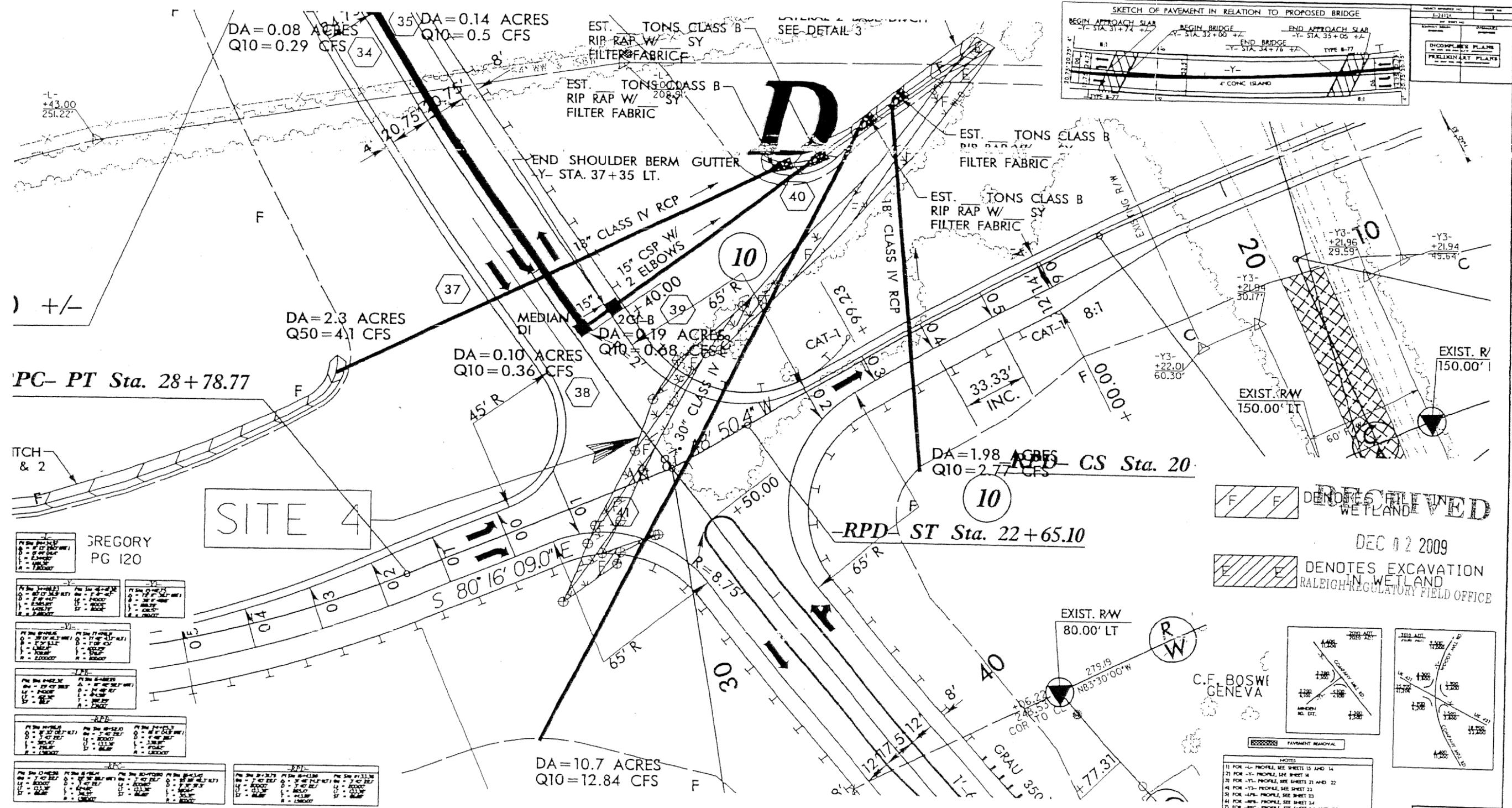


Permit Drawing
 Sheet 18 of 30

REVISIONS
 05/2008 - DESIGN REVISION: REMOVED ALIGNMENT - RPA - ADJUSTED THE HORIZONTAL ALIGNMENT TO ACCOMMODATE - LFB - AND RAISED THE VERTICAL ALIGNMENT FOR - LFB - TO PROVIDE ADEQUATE CLEARANCE OF THE BRIDGE. SCL
 VERTICAL ALIGNMENTS FOR - LFB - OR FUTURE WIDENING



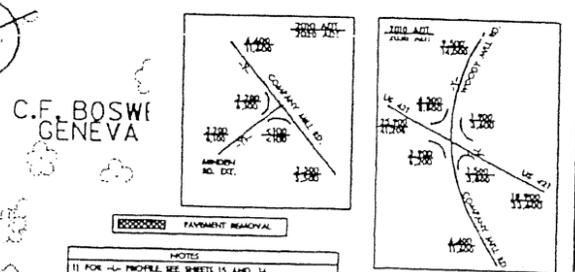
DESIGN	DATE	BY
INCOMPLETE PLANS		
PRELIMINARY PLANS		



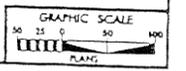
GREGORY
 PG 120

NO.	DATE	DESCRIPTION	BY	CHKD.
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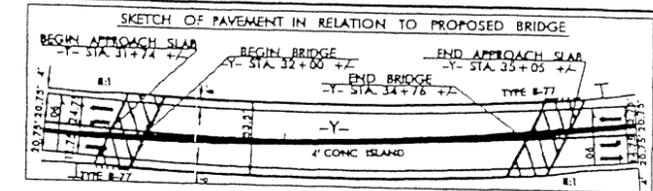
RECEIVED
 DEC 02 2009
 DENOTES EXCAVATION IN WETLAND
 RALEIGH REGULATORY FIELD OFFICE



- NOTES
- 1) FOR -L- PROFILE, SEE SHEETS 15 AND 14
 - 2) FOR -Y- PROFILE, SEE SHEET 14
 - 3) FOR -Y1- PROFILE, SEE SHEETS 21 AND 22
 - 4) FOR -Y2- PROFILE, SEE SHEET 23
 - 5) FOR -LFB- PROFILE, SEE SHEET 23
 - 6) FOR -RFB- PROFILE, SEE SHEET 24
 - 7) FOR -RFB- PROFILE, SEE SHEET 24 AND 25
 - 8) FOR -RFB- PROFILE, SEE SHEET 21
 - 9) FOR STRUCTURE PLANS, SEE SHEETS 5-1 THROUGH 5-11
 - 10) DRIVEWAY WIDTH IS 12' UNLESS OTHERWISE NOTED

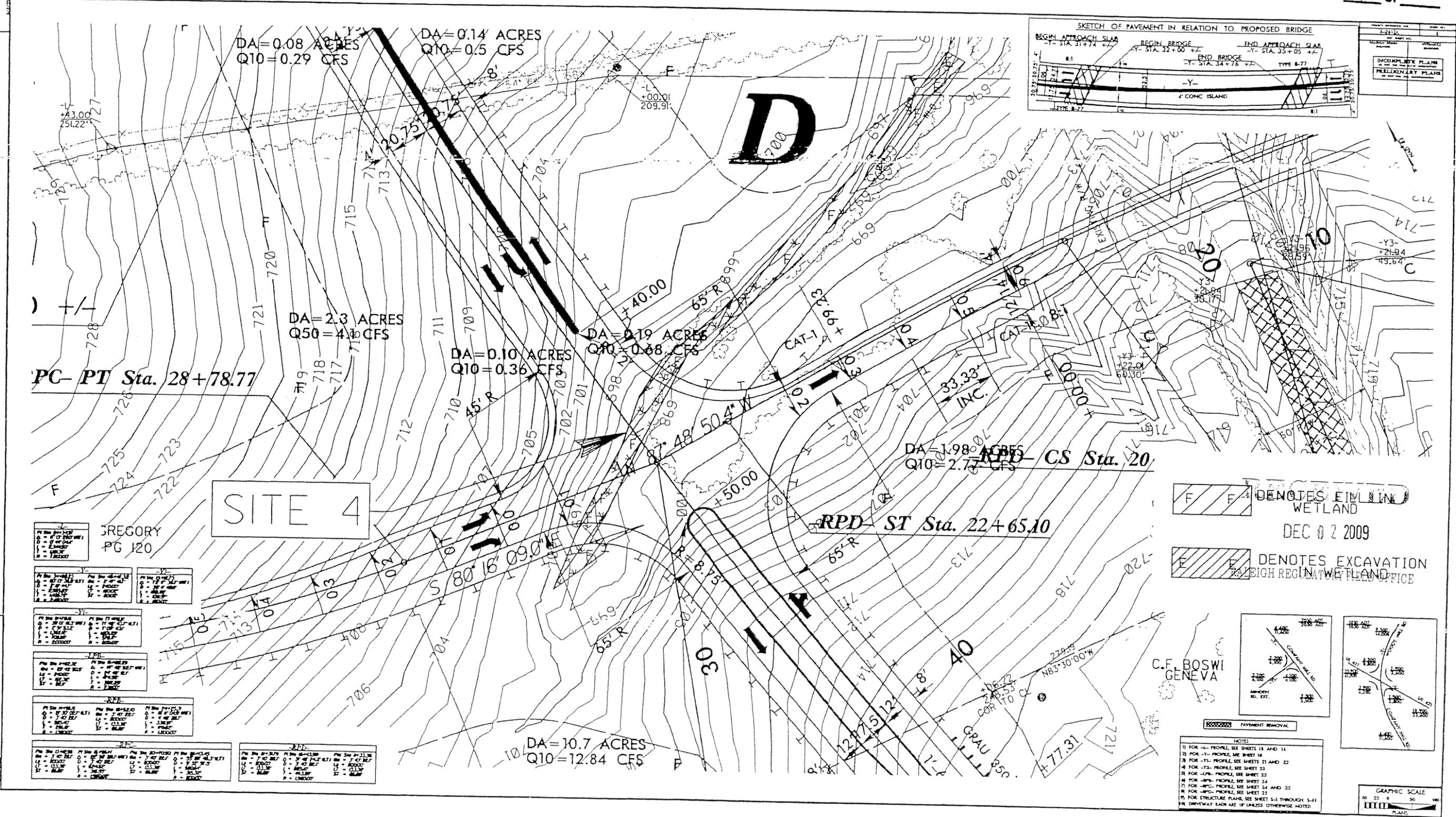


REVISIONS
 DESIGN REVISION: REMOVED ALIGNMENT APP-1, ADDED ALIGNMENT APP-2, ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR
 APP-1 TO ACCOMMODATE APP-2, AND RAISED THE VERTICAL ALIGNMENT FOR APP-1 TO PROVIDE ADEQUATE CLEARANCE FOR FUTURE WIDENING
 OF THE BRIDGE. SEE



DATE	DESCRIPTION

INCOMPLETE PLANS
 PRELIMINARY PLANS



GREGORY
 PG 120

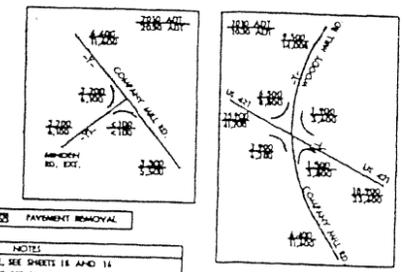
SITE 4

F F DENOTES EITW IN WETLAND

DEC 02 2009

F F DENOTES EXCAVATION IN HIGH REGIONAL WETLAND OFFICE

C.F. BOSWI
 GENEVA



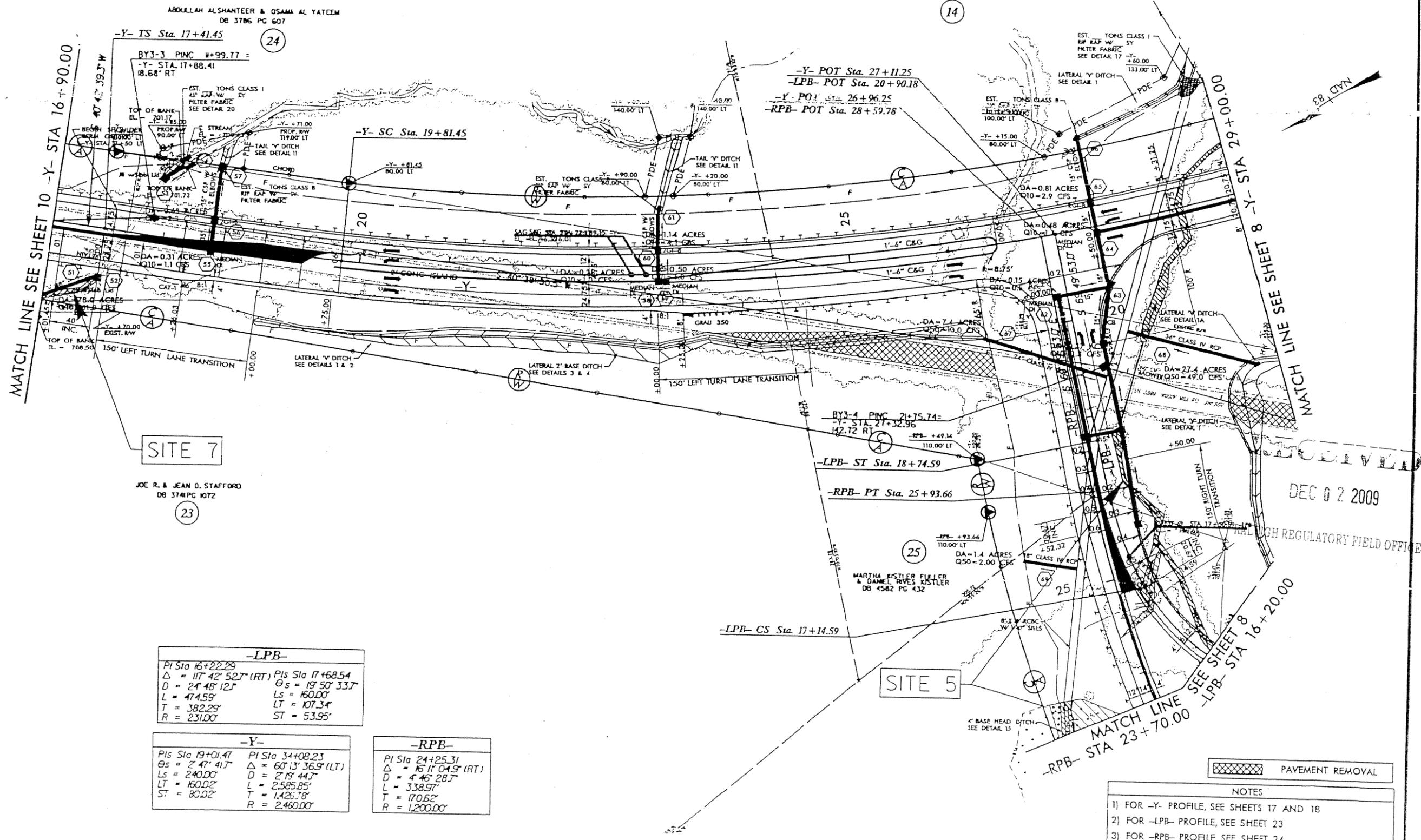
- NOTES
- FOR -1- PROFILE, SEE SHEETS 11 AND 14
 - FOR -2- PROFILE, SEE SHEET 16
 - FOR -3- PROFILE, SEE SHEETS 21 AND 22
 - FOR -4- PROFILE, SEE SHEET 23
 - FOR -5- PROFILE, SEE SHEET 23
 - FOR -6- PROFILE, SEE SHEET 24
 - FOR -7- PROFILE, SEE SHEET 24 AND 25
 - FOR -8- PROFILE, SEE SHEET 24
 - FOR STRUCTURE PLANS, SEE SHEET S-1 THROUGH S-11
 - DRIVEWAY RAMP ARE SHOWN UNLESS OTHERWISE NOTED



PROJECT REFERENCE NO. R-2612A	SHEET NO. 11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing Sheet 20 of 30	

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

REVISIONS
 052008 - DESIGN REVISION: REMOVED ALIGNMENT -RPA-; ADDED ALIGNMENT -LPB-; AND ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR -RFB- TO ACCOMMODATE -LPB-, -SCL



SITE 7

SITE 5

-LPB-

PI Sta 16+22.29	PI Sta 17+68.54
$\Delta = 117^{\circ} 42' 52.7"$ (RT)	$\theta_s = 19^{\circ} 50' 33.7"$
$D = 24^{\circ} 48' 12.7"$	$L_s = 160.00'$
$L = 474.59'$	$LT = 107.34'$
$T = 382.29'$	$ST = 53.95'$
$R = 231.00'$	

-Y-

PI Sta 19+01.47	PI Sta 34+08.23
$\theta_s = 2^{\circ} 47' 41.7"$	$\Delta = 60^{\circ} 13' 36.9"$ (LT)
$L_s = 240.00'$	$D = 2^{\circ} 19' 44.7"$
$LT = 160.02'$	$L = 2,585.85'$
$ST = 80.02'$	$T = 1,426.78'$
	$R = 2,460.00'$

-RPB-

PI Sta 24+25.31	
$\Delta = 16^{\circ} 11' 04.5"$ (RT)	
$D = 4^{\circ} 46' 28.7"$	
$L = 338.97'$	
$T = 170.62'$	
$R = 1,200.00'$	

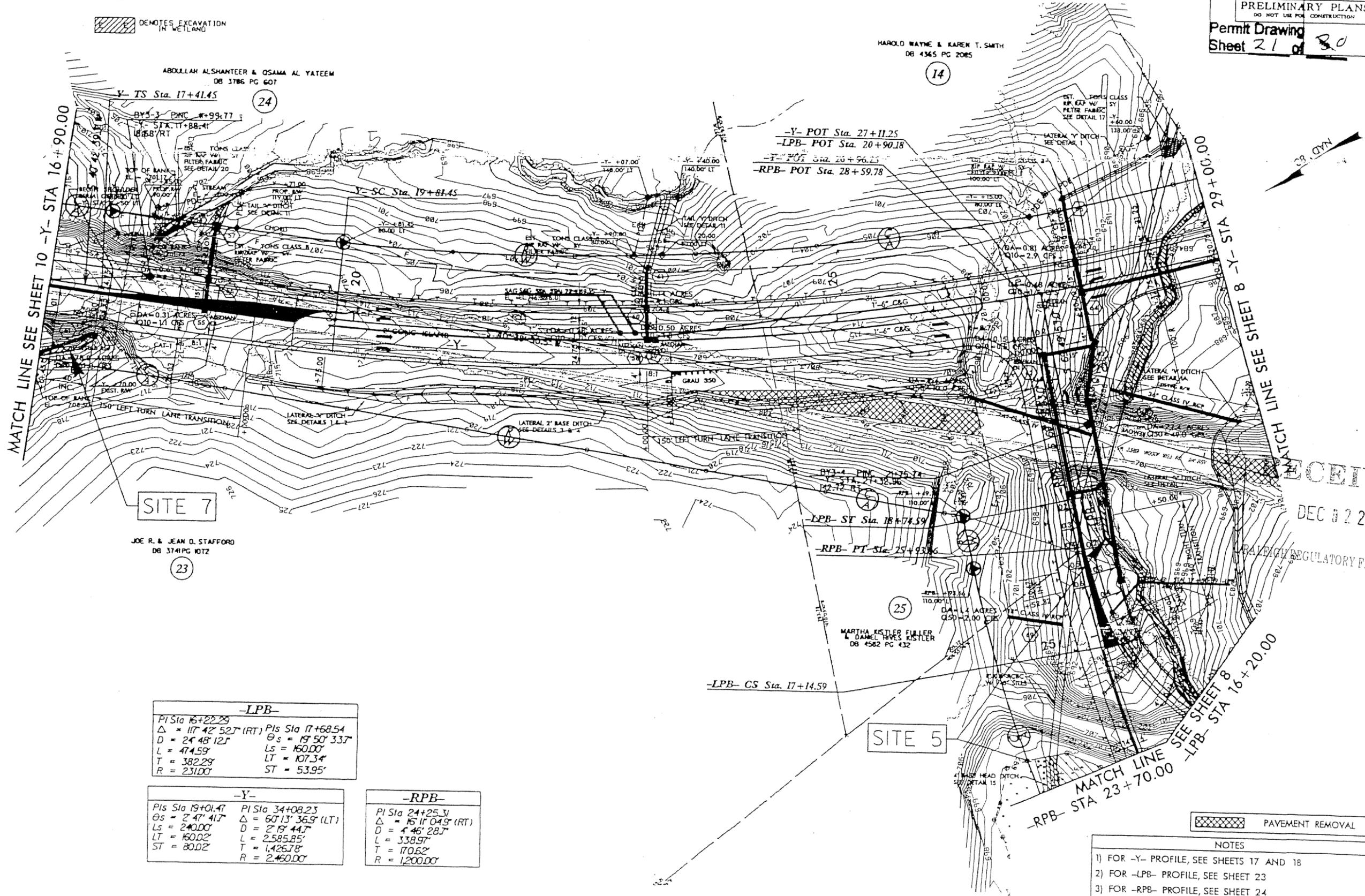
DEC 02 2009

 PAVEMENT REMOVAL

- NOTES
- 1) FOR -Y- PROFILE, SEE SHEETS 17 AND 18
 - 2) FOR -LPB- PROFILE, SEE SHEET 23
 - 3) FOR -RPB- PROFILE, SEE SHEET 24

PROJECT REFERENCE NO. R-2612A	SHEET NO. 11
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing Sheet 21 of 30	

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



REVISIONS
 05/20/08 - DESIGN REVISION: REMOVED ALIGNMENT -RPA-; ADDED ALIGNMENT -LPB-; AND ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR -RPB- TO ACCOMMODATE -LPB-, SCL

7/15/2009
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SITE 7

SITE 5

-LPB-

PI Sta 16+22.29	PI Sta 17+68.54
$\Delta = 117^{\circ} 42' 52"$ (RT)	$\Delta = 19^{\circ} 50' 33"$
D = 24' 48" 12"	Ls = 160.00'
L = 47.459'	LT = 107.34'
T = 382.29'	ST = 53.95'
R = 231.00'	

-Y-

PI Sta 19+01.47	PI Sta 34+08.23
$\Delta = 2^{\circ} 47' 41"$	$\Delta = 60^{\circ} 13' 36"$ (LT)
Ls = 240.00'	D = 2' 19" 44.7"
LT = 160.02'	L = 2,585.85'
ST = 80.02'	T = 1,426.78'
	R = 2,460.00'

-RPB-

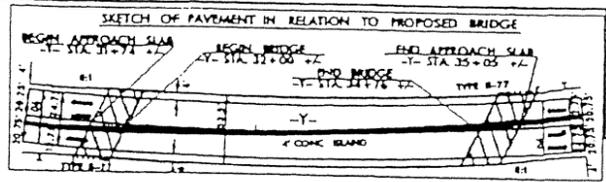
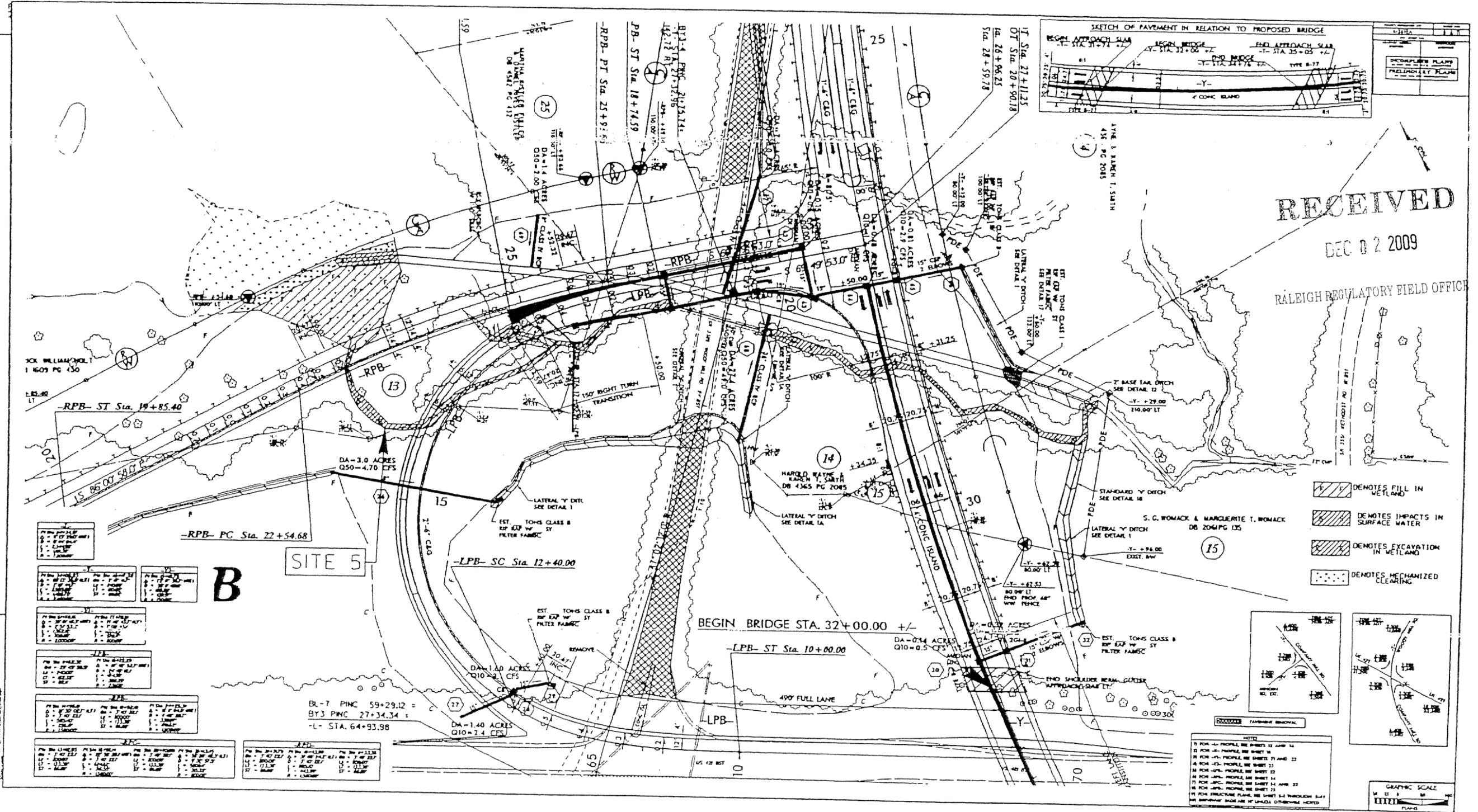
PI Sta 24+25.31
$\Delta = 16^{\circ} 11' 04"$ (RT)
D = 4' 46" 28.7"
L = 338.97'
T = 170.62'
R = 1,200.00'

 PAVEMENT REMOVAL

- NOTES
- 1) FOR -Y- PROFILE, SEE SHEETS 17 AND 18
 - 2) FOR -LPB- PROFILE, SEE SHEET 23
 - 3) FOR -RPB- PROFILE, SEE SHEET 24

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REVISIONS
02/10/09 - DESIGN REVISION: REMOVED ALIGNMENT 22A; ADDED ALIGNMENT 22B; ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR THE BRIDGE; AND RAISED THE VERTICAL ALIGNMENT FOR 'Y' TO PROVIDE ADEQUATE CLEARANCE FOR FUTURE WIDENING



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Table with 2 columns: 'NO.' and 'DESCRIPTION'. It lists various items and their corresponding quantities or specifications.

B

SITE 5

- Legend for symbols:
- Hatched area: DENOTES FILL IN WETLAND
- Dotted area: DENOTES IMPACTS IN SURFACE WATER
- Cross-hatched area: DENOTES EXCAVATION IN WETLAND
- Stippled area: DENOTES MECHANIZED CLEARING

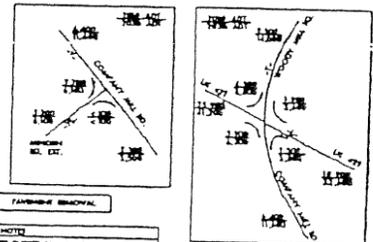
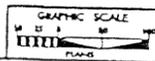
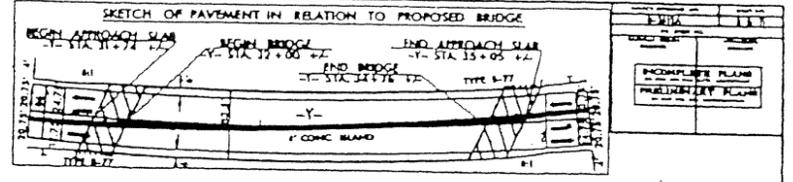
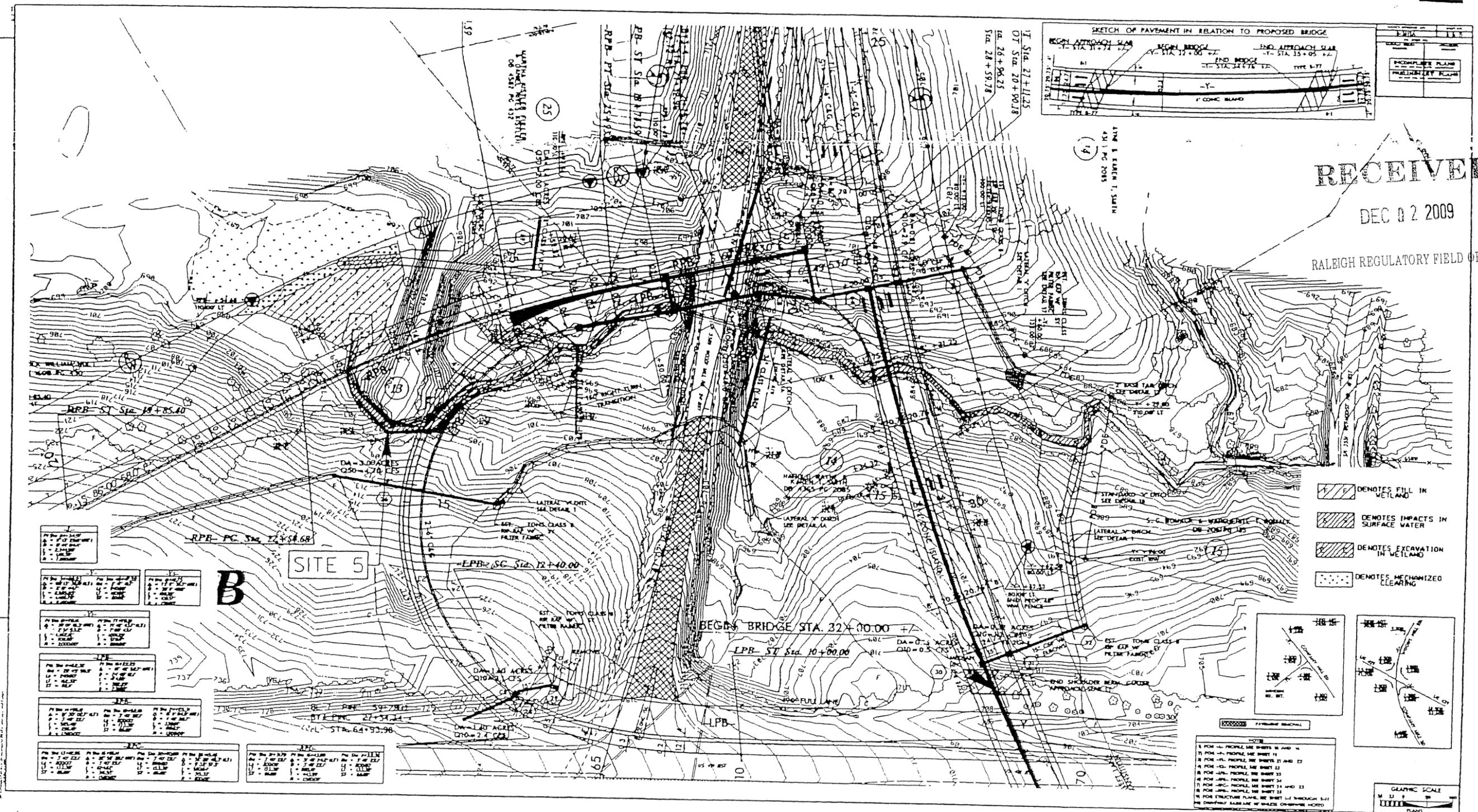


Table with 2 columns: 'NO.' and 'DESCRIPTION'. It lists specific notes or details related to the drawing.



REVISIONS - DESIGN REVISION; REMOVED ALIGNMENT #2; ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR
 OF THE BRIDGE. SCL

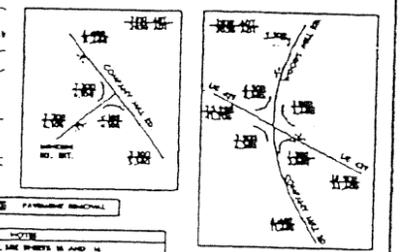


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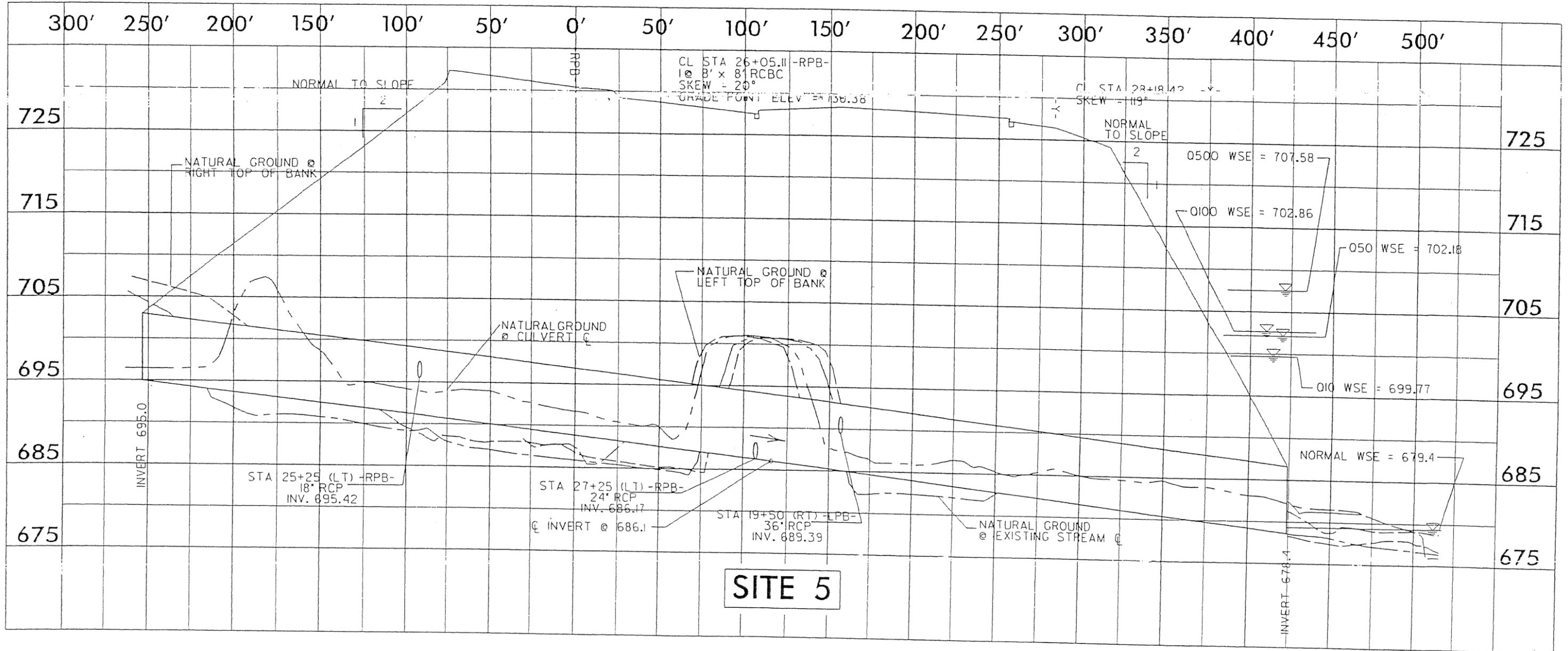
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES EXCAVATION IN WETLAND
- DENOTES MECHANIZED CLEARING



REV.	DATE	DESCRIPTION
1	05/20/08	DESIGN REVISION; REMOVED ALIGNMENT #2; ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR OF THE BRIDGE. SCL

DEC 02 2009

RALEIGH REGULATORY PERMIT OFFICE
 Permit Drawing
 Sheet 24 of 30



SITE 5

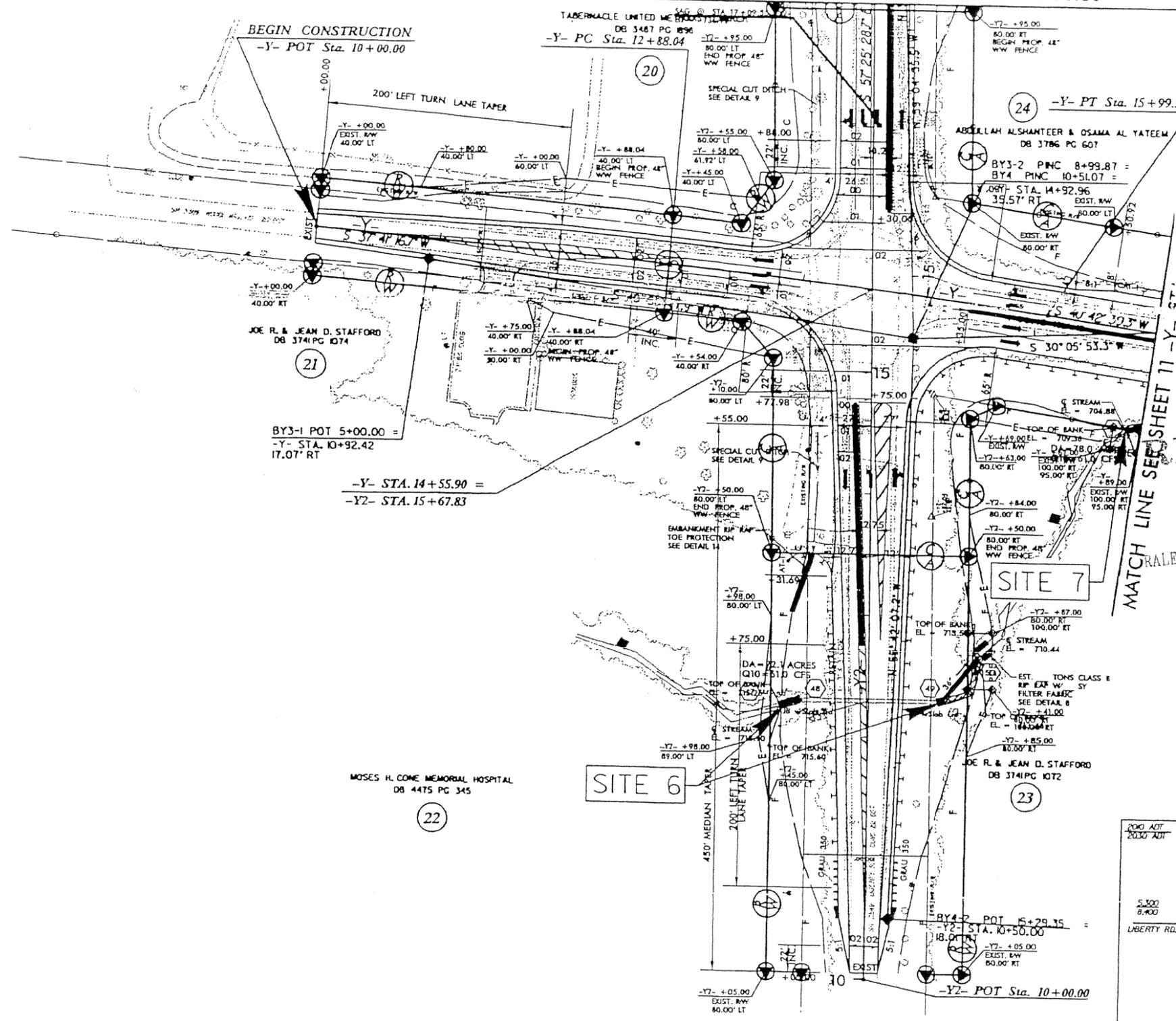
MATCH LINE SEE SHEET 13 -Y2- STA 18+00.00

PROJECT REFERENCE NO.	SHEET NO.
R-2612A	10
RDY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS CONSTRUCTION	
Permit Drawing Sheet 25 of 30	

Action Id: 2009-01927
 Applicant: NCDOT
 Project Name: TIP R-2612A
 Sheet 21 of 27

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RALEIGH REGULATORY FIELD OFFICE

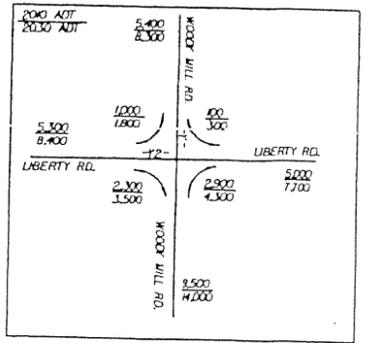


-Y-

PI Sta 14+43.85
 $\Delta = 3^{\circ} 22.6' (RT)$
 $D = 0^{\circ} 58' 13''$
 $L = 311.55'$
 $T = 155.8'$
 $R = 5,905.00'$

- NOTES
- 1) FOR -Y- PROFILE, SEE SHEET 17
 - 2) FOR -Y2- PROFILE, SEE SHEET 22
 - 3) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED

DENOTES IMPACTS IN SURFACE WATER



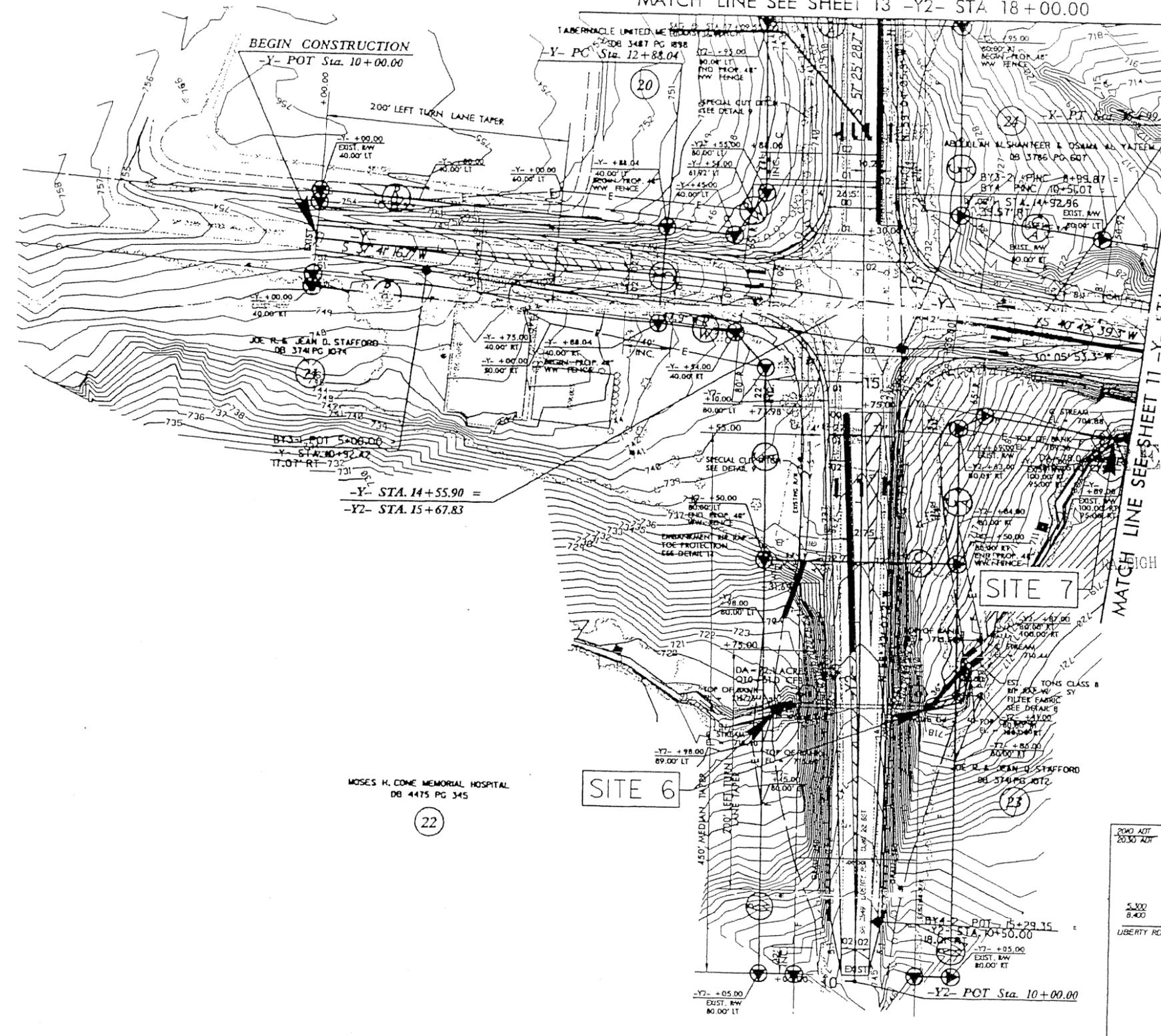
REVISIONS

1/15/2009
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B/17/09

MATCH LINE SEE SHEET 13 -Y2- STA 18+00.00

PROJECT REFERENCE NO R-2612A	SHEET NO 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing Sheet 26 of 30	



Action Id: 2009-01927
 Applicant: NCDOT
 Project Name: TIP R-2612A
 Sheet 22 of 27

RECEIVED

DEC 02 2009

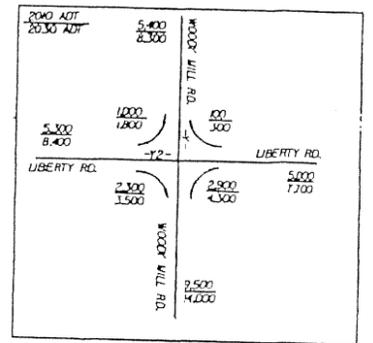
HIGH REGULATORY FIELD OFFICE

REVISIONS

-Y-
PI Sta 14+43.85
$\Delta = 3' 07" 22.6' (RT)$
$D = 0' 58" 13.5'$
$L = 311.55'$
$T = 155.8'$
$R = 5,905.00'$

- NOTES
- 1) FOR -Y- PROFILE, SEE SHEET 17
 - 2) FOR -Y2- PROFILE, SEE SHEET 22
 - 3) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED

DENOTES IMPACTS IN SURFACE WATER



1/15/2009
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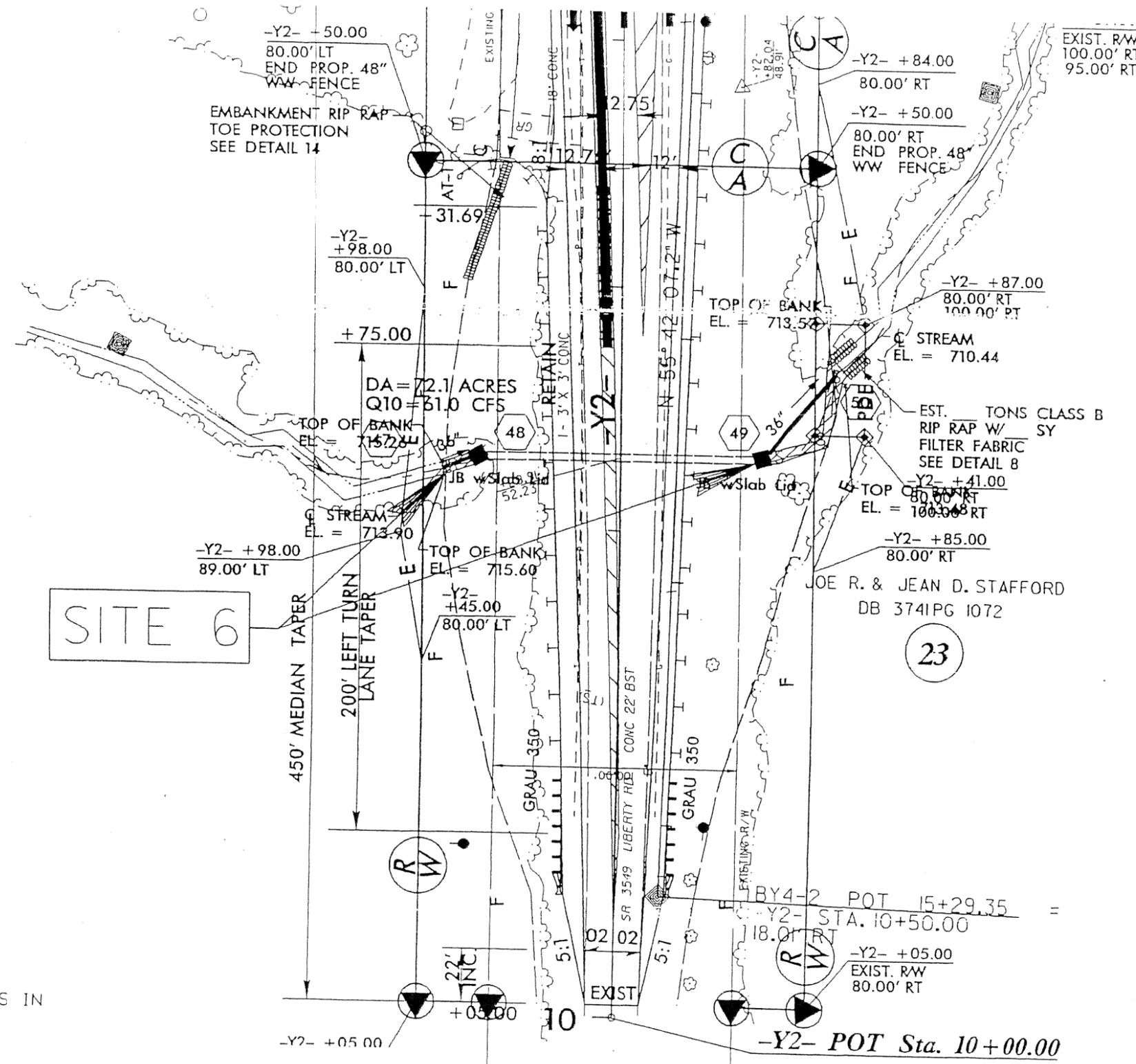
PROJECT REFERENCE NO. R-2612A	SHEET NO. 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing Sheet 27 of 30	

Action Id: 2009-01927
 Applicant: NCDOT
 Project Name: TIP R-2612A
 Sheet 23 of 27

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DEC 02 2009

RALEIGH REGULATORY FIELD OFFICE

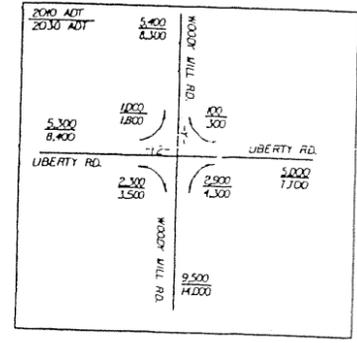


SITE 6

23

DENOTES IMPACTS IN SURFACE WATER

- NOTES
- 1) FOR -Y- PROFILE, SEE SHEET 17
 - 2) FOR -Y2- PROFILE, SEE SHEET 22
 - 3) DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED



REVISIONS

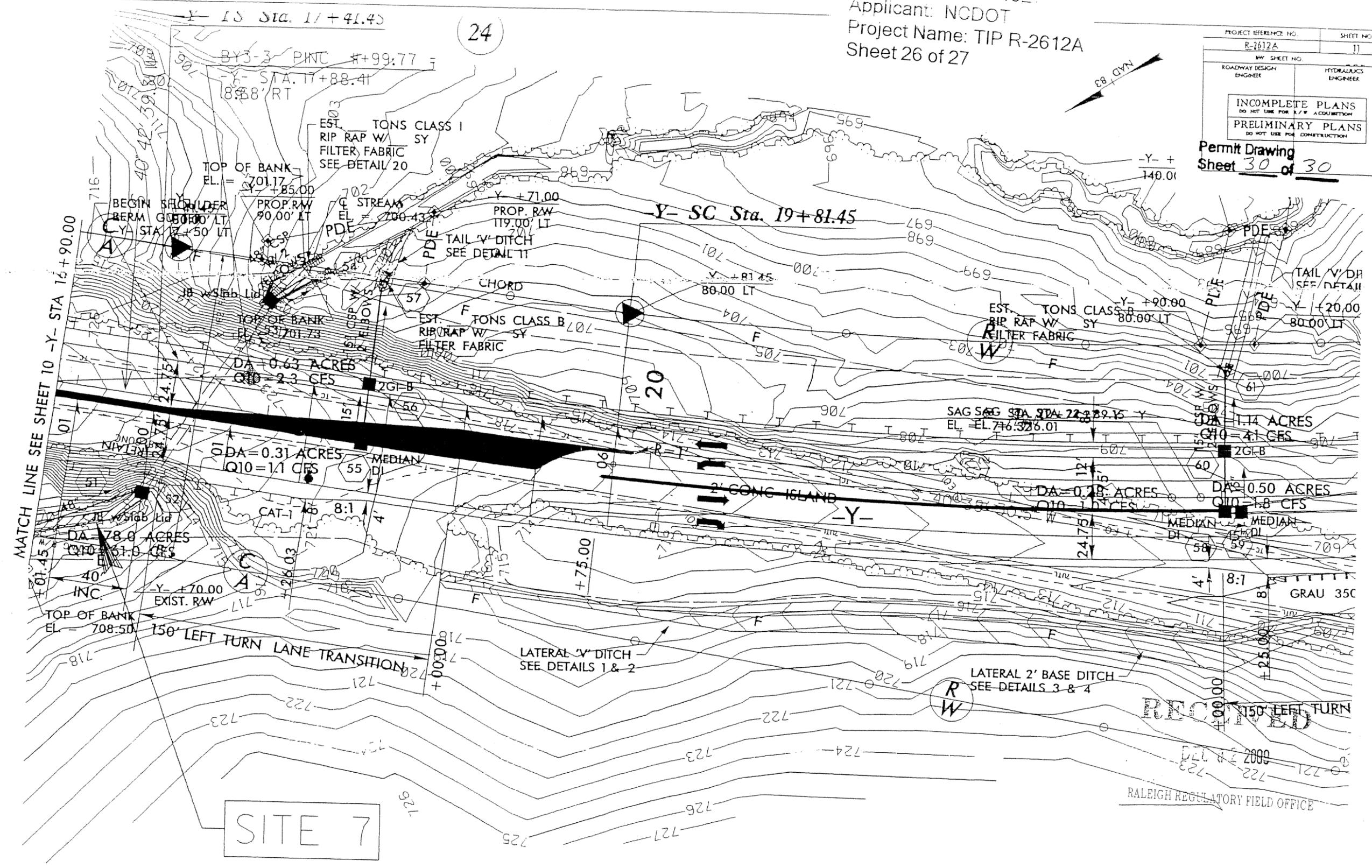
7/15/2009
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 10/12/09

PROJECT REFERENCE NO. R-2612A	SHEET NO. 11
RDWY SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

INCOMPLETE PLANS
 DO NOT USE FOR B.F.P. ACQUISITION
 PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

Permit Drawing
 Sheet 30 of 30

REVISIONS
 05/09/08 - DESIGN REVISION: REMOVED ALIGNMENT -RFA- ADDED ALIGNMENT -LPB- AND ADJUSTED THE HORIZONTAL AND VERTICAL ALIGNMENTS FOR -RFB- TO ACCOMMODATE -LPB- SCL



DENOTES IMPACTS IN SURFACE WATER

PAVEMENT REMOVAL

- NOTES
- 1) FOR -Y- PROFILE, SEE SHEETS 17 AND 18
 - 2) FOR -LPB- PROFILE, SEE SHEET 23
 - 3) FOR -RPB- PROFILE, SEE SHEET 24

SITE 7

RALEIGH REGULATORY FIELD OFFICE

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1/16/2009
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