



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

November 17, 2003

U. S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1000
Washington, NC 27889-1000

ATTENTION: Mr. Mike Bell
NCDOT Coordinator

Dear Sir:

Subject: **Nationwide 23 Permit Application and Request for Buffer Certification** for the Replacement of Bridge No. 448 over Bernal Branch on SR 1229, Johnston County, Federal Aid Project No. BRZ-1229(8), State Project No. 8.2312501, TIP B-3670, Division 4.

Please find enclosed copies of the project planning report for the above referenced project. Bridge No. 448 will be replaced in the existing location with a cored slab bridge, approximately 60 feet (18 m) in length with a 26-foot (12.0 m) clear roadway width. The bridge will have a 22-foot (6.7 m) travelway with 2.0-foot (0.6 m) offsets on each side. The new approach roadway will have a 22-foot (6.7 m) travelway with 2.0-foot (0.6 m) turf shoulders. A design speed of 25 mph (40 km/hr) will be provided. A temporary on-site detour will be required to maintain traffic during construction of the permanent structure.

No permanent impacts to jurisdictional wetlands are anticipated as a result of the construction of this project. However, there will be minor amount of temporary impact associated with the proposed temporary detour. As shown in the attached plan sheets, the temporary detour will consist of earthen fill with three 72" x 44" corrugated steel arch pipes to carry the flow of Bernal Branch. Filter fabric will be placed under the earthen fill to reduce compaction and to ensure that all temporary fill material is removed. Temporary fill in wetlands will be 0.06 acres. There will also be a very minor amount of temporary excavation in wetlands to facilitate drainage of the temporary detour. The total area to be excavated is 0.01 acres. The excavated area will be returned to pre-construction grade and re-vegetated upon completion of the project. Finally, there will be 0.06 acres of mechanized clearing. This area is necessary to allow for construction equipment to move freely within the construction area. The cleared area will not be maintained and will be allowed to naturally revegetate upon completion of construction.

The Stream Crossing Guidelines for Anadromous Fish Passage will be implemented, as applicable.

The bridge will be a single span cored slab structure built using top-down construction. No causeway or work pad will be needed, and thus no temporary impacts from construction access.

During construction, traffic will be maintained by an on-site detour located to the west of the existing bridge.

Bridge Demolition

Bridge Demolition: Bridge No. 448 is composed of asphalt and timber. The existing structure is 31 feet (9.5 m) long with a 19.1-foot (5.8 m) clear roadway width. Due to the nature of the structural components of the bridge, no fill will be dropped into the “Waters of the United States.” Best Management Practices for Bridge Demolition and Removal will be implemented.

As noted in the project’s CE document, NCDOT will observe an in-stream construction moratorium from February 15 to June 15.

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 January 29, 2003, the U. S. Fish and Wildlife Service (FWS) lists the following federally protected species for Johnston County (Table 1).

Table 1. Federally-protected Species for Johnston County

Common Name	Scientific Name	Status
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered
Dwarf wedge mussel	<i>Alasmidonta heterodon</i>	Endangered
Tar spiny mussel	<i>Elliptio steinstansana</i>	Endangered
Michaux’s sumac	<i>Rhus michauxii</i>	Endangered*

Endangered – A taxon “which is in danger of extinction throughout all or a significant portion of its range” (Endangered Species Act, Section 3).

“*” – Indicates the species was last observed in the county more than 50 years ago.

Biological Conclusions of “No Effect” were reached for all listed species. We have updated information for two species that had habitat: Dwarf wedgemussel (*Alasmidonta heterodon*) and Michaux’s sumac (*Rhus michauxii*). A site search for the Dwarf wedgemussel was conducted in October of 2003 and no individuals were found. Also, Michaux’s sumac was resurveyed in October of 2003 and no individuals were found. Therefore, in accordance with the most recent guidance from the USFWS, Michaux’s sumac received the biological conclusion of “May affect but not likely to adversely affect”, and the Dwarf wedgemussel received “No Effect” for the biological conclusion.

Neuse Buffer Impacts

This project is located in the Neuse River Basin (sub-basin 03-04-04, HUC 03020201); therefore the regulations pertaining to the Neuse River Buffer Rules will apply. Buffer impacts associated with this project total 10354.5 sq. ft. (0.24 ac.) for Zone 1 and 2225.5 sq. ft. (0.05 ac.) for Zone 2. All practicable measures to minimize impacts within the buffer zones were followed.

Regulatory Approvals

Section 404 Permit: This project is being processed by the Federal Highway Administration as a “Categorical Exclusion” in accordance with 23 CFR 771.115(b). Therefore, we do not anticipate

requesting an individual permit but propose to proceed under a Nationwide 23 as authorized by a Nationwide Permit 23 (67 FR 2020; January 15, 2002).

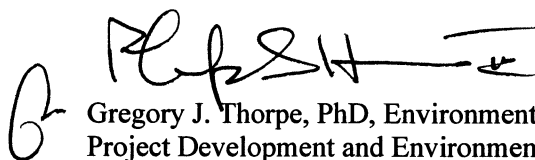
Section 401 Permit: We anticipate 401 General Certification number 3403 will apply to this project. In accordance with 15A NCAC 2H, Section .0500(a) we are providing two copies of this application to the North Carolina Department of Environmental and Natural Resources, Division of Water Quality, for their review.

Neuse Buffer Rules: This project lies within the Neuse River Basin; therefore, the regulations pertaining to the Neuse River Buffer Rules will apply. There are 0.24 acres of impacts to Buffer Zone One and 0.05 acres of impacts to Buffer Zone Two. These uses require written authorization from the Division or the delegated local authority. Therefore, NCDOT requests written authorization for a Buffer Certification from the Division of Water Quality.

A copy of this permit application will be posted on the DOT website at: <http://www.ncdot.org/planning/pe/naturalunit/Permit.html>.

If you have any questions or need additional information, please contact Mr. Chris Manley at (919) 715-1487.

Sincerely,



Gregory J. Thorpe, PhD, Environmental Management Director
Project Development and Environmental Analysis Branch

cc:

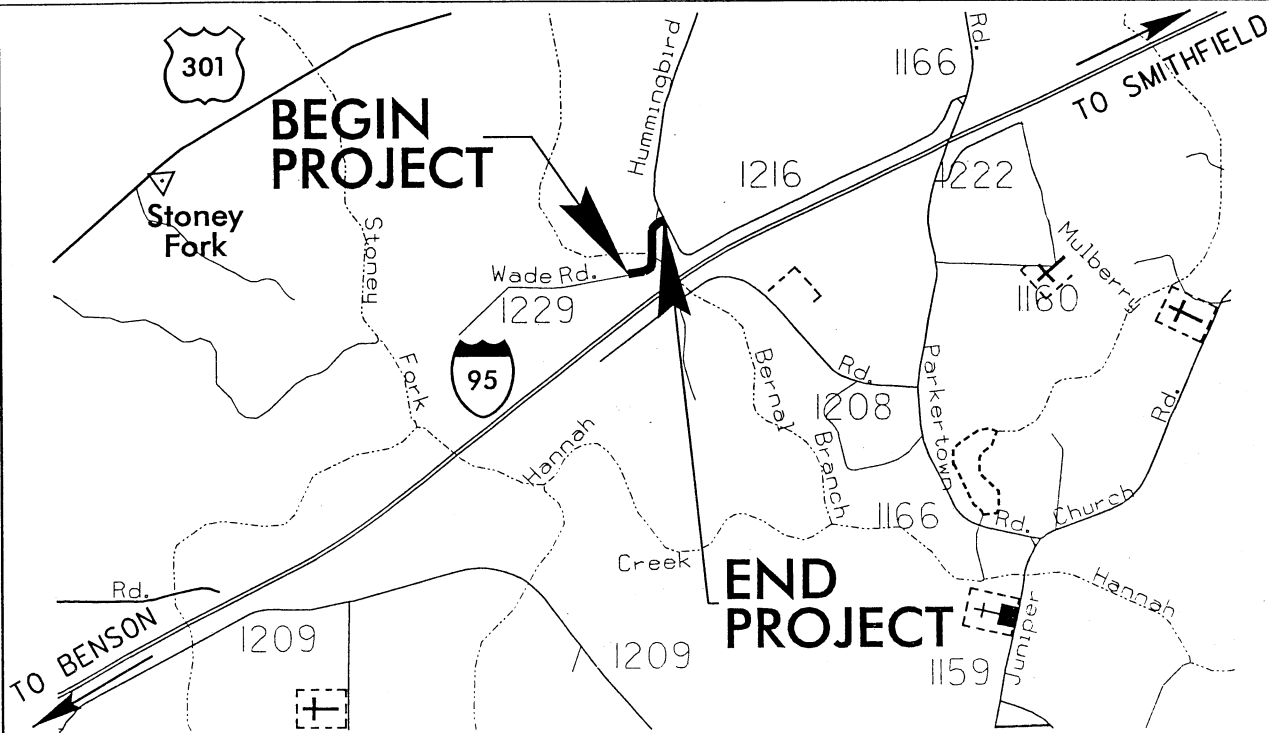
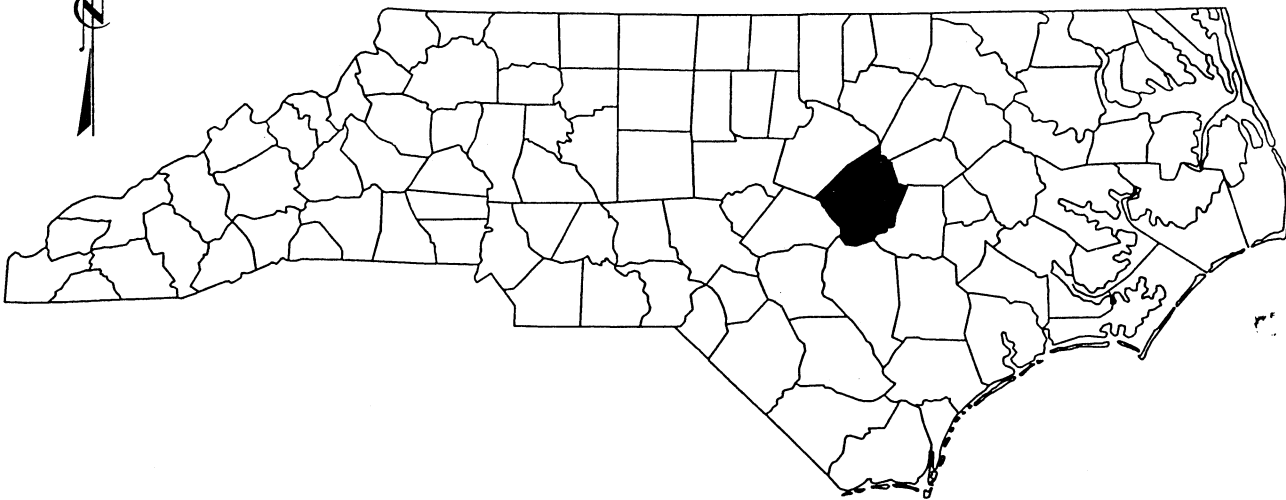
w/attachment

Mr. John Dorney, Division of Water Quality (2 copies)
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Mr. Greg Perfetti, P.E., Structure Design

w/o attachment

Mr. David Franklin, USACE, Wilmington
Mr. Jay Bennett, P.E., Roadway Design
Mr. Omar Sultan, Programming and TIP
Ms. Debbie Barbour, P.E., Highway Design
Mr. David Chang, P.E., Hydraulics
Mr. Mark Staley, Roadside Environmental
Mr. John Sullivan, FHWA
Mr. Anthony W. Roper, P.E., Division Engineer
Mr. Jamie Shern, DEO
Ms. Stacy Baldwin, Project Planning Engineer

NORTH CAROLINA



VICINITY MAPS

WETLAND

NCDOT
DIVISION OF HIGHWAYS
JOHNSTON COUNTY
PROJECT: 8.2312501 (B-3670)
BRIDGE NO. 448 OVER
BERNAL BRANCH AND
APPROACHES ON SR 1229

SHEET

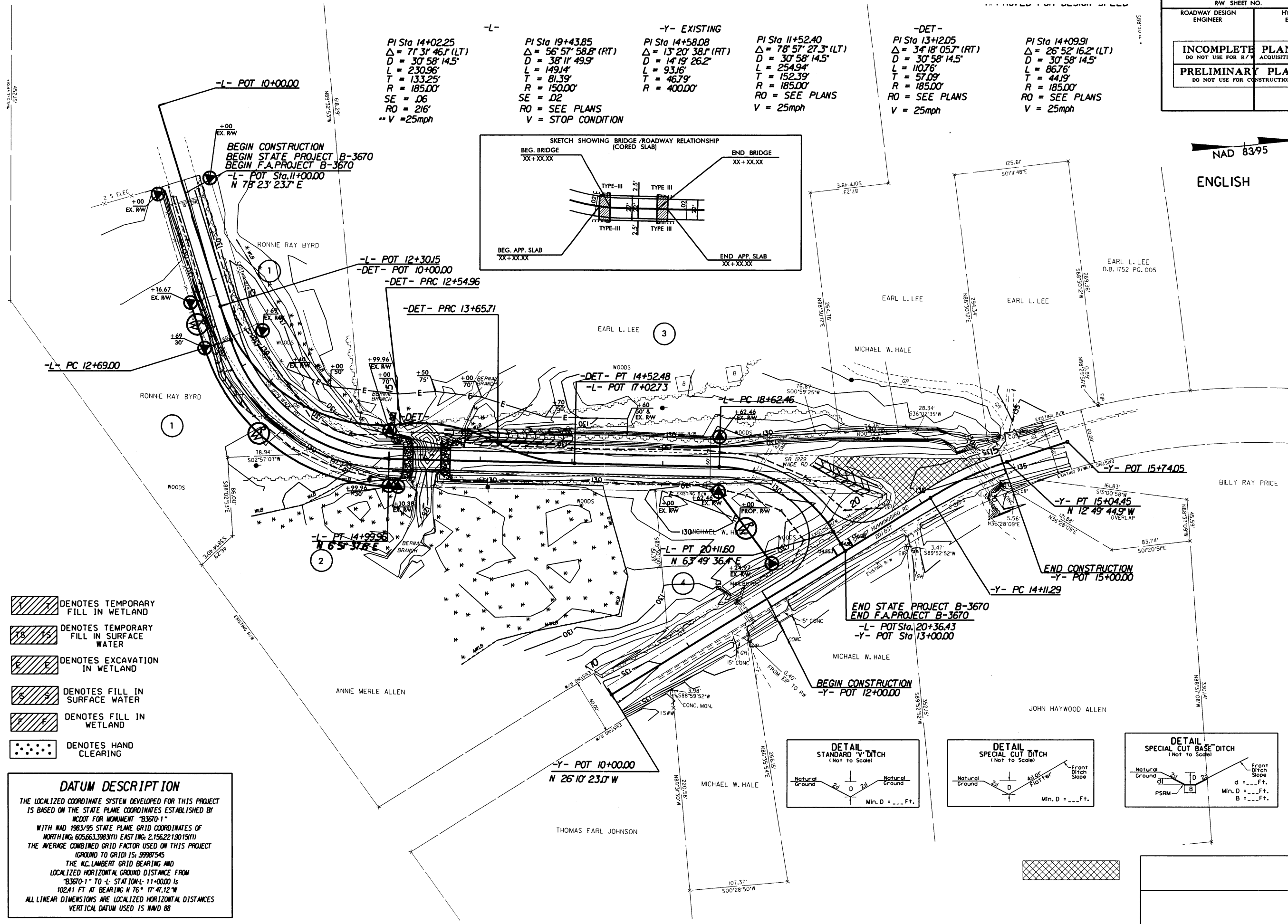
OF

7 / 21 / 03

8/17/99

PROJECT REFERENCE NO. B-3670	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS <small>DO NOT USE FOR R/W ACQUISITION</small>	
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	

NAD 83/95
ENGLISH



- DENOTES TEMPORARY FILL IN WETLAND
- DENOTES TEMPORARY FILL IN SURFACE WATER
- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING

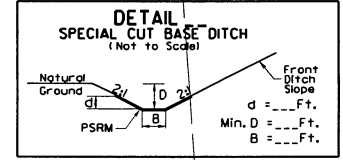
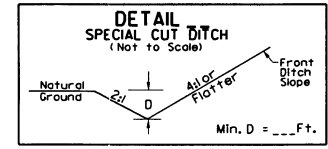
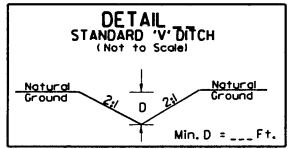
DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY MCDOT FOR MONUMENT "B3670-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 605663.3983(1) EASTING: 2.1562219015(1) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 99987545

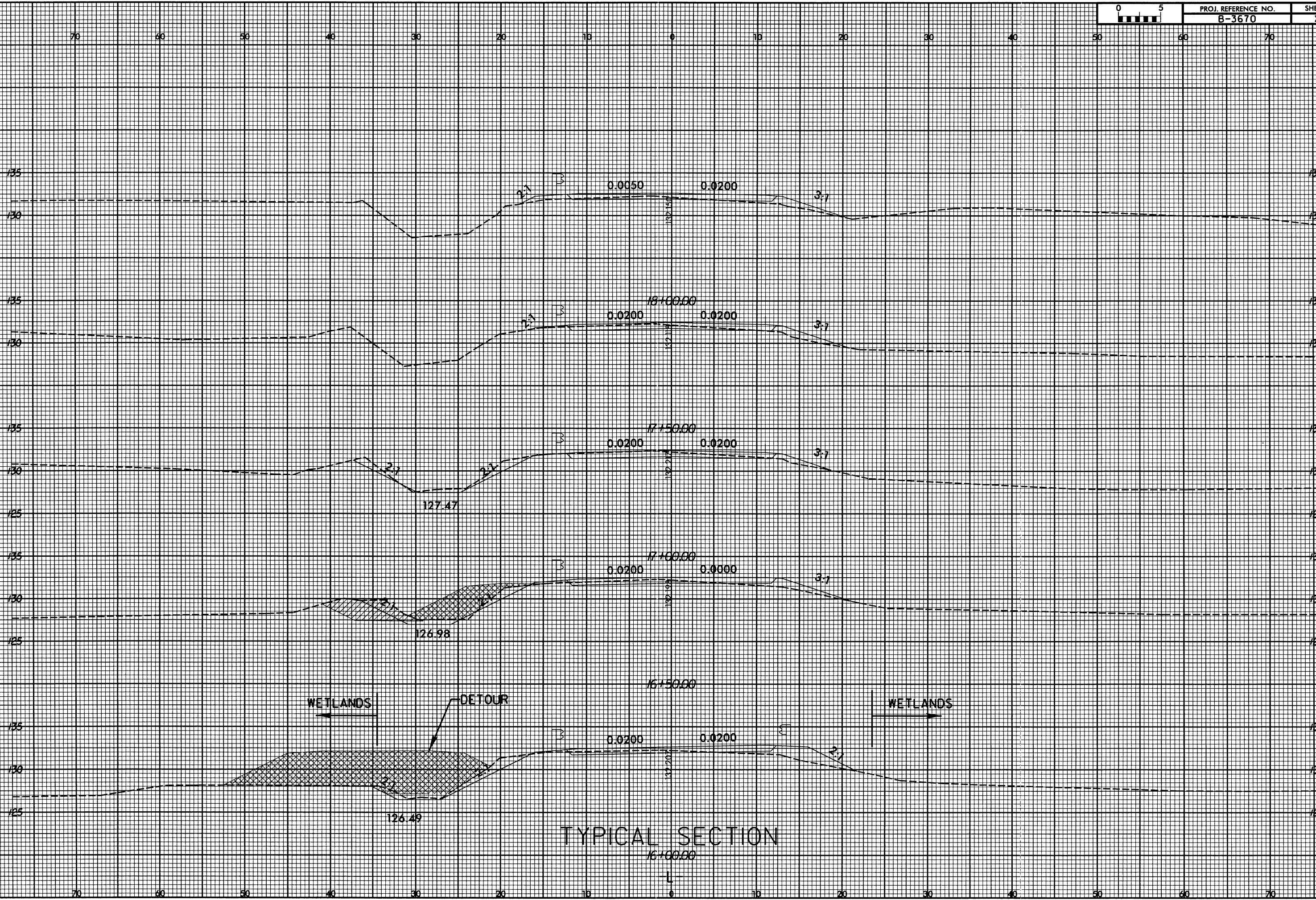
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3670-1" TO L- STATION L- 11+00.00 IS 10241 FT AT BEARING N 76° 17' 47.12" W

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS NAD 88



8/23/99



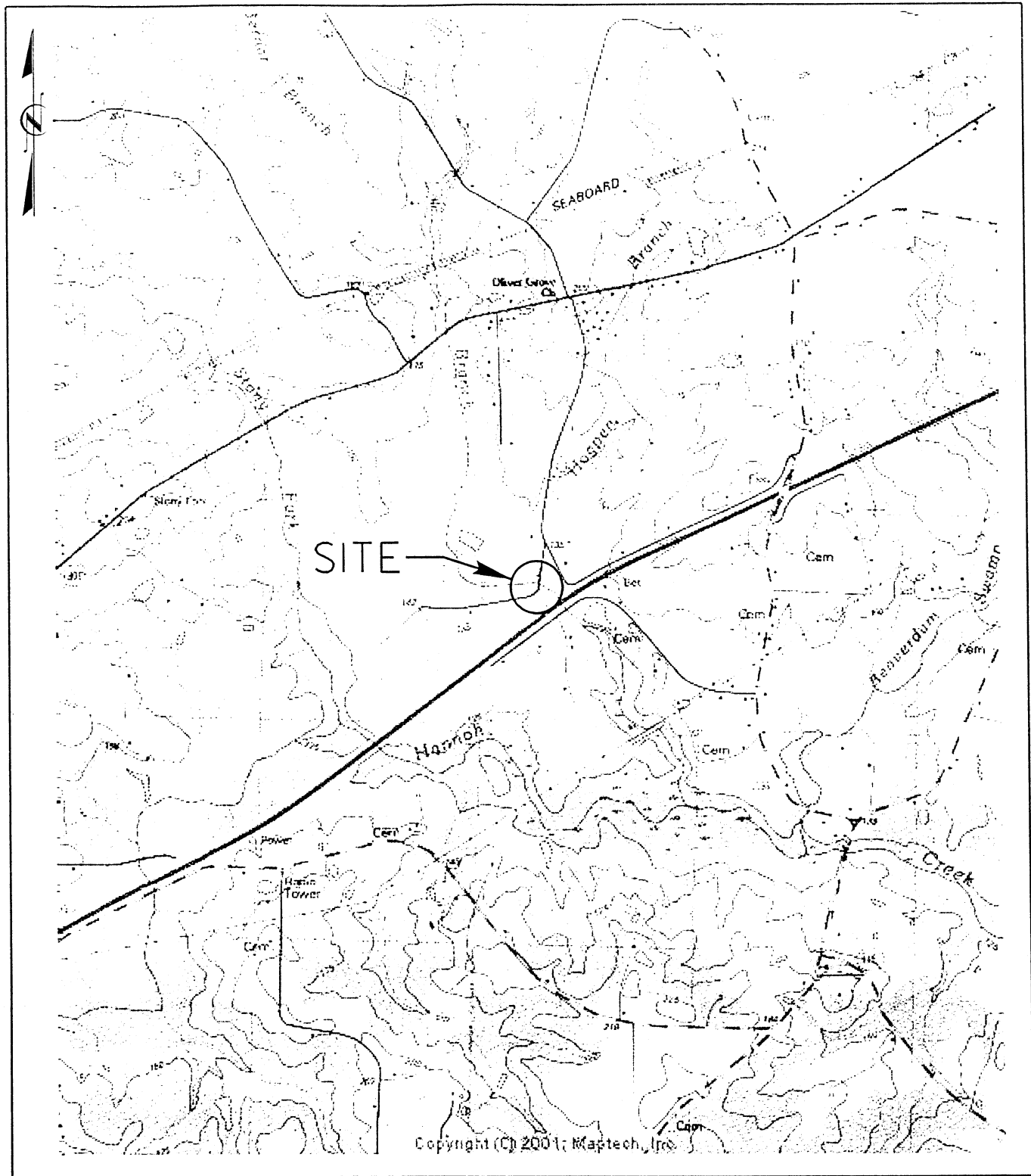
SECTIONAL VIEW

TYPICAL SECTION

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS						SURFACE WATER IMPACTS								
			Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method III) (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	15+41.23 -L-	1 @ 52' 21" CORED SLAB BRIDGE				0.064	0.002										
1	12+85 -DET-	3 @ 72" x 44" CSPA		0.058	0.011					0.076							
			0	0.06	0.01	0.06	<0.01	0	0.08	0	0	0	0	0	0	0	0
TOTALS:																	

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 JOHNSTON COUNTY
 PROJECT 8.2212501 (B-3670)



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NCDOT

DIVISION OF HIGHWAYS
JOHNSTON COUNTY

PROJECT: 8.2312501 (B-3670)

BRIDGE NO. 448 OVER
BERNAL BRANCH AND
APPROACHES ON SR 1229

SHEET

OF

7 / 21 / 03

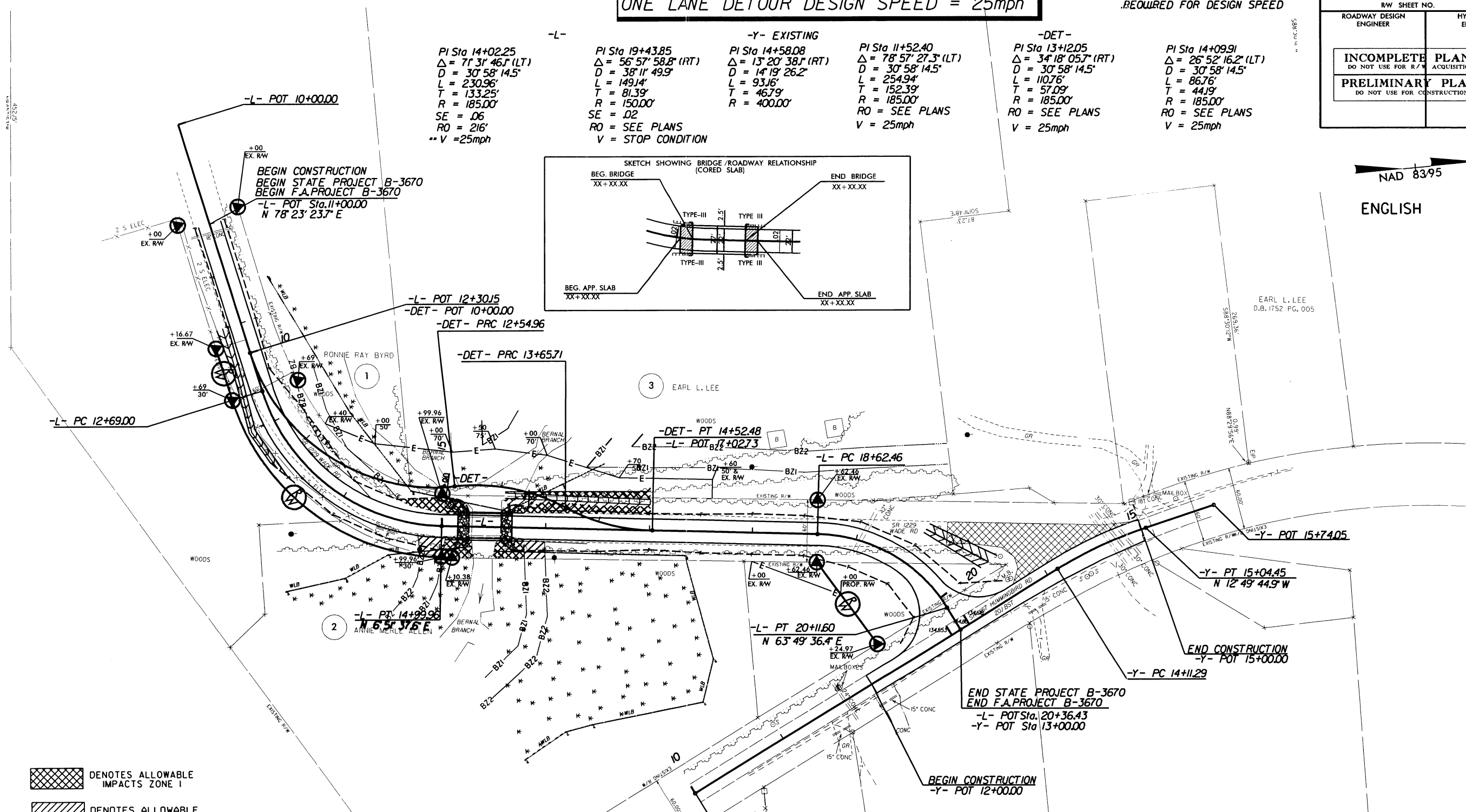
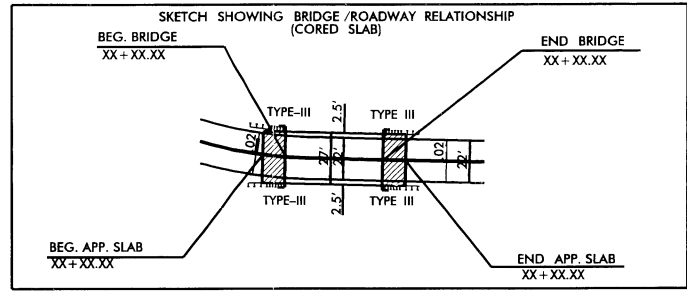
8/17/99

ONE LANE DETOUR DESIGN SPEED = 25mph

** DESIGN EXCEPTION
REQUIRED FOR DESIGN SPEED

PROJECT REFERENCE NO. B-3670	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

-L- PI Sta 14+02.25 $\Delta = 71^{\circ} 31' 46.1''$ (LT) $D = 30^{\circ} 58' 14.5''$ $L = 230.96'$ $T = 133.25'$ $R = 185.00'$ $SE = .06$ $RO = 216'$ $V = 25\text{mph}$	-Y- EXISTING PI Sta 19+43.85 $\Delta = 56^{\circ} 57' 58.8''$ (RT) $D = 38^{\circ} 11' 49.9''$ $L = 149.14'$ $T = 81.39'$ $R = 150.00'$ $SE = .02$ $RO = \text{SEE PLANS}$ $V = \text{STOP CONDITION}$	-Y- EXISTING PI Sta 14+58.08 $\Delta = 13^{\circ} 20' 38.1''$ (RT) $D = 14^{\circ} 19' 26.2''$ $L = 93.16'$ $T = 46.79'$ $R = 400.00'$ $V = 25\text{mph}$	-DET- PI Sta 11+52.40 $\Delta = 78^{\circ} 57' 27.3''$ (LT) $D = 30^{\circ} 58' 14.5''$ $L = 254.94'$ $T = 152.39'$ $R = 185.00'$ $RO = \text{SEE PLANS}$ $V = 25\text{mph}$	-DET- PI Sta 13+12.05 $\Delta = 34^{\circ} 18' 05.7''$ (RT) $D = 30^{\circ} 58' 14.5''$ $L = 110.76'$ $T = 57.09'$ $R = 185.00'$ $RO = \text{SEE PLANS}$ $V = 25\text{mph}$	-DET- PI Sta 14+09.91 $\Delta = 26^{\circ} 52' 16.2''$ (LT) $D = 30^{\circ} 58' 14.5''$ $L = 86.76'$ $T = 44.19'$ $R = 185.00'$ $RO = \text{SEE PLANS}$ $V = 25\text{mph}$
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- DENOTES ALLOWABLE IMPACTS ZONE 1
- DENOTES ALLOWABLE IMPACTS ZONE 2

DATUM DESCRIPTION

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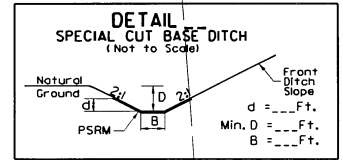
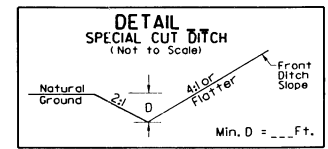
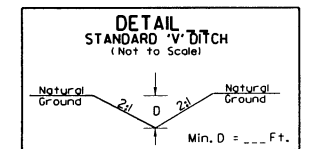
WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 605,663,398.3111; EASTING: 2,156,221,901.5111

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: .99987545

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3670-1" TO -L- STAT 10+11+00.00 IS 102.41 FT AT BEARING N 76° 17' 47.12" W

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS NAD 88



PAVEMENT REMOVAL

SEE SHEET 4-A FOR DETOUR

SEE SHEET 5 FOR PROFILE

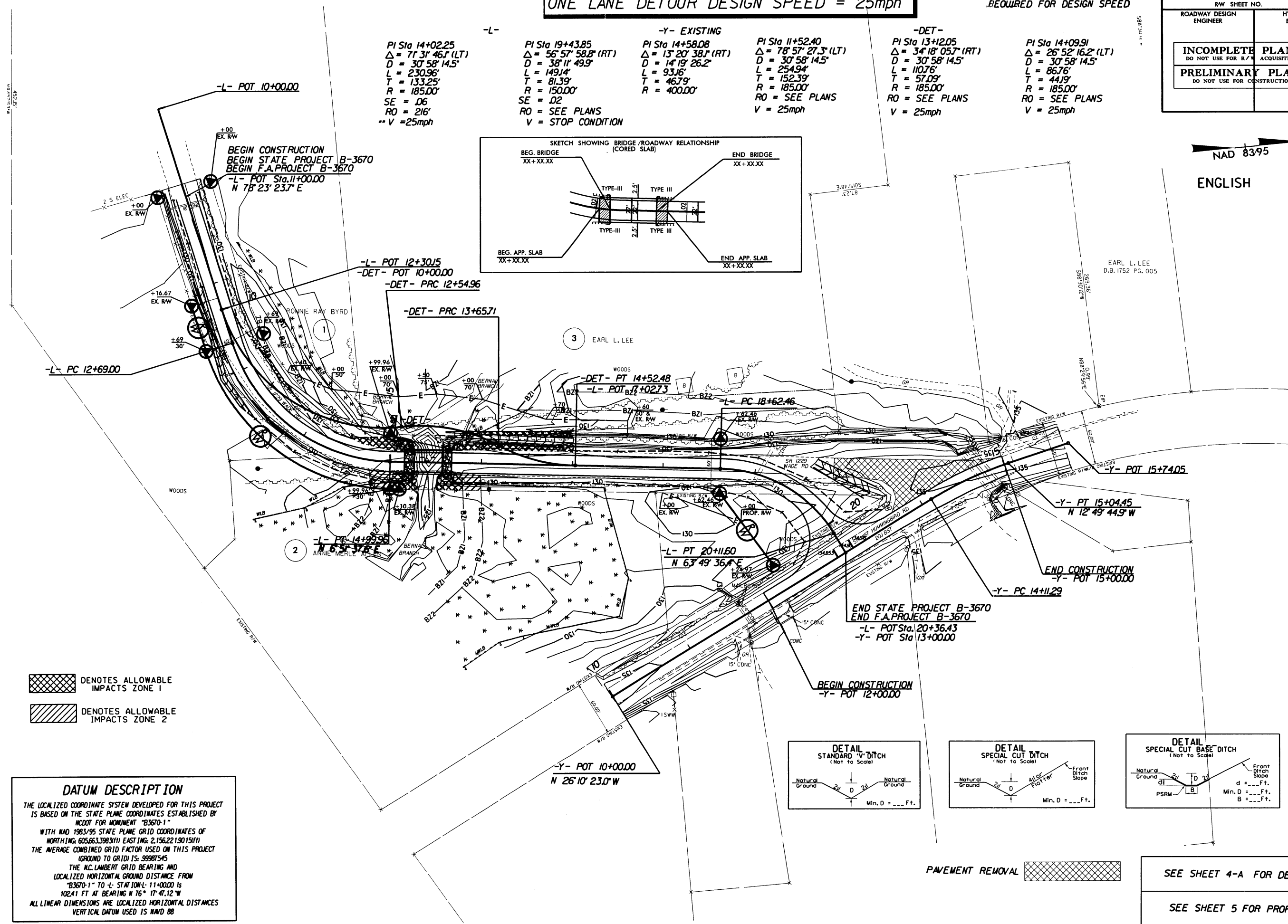
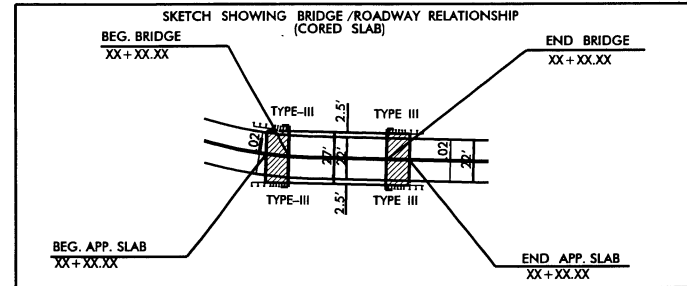
8/17/99

ONE LANE DETOUR DESIGN SPEED = 25mph

**** DESIGN EXCEPTION
REQUIRED FOR DESIGN SPEED**

PROJECT REFERENCE NO. B-3670	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	PLANS ACQUISITION
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

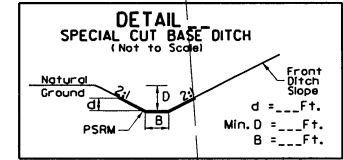
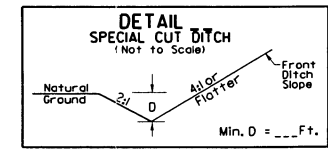
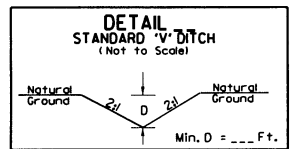
<p>-L-</p> <p>PI Sta 14+02.25 $\Delta = 71' 31" 46.1' (LT)$ $D = 30' 58" 14.5'$ $L = 230.96'$ $T = 133.25'$ $R = 185.00'$ $SE = .06$ $RO = 216'$ $V = 25mph$</p>	<p>-Y- EXISTING</p> <p>PI Sta 19+43.85 $\Delta = 56' 57" 58.8' (RT)$ $D = 38' 11" 49.9'$ $L = 149.14'$ $T = 81.39'$ $R = 150.00'$ $SE = .02$ $RO = SEE PLANS$ $V = STOP CONDITION$</p>	<p>-Y- EXISTING</p> <p>PI Sta 14+58.08 $\Delta = 13' 20' 38.1' (RT)$ $D = 14' 19' 26.2'$ $L = 93.16'$ $T = 46.79'$ $R = 400.00'$</p>	<p>-DET-</p> <p>PI Sta 11+52.40 $\Delta = 78' 57' 27.3' (LT)$ $D = 30' 58" 14.5'$ $L = 254.94'$ $T = 152.39'$ $R = 185.00'$ $RO = SEE PLANS$ $V = 25mph$</p>	<p>-DET-</p> <p>PI Sta 13+12.05 $\Delta = 34' 18' 05.7' (RT)$ $D = 30' 58" 14.5'$ $L = 110.76'$ $T = 57.09'$ $R = 185.00'$ $RO = SEE PLANS$ $V = 25mph$</p>	<p>-DET-</p> <p>PI Sta 14+09.91 $\Delta = 26' 52' 16.2' (LT)$ $D = 30' 58" 14.5'$ $L = 86.76'$ $T = 44.19'$ $R = 185.00'$ $RO = SEE PLANS$ $V = 25mph$</p>
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- DENOTES ALLOWABLE IMPACTS ZONE 1
- DENOTES ALLOWABLE IMPACTS ZONE 2

DATUM DESCRIPTION

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PAVEMENT REMOVAL

SEE SHEET 4-A FOR DETOUR
SEE SHEET 5 FOR PROFILE

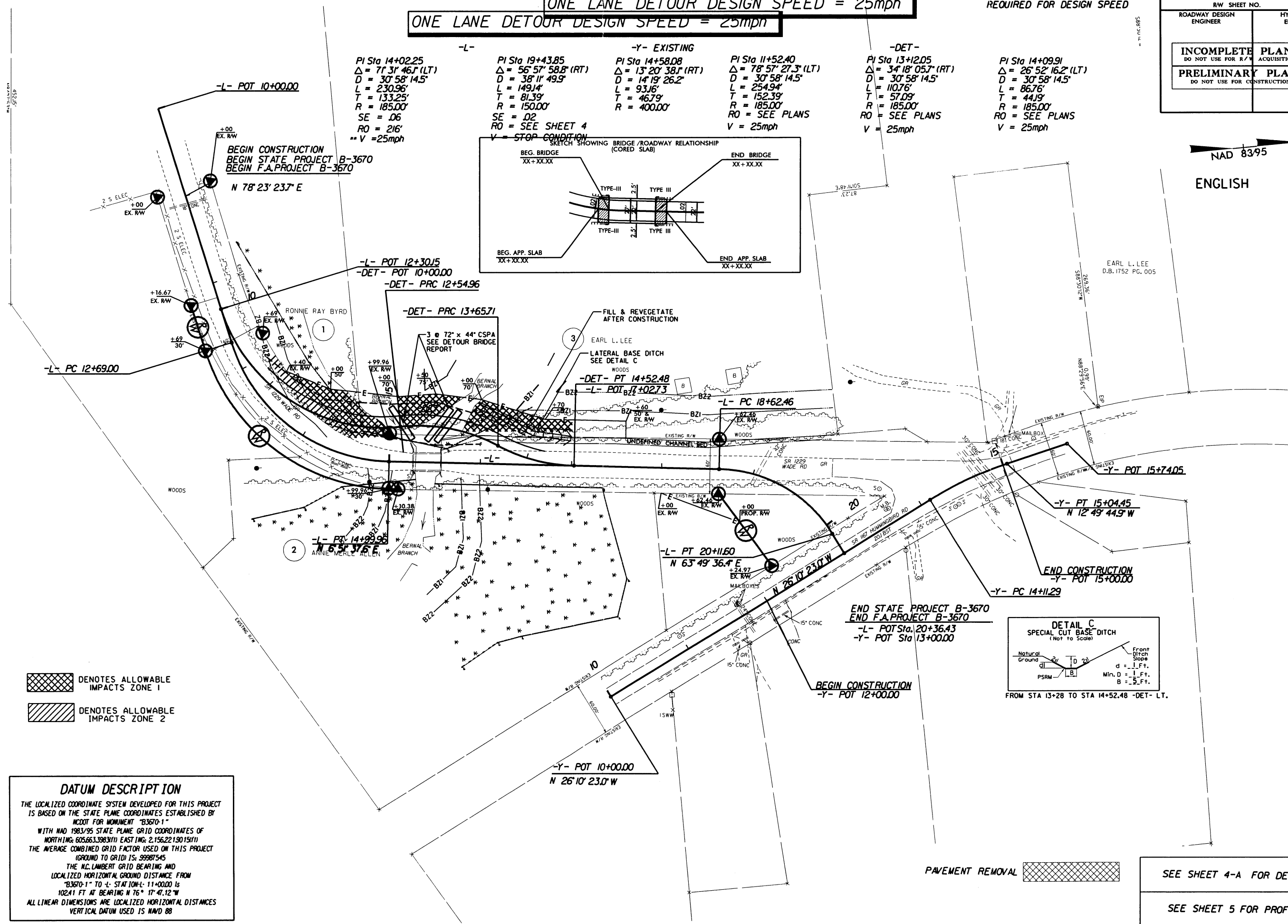
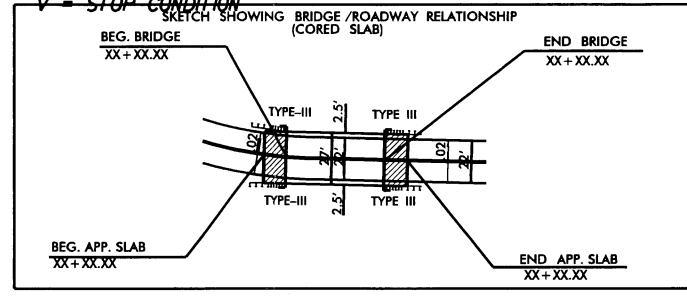
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-3670	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

ONE LANE DETOUR DESIGN SPEED = 25mph

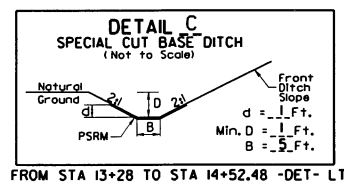
DESIGN EXCEPTION
REQUIRED FOR DESIGN SPEED

-L-	-Y- EXISTING	-DET-
PI Sta 14+02.25	PI Sta 14+58.08	PI Sta 11+52.40
$\Delta = 71' 31" 46.1 (LT)$	$\Delta = 13' 20' 38.1 (RT)$	$\Delta = 78' 57' 27.3 (LT)$
$D = 30' 58' 14.5"$	$D = 14' 19' 26.2"$	$D = 30' 58' 14.5"$
$L = 230.96'$	$L = 149.14'$	$L = 254.94'$
$T = 133.25'$	$T = 81.39'$	$T = 152.39'$
$R = 185.00'$	$R = 150.00'$	$R = 185.00'$
$SE = .06$	$SE = .02$	$RO = SEE PLANS$
$RO = 216'$	$RO = SEE SHEET 4$	$RO = SEE PLANS$
$** V = 25mph$	$V = 25mph$	$V = 25mph$



- DENOTES ALLOWABLE IMPACTS ZONE 1
- DENOTES ALLOWABLE IMPACTS ZONE 2

DATUM DESCRIPTION
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NAD 8395
ENGLISH

SEE SHEET 4-A FOR DETOUR
SEE SHEET 5 FOR PROFILE

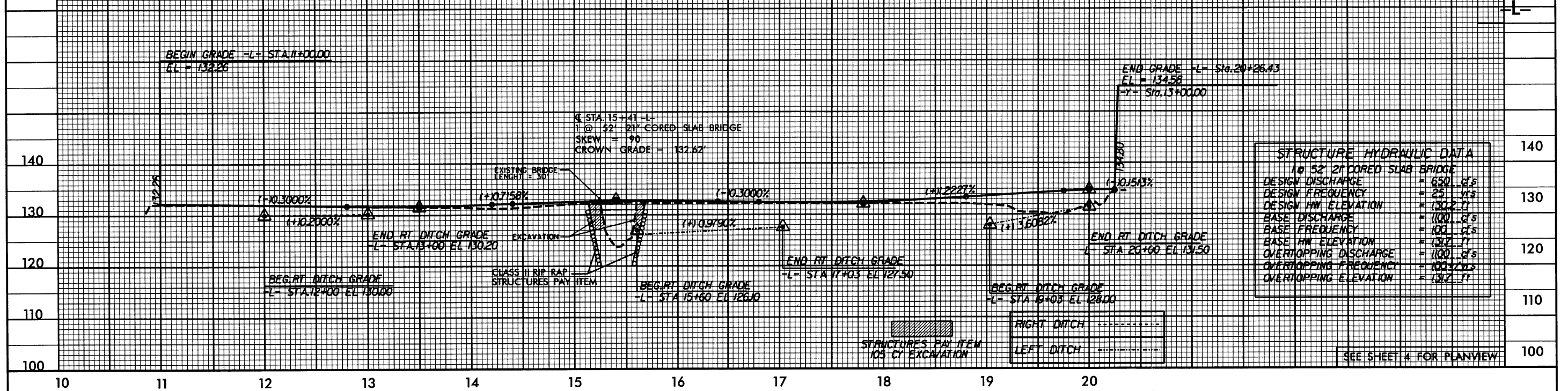
PAVEMENT REMOVAL

SYSTEMS SECTION
UNREVISIONED

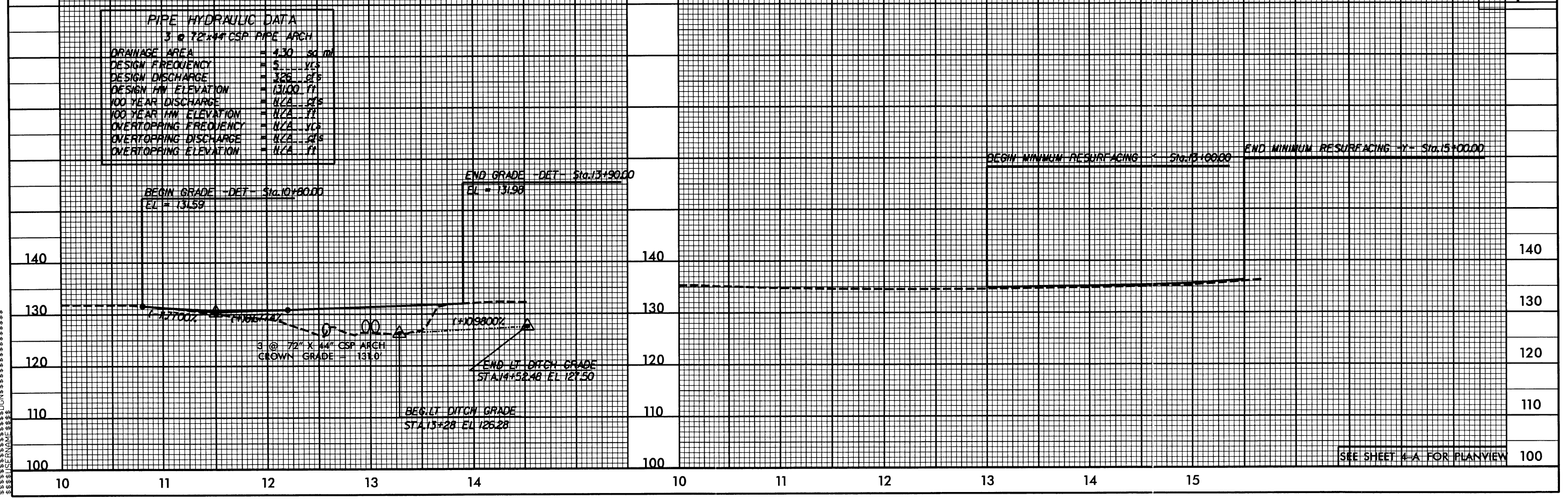
5/28/99

-L- SR 1229

PROJECT REFERENCE NO. B-3670	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-DETOUR-



SYSTEMS
DESIGN
CONSTRUCTION
DIVISION
STATE OF TEXAS

PROPERTY OWNERS
NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
①	Ronnie Ray Byrd	125 Wade Rd. Four Oaks, NC 27524
②	Annie Merle Allen	8625 US 301S Four Oaks, NC 27524
③	Earl L. Lee	759 Hummingbird Rd. Four Oaks, NC 27524

NCDOT
DIVISION OF HIGHWAYS
JOHNSTON COUNTY
PROJECT: 8.2312501 (B-3670)
BRIDGE NO. 448 OVER
BERNAL BRANCH
ON SR 1229

SHEET **OF** **7 / 21 / 03**