



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 23, 2004

US Army Corps of Engineers
Regulatory Branch
6508 Falls of the Neuse Road
Raleigh, NC 27615

ATTENTION: Mr. Eric Alsmeyer
NCDOT Coordinator

Dear Sir:

SUBJECT: **Application for Nationwide Permit 14** for the relocation of Service Road (SR 1126) near the intersection of US 15-501 and Garrett Road (SR 1116) and addition of a left turn lane from southbound US 15-501 onto Garrett Road with an additional westbound receiving lane on Garrett Road in Durham County. State Project No. 9.8059077 T.I.P. No. U-4009: \$475.00 Debit work order 9.8059077, WBS Element 35010.1.1

The NCDOT proposes to relocate Service Road (SR 1126) near the intersection of US 15-501 and Garrett Road (SR 1116). The project will also include the addition of a left turn lane from southbound US 15-501 onto Garrett Road with an additional westbound receiving lane on Garrett Road in Durham County. The purpose of this project is to relieve congestion and improve safety at the intersection US 15-501, Garret Road and the Service Road. Construction of the proposed project will necessitate in impacts to jurisdictional waters. This project is located in the Cape Fear River Basin within HUC 03030002. There will be 45 feet of jurisdictional stream channel impacted and 0.075 acres of impacts to wetlands. Impacts from this project will qualify for permitting under a Nationwide Permit 14. This project has a let date of May 18, 2004. No Compensatory mitigation is proposed because of the minimal impacts.

NEPA Document Status

A State Environmental Assessment/Finding of No Significant Impact (SEA/FONSI) was prepared by the North Carolina Department of Transportation and approved November 2, 2001. The document describes the need for transportation improvements in the City of Durham. In addition, existing and projected conditions in the study area were described including natural systems and wetlands. Alignments were evaluated with respect to costs, social and economic impacts, and environmental consequences. The SEA/FONSI has been provided to regulatory review agencies involved in the approval process. Additional copies will be provided upon request.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-733-3141
FAX: 919-733-9794

WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

The subject project is in compliance with 23 CFR Part 771.111(f) which lists the Federal Highway Administration (FHWA) characteristics of independent utility of a project:

- (1) The project connects logical termini and is of sufficient length to address environmental matters on a broad scope;
- (2) The project is usable and a reasonable expenditure, even if no additional transportation improvements are made in the area;
- (3) The project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Resource Status

Wetland Delineations: NCDOT Biologists Karen Lynch and Chris Murray delineated wetlands on February 2, 2001. The USACE (Eric Alsmeyer) verified the wetlands and streams on August 23, 2001 using desktop verification methods. Impacts are reported in Table 1.

Table 1. Stream and Wetland Impacts for TIP Project U-4009, Durham Co.

Site	Station	Stream Name	DWQ Index No.	Stream Impacts feet	Wetland Impacts (ac)
1	NSR1 14+04	NA	NA	-	0.019
2	NSR2 14+00	UT to Sandy Creek	16-41-1-11	45	0.056
		Total		45	0.075

Permanent Impacts: There are two sites in the project area that impact jurisdictional waters.

DESCRIPTION OF JURISDICTIONAL SITES:

Site 1: located at station NSR1 14+04. There is a riverine linear wetland that is upstream of an intermittent channel. The subject channel becomes intermittent outside of the project area. Two 30" Reinforced concrete pipes will be used to cross this wetland.

Site 2: located at Station NSR2 14+00 An unnamed intermittent tributary originates within the proposed alignment. There is a linear riverine wetland adjacent to the UT that will also be impacted. Wetlands upstream of the road will not be affected by construction. Two 30" reinforced concrete pipes will be used to cross this channel.

Federally Protected Species

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered, and Proposed Threatened are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of February 11, 2003, the United States Fish and Wildlife Service (USFWS) lists three federally protected species as occurring in Durham County. Table 1 lists the species, their status and biological conclusion. Since the original Environmental Assessment was prepared no species have been added to or removed from the list. In a letter dated October 30, 2003, the USFWS concurred with the biological conclusion for all species listed in Durham County. A copy is attached for your convenience.

Table 1. Federally-Protected Species for Durham County

Common Name	Scientific Name	Federal Status	Habitat Analysis	Biological Conclusion
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T (Proposed for Delisting)	No	No Effect
Smooth Coneflower	<i>Echinacea laevigata</i>	E	Yes	May Effect, Not Likely to Adversely Effect
Michaux's sumac	<i>Rhus michauxii</i>	E	Yes	May Effect, Not Likely to Adversely effect

“E” denotes Endangered (a species that is in danger of extinction throughout all or a significant portion of its range).

“T” denotes Threatened (a species that is likely to become an endangered species within the foreseeable future throughout all or significant portion of its range).

“*” Based on Latest survey of October 8, 2003

Cultural Resources

Historic Resources: No structures listed in or eligible for the National Register of Historic Places are located in the project area. The State Historic Preservation Office (SHPO) was consulted during the planning of the project. In a letter dated August 24, 2000, exhibited in Appendix A of the SEA, the Department of Cultural Resources indicated that there is no effect on any historical resources as a result of TIP project U-4009.

Archaeological Resources: The data recovery investigations found no archeological or documentary evidence that required further archeological work. The State Historic Preservation Officer was consulted during the planing of the project. In a letter dated August 24, 2000, the Department of Cultural resources indicated that there is no effect on archeological resources as a result of TIP project U-4009.

Mitigation Options

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize wetland impacts, and to provide full compensatory mitigation of all remaining wetland impacts. Avoidance measures were taken during the planning and SEA/FONSI phases; minimization measures were incorporated as part of the project design.

Avoidance: All wetlands not directly affected by the project will be protected from unnecessary encroachment.

1. No staging of construction equipment or storage of construction supplies will be allowed in wetlands or near surface waters.

Minimization: Wetland impacts were minimized to the maximum extent practical. In addition to directly avoiding wetlands and streams, NCDOT is incorporating the following measures to minimize impact to wetlands and surface waters:

1. Use of 2:1 fill slopes in jurisdictional areas at Site 1 and 2.

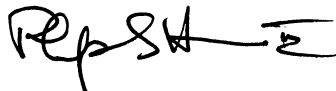
Compensation: No compensatory mitigation is proposed because the wetland impacts will be 0.075 acres and the jurisdictional streams impacts total 45 feet.


Regulatory Approvals

Attached for your information is a copy of the roadway designs plans, Pre-construction Notification, and permit drawings for the subject project. Application is hereby made for the Department of Army Section 404 Nationwide 14 for the above-described activities. We are also hereby requesting a 401 Water Quality Certification from the Division of Water Quality. In compliance with Section 143-215.3D(e) of the NCAC we will provide \$475.00 to act as payment for processing the Section 401 permit application previously noted in this application (see Subject line). We are providing seven copies of this application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality, for their review.

Thank you for your assistance with this project. If you have any questions or need additional information please call Mr. Brett Feulner at (919) 715-1488.

Sincerely,



 Gregory Thorpe, Ph.D
Environmental Management Director, PDEA

Mr. David Franklin, USACE, Wilmington
Mr. John Dorney, DWQ (7 copies)
Mr. Gary Jordan, USFWS
Mr. Travis Wilson, NCWRC
Mr. Jay Bennett, P.E., Roadway Design
Mr. Omar Sultan, Programming and TIP
Mr. Art McMillan, P.E., Design Services

Mr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Jon Nance, P.E., Division 5 Engineer
Mr. Kristina Solberg, P.E., PDEA
Mr. Chris Murray, Division 5 DEO

Office Use Only:

Form Version May 2002

USACE Action ID No. _____ **DWQ No.** _____

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

I. Processing

1. Check all of the approval(s) requested for this project:
 Section 404 Permit Riparian or Watershed Buffer Rules
 Section 10 Permit Isolated Wetland Permit from DWQ
 401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested: NW 14 & 33

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here:

4. If payment into the North Carolina Wetlands Restoration Program (NCWRP) is proposed for mitigation of impacts (verify availability with NCWRP prior to submittal of PCN), complete section VIII and check here:

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here:

II. Applicant Information

1. Owner/Applicant Information
Name: NCDOT
Mailing Address: Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, NC 27966-1548

Telephone Number: (919) 733-3141 Fax Number: (919) 733-9794
E-mail Address: gthorpe@dot.state.nc.us

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)
Name: _____
Company Affiliation: _____
Mailing Address: _____

Telephone Number: _____ Fax Number: _____
E-mail Address: _____

III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: Relocation of Service Road (SR 1126) near the intersection of US 15-501 and Garret Road and addition of a left turn lane from southbound US 15-501 onto Garrett Road with an additional westbound receiving on Garret Road
2. T.I.P. Project Number or State Project Number (NCDOT Only): U-4009
3. Property Identification Number (Tax PIN): _____
4. Location
County: Durham Nearest Town: Durham
Subdivision name (include phase/lot number): _____
Directions to site (include road numbers, landmarks, etc.): The site is located at the intersection of US 15-501 and Garret Road in Durham, NC
5. Site coordinates, if available (UTM or Lat/Long): UTM 17 682677E 3981510N
(Note – If project is linear, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
6. Property size (acres): _____
7. Nearest body of water (stream/river/sound/ocean/lake): Unnamed Tributaries to Sandy Creek
8. River Basin: Cape Fear
(Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at <http://h2o.enr.state.nc.us/admin/maps/>.)

9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: The area surrounding the relocation is developed commercial
-
10. Describe the overall project in detail, including the type of equipment to be used: Plans for relocation the road include grading, drainage, paving, widening resurfacing and signals. Equipment used will include regular equipment utilized in new road construction
-
11. Explain the purpose of the proposed work: The purpose is to relieve congestion and improve safety.
-

IV. Prior Project History

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules.

Jurisdictional Determinations were obtained from the USACE

V. Future Project Plans

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.

N/A

VI. Proposed Impacts to Waters of the United States/Waters of the State

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. The applicant must also provide justification for these impacts in Section VII below. All proposed impacts, permanent and temporary, must be listed herein, and must be clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) must be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream

mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: _____

2. Individually list wetland impacts below:

Wetland Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Located within 100-year Floodplain** (yes/no)	Distance to Nearest Stream (linear feet)	Type of Wetland***
1	Fill	0.009	No	Adjacent	Forested
1	Mechanized clearing	0.01	No	Adjacent	Forested
2	Fill	0.056	No	Adjacent	Forested

- * List each impact separately and identify temporary impacts. Impacts include, but are not limited to: mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.
- ** 100-Year floodplains are identified through the Federal Emergency Management Agency’s (FEMA) Flood Insurance Rate Maps (FIRM), or FEMA-approved local floodplain maps. Maps are available through the FEMA Map Service Center at 1-800-358-9616, or online at <http://www.fema.gov>.
- *** List a wetland type that best describes wetland to be impacted (e.g., freshwater/saltwater marsh, forested wetland, beaver pond, Carolina Bay, bog, etc.) Indicate if wetland is isolated (determination of isolation to be made by USACE only).

List the total acreage (estimated) of all existing wetlands on the property: _____
 Total area of wetland impact proposed: 0.075

3. Individually list all intermittent and perennial stream impacts below:

Stream Impact Site Number (indicate on map)	Type of Impact*	Length of Impact (linear feet)	Stream Name**	Average Width of Stream Before Impact	Perennial or Intermittent? (please specify)
1	Fill	45 ft	UT to Sandy Creek	1 ft	Intermittent

- * List each impact separately and identify temporary impacts. Impacts include, but are not limited to: culverts and associated rip-rap, dams (separately list impacts due to both structure and flooding), relocation (include linear feet before and after, and net loss/gain), stabilization activities (cement wall, rip-rap, crib wall, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included.
- ** Stream names can be found on USGS topographic maps. If a stream has no name, list as UT (unnamed tributary) to the nearest downstream named stream into which it flows. USGS maps are available through the USGS at 1-800-358-9616, or online at www.usgs.gov. Several internet sites also allow direct download and printing of USGS maps (e.g., www.topozone.com, www.mapquest.com, etc.).

Cumulative impacts (linear distance in feet) to all streams on site: 45 ft

4. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.) below:

Open Water Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Name of Waterbody (if applicable)	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: fill, excavation, dredging, flooding, drainage, bulkheads, etc.

5. Pond Creation

If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.

Pond to be created in (check all that apply): uplands stream wetlands

Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.): _____

Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.): _____

Size of watershed draining to pond: _____ Expected pond surface area: _____

VII. Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts.

The No-Build or “do nothing” alternative was considered but would not provide relief to congestion and would not improve the safety.

VIII. Mitigation

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to

freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on March 9, 2000, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCWRP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ’s Draft Technical Guide for Stream Work in North Carolina, available at <http://h2o.enr.state.nc.us/ncwetlands/strmgide.html>.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.

N/A

2. Mitigation may also be made by payment into the North Carolina Wetlands Restoration Program (NCWRP). Please note it is the applicant’s responsibility to contact the NCWRP at (919) 733-5208 to determine availability and to request written approval of mitigation prior to submittal of a PCN. For additional information regarding the application process for the NCWRP, check the NCWRP website at <http://h2o.enr.state.nc.us/wrp/index.htm>. If use of the NCWRP is proposed, please check the appropriate box on page three and provide the following information:

Amount of stream mitigation requested (linear feet): _____
Amount of buffer mitigation requested (square feet): _____
Amount of Riparian wetland mitigation requested (acres): _____
Amount of Non-riparian wetland mitigation requested (acres): _____

Amount of Coastal wetland mitigation requested (acres): _____

IX. Environmental Documentation (required by DWQ)

Does the project involve an expenditure of public (federal/state) funds or the use of public (federal/state) land?

Yes No

If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)?

Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.

Yes No

If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter.

Yes No

X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify _____)?

Yes No If you answered "yes", provide the following information:

Identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1		3	
2		1.5	
Total			

* Zone 1 extends out 30 feet perpendicular from near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Conservation Easement, Riparian Buffer Restoration / Enhancement, Preservation or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0260.

XI. Stormwater (required by DWQ)

Describe impervious acreage (both existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property.

XII. Sewage Disposal (required by DWQ)

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.

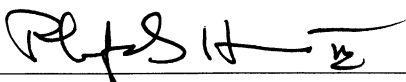
XIII. Violations (required by DWQ)

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?
Yes No

Is this an after-the-fact permit application?
Yes No

XIV. Other Circumstances (Optional):

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).



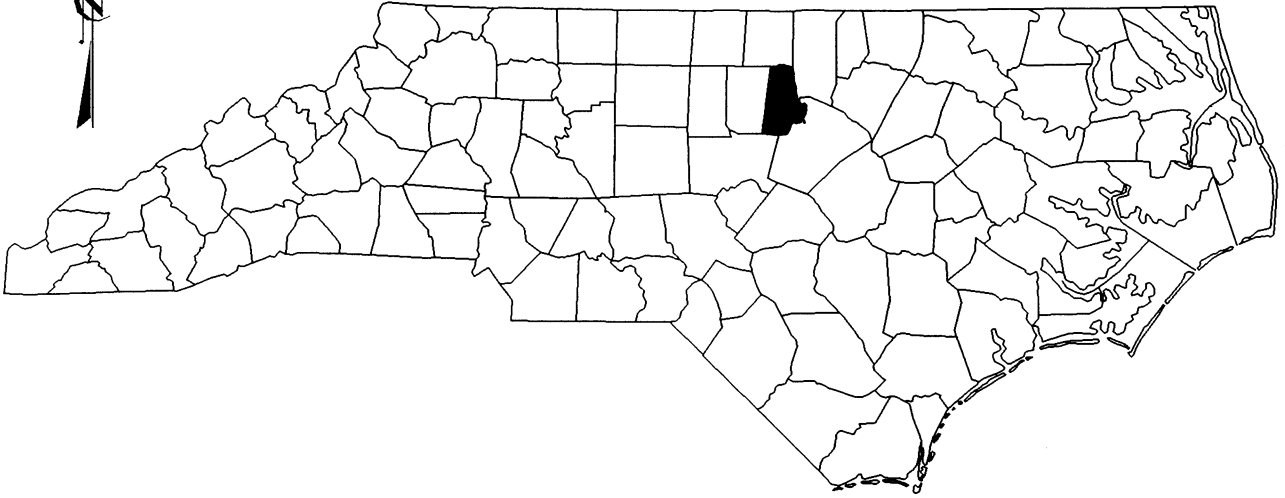
Applicant/Agent's Signature

1/15/04

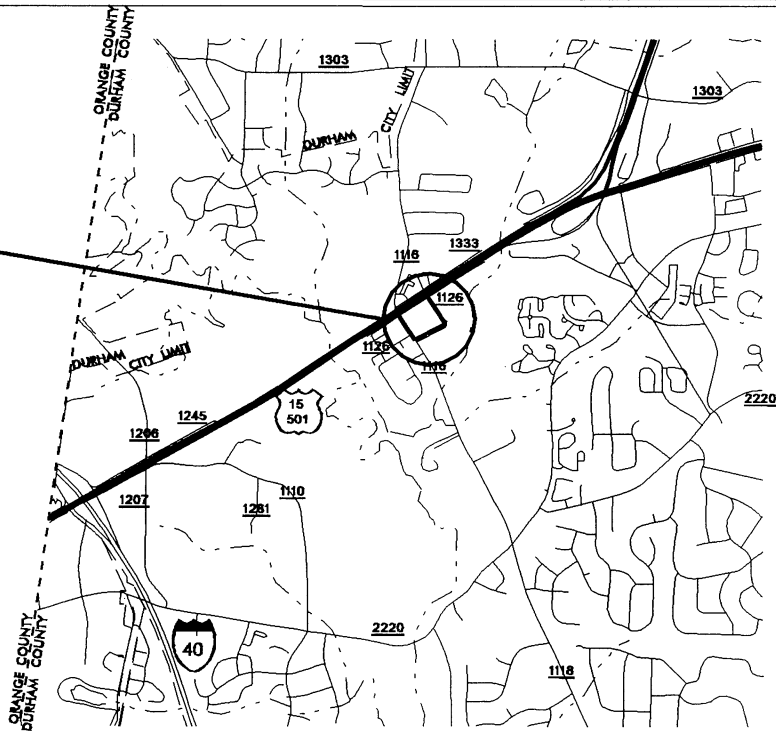
Date

(Agent's signature is valid only if an authorization letter from the applicant is provided.)

NORTH CAROLINA



PROJECT SITE



VICINITY MAPS

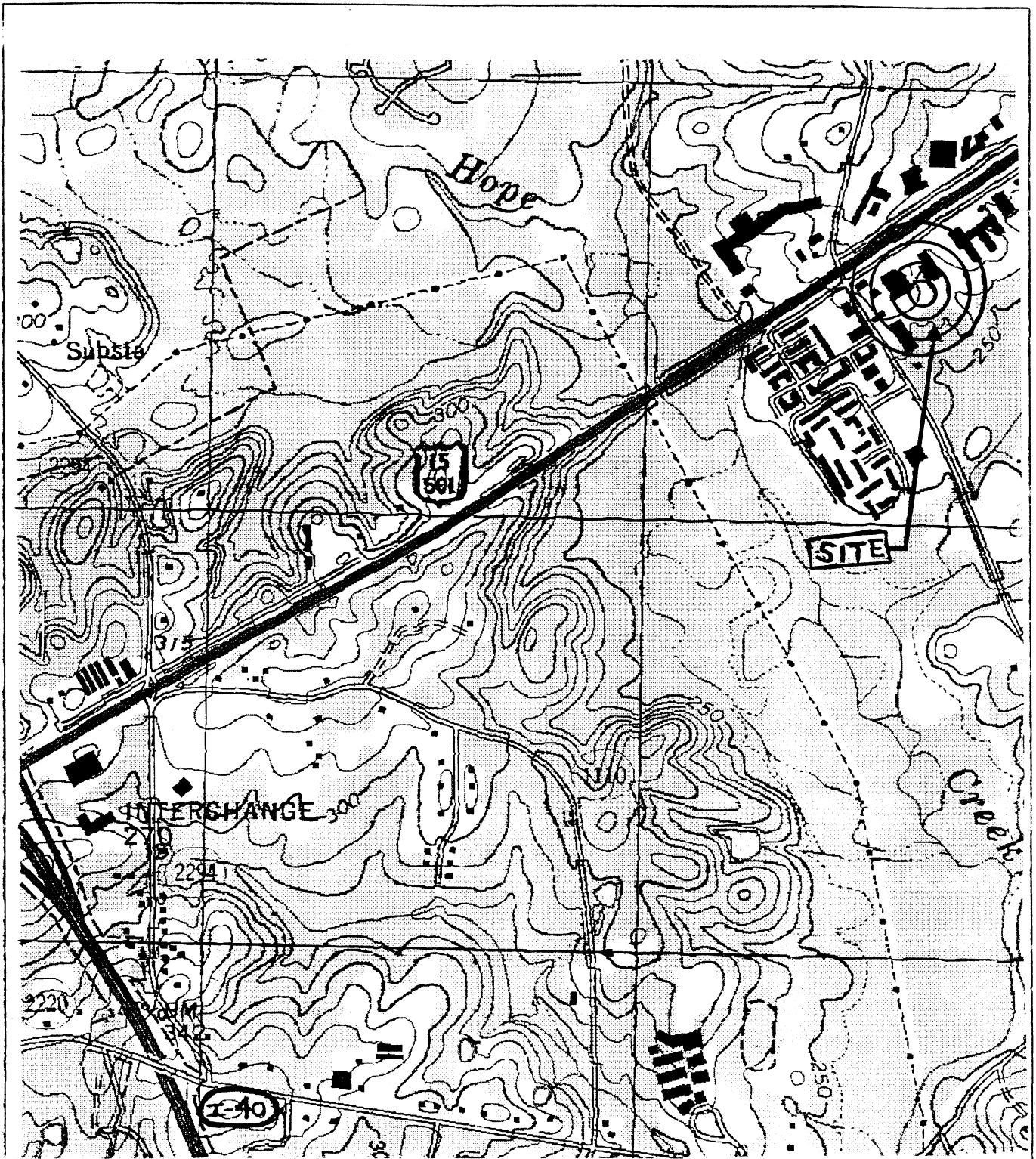
NCDOT

DIVISION OF HIGHWAYS

DURHAM COUNTY

PROJECT: 9.8059077 (U-4009)

SR 1126 (SERVICE ROAD)
US 15-501 AND GARRETT ROAD



QUAD MAP

NCDOT

DIVISION OF HIGHWAYS

DURHAM COUNTY

PROJECT: 9.8059077 (U-4009)

SR 1126 (SERVICE ROAD)
US 15-501 AND GARRETT ROAD

SHEET 2 OF 8

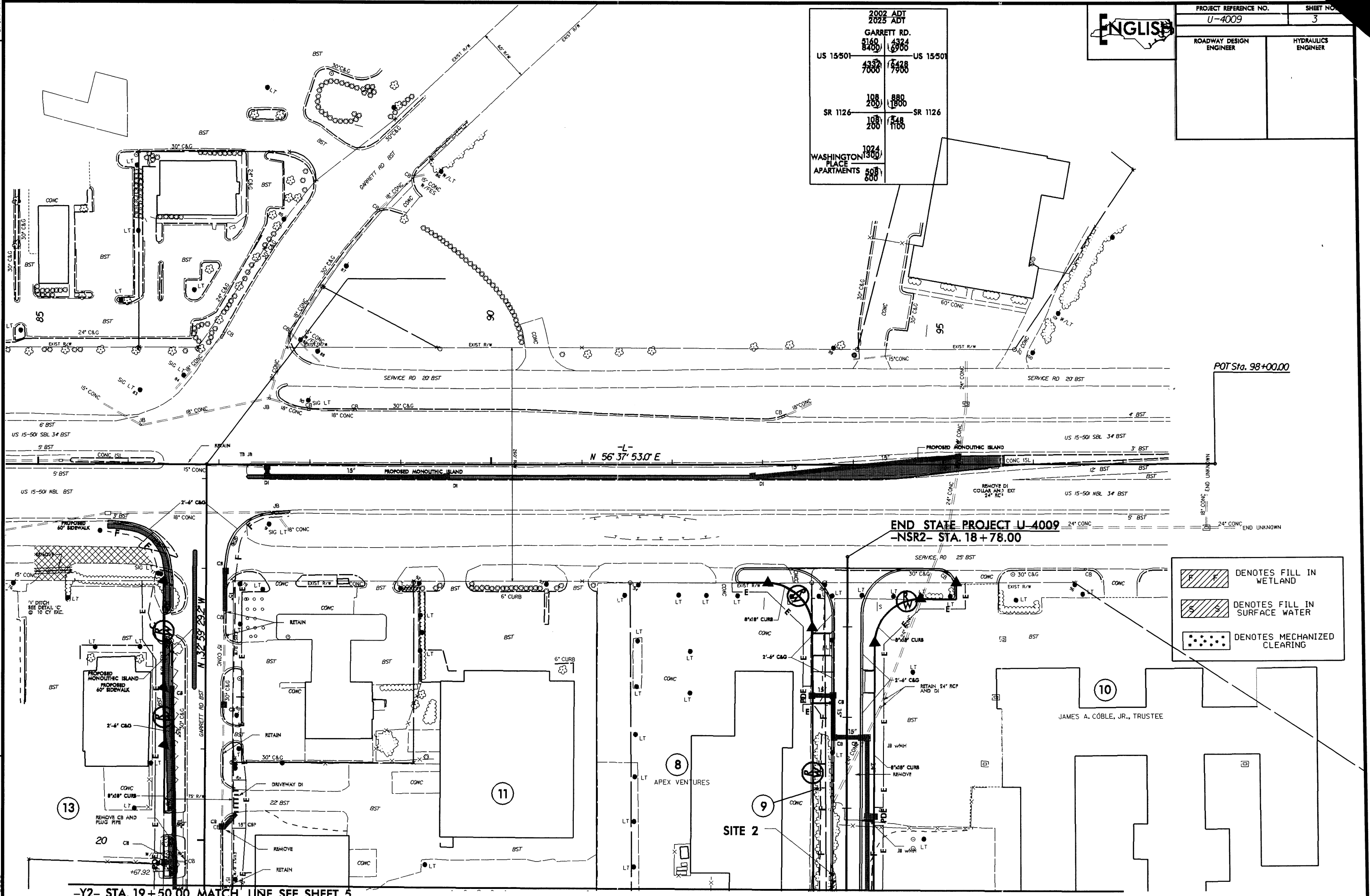
5/28/03

ENGLISH

PROJECT REFERENCE NO. U-4009	SHEET NO. 3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

2002 ADT 2025 ADT	4324 4374
US 15/501	US 15/501
8400 7800	7900 7900
SR 1126	SR 1126
108 200	880 1800
108 200	148 1100
WASHINGTON PLACE APARTMENTS	1024 300
	508 600

REVISIONS



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

-Y2- STA. 19+50.00 MATCH LINE SEE SHEET 5

END STATE PROJECT U-4009
-NSR2- STA. 18+78.00

POT Sta. 98+00.00

-L-
N 56° 37' 53.0" E

JAMES A. COBLE, JR., TRUSTEE

8
APEX VENTURES

9
SITE 2

11

13

10

B.17/99

SYSTEMS DESIGN CONSULTANTS, INC. 10000 W. CENTURY BLVD. SUITE 1000 WESTLAKE, CA 90246

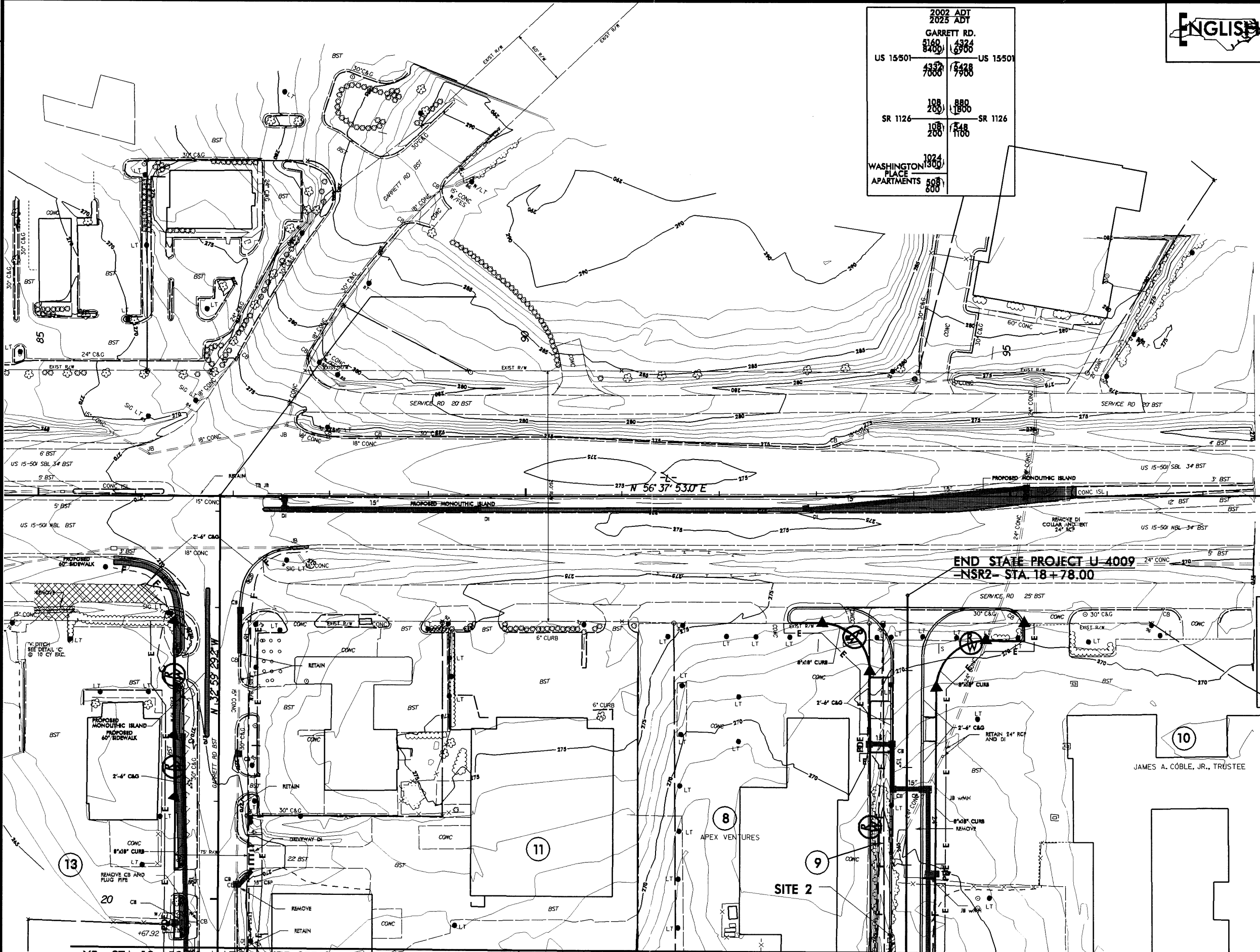
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2002 ADT		2025 ADT	
GARRETT RD.			
US 15/501	5180 8400	6325 6960	US 15/501
	4330 7000	6428 9900	
SR 1126	108 200	880 1500	SR 1126
	108 200	848 1100	
WASHINGTON PLACE APARTMENTS		1024 1300	
		500 800	



PROJECT REFERENCE NO.	SHEET NO.
U-4009	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS



END STATE PROJECT U-4009
-NSR2- STA. 18+78.00

POT Sta. 98+00.00

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

-Y2- STA. 19+50.00 MATCH LINE SEE SHEET 5

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18\"/>

(10)
JAMES A. COBLE, JR., TRUSTEE

(8)
APEX VENTURES

(9)
SITE 2

(11)

(13)

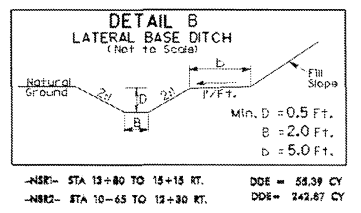
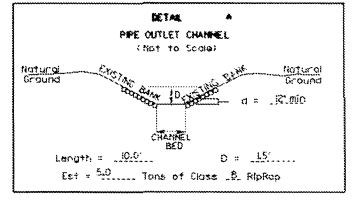
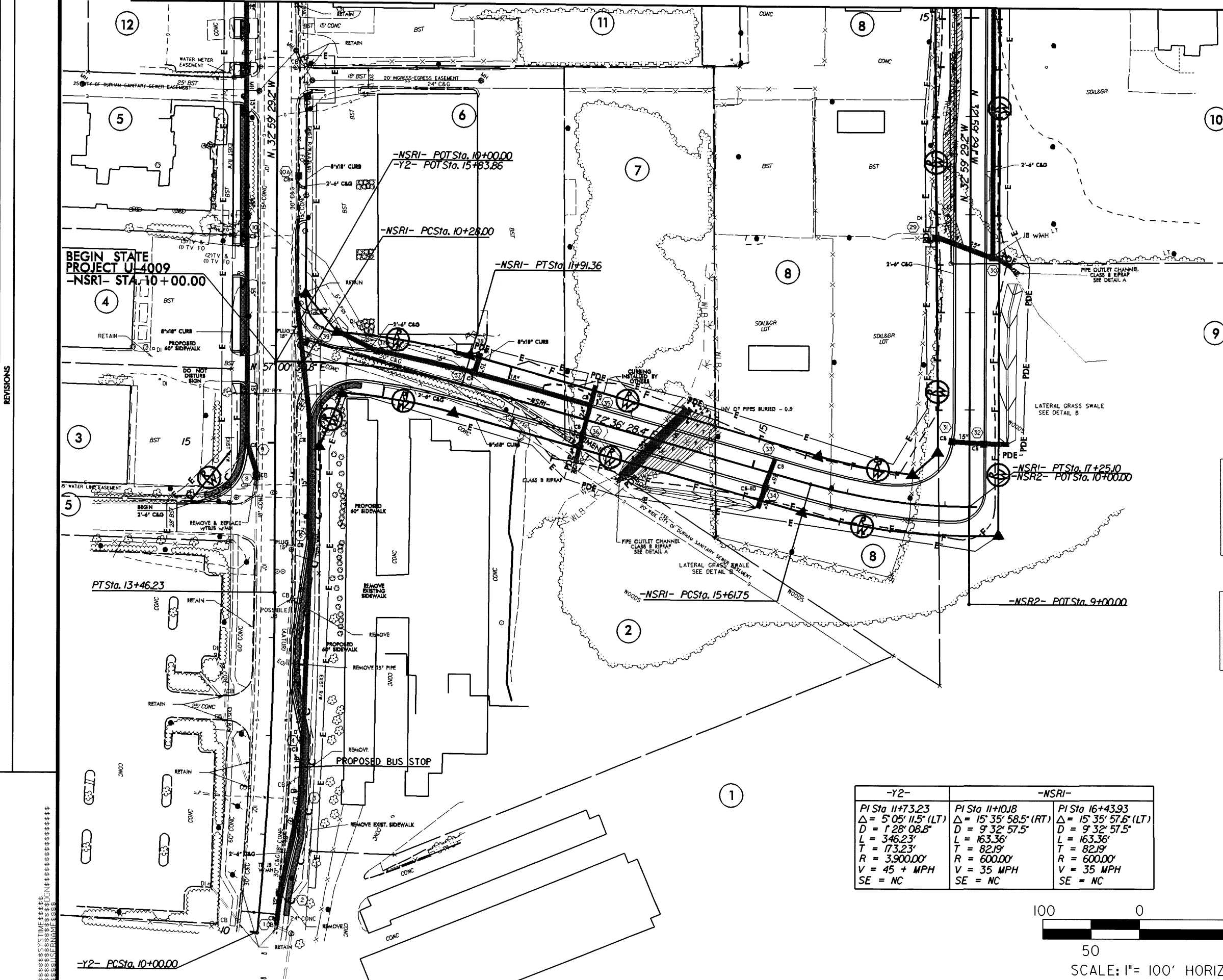
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8/17/99

-Y2- STA. 19+50.00 MATCH LINE SEE SHEET 4

ENGLISH

PROJECT REFERENCE NO. U-4009	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-Y2-	-NSRI-	
PI Sta 11+73.23	PI Sta 11+10.18	PI Sta 16+43.93
$\Delta = 5' 05'' 11.5'' (LT)$	$\Delta = 15' 35'' 58.5'' (RT)$	$\Delta = 15' 35'' 57.6'' (LT)$
D = 1' 28'' 08.8''	D = 9' 32'' 57.5''	D = 9' 32'' 57.5''
L = 346.23'	L = 163.36'	L = 163.36'
T = 173.23'	T = 82.19'	T = 82.19'
R = 3,900.00'	R = 600.00'	R = 600.00'
V = 45 + MPH	V = 35 MPH	V = 35 MPH
SE = NC	SE = NC	SE = NC



	2002 ADT		2025 ADT	
US 15501	5160	8400	4324	4324
	7888	7888	7428	7988
SR 1126	108	200	880	1800
	108	200	748	1100
WASHINGTON PLACE APARTMENTS	1024	1300	808	888

REVISIONS

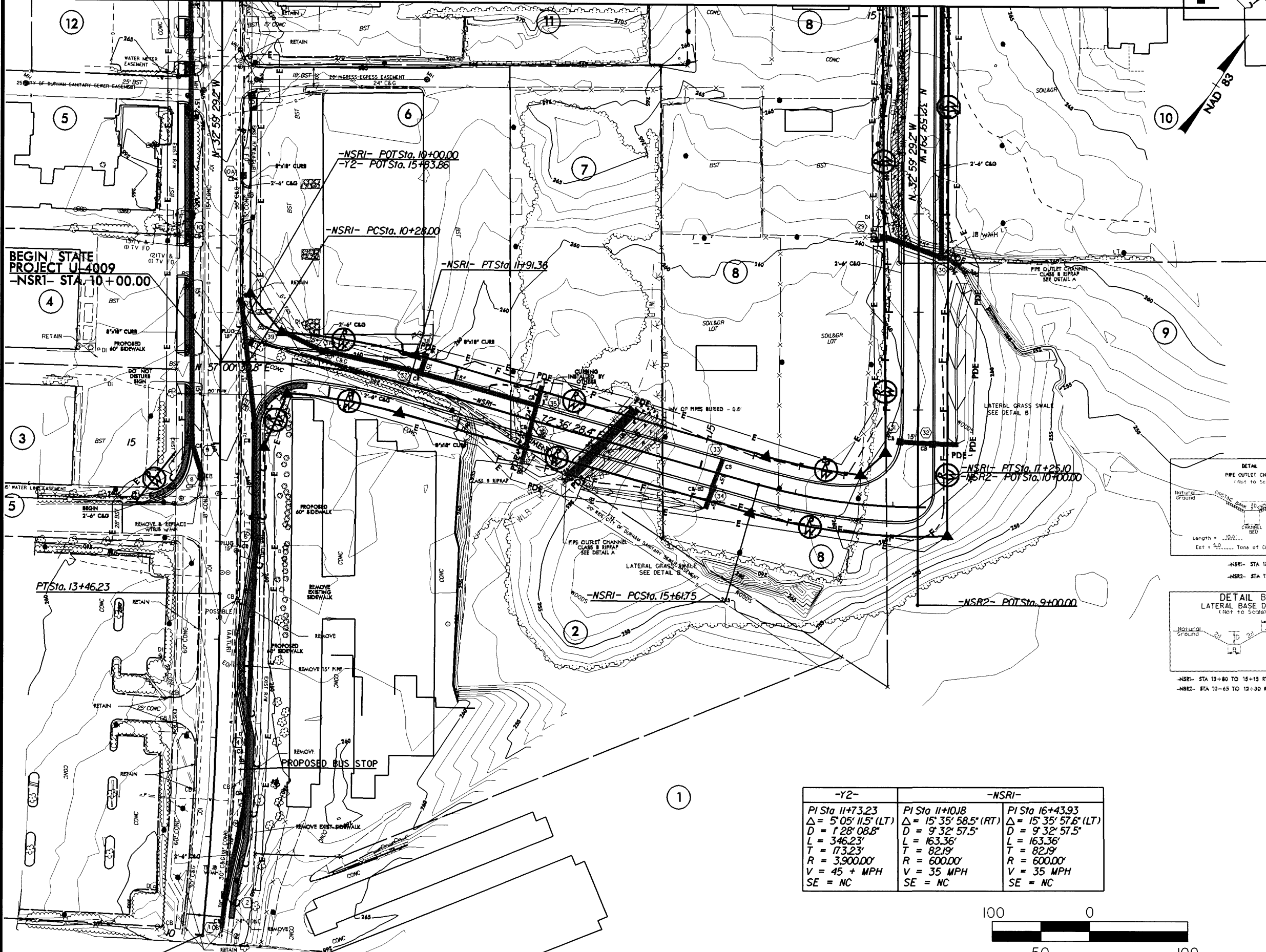
***** SYSTEMS DESIGN *****
***** 48-11-1 *****
***** 8/17/99 *****

8/17/99

-Y2- STA. 19+50.00 MATCH LINE SEE SHEET 4

ENGLISH

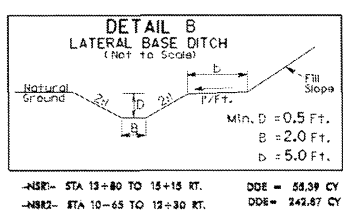
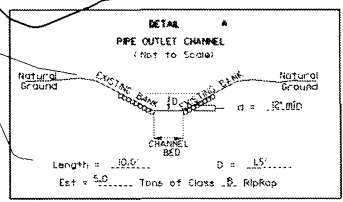
PROJECT REFERENCE NO. U-4009	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



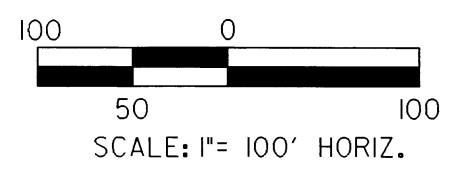
BEGIN STATE PROJECT U-4009
-NSRI- STA. 10+00.00

PT Sta. 13+46.23

-Y2- PC Sta. 10+00.00



-Y2-	-NSRI-	
PI Sta 11+73.23	PI Sta 11+10.18	PI Sta 16+43.93
$\Delta = 5' 05'' 11.5''$ (LT)	$\Delta = 15' 35'' 58.5''$ (RT)	$\Delta = 15' 35'' 57.6''$ (LT)
D = 1' 28' 08.8"	D = 9' 32' 57.5"	D = 9' 32' 57.5"
L = 346.23'	L = 163.36'	L = 163.36'
T = 173.23'	T = 82.19'	T = 82.19'
R = 3,900.00'	R = 600.00'	R = 600.00'
V = 45 + MPH	V = 35 MPH	V = 35 MPH
SE = NC	SE = NC	SE = NC



2002 ADT	4324	US 15501
2025 ADT	6900	
GARRETT RD.	4324	
5160	6900	
8400	6900	
US 15501	4324	US 15501
7888	6428	
	7988	
	108	880
	280	1880
SR 1126	108	SR 1126
	280	
	108	548
	280	1188
WASHINGTON PLACE APARTMENTS	1024	
	1300	
	508	
	800	

REVISIONS

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method II) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Temp. Fill In SW (ac)	Existing Channel Impacted (ft)	Natural Stream Design (ft)
1	NSR1 14+04	2 @ 30" RCP	0.009			0.010					
2	NSR2 14+00	N/A	0.056				0.008			45.000	
TOTALS:			0.065			0.010	0.008			45.000	

NCDOT

DURHAM COUNTY
 PROJECT 9.8059077 (U-4009)
 SR 1126 SERVICE ROAD
 US - 15-501 @ GARRETT RD.

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
2	THE ELECTRIC COMPANY GENERAL PARTNERSHIP	235 A.E. MARKET ST. SMITHFIELD, NC 27577
7	GOLD CENTER LIMITED PARTNERSHIP	P. O. BOX 2734 CHAPEL HILL, NC 27515
8	APEX VENTURES	2405 MOORES MILL RD. ROUGEMONT, NC 27572
9	SUMMIT PROPERTIES PARTNERSHIP, L.P. DELAWARE LIMITED PARTNERSHIP	309 E. MOREHEAD ST. CHARLOTTE, NC 28202
10	JAMES A. COBLE JR., TRUSTEE	122 E. PARRISH ST. DURHAM, NC 27702

NCDOT

DIVISION OF HIGHWAYS

DURHAM COUNTY

PROJECT: 9.8059077 (U-4009)

**SR 1126 (SERVICE ROAD)
US 15-501 AND GARRETT ROAD**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

October 30, 2003

Brett Feulner
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Feulner:

This letter is in response to your letter of October 22, 2003 which provided the U.S. Fish and Wildlife Service (Service) with the biological conclusion of the North Carolina Department of Transportation (NCDOT) that the proposed relocation of Service Road (SR 1126) in Durham County, North Carolina (TIP No. U-4009) will have no effect on the federally-threatened bald eagle (*Haliaeetus leucocephalus*) and may affect, but is not likely to adversely affect the federally-endangered Michaux's sumac (*Rhus michauxii*) and smooth coneflower (*Echinacea laevigata*). These comments are provided in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

According to the information you submitted, a plant survey was conducted on October 15, 2003 at the proposed project site. No specimens of Michaux's sumac or smooth coneflower were observed. Based on the negative survey results, the Service concurs that the project may affect, but is not likely to adversely affect Michaux's sumac or smooth coneflower. Also, due to the lack of habitat, the Service concurs that the project will have no effect on the bald eagle. We believe that the requirements of section 7 (a)(2) of the ESA have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

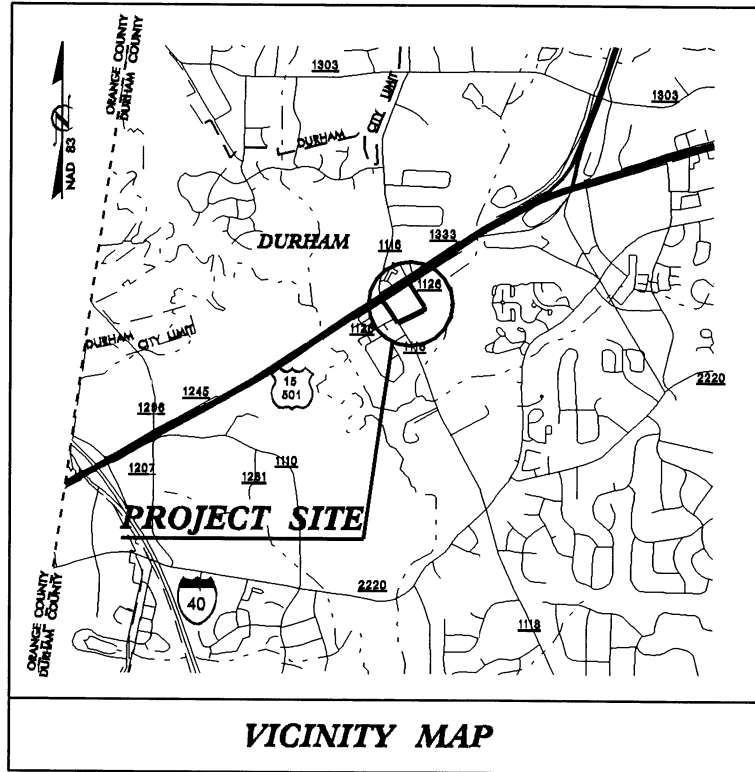
Sincerely,

for Garland B. Pardue, Ph.D.
Ecological Services Supervisor

cc: Eric Alsmeyer, USACE, Raleigh, NC
David Franklin, USACE, Wilmington, NC
John Hennessy, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmore, NC
Chris Militscher, USEPA, Raleigh, NC

CONTRACT: TIP PROJECT: U-4009

See Sheet 1-A For Index of Sheets



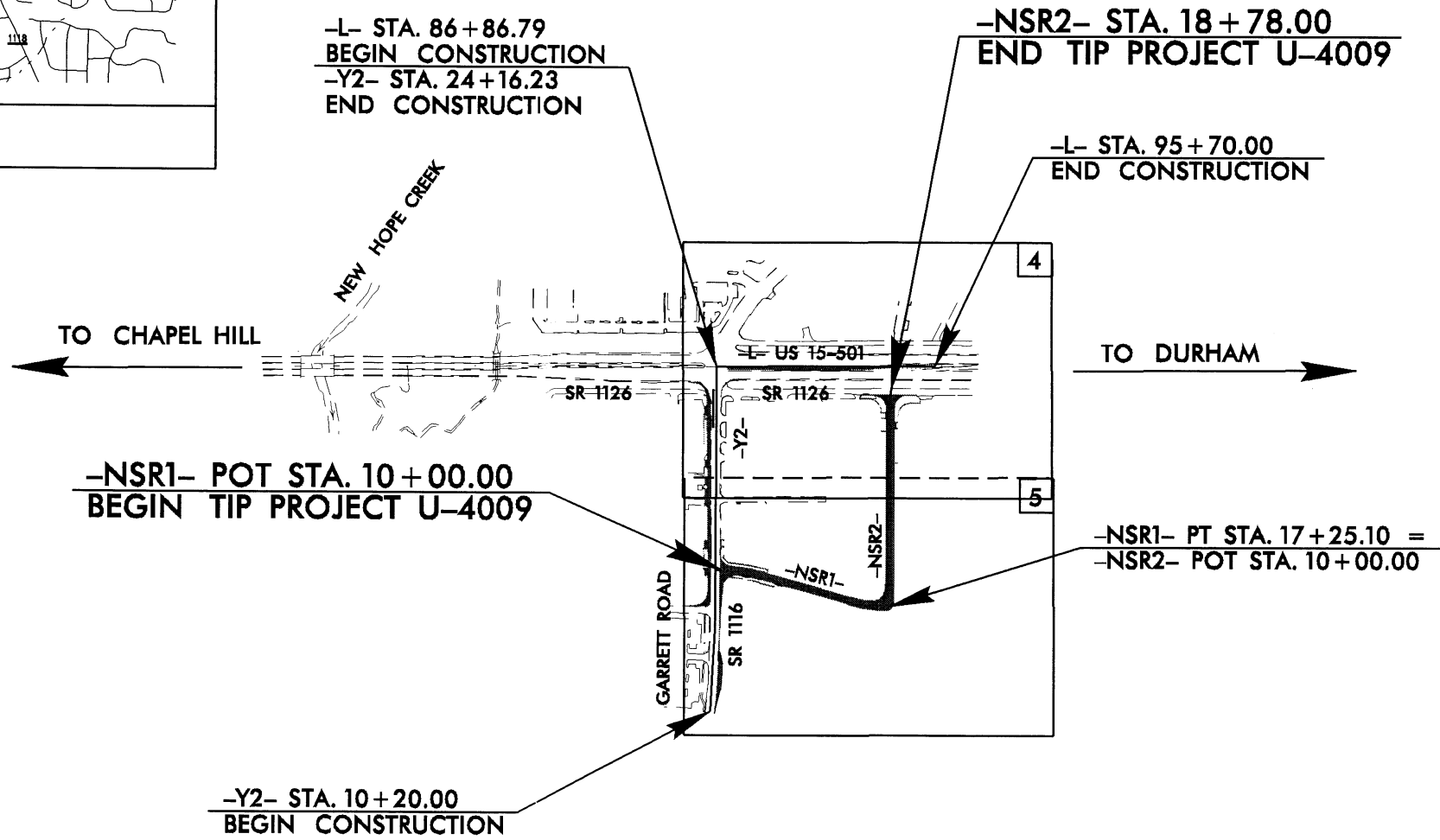
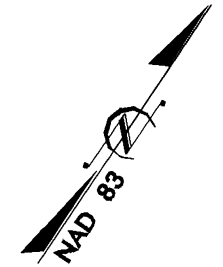
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DURHAM COUNTY

LOCATION: SR 1126 (SERVICE ROAD) NEAR US 15/501 AND SR 1116 (GARRETT ROAD) INTERSECTION

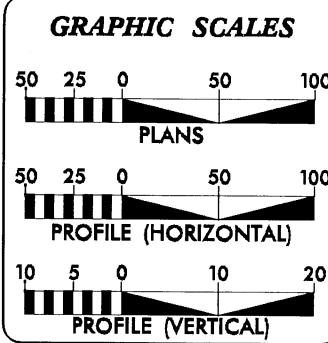
TYPE OF WORK: GRADING, DRAINAGE, PAVING, WIDENING, RESURFACING AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4009	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35010.1.1		PE	
35010.2.1		R /W	



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF DURHAM.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2002 =	1,736
ADT 2025 =	5,600
DHV =	10%
D =	60%
T =	3% *
V =	40 MPH
* DUAL 2 %	TTST 1 %

PROJECT LENGTH

TOTAL LENGTH OF TIP PROJECT U-4009 = 0.304 MI

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

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., NC, 27610

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 31, 2003	RONALD D. ALLEN, P.E. PROJECT ENGINEER
LETTING DATE: MAY 18, 2004	JEANIE TYSON PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE DESIGN ENGINEER

**DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION**

APPROVED DIVISION ADMINISTRATOR

DATE

24-OCT-2003 12:26
 P:\Proj\4009\Fish
 E:\Cen_A\10214.dwg

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

*S.U.E = SUBSURFACE UTILITY ENGINEER

CONVENTIONAL SYMBOLS

ROADS & RELATED ITEMS

Edge of Pavement	-----
Curb	-----
Prop. Slope Stakes Cut	----- C
Prop. Slope Stakes Fill	----- F
Prop. Woven Wire Fence	-----
Prop. Chain Link Fence	-----
Prop. Barbed Wire Fence	-----
Prop. Wheelchair Ramp	-----
Curb Cut for Future Wheelchair Ramp	-----
Exist. Guardrail	-----
Prop. Guardrail	-----
Equality Symbol	-----
Pavement Removal	-----

RIGHT OF WAY

Baseline Control Point	-----
Existing Right of Way Marker	-----
Exist. Right of Way Line w/Marker	-----
Prop. Right of Way Line with Proposed RW Marker (Iron Pin & Cap)	-----
Prop. Right of Way Line with Proposed (Concrete or Granite) R/W Marker	-----
Exist. Control of Access Line	-----
Prop. Control of Access Line	-----
Exist. Easement Line	-----
Prop. Temp. Construction Easement Line	-----
Prop. Temp. Drainage Easement Line	-----
Prop. Perm. Drainage Easement Line	-----

HYDROLOGY

Stream or Body of Water	-----
River Basin Buffer	-----
Flow Arrow	-----
Disappearing Stream	-----
Spring	-----
Swamp Marsh	-----
Shoreline	-----
Falls, Rapids	-----
Prop Lateral, Tail, Head Ditches	-----

STRUCTURES

MAJOR	
Bridge, Tunnel, or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----

MINOR	
Head & End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Boxes	-----
Paved Ditch Gutter	-----

UTILITIES

Exist. Pole	-----
Exist. Power Pole	-----
Prop. Power Pole	-----
Exist. Telephone Pole	-----
Prop. Telephone Pole	-----
Exist. Joint Use Pole	-----
Prop. Joint Use Pole	-----
Telephone Pedestal	-----
UG Telephone Cable Hand Hold	-----
Cable TV Pedestal	-----
UG TV Cable Hand Hold	-----
UG Power Cable Hand Hold	-----
Hydrant	-----
Satellite Dish	-----
Exist. Water Valve	-----
Sewer Clean Out	-----
Power Manhole	-----
Telephone Booth	-----
Cellular Telephone Tower	-----
Water Manhole	-----
Light Pole	-----
H-Frame Pole	-----
Power Line Tower	-----
Pole with Base	-----
Gas Valve	-----
Gas Meter	-----
Telephone Manhole	-----
Power Transformer	-----
Sanitary Sewer Manhole	-----
Storm Sewer Manhole	-----
Tank; Water, Gas, Oil	-----
Water Tank With Legs	-----
Traffic Signal Junction Box	-----
Fiber Optic Splice Box	-----
Television or Radio Tower	-----
Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement	-----

Recorded Water Line	-----
Designated Water Line (S.U.E.*)	-----
Sanitary Sewer	-----
Recorded Sanitary Sewer Force Main	-----
Designated Sanitary Sewer Force Main(S.U.E.*)	-----
Recorded Gas Line	-----
Designated Gas Line (S.U.E.*)	-----
Storm Sewer	-----
Recorded Power Line	-----
Designated Power Line (S.U.E.*)	-----
Recorded Telephone Cable	-----
Designated Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Unknown Utility (S.U.E.*)	-----
Recorded Television Cable	-----
Designated Television Cable (S.U.E.*)	-----
Recorded Fiber Optics Cable	-----
Designated Fiber Optics Cable (S.U.E.*)	-----
Exist. Water Meter	-----
UG Test Hole (S.U.E.*)	-----
Abandoned According to U/G Record	-----
End of Information	-----

BOUNDARIES & PROPERTIES

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Property Line Symbol	-----
Exist. Iron Pin	-----
Property Corner	-----
Property Monument	-----
Property Number	-----
Parcel Number	-----
Fence Line	-----
Existing Wetland Boundaries	-----
High Quality Wetland Boundary	-----
Medium Quality Wetland Boundaries	-----
Low Quality Wetland Boundaries	-----
Proposed Wetland Boundaries	-----
Existing Endangered Animal Boundaries	-----
Existing Endangered Plant Boundaries	-----

BUILDINGS & OTHER CULTURE

Buildings	-----
Foundations	-----
Area Outline	-----
Gate	-----
Gas Pump Vent or U/G Tank Cap	-----
Church	-----
School	-----
Park	-----
Cemetery	-----
Dam	-----
Sign	-----
Well	-----
Small Mine	-----
Swimming Pool	-----

TOPOGRAPHY

Loose Surface	-----
Hard Surface	-----
Change in Road Surface	-----
Curb	-----
Right of Way Symbol	-----
Guard Post	-----
Paved Walk	-----
Bridge	-----
Box Culvert or Tunnel	-----
Ferry	-----
Culvert	-----
Footbridge	-----
Trail, Footpath	-----
Light House	-----

VEGETATION

Single Tree	-----
Single Shrub	-----
Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	-----

RAILROADS

Standard Gauge	-----
RR Signal Milepost	-----
Switch	-----

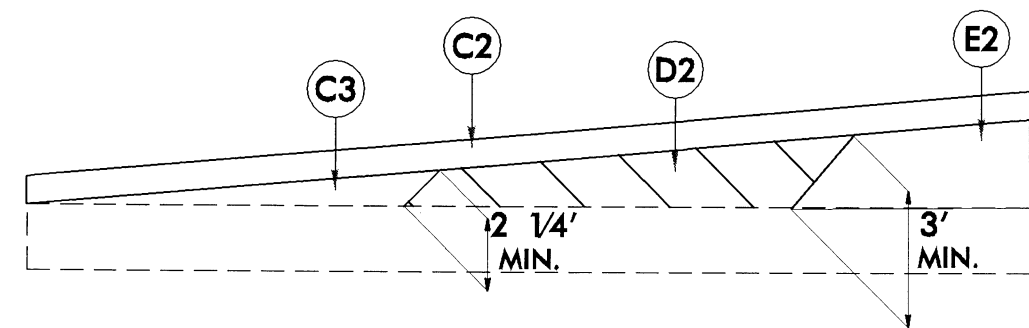
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3PKer AT 14:34
u4009.tsh

6/2/99

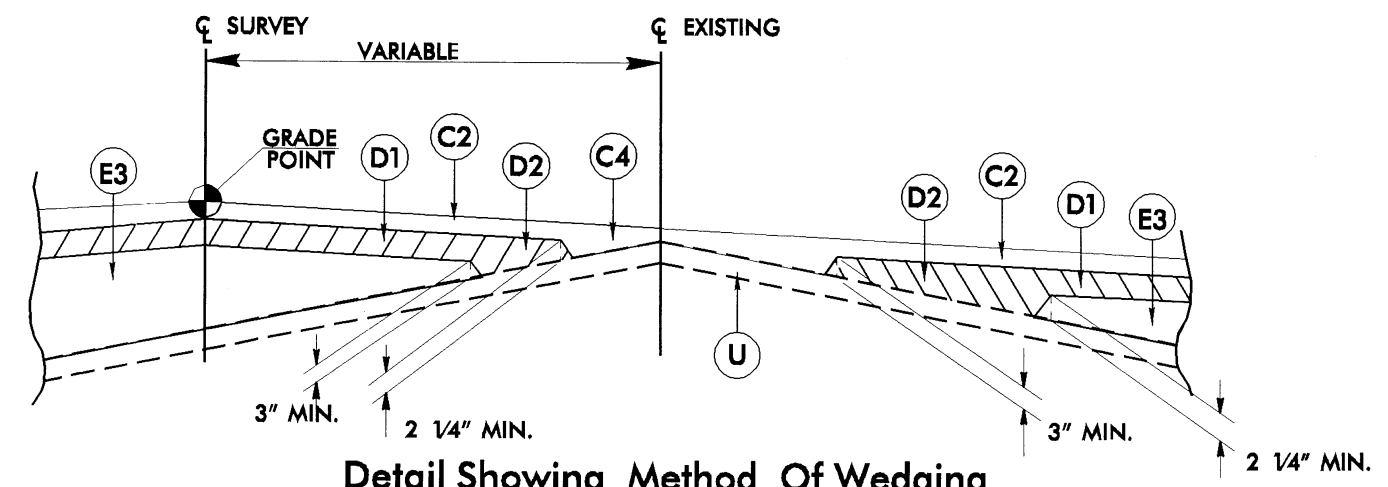
PROJECT REFERENCE NO. U-4009	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.6A, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF THE TWO LAYERS
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.6B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.6B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF THE TWO LAYERS
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE 89.6B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 1 1/2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" IN DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/4" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.
E2	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E3	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0 AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
J1	PROP. 6" AGGREGATE BASE COURSE.
R1	2'-8" CONCRETE CURB AND GUTTER.
R2	8"x18" CONCRETE CURB.
R3	6" MONOLITHIC CONCRETE ISLAND.
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING EXISTING BITUMINOUS PAVEMENT, VARIABLE 1 1/2" IN DEPTH.
V1	MILLING EXISTING BITUMINOUS PAVEMENT, VARIABLE IN DEPTH.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAILS).

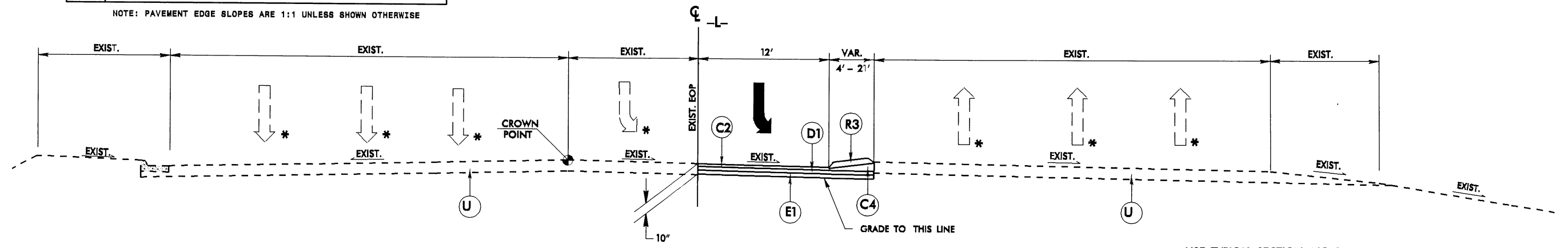
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE



Wedging Detail For Resurfacing



Detail Showing Method Of Wedging



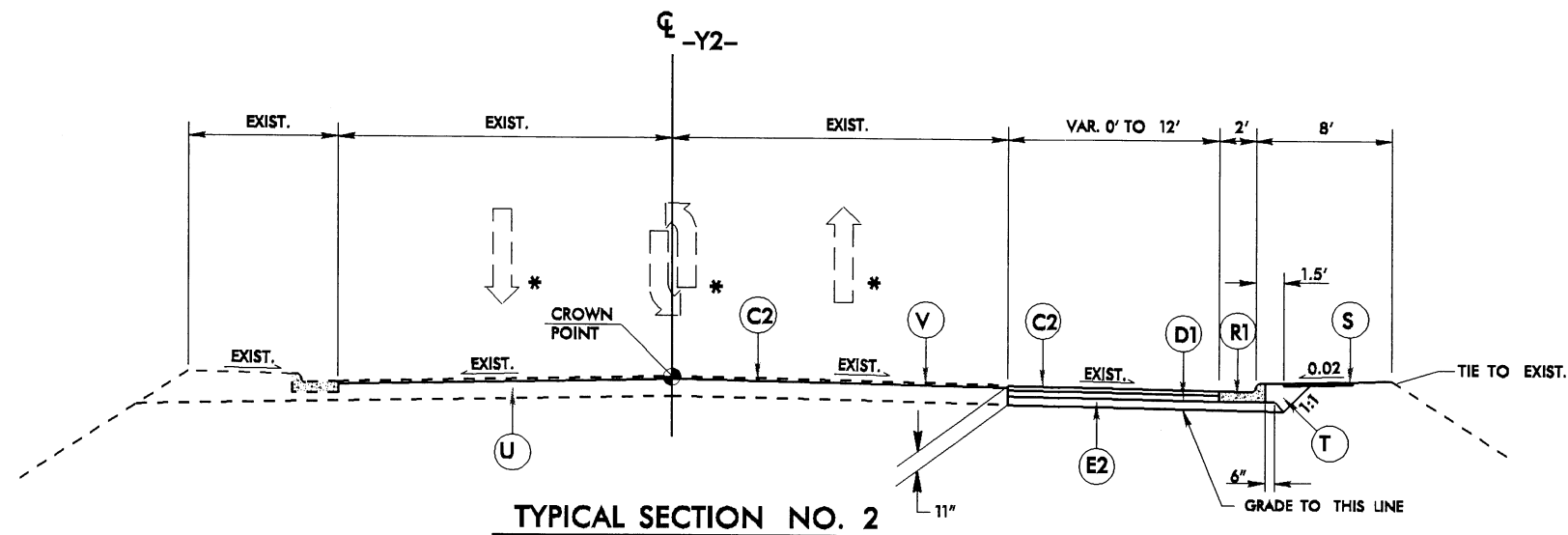
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
 -L- STA 86+86.79 TO 95+70.00
 *Existing Lane Usage

24-OCT-2003 16:27
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 E:\proj\4009\dwg\192.dwg

6/2/99

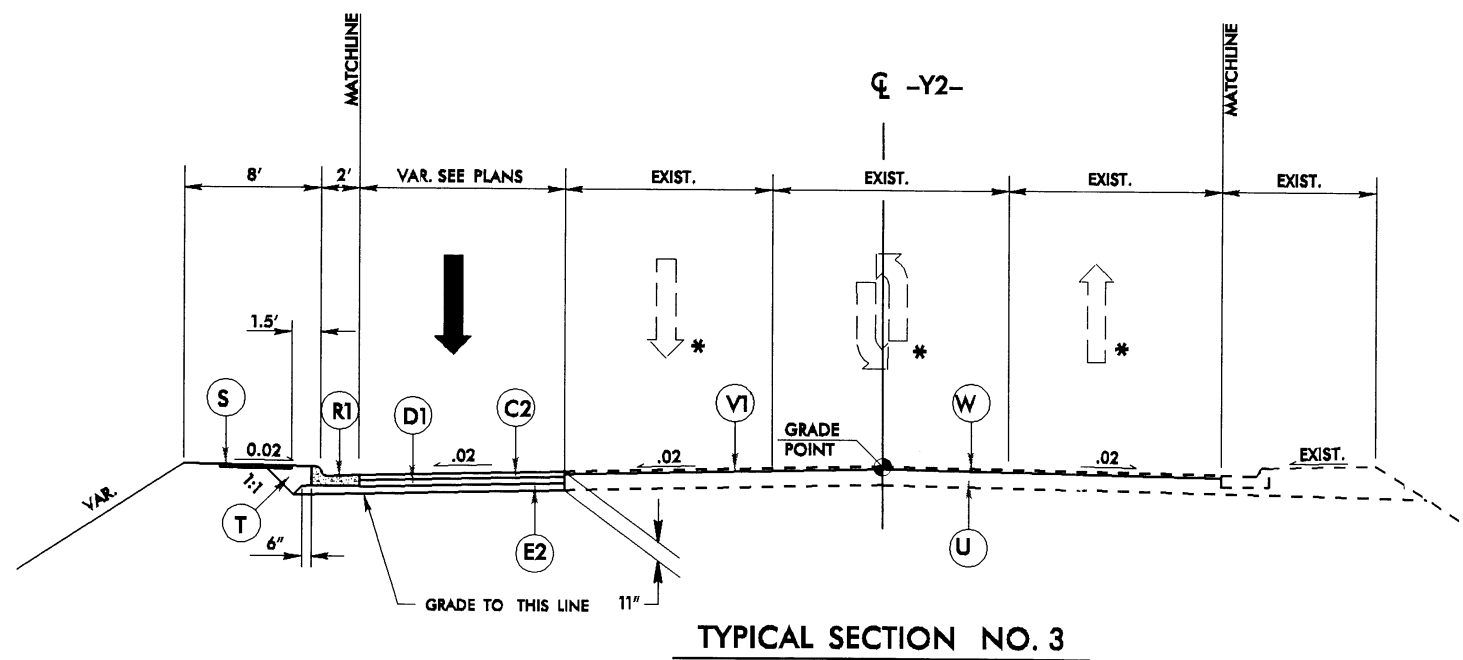
PROJECT REFERENCE NO. U-4009	SHEET NO. 2-A
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



USE TYPICAL SECTION NO. 2
 -Y2- STA 10+20.00 TO 14+35.00
 BUS STOP -Y2- STA 10+20.00 RT TO 12+50.00 RT
 SEE PLANS FOR RIGHT TURN LANE LOCATION

* Existing Lane Usage

C2	1.8" ASPHALT CONC. SURFACE COURSE, TYPE 80.8B
D1	4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I18.0B
E2	5.8" ASPHALT CONC. BASE COURSE, TYPE B28.0B
R1	2'-6" CONCRETE CURB AND GUTTER.
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	1 1/2" MILLING
V1	VAR. DEPTH MILLING
W	WEDGING



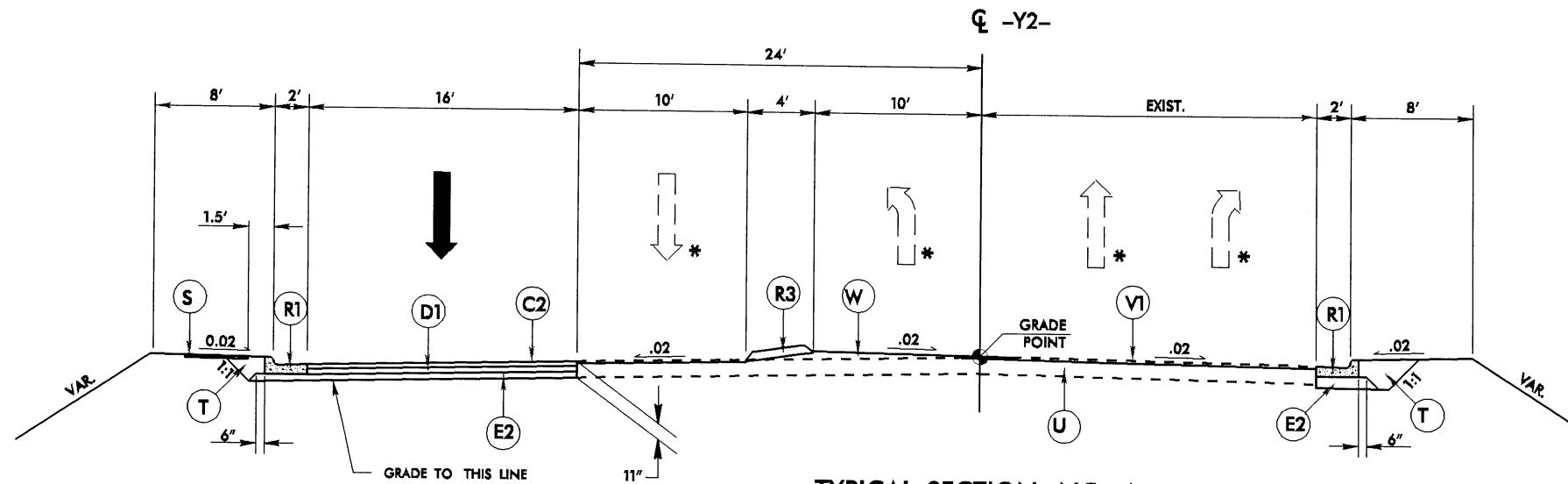
USE TYPICAL SECTION NO. 3
 -Y2- STA 14+35.00 TO 22+70.00
 USE INSET A -Y2- STA 15+88.00 LT TO 22+15.00 LT
 USE INSET B -Y2- STA 16+15.00 RT TO 17+15.00 RT
 USE INSET C -Y2- STA 17+15.00 RT TO 18+60.00 RT

* Existing Lane Usage

NOTE: TRANSITION FROM TYPICAL SECTION NO. 5
 TO TYPICAL SECTION NO. 6
 -Y2- STA. 21+65.00 TO 22+70.00

24 OCT 2003 12:27
 982X PROJ \CADD\01\02\1192
 982X PROJ \CADD\01\02\1192

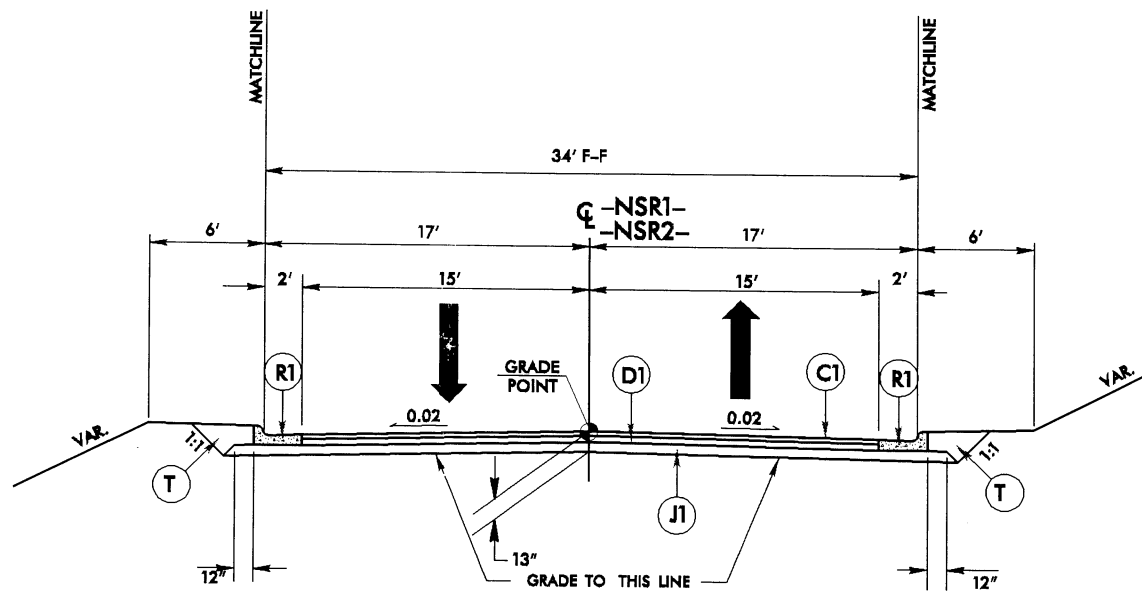
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ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	



TYPICAL SECTION NO. 4

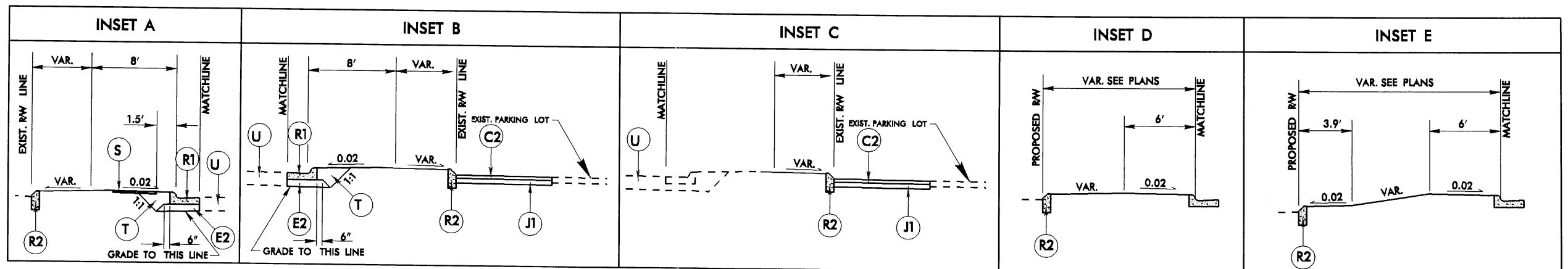
USE TYPICAL SECTION NO. 4
-Y2- STA 22+70.00 TO 23+64.00
* Existing Lane Usage

C1	3" ASPHALT CONG. SURFACE COURSE, TYPE 80.5A
C2	1.5" ASPHALT CONG. SURFACE COURSE, TYPE 80.5B
D1	4" ASPHALT CONG. INTERMEDIATE COURSE, TYPE 110.0B
J1	6" AGGREGATE BASE COURSE.
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	8"x18" CONCRETE CURB.
R3	6" MONOLITHIC CONCRETE ISLAND.
T	EARTH MATERIAL.
V	1 1/2" DEPTH MILLING
V1	VAR. DEPTH MILLING
W	WEDGING



TYPICAL SECTION NO. 5

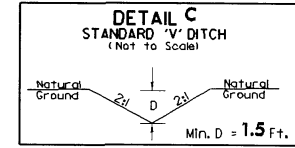
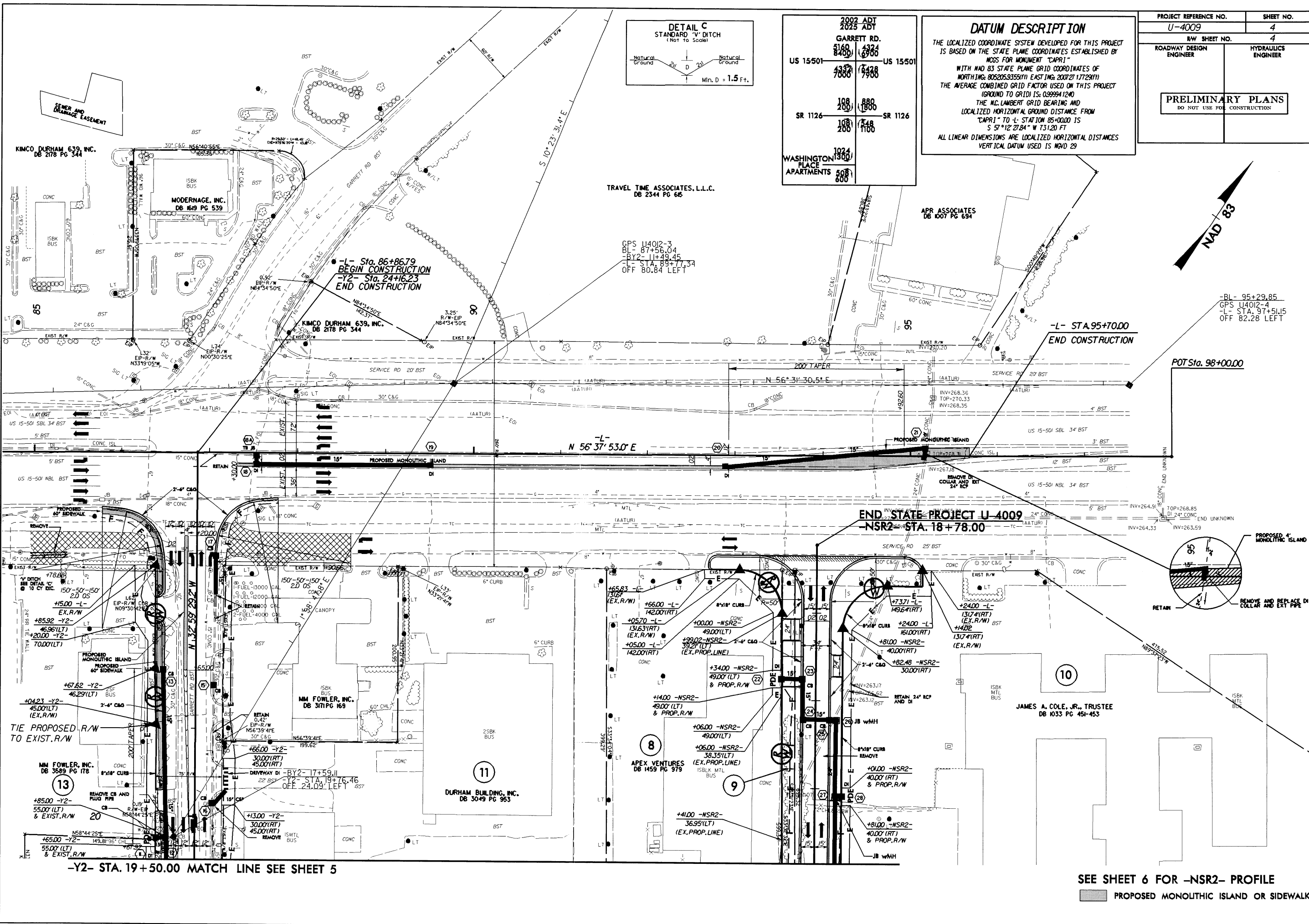
USE TYPICAL SECTION NO. 5
-NSR1- STA 10+19.31 TO STA. 17+25.10
-NSR2- STA 10+00.00 TO STA. 18+78.00
USE INSET D -NSR1- STA 10+60.00 LT TO STA. 12+10.00 LT
USE INSET D -NSR1- STA 10+65.00 RT TO STA. 12+50.00 RT (MIRROR)
USE INSET E -NSR2- STA 17+15.00 LT TO STA. 18+50.00 LT
USE INSET E -NSR2- STA 15+85.00 RT TO STA. 18+30.00 RT (MIRROR)



8/17/99

R/W Rev. - Revisions consist of extending temp. easements across water meter and sanitary sewer easements, property owner name and deed book corrections, adding a 'Do Not Disturb' Sign note and same R/W & easement break point location corrections. Also widened the proposed 24' driveway on Parcel 4 to 30'. Parcels affected are 9, 10, 11, 12 & 13. 7/30/03 BCK

24-DCT-2003 (12-27)
REVISED BY: [unclear]

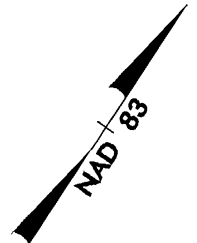


2002 ADT	2025 ADT
GARRETT RD.	
5160 (8400)	4324 (6900)
US 15501	US 15501
4377 (7800)	4298 (7400)
108 (200)	880 (1800)
SR 1126	SR 1126
108 (200)	748 (1100)
WASHINGTON PLACE APARTMENTS	1024 (300)
	508 (800)

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCOS FOR MONUMENT "CAPRI" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 8052059355(11) EASTING: 2002211728(11) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999941240 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "CAPRI" TO -L- STATION 85+00.00 IS S 57°12'21.84" W 73.120 FT ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

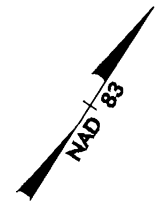
PROJECT REFERENCE NO.	SHEET NO.
U-4009	4
R/W SHEET NO.	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-Y2- STA. 19+50.00 MATCH LINE SEE SHEET 5

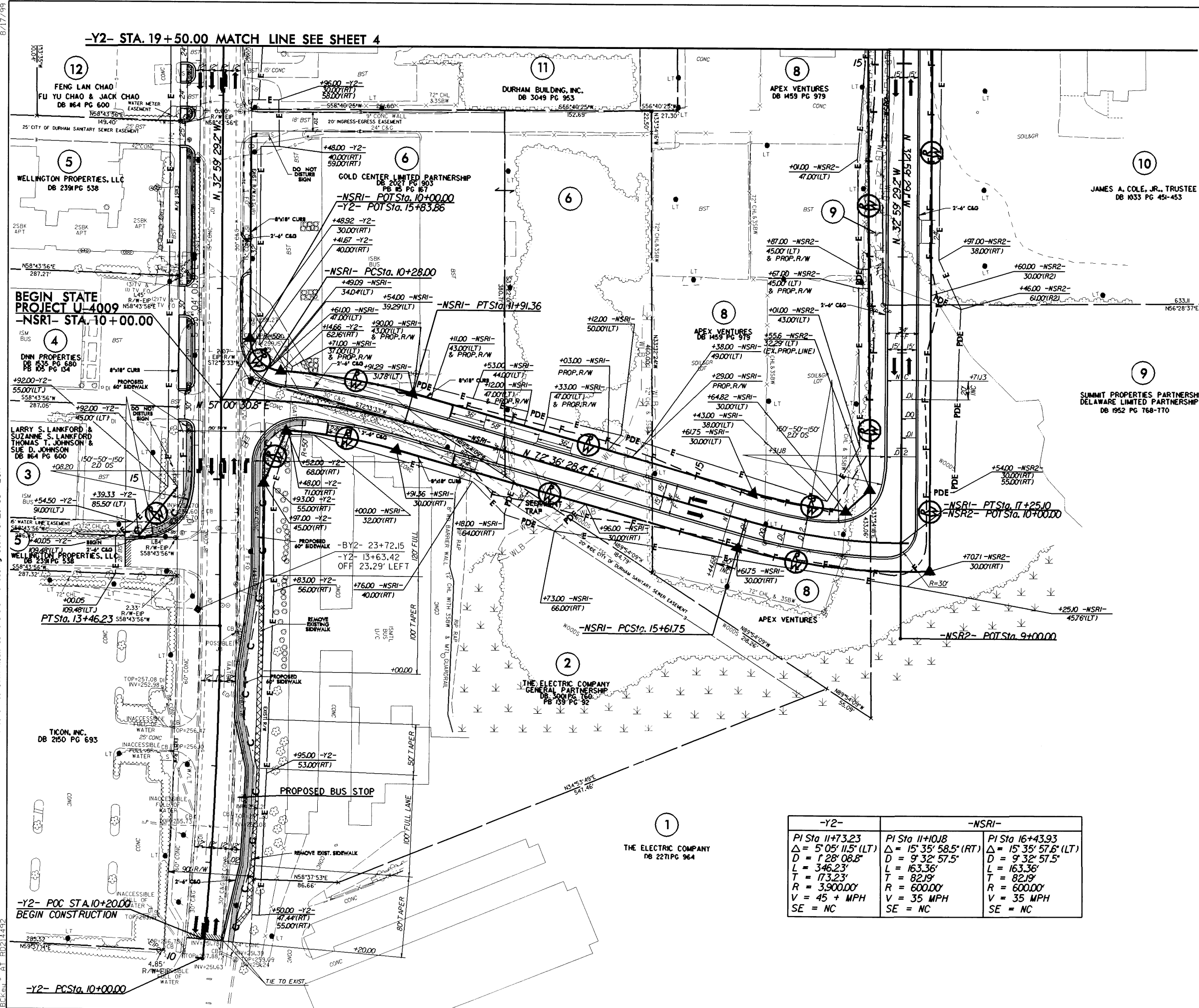
SEE SHEET 6 FOR -NSR2- PROFILE
[Hatched Box] PROPOSED MONOLITHIC ISLAND OR SIDEWALK

PROJECT REFERENCE NO.	SHEET NO.
U-4009	5
R/W SHEET NO.	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	



-Y2- STA. 19+50.00 MATCH LINE SEE SHEET 4

R/W Rev. - The driveway from -Y2- onto Parcel 6 has been widened from 24' to 32'. The driveway from -NSRI- onto Parcel 6 has also been widened from 24' to 36'. A 36' driveway has been added from -NSRI- onto the second Parcel 6 (formerly Parcel 7). And the channelization curbing adjacent to the loading dock on Parcel 6 has been modified to avoid the loading dock. 10/20/03 BCK



-Y2-	-NSRI-	
PI Sta 11+73.23	PI Sta 11+10.18	PI Sta 16+43.93
$\Delta = 5' 05'' 11.5'' (LT)$	$\Delta = 15' 35'' 58.5'' (RT)$	$\Delta = 15' 35'' 57.6'' (LT)$
$D = 1' 28' 08.8''$	$D = 9' 32' 57.5''$	$D = 9' 32' 57.5''$
$L = 346.23'$	$L = 163.36'$	$L = 163.36'$
$T = 173.23'$	$T = 82.19'$	$T = 82.19'$
$R = 3,900.00'$	$R = 600.00'$	$R = 600.00'$
$V = 45 + MPH$	$V = 35 MPH$	$V = 35 MPH$
SE = NC	SE = NC	SE = NC

2002 ADT	2025 ADT
GARRETT RD.	
5160	4320
8400	6900
US 15501	US 15501
4370	6428
7880	9900
SR 1126	SR 1126
108	880
200	1100
WASHINGTON PLACE APARTMENTS	
1024	
1300	
508	
800	

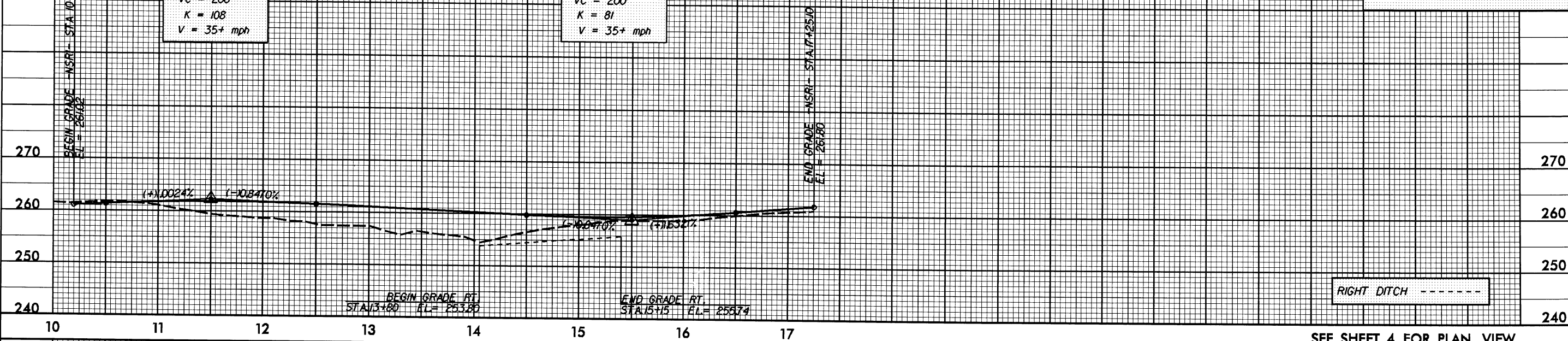
SEE SHEET 6 FOR -NSRI- PROFILE
SEE SHEET 6 FOR -NSR2- PROFILE

5/28/99

PROJECT REFERENCE NO. U-4009	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	

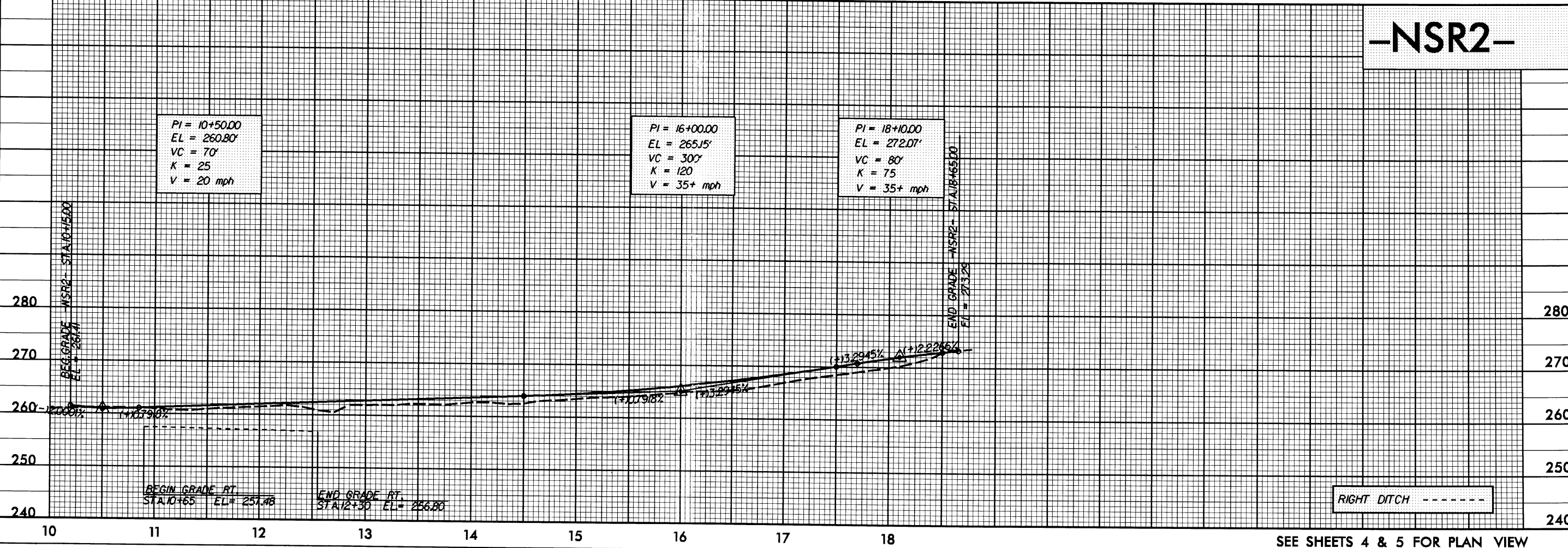
BM 5 RAIL ROAD SPIKE IN BASE OF 12" PINE
269' LEFT OF BL STA. 87+42
N 805353.0000 E 2005499.0000
ELEV. = 290.64

-NSR1-



SEE SHEET 4 FOR PLAN VIEW

-NSR2-



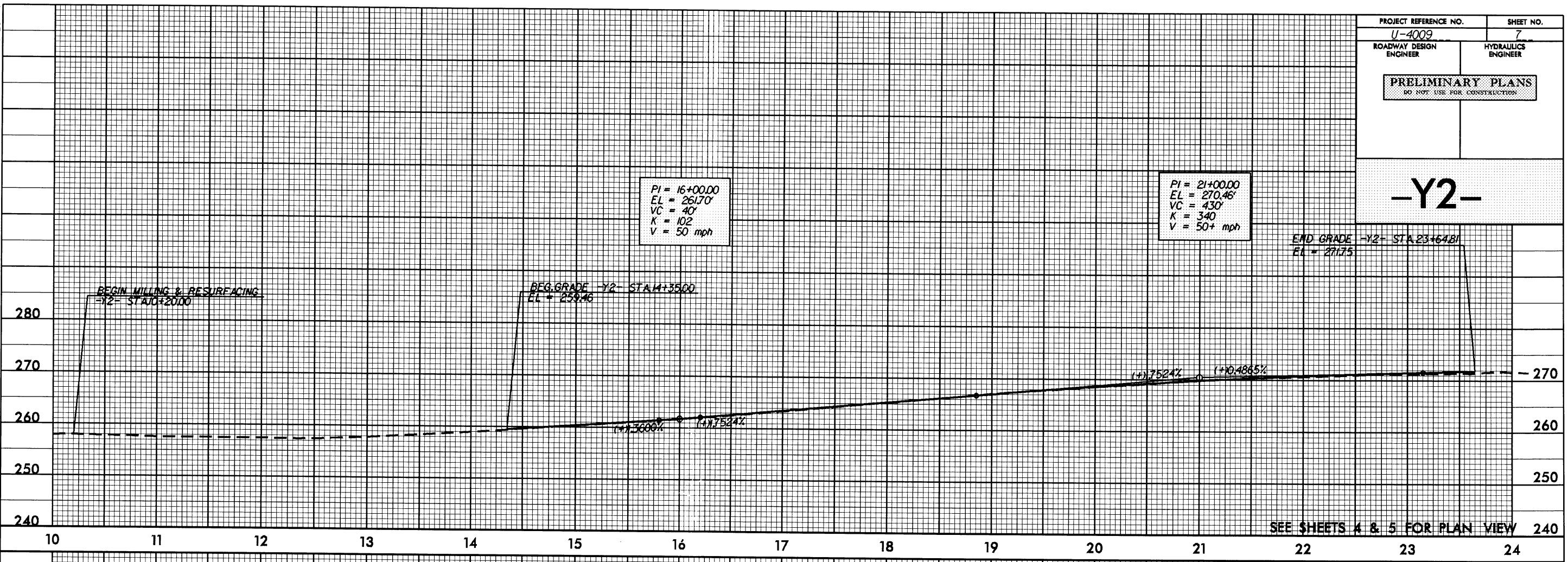
SEE SHEETS 4 & 5 FOR PLAN VIEW

24-OCT-2007 12:28
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5/28/99

PROJECT REFERENCE NO. U-4009	SHEET NO. 7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	

-Y2-



SEE SHEETS 4 & 5 FOR PLAN VIEW

24 OCT 2003 12:28
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BLK\DWG\14492