

**PROJECT SPECIAL PROVISION**

(10-18-95)

Z-1

**PERMITS**

The Contractor's attention is directed to the following permits, which have been issued to the Department of Transportation by the authority granting the permit.

<b><u>PERMIT</u></b>	<b><u>AUTHORITY GRANTING THE PERMIT</u></b>
Dredge and Fill and/or Work in Navigable Waters (404)	U. S. Army Corps of Engineers
State Dredge and Fill and/or CAMA	Division of Coastal Management, DENR State of North Carolina
Water Quality (401)	Division of Environmental Management, DENR State of North Carolina
Stormwater	Division of Environmental and Natural Resources, DENR, State of North Carolina

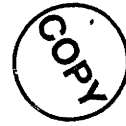
The Contractor shall comply with all applicable permit conditions during construction of this project. Those conditions marked by \* are the responsibility of the department and the Contractor has no responsibility in accomplishing those conditions.

Agents of the permitting authority will periodically inspect the project for adherence to the permits.

The Contractor's attention is also directed to Articles 107-10 and 107-14 of the *Standard Specifications* and the following:

Should the Contractor propose to utilize construction methods (such as temporary structures or fill in waters and/or wetlands for haul roads, work platforms, cofferdams, etc.) not specifically identified in the permit (individual, general, or nationwide) authorizing the project it shall be the Contractor's responsibility to coordinate with the Engineer to determine what, if any, additional permit action is required. The Contractor shall also be responsible for initiating the request for the authorization of such construction method by the permitting agency. The request shall be submitted through the Engineer. The Contractor shall not utilize the construction method until it is approved by the permitting agency. The request normally takes approximately 60 days to process; however, no extensions of time or additional compensation will be granted for delays resulting from the Contractor's request for approval of construction methods not specifically identified in the permit.

**Where construction moratoriums are contained in a permit condition which restricts the Contractor's activities to certain times of the year, those moratoriums will apply only to the portions of the work taking place in the waters or wetlands provided that activities outside those areas is done in such a manner as to not affect the waters or wetlands.**



DEPARTMENT OF THE ARMY PERMIT

Permittee **North Carolina Department of Transportation, Dr. Gregory Thorpe**

Permit No. **SAW 1994-02124**

Issuing Office **CESAW-RG-W**

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 TIP project R-2414 A & B involves the widening of an existing two lane road facility to a multi-lane facility for approximately 5.5 miles. The project would permanently impact 4.35 acres of wetlands, 0.11 acres of surface waters and 296 linear feet of stream. The project would temporarily impact 10.41 acres of wetlands and 174 linear feet of stream.**

Project Location: **This project is located along US 158/NC 34 just east of the Pasquotank River to the US 158/NC 34 split in Belcross, adjacent to the Pasquotank River and unnamed tributaries to the Pasquotank River and Sawyers Creek in Camden County, North Carolina.**

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2013**. 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).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

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

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

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

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.



SPECIAL CONDITIONS (Action ID. 199402124; NCDOT/TIP R-2414A&B)

## COMPLIANCE WITH PLANS



a) All work must be performed in strict compliance with the attached plans, which are a part of this permit. Any modification to the permit plans must be approved by the USACE prior to implementation.

## ACTIVITIES NOT AUTHORIZED

b) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill, or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands, nor shall any activities take place that cause the degradation of waters or wetlands. In addition, 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, into, or out of waters or wetlands or to reduce the reach of waters or wetlands.

This permit does not authorize temporary placement or double handling of excavated or fill material within jurisdictional waters, including wetlands, outside the permitted area. Additionally, no construction materials or equipment will be placed or stored within jurisdictional waters, including wetlands.

## CONSTRUCTION PLANS

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

d) Prior to commencing construction within jurisdictional waters of the United States for any portion of the proposed project, the permittee shall forward the latest version of project construction drawings to the Corps of Engineers, Washington Regulatory Field Office NCDOT Regulatory Project Manager. Half-size drawings will be acceptable.

## POLLUTION SPILLS

e) All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. No equipment staging or storage of construction material will occur in

wetlands. Hydro-seeding equipment will not be discharged or washed out into any surface waters or wetlands. 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) 733-5083 or (800) 662-7956 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

#### NOTIFICATION

f) The permittee shall advise the Corps in writing at least two weeks prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.

#### CLEAN FILL MATERIAL

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

#### IN-WATER MORATORIUM

h) A construction moratorium for anadromous and resident fisheries from February 15 through June 15 of any year will be adhered to for in-water work.

i) The permittee will follow NCDOT adopted anadromous fish stream crossing guidelines.

#### CONTRACTOR COMPLIANCE

j) 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, and any authorized modifications. A copy of this permit, and any authorized modifications, including all conditions, shall be available at the project site during construction and maintenance of this project.

#### SEDIMENTATION AND EROSION CONTROL MEASURES

k) 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. 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.

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

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 nonerodable materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.

No fill or excavation for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless it is included on the plan drawings and specifically authorized by this permit.

#### REPORTING OF VIOLATIONS

l) The permittee will report any violation of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act in writing to the Corps of Engineers, Washington Regulatory Field Office NCDOT Regulatory Project Manager, within 24 hours of the permittee's discovery of the violation.

#### COMPLIANCE WITH SPECIAL CONDITIONS

m) Failure to institute and carry out the details of these special conditions, will result in a directive to cease all ongoing and permitted work within waters and/or wetlands associated with the permitted project, or such other remedies and/or fines as the District Engineer or his authorized representatives may seek.

#### WET CONCRETE

n) The permittee shall take measures to prevent live or fresh concrete from coming into contact with any surface waters until the concrete has hardened.

#### CULVERTS

o) All authorized culverts will be installed to allow the passage of low stream flows and the continued movement of fish and other aquatic life as well as to prevent headcutting of

the streambed. For all box culverts and for pipes greater than 48 inches in diameter, the bottom of the pipe will be buried at least one foot below the bed of the stream unless burial would be impractical and the Corps of Engineers has waived this requirement. For culverts 48 inches in diameter or smaller, the bottom of the pipe must be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to, upstream or downstream of the structures. In order to allow for the continued movement of bed load and aquatic organisms, existing stream channel widths and depths will be maintained at the inlet and outlet ends of culverts. Riprap armoring of streams at culvert inlets and outlets shall be minimized above the ordinary high water elevation in favor of bioengineering techniques such as bank sloping, erosion control matting and revegetation with deep-rooted, woody plants.

#### PRECONSTRUCTION MEETING

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

#### BORROW AND WASTE

q) 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 Corps of Engineers 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 Corps of Engineers before approving any borrow or waste sites that are within 400 feet of any streams or wetlands. All jurisdictional wetland boundaries on borrow and waste sites shall be verified by the Corps of Engineers and shown on the approved reclamation plans. The permittee shall ensure that all such areas comply with Special Condition b) of this permit, and shall require and maintain documentation of the location and characteristics of all borrow and disposal sites



associated with this project. This information will include data regarding soils, vegetation and hydrology sufficient to clearly demonstrate compliance with the Special Condition b). All information will be available to the Corps of Engineers upon request. NCDOT shall require its contractors to complete and execute reclamation plans for each waste and borrow site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the Corps of Engineers within 30 days of the completion of the reclamation work.

#### SECTION 106 (NATIONAL HISTORIC PRESERVATION ACT)

r) Project construction shall not commence for section B of the project until NCDOT has completed all the requirements and implemented the stipulations agreed to by NCDOT, State Historic Preservation Office (SHPO) and the Federal Highway Administration (FHWA) regarding the relocation of the Creekmore Store which is to be relocated to the rear of the property away from US 158/NC 34.

s) NCDOT will avoid impacting the Sawyer Graveyard. NCDOT will mark the graveyard prior to beginning construction activities with orange protective fencing.

#### EEP MITIGATION

t) Compensatory mitigation for the unavoidable impacts to 4.35 acres of riverine wetlands and 246 linear feet of stream associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated July 14, 2008 from William D. Gilmore, EEP Director. Pursuant to the EEP Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corps of Engineers signed on July 22, 2003, the EEP will provide 8.7 acres of restoration equivalent riverine wetlands and 492 linear feet of restoration equivalent warm water stream channel in the Pasquotank River basin (Hydrologic Cataloging Unit 03010205) by one year of the date of this permit. For wetlands, a minimum of 1:1 (impact to mitigation) must be in the form of wetland restoration. The NCDOT shall, within 30 days of the issue date of this permit, certify that sufficient funds have been provided to EEP to complete the required mitigation, pursuant to Paragraph V. of the MOA.



**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 (DWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 14.79 acres of jurisdictional wetlands, and 545 linear feet of jurisdictional streams in Camden County. The project shall be constructed pursuant to the application dated received October 21, 2008. The authorized impacts are as described below:

**Stream Impacts in the Pasquotank River Basin**

Site	Permanent Fill in Intermittent Stream (linear ft.)	Temporary Fill in Intermittent Stream (linear ft.)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
<b>R-2414A</b>						
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	75	105	180	0
<b>TOTAL:</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>105</b>	<b>180</b>	<b>0</b>
<b>R-2414B</b>						
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	121	29	150	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	92	21	113	0
7	0	0	83	19	102	0
<b>TOTAL:</b>	<b>0</b>	<b>0</b>	<b>296</b>	<b>69</b>	<b>365</b>	<b>0</b>
<b>PROJECT TOTAL:</b>	<b>0</b>	<b>0</b>	<b>371</b>	<b>174</b>	<b>545</b>	<b>0</b>

**Total Stream Impact for Project: 470 linear feet**



**Wetland Impacts in the Pasquotank River Basin**

Site	Fill (permanent) (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)*	Total Wetland Impact (ac)
<b>R-2414A</b>						
1	0.01	0	0	0	0.19	0.20
2	0	0	0	0	0.07	0.07
3	0.01	0	0	0	0.18	0.19
4	0.03	0	0	0	0.34	0.37
5	0.01	0	0	0	0.07	0.08
6	0.02	0	0	0	2.00	2.02
7	0.12	0	0	0	0.54	0.66
8	1.46	0	0	0	1.96	3.42
9	0.01	0	0	0	0.04	0.05
10	0.18	0	0	0	4.08	4.26
11	0	0	0	0	0.01	0.01
<b>TOTAL:</b>	<b>1.85</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.48</b>	<b>11.33</b>
<b>R-2414B</b>						
1	0	0	0	0	0.01	0.01
2	0.09	0	0	0	0.05	0.14
3	0.95	0	0.09	0	0.26	1.3
4	0.06	0	0	0	0.04	0.1
5	0.08	0	0	0	0.06	0.14
6	0.85	0	0.01	0	0.37	1.23
7	0.38	0	0	0	0.16	0.54
<b>TOTAL:</b>	<b>2.41</b>	<b>0.00</b>	<b>0.10</b>	<b>0.00</b>	<b>0.95</b>	<b>3.46</b>
<b>PROJECT TOTAL:</b>	<b>4.26</b>	<b>0.00</b>	<b>0.10</b>	<b>0.00</b>	<b>10.43</b>	<b>14.79</b>

\* Totals include areas to be hand cleared for utility relocations  
**Total Wetland Impact for Project: 14.79 acres.**  
**Total Wetland Impacts Requiring Mitigation: 4.36 acres**

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

This approval is only valid for the purpose and design that you submitted in your application dated received October 21, 2008. Should your project change, you are required to notify the DWQ 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.

## Conditions of Certification:

### Project Specific Conditions

1. In accordance with commitments made in your application, mechanized clearing shall not be used for the purpose of clearing vegetation in relocating overhead power lines within jurisdictional wetlands.
2. 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*.
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. Except as noted in Condition #3, the placement of culverts and other structures in waters, streams, and wetlands 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 down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ for guidance on how to proceed and to determine whether or not a modification to this certification will be required.
5. 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.
6. The permittee will need to adhere to all appropriate in-water work moratoriums (including the use of pile driving or vibration techniques) prescribed by the NC Wildlife Resources Commission, the US Fish and Wildlife Service, and National Marine Fisheries Service. No in-water work is permitted between February 15 and June 15 of any year, without prior approval from the NC Division of Water Quality and the NC Wildlife Resources Commission. In addition, the permittee shall conform to the NCDOT policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997) at all times.
7. Where the existing culvert at Site 11 on Section A of the project will be removed, the banks shall be graded to match existing bank slopes. Additionally, any open areas shall be planted within two weeks after culvert removal with appropriate vegetation in order to stabilize the banks and surrounding areas.



8. 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 unless prior written approval is given by DWQ first.
9. All pile driving or drilling activities shall be enclosed in turbidity curtains unless otherwise approved by DWQ in this certification.
10. Turbidity curtains shall be used to isolate all work areas from the stream at UT to Pasquotank River at Site 11, including pile or casement installation, placement of riprap, excavation or filling. Strict adherence to the Construction and Maintenance Best Management Practices will be required.
11. No utilities shall be relocated into jurisdictional wetland areas.
12. Compensatory mitigation for impacts to 4.36 acres of 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 14, 2008 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the Tri-Party MOA signed on July 22, 2003 and the Dual-Party MOA signed on April 12, 2004.

### General Conditions

13. 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.
14. 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.
15. 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.
16. 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.
17. The Permittee shall ensure that the final design drawings adhere to the certification and to the drawings submitted for approval.
18. 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.
19. 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.
20. 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.



21. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
22. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
23. 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 DWQ 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, DWQ may reevaluate and modify this certification.
24. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification.
25. A copy of this Water Quality Certification shall be maintained on site at the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
26. The outside buffer, wetland or water boundary located within the construction corridor approved by this certification shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.
27. 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.
28. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
- \* 29. Upon completion of the project (including any impacts at associated borrow or waste site), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed.
30. Native riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
31. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this certification without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.
32. 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:
33. 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*.



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34. 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.
35. 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*.
36. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
37. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

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

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

This the 18th day of December 2008

DIVISION OF WATER QUALITY

Coleen Sullins  
Director

WQC No. 003774



DWQ Project No.: \_\_\_\_\_ County: \_\_\_\_\_

Applicant: \_\_\_\_\_

Project Name: \_\_\_\_\_

Date of Issuance of 401 Water Quality Certification: \_\_\_\_\_

### \* Certificate of Completion

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

#### **Applicant's Certification**

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

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### **Agent's Certification**

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

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### **If this project was designed by a Certified Professional**

I, \_\_\_\_\_, as a duly registered Professional \_\_\_\_\_ (i.e., Engineer, Landscape Architect, Surveyor, etc.) 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 \_\_\_\_\_



**PAGES 139 thru 143**

**HAVE BEEN**

**INTENTIONALLY**

**OMITTED**

Permit Class  
NEW

144

Permit Number  
03-09

STATE OF NORTH CAROLINA  
Department of Environment and Natural Resources  
and  
Coastal Resources Commission

# Permit

for

X Major Development in an Area of Environmental Concern  
pursuant to NCGS 113A-118

X Excavation and/or filling pursuant to NCGS 113-229

Issued to N.C. Department of Transportation, 1598 Mail Service Center, Raleigh, NC 27699-1598

Authorizing development in Camden County at unnamed tributary to the Pasquotank River,  
US 158 widening, as requested in the permittee's application dated 10/14/08 (MP-1 and MP-2)  
and 10/24/08 (MP-5), including the attached workplan drawings (121) as referenced in Condition No. 1 of this permit.

This permit, issued on 1/12/09, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

### TIP No. R-2414, Roadway Widening

- 1) All work authorized by this permit shall be carried out in accordance with the following attached workplan drawing(s), except as modified herein.

Permit drawings (R-2414A): 22 sheets dated 6/18/08; 6 sheets dated 3/3/08; 3 sheets undated

Permit drawings (R-2414B): 2 sheets dated 6/20/08; 3 sheets dated 4/21/08; 18 sheets dated 6/18/08; 3 sheets undated; 5 sheets dated 6/16/08

Utility drawings (R-2414A): 12 sheets dated 4/7/08; 1 sheet dated 7/3/08

Utility drawings (R-2414B): 12 sheets dated 5/14/08; 2 sheets dated 7/3/08

Roadway Design drawings (R-2414A): 17 sheets dated 2/22/08; 1 sheet dated 3/4/08

Roadway Design drawings (R-2414B): 13 sheets dated 5/13/08; 1 sheet dated 5/14/08

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

### No expiration date, pursuant to GS 136-44.7B

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.

James H. Gregson, Director  
Division of Coastal Management

This permit and its conditions are hereby accepted.

Signature of Permittee

## ADDITIONAL CONDITIONS

- 2) In accordance with commitments made by the permittee, no in-water work shall be conducted between February 15<sup>th</sup> to June 15<sup>th</sup> of any year without prior approval of the N.C. Division of Coastal Management (DCM), in consultation with the N.C. Wildlife Resources Commission (WRC).
- 3) All pipe and culvert bottoms shall be buried at least one foot below normal bed elevation when they are placed within the Public Trust Area of Environmental Concern (AEC) as designated by the Coastal Area Management Act (CAMA). Culverts placed in wetlands are not subject to this burial requirement.
- 4) Wetlands shall not be crossed in transporting equipment to the project site, without prior approval from DCM.
- 5) Fill slopes in wetlands and Waters of the State shall be 3:1 or steeper.
- 6) In accordance with commitments made by the permittee, all clearing within wetlands shall be accomplished by hand clearing only. Any other method of clearing within wetlands shall require additional approval from the Division.
- 7) There shall be no clearing of wetlands outside of the areas indicated on the attached workplan drawings, without prior approval from the Division.
- 8) No excavation shall take place at any time in any vegetated wetlands or surrounding waters outside of the alignment of the areas indicated on the attached workplan drawings, without permit modification.
- 9) Material excavated may be used in fill areas associated with the project once properly dewatered or shall be removed from the site and taken to a high ground location.
- 10) The temporary placement or double handling of excavated and/or fill materials within waters or vegetated wetlands is not authorized.
- 11) No excavated or fill material shall be placed at any time in any vegetated wetlands or surrounding waters outside of the alignment of the fill area indicated on the attached workplan drawings.
- 12) All excavated materials shall be confined above normal water level and landward of regularly or irregularly flooded wetlands behind adequate dikes or other retaining structures to prevent spillover of solids into any wetlands or surrounding waters.
- 13) All fill material shall be clean and free of any pollutants, except in trace quantities.
- 14) Placement of riprap shall be limited to the areas as depicted on the attached workplan drawings. The riprap material shall be free from loose dirt or any pollutant. The riprap material shall consist of clean rock or masonry materials such as but not limited to granite or broken concrete.
- 15) Live concrete shall not be allowed to contact the water in or entering into tributaries of the Pasquotank River, or the adjacent wetlands.
- 16) Construction staging areas shall be located only in upland areas, and not in wetlands or Waters of the State.

**ADDITIONAL CONDITIONS**

- 17) All materials and debris associated with the removal and/or construction of the existing and/or new bridge (including deck components), culverts, roadway asphalt, other existing structures within the Right-of-Way as authorized by this permit and associated materials shall not enter wetlands or Waters of the State, even temporarily. Any such material shall be disposed of at an approved upland site or shall be recycled in an environmentally appropriate manner provided appropriate authorizations from any relevant state, federal, or local authorities are obtained.
- 18) Unless specifically altered herein, any mitigative measures or environmental commitments specifically made by the permittee in the CAMA permit application and/or the Environmental Assessment and Programmatic Section 4(f) Evaluations dated 8/29/97, shall be implemented, regardless of whether or not such commitments are addressed by individual conditions of this permit.

**Bridge Construction**

- 19) Construction or removal of the temporary construction sheeting is prohibited while the moratorium referenced in Condition No. 2 of this permit is in effect without prior approval of the Division, in consultation with WRC.
- 20) The bridge shall be constructed using top down construction methodologies. Any other construction method shall require additional authorization from the Division.
- 21) The installation practice for the bridge piles and temporary construction sheeting shall be accomplished by driving and/or vibratory hammer. Should the permittee and/or its contractor determine that another type of installation, such as jetting or drilled shaft construction, is preferred, additional authorization from DCM shall be required.
- 22) The permittee did not propose the use of deck drains in the permit application package. Any future proposal to utilize deck drains shall require additional authorization from DCM.

**Compensatory Mitigation****NOTE:**

Impacts to wetlands and Waters of the State due to this project are as follows:

- **CAMA Coastal Wetlands:** Permanent impacts of approximately 0.06 acres due to fill; temporary impacts of approximately 0.07 acres due to hand clearing for the roadway work; and temporary impacts of approximately 0.18 acres due to hand clearing for utility work. (Within the hand clearing areas, approximately 0.02 acres will also be temporarily impacted by erosion control measures for the roadway work.)
- **Riparian wetlands:** Permanent impacts of approximately 4.29 acres (4.19 acres due to fill and 0.10 acres due to excavation); temporary impacts of approximately 3.73 acres due to hand clearing for the roadway work; and temporary impacts of approximately 6.43 acres due to hand clearing for utility work. (Within the hand clearing areas, approximately 0.77 acres will also be temporarily impacted by erosion control measures for the roadway work.)
- **Streams:** Permanent impacts of approximately 297 linear feet; and temporary impacts of approximately 174 linear feet.
- **Surface waters:** Permanent impacts of approximately 0.11 acres; and temporary impacts of approximately 0.11 acres.

**ADDITIONAL CONDITIONS**

**NOTE:** In accordance with the Ecosystem Enhancement Program (EEP) letter dated 7/14/08, compensatory mitigation for permanent impacts of 4.35 acres of riparian wetlands and 247 linear feet of stream associated with the authorized project shall be provided by the EEP. In accordance with the permit application, compensatory mitigation for permanent stream impacts associated with the authorized project also includes on-site mitigation for 50 linear feet of stream impacts at the culvert-to-bridge replacement location at Site 11 within TIP No. R-2414A.

- 23) The permittee shall develop a compensatory mitigation plan for permanent impacts to 0.06 acres (approximately 2,614 square feet) of CAMA Coastal Wetlands as defined by 15A NCAC 07H .0205. The compensatory mitigation plan shall include a minimum of 1:1 restoration of CAMA Coastal Wetlands as defined by 15A NCAC 07H .0205. The mitigation shall be in-kind, i.e. the targeted species composition of the restored wetlands shall approximate the species composition of the impacted wetlands. The mitigation shall be implemented and in place within 3 years of the issuance of this permit. The CAMA coastal wetland species impacted by this project are *Scirpus* and *Typha*.
- 24) Due to the possibility that compaction, mechanized clearing and/or other site alterations might prevent the temporary Coastal Wetland impact areas from re-attaining pre-project wetland functions, the permittee shall provide an annual update on the Coastal Wetland areas temporarily impacted by this project. This annual update shall consist of photographs and a brief written report on the progress of these temporarily impacted areas in re-attaining their pre-project wetland functions. Within three years after project completion, the permittee shall hold an agency field meeting with DCM to determine if the Coastal Wetland areas temporarily impacted by this project have re-attained pre-project wetland functions. If at the end of three years DCM determines that the Coastal Wetland areas temporarily impacted by the project have not re-attained pre-project wetland functions, DCM will determine whether compensatory wetland mitigation shall be required.

**Sedimentation and Erosion Control**

- 25) Turbidity curtains and silt fences shall be used to isolate all work areas from the tributary to the Pasquotank River at Site 11 on R-2414A, including installation of bridge piles and temporary construction sheeting, placement of riprap, excavation or filling. The turbidity curtains shall be installed parallel to the banks on each side of the tributary. The turbidity curtains shall extend past the construction limits and be attached to the silt fences containing the work site. The turbidity curtains shall be of sufficient length and effectiveness to prevent a visible increase in the amount of suspended sediments in adjacent waters. The turbidity curtains shall not fully encircle the work area or extend across the tributary. The turbidity curtains shall be properly maintained and retained in the water until construction is complete and all of the work area contained by the turbidity curtains has been stabilized by vegetation or other means. The turbidity curtains shall be removed when turbidity within the curtains reaches ambient levels.
- 26) The permittee shall follow "Best Management Practices for the Protection of Surface Waters".
- 27) This project shall conform to all requirements of the NC Sedimentation Pollution Control Act and NC DOT's Memorandum of Agreement with the Division of Land Resources.
- 28) In order to protect water quality, runoff from construction shall not visibly increase the amount of suspended sediments in adjacent waters.

**ADDITIONAL CONDITIONS**

- 29) Appropriate sedimentation and erosion control devices, measures or structures shall be implemented to ensure that eroded materials do not enter adjacent wetlands, watercourses and property (e.g. silt fence, diversion swales or berms, etc.).

**Stormwater Management**

- 30) The N.C. Division of Water Quality (DWQ) confirmed in a letter dated 11/21/08 that the subject project is excluded from State Stormwater permitting requirements as set forth in Section 2(d)(1) of Session Law 2008-211, effective October 1, 2008, and the stormwater rules under Title 15A NCAC 2H .1000, as amended.

**Historical and Cultural Resource Protection**

- 31) In accordance with Environmental Commitments contained within the Finding of No Significant Impact and Programmatic Section 4(f) Evaluations dated 7/13/98, the permittee shall move the Creekmore Store to the rear of its property for mitigation purposes. The permittee shall coordinate with the State Historic Preservation Officer prior to construction so that measures are taken to preserve the historic character of the Creekmore Store.
- 32) In accordance with Environmental Commitments contained within the Finding of No Significant Impact and Programmatic Section 4(f) Evaluations dated 7/13/98, the permittee shall avoid impacting the Sawyer Graveyard.

**General**

- 33) Any relocation of utility lines that is not specifically depicted on the attached workplan drawing(s), or specifically described within the attached permit application, shall require approval from DCM, either under the authority of this permit, or by the utility company obtaining separate authorization.
- 34) Directional boring shall not be used for utility relocations. All utilities shall be relocated aurally.
- 35) No attempt shall be made by the permittee to prevent the full and free use by the public of Causeway Park, George M. Wood Memorial Park and all navigable waters at or adjacent to the authorized work following completion of construction activities.
- 36) During project construction, the permittee shall make every attempt to maintain use by the public of Causeway Park, George M. Wood Memorial Park and all navigable waters at or adjacent to the authorized work. If this is not possible, then adequate notice shall be provided to the public that use of Causeway Park, George M. Wood Memorial Park and/or all navigable waters at or adjacent to the authorized work will be limited during construction. The notice shall include an estimate of the amount of time that the limited use will occur.
- 37) The permittee shall exercise all available precautions in the day-to-day operation of the facility to prevent waste from entering the adjacent wetlands and Waters of the State.

## ADDITIONAL CONDITIONS

- 38) If it is determined that additional permanent and/or temporary impacts (such as but not limited to temporary access roads or detours) are necessary that are not shown on the attached workplan drawings or described in the authorized permit application, a permit modification and/or additional authorization from DCM shall be required. In addition, any changes in the approved plan, such as the removal of Underground Storage Tanks, may also require a permit modification and/or additional authorization from DCM. The permittee shall contact a representative of DCM prior to commencement of any such activity for this determination and any permit modification.
- 39) Development authorized by this permit shall only be conducted within NCDOT Right-of-Ways and/or easements.
- 40) The permittee and/or his contractor shall contact the DCM Transportation Project Coordinator in Elizabeth City at (252) 264-3901 to request a preconstruction conference prior to project initiation.
- 41) The N.C. Division of Water Quality has authorized the proposed project under Water Quality Certification No. 003774 (DWQ Project No. 20081602), which was issued on 12/18/08. Any violation of the Certification approved by DWQ shall be considered a violation of this CAMA permit.
- 42) Approval from the N.C. Division of Environmental Health Public Water Supply Plan Review Section is required for the relocation/modification of existing water mains prior to construction. If NCDOT specifications are to be used, only plan submittal and approval is required.

**NOTE:** The U.S. Army Corps of Engineers has assigned the proposed project COE Action ID. No. 199402124.

**NOTE:** This permit does not eliminate the need to obtain any additional state, federal or local permits, approvals or authorizations that may be required.



150

RECEIVED  
Division of Highways

North Carolina Department of Environment and Natural Resources

Division of Coastal Management

Beverly Eaves Perdue, Governor

James H. Gregson, Director

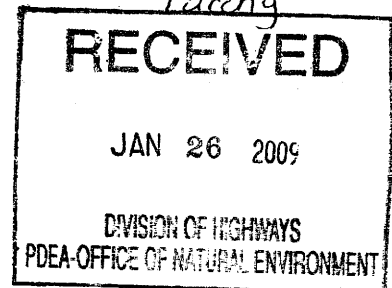
JAN 26 2009

Preconstruction

Dee Freeman, Secretary  
Project Development and  
Environmental Analysis Branch

January 21, 2009

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



RE: Letter of Refinement, CAMA Major Development Permit No. 03-09, Widening of US 158/NC 34 from East of Pasquotank River to the US 158/NC 34 split, Camden County, TIP No. R-2414.

Dear Dr. Thorpe:

This letter is in response to the N.C. Department of Transportation's (NCDOT's) attached e-mail dated 1/14/09 and attached memorandum dated 1/16/09, including the attached workplan drawings (2): 1 dated 10/14/08; and 1 dated 10/15/08.

Please be advised that through this **Letter of Refinement**, DCM conveys its determination that the above referenced request is consistent with existing State rules and regulations and is in keeping with the original purpose and intent of CAMA Permit No. 03-09 with the following conditions:

1. Condition Number 34 is hereby modified as follows: "34) The 10" water line at Site 11 on R-2414A shall be relocated by directional boring. All other utilities shall be relocated aurally."
2. Entry and exit points of the directional boring activity, including disposal of material from the drilling activity, shall be outside of all wetlands and Waters of the State.
3. NCDOT shall debit 0.6 acres of CAMA Coastal Wetland restoration credits from the Ballance Farm Mitigation Site in Currituck County.
4. Condition Number 20 is hereby modified as follows: "The bridge shall be constructed using staged construction or top down construction methodologies. Any other construction method shall require additional authorization from the Division."
5. This Letter of Refinement does not eliminate the need to obtain any additional state, federal or local permits, approvals or authorizations that may be required.

1638 Mail Service Center, Raleigh, North Carolina 27699-1638  
Phone: 919-733-2293 \ FAX: 919-733-1495 \ Internet: <http://dcm2.enr.state.nc.us>



6. This Letter of Refinement shall be attached to the original of CAMA Permit No. 03-09, which was issued on 1/12/09, and both documents shall be readily available on site when a N.C. Division of Coastal Management (DCM) representative inspects the project for compliance.
7. All conditions and stipulations of the active permit remain in force under this Letter of Refinement unless altered herein.

Please contact Jim Hoadley or Cathy Brittingham if you have any questions or concerns. Jim can be reached at (252) 264-3901 or via e-mail at [Jim.Hoadley@ncmail.net](mailto:Jim.Hoadley@ncmail.net). Cathy can be reached at (919) 733-2293 x238 or via e-mail at [Cathy.brittingham@ncmail.net](mailto:Cathy.brittingham@ncmail.net).

Sincerely,



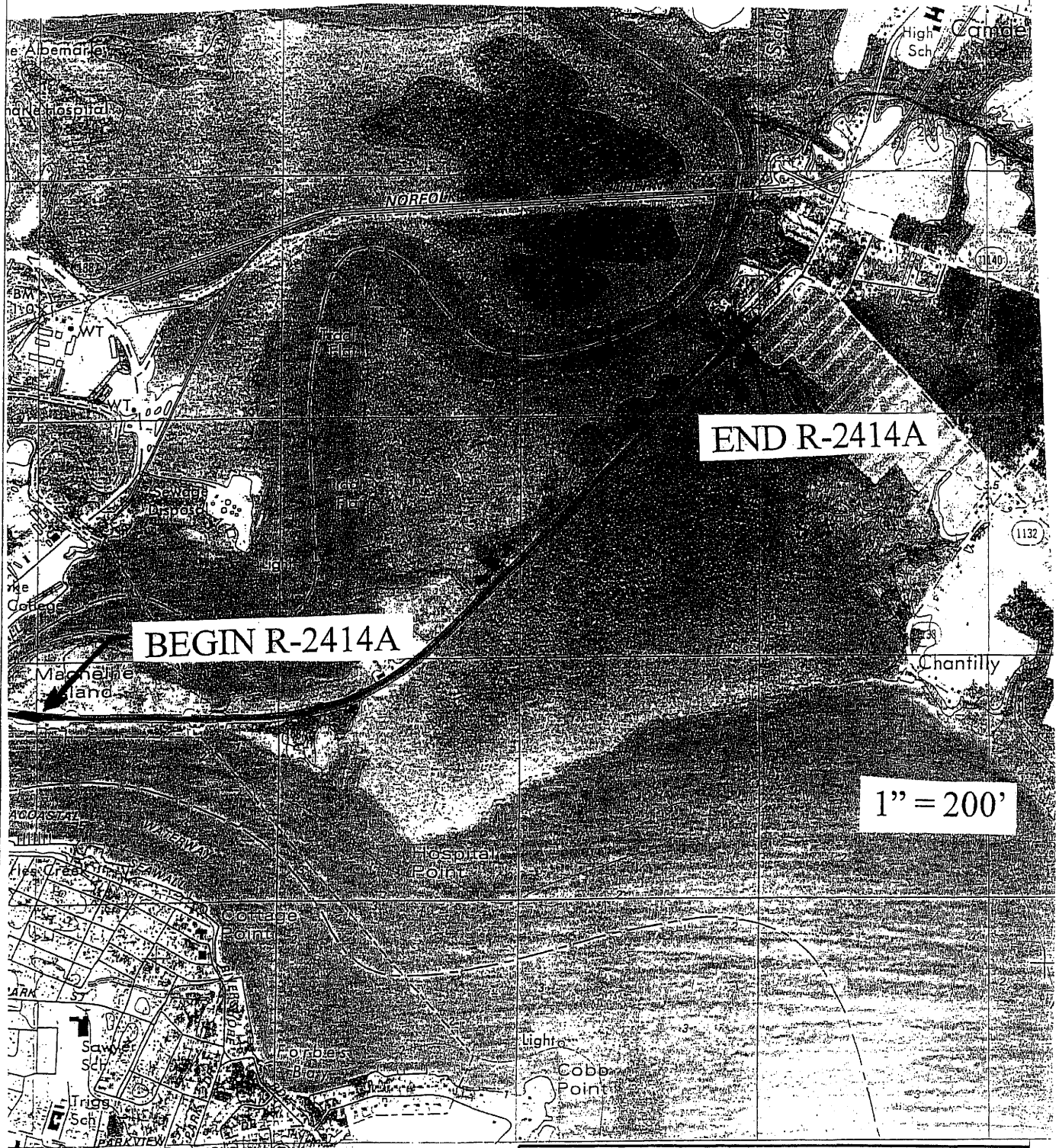
Doug Huggett  
Major Permits and Consistency Coordinator

Cc: Michael Turchy, NCDOT  
Bill Biddlecome, USACE  
David Wainwright, NCDWQ  
Garcy Ward, DWQ  
Beth Harmon, EEP  
Jim Hoadley, DCM  
Cathy Brittingham, DCM





# VICINITY MAP 154



N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

CAMDEN COUNTY  
34430.1.1 (R-2414A)  
US 158 WIDENING

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS						SURFACE WATER IMPACTS					
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)		
1	7+00 -L-	18" RCP	<0.01				0.01							
2	10+75 -L- LT					<0.01								
3	12+30 -L- RT	Rip Rap	0.01											
4*	13+80 - 14+63 -L- LT		0.03											
5	15+60 - 15+75 -L- LT		<0.01											
6	16+62 - 18+17 -L- RT		0.02				0.10							
7*	16+79 - 23+30 -L- LT		0.12				0.31							
8*	20+16 - 43+00 -L- RT		1.46				1.51							
9	24+50 - 25+12 -L- LT		0.01				0.03							
10	25+90 - 42+90 -L- LT		0.18				0.89							
11**	43+10 -L-	3 span bridge (Length=100')									0.080		105	50
TOTALS:			1.83				2.85				0.080		105	50

\* Portion of CAMA Wetland Impacts. Total Listed in Table.

- Site 3 = 0.01 ac (Fill)
- Site 4 = 0.03 ac (Fill)
- Site 7 = 0.01 ac (Fill); 0.05 ac (Hand Clearing)
- Site 8 = <0.01 ac (Fill); 0.02 ac (Hand Clearing)

\*\* 50 ft of existing box culvert to be removed and replaced with open channel and bridged.

NOTE: 0.79 ac of Temp Impacts in Wetlands in the Hand Clearing areas due to erosion control measures. Includes 0.77 ac and 0.02 ac of impact to 404 and CAMA wetlands, respectively.

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
CAMDEN COUNTY  
WBS - 34430.1.1 (R-2414A)

US 158 Widening

2 of 36

SHPET March-08

WETLAND PERMIT IMPACT SUMMARY														
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS							
			Permanent Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation in Wetlands (ha)	Mechanized Clearing in Wetlands (ha)	Hand Clearing in Wetlands (ha)	Permanent SW impacts (ha)	Temp. SW impacts (ha)	Existing Channel Impacts Temporary (m)	Natural Stream Design (m)			
1	7+00 -L-	450 RCP	0.001					0.002						
2	10+75 -L- LT							0.001						
3*	12+30 -L- RT	Rip Rap	0.002											
4*	13+80 - 14+63 -L- LT		0.010											
5	15+60 - 15+75 -L- LT		0.001					0.002						
6	16+62 - 18+17 -L- RT		0.009					0.041						
7*	16+79 - 23+30 -L- LT		0.049					0.127						
8*	20+16 - 43+00 -L- RT		0.590					0.611						
9	24+50 - 25+12 -L- LT		0.003					0.012						
10	25+90 - 42+90 -L- LT		0.072					0.361						
11**	43+10 -L-	3 span bridge (Length = 30.4m)										0.033	32	15.2
TOTALS:			0.737					1.157				0.033	32	15.2

\* Portion of CAMA Wetland Impacts. Total Listed in Table.

Site 3 = 0.002 ha (Fill)

Site 4 = 0.010 ha (Fill)

Site 7 = 0.003 ha (Fill); 0.022 ha (Hand Clearing)

Site 8 = 0.001 ha (Fill); 0.006 ha (Hand Clearing)

\*\* 15.2m of existing box culvert to be removed and replaced with open channel and bridged.

NOTE: 0.318 ha of Temp impacts in wetlands in the Hand Clearing areas due to erosion control measures. Includes 0.311 ha and 0.007 ha of impacts to 404 and CAMA wetlands, respectively.

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

CAMDEN COUNTY  
WBS - 34430.1.1 (R-2414A)

US 158 Widening  
SHEET 3 of 36 March-08

157  
PROPERTY OWNERS  
NAMES AND ADDRESSES

PARCEL NO.	SITE NO.	NAMES	ADDRESSES
1	1	City of Elizabeth City	P.O. Box 347 Elizabeth City, NC 27909
	2, 3, 4, 5, 6, 7, 8, 9, 10, 11	NCDOT	
3	8	C.O. Robinson Trust	201 E. Main Street Elizabeth City, NC 27909

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

CAMDEN COUNTY  
34430.1.1 (R-2414A)  
US 158 WIDENING



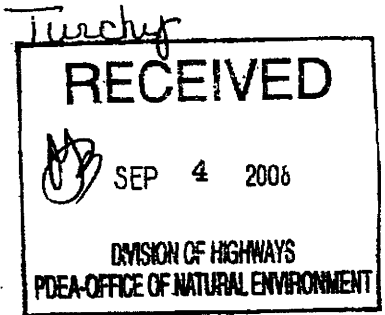
Michael F. Easley, Governor

William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director  
Division of Water Quality

1 158

DIVISION OF WATER QUALITY  
August 27, 2008



Dr. Gregory J. Thorpe  
NC Department of Transportation  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Subject: Stormwater Permit No. SW7080616  
US 158 Widening Project  
TIP No. R-2414A  
Camden County

Dear Dr. Thorpe:

The Washington Regional Office received a completed Stormwater Application for the subject project on June 24, 2008. Staff review of the plans and specifications has determined that the project, as proposed, will comply with the Stormwater Regulations set forth in Title 15A NCAC 2H.1000. We are forwarding Permit No. SW7080616 dated August 27, 2008 to the NC Department of Transportation for the proposed widening of US 158 highway project located near Camden, NC.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the conditions and limitations as specified therein.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

If you have any questions, or need additional information concerning this matter, please contact Mr. Bill Moore at (252) 948-3919.

Sincerely,

Bill Moore, Regional Supervisor  
Surface Water Protection Section  
Washington Regional Office

cc: Washington Regional Office  
Central Files



STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
DIVISION OF WATER QUALITY

STATE STORMWATER MANAGEMENT PERMIT

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

PERMISSION IS HEREBY GRANTED TO

NC Department of Transportation

Camden County

FOR THE

construction of a public road/bridge in compliance with the provisions of 15A NCAC 2H.1000 (hereafter referred to as the "*stormwater rules*") and the approved stormwater management plans and specifications and other supporting data as attached and on file with and approved by the Division of Water Quality and considered a part of this permit for the US158 Highway widening project located near Camden, NC.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the following specified conditions and limitations:

I. **DESIGN STANDARDS**

1. The runoff from the impervious surfaces has been directed away from surface waters as much as possible.
2. The Amount of built-upon area has been minimized as much as possible.
3. Best management Practices are employed which minimizes water quality impacts.
4. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of the permit.
5. Vegetated roadside ditches are 3:1 slopes or flatter.

**II. SCHEDULE OF COMPLIANCE**

1. The permittee shall at all times provide adequate erosion control measures in conformance with the approved Erosion Control Plan.
2. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the Director that the changes have been made.
3. The permittee shall submit all information requested by the Director or his representative within the time frame specified in the written information request.
4. The permittee shall submit to the Director and shall have received approval for revised plans, specifications, and calculations prior to construction for the following items:
  - a. Major revisions to the approved plans, such as road realignment, deletion of any proposed BMP, changes to the drainage area or scope of the project, etc.
  - b. Project name change.
  - c. Redesign of, addition to, or deletion of the approved amount of built-upon area, regardless of size.
  - d. Alteration of the proposed drainage.
5. The Director may determine that other revisions to the project should require a modification to the permit.

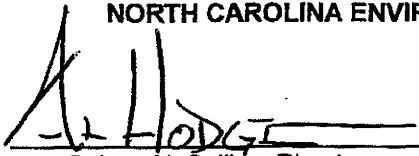
**III. GENERAL CONDITIONS**

1. This permit is not transferable to any person except after notice to and approval by the Director. The Director may require modification or revocation and reissuance of the permit to change name and incorporate such other requirements as may be necessary. A formal permit request must be submitted to the Division of Water Quality accompanied by the appropriate fee, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved. The permittee is responsible for compliance with the terms and conditions of this permit until such time as the Director approves the transfer.
2. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to enforcement action by the Division of Water Quality, in accordance with North Carolina General Statute 143-215.6(A) to 143-215.6(C).
3. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state, and federal) which have jurisdiction.
4. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by laws, rules, and regulations contained in Title 15A of the North Carolina Administrative Code, Subchapter 2H .1000; and North Carolina General Statute 143-215.1 et. al.

5. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and reissuance or termination does not stay any permit condition.
6. The permit issued shall continue in force and effect until revoked or terminated.
7. The permittee shall notify the Division of any name, ownership or mailing address changes within 30 days.

Permit issued this the 27 th day of August, 2008.

**NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION**



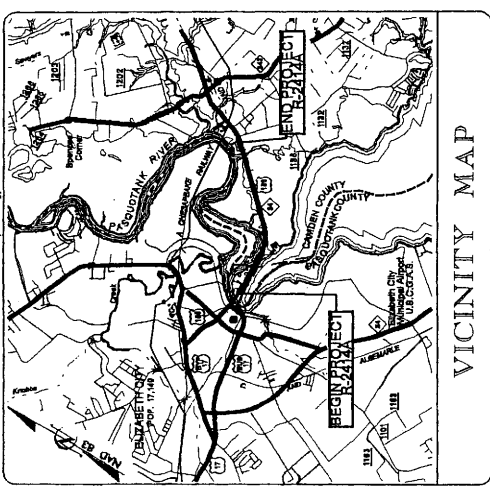
---

for Coleen H. Sullins, Director  
Division of Water Quality  
By Authority of the Environmental Management Commission

**Permit Number SW7080616**

# CONTRACT: TIP PROJECT: R-2414A

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Symbolology



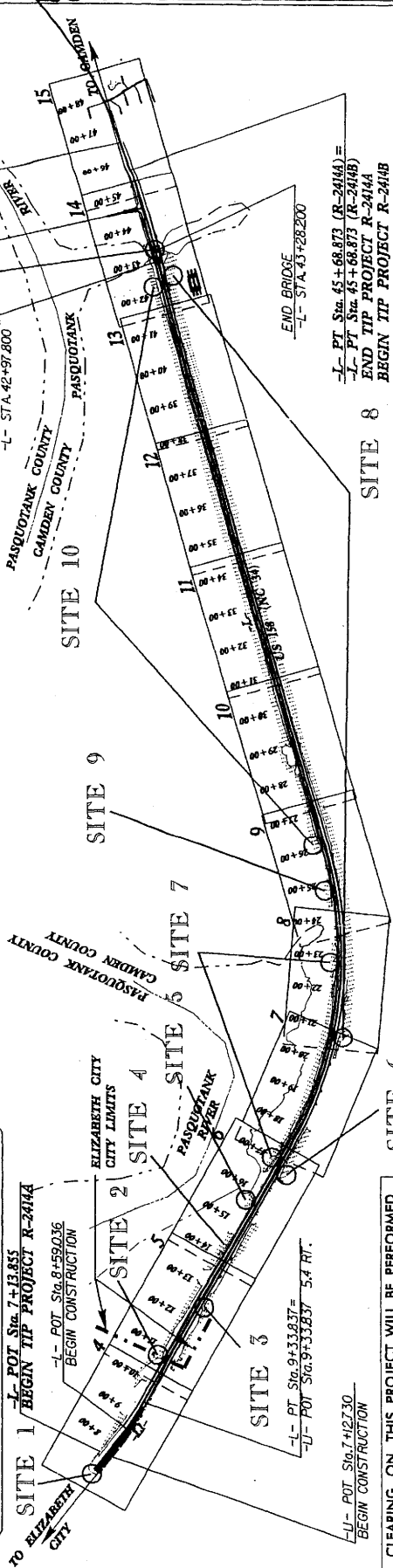
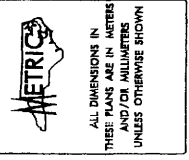
## STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS CAMDEN COUNTY

**LOCATION: US 158 / NC 34 FROM EAST OF PASQUOTANK RIVER TO NORTH OF SR 1257 (HAVENWOOD DR.) BETWEEN ELIZABETH CITY AND CAMDEN**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE**

<b>STATE PROJECT NUMBER</b>	R-2414A	<b>PERMIT NUMBER</b>	1
<b>STATE</b>	N.C.	<b>DATE</b>	11/15/06
<b>PROJECT NUMBER</b>	34430.1.1	<b>CONTRACT NUMBER</b>	57-158(2)
<b>ROW &amp; UTILITIES</b>	34430.2.4	<b>ROW &amp; UTILITIES</b>	PE
		<b>CONST.</b>	CONST.

Permit Drawing  
Sheet 5 of 36



CLEARING ON THIS PROJECT WILL BE PERFORMED BY THE LIMITS ESTABLISHED BY METHOD II

A PORTION OF THIS PROJECT IS WITHIN MUNICIPAL BOUNDARIES OF ELIZABETH CITY

**GRAPHIC SCALES**

PLANS 	PROFILE (HORIZONTAL) 
PROFILE (VERTICAL) 	

**DESIGN DATA**

ADT 2008	=	2510
ADT 2028	=	40730
DHV	=	12 %
D	=	60 %
T	=	6 %
V	=	80-100 KMH

\* (TTST 2 % + DUAL 4 %)  
FUNC. CLASS. = ARTERIAL

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-2414A	=	3.825 KM
LENGTH STRUCTURE TIP PROJECT R-2414A	=	0.030 KM
TOTAL LENGTH TIP PROJECT R-2414A	=	3.855 KM

Prepared in the Office of  
Edward G. Wetherill, PE  
Project Engineer  
Contract No. 57-158(2)  
Contract Date: 11/15/06  
Contract No. 57-158(2)  
Contract Date: 11/15/06  
Contract No. 57-158(2)  
Contract Date: 11/15/06

<b>RIGHT OF WAY DATE:</b>	November 15, 2006
<b>LETTING DATE:</b>	October 21, 2008
<b>NCDOT CONTACT:</b>	DOUG TAYLOR, PE PROJECT ENGINEER

<b>HYDRAULICS ENGINEER</b>	PE
<b>ROADWAY DESIGN ENGINEER</b>	PE

PRELIMINARY PLANS  
NO. 57-158(2) - CONSTRUCTION

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ANCHORAGE  
P.E.



PROJECT REFERENCE NO. SHEET NO. 4



ROADWAY DESIGN ENGINEER

PRELIMINARY PLANS

CONTR. BY R.A. BEV.

Permit Drawing Sheet 7 of 26

PI SIG 8+56.800  
Δ = 8' 27" 35.5' (LT)  
L = 865.91  
R = 600.000  
SE = 05  
V<sub>max</sub> = 80 KPH

DENOTES FILL IN WETLAND  
DENOTES HAND CLEARING

DETAIL A  
VALLEY CUTTER  
600  
300  
150

11- RT 7425.6 TO 7435.9  
11- RT 7445.0 TO 7447.7  
11- RT 8485.3 TO 8485.4  
11- RT 8491.3 TO 8491.5  
11- RT 8491.6 TO 8491.7

BEGIN TIP PROJECT R-2414  
-L- POT STA. 7+13.855

CITY OF ELIZABETH CITY

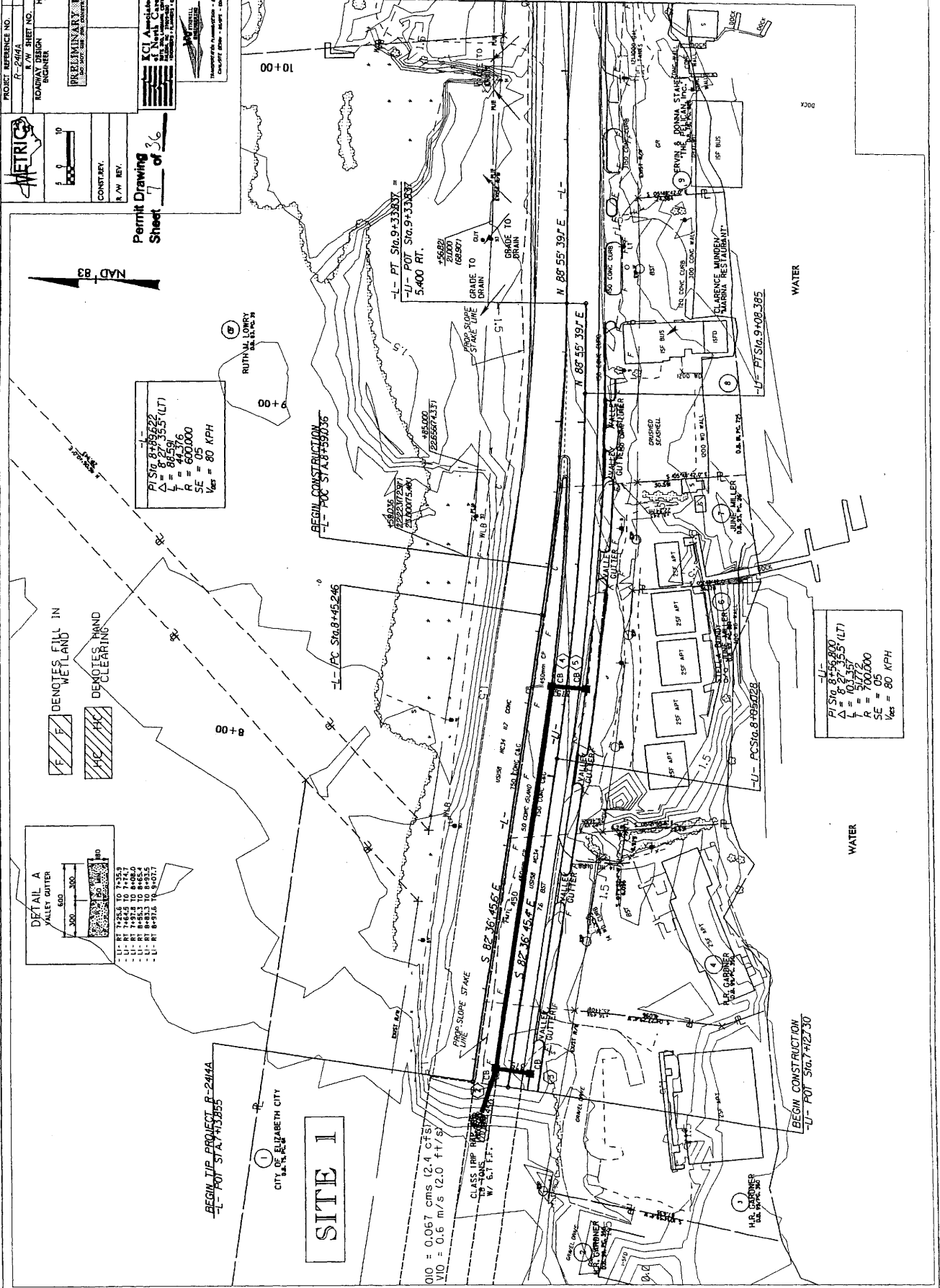
SITE I

OIO = 0.067 cms (2.4 CTS)  
VIO = 0.6 m/s (2.0 ft/s)

REVISIONS

164

MATCH TO SHEET 5  
-L- STA 10+20.000



PI SIG 8+56.800  
Δ = 8' 27" 35.5' (LT)  
L = 865.91  
R = 600.000  
SE = 05  
V<sub>max</sub> = 80 KPH

BEGIN CONSTRUCTION  
-L- POT SIG. 7+127.30

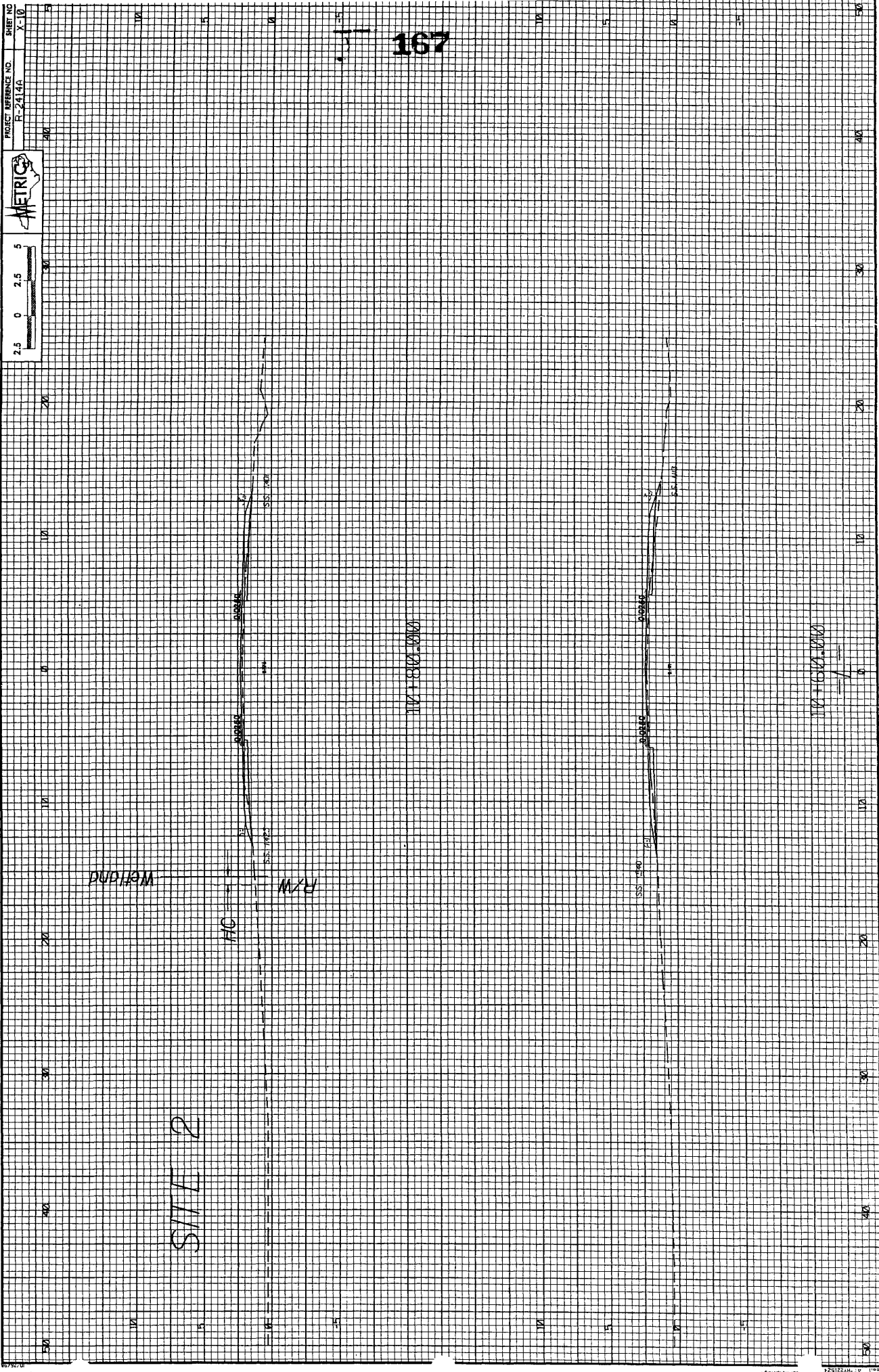
H.R. GARDNER  
U.S. PAT. NO.

15-04-2008 154  
15-04-2008 154  
15-04-2008 154









167

SITE 2

WESTING

R/W

HC

1000' 0" 1003' 0" 1011'

1000' 0" 1003' 0" 1011'





Sheet 13 of 36

**METRICS**

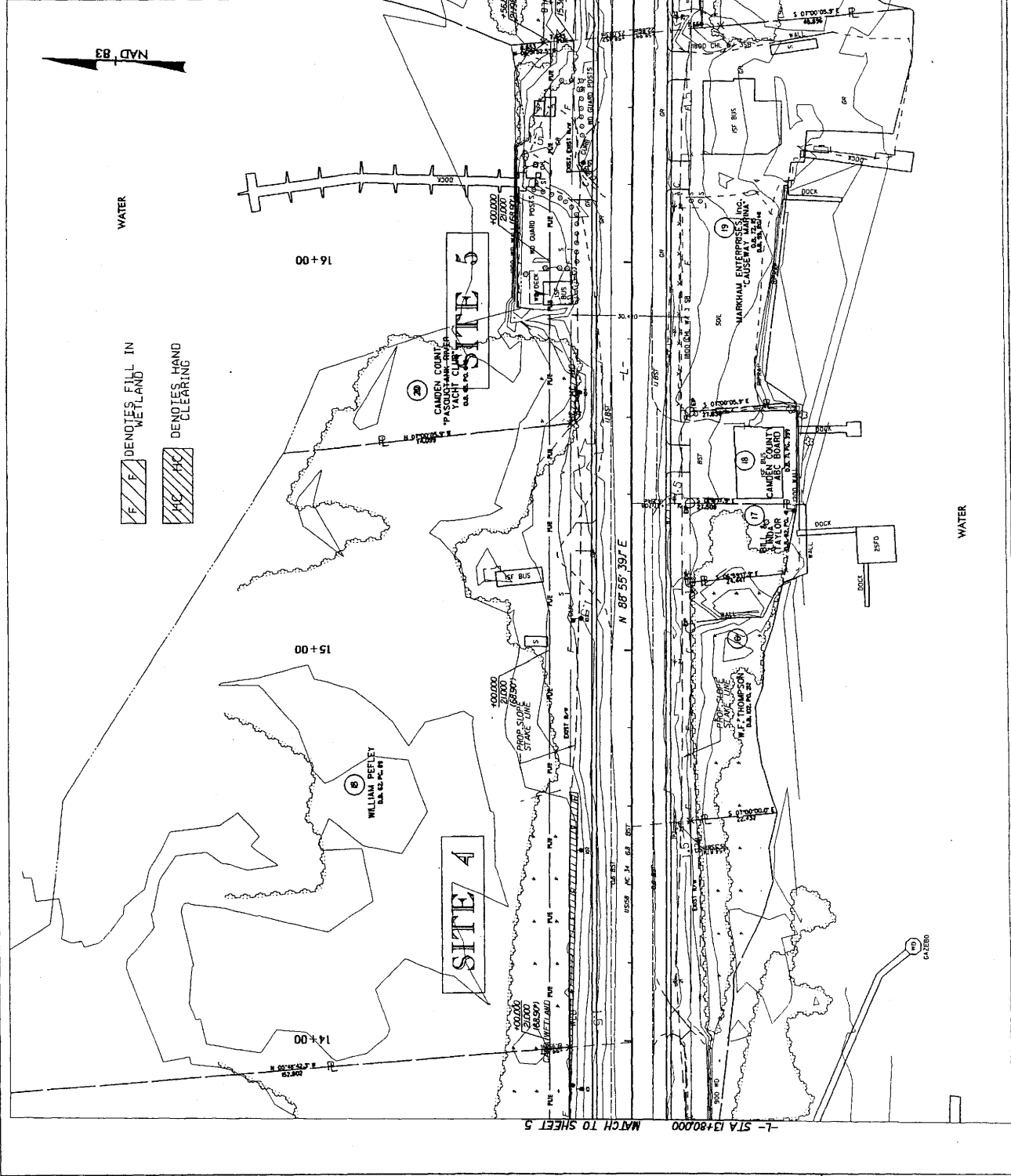
PROJECT REFERENCE NO. R-214/A  
SHEET NO. 6  
HYDRAULICS ENGINEER

CONTRACTOR: [Blank]  
DATE: [Blank]

**PRELIMINARY PLANS**  
FOR THE [Blank]

**KCI Associates of North Carolina, P.A.**  
10000 W. HARRIS ROAD  
SUITE 200  
DURHAM, N.C. 27703  
TEL: 919.486.1100  
FAX: 919.486.1101  
WWW.KCI-PA.COM

THESE PLANS WERE PREPARED BY THE ENGINEER OR UNDER HIS CLOSE PERSONAL SUPERVISION AND TO HIS KNOWLEDGE THEY COMPLY WITH ALL CITY, STATE AND FEDERAL REQUIREMENTS.



WATER

DENOTES FILL IN WETLAND

DENOTES HAND CLEARING

ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE  
SEE SHEET 17 FOR -L- PROFILE

REVISIONS

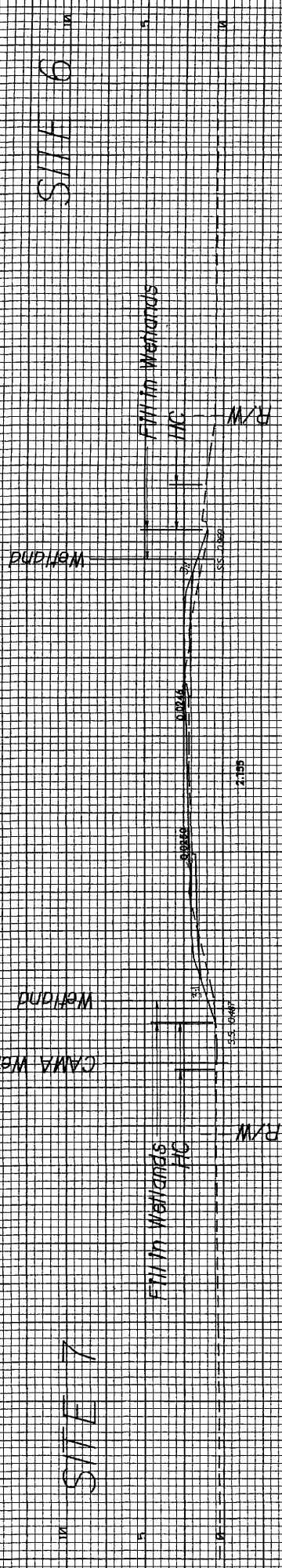
R/W REVISION - REVISED PROPOSED STATION AND OFFSETS FOR TEMPORARY CONST. EASEMENT LEFT. BAY





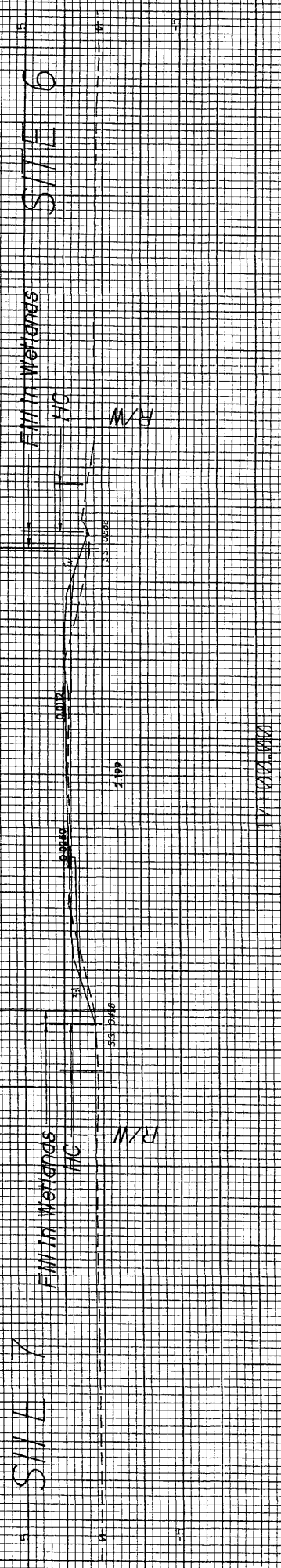


50 40 30 20 10 0 10 20 30 40 50



173

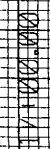
SITE 6



SITE 6

SITE 7

50 40 30 20 10 0 10 20 30 40 50



PROJECT REFERENCE NO. R-2412A SHEET NO. 7

ROADWAY DESIGN ENGINEER

PRELIMINARY PLANS

CONTRACT NO. 14W 18V

SCALE 1" = 40'

DATE 10/1/03

PROJECT LOCATION: CAMBER COUNTY, PA

PROJECT NO. 14W 18V

PROJECT TITLE: ROUTE 18 IMPROVEMENTS

PROJECT DESCRIPTION: ROUTE 18 IMPROVEMENTS FROM STA. 17+00 TO STA. 20+00

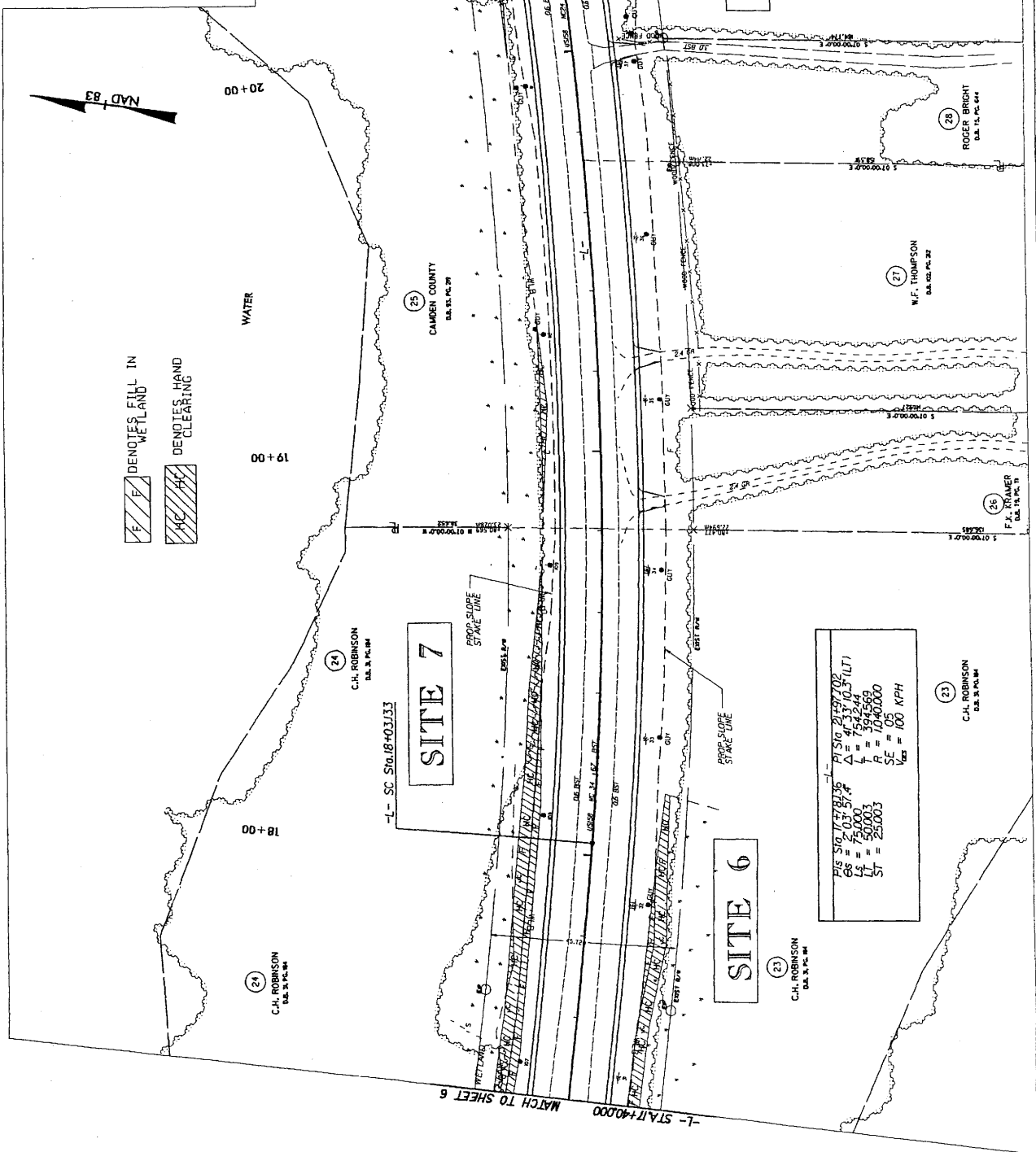
DESIGNED BY: R. J. METRICK

CHECKED BY: R. J. METRICK

APPROVED BY: R. J. METRICK

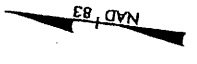
DATE: 10/1/03

174



4 DENOTES FILL IN WETLAND

4 DENOTES HAND CLEARING



PI	= 567.74	PI	= 2159.70
CS	= 703.57	Δ	= 47.17 (0.5' LT)
LS	= 75.000	L	= 752.24
LT	= 50.003	T	= 394.569
ST	= 25.003	CE	= 104.000
		VE	= 100 KPH

ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE SEE SHEET 18 FOR -L- PROFILE



PROJECT REFERENCE NO. 175  
 P-2424  
 ROADWAY DESIGN ENGINEER  
 HYDRAULICS ENGINEER

PRELIMINARY PLANS  
 DO NOT BE USED FOR CONSTRUCTION

CONSTRICTION  
 N.W. BEV.

**METRIC**

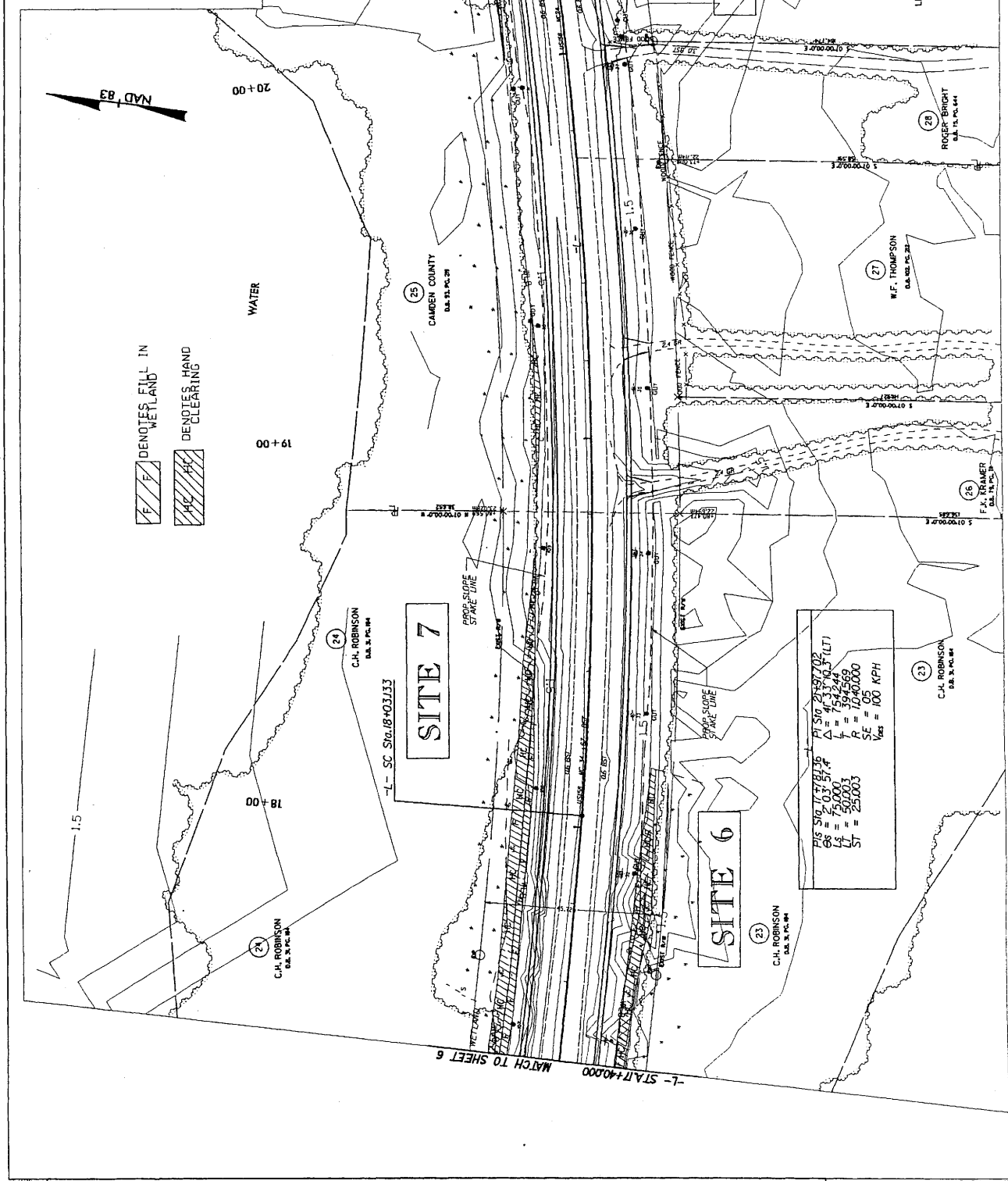
1" = 10'

NAD '83

**KCI**  
 KCI HOLDINGS  
 1000 N. MARKET ST., PHOENIX, AZ 85004  
 602.258.1000  
 www.kci.com

**C.H. ROBINSON**  
 1000 N. MARKET ST., PHOENIX, AZ 85004  
 602.258.1000  
 www.chrob.com

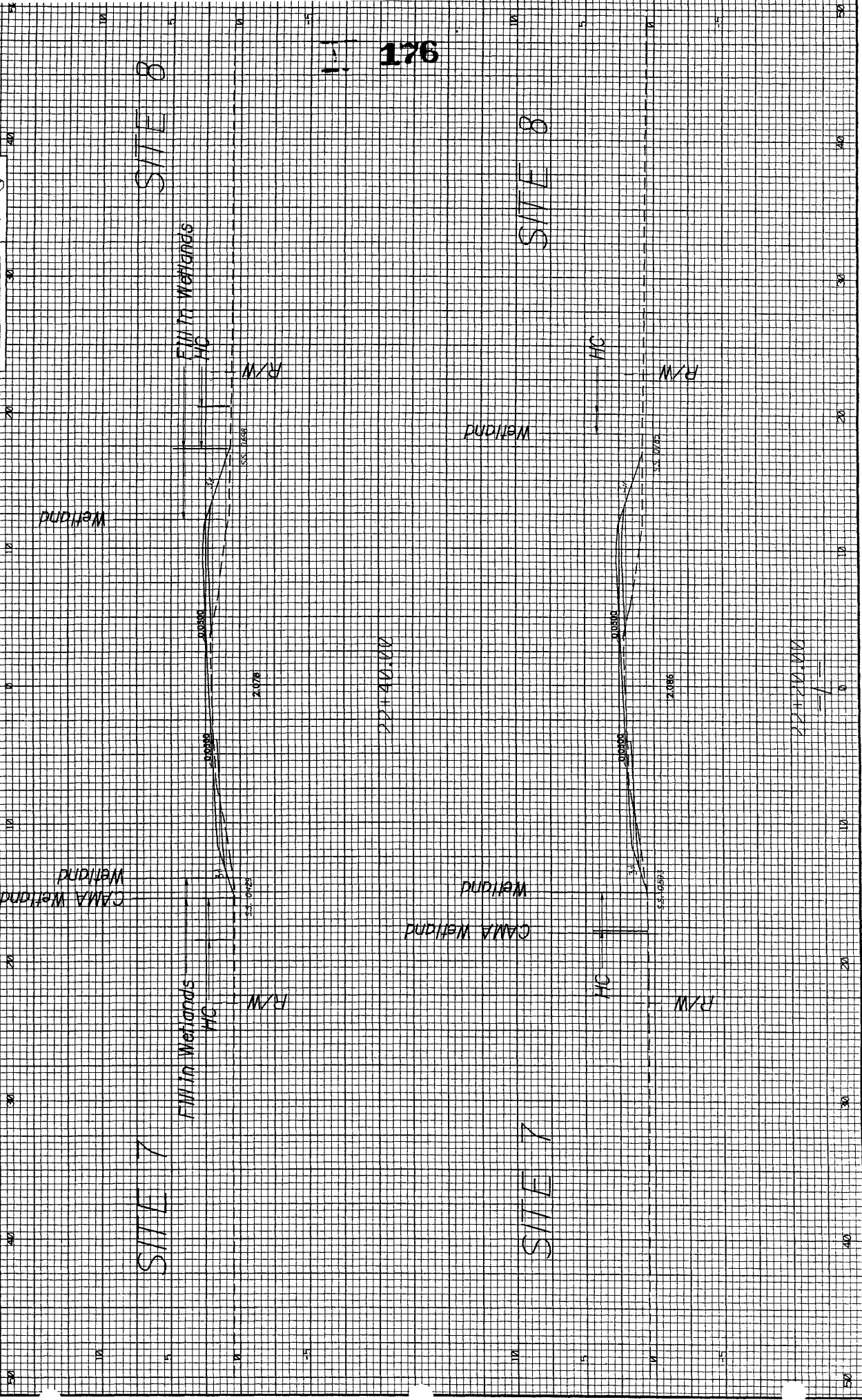
REGISTERED PROFESSIONAL ENGINEER - MECHANICAL ENGINEERING  
 LICENSE NO. 12345  
 EXPIRES 12/31/2024



$P = 5.0000$   
 $G = 2.0357\%$   
 $L = 500.00$   
 $S = 25.0003$   
 $R = 1040.0000$   
 $SE = 05$   
 $V_{85} = 100 \text{ MPH}$

ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE  
 SEE SHEET 18 FOR I-L PROFILE

REVISIONS

22+40.00

22+40.00

176

SITE 8

SITE 8

SITE 7

SITE 7

CAMA Wetland

CAMA Wetland

Wetland

Wetland

FMI in Wetlands

HC

R/W

R/W

HC

HC

R/W

R/W

22+40.00

Sheet 20 of 36

PROJECT REFERENCE NO. P-2443 SHEET NO. 8

ROADWAY DESIGNER: METRIC ENGINEERS

PRELIMINARY PLANS

CONSTARY.

DATE: 10/15/11

SCALE: 1" = 40'

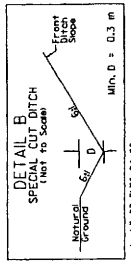
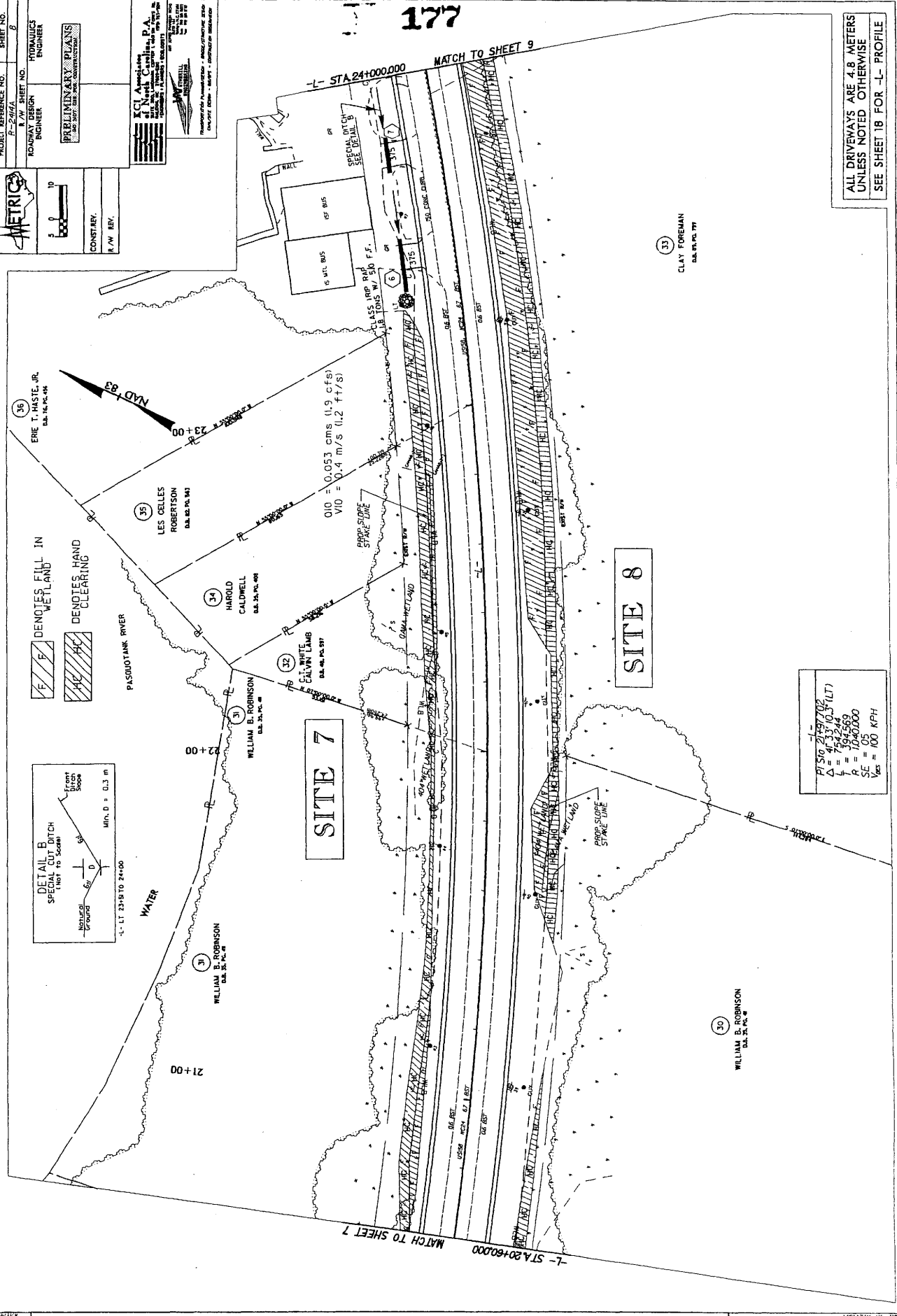
PROJECT: ...

LOCATION: ...

DESIGNER: ...

DATE: ...

177

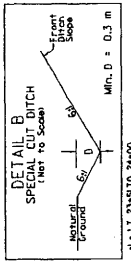
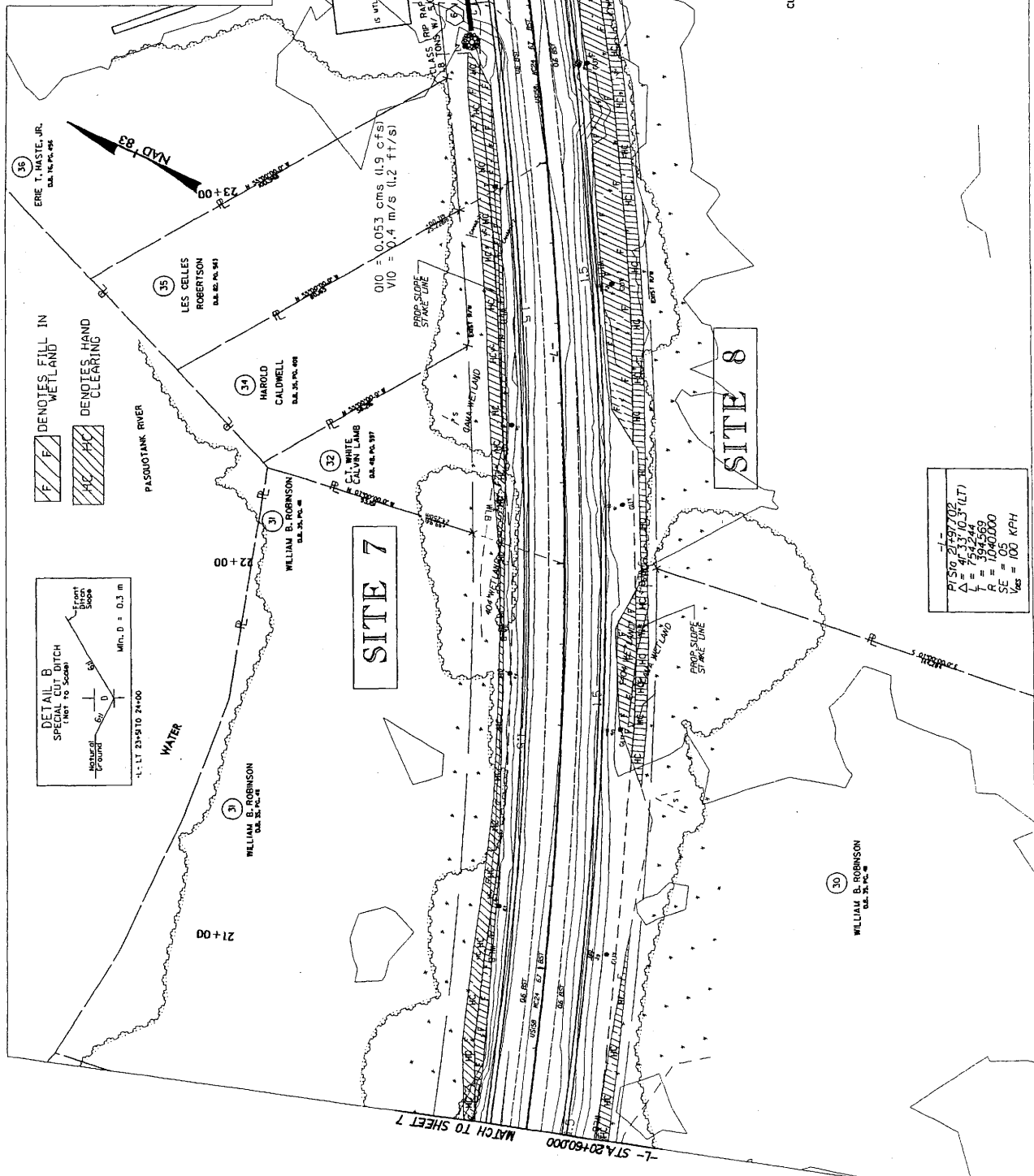


PI SIG	2457700
Δ	4' 33" (1.3117)
L	594.569
R	1040.000
SE	05
V <sub>max</sub>	100 KPH

ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE SEE SHEET 18 FOR -L- PROFILE

REVISIONS

PROJECT REFERENCE NO. SHEET NO. 8  
 R-2304A SHEET NO. 8  
 ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER  
 PRELIMINARY PLANS  
 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000  
 CONSTANT  
 R/W REV.  
 KCI Associates  
 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000  
 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000  
 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000



SITE 7

SITE 8

PI SIG	21+97.702
Δ	4° 33' 16.3" (LT)
L	594.569
R	10+00.000
SE	05
V <sub>max</sub>	100 KPH

ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE  
 SEE SHEET 18 FOR -L- PROFILE

MATCH TO SHEET 7

MATCH TO SHEET 9

Permit Drawing  
Sheet 22 of 36

PROJECT REFERENCE NO. R-2444  
SHEET NO. 9  
ROADWAY DESIGN ENGINEER  
HYDRAULICS ENGINEER  
PRELIMINARY PLANS  
CONSTRUCTION  
R/W REV.

**METRICS**

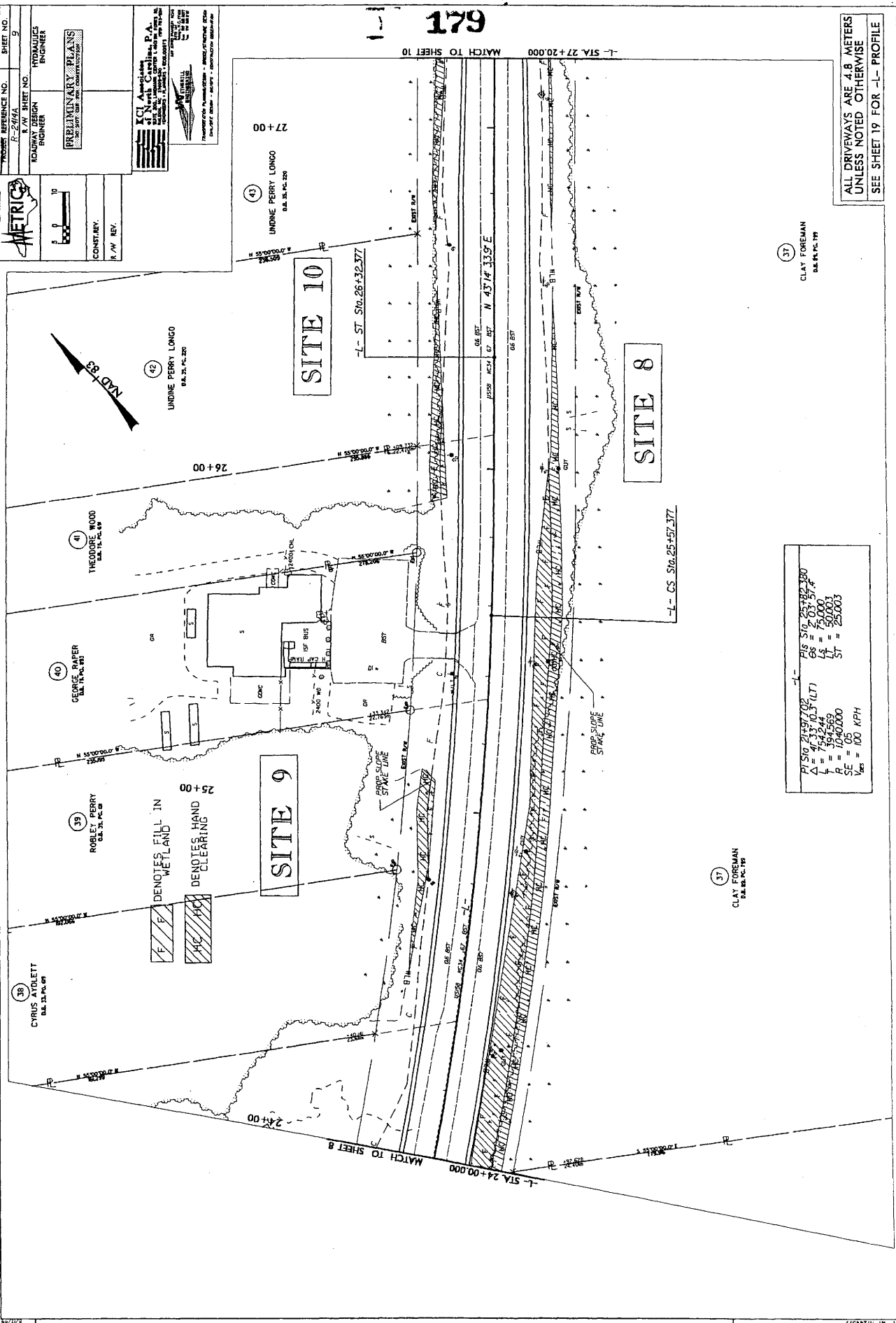
1" = 100'

CONTRARY  
R/W REV.

**KCI Associates of North Carolina, P.A.**  
10000 W. HARRISVILLE RD.  
SUITE 100  
RANDOLPH, NC 28134  
TEL: 704.393.1100  
FAX: 704.393.1101  
WWW.KCI-NC.COM

Professional Seal: **THEODORE WOOD**, P.E., No. 35000, State of North Carolina

179



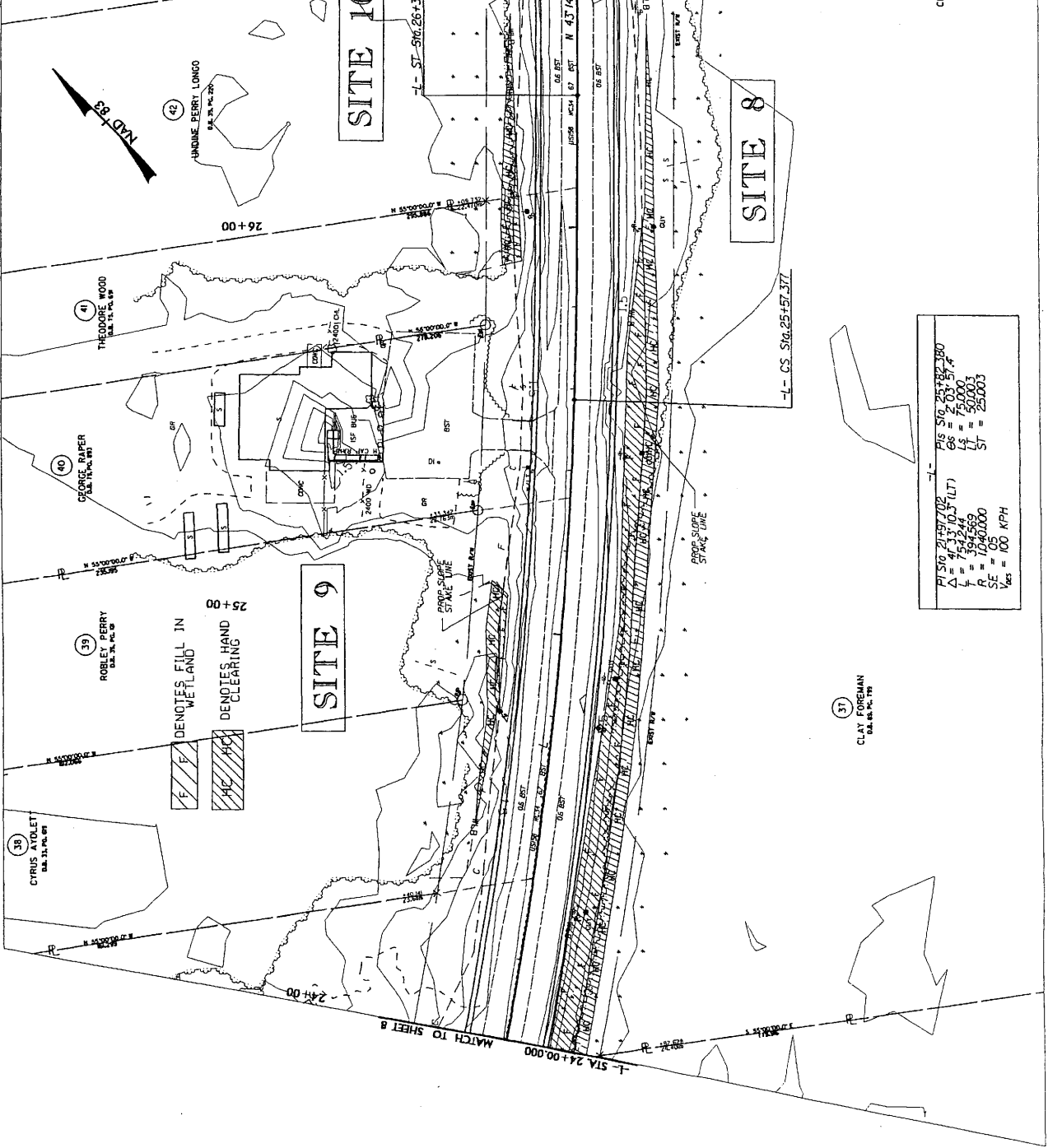
PI	516.71	57.09	-L-	CS	Sta. 25+32.377
PI	516.71	57.09	-L-	CS	Sta. 25+32.377
L	75.000			LT	50.000
L	75.000			LT	50.000
PE	1050.000			ST	25.000
VE	100	KPH			

ALL DRIVEWAYS ARE 4.8 METERS  
UNLESS NOTED OTHERWISE  
SEE SHEET 19 FOR -L- PROFILE

REVISIONS

PROJECT REFERENCE NO. R-2464A  
 SHEET NO. 9  
 ROADWAY DESIGN ENGINEER  
 METRICS  
 PRELIMINARY PLANS  
 CONTRACTOR  
 R/W REV.

**KCI Associates of North Carolina, P.A.**  
 10000 W. HARRIS BLVD., SUITE 100  
 FAYETTEVILLE, NC 28404  
 PHONE: 704.399.1100  
 FAX: 704.399.1101  
 WWW.KCI-NC.COM



PI STA.	24+31.00
CH	24.31
Δ	7542.48
r	75.000
R	594.569
VE	104.0000
VS	100 KPH
ST	25.003
LS	75.000
LT	50.003
CS	25.003
ST	25.003

ALL DRIVEWAYS ARE 4.8 METERS  
 UNLESS NOTED OTHERWISE  
 SEE SHEET 19 FOR -L- PROFILE

3/11/00



2.5 0 2.5 5



SITE 8

SITE 8

SITE 9

181

25th 20.00

25th 20.00

Sheet 15 of 36

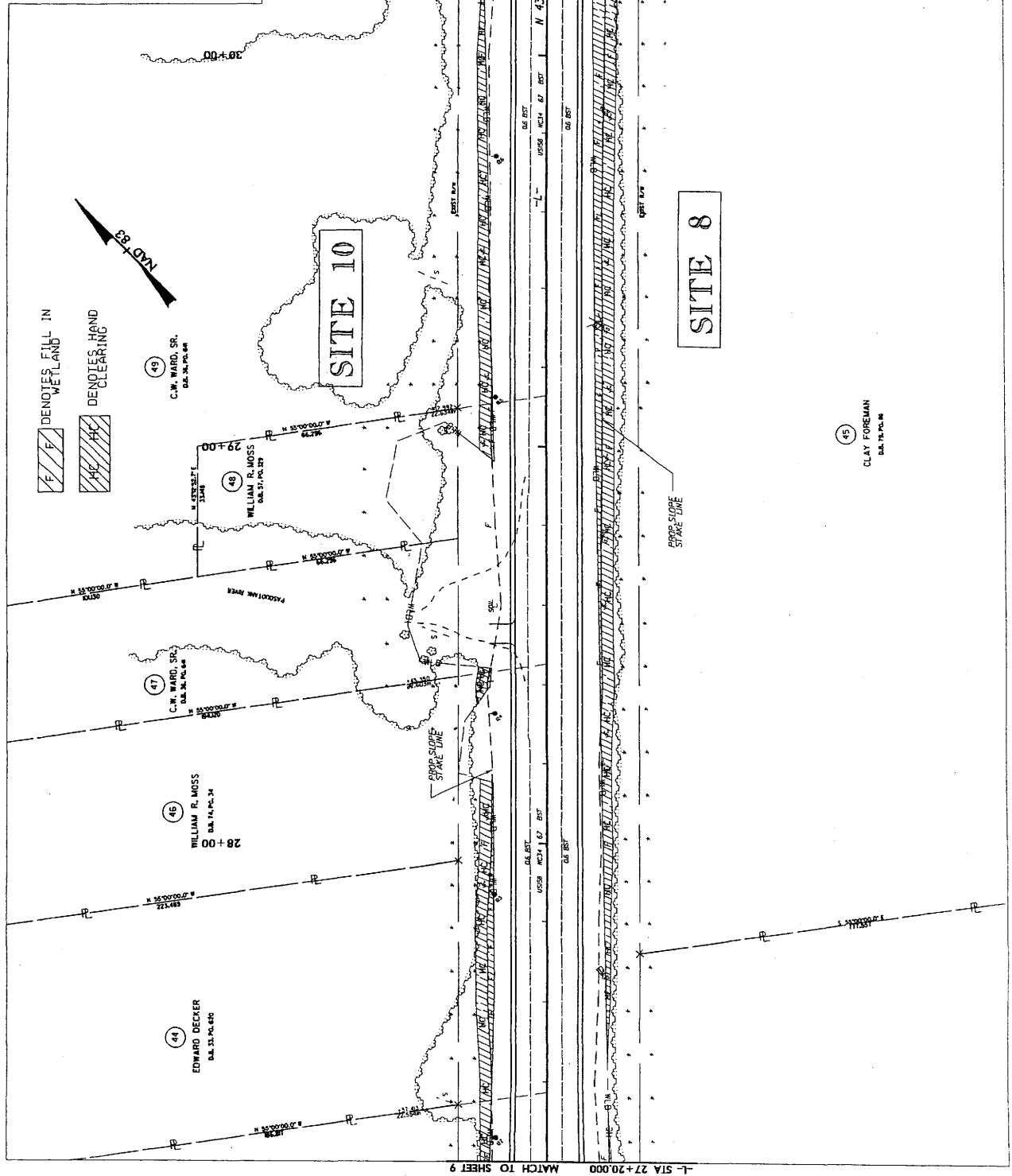
**METRICS**

PROJECT REFERENCE NO. P-2454  
 R/W SHEET NO. 10  
 HYDRAULICS ENGINEER  
 ROADWAY DESIGN ENGINEER

PRELIMINARY PLANS  
 30 DAY PERM. CONTROL DISTRICT

CONTRACT NO. R/W REV.

**T.C. Adams & Associates, P.A.**  
 4000 N. ...  
 ...  
 ...




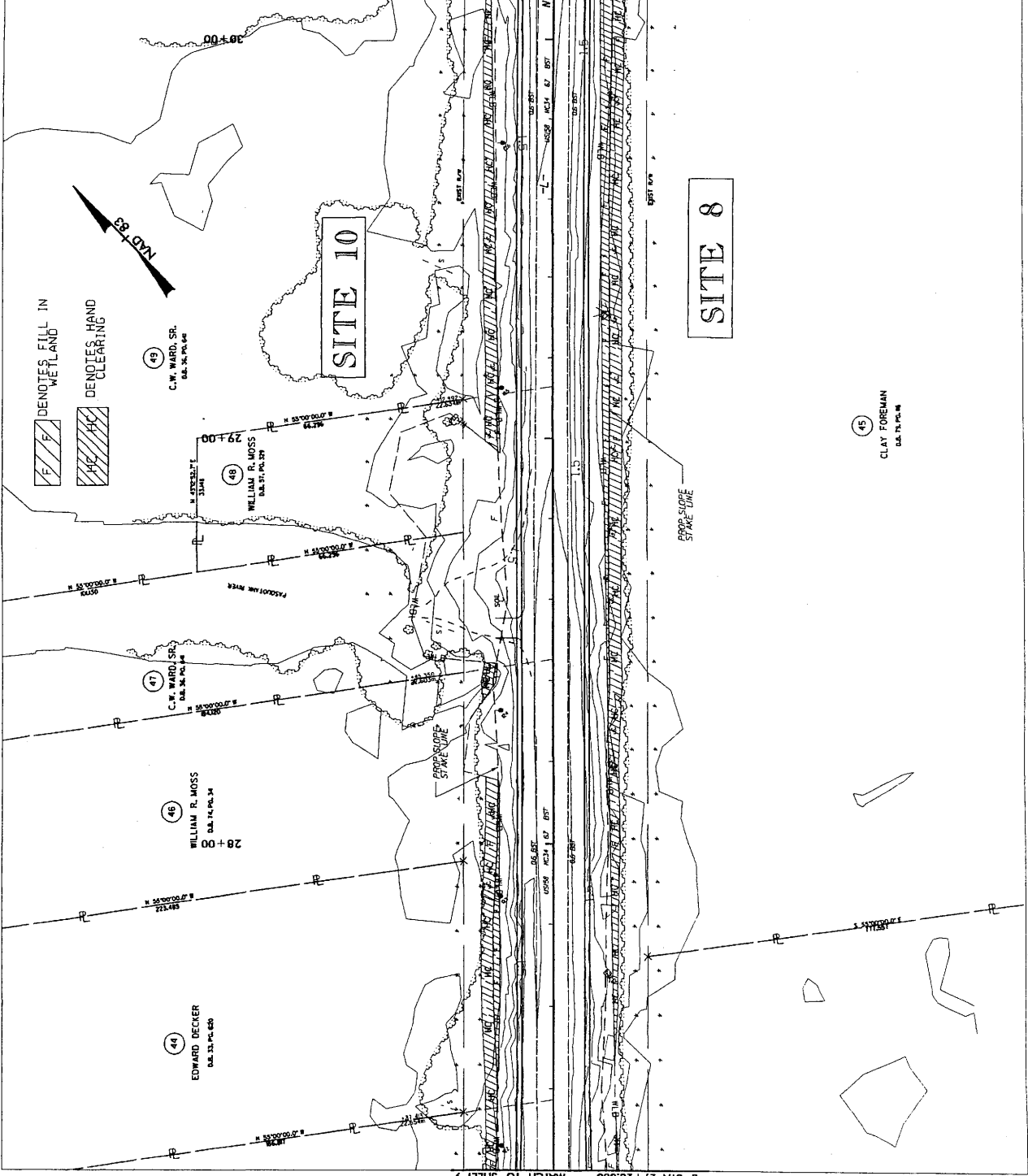
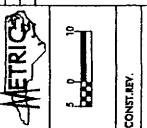
ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE  
 SEE SHEET 19 FOR -L- PROFILE

REVISIONS

NO.	DESCRIPTION



PROJECT REFERENCE NO. B-2494		SHEET NO. 10
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS FOR CONSTRUCTION		
 <b>KCI Associates of North Carolina, P.A.</b> 10000 University City Blvd., Suite 100 Charlotte, NC 28213 Phone: 704.366.1100 Fax: 704.366.1101 www.kci.com		
THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF KCI ASSOCIATES OF NORTH CAROLINA, P.A. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF KCI ASSOCIATES OF NORTH CAROLINA, P.A.		



ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE SEE SHEET 19 FOR -I- PROFILE

L- STA 27+20.000 MATCH TO SHEET 9

L- STA 30+80.000 MATCH TO SHEET 11

NO.	DATE	DESCRIPTION

Sheet 2.1.5.36



PROJECT REFERENCE NO.  
R-2414A

SHEET NO.  
X-70



Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Wetland

Wetland

Wetland

Wetland

Wetland

Wetland

Wetland

Wetland

Wetland

SITE 8

SITE 8

SITE 8

SITE 8

SITE 8

SITE 8

SITE 8

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184

184

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SITE 10

SITE 10

SITE 10

SITE 10

SITE 10

SITE 10

SITE 10

SITE 10

SITE 10

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

R/W

R/W

R/W

R/W

R/W

R/W

R/W

R/W

R/W

HC

HC

HC

HC

HC

HC

HC

HC

HC

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

Excavation in Wetlands

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

34+10.00

Sheet 18 of 56

PROJECT REFERENCE NO. SHEET NO. R-241/A II

R/W SHEET NO. HYDRAULICS ENGINEER

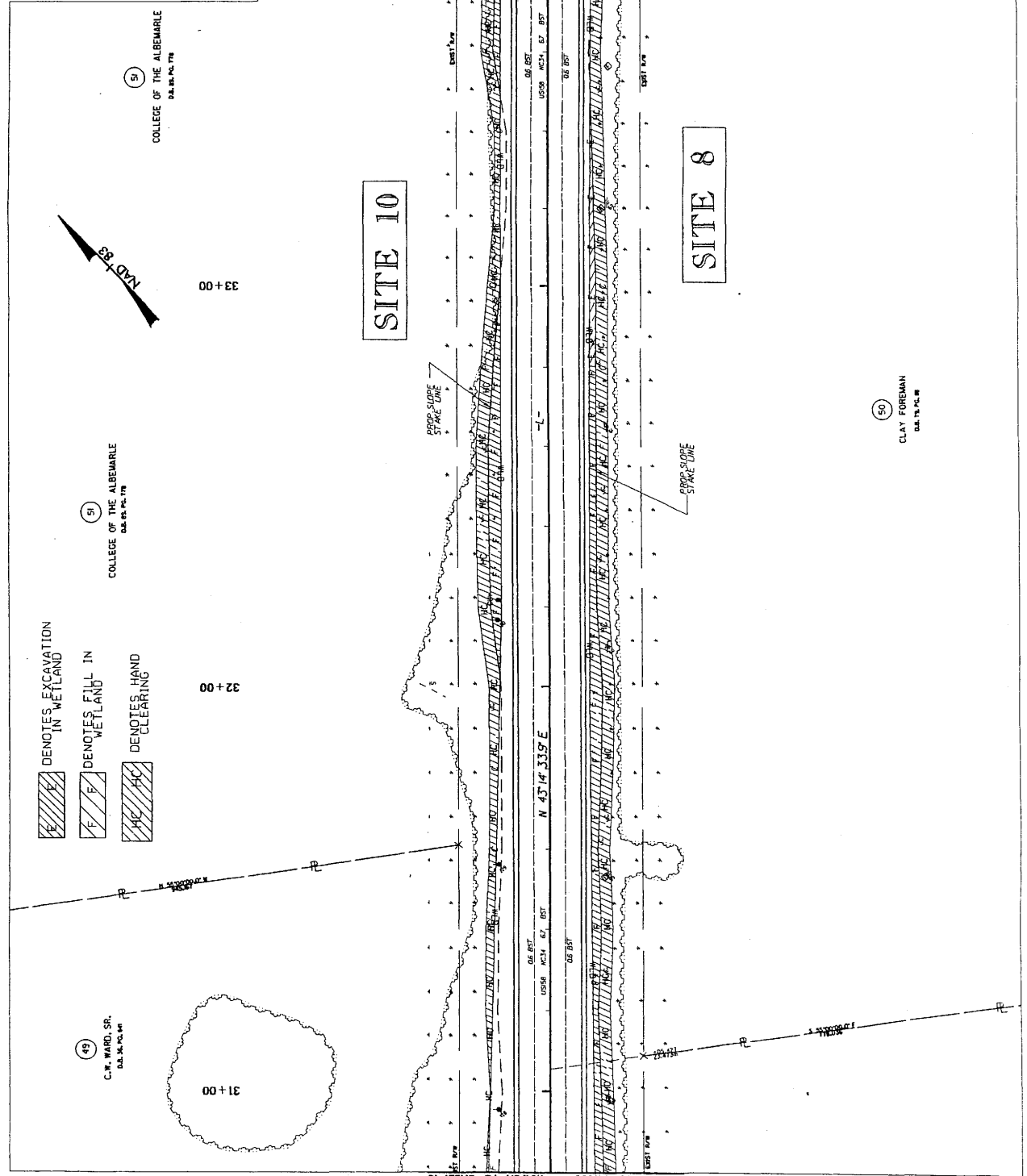
ROADWAY DESIGN ENGINEER

PRELIMINARY PLANS

CONST. REV. R/W REV.

KCI Associates  
 11 North Carolina, P.A.  
 1100 North Carolina, P.A.  
 1100 North Carolina, P.A.  
 1100 North Carolina, P.A.

Professional Seal: KCI Associates, Inc., License No. 1100, State of North Carolina, Professional Engineer, Civil Engineering



ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE

SEE SHEET 20 FOR -L- PROFILE

REVISIONS


Sheet 29 of 36

PROJECT REFERENCE NO. P-2464 SHEET NO. 11

R/W SHEET NO. HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

PRELIMINARY PLANS

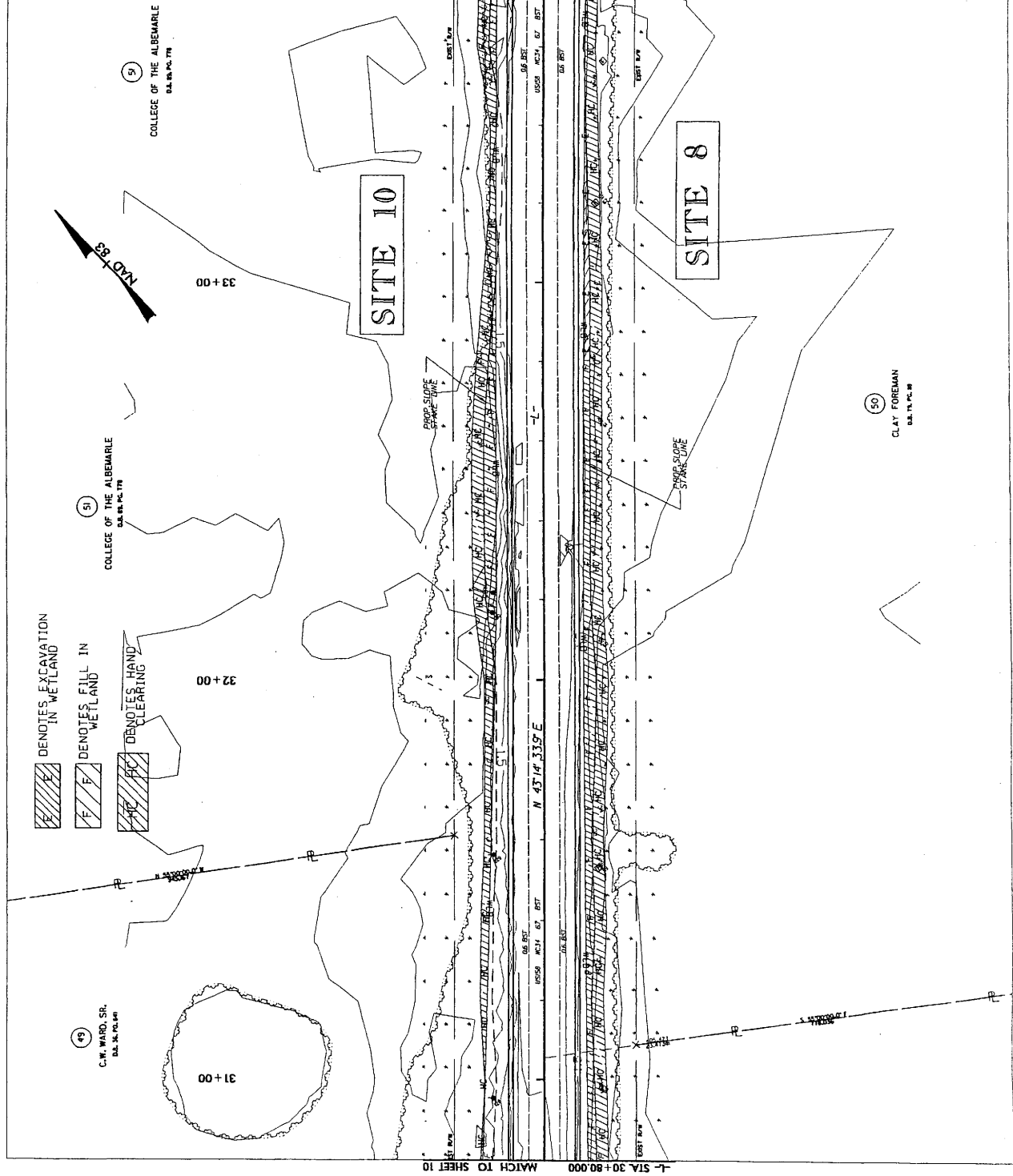
CONST. REV.

K/A REV.

**AMERIC**

**K/A Consulting Engineers, P.A.**  
 1000 N. 10th St., Suite 100  
 Raleigh, NC 27601  
 (919) 876-1111  
 FAX (919) 876-1112  
 www.americ-engineers.com

TRANSPORTATION DIVISION - HYDRAULICS ENGINEERING  
 CIVIL ENGINE - DESIGN - CONSTRUCTION ADMINISTRATION



ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE  
 SEE SHEET 20 FOR -L- PROFILE

REVISIONS


8-14-2004 L&D  
 21/12/2004 11:53:11 AM  
 21/12/2004 11:53:11 AM

Sheet 30 of 36



PROJECT REFERENCE NO.	R-2444	SHEET NO.	30
ROADWAY DESIGN ENGINEER	KCI Associates of North Carolina, P.A.		
HYDRAULICS ENGINEER	KCI Associates of North Carolina, P.A.		
PRELIMINARY PLANS	DATE: 08/20/08		
CONTRACT	R/W REV.		

- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING



(51)

COLLEGE OF THE ALBEMARLE  
D.A. 80, PG. 30

37+00

36+00

35+00

SITE 10

SITE 8

187

MATCH TO SHEET 13

MATCH TO SHEET 11

L-STA 34+40.000

L-STA 36+00.000

(52)  
W.B. ROBINSON  
NO REVISIONS AVAILABLE

(54)  
ROBERT LUTHER  
D.A. 80, PG. 43

ALL DRIVEWAYS ARE 4.8 METERS  
UNLESS NOTED OTHERWISE  
SEE SHEET 20 FOR I-1 PROFILE

REVISIONS

Sheet 31 of 36

**METRICS**

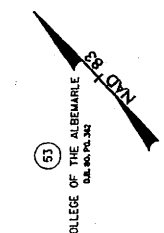
PROJECT REFERENCE NO. R-2416A  
 SHEET NO. 12  
 R/W SHEET NO. 12  
 ROADWAY DESIGN ENGINEER  
 HYDRAULICS ENGINEER




**PRELIMINARY PLANS**  
 NOT FOR CONSTRUCTION

CONSULTANT  
 R/W REV.

**ICI Associates**  
 41 North Carolina, P.A.  
 1000 North Carolina  
 Raleigh, N.C. 27601  
 (919) 876-1000

**Robert Luther**  
 606 W. 10th St.  
 Raleigh, N.C. 27601  
 (919) 876-1000



-  DENOTES EXCAVATION IN WETLAND
-  DENOTES FILL IN WETLAND
-  DENOTES HAND CLEARING

37+00

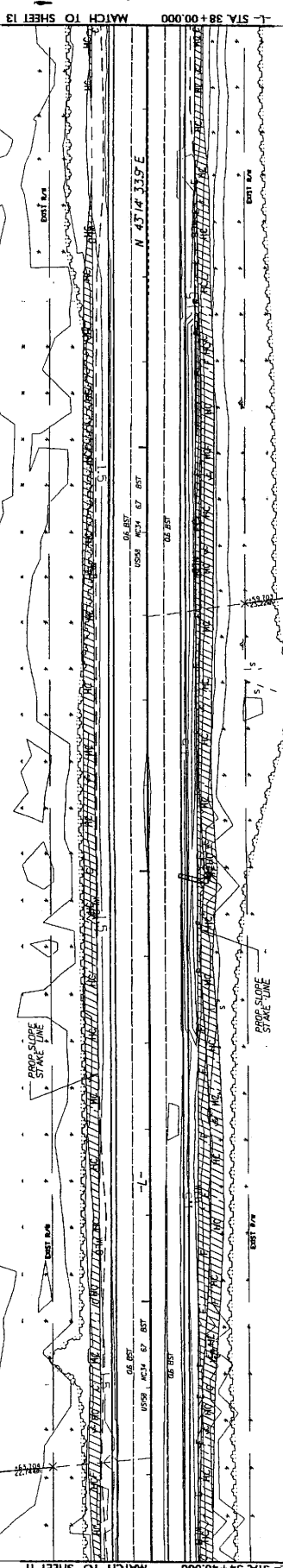
36+00

35+00

38+00

SITE 10

SITE 8



W.B. ROBINSON  
NO RED NETWORK AVAILABLE

54  
ROBERT LUTHER  
D.A. WALKER

ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE  
SEE SHEET 20 FOR -L- PROFILE



Sheet 22 of 26

PROJECT REFERENCE NO. R-2464  
 R/W SHEET NO. 13  
 HYDRAULICS ENGINEER  
 ROADWAY DESIGN ENGINEER  
 PRELIMINARY PLANS  
 KCI Associates of North Carolina, P.A.  
 10000 W. HARRIS LANE, SUITE 100  
 FARMERSVILLE, NC 27834  
 (704) 771-1100  
 www.kciassoc.com

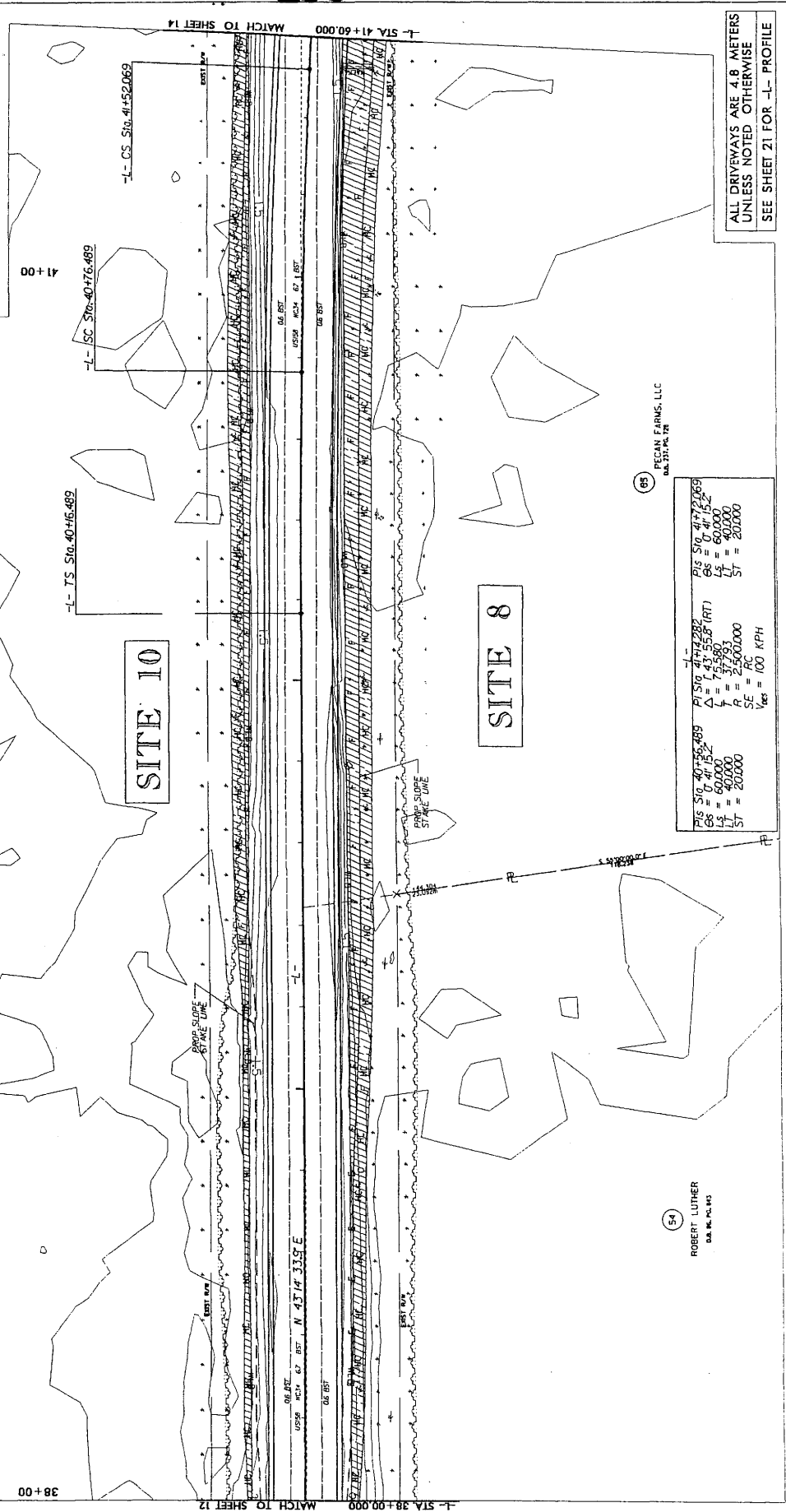
CONST. BY: R/W REV.

COLLEGE OF THE ALBEMARLE  
 D.A. No. PC 382  
 (51)

PECAN FARMS, LLC  
 D.A. No. PC 128  
 (61)

LEGEND:

- [Hatched Box 1] DENOTES EXCAVATION IN WETLAND
- [Hatched Box 2] DENOTES FILL IN WETLAND
- [Hatched Box 3] DENOTES HAND CLEARING



PI SLO 40+76.489	PI SLO 41+76.282
GS = 0.4152	GS = 0.4152
L = 60.000	L = 60.000
ST = 20.000	ST = 20.000
R = 2,500.000	R = 2,500.000
SE = RC	SE = RC
Ves = 100 KPH	Ves = 100 KPH

(54)  
 ROBERT LUTHER  
 D.A. No. PC 143

ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE  
 SEE SHEET 21 FOR -L- PROFILE

MATCH TO SHEET 14

MATCH TO SHEET 12

REVISIONS




Sheet 34 of 36

**METRICS**

PROJECT REFERENCE NO. R-2414  
 R/W SHEET NO. 14  
 HYDRAULICS ENGINEER  
 ROADWAY DESIGN ENGINEER

**PRELIMINARY PLANS**  
 (NOT FOR CONSTRUCTION)

CONSTANT  
 R/W REV.

**KCI Associates of North Carolina, P.A.**  
 PROFESSIONAL ENGINEERS  
 10000 W. HARRIS BLVD., SUITE 100  
 FARMERSVILLE, NC 27834

**PECAN FARMS, LLC**  
 D.B. ST. NO. 128

**DETAIL C**  
 BRIDGE SPILLTHRU SLOPE  
 EXCAVATE CHANNEL 1' NET TO SCOUR  
 BRIDGE SPILLTHRU SLOPE  
 D = 2.0m MIN

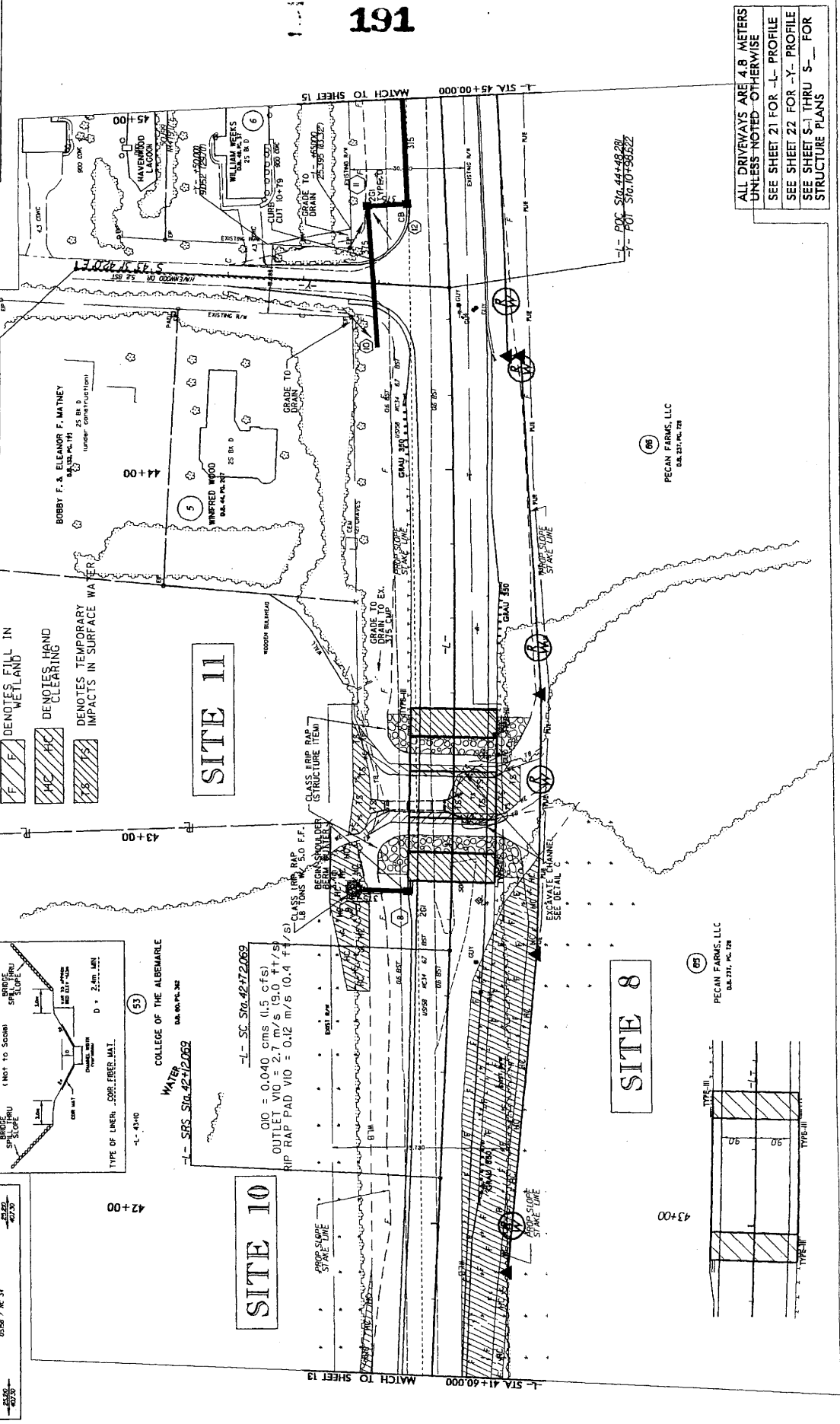
TYPE OF LINER: CORRUGATED METAL

**DETAIL A**  
 BRIDGE SPILLTHRU SLOPE  
 EXCAVATE CHANNEL 1' NET TO SCOUR  
 BRIDGE SPILLTHRU SLOPE  
 D = 2.0m MIN

TYPE OF LINER: CORRUGATED METAL

**DETAIL B**  
 BRIDGE SPILLTHRU SLOPE  
 EXCAVATE CHANNEL 1' NET TO SCOUR  
 BRIDGE SPILLTHRU SLOPE  
 D = 2.0m MIN

TYPE OF LINER: CORRUGATED METAL



ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE  
 SEE SHEET 21 FOR -L- PROFILE  
 SEE SHEET 22 FOR -Y- PROFILE  
 SEE SHEET 5-1 THRU 5- FOR STRUCTURE PLANS



**STRUCTURE HYDRAULIC DATA**

DESIGN DISCHARGE	= 3.3 CMS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 171 M
BASE DISCHARGE	= 40 CMS
BASE F FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 186 M
OVERTOPPING DISCHARGE	= 5.9 CMS
OVERTOPPING FREQUENCY	= 500 YRS
OVERTOPPING ELEVATION	= 207 M

533 mm CORED SLAB  
THREE SPAN - 1 @ 9.1M,  
1 @ 12.2, 1 @ 9.1M  
LENGTH 30.4M

**BEGIN BRIDGE**  
-L- STA. 42+97.800  
EL = 3.492 M

**END BRIDGE**  
-L- STA. 43+28.200  
EL = 3.717 M

PI = 43+80.000  
EL = 4.102 M  
VC = 75 M  
K = 64.2  
V<sub>CRS</sub> = 100 KPH

+0.7420%

-0.6430%

EX. CENTERLINE & GROUND LINE

NATURAL GROUND

AREAS TO BE EXCAVATED  
EST. 1600 C.M.

EXCAVATION

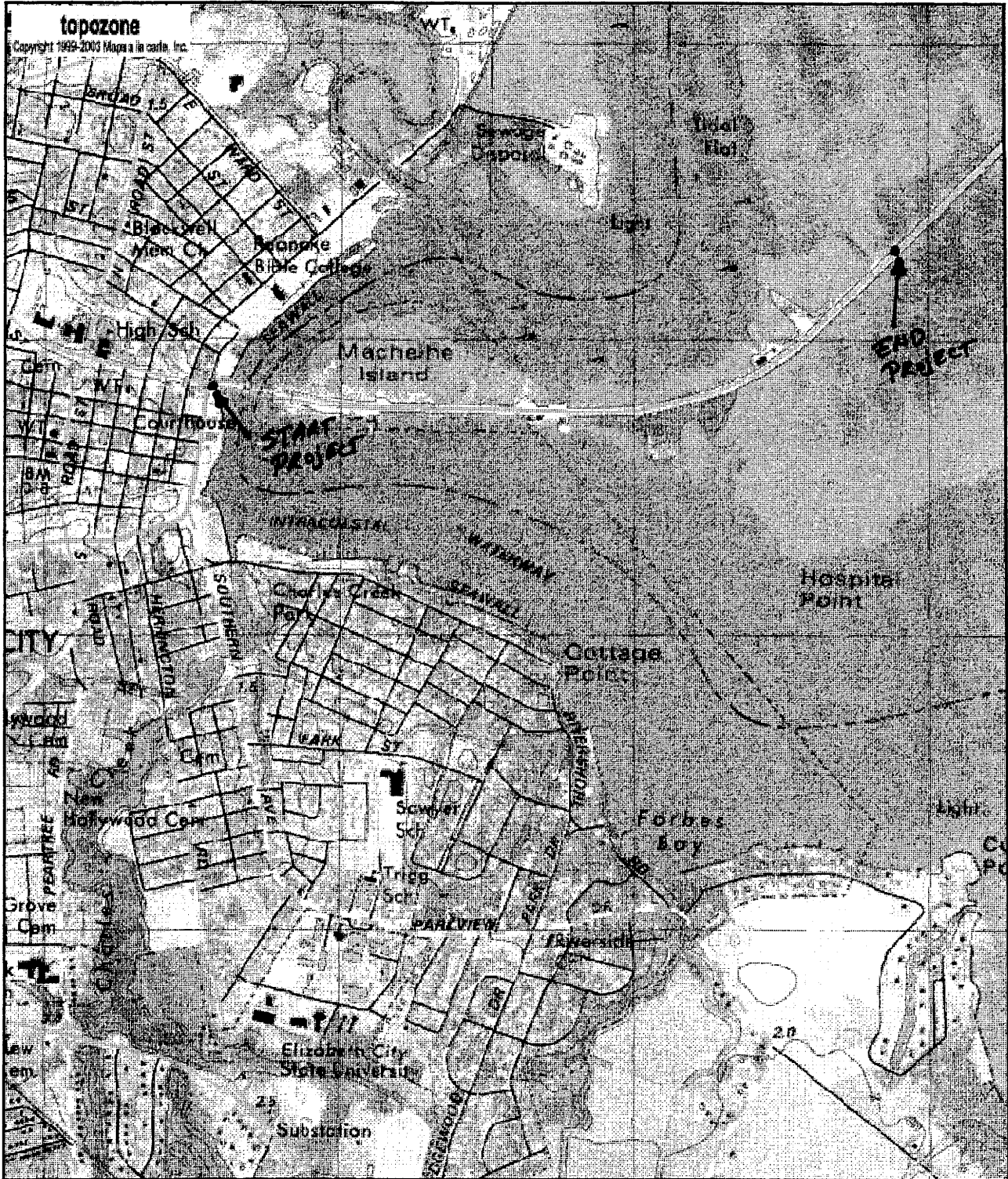
REMOVE EXISTING  
2.13m X 2.44m RCBC

NMS = 0.470

VAR. TO APPROX.  
BED ELEV. = (-) 1.13m

2 +20 +40 +60 +80 +100 +120 +140 +160 +180 +200 +220 +240 +260 +280 +300 +320 +340 +360 +380 +400 +420 +440

194



UTM 18 391596E 4017366N (NAD83/WGS84)  
**Cottage Point, USGS Elizabeth City (NC) Quadrangle**  
 Projection is UTM Zone 18 NAD83 Datum

M\*  
 M=-10.555  
 G=-0.715

Utility Permit Drawing  
 Sheet 1 of 16

R-2414A Utilities

WETLAND PERMIT IMPACT SUMMARY																	
Site No.	Station (From/To) -L- LINE	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS									
			Permanent Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation in Wetlands (ha)	Mechanized Clearing in Wetlands (ha)	Hand Clearing in Wetlands (ha)	Permanent SW impacts (ha)	Temp. SW impacts (ha)	Existing Channel Impacts Temp (m)	Natural Stream Design (m)						
1	8+11 TO 8+83							0.072									
2	10+70 TO 11+07							0.024									
3	11+83 TO 13+00							0.074									
4	13+48 TO 14+64							0.136									
5	15+51 TO 15+79							0.030									
6	16+57 TO 23+30							0.767									
7	24+36 TO 25+11							0.092									
8	25+89 TO 28+17							0.184									
9	28+31 TO 28+45							0.006									
10	28+99 TO 41+64							1.291									
11	42+80 TO 43+00							0.004									
TOTALS:								2.679					0.000	0			0.0

Temporary fill in wetlands for erosion and sediment control measures.

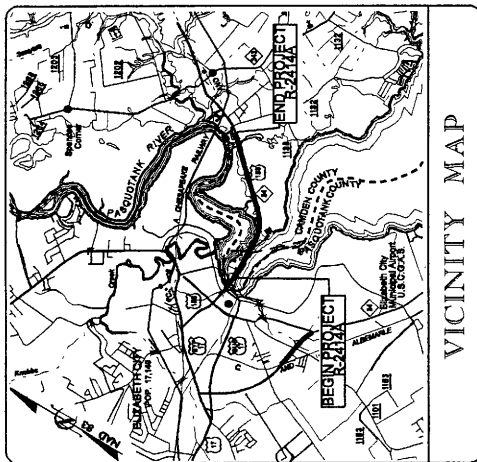
Temporary Stream Impact.  
Existing RCBC and Roadway Fill Removed.  
Replaced w/ 23.9m of Open Channel.

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

CAMDEN COUNTY  
WBS - 34430.1.1 (R-2414A)

SHEET

10/13/2008



See Sheets 1-10 of Index of Sheets

VICINITY MAP

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

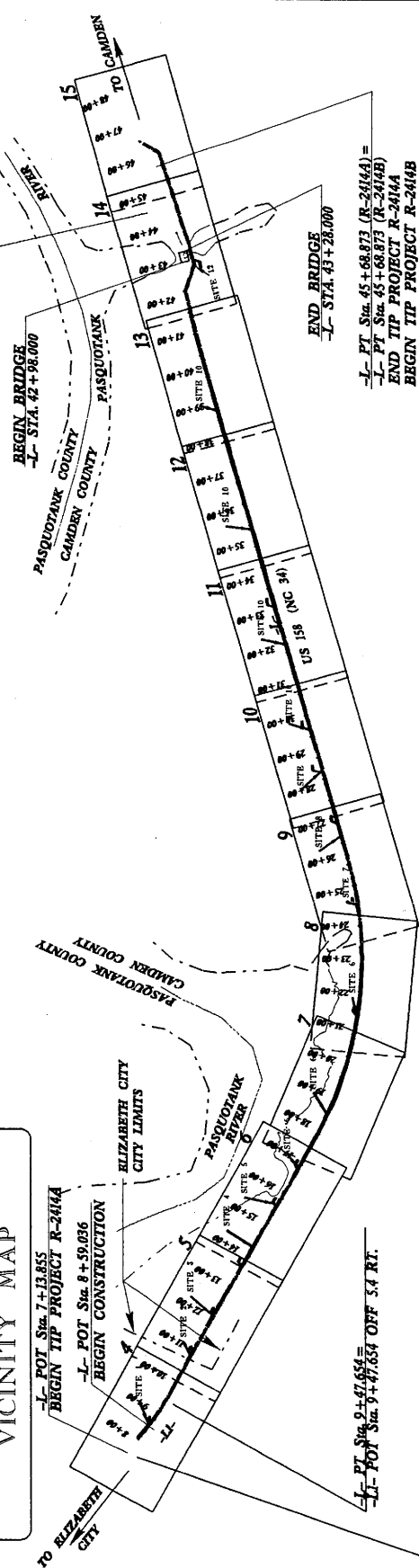
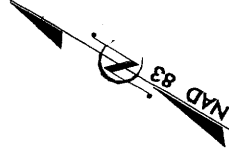
**UTILITY BY OTHERS PLANS  
CAMDEN COUNTY**

LOCATION: US 158/NC 34 FORM EAST OF PASQUOTANK RIVER TO SOUTH OF SR 1257 (HAVENWOOD DR.) BETWEEN ELIZABETH CITY AND CAMDEN  
TYPE OF WORK: POWER, TELEPHONE AND CABLE RELOCATION

T.I.P. NO. R-2414A  
SHEET NO. UO-1

Permit Drawing Sheet 3 of 16  
Utility

ALL DIMENSIONS IN THESE PLANS ARE IN METERS UNLESS OTHERWISE NOTED UNDER OTHERWISE NOTED

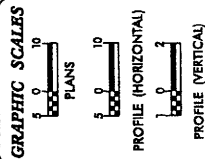


-L- PT Sta. 45+68.873 (R-2414A) =  
-L- PT Sta. 45+68.873 (R-2414B) =  
END TIP PROJECT R-2414A  
BEGIN TIP PROJECT R-2414B

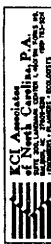
PRELIMINARY PLANS  
INCOMPLETE PLANS  
DO NOT USE FOR CONSTRUCTION

THIS PROJECT IS WITHIN MUNICIPAL BOUNDARIES OF ELIZABETH CITY

CLEARING TO BE PERFORMED BY METHOD II



PROJECT LENGTH  
LENGTH ROADWAY TIP PROJECT R-2414A = 3.825 KM  
LENGTH STRUCTURE TIP PROJECT R-2414A = 0.030 KM  
TOTAL LENGTH TIP PROJECT R-2414A = 3.855 KM



PREPARED IN THE OFFICE OF  
DIVISION OF HIGHWAYS  
DESIGN SERVICES  
UTILITY SECTION  
101 MAE SERVICE CENTER  
BUILDING NO. 7000-101  
RAVENHURST PARK  
RAVENHURST, NC 27817-1010

By: W. W. HARRIS, P.E. UTILITIES SECTION ENGINEER  
Comp. BOBBI L. HARRIS, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER  
Date: 11/11/09 UTILITIES PROJECT DESIGNER

**TIP PROJECT: R-2414A**



PROJECT REFERENCE NO. R-2414A  
SHEET NO. UD-3

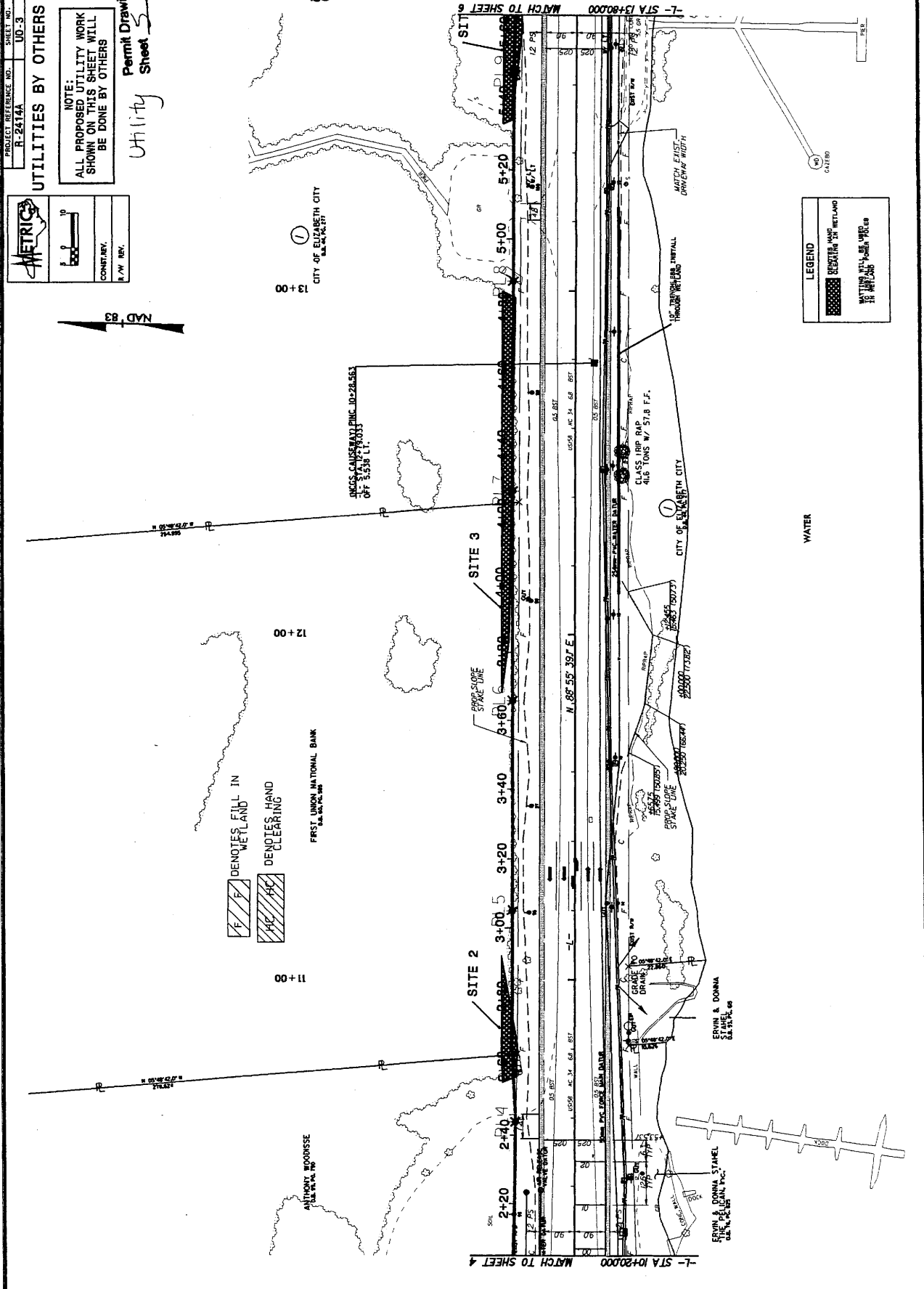
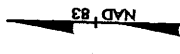
### UTILITIES BY OTHERS

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

**METRICS**

CONTR. REV.  
R.A.W. REV.

Permit Drawing  
Sheet 5 of 16  
Utility



REVISIONS

07-APR-2008 14:08  
C:\projects\119-2414A\11-03\PS4.DWG





PROJECT REFERENCE NO. SHEET NO. 7

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

**METRICS**

PRELIMINARY PLANS

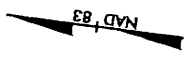
CONTRACT NO.

R/W REV.

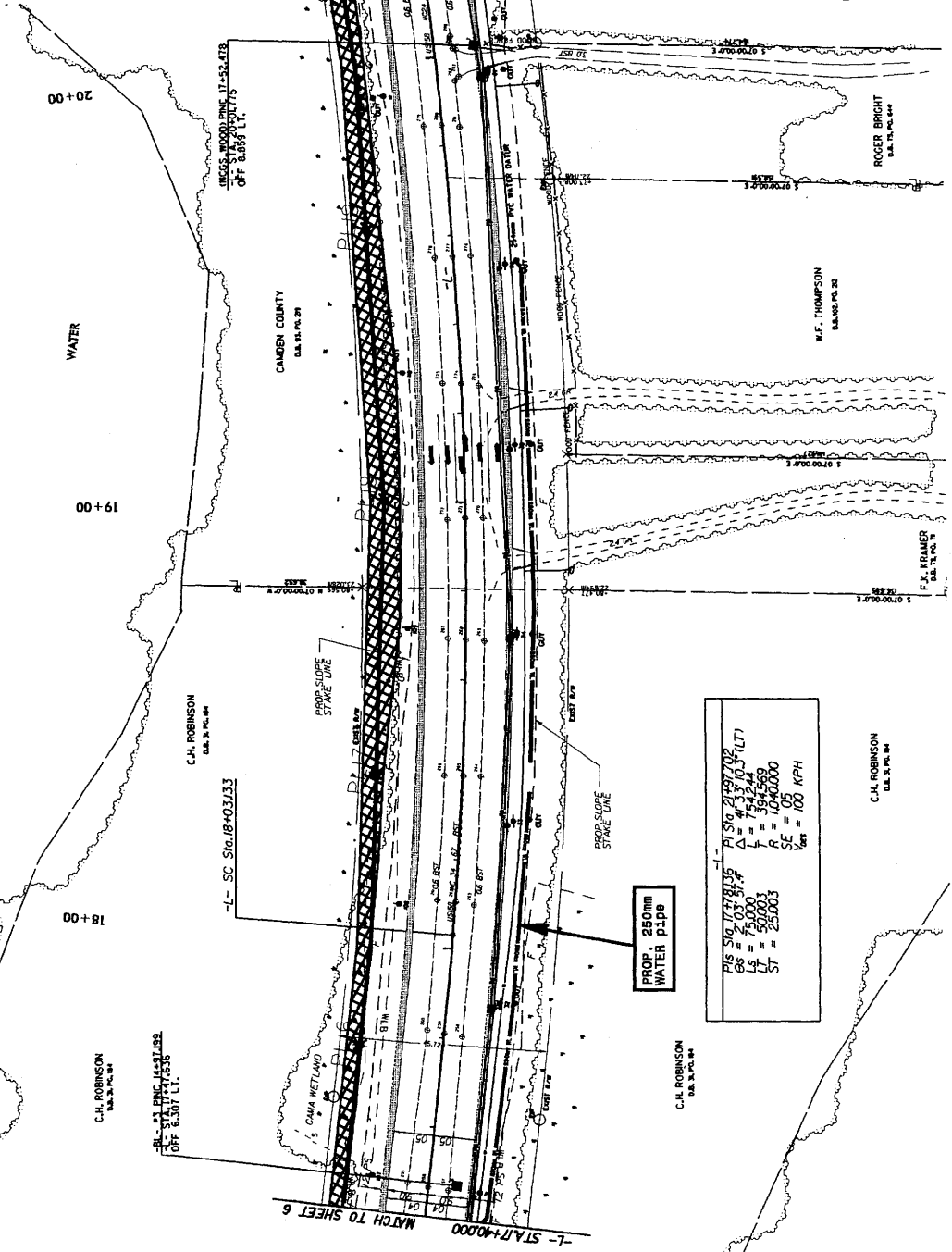
KCI Associates  
1100 North 10th Street, P.O. Box 1000  
York, PA 17402

Utility Sheet 7 of 16

200



DENOTES FILL IN WETLAND  
 DENOTES HAND CLEARING



ALL DRIVEWAYS ARE 4.8 METERS UNLESS NOTED OTHERWISE  
SEE SHEET 18 FOR -L- PROFILE

PIV	= 75.000	PI	= 75.000
LS	= 75.000	L	= 75.424
LT	= 50.003	R	= 394.569
ST	= 25.003	A	= 10.60000
		VE	= 0.0
		V	= 100 KPH

REVISIONS


02-24-2008

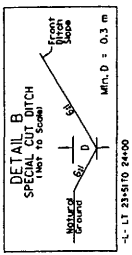
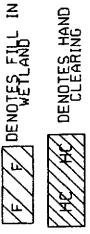
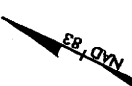
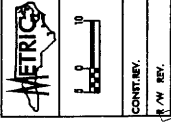
PROJECT REFERENCE NO. R-2414A

SHEET NO. 10-6

UTILITIES BY OTHERS

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

Permit Drawing  
Utility Sheet 2 of 6



ERE T. WASTE, JR.  
D.A. 10.10.08

LES CELLES ROBERTSON  
D.A. 08.10.03

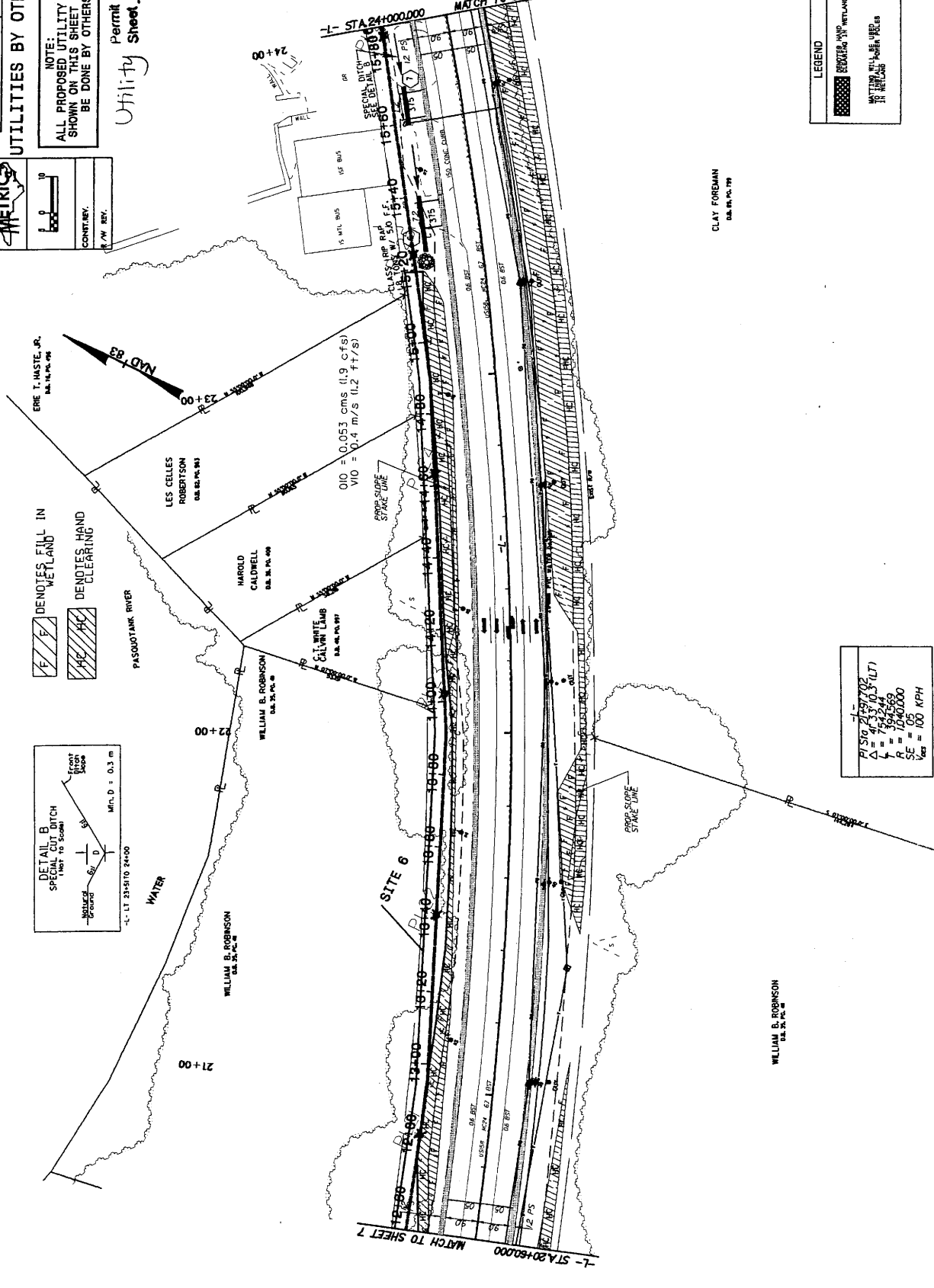
HAROLD CALDWELL  
D.A. 08.10.08

WILLIAM B. ROBINSON  
D.A. 08.10.08

WILLIAM B. ROBINSON  
D.A. 08.10.08

WILLIAM B. ROBINSON  
D.A. 08.10.08

201



MATCH TO SHEET 7

MATCH TO SHEET 9

STA 24+000.000

STA 23+500.000

STA 23+000.000

STA 22+500.000

STA 22+000.000

STA 21+500.000

STA 21+000.000

STA 20+500.000

STA 20+000.000

STA 19+500.000

STA 19+000.000

STA 18+500.000

STA 18+000.000

STA 17+500.000

STA 17+000.000

STA 16+500.000

STA 16+000.000

STA 15+500.000

STA 15+000.000

STA 14+500.000

STA 14+000.000

STA 13+500.000

STA 13+000.000

STA 12+500.000

STA 12+000.000

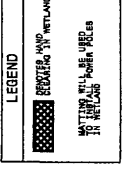
STA 11+500.000

STA 11+000.000

STA 10+500.000

STA 10+000.000

CLAY FOREMAN  
D.A. 08.10.08



PI	24.1000
SI	24.1000
LI	24.1000
PI	24.1000
SE	24.1000
VE	24.1000



PROJECT REFERENCE NO. R-2414A

SHEET NO. UO-8

UTILITIES BY OTHERS

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

METRIC

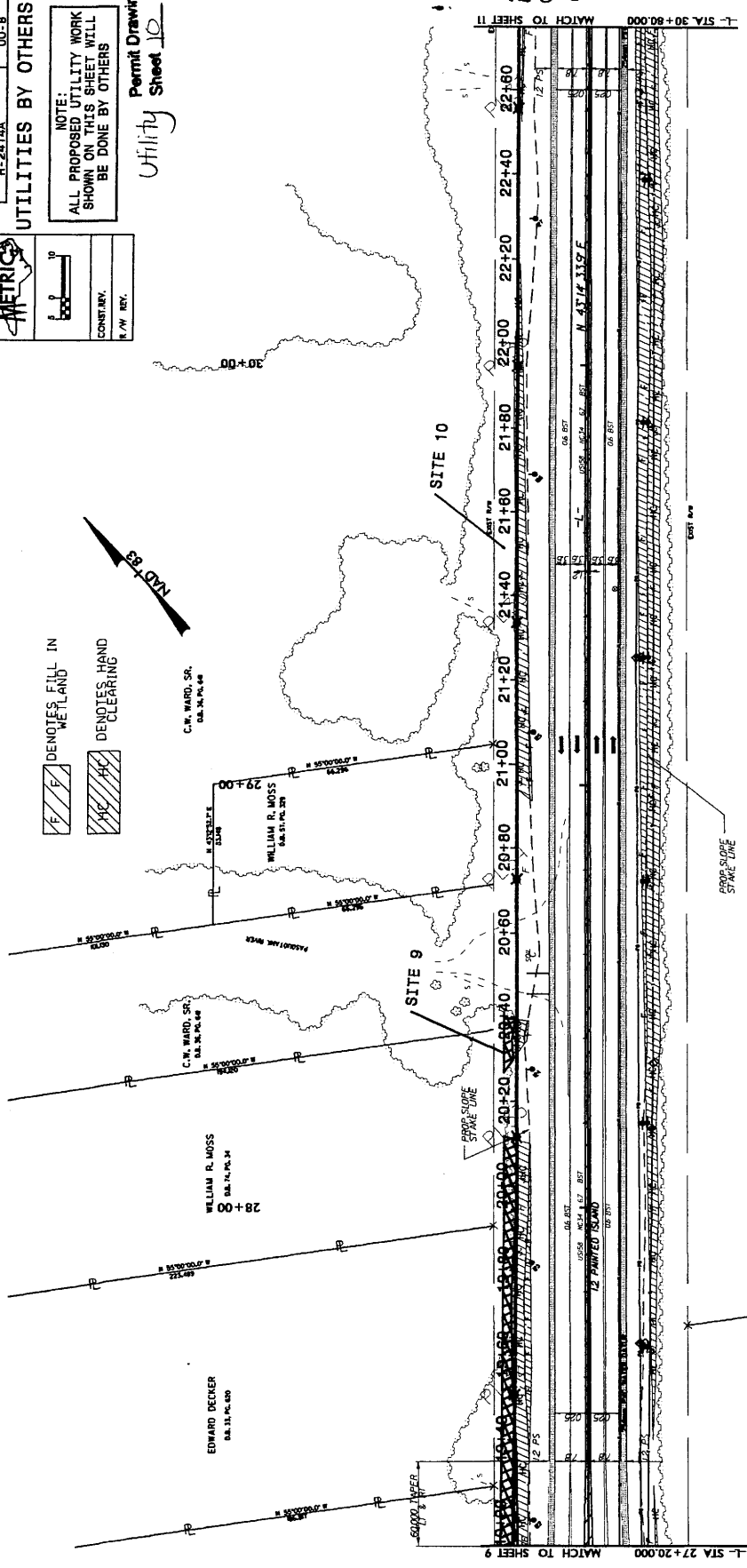
CONTR. BY: [Symbol]

R/W REV.:

Permit Drawing  
Utility Sheet 10 of 16

DENOTES FILL IN WETLAND

DENOTES HAND CLEARING



LEGEND

CLAY FOREMAN D.B. N.P.M.

CLAY FOREMAN D.B. N.P.M.

CLAY FOREMAN D.B. N.P.M.

203

MATCH TO SHEET 11

MATCH TO SHEET 9

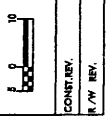


PROJECT REFERENCE NO. R-2414A SHEET NO. UD-10

UTILITIES BY OTHERS

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

Permit Drawing of Utility Sheet 12 of 16



CONTR. BY: R/W REV.



COLLEGE OF THE ALBEMARLE O.S. 04.00.002

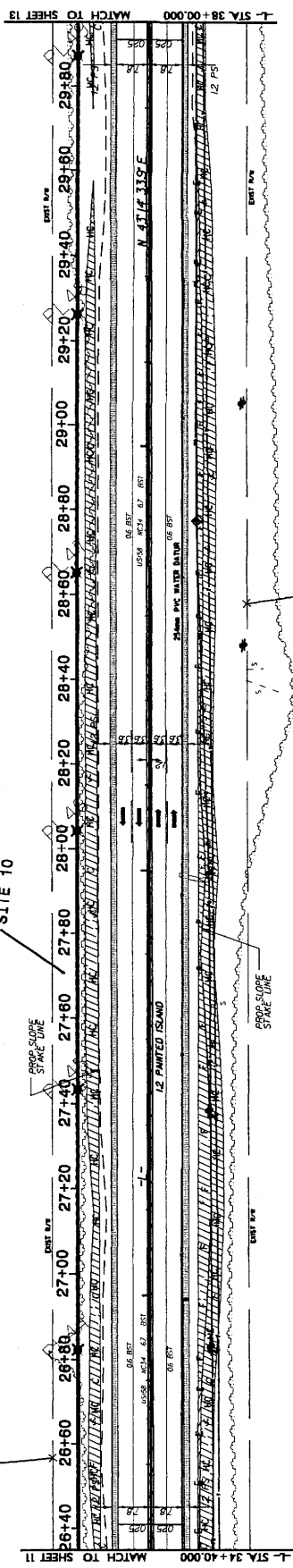
- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING

36+00

35+00

38+00

SITE 10



MATCH TO SHEET 11

MATCH TO SHEET 13

L- STA 34+40.000

L- STA 38+00.000

LEGEND

- EXCAVATION IN WETLAND
- FILL IN WETLAND
- HAND CLEARING

ROBERT LUTNER O.S. 04.00.002

M.S. ROBINSON

PROJECT REFERENCE NO. R-2414A  
SHEET NO. UD-11

UTILITIES BY OTHERS

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

Utility  
Permit Drawing  
Sheet 13 of 16



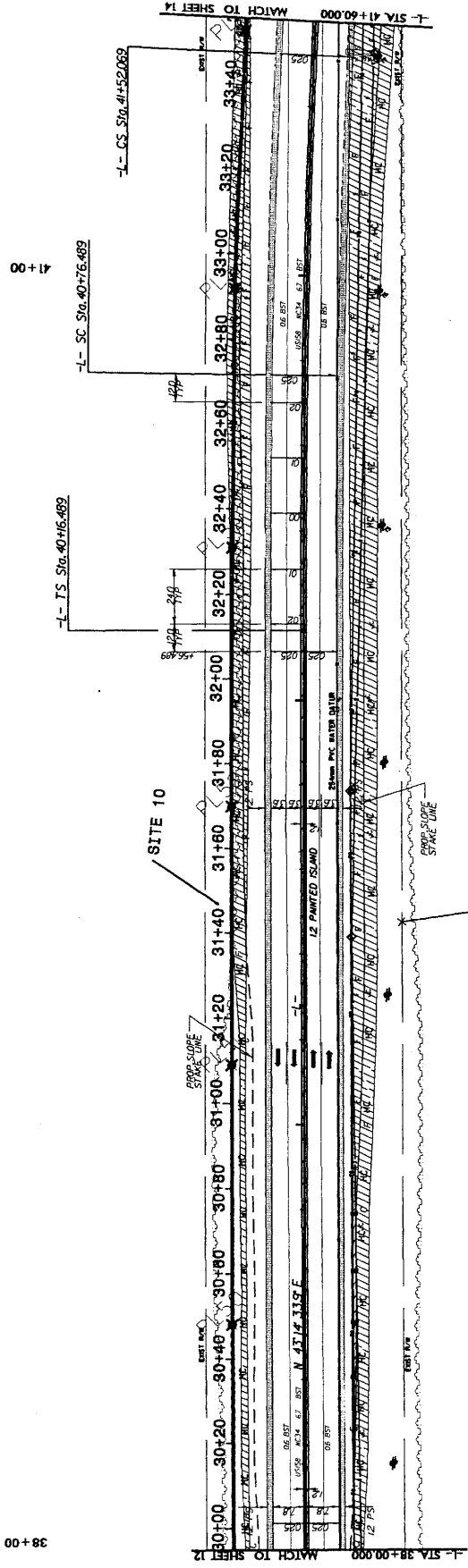
COLLEGE OF THE ALBEMARLE  
D.A. M. P.C. 82

- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING

LEGEND

 DENOTES HAND CLEARING IN WETLAND  
 DENOTES FILL IN WETLAND  
 DENOTES EXCAVATION IN WETLAND

38+00  
39+00  
40+00  
41+00



C.O. ROBINSON TRUST  
D.A. M. P.C. 80

PIV Sta. 40+56.489	PIV Sta. 41+42.82	PIV Sta. 41+72.069
GS = 60.000	Δ = 1.300	GS = 60.000
L = 40.000	Δ = 1.300 (HT)	L = 40.000
ST = 20.000	Δ = 1.300	ST = 20.000
SE = RC	SE = RC	SE = RC
V <sub>max</sub> = 100 KPH	V <sub>max</sub> = 100 KPH	V <sub>max</sub> = 100 KPH

ROBERT LUTHER  
D.A. M. P.C. 81







