




STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 24, 2006

MEMORANDUM TO: Mr. C. E. Lassiter, Jr., P.E.
Division 2 Engineer

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

SUBJECT: Beaufort County; Improvements to US 17 over the Tar River;
State Project No. 8.T150601; T.I.P. No. R-2510

Attached is the U. S. Army Corps of Engineers Individual 404 Permit and the DWQ 401 Water Quality Certification for the above referenced project. All environmental permits have been received for the construction of this project.

PSH/gyb

Attachment

cc: Mr. Art McMillan, P.E.
Mr. Jay Bennett, P.E.
Mr. David Chang, P.E.
Mr. Randy Garriss, P.E.
Mr. Greg Perfetti, P.E.
Mr. Mark Staley
Mr. John F. Sullivan, III, FHWA
Mr. Omar Sultan
Mr. Jay Johnson, Division 2 Environmental Officer

PROJECT COMMITMENTS

Beaufort County
Improvements to US 17
Over the Tar River
Federal Aid Project MAF-75-3 (26)
State Project 8.T150601
TIP No. R-2510

In addition to the standard Nationwide Permit # 6 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, General Certification Conditions, Individual Section 404 Special Conditions and the Section 401 Conditions of Certification, the following Special Commitments have been agreed to by NCDOT:

Commitments Developed During Project Planning:

Hydraulics Unit, Division 2, REU

“High Quality Waters (HQW) Erosion Control Guidelines” will be adhered to throughout construction.

Hydraulics Unit, Division 2

NCDOT’s “Stream Crossing Guidelines for Anadromous Fish Passage” will be adhered to for this project.

Division 2

Precautionary Guidelines for General Construction in Areas Which May Be Used by the West Indian Manatee in North Carolina will be utilized for this project.

Commitments Developed During Permitting:

PDEA

Prior to commencing construction within jurisdictional waters of the United States for any portion of the proposed project, the permittee shall conduct another survey for the federally threatened sensitive joint-vetch (*Aeschynomene virginica*) during its flowering season (mid July –October). Results of that survey shall be forwarded to USFWS for review. The USFWS shall submit their findings in writing to the Corps of Engineers, Washington Regulatory Field Office NCDOT Regulatory Project Manager.

NCDOT biologists completed this survey on August 22, 2005 and the results were forwarded to the USFWS on November 28, 2005.

Division 2

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.

PDEA, Division 2, Roadway Design, Hydraulics Unit

NCDOT understands that no construction will occur on sections R-2510B and R-2510C until final design and resulting impacts have been approved by all regulatory agencies.

Division 2

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.

Division 2

A construction moratorium for anadromous fish from February 15 through June 15 will be adhered to for in-water work.

Division 2

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.

Division 2

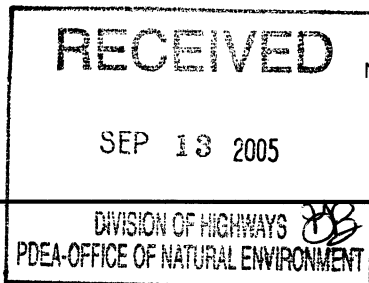
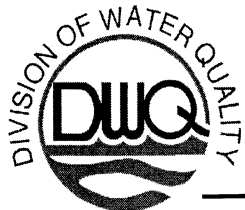
The permittee shall schedule a preconstruction meeting between its representatives, the contractor's representatives, and the Corps of Engineers, Washington Regulatory Field Office, NCDOT Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands to ensure that there is a 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.

PDEA

Compensatory mitigation for the unavoidable impacts to 8.53 acres of riverine wetlands, 3.88 acres of non-riverine wetlands, and 4,244 linear feet of perennial stream associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated August 4, 2005 from William D. Gilmore, EEP Director. The EEP will provide the compensatory mitigation as follows:

Lower Tar-Pamlico River, CU 03020104 (17.06 acre riverine; 7.76 acres non-riverine; and 8,488 feet of stream): In order to compensate for impacts to 4,244 linear feet of warm-water stream, 8.53 acres of Riverine wetlands (Cypres-Gum swamp), and 3.88 acres of Non-Riverine wetlands, the permittee shall make payment to the North Carolina Ecosystem Enhancement Program (NC EEP) in the amount determined by the NC EEP, sufficient to perform the restoration of 8,488 linear feet of warm water stream, 17.06 acres of Riparian (Riverine) Wetlands, and 7.76 acres of non-Riparian (non-Riverine) wetlands in the Tar-Pamlico River Basin, Cataloging Unit 03020104).

Construction within jurisdictional areas on the property shall begin only after the permittee has made full payment to the NC EEP and provided a copy of the payment documentation to the Corps, and the NC EEP has provided written confirmation to the Corps that it agrees to accept responsibility for the mitigation work required, in compliance with the MOU between the North Carolina Department of Environment and Natural Resources and the United States Army Corps of Engineers, Wilmington District, dated November 4, 1998.

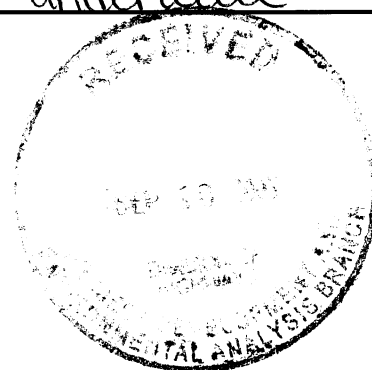


Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

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

Underwood

September 6, 2005



Dr. Gregory J. Thorpe, PhD., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina, 27699-1548

Dear Dr. Thorpe:

Re: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and Tar-Pamlico River Buffer Authorization for Proposed Improvements to US 17 (Washington Bypass) from south of SR 1127 (Possum Track Road) to north of SR 1418 (Roberson Road) in Beaufort County, TIP No. R-2510 A, B and C, State Project No. 8.T150601, Federal Aid Project No. MAF-75-3(26).
DWQ Project No. 050785

Attached hereto is a copy of Certification No. 3527 issued to The North Carolina Department of Transportation dated September 6, 2005.

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

Sincerely,

Alan W. Klimek, P.E.
Director

Attachments

cc: Wilmington District Corps of Engineers
Mr. Bill Biddlecome, Corps of Engineers Washington Field Office
Mr. Christopher Militscher, US EPA, Region IV
Mr. C.E. Lassiter, Jr., PE, Division 2 Engineer, PO Box 1587, Greenville, NC 27835
Mr. Jay Johnson, Division 2 Environmental Officer, PO Box 1587, Greenville, NC 27835
Mr. Chris Underwood, NEU, 2728-168 Capital Blvd., Parker Lincoln Bldg., Raleigh, NC 27604
Mr. William Gilmore, Ecosystem Enhancement Program
Mr. Steven Sollod, NCDENR - DCM, 2728-168 Capital Blvd., Parker Lincoln Bldg., Raleigh, NC 27604
Mr. Garcy Ward, NCDWQ Washington Regional Office
Central Files
File Copy

**APPROVAL OF 401 Water Quality Certification and ADDITIONAL CONDITIONS
And Tar Pamlico River Buffer Rules**

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, Section .0500. The project shall be constructed pursuant to the application dated received August 5, 2005, to construct US 17 (Washington Bypass) from South of SR 1127 (Possum Track Road) to North of SR 1418 (Roberson Road) in Beaufort County. The approved design is that submitted in your application dated received August 5, 2005. This certification authorizes the NCDOT to impact 12.41 acres of jurisdictional wetlands, permanently impact 4,244.4 linear feet of stream, 1.49 acres of surface water and impact 385,780.2 square feet of protected Tar-Pamlico Riparian Buffers (234,117.8 square feet in Zone 1 and 151, 662.4 square feet in Zone 2) in Beaufort County. The authorized impacts are as described below:

Section A Wetland Impacts in Tar-Pamlico River Basin

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing Method III (ac)
1	0.1184		0.0441	0.0142
2	0.22		0.0214	0.0238
3	0.0108		0.0072	0.0058
4	0.3314		0.3302	0.1425
5	0.0404		0.0877	0.0676
6	1.0470			0.1639
7	0.1491			0.0051
8	0.2530		0.0128	0.0646
9	0.1186		0.0873	0.0276
10	0.5961		0.1659	0.0655
11			0.0359	0.0079
12	0.0171			
15	0.1766		0.0154	0.0789
16	0.2049			0.0475
17	0.0047		0.0093	0.0055
Total	3.2881	0	0.8171	0.7204

Section B Wetland Impacts in the Tar -Pamlico River Basin

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)
1	0.092			0.007
2			0.017	0.013
3	0.431			0.040
4	3.062			0.149
5	0.122			0.011
6	0.216	0.050		
7	1.554			
8	0.042			
9	0.126			0.017
10	0.223			
Total	5.839	0.050	0.017	0.237

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Section A Wetland Impacts in Tar-Pamlico River Basin

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing Method III (ac)
1	0.0784		0.0441	0.0542
2			0.0214	0.2438
3	0.0108		0.0072	0.0058
4	0.3014		0.3302	0.1425
5	0.0404		0.0877	0.0676
6	1.0470			0.1639
7	0.1491			0.0051
8	0.2530		0.0128	0.0646
9	0.1186		0.0873	0.0276
10	0.4161		0.1659	0.2455
11			0.0359	0.0079
12	0.0171			
15	0.1766		0.0154	0.0789
16	0.2049			0.0475
17	0.0047		0.0093	0.0055
Total	2.8080	0	0.8171	1.1604

Section B Wetland Impacts in the Tar -Pamlico River Basin

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)
1	0.092			0.007
2			0.017	0.013
3	0.431			0.040
4	3.032			0.149
5	0.122			0.011
6	0.216	0.050		
7	1.554			
8	0.042			
9	0.126			0.017
10	0.223			
Total	5.839	0.050	0.017	0.237

Section C Wetland Impacts in the Tar-Pamlico River Basin

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)
1A	0.022			0.027
1B			0.074	0.021
1C			0.056	0.019
3	0.093			0.031
4	1.035			0.108
Total	1.15	0	0.13	0.206

Section A Surface Water and Stream Impacts in the Tar-Pamlico River Basin

Site	Permanent Fill in Surface Water (ac)	Temporary Fill in Surface Water (ac)	Permanent Stream Impacts (ft)
3	0.0105	0.0061	113
12	0.0140	0.0019	88
13	0.0087	0.0036	52
14	0.0119	0.0080	122
15	0.0219	0.0310	103
Total	0.0670	0.0506	478

Section B Surface Water and Stream Impacts in the Tar-Pamlico River Basin

Site	Permanent Fill in Surface Water (ac)	Temporary Fill in Surface Water (ac)	Permanent Stream Impacts (ft)
1	0.011		121.6
2	0.003		72.7
3	0.759		
4			826.1
6	0.069	0.033	
7	0.128		1118
8	0.074		
9	0.051		278.9
Total	1.095	0.033	2,417.3

Section C Surface Water and Stream Impacts in the Tar-Pamlico River Basin

Site	Permanent Fill in Surface Water (ac)	Temporary Fill in Surface Water (ac)	Permanent Stream Impacts (ft)
2	0.003		113.8
3	0.018		159.3
4	0.287		841.6
5A	0.007		107.5
5B	0.008		72.5
5C	0.006		54.4
Total	0.329	0	1,349.1

Section A Tar-Pamlico Riparian Buffer Impacts

Site	Zone 1 (sq. ft.)	Zone 2 (sq. ft.)	Wetlands in Zone 1 (sq. ft.)	Wetlands in Zone 2 (sq. ft.)	Mitigation Required Zone 1 (sq. ft.)	Mitigation Required Zone 2 (sq. ft.)
1	12,548.7	7,215	1,034.9		11,513.8	7,215
2	7,000.1	4,327.3	886.4		6,113.7	4,327.3
3	10,019.3	5,931.8			10,019.3	5,931.8
4	13,129.4	6,815.4			13,129.4	6,815.4
5	15,405	7,489	4,051	2,737.4	11,354	4,751.6
6	2,165.1	1,383.8	853		1,312.1	1,383.8
Total	60,330.6	33,162.3	6,825.3	2,737.4	53,505.3	30,424.9

Section B Tar-Pamlico Riparian Buffer Impacts

Site	Zone 1 (sq. ft.)	Zone 2 (sq. ft.)	Wetlands in Zone 1 (sq. ft.)	Wetlands in Zone 2 (sq. ft.)	Mitigation Required Zone 1 (sq. ft.)	Mitigation Required Zone 2 (sq. ft.)
1	6,676.6	4,450	4,312.9			
2	2,842.1	1,992.6	1,179.5	98.8		
4	49,735.4	32,361	48,299	24,287.9	1,436.4	8,073.1
6A	9,424.7	6,215.2	35.5	3		
6B	10,188.4	6,628.1	7.5	3		
6C	29,045.5	19,778.2	35.5	41.5	29,010	19,736.7
7	60,721.8	38,160.8	3,079.2	5,244.5	57,642.6	32,916.3
9	16,736.8	11,154.9	2,253.9	1,944.5	14,482.9	9,210.4
Total	185,371.3	116,290.7	59,202.9	31,623.2	102,571.9	69,936.5

Section C Tar-Pamlico Riparian Buffer Impacts

Site	Zone 1 (sq. ft.)	Zone 2 (sq. ft.)	Wetlands in Zone 1 (sq. ft.)	Wetlands in Zone 2 (sq. ft.)	Mitigation Required Zone 1 (sq. ft.)	Mitigation Required Zone 2 (sq. ft.)
1A	14,759.6	9,684.9	1,477.4	453.3	13,282.2	9,231.6
3	10,208.7	6,621.8	521.8	934.7	9,686.9	5,687.1
4	55,506.1	33,873.3	434.6	2.4	55,071.5	33,870.9
5A	8,114.1	5,294.4				
5B	6,986.8	4,080.4				
5C	3,976.1	2,628.6				
Total	99,551.5	62,183.2	2,433.9	1,390.3	78,040.6	48,789.6

Mitigation Requirements for Tar-Pamlico Riparian Buffers Project Wide

	Impact (sq. ft.)	Replacement Ratio	Total Impact (sq. ft.)	Fee schedule	Payment amount for Mitigation
Zone 1	234,117.8	3:1	702,353.4	\$0.96/sq. ft.	\$674,259.26
Zone 2	149,151	1.5:1	223,726.5	\$0.96/sq. ft.	\$214,777.44
Total Mitigation Payment Required					\$889,036.7

The application provides adequate assurance that the discharge of fill material into the waters of the Tar-Pamlico 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 August 5, 2005, as described in the Public Notice. 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 three years from the date of the cover letter from DWQ or on the same day as the expiration date of the corresponding Corps of Engineers Permit, whichever is sooner.

Condition(s) of Certification:

1. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act
2. All sediment and erosion control measures shall not be placed in wetlands or waters to the maximum extent practicable. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, they shall be removed and the natural grade restored after the Division of Land Resources has released the project.
3. If an environmental document is required, this Certification is not valid until a FONSI or ROD is issued by the State Clearinghouse. All water quality-related conditions of the FONSI or ROD shall become conditions of this Certification;
4. No live or fresh concrete shall come into contact with waters of the state until the concrete has hardened.
5. There shall be no excavation from or waste disposal into jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit. Should waste or borrow sites be located in wetlands or stream, compensatory mitigation will be required since it is a direct impact from road construction activities.

6. All channel relocations will be constructed in a dry work area, and stabilized before stream flows are diverted. Channel relocations will be completed and stabilized prior to diverting water into the new channel. Whenever possible, channel relocations shall be allowed to stabilize for an entire growing season. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30 foot wide wooded and an adjacent 20 foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. A transitional phase incorporating coir fiber and seedling establishment is allowable. Also, rip-rap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage requested.
7. Upon completion of the project, the NCDOT shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the Division of Water Quality upon completion of the project.
8. The NCDOT 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, NCDOT shall conform with the NCDOT policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997) at all times.
9. When final design plans are completed for R-2510 Section B and C, a modification to the 401 Water Quality Certification and the Tar-Pamlico River Riparian Buffer Certification shall be submitted with seven copies and fees to the NC Division of Water Quality. Final designs shall reflect all appropriate avoidance, minimization, and mitigation for impacts to wetlands, streams, and other surface waters, and buffers. No construction activities that impact any wetlands, streams, surface waters, or protected riparian buffers located in R-2510 Section B and C shall begin until after NCDOT applies for, and receives a written modification 401 Water Quality Certification and Tar-Pamlico River Riparian Buffer Authorization from the NC Division of Water Quality.
10. Compensatory mitigation for impacts 383,268.8 square feet of Tar-Pamlico Riparian Buffers shall be provided for as described below.

Zone of Impact	Impacts (Square Feet)	Replacement Ratio	Total Square Feet of Mitigation Required
Zone 1	234,117.8	3:1	702,354.4
Zone 2	149,151	1.5:1	223,726.5
Total	383,268.8		926,080.9

We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through an in lieu payment to the North Carolina Ecosystem Enhancement Program (NCEEP), and that the EEP has agreed to implement the mitigation for the project. Mitigation for unavoidable impacts to Tar-Pamlico Riparian Buffers shall be provided through an in-lieu payment to the North Carolina Ecosystem Enhancement Program (NCEEP) at a rate of \$0.96 per square foot. Therefore, a total payment of \$889,036.7 shall be submitted to the NCEEP to offset the impacts. No construction activities in Tar-Pamlico River Riparian buffers shall begin until payment for buffer mitigation is made and the Ecosystem Enhancement Program receives and clears your check (made payable to DENR Ecosystem Enhancement Program). The payment to NCEEP shall be sent within two months of issuance of the 404 permit. If you have any questions concerning the Ecosystem Enhancement Program please contact them at 919-733-5208.

11. Compensatory mitigation for impacts to 12.41 acres of jurisdictional wetlands shall be done. Total mitigation shall be provided as described below:

Offsite Compensatory Mitigation

Compensatory mitigation for the unavoidable impacts to 8.53 acres of riparian wetlands and 3.88 acres of non-riparian wetlands in the Hydrologic Cataloging Unit 03020104, associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated August 4, 2005, and in accordance with the Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corps of Engineers signed on July 22, 2003.

12. Compensatory mitigation for impacts to 4,244.4 linear feet of streams shall be done at a replacement ratio of 2:1, except sites A3, and B7, which will be done at a ratio of 1:1. Applying a replacement ratio of 2:1 or 1:1, total mitigation for 7,255.8 linear feet of streams shall be provided as described below:

Offsite Compensatory Mitigation

Compensatory mitigation for the unavoidable impacts to 4,244.4 linear feet of streams in the Hydrologic Cataloging Unit 03020104 associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated August 4, 2005, and in accordance with the Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corps of Engineers signed on July 22, 2003.

13. 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.
14. All temporary fills in wetlands and surface waters shall be removed upon completion of the project. In addition, the post-construction removal of any temporary bridge structures or fill will need to return the project site to its preconstruction contours and elevations. The revegetation of the impacted areas with appropriate native species will be required.
15. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
16. The dimension, pattern and profile of the stream above and below the crossing should not be modified by widening the stream channel or reducing the depth of the stream. Disturbed floodplains and streams should be restored to natural geomorphic conditions.
17. Any riprap used must not interfere with thalweg performance and aquatic life passage during low flow conditions.
18. 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.
19. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
20. Two copies of the final construction drawings shall be furnished to NCDWQ prior to the pre-construction meeting. Written verification shall be provided to the NC Division of Water Quality that the final construction drawings comply with the attached permit drawings contained in your application dated August 5, 2005.
21. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.
22. NCDOT, 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 law 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 to include conditions appropriate to assure compliance with such standards and requirements in accordance with 15A NCAC 2H.0507(d).

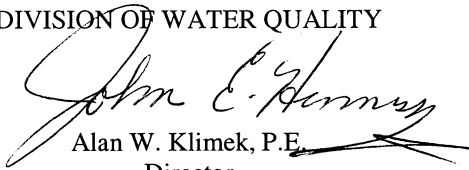
23. A copy of this Water Quality Certification shall be posted on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
24. DOT shall schedule a preconstruction meeting for this project prior to incurring any impacts in jurisdictional waters including wetlands. The Division of Water Quality shall be notified a minimum of 30 days prior to the preconstruction conference.
25. Placement of culverts and other structures in waters, streams, and wetlands must 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 shall be maintained if requested in writing by DWQ.
26. If the above condition (#25) is unable to be met, due to bedrock or other limiting features encountered during construction, please contact the NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
27. There shall be no excavation from or waste disposal into jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit. Should waste or borrow sites be located in wetlands or stream, compensatory mitigation will be required since it is a direct impact from road construction activities.
28. Any violations, during the construction of the approved project, of this 401 Water Quality Certification or the North Carolina State Water Quality Standards as defined in 15A NCAC 2B .0200 Rules, shall be reported immediately to the North Carolina Division of Water Quality.
29. Pursuant to NCAC15A 2B.0259(6), sediment and erosion control devices shall not be placed in Zone 1 of any Tar-Pamlico Buffer without prior approval by the NCDWQ. At this time, the NCDWQ has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.

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, P.O. Box 27447, Raleigh, N.C. 27611-7447. 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 6th day of September 2005

DIVISION OF WATER QUALITY


Alan W. Klimek, P.E.
Director

WQC No. 3527



North Carolina Department of Environment and Natural Resources

Division of Coastal Management

Michael F. Easley, Governor

Charles S. Jones, Director

William G. Ross Jr., Secretary

October 31, 2005

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

SUBJECT: CD05-052 - Consistency Concurrence for Improvements to US 17 from South of SR 1127 to North of SR 1418 (Washington Bypass, TIP No. R-2510) in Beaufort County, NC (DCM #20050063)

Dear Dr. Thorpe:

The Division of Coastal Management (DCM) received on September 19, 2005 complete documentation supporting that the above referenced project would be consistent with the enforceable policies of North Carolina's coastal management program.

North Carolina's coastal management program consists of, but is not limited to, the Coastal Area Management Act, the State's Dredge and Fill Law, and the land use plan of the County and/or local municipality in which the proposed project is located. It is the objective of DCM to manage the State's coastal resources to ensure that proposed activities are compatible with safeguarding and perpetuating the biological, social, economic and aesthetic values of the State's coastal resources.

To solicit public comments, DCM published a public notice in the "*Washington Daily News*" on September 21, 2005 and circulated a description of the proposed project to State agencies that would have a regulatory interest in the proposed development. No comments were received asserting that the proposed project would be inconsistent with North Carolina's coastal management program.

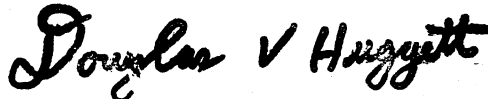
In accordance with the supporting documentation accompanying NCDOT's Consistency Certification for this project, no CAMA Areas of Environmental Concern (AEC's) are to be impacted by the construction of the A section, R-2510A. However, the proposed R-2510B section impacts the Public Trust Area and Public Trust Shoreline CAMA AEC's where it crosses the Tar River. The proposed R-2510C section impacts the Public Trust Area and Public Trust Shoreline CAMA AEC's where it crosses Cherry Run and Old Ford Swamp. Prior to initiating any construction on the remaining segments of this project (R-

400 Commerce Avenue, Morehead City, North Carolina 28557-3421
Phone: 252-808-2808 \ FAX: 252-247-3330 \ Internet: www.nccoastalmanagement.net

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Should the project be modified, a revised consistency certification could be necessary. This might take the form of either a supplemental consistency certification pursuant to 15 CFR 930.66, or a new consistency certification pursuant to 15 CFR 930.57. Likewise, if further project assessments reveal environmental impacts not previously considered by the proposed development, a supplemental consistency certification might be required. If you have any questions, please contact Steve Sollod at (919) 733-2293 x230 or via e-mail at steve.sollod@ncmail.net. Thank you for your consideration of the North Carolina coastal management program.

Sincerely,

A handwritten signature in black ink that reads "Douglas V Huggett". The signature is written in a cursive, slightly slanted style.

Doug Huggett
Manager, Major Permits and Consistency Unit

cc: Bill Arrington, DCM
Christina Breen, DWQ
Bill Gilmore, EEP
Terry Moore, DCM
Stephen Rynas, DCM
Steve Sollod, DCM
Chris Underwood, NCDOT
William Wescott, USACE



**DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS**

P. O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

IN REPLY REFER TO

January 17, 2006

Regulatory Division

Action ID. 199301143; Tip Project No. R-2510A

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

Dear Mr. Thorpe:

In accordance with the written request of May 3, 2005, and the ensuing administrative record, enclosed is a permit to relocate and widen approximately 15 miles of US Highway 17 (Washington Bypass), starting from 0.5 mile south of Possum Track Road (NCSR 1127) south of Chocowinity, Beaufort County and ending 0.2 mile north of Roberson Road (NCSR 1418) north of Washington, Beaufort County, North Carolina.

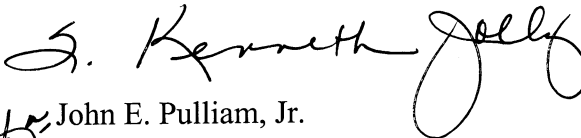
If any change in the authorized work is required because of unforeseen or altered conditions or for any other reason, the plans revised to show the change must be sent promptly to this office. Such action is necessary, as revised plans must be reviewed and the permit modified.

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

- a. You must complete construction before December 31, 2008.
- b. You must notify this office in advance as to when you intend to commence and complete work.
- c. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.

If you have questions, please contact Mr. William Wescott at the Washington Regulatory Field Office, telephone 252-975-1616, extension 31.

Sincerely,


John E. Pulliam, Jr.
Colonel, U.S. Army
District Engineer

Enclosures

Copy Furnished with enclosures:

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

Copies Furnished with special conditions and plans:

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

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

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

Mr. Ronald Mikulak, Chief
Wetlands Section - Region IV
Water Management Division
U.S. Environmental Protection Agency
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

Mr. Doug Huggett
NC Division of Coastal Management
Division of Coastal Management
400 Commerce Avenue
Morehead City, NC 28557-3421

NC Department of Transportation
ATTN: Beth Harmon
1652 Mail Service Center
Raleigh, NC 27699-1652

DEPARTMENT OF THE ARMY PERMIT

Permittee **North Carolina Department of Transportation, Gregory J. Thorpe, Ph.D.**

Permit No. **199301143**

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: Widen and relocate approximately 15 miles of US Highway 17. The proposed roadway will be a four-lane, divided highway, with grass shoulders and ditches, and a 46-foot wide grassed median. The median will be reduced to a 10-foot median divided by a barrier on the four-lane freeway bridge that will span the Tar River and the frequently inundated forested wetlands adjacent to the Tar River.

Project Location: The proposed highway widening and relocation will extend approximately 15 miles, starting from 0.5 mile south of Possum Track Road (NCSR 1127) south of Chocowinity, in Beaufort County and ending 0.2 mile north of Roberson Road (NCSR 1418) north of Washington, in Beaufort County, North Carolina.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2008**. 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:
 - (X) 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.

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

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

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

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

 12/6/05
(PERMITTEE) **North Carolina Department of Transportation** (DATE)

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

 1/17/06
(DISTRICT ENGINEER) **JOHN E. PULLIAM, JR., COLONEL** (DATE)

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

(TRANSFeree) (DATE)

SPECIAL CONDITIONS (Action ID. 199301143; NCDOT/TIP R-2510)

COMPLIANCE WITH PLANS

- a) This authorization is only for Section R-2510-A. Construction on sections R-2510-B and R-2510-C shall not commence until final design has been completed and plans have been approved by the District Engineer.
- b) 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

- c) 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

- d) 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.
- e) 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

f) All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. 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

g) 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

h) 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

i) A construction moratorium for anadromous fish from February 15 through June 15 will be adhered to for in-water work.

SECTION 7 ESA CONSULTATION

j) Prior to commencing construction within jurisdictional waters of the United States for any portion of the proposed project, the permittee shall conduct another survey for the federally threatened sensitive joint-vetch (*Aeschynomene virginica*) during its flowering season (mid July –October). Results of that survey shall be forwarded to USFWS for review. The USFWS shall submit their findings in writing to the Corps of Engineers, Washington Regulatory Field Office NCDOT Regulatory Project Manager.

CONTRACTOR COMPLIANCE

k) 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

l) 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

m) 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

n) 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

o) 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

p) 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

q) 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

r) 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.

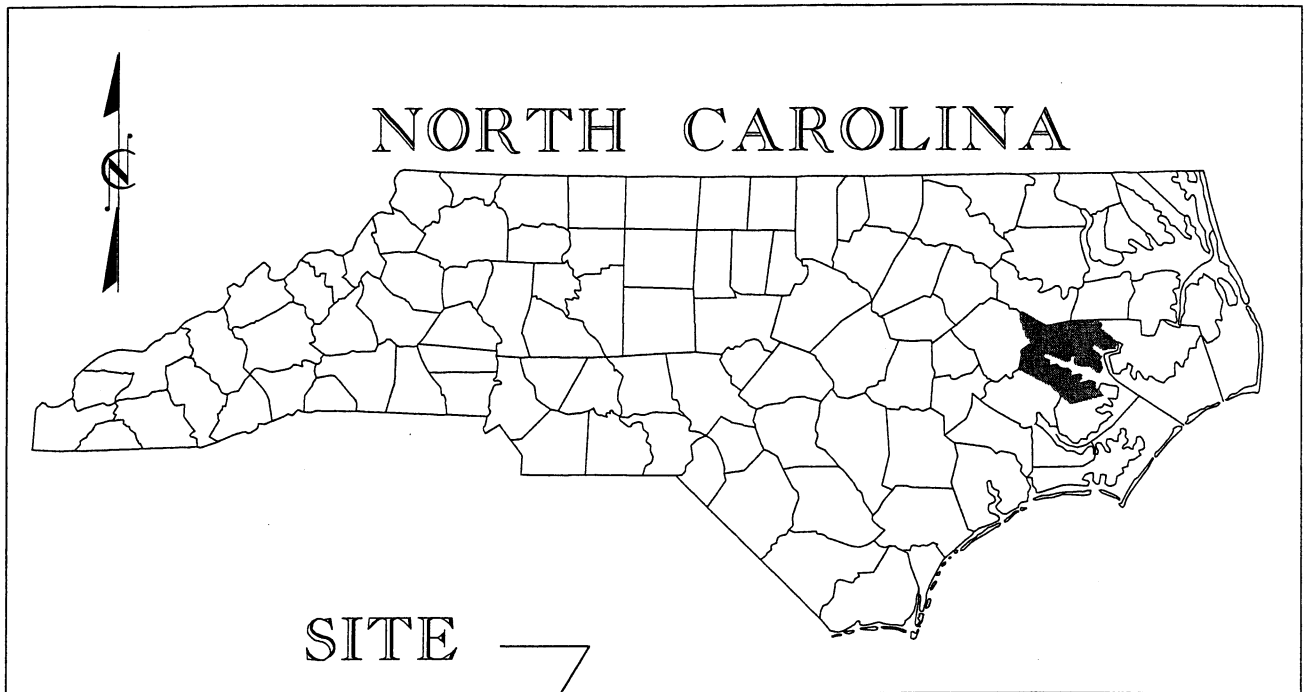
EEP MITIGATION

s) Compensatory mitigation for the unavoidable impacts to 8.53 acres of riverine wetlands, 3.88 acres of non-riverine wetlands, and 4,244 linear feet of perennial stream associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated August 4, 2005 from William D. Gilmore, EEP Director. The EEP will provide the compensatory mitigation as follows:

Lower Tar-Pamlico River, CU 03020104 (17.06 acre riverine; 7.76 acres non-riverine; and 8,488 feet of stream):

In order to compensate for impacts to 4,244 linear feet of warm-water stream, 8.53 acres of Riverine wetlands (Cypress-Gum swamp), and 3.88 acres of Non-Riverine wetlands, the permittee shall make payment to the North Carolina Ecosystem Enhancement Program (NC EEP) in the amount determined by the NC EEP, sufficient to perform the restoration of 8,488 linear feet of warm water stream, 17.06 acres of Riparian (Riverine) Wetlands, and 7.76 acres of non-Riparian (non-Riverine) wetlands in the Tar-Pamlico River Basin, Cataloging Unit 03020104).

Construction within jurisdictional areas on the property shall begin only after the permittee has made full payment to the NC EEP and provided a copy of the payment documentation to the Corps, and the NC EEP has provided written confirmation to the Corps that it agrees to accept responsibility for the mitigation work required, in compliance with the MOU between the North Carolina Department of Environment and Natural Resources and the United States Army Corps of Engineers, Wilmington District, dated November 4, 1998.



VICINITY MAP

NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.I.I(R-2510A)

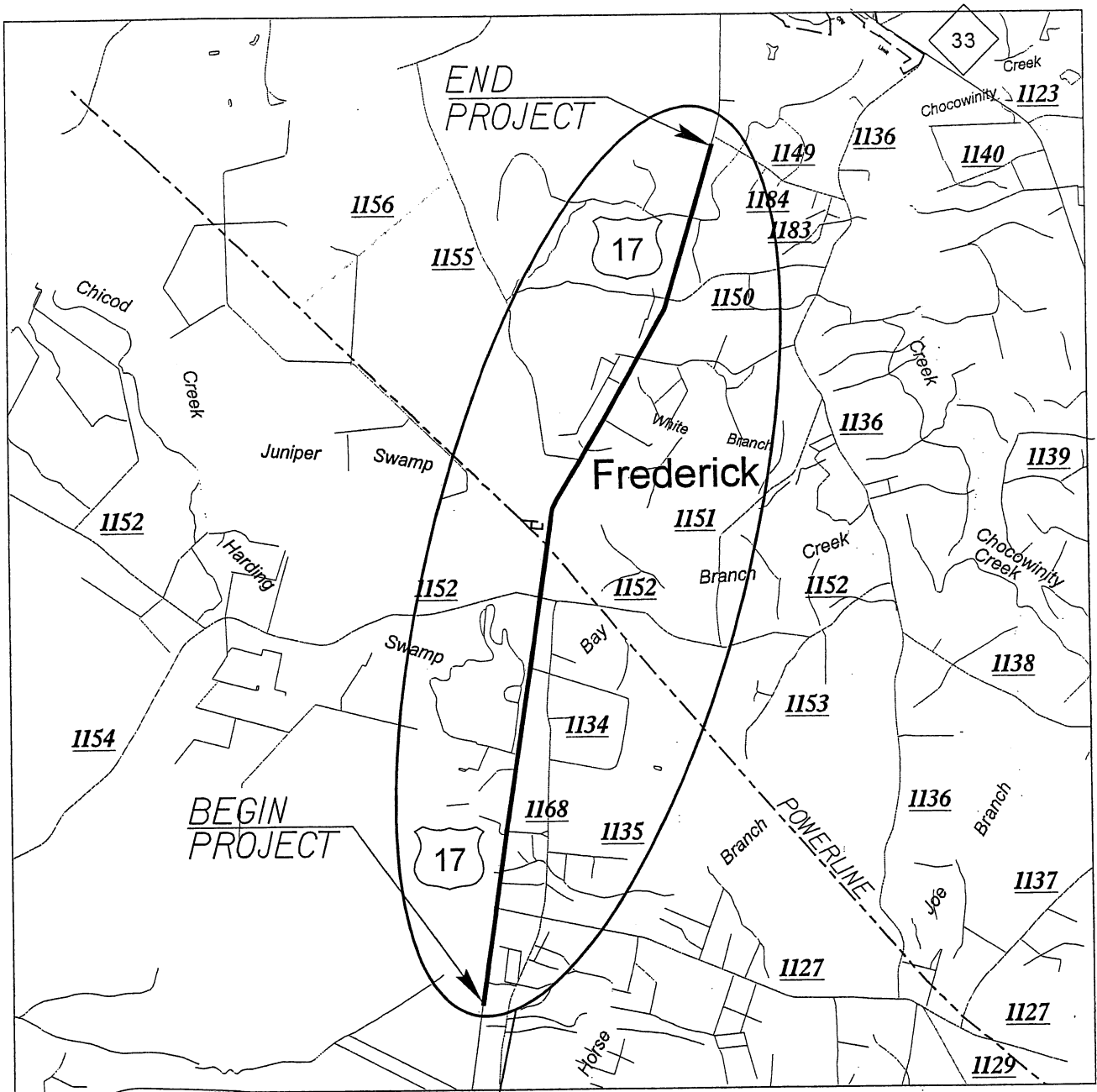
US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

NOT TO SCALE

DATE: AUG-04

SHEET ____ OF ____

BUFFER SITE MAP



SITE



**NORTH CAROLINA
DEPARTMENT OF HIGHWAYS**

BEAUFORT COUNTY
34440.1.I (R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

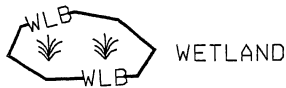
NOT TO SCALE

DATE: AUG-04

SHEET ____ OF ____

BUFFER LEGEND

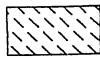
—WLB— WETLAND BOUNDARY



WETLAND



ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2



MITIGABLE IMPACTS ZONE 1



MITIGABLE IMPACTS ZONE 2

—BZ— RIPARIAN BUFFER ZONE

—BZ1— RIPARIAN BUFFER ZONE 1
30 ft (9.2m)

—BZ2— RIPARIAN BUFFER ZONE 2
20 ft (6.1m)

→ → FLOW DIRECTION

—TB— TOP OF BANK

—WE— EDGE OF WATER

—C— PROP. LIMIT OF CUT

—F— PROP. LIMIT OF FILL

▲ PROP. RIGHT OF WAY

—NG— NATURAL GROUND

—PL— PROPERTY LINE

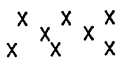
—TDE— TEMP. DRAINAGE
EASEMENT

—PDE— PERMANENT DRAINAGE
EASEMENT

—EAB— EXIST. ENDANGERED
ANIMAL BOUNDARY

—EPB— EXIST. ENDANGERED
PLANT BOUNDARY

—▽— WATER SURFACE

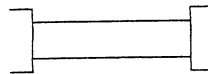


LIVE STAKES

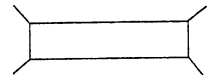


BOULDER

— — — CORE FIBER ROLLS



PROPOSED BRIDGE



PROPOSED BOX CULVERT



PROPOSED PIPE CULVERT

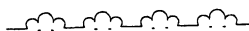
(DASHED LINES DENOTE
EXISTING STRUCTURES)

12"-48"
PIPES

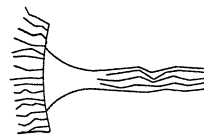
54" PIPES
& ABOVE



SINGLE TREE



WOODS LINE



DRAINAGE INLET



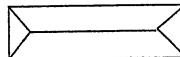
RIP RAP



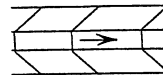
ADJACENT PROPERTY OWNER
OR PARCEL NUMBER
IF AVAILABLE



PREFORMED SCOUR HOLE (PSH)



LEVEL SPREADER (LS)



GRASS SWALE



NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.LI (R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

NOT TO SCALE

DATE: AUG-04

SHEET ____ OF ____

SUMMARY OF AFFECTED PROPERTY OWNERS BUFFER SITES

TRACT NO.	PROPERTY OWNER	ADDRESS	SITE NO.
(12)	TERRY D. ANDREWS	8059 US HWY 17 S CHOCOWINITY NC, 27817	1
(13)	J.M. HILL, et ux	3509 TRENT RD. NEW BERN NC, 28560	1
(60)	MICHAEL MIZELL, et ux	6219 US HWY 17 S CHOCOWINITY NC, 27817	2
(62)	BOBBY GENE WEATHINGTON	PO BOX 921 CHOCOWINITY NC, 27817	2
(68)	ROY MITCHELL CLARK, et ux	7450 PITT ST. GRIMESLAND NC, 27837	3
(71)	BETSY ROSE HADDOCK	6025 US HWY 17 S CHOCOWINITY NC, 27817	3
(87)	EDWARD A. BUCK, et ux	?	4
(95)	CHARLES L. TOLER, JR.	PO BOX 398 CHOCOWINITY NC, 27817	4
(97)	SALLIE BLOUNT TOLER	5613 US HWY 17 S CHOCOWINITY NC, 27817	4
(108)	A. FRANK RESPESS	4918 US HWY 17 S CHOCOWINITY NC, 27817	5
(109)	MARVIN J. HARRIS FAMILY TRUST	PO BOX 1747 WASHINGTON NC, 27889	5
(107)	JASON C. SHEPPARD	PO BOX 1902 WASHINGTON NC, 27889	5
(110)	SCOTT ROBERT BATEMAN, et ux	4892 US HWY 17 S CHOCOWINITY NC, 27817	5
(118)	RICHARD D. PEED, JR., et ux	410 TRANTERS CREEK DR. WASHINGTON NC, 27889	6

NORTH CAROLINA DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.I.I (R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

NOT TO SCALE

DATE: AUG-04

SHEET ____ OF ____



BUFFER IMPACTS SUMMARY

			IMPACT										BUFFER REPLACEMENT	
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	TYPE		ALLOWABLE			MITIGABLE			TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)	
			ROAD CROSSING	PARALLEL IMPACT	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)					
1	66" RCP	56+75 to 57+80	X					12548.7	7215.0	19763.7				
2	30" RCP	154+80 to 156+00	X					7000.1	4327.3	11327.4				
3	24" RCP	161+80 to 162+90	X					10019.3	5931.8	15951.1				
4	24" RCP	184+00 to 186+30	X					13192.4	6815.4	20007.7				
5	2@ 8 ft x 7 ft	223+50 to 225+20	X					15405.0	7489.0	22894.0				
6	36" RCP	241+10 to 241+65	X					2165.1	1383.8	3548.9				

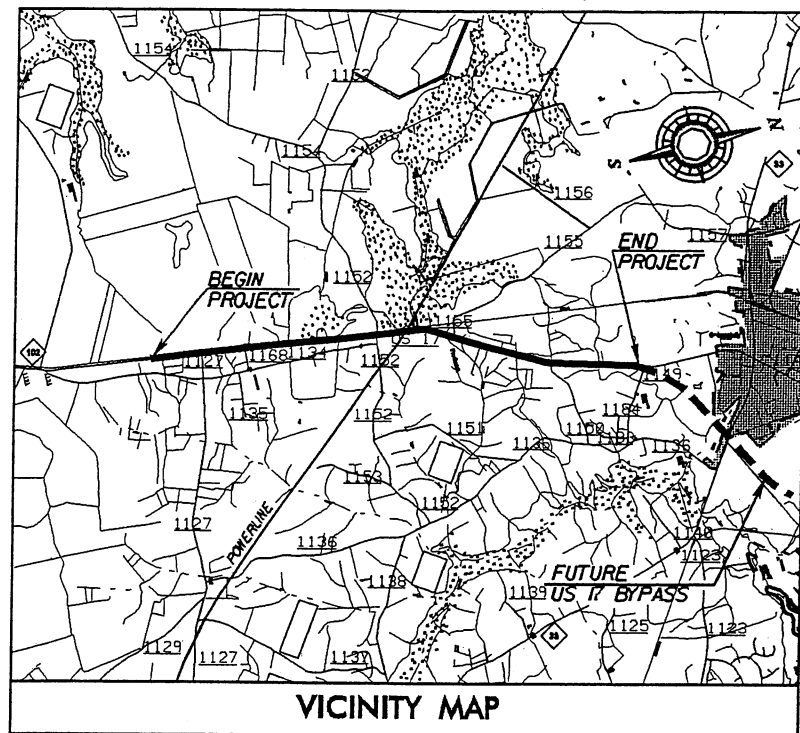
N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510A)

4/8/2005
SHEET OF

05/08/95

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



VICINITY MAP

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

BEAUFORT COUNTY

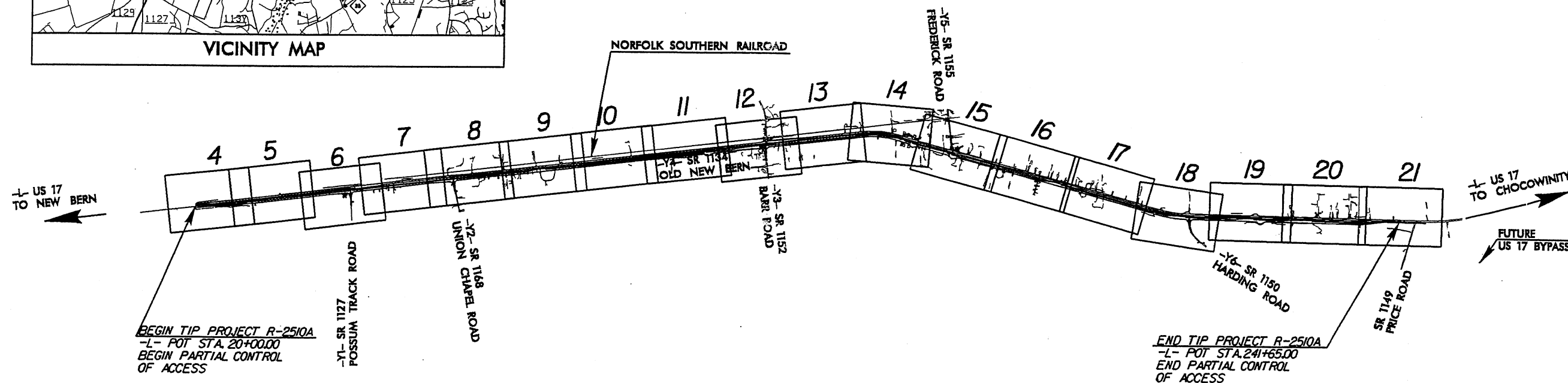
LOCATION: US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2510A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34440.1.1	MAF-75-3(26)	PE	

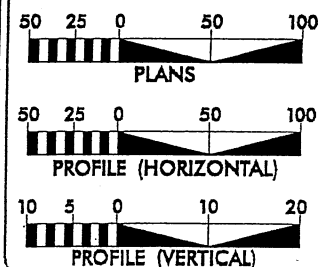
Utility Plans

NAD 8395 NC GRID



NOTES: THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III OR TO R/W WHEN INDICATED ON PLANS.

GRAPHIC SCALES



DESIGN DATA

ADT 2006 = 10200 VPD
ADT 2026 = 17000 VPD
DHV = 12 %
D = 60 %
T = 12 % *
V = 60 MPH
* TTST 7% DUAL 5%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2510A = 4.198 Mi
TOTAL LENGTH OF TIP PROJECT R-2510A = 4.198 Mi

Prepared In The Office Of:

Carter-Burgess

Consultants in Planning, Engineering, Architecture,
Construction Management and Related Services
581 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27602

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

MARCH 18, 2005

LETTING DATE:

DECEMBER 19, 2006

NCDOT CONTACT:

CATHY S. HOUSER, PE

ROADWAY DESIGN PROJECT ENGINEER

R. DONALD HURLBUT, PE

ROADWAY GROUP MANAGER

CARL L. BUSH III, PE

PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

SIGNATURE: P.E.

STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

APPROVED

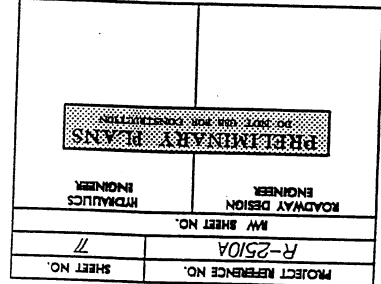
DIVISION ADMINISTRATOR

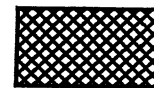
DATE

04-AUG-2006 15:00
C:\Users\paul\Documents\Projects\R-2510a_rdy_tsh.dgn
Paul A. Frazier

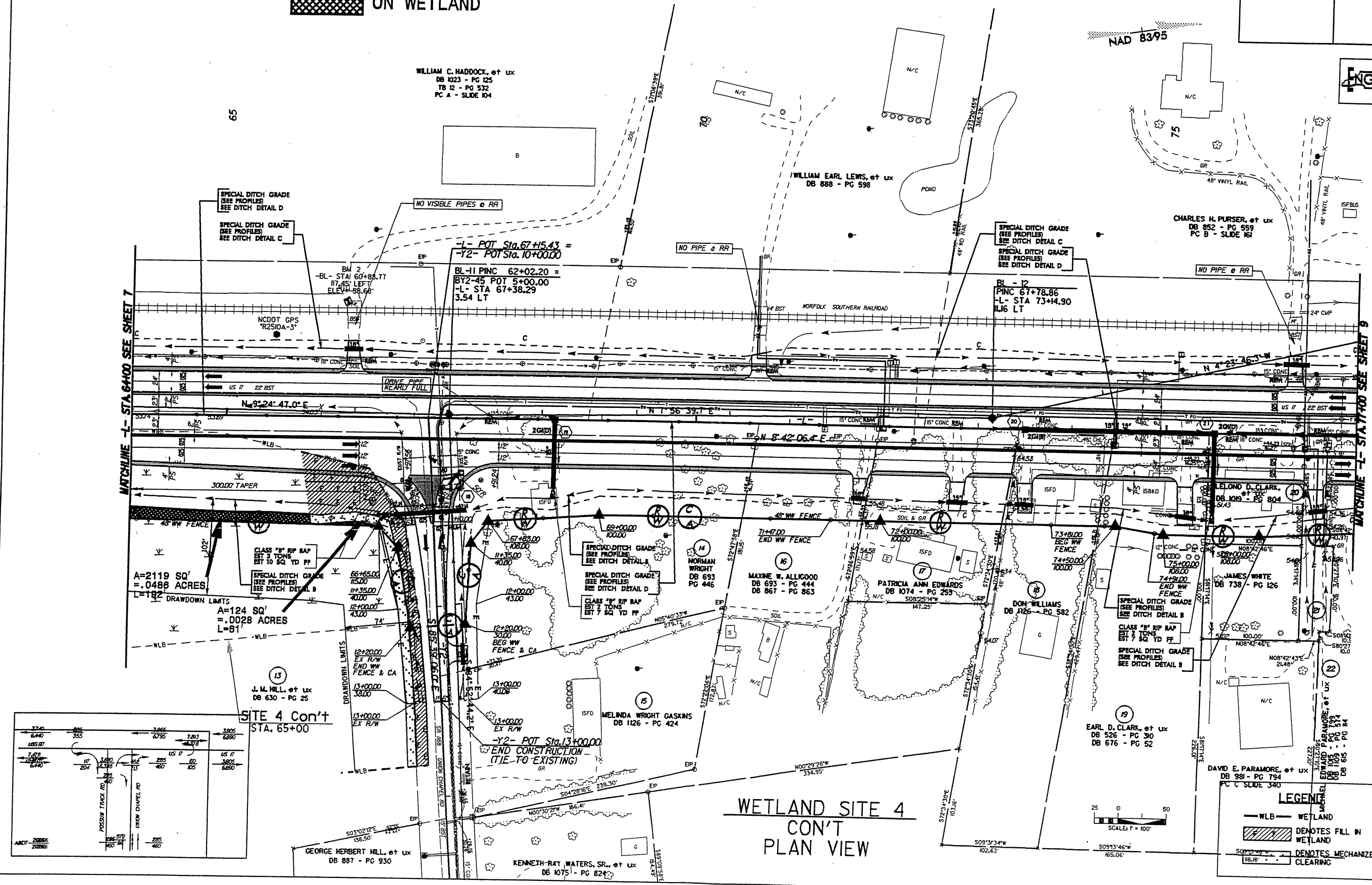
CONTRACT: R-2510A







PERMANENT IMPACTS ON WETLAND



WETLAND SITE 4
CON'T
PLAN VIEW

LEGEND

— WLB — WETLAND
 DENOTES FILL IN WETLAND
 SCS 12-46 W DENOTES MECHANIZED CLEARING


5/14/99

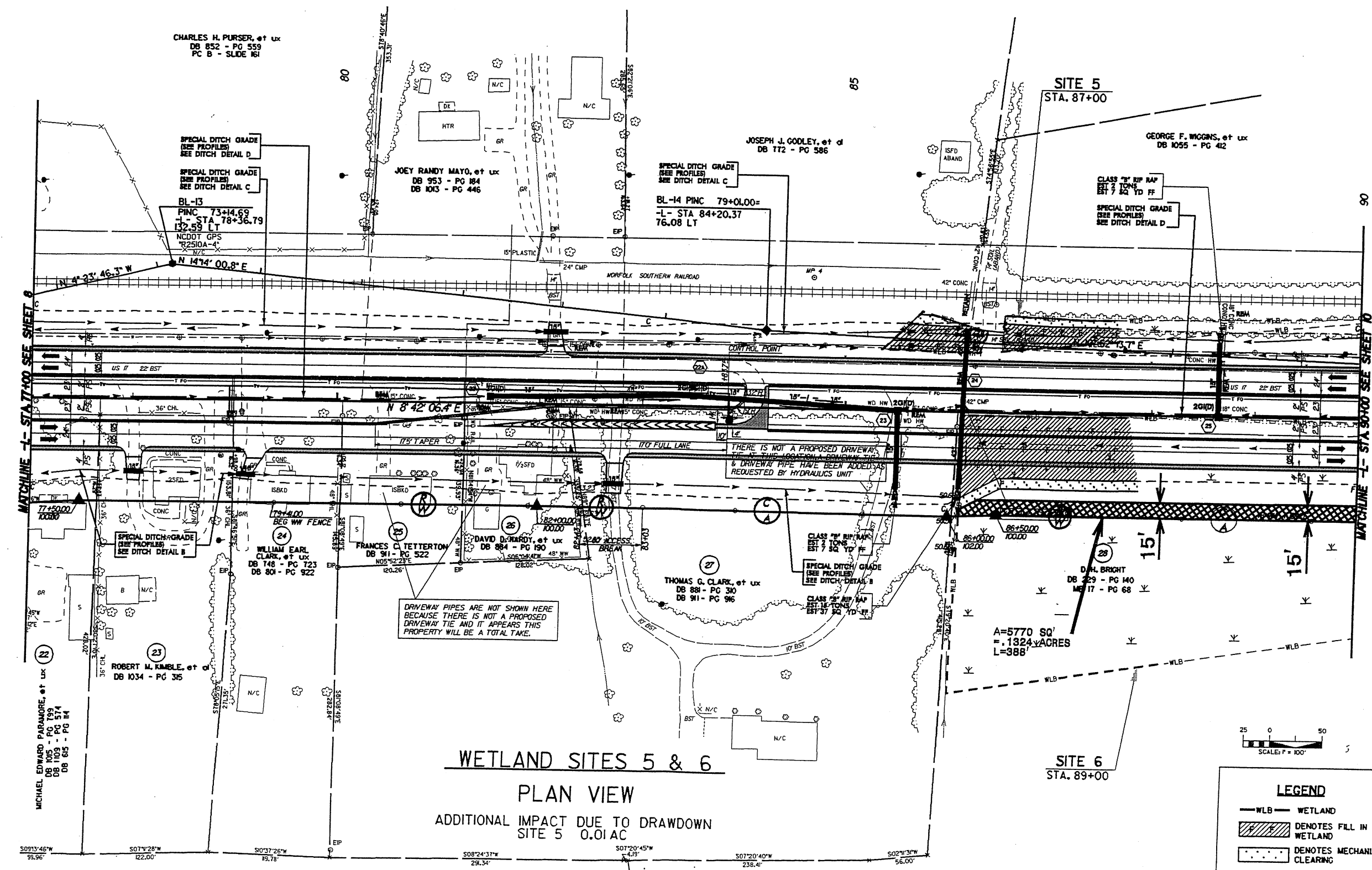
NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6' ABC
UNLESS OTHERWISE NOTED




SEE SHEET 26 FOR L- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 12' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

NAD 8395

PROJECT REFERENCE NO. R-2510A	SHEET NO. 9
RDW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	

 PERMANENT IMPACTS
ON WETLAND



LEGEND	
	WETLAND
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING

04-AUG-2005 14:57
util:\ees\ndy\at\B5291\2510a-wetland\2510a09-wt.dgn
Kamali AT B5291\2510a

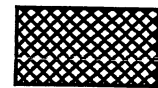
5/14/99

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6' ABC
UNLESS OTHERWISE NOTED

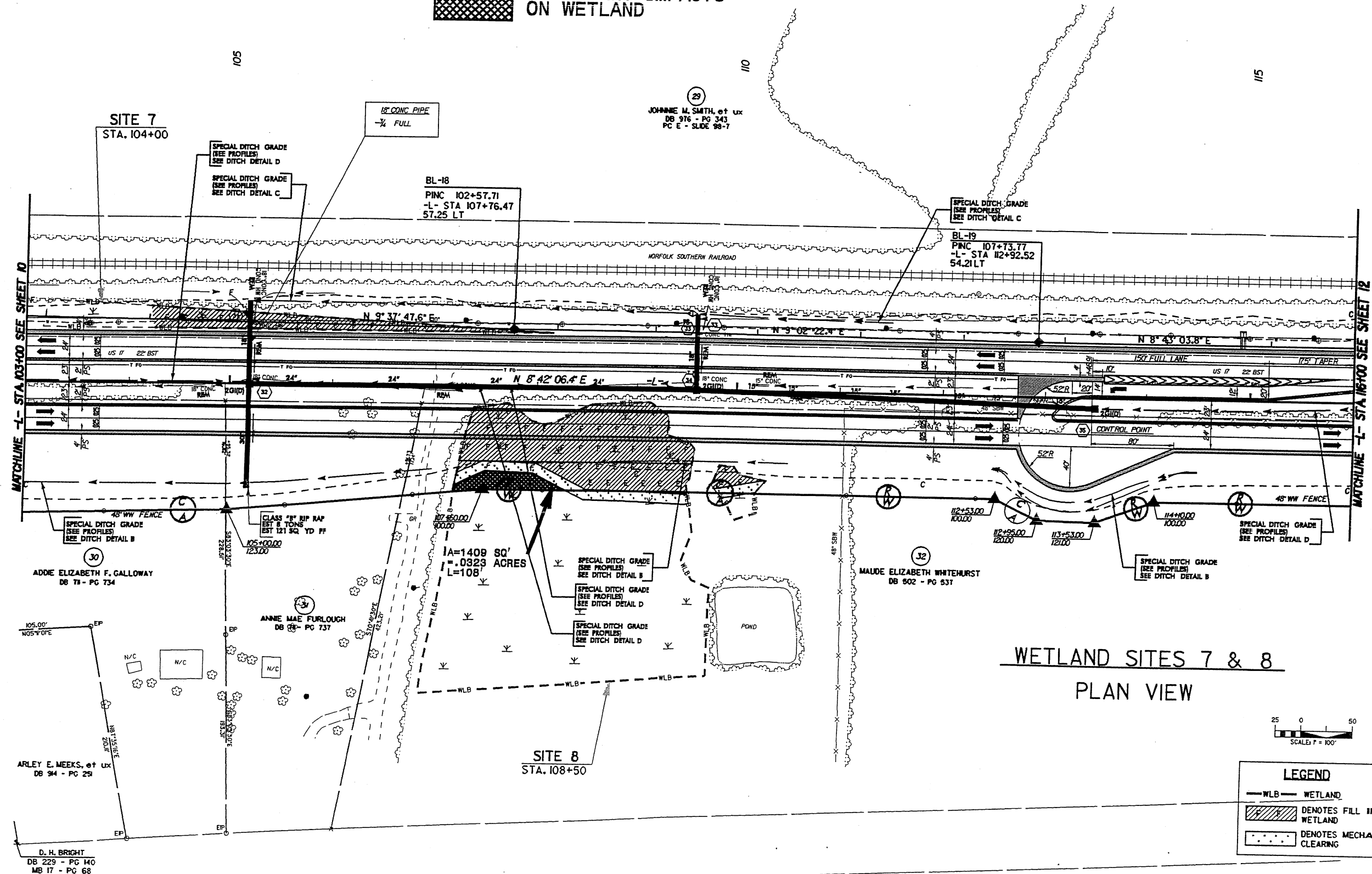
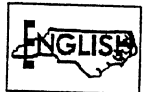
SEE SHEET 26 FOR -L- PROFILE
SEE SHEET 20 FOR DITCH DETAILS
ALL DRIVEWAYS ARE 18' WIDE WITH
10' RADIUS UNLESS OTHERWISE NOTED

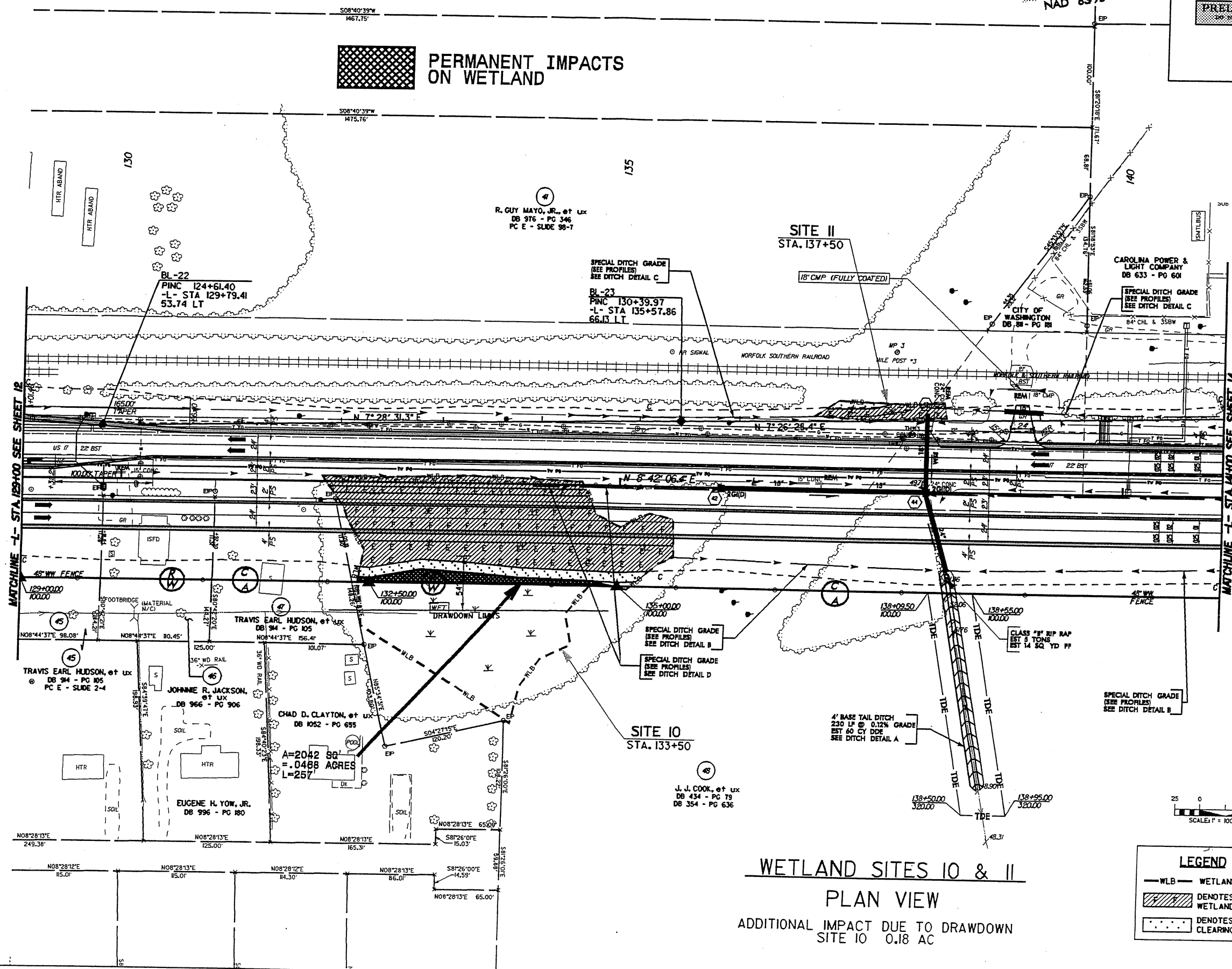
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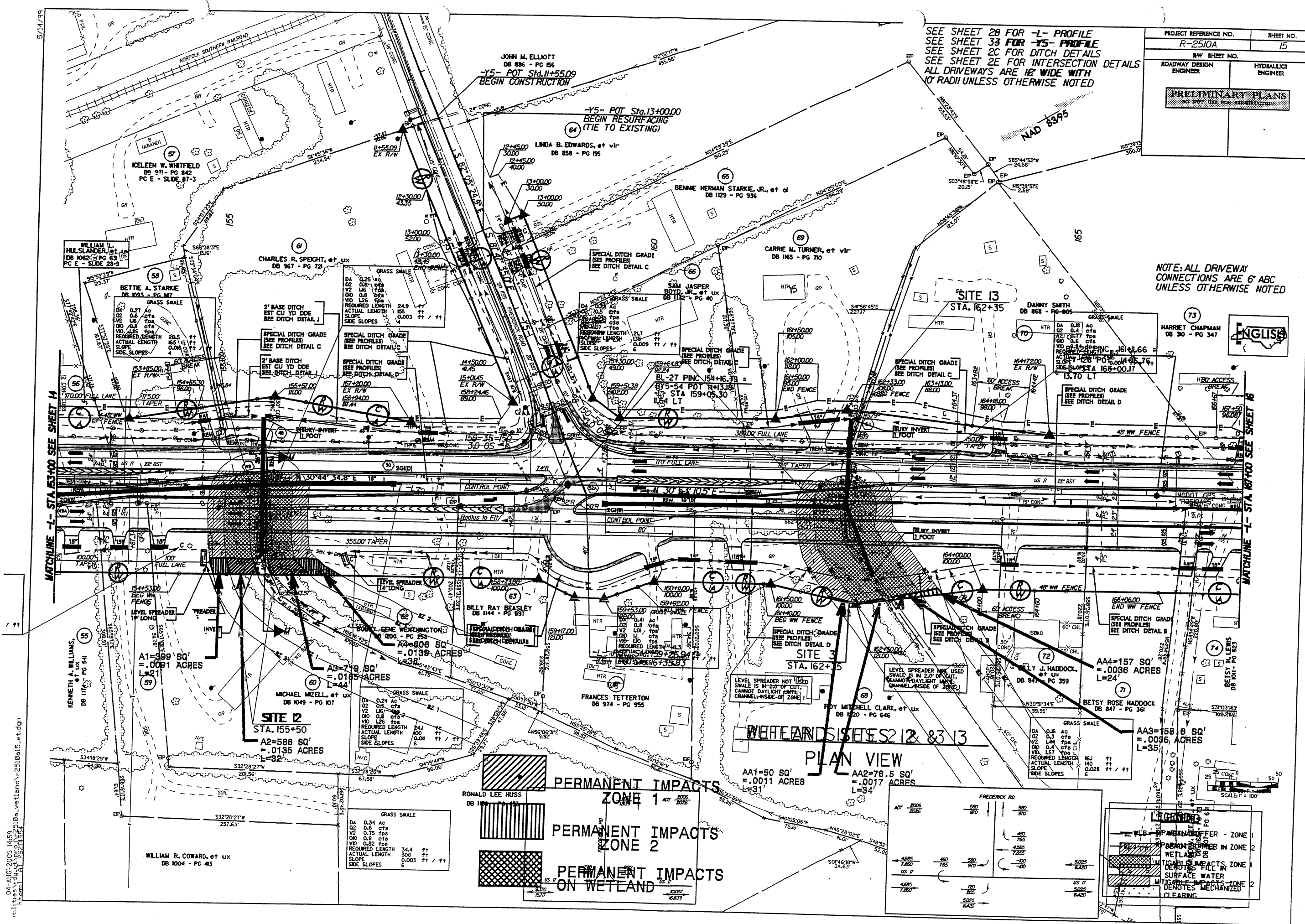
PROJECT REFERENCE NO.	SHEET NO.
R-2510A	11
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	



PERMANENT IMPACTS
ON WETLAND





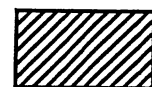



5/14/99

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6" ABC
UNLESS OTHERWISE NOTED

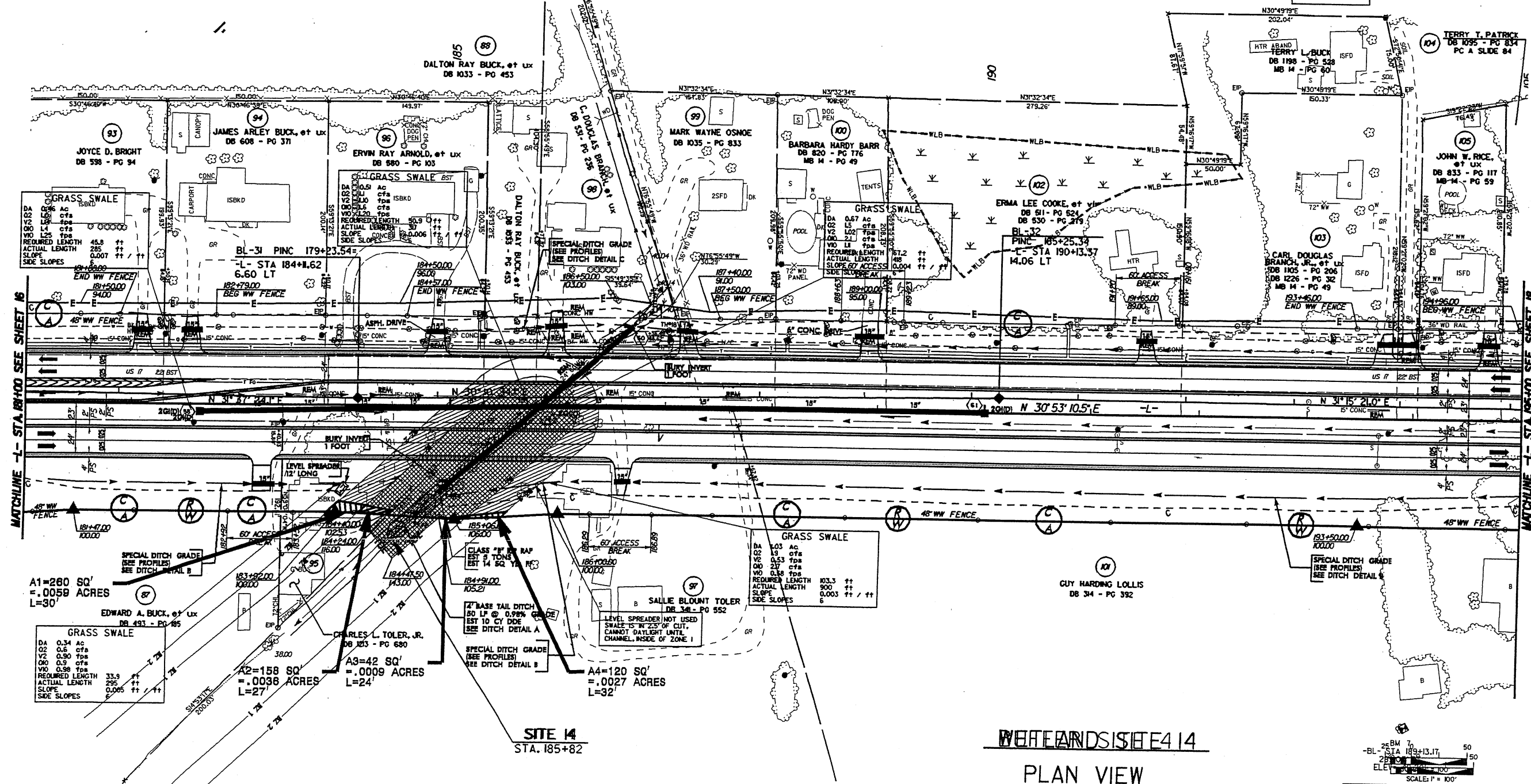
SEE SHEET 20 FOR -L- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 18" WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	

 PERMANENT IMPACTS
ZONE 1

 PERMANENT IMPACTS
ZONE 2

ENGLISH



LEGEND

- WLB - RIPARIAN BUFFER - ZONE 1
- WLB - RIPARIAN BUFFER - ZONE 2
- SURFACE WATER
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

1-27-03 DRAINAGE REVISION STRUCTURE 7476 5/14/99

NOTE: ALL DRIVEWAY CONNECTIONS ARE 6" ABC UNLESS OTHERWISE NOTED

SEE SHEET 30FBBR-LL-PROBRIE
SEE SHEET 38 FOR -DET2- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	

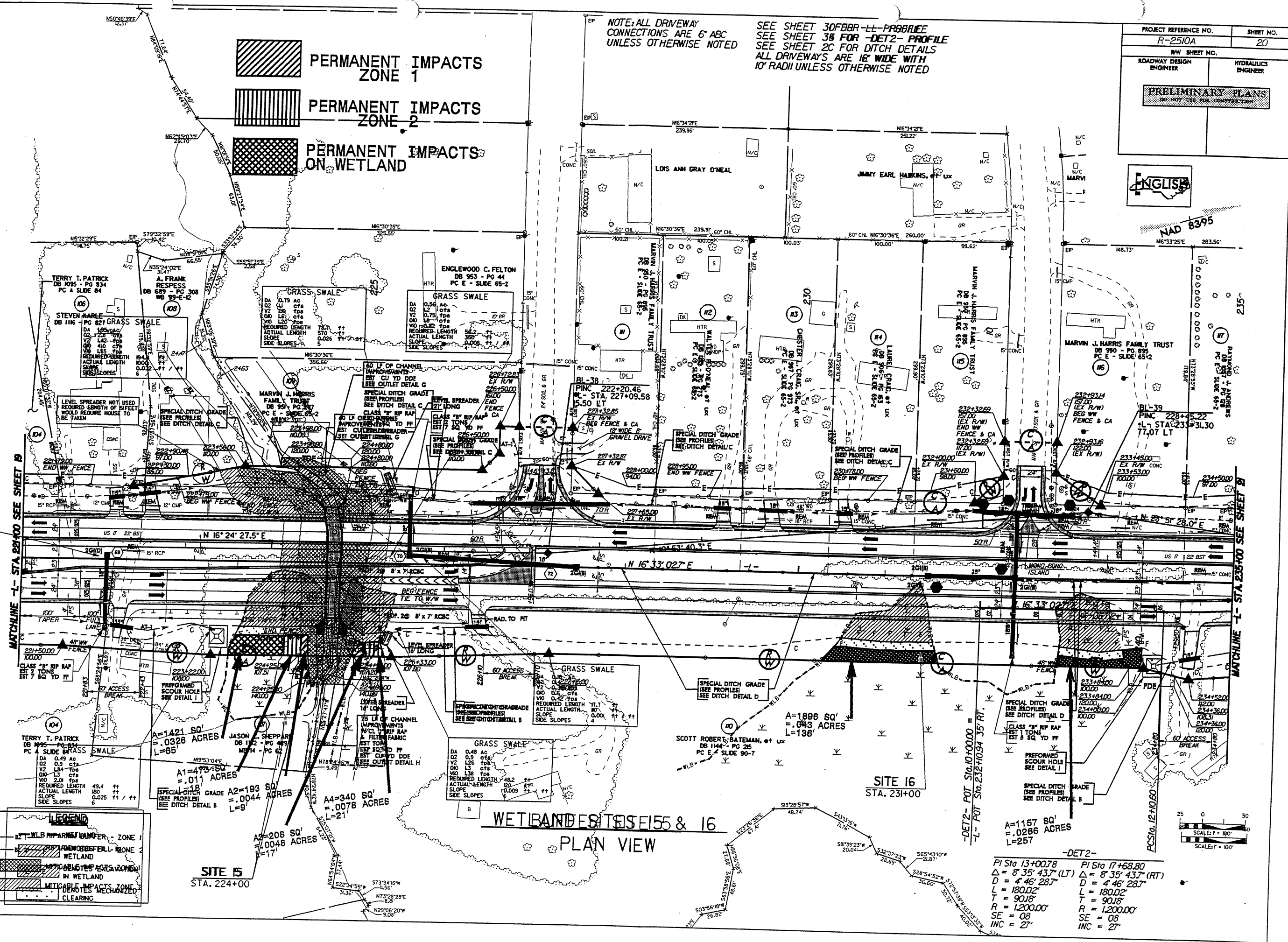


NAD 8395

PERMANENT IMPACTS ZONE 1

PERMANENT IMPACTS ZONE 2

PERMANENT IMPACTS ON WETLAND



LEGEND

- WLB RIP RAP BUFFER - ZONE 1
- WLB RIP RAP BUFFER - ZONE 2
- WETLAND
- MULTIPLYING EFFECTS ZONE IN WETLAND
- MULTIPLYING EFFECTS ZONE 1
- MULTIPLYING EFFECTS ZONE 2
- MULTIPLYING EFFECTS ZONE 3
- MULTIPLYING EFFECTS ZONE 4
- MULTIPLYING EFFECTS ZONE 5
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- MULTIPLYING EFFECTS ZONE 100

WETLANDS SITES 15 & 16
PLAN VIEW

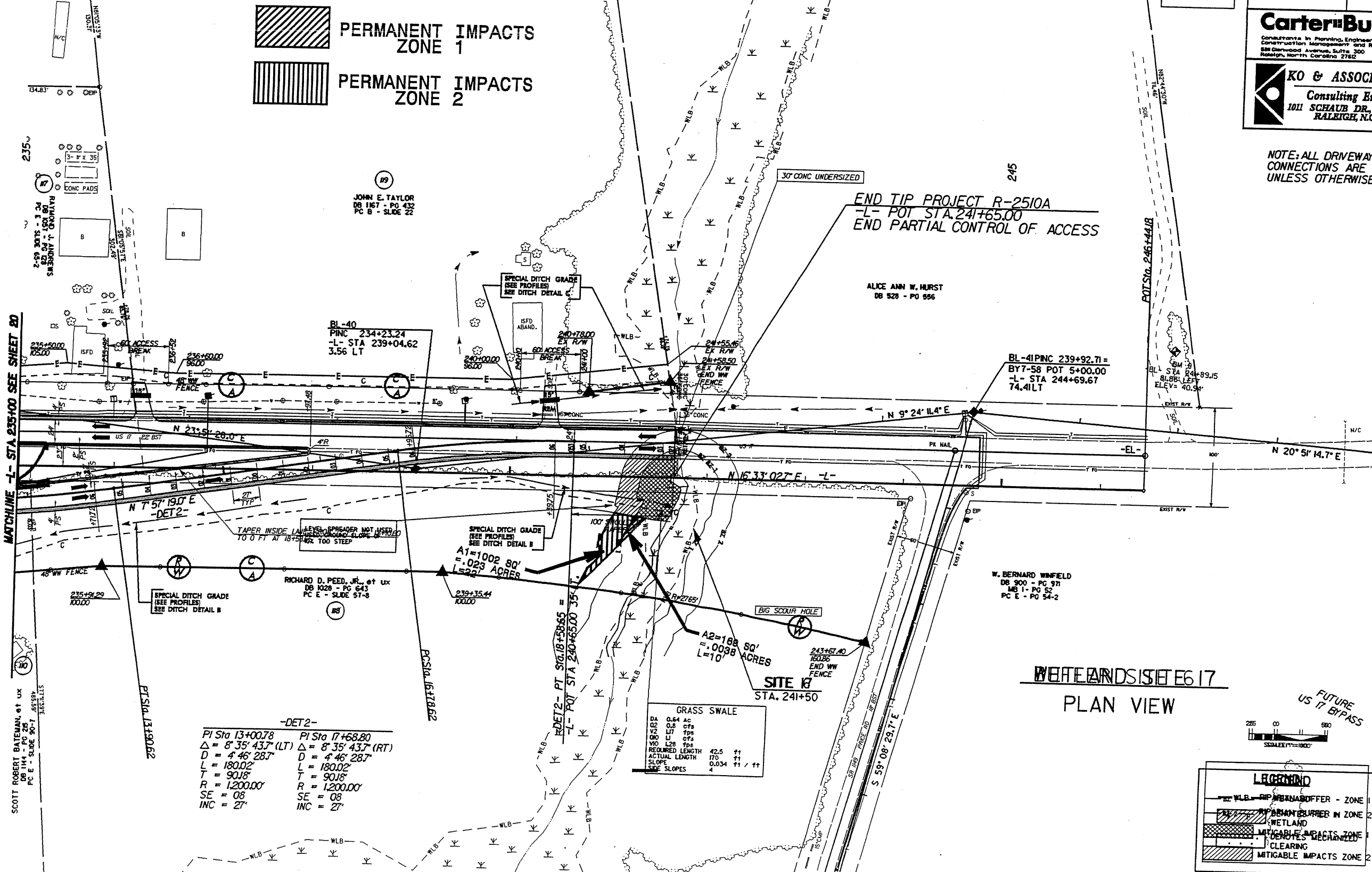
PI Sta 13+00.78
PI Sta 17+68.80
D = 8' 35" 43.7" (LT) D = 8' 35" 43.7" (RT)
D = 4' 46" 28.7" D = 4' 46" 28.7"
L = 180.02' L = 180.02'
T = 90.18' T = 90.18'
R = 1,200.00' R = 1,200.00'
SE = 08 SE = 08
INC = 27' INC = 27'

5/14/99

SEE SHEET 30F00R-LL-PROBIEE
SEE SHEET 38 FOR -DET2- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

PROJECT REFERENCE NO. R-2510A		SHEET NO. 21	
RAW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
Carter Burgess Consultants in Planning, Engineering, Architecture, Construction Management and Related Services 588 Glenwood Avenue, Suite 300 Raleigh, North Carolina 27602			
KO & ASSOCIATES, P.C. Consulting Engineers 1011 SCHAUH DR., SUITE #202 RALEIGH, N.C. 27606			

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6' ABC
UNLESS OTHERWISE NOTED



04-AUG-2005 15:00
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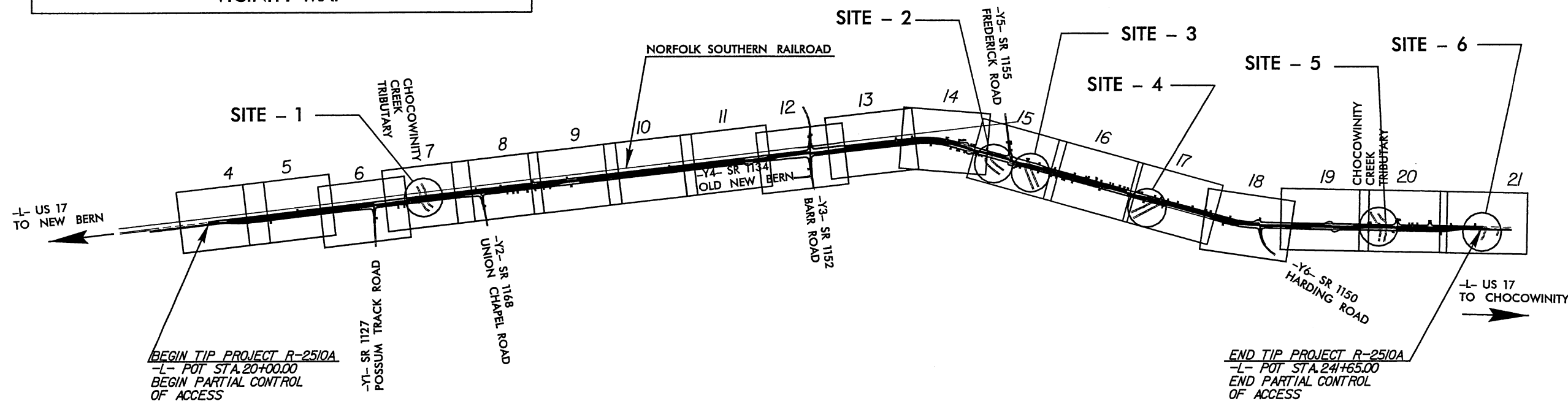
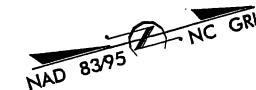
CONTRACT:

A vicinity map showing the project area. The map includes a network of roads and a powerline. The project area is defined by a thick black line. The map is labeled with 'BEGIN PROJECT' and 'END PROJECT' at the ends of the project line. The map also shows a 'POWERLINE' running diagonally across the area. Various road numbers are visible, including 1154, 1152, 1156, 1157, 1155, 1153, 1151, 1149, 1147, 1145, 1143, 1141, 1139, 1137, 1135, 1133, 1131, 1129, 1127, 1125, 1123, 1121, 1119, 1117, 1115, 1113, 1111, 1109, 1107, 1105, 1103, 1101, 1099, 1097, 1095, 1093, 1091, 1089, 1087, 1085, 1083, 1081, 1079, 1077, 1075, 1073, 1071, 1069, 1067, 1065, 1063, 1061, 1059, 1057, 1055, 1053, 1051, 1049, 1047, 1045, 1043, 1041, 1039, 1037, 1035, 1033, 1031, 1029, 1027, 1025, 1023, 1021, 1019, 1017, 1015, 1013, 1011, 1009, 1007, 1005, 1003, 1001, 999, 997, 995, 993, 991, 989, 987, 985, 983, 981, 979, 977, 975, 973, 971, 969, 967, 965, 963, 961, 959, 957, 955, 953, 951, 949, 947, 945, 943, 941, 939, 937, 935, 933, 931, 929, 927, 925, 923, 921, 919, 917, 915, 913, 911, 909, 907, 905, 903, 901, 899, 897, 895, 893, 891, 889, 887, 885, 883, 881, 879, 877, 875, 873, 871, 869, 867, 865, 863, 861, 859, 857, 855, 853, 851, 849, 847, 845, 843, 841, 839, 837, 835, 833, 831, 829, 827, 825, 823, 821, 819, 817, 815, 813, 811, 809, 807, 805, 803, 801, 799, 797, 795, 793, 791, 789, 787, 785, 783, 781, 779, 777, 775, 773, 771, 769, 767, 765, 763, 761, 759, 757, 755, 753, 751, 749, 747, 745, 743, 741, 739, 737, 735, 733, 731, 729, 727, 725, 723, 721, 719, 717, 715, 713, 711, 709, 707, 705, 703, 701, 699, 697, 695, 693, 691, 689, 687, 685, 683, 681, 679, 677, 675, 673, 671, 669, 667, 665, 663, 661, 659, 657, 655, 653, 651, 649, 647, 645, 643, 641, 639, 637, 635, 633, 631, 629, 627, 625, 623, 621, 619, 617, 615, 613, 611, 609, 607, 605, 603, 601, 599, 597, 595, 593, 591, 589, 587, 585, 583, 581, 579, 577, 575, 573, 571, 569, 567, 565, 563, 561, 559, 557, 555, 553, 551, 549, 547, 545, 543, 541, 539, 537, 535, 533, 531, 529, 527, 525, 523, 521, 519, 517, 515, 513, 511, 509, 507, 505, 503, 501, 499, 497, 495, 493, 491, 489, 487, 485, 483, 481, 479, 477, 475, 473, 471, 469, 467, 465, 463, 461, 459, 457, 455, 453, 451, 449, 447, 445, 443, 441, 439, 437, 435, 433, 431, 429, 427, 425, 423, 421, 419, 417, 415, 413, 411, 409, 407, 405, 403, 401, 399, 397, 395, 393, 391, 389, 387, 385, 383, 381, 379, 377, 375, 373, 371, 369, 367, 365, 363, 361, 359, 357, 355, 353, 351, 349, 347, 345, 343, 341, 339, 337, 335, 333, 331, 329, 327, 325, 323, 321, 319, 317, 315, 313, 311, 309, 307, 305, 303, 301, 299, 297, 295, 293, 291, 289, 287, 285, 283, 281, 279, 277, 275, 273, 271, 269, 267, 265, 263, 261, 259, 257, 255, 253, 251, 249, 247, 245, 243, 241, 239, 237, 235, 233, 231, 229, 227, 225, 223, 221, 219, 217, 215, 213, 211, 209, 207, 205, 203, 201, 199, 197, 195, 193, 191, 189, 187, 185, 183, 181, 179, 177, 175, 173, 171, 169, 167, 165, 163, 161, 159, 157, 155, 153, 151, 149, 147, 145, 143, 141, 139, 137, 135, 133, 131, 129, 127, 125, 123, 121, 119, 117, 115, 113, 111, 109, 107, 105, 103, 101, 99, 97, 95, 93, 91, 89, 87, 85, 83, 81, 79, 77, 75, 73, 71, 69, 67, 65, 63, 61, 59, 57, 55, 53, 51, 49, 47, 45, 43, 41, 39, 37, 35, 33, 31, 29, 27, 25, 23, 21, 19, 17, 15, 13, 11, 9, 7, 5, 3, 1, 0.

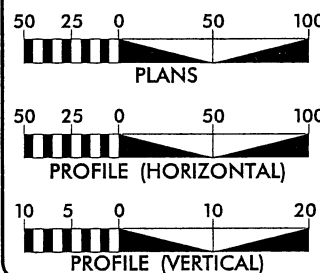
BEAUFORT COUNTY

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

R-2510A: BUFFER SITE MAP

[illegible]

GRAPHIC SCALES



ADT 2006 = 10200 VPD
ADT 2026 = 17000 VPD
DHV = 12 %
D = 60 %
T = 12 % *
V = 60 MPH

* TTST 7% DUAL 5%

LENGTH ROADWAY TIP PROJECT R-2510A = 4.387 Mi
TOTAL LENGTH OF TIP PROJECT R-2510A = 4.837 Mi

Carter-Burgess

Consultants in Planning, Engineering, Architecture,
Construction Management and Related Services
5811 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 17, 2004

LETTING DATE:
DECEMBER 19, 2006

NCDOT CONTACT:

R. DONALD HURLBUT, PE
ROADWAY CRETE MANAGER

CARL L. BUSH III, PE
PROJECT DESIGN ENGINEER

CATHY S. HOUSER, PE
DESIGN SERVICES PROJECT ENGINEER

P.E.

SIGNATURE: _____

ROADWAY DESIGN ENGINEER

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____
 DIVISION ADMINISTRATOR DATE _____

5/14/99

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6' ABC
UNLESS OTHERWISE NOTED

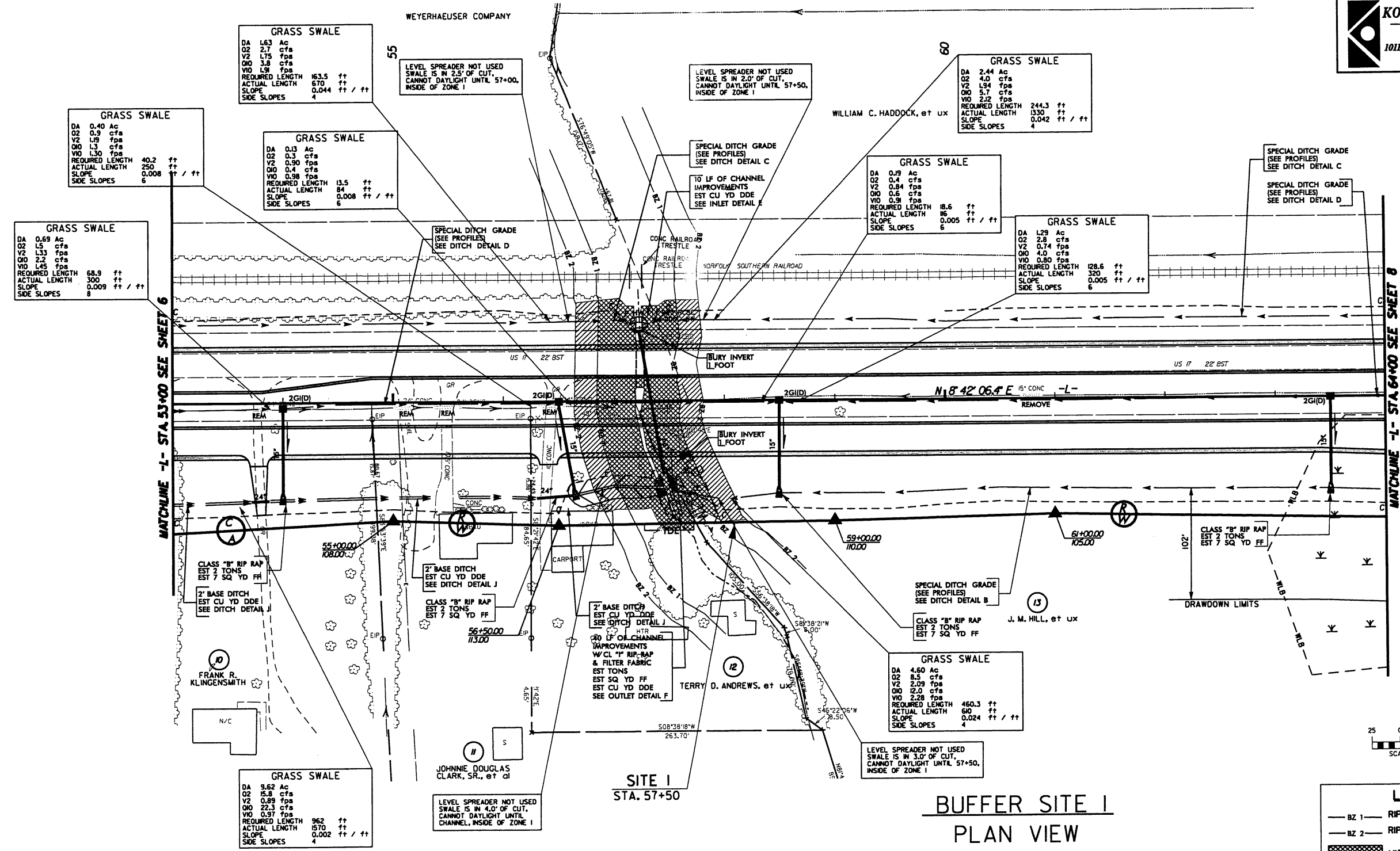
SEE SHEET 24 FOR -L- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

NAD 8395

PROJECT REFERENCE NO.		SHEET NO.
R-2510A		7
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		

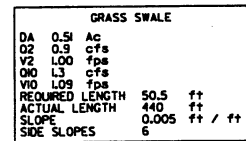
Carter-Burgess
Consultants in Planning, Engineering, Architecture,
Construction Management and Related Services
581 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27602

KO & ASSOCIATES, P.C.
Consulting Engineers
1011 SCHAU DR., SUITE #202
RALEIGH, N.C. 27606



LEGEND	
— BZ 1 —	RIPARIAN BUFFER - ZONE 1
— BZ 2 —	RIPARIAN BUFFER - ZONE 2
	MITIGABLE IMPACTS ZONE 1
	MITIGABLE IMPACTS ZONE 2

4/7/2005
310A-Hydrology-Permits-R2510A-Buffer-07.dgn
C. & Associates, P.C.

4/7/2005
510A\Hydraulics\Permits\R2510A_Buffer-15.dgn

3-15-05 DRAINAGE REVISION REVISED PIPE SIZE STA 185+82

4/7/2005 5100a\Hydraulics\Permits\2510a_Buffer_17.dgn

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6" ABC
UNLESS OTHERWISE NOTED

SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 20 FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADI UNLESS OTHERWISE NOTED



Carter-Burgess

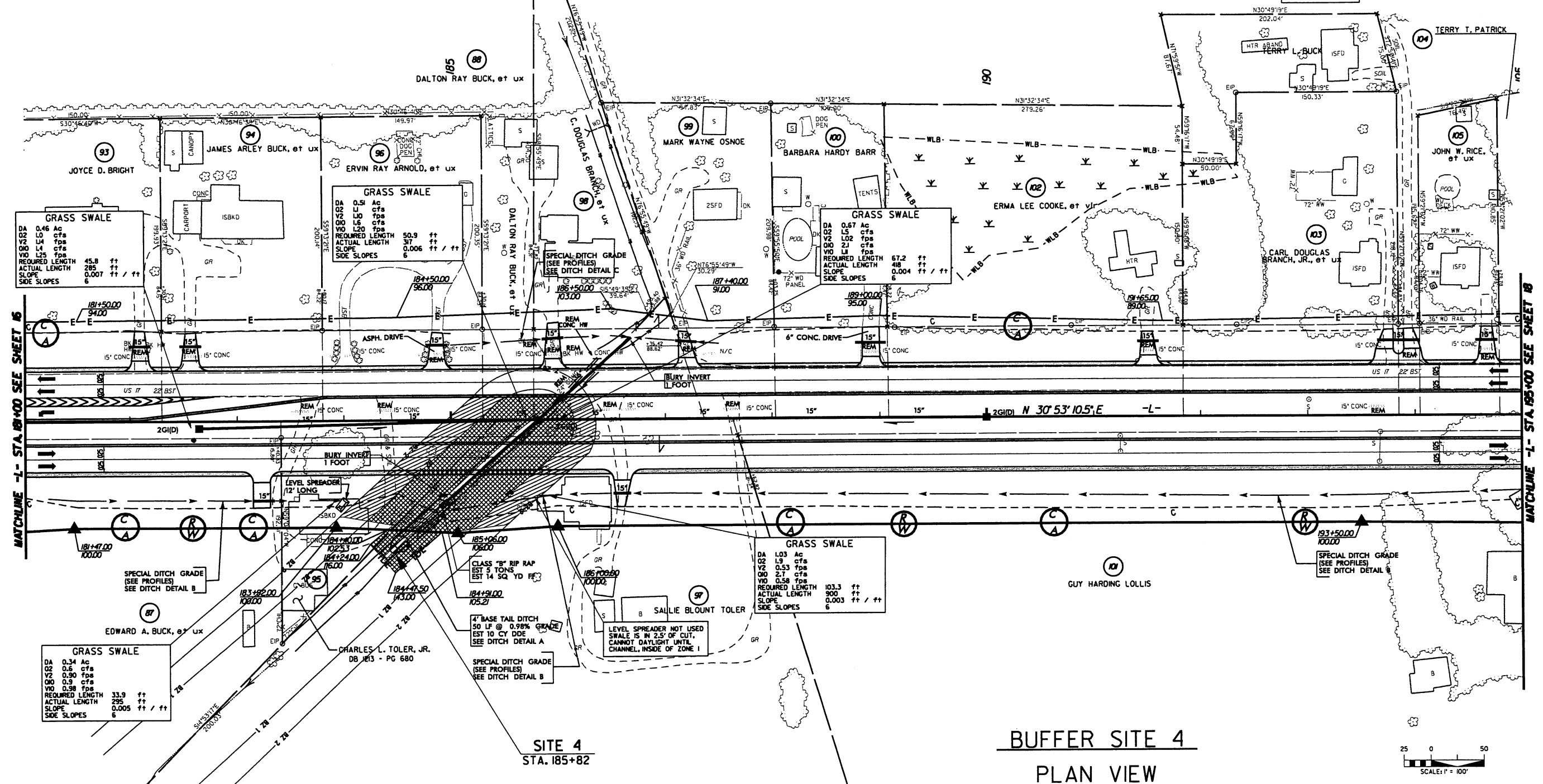
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Construction Management and Related Services
588 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612



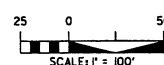
KO & ASSOCIATES, P.C.

Consulting Engineers
1011 SCHAUH DR., SUITE #202
RALEIGH, N.C. 27606

PROJECT REFERENCE NO. R-2510A		SHEET NO. 17	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	



BUFFER SITE 4
PLAN VIEW



LEGEND	
— BZ 1 —	RIPARIAN BUFFER - ZONE 1
— BZ 2 —	RIPARIAN BUFFER - ZONE 2
	MITIGABLE IMPACTS ZONE 1
	MITIGABLE IMPACTS ZONE 2

1-27-05 DRAINAGE REVISION STRUCTURE 7476 15/14/09

NOTE: ALL DRIVEWAY CONNECTIONS ARE 6' ABC UNLESS OTHERWISE NOTED

SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 34 FOR -DET2- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

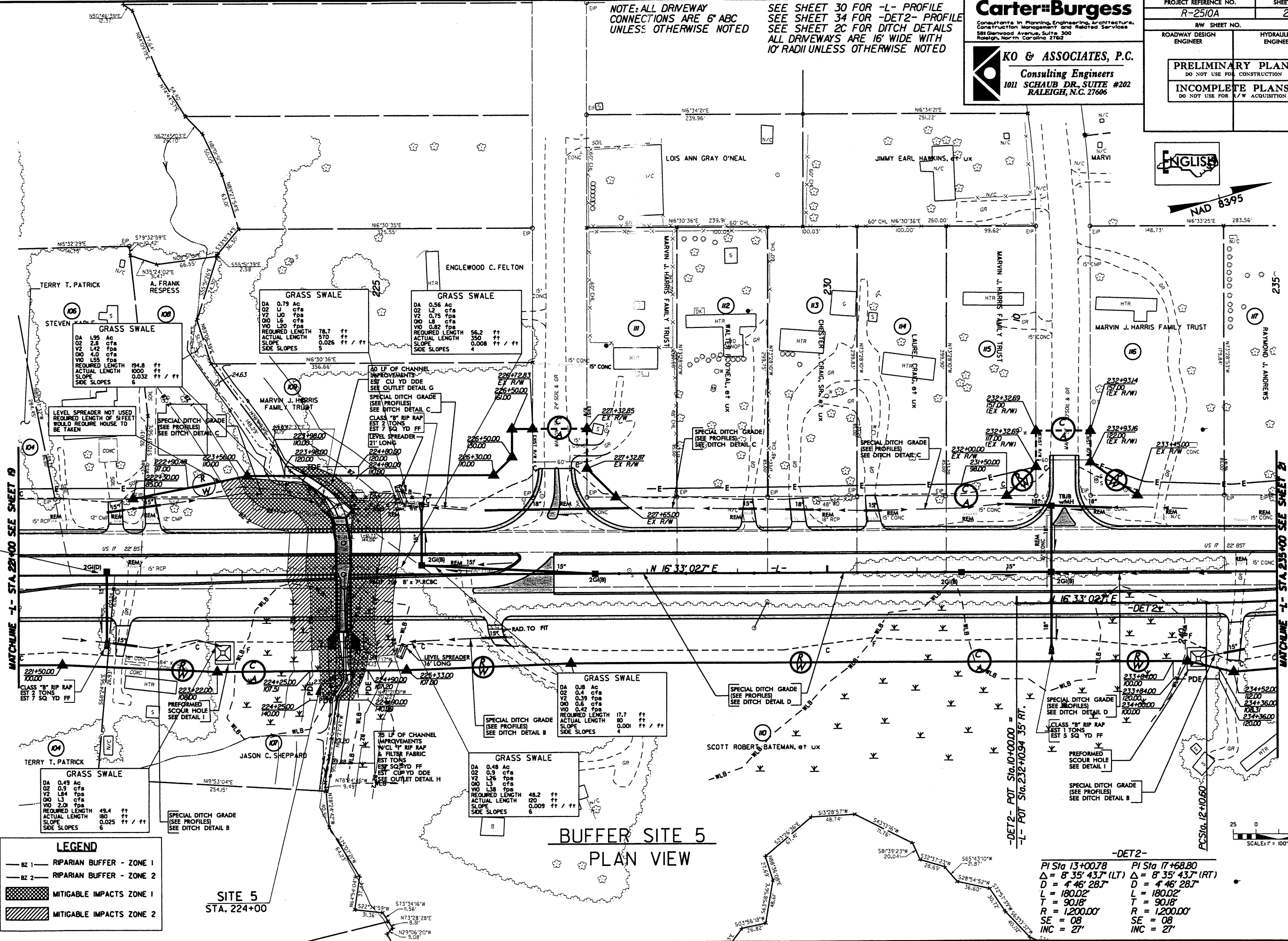
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Construction Management and Related Services
588 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27602

KO & ASSOCIATES, P.C.
Consulting Engineers
1011 SCHAU DR. SUITE #202
RALEIGH, N.C. 27606

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	



GRASS SWALE			
DA	0.64	Ac	
O2	1.4	cfs	
V2	0.78	fps	
O10	2.0	cfs	
V10	0.85	fps	
REQUIRED LENGTH	64.3	ft	
ACTUAL LENGTH	400	ft	
SLOPE	0.009	ft / ft	
SIDE SLOPES	5		

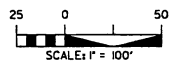


LEGEND	
— BZ 1 —	RIPARIAN BUFFER - ZONE 1
— BZ 2 —	RIPARIAN BUFFER - ZONE 2
	MITIGABLE IMPACTS ZONE 1
	MITIGABLE IMPACTS ZONE 2

SITE 5
STA. 224+00

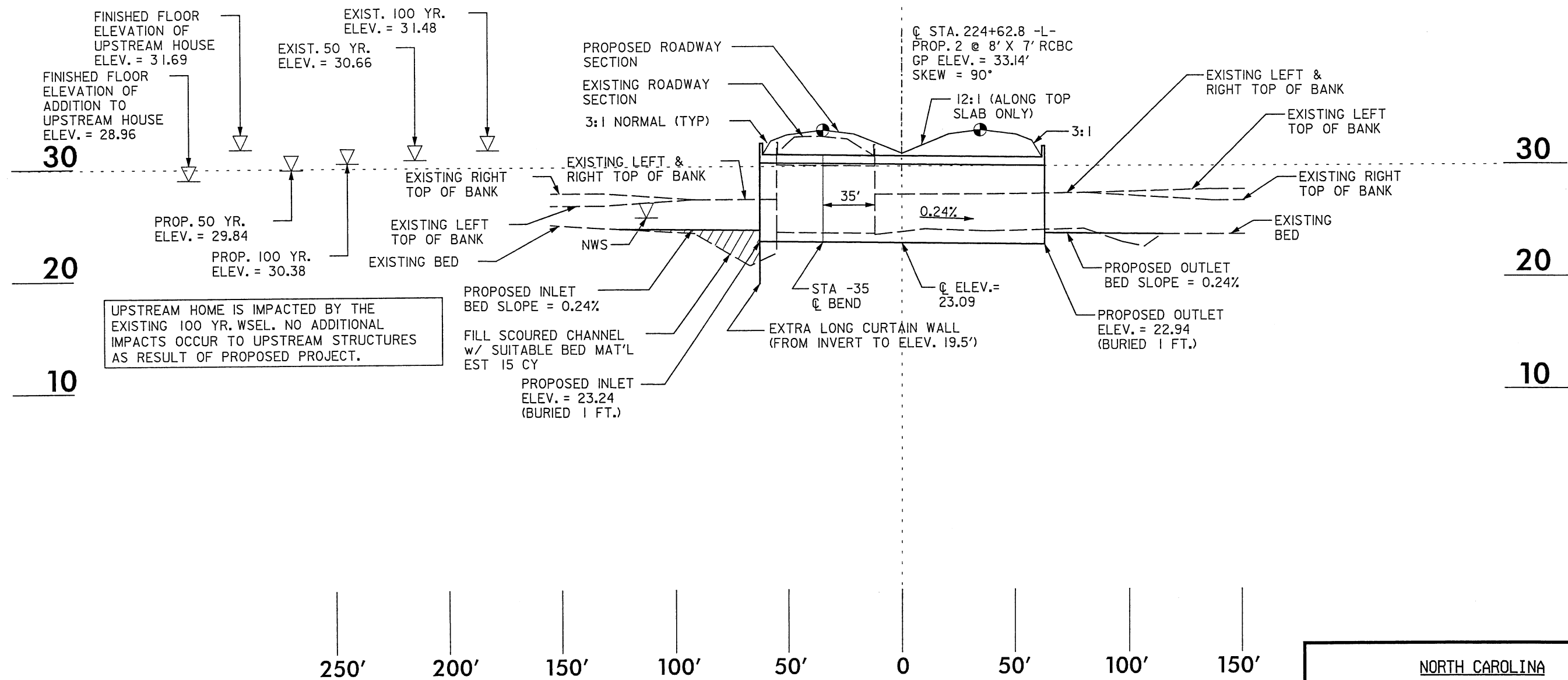
BUFFER SITE 5
PLAN VIEW

PI Sta 13+00.78 Δ = 8' 35" 43.7" (LT) D = 4' 46" 28.7" L = 180.02' T = 90.18' R = 1200.00' SE = 08 INC = 27'	PI Sta 17+68.80 Δ = 8' 35" 43.7" (RT) D = 4' 46" 28.7" L = 180.02' T = 90.18' R = 1200.00' SE = 08 INC = 27'
---	---



4/7/2005
310A Hydraulic Permit R2510A Buffer_20.dgn
KO & Associates

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	BUF S5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>	



PROFILE ALONG STRUCTURE
 BUFFER SITE 5
 STA 224 + 00

NORTH CAROLINA
 DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
 34440.11 (R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
 TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 10'

DATE: AUG-04

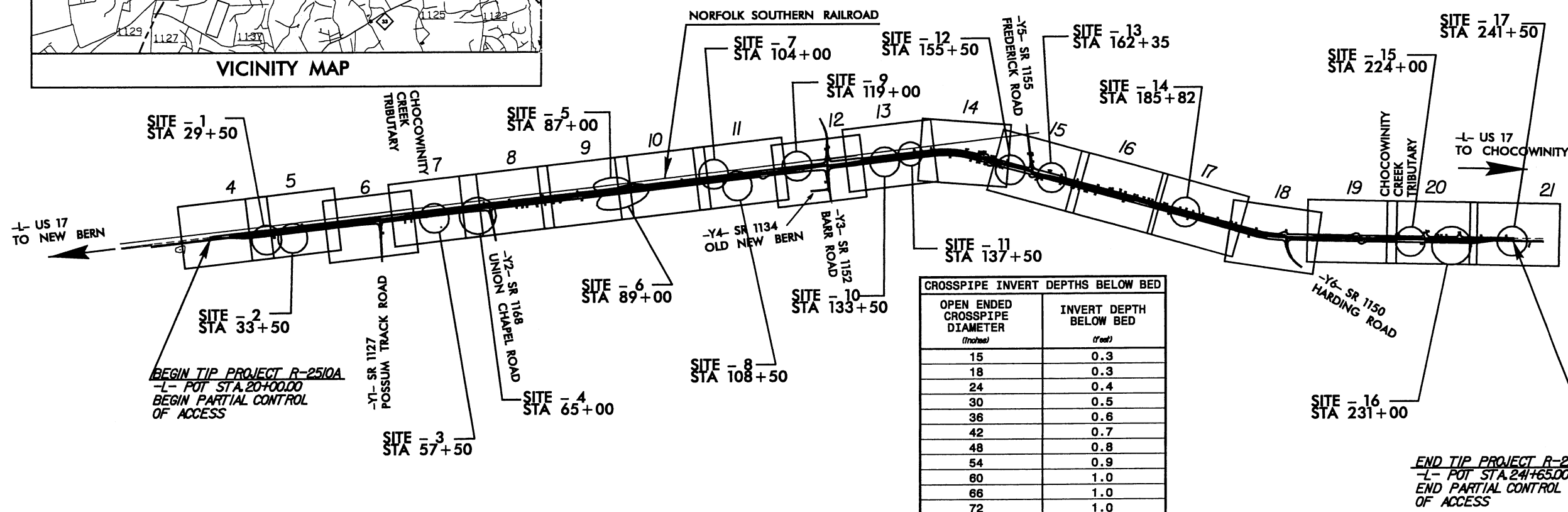
SHEET ____ OF ____

3/15/2005
 r:\R2510A\Hydraulics\Permits\R2510A_Permit_PFL-30.dgn
 k.o. & Associates, P.C.

CONTRACT:

R-2510A: PERMIT SITE MAP

NAD 8395 ~~NC GR~~



GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2006 = 10200 VPD
ADT 2026 = 17000 VPD
DHV = 12 %
D = 60 %
T = 12 % *
V = 60 MPH

* TTST 7% DUAL 5%

LENGTH ROADWAY TIP PROJECT R-2510A = 4.387 Mi
TOTAL LENGTH OF TIP PROJECT R-2510A = 4.837 Mi

Carter-Burgess

Consultants in Planning, Engineering, Architecture,
Construction Management and Related Services
581 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27602

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

RECEIVED AT 2004

DECEMBER 17, 2004

LETTING DATE:

DECEMBER 19 2006

DECEMBER 17, 2000

NCDOT CONTACT:

ACDOT CONTACT:

R. DONALD HURIBUT PE

R. DONALD TUCKER, JR.
ROADWAY GROUP MANAGER

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CARL L. BUSH III, PE

PROJECT DESIGN ENGINEER

CATHY S. HOUSER, PE

DESIGN SERVICES PROJECT ENGINEER

HYDRAULICS ENGINEER

P.R.

SIGNATURE: _____

ROADWAY DESIGN ENGINEER

SIGNATURE: _____

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6' ABC
UNLESS OTHERWISE NOTED

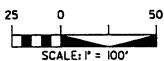
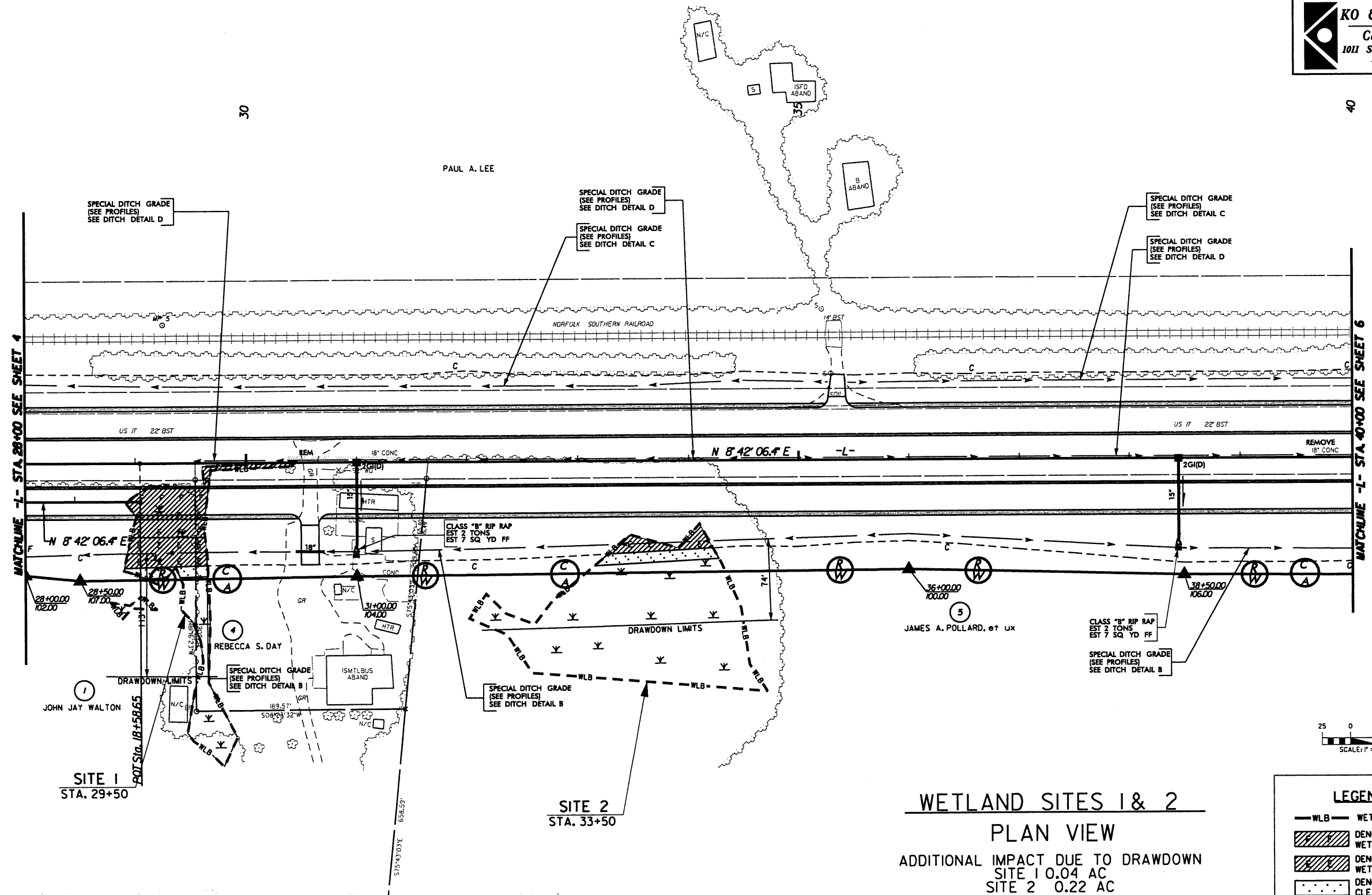
SEE SHEET 23 FOR -L- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

NAD 83/95

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

Carter-Burgess
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Construction Management and Related Services
551 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27602

KO & ASSOCIATES, P.C.
Consulting Engineers
1011 SCHAU DR., SUITE #202
RALEIGH, N.C. 27606



LEGEND	
— WLB —	WETLAND
	DENOTES FILL IN WETLAND
	DENOTES EXCAVATION IN WETLAND
	DENOTES MECHANIZED CLEARING

WETLAND SITES 1 & 2

PLAN VIEW

ADDITIONAL IMPACT DUE TO DRAWDOWN
SITE 1 0.04 AC
SITE 2 0.22 AC

5/14/99

4/7/2005
310A\Hydraulics\Permits\R2510A_Permit_05.dgn
KO & ASSOCIATES, P.C.

5/14/99

4/7/2005 5:09AM hydro\p\permits\025100\Permit_07.dgn

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6' ABC
UNLESS OTHERWISE NOTED

SEE SHEET 24 FOR -L- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

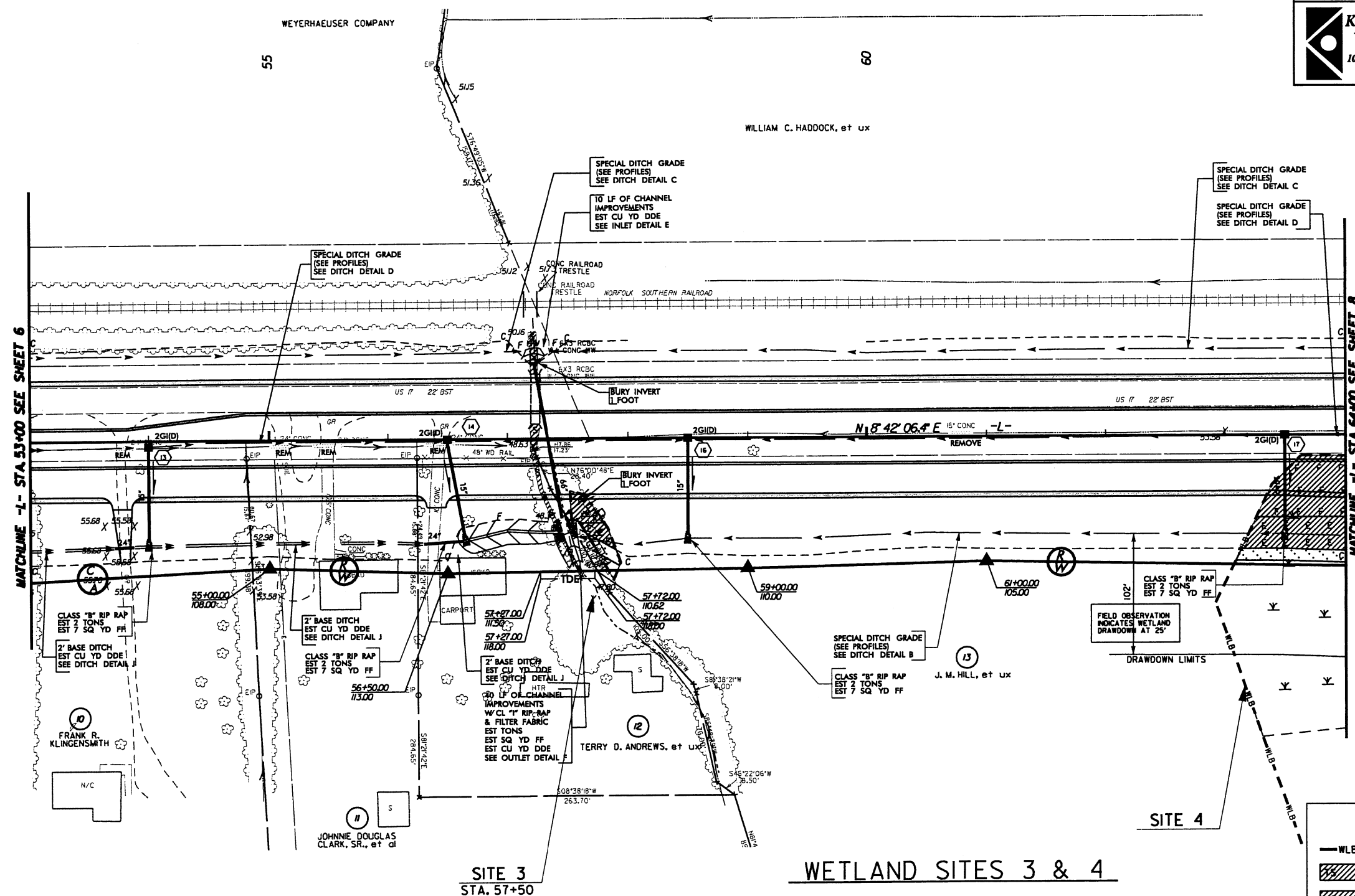
NAD 83/95

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

Carter-Burgess

Consultants in Planning, Engineering, Architecture,
Construction Management and Related Services
588 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612

KO & ASSOCIATES, P.C.
Consulting Engineers
1011 SCHAU DR., SUITE #202
RALEIGH, N.C. 27606



WETLAND SITES 3 & 4

PLAN VIEW

ADDITIONAL IMPACT DUE TO DRAWDOWN
SITE 4 0.03 AC

LEGEND

- WLB WETLAND
- DENOTES TEMPORARY SURFACE WATER LOSS
- DENOTES SURFACE WATER LOSS
- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES MECHANIZED CLEARING

LEGEND

— WLB — WETLAND

DENOTES FILL IN WETLAND

DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

5/14/99

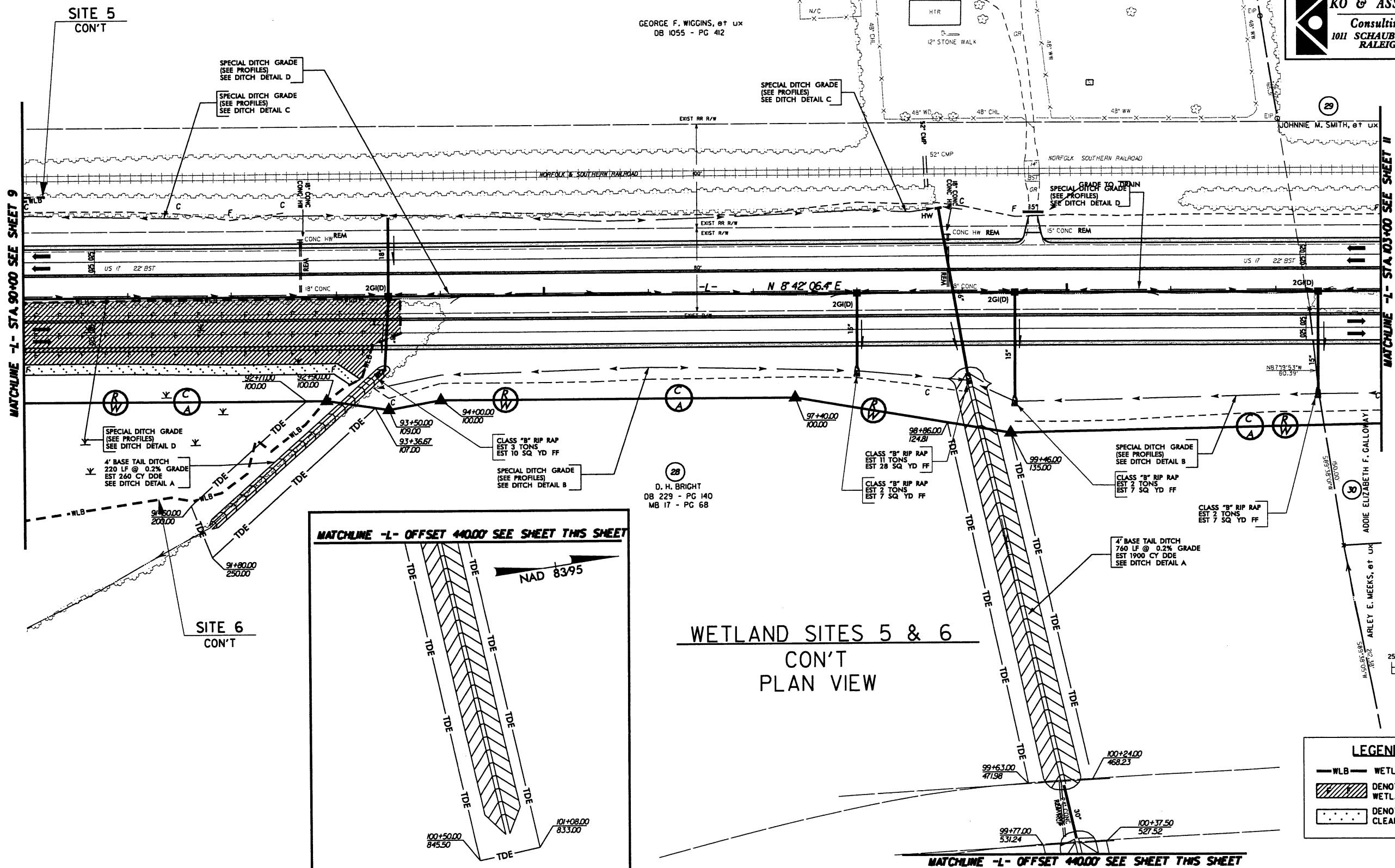
4/8/2005
5100A\Hud\2100Cs\Permits\R2510A_Permit.t10.dgn

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6" ABC
UNLESS OTHERWISE NOTED

SEE SHEET 25 FOR -L- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

NAD 83/95

PROJECT REFERENCE NO. R-2510A		SHEET NO. 10	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
Carter-Burgess Consultants in Planning, Engineering, Architecture, Construction Management and Related Services 584 Glenwood Avenue, Suite 300 Raleigh, North Carolina 27602			
KO & ASSOCIATES, P.C. Consulting Engineers 1011 SCHAUH DR., SUITE #202 RALEIGH, N.C. 27606			

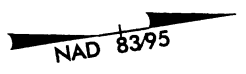


LEGEND	
— WLB —	WETLAND
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING

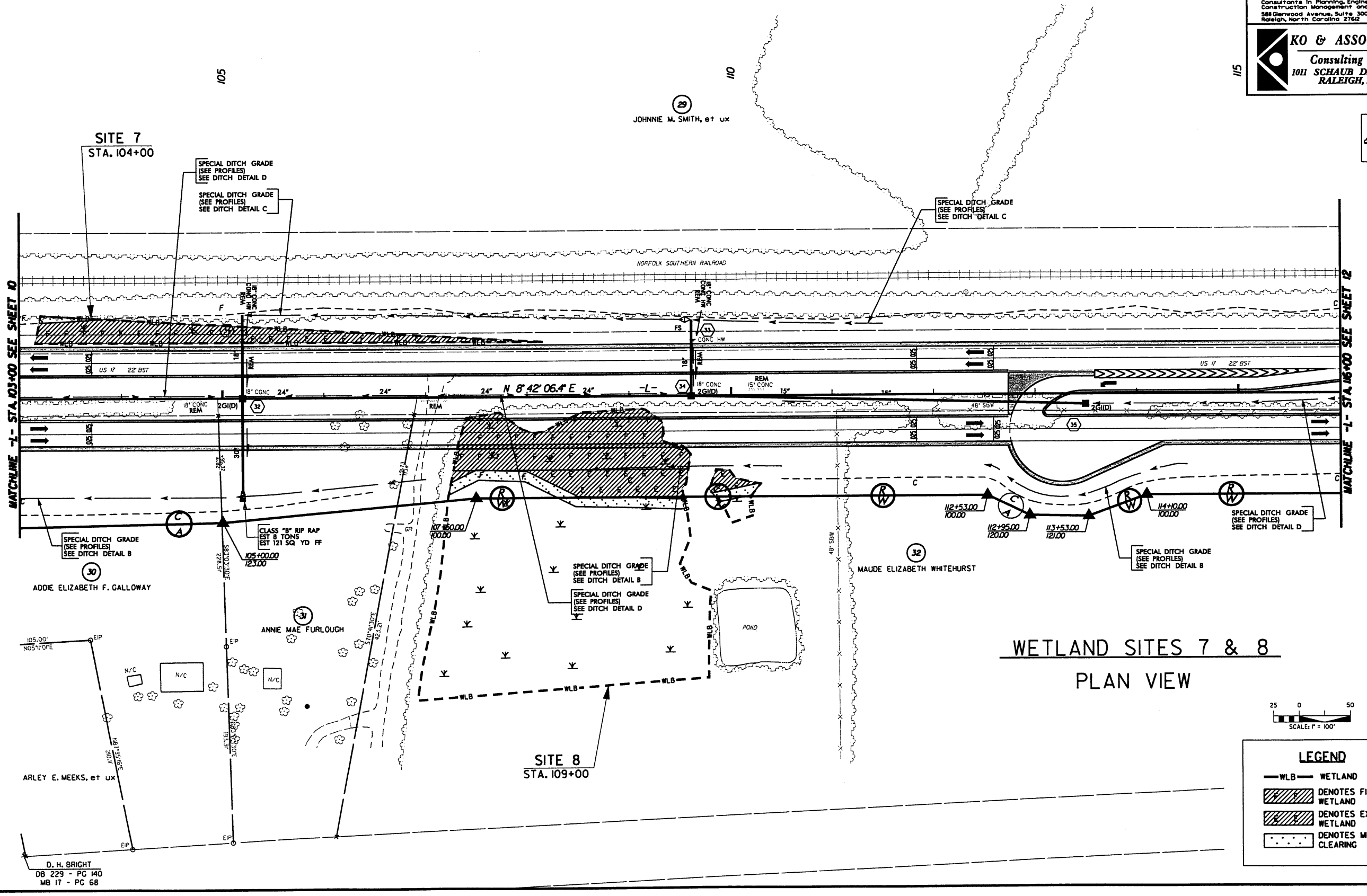
5/14/99
4/17/2005
5:00A Hydraulic Permits VR2510A_Permit.L11.dgn

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6" ABC
UNLESS OTHERWISE NOTED

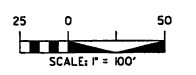
SEE SHEET 26 FOR -L- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADIUS UNLESS OTHERWISE NOTED



PROJECT REFERENCE NO. R-2510A		SHEET NO. 11	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
Carter-Burgess Consultants in Planning, Engineering, Architecture, Construction Management and Related Services 588 Glenwood Avenue, Suite 300 Raleigh, North Carolina 27612			
KO & ASSOCIATES, P.C. Consulting Engineers 1011 SCHAUH DR., SUITE #202 RALEIGH, N.C. 27606			



WETLAND SITES 7 & 8
PLAN VIEW

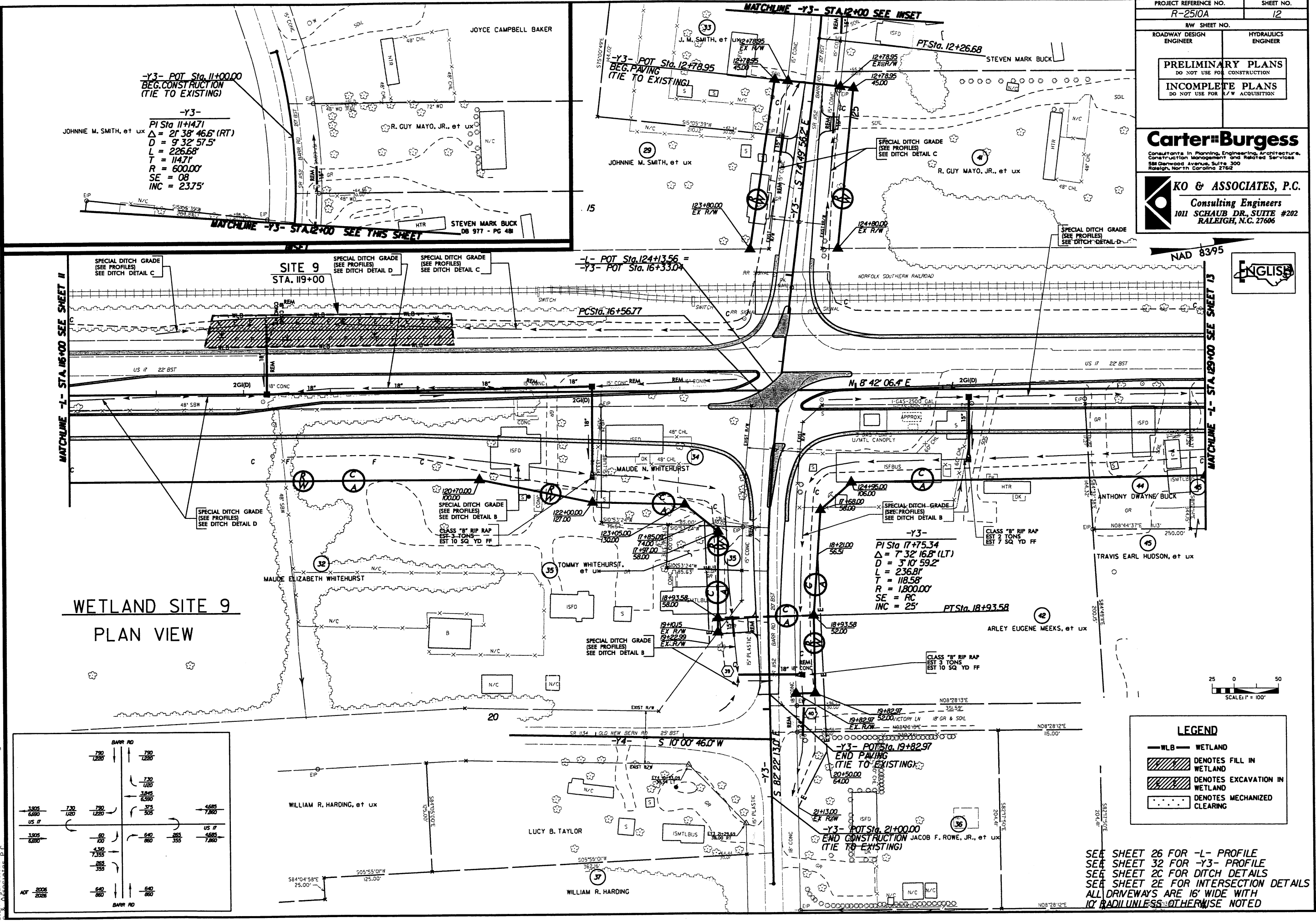


LEGEND

- WLB WETLAND
- Denotes Fill in Wetland
- Denotes Excavation in Wetland
- Denotes Mechanized Clearing

3-15-08 Y3 PROFILE REVISION
1-27-08 DRAINAGE REVISION ADDED EASEMENTS

4/7/2005
5:00A
Permits\2510A_Permit\12.dgn



5/14/99

4/1/2005
510A-Hydraulics-Permits-R2510A-Permit-13.dgn

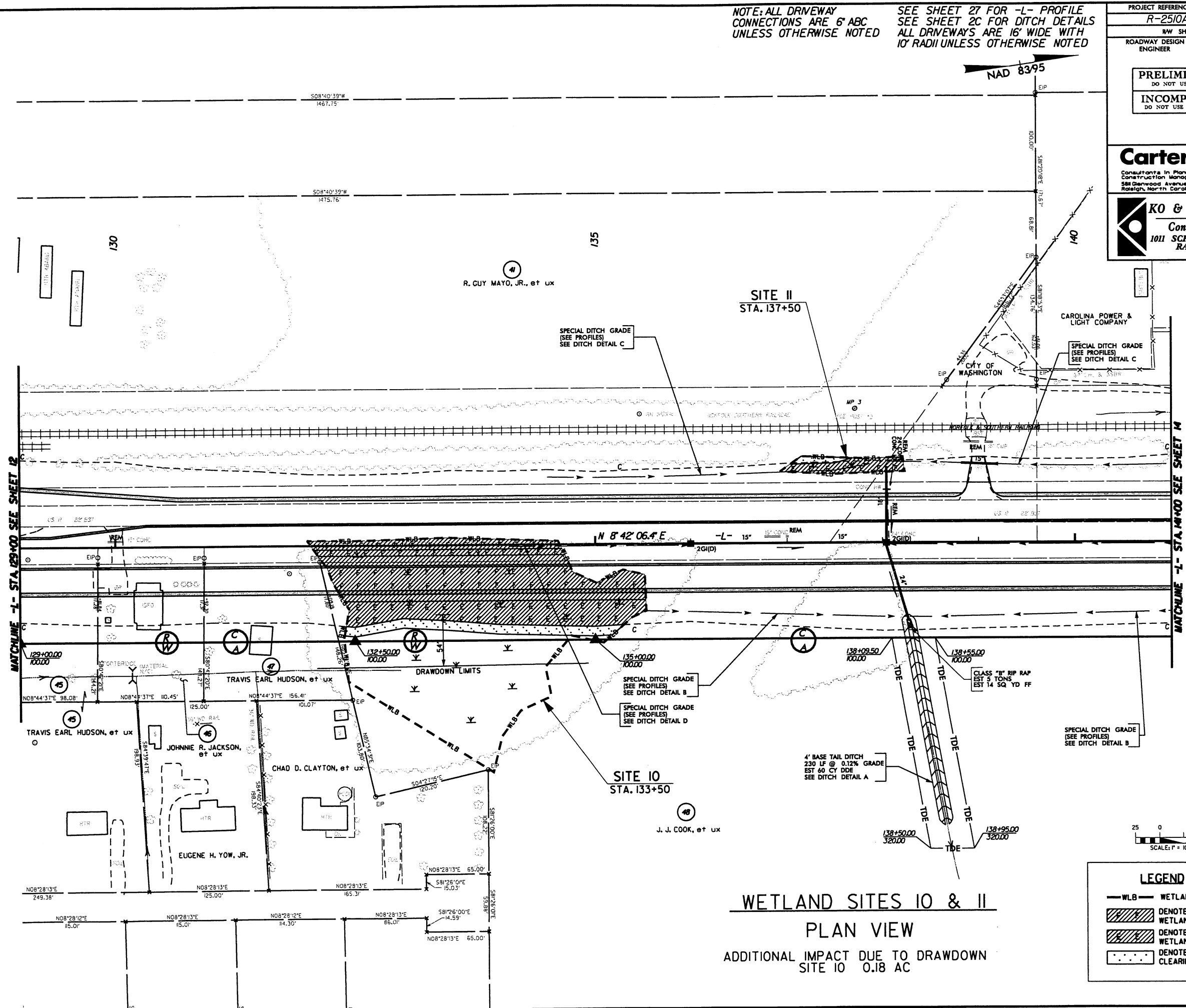
NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6' ABC
UNLESS OTHERWISE NOTED

SEE SHEET 27 FOR -L- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

PROJECT REFERENCE NO. R-2510A	SHEET NO. 13
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

Carter-Burgess
Consultants in Planning, Engineering, Architecture,
Construction Management and Related Services
588 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612

KO & ASSOCIATES, P.C.
Consulting Engineers
1011 SCHAUH DR., SUITE #202
RALEIGH, N.C. 27606

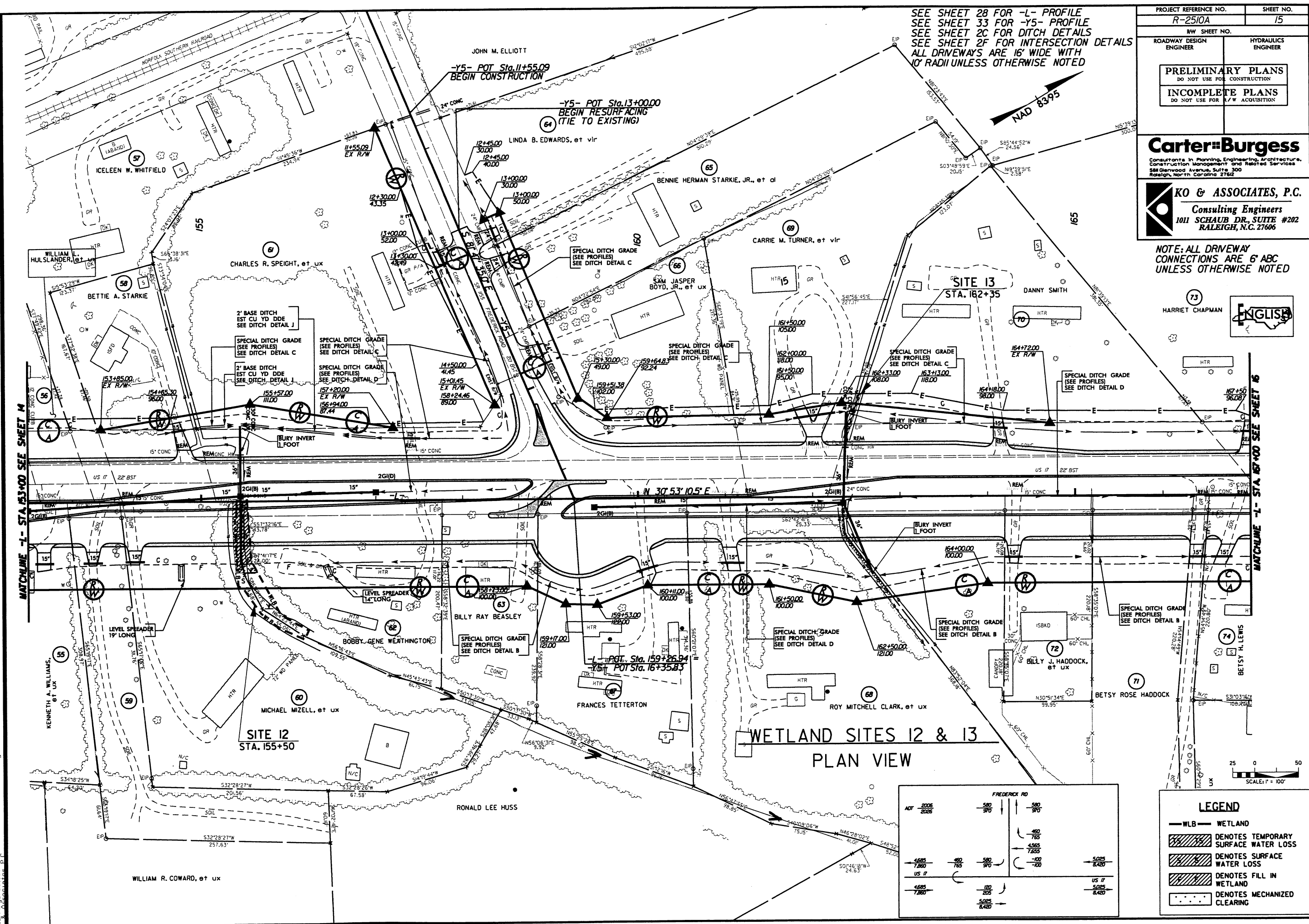


WETLAND SITES IO & II
PLAN VIEW
ADDITIONAL IMPACT DUE TO DRAWDOWN
SITE IO 0.18 AC

LEGEND	
— WLB —	WETLAND
	DENOTES FILL IN WETLAND
	DENOTES EXCAVATION IN WETLAND
	DENOTES MECHANIZED CLEARING

3-15-03 DRAINAGE REVISION REVISED PIPE SIZE STA. 155+45 AND 162+35

4/7/2005
5100\N\p\permts\N2510A_Permit_15.dgn



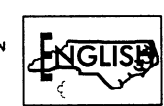
SEE SHEET 28 FOR -L- PROFILE
SEE SHEET 33 FOR -Y5- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
SEE SHEET 2F FOR INTERSECTION DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

Carter-Burgess
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Raleigh, North Carolina 27602

KO & ASSOCIATES, P.C.
Consulting Engineers
1011 SCHAUB DR., SUITE #202
RALEIGH, N.C. 27606

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6' ABC
UNLESS OTHERWISE NOTED



WETLAND SITES 12 & 13
PLAN VIEW

ACT 2005 2005		FREDERICK RD	
580	970	580	970
465	780	465	780
US 17		US 17	
465	780	465	780
5025	8420	5025	8420

LEGEND

- WLB WETLAND
- Denotes TEMPORARY SURFACE WATER LOSS
- Denotes SURFACE WATER LOSS
- Denotes FILL IN WETLAND
- Denotes MECHANIZED CLEARING

5/14/99

3-15-03 DRAINAGE REVISION REVISED PIPE SIZE STA 185+82

4/7/2005
51045\Ndr\2005a\Permits\R2510A_Permit_17.dgn
KO & ASSOCIATES, P.C.

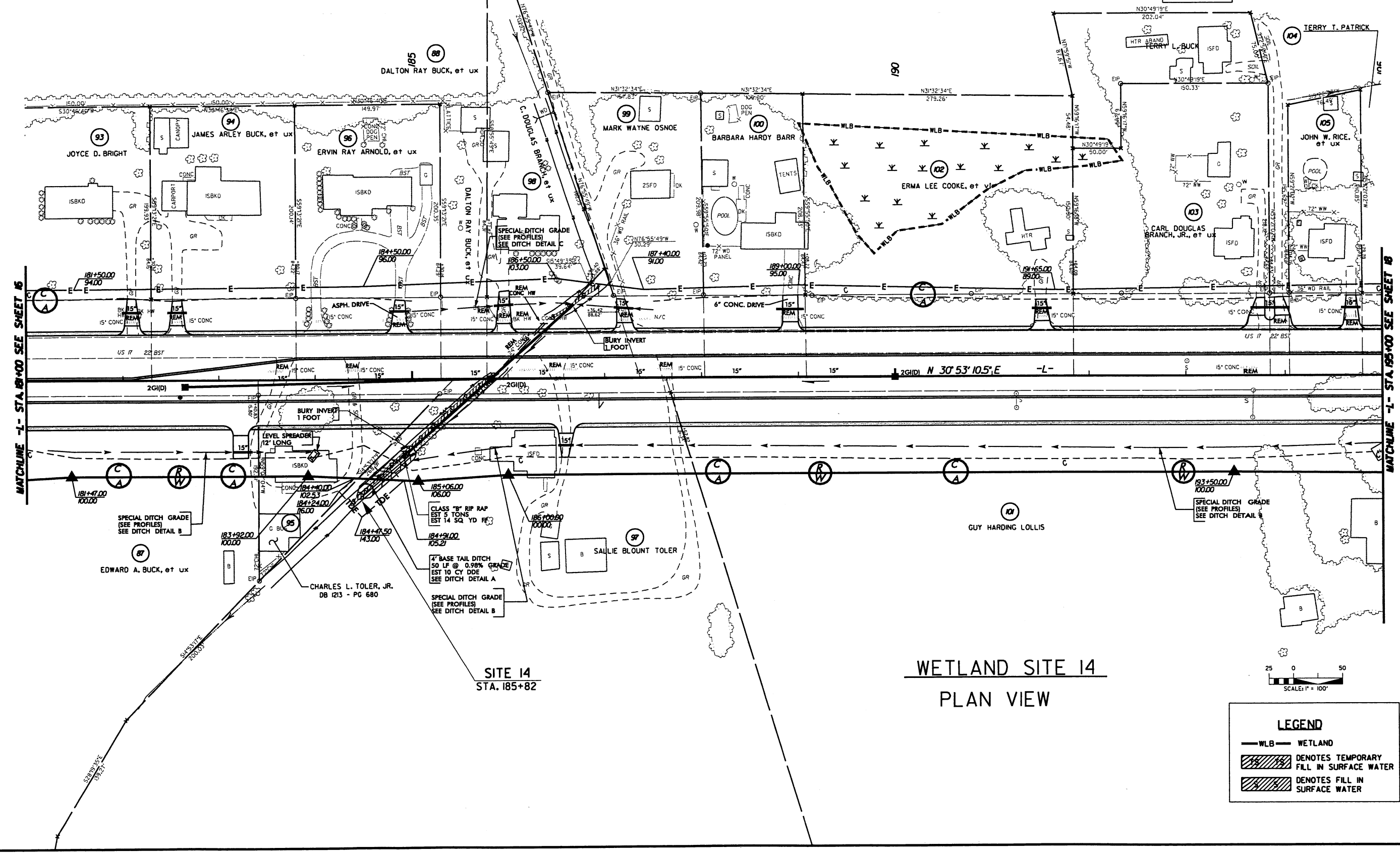
NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6" ABC
UNLESS OTHERWISE NOTED

SEE SHEET 29 FOR -L- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

Carter-Burgess
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Construction Management and Related Services
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Raleigh, North Carolina 27612

KO & ASSOCIATES, P.C.
Consulting Engineers
1011 SCHAUH DR., SUITE #202
RALEIGH, N.C. 27606

PROJECT REFERENCE NO. R-2510A		SHEET NO. 17	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
		INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	



WETLAND SITE 14
PLAN VIEW

LEGEND

- WLB WETLAND
- Denotes TEMPORARY FILL IN SURFACE WATER
- Denotes FILL IN SURFACE WATER

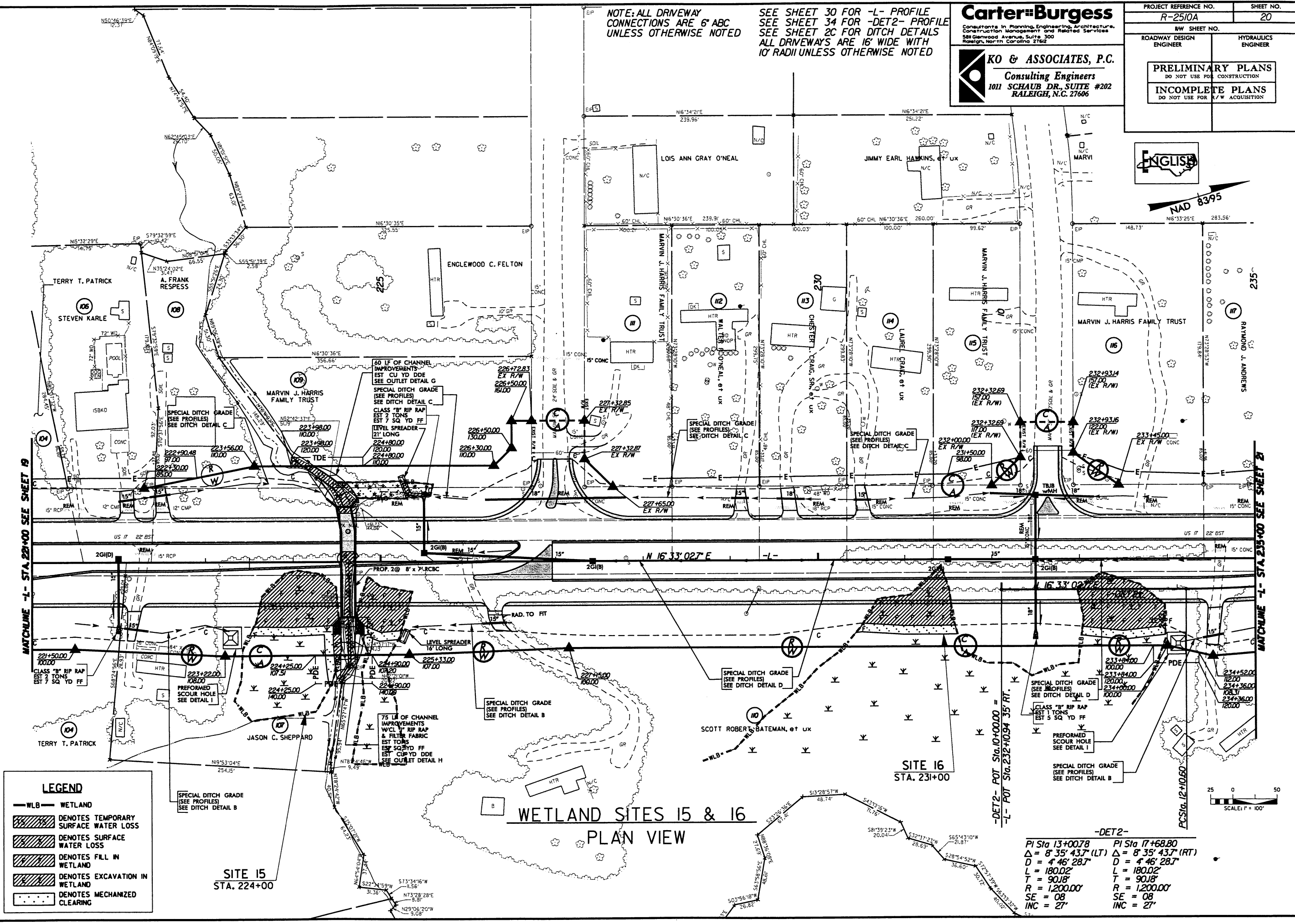
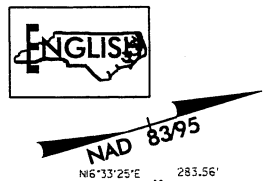
4/7/2005 5:14/499 1-27-05 DRAINAGE REVISION STRUCTURE 7476

NOTE: ALL DRIVEWAY CONNECTIONS ARE 6" ABC UNLESS OTHERWISE NOTED
SEE SHEET 30 FOR -L- PROFILE
SEE SHEET 34 FOR -DET2- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED

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PROJECT REFERENCE NO. R-2510A		SHEET NO. 20	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
		INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	



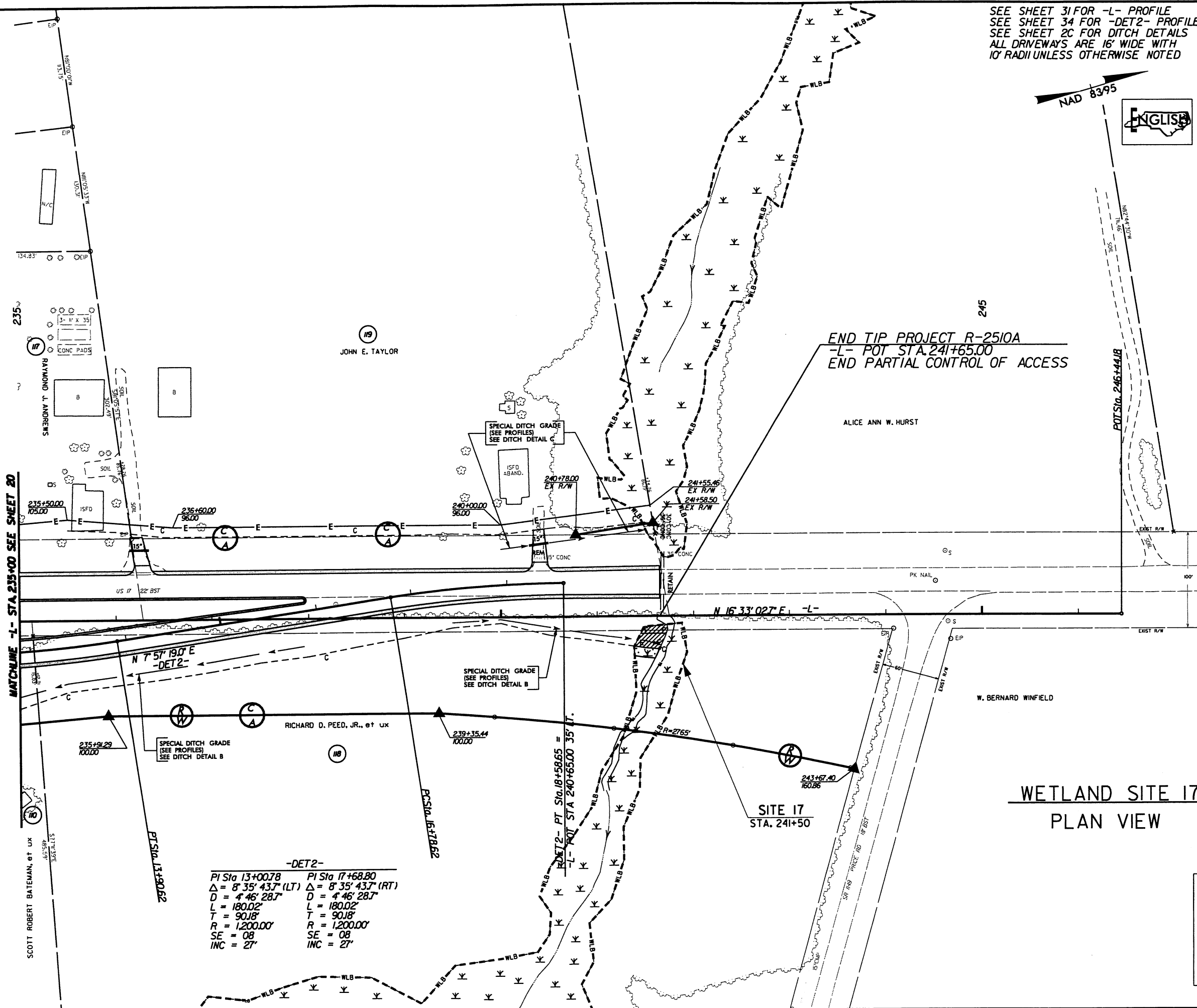
LEGEND

- WLB WETLAND
- DENOTES TEMPORARY SURFACE WATER LOSS
- DENOTES SURFACE WATER LOSS
- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES MECHANIZED CLEARING

-DET2-	
PI Sta 13+00.78	PI Sta 17+68.80
$\Delta = 8' 35' 43.7''$ (LT)	$\Delta = 8' 35' 43.7''$ (RT)
$D = 4' 46' 28.7''$	$D = 4' 46' 28.7''$
$L = 180.02'$	$L = 180.02'$
$T = 90.18'$	$T = 90.18'$
$R = 1200.00'$	$R = 1200.00'$
$SE = 08$	$SE = 08$
$INC = 27'$	$INC = 27'$

5/14/99

4/1/2005 510A-Hydraulics-Permits\2510A-Permit-21.dgn



SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 34 FOR -DET2- PROFILE
SEE SHEET 2C FOR DITCH DETAILS
ALL DRIVEWAYS ARE 16' WIDE WITH
10' RADII UNLESS OTHERWISE NOTED

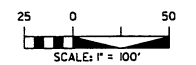


PROJECT REFERENCE NO. R-2510A		SHEET NO. 21	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
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KO & ASSOCIATES, P.C. Consulting Engineers 1011 SCHAUER DR., SUITE #202 RALEIGH, N.C. 27606			

NOTE: ALL DRIVEWAY
CONNECTIONS ARE 6' ABC
UNLESS OTHERWISE NOTED

END TIP PROJECT R-2510A
-L- POT STA 241+65.00
END PARTIAL CONTROL OF ACCESS

WETLAND SITE 17
PLAN VIEW



LEGEND	
	WETLAND
	DENOTES FILL IN WETLAND
	DENOTES EXCAVATION IN WETLAND
	DENOTES MECHANIZED CLEARING

5/28/93

SEE SHEET 5 FOR -L- PLAN

PROJECT REFERENCE NO.
R-2510A

SHEET NO.
23

ROADWAY DESIGN
ENGINEER


HYDRAULICS
ENGINEER

PRELIMINARY PLANS

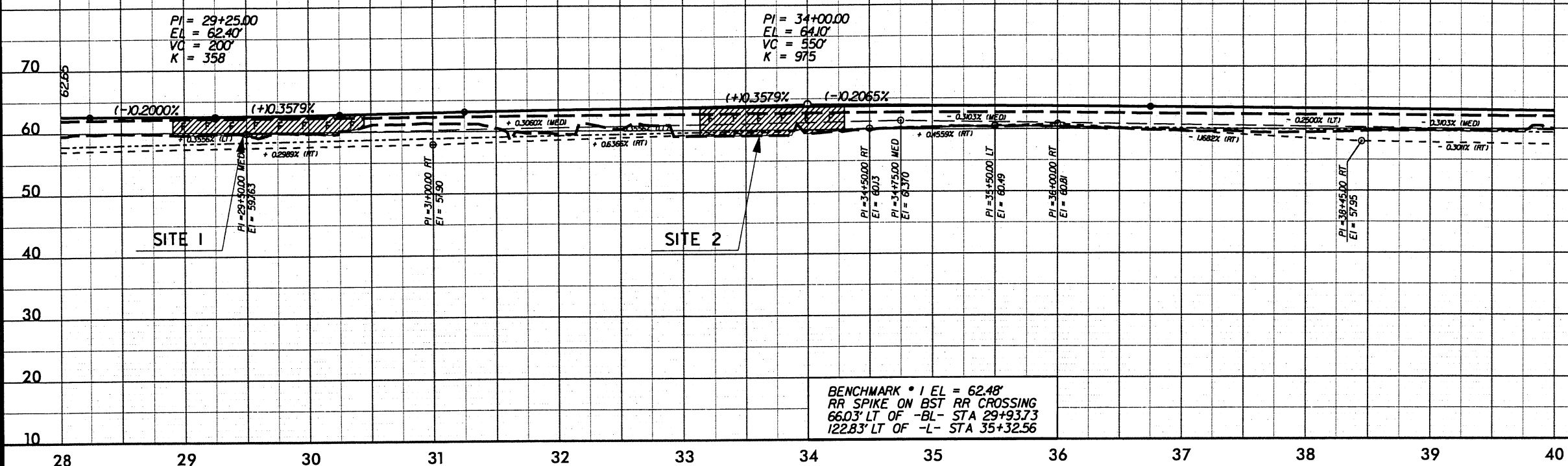
DO NOT USE FOR CONSTRUCTION

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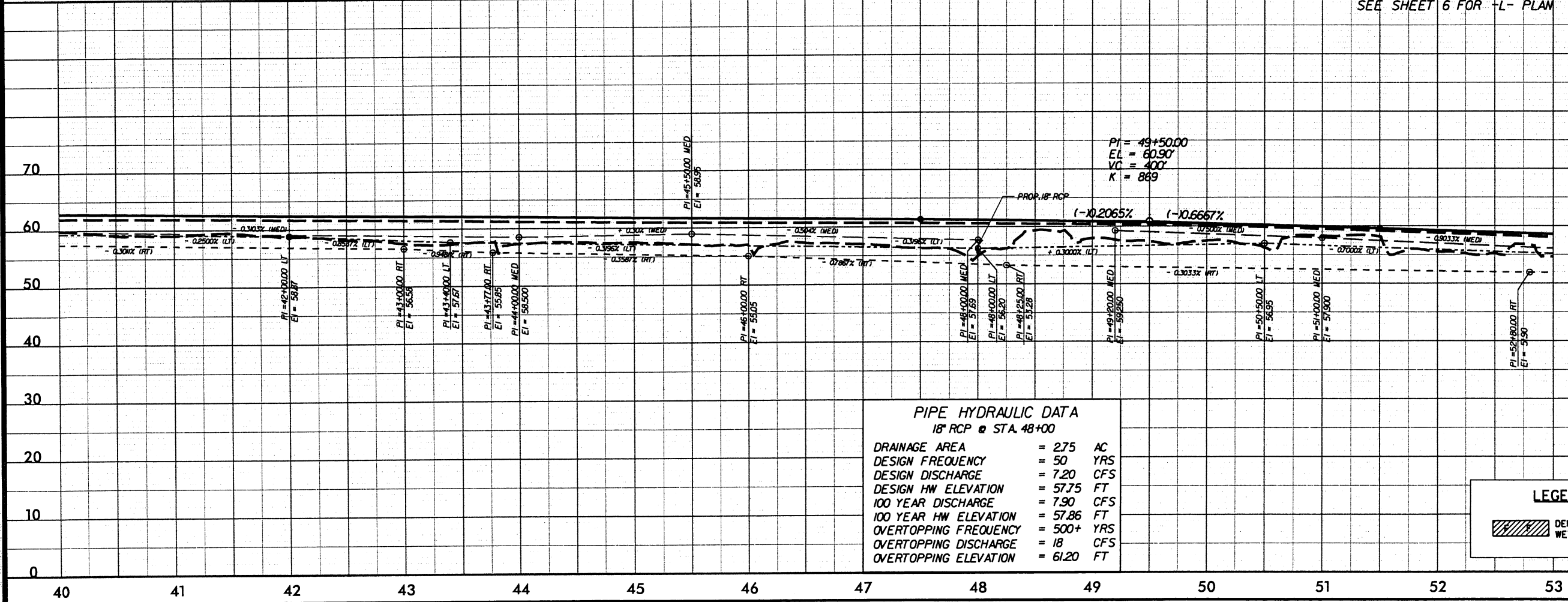
 **KO & ASSOCIATES, P.C.**

Consulting Engineers
1011 SCHAU DR., SUITE #202
RALEIGH, N.C. 27606




BENCHMARK * 1 EL = 62.48'
RR SPIKE ON BST RR CROSSING
66.03' LT OF -BL- STA 29+93.73
122.83' LT OF -L- STA 35+32.56

SEE SHEET 6 FOR -L- PLAN



PIPE HYDRAULIC DATA		
18" RCP @ STA. 48+00		
DRAINAGE AREA	= 275	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 7.20	CFS
DESIGN HW ELEVATION	= 57.75	FT
100 YEAR DISCHARGE	= 7.90	CFS
100 YEAR HW ELEVATION	= 57.86	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 18	CFS
OVERTOPPING ELEVATION	= 61.20	FT

LEGEND

 DENOTES FILL IN WETLAND

5/28/99

SEE SHEET 7 FOR -L- PLAN

PROJECT REFERENCE NO. R-2510A SHEET NO. 24

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

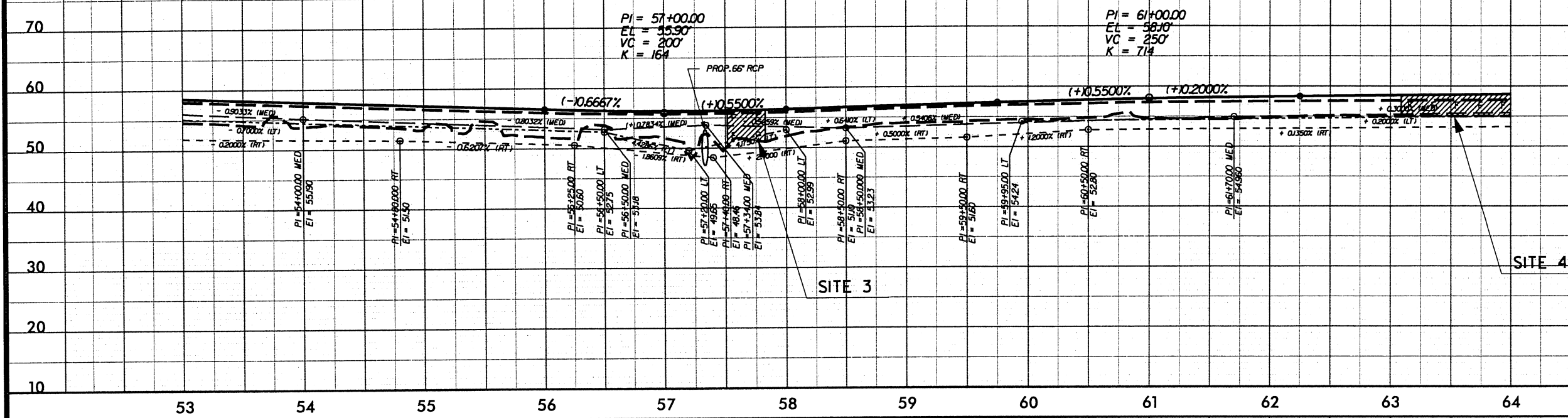
Carter-Burgess

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Raleigh, North Carolina 27612

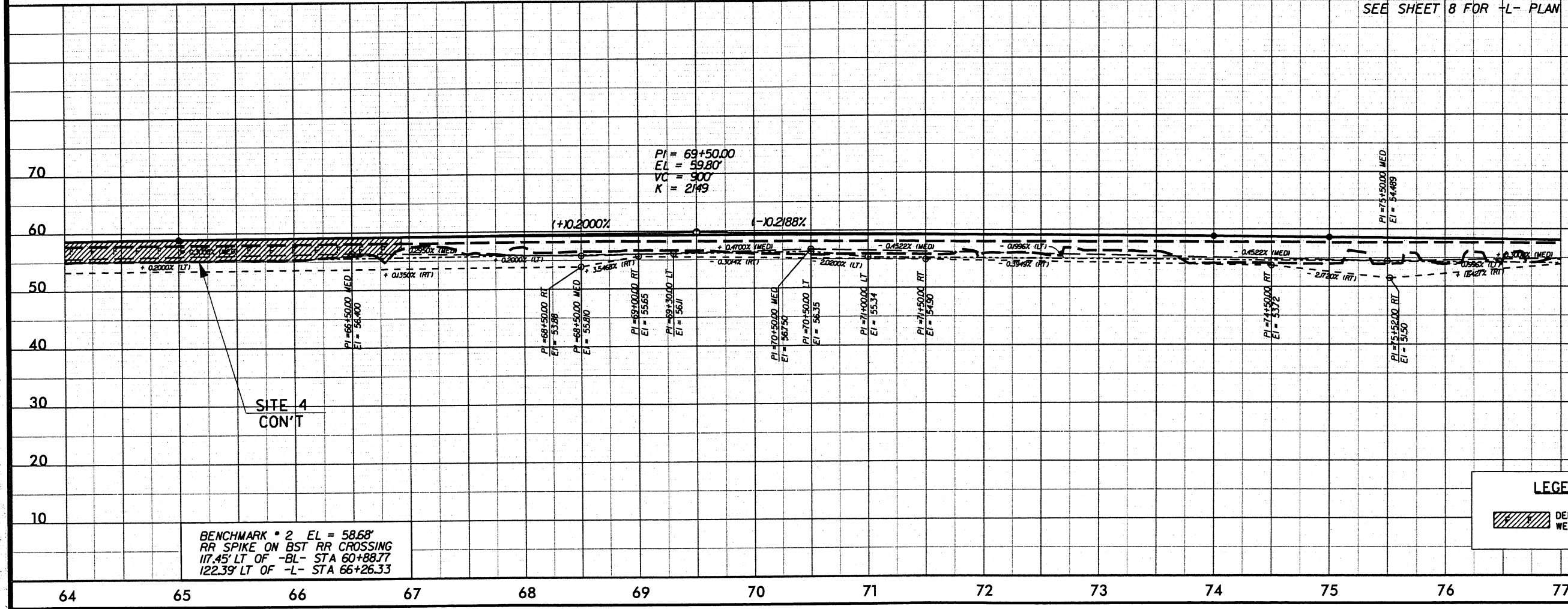
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RALEIGH, N.C. 27606

STRUCTURE HYDRAULIC DATA
10 66" RCP STA 57+33.2 -L-

DESIGN DISCHARGE	= 70	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 52.81	FT
BASE DISCHARGE	= 80	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 53.02	FT
OVERTOPPING DISCHARGE	= 170	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 56.20	FT



SEE SHEET 8 FOR -L- PLAN



BENCHMARK * 2 EL = 58.68'
RR SPIKE ON BST RR CROSSING
117.45' LT OF -BL- STA 60+88.77
122.39' LT OF -L- STA 66+26.33

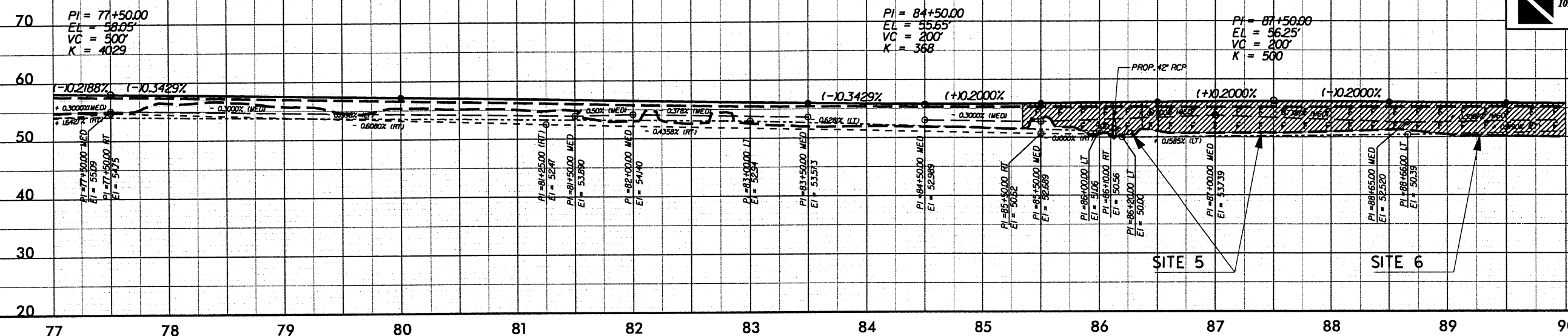
LEGEND
DENOTES FILL IN WETLAND

PROJECT REFERENCE NO. R-2510A	SHEET NO. 25
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
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KO & ASSOCIATES, P.C. Consulting Engineers 1011 SCHAUER DR., SUITE #202 RALEIGH, N.C. 27606	

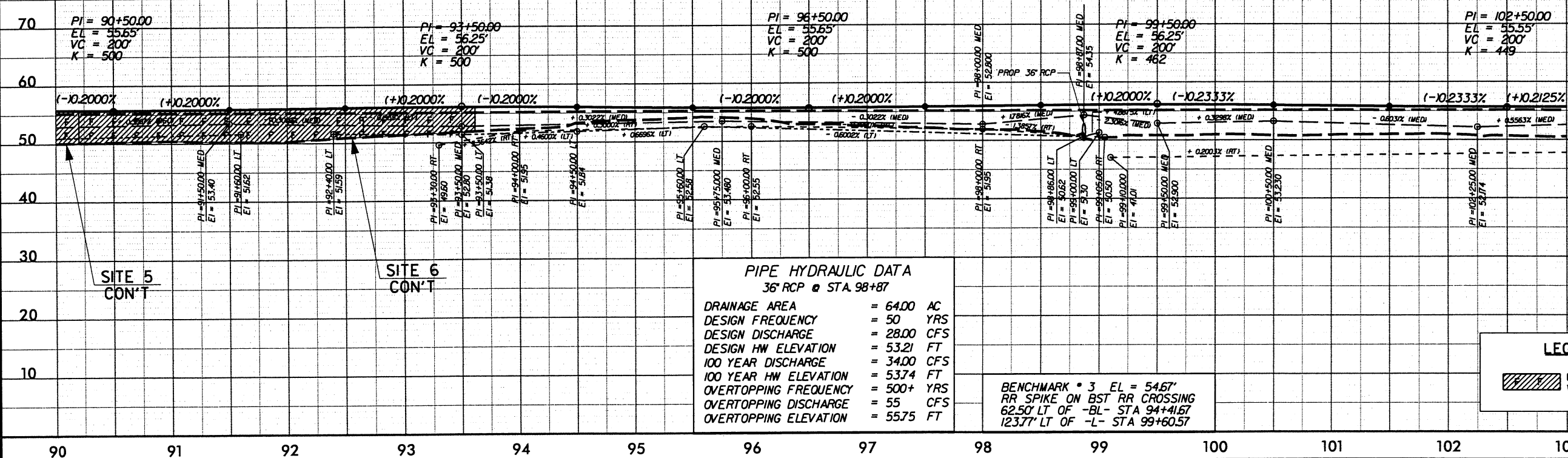
PIPE HYDRAULIC DATA

42" RCP @ STA. 86+13

DRAINAGE AREA	= 64.00 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 30.00 CFS
DESIGN HW ELEVATION	= 52.53 FT
100 YEAR DISCHARGE	= 36.00 CFS
100 YEAR HW ELEVATION	= 52.88 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 79 CFS
OVERTOPPING ELEVATION	= 55.77 FT



SEE SHEET 10 FOR -L- PLAN



PIPE HYDRAULIC DATA

36" RCP @ STA. 98+87

DRAINAGE AREA	= 64.00 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 28.00 CFS
DESIGN HW ELEVATION	= 53.21 FT
100 YEAR DISCHARGE	= 34.00 CFS
100 YEAR HW ELEVATION	= 53.74 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 55 CFS
OVERTOPPING ELEVATION	= 55.75 FT

BENCHMARK * 3 EL = 54.67'
 RR SPIKE ON BST RR CROSSING
 62.50' LT OF -BL- STA 94+41.67
 123.77' LT OF -L- STA 99+60.57

LEGEND

DENOTES FILL IN WETLAND

5/28/99

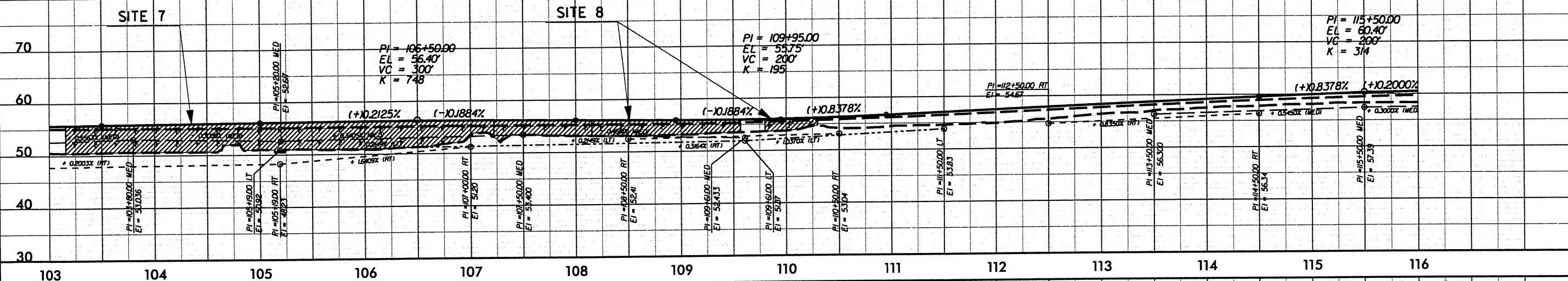
SEE SHEET 11 FOR -L- PLAN

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	26
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

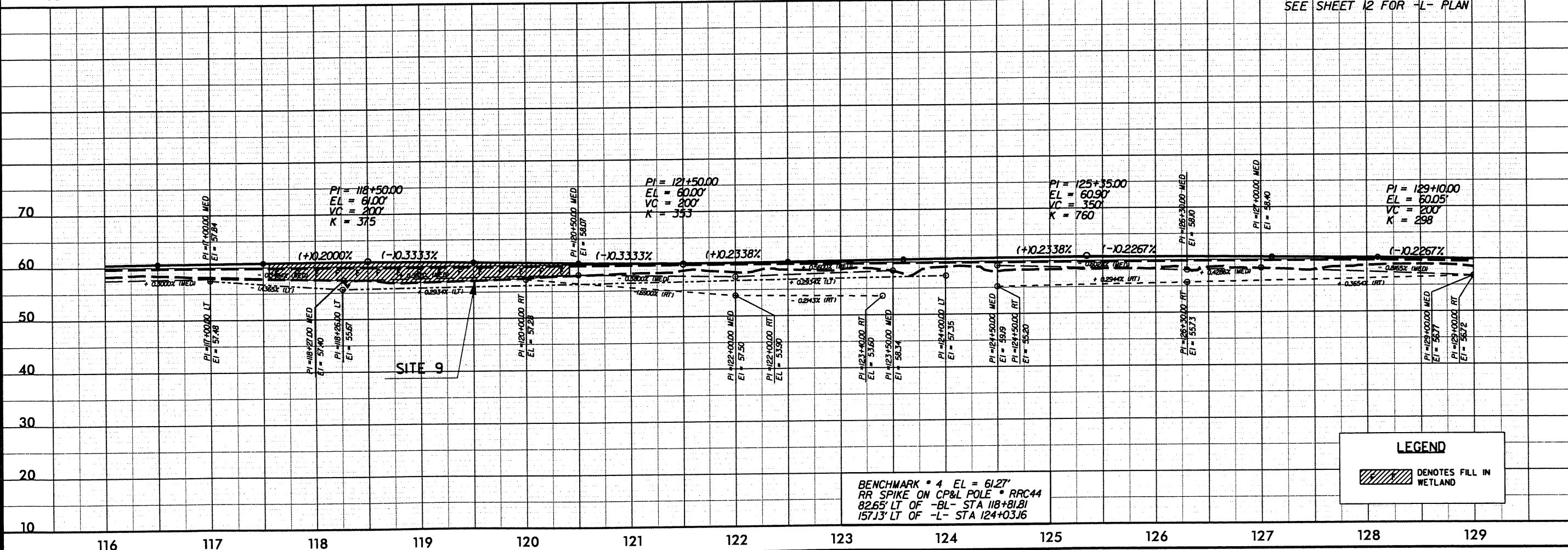
Carter-Burgess

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SEE SHEET 12 FOR -L- PLAN




LEGEND

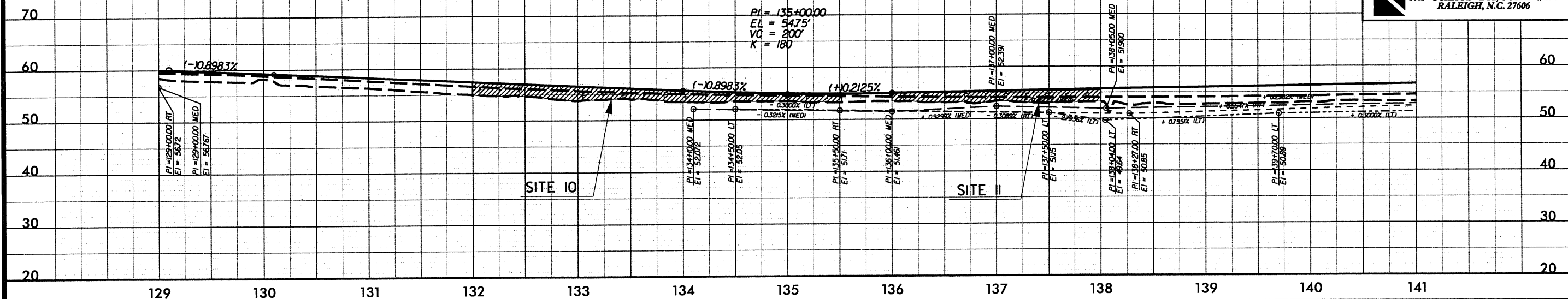
/// DENOTES FILL IN WETLAND

BENCHMARK * 4 EL = 61.27'
RR SPIKE ON CP&L POLE * RRC44
82.65' LT OF -BL- STA 118+81.81
157.13' LT OF -L- STA 124+03.66

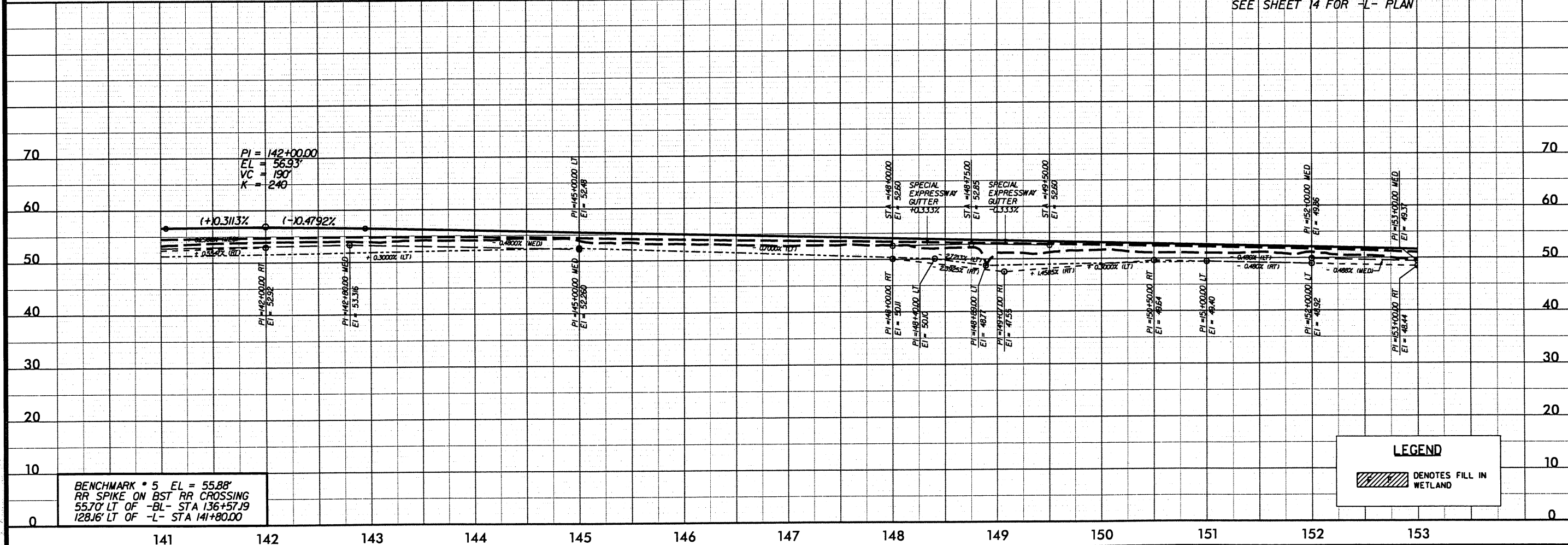
5/28/99

SEE SHEET 13 FOR -L- PLAN

PROJECT REFERENCE NO. R-2510A		SHEET NO. 27	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
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SEE SHEET 14 FOR -L- PLAN



5/28/99

PIPE HYDRAULIC DATA	
36" RCP @ STA. 155+45	
DRAINAGE AREA	= 54.95 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 17.00 CFS
DESIGN HW ELEVATION	= 46.55 FT
100 YEAR DISCHARGE	= 21.00 CFS
100 YEAR HW ELEVATION	= 46.58 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 57 CFS
OVERTOPPING ELEVATION	= 50.26 FT

PIPE HYDRAULIC DATA	
36" RCP @ STA. 162+35	
DRAINAGE AREA	= 11.80 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 8.10 CFS
DESIGN HW ELEVATION	= 45.90 FT
100 YEAR DISCHARGE	= 9.80 CFS
100 YEAR HW ELEVATION	= 46.19 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 30 CFS
OVERTOPPING ELEVATION	= 50.86 FT

SEE SHEET 15 FOR -L- PLAN

PROJECT REFERENCE NO.
R-2510A

SHEET NO.
28

ROADWAY DESIGN
ENGINEER


HYDRAULICS
ENGINEER

PRELIMINARY PLANS

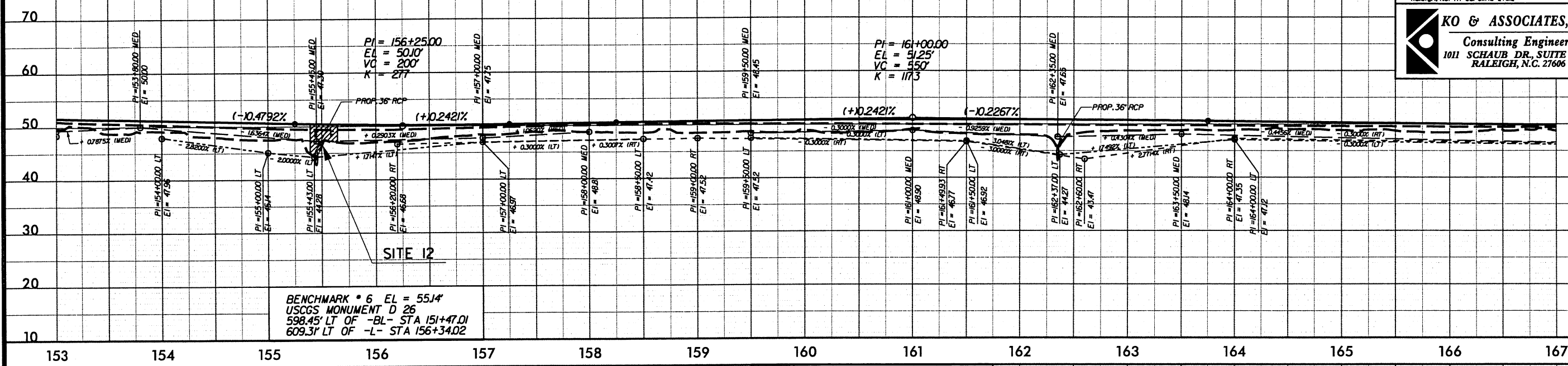
DO NOT USE FOR CONSTRUCTION

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Raleigh, North Carolina 27612

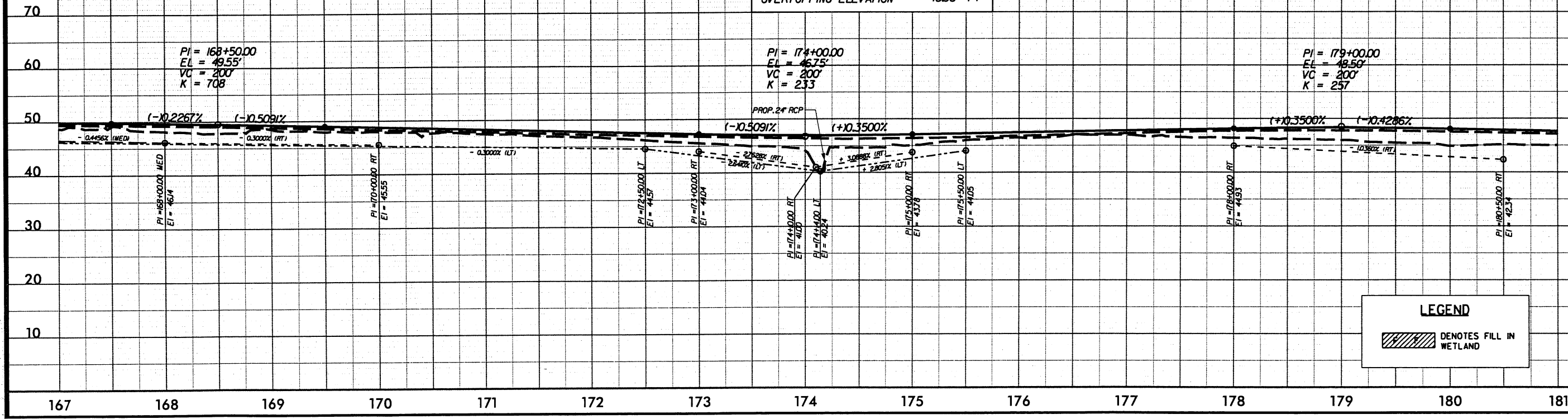
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RALEIGH, N.C. 27606




PIPE HYDRAULIC DATA	
24" RCP @ STA. 174+18	
DRAINAGE AREA	= 22.70 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 11.00 CFS
DESIGN HW ELEVATION	= 42.22 FT
100 YEAR DISCHARGE	= 13.00 CFS
100 YEAR HW ELEVATION	= 42.45 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 35 CFS
OVERTOPPING ELEVATION	= 46.96 FT

SEE SHEET 16 FOR -L- PLAN



LEGEND

 DENOTES FILL IN WETLAND

PIPE HYDRAULIC DATA

18" RCP @ STA. 213+40

DRAINAGE AREA	= 1.11	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 2.40	CFS
DESIGN HW ELEVATION	= 38.03	FT
100 YEAR DISCHARGE	= 2.90	CFS
100 YEAR HW ELEVATION	= 38.14	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 14	CFS
OVERTOPPING ELEVATION	= 41.51	FT

SEE SHEET 19 FOR -L- PLAN

PROJECT REFERENCE NO.

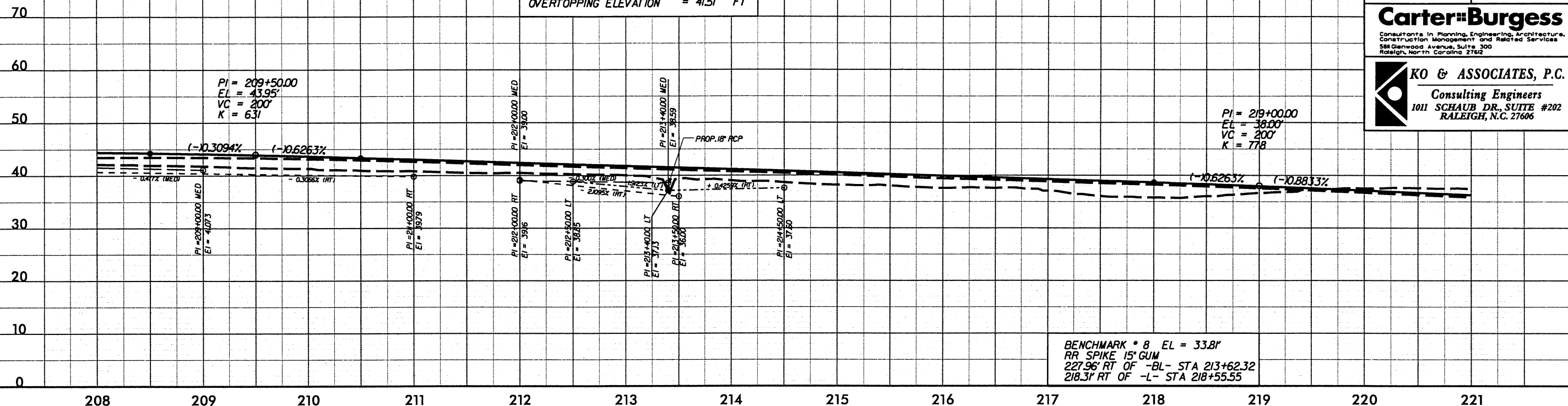
R-2510A

SHEET NO.

30

ROADWAY DESIGN
ENGINEERHYDRAULICS
ENGINEERPRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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Consulting Engineers
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RALEIGH, N.C. 27606

STRUCTURE HYDRAULIC DATA

20 8' x 7' RCBC STA. 224+62.8 -L-

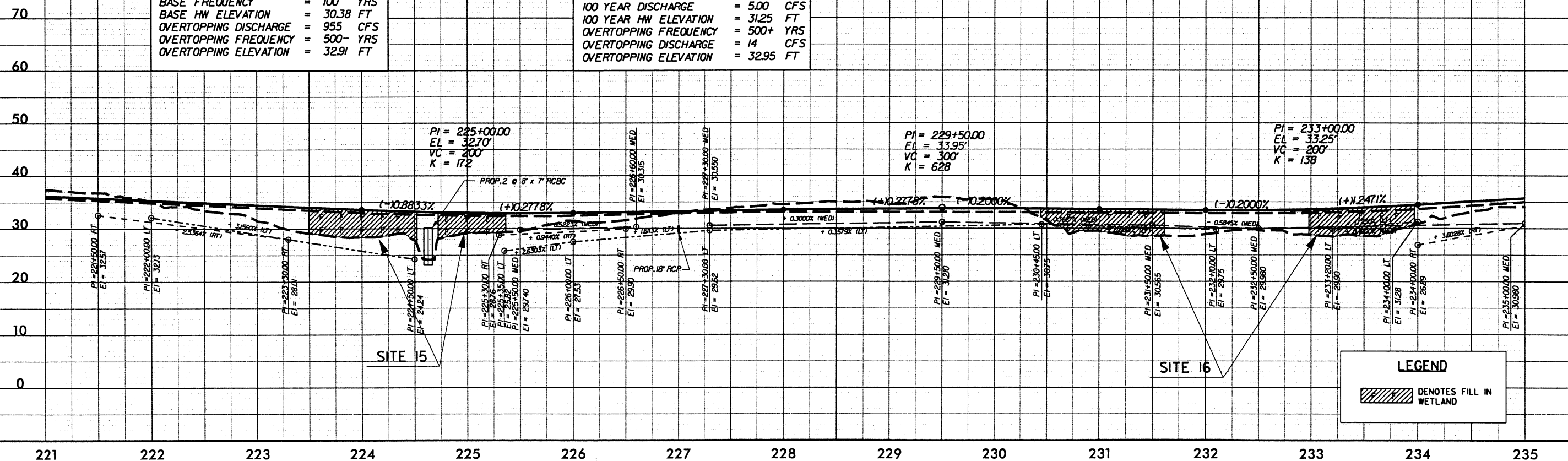
DESIGN DISCHARGE	= 470	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 29.84	FT
BASE DISCHARGE	= 590	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 30.38	FT
OVERTOPPING DISCHARGE	= 955	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 32.91	FT

PIPE HYDRAULIC DATA

18 RCP @ STA. 227+00

DRAINAGE AREA	= 4.32	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 4.10	CFS
DESIGN HW ELEVATION	= 31.06	FT
100 YEAR DISCHARGE	= 5.00	CFS
100 YEAR HW ELEVATION	= 31.25	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 14	CFS
OVERTOPPING ELEVATION	= 32.95	FT

SEE SHEET 20 FOR -L- PLAN



LEGEND


DENOTES FILL IN
WETLAND

31

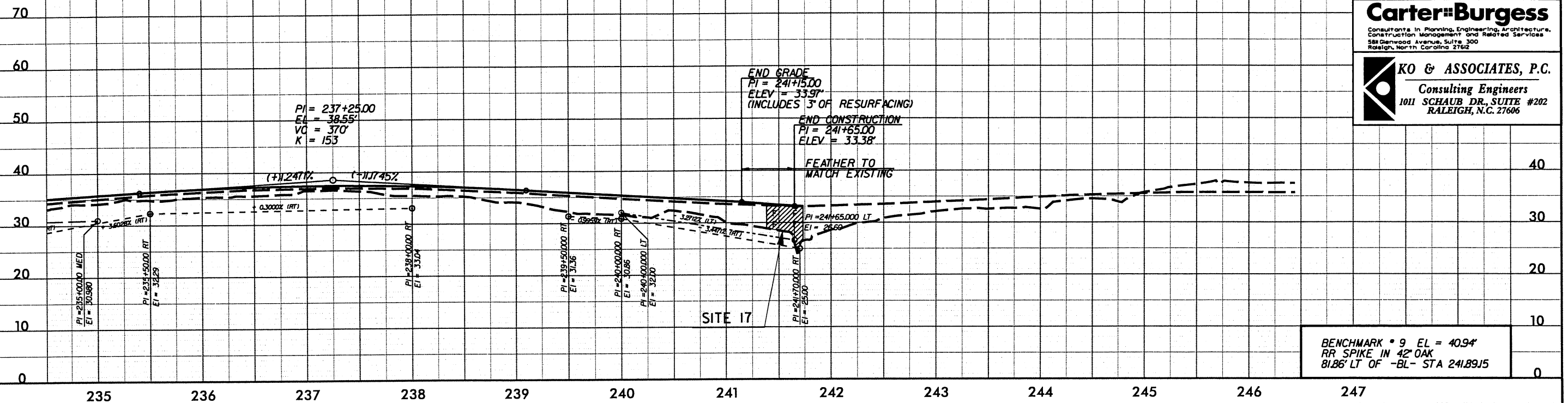
**HYDRAULICS
ENGINEER**

DO NOT USE FOR CONSTRUCTION

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Construction Management and Related Services
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Raleigh, North Carolina 27612



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Consulting Engineers
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 RALEIGH, N.C. 27606

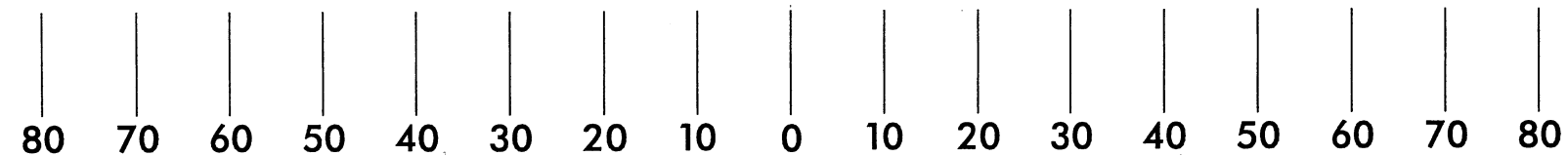
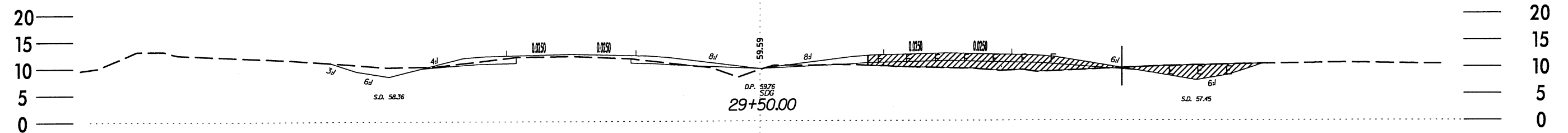


BENCHMARK * 9 EL = 40.94'
RR SPIKE IN 42" OAK
81.86' LT OF -BL- STA 241.89J5

LEGEND

 DENOTES FILL IN WETLAND

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	SITE 1
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



LEGEND

- DENOTES FILL IN WETLANDS
- DENOTES EXCAVATION IN WETLANDS

X-SECTION
SITE 1
STA 29 + 50



NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.11(R-2510A)

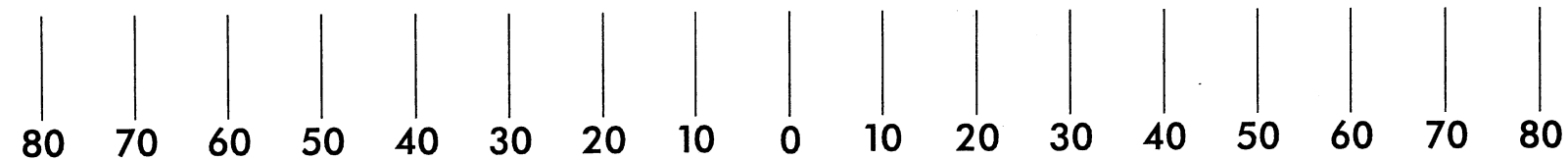
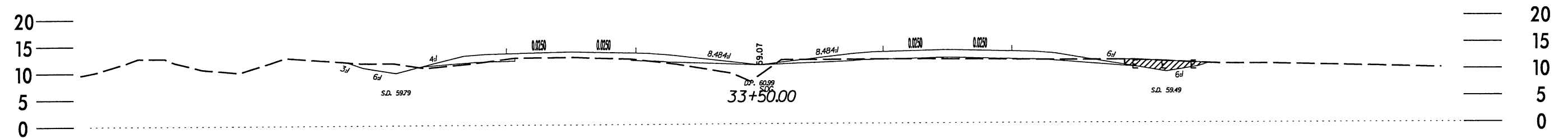
US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 20'

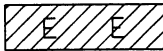
DATE: APR-05

SHEET 1 OF 14

PROJECT REFERENCE NO.		SHEET NO.	
R-2510A		SITE 2	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			



LEGEND

 DENOTES EXCAVATION IN WETLANDS

X-SECTION
SITE 2
STA 33 + 50



NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.11 (R-2510A)

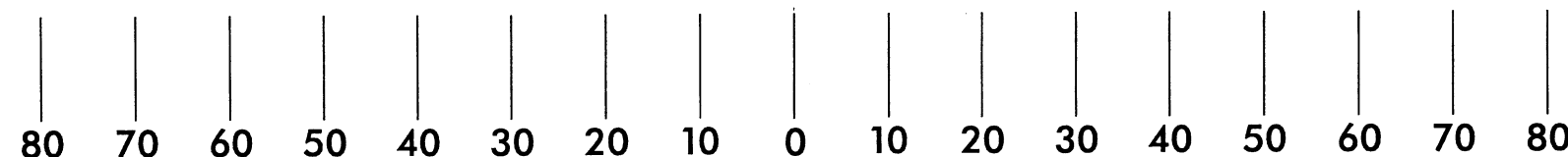
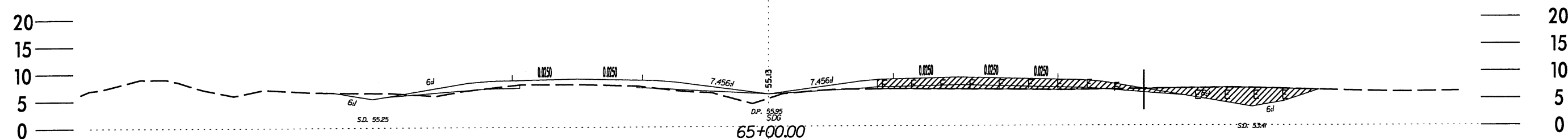
US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 20'

DATE: APR-05

SHEET **2** OF **14**

PROJECT REFERENCE NO.		SHEET NO.	
R-2510A		SITE 4	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div style="border: 1px solid black; padding: 5px; text-align: center;"> PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small> </div>			

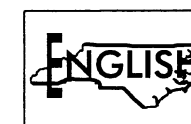


LEGEND

DENOTES FILL
IN WETLANDS

DENOTES EXCAVATION
IN WETLANDS

X-SECTION
SITE 4
STA 65 + 00



NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
 34440.11(R-2510A)

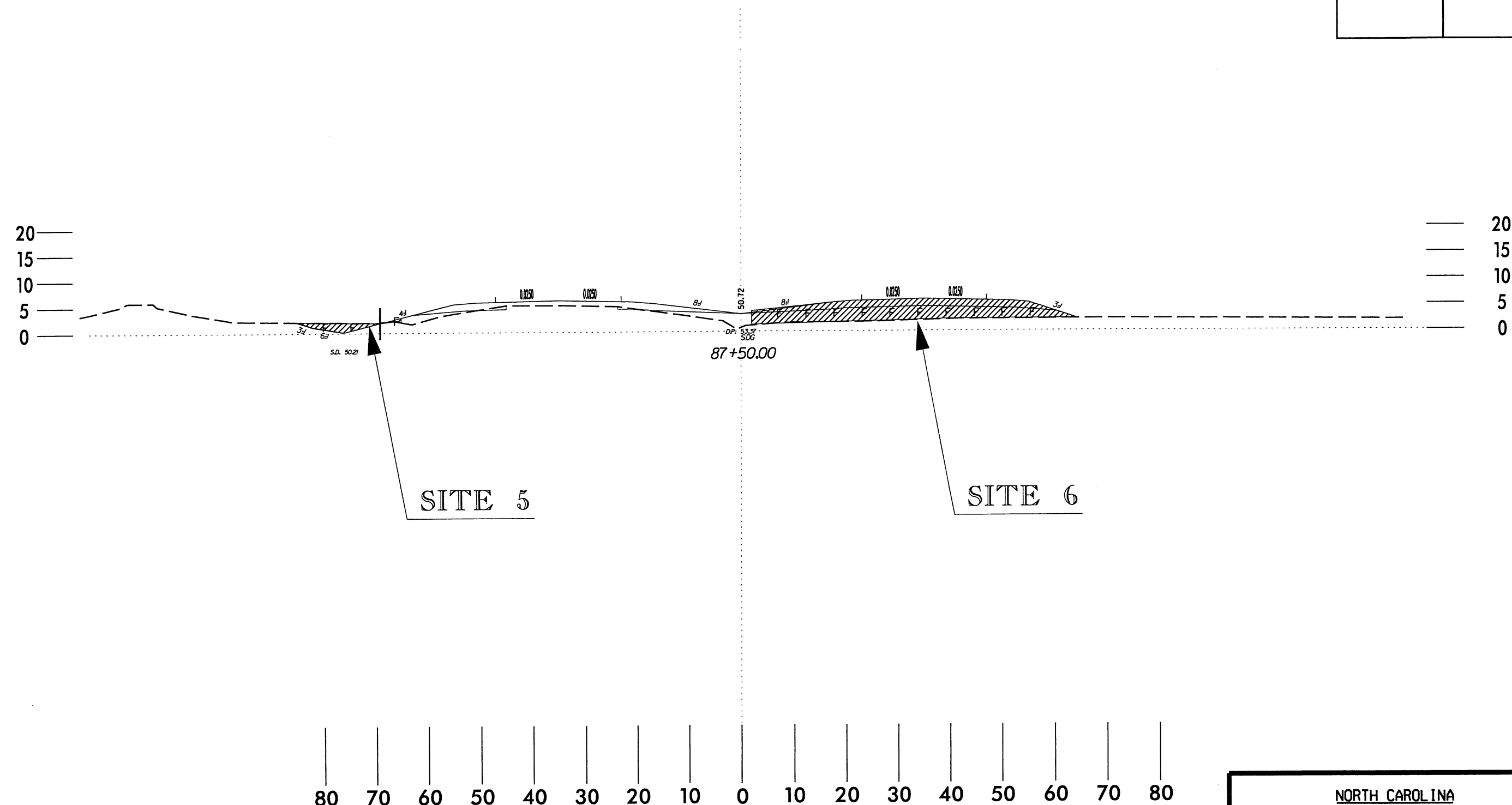
US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
 TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 20'

DATE: APR-05

SHEET **4** OF **14**

PROJECT REFERENCE NO.		SHEET NO.	
R-2510A		SITES 5&6	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div style="border: 1px solid black; padding: 5px; text-align: center;"> PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small> </div>			



LEGEND

DENOTES FILL
IN WETLANDS

DENOTES EXCAVATION
IN WETLANDS

X-SECTION

SITES 5 & 6

STA 87+00

NORTH CAROLINA

DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY

34440.11(R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

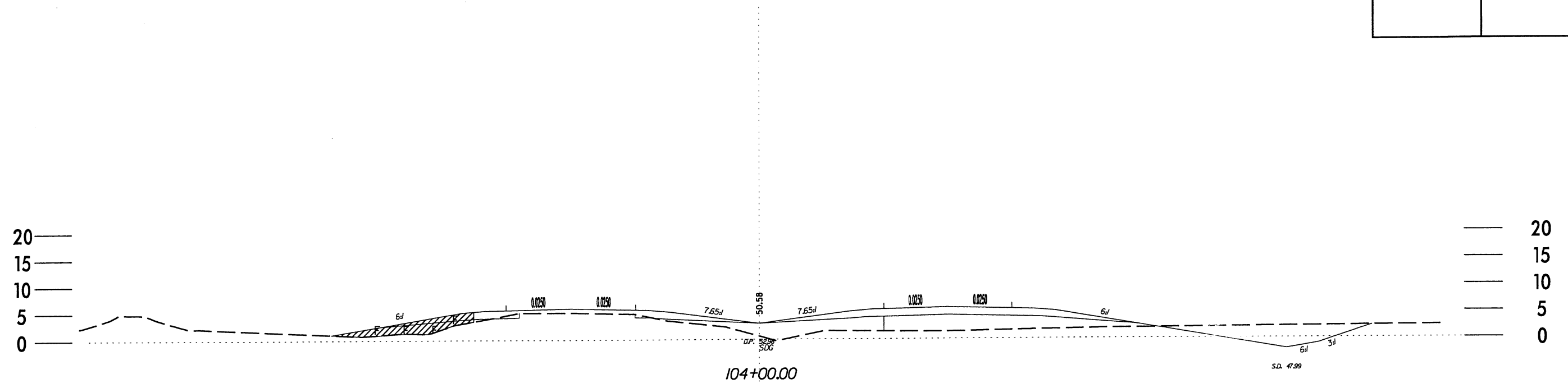
HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 20'

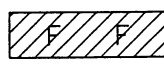
DATE: APR-05

SHEET 5 OF 14

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	SITE 7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



LEGEND

 DENOTES FILL IN WETLANDS

X-SECTION
SITE 7
STA 104 + 00



NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.11(R-2510A)

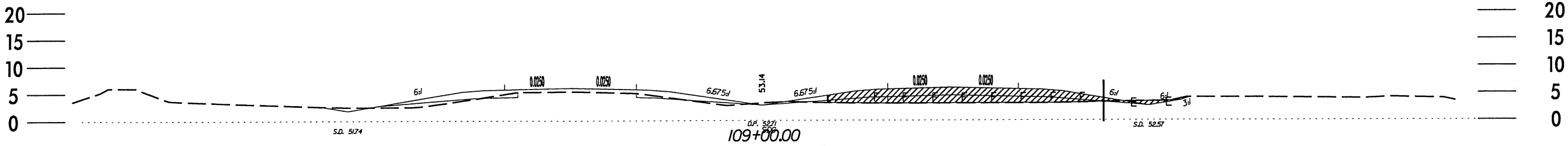
US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 20'

DATE: APR-05

SHEET **6** OF **14**

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	SITE 8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>	



LEGEND

F

DENOTES FILL
IN WETLANDS

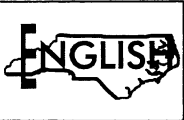
E

DENOTES EXCAVATION
IN WETLANDS

X-SECTION

SITE 8

STA 109 + 00



NORTH CAROLINA

DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY

34440.11(R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)

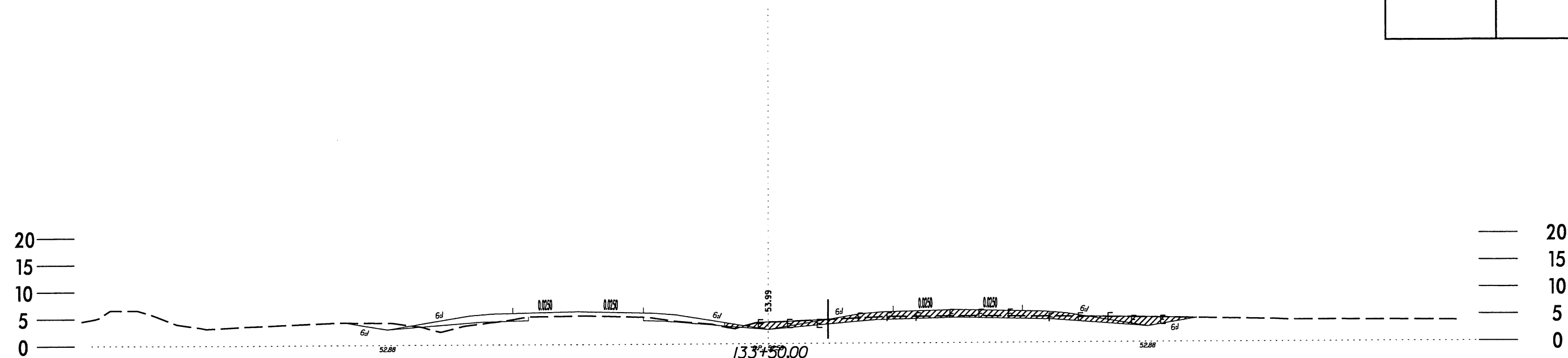
TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 20'

DATE: APR-05

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	SITE 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>	



LEGEND

DENOTES FILL
IN WETLANDS

DENOTES EXCAVATION
IN WETLANDS

X-SECTION

SITE 10

STA 133 + 50



NORTH CAROLINA

DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY

34440.11(R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)

TO SR 1149 (PRICE ROAD)

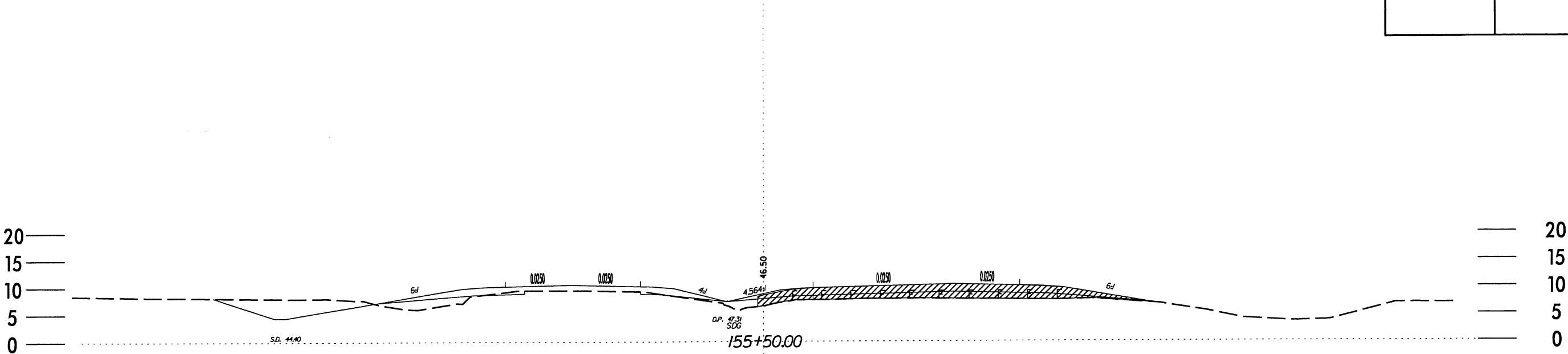
HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 20'

DATE: APR-05

SHEET 9 OF 14

PROJECT REFERENCE NO.	SHEET NO.
R-2510A	SITE 12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>	



LEGEND

DENOTES FILL
IN WETLANDS

X-SECTION

SITE 12

STA 155 + 50



NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.11 (R-2510A)

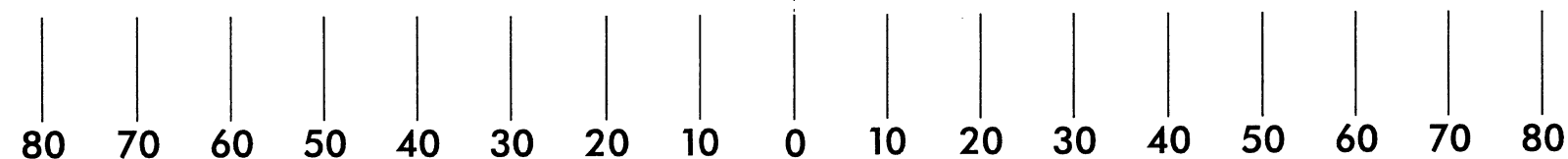
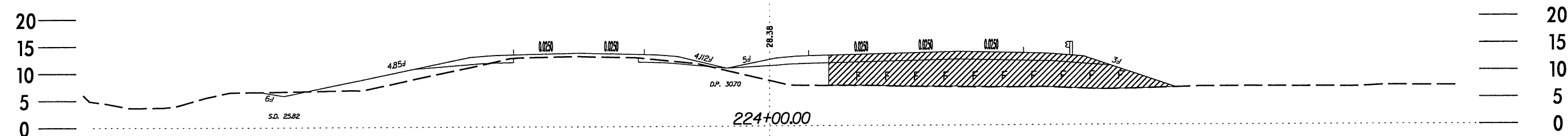
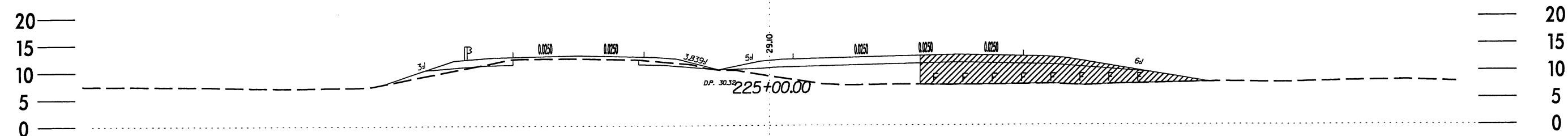
US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 20'

DATE: APR-05

SHEET 11 OF 14

PROJECT REFERENCE NO.		SHEET NO.	
R-2510A		SITE 15	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div style="border: 1px solid black; padding: 5px; text-align: center;"> PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small> </div>			



LEGEND

DENOTES FILL
IN WETLANDS

X-SECTION
SITE 15
STA 224 + 00 &
STA 225 + 00



NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
 34440.11(R-2510A)

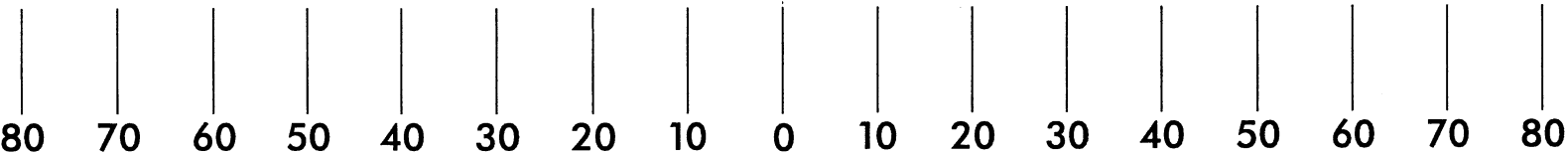
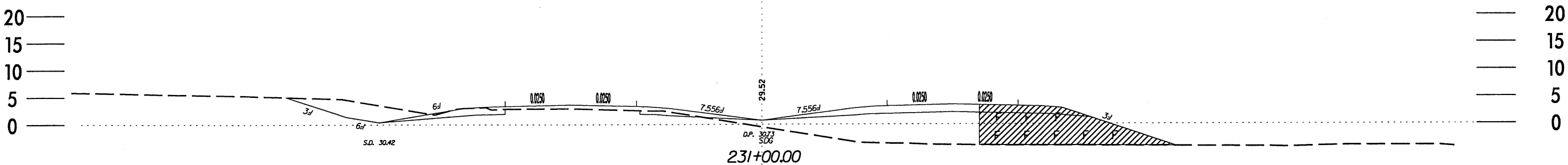
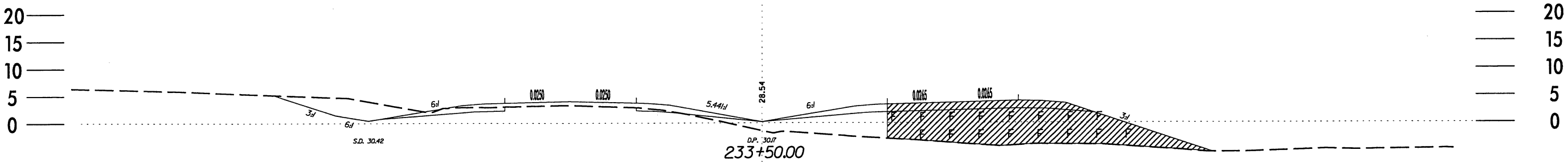
US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
 TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 20'

DATE: APR-05

SHEET **12** OF **14**

PROJECT REFERENCE NO. <i>R-2510A</i>	SHEET NO. <i>SITE 16</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>	



LEGEND

DENOTES FILL
IN WETLANDS

X-SECTION

SITE 16

STA 231 + 00 &

STA 233 + 50



NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.J.I (R-2510A)

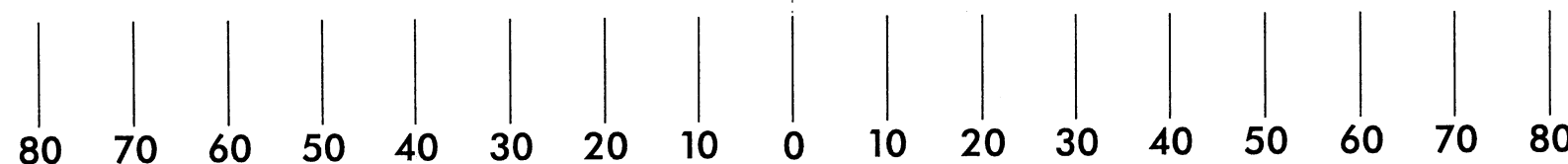
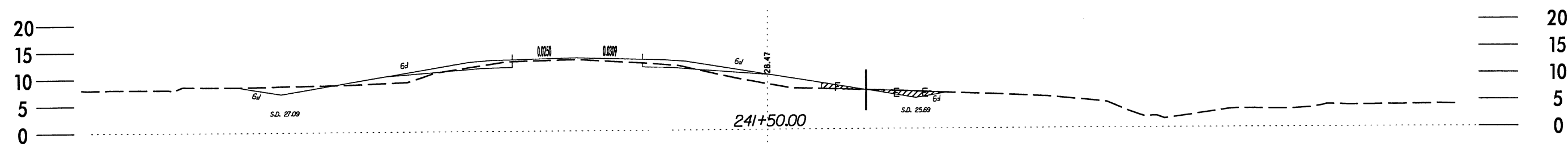
US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 20'

DATE: APR-05

SHEET 13 OF 14

PROJECT REFERENCE NO.		SHEET NO.	
R-2510A		SITE 17	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div style="border: 1px solid black; padding: 5px; text-align: center;"> PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small> </div>			



LEGEND

F DENOTES FILL

IN WETLANDS

E DENOTES EXCAVATION

IN WETLANDS

X-SECTION
SITE 17
STA 241 + 50



NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
 34440.11(R-2510A)

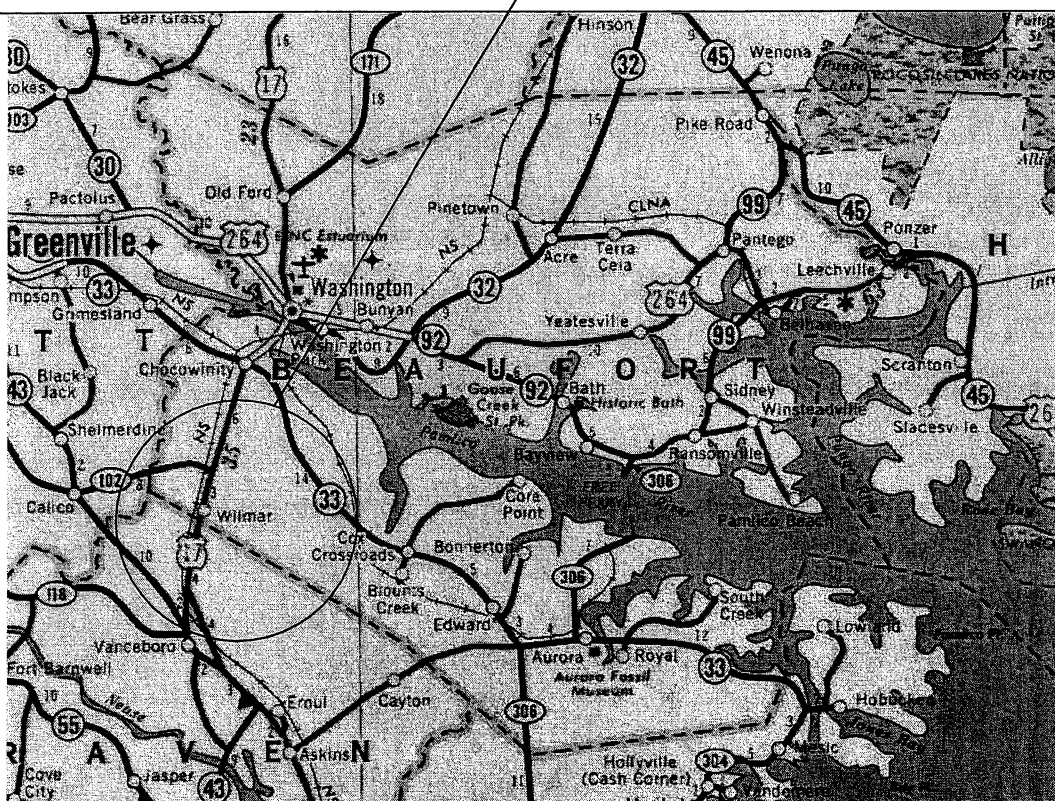
US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
 TO SR 1149 (PRICE ROAD)

HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 20'

DATE: APR-05

SHEET 14 OF 14

SITE



VICINITY MAP

NORTH CAROLINA
DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.1.1 (R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

NOT TO SCALE

DATE: AUG-04

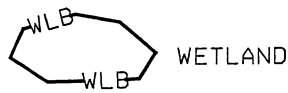
SHEET 1 OF 62

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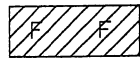
SHEET 2 OF 6

WETLAND LEGEND

—WLB— WETLAND BOUNDARY



WETLAND



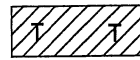
DENOTES FILL IN WETLAND



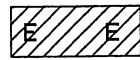
DENOTES FILL IN SURFACE WATER



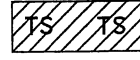
DENOTES FILL IN SURFACE WATER (POND)



DENOTES TEMPORARY FILL IN WETLAND



DENOTES EXCAVATION IN WETLAND



DENOTES TEMPORARY FILL IN SURFACE WATER



DENOTES MECHANIZED CLEARING

→ → FLOW DIRECTION

—TB— TOP OF BANK

—WE— EDGE OF WATER

—C— PROP. LIMIT OF CUT

—F— PROP. LIMIT OF FILL

▲ PROP. RIGHT OF WAY

—NG— NATURAL GROUND

—PL— PROPERTY LINE

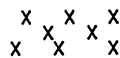
—TDE— TEMP. DRAINAGE EASEMENT

—PDE— PERMANENT DRAINAGE EASEMENT

—EAB— EXIST. ENDANGERED ANIMAL BOUNDARY

—EPB— EXIST. ENDANGERED PLANT BOUNDARY

—▽— WATER SURFACE

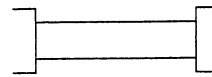


LIVE STAKES

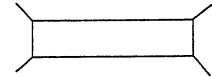


BOULDER

— — — CORE FIBER ROLLS



PROPOSED BRIDGE



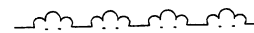
PROPOSED BOX CULVERT



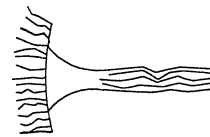
PROPOSED PIPE CULVERT
12"-48"
PIPES
(DASHED LINES DENOTE
EXISTING STRUCTURES)
54" PIPES
& ABOVE



SINGLE TREE



WOODS LINE



DRAINAGE INLET



ROOTWAD



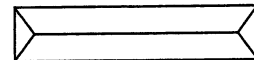
RIP RAP



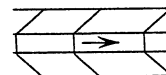
ADJACENT PROPERTY
OWNER OR PARCEL
NUMBER (IF AVAILABLE)



PREFORMED SCOUR HOLE



LEVEL SPREADER (LS)



DITCH /
GRASS SWALE



NORTH CAROLINA DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.II (R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

NOT TO SCALE

DATE: AUG-04

SHEET 3 OF 6

SUMMARY OF AFFECTED PROPERTY OWNERS WETLAND SITES

TRACT NO.	PROPERTY OWNER	ADDRESS	SITE NO.
(1)	JOHN JAY WALTON	2314 NC 33 CHOCOWINITY NC, 27817	1
(4)	REBECCA S. DAY	QUARTERDECK #13 RIVERBEND NEW BERN NC, 28562	1
(5)	JAMES A. POLLARD, et ux	1255 WARES CHAPEL LN. WASHINGTON NC, 27889	2
(12)	TERRY D. ANDREWS	8059 US HWY 17 S CHOCOWINITY NC, 27817	3
(13)	J.M. HILL, et ux	3509 TRENT RD. NEW BERN NC, 28560	3,4
(28)	D.H. BRIGHT	?	6
(32)	MAUDE ELIZABETH WHITEHURST	6851 US HWY 17 S CHOCOWINITY NC, 27817	8
(48)	J.J. COOK, et ux	236 E. MAIN ST. WASHINGTON NC, 27889	10
(60)	MICHAEL MIZELL, et ux	6219 US HWY 17 S CHOCOWINITY NC, 27817	12
(62)	BOBBY GENE WEATHINGTON	PO BOX 921 CHOCOWINITY NC, 27817	12
(70)	DANNY SMITH	PO BOX 623 CHOCOWINITY NC, 27817	13
(68)	ROY MITCHELL CLARK, et ux	7450 PITT ST. GRIMESLAND NC, 27837	13
(71)	BETSY ROSE HADDOCK	6025 US HWY 17 S CHOCOWINITY NC, 27817	13

NORTH CAROLINA DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.IJ (R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

NOT TO SCALE

DATE: AUG-04

SHEET 4 OF 6



SUMMARY OF AFFECTED PROPERTY OWNERS WETLAND SITES

TRACT NO.	PROPERTY OWNER	ADDRESS	SITE NO.
(69)	CARRIE M. TURNER, et ux	1014 VAN NORDEN ST. WASHINGTON NC, 27889	13
(97)	SALLIE BLOUNT TOLER	5613 US HWY 17 S CHOCOWINITY NC, 27817	14
(107)	JASON C. SHEPPARD	PO BOX 1902 CHOCOWINITY NC, 27889	15
(110)	SCOTT ROBERT BATEMAN, et ux	4829 US HWY 17 S CHOCOWINITY NC, 27817	15,16
(109)	MARVIN J. HARRIS FAMILY TRUST	PO BOX 1747 WASHINGTON NC, 27889	15
(108)	A. FRANK RESPESS	4918 US HWY 17 S CHOCOWINITY NC, 27817	15
(118)	RICHARD D. PEED, JR., et ux	410 TRANTERS CREEK DR. WASHINGTON NC, 27889	17
	NORFOLK SOUTHERN RAILROAD		3,5,7,9,11
(98)	C. DOUGLAS BRANCH, et ux	5614 US HWY 17 S CHOCOWINITY NC, 27817	14



NORTH CAROLINA DEPARTMENT OF HIGHWAYS

BEAUFORT COUNTY
34440.11 (R-2510A)

US 17 FROM SOUTH OF SR 1127 (POSSUM TRACK ROAD)
TO SR 1149 (PRICE ROAD)

NOT TO SCALE

DATE: AUG-04

SHEET 5 OF 6

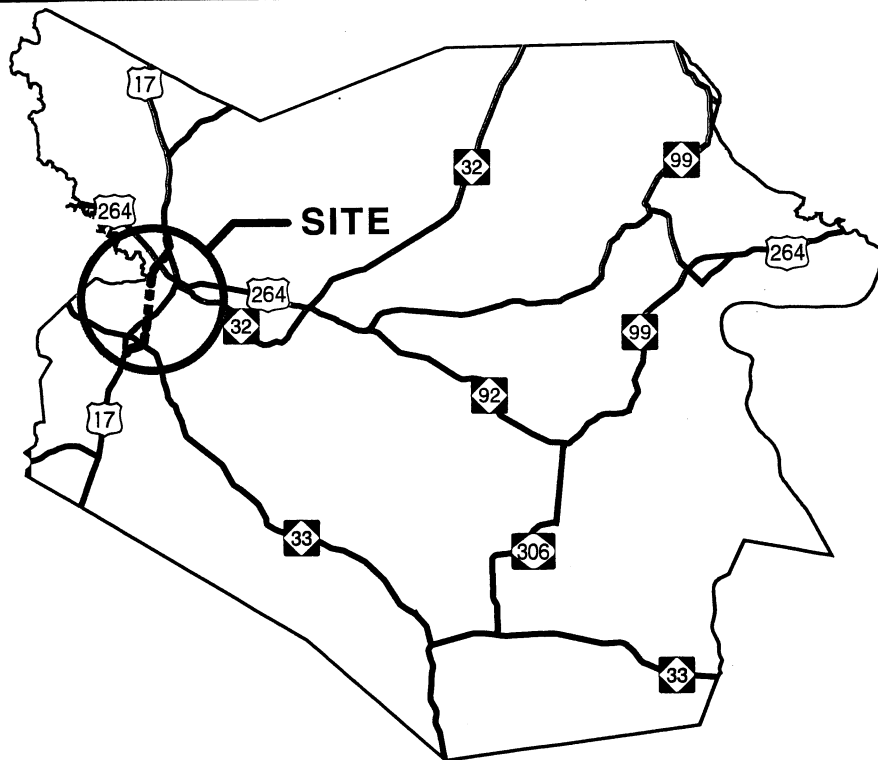
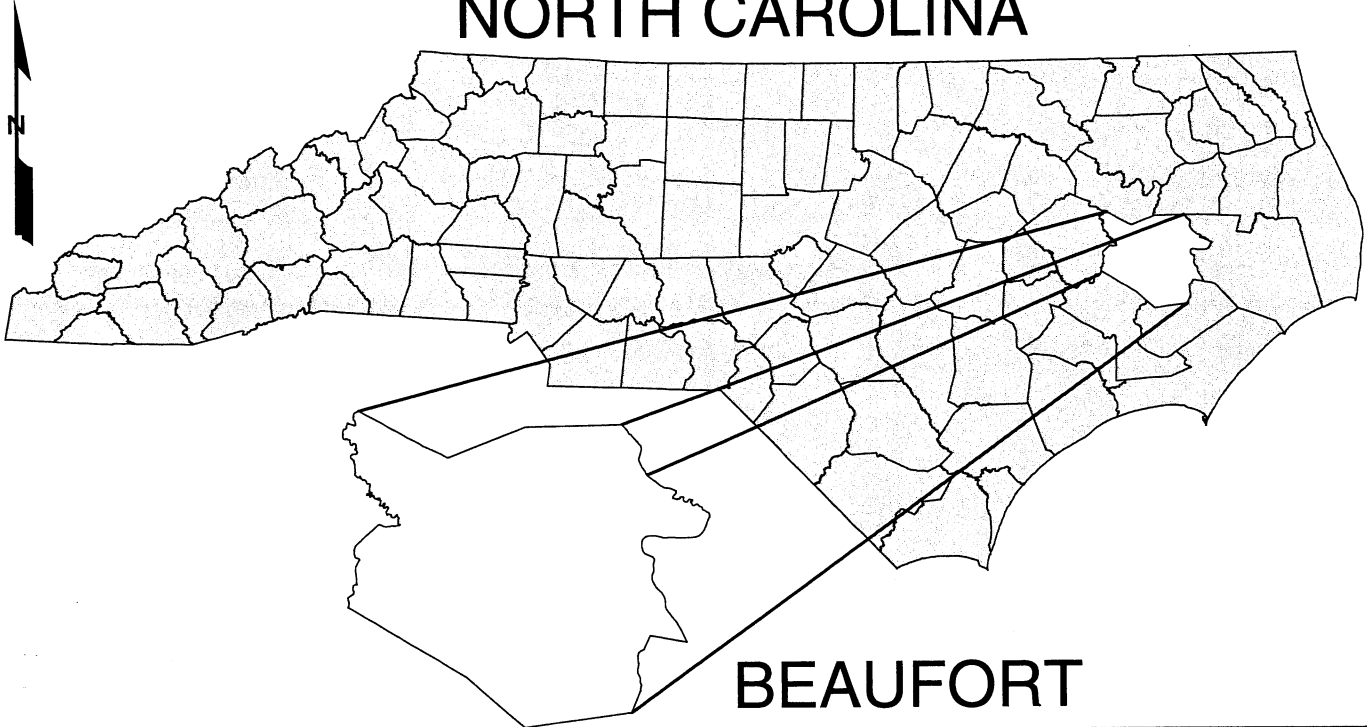
WETLAND PERMIT IMPACT SUMMARY

TOTALS:	2.8080	0.0000	0.8171	0.7204	0.0670	0.0000	0.0506	478	0
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SHEET 6 OF 6

Form Revised 3/22/01

NORTH CAROLINA

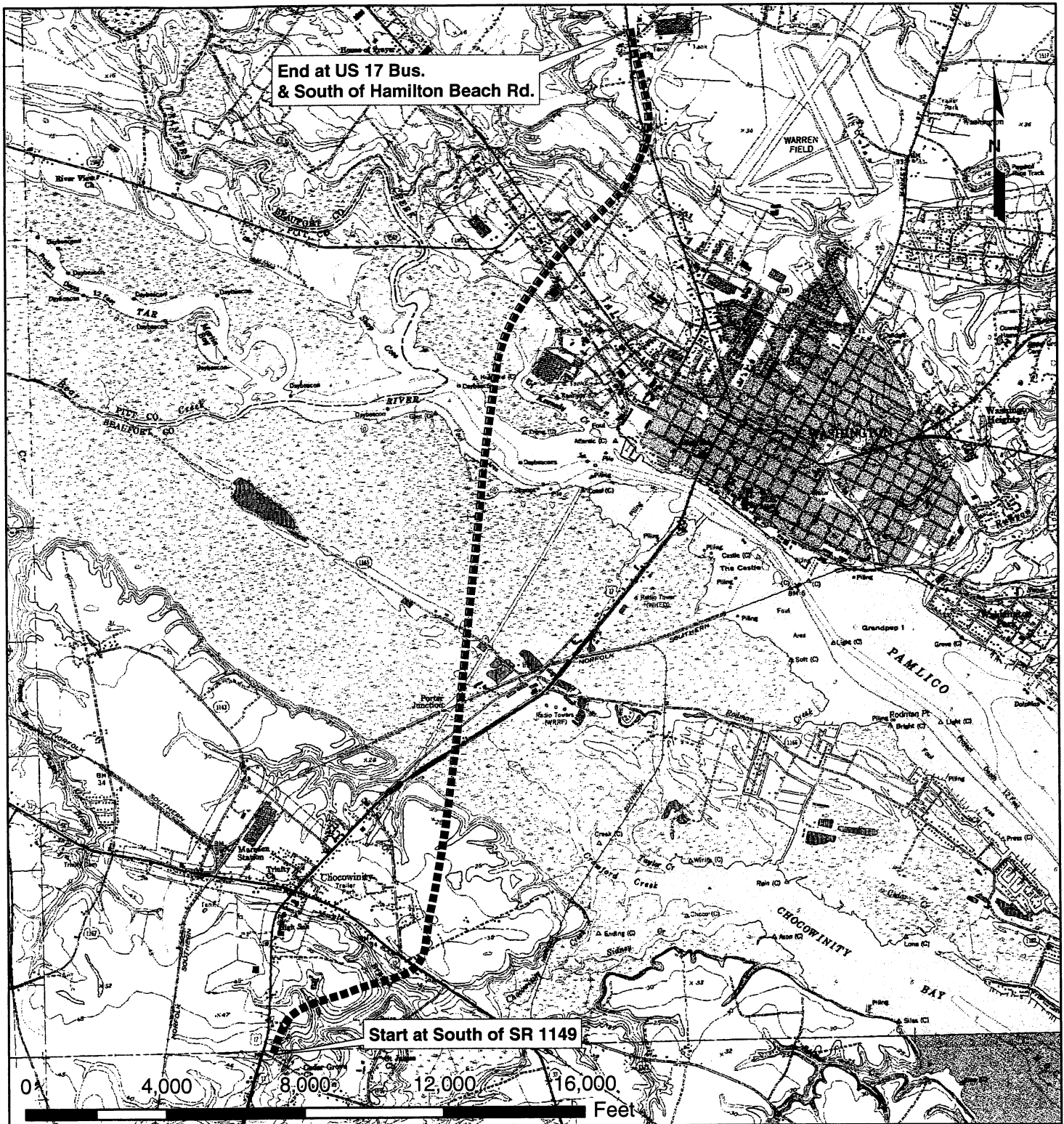


VICINITY MAPS

NCDOT

DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510B)
US 17 BYPASS

3/11/05



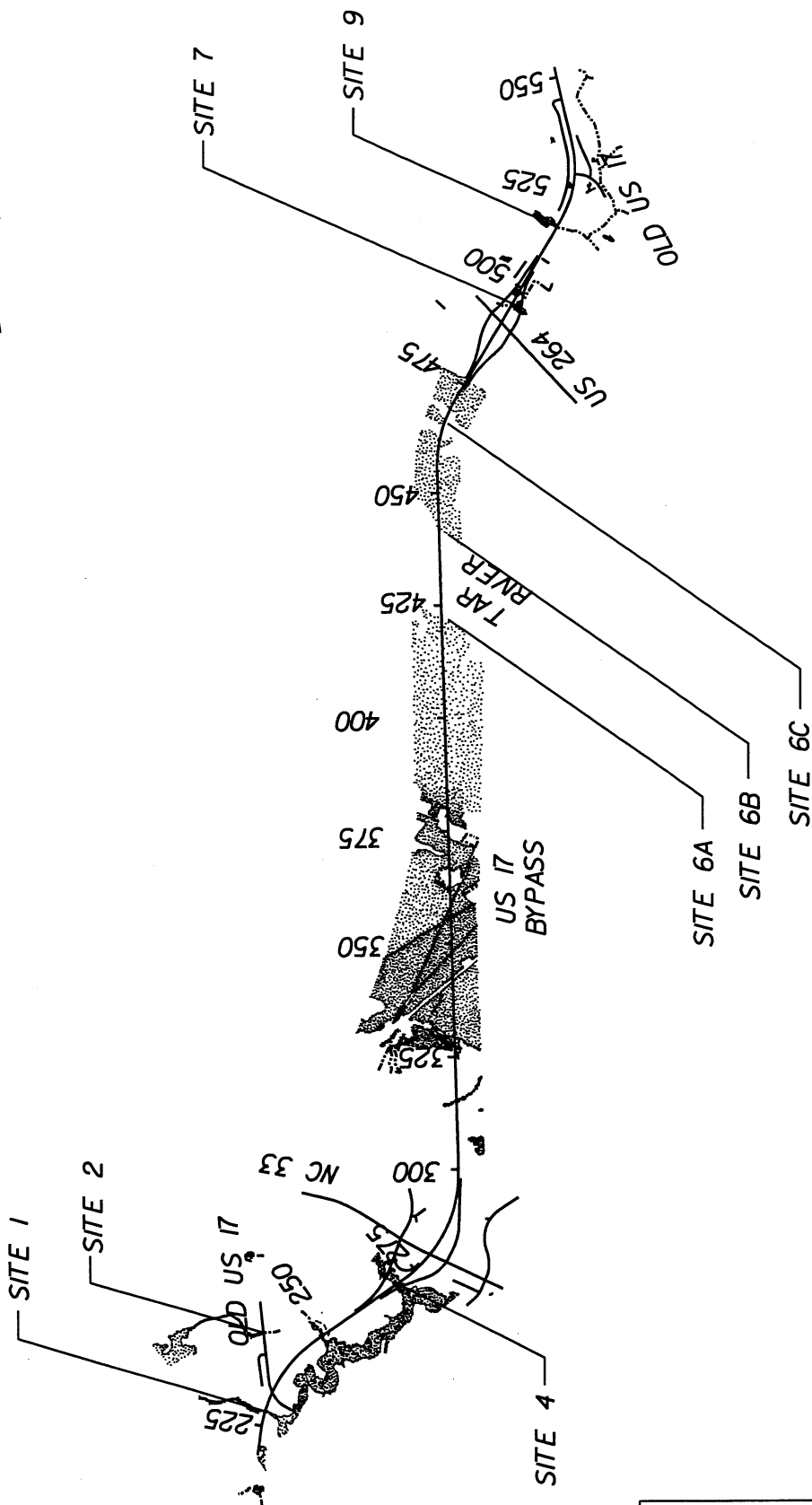
1 inch equals 4,000 feet

LOCATION

NCDOT

**DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510B)
US 17 BYPASS**

3/11/05



SITE MAP

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
BEAUFORT COUNTY

PROJECT 34440.1.1 (R-2510B)

US 17 BYPASS

03/11/05

PROP. NO.	PROPERTY OWNER NAME	PROP. OWNER MAILING ADDRESS
10 11 12 13 21 25 26 30 31	PEED, RICHARD D JR & KRISTEN M WINFIELD, WILLIAM BERNARD MCCROY, GEORGE MAYHEW & CIRICLIO, RONNIE M & RANDY J SINGLETON B E JR & MARSHALL T RHEM, J DAN SR GODFREY, OTIS A BONDY, EMILY WINFIELD WINFIELD, ZELMA M	410 TRANTERS CREEK DR, WASHINGTON, NC 27889 527 W MAIN ST, WASHINGTON, NC 27889 NA 57 HILLANDALE AVE, WHITE PLAINS, NY 10603 920 W 3RD ST, WASHINGTON, NC 27889 NA 810 RIVER RD, WASHINGTON, NC 27889 527 W MAIN ST, WASHINGTON, NC 27889 627 W MAIN ST, WASHINGTON, NC 27889
<div> <div>N.C. DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS</div> <div> BEAUFORT COUNTY PROJECT: 34440.1.1 (R-2510B) 1/7/2005 </div> </div>		

BUFFER IMPACTS SUMMARY

[illegible]

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 344401.1 (R-2510B)

3/22/2005

BUFFER IMPACTS SUMMARY

[illegible]

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510B)

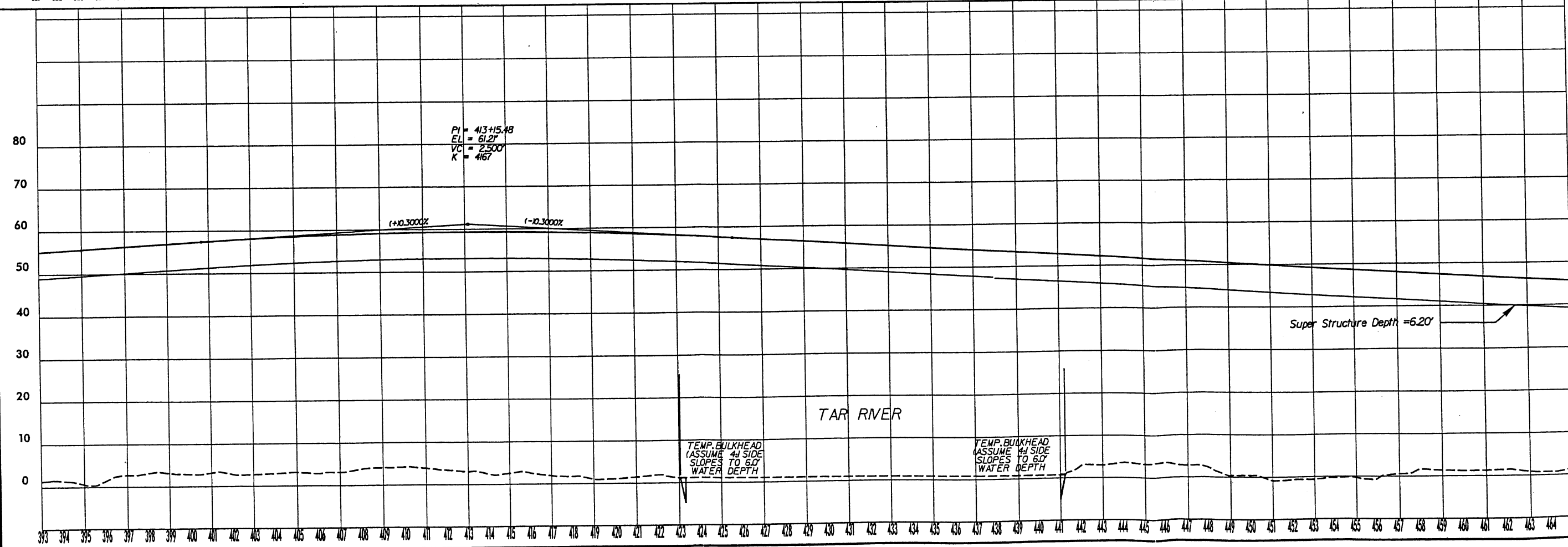
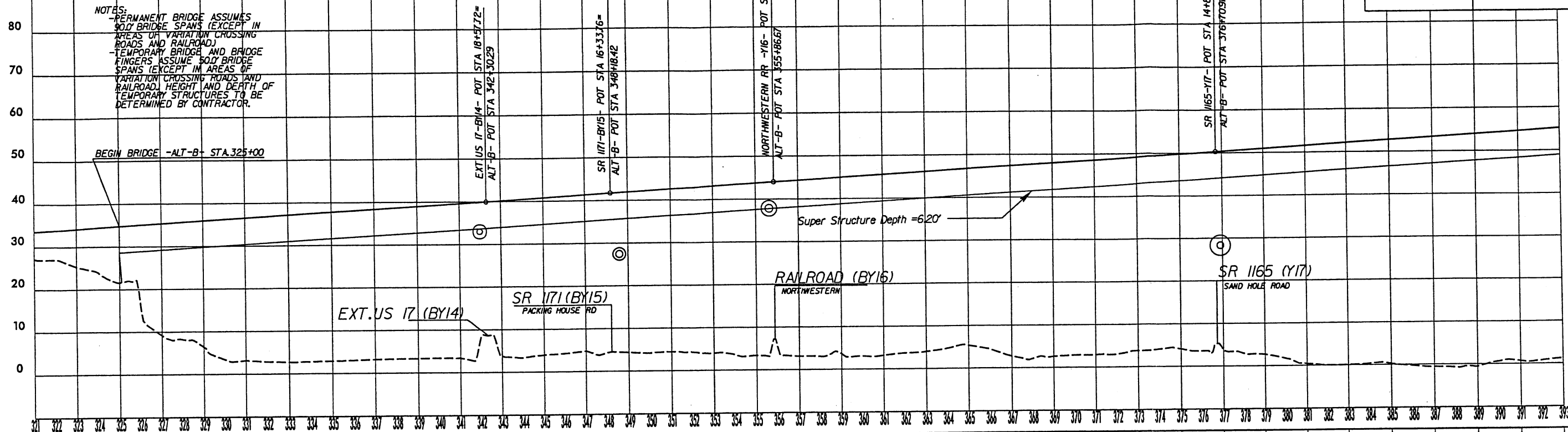
3/11/2005

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	PFL 1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/E ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L- PROFILE

NOTES:
- PERMANENT BRIDGE ASSUMES 90.0' BRIDGE SPANS (EXCEPT IN AREAS OF VARIATION CROSSING ROADS AND RAILROAD)
- TEMPORARY BRIDGE AND BRIDGE FINGERS ASSUME 50.0' BRIDGE SPANS (EXCEPT IN AREAS OF VARIATION CROSSING ROADS AND RAILROAD) HEIGHT AND DEPTH OF TEMPORARY STRUCTURES TO BE DETERMINED BY CONTRACTOR.



REVISIONS

8/17/99

01/07/2005 Proj\p00000000.pfl
m0000

8/17/99

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	PFL 2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/V ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L- PROFILE

NOTES:
-PERMANENT BRIDGE ASSUMES 50.0' BRIDGE SPANS (EXCEPT IN AREAS OF VARIATION CROSSING ROADS AND RAILROADS)
-TEMPORARY BRIDGE AND BRIDGE FINGERS ASSUME 50.0' BRIDGE SPANS (EXCEPT IN AREAS OF VARIATION CROSSING ROADS AND RAILROADS) HEIGHT AND DEPTH OF TEMPORARY STRUCTURES TO BE DETERMINED BY CONTRACTOR.

PI = 489+00.00
EL = 38.46'
VC = 500'
K = 833

US 264-BY19- POT STA 24+51.54=
-ALT-B- POT STA 49+00.36

PI = 497+00.00
EL = 40.86'
VC = 600'
K = 857

-BY19APD- TS STA 10+00 (47 RT)=
-ALT-B- POT STA 504+39.43
15th STREET -BY20- POT STA 29+21.19=
-ALT-B- POT STA 505+34.98

-BY19BPA- POT STA 10+00 (47 LT)=
-ALT-B- POT STA 508+00.00

PI = 524+00.00
EL = 30.08'
VC = 400'
K = 577

US124G- POT STA 10+00=
-ALT-B- POT STA 528+00.00

(-10.3000%)

(+10.3000%)

(-10.4000%)

(-10.4000%)

(+10.3000%)

(+10.3000%)

US264 (BY19)

Super Structure Depth = 7.218'

15th STREET
(Y-20)

Super Structure Depth = 7.218'

REVISIONS

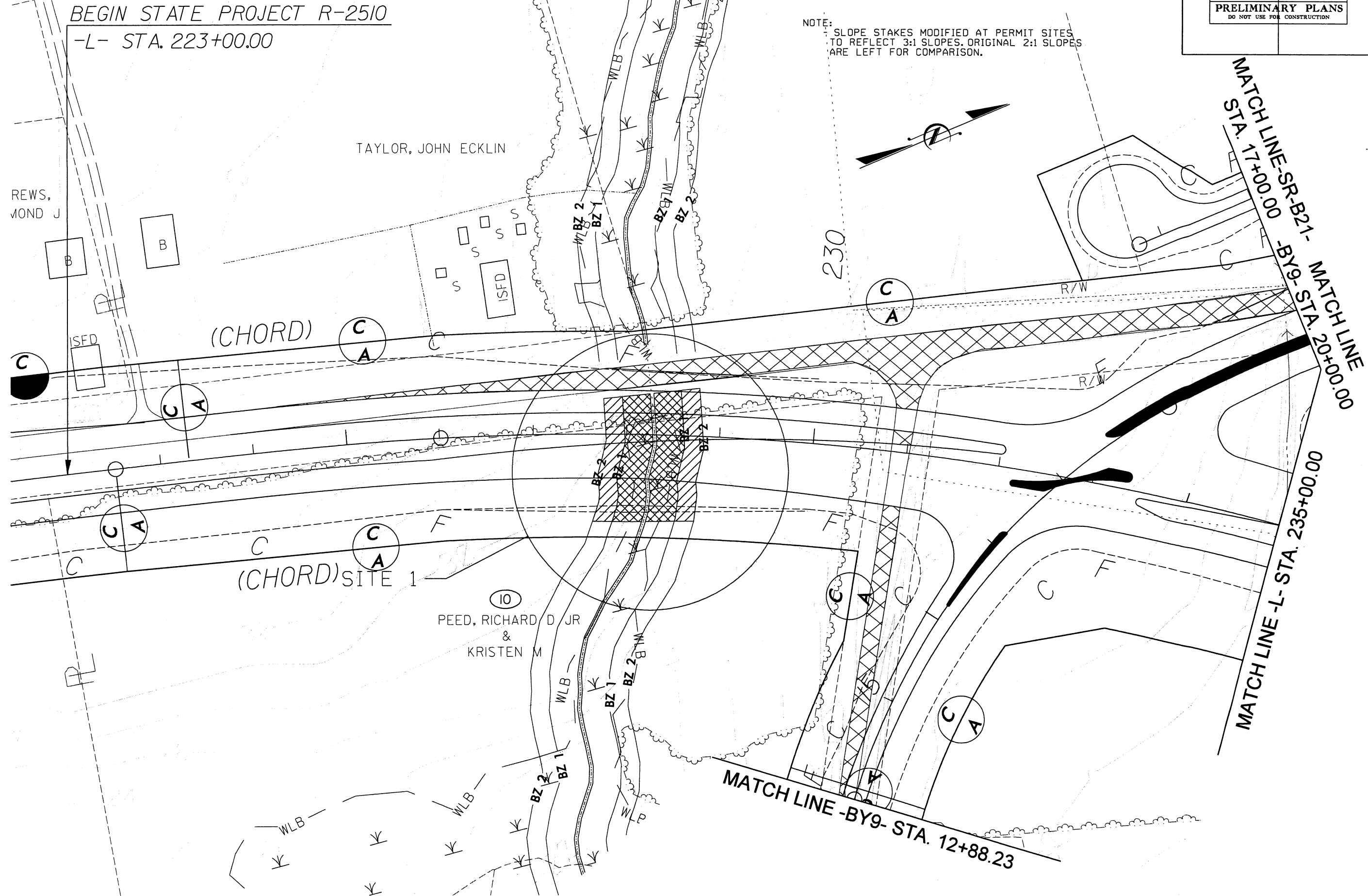
01/07/2005
c:\Roadway\Proj\permit.pfl
moad

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

NOTE: SLOPE STAKES MODIFIED AT PERMIT SITES TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES ARE LEFT FOR COMPARISON.



8/17/99

REVISIONS

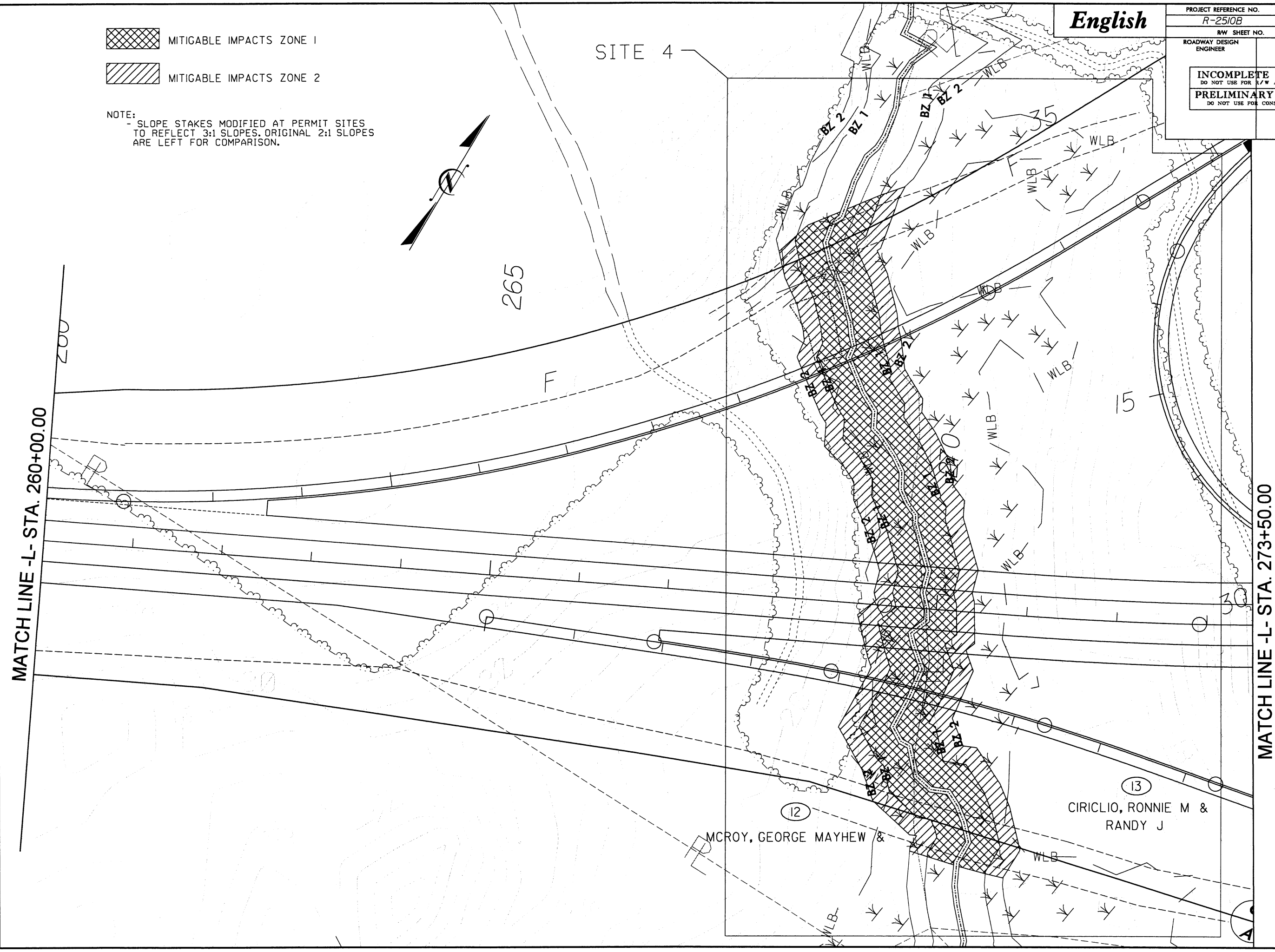
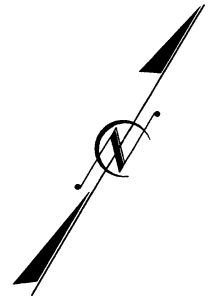
03/14/2005
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book

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.



REVISIONS

03/14/2005
m:\hydra\autics\buffers\vr2510.pst_07.dgn
msh

8/17/99

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

MATCH LINE -L- STA. 416+50.00


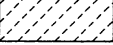
MATCH LINE -L- STA. 429+50.00

(21)
SINGLETON B E JR & MARSHALL T

(21)
SINGLETON B E JR & MARSHALL T

TAR RIVER

SITE 6

-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

REVISIONS

03/14/2005
c:\hdd\out\cs\buffers\vr-2510_psh_19.dgn
mccok

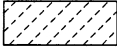
8/17/99

REVISIONS

SITE 6



ALLOWABLE IMPACTS ZONE 1



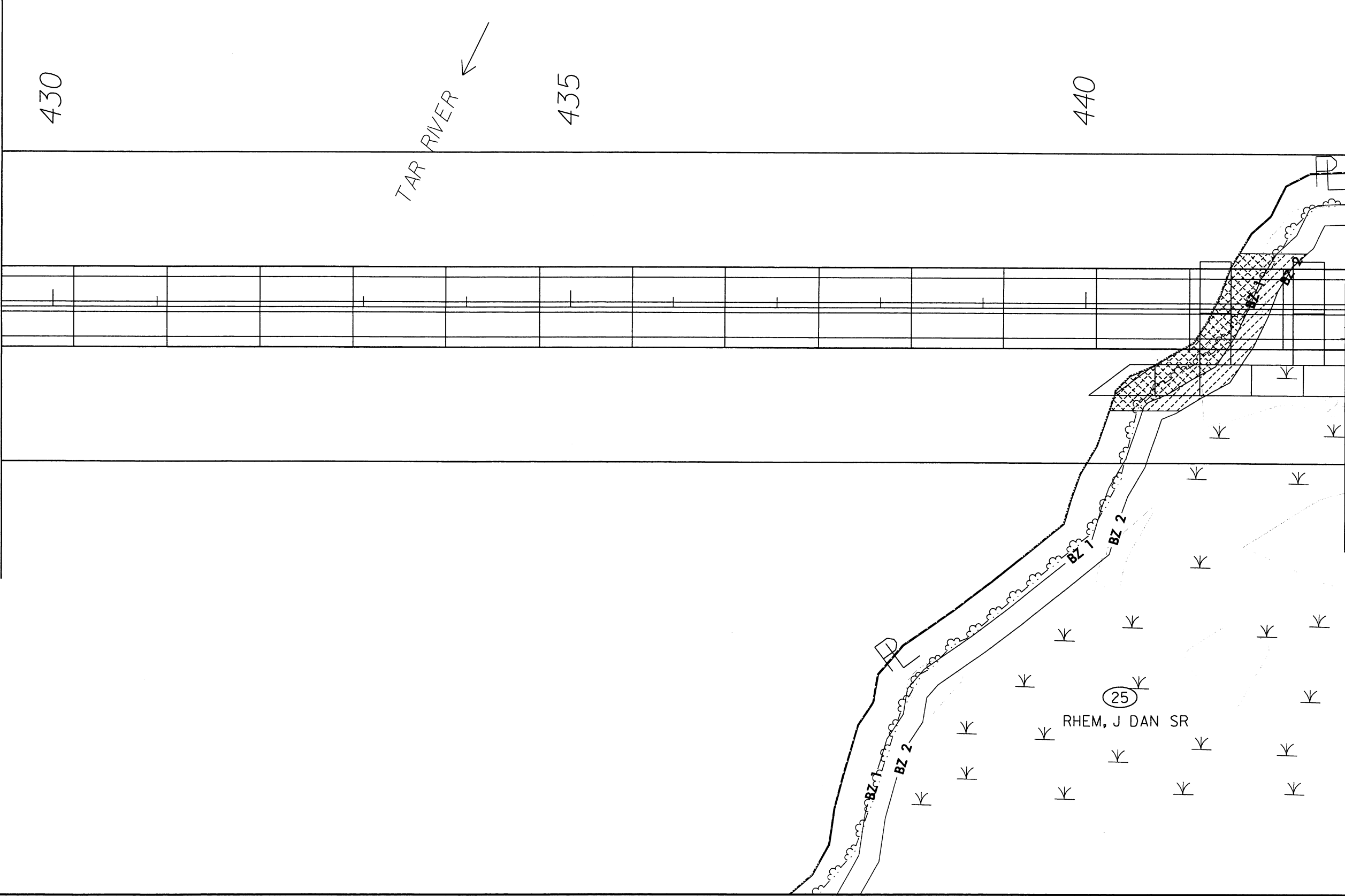
ALLOWABLE IMPACTS ZONE 2



English

PROJECT REFERENCE NO. R-2510B	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

MATCH LINE -L- STA. 429+50.00

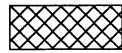
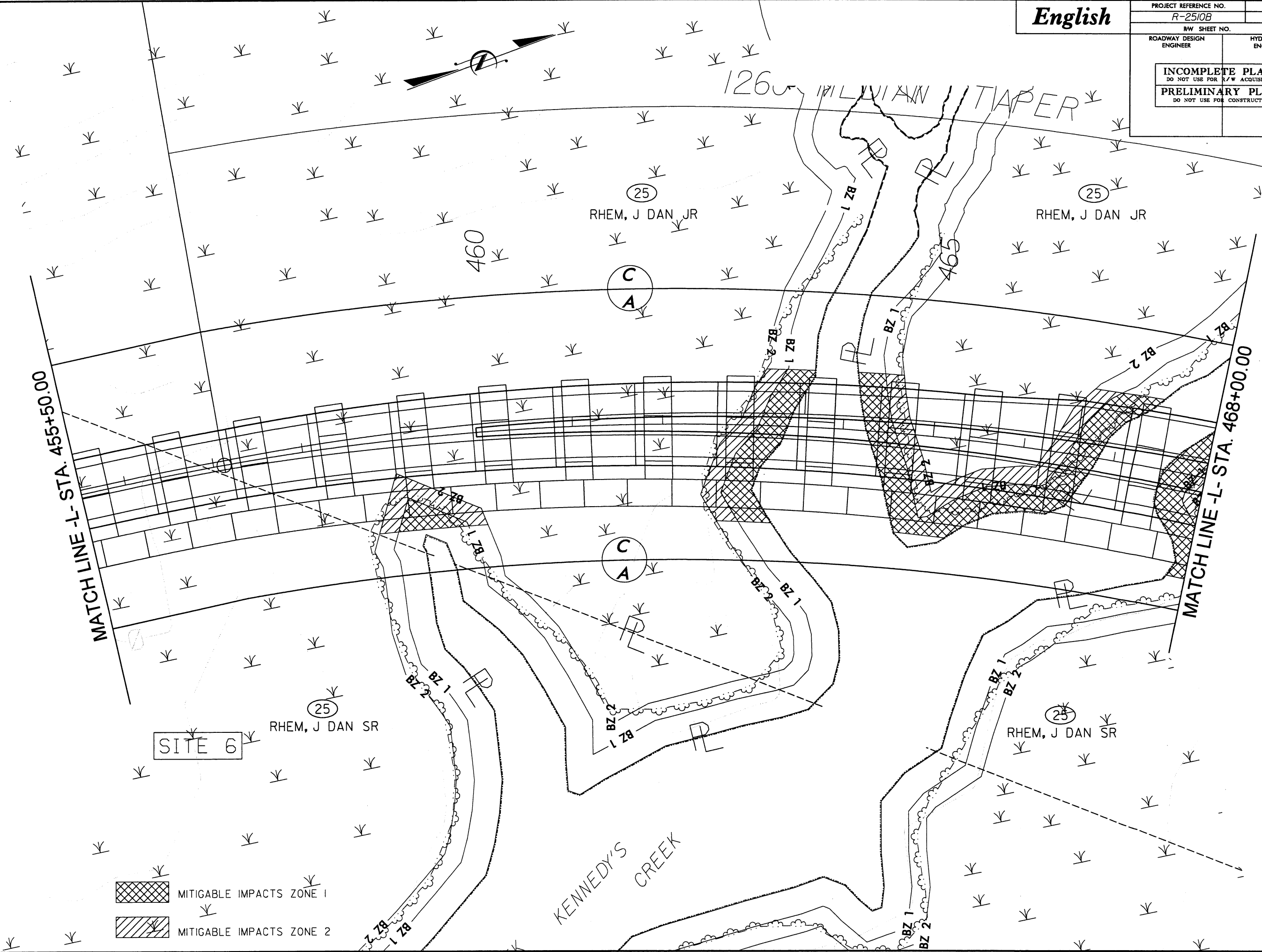


MATCH LINE -L- STA. 442+50.00

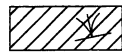
REVISIONS

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MITIGABLE IMPACTS ZONE 1



MITIGABLE IMPACTS ZONE 2

**HYDRAULICS
ENGINEER**

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

SITE, 6

KNOTT, RUFUS H &

480

(CHORD)

MATCH LINE -L- STA. 468+00.00

MATCH LINE - L- STA. 480+50.00

RHEM, J DAN SR

470

475

(CHORD)

(CHORD)

PA

SILOS

REVISIONS

03/14/2005
r:\hydraulics\buffers\r2510_psh-23.dgn
mcook

English

PROJECT REFERENCE NO.	SHEET NO.
R-25/0B	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

MATCH LINE -L- STA. 493+50.00

MATCH LINE -L- STA. 506+50.00

MITIGABLE IMPACTS ZONE 1
MITIGABLE IMPACTS ZONE 2

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.

MANNING
RUSSELL
EDWARD

UNKNOWN

D

SITE 7

26
GODFREY, OTIS A

LILLEY,
DALTON G &

ISBK
BUS

PA

PA

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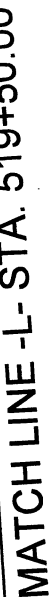
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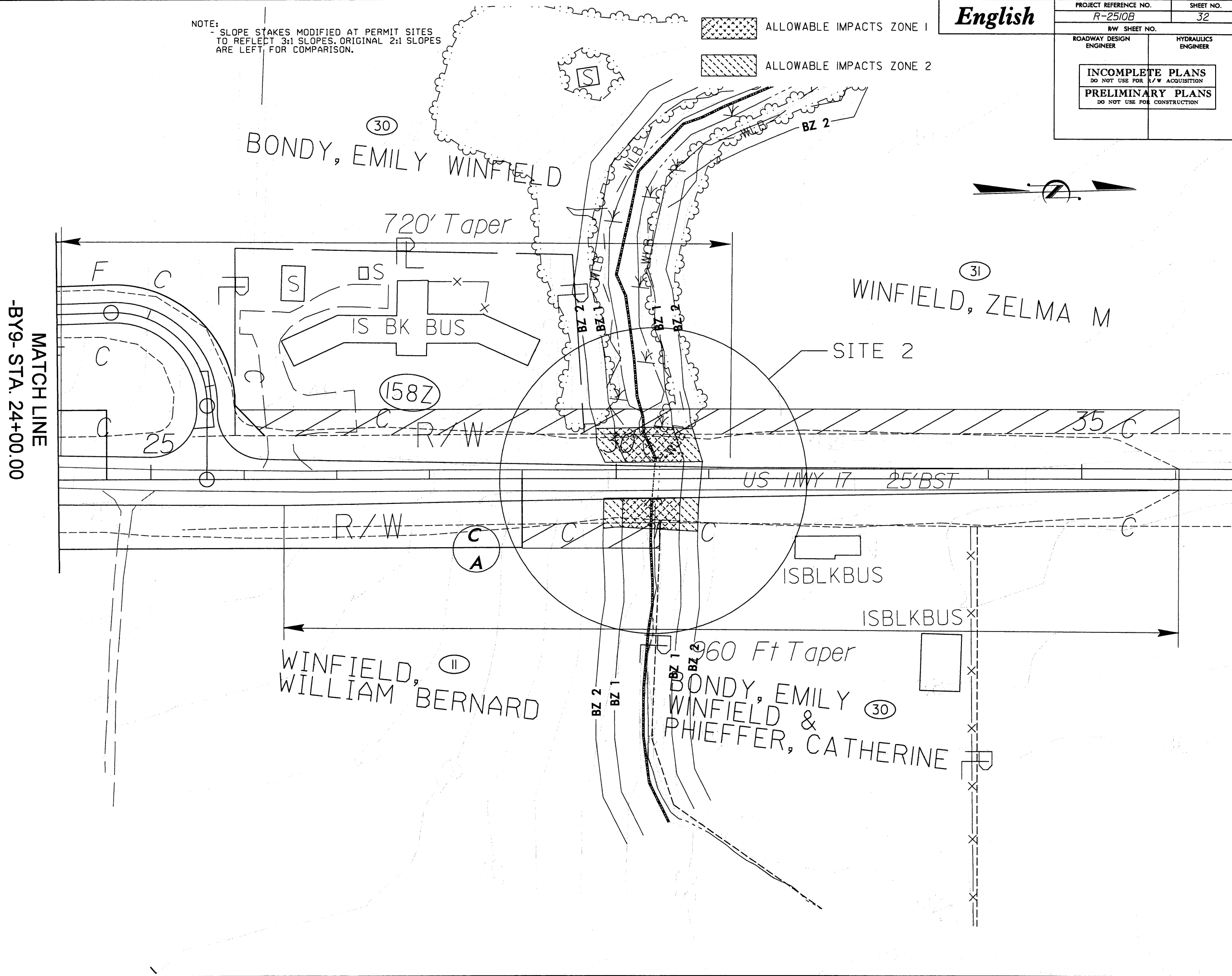
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 MITIGABLE IMPACTS ZONE 203/14/2005
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mcook

 ALLOWABLE IMPACTS ZONE 2

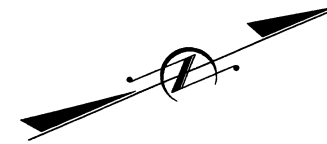
PROJECT REFERENCE NO.	SHEET NO.
R-2510B	32
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>INCOMPLETE PLANS</p> <p>DO NOT USE FOR R/W ACQUISITION</p> </div>	
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>PRELIMINARY PLANS</p> <p>DO NOT USE FOR CONSTRUCTION</p> </div>	



 MITIGABLE IMPACTS ZONE 1

 MITIGABLE IMPACTS ZONE 2

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.



MATCH LINE -BY9- STA. 12+88.23

TAYLOR, JOHN ECKLIN

REWS,
MOND J

(CHORD)

(CHORD) SITE 1

PEED, RICHARD D JR
&
KRISTEN M

REVISIONS

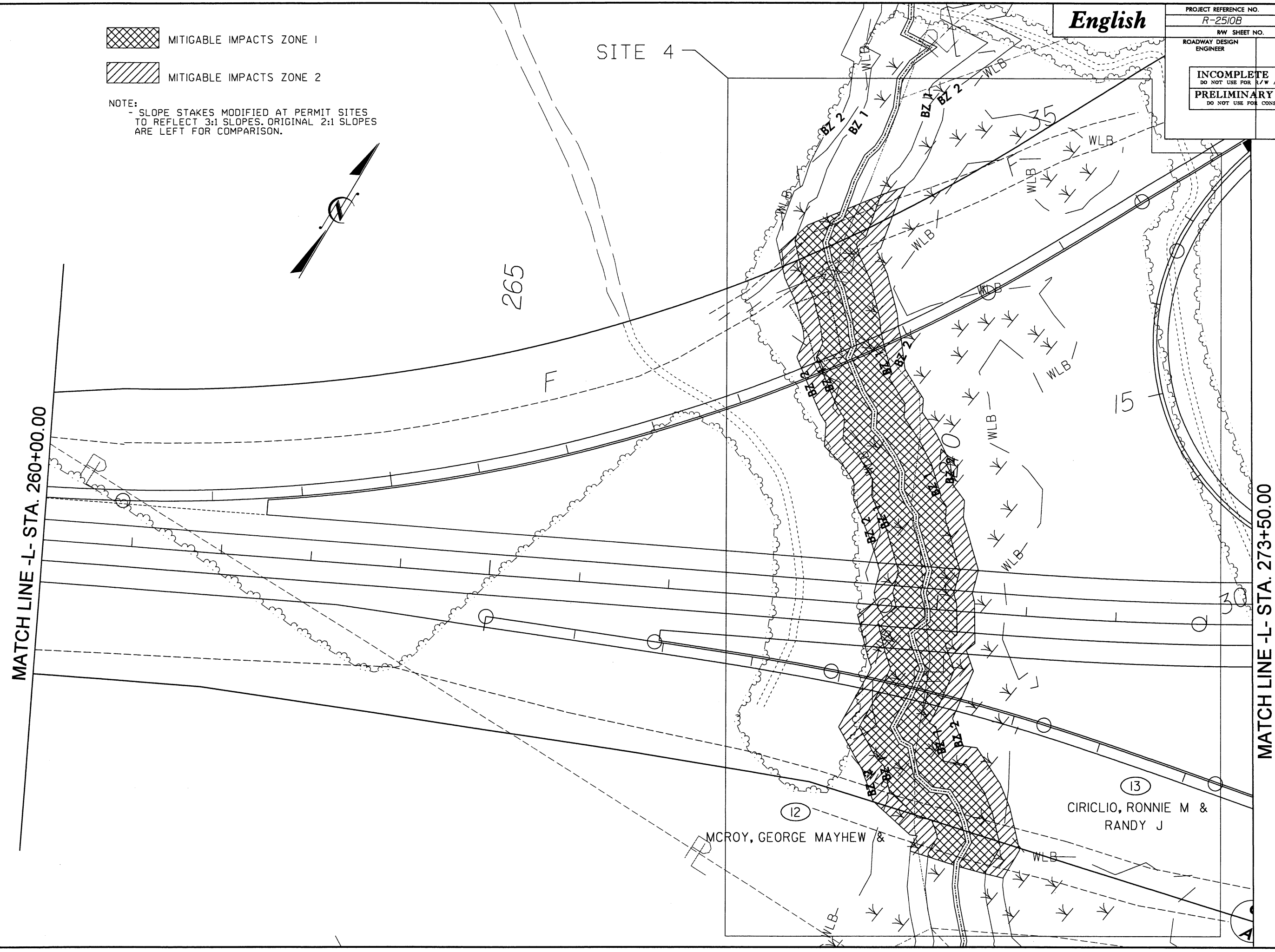
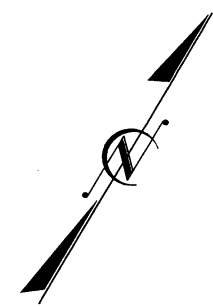
03/14/2005
r:\hydraulics\buffers\nocontours\r2510_psh_04.dgn

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES ARE LEFT FOR COMPARISON.




MATCH LINE -L- STA. 260+00.00


MATCH LINE -L- STA. 273+50.00



REVISIONS

MATCH LINE -L- STA. 429+50.00



SITE 6

 ALLOWABLE IMPACTS ZONE 1

 ALLOWABLE IMPACTS ZONE 2

SINGLETON B E JR & MARSHALL T

SINGLETON B E JR & MARSHALL T

BZ 2
BZ 1

425

BZ 2
BZ 1

BZ 1

BZ 2
BZ 1

82 1-

BZ 2
BZ

2-
BZ

REVISIONS

8/17/99

03/14/2005
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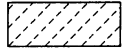
English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SITE 6



ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2



MATCH LINE -L- STA. 429+50.00

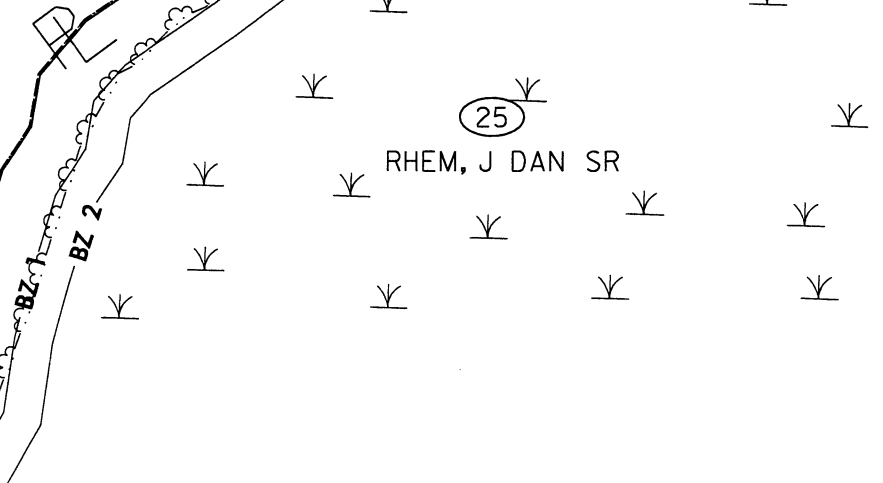
430

TAR RIVER

435

440

MATCH LINE -L- STA. 442+50.00



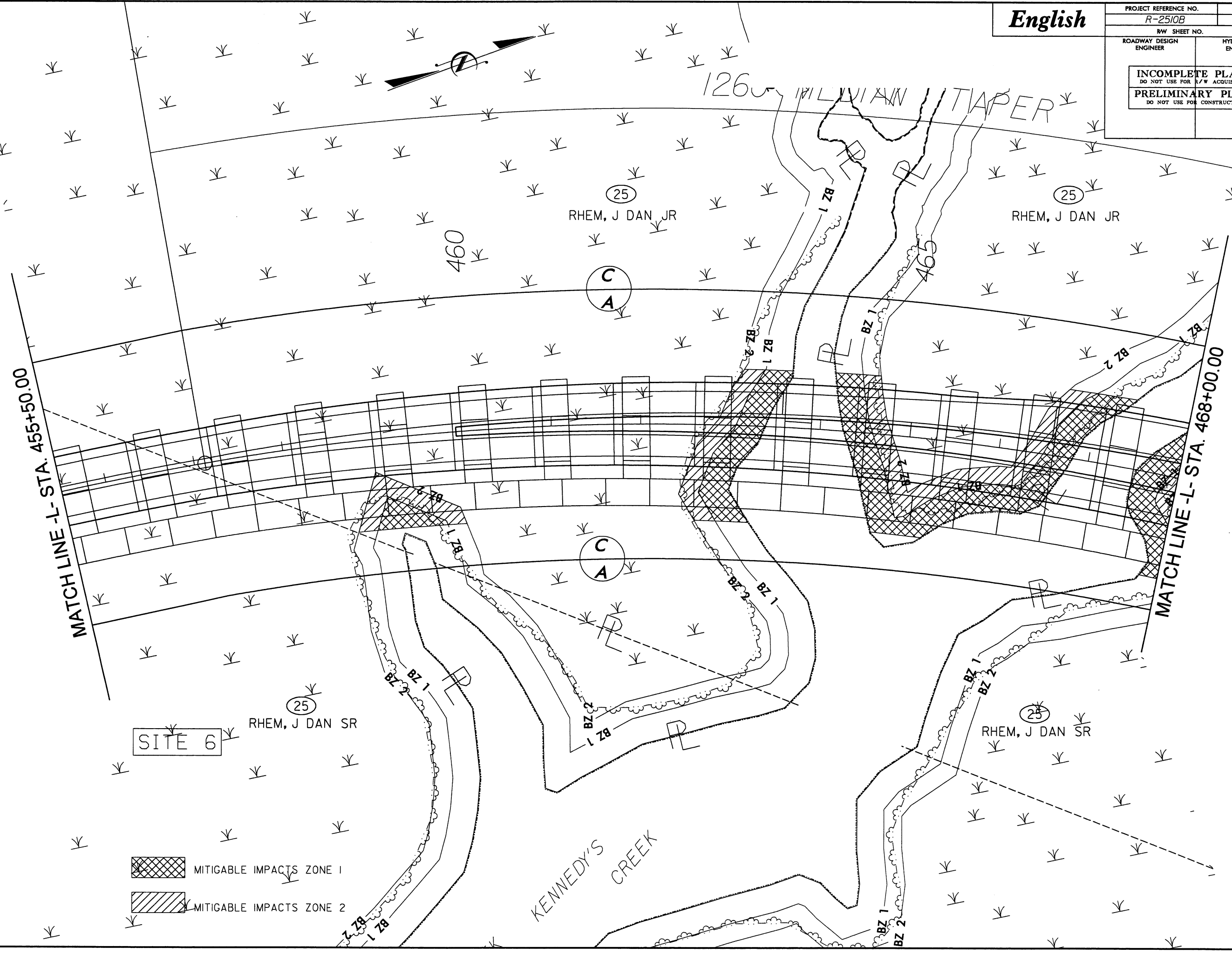
REVISIONS

03/14/2005
C:\Users\mccoy\Documents\2510\psh.20.dgn

8/17/99

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



REVISIONS

03/14/2005
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8/17/99

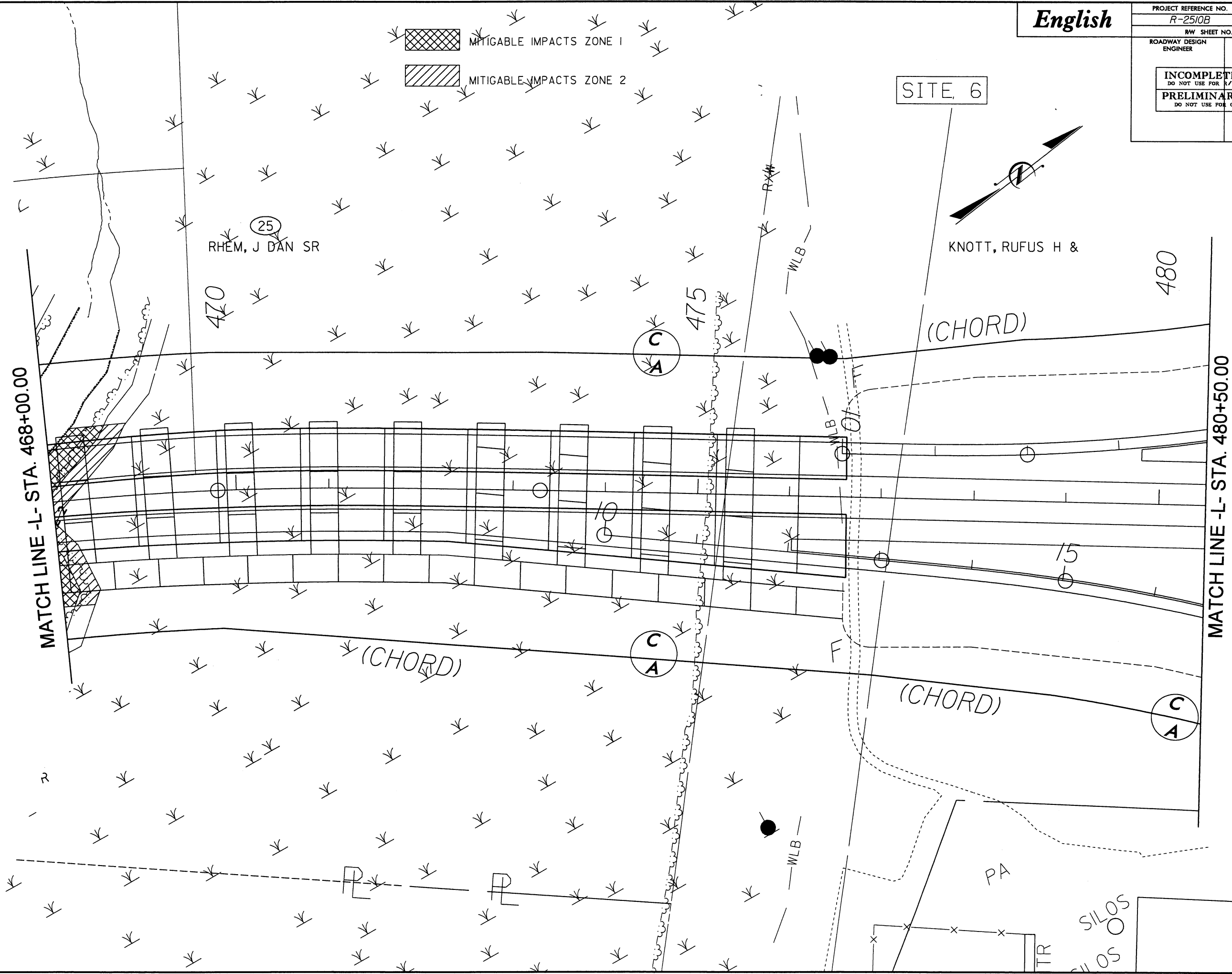
English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

03/14/2005
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mccook

REVISIONS



MATCH LINE -L- STA. 493+50.00

MATCH LINE -L- STA. 506+50.00

MANNING
RUSSELL
EDWARD

UNKNOWN

D

ISBK
BUS

SITE 7

LILLEY,
DALTON G &

GODFREY, OTIS A

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.

 MITIGABLE IMPACTS ZONE I MITIGABLE IMPACTS ZONE 2

REVISIONS

03/14/2005
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mcook

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	26
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.

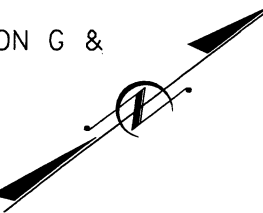
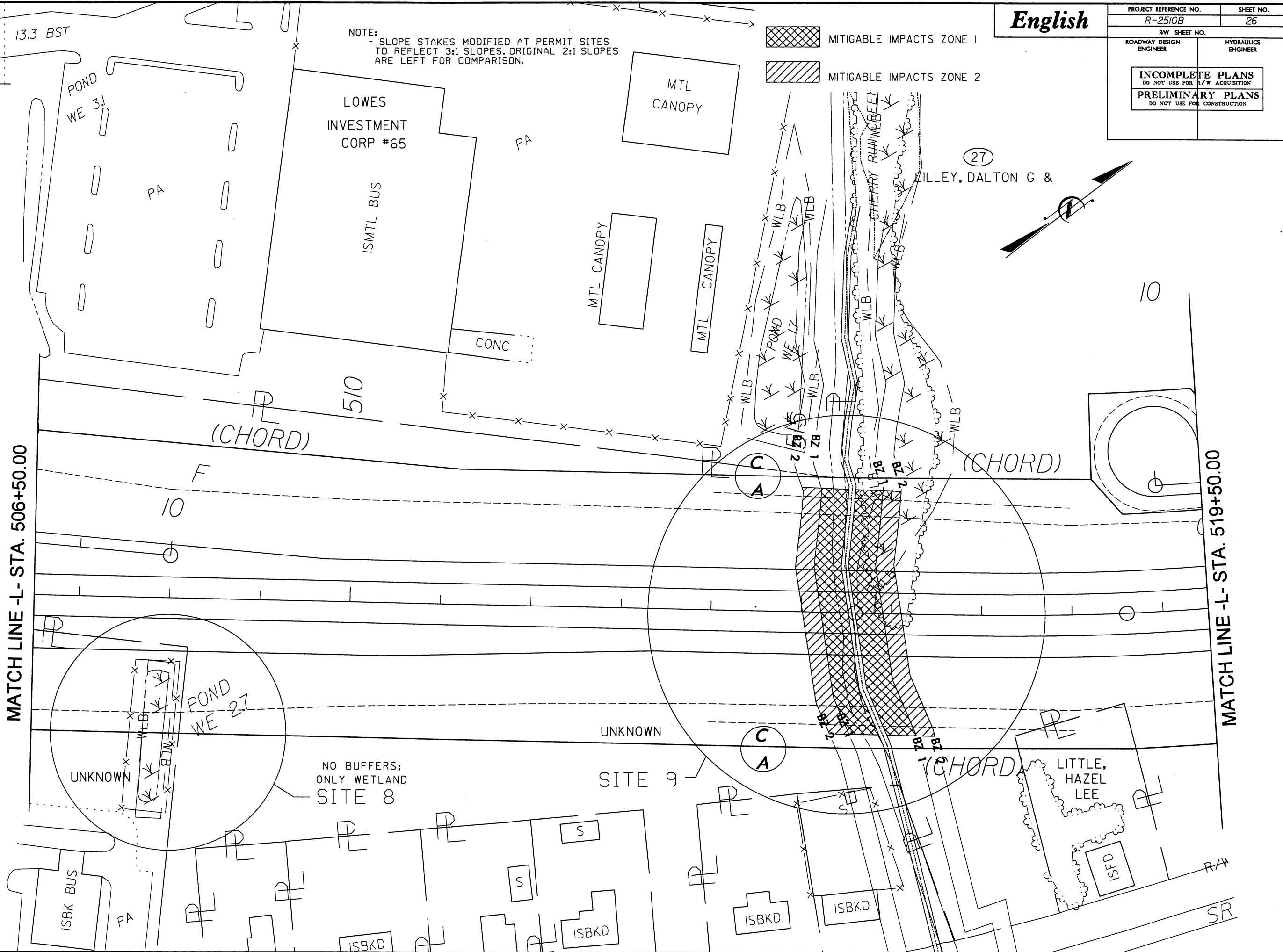
MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

(27)
LILLEY, DALTON G &

MATCH LINE -L- STA. 506+50.00

MATCH LINE -L- STA. 519+50.00



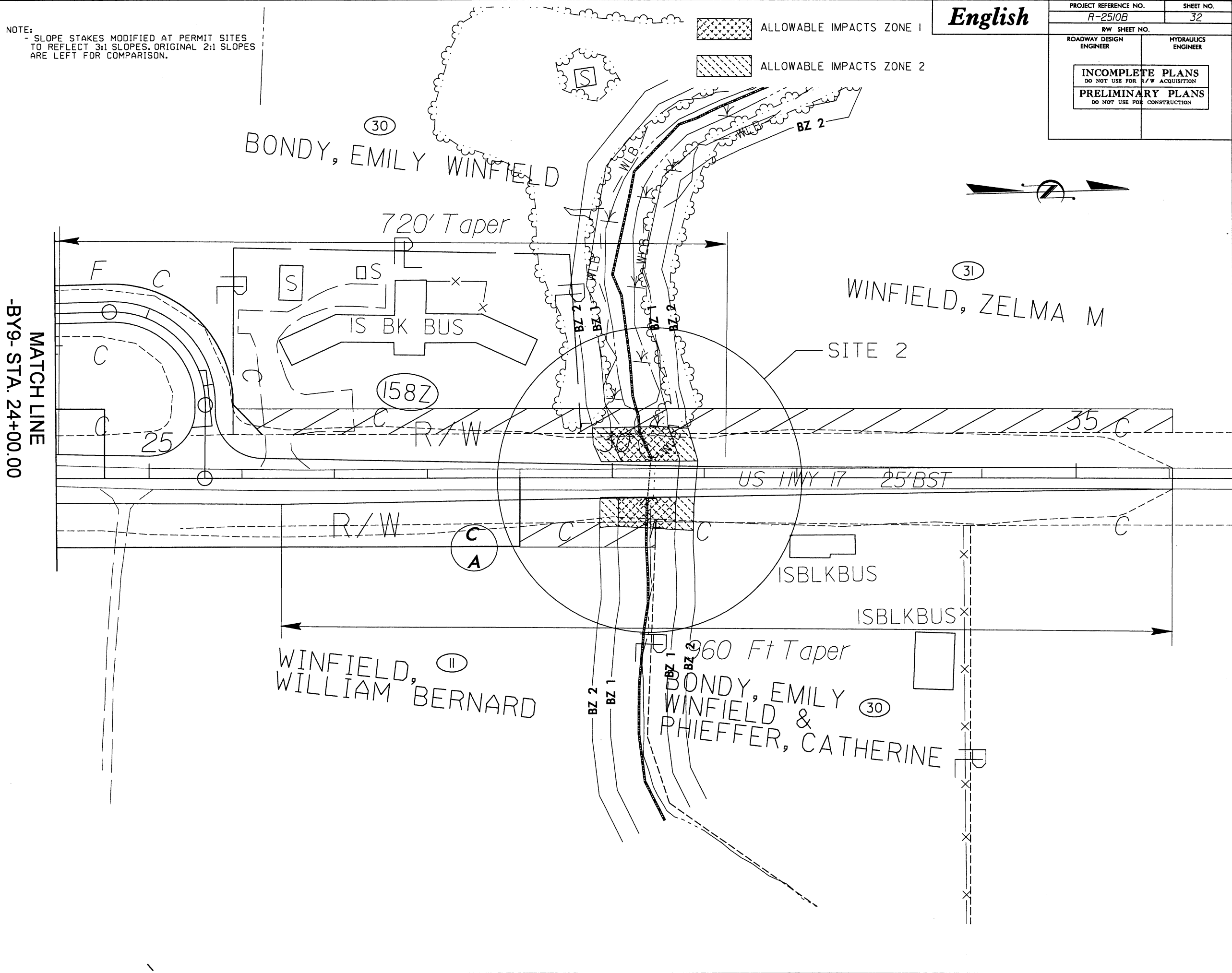
REVISIONS

8/17/99
03/14/2005
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<i>English</i>	PROJECT REFERENCE NO.	SHEET NO.
	R-2510B	32
	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

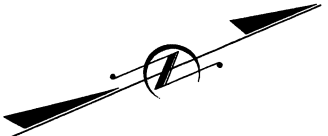
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



PROJECT REFERENCE NO.	SHEET NO.
R-2510B	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

- FF F DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- SSS DENOTES FILL IN SURFACE WATER

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES ARE LEFT FOR COMPARISON.



BEGIN STATE PROJECT R-2510
-L- STA. 223+00.00

TAYLOR, JOHN ECKLIN

REWS, MOND J

230

(CHORD)

(CHORD) SITE 1

PEED, RICHARD D JR
&
KRISTEN M

MATCH LINE -SR-B21- STA. 17+00.00
MATCH LINE -BY9- STA. 20+00.00
MATCH LINE -L- STA. 235+00.00

MATCH LINE -BY9- STA. 12+88.23

REVISIONS

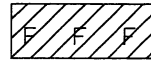
REVISIONS

English

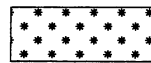
PROJECT REFERENCE NO.	SHEET NO.
R-2510B	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



DENOTES FILL IN
SURFACE WATER
(POND)

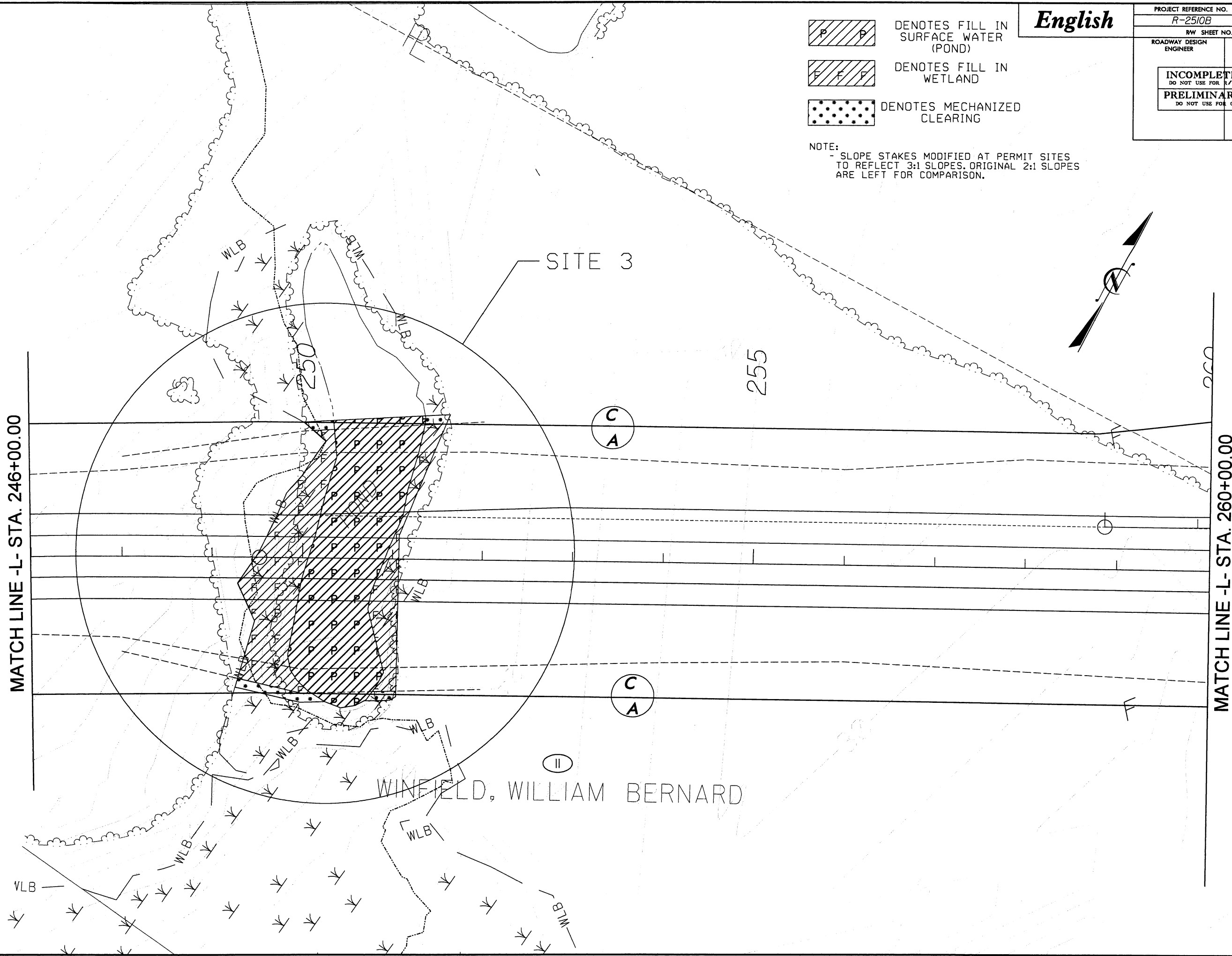


DENOTES FILL IN
WETLAND



DENOTES MECHANIZED
CLEARING

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.

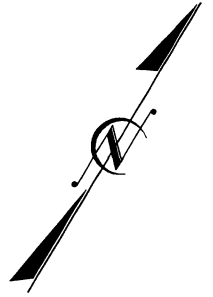


English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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

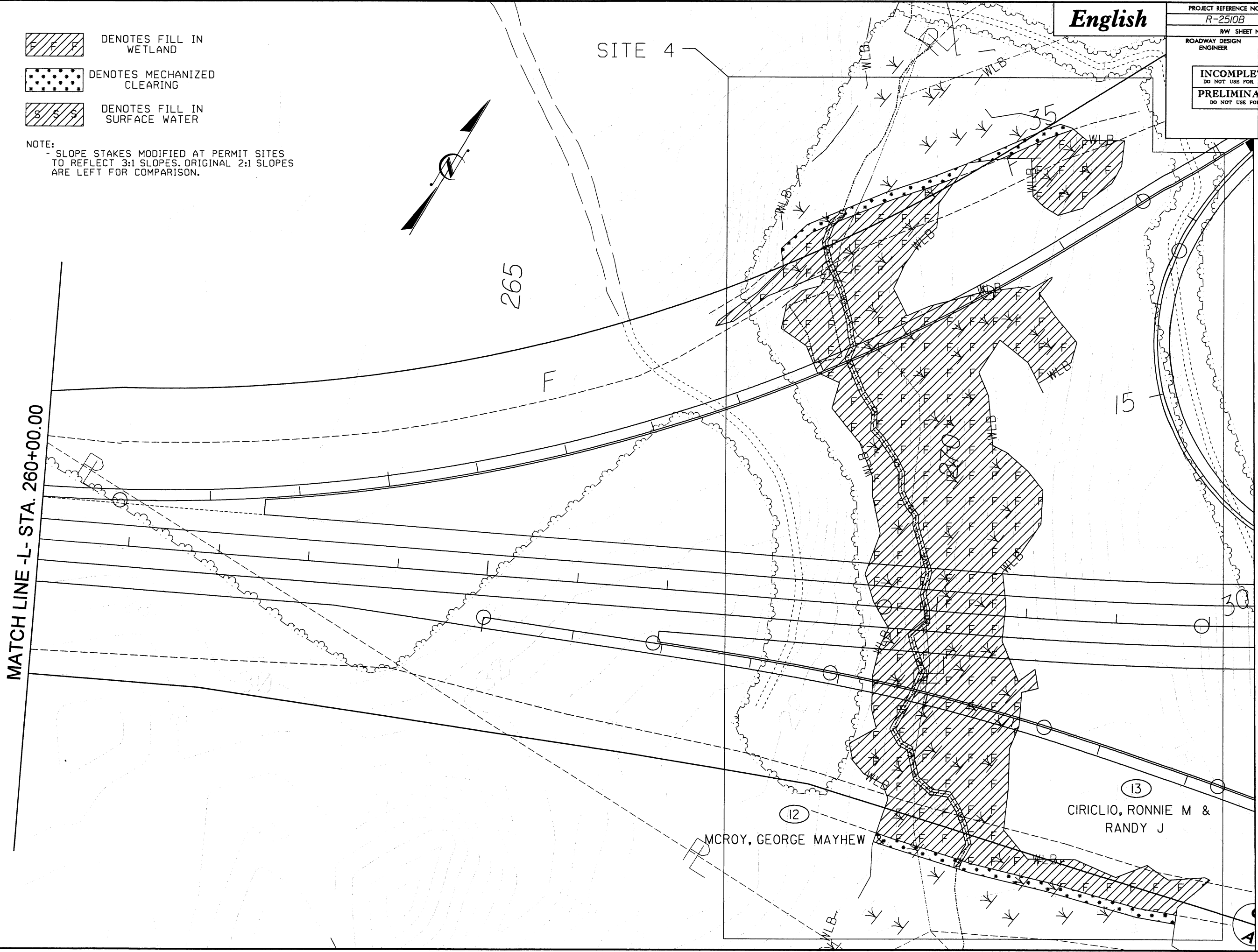
NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES ARE LEFT FOR COMPARISON.



SITE 4

MATCH LINE -L- STA. 260+00.00

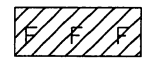
MATCH LINE -L- STA. 273+50.00



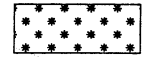
REVISIONS

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	II
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

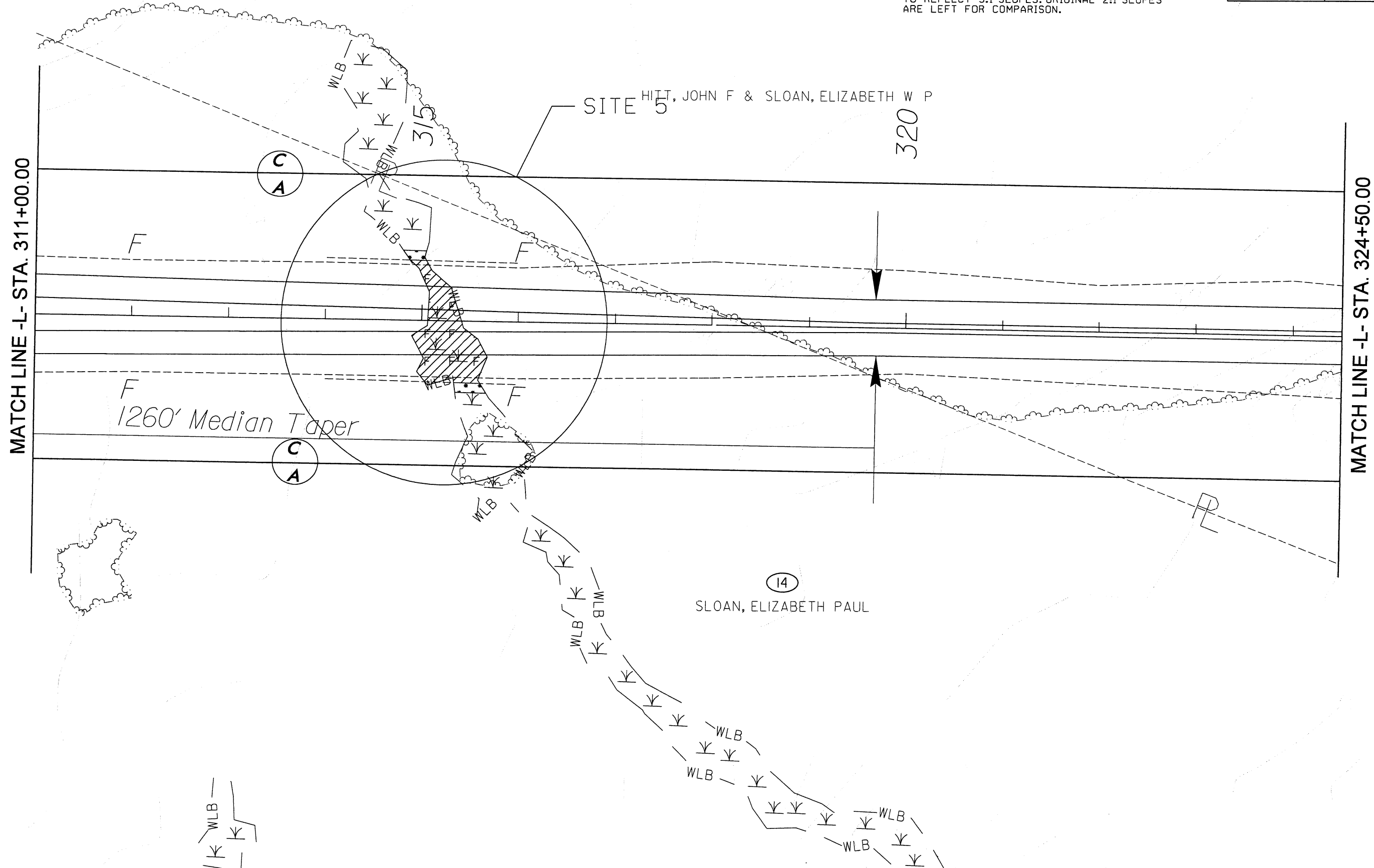


DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES ARE LEFT FOR COMPARISON.



REVISIONS

03/14/2005
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mccok

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div> <div>PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION</div>	

HC DENOTES HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

SITE 6

UNKNOWN

MATCH LINE -L- STA. 324+50.00

MATCH LINE -L- STA. 337+50.00



325

330

335

HITT, JOHN F & SLOAN,
ELIZABETH W P

ERN, GARY R &
ROBERT A

REVISIONS

8/17/99
03/14/2005
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mccook

English

PROJECT REFERENCE NO. R-2510B	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div> <div>PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION</div>	



DENOTES
HAND CLEARING

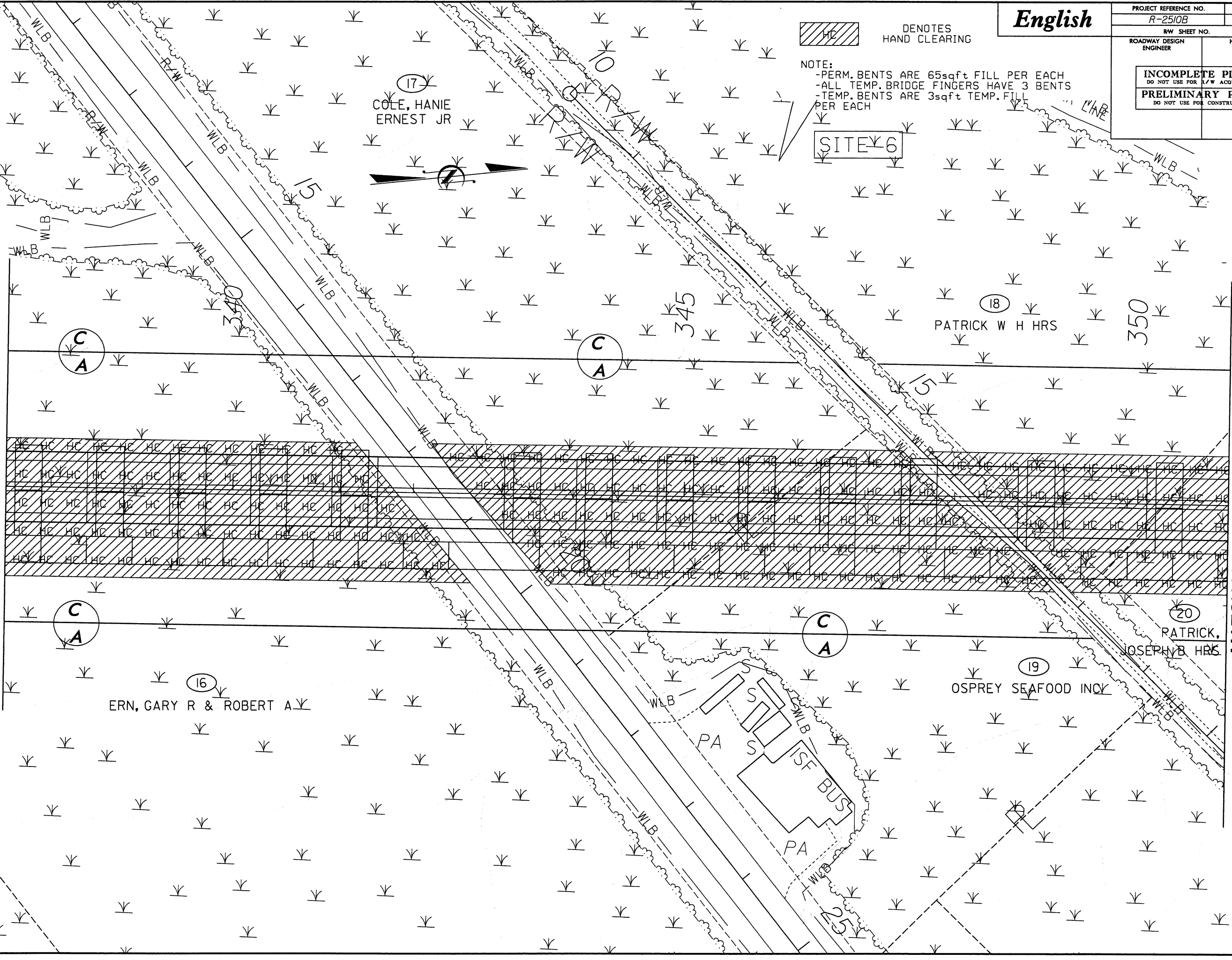
NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

SITE 6



MATCH LINE - L- STA. 337+50.00

MATCH LINE - L- STA. 351+00.00



REVISIONS

8/17/99
03/14/2005
c:\hydro\wetlands\2510_pah_13.dgn
mcook

English

PROJECT REFERENCE NO. R-2510B	SHEET NO. 14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

HC DENOTES HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

SITE 6

20
PATRICK, JOSEPH B HRS

360

21
SINGLETON, B E JR
& MARSHALL T

POND WE 1.6
S
B

MATCH LINE -L- STA. 351+00.00

MATCH LINE -L- STA. 364+00.00

REVISIONS

8/17/99
03/14/2005
r:\hyd\aulica\wetlands\2510_psh_14.dgn
mccook

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

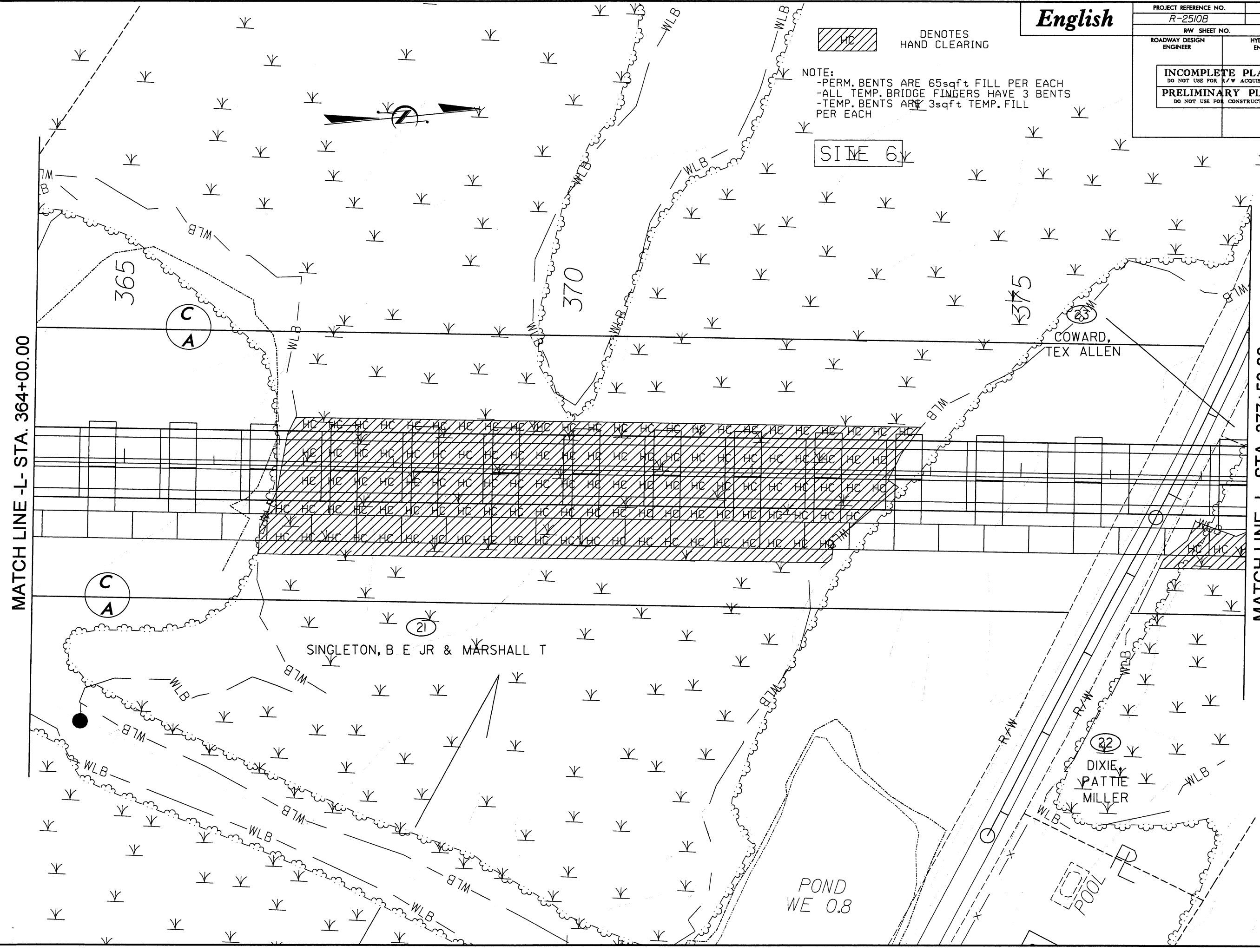
HC DENOTES HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

SINE 6

MATCH LINE -L- STA. 364+00.00

MATCH LINE -L- STA. 377+50.00



REVISIONS

03/14/2005
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moock

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH



DENOTES
HAND CLEARING

SITE 6

21

SINGLETON B E JR & MARSHALL T

COWARD,
TEX ALLEN

23

HTR

C
A

380

385

390

MATCH LINE -L- STA. 377+50.00

MATCH LINE -L- STA. 390+50.00

PATTIE
MILLER

22

C
A

24

CITY, OF WASHINGTON

8/17/99

REVISIONS

03/04/2005
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mccook

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

HC DENOTES HAND CLEARING

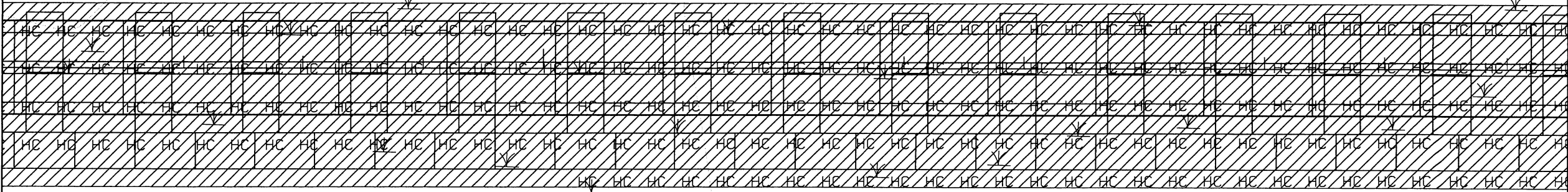
NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

SITE 6



MATCH LINE -L- STA. 390+50.00

MATCH LINE -L- STA. 404+50.00



(21)
SINGLETON B E JR & MARSHALL T

395

400

C
A

C
A

(21)
SINGLETON B E JR & MARSHALL T

REVISIONS

8/17/99

03/14/2005
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mccook

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</p> <hr/> <p>PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION</p> </div>	

 DENOTES
HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 13sqft TEMP. FILL
PER EACH

SITE 6



21

SINGLETON B E JR & MARSHALL T

405

4/0

$$\frac{4}{5} \downarrow$$

MATCH LINE -L- STA. 404+50.00

MATCH LINE -L- STA. 416+50.00



21

SINGLETON B E JR & ^YMARSHALL T

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



(21)
SINGLETON B E JR & MARSHALL T

420

425

TAR RIVER

MATCH LINE -L- STA. 416+50.00

MATCH LINE -L- STA. 429+50.00

(21)
SINGLETON B E JR & MARSHALL T

SITE 6

NOTE:
-PERM. BENTS IN WETLAND ARE 65sqft FILL PER EACH.
-PERM. BENTS IN RIVER ARE 130sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

TS TS DENOTES TEMPORARY FILL IN SURFACE WATER

HC DENOTES HAND CLEARING

REVISIONS

8/17/99

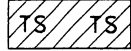
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mccook

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



DENOTES
HAND CLEARING



DENOTES TEMPORARY
FILL IN SURFACE
WATER

SITE 6

NOTE:

- PERM. BENTS IN WETLAND ARE 65sqft FILL PER EACH.
- PERM. BENTS IN RIVER ARE 130sqft FILL PER EACH
- ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
- TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH



MATCH LINE -L- STA. 429+50.00

430

TAR RIVER

435

440

MATCH LINE -L- STA. 442+50.00

REVISIONS

 HC

DENOTES
HAND CLEARING

SITE 6

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL
PER EACH



TAR RIVER

MATCH LINE -L- STA. 442+50.00

MATCH LINE -L- STA. 455+50.00

REVISIONS

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

MATCH LINE -L- STA. 455+50.00

MATCH LINE -L- STA. 468+00.00

1260' MEDIAN TAPER

RHEM, J DAN JR

RHEM, J DAN JR

460

465

C
A

C
A

SITE 6

RHEM, J DAN SR

RHEM, J DAN SR



HC
DENOTES
HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS BEFORE 468+00
HAVE 3 BENTS; ALL TEMP. BRIDGE FINGERS
AFTER 468+00 HAVE 4 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL
PER EACH

KENNEDY'S
CREEK

REVISIONS

B/17/99

03/14/2005
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mccook

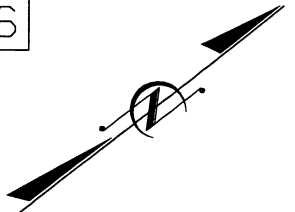
English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS BEFORE 472+00
HAVE 4 BENTS; ALL TEMP. BRIDGE FINGERS
AFTER 472+00 HAVE 5 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL
PER EACH

DENOTES
HAND CLEARING

SITE 6



25
RHEM, J DAN SR

KNOTT, RUFUS H &

480

(CHORD)

MATCH LINE -L- STA. 468+00.00

MATCH LINE -L- STA. 480+50.00



C
A

C
A

C
A

(CHORD)

(CHORD)

WLB

WLB

R&R

PA

SILOS

TR

REVISIONS

8/17/99

03/14/2005
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mcb

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

MATCH LINE -L- STA. 493+50.00

MATCH LINE -L- STA. 506+50.00

MANNING
RUSSELL
EDWARD

UNKNOWN

ISBK BUS


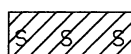
LILLEY,
DALTON G &

ISBK
BUS

SITE 7

GODFREY, OTIS A

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.

 DENOTES FILL IN
WETLAND
 DENOTES FILL IN
SURFACE WATER

(CHORD)

(CHORD)

8/17/99

REVISIONS

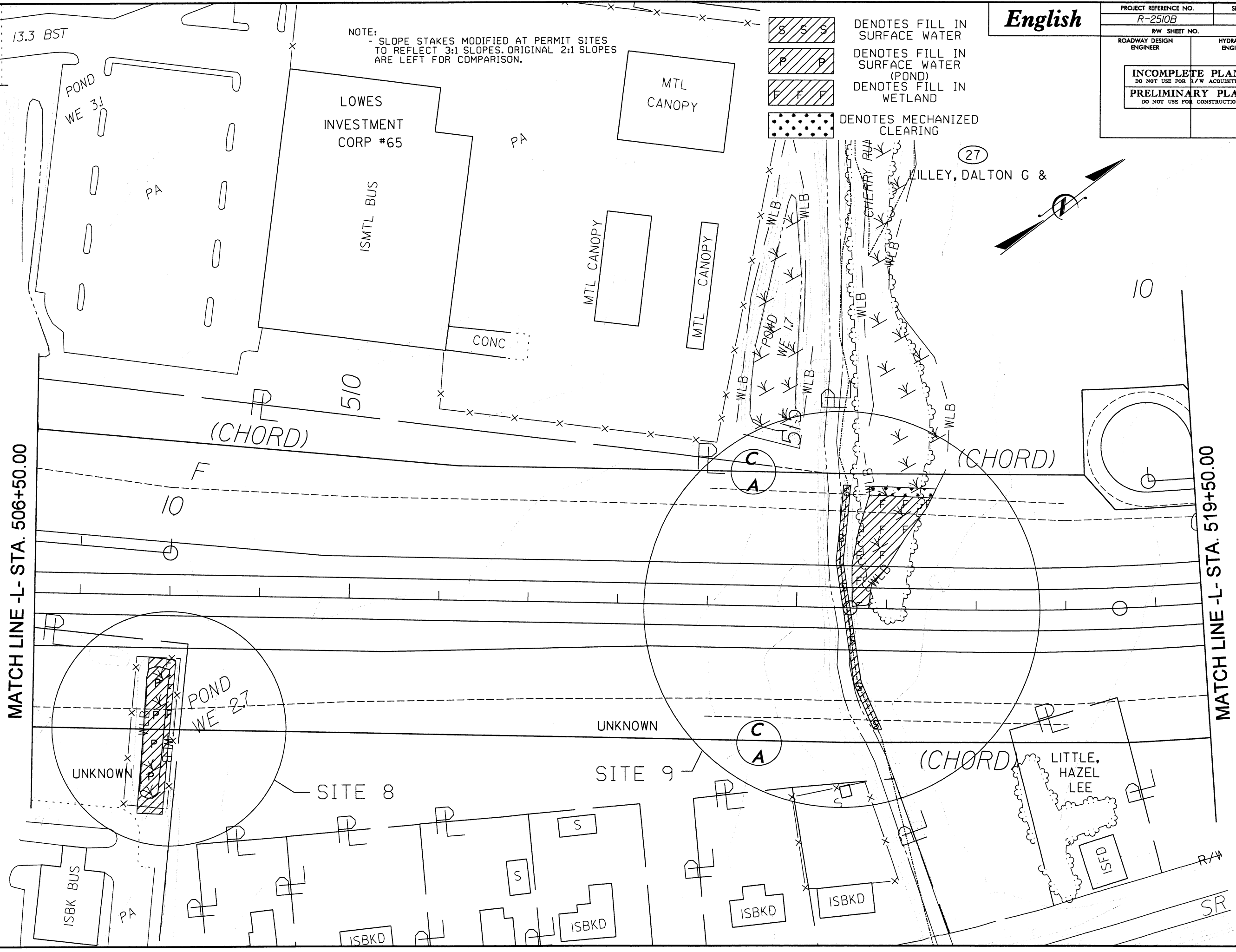
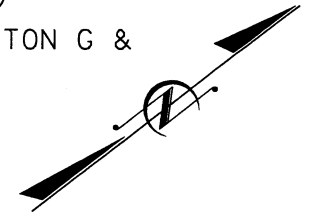
03/15/2005
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mcd

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.

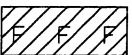
- DENOTES FILL IN SURFACE WATER
- DENOTES FILL IN SURFACE WATER (POND)
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING



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03/14/2005
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mcbk

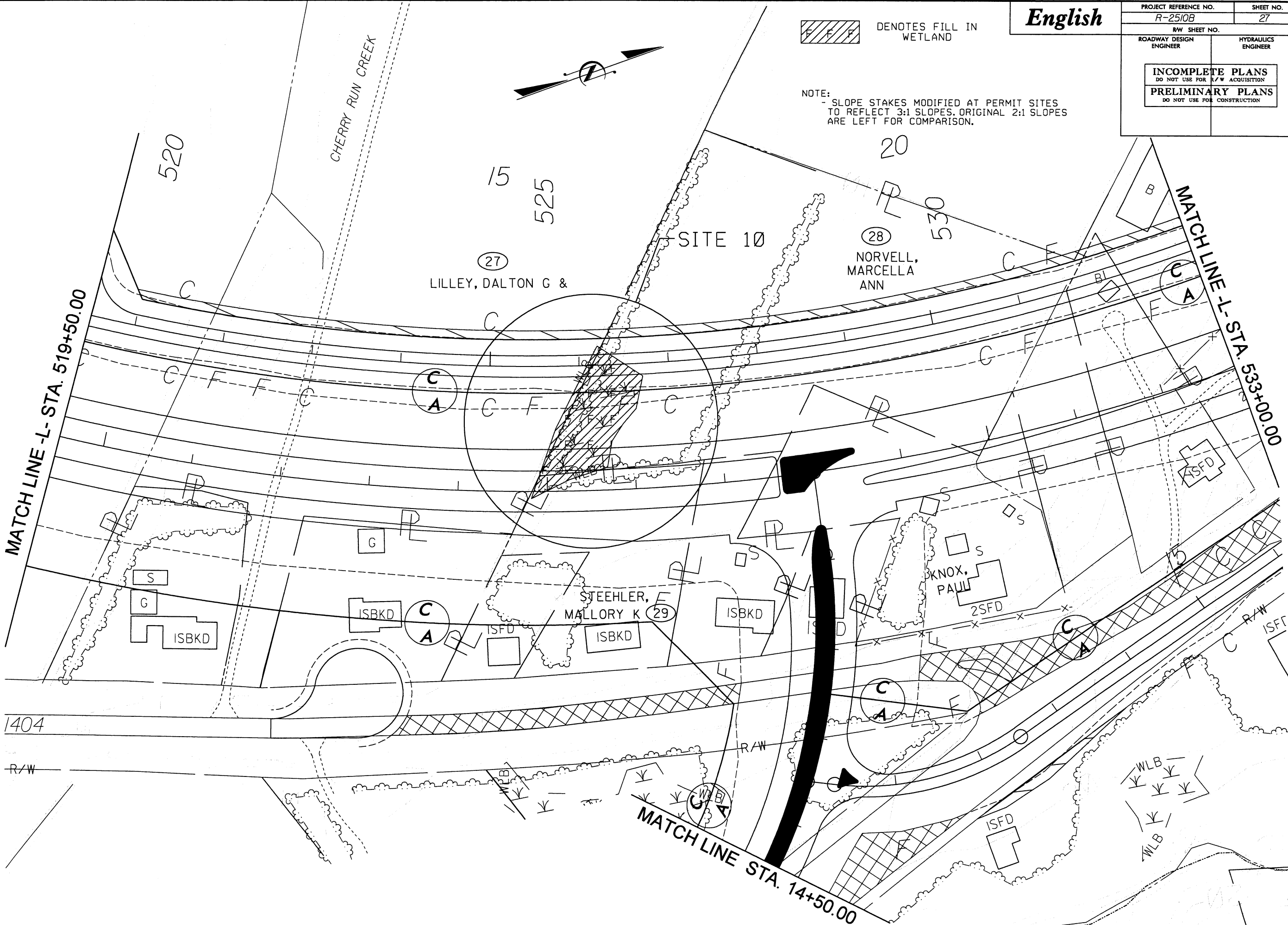
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

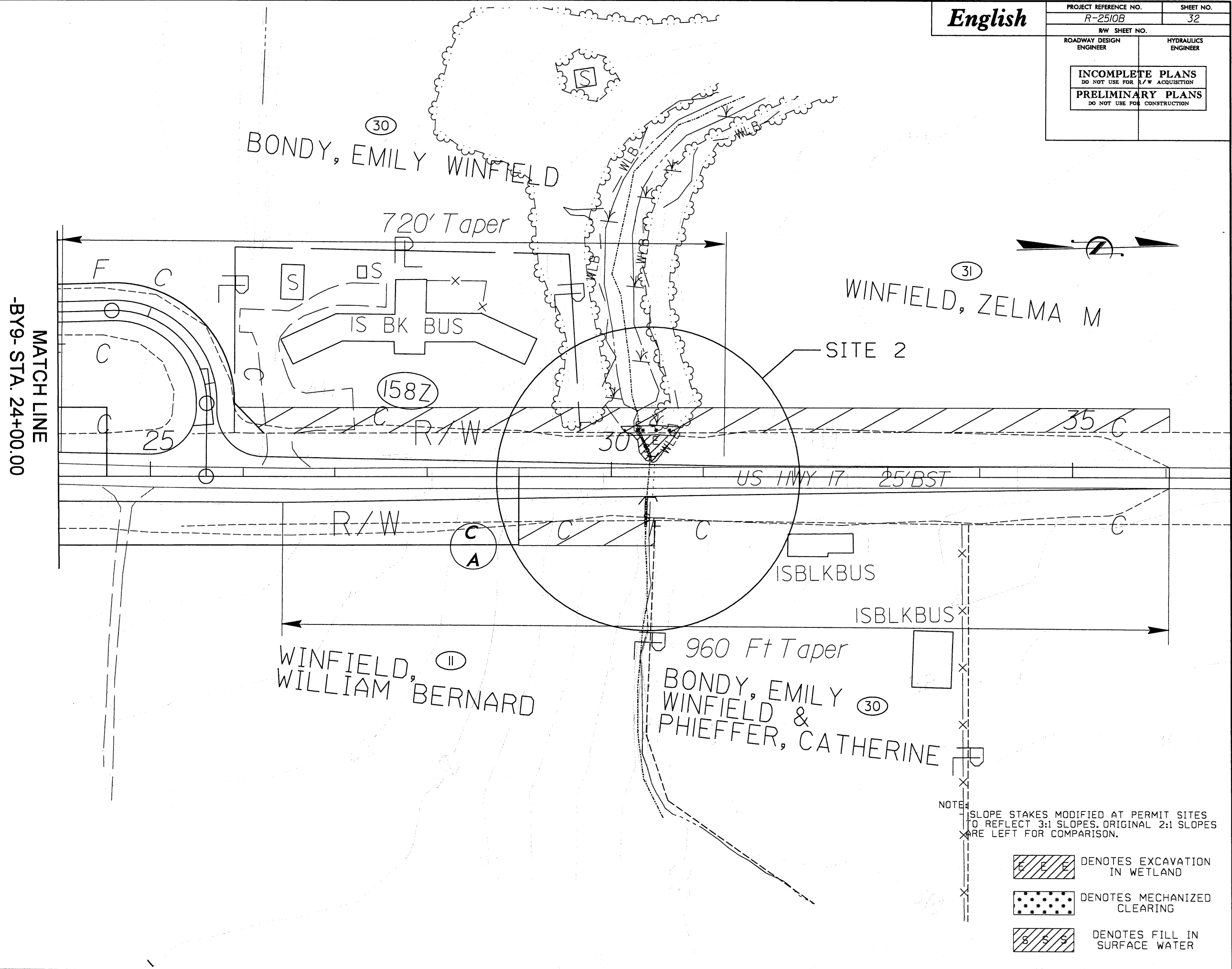


DENOTES FILL IN WETLAND

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES ARE LEFT FOR COMPARISON.



REVISIONS

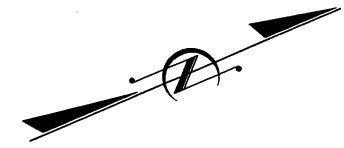


English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

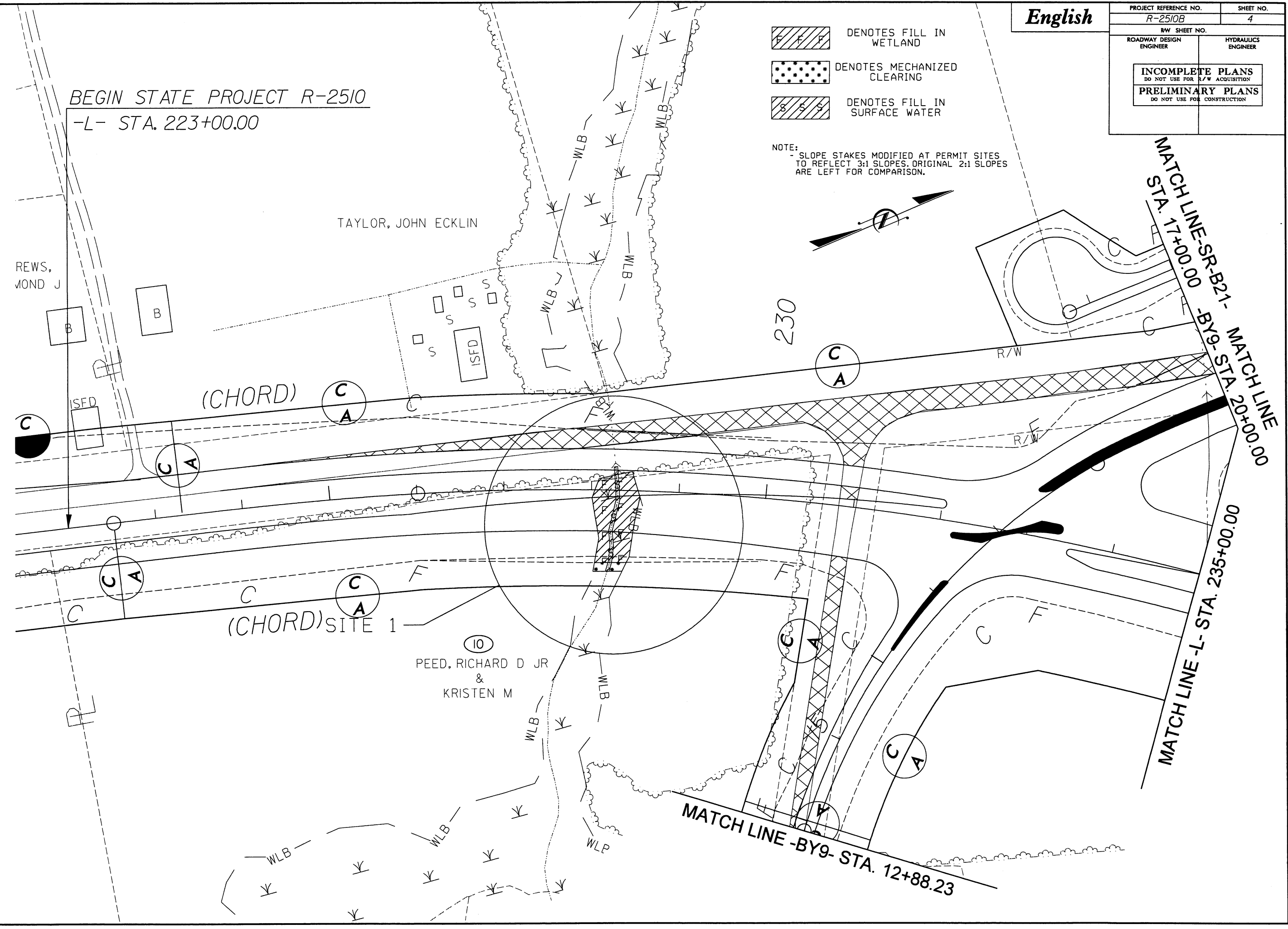
- [Hatched Box] DENOTES FILL IN WETLAND
- [Dotted Box] DENOTES MECHANIZED CLEARING
- [Box with S] DENOTES FILL IN SURFACE WATER

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES ARE LEFT FOR COMPARISON.



BEGIN STATE PROJECT R-2510
-L- STA. 223+00.00

MATCH LINE-SR-B21- STA. 17+00.00
-BY9- STA. 20+00.00
MATCH LINE-L- STA. 235+00.00



8/17/99

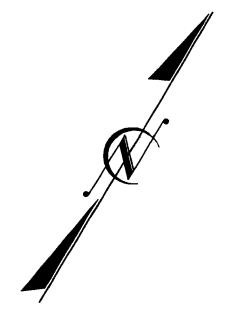
REVISIONS

03/14/2005
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microk

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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

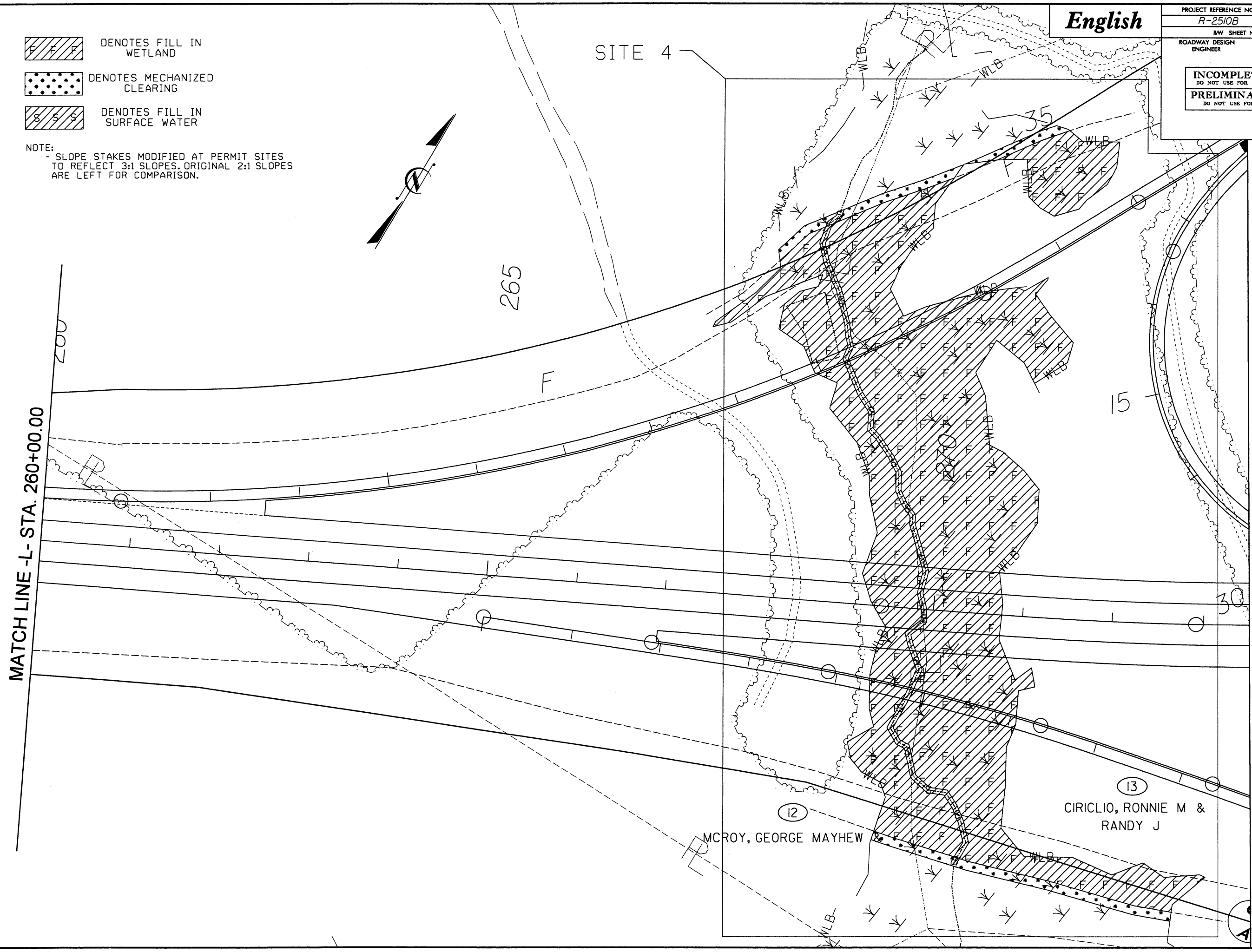
NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES ARE LEFT FOR COMPARISON.



SITE 4

MATCH LINE -L- STA. 260+00.00

MATCH LINE -L- STA. 273+50.00



REVISIONS

DENOTES FILL IN
WETLAND

DENOTES MECHANIZED
CLEARING

NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.



REVISIONS

03/14/2005
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mcook

**HYDRAULIC
ENGINEER**

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

SITE 6

DENOTES
HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL
PER EACH

UNKNOWN

353

MATCH LINE -L- STA. 337+50.00

MATCH LINE -L- STA. 324+50.00

325

33

HITT, JOHN F & SLOAN,
ELIZABETH W P

ERN, GARY R &
ROBERT A

UNKNOWN

REVISIONS

03/14/2005
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English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

HC DENOTES HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

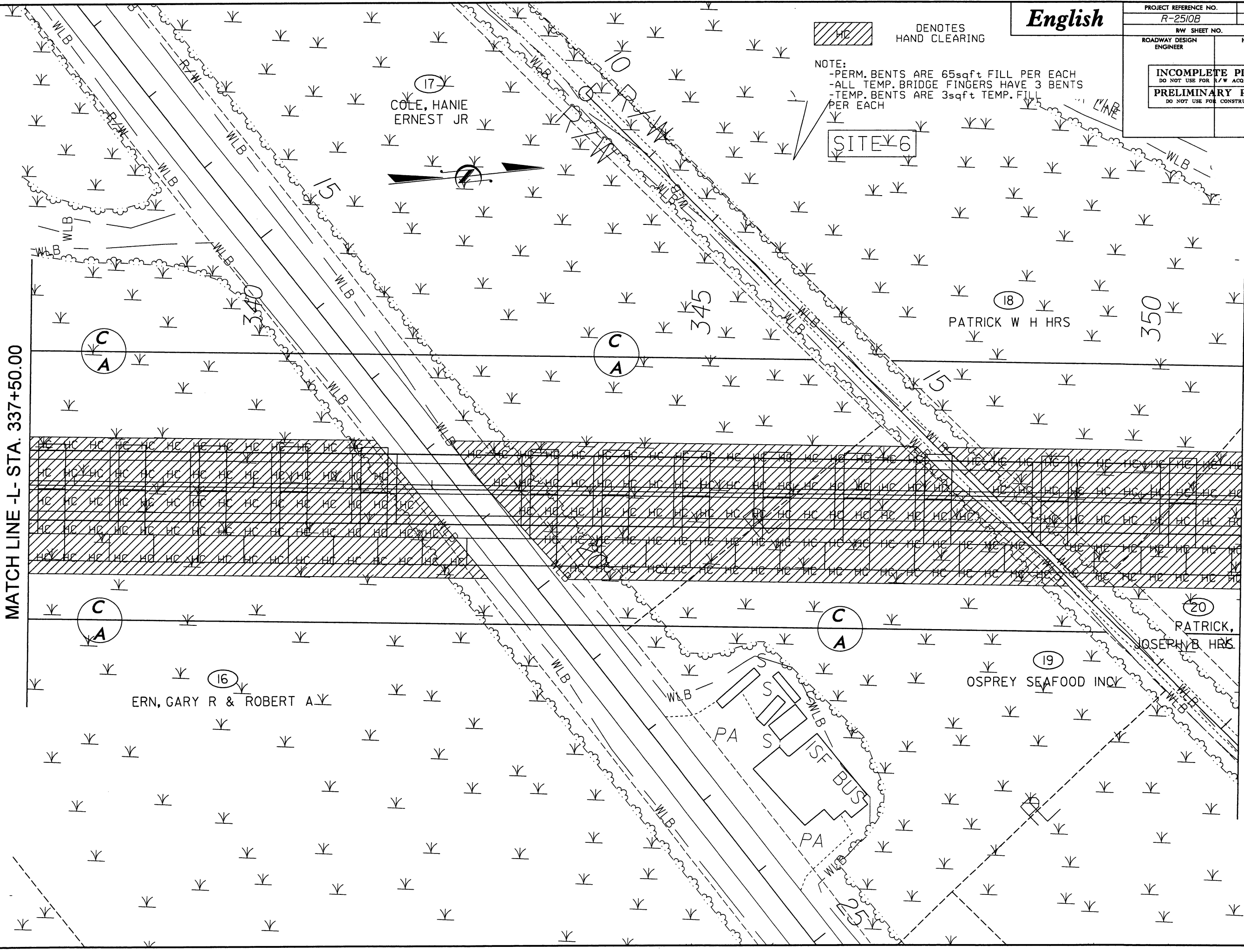
SITE 6

MATCH LINE -L- STA. 337+50.00

MATCH LINE -L- STA. 351+00.00

REVISIONS

03/14/2005
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mcb



English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div> <div>PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION</div>	

HC DENOTES HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

SITE 6

(20) PATRICK, JOSEPH B HRS

360

MATCH LINE -L- STA. 351+00.00

MATCH LINE -L- STA. 364+00.00

(21) SINGLETON, B JR & MARSHALL T

POND WE 1.6

(20) PATRICK, JOSEPH B HRS

REVISIONS

8/17/99

03/14/2005
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mccook

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

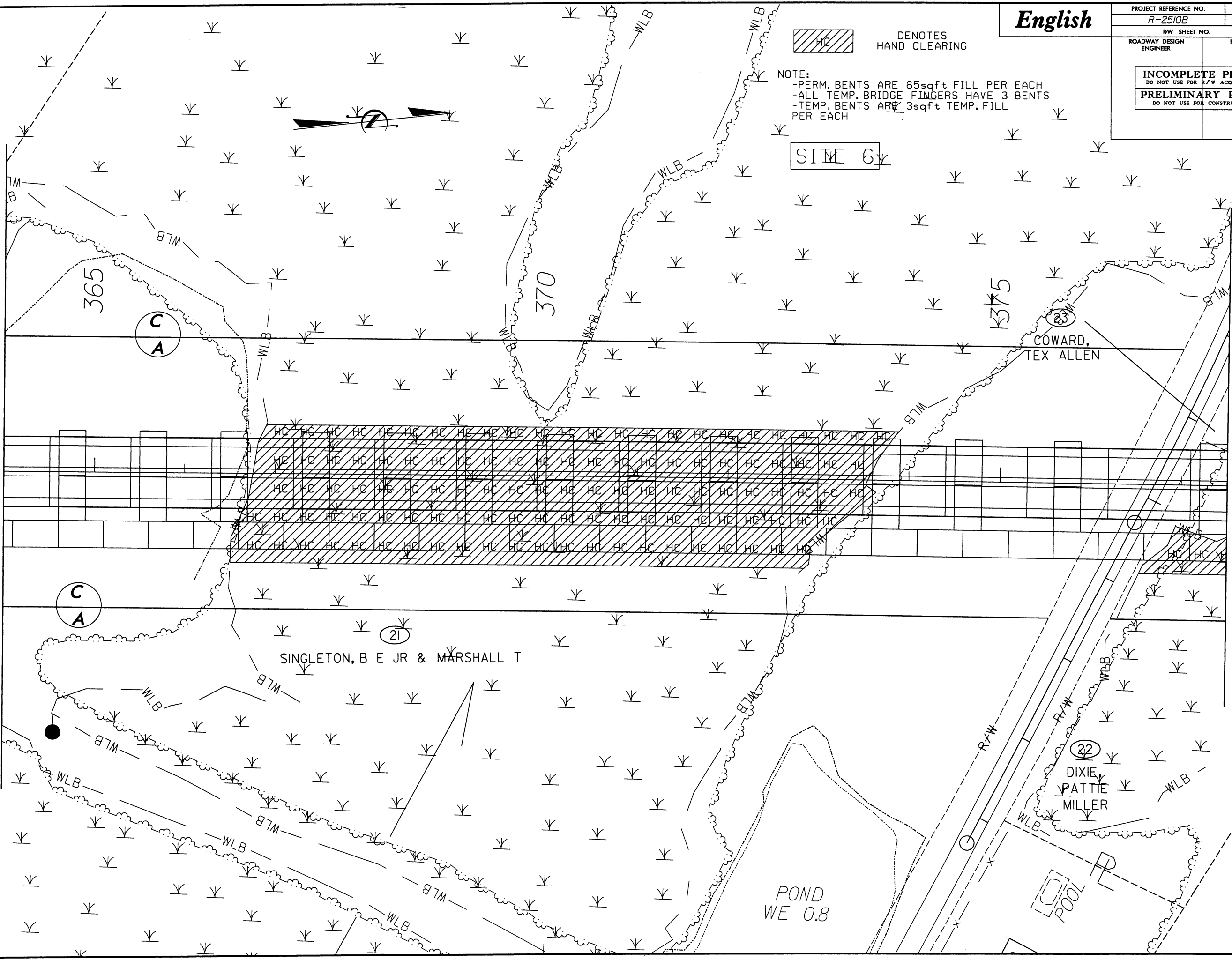
HC DENOTES HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

SINE 6

MATCH LINE -L- STA. 364+00.00

MATCH LINE -L- STA. 377+50.00



REVISIONS

8/17/99

03/14/2005
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road

8/17/99

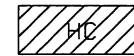
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REVISIONS

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH



DENOTES
HAND CLEARING

SITE 6

21

SINGLETON B E JR & MARSHALL T

COWARD,
TEX ALLEN

23

HTR

MATCH LINE -L- STA. 377+50.00

PATTIE
MILLER

22

C
A

CITY, OF WASHINGTON

24

MATCH LINE -L- STA. 390+50.00

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

HC DENOTES HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

SITE 6



(21)
SINGLETON B E JR & MARSHALL T

395

400

C
A

C
A

MATCH LINE -L- STA. 390+50.00

MATCH LINE -L- STA. 404+50.00

REVISIONS

03/14/2005
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8/17/99

English

PROJECT REFERENCE NO.

R-2510B

SHEET NO.

18

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

INCOMPLETE PLANS

DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION



DENOTES
HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 13sqft TEMP. FILL
PER EACH

SITE 6



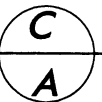
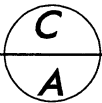
21

SINGLETON B E JR & MARSHALL T

405

410

415



21

SINGLETON B E JR & MARSHALL T

MATCH LINE -L- STA. 404+50.00

MATCH LINE -L- STA. 416+50.00

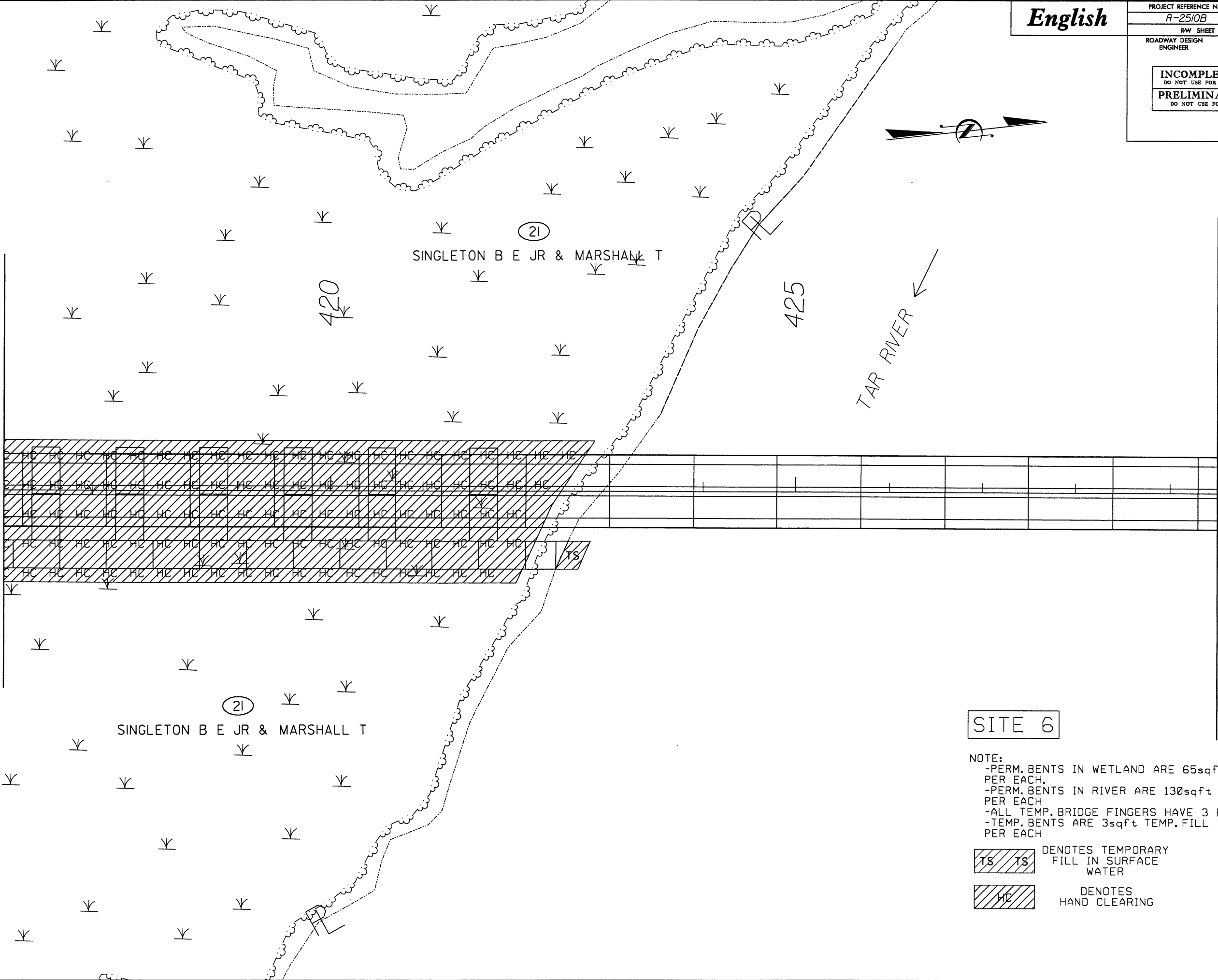
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

REVISIONS

MATCH LINE -L- STA. 416+50.00

MATCH LINE -L- STA. 429+50.00



SITE 6

NOTE:
-PERM. BENTS IN WETLAND ARE 65sqft FILL PER EACH.
-PERM. BENTS IN RIVER ARE 130sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL PER EACH

TS TS DENOTES TEMPORARY FILL IN SURFACE WATER
HC DENOTES HAND CLEARING

REVISIONS



DENOTES
HAND CLEARING



DENOTES TEMPORARY
FILL IN SURFACE
WATER

SITE 6

NOTE:
-PERM. BENTS IN WETLAND ARE 65sqft FILL
PER EACH.
-PERM. BENTS IN RIVER ARE 130sqft FILL
PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL
PER EACH



English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

MATCH LINE -L- STA. 429+50.00

430

TAR RIVER

435

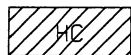
440

MATCH LINE -L- STA. 442+50.00



(25)

RHEM, J DAN SR



DENOTES
HAND CLEARING

SITE 6

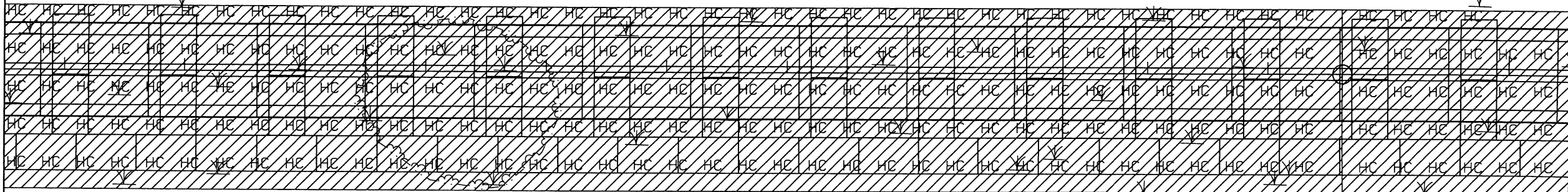
NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS HAVE 3 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL
PER EACH

TAR RIVER



MATCH LINE -L- STA. 442+50.00

MATCH LINE -L- STA. 455+50.00



C
A

250

RHEM, J DAN SR

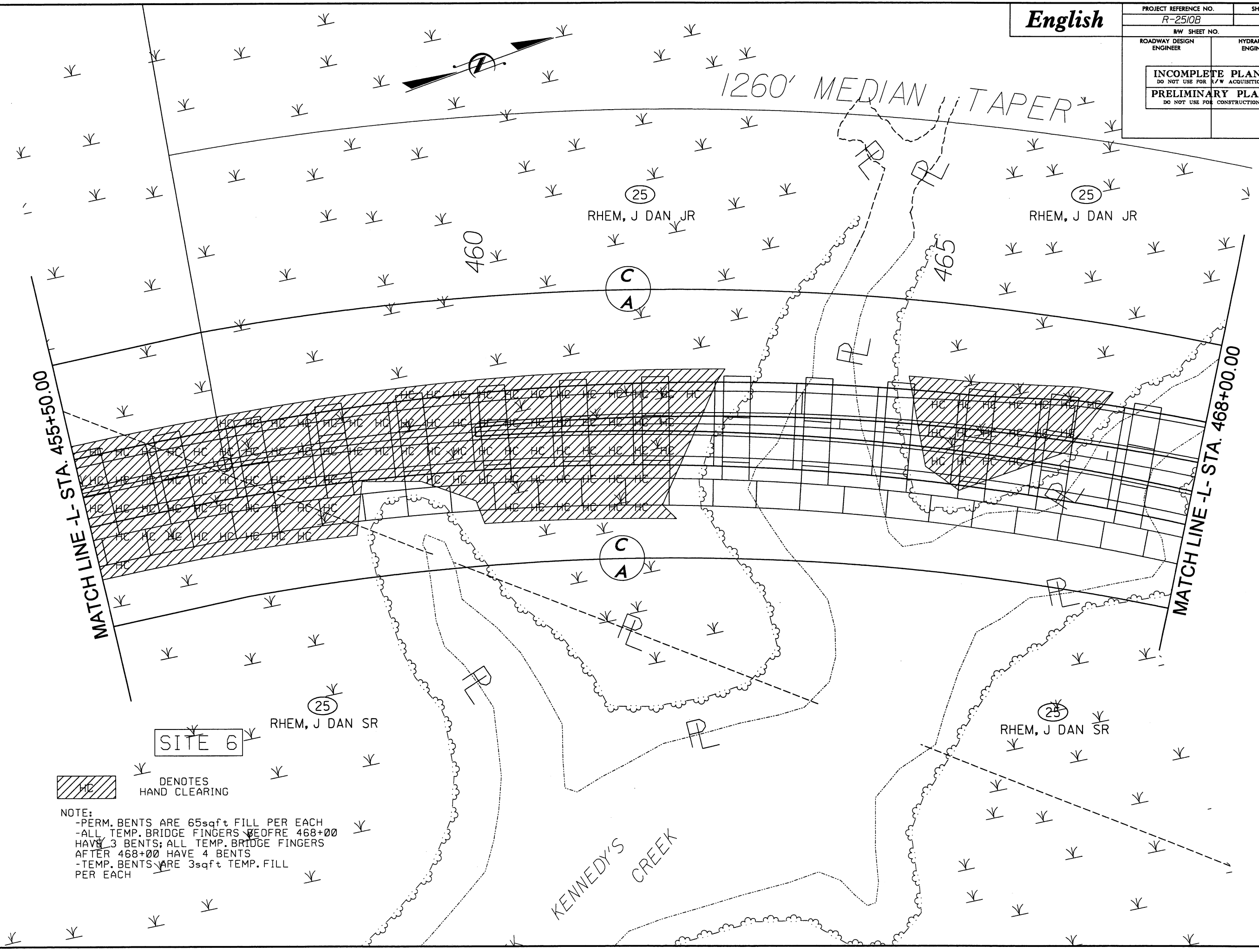
English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

REVISIONS

03/14/2005
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mcook



HC DENOTES
HAND CLEARING

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS OFRE 468+00
HAVE 3 BENTS; ALL TEMP. BRIDGE FINGERS
AFTER 468+00 HAVE 4 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL
PER EACH

English

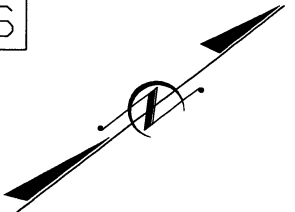
PROJECT REFERENCE NO.	SHEET NO.
R-2510B	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE:
-PERM. BENTS ARE 65sqft FILL PER EACH
-ALL TEMP. BRIDGE FINGERS BEFORE 472+00
HAVE 4 BENTS; ALL TEMP. BRIDGE FINGERS
AFTER 472+00 HAVE 5 BENTS
-TEMP. BENTS ARE 3sqft TEMP. FILL
PER EACH



DENOTES
HAND CLEARING

SITE 6



(25)
RHEM, J DAN SR

KNOTT, RUFUS H &

480

(CHORD)

MATCH LINE -L- STA. 468+00.00

MATCH LINE -L- STA. 480+50.00



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(CHORD)

(CHORD)

WLB

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REVISIONS

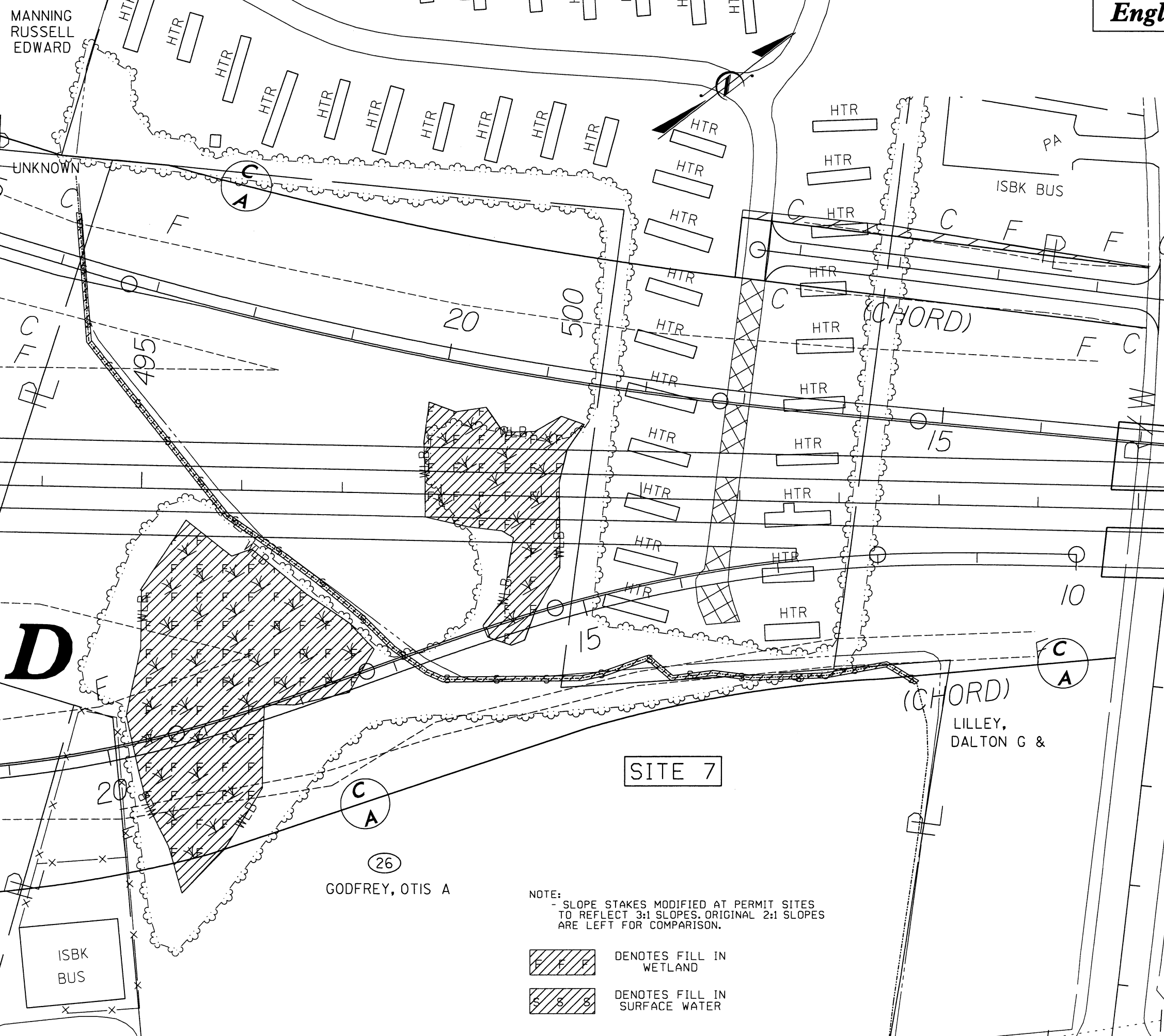
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03/14/2005
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English

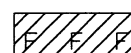
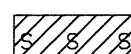
PROJECT REFERENCE NO.	SHEET NO.
R-2510B	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

MATCH LINE -L- STA. 493+50.00

MATCH LINE -L- STA. 506+50.00



NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.


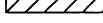


-  DENOTES FILL IN WETLAND
-  DENOTES FILL IN SURFACE WATER

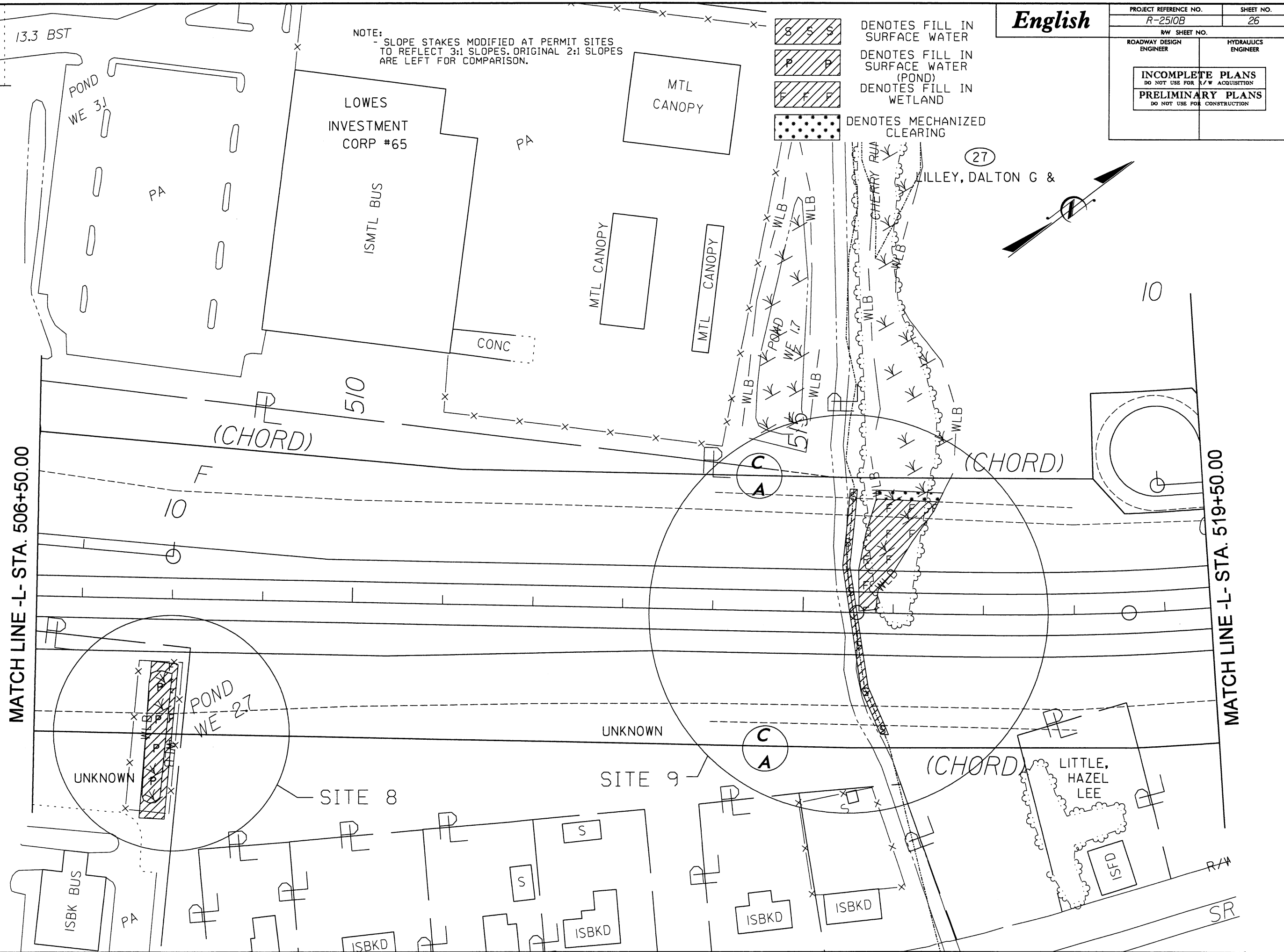
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micobk

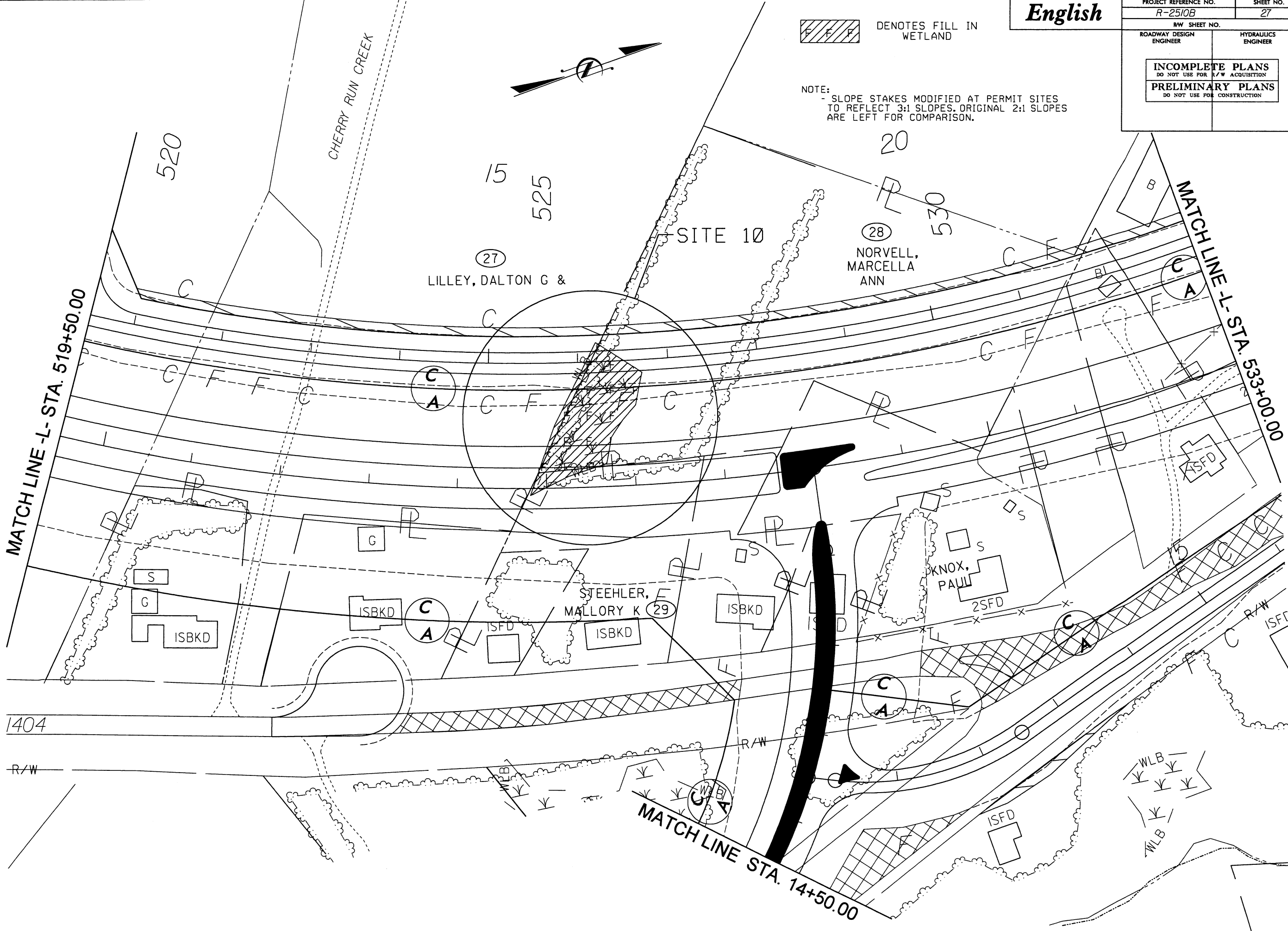
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PROJECT REFERENCE NO.	SHEET NO.
R-250B	26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>INCOMPLETE PLANS</p> <p>DO NOT USE FOR R/W ACQUISITION</p> </div>	
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>PRELIMINARY PLANS</p> <p>DO NOT USE FOR CONSTRUCTION</p> </div>	

	DENOTES FILL IN SURFACE WATER
	DENOTES FILL IN SURFACE WATER (POND)
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING



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revisions

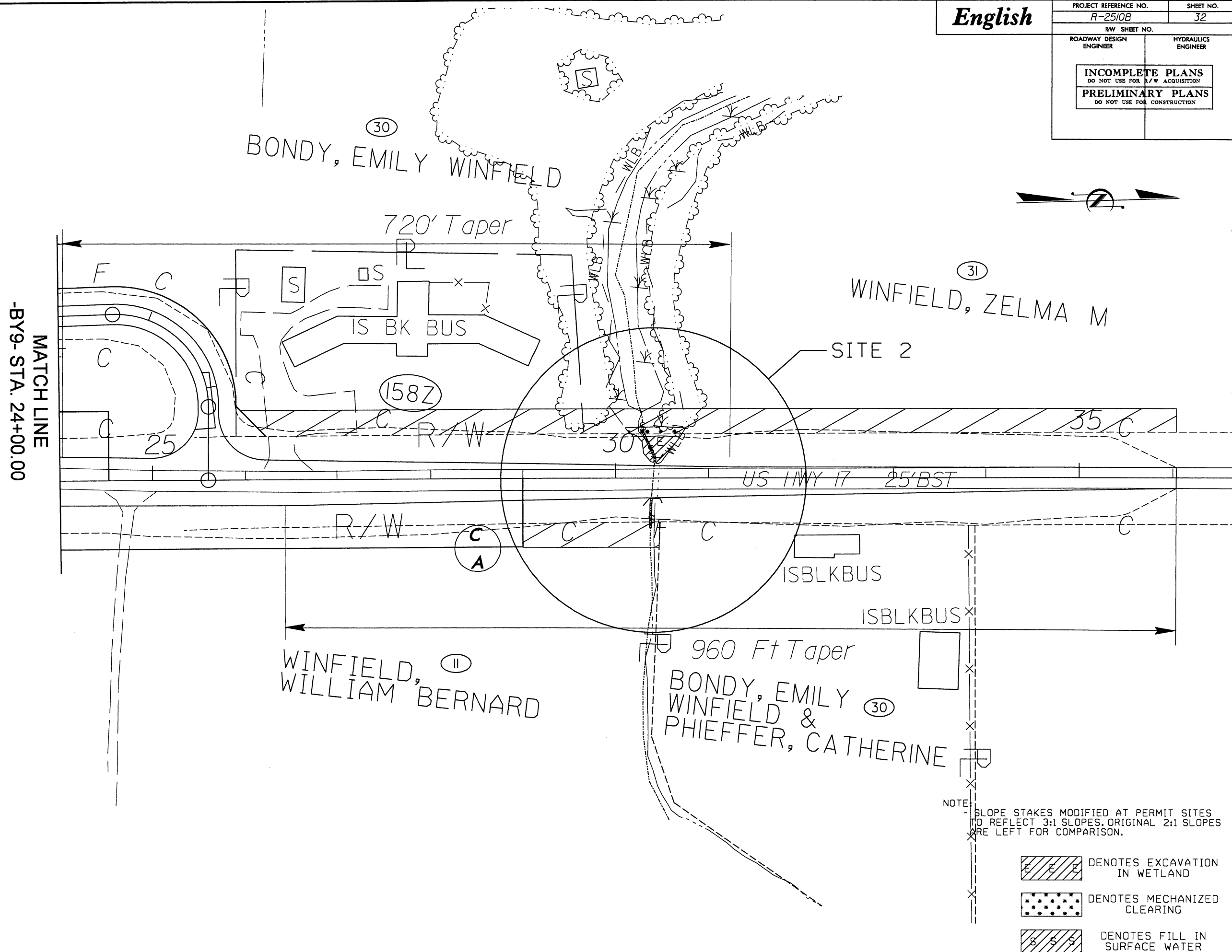


DENOTES FILL IN
WETLAND

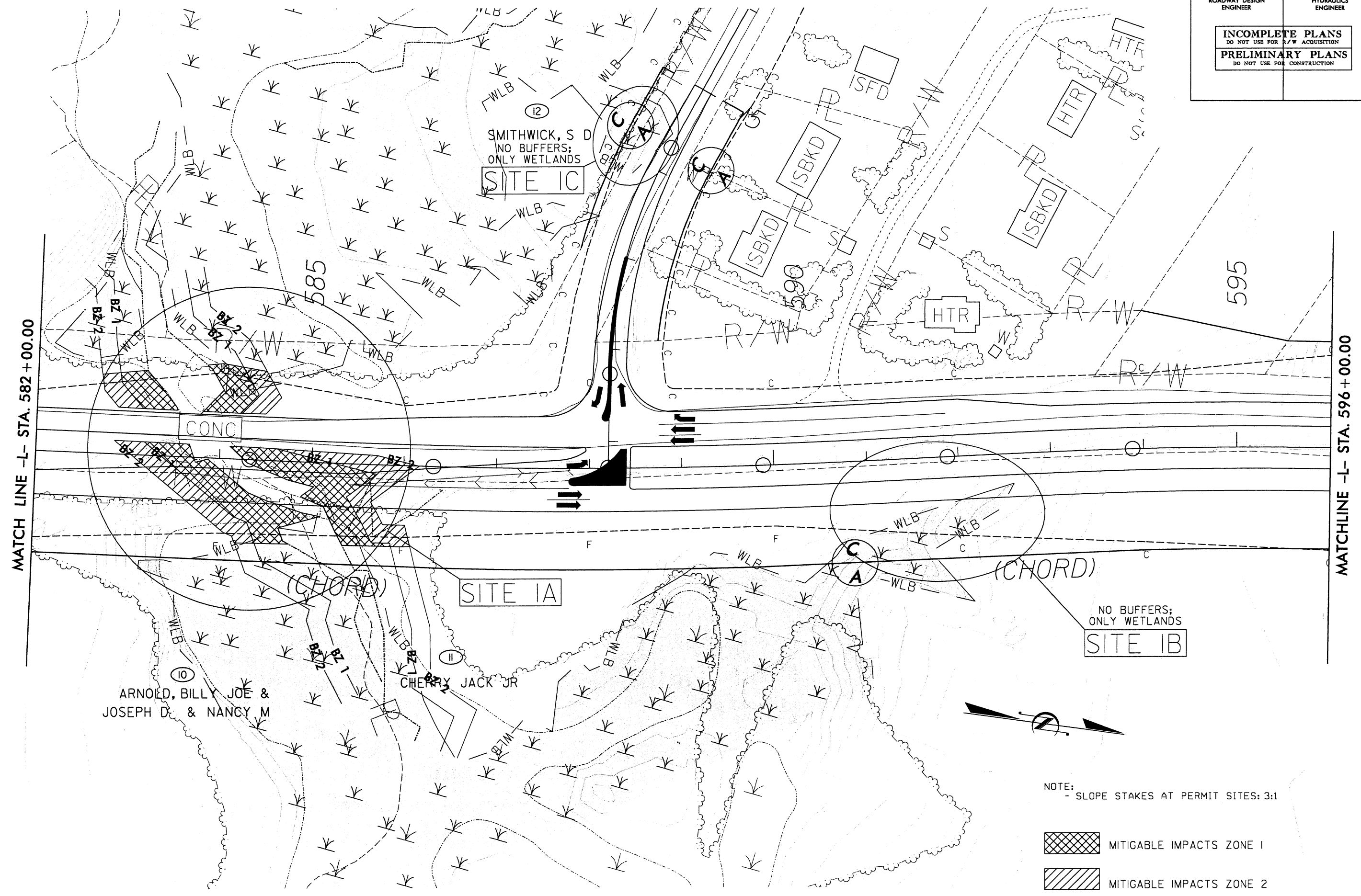
NOTE:
- SLOPE STAKES MODIFIED AT PERMIT SITES
TO REFLECT 3:1 SLOPES. ORIGINAL 2:1 SLOPES
ARE LEFT FOR COMPARISON.

English

PROJECT REFERENCE NO.	SHEET NO.
R-2510B	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



PROJECT REFERENCE NO.	SHEET NO.
R2510C	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

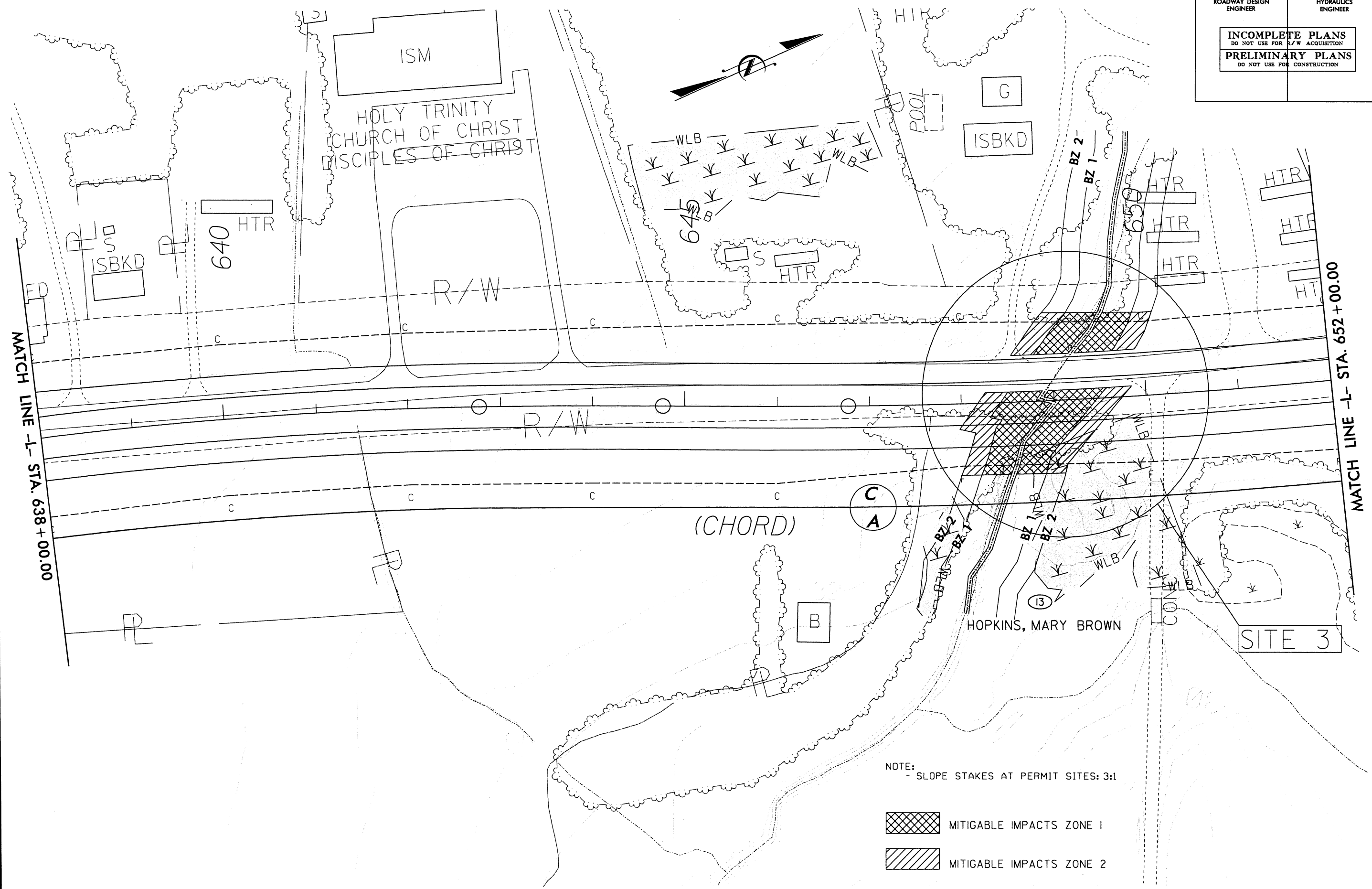
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

REVISIONS

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English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	II
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



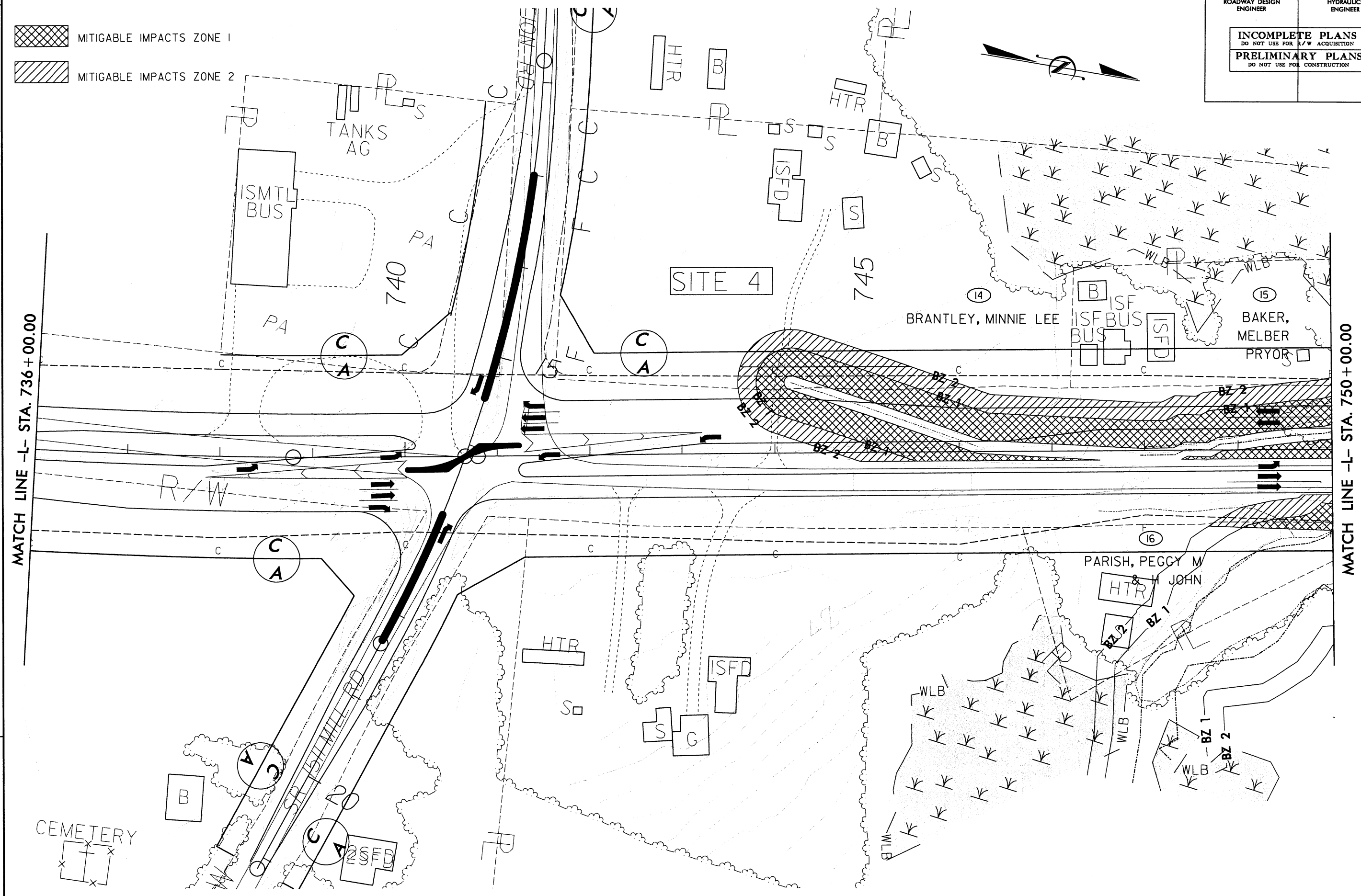
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REVISIONS

NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

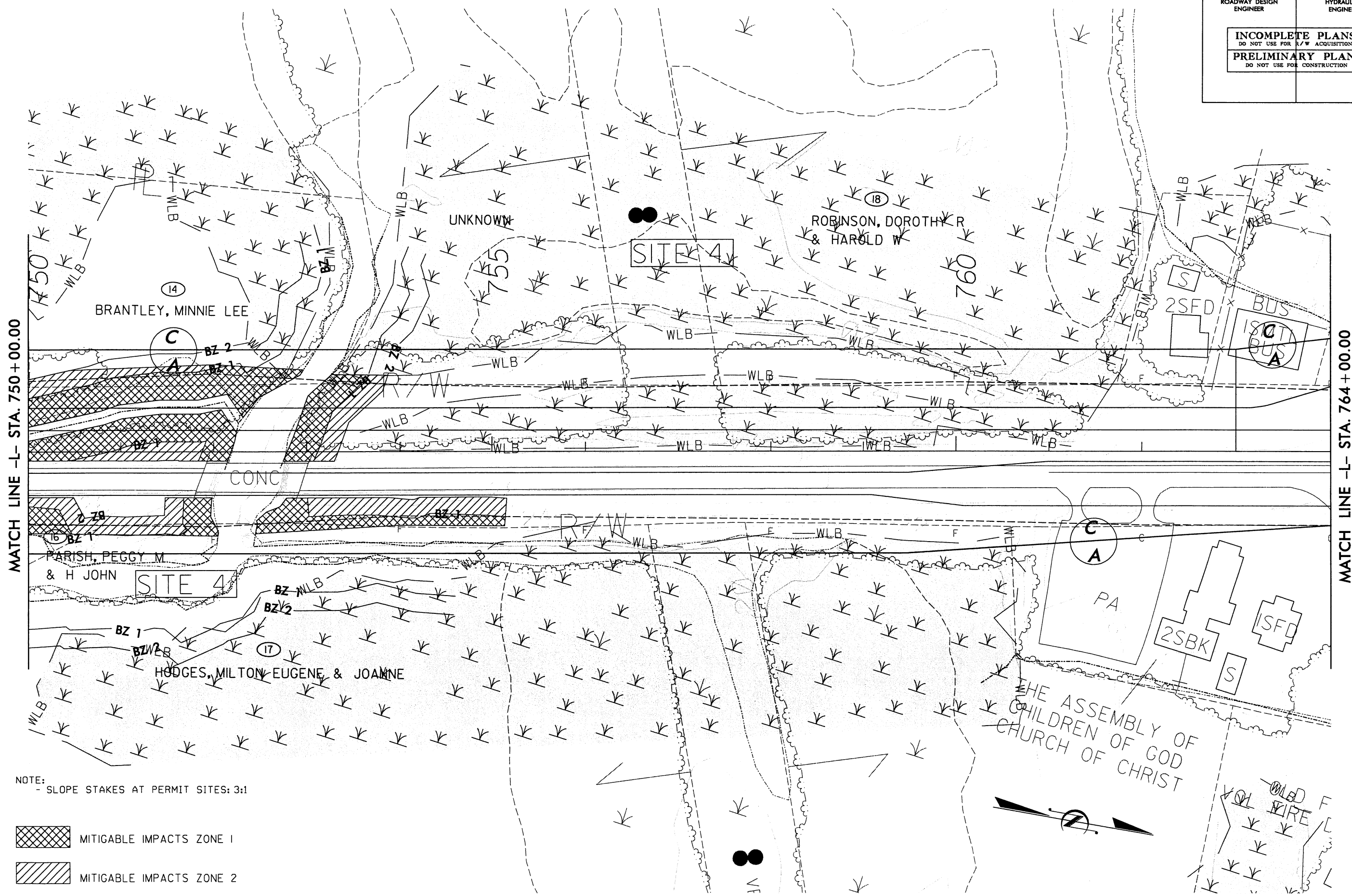


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English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

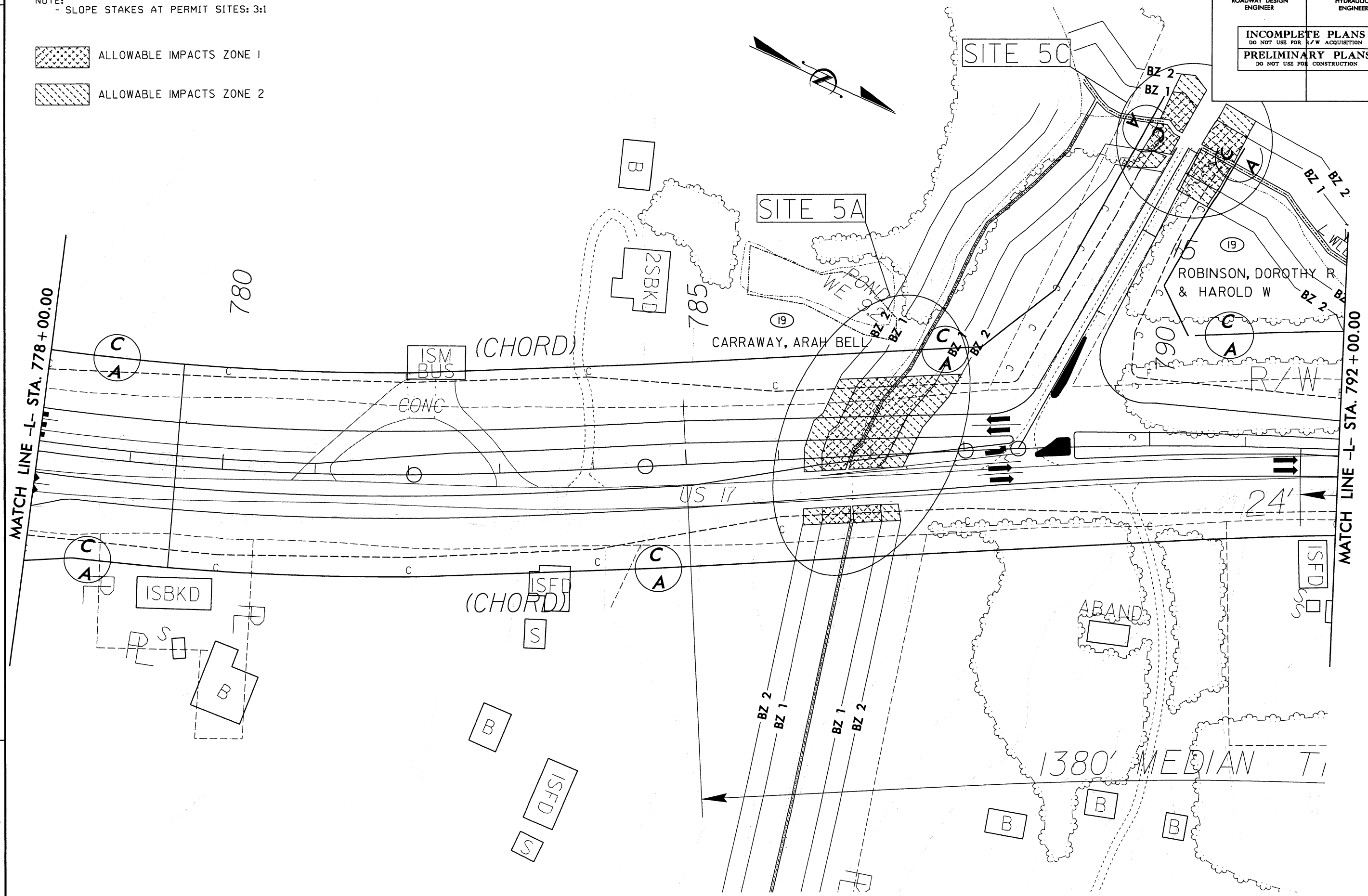
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

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PROJECT REFERENCE NO.		SHEET NO.
R2510C		21
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

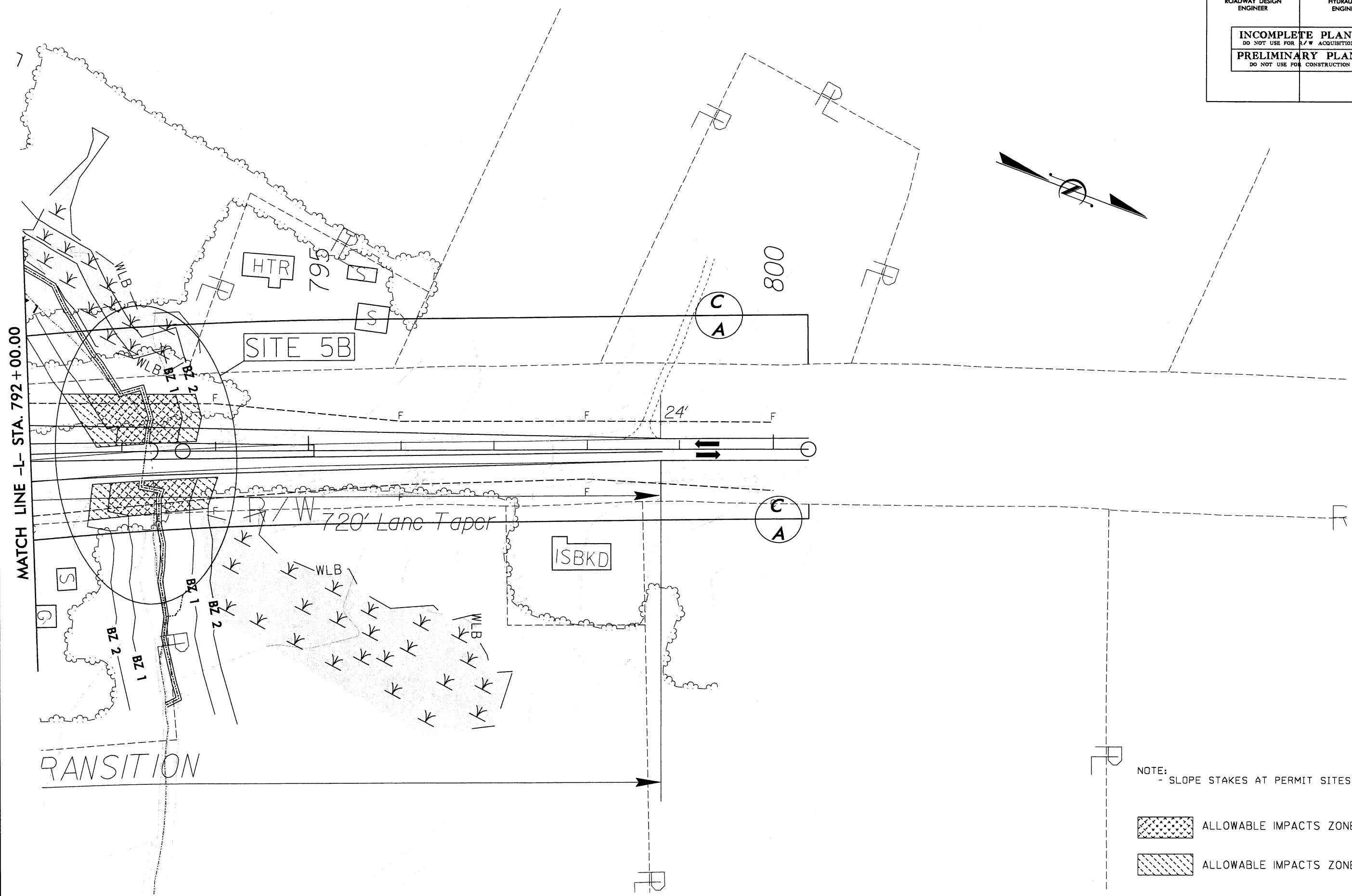
- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2



REVISIONS

English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

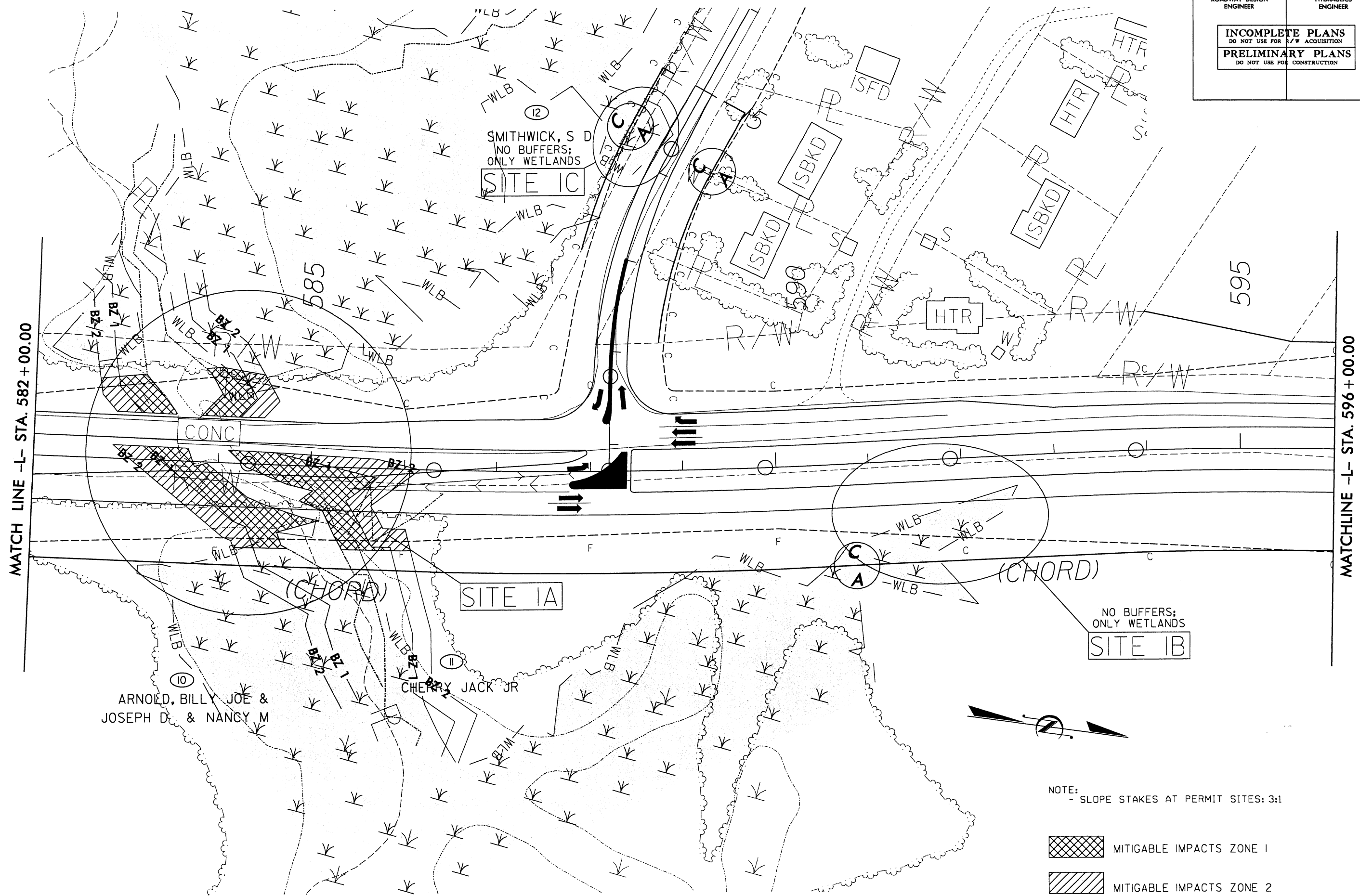
- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2

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English

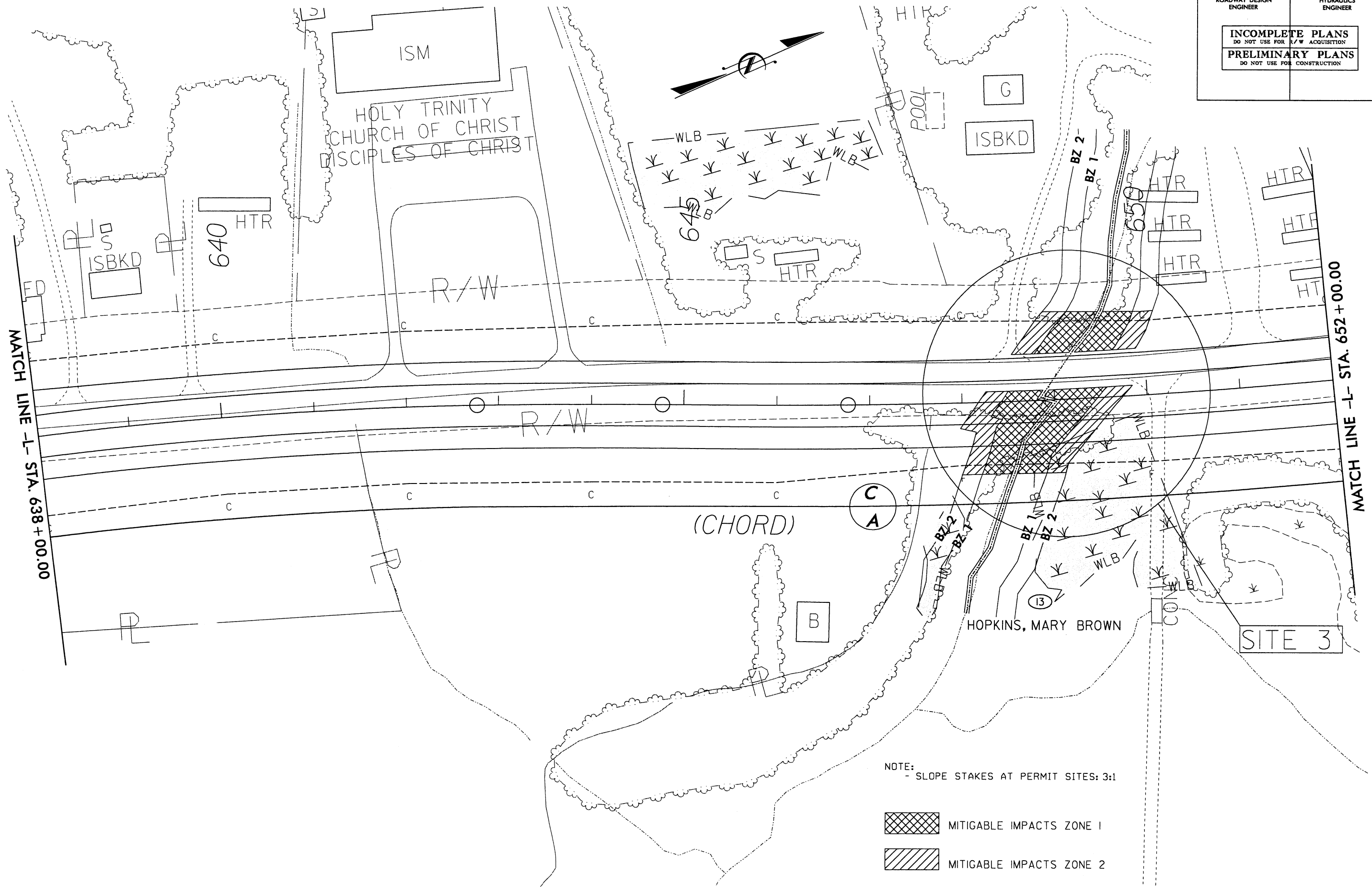
PROJECT REFERENCE NO.	SHEET NO.
R2510C	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



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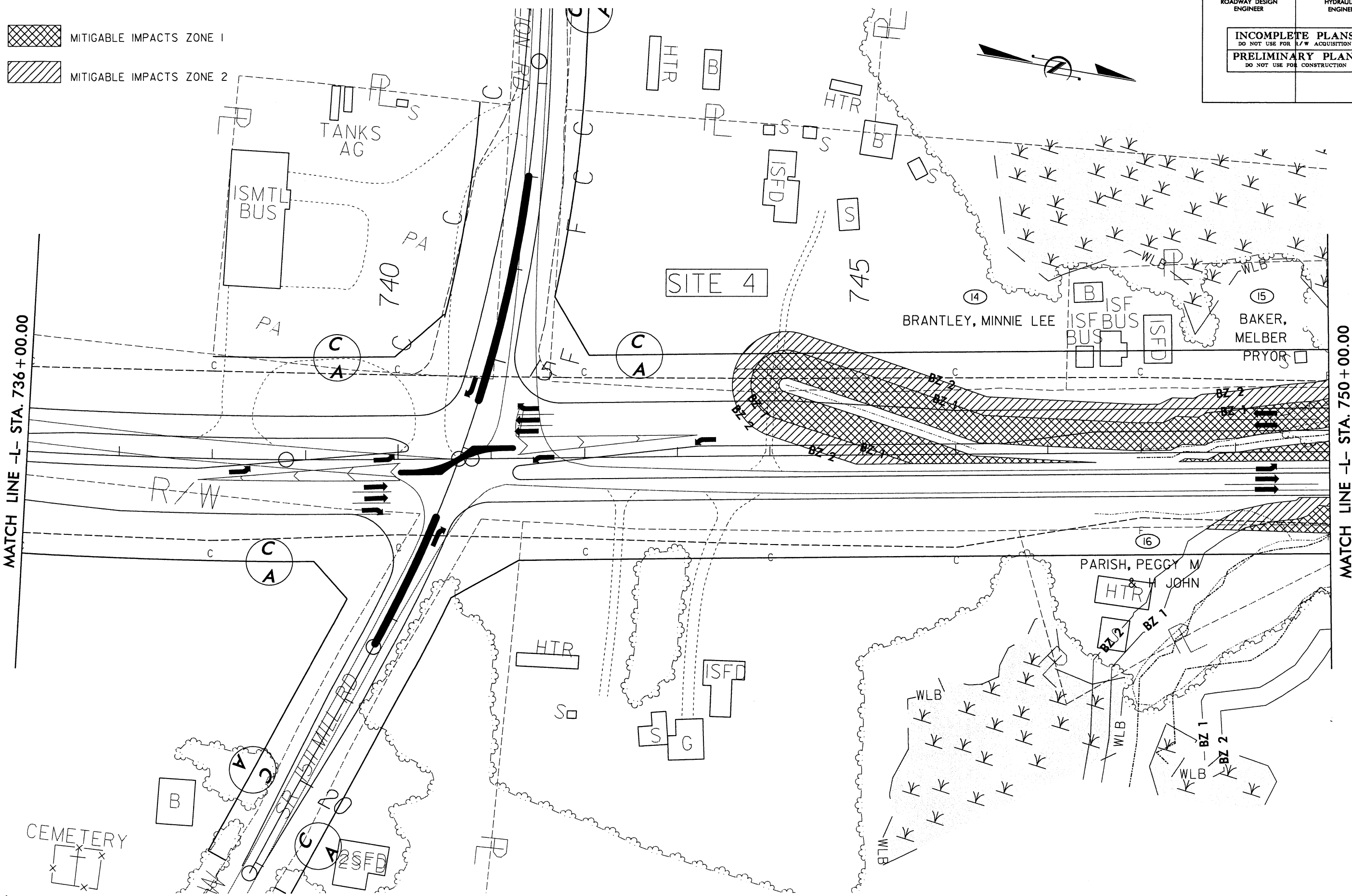
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English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2



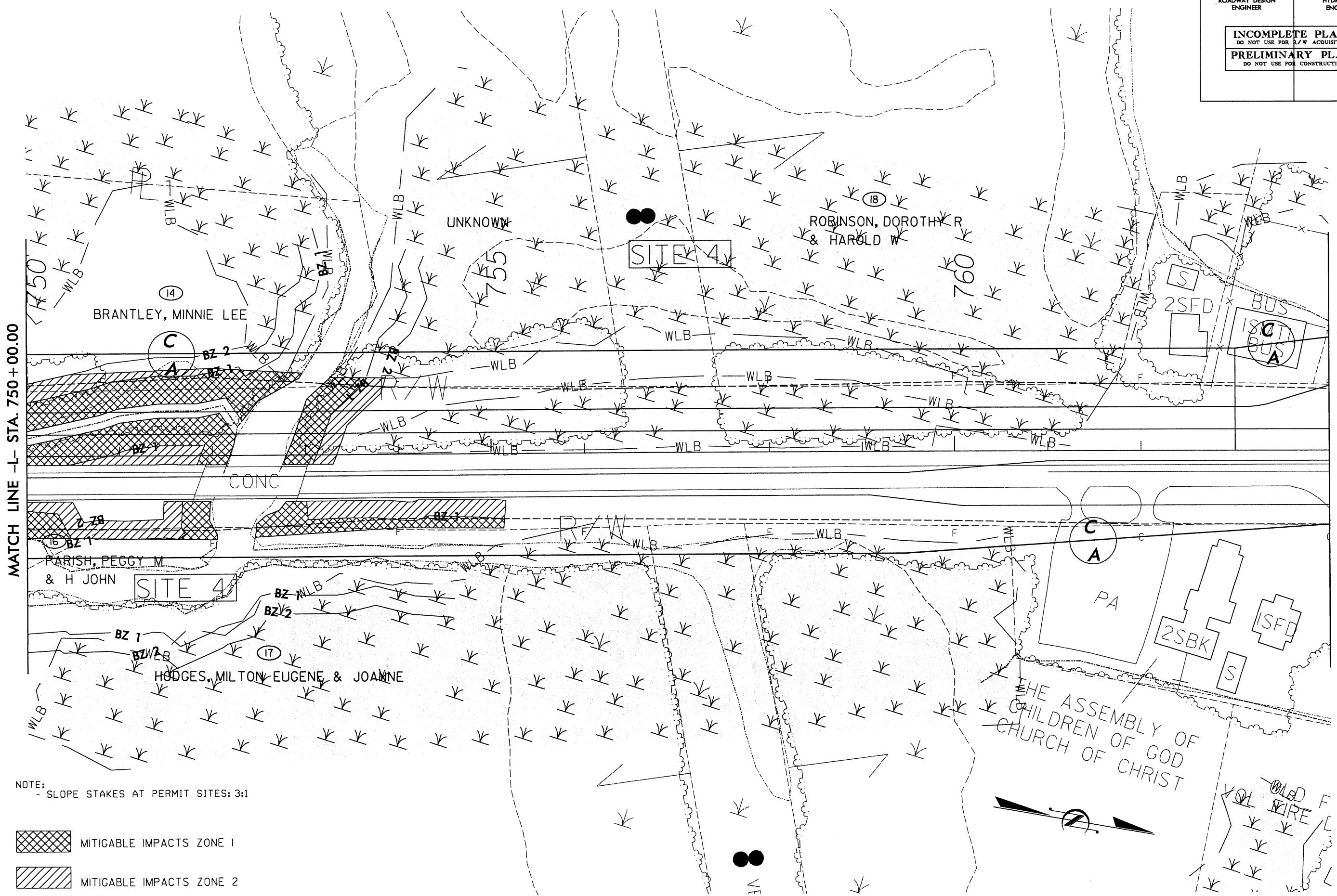
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REVISIONS

English

PROJECT REFERENCE NO. <i>R2510C</i>		SHEET NO. <i>19</i>
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

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micook



MATCH LINE -L- STA. 750+00.00

MATCH LINE -L- STA. 764+00.00

NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

English

PROJECT REFERENCE NO.

R2510C

SHEET NO.

21

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

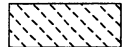
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

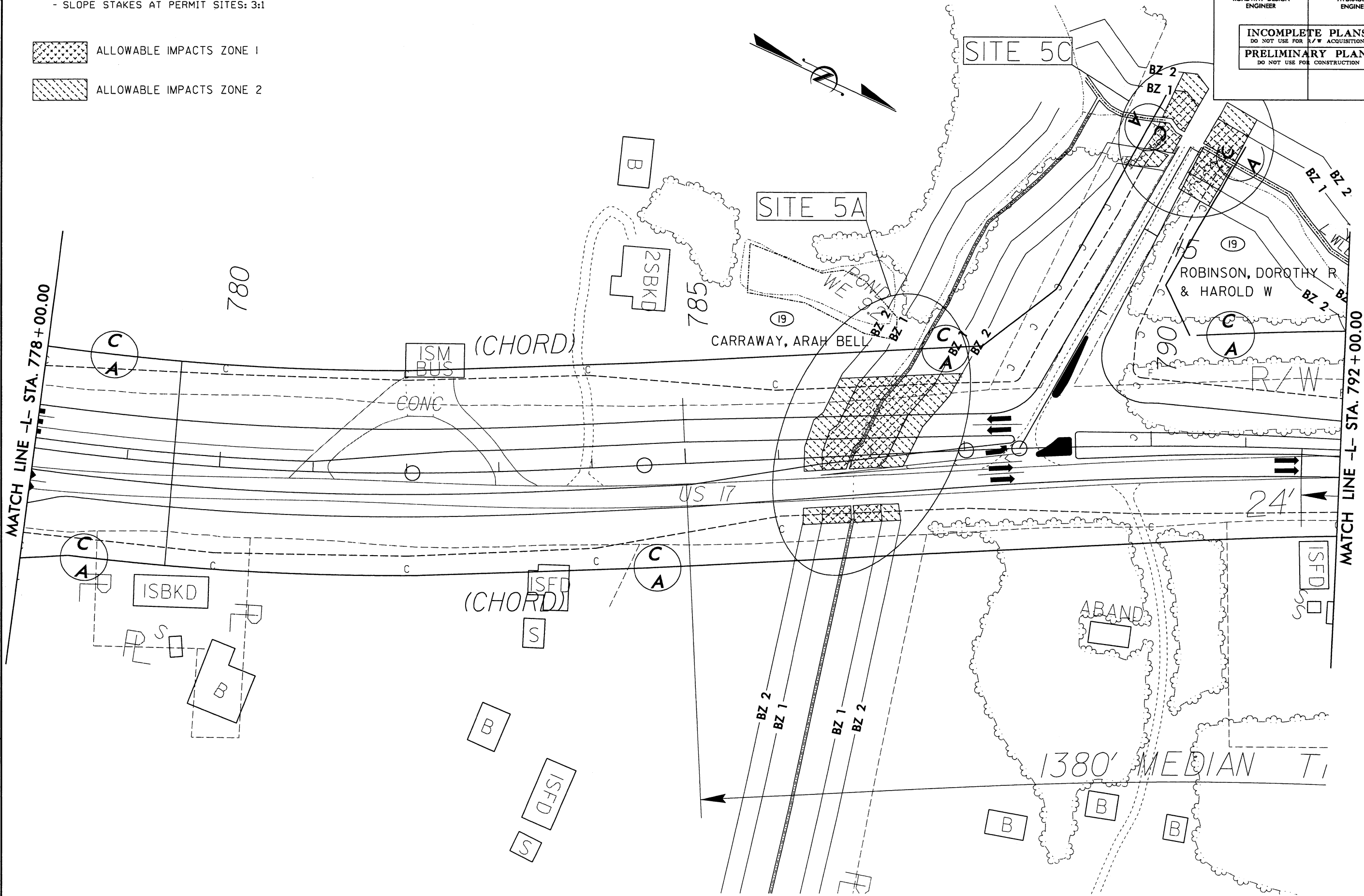
NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1



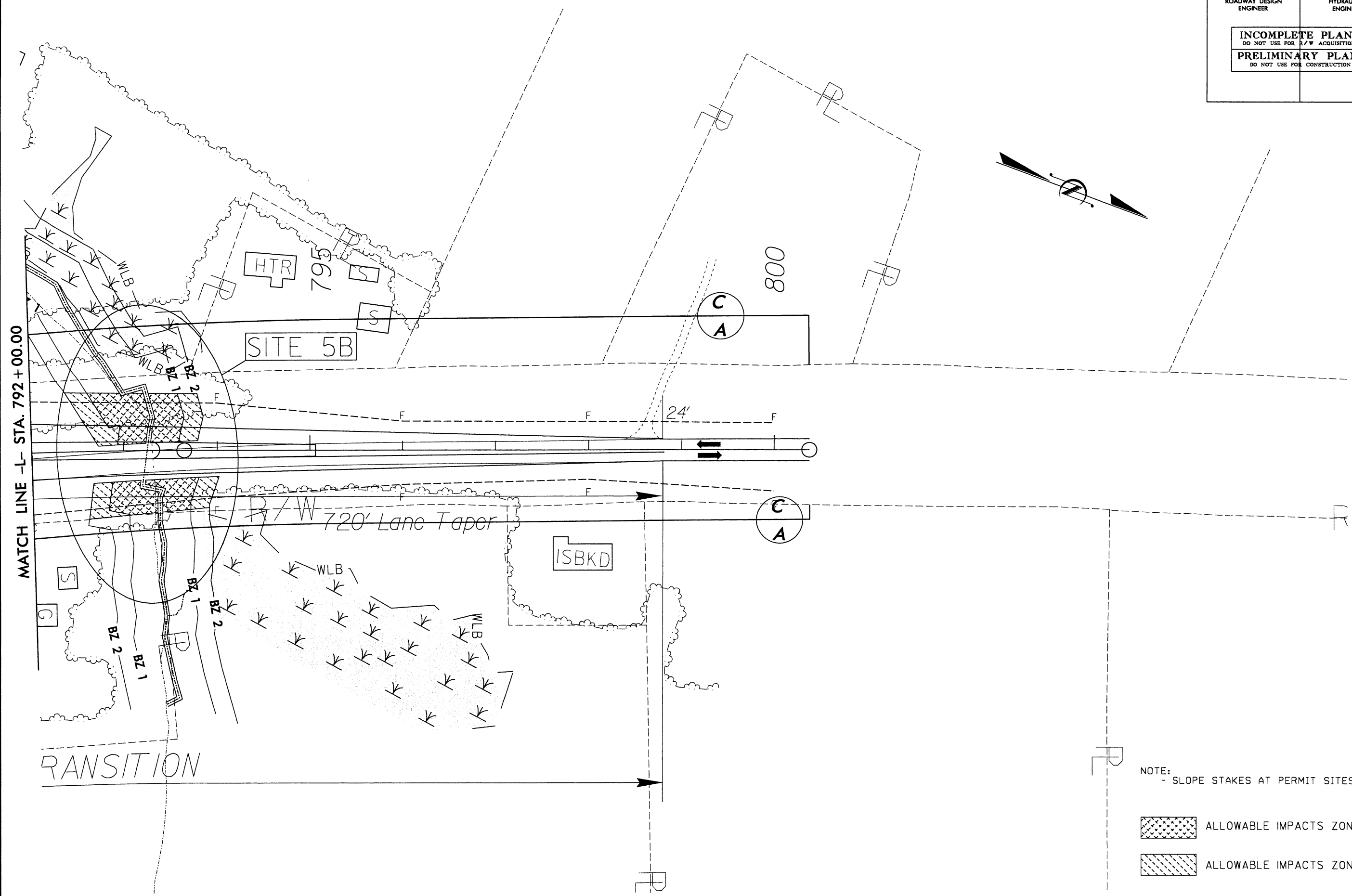
ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2



REVISIONS



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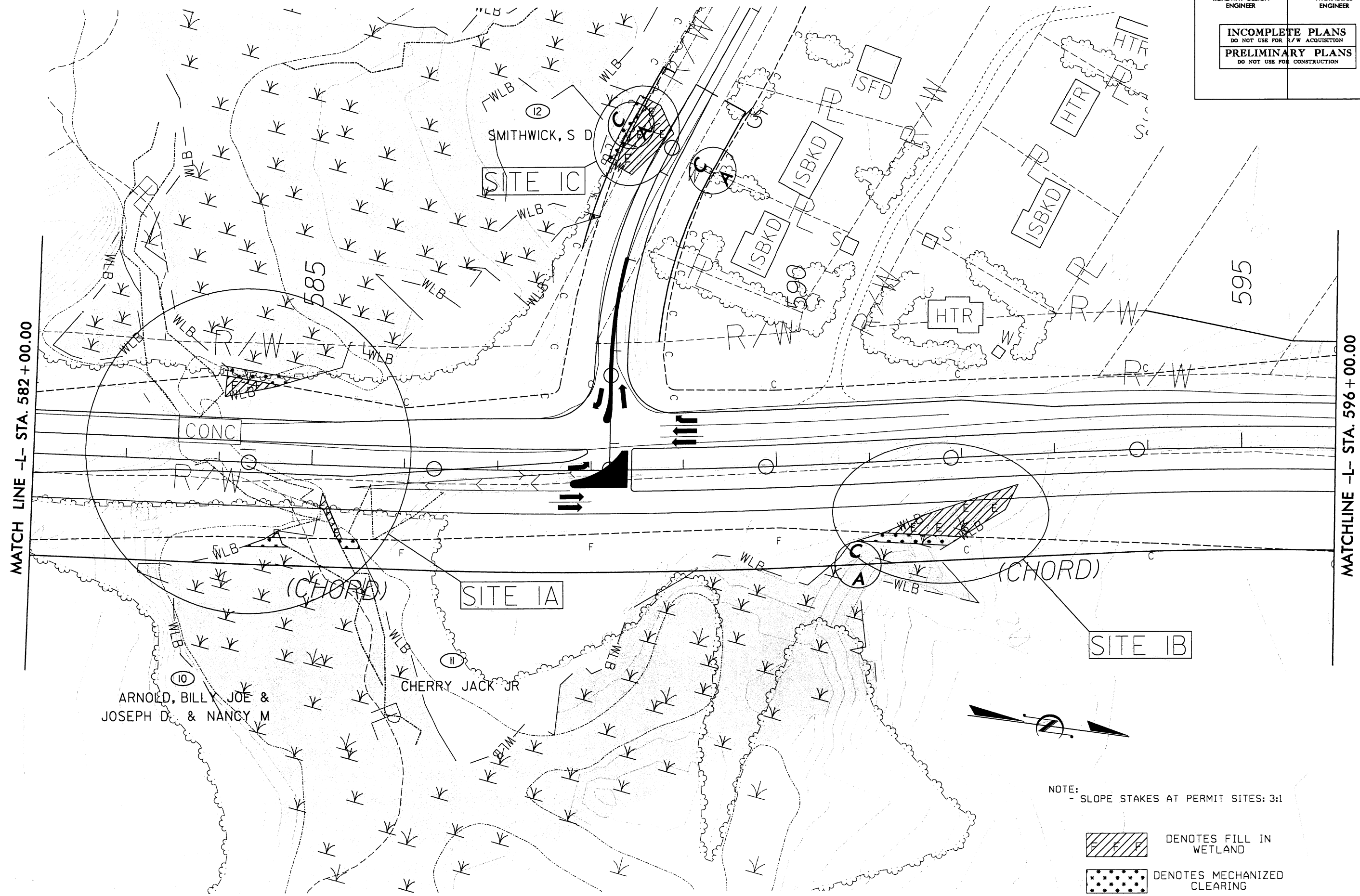
NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

ALLOWABLE IMPACTS ZONE 1


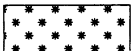
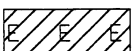
ALLOWABLE IMPACTS ZONE 2

English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

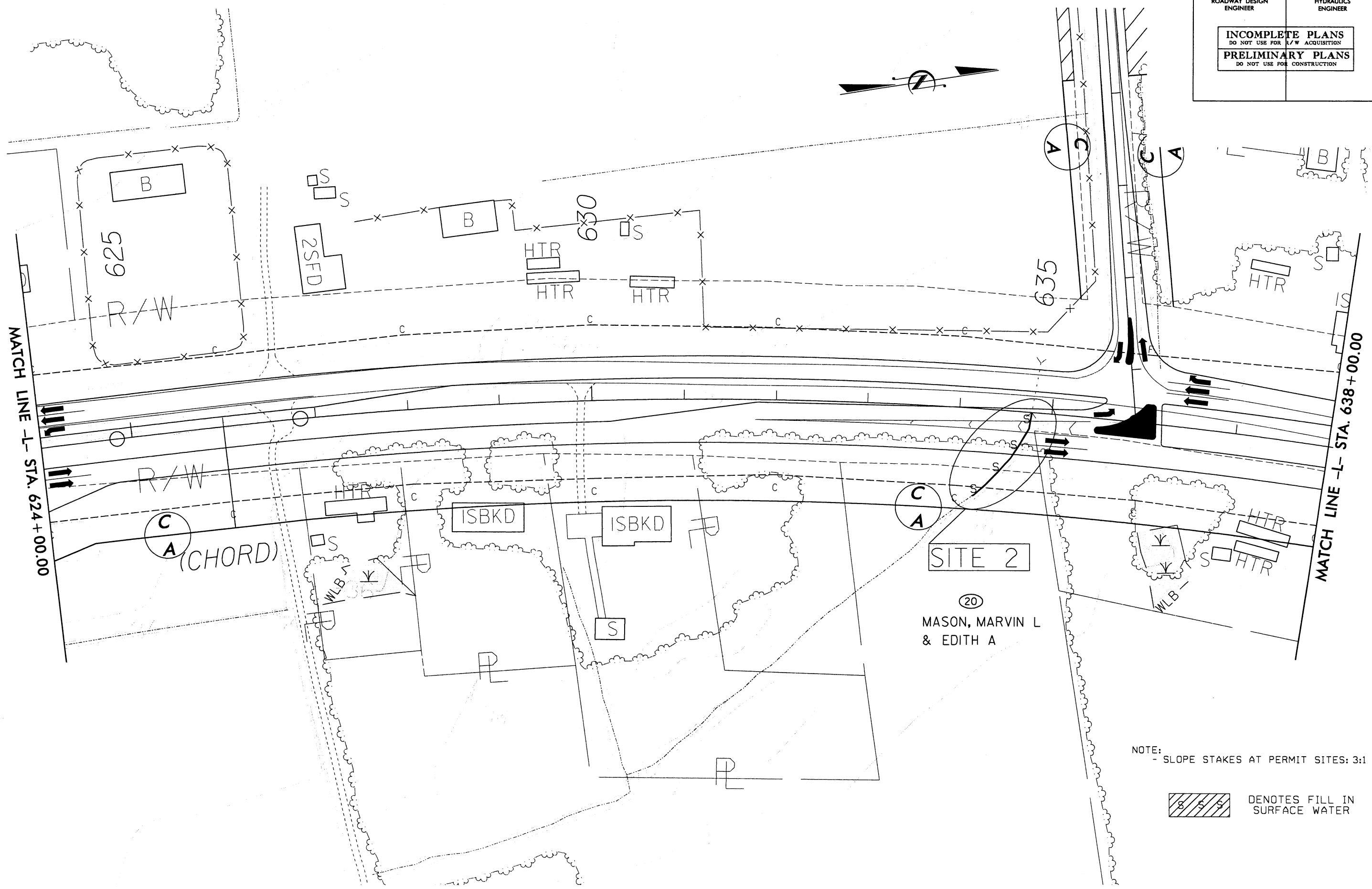
-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES EXCAVATION IN WETLAND

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REVISIONS

English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

 DENOTES FILL IN SURFACE WATER

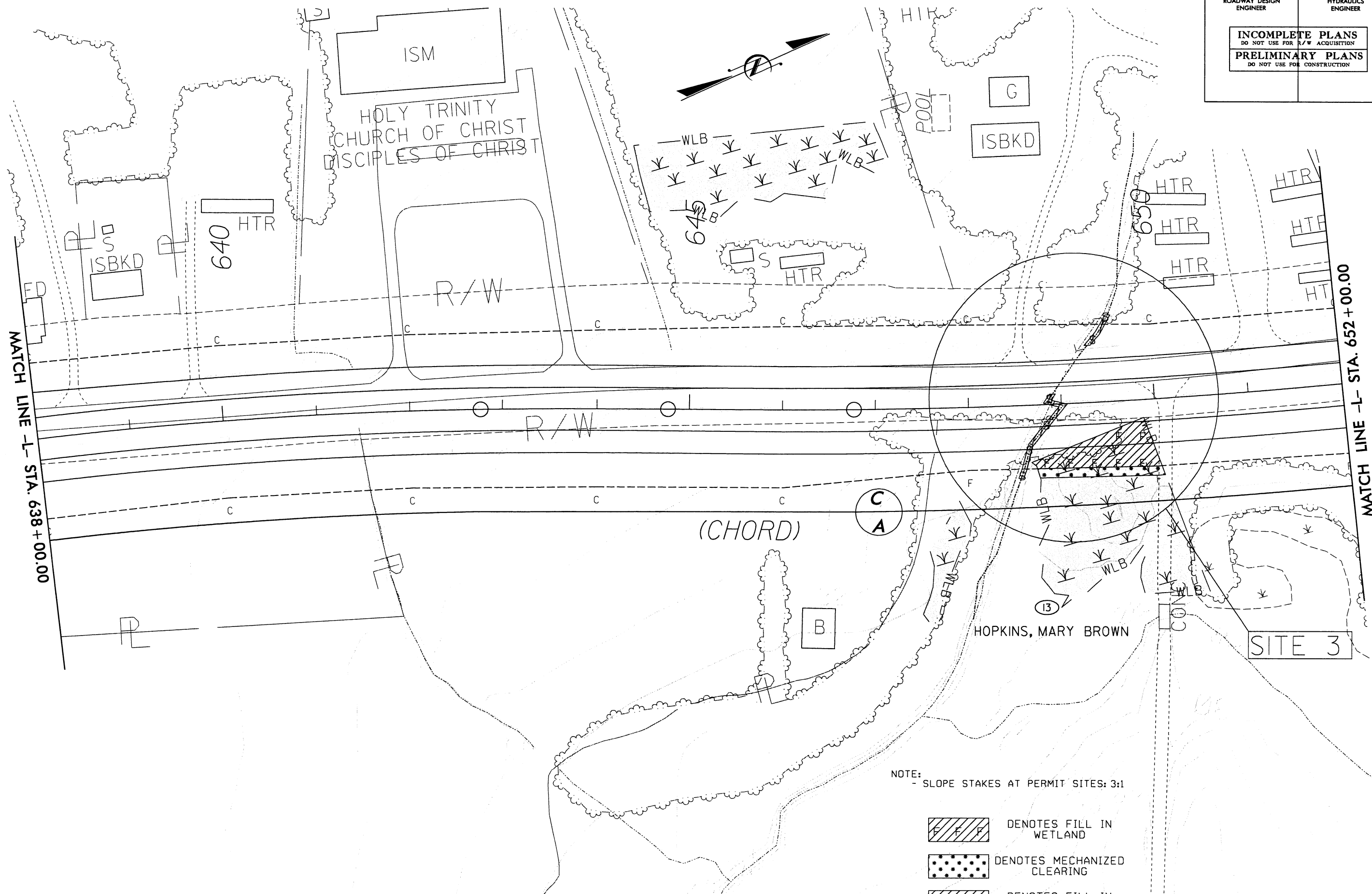
English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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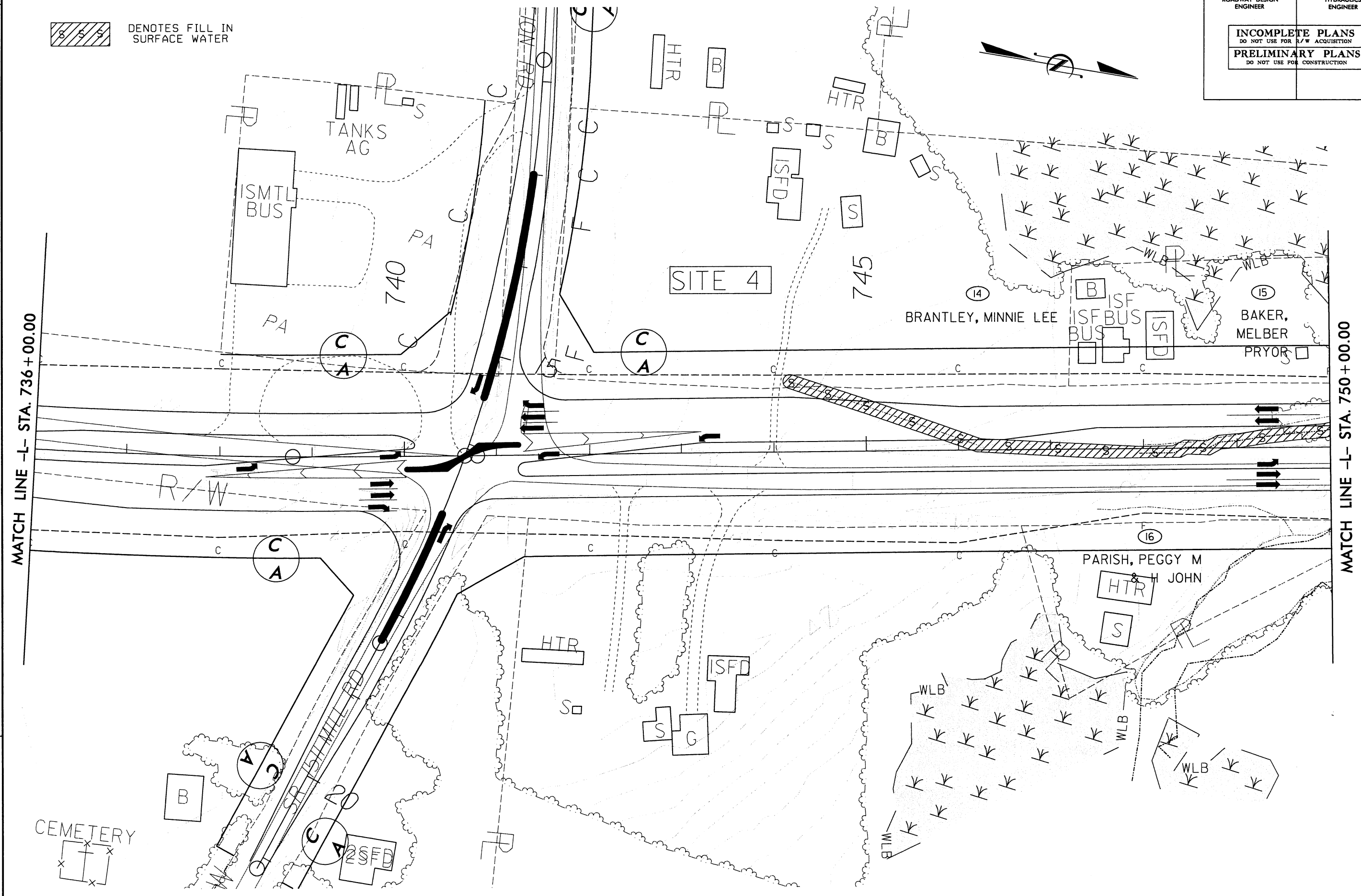
REVISIONS



PROJECT REFERENCE NO.	SHEET NO.
R2510C	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

SSS DENOTES FILL IN SURFACE WATER

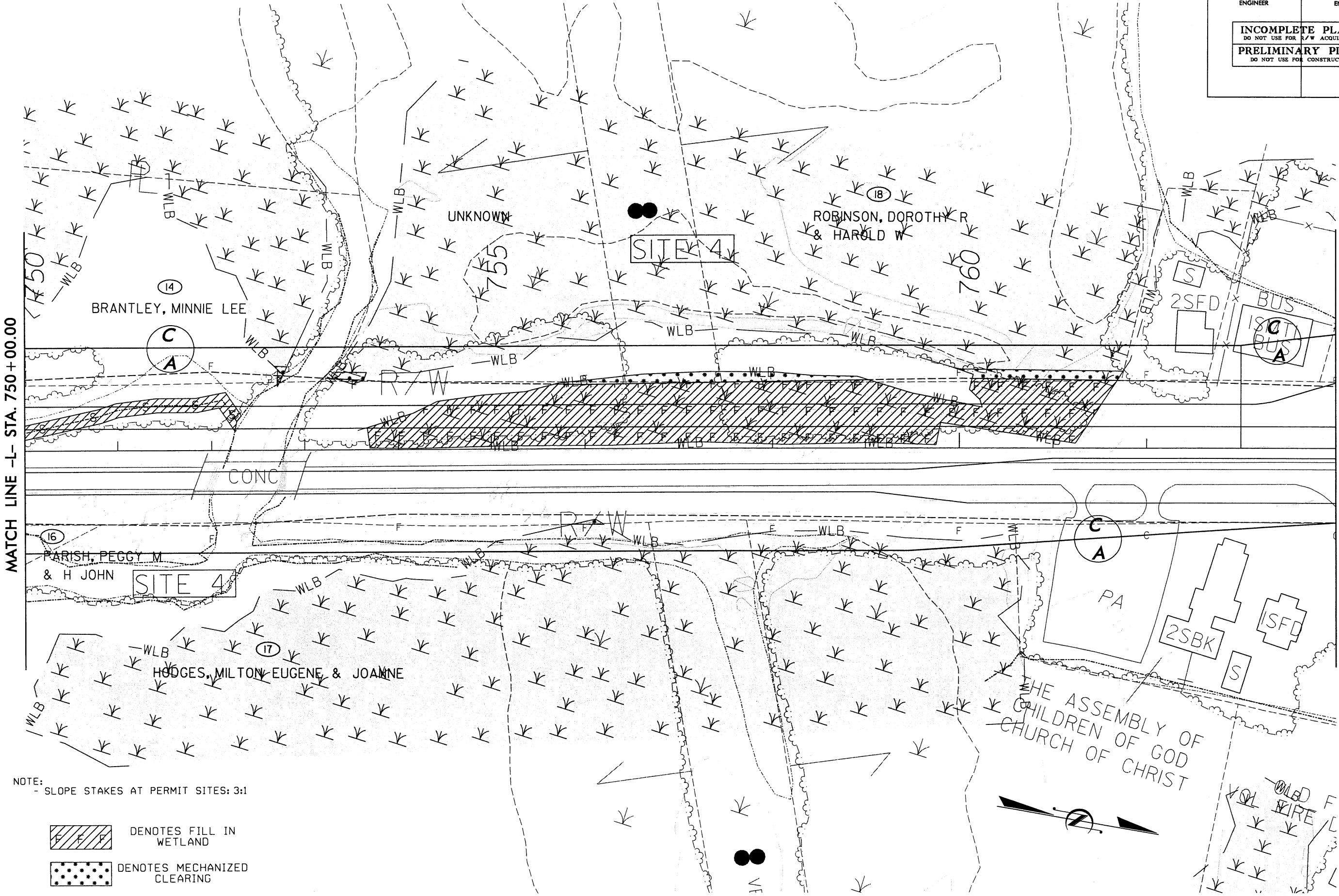


REVISIONS

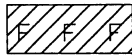
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English

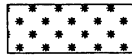
PROJECT REFERENCE NO.	SHEET NO.
R2510C	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



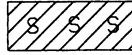
NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING



DENOTES FILL IN SURFACE WATER

REVISIONS

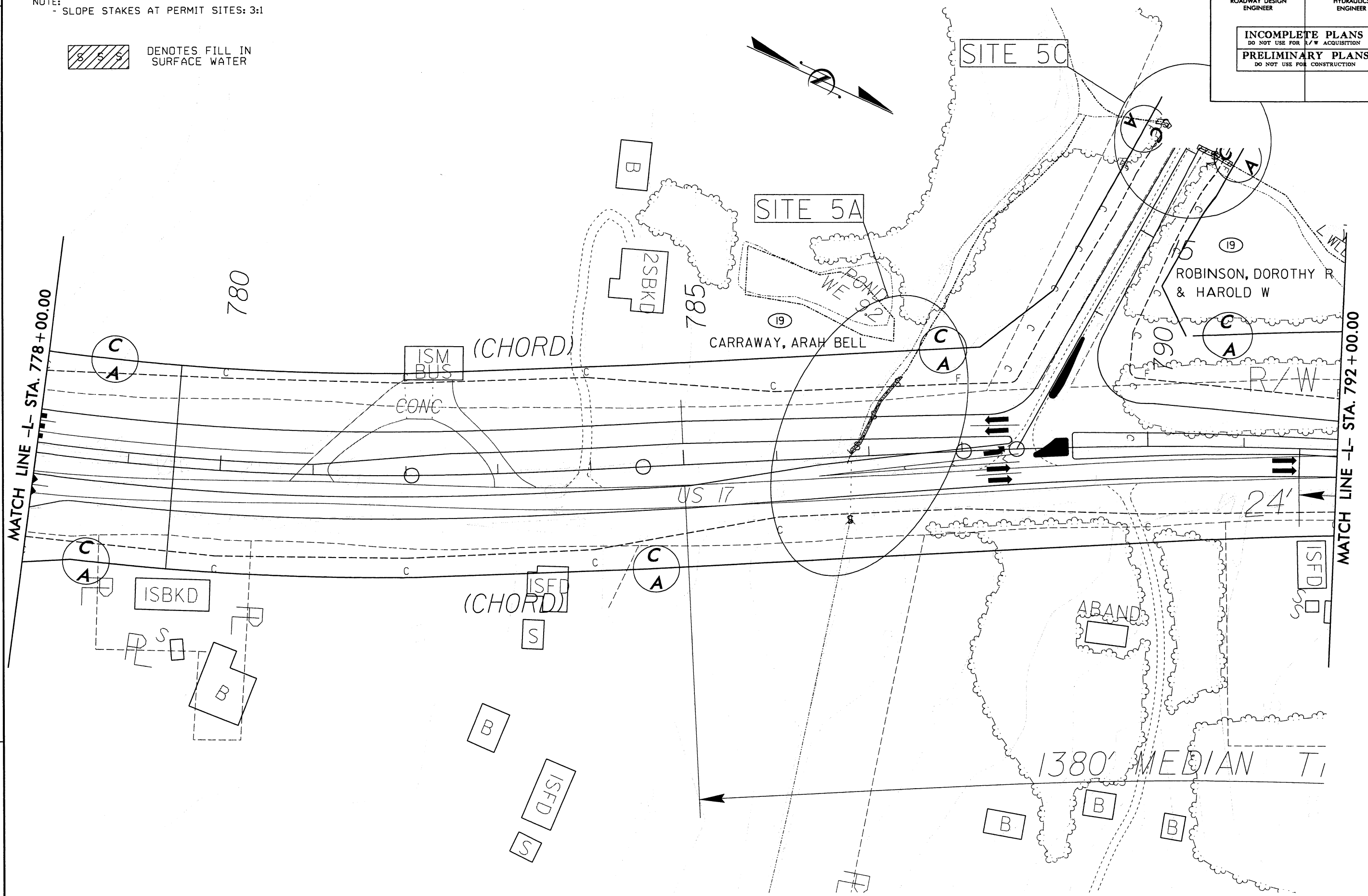
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English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

SSS DENOTES FILL IN SURFACE WATER



REVISIONS

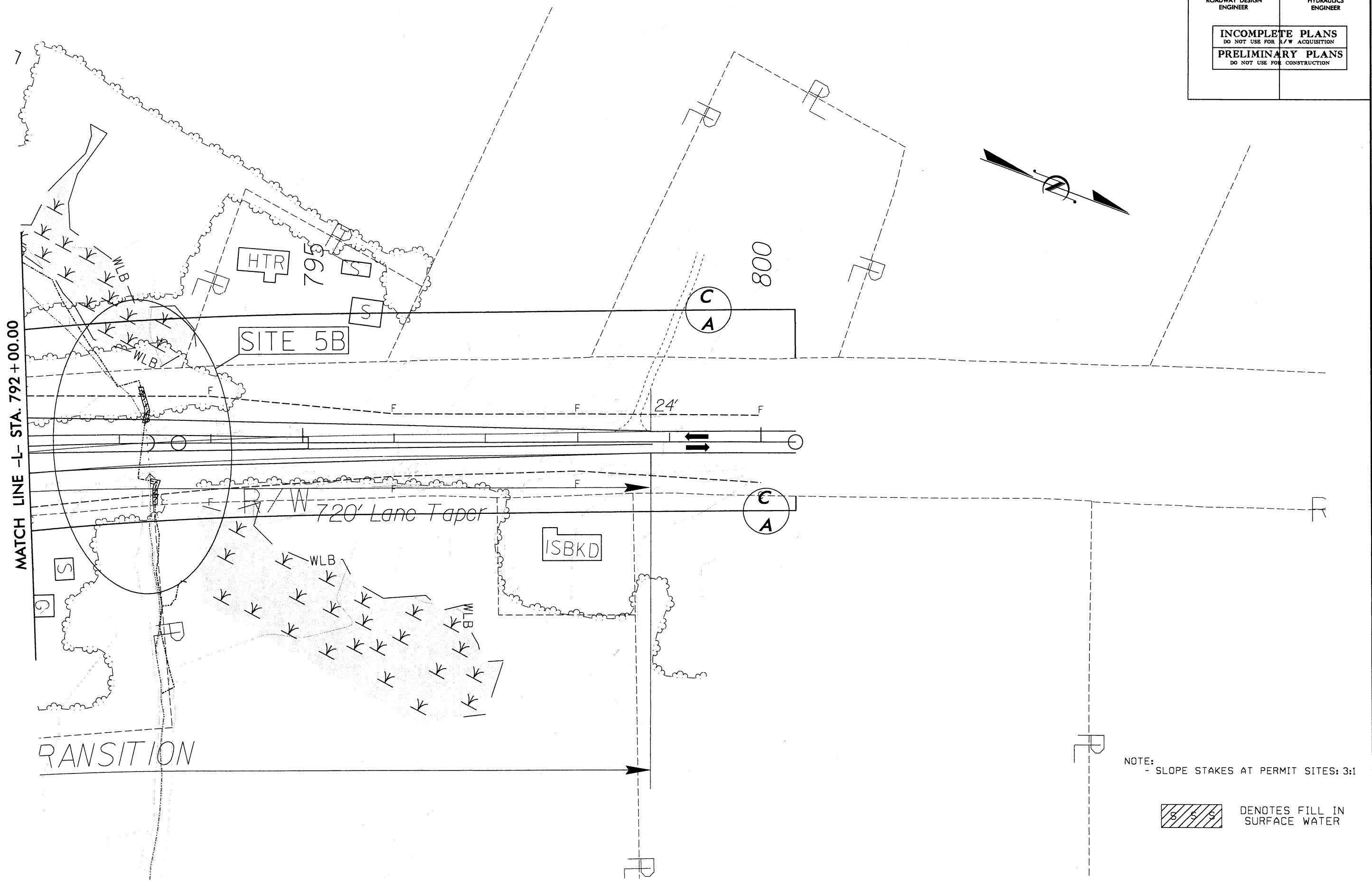
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mcook

English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

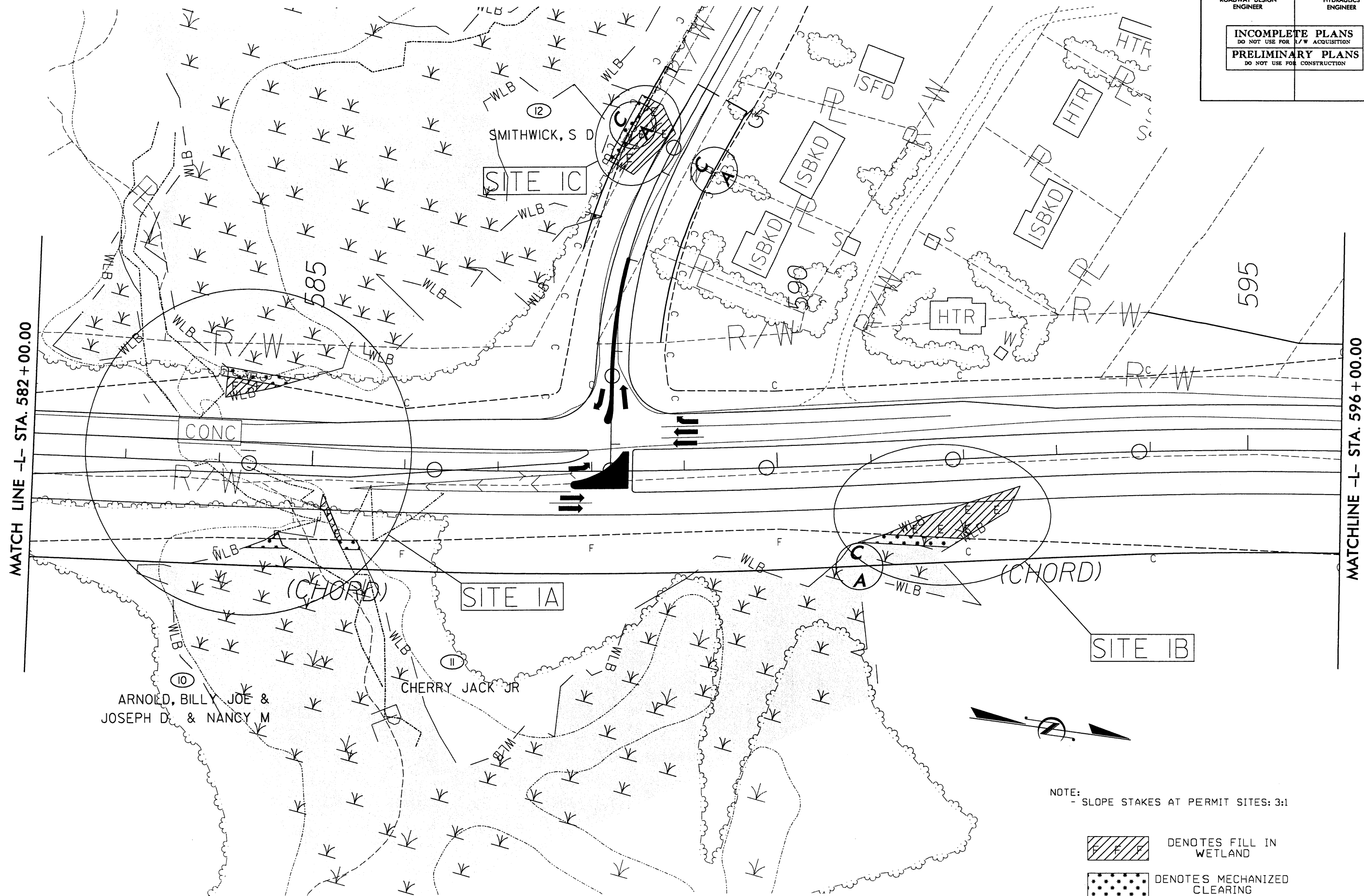
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REVISIONS



English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES EXCAVATION IN WETLAND

8/17/99

REVISIONS

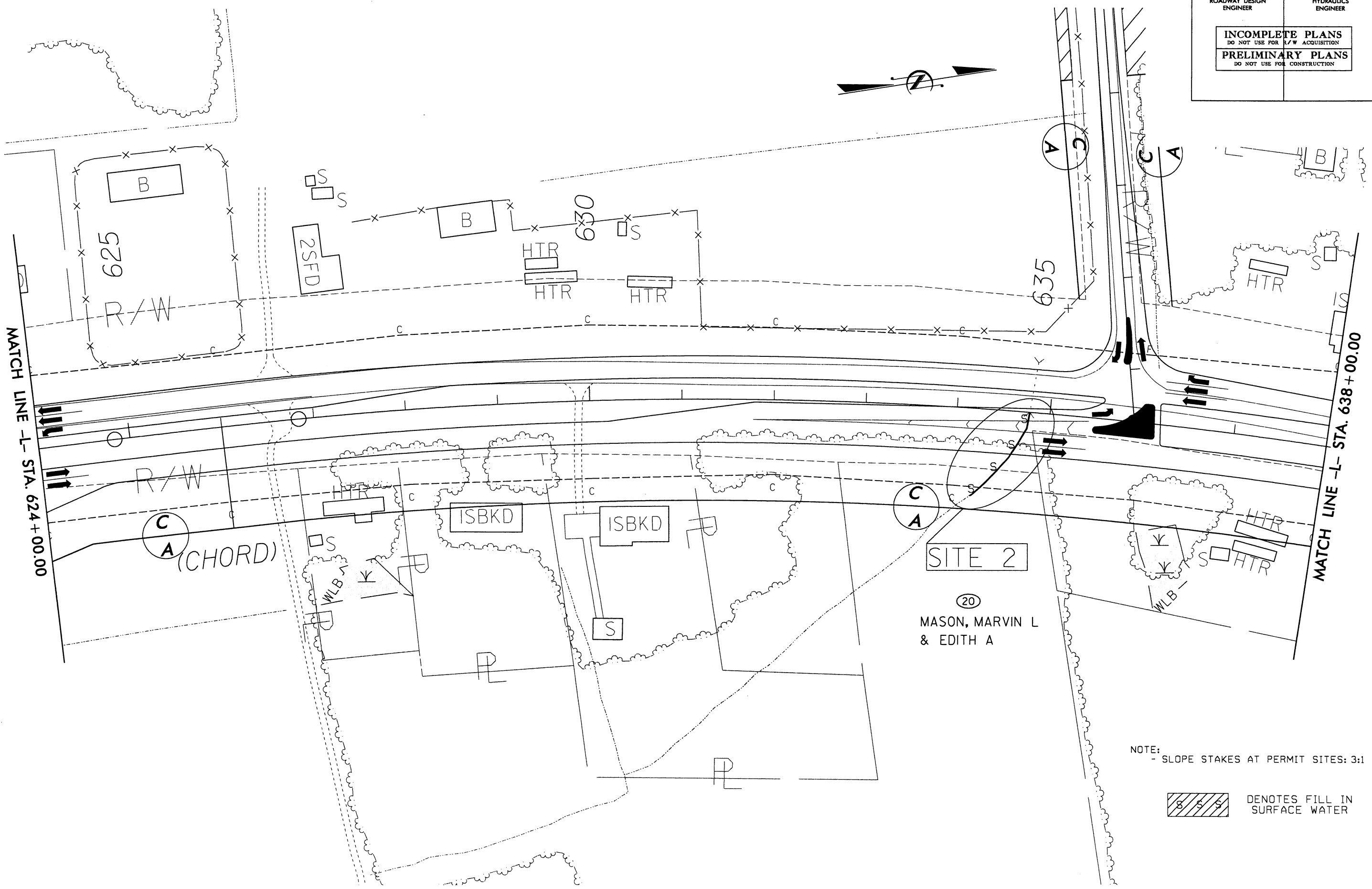
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English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

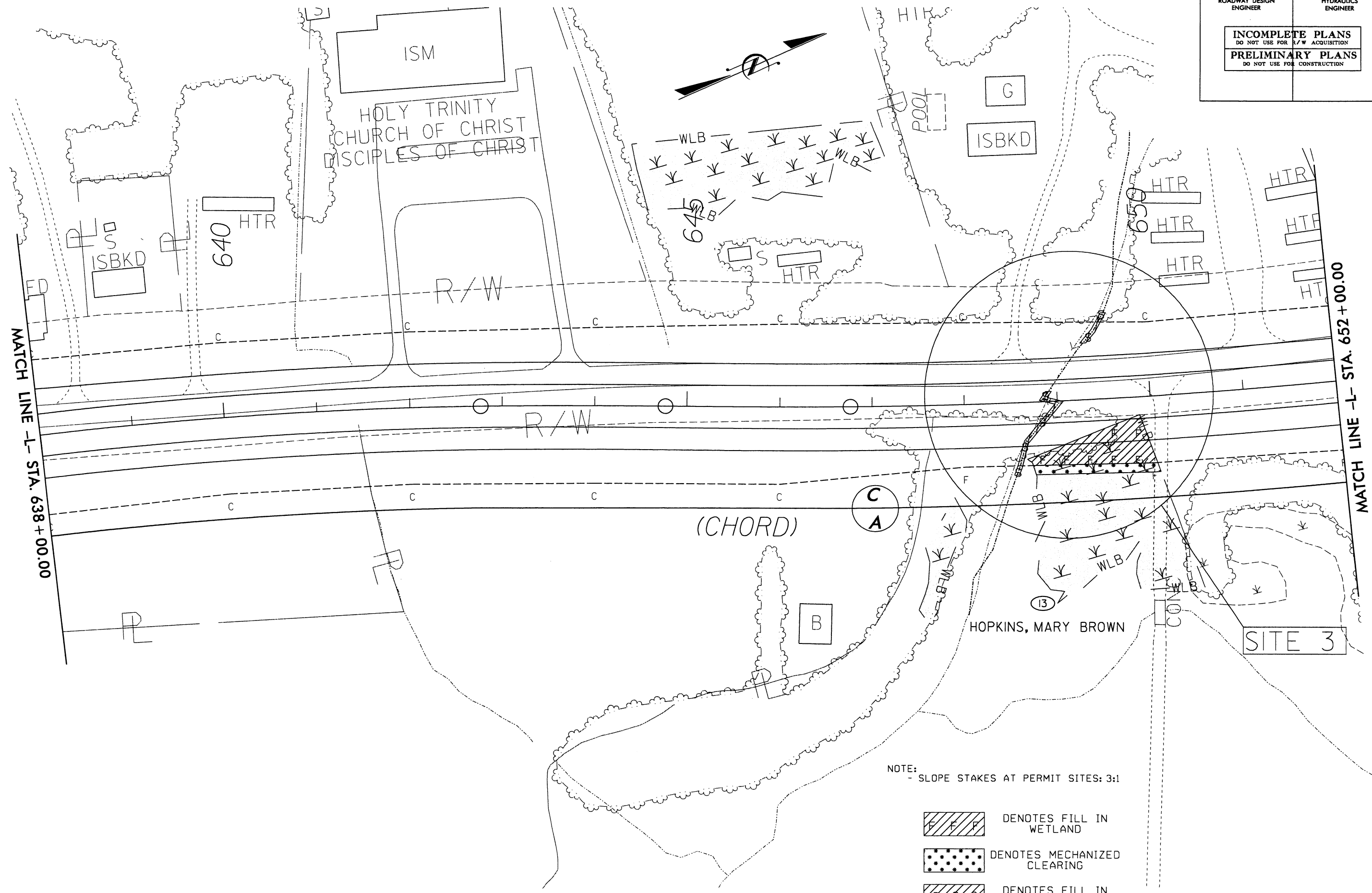
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REVISIONS

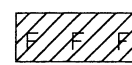
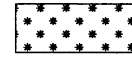
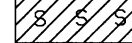


English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	II
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

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

REVISIONS

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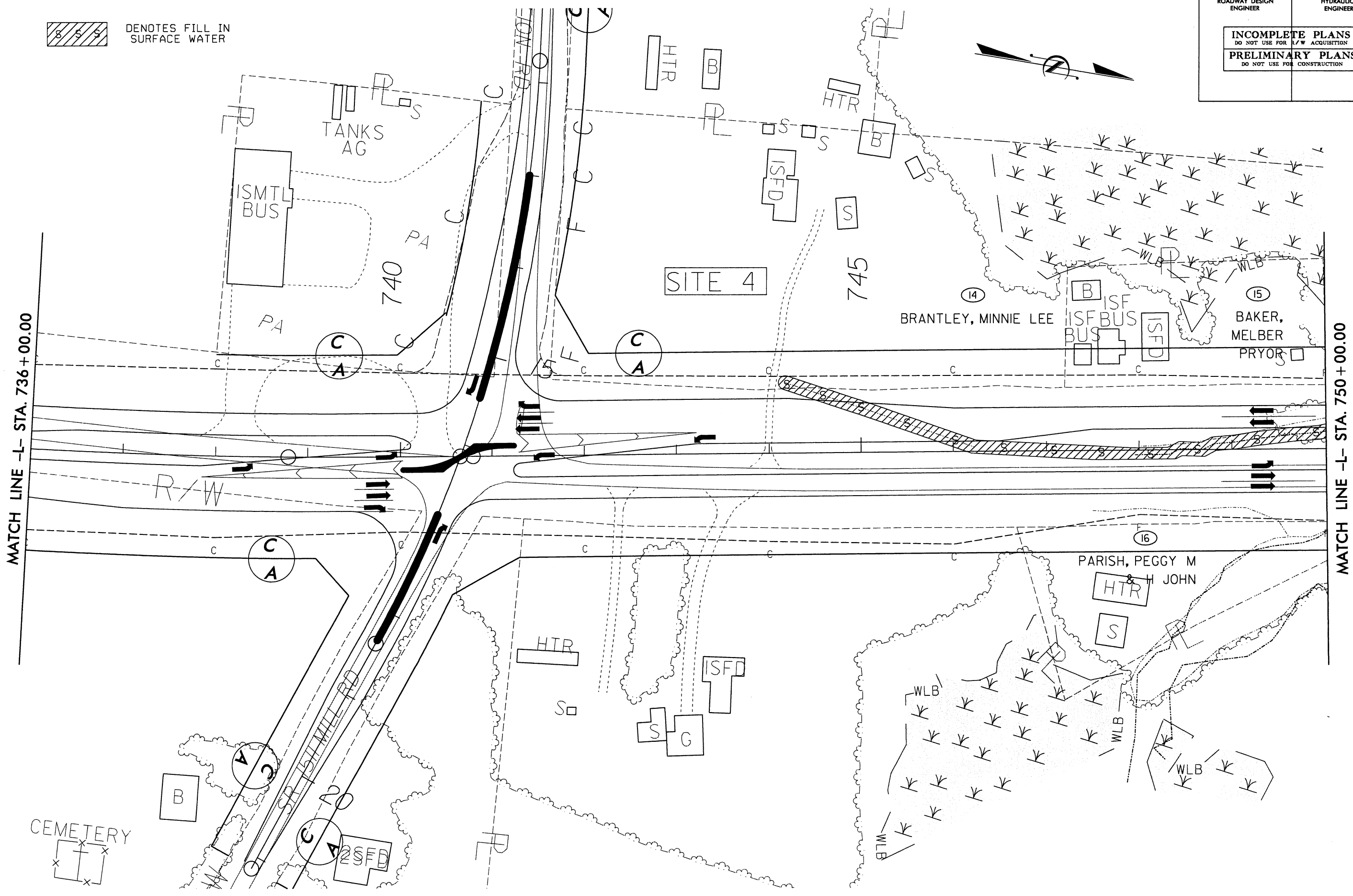
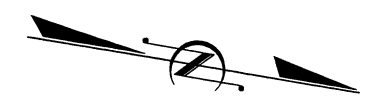
8/17/99

English

PROJECT REFERENCE NO.	SHEET NO.
R2510C	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

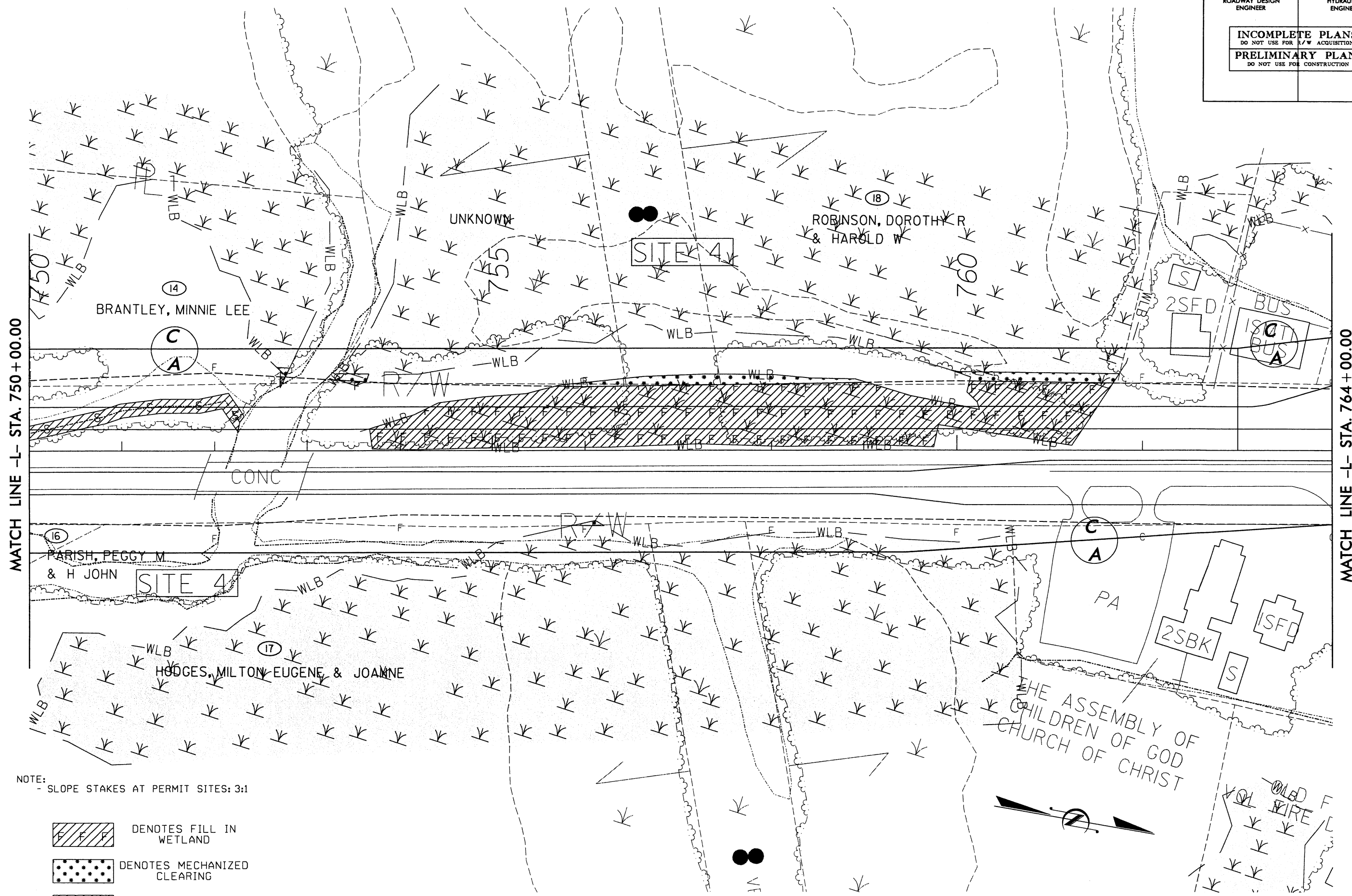
NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

 DENOTES FILL IN SURFACE WATER



REVISIONS

03/15/2005
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jacob



NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

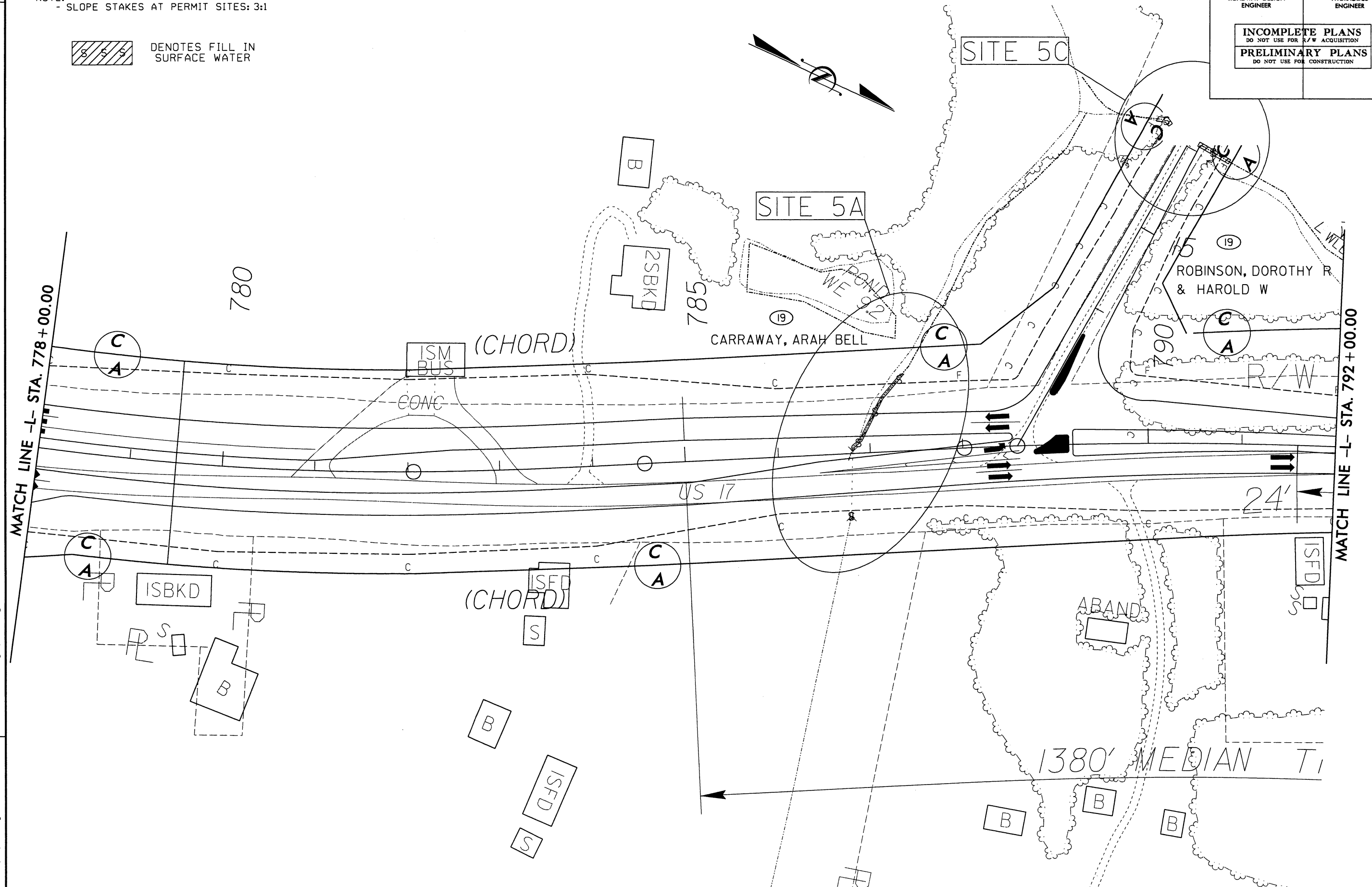
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN SURFACE WATER

8/17/99

REVISIONS

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 DENOTES FILL IN
SURFACE WATER



REVISIONS

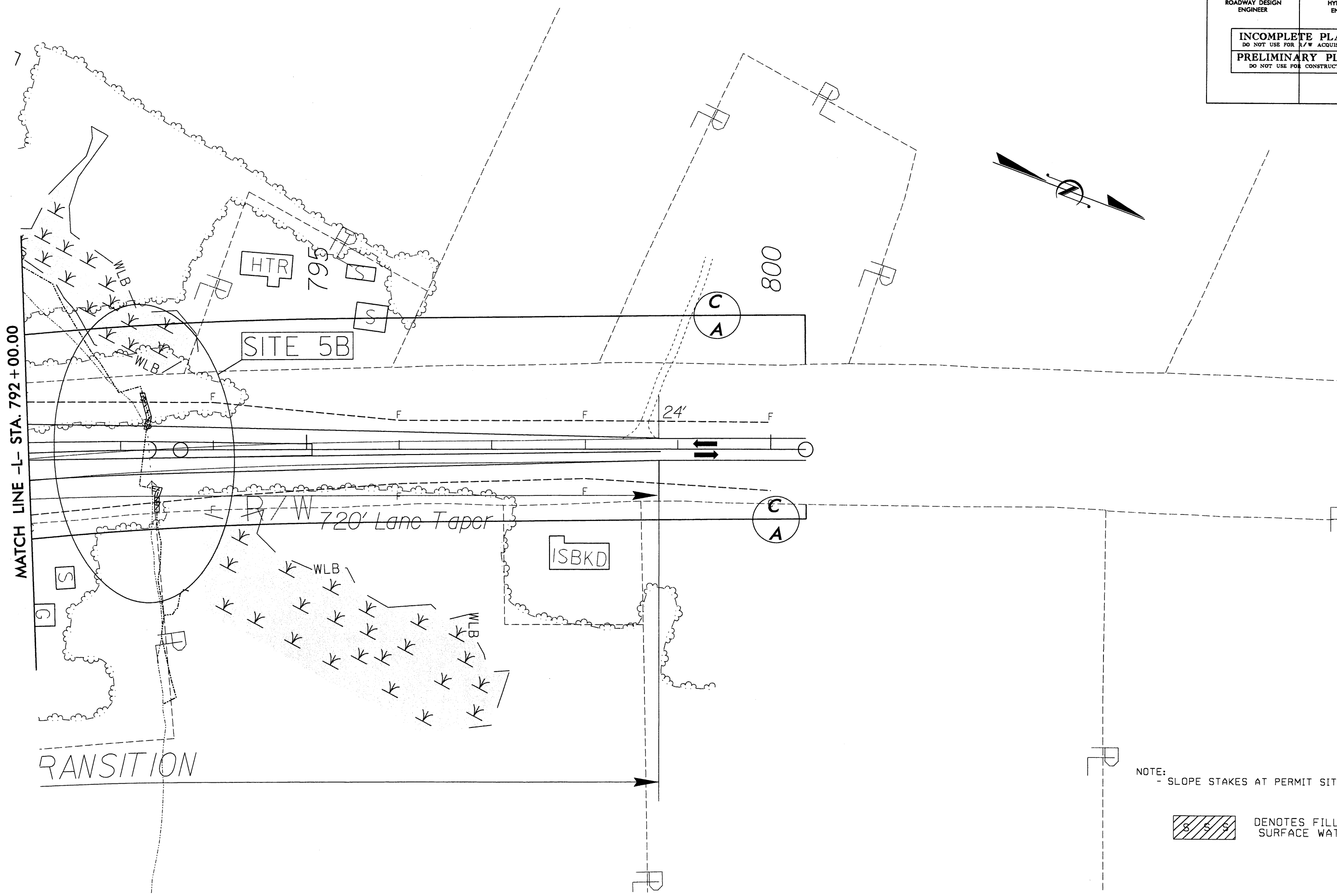
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mgbook

English

PROJECT REFERENCE NO.		SHEET NO.	
R2510C		22	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS</div> <div>DO NOT USE FOR R/W ACQUISITION</div>			
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>			

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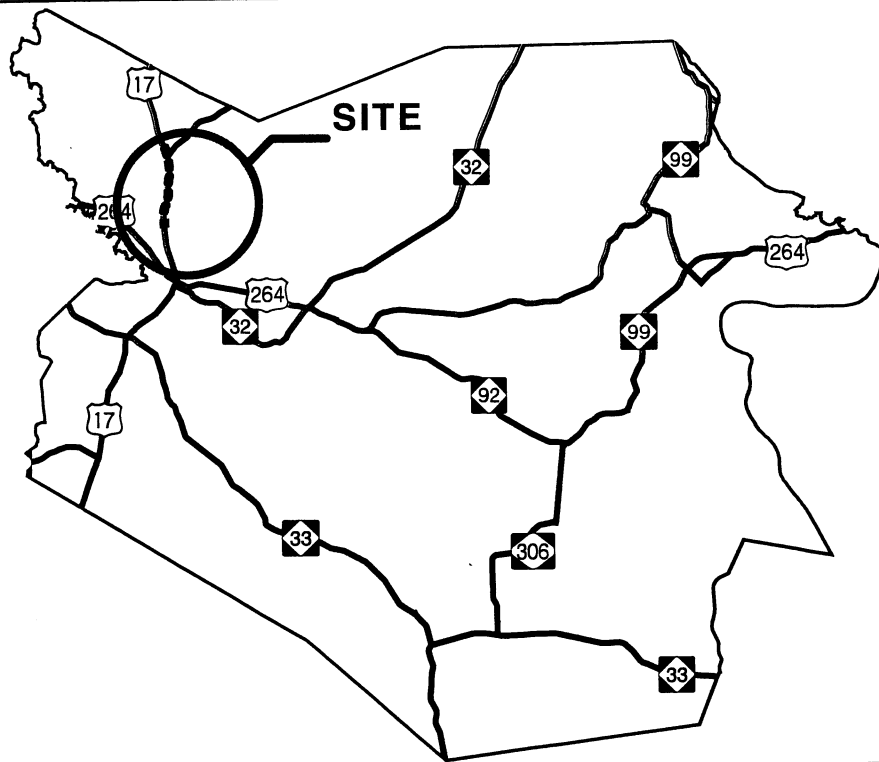
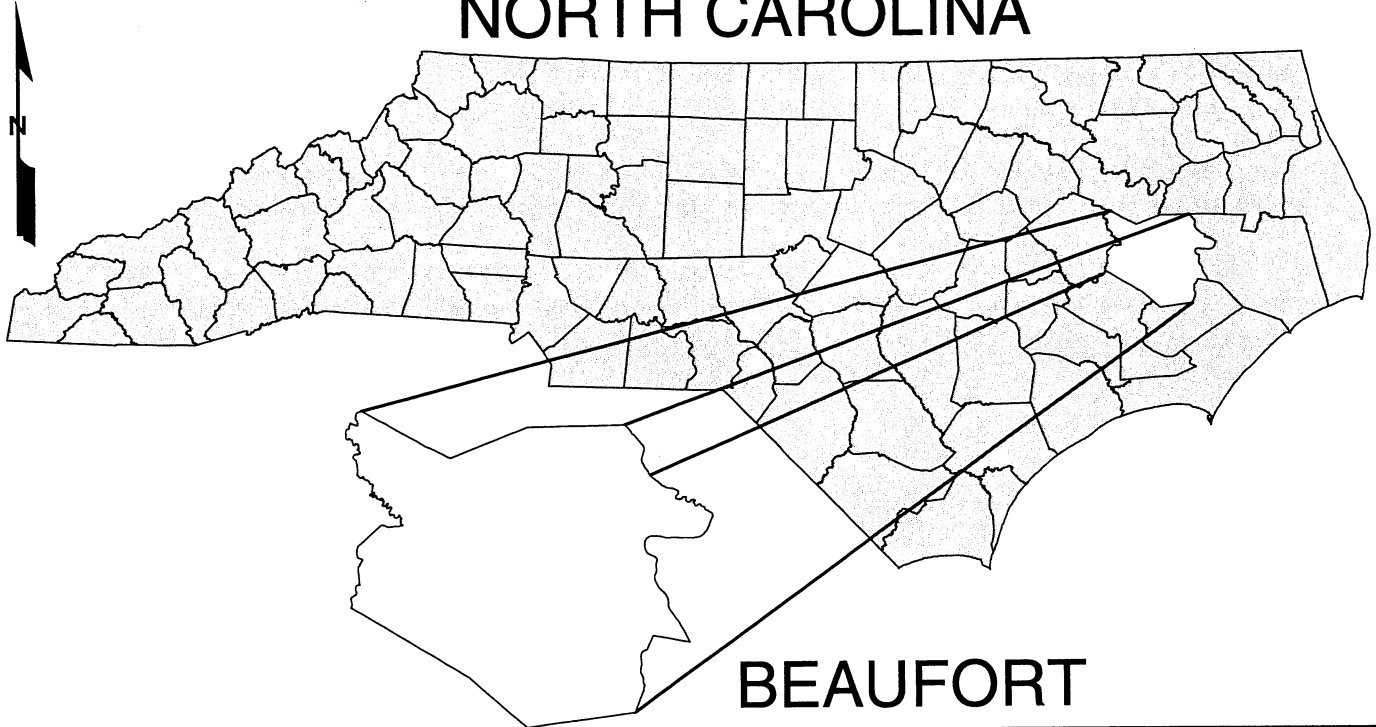
REVISIONS



NOTE:
- SLOPE STAKES AT PERMIT SITES: 3:1

DENOTES FILL IN SURFACE WATER

NORTH CAROLINA

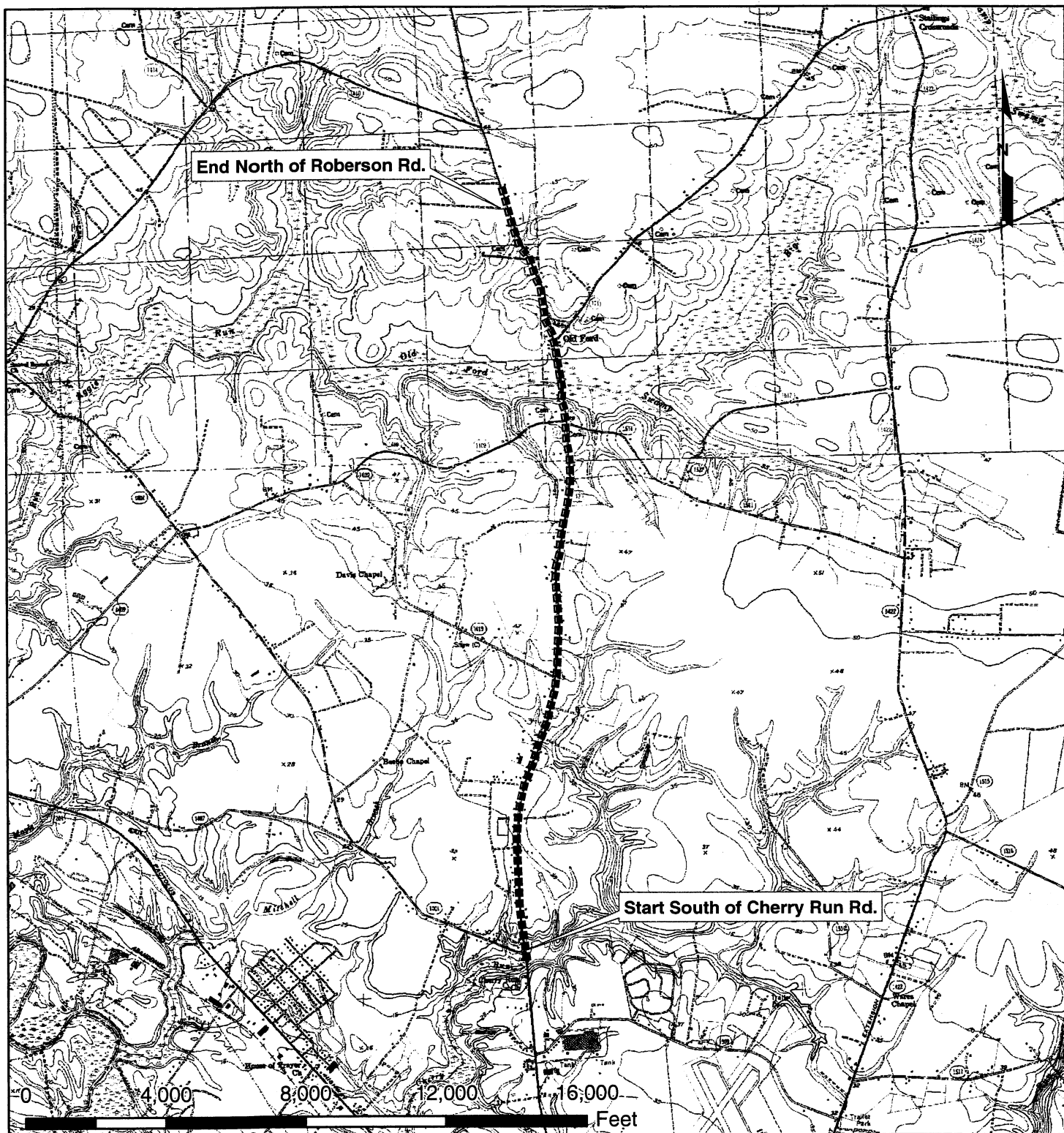


VICINITY MAPS

NCDOT

**DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)
US 17 BYPASS**

3/11/05



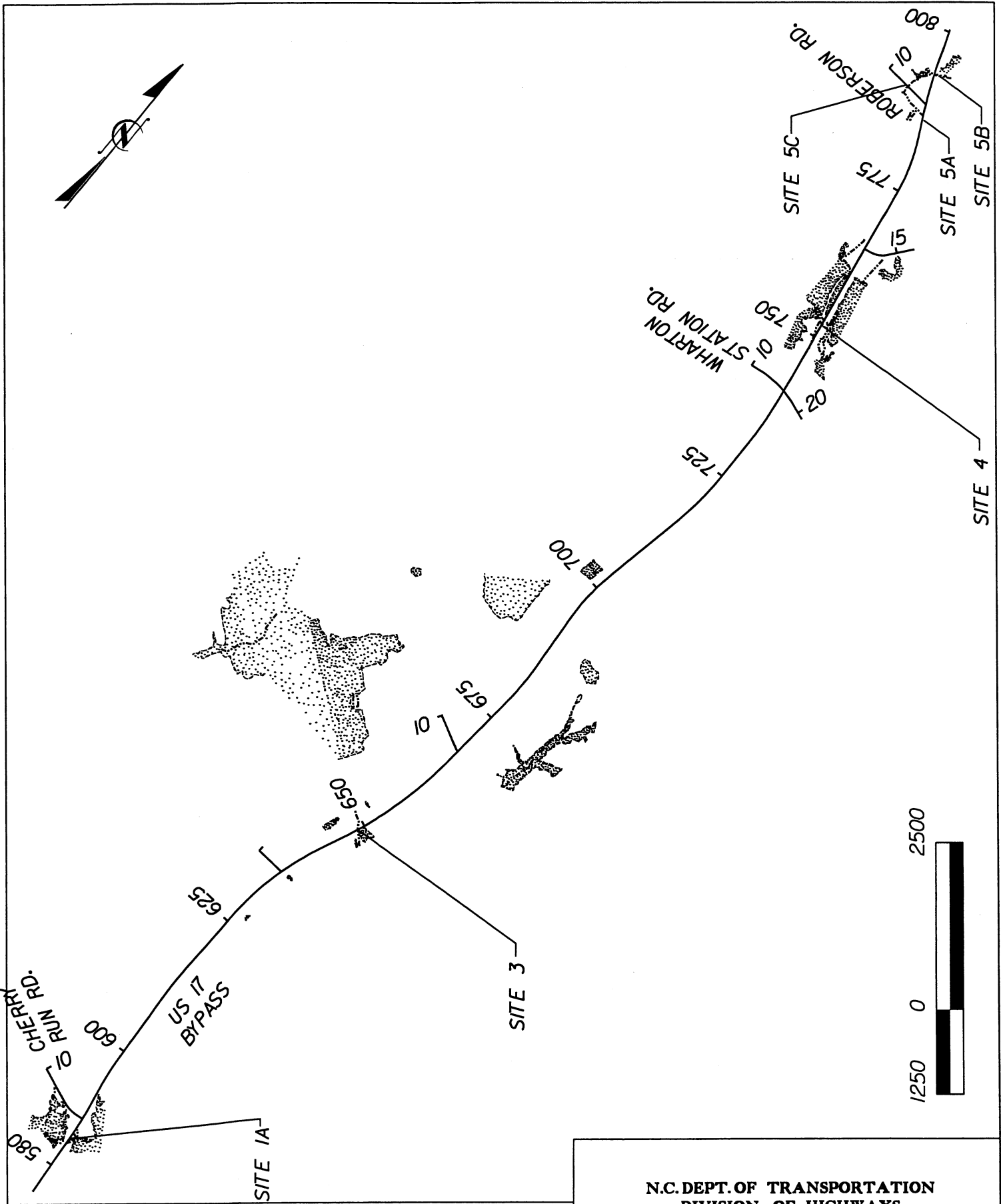
1 inch equals 4,000 feet

LOCATION

NCDOT

**DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)
US 17 BYPASS**

3/11/05



N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
BEAUFORT COUNTY

PROJECT 34440.1.1 (R-2510C)

US 17 BYPASS

03/11/05

PROP. NO.	PROPERTY OWNER NAME	PROP. OWNER MAILING ADDRESS
10	ARNOLD, BILLY JOE & JOSEPH D. A& NANCY M.	2125 US 17 HWY N, WASHINGTON, NC 27889
11	CHERRY, JACK JR	707 OAKWOOD AVE SOUTH, BRANDON, FL 33511
13	HOPKINS, MARY BROWN	952 WHARTON STATION RD, WASHINGTON, NC 27889
14	BRANTLEY, MINNIE LEE	5595 HWY 17 N, WASHINGTON, NC 27889
15	BAKER, MELBER PRYOR	1160 CARROW ROAD, CHOCOWINITY, NC 27817-9790
16	PARISH, PEGGY M & H JOHN	5666 US HWY 17 N, WASHINGTON, NC 27889
17	HODGES, MILTON EUGENE & JOANNE	5548 US HWY 17 N, WASHINGTON, NC 27889
19	CARRAWAY, ARAH BELL	6361 US HWY 17 N, WASHINGTON, NC 27889
<p>N.C. DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS</p> <p>BEAUFORT COUNTY PROJECT: 34440.1.1 (R-2510C)</p> <p>3/8/2005</p>		

BUFFER IMPACTS SUMMARY

			WETLANDS IN BUFFER	
Site	Station	ZONE 1 (ft ²)	ZONE 2 (ft ²)	
1A	L- 582+75-585+75	1477.4	453.3	
3	L- 648+50-650+15	521.8	994.7	
4	L- 743+50-761+90	434.6	2.4	
				1390.3
				2433.9

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 344401.1 (R-2510C)

3/22/2005

