



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

March 12, 2013

MEMORANDUM TO: Ms. Karen E. Fussell, PE
Division 3 Engineer

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

SUBJECT: Brunswick County, NC 133 Connector from NC 211 to NC
87; Federal Aid Project No. STP-133(3); WBS Element
34531.1.1.; **TIP R-3324**

A handwritten signature in blue ink, appearing to read "E. L. Fushk".

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

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

cc:

Mr. Randy Garriss, Contract Standards and Development Unit
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Jay Bennett, P.E., Roadway Design Unit
Mr. Dewayne Sykes, P.E. Utilities Unit
Mr. Art McMillan, P.E., Hydraulics Unit
Mr. Greg Perfetti, P.E., Structure Design Unit
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Mike Robinson, P.E., State Bridge Construction Engineer
Mr. Stoney Mathis, Division Environmental Officer
Mr. Ted Devens, P.E., PDEA
Ms. Beth Harmon, EEP
Mr. Phillip Ayscue, Office of Inspector General
Mr. Clarence Coleman, P.E., FHWA

PROJECT COMMITMENTS

T.I.P PROJECT R-3324
NC 133 Connector from NC 211-133 (Southport-Supply Road) to
NC 87-133 (River Road)
Brunswick County
Federal Aid Project STP-133(3)
WBS No. 34531.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Project Development and Environmental Analysis - Human Environment Section

Once a recommended alignment is chosen, additional archaeological studies will be required.

An archaeological survey report was submitted to the State Historic Preservation Office (SHPO) on July 26, 2007. On August 14, 2007 the SHPO agreed with the recommendation that no further archaeological investigation be conducted with this project since the project will not involve significant archaeological resources.

Project Development and Environmental Analysis – Natural Environment Section

Because a suitable habitat for the Red-Cockaded Woodpecker (RCW) is within the project area, a Section 7 Consultation with the United States Fish and Wildlife Services (USFWS) will be necessary for the project.

Concurrence was received from the USFWS for the RCW on January 8, 2008. NCDOT performed an additional evaluation for this species in the summer of 2012. The updated information presented in the RCW Aerial and Ground Survey Report, September 18, 2012 did not call for adjustments to the findings of the 2006 foraging habitat analysis nor changes the information for which concurrence was reached on this species. Therefore, the biological conclusion of May Affect Not Likely to Adversely Affect for this species has not changed.

Surveys for Cooley's meadowrue and rough-leaved loosestrife are required for the summer of 2006.

Concurrence was received from the USFWS for rough leaved loosestrife and Cooley's meadowrue on January 8, 2008. NCDOT performed an additional survey for these species during the survey window in 2012. No plants were identified during this survey. Therefore, the biological conclusion of No Effect for these species has not changed.

Roadside Environmental Unit/Hydraulics Unit

Dutchman Creek and its associated tributaries are designated High Quality Water resources. Any work *conducted* within the portion of this project that is in the High Quality Water Zone must comply with the "Design Standards in Sensitive Watersheds", 15 A NCAC 4B .0124(b)-(e), a North Carolina Statute.

NCDOT has complied with the "Design Standards in Sensitive Watersheds."

COMMITMENTS FROM PERMITTING

Division 3 Construction/Natural Environment Section/Roadside Environmental Section

Native material shall be placed inside of the reinforced concrete box culverts at Permit Sites 9 and 11 to provide a natural streambed in the low flow channel and floodplain benches between the sills in the overflow barrels. If possible, the material placed inside of the culvert should be the same native material that is excavated from the streambed and/or floodplain during the construction of these structures. Rip rap is not permissible in the low flow channel; however it may be used to supplement the natural material in the overflow barrels.

Division 3

The stream channel shall be excavated no deeper than the natural bed material of the stream, to the maximum extent practicable. Efforts must be made to minimize impacts to the stream banks, as well as to vegetation responsible for maintaining the stream bank stability. Any applicable riparian buffer impact for access to stream channel shall be temporary and be revegetated with native riparian species.

Division 3/Roadside Environmental Unit

Channel relocations shall be completed and stabilized, and approved on site by DWQ 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.

Division 3

The proposed excavation of the existing causeway at Site 6 shall be conducted in a manner that floodplain adjacent to the channel relocation is at an elevation equivalent to the adjacent and undisturbed wetland elevation.

Division 3

The permittee will ensure that the construction design plans for this project do not deviate from the permit plans (Permit Drawings sheets 54 of 54 and Utility Permit Drawings sheets 17 of 17, both received December 2012, and revised sheets 24A, 24B, 24C, 29, 35, 36, 37, 39, and 54 dated 1/24/2013) 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 COE, Wilmington Regulatory Field Office prior to any active construction in waters or wetlands.

Division 3

Measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed 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.

Division 3/Roadside Environmental Unit

Cleared wetland areas shall be re-vegetated with a wetland seed mix or a mix of native woody species. Fescue grass or any invasive species such as lespedeza, shall not be used within the wetland areas.

Natural Environment Section/Roadside Environmental Unit

Due to the possibility that compaction, mechanized clearing and/or other site alterations resulting from the authorized temporary fill that might prevent the wetland area at Site # 6 from re-attaining pre-project wetland functions, the permittee shall monitor temporary wetland impacts for three years after project completion. The permittee shall first schedule a meeting with USACE and NCDWQ to verify the extent and location of temporary impacts upon project completion. The permittee shall then provide an annual update for 3 years on this wetland area impacted by this project. This annual update shall consist of photographs and written report on the progress of this impacted area in re-attaining wetland jurisdictional status. Three years after project completion, the permittee shall schedule an agency field meeting with USACE and NCDWQ to determine if the wetland area impacted by the project has re-attained pre-project

wetland functions. If at the end of 3 years the wetland area impacted by the project has not re-attained pre-project wetland functions, USACE and NCDWQ shall determine whether compensatory wetland mitigation shall be required.

Natural Environmental Section

The total non-riparian impact amount for this project is 7.33 acres. This is broken down to 4.78 acres of permanent impact (fill, excavation, and or mechanized land clearing) for project construction, 0.85 acre permanent forest conversion, and 1.7 acres of drainage through the relocation of highways ditches. The permanent impact and drainage from ditch relocation will be mitigated through the purchase of credits from NCEEP at a 2:1 ratio since the work will not be on-site. The 0.85 acre impact associated with the utility work is being mitigated at a 0.25:1 ratio since it will not be a complete loss of resource just a conversion type. Applying these ratios the NCDOT will debit 13.17 acres of nonriparian credits. The total amount of riparian impact for this project is 1.51 acres. This fill will be mitigated again through the purchase of credits from NCEEP at a 2:1 ratio again since mitigation will come from off-site. The Department will debit 3.02 acres of riparian credits. The amount of stream mitigation required for the project would be 992 linear feet and will come from NCEEP credits at a 2:1 ratio since off-site. The Department will debit 1,984 linear feet of stream credits.



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

REPLY TO
ATTENTION OF:

February 21, 2013

Regulatory Division

Action ID No. SAW-2001-00921; TIP Project No. R-3324 Brunswick County, North Carolina.

Dr. Gregory J. Thorpe, Ph.D.
North Carolina Department of Transportation
Project Development and Environmental Analysis
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Dr. Thorpe:

In accordance with your complete written request of December 13, 2012 (revised application) and the ensuing administrative record, enclosed is one copy of a Department of the Army permit to directly discharge fill material into waters and wetlands along Jump and Run Creek and Dutchman Creek, both tributaries to the Intracoastal Waterway, to construct the NC 133 connector road from NC 211/133 to NC 87/133, Brunswick County, North Carolina. The proposed improvements total 2.1 miles in length.

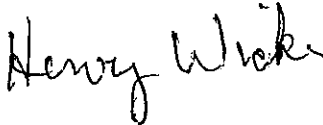
Any deviation in the authorized work will likely require modification of this permit. If a change in the authorized work is necessary, you should promptly submit revised plans to the Corps showing the proposed changes. You may not undertake the proposed changes until the Corps notifies you that your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

- a. You must complete construction before December 31, 2018.
- b. You must notify this office in advance as to when you intend to commence and complete work.
- c. 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.

You should address all questions regarding this authorization to Mr. Brad Shaver in the Wilmington Regulatory Field Office, telephone number (910) 251-4611.

Sincerely,

for 
Steven A. Baker
Colonel, U. S. Army
District Commander

Enclosures

Copies Furnished (with enclosures):

Chief, Source Data Unit
NOAA/National Ocean Service
1315 East-West Highway, Room 3716
Silver Spring, Maryland 20910-3282

Copies Furnished (with Special Conditions and plans):

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

Ms. Jennifer Derby, Chief
Wetlands Protection Section – Region IV
Water Management Division
U.S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, Georgia 30303-8931

Mr. Jeffrey Garnett
Wetlands and Marine Regulatory Section
Water Protection Division – Region IV
U.S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, Georgia 30303-8931

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

Mr. Pace Wilber
National Marine Fisheries Service
2191 Fort Johnson Road
Charleston, South Carolina 29412-9110

DEPARTMENT OF THE ARMY PERMIT

Permittee: North Carolina Department of Transportation (NCDOT)

Permit No.: SAW-2001-00921 **R-3324**

Issuing Office: CESA-W-RG-L

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 that office acting under the authority of the commanding officer.

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

Project Description: The proposed action involves the construction of a two-lane facility on new location from NC 211-133 (Southport Supply Road) to NC 87-133 (River Road), and construct the entrance road to Sunny Point Military Terminal in the city of Southport, Brunswick County.

Project Location: The proposed 2.1 mile highway improvement just outside Southport between NC 211-133 to NC 87-133 is located in southern Brunswick County. The project can be generally located at Latitude 33.9625 N and Longitude -78.0409 W. The project area crosses Dutchman and Jump and Run Creek to include their riparian wetlands and tributaries.

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2018**. 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 Condition 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 is 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).
- ☒ 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.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

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

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

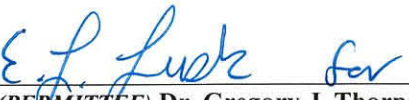
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

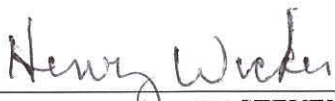
6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.


(PERMITTEE) Dr. Gregory J. Thorpe, Ph.D., NCDOT

2.20.13
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.


(DISTRICT ENGINEER) STEVEN A. BAKER
Colonel, EN
Commanding

2-26-13
(DATE)

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

(TRANSFEEE)

(DATE)

*U.S. GOVERNMENT PRINTING OFFICE: 1986 - 717-425

SAW-2001-00921, SPECIAL CONDITIONS

In accordance with 33 U.S.C. 1341(d), all conditions of the North Carolina Division of Water Quality (NCDWQ) 401 Water Quality Certification #3949 and the North Carolina Division of Coastal Management Consistency Determination (CD13-002) is incorporated as part of the Department of the Army permit.

1. Plans

A. The permittee will ensure that the construction design plans for this project do not deviate from the permit plans (Permit Drawings sheets 54 of 54 and Utility Permit Drawings sheets 17 of 17, both received December 2012, and revised sheets 24A, 24B, 24C, 29, 35, 36, 37, 39, and 54 dated 1/24/2013) 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 COE, Wilmington Regulatory Field Office prior to any active construction in waters or wetlands.

B. 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.

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.

2. Pre Construction Meeting

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

B. The permittee shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Written verification shall be provided that the final construction drawings comply with the attached permit drawings prior to any active construction in waters of the United States, including wetlands. Any deviation in the construction design plans will be brought to the attention of the Corps of Engineers, Mr. Brad Shaver, Regulatory Field Office prior to any active construction in waters or wetlands.

3. Culverts

A. Unless otherwise requested in the applicant's application and depicted on the approved work plans, culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter and 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 existing channel slope. The bottom of the culvert must be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions. Destabilizing the channel and head cutting upstream should be considered in the placement of the culvert. The excavation required, typically noted as temporary stream impact, should be restored to its original elevation at the completion of the culvert installation.

B. Any instability of the stream channel or banks (downcutting, headcutting, or bank erosion) caused by the installation of authorized work shall be corrected before project completion. Any remedial actions to correct stream channel or bank instability shall be coordinated through the appropriate USACE field office project manager prior to execution.

C. Measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed 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.

D. 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. Culverts placed across wetland fills purely for the purposes of equalizing surface water do not have to be buried.

E. Rip rap is prohibited from being placed in the low flow channel of any culvert along this project.

4. Sediment Erosion Control

A. During the clearing phase of the project, heavy equipment must not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.

B. No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit. This permit does not authorize

temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area.

C. The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades on those areas, prior to project completion.

D. The permittee shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to assure compliance with the appropriate turbidity water quality standard. 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 assure compliance with the appropriate turbidity water quality standards. 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). Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures must be inspected and maintained regularly, especially following rainfall events. All fill material must be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.

E. The permittee shall install barrier fencing around all wetlands that are not to be disturbed to make them readily visible and prevent construction equipment from inadvertently entering or disturbing these areas.

F. 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) 733-3300 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

G. Cleared wetland areas shall be re-vegetated with a wetland seed mix or a mix of native woody species. Fescue grass or any invasive species such as Lespedeza, shall not be used within the wetland areas.

5. Temporary Fills

A. 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.

B. Due to the possibility that compaction, mechanized clearing and/or other site alterations resulting from the authorized temporary fill that might prevent the wetland area at Site # 6 from re-attaining pre-project wetland functions, the permittee shall monitor temporary

wetland impacts for three years after project completion. The permittee shall first schedule a meeting with USACE and NCDWQ to verify the extent and location of temporary impacts upon project completion. The permittee shall then provide an annual update for 3 years on this wetland area impacted by this project. This annual update shall consist of photographs and written report on the progress of this impacted area in re-attaining wetland jurisdictional status. Three years after project completion, the permittee shall schedule an agency field meeting with USACE and NCDWQ to determine if the wetland area impacted by the project has re-attained pre-project wetland functions. If at the end of 3 years the wetland area impacted by the project has not re-attained pre-project wetland functions, USACE and NCDWQ shall determine whether compensatory wetland mitigation shall be required.

6. Borrow and Waste

A. 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 COE 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 COE before approving any borrow or waste sites that are within 400 feet of any streams or wetlands. The evaluation of impacts to jurisdictional resources (waters and wetlands) associated with borrow/waste sites should include any haul roads or other access points.

B. 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. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act.

7. Mitigation

A. The permittee, NCDOT, is the party responsible for the implementation and performance and long term management of the compensatory mitigation project.

B. The permittee shall maintain the entire mitigation site in its natural condition, as altered by the work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: Filling; grading; excavating; earth movement of any kind; construction of roads, walkways, buildings, signs, or any other structure; any activity that may alter the drainage patterns on the property; the destruction, cutting, removal, mowing, or other alteration of vegetation on the property; disposal or storage of any garbage, trash, debris or other waste material; graze or water animals, or use for any agricultural or horticultural purpose; or any other activity which will result in the property being adversely impacted or destroyed, except as specifically authorized by this permit.

C. The permittee shall not sell or otherwise convey any interest in the mitigation property used to satisfy the mitigation requirements for this permit to any third party, without written approval from the Wilmington District COE.

D. 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.

**** Note, breakdown of impacts to required mitigation:**

- The total non-riparian impact amount for this project is 7.33 acres. This is broken down to 4.78 acres of permanent impact (fill, excavation, and or mechanized land clearing) for project construction, 0.85 acre permanent forest conversion, and 1.7 acres of drainage through the relocation of highways ditches. The permanent impact and drainage from ditch relocation will be mitigated through the purchase of credits from NCEEP at a 2:1 ratio since the work will not be on-site. The 0.85 acre impact associated with the utility work is being mitigated at a 0.25/1 ratio since it will not be a complete loss of resource just a conversion type. Applying these ratios the NCDOT will debit 13.1725 acres of non-riparian credits.

- The total amount of riparian impact for this project is 1.51 acres. This fill will be mitigated again through the purchase of credits from NCEEP at a 2:1 ratio again since mitigation will come from off-site. The Department will debit 3.02 acres of riparian credits.

- The amount of stream mitigation required for the project would be 992 linear feet and will come from NCEEP credits at a 2:1 ratio since off-site. The Department will debit 1,984 linear feet of stream credits.

E. Prior to the introduction of stream flow, the relocated channel will be allowed to stabilize for one growing season or until such time as the permittee can demonstrate to the COE satisfaction that the channel has adequately stabilized.

8. Enforcement

A. 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.

B. Violations of these conditions or violations of Section 404 of the Clean Water Act must be reported in writing to the Wilmington District U.S. Army COE within 24 hours of the permittee's discovery of the violation.

C. If the permittee discovers any previously unknown historic or archaeological sites while accomplishing the authorized work, he shall immediately stop work and notify the Wilmington District Commander who will initiate the required State/Federal coordination.

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

9. Jurisdiction Note

The final jurisdictional determination which is defined by the purchased right of way has been completed and attached to this permit decision. The appeals information has been returned to the Department as an attachment to the permit.



REPLY TO
ATTENTION OF:

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

April 14, 2015

Regulatory Division

Action ID. SAW-2001-00921
TIP# R-3324

Mr. Richard Hancock, P.E., Manager
Project Development and Environmental Analysis Unit
N.C. Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Mr. Hancock:

Reference the Department of the Army permit issued on February 6, 2013, for the proposed NC 133 Connector from NC 211-133 (Southport Supply Road) to NC 87-133 (River Road), Brunswick County. (TIP# R-3324) Reference is also made to your permit modification request dated March 5, 2015 with a clarification request dated March 30, 2015. As described in the field and as requested, the construction activities have resulted in more than hand clearing at the toe of slopes along several sites in the project limits. Therefore, the existing 5-foot of hand clearing is being authorized as mechanized clearing (after the fact) which results in the additional, permanent impact of 0.40 of an acre of non-riparian wetlands. The permit drawing sheets covered by this modification are R-3324 permit drawing sheets 21, 22, 25, 26, 50, 51, and 54 of 54 dated revised 3/24/2015.

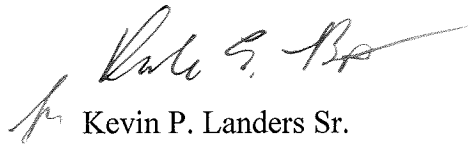
We have determined that the proposed change is minor, and that a supplemental public notice is not necessary. Your permit is hereby modified to include the aforementioned changes as described in the modification request with an additional special condition identified below. It is understood that all other conditions of the original permit and previous modifications remain applicable, including the permit expiration date of December 31, 2018.

Additional Special Conditions:

1. In order to compensate for additional 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 modification authorization.

This modification approval and referenced plans will be utilized for future compliance of the project. If you have questions, please contact Brad Shaver of the Wilmington Regulatory Field Office, at telephone (910) 251-4611.

Sincerely,

A handwritten signature in dark ink, appearing to read "Kevin P. Landers Sr.", with a stylized flourish at the end.

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

Copies Furnished: (electronic)

Mr. Stoney Mathis, NCDOT
Ms. John Merritt, NCDOT
Mr. Mason Herndon, NCDENR-DWR
Mr. Stephen Lane, NCDENR-DCM
Mr. Cathy Brittingham, NCDENR-DCM
Ms. Beth Harmon, NCEEP
Mr. Todd Tugwell, USACE
Ms. Cindy Corbett, USACE

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

Permittee: North Carolina Department of Transportation
Project Name: R-3324 NC 133 Connector

Action ID: SAW-2001-00921
County: Brunswick

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

Instructions to Sponsor: The Sponsor must verify that the mitigation requirements shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not they have received payment from the Permittee. Once the form is signed, the Sponsor must update the appropriate ledger and provide a copy of the signed form to the Permittee and to the USACE Bank/In-Lieu Fee Program Manager. The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

ADDITIONAL Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation*

8-digit HUC and Basin: 03030005, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
					0.40	

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

ADDITIONAL Compensatory Mitigation Requirements:

8-digit HUC and Basin: 03030005, Cape Fear River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
					0.80	

Mitigation Site Debited: NCEEP

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

Section to be completed by the Mitigation Sponsor

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

Mitigation Sponsor Name: _____

Name of Sponsor's Authorized Representative: _____

Signature of Sponsor's Authorized Representative

Date of Signature

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

Conditions for Transfer of Compensatory Mitigation Credit:

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

Comments/Additional Conditions:

These additional impacts are needed for modification requests dated March 5 and March 30, 2015.

This form is not valid unless signed by the mitigation Sponsor and USACE Project Manager. For questions regarding this form or any of the conditions of the permit authorization, contact the Project Manager at the address below.

USACE Project Manager: Brad Shaver
USACE Field Office: Wilmington Regulatory Field Office
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403

Email:



USACE Project Manager Signature

April 7, 2015

Date of Signature

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

U.S. ARMY CORPS OF ENGINEERS

Wilmington District

Compensatory Mitigation Responsibility Transfer Form

Permittee: North Carolina Department of Transportation

Action ID: SAW-2001-00921

Project Name: NC 133 Connector from NC 211-133 to NC 87-133, R-3324

County: Brunswick

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

Instructions to Sponsor: The Sponsor should verify that the mitigation requirements shown below are available and ensure that they have received payment before signing this form. By signing below, the Sponsor is accepting responsibility for the identified mitigation. Once the form is signed, the Sponsor must update the appropriate ledger and provide a copy of the signed form to the Permittee and to the USACE Bank/ILF Manager. The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation*

8-digit HUC and Basin: 03030005, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
992			1.51		7.33	

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

Compensatory Mitigation Requirements:

8-digit HUC and Basin: 03030005, Cape Fear River Basin

Stream (credits)			Wetland (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
1,984			3.02		13.17	

Mitigation Site Debited: NC EEP

(For banks, list the name of the bank to be debited, and the specific site if an umbrella bank. For NCEEP, list "NCEEP" and "Advance Credits", "Unassigned", or the name of the site name if specified in the acceptance letter from NCEEP.)

Section to be completed by the Mitigation Bank or ILF Sponsor

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

Mitigation Bank/ILF Sponsor Name: _____

Name of Sponsor's Authorized Representative: _____

Signature of Sponsor's Authorized Representative

Date of Signature

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

Conditions for Transfer of Compensatory Mitigation Credit:

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

Comments/Additional Conditions:

**** Note, breakdown of impacts to required mitigation:**

- The total non-riparian impact amount for this project is 7.33 acres. This is broken down to 4.78 acres of permanent impact (fill, excavation, and or mechanized land clearing) for project construction, 0.85 acre permanent forest conversion, and 1.7 acres of drainage through the relocation of highways ditches. The permanent impact and drainage from ditch relocation will be mitigated through the purchase of credits from NCEEP at a 2:1 ratio since the work will not be on-site. The 0.85 acre impact associated with the utility work is being mitigated at a 0.25/1 ratio since it will not be a complete loss of resource just a conversion type. Applying these ratios the NCDOT will debit 13.1725 acres of non-riparian credits.
- The total amount of riparian impact for this project is 1.51 acres. This will be mitigated through the purchase of credits from NCEEP at a 2:1 ratio since from off-site. The Department will debit 3.02 acres of riparian credits.
- The amount of stream mitigation required for the project would be 992 linear feet and will come from NCEEP credits at a 2:1 ratio since off-site. The Department will debit 1,984 linear feet of stream credits.

This form is not valid unless signed by the mitigation Sponsor and USACE Project Manager. For questions regarding this form or any of the conditions of the permit authorization, contact the Project Manager at the address below.

USACE Project Manager: Brad Shaver
USACE Field Office: Wilmington Regulatory Field Office
 US Army Corps of Engineers
 69 Darlington Avenue
 Wilmington, NC 28403

Email:



February 12, 2013

USACE Project Manager Signature

Date of Signature

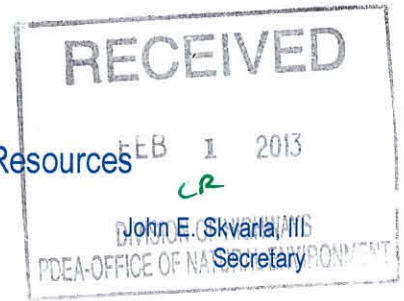
Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Charles Wakild, P. E.
Director

Pat McCrory
Governor



January 25, 2013

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 NC 133 Connector from NC 21/NC 133 (Southport Supply
Road) to NC 87/NC133 (River Road) in Brunswick County, Federal Aid Project No. STP-133(3), WBS
No. 34531.1.1.1, TIP R-3324.

NCDWQ Project No. 12-0711
NCDWQ Certification No. 3949

Dear Dr. Thorpe:

Attached hereto is a copy of Certification No. 3949 issued to The North Carolina Department of Transportation
(NCDOT) dated January 25, 2013.

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

Sincerely,


Charles Wakild
Director

Attachments

cc: Brad Shaver, US Army Corps of Engineers, Wilmington Field Office
Karen Fussell, PE, Division 3 Engineer
Stoney Mathis, Division 3 Environmental Officer (electronic copy only)
Chris Militscher, Environmental Protection Agency (electronic copy only)
Gary Jordan, US Fish and Wildlife Service (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission (electronic copy only)
Jason Elliott, NCDOT, Roadside Environmental Unit
Steve Sollod, Division of Coastal Management
Michael Ellison, Ecosystem Enhancement Program
Sonia Carrillo, NCDWQ Central Office
File Copy

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1617
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6492
Internet: www.ncwaterquality.org

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401 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 11.17 acres of jurisdictional wetlands and 1,702 linear feet of jurisdictional streams in Brunswick County. The project shall be constructed pursuant to the revised application dated received December 19, 2012 and additional information received on January 24, 2013. The authorized impacts are as described below:

Stream Impacts in the Cape Fear River Basin

Site	Station	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)	Bank Stabilization (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1	22+00-L-	0	0	0	160	26	186	0
4	51+70 to 60+00-L-	0	0	481*	0	0	481	131
5	61+00 to 73+40-L-	0	0	242	0	0	242	242
6	83+50 to 91+70-L-	0	0	395	73	0	468	395
9	112+80-L-	0	0	128	55	0	183	0
11	123+50 to 127+60-L-	0	0	96	46	0	142	0
TOTAL		0	0	1,342	334	26	1,702	768

Total Stream Impact for Project: 1,702 linear feet

*350 linear feet of stream will be relocated

Wetland Impacts in the Cape Fear River Basin

Site	Station	Wetland Type	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Drainage Effect (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation
2	12+30 to 25+00-Y1-	NR	0.10	0	0.03	0	0	0	0.13	0.13
4	51+70 to 60+00-L-	NR	0.15	0.03*	0	0	0	0.06	0.24	0.15
5	61+00 to 73+40-L-	NR	1.98	0.15*	0.05	0	0	0.35	2.53	2.03
6	83+50 to 91+70-L-	R	1.08	0.39	0.18	0	0.21	0	1.86	1.47
7	98+00-L-	NR	0.06	0.01*	0	0	0	0.03	0.10	0.06
8	104+00 to 107+70-L-	NR	0.56	0.05*	0	0	0	0.12	0.73	0.56
10	113+60 to 118+80-L-	NR	0.49	0.06*	0	0	0	0.14	0.69	0.49
11	123+50 to 127+60-L-	NR	1.05	0	0	0	0.22	0	1.27	1.27
12	32+00 to 81+50-Y2-	NR	0	0.18*	0.09	1.7	0	0.43	2.40	1.79
13	46+00 to 47+30-Y1-	R	<0.01	0	0.04	0	0	0.01	0.05	0.04
UTILITIES										
A1/A2	See UPD 9 of 17	NR	<0.01**	0	0	0	0	0.36	0.36	0
A3	See UPD 10 of 17	NR	<0.01**	0	0	0	0	0.40	0.40	0
A4/A5	See UPD 11 of 17	NR	<0.01**	0	0	0	0	0.32	0.32	0
A6/A7	See UPD 12 of 17	NR	<0.01**	0	0	0	0	0.06	0.06	0
A8	See UPD 13 of 17	NR	<0.01**	0	0	0	0	0.03	0.03	0
TOTAL			5.47	0.87	0.39	1.7	0.43	2.31	11.17	7.99

Total Wetland Impact for Project: 11.17 acres.

*denotes temporary fill in hand clearing areas for erosion control measures

**power pole installation

R – Riparian wetland; NR- Non riparian wetland

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 revised application dated received December 19, 2012. 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). 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 Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Condition(s) of Certification:

Project Specific Conditions

1. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the potential issues with stream and pipe alignment at the permitted site. NCDWQ staff shall be invited to the pre-construction meeting.
2. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
3. 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.
4. Native material shall be placed inside of the reinforced concrete box culverts at Permit Sites 9 and 11 to provide a natural streambed in the low flow channel and floodplain benches between the sills in the overflow barrels. If possible, the material placed inside of the culvert should be the same native material that is excavated from the streambed and/or floodplain during the construction of these structures. Rip rap is not permissible in the low flow channel; however it may be used to supplement the natural material in the overflow barrels.
5. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly.
6. The stream channel shall be excavated no deeper than the natural bed material of the stream, to the maximum extent practicable. Efforts must be made to minimize impacts to the stream banks, as well as to vegetation responsible for maintaining the stream bank stability. Any applicable riparian buffer impact for access to stream channel shall be temporary and be revegetated with native riparian species.
7. Channel relocations shall be completed and stabilized, and approved on site by DWQ 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.

8. The proposed excavation of the existing causeway at Site 6 shall be conducted in a manner that floodplain adjacent to the channel relocation is at an elevation equivalent to the adjacent and undisturbed wetland elevation.
9. Pipes and culverts used exclusively to maintain equilibrium in wetlands and/or served as floodplain pipes, where aquatic life passage is not a concern shall not be buried. These pipes shall be installed at natural ground elevation.
10. Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.
11. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*.
12. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from NCDWQ first.
13. Due to the possibility that compaction and/or other site alterations might prevent the temporary wetland impact area from re-attaining jurisdictional wetland status; the permittee shall provide an update on the wetland areas temporarily impacted at Site 6. This update shall be conducted a minimum of two growing seasons after completion of the work at Site 6 and shall consist of photographs and a brief report on the progress of the areas in re-attaining wetland jurisdictional status. Upon submission of this update to NCDWQ, the permittee shall schedule an agency field meeting with the NCDWQ to determine if the wetland areas temporarily impacted by this project have re-attained jurisdictional wetland status. If the wetland areas temporarily impacted by this project have not re-attained jurisdictional wetland status, NCDWQ shall determine if compensatory wetland mitigation is required.
14. Compensatory mitigation for 768 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 Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated July 17, 2012 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the EEP Mitigation Banking Instrument signed July 28, 2010.
15. Compensatory mitigation for impacts to 1.51 acre of riparian and 6.48 acre of non riparian wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated July 17, 2012 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project in accordance with the EEP Mitigation Banking Instrument signed July 28, 2010.
16. The project shall be constructed in accordance with Stormwater Permit Number SW081020 which was issued to this project by the DWQ Stormwater Permitting Unit on October 29, 2008.

General Condition

17. 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 NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
18. 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.
19. 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.
20. 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.
21. 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.
22. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.
23. 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.
24. 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.
25. 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.
26. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
27. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
28. 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.

29. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification..
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.
31. 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.
32. 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.
33. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
34. 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.
35. 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.
36. 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.
37. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
38. 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 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 DENR as follows:

Mr. Lacey Presnell, General Counsel
Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

This the 25th day of January 2013

DIVISION OF WATER QUALITY



Charles Wakild
Director



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

April 7, 2015

Mr. Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS for proposed NC 133 Connector from NC 21/NC 133 (Southport Supply Road) to NC 87/NC133 (River Road) in Brunswick County, Federal Aid Project No. STP-133(3), WBS No. 34531.1.1.1, TIP R-3324.

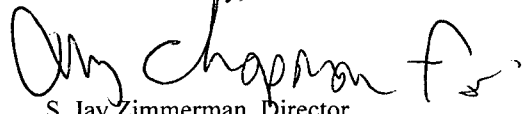
NCDWQ Project No. 12-0711v.2
NCDWQ Certification No. 3949

Dear Mr. Hancock:

Attached hereto is a modification of Certification No. 3949 issued to The North Carolina Department of Transportation (NCDOT) dated January 25, 2013.

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

Sincerely,


S. Jay Zimmerman, Director
Division of Water Resources

Attachments

Electronic copy only distribution:

Brad Shaver, US Army Corps of Engineers, Wilmington Field Office
Stoney Mathis, Division 3 Environmental Officer
Colin Mellor, NC Department of Transportation
Chris Rivenbark, NC Department of Transportation
Dr. Cynthia Van Der Wiele, US Environmental Protection Agency
Gary Jordan, US Fish and Wildlife Service
Travis Wilson, NC Wildlife Resources Commission
Cathy Brittingham, NC Division of Coastal Management
Stephen Lane, NC Division of Coastal Management
Jason Elliott, NCDOT, Natural Environment Section
Beth Harmon, Division of Mitigation Services
NC Division of Water Resources Raleigh Central Office
File Copy

1617 Mail Service Center, Raleigh, North Carolina 27699-1617
Phone: 919-807-6300 \ Internet: www.ncdenr.gov

An Equal Opportunity \ Affirmative Action Employer

**Modification to the 401 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 Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to permanently impact an additional 0.40 acres of jurisdictional wetlands in Brunswick County. The project shall be constructed pursuant to the modification dated received March 5, 2015 and revisions received on March 30, 2015. The authorized impacts are as described below:

Revised Wetland Impacts in the Cape Fear River Basin

Site/Station	Wetland Type	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
Site 2 (12+30 to 25+00 - Y1-)	NR	0.10	0	0.03	0	0	0.13	0.13
Original approved impacts at Site 4 (51+70 to 60+00-L-)	NR	0.15	0.03*	0	0	0.06	0.24	N/A
Revised impacts with this approval at Site 4 (51+70 to 60+00-L-)	NR	0.15	0.03*	0	0.03	0.03	0.24	0.18
Original approved impacts at Site 5 (61+00 to 73+40-L-)	NR	1.98	0.15*	0.05	0	0.35	2.53	N/A
Revised impacts with this approval at Site 5 (61+00 to 73+40-L-)	NR	1.98	0.15*	0.05	0.15	0.15	2.48	2.18
Original approved impacts at Site 6 (83+50 to 91+70-L-)	R	1.08	0.39	0.18	0.21	0	1.86	N/A
Revised impacts with this approval at Site 6 (83+50 to 91+70-L-)	R	1.08	0.33	0.18	0.27	0	1.86	1.53
Original approved impacts at Site 7 (98+00-L-)	NR	0.06	0.01*	0	0	0.03	0.10	N/A
Revised impacts with this approval at Site 7 (98+00-L-)	NR	0.06	0.01*	0	0.01	0.01	0.09	0.07
Original approved impacts at Site 8 (104+00 to 107+70-L-)	NR	0.56	0.05*	0	0	0.12	0.73	N/A
Revised impacts with this approval at Site 8 (104+00 to 107+70-L-)	NR	0.56	0.05*	0	0.06	0.06	0.73	0.62
Original approved impacts at Site 10 (113+60 to 118+80-L-)	NR	0.49	0.06*	0	0	0.14	0.69	N/A

Revised impacts with this approval at Site 10 (113+60 to 118+80-L-)	NR	0.49	0.06*	0	0.09	0.06	0.70	0.58
Site 11 (123+50 to 127+60-L-)	NR	1.05	0	0	0.22	0	1.27	1.27
Original approved impacts at Site 12 (32+00 to 81+50-Y2-)	NR	0	0.18*	0.09	1.7**	0.43	2.40	N/A
Revised impacts with this approval at Site 12 (32+00 to 81+50-Y2-)	NR	0	0.18*	0.09	1.7**	0.23	2.20	1.79
Site 13 (46+00 to 47+30-Y1-)	R	<0.01	0	0.04	0	<0.01	0.05	0.04
Revised Total Project Wetland Impacts		5.47	0.81	0.39	2.53	0.54	9.75	8.39

Total Revised Project Wetland Impacts: 8.39 acres.

*denotes temporary fill in hand clearing areas for erosion control measure

** includes mechanized clearing and wetland drainage form ditch relocation

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 modified application dated received March 5, 2015 and revisions received on March 30, 2015. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated January 25, 2013 still apply except where superseded by this certification. Should your project change, you are required to 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 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). 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 Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Condition(s) of Certification:

1. This modification is applicable only to the additional proposed activities. All of the authorized activities and conditions of certification associated with the original Water Quality Certification dated January 25, 2015 still apply except where superseded by this certification.
2. Compensatory mitigation for additional impacts to 0.4 acres of non-riverine wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Division of Mitigation Services (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. DMS has indicated in a letter dated March 25, 2015 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed July 28, 2010.

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 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:

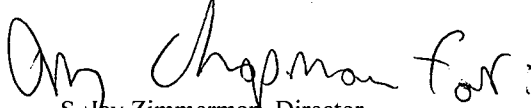
Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919)-431-3000, Facsimile: (919)-431-3100

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

Mr. Sam M. Hayes, General Counsel
Department of Environment and Natural Resources
1601 Mail Service Center

This the 7th day of April 2015

DIVISION OF WATER RESOURCES


S. Jay Zimmerman, Director
Division of Water Resources

WQC No. 3949



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

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 _____



North Carolina Department of Environment and Natural Resources
Division of Coastal Management

Pat McCrory
Governor

Braxton C. Davis
Director

John E. Skvarla, III
Secretary

January 16, 2013

Gregory J. Thorpe, Ph.D., Manager
Project Development and Environmental Analysis Branch
NC Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1598

SUBJECT: Consistency Concurrence - ~~CD10-002~~ **CD13-002** (Corrected)
Proposed NC 133 Connector, from NC 211-133 (Southport-Supply Road) to
NC 87-133 (River Road) in Brunswick County, R-3324 (DCM#20120067)

Dear Dr. Thorpe:

The Division of Coastal Management (DCM) received NC Department of Transportation's (NCDOT) Consistency Determination certifying that the subject project is consistent with the NC Coastal Management Program on July 23, 2012. NCDOT's Consistency Certification documentation was distributed to State agencies with a regulatory interest for review and to provide DCM with comments on the potential impacts of the project on each agency's resources.

The proposed project, which was taken through the merger process, is a two-lane facility on new location from NC 211-133 (Southport-Supply Road) to NC 87-133 (River Road) in Brunswick County. The 2.1 mile long project includes a reconfiguration of the intersection of NC 87, NC 133, and the entrance road to the Sunny Point Military Terminal. No Coastal Area Management Act (CAMA) Areas of Environmental Concern (AECs) will be impacted by the construction of the proposed project.

Based on the review of NCDOT's Consistency Certification and the supplementary supporting documentation, comments received from the interested State agencies, and the enforceable policies of the NC Coastal Management Program, DCM concurs, as conditioned below, that the proposed project is consistent, to the maximum extent practicable, with North Carolina's certified coastal management program provided that the following conditions are implemented.

- NCDOT shall obtain and comply with a NC Division of Water Quality (DWQ), Section 401, Water Quality Certification. A copy of the 401 Water Quality Certification shall be forward to DCM.

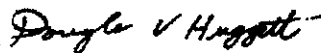
- In accordance with correspondence to NCDOT by DWQ, dated January 10, 2013, NCDOT shall obtain a revised Mitigation Acceptance Letter from the EEP to cover all required mitigation. Any future unanticipated, substantial, increases in impacts may require NCDOT to revise the Consistency Certification for this project.
- This project shall comply with all requirements of DWQ Stormwater Permit No. SW8 081020, issued on October 29, 2008.
- This project shall conform to all requirements of the NC Sedimentation Pollution Control Act and NCDOT's Memorandum of Agreement with the Division of Energy, Mineral and Land Resources.
- Unless specifically altered herein, the environmental commitments made within the Federal Consistency Certification, dated July 23, 2012, and within the Environmental Assessment, signed by NCDOT on July 6, 2006, and the Finding of No Significant Impact, signed by NCDOT on October 29, 2007, shall be met unless otherwise negotiated with state regulatory agencies. DCM shall be notified of any deviation from the stated commitments and a revised Consistency Determination may be necessary.

These conditions allow DCM to concur with the proposed action. It should be noted, that in accordance with 15 CFR 930.4, if the conditions of concurrence are not met, then this concurrence shall be considered an objection to the action. Should there be disagreement of any stated conditions of concurrence; a response to this correspondence is requested, as soon as possible, to resolve any disagreement with the conditions.

Should the project be modified, a revised Consistency Certification could be necessary. This might take the form of either a supplemental Consistency Determination pursuant to 15 CFR 930.46, or a new Consistency Determination pursuant to 15 CFR 930.36.

If you have any questions on this Consistency Concurrence, please contact Steve Sollod at (919) 707-9152 or via e-mail at steve.sollod@ncdenr.gov. Thank you for your consideration of the North Carolina Coastal Management Program.

Sincerely,



Doug Huggett
Manager, Major Permits and Consistency Unit

cc: Beth Harmon, EEP
Stephen Lane, DCM
John Merritt, NCDOT
Chris Rivenbark, NCDOT
Stephen Rynas, DCM
Brad Shaver, USACE



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

April 21, 2015

Richard W. Hancock, PE, Manager
Project Development and Environmental Analysis Branch
NC Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

SUBJECT: **CD13-002**, Consistency Concurrence Supplemental Coordination.
TIP No. R-3324, NC133 Connector from NC 211-133 (Southport-Supply Road) to NC 87-133 (River Road), Brunswick County, NC.
DCM#20120067.

Dear Mr. Hancock:

The N.C. Division of Coastal Management (DCM) received correspondence from the N.C. Department of Transportation (NCDOT) dated March 5, 2015 and March 30, 2015 regarding changes to the above referenced project for which Federal Consistency Concurrence CD 13-002 was issued by DCM on January 16, 2013. The correspondence from NCDOT dated March 5, 2015 and March 30, 2015 included 24 revised workplan drawings: 18 dated March 2, 2015, 4 dated March 24, 2015, and 2 dated March 30, 2015. The correspondence also included a mitigation acceptance letter from the N.C. Division of Mitigation Services dated March 25, 2015 stating that it will provide wetland mitigation for the additional permanent wetland impacts of 0.40 acres to non-riparian wetlands. Changes to the originally authorized project are due to the addition of a 5-foot wide mechanized clearing area throughout the project, which is necessitated due to site conditions.

The N.C. Division of Water Resources (DWR) issued a modification of the Section 401 Water Quality Certification No. 3949 on April 7, 2015 (NCDWR Project No. 12-0711v.2). The modified Section 401 Water Quality Certification authorizes a revised total of 9.75 acres of wetland impacts (5.47 acres due to permanent fill, 0.81 acres due to temporary fill, 0.39 acres due to excavation, 2.53 acres due to mechanized clearing, and 0.54 acres due to hand clearing).

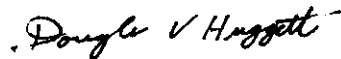
In accordance with provisions of Federal Consistency under 15 CFR § 930.46, Supplemental Coordination for Proposed Activities, the preparation of a supplemental consistency determination is required only if the proposed activity will affect any coastal use or resource substantially different than originally described.

Based on the review of the proposed changes as described above, consultation with DWR, and review of the original Consistency Concurrence, DCM has concluded that the new information or changes in the proposed activity, in this case, would not be considered substantially different in coastal effects than the activity originally described in your Federal Consistency Certification. Therefore, the preparation of a supplemental consistency certification will not be necessary, and the project with the proposed changes is still consistent with North Carolina's Coastal Management Program.

Should the project be further modified or revised NCDOT should consult with DCM. A Supplemental Consistency Certification pursuant to 15 CFR 930.66 may be necessary.

If you have any questions on this correspondence, please contact Cathy Brittingham at (919) 707-9149 or via e-mail at cathy.brittingham@ncdenr.gov or Stephen Lane at (252) 808-2808 x208 or via e-mail at Stephen.Lane@ncdenr.gov. Thank you for your consideration of the North Carolina Coastal Management Program.

Sincerely,

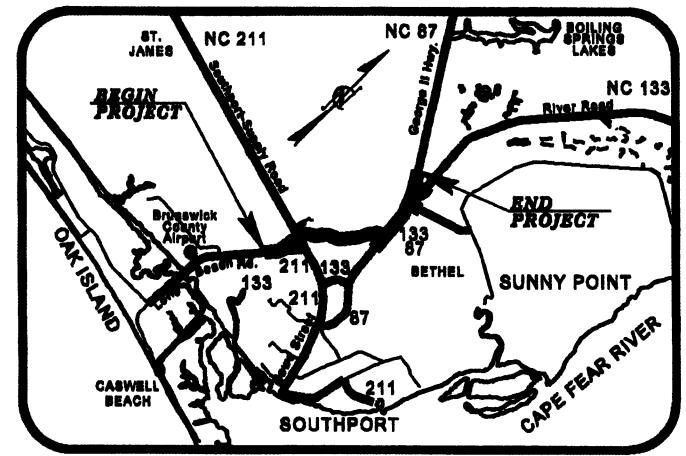


Doug Huggett
Manager, Major Permits and Consistency Unit
NC Division of Coastal Management

cc: Beth Harmon, DMS
Mason Herndon, DWR
Stephen Lane, DCM
Stonewall Mathis, NCDOT
John Merritt, NCDOT
Brad Shaver, USACE

05/80/55
CONTRACT: C202155
TIP PROJECT: R-3324
\$\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

See Sheet 1-A For Index of Sheets



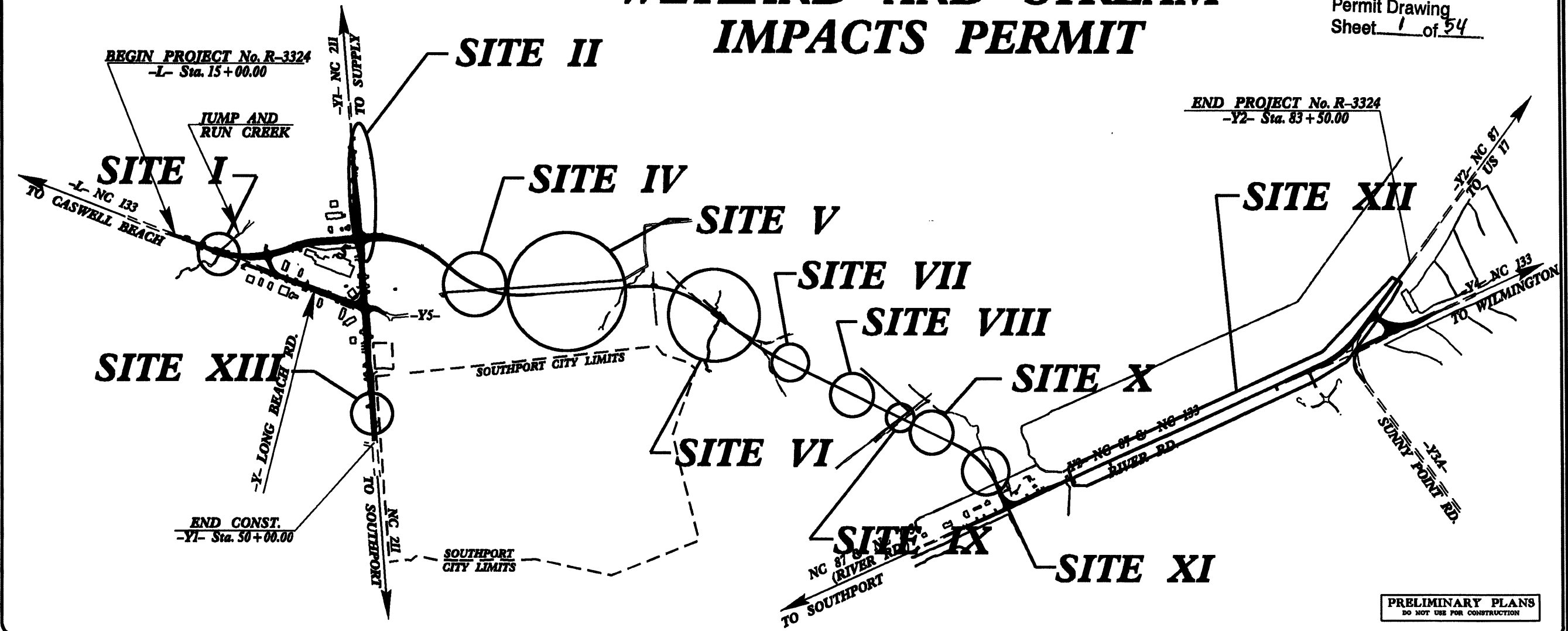
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY

LOCATION: NEW ROUTE FROM NC 133 (LONG BEACH RD.) TO NC 133.
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS, STRUCTURES,
CULVERTS, RETAINING WALL.

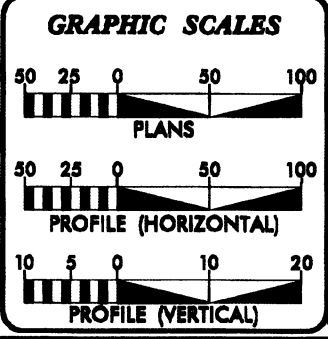
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3324	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34531.1.1	STP-0133(3)	PE	
34531.2.1	STP-0133(3)	RAW & Utilities	
34531.3.1	STP-0133(7)	CONST.	

NAD 8395
Permit Drawing
Sheet 1 of 54

**WETLAND AND STREAM
IMPACTS PERMIT**



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2009 = 9,514 - 13,720
ADT 2033 = 13,620 - 47,170
DHV = 50 %
D = 10 %
T = 5 % *
V = 50 MPH
FUNCTIONAL CLASSIFICATION: LOCAL
* TTST 2% DUAL 3%

PROJECT LENGTH

LENGTH ROADWAY TIP No. R-3324 (-L-) = 2.193 MILES
LENGTH ROADWAY TIP No. R-3324 (-Y2-) = 1.134 MILES
LENGTH STRUCTURES PROJECT No. R-3324: (@ Jump-n-Run Creek) = 0.026 MILES (@ Trib. to Dutchman Creek) = 0.030 MILES
TOTAL LENGTH TIP PROJECT No. R-3324 = 3.271 MILES

Prepared in the Office of: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr., Raleigh NC, 27610	
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: MARCH 31, 2008	JIMMY GOODNIGHT, PE PROJECT ENGINEER
LETTING DATE: FEBRUARY 15, 2013	STEVE KENDALL, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SIGNATURE: _____ P.E.
ROADWAY DESIGN ENGINEER
SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

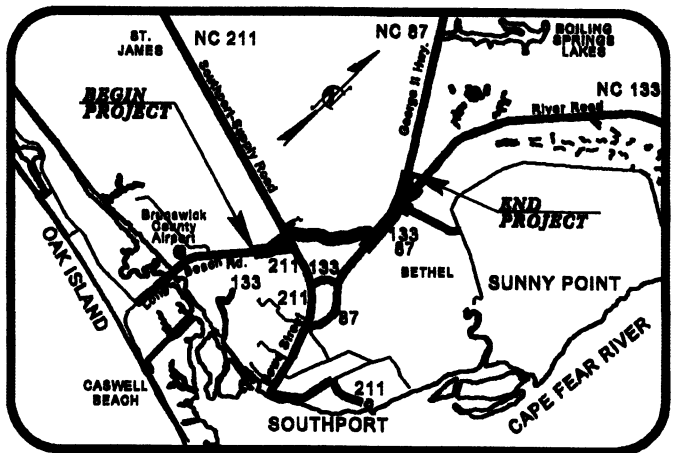
STATE HIGHWAY DESIGN ENGINEER

95/08/99

CONTRACT: C202155 TIP PROJECT: R-3324

CONTRACT: C202155 TIP PROJECT: R-3324

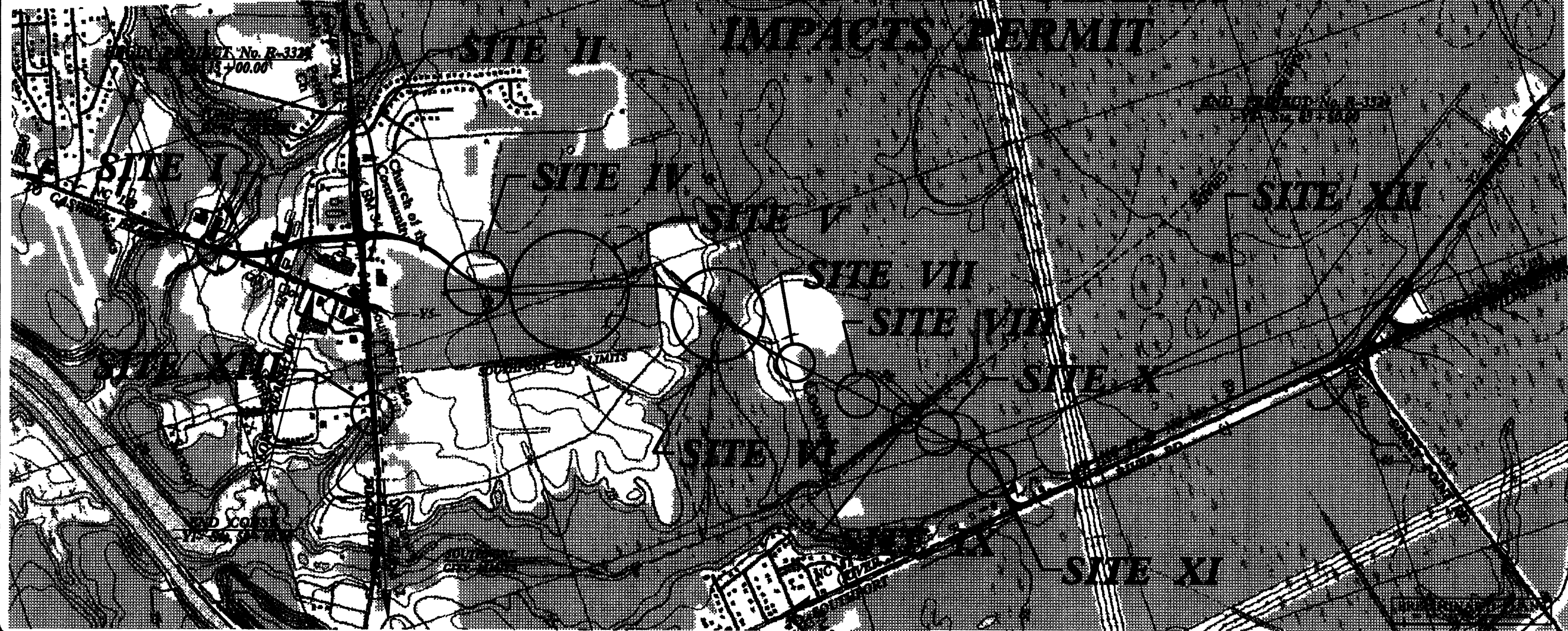
See Sheet 1-A For Index of Sheets



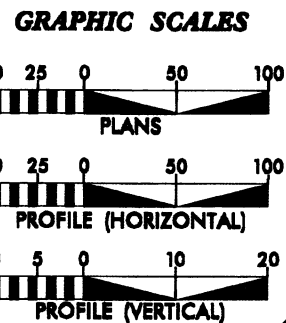
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY

LOCATION NEW, ROUTING OF 13 LONG REACH RD TO NC 133
TYPE OF WORK GRADING, DRAINAGE, PAVING, SIGNALS, STRUCTURES,
UTILITYS, RETAINING WALLS

WETLAND AND STREAM
IMPACTS PERMIT



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3324	1	
STATE PROJECT	S.A. NUMBER	DESCRIPTION	
34531.1.1	STP-0133(3)	PE	
34531.2.1	STP-0133(3)	RW & Utilities	
34531.3.1	STP-0133(7)	CONST.	



DESIGN DATA

ADT 2009 = 9,514 - 13,720
ADT 2033 = 13,620 - 47,170
DHV = 50 %
D = 10 %
T = 5 % *
V = 50 MPH
FUNCTIONAL CLASSIFICATION: LOCAL
* TTST 2% DUAL 3%

PROJECT LENGTH

LENGTH ROADWAY TIP No. R-3324 (-L-) = 2.193 MILES
LENGTH ROADWAY TIP No. R-3324 (-Y2-) = 1.134 MILES
LENGTH STRUCTURES PROJECT No. R-3324: (@ Jump-n-Run Creek) = 0.026 MILES (@ Trib. to Dutchman Creek) = 0.030 MILES
TOTAL LENGTH TIP PROJECT No. R-3324 = 3.271 MILES

Prepared In the Office of: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr., Raleigh NC, 27610	
RIGHT OF WAY DATE: MARCH 31, 2008	JIMMY GOODNIGHT, PE PROJECT ENGINEER
LETTING DATE: FEBRUARY 15, 2013	STEVE KENDALL, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER	
SIGNATURE: _____	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE: _____	P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA	
	
STATE HIGHWAY DESIGN ENGINEER	

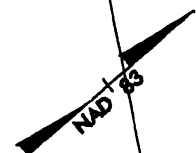
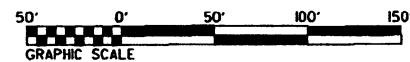
8/17/9

PROPERTY OWNERS

⑦ NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
FORMERLY SOUTHPORT-OAK ISLAND
CHAMBER OF COMMERCE

⑧ KATHLEEN VLOSKI

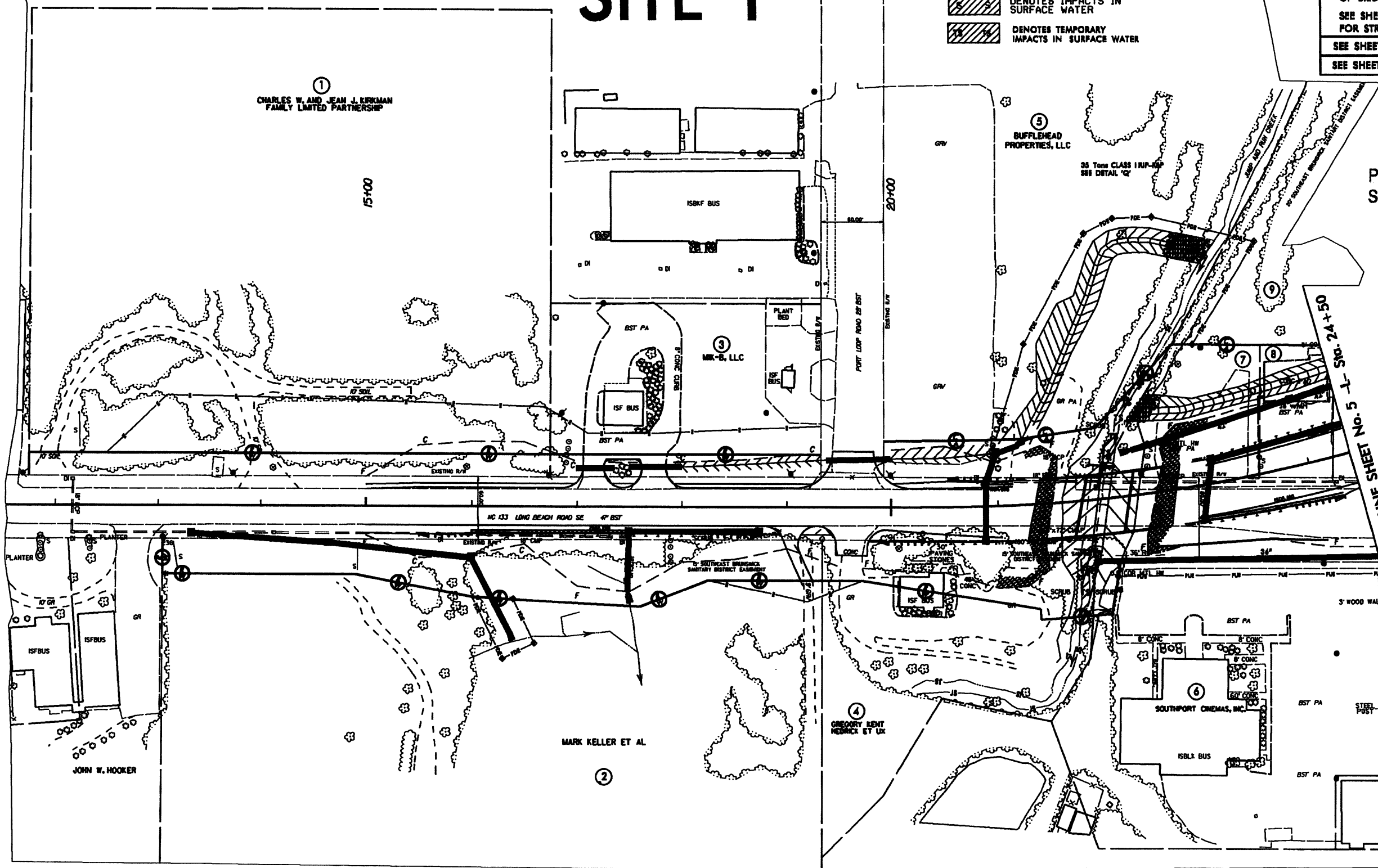
SITE I

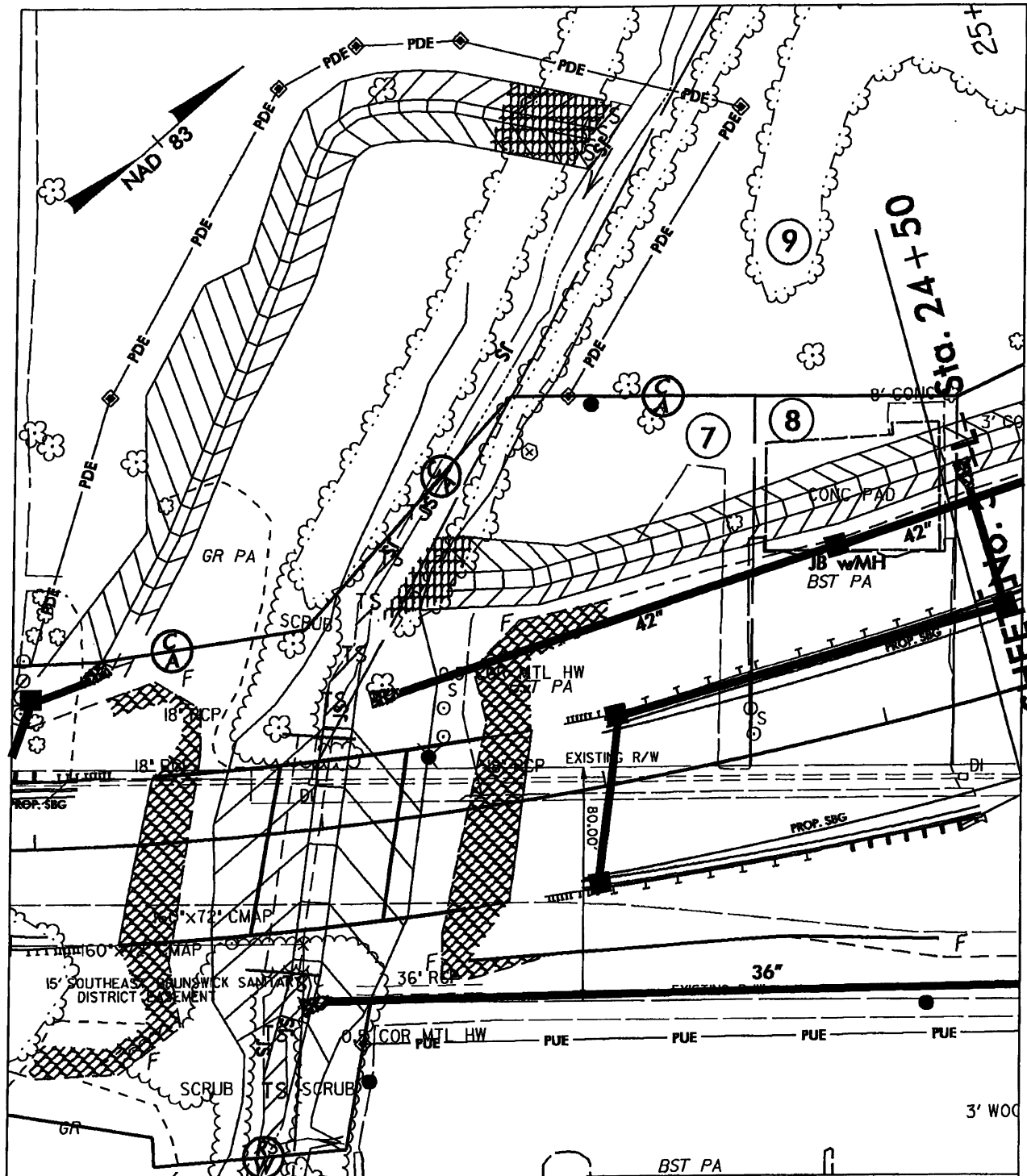


- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

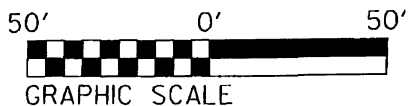
PROJECT REFERENCE NO. R-3324		SHEET NO. 4	
RDW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
SEE SHEET No. 23 FOR -L- PROFILE			
SEE SHEET No. 2-F FOR RELATIONSHIP OF BRIDGE TO ROADWAY SKETCH			
SEE SHEET No. S-1 to S- FOR STRUCTURE PLANS			
SEE SHEET No. 2-H FOR DITCH DETAILS			
SEE SHEET No. 4-A FOR DETOUR PLANS			

Permit Drawing
Sheet 3 of 54





-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER



SITE I

Permit Drawing
Sheet 4 of 54

NCDOT
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 3453.1.1 (R-3324)

NEW ROUTE FROM NC 133
TO NC 133 AND NC 87

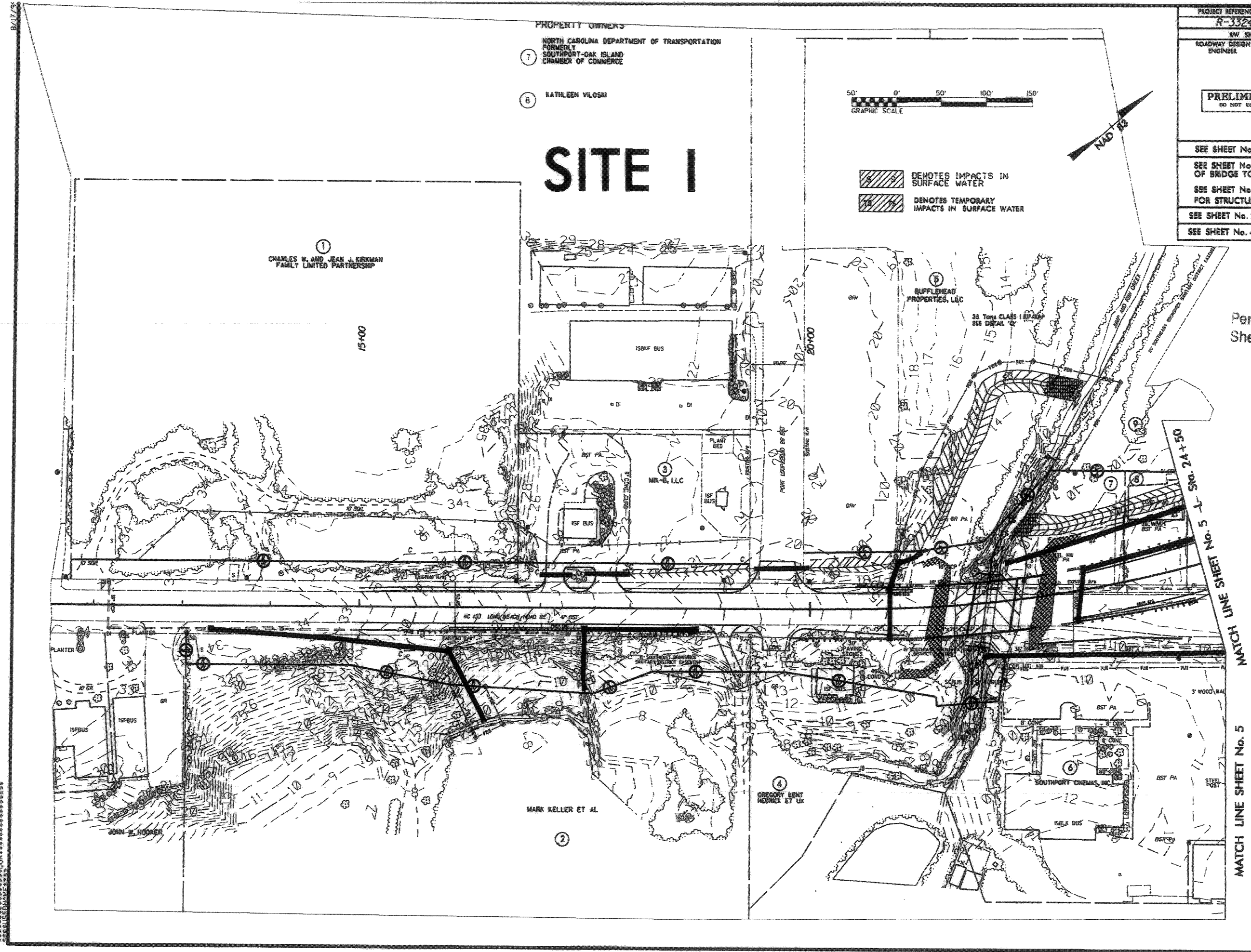
SHEET

OF

12/04/12

SEE SHEET NO. 3

Permit Drawing
Sheet 5 of 54



5/26/99

-L- SITE I

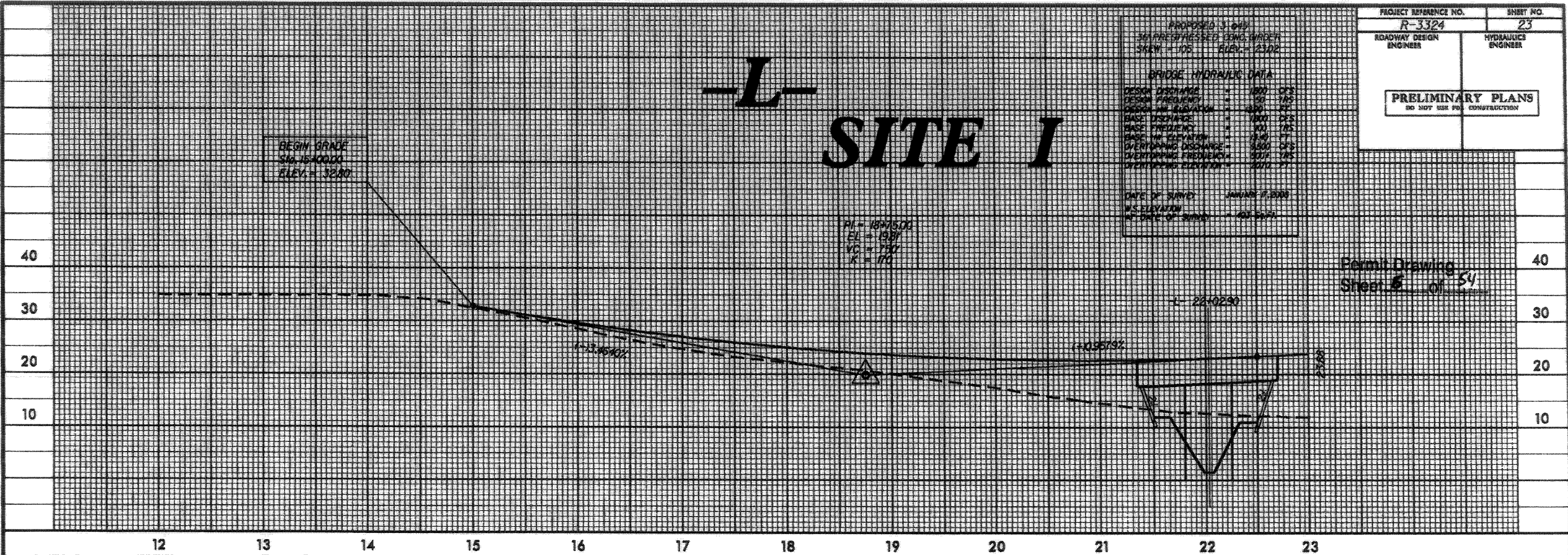
BEGIN GRADE
Sta. 15+00.00
ELEV. = 32.00

PI = 18+75.00
EL = 19.81
VC = 75.0
K = 170

PROPOSED 3-LV. 34" PRESTRESSED CONG. UNDER SLAB - 105' ELEV. = 23.02	
BRIDGE HYDRAULIC DATA	
DESIGN DISCHARGE	= 1000 CFS
DESIGN FREQUENCY	= 100 YRS
DESIGN HW ELEVATION	= 30.00 FT
BASE DISCHARGE	= 1000 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 18.40 FT
OVERTOPPING DISCHARGE	= 1000 CFS
OVERTOPPING FREQUENCY	= 100 YRS
OVERTOPPING ELEVATION	= 20.00 FT
DATE OF SURVEY JANUARY 7, 2000	
HW ELEVATION	
HW DATE OF SURVEY = 100 CFS	

PROJECT REFERENCE NO. R-3324	SHEET NO. 23
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet **6** of **54**



SEE SHEETS No's. 4, 5 & 6 FOR +L- DESIGN

-L-

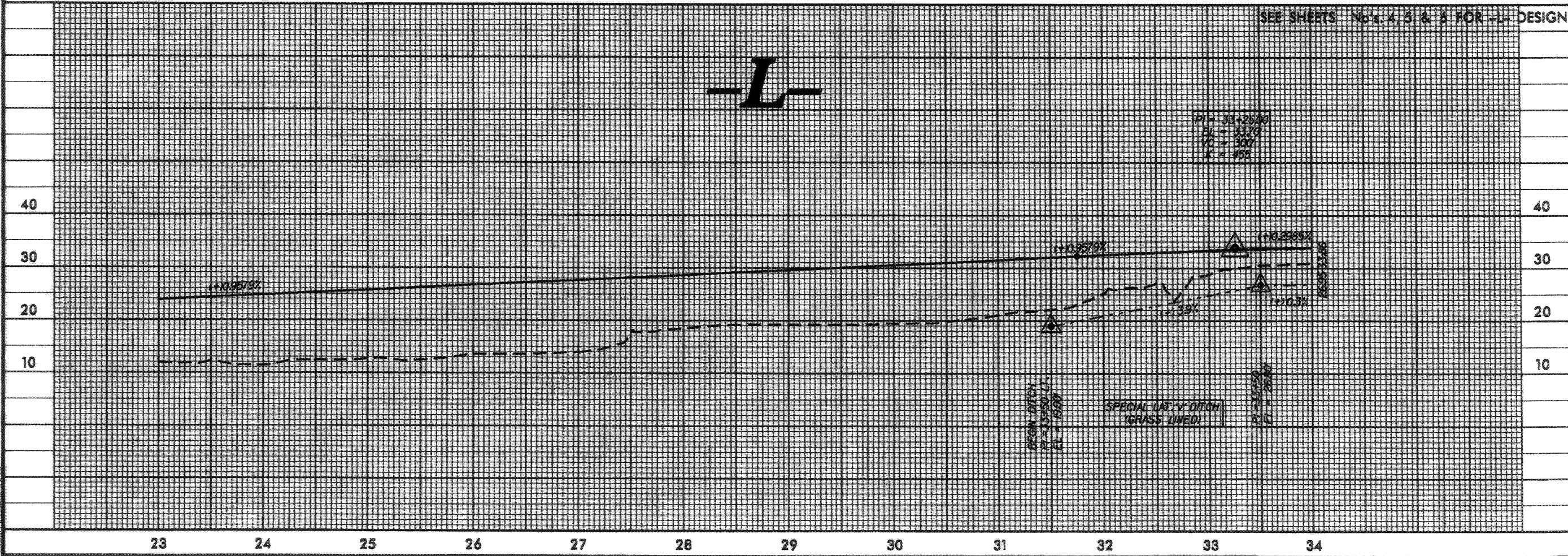
PI = 33+25.00
EL = 33.70
VC = 300
K = 455

BEGIN DITCH
PI = 31+50.00
EL = 19.80

SPECIAL NAT'L V. DITCH
(GRASS LINED)

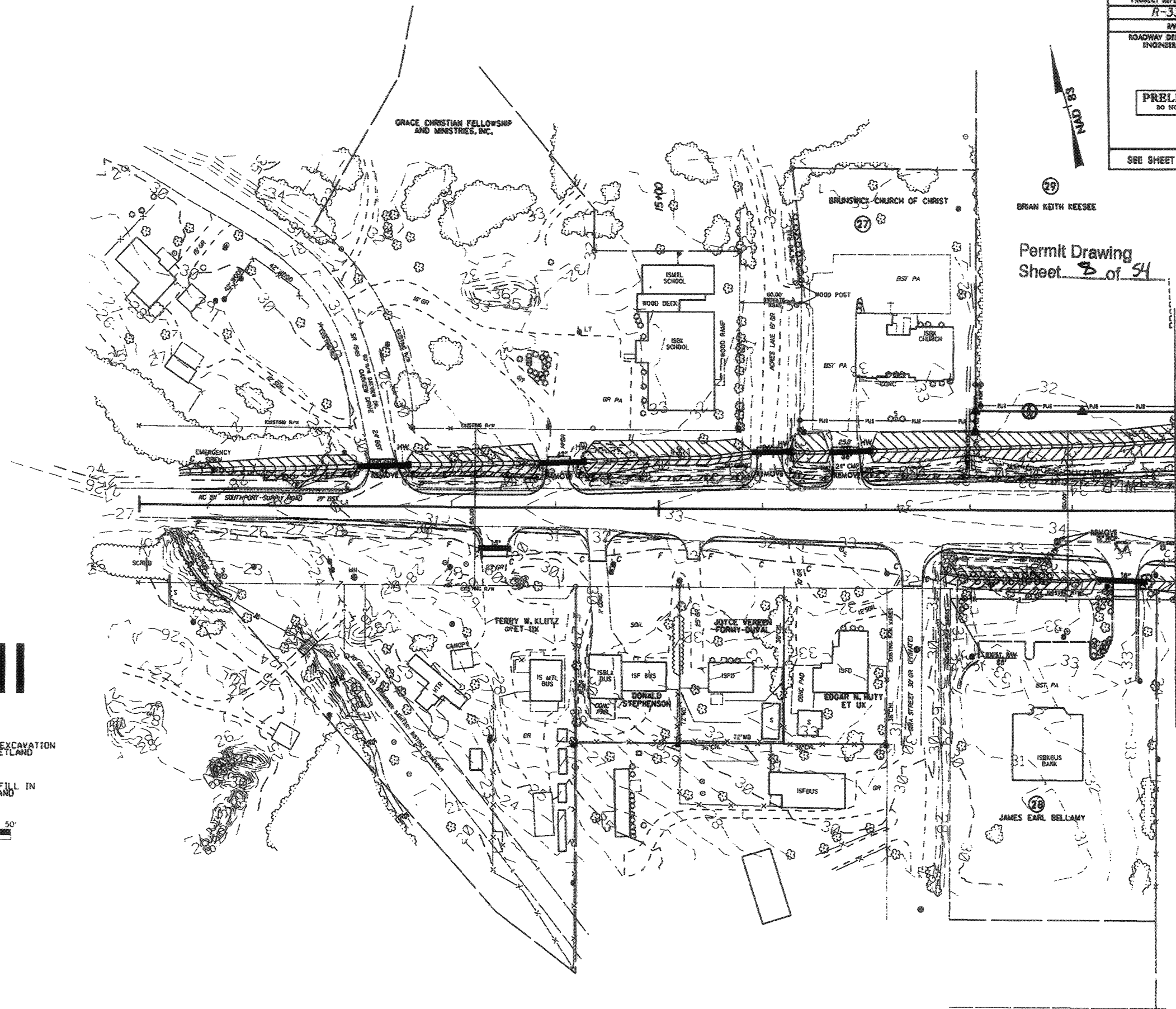
DESIGN
HW ELEVATION
EL = 20.00

5/26/99



7-83

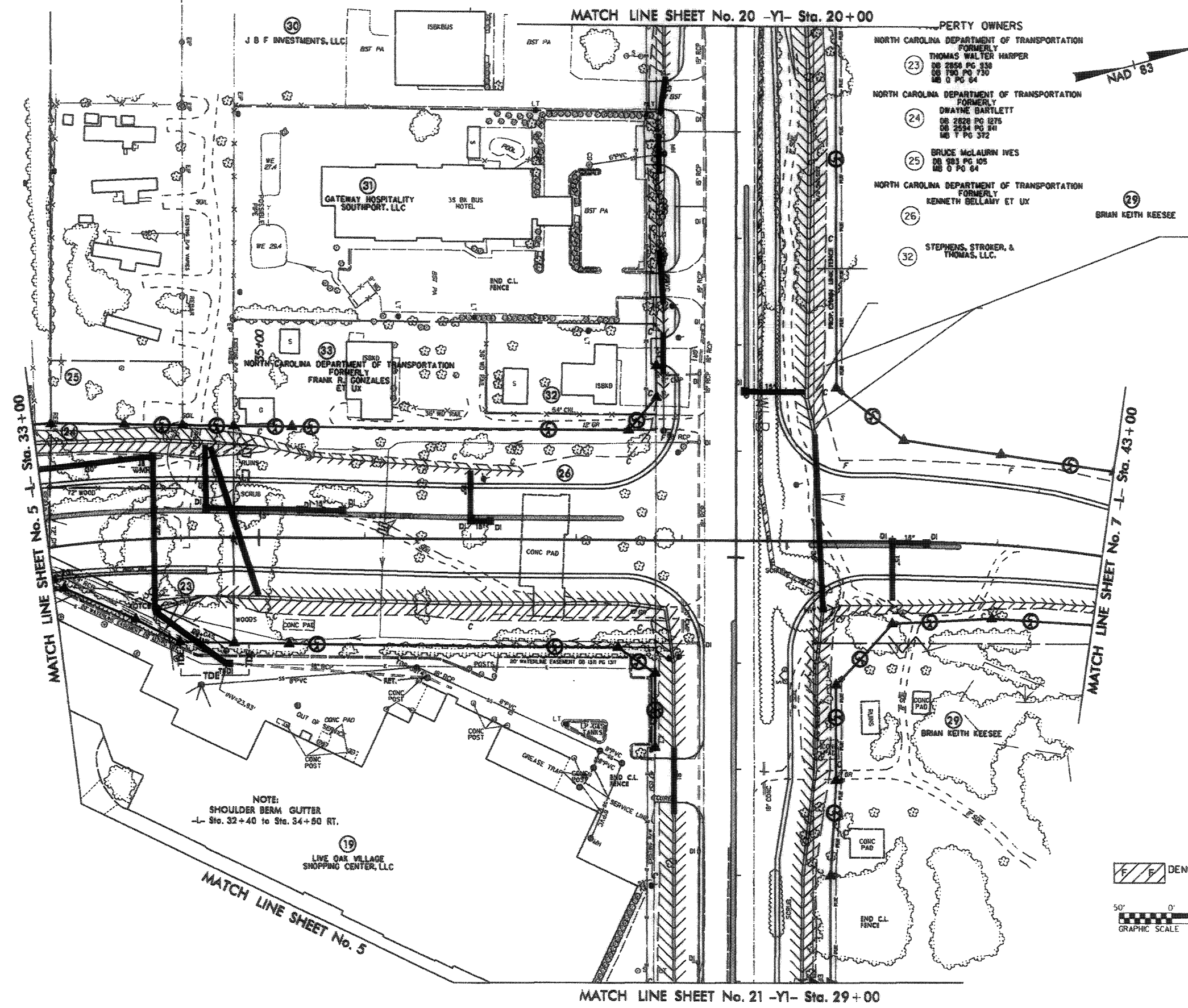
 DENOTES EXCAVATION
IN WETLAND
 DENOTES FILL IN
WETLAND
 50' 0' 50'
 GRAPHIC SCALE



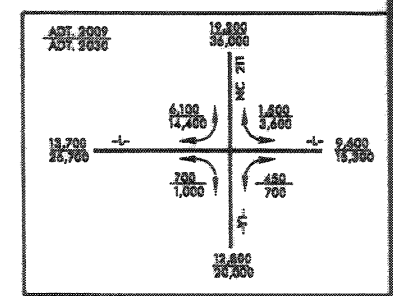
8/17/99

8/17/99

PROJECT REFERENCE NO. A-3324		SHEET NO. 6	
RDW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
SEE SHEET No. 23 & 24 FOR -L- PROFILE SEE SHEET No. 29 FOR -YI- PROFILE SEE SHEET 2-H FOR DITCH DETAILS			



SITE II

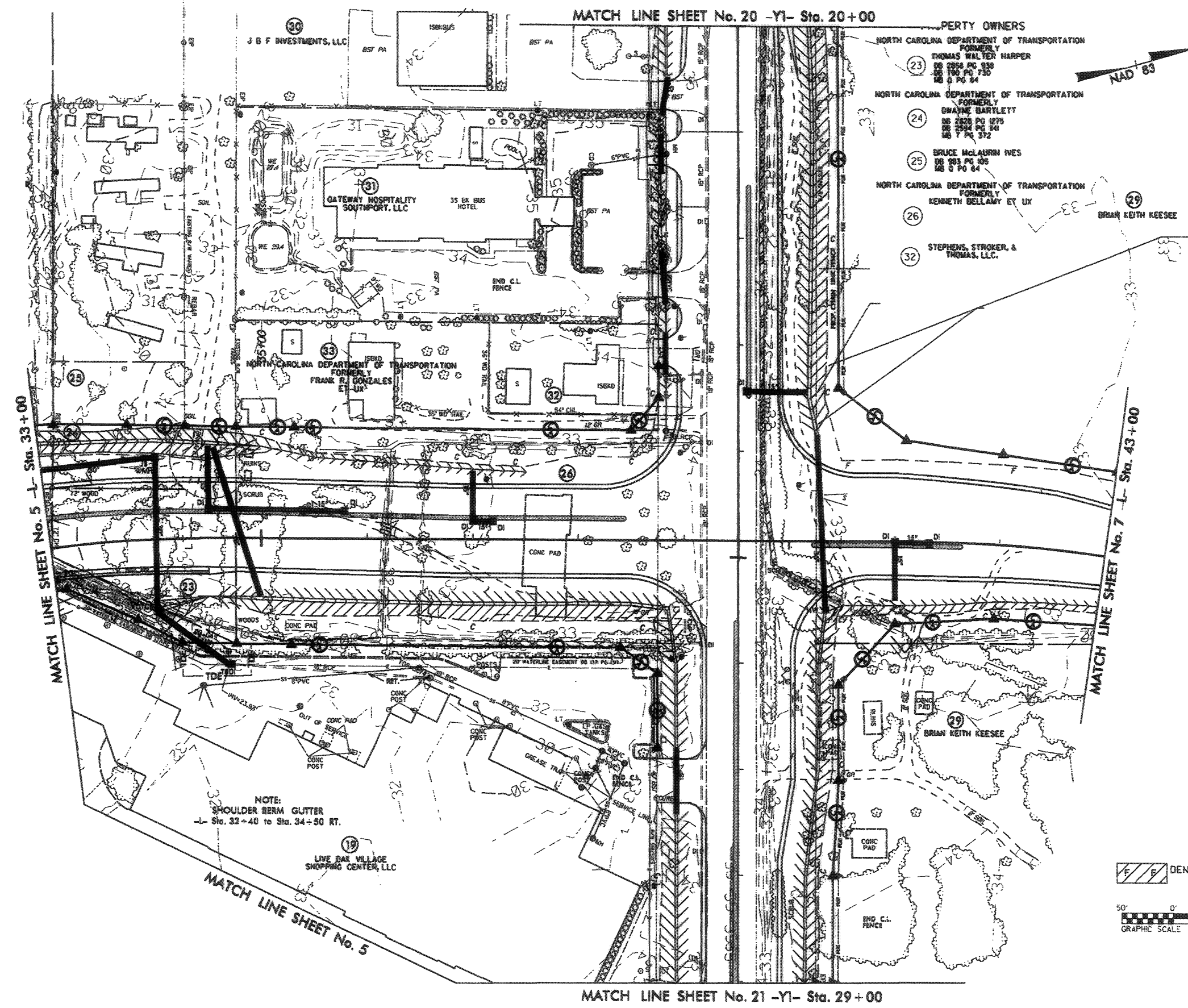


Permit Drawing
Sheet 9 of 54

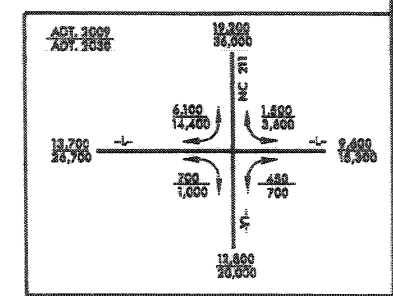
8/17/99

8/17/99

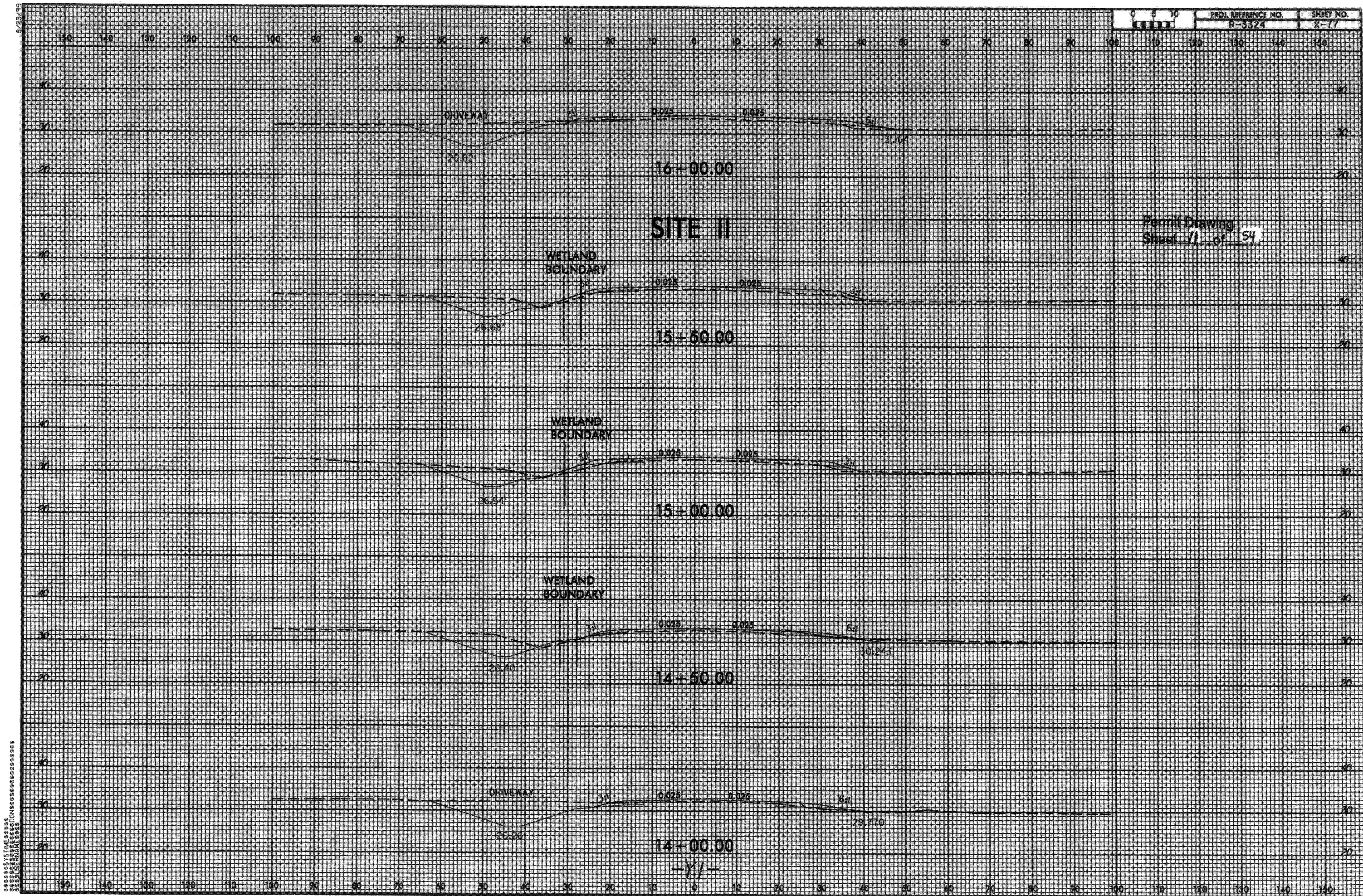
PROJECT REFERENCE NO. R-3324		SHEET NO. 6
RDW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
SEE SHEET No. 23 & 24 FOR -L- PROFILE SEE SHEET No. 29 FOR -YI- PROFILE SEE SHEET 2-H FOR DITCH DETAILS		



SITE II



Permit Drawing
Sheet 10 of 54



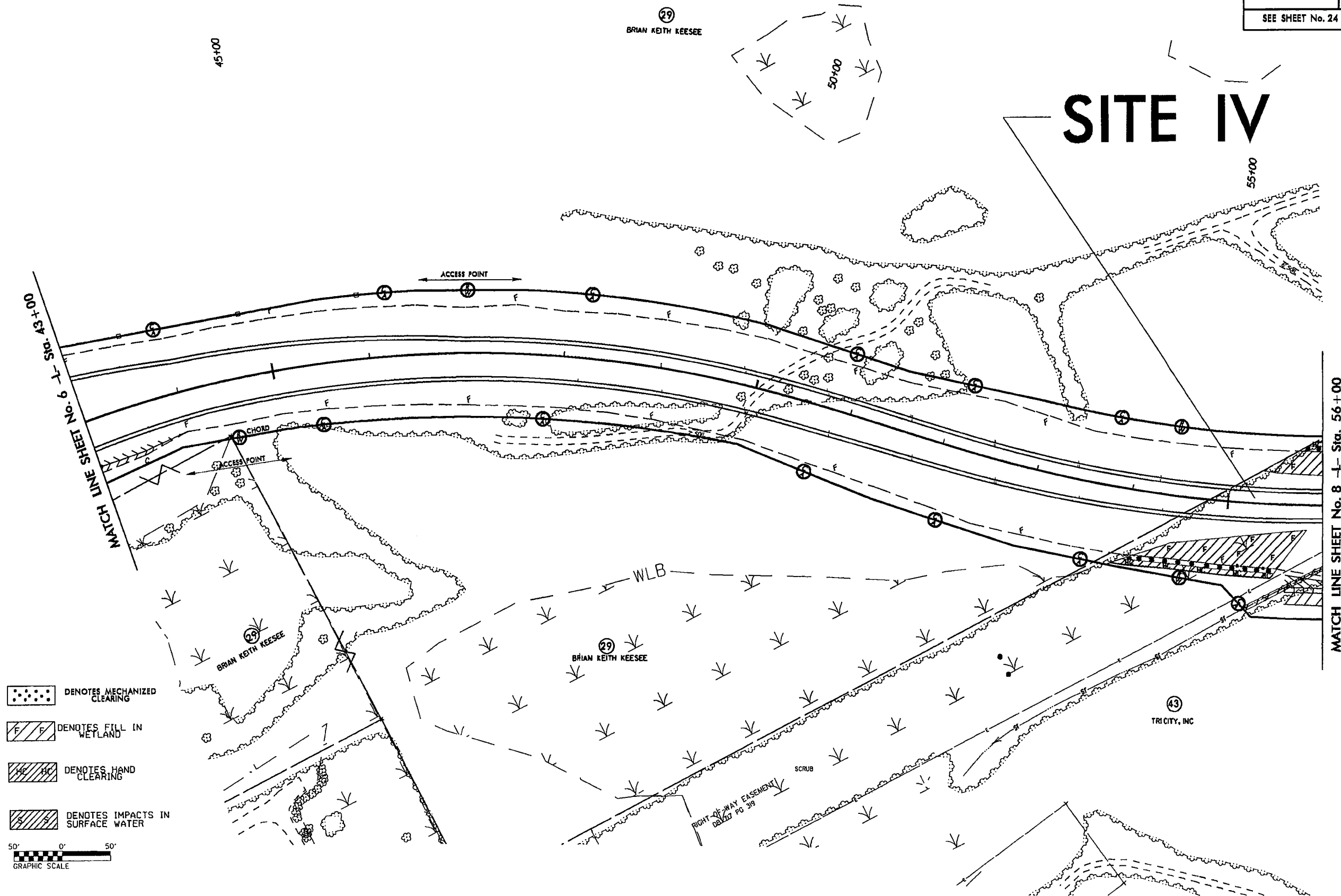
8/17/99

PERMIT DRAWING
SHEET 12 OF 54

REVISED 3/2/2015

PROJECT REFERENCE NO. R-3324	SHEET NO. 7
RDW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
SEE SHEET No. 24 FOR -L- PROFILE	

SITE IV



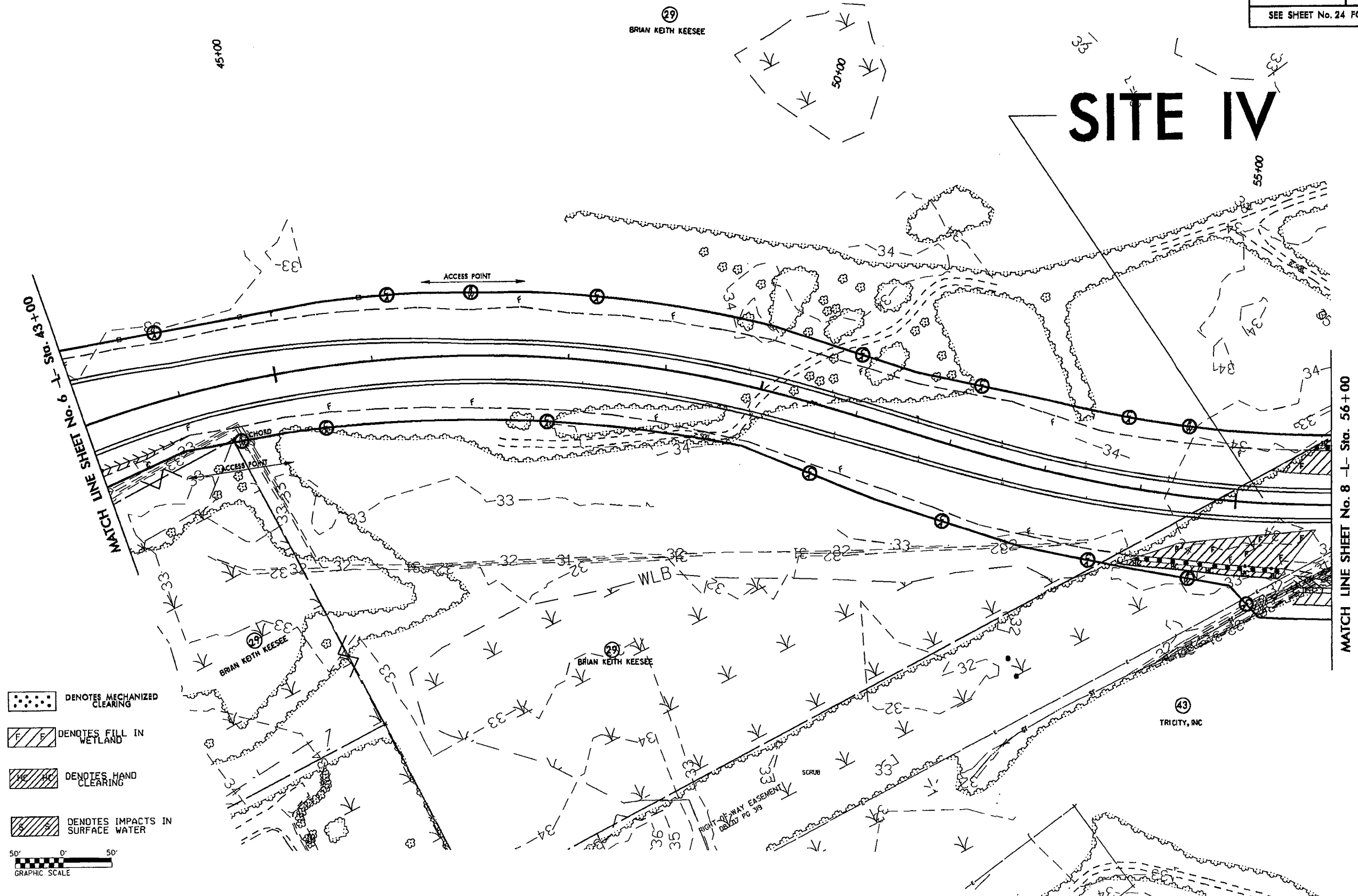
- DENOTES MECHANIZED CLEARING
 - DENOTES FILL IN WETLAND
 - DENOTES HAND CLEARING
 - DENOTES IMPACTS IN SURFACE WATER
- 50' 0' 50'
GRAPHIC SCALE

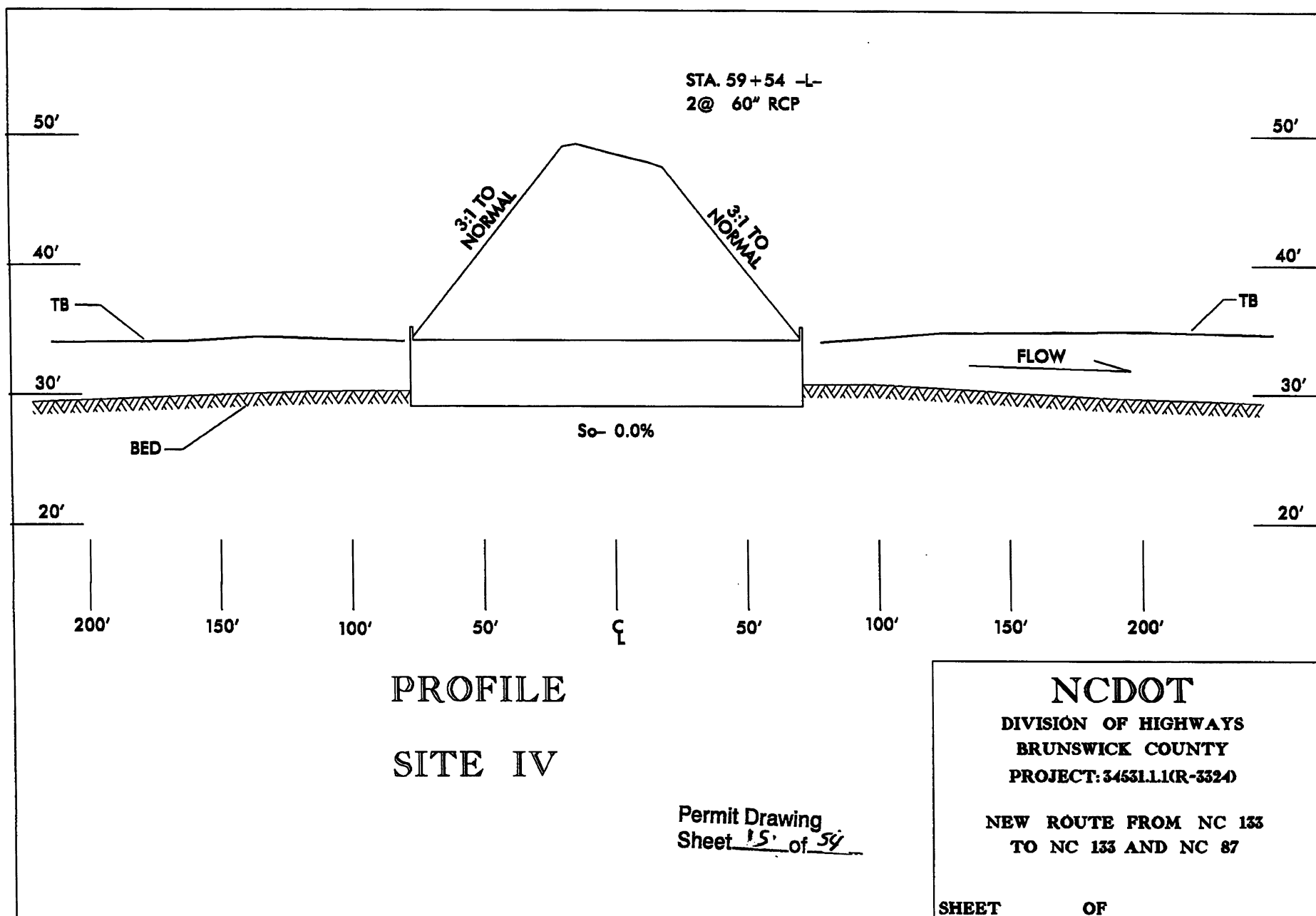
SECTION 10
TOWNSHIP 10N
RANGE 10E
COUNTY 10S

REVISÉD 3/2/2015

PROJECT REFERENCE NO.	SHEET NO.
R-3324	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
SEE SHEET No. 24 FOR -L- PROFILE	

SITE IV





**NOTE: INVERTS OF EQUALIZER PIPES
SHALL NOT BE BURIED**

REVISÉD 3/2/2015

PERMIT DRAWING
SHEET 16 OF 54

SITE V

BRIAN KEITH KEESEE

BRAN KEITH KEESEE

RIGHT-OF-WAY EASEMENT
DB 117 PG 319

SCRUB

TRICITY, INC

~~WLB~~

PLACE 1.5 FT. SILL IN
INLET OF RIGHTHAND BARRE

SCRUB

43
TRICITY, INC

TRI CITY, INC

MATCH LINE SHEET No. 9 -L- Sta. 69+00

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

50' 0' 50'

GRAPHIC SCALE

SYTIME\$\$\$\$\$
DGN\$\$\$\$\$

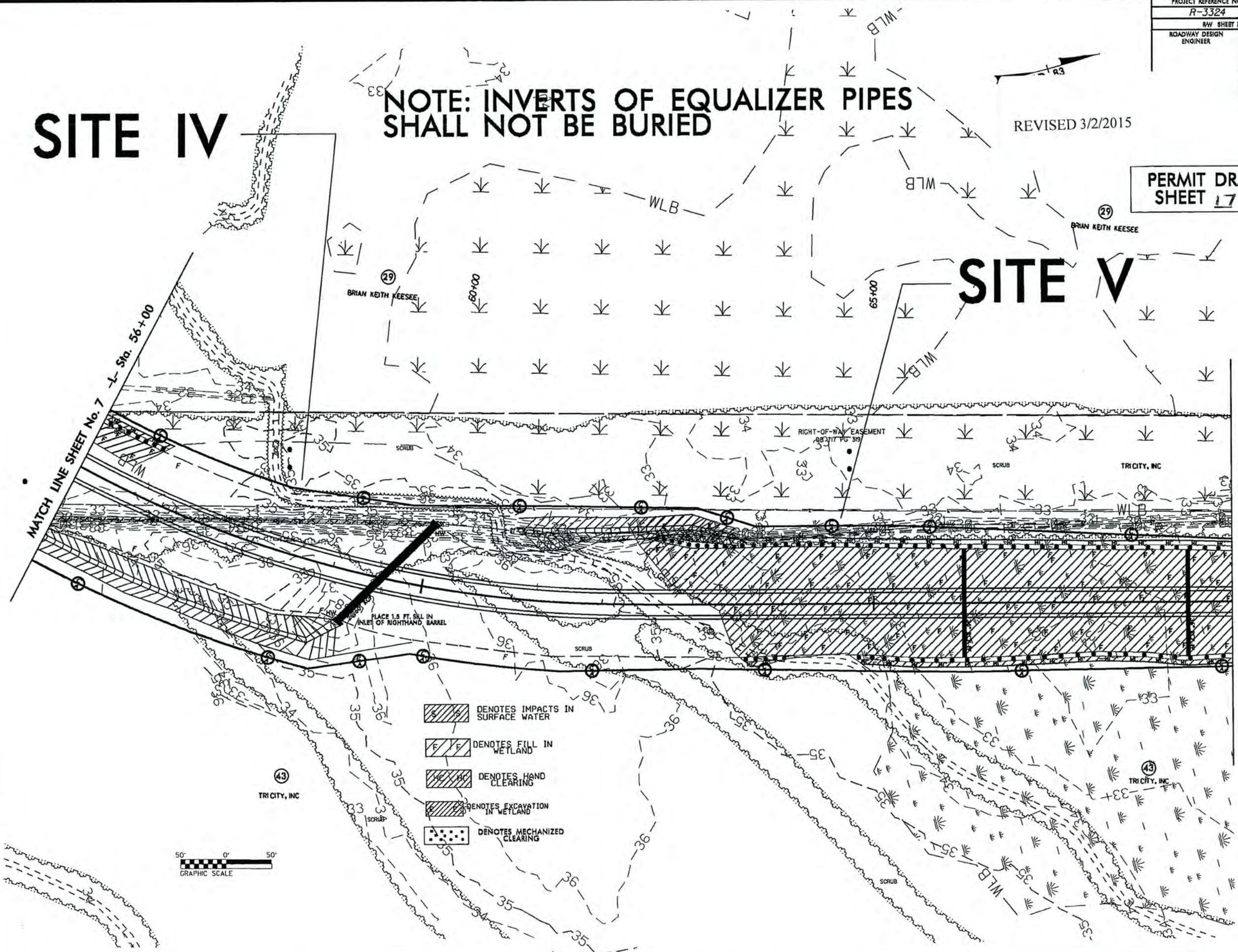
25 FOR -L- PROF

NOTE: INVERTS OF EQUALIZER PIPES SHALL NOT BE BURIED

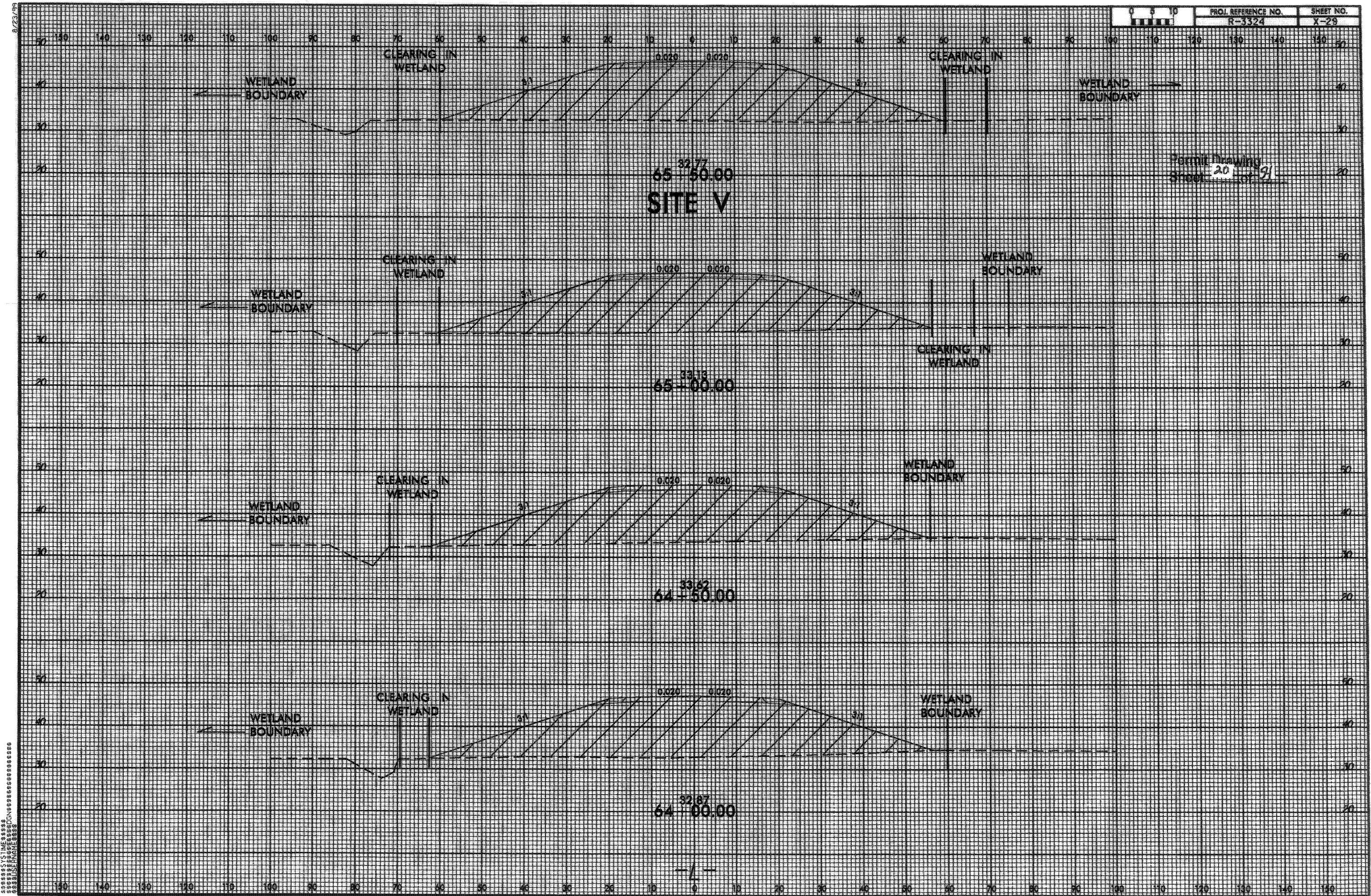
REVISÉ 3/2/2015

PERMIT DRAWING
SHEET 17 OF 54

SITE V

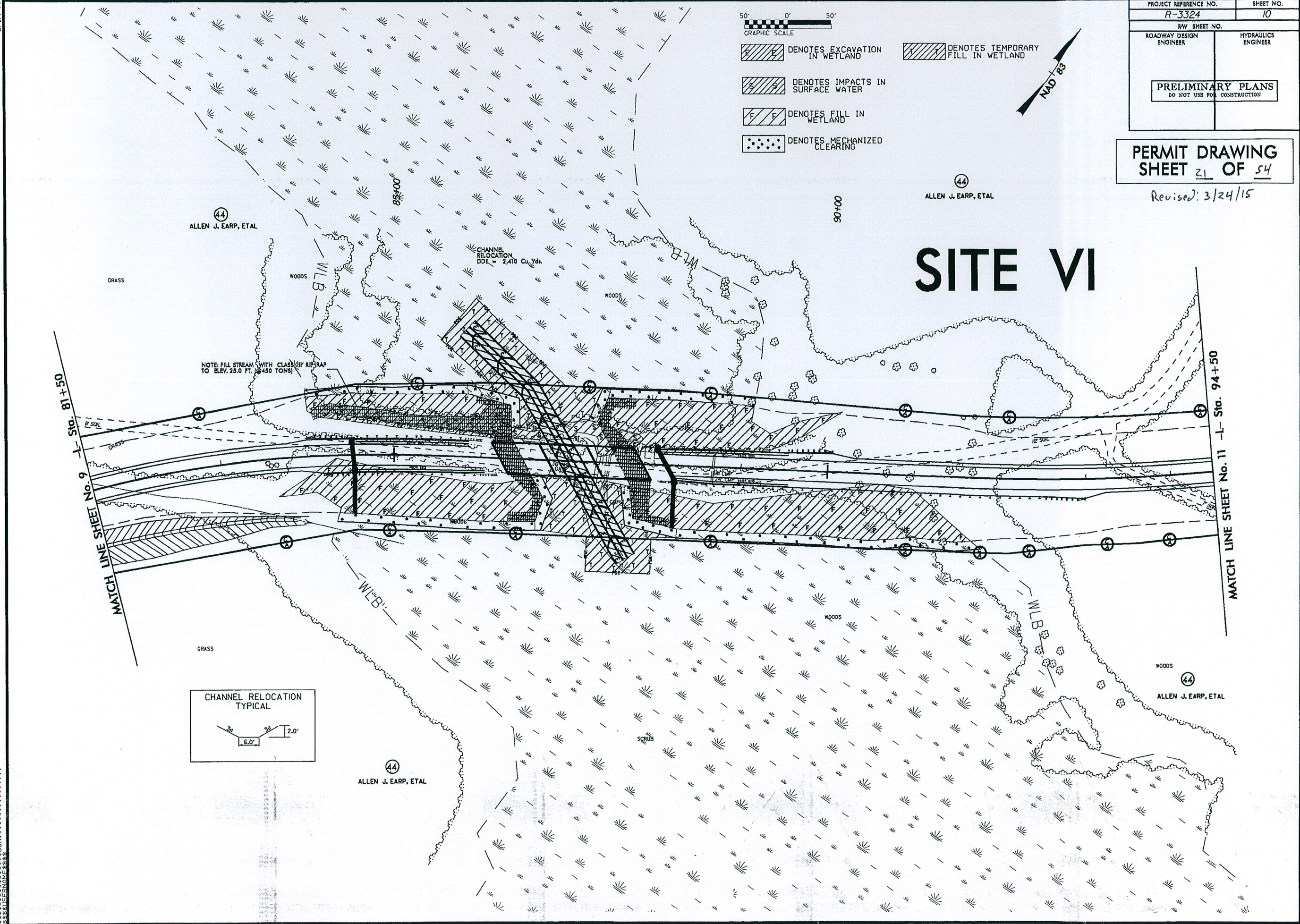


MATCH LINE SHEET No. 9 -L- Sta. 69+00



8/17/99

*****SYTIME*****
*****DRAWING*****



 DENOTES EXCAVATION
IN WETLAND DENOTES TEMPORARY
FILL IN WETLAND

 DENOTES IMPACTS IN
SURFACE WATER

 DENOTES FILL IN
WETLAND

 DENOTES MECHANIZED CLEARING

PROJECT REFERENCE NO. <i>R-3324</i>	SHEET NO. <i>10</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 22 OF 54

Revised: 3/24/15

SITE VI

ALLEN J. EARP, ETAL

CHANNEL
RELOCATION
DDE = 2,410 Cu, Yds

NOTE: FILL STREAM WITH CLASS #1 RIPRA
TO ELEV. 2510 FT. (2450 TONS)

CHANNEL RELOCATION
TYPICAL

ALLEN J. EARP, ETAL

ALLEN, L. EARP, ET AL.

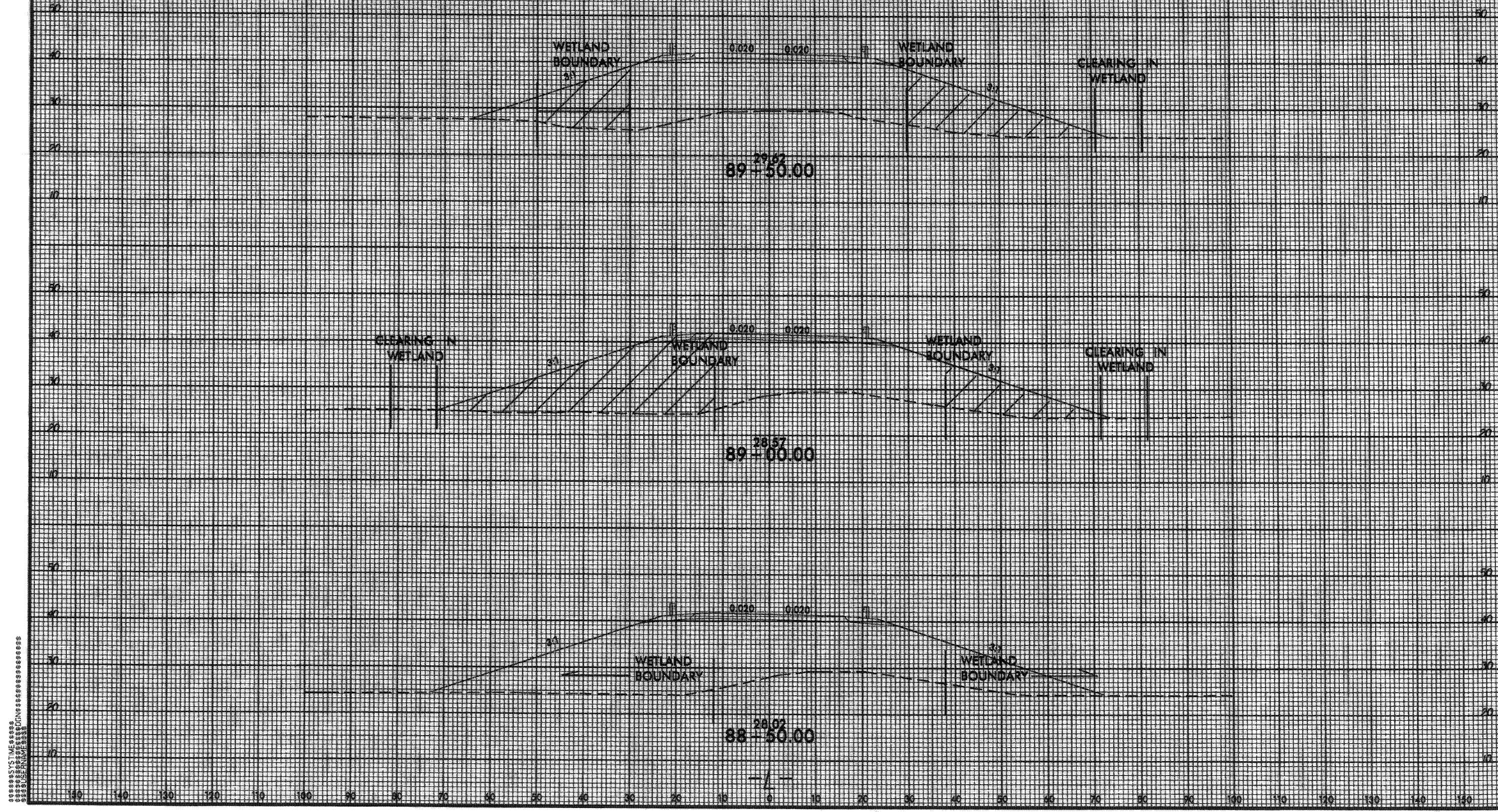
$$81 + 50$$

11 - Sta. 94 + 50

8/23/98

SITE VI

Permit Drawing
Sheet 23 of 54



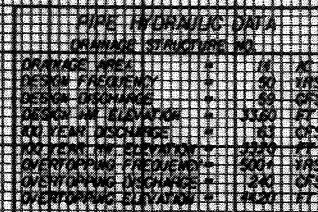
#####

PROPOSED 5' x 5' 36" PRESTRESSED CONG GIRDER
SKIN = 50' FLEW = 144"

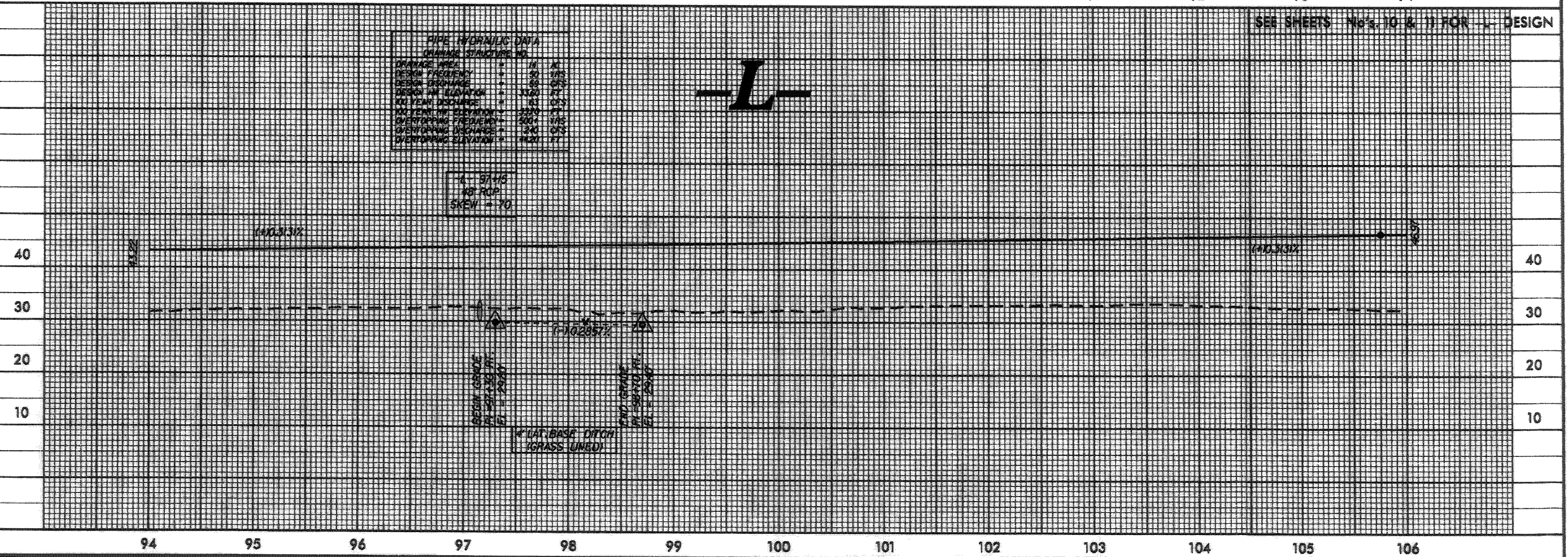
BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	660	CFS
DESIGN FREQUENCY	=	20	1/SEC
DESIGN H/L ELEVATION	=	2600	FT
BASE DISCHARGE	=	660	CFS
BASE FREQUENCY	=	100	1/SEC
BASE H/L ELEVATION	=	2700	FT
OVERWINDING DISCHARGE	=	N/A	CFS
OVERWINDING FREQUENCY	=	N/A	1/SEC
OVERWINDING ELEVATION	=	N/A	FT

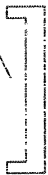
DATE OF SURVEY JANUARY 23, 2008
W/ELEVATION
H/L DATE OF SURVEY = 2600-0000

Permit Drawing
Sheet 24 of 54

L



PROPOSED BRIDGE



Permit Drawing
Sheet 24A of 54
Revised 1/24/13

30'

TB

20'

PROPOSED CHANNEL
RELOCATION

CHANNEL SLOPE- 0.0%

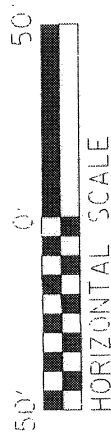
10'

300'

200'

100'

0



PROFILE
CHANNEL RELOCATION
SITE VI

NCDOT

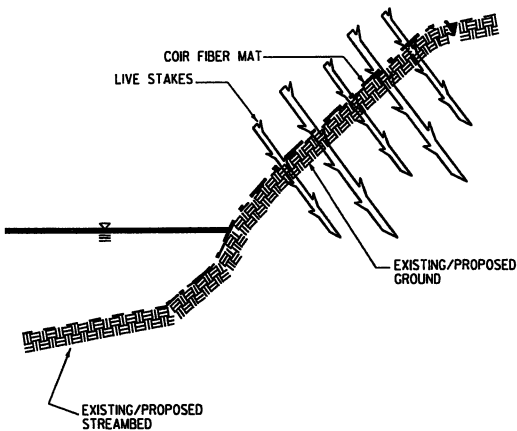
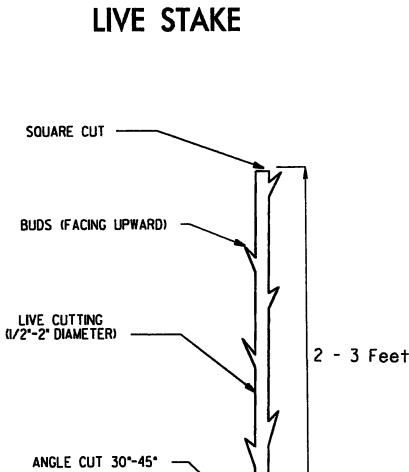
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 34531.1 (R-3324)

NEW ROUTE FROM NC 133
TO NC 133 AND NC 87

SHEET OF

PLANTING DETAILS

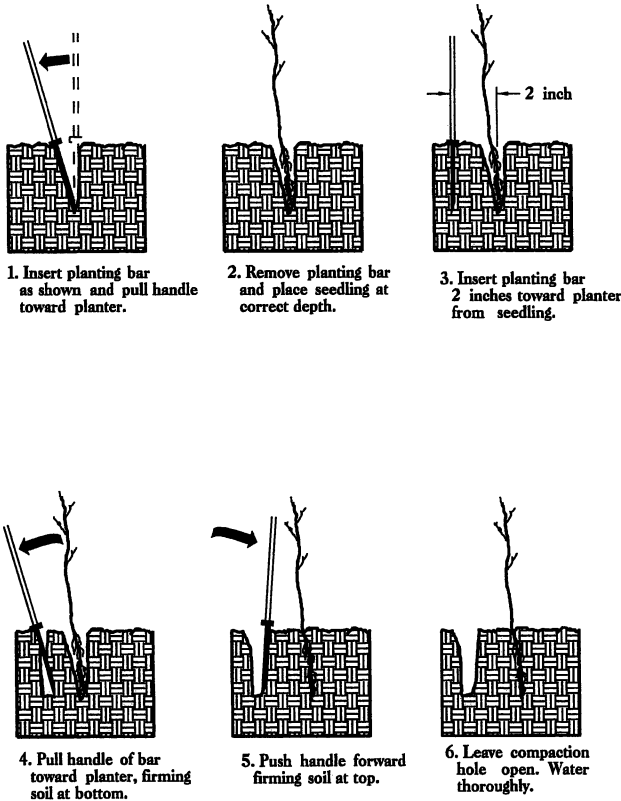
LIVE STAKES PLANTING DETAIL



BANK STABILIZATION WITH LIVE STAKES

NOTE:
LIVE STAKES SHALL BE SPACED APPROXIMATELY 4 FEET ON CENTER
LIVE STAKES SHALL BE DRIVEN UNTIL APPROXIMATELY 3/4 OF LIVE STAKE IS WITHIN GROUND

BAREROOT PLANTING DETAIL
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.

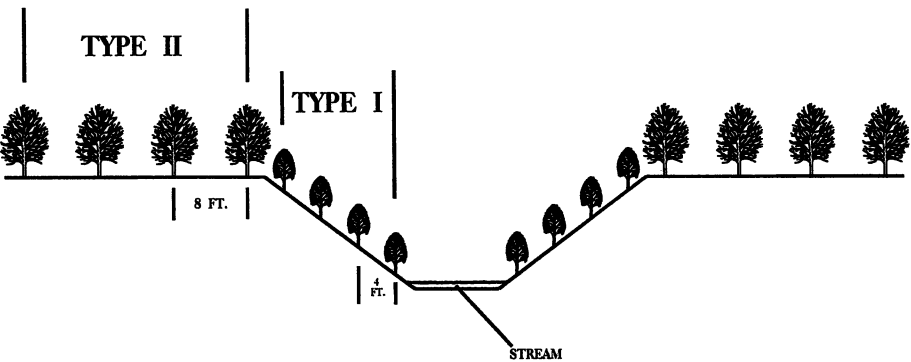
KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.

ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.



- ☐ TYPE 1 STREAMBANK REFORESTATION SHALL BE PLANTED 3 FT. TO 5 FT. ON CENTER, RANDOM SPACING, AVERAGING 4 FT. ON CENTER, APPROXIMATELY 2724 PLANTS PER ACRE.
- ☐ TYPE 2 STREAMBANK REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.
- ☐ NOTE: TYPE 1 AND TYPE 2 STREAMBANK REFORESTATION SHALL BE PAID FOR AS "STREAMBANK REFORESTATION"

STREAMBANK REFORESTATION TYPICAL



STREAMBANK REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

TYPE 1

50% CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	2 ft - 3 ft LIVE STAKES
50% CORNUS AMOMUM	SILKY DOGWOOD	2 ft - 3 ft LIVE STAKES

TYPE 2

25% TAXODIUM DISTICHUM	BALD CYPRESS	12 in - 18 in BR
25% FRAXINUS PENNSYLVANICA	GREEN ASH	12 in - 18 in BR
25% NYSSA AQUATICA	WATER TUPELO	12 in - 18 in BR
25% QUERCUS MICHAUXII	SWAMP CHESTNUT OAK	12 in - 18 in BR

- ☐ SEE PLAN SHEETS FOR AREAS TO BE PLANTED

STREAMBANK REFORESTATION

DETAIL SHEET 1 OF 2

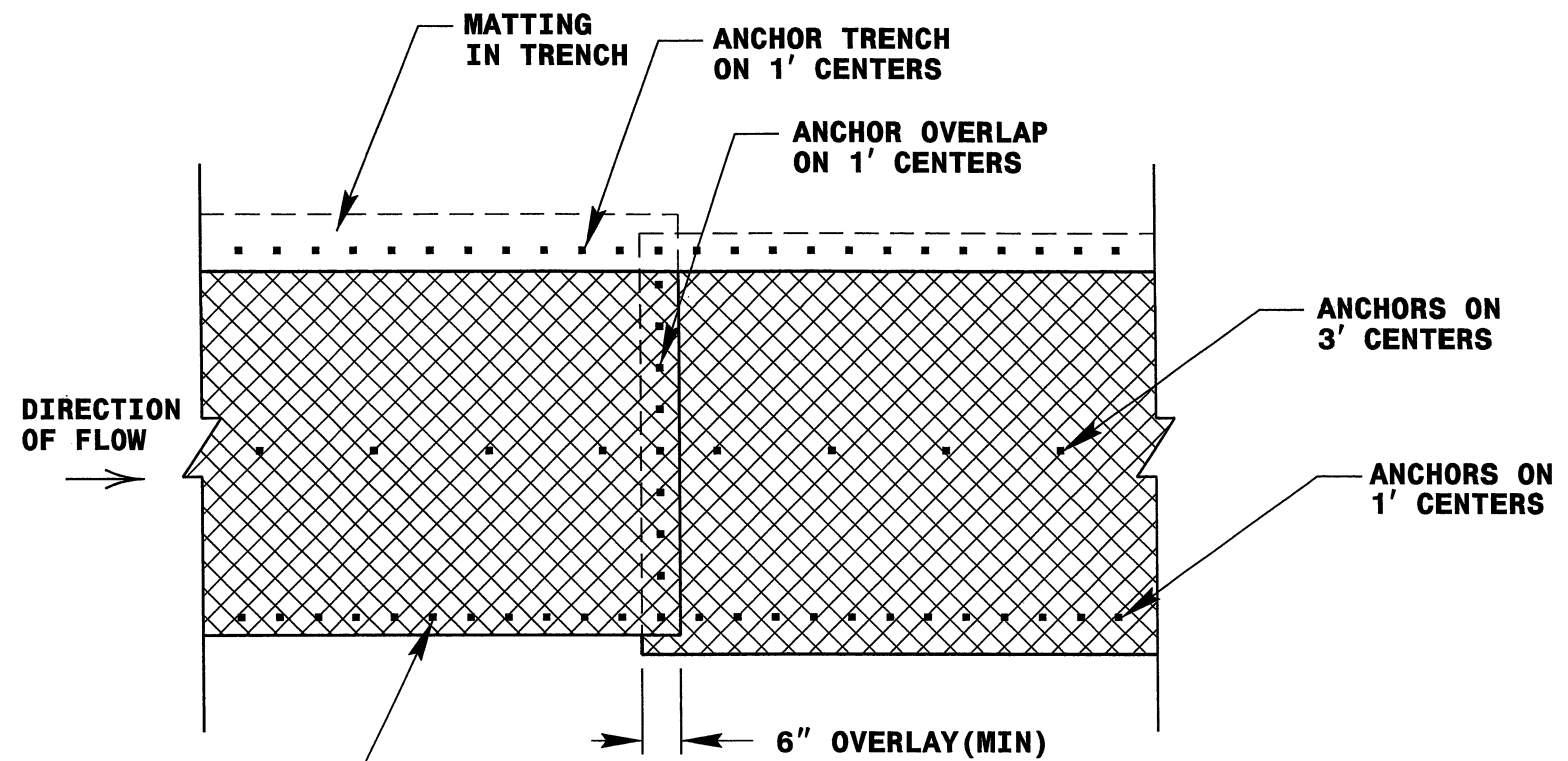
N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT

PROJECT REFERENCE NO. R-3324	SHEET NO. RF-2
B/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

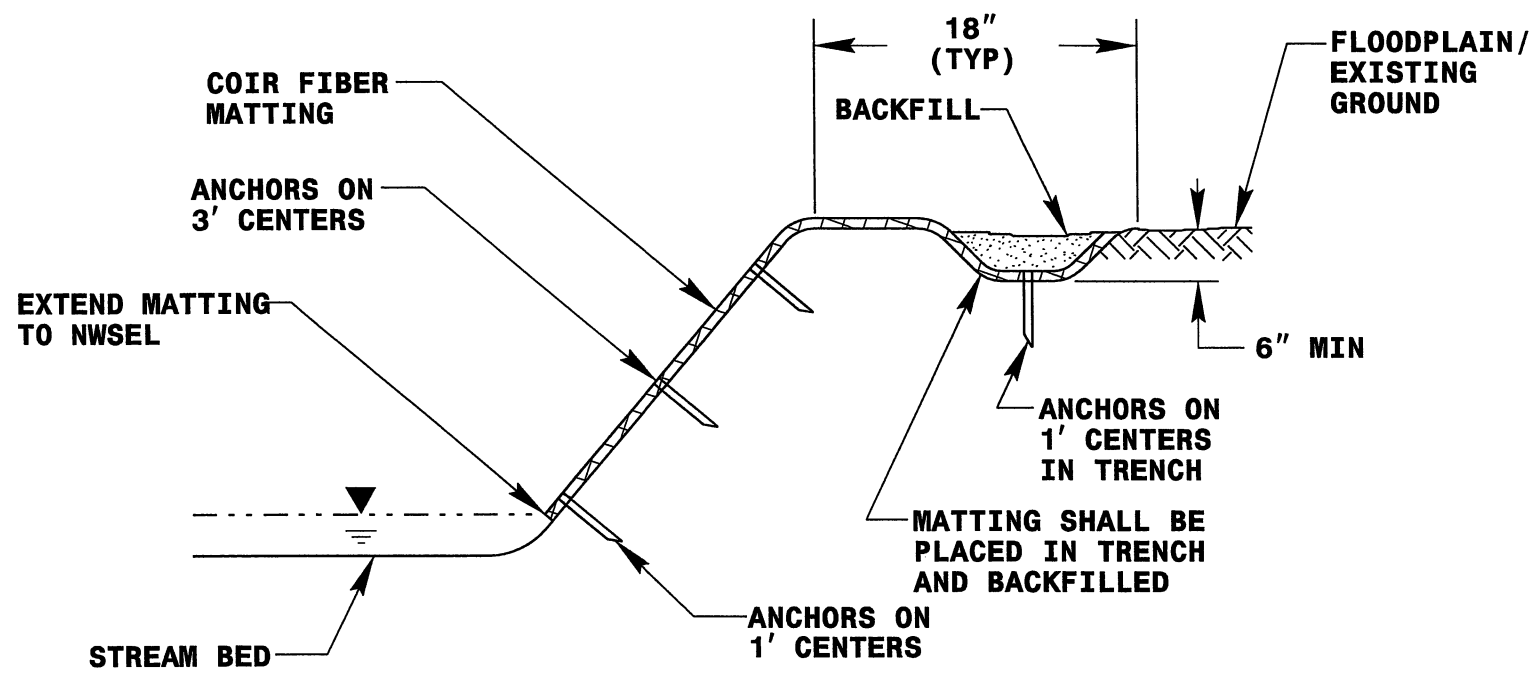
Permit Drawing
Sheet 24B of 34
Revised 1/24/13

PROJECT REFERENCE NO. <i>R-3324</i>	SHEET NO. <i>RF-3</i>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
 Sheet *24c* of *54*
 revised *1/24/13*



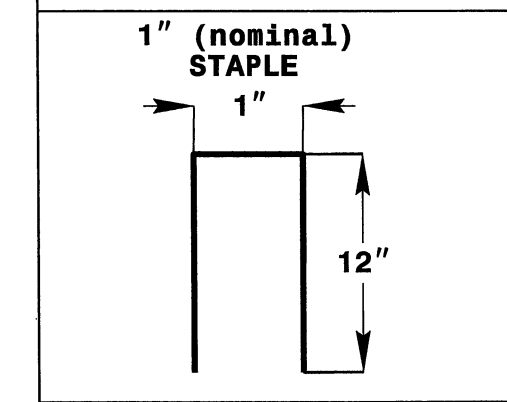
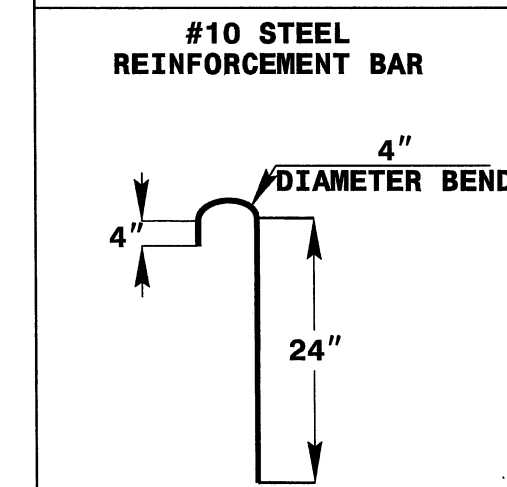
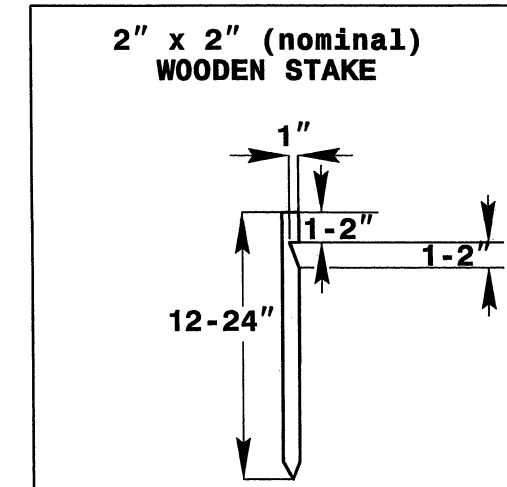
PLAN VIEW



TYPICAL CROSS SECTION

COIR FIBER MATTING DETAIL

NOT TO SCALE

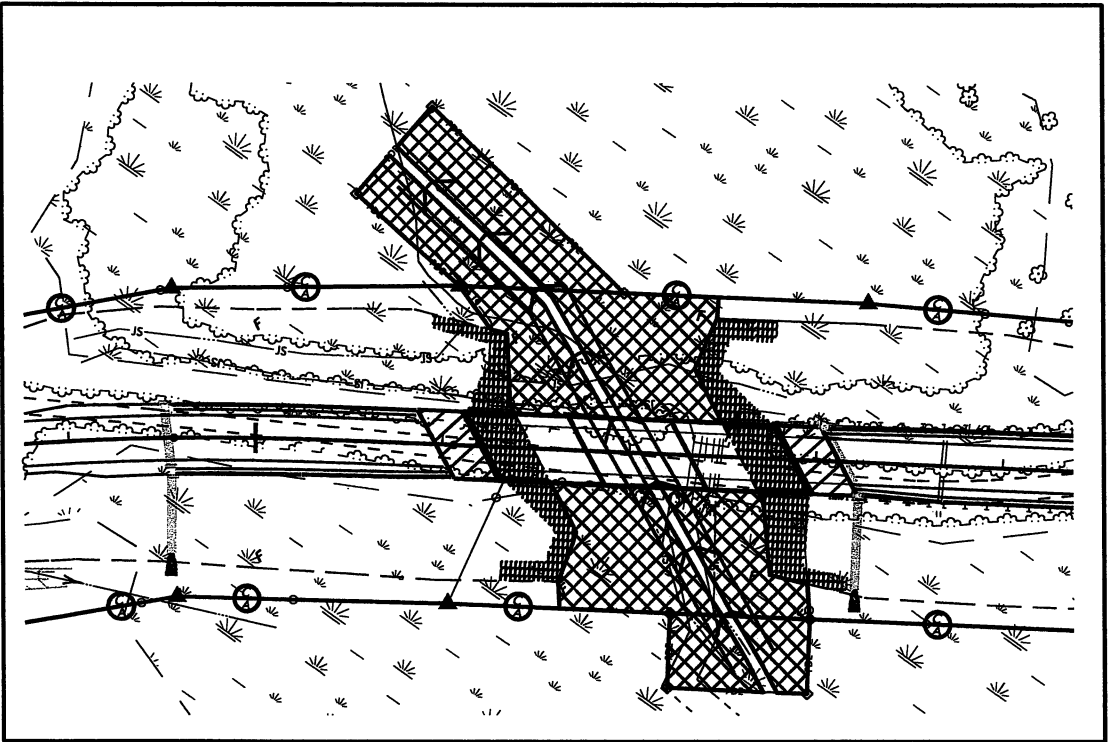
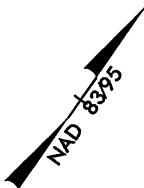


ANCHOR OPTIONS

PROJECT REFERENCE NO.	SHEET NO.
R-3324	EC-33A/CONST.0
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

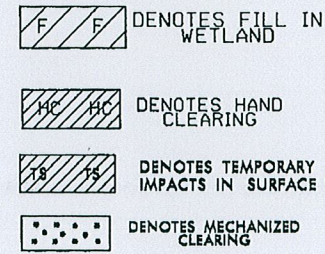
0.55 ACRE STREAMBANK REFORESTATION

Permit Drawing
Sheet Z4D of 34
Revised 1/24/13



SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

SYSTIME \$\$\$



44
ALLEN J. EARP, ETAL

44
ALLEN J. EARP, ETAL

PROJECT REFERENCE NO.	SHEET NO.
R-3324	II
RW SHEET NO. _____	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
SEE SHEET NO. 26 & 27 FOR -L- PROFILE	

PERMIT DRAWING
SHEET 25 OF 34
Revised: 3/24/15

MATCH LINE SHEET No. 12 - L- Sta. 107+50

**NOTE: INVERTS OF EQUALIZER
PIPES SHALL NOT BE BURIED**

8/17/99

*****SYTIME*****
*****PLAN VIEW*****



DENOTES FILL IN WETLAND

DENOTES HAND CLEARING

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

SITE VII

44
ALLEN J. EARP, ETAL

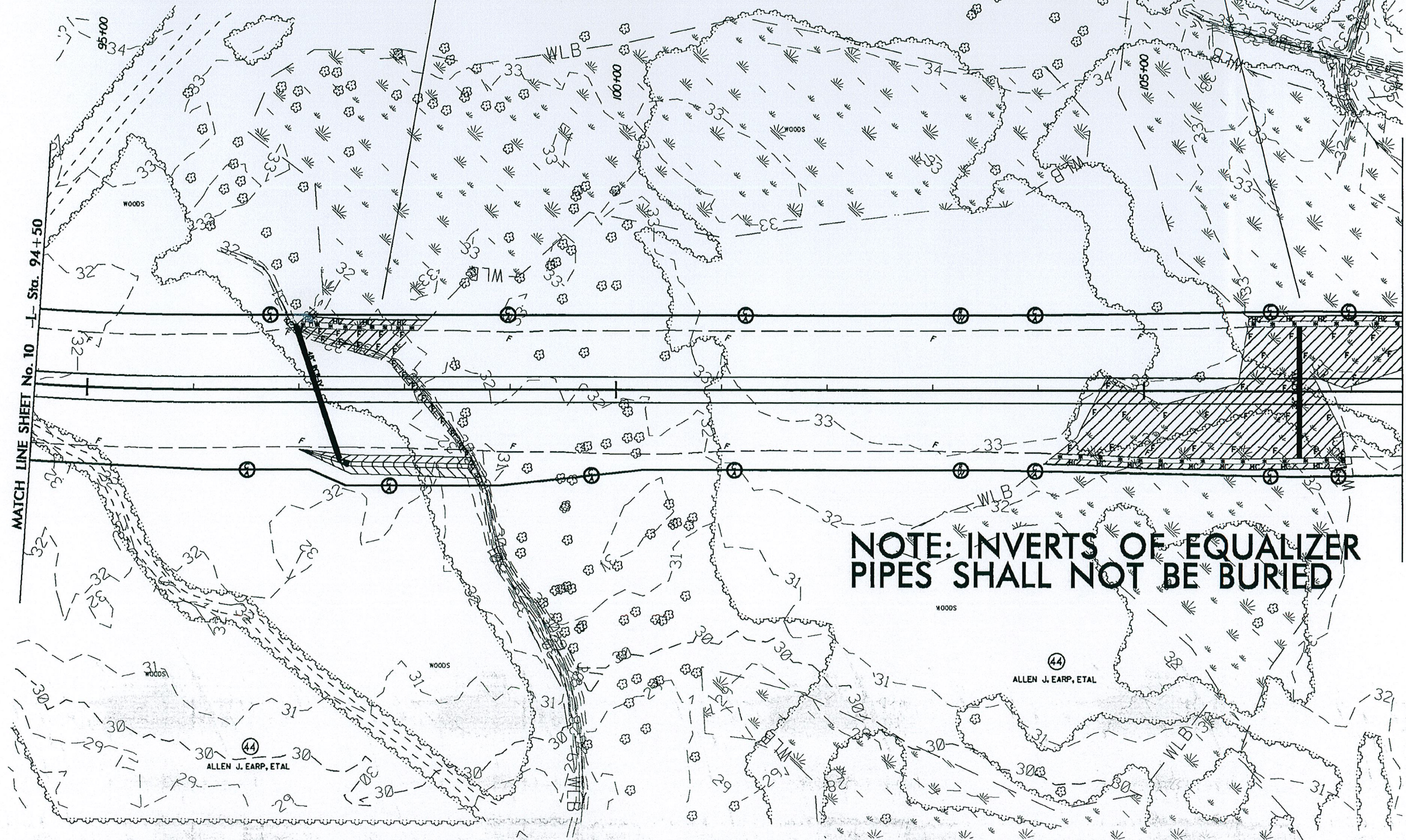
SITE VIII

44
ALLEN J. EARP, ETAL

PROJECT REFERENCE NO. <i>R-3324</i>		SHEET NO. <i>11</i>			
RW SHEET NO.					
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER			
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PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION					
SEE SHEET No. 26 & 27 FOR -L- PROFILE					

PERMIT DRAWING
SHEET 26 OF 54

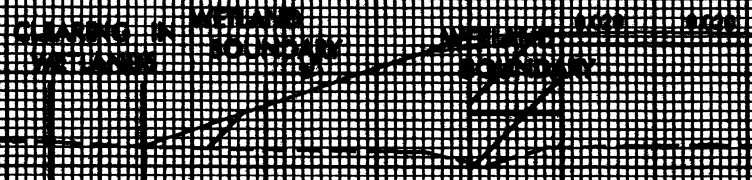
Revised 3/24/15



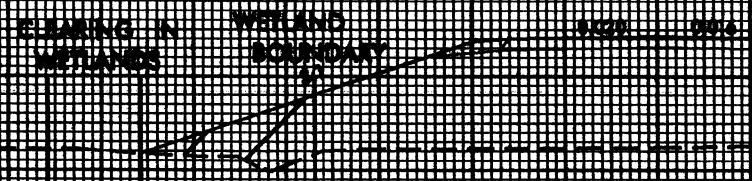
8/23/95

98-00.00
SITE VII

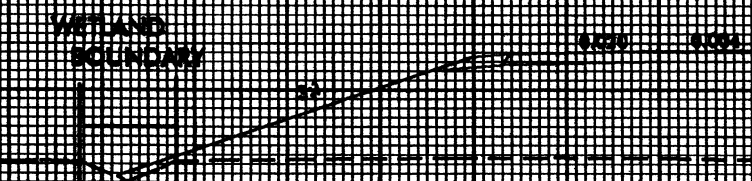
Partial Drawing
Sheet 27 of 39



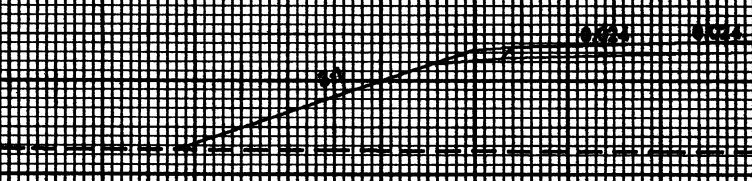
97-50.00



97-00.00



96-50.00



*****SYSTEM*****
*****SERIAL*****

SITE VIII

SITE IX

SITE X

ALLEN J. EARP, ETAL

WLB

WOODS

100+00

110+00

115+00

120+00

7 Tons CLASS I RIP-RAP

8 Tons CLASS I RIP-RAP

9 Tons CLASS I RIP-RAP

10 Tons CLASS I RIP-RAP

1 Tons CLASS 'B' RIP-RAP
5 Sq. Yds. Filter Fabric

1 Tons CLASS 'B' RIP-RAP
5 Sq. Yds. Filter Fabric

1 Tons CLASS 'B' RIP-RAP
5 Sq. Yds. Filter Fabric

TM

NOTE: INVERTS OF EQUALIZER PIPES SHALL NOT BE BURIED

LEGEND:

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

GRAPHIC SCALE

MATCH LINE SHEET No. 11 - L- Sta. 107+50

MATCH LINE SHEET No. 13 - L- Sta. 120+75

PROJECT REFERENCE NO. R-3324		SHEET NO. 12
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

PERMIT DRAWING
SHEET **28** OF **54**

REVISIION 3/2/2015

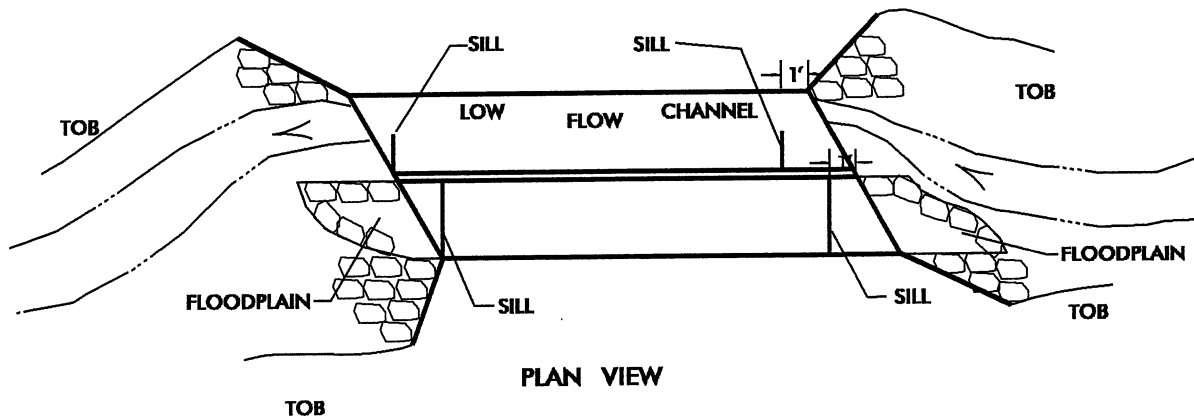
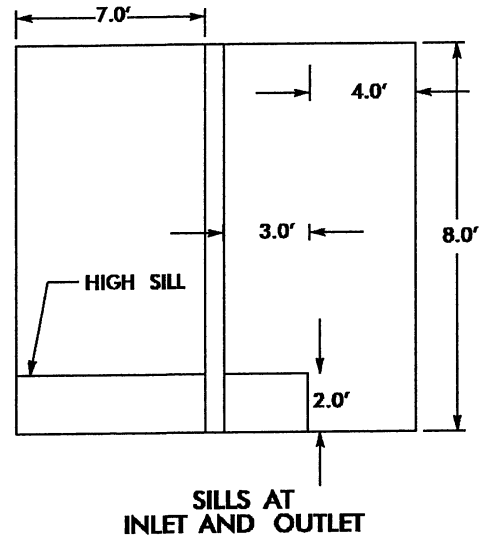
SKewed MULTI-BARREL LOW FLOW CHANNEL,SILLS AND FLOOD PLAIN

(NOT TO SCALE)

***NOTES:**

- 1) BED MATERIAL BETWEEN SILLS IN THE CULVERT SHALL PROVIDE A CONTINUOUS LOW FLOW CHANNEL THE MATERIAL SHALL BE NATIVE SOILS. BED MATERIALS SUBJECT TO APPROVAL BY THE ENGINEER.
- 2) SILLS ARE TO BE 1.0 FT. WIDE, CAST SEPARATELY AND ATTACHED BY DOWELS.
- 3) TOP OF LOW FLOW SILLS SHOULD MATCH STREAM BED ELEVATION IN LOW FLOW CHANNEL OF STREAM. (THALWEG)
- 4) DO NOT SET ELEVATION OF HIGH SILL ABOVE BANK FULL.
- 5) NUMBER OF SILL DETERMINED BY THE ENGINEER.

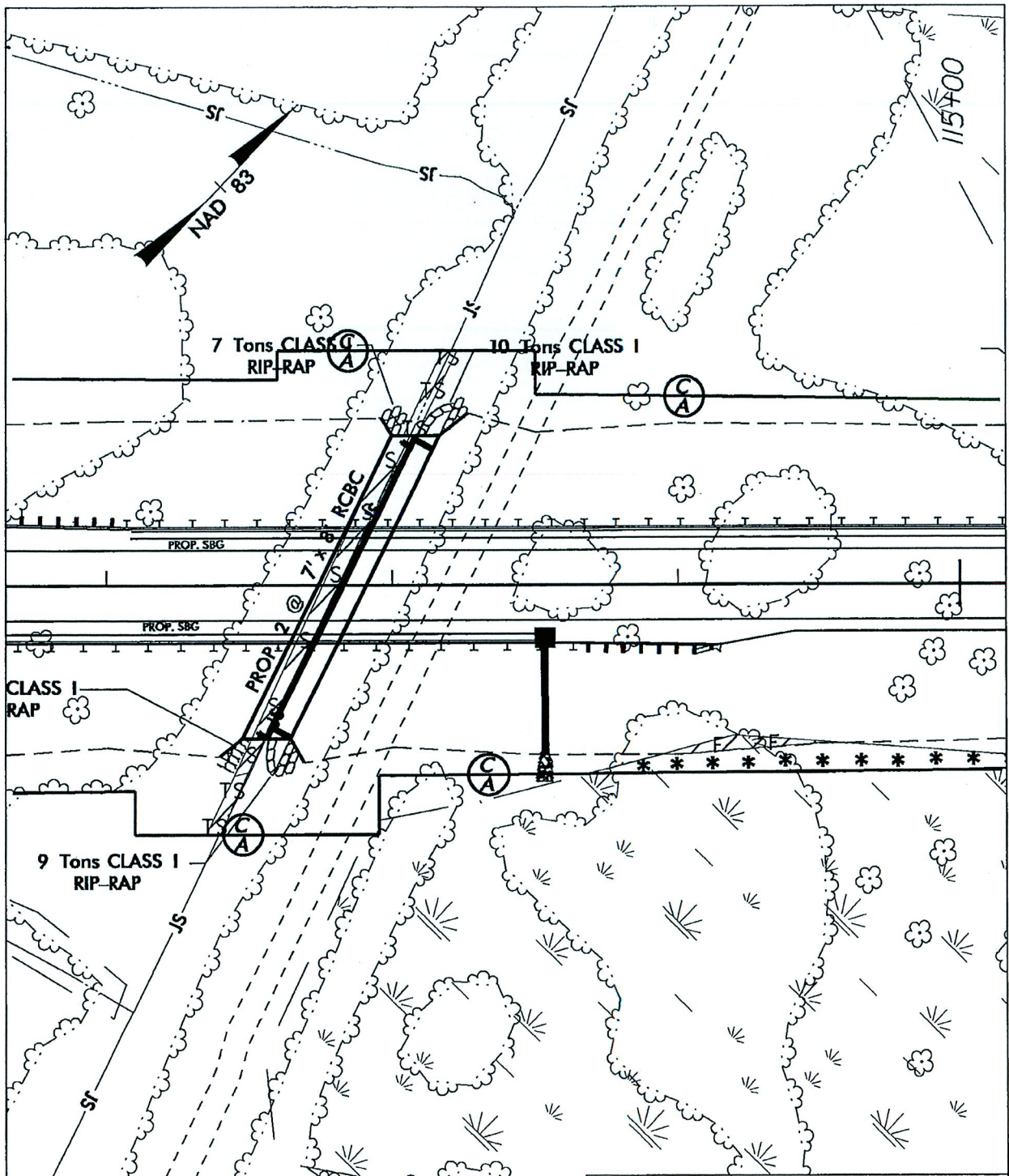
Permit Drawing
Sheet 29 of 54
Revised 1/24/13

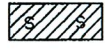


**PLAN VIEW
SITE IX
-L- STA. 112 + 82.5
2@ 7' x 8' RCBC**

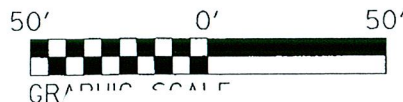
**NCDOT
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 34531.1.1 (R-3324)

NEW ROUTE FROM NC 133
AND NC 87**



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

SITE IX



NCDOT

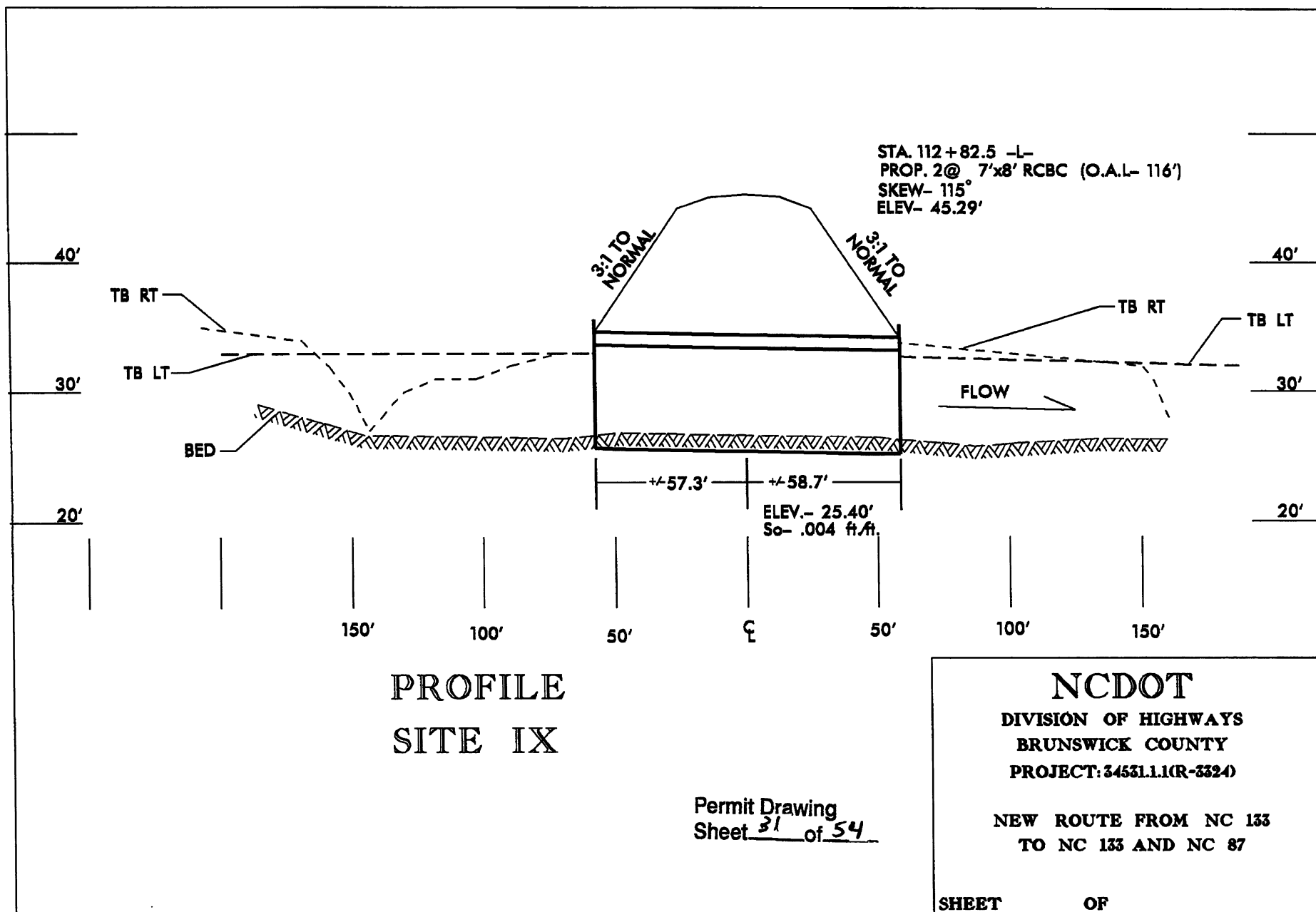
**DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 34531.1.1 (R-3324)**

**NEW ROUTE FROM NC 133
AND NC 87**

**REVISED
2/03/15**

30 54

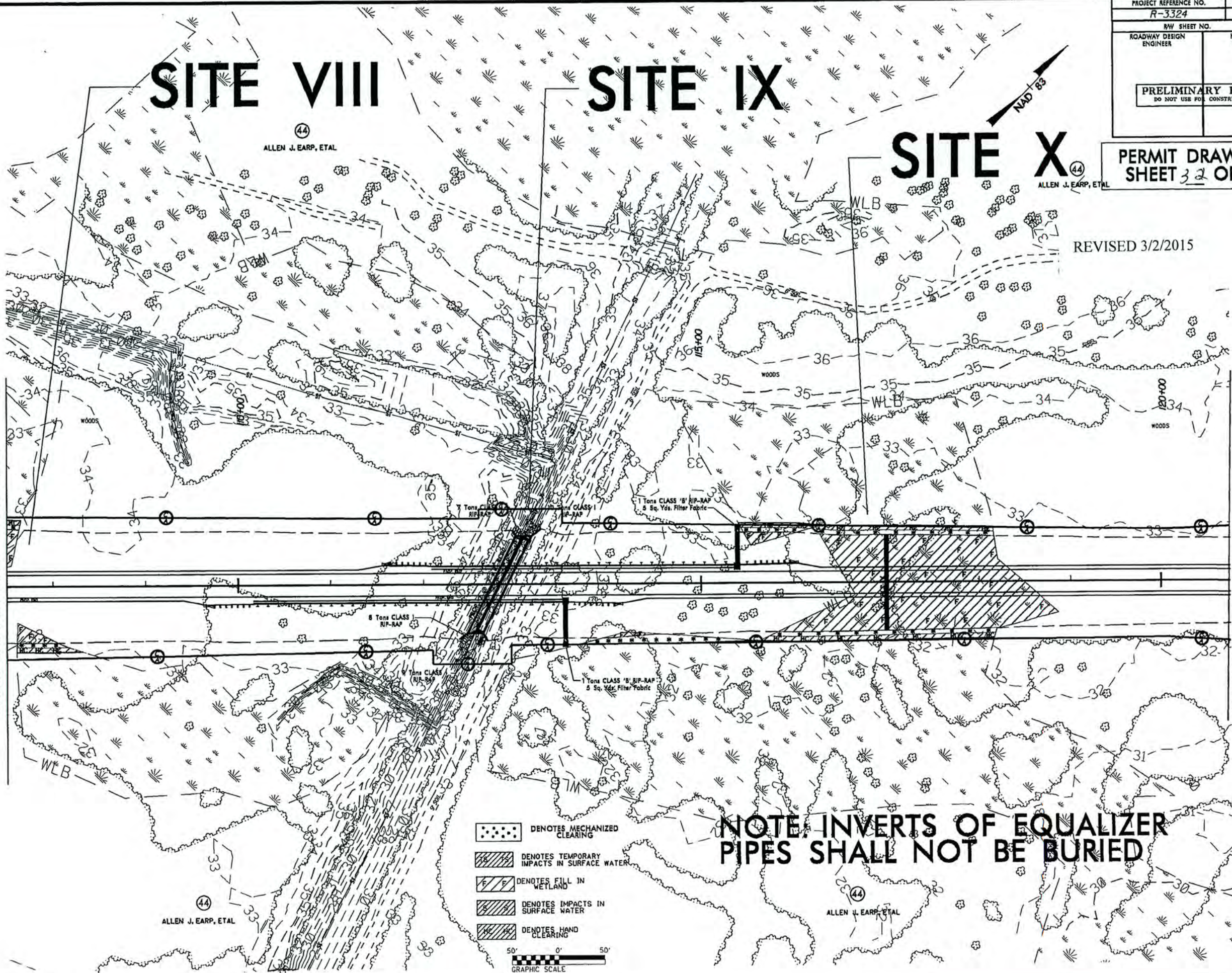
REVISED 3/2/2015



8/17/99

SYNOPSIS OF DESIGN INFORMATION

MATCH LINE SHEET No. 11 -L- Sta. 107+50



PROJECT REFERENCE NO.	SHEET NO.
R-3324	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 32 OF 54

REVISED 3/2/2015

MATCH LINE SHEET No. 13 -L- Sta. 120+75

NOTE: INVERTS OF EQUALIZER
PIPES SHALL NOT BE BURIED

8/23/99



PROJ. REFERENCE NO.
R-3324

SHEET NO.
X-38

WETLAND
BOUNDARY

CLEARING IN
WETLANDS

CLEARING IN
WETLANDS

WETLAND
BOUNDARY

116750.00

SITE X

Permit Drawing
Sheet 34 of 54

WETLAND
BOUNDARY

CLEARING IN
WETLANDS

CLEARING IN
WETLANDS

WETLAND
BOUNDARY

117450.00

WETLAND
BOUNDARY

CLEARING IN
WETLANDS

CLEARING IN
WETLANDS

WETLAND
BOUNDARY

117450.00

CLEARING IN
WETLANDS

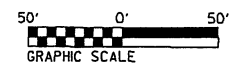
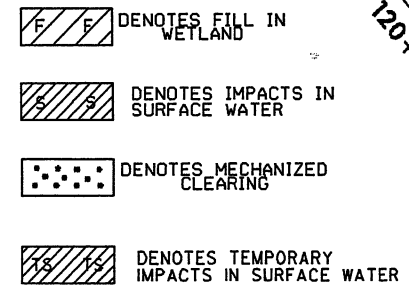
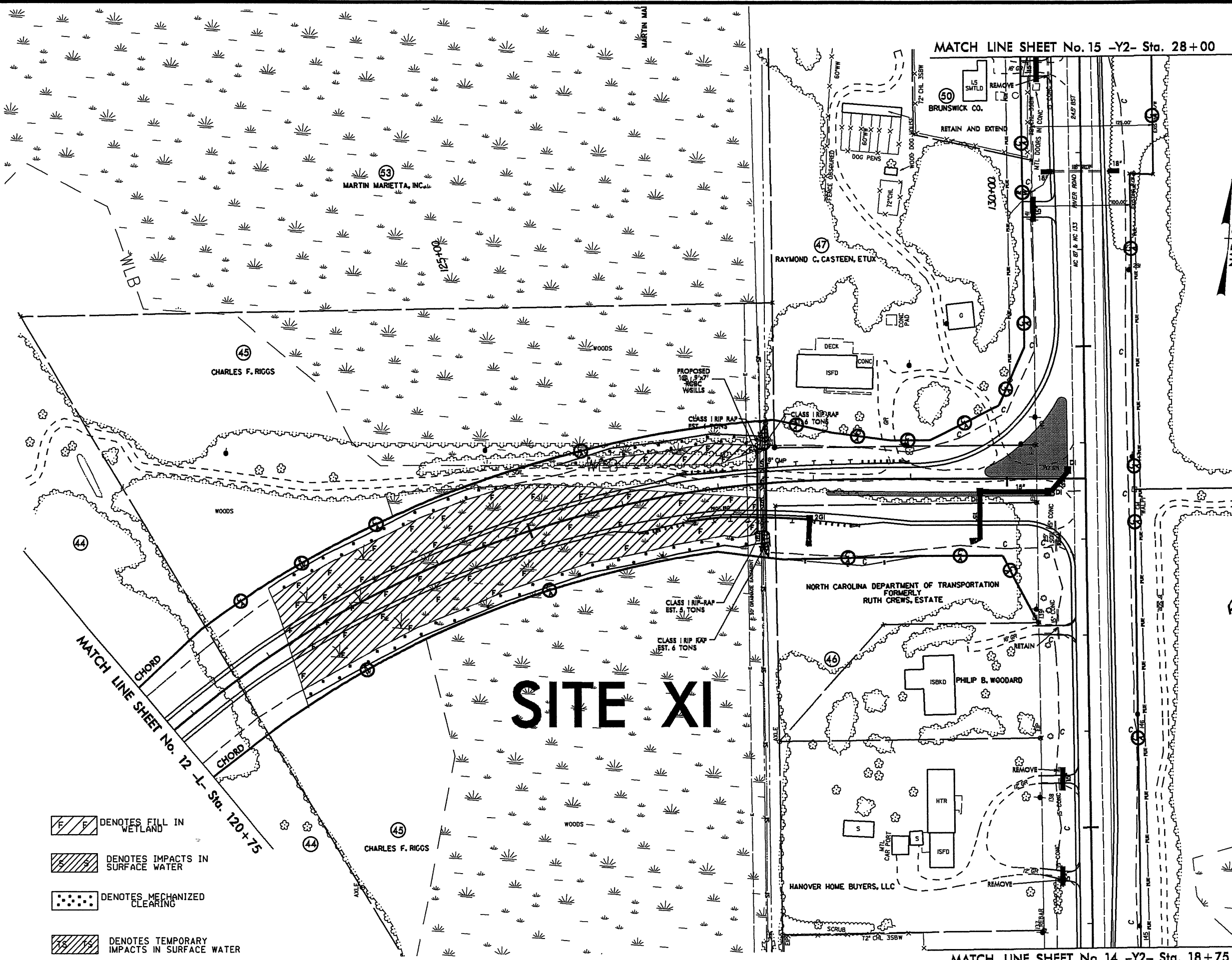
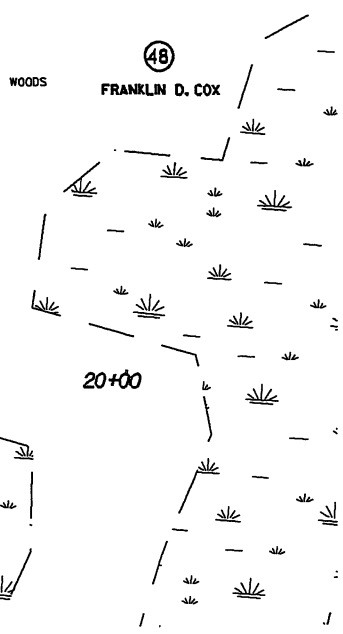
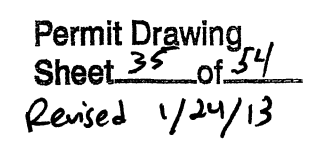
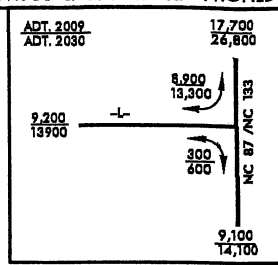
WETLAND
BOUNDARY

WETLAND
BOUNDARY

CLEARING IN
WETLANDS

116750.00

*****SYTIME*****
*****SERIAL*****

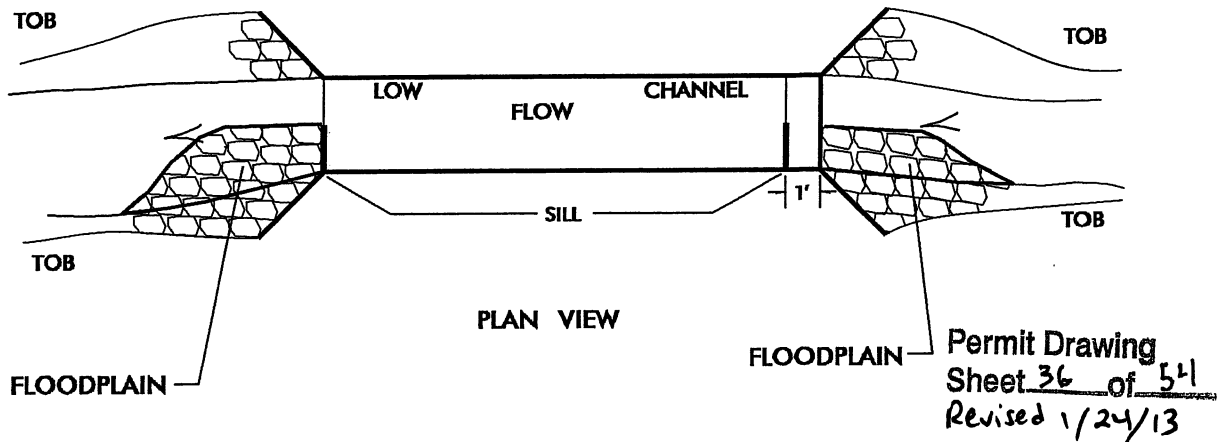
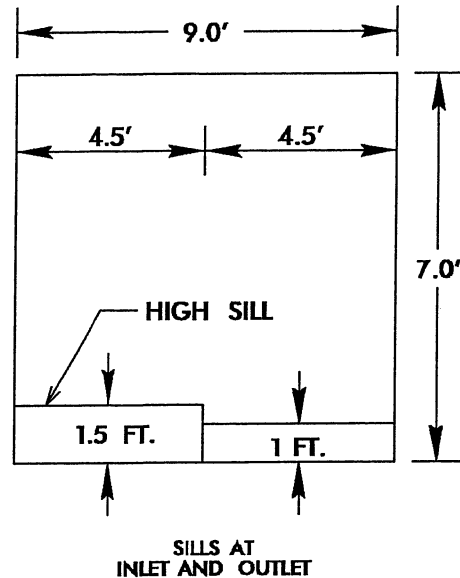


CULVERT SILLS AND FLOODPLAIN

(NOT TO SCALE)

***NOTES:**

- 1) BED MATERIAL BETWEEN SILLS IN THE CULVERT SHALL PROVIDE A CONTINUOUS LOW FLOW CHANNEL. THE MATERIAL SHALL BE NATIVE SOILS. BED MATERIALS SUBJECT TO APPROVAL BY THE ENGINEER.
- 2) SILLS ARE TO BE 1.0 FT. WIDE, CAST SEPARATELY AND ATTACHED BY DOWELS.
- 3) TOP OF LOW FLOW SILLS SHOULD MATCH STREAM BED ELEVATION IN LOW FLOW CHANNEL OF STREAM. (THALWEG)
- 4) DO NOT SET ELEVATION OF HIGH SILL ABOVE BANK FULL.
- 5) NUMBER OF SILLS DETERMINED BY THE ENGINEER.



PLAN VIEW

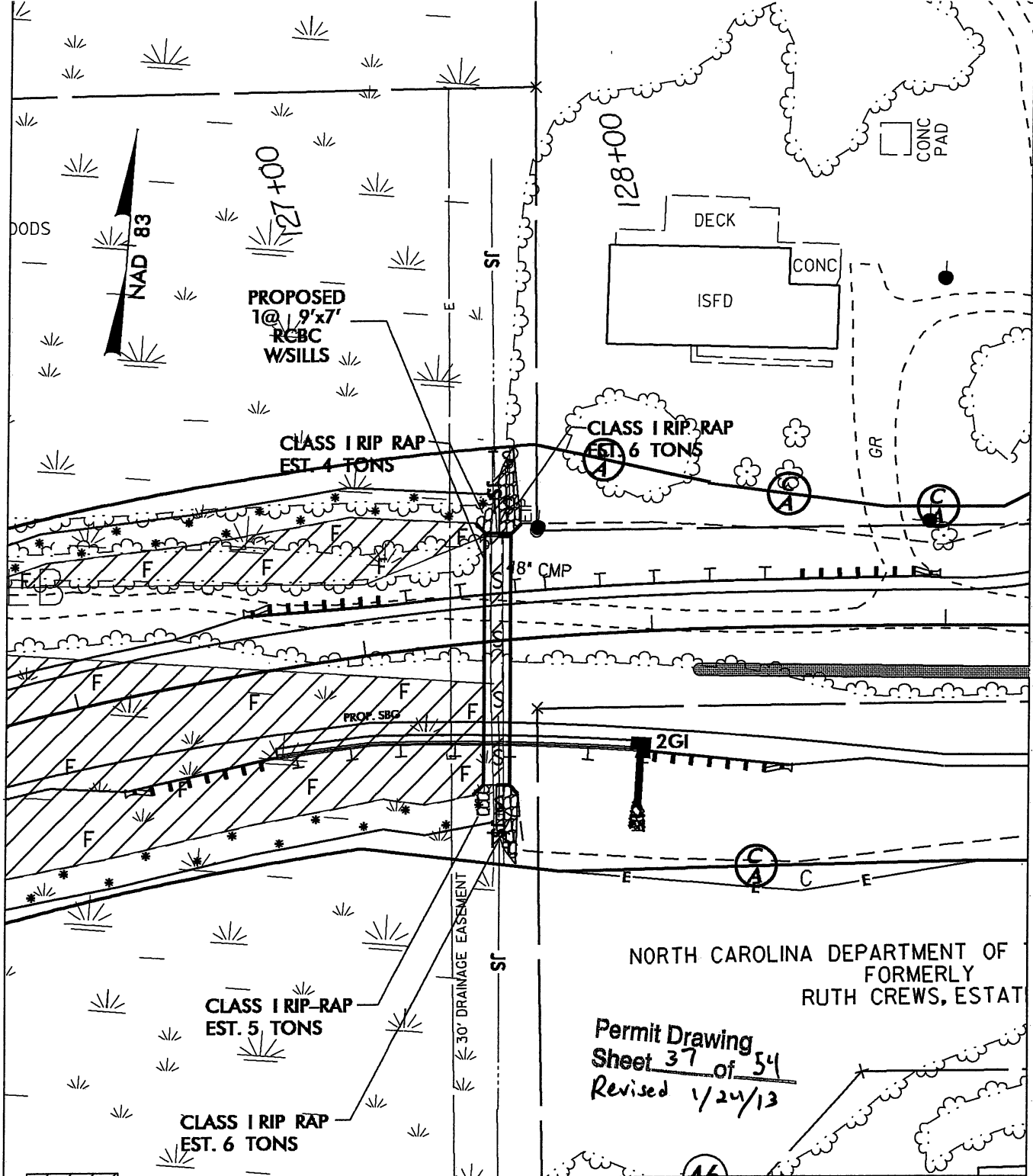
SITE XI
-L- STA. 127 + 46
1 @ 9' X 7' RCBC

NCDOT

DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 3453L1.1 (R-3324)

NEW ROUTE FROM NC 133
AND NC 87

SHEET OF 10 / 30 / 12



NORTH CAROLINA DEPARTMENT OF
FORMERLY
RUTH CREWS, ESTAT

Permit Drawing
Sheet 37 of 54
Revised 1/24/13

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

SITE XI

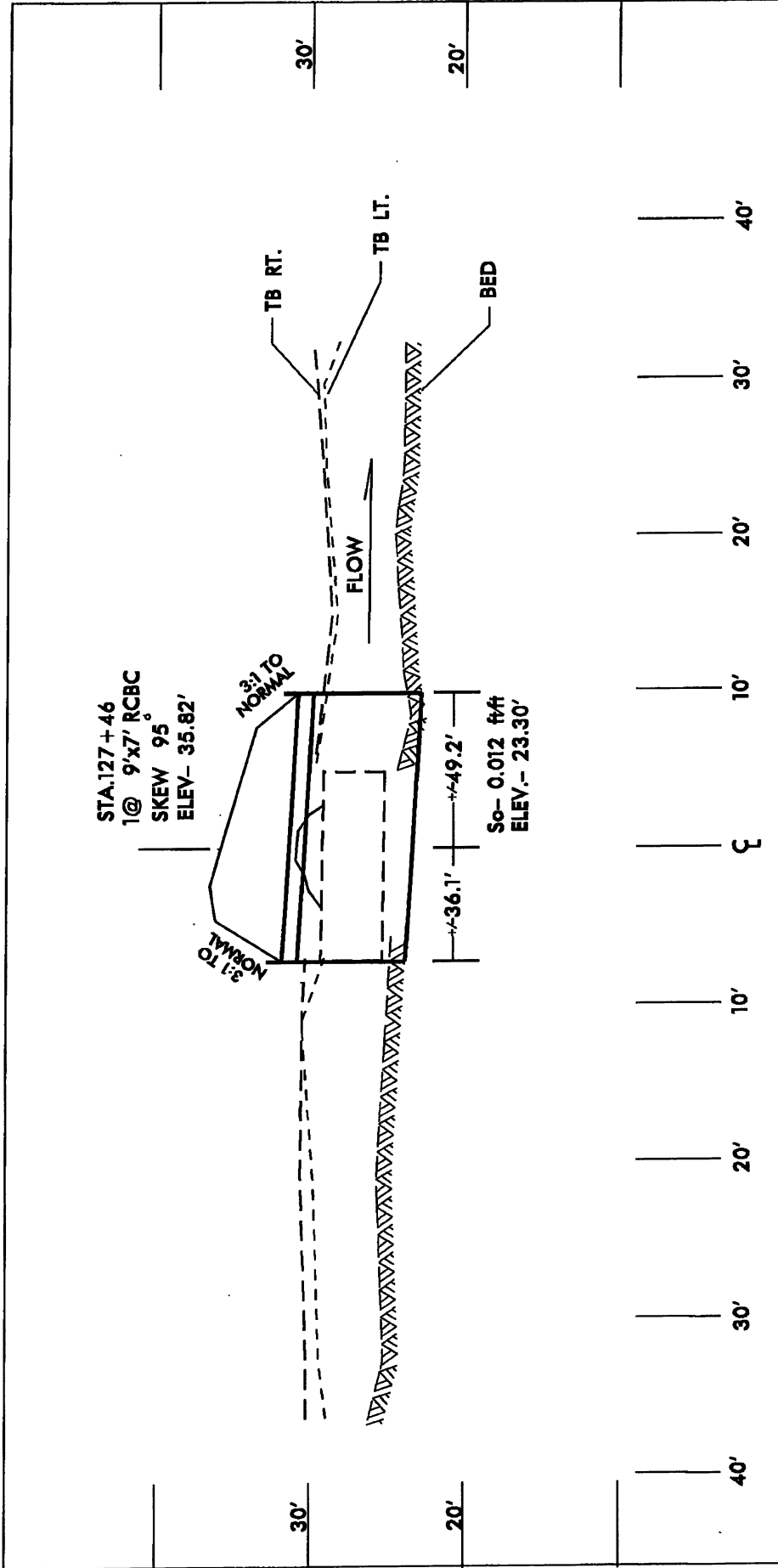


NCDOT

**DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 34531.1.1 (R-3324)**

**NEW ROUTE FROM NC 133
AND NC 87**

SHEET OF 12/04/12



PROFILE SITE XI

Permit Drawing
Sheet 38 of 54

NCDOT

DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 34531.1(R-3324)

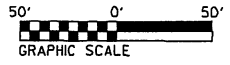
NEW ROUTE FROM NC 133
TO NC 133 AND NC 87

SHEET OF

A/C 133	
9,200	17,700
13,900	26,800
	8,900
	13,300
	300
	600
	NC 87 / NC 133
	9,100
	14,100

49

PROGRESS ENERGY CAROLINA, INC. E

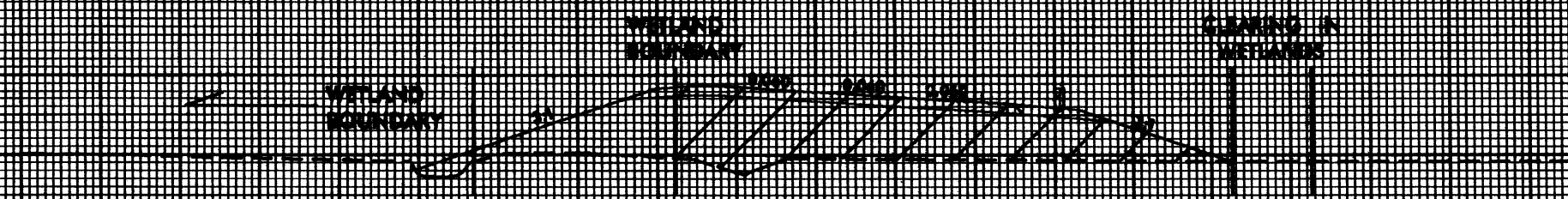


SITE XI

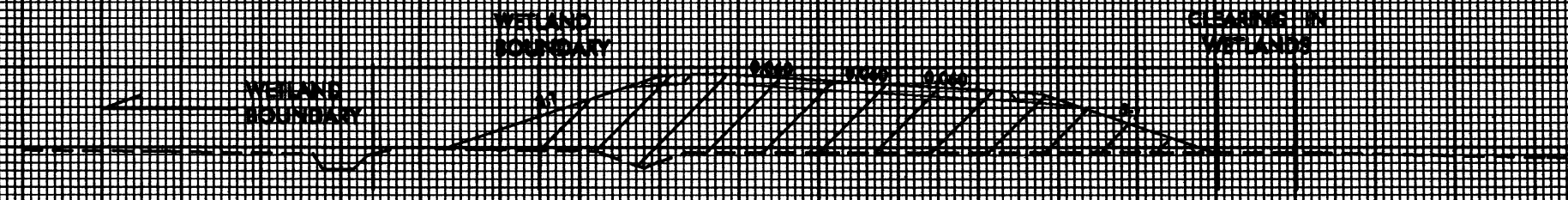
MATCH LINE SHEET No. 14 -Y2- Sta. 18+75

8/23/99

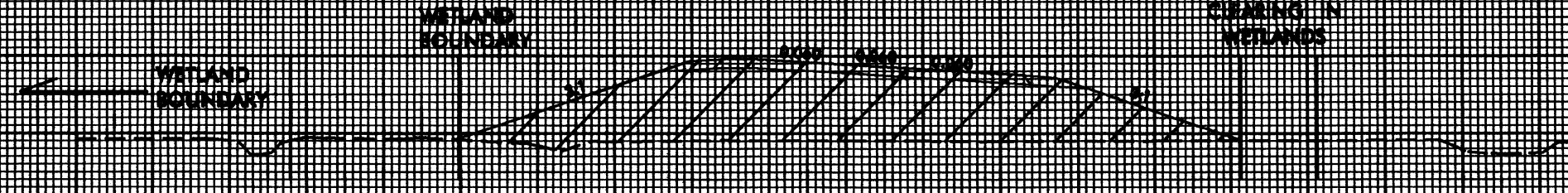
SITE XI



PERMITS DRAWING
SHEET 40 OF 54



125-00.00



125-00.00

*****SYSTEMS*****
*****ENVIRONMENTAL*****
*****ENGINEERING*****

8/17/99

SYSTINGE
SUGERNOE

PROJECT REFERENCE NO.	SHEET NO.
R-3324	15
RAW SHEET NO.	HYDRAULICS
ROADWAY DESIGN	PN/IN/PPR

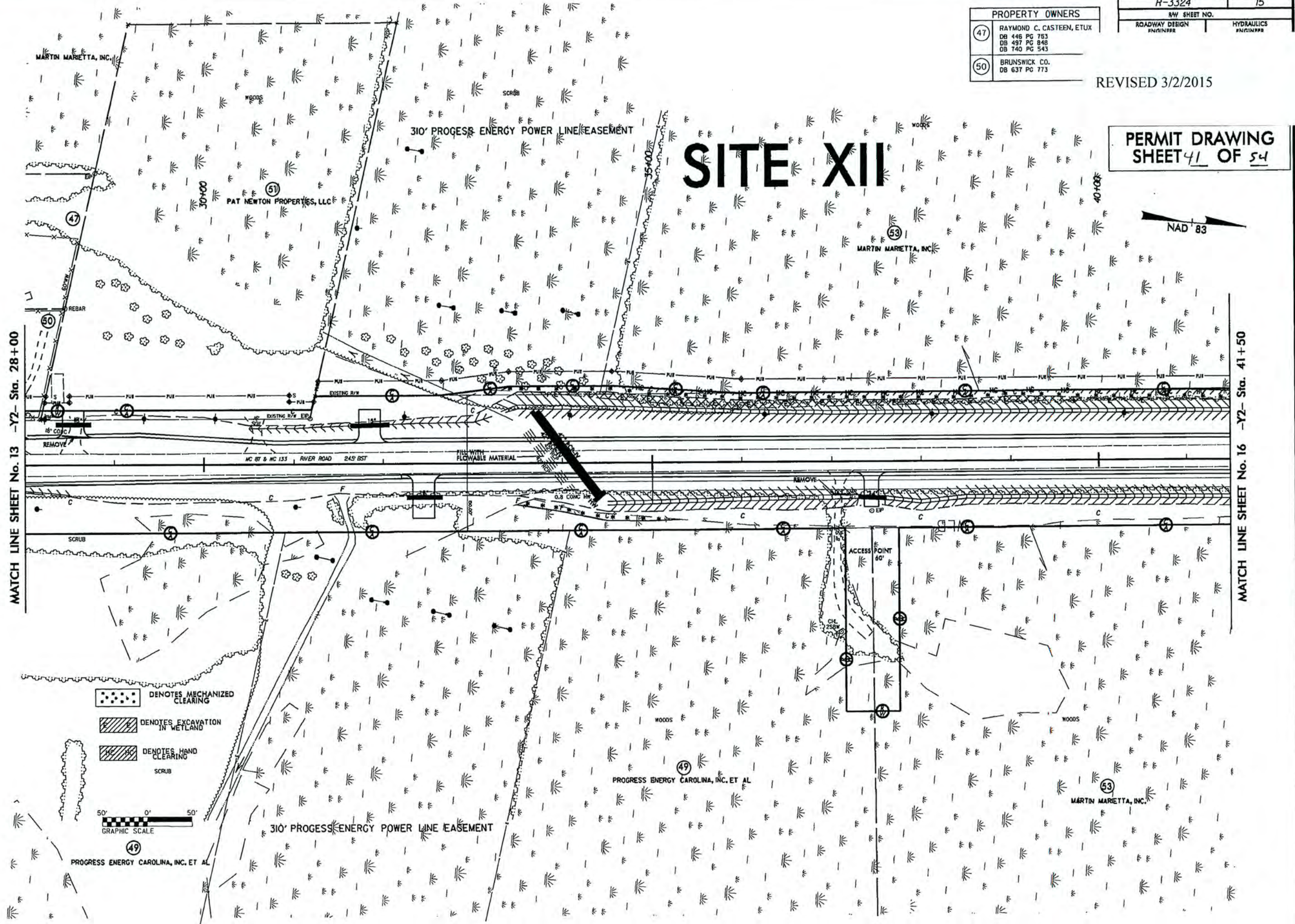
PROPERTY OWNERS	
(47)	RAYMOND C. CASTEEN, ETUX DB 446 PG 753 DB 497 PG 848 DB 740 PG 543
(50)	BRUNSWICK CO. DB 637 PG 773

REVISED 3/2/2015

PERMIT DRAWING
SHEET 41 OF 54

MATCH LINE SHEET No. 13 -Y2- Sta. 28+00

MATCH LINE SHEET No. 16 -Y2- Sta. 41+50



8/17/95

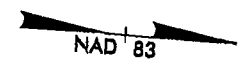
PROJECT REFERENCE NO.	SHEET NO.
R-3324	15
R/W SHEET NO.	
ROADWAY DESIGN	HYDRAULICS

PROPERTY OWNERS	
(47)	RAYMOND C. CASTEEN, ETUX DB 446 PG 763 DB 497 PG 848 DB 740 PG 543
(50)	BRUNSWICK CO. DB 637 PG 773

REVISED 3/2/2015

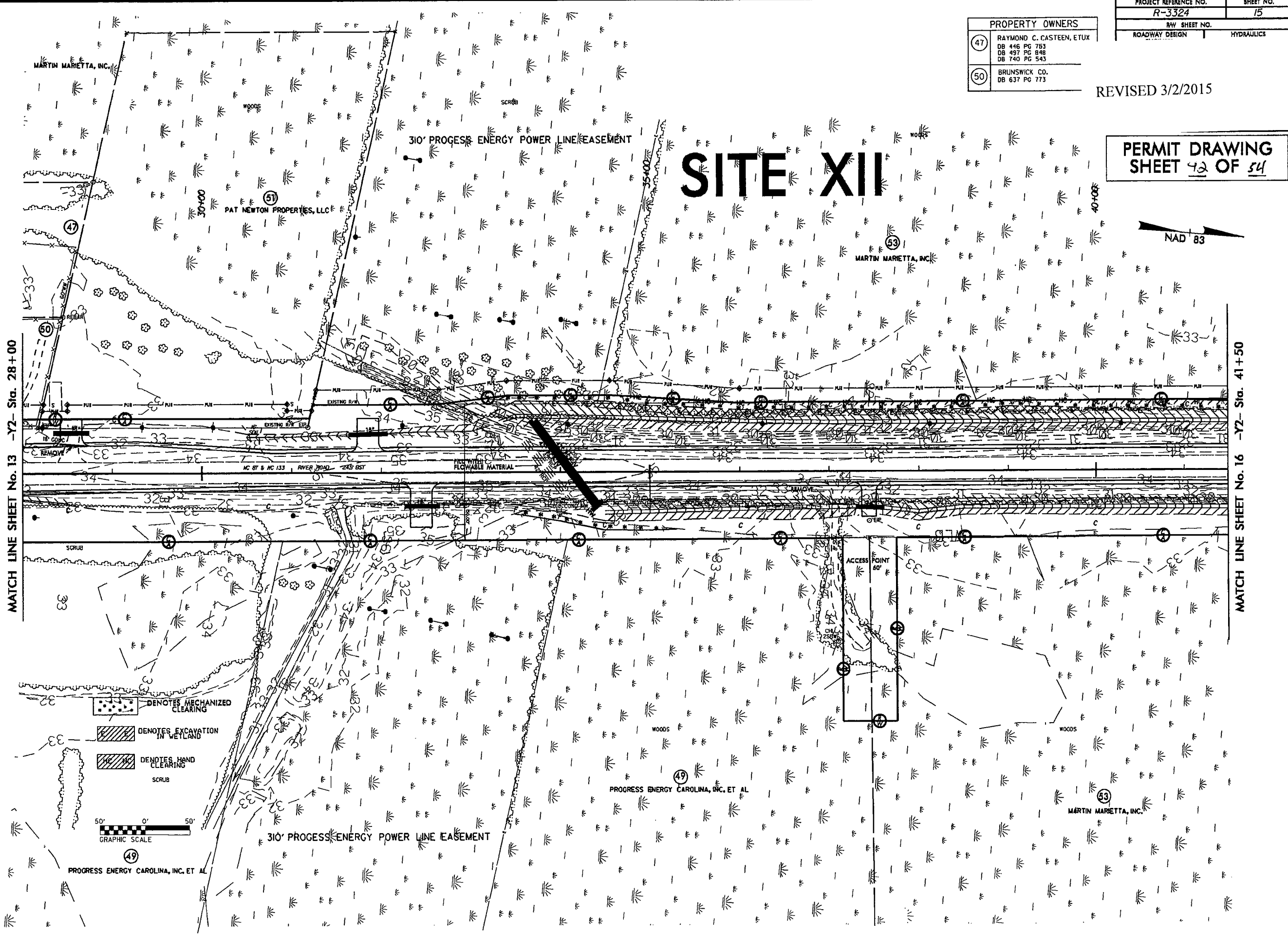
PERMIT DRAWING
SHEET 42 OF 54

SITE XII



MATCH LINE SHEET No. 13 -Y2- Sta. 28+00

MATCH LINE SHEET No. 16 -Y2- Sta. 41+50



LEGEND

- DENOTES MECHANIZED CLEARING
- DENOTES EXCAVATION IN WETLAND
- DENOTES HAND CLEARING
- SCRUB

50' 0' 50'

GRAPHIC SCALE

(49) PROGRESS ENERGY CAROLINA, INC. ET AL

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3324	16
RAW SHEET NO.	
ROADWAY DESIGN	HYDRAULICS

REVISED 3/2/2015

PERMIT DRAWING
SHEET 43 OF 54

NAD '83

MATCH LINE SHEET No. 15 -Y2- Sta. 41+50

MATCH LINE SHEET No. 17 -Y2- Sta. 54+50

NC 87 & NC 133 RIVER ROAD 245' BST

SITE XII

WOODS

(53)
MARTIN MARIETTA, INC.

DENOTES MECHANIZED
CLEARING

DENOTES HAND
CLEARING

50' 0' 50'
GRAPHIC SCALE

8/17/99

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3324	17
R/W SHEET NO.	
ROADWAY DESIGN	HYDRAULICS
PLANNING	ENGINEER

SITE XII

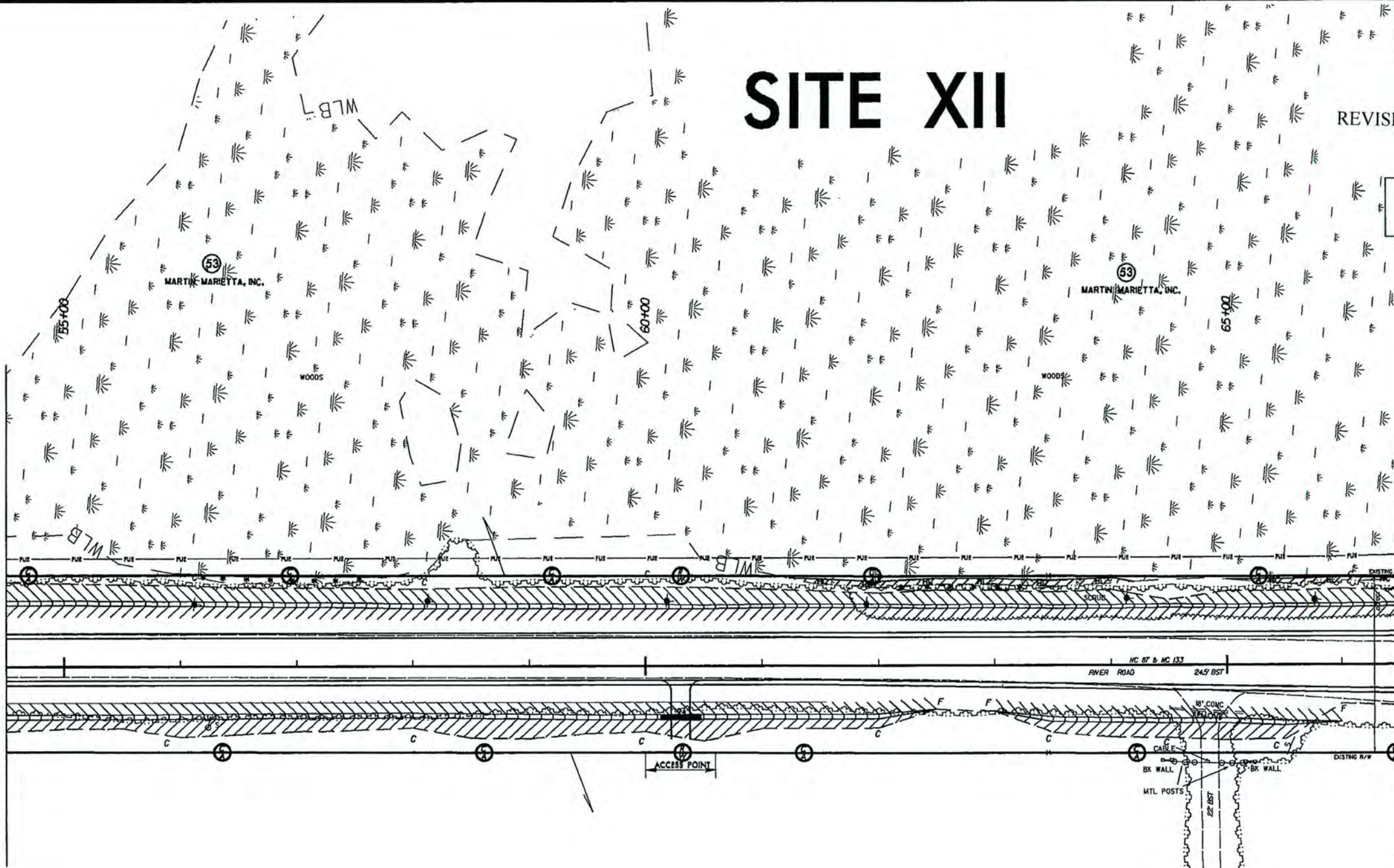
REVISED 3/2/2015

PERMIT DRAWING
SHEET 45 OF 54

NAD 83

MATCH LINE SHEET No. 16 -Y2- Sta. 54+50

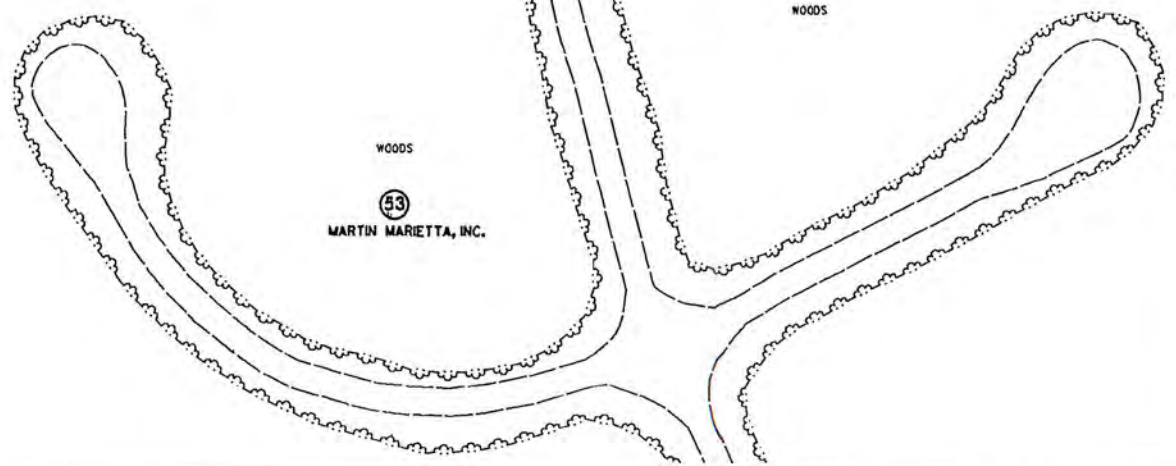
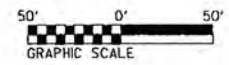
MATCH LINE SHEET No. 18 -Y2- Sta. 66+50



DENOTES MECHANIZED
CLEARING

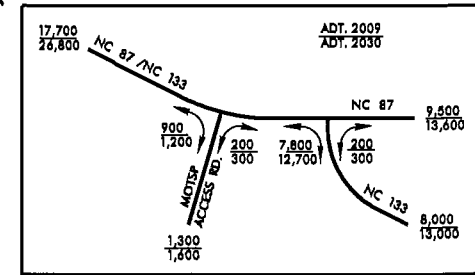
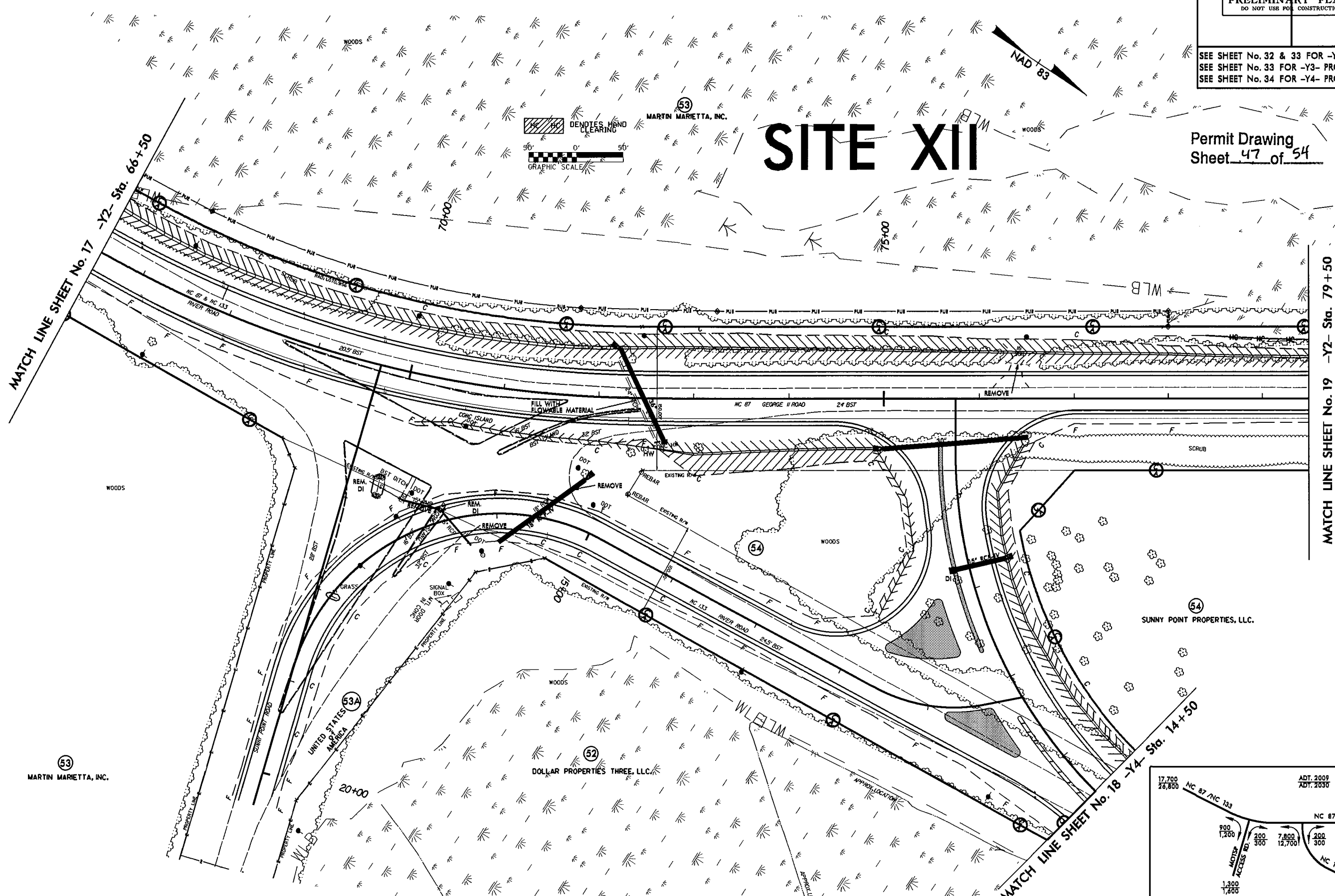
DENOTES HAND
CLEARING

MARTIN MARIETTA, INC.



8/17/99

PROJECT REFERENCE NO. <i>R-3324</i>		SHEET NO. <i>18</i>
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
SEE SHEET No. 32 & 33 FOR -Y2- PROFILE SEE SHEET No. 33 FOR -Y3- PROFILE SEE SHEET No. 34 FOR -Y4- PROFILE		



*****SYSTIME*****
*****8/17/99*****
*****R-3324*****
*****SHEET 18*****

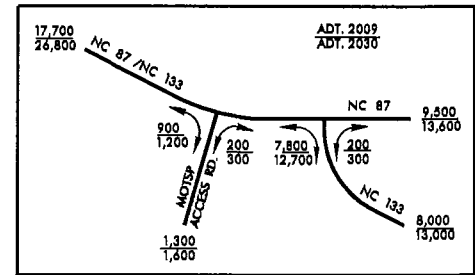
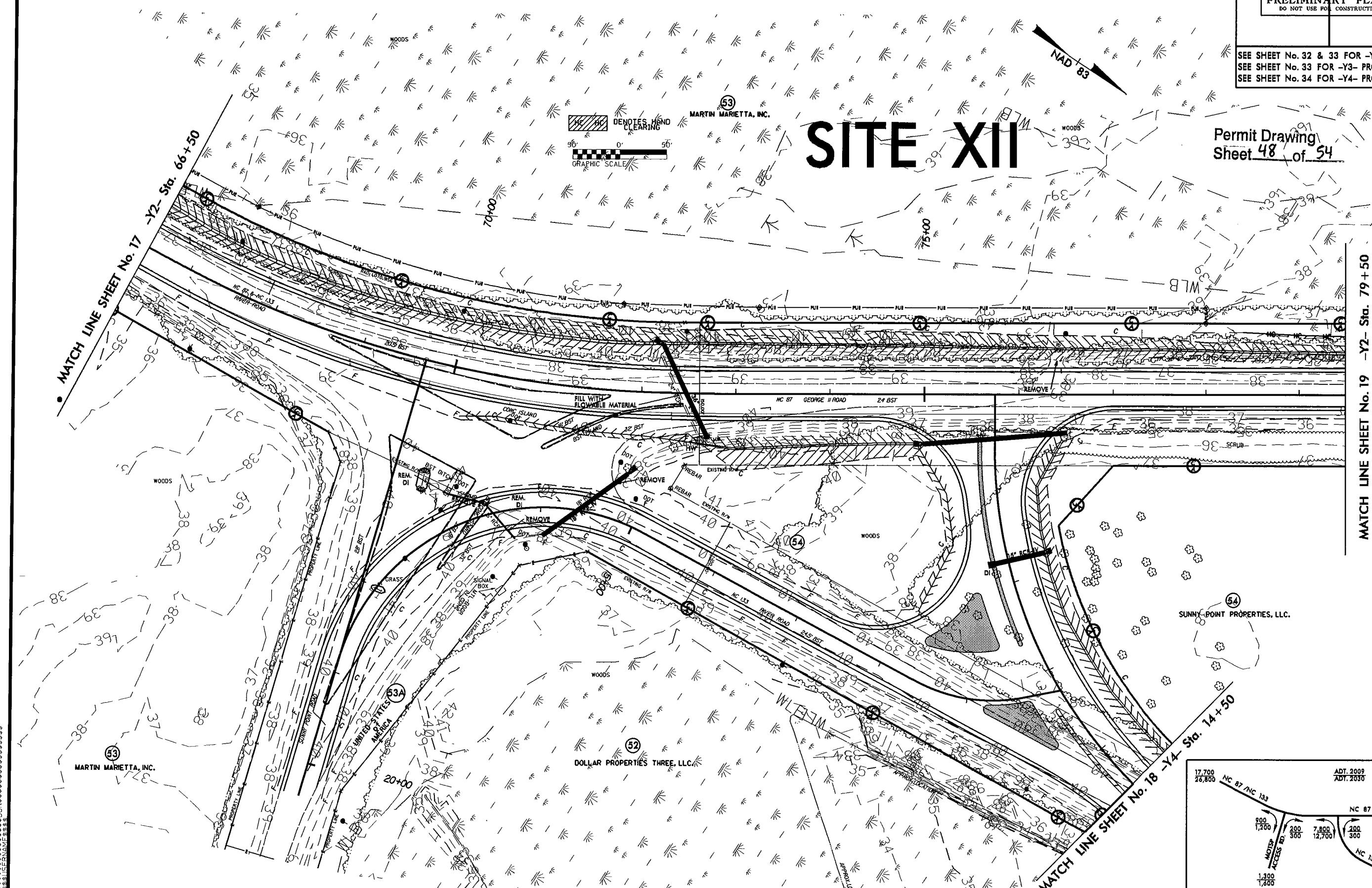
8/17/99

PROJECT REFERENCE NO. <i>R-3324</i>		SHEET NO. <i>18</i>
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

SEE SHEET No. 32 & 33 FOR -Y2- PROFILE
SEE SHEET No. 33 FOR -Y3- PROFILE
SEE SHEET No. 34 FOR -Y4- PROFILE

Permit Drawing
Sheet 48 of 54

SITE XII

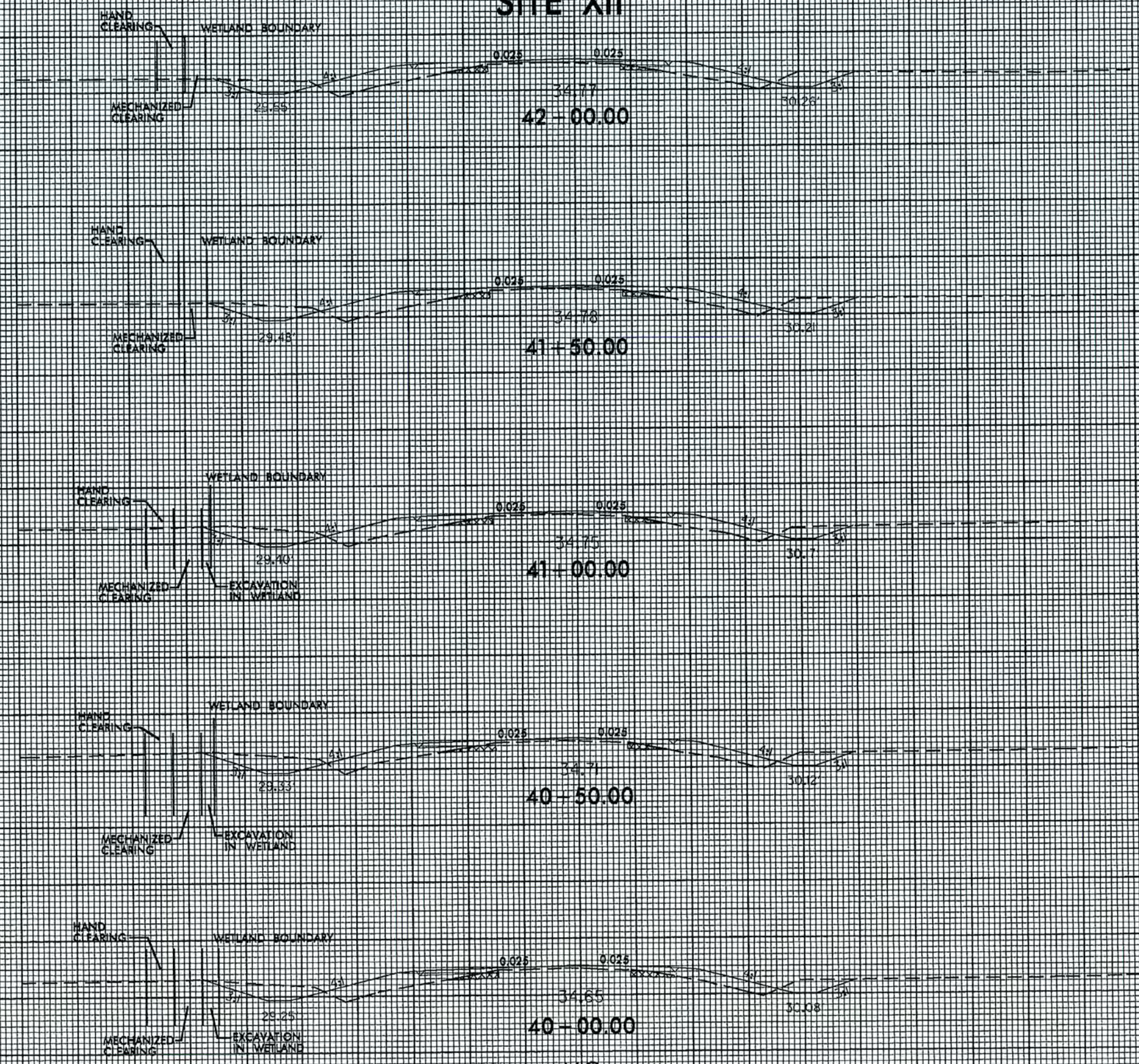


8/23/99

SITE XII

PERMIT DRAWING
SHEET 49 OF 56

Revised 3/2/2015



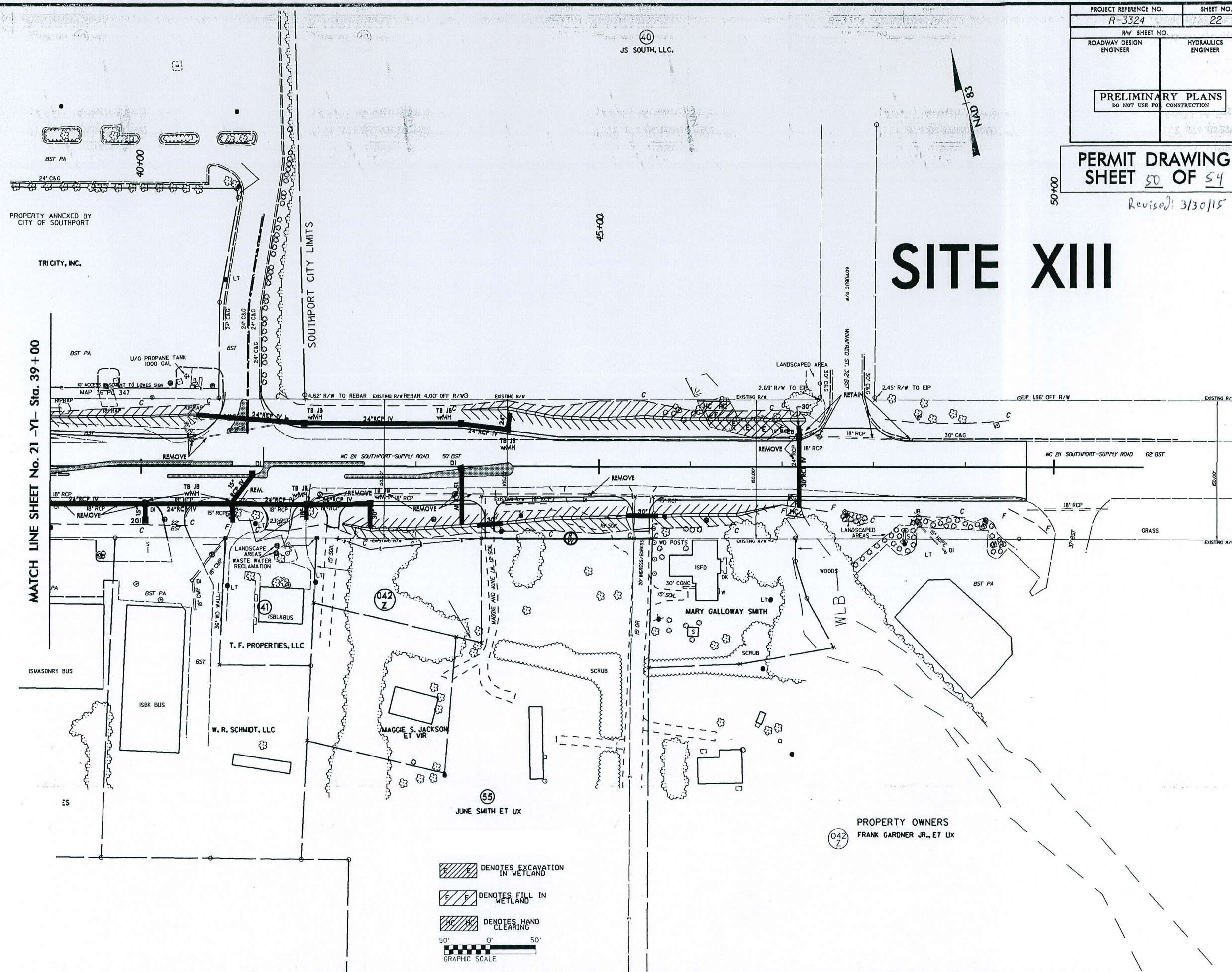
-Y2-

UNIVERSITY OF CALIFORNIA
SUSTAINABLE DESIGN
INSTITUTE

SYSTEM\$DGN\$\$\$\$\$

Revised: 3/30/15

SITE XIII



PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
4	GREGORY K. HEDRICK	504 INDIAN WELLS CIRCLE LEXINGTON, N.C. 27295
5	BUFFLE HEAD PROPERTIES, LLC	P.O. BOX 3069 BALD HEAD ISLAND, N.C. 28461
6	SOUTHEAST CINEMA ENTERTAINMENT, INC	4523 PARK ROAD #A-105 CHARLOTTE, N.C. 28209
7	SOUTHPORT-OAK ISLAND CHAMBER OF COMMERCE	HWY 133 LONG BEACH RD. SOUTHPORT, N.C. 28461
43	TRI CITY, INC.	TRI CITY SHOPPING CENTER ROCKINGHAM, N.C. 28379
44	ALLEN J. EARP	P.O. BOX 3649 WILMINGTON, N.C. 28406
45	CHARLES F. RIGGS	202 WARLICK ST. JACKSONVILLE, N.C. 28540
49	PROGRESS ENERGY CAROLINA, INC.	P.O. BOX 14042 ST. PETERSBURG, FL. 33733
53	MARTIN MARIETTA, INC	2700 WYCLIFF RD. SUITE 104 RALEIGH, N.C. 27607

Permit Drawing
Sheet 53 of 54

NCDOT

DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
PROJECT: 3453L1.1 (R-3324)

NEW ROUTE FROM NC 133
TO NC 133 AND NC 87

SHEET OF

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)
I	22+00 -L-	BRG 3@45'						<0.01	0.02	26	160	
II	12+30-25+00-Y1-	N/A	0.10		0.03							
IV	51+70-60+00-L-	2@60" RCP	0.15			0.03	0.03	0.05		481		
V	61+00-73+40-L-	N/A	1.98		0.05	0.15	0.15	0.03		242		
VI	83+50-91+70-L-	BRG 3@55'	1.08	0.33	0.18	0.27		0.10		395	73	
VII	98+00 -L-	48" RCP	0.06	<0.01		0.01	0.01					
VIII	104+00-107+70-L-	N/A	0.56			0.06	0.06					
IX	112+80 -L-	2@7'x8' RCBC						0.02	0.01	128	55	
X	113+60-118+80-L-	N/A	0.49			0.09	0.06					
XI	123+50-127+60-L-	1@9'x7' RCBC	1.05			0.22		0.01	0.01	96	46	
XII	32+00-81+50-Y2-	N/A			0.09		0.23					
XIII	46+00-47+30-Y1-	N/A	<0.01		0.04		<0.01					
TOTALS:			5.47	0.33	0.39	0.83	0.54	0.21	0.05	1368	334	

Permit Drawing

Sheet 54 of 5

Revised: 3/30/15

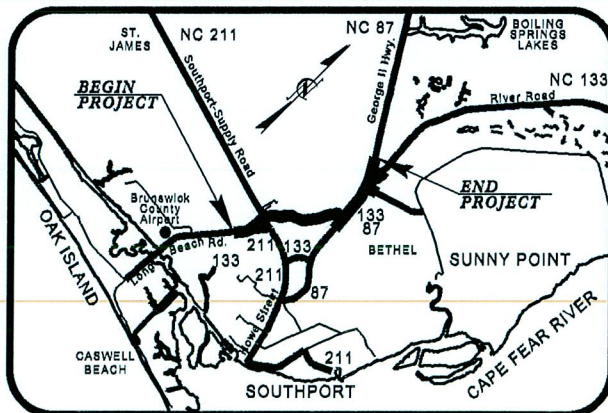
REVISED
3/19/2015

SHEET

16-NOV-2012 12:34
R:\Utilities\RDY\U\Proj\NEU\3324.UO-L.Rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

TIP PROJECT: R-3324

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NEU PERMIT DRAWINGS
BRUNSWICK COUNTY

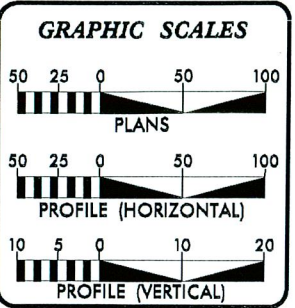
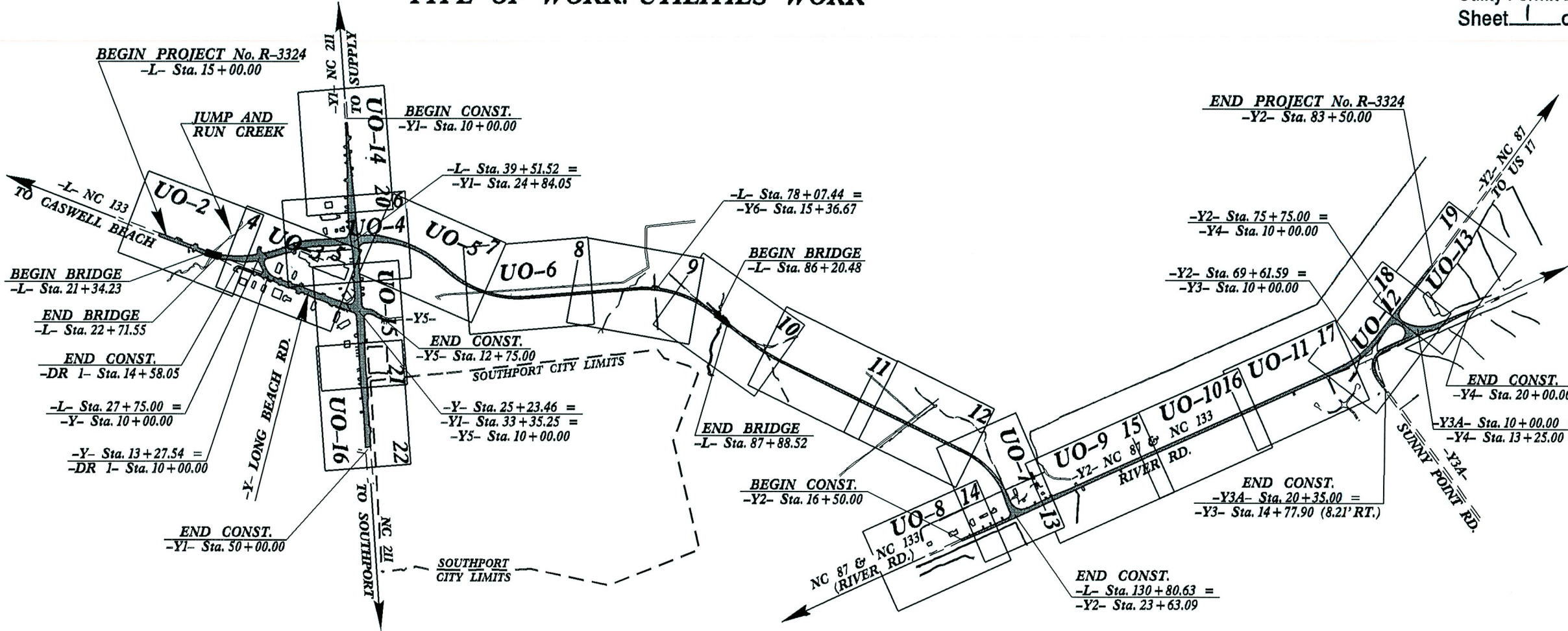
LOCATION: NEW ROUTE FROM NC 133 (LONG BEACH RD.) TO NC 133.

TYPE OF WORK: UTILITIES WORK

T.I.P. NO.	SHEET NO.
R-3324	UO-1



Utility Permit Drawing
Sheet 1 of 17



SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-16	UTILITY BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT
(1) Brunswick EMC - Power
(2) Progress Energy - Power
(3) Atlantic Telephone Membership Corp. - Telephone
(4) AT&T - Telephone
(5) Time Warner Cable - CATV
(6) City of Southport - Prop. 16" Force Main sewer
(7) Brunswick County Public Utilities - 12" F.M. & 12" W.L.

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 256-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER

Steve McKee, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER

Jamshid Hafshejani UTILITIES PROJECT DESIGNER

Utility Permit Drawing
Sheet 2 of 17

SHOULDER BERM GUTTER LOCATIONS
-L- Sta. 20+87 to BEGIN BRIDGE LT.
-L- END BRIDGE to Sta. 27+00 LT.
-L- Sta. 16+00 to Sta. 18+70 RT.
-L- END BRIDGE to Sta. 25+85 RT.
-L- Sta. 28+00 to Sta. 31+00 RT.

BRUNSWICK EMC POWER
& CATV LINES
$$\frac{-BY-25 \text{ PINC } Sta.13+23.87 =}{-L- Sta.22+09.08 (17.22' L}$$

BEGIN BRIDGE
Sta. 2+34.23

SC Sta. 21+23.00

SRUB

SCRUB

AT&T TRENCHLESS
TEL. LINES

MATCH LINE SHEET No. UO-3

16-NOV-2012 12:33
s\Rdy_Ut\Proj\NE\U0-2.dgn
\$\$\$SYCEBNAME\$\$\$

Utility Permit Drawing
Sheet 3 of 17

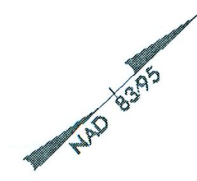


Utility Permit Drawing
Sheet 4 of 17



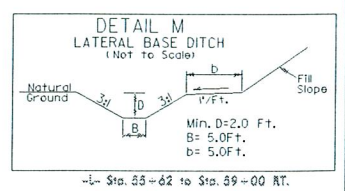
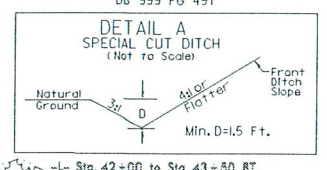
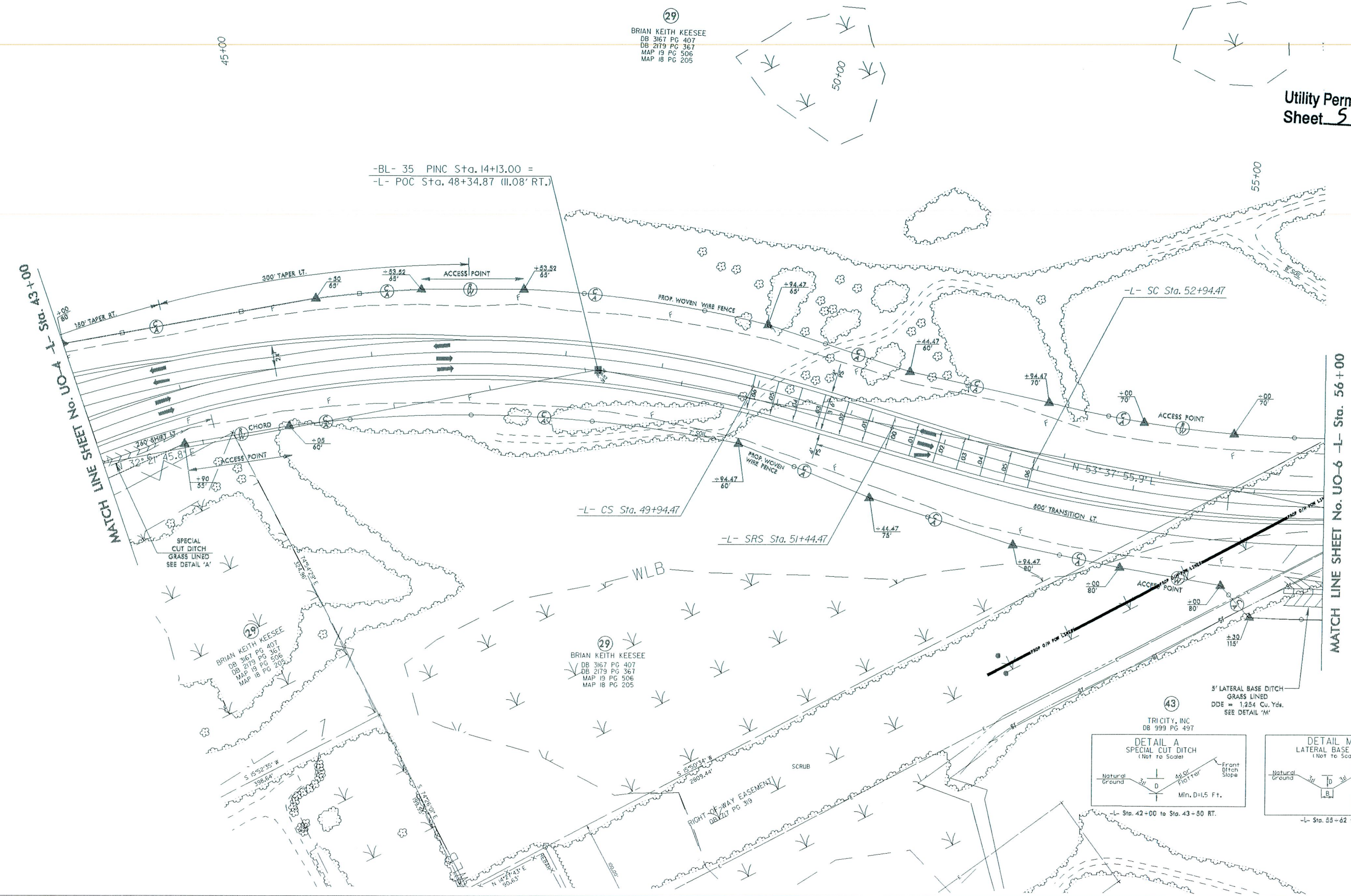
UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS



Utility Permit Drawing
Sheet 5 of 17

PI Sta 46+11.79 Δ = 38° 00' 00.0" (RT) D = 4' 46' 28.7" L = 795.87' T = 413.19' R = 1,200.00'	PIs Sta 50+44.49 Θs = 3' 34' 51.6" Ls = 150.00' LT = 100.02' ST = 50.02'	PIs Sta 52+44.49 Θs = 3' 21' 35.3" Ls = 150.00' LT = 100.02' ST = 50.02'	PI Sta 57+42.12 Δ = 38° 34' 47.6" (LT) D = 4' 28' 47.0" L = 861.21' T = 447.65' R = 1,279.00'
--	--	--	--



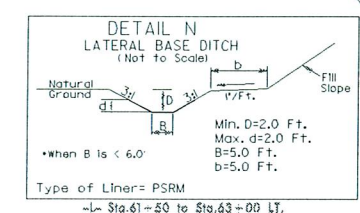
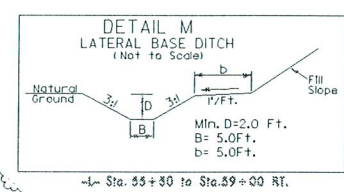
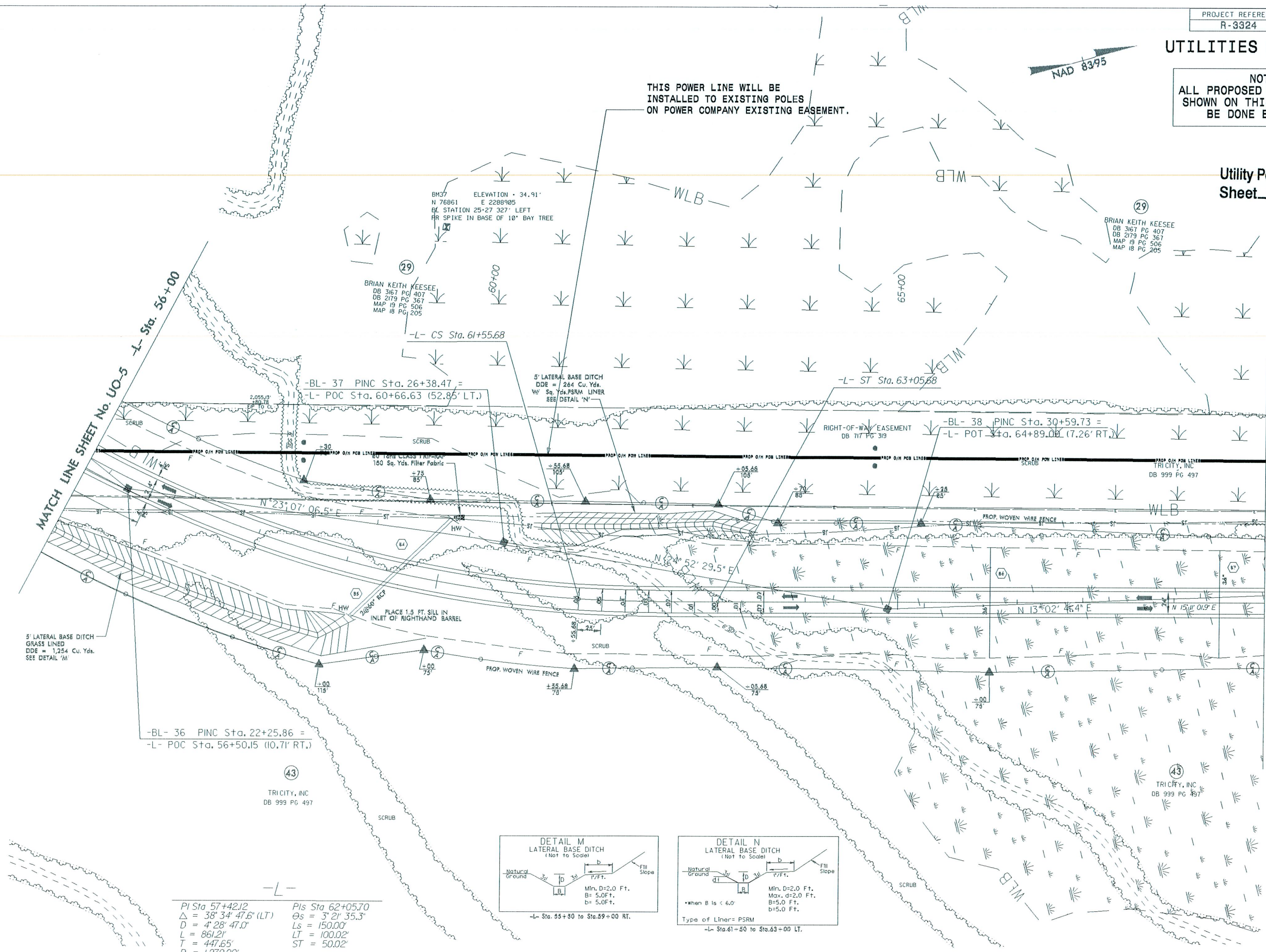
16-NOV-2012 12:27
R3324_Ut_rdy.shx*77.UO-5.dgn
533515614063333

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

Utility Permit Drawing
Sheet 6 of 17

THIS POWER LINE WILL BE
INSTALLED TO EXISTING POLES
ON POWER COMPANY EXISTING EASEMENT.

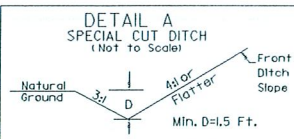


-L-

PI Sta 57+42.12	PIs Sta 62+05.70
$\Delta = 38^\circ 34' 47.6" (LT)$	$\Theta s = 3^\circ 21' 35.3"$
D = 4' 28' 47.0"	Ls = 150.00'
L = 861.21'	LT = 100.02'
T = 447.65'	ST = 50.02'
R = 1,279.00'	

16-NOV-2012 11:58
R:\Projects\3324\UO-6.dgn
R:\Projects\3324\UO-6.dgn
R:\Projects\3324\UO-6.dgn

5/14/99
16-NOV-2012 14:57
R3324-UT.rdy shw#13:UO-7.dgn
333-555-5555



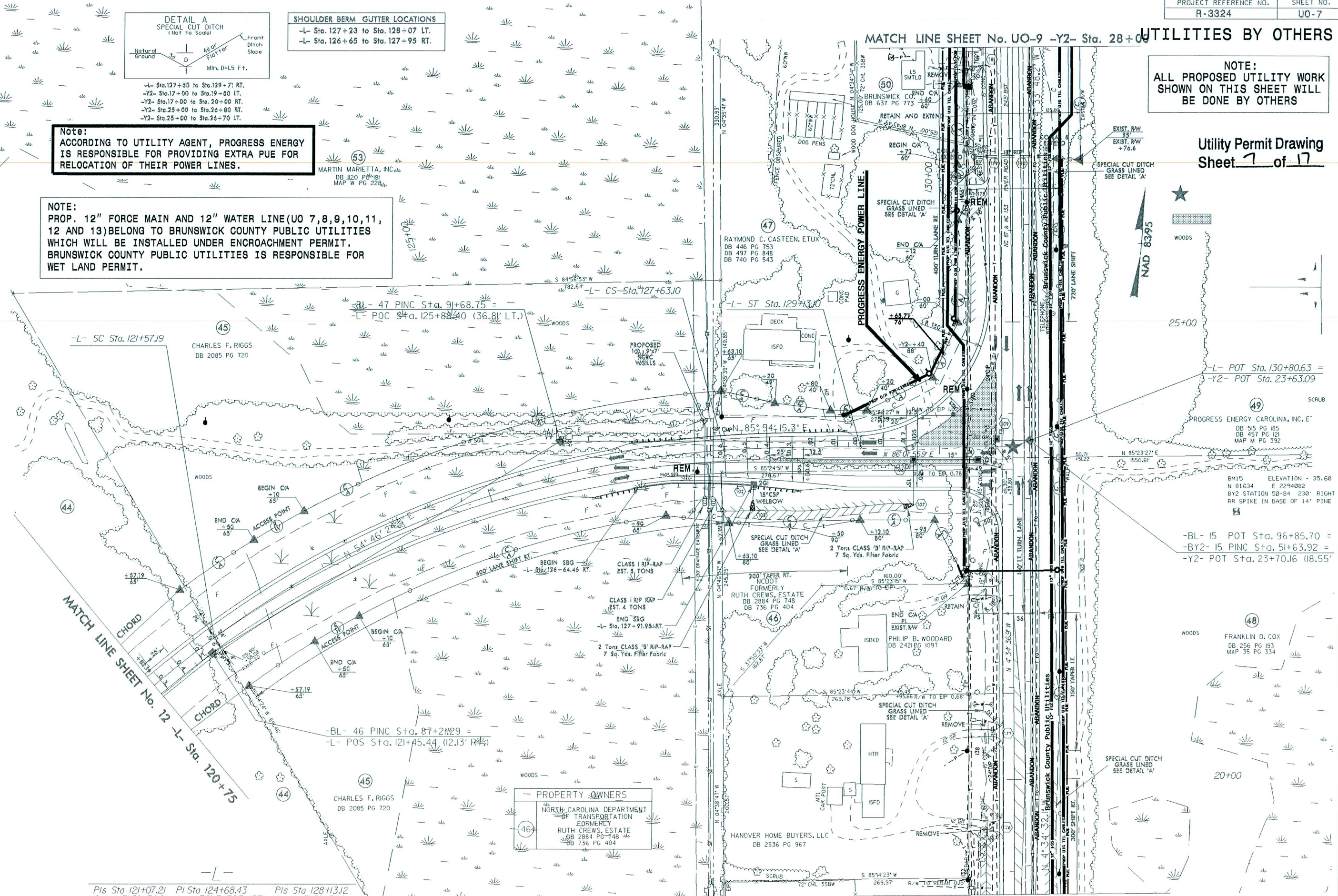
SHOULDER BERM GUTTER LOCATIONS
-L- Sta. 127+23 to Sta. 128+07 LT.
-L- Sta. 126+65 to Sta. 127+95 RT.

Note:
ACCORDING TO UTILITY AGENT, PROGRESS ENERGY
IS RESPONSIBLE FOR PROVIDING EXTRA PUE FOR
RELOCATION OF THEIR POWER LINES.

NOTE:
PROP. 12" FORCE MAIN AND 12" WATER LINE(UO 7,8,9,10,11,
12 AND 13)BELONG TO BRUNSWICK COUNTY PUBLIC UTILITIES
WHICH WILL BE INSTALLED UNDER ENCROACHMENT PERMIT.
BRUNSWICK COUNTY PUBLIC UTILITIES IS RESPONSIBLE FOR
WET LAND PERMIT.

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

Utility Permit Drawing
Sheet 7 of 17



Pls Sta 121+07.21	Pl Sta 124+68.43	Pls Sta 128+13.12
Os = 3' 59' 50.6"	Os = 32' 17' 38.7" (RT)	Os = 3' 59' 50.6"
Ls = 150.00'	D = 5' 19' 47.4"	Ls = 150.00'
LT = 100.03'	L = 605.91'	LT = 100.03'
ST = 50.02'	T = 311.24'	ST = 50.02'
	R = 1,075.00'	

MATCH LINE SHEET No. UO-8 -Y2- Sta. 18+75

16-NOV-2012 14:53
R:\PROJECTS\3324\UT\RDJ\SH14\U0-8.dgn
USER:RDJ

5/14/99

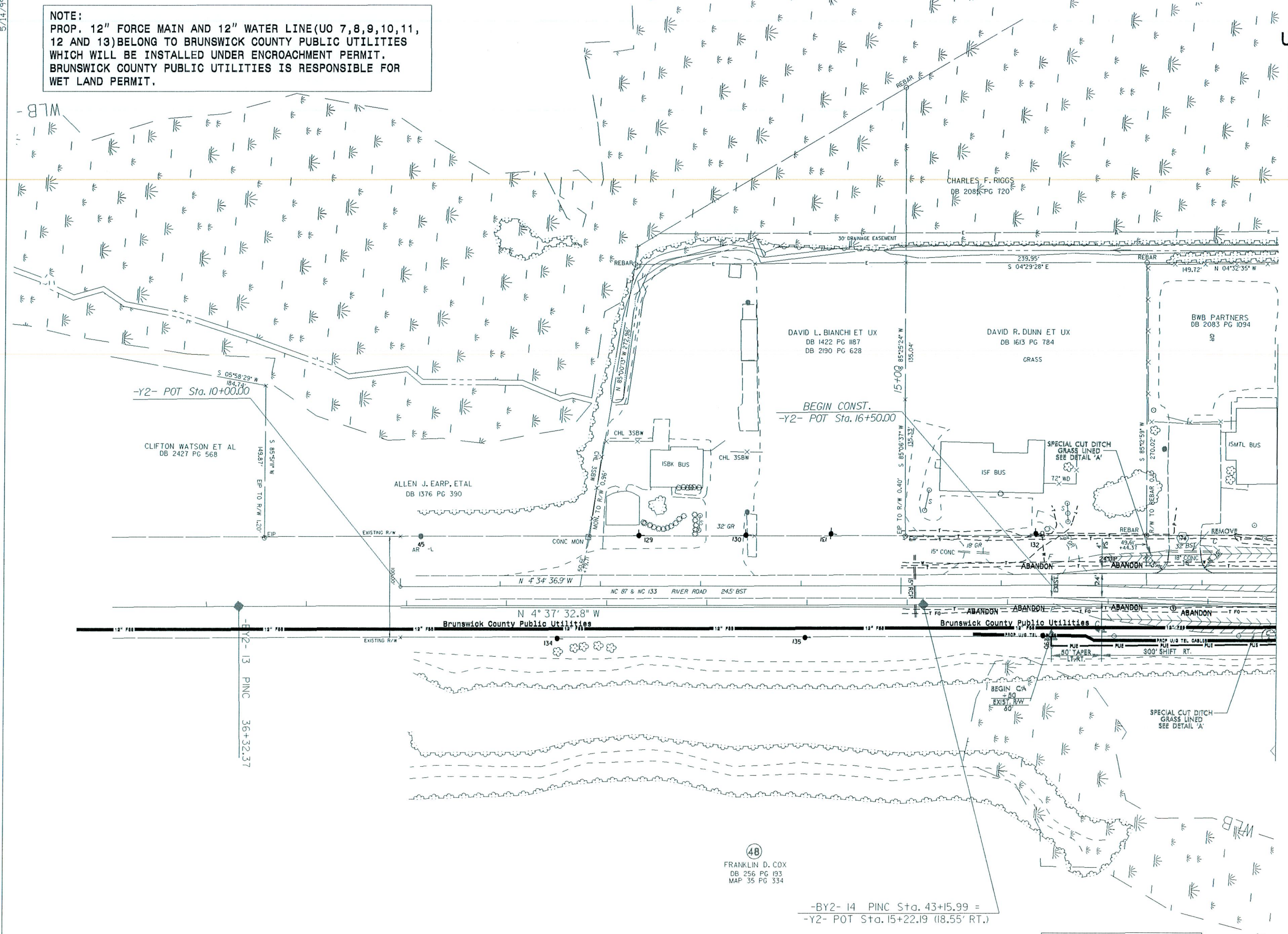
NOTE:
PROP. 12" FORCE MAIN AND 12" WATER LINE(UO 7,8,9,10,11,
12 AND 13)BELONG TO BRUNSWICK COUNTY PUBLIC UTILITIES
WHICH WILL BE INSTALLED UNDER ENCROACHMENT PERMIT.
BRUNSWICK COUNTY PUBLIC UTILITIES IS RESPONSIBLE FOR
WET LAND PERMIT.

PROJECT REFERENCE NO.	SHEET NO.
R-3324	UO-8

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

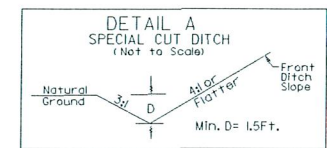
Utility Permit Drawing
Sheet 8 of 17



MATCH LINE SHEET No. UO-7 -Y2- Sta. 18+75

(48)
FRANKLIN D. COX
DB 256 PG 193
MAP 35 PG 334

-BY2- 14 PINC Sta. 43+15.99 =
-Y2- POT Sta. 15+22.19 (18.55' RT.)



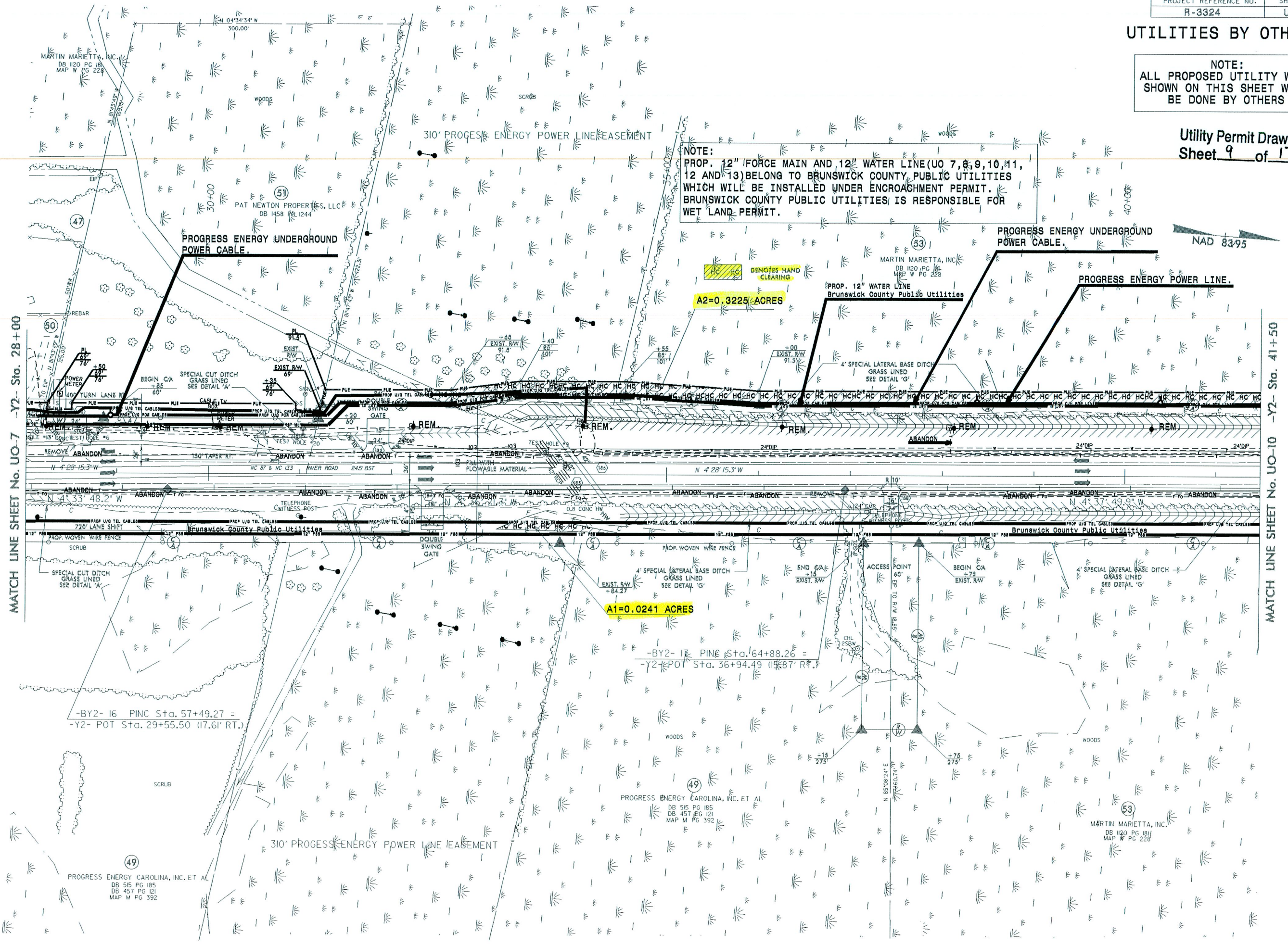
-Y2- Sta. 17+00 to Sta. 19+50 LT.
-Y2- Sta. 17+00 to Sta. 20+00 RT.

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

Utility Permit Drawing
Sheet 9 of 17

NOTE:
PROP. 12" FORCE MAIN AND 12" WATER LINE (UO 7, 8, 9, 10, 11, 12 AND 13) BELONG TO BRUNSWICK COUNTY PUBLIC UTILITIES WHICH WILL BE INSTALLED UNDER ENCROACHMENT PERMIT. BRUNSWICK COUNTY PUBLIC UTILITIES IS RESPONSIBLE FOR WET LAND PERMIT.



16-NOV-2012 14:52
R:\PROJECTS\3324-UO-9.dgn
USER:R3324

DETAIL G
SPECIAL LATERAL BASE DITCH
 (Not to Scale)

Natural Ground 3:1 10 4:1 or flatter Fill Slope

Min. D=1.5 Ft.
 B=4.0 Ft.

-Y2-- Sta. 41+50 to Sta. 54+50 LT.
 -Y2-- Sta. 41+50 to Sta. 54+50 RT.

Utility Permit Drawing
Sheet 10 of 17



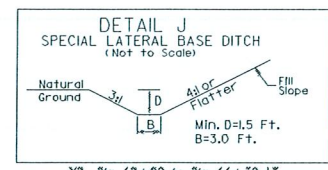
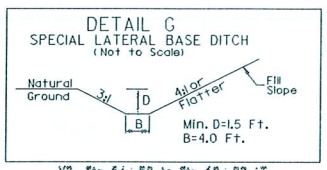
UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

Utility Permit Drawing
Sheet 11 of 17



-Y2-
Pls Sta 66+86.71
Os = 3' 42' 16.1"
Ls = 150.00'
LT = 100.02'
ST = 50.02'



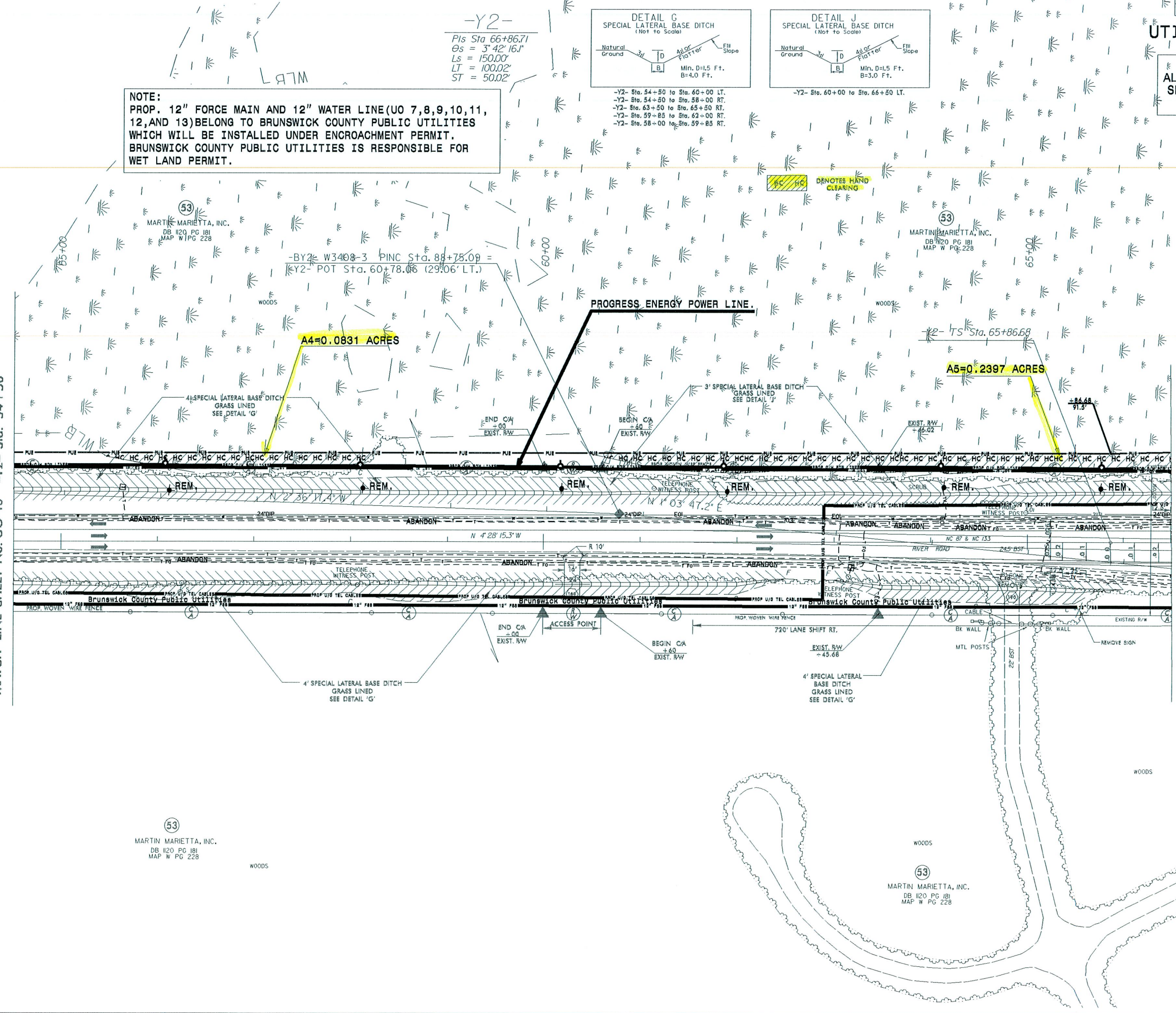
NOTE:
PROP. 12" FORCE MAIN AND 12" WATER LINE (UO 7,8,9,10,11,
12, AND 13) BELONG TO BRUNSWICK COUNTY PUBLIC UTILITIES
WHICH WILL BE INSTALLED UNDER ENCROACHMENT PERMIT.
BRUNSWICK COUNTY PUBLIC UTILITIES IS RESPONSIBLE FOR
WET LAND PERMIT.

-Y2- Sta. 54+50 to Sta. 60+00 LT.
-Y2- Sta. 54+50 to Sta. 58+00 RT.
-Y2- Sta. 63+50 to Sta. 65+50 RT.
-Y2- Sta. 59+85 to Sta. 62+00 RT.
-Y2- Sta. 58+00 to Sta. 59+85 RT.

-Y2- Sta. 60+00 to Sta. 66+50 LT.

MATCH LINE SHEET No. UO-10 -Y2- Sta. 54+50

MATCH LINE SHEET No. UO-12 -Y2- Sta. 66+50



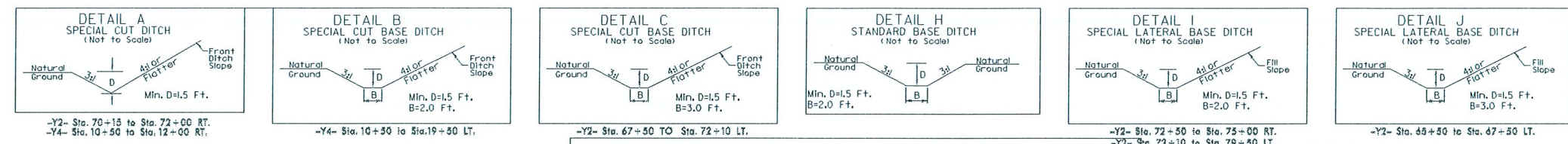
(53)
MARTIN MARIETTA, INC.
DB 1120 PG 181
MAP W PG 228

(53)
MARTIN MARIETTA, INC.
DB 1120 PG 181
MAP W PG 228

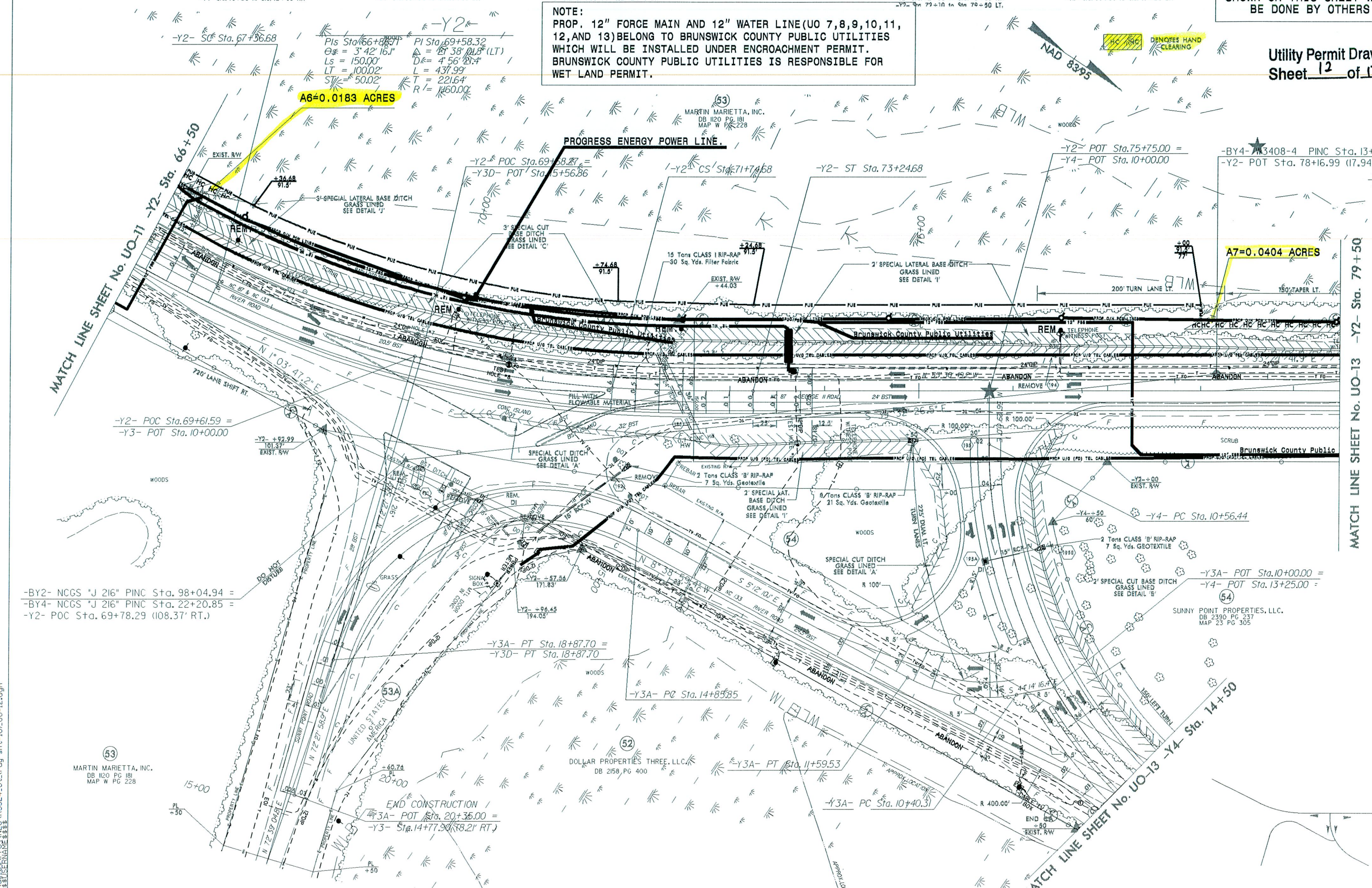
UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

Utility Permit Drawing
Sheet 12 of 17



NOTE:
PROP. 12" FORCE MAIN AND 12" WATER LINE (UO 7,8,9,10,11,
12, AND 13) BELONG TO BRUNSWICK COUNTY PUBLIC UTILITIES
WHICH WILL BE INSTALLED UNDER ENCROACHMENT PERMIT.
BRUNSWICK COUNTY PUBLIC UTILITIES IS RESPONSIBLE FOR
WET LAND PERMIT.

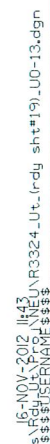


A6=0.0183 ACRES

A7=0.0404 ACRES

16-NOV-2012 11:45
R3324-UT-rdy sht#18_UO-12.dgn
SUNNY POINT PROPERTIES, LLC.

Utility Permit Drawing
Sheet 13 of 17

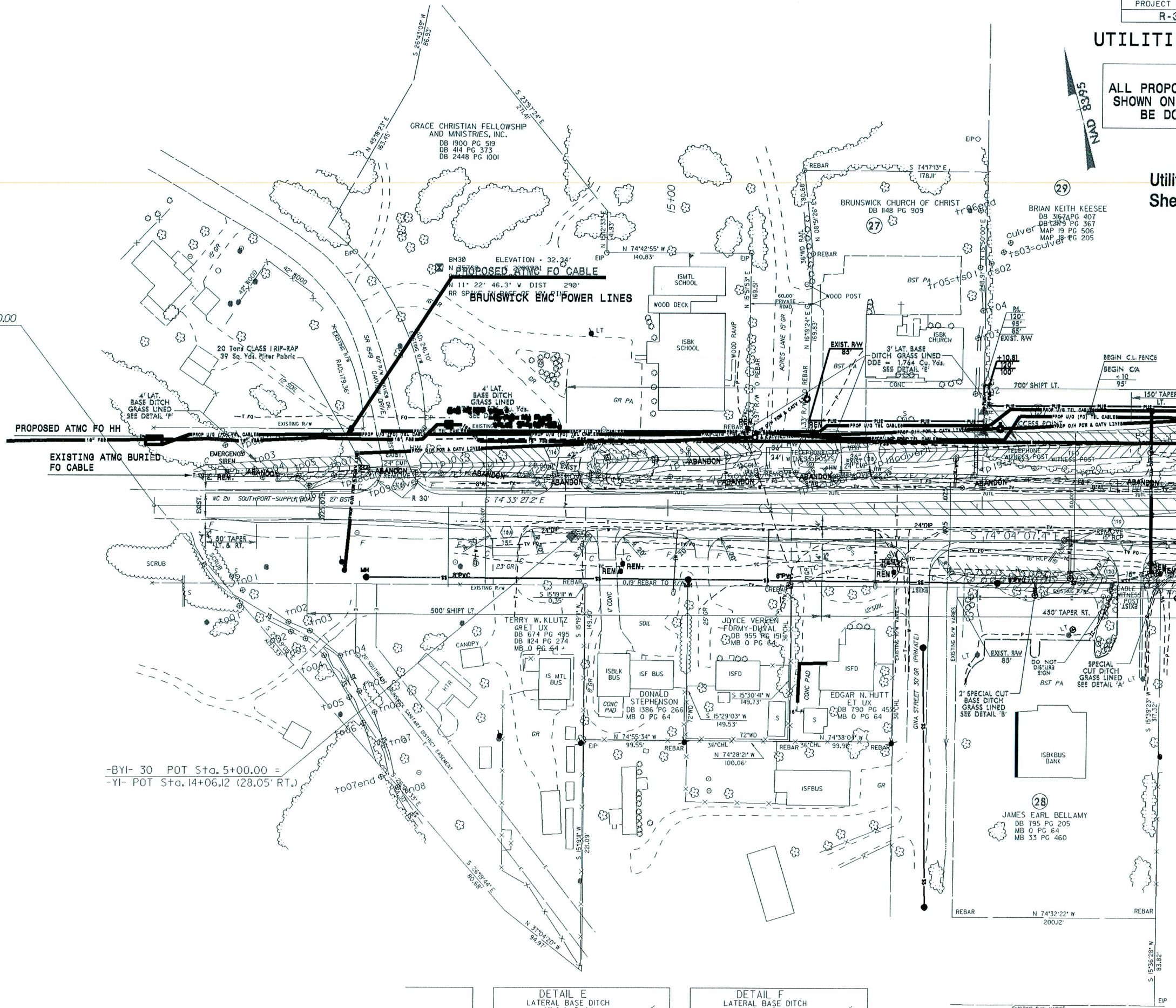


UTILITIES BY OTHERS

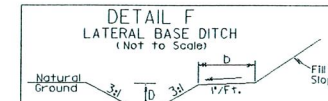
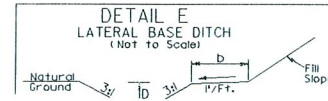
NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

Utility Permit Drawing
Sheet 14 of 17

-Y1- POT Sta. 10+00.00



-BYI- 30 POT Sta. 5+00.00 =
-Y1- POT Sta. 14+06.12 (28.05' RT.)

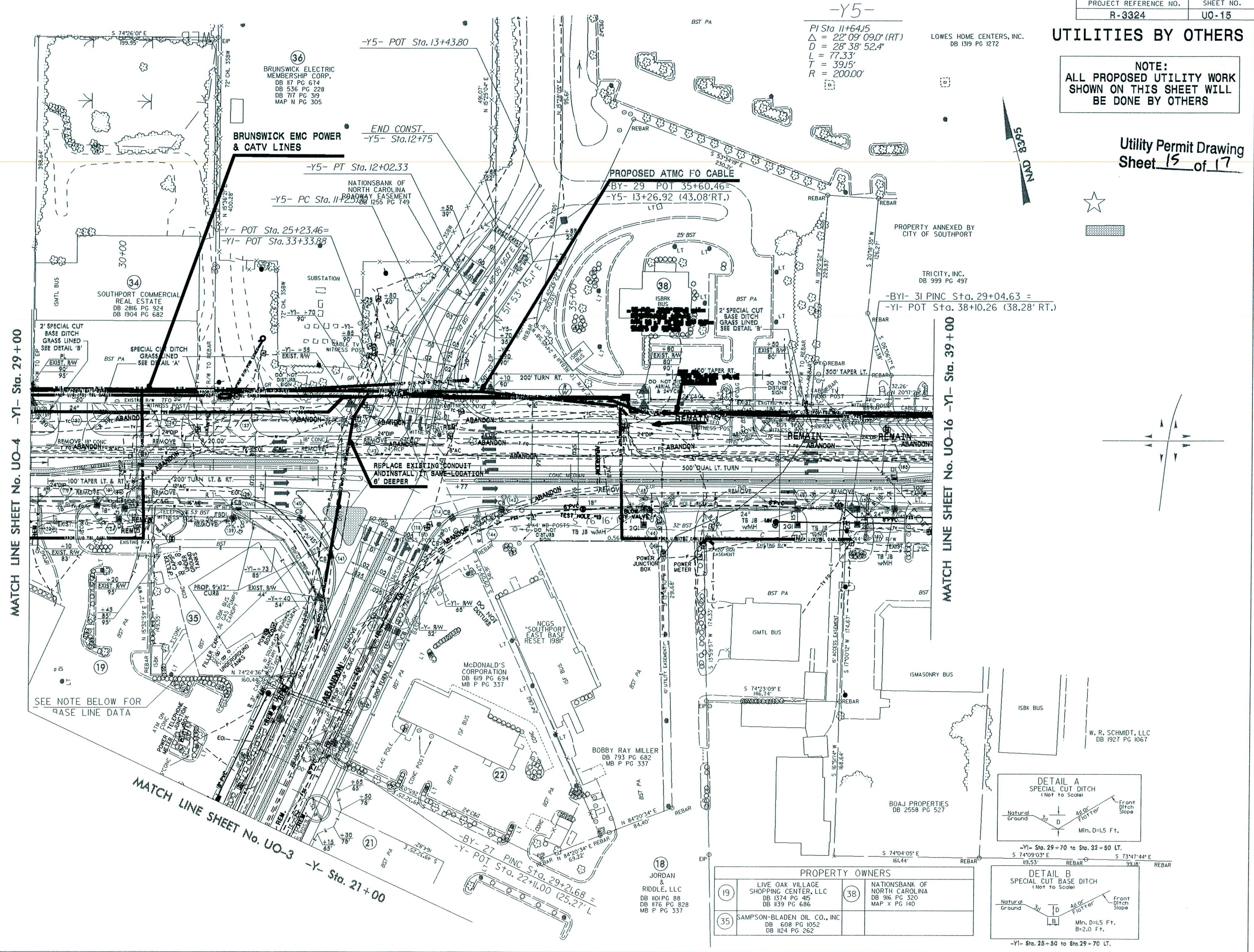


5/14/99

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

Utility Permit Drawing
Sheet 15 of 17



MATCH LINE SHEET No. UO-4 -Y1- Sta. 29+00

MATCH LINE SHEET No. UO-16 -Y1- Sta. 39+00

MATCH LINE SHEET No. UO-3 -Y- Sta. 21+00

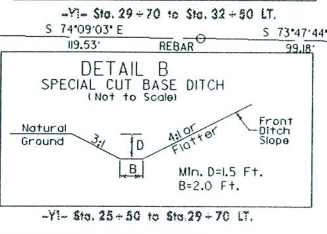
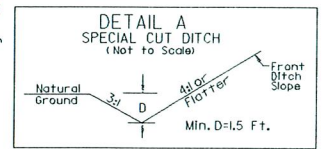
-Y5-
PI Sta 11+64.15
 $\Delta = 22^\circ 09' 09.0''$ (RT)
 $D = 28^\circ 38' 52.4''$
 $L = 77.33'$
 $T = 39.15'$
 $R = 200.00'$

LOWES HOME CENTERS, INC.
DB 1319 PG 1272

TRICITY, INC.
DB 999 PG 497

-BY1- 31 PINC Sta. 29+04.63 =
-Y1- POT Sta. 38+10.26 (38.28' RT.)

SEE NOTE BELOW FOR
BASE LINE DATA



PROPERTY OWNERS			
19	LIVE OAK VILLAGE SHOPPING CENTER, LLC DB 1374 PG 415 DB 1139 PG 686	38	NATIONSBANK OF NORTH CAROLINA DB 916 PG 320 MAP X PG 140
35	SAMPSON-BLADEN OIL CO., INC. DB 608 PG 1052 DB 1124 PG 262		

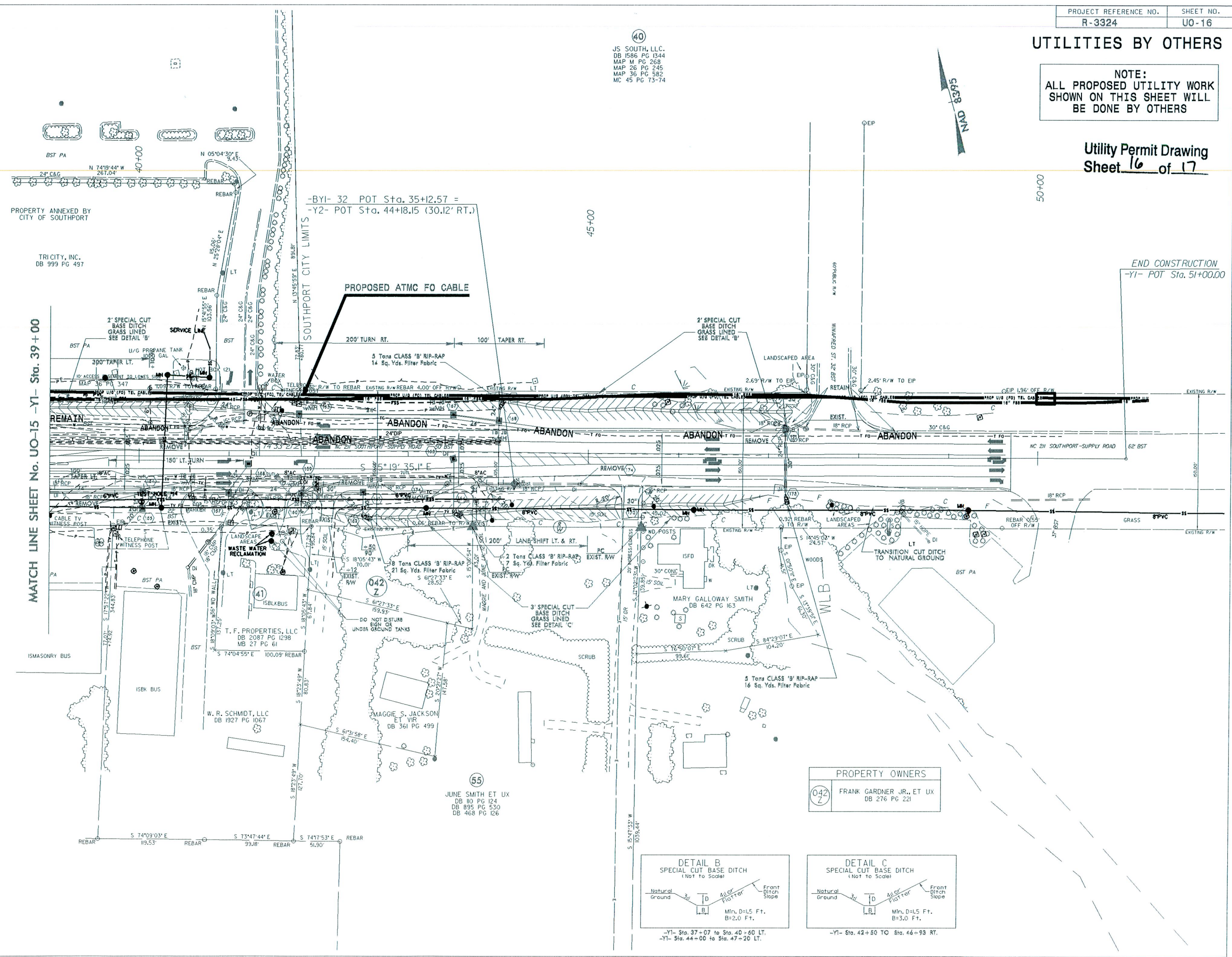
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C:\PROJECTS\NEW\U0-15.dgn
USER:R3324-UT-15

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

Utility Permit Drawing
Sheet 16 of 17

END CONSTRUCTION
-Y1- POT Sta. 51+00.00



MATCH LINE SHEET No. UO-15 -Y1- Sta. 39+00

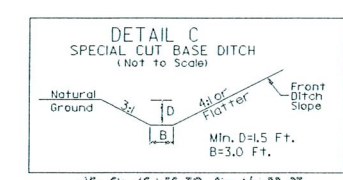
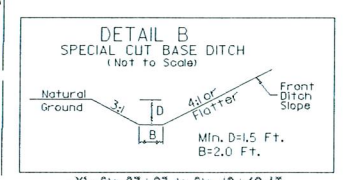
PROPERTY ANNEXED BY
CITY OF SOUTHPORT

TRI CITY, INC.
DB 999 PG 497

-BYI- 32 POT Sta. 35+12.57 =
-Y2- POT Sta. 44+18.15 (30.12' RT.)

PROPOSED ATMC FO CABLE

PROPERTY OWNERS
042 Z
FRANK GARDNER JR., ET UX
DB 276 PG 221



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)
A1&A2	sheet UO-9	O/H Power Line	<0.01				0.36					
A3	sheet UO-10	O/H Power Line	<0.01				0.40					
A4&A5	sheet UO-11	O/H Power Line	<0.01				0.32					
A6&A7	sheet UO-12	O/H Power Line	<0.01				0.06					
A8	sheet UO-13	O/H Power Line	<0.01				0.03					
TOTALS:			<0.01	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.00	0.00

Some proposed underground utilities will be installed by trenchless installation thru the wetlands.

Utility Permit Drawing
Sheet 17 of 17

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY
TIP PROJECT (R-3324)