



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

March 15, 2004

MEMORANDUM TO: Mr. M. L. Holder, P.E.  
Division 12 Engineer

FROM: *PH* Philip S. Harris, III, P.E., Manager *PH*  
Office of the Natural Environment  
Project Development and  
Environmental Analysis Branch

SUBJECT: Alexander County, Replacement of Bridge No. 27 on SR 1001  
over the South Yadkin River.; State Project No. 8.2780601;  
T.I.P. B-3100

No permits are required for the subject project. Attached is documentation from the USACE verifying this status.

PSH/ang

Attachment

cc: Mr. Art McMillan, P.E.  
Mr. Omar Sultan  
Mr. Jay Bennett, P.E.  
Mr. David Chang, P.E.  
Mr. Randy Garris, P.E.  
Mr. Greg Perfetti, P.E.  
Mr. Mark Staley  
Mr. John F. Sullivan, III, FHWA  
Ms. Trish Simon, Division 12 DEO



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

March 10, 2004

MEMORANDUM TO: Gregory J. Thorpe, Ph.D.  
Environmental Management Director, PDEA

FROM: Tyler Stanton, PDEA- ONE Project Manager  
Natural Environment Project Management Unit

SUBJECT: The proposed replacement of Bridge No. 27 on SR 1001  
(Sulphur Springs Rd) over the South Yadkin River.  
Alexander County in Division 12. Federal Project No. BRZ-  
1001(16), State Project No. 8.2780601, T.I.P. No. B-3100.

Bridge No. 27, constructed in 1951, carries SR 1001 over the South Yadkin River. The existing bridge has an overall length of 127.5 feet (38.9 meters) and a deck width of approximately 23.1 feet (7 meters), measured from the face of the guardrail. The structure consists of a 3-span, reinforced concrete deck on steel I-beams with an asphalt-wearing surface. The end bents consist of reinforced concrete caps on timber piles. The interior bents consist of reinforced concrete posts and beams. THIS BRIDGE CAN BE COMPLETELY REMOVED WITHOUT DROPPING ANY COMPONENTS INTO HOMINY CREEK.

NCDOT is proposing the replacement of Bridge No. 27 with a new bridge (completely spanning the South Yadkin River) estimated to be 130 feet (40 meters) long and located on a new alignment approximately 60 feet (18 meters) north (upstream) of the existing structure. During construction, traffic will be maintained on the existing bridge. The roadway approach work will extend from approximately 310 feet south and 250 feet north of the existing bridge.

The information in the Federal Categorical Exclusion approved May 5, 2002, along with subsequent field investigations indicate that there are no jurisdictional wetlands associated with this project. As each structure completely spans the South Yadkin River, there will be no impacts to Waters of the United States. Therefore, no permits are required, and no notification required to the Corps of Engineers or to the North Carolina Division of Water Quality.

Thank you for your assistance in this project. If you have any questions or need additional information please contact Tyler Stanton at (919) 715-1439.

Cc: w/attachment

Mr. John Hennessy, Division of Water Quality (7 copies)  
Ms. Marella Buncick, USFWS  
Ms. Marla Chambers, NCWRC  
Mr. Jay Bennett, P.E., Roadway Design  
Mr. Omar Sultan, Programming and TIP  
Mr. Art McMillan, P.E., Highway Design  
Mr. David Chang, P.E., Hydraulics  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. John F. Sullivan, III, FHWA  
Mr. M. L. Holder, P.E., Division Engineer  
Ms. Trish Simon, DEO  
Mr. David Franklin, USACE, Wilmington (Cover Letter Only)

## SUMMARY OF SPECIAL PROJECT COMMITMENTS

**SR 1001 (Sulphur Springs Road)  
Replace Bridge No. 27 Over South Yadkin River  
Alexander County  
State Project 8.2780601  
Federal Aid Project BRZ-1001(16)  
TIP Project B-3100**

This project does not require 404/401 notification. The following commitments have been developed throughout the planning process:

Roadside Environmental:

- A. “*Design Standards for Sensitive Watersheds*” (15A NCAC 04B .0024) will be strictly followed throughout design and construction of the project.

ACTION: The erosion control plans have been developed in accordance with *Design Standards for Sensitive Watersheds*.

Division 12:

- B. All methods of demolition other than dropping the bridge in the water will be considered and implemented where practical. Bridge demolition activities associated with this project will strictly follow NCDOT’s *Best Management Practices for Bridge Demolition and Removal* (BMP-BDR). The proposed project falls under Case 3 of the BMPs-BDR.

ACTION: BMP-BDRs will be strictly followed in accordance with the contract standard specifications.

- C. A section of eroding stream bank is located directly south of the proposed bridge location along the east side of the bank. This section is approximately 20 feet (6 meters) long and 8 feet (2 meters) high. The erosion may be addressed with construction of the proposed structure or may require additional measures. Additional measures could include cutting back the stream bank, re-vegetation, and stabilization with a rock vane. If during final design a rock vane is required, it will be able to shift the flow vectors away from the bank, eliminating erosion at the toe of the stream bank. Minor clearing and disturbance will be required to facilitate construction of the rock vane, including the short-term use of machinery like a track hoe within the river. The access point created for the proposed bridge construction will be utilized also for the stream bank repair.

ACTION: NCDOT Hydraulics Unit made the decision not to repair the eroding streambank as part of this project since it was beyond the project scope. Consequently, no rock vane is to be constructed.

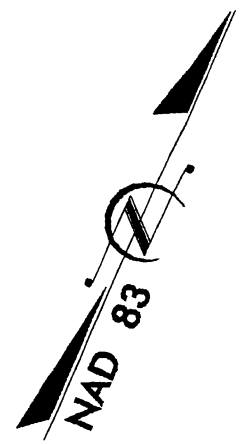
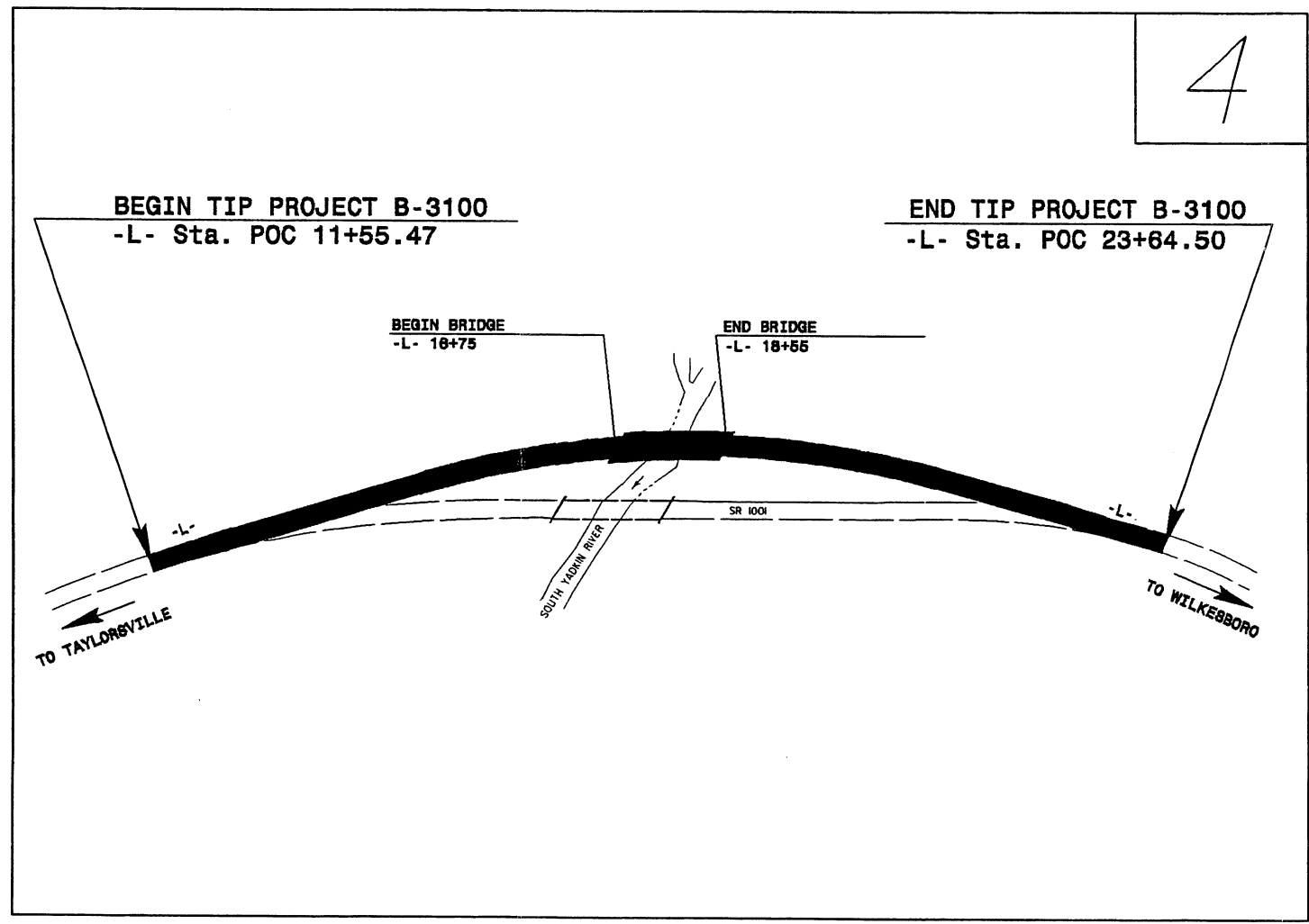
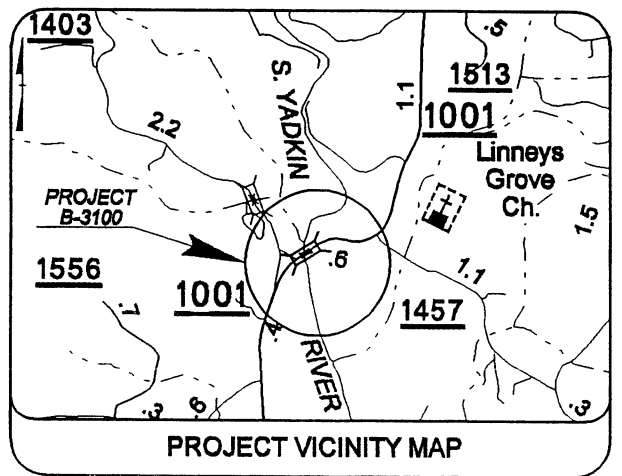
N.C.	B-3100	1
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION
32865.1.1	BRZ-1001(16)	P.E., P.E. for Utilities
32865.2.2	BRZ-1001(16)	RAW & UTIL

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**ALEXANDER COUNTY**

LOCATION: BRIDGE NO. 27 ON SR 1001 OVER SOUTH YADKIN RIVER

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

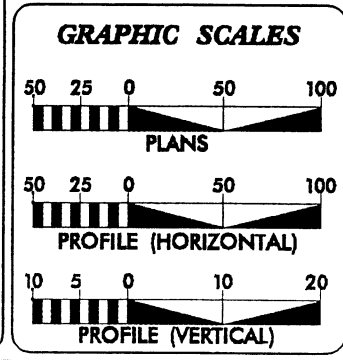


-THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES  
-CLEARING ON THIS PROJECT SHALL BE TO THE LIMITS ESTABLISHED BY METHOD III

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

\$\$\$ SYSTEM TIME \$\$\$  
\$\$\$ DONOR \$\$\$  
\$\$\$ USERNAME \$\$\$

CONTRACT: C????? TIP PROJECT: B-3100



**DESIGN DATA**

ADT 2004 = 1033
ADT 2024 = 1478
DHV = 10 %
D = 60 %
T = 4 % *
**V = 40 MPH
* TTST 2% DUAL 2%
**REQUIRES DESIGN EXCEPTION

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-3100	=	0.95 MILES
LENGTH STRUCTURE TIP PROJECT B-3100	=	0.034 MILES
TOTAL LENGTH TIP PROJECT B-3100	=	0.229 MILES

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

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: February 27, 2003	GARY LOVERING, P.E. PROJECT ENGINEER
LETTING DATE: April 20, 2004	R. A. SHILLINGLAW, PE PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**DIVISION OF HIGHWAYS**  
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER P.E.

**DEPARTMENT OF TRANSPORTATION**  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED DIVISION ADMINISTRATOR DATE



\*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	----- (WCR) -----
Curb Cut For Future Wheelchair Ramp	----- (CCFR) -----
Exist. Guardrail	----- [---] -----
Prop. Guardrail	----- [---] -----
Exist. Cable Guiderail	----- [---] -----
Prop. Cable Guiderail	----- [---] -----
Equality Symbol	----- ⊕ -----
Pavement Removal	----- [X] -----

## RIGHT OF WAY

Baseline Control Point	----- ◆ -----
Existing Right of Way Marker	----- ▲ -----
Exist. Right of Way Line wMarker	----- [▲] -----
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	----- (A) -----
Prop. Control of Access Line	----- (A) -----
Exist. Easement Line	----- E -----
Prop. Temp. Construction Easement Line	----- E -----
Prop. Temp. Drainage Easement Line	----- TDE -----
Prop. Perm. Drainage Easement Line	----- PDE -----

## HYDROLOGY

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

## STRUCTURES

<b>MAJOR</b>	
Bridge, Tunnel, or Box Culvert	----- [CONC] -----
Bridge Wing Wall, Head Wall and End Wall	----- [CONC WW] -----

<b>MINOR</b>	
Head & End Wall	----- [CONC HW] -----
Pipe Culvert	----- [---] -----
Footbridge	----- [---] -----
Drainage Boxes	----- [CB] -----
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	----- [T] -----
Cable TV Pedestal	----- [C] -----
Hydrant	----- [H] -----
Satellite Dish	----- [SD] -----
Exist. Water Valve	----- [WV] -----
Sewer Clean Out	----- [SCO] -----
Power Manhole	----- [PM] -----
Telephone Booth	----- [TB] -----
Water Manhole	----- [WM] -----
Light Pole	----- [LP] -----
H-Frame Pole	----- [HP] -----
Power Line Tower	----- [PT] -----
Pole with Base	----- [PB] -----
Gas Valve	----- [GV] -----
Gas Meter	----- [GM] -----
Telephone Manhole	----- [TM] -----
Power Transformer	----- [PT] -----
Sanitary Sewer Manhole	----- [SSM] -----
Storm Sewer Manhole	----- [SSM] -----
Tank; Water, Gas, Oil	----- [TO] -----
Water Tank With Legs	----- [TWL] -----
Traffic Signal Junction Box	----- [TSJB] -----
Fiber Optic Splice Box	----- [FOSB] -----
Television or Radio Tower	----- [TRT] -----
Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement	----- [TS] -----

Recorded Water Line	----- [---] -----
Designated Water Line (S.U.E.*)	----- [---] -----
Sanitary Sewer	----- [SS] -----
Recorded Sanitary Sewer Force Main	----- [FSS] -----
Designated Sanitary Sewer Force Main(S.U.E.*)	----- [FSS] -----
Recorded Gas Line	----- [G] -----
Designated Gas Line (S.U.E.*)	----- [G] -----
Storm Sewer	----- [S] -----
Recorded Power Line	----- [P] -----
Designated Power Line (S.U.E.*)	----- [P] -----
Recorded Telephone Cable	----- [T] -----
Designated Telephone Cable (S.U.E.*)	----- [T] -----
Recorded U/G Telephone Conduit	----- [TC] -----
Designated U/G Telephone Conduit (S.U.E.*)	----- [TC] -----
Unknown Utility (S.U.E.*)	----- [UTL] -----
Recorded Television Cable	----- [TV] -----
Designated Television Cable (S.U.E.*)	----- [TV] -----
Recorded Fiber Optics Cable	----- [FO] -----
Designated Fiber Optics Cable (S.U.E.*)	----- [FO] -----
Exist. Water Meter	----- [W] -----
UG Test Hole (S.U.E.*)	----- [W] -----
Abandoned According to UG Record	----- [ATTUR] -----
End of Information	----- [E.O.I.] -----

## BOUNDARIES & PROPERTIES

State Line	----- [---] -----
County Line	----- [---] -----
Township Line	----- [---] -----
City Line	----- [---] -----
Reservation Line	----- [---] -----
Property Line	----- [---] -----
Property Line Symbol	----- [PL] -----
Exist. Iron Pin	----- [EIP] -----
Property Corner	----- [---] -----
Property Monument	----- [ECM] -----
Property Number	----- [123] -----
Parcel Number	----- [6] -----
Fence Line	----- [X] -----
Existing Wetland Boundaries	----- [WLB] -----
Proposed Wetland Boundaries	----- [WLB] -----
Existing Endangered Animal Boundaries	----- [EAB] -----
Existing Endangered Plant Boundaries	----- [EPB] -----

## BUILDINGS & OTHER CULTURE

Buildings	----- [---] -----
Foundations	----- [---] -----
Area Outline	----- [---] -----
Gate	----- [---] -----
Gas Pump Vent or UG Tank Cap	----- [---] -----
Church	----- [---] -----
School	----- [---] -----
Park	----- [---] -----
Cemetery	----- [---] -----
Dam	----- [---] -----
Sign	----- [S] -----
Well	----- [W] -----
Small Mine	----- [M] -----
Swimming Pool	----- [---] -----

## TOPOGRAPHY

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

## VEGETATION

Single Tree	----- [---] -----
Single Shrub	----- [---] -----
Hedge	----- [---] -----
Woods Line	----- [---] -----
Orchard	----- [---] -----
Vineyard	----- [VINEYARD] -----

## RAILROADS

Standard Gauge	----- [---] -----
RR Signal Milepost	----- [---] -----
Switch	----- [SWITCH] -----

SYMBOLS FOR CONVENTIONAL SYMBOLS

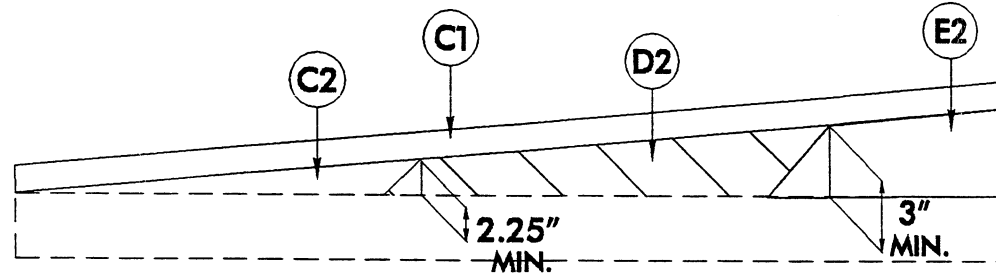
6/2/99

PAVEMENT SCHEDULE FINAL DESIGN	
C1	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 140 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1.25" IN DEPTH.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.25" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 3" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, 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 5.5" IN DEPTH.
J	PROP. APPROX. 6" AGGREGATE BASE COURSE.
T	EARTH MATERIAL.
W	WEDGING. (SEE WEDGING DETAIL)

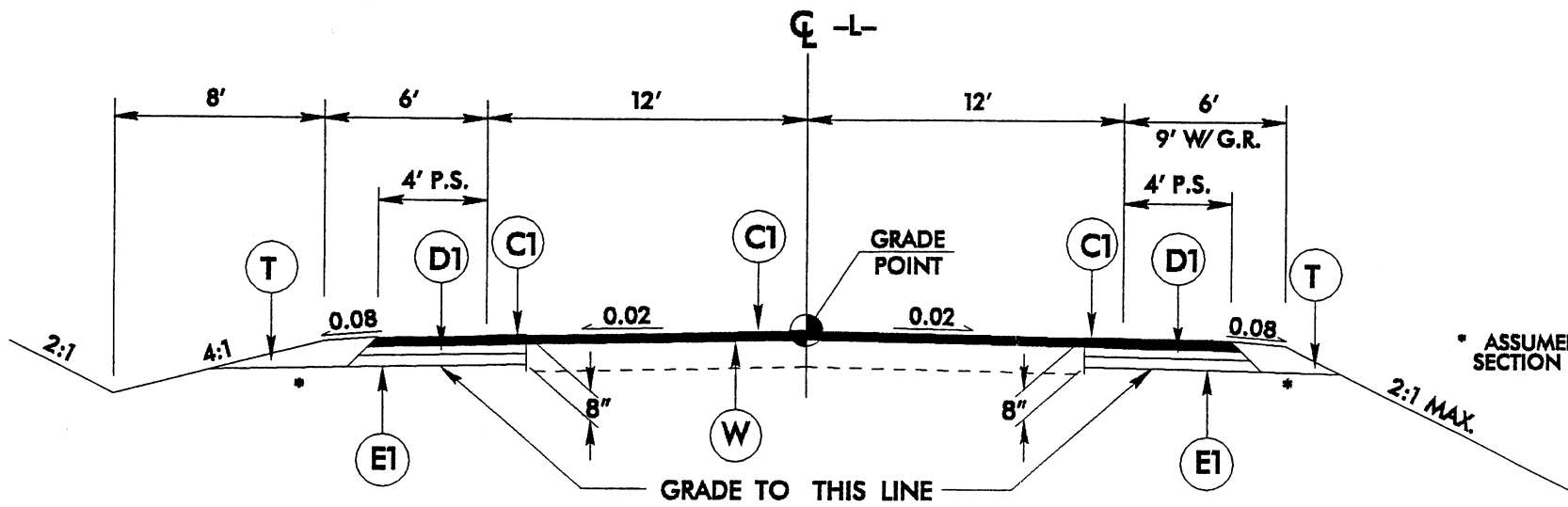
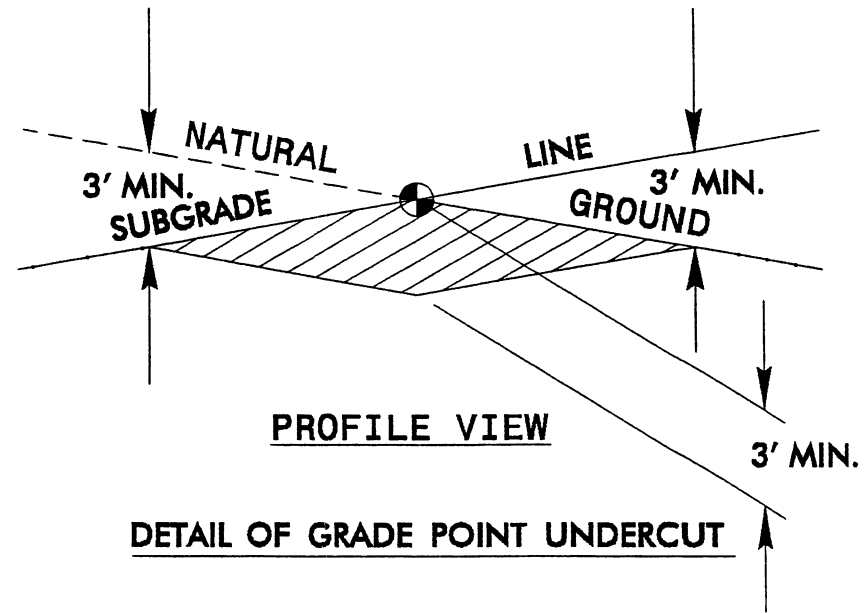
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

SYSTEMS DESIGN

PROJECT REFERENCE NO.	SHEET NO.
B-3100	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



Wedgeing Detail For Resurfacing



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

-L- STA 12+00.64 TO 14+28.71  
-L- STA 21+46.76 TO 22+95.95

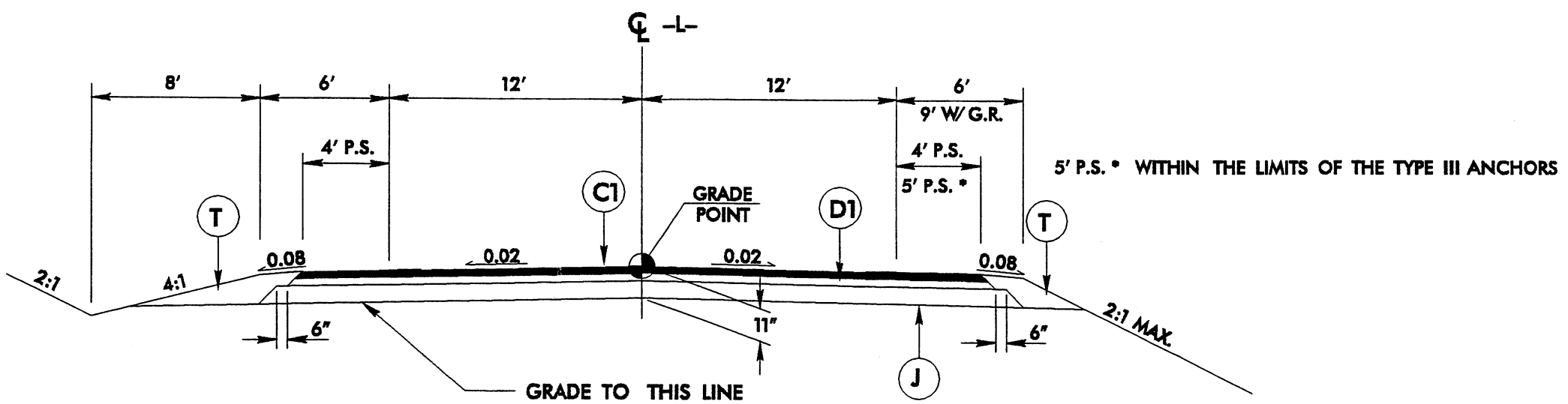
\* ASSUMED GRADED SUBGRADE INSTEAD OF TRENCH SECTION TO MATCH REMAINDER OF PROJECT

TRANSITION FROM TYPICAL SECTION NO. 1 TO EXISTING (INCLUDES RESURF. AND WIDENING)  
-L- STA. 11+55.47 TO 12+00.64  
-L- STA. 22+95.95 TO 23+64.50

6/2/99

PAVEMENT SCHEDULE (FINAL)	
C1	2.5" S9.5A
C2	VAR. DEPTH S9.5A
D1	2.5" I19.0B
D2	VAR. DEPTH I19.0B
E1	3" B25.0B
E2	VAR. DEPTH B25.0B
J	6" ABC
T	EARTH MATERIAL
W	WEDGING

PROJECT REFERENCE NO.	SHEET NO.
B-3100	2A
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



**TYPICAL SECTION NO. 2**

USE TYPICAL SECTION NO. 2

- L- STA 14+28.71 TO 16+75.00 (BEGIN BRIDGE)
- L- STA 18+55.00 (END BRIDGE) TO 21+46.76

\*\*\*\*\*  
 SYSTEMS  
 DESIGN  
 GROUP  
 \*\*\*\*\*



SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

SUMMARY OF REMOVAL OF EXISTING ASPHALT PAVEMENT

Table with 4 columns: LINE, STATION TO STATION, LOCATION, AREA S.Y. Rows include BRIDGE No. 27 and TOTAL.

APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, SHOULDER BORROW, FINE GRADING, CLEARING AND GRUBBING, BREAKING OF EXISTING PAVEMENT AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID AT THE LUMP SUM PRICE FOR "GRADING".

Table with 6 columns: LOCATION, TOTAL UNCLASS. EXCAV., UNDERCUT, EMBANKMENT %, BORROW, TOTAL WASTE. Rows include various stationing ranges and subtotals.

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

Large table with multiple columns for station, structure no., pipe class/type, size, material, and endwalls. Includes a 'REMARKS' column and abbreviations at the bottom right.

\*M\* = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL. TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT. FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL. W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL. G = GATING IMPACT ATTENUATOR TYPE 350. NG = NON-GATING IMPACT ATTENUATOR TYPE 350.

GUARDRAIL SUMMARY

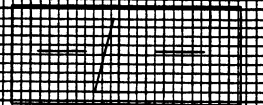
Table with columns for SURVEY LINE, BEG. STA., END STA., LOCATION, LENGTH (STRAIGHT, SHOP CURVED, DOUBLE FACED), WARRANT POINT (APPROACH END, TRAILING END), TOTAL SHOUL. WIDTH, FLARE LENGTH (APPROACH END, TRAILING END), W (APPROACH END, TRAILING END), ANCHORS (XI MOD, II, GRAU 350, H-350, TEMP. GRAU 350, TERMINAL SECTIONS, VI MOD, BIC, AT-1), IMPACT ATTENUATOR TYPE 350 (EA, G, NG), SINGLE FACED GUARDRAIL, REMOVE EXISTING GUARDRAIL, REMOVE AND STOCKPILE EXISTING GUARDRAIL, and REMARKS.

Vertical text on the left margin: 5/2/88



5/14/99

BM #1 B SPIKE IN BASE OF BYILD CHERRY TREE  
S 1409 0221 W 639 631 FT FROM -LT- STATION  
ELEV 1097.21



BM #2 B SPIKE IN BASE OF WALNUT TREE  
TOTAL LEFT OF -LT- STA 19+32.10  
ELEV 1021.6

BM #3 CHISELED SQUARE IN SOUTHWEST CORNER  
OF CONCRETE PAD OF TELEPHONE EXCHANGE  
588 55 04 47 E 456 23 87 FT FROM -LT- STATION  
ELEV 1054.25

B-3100	5
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

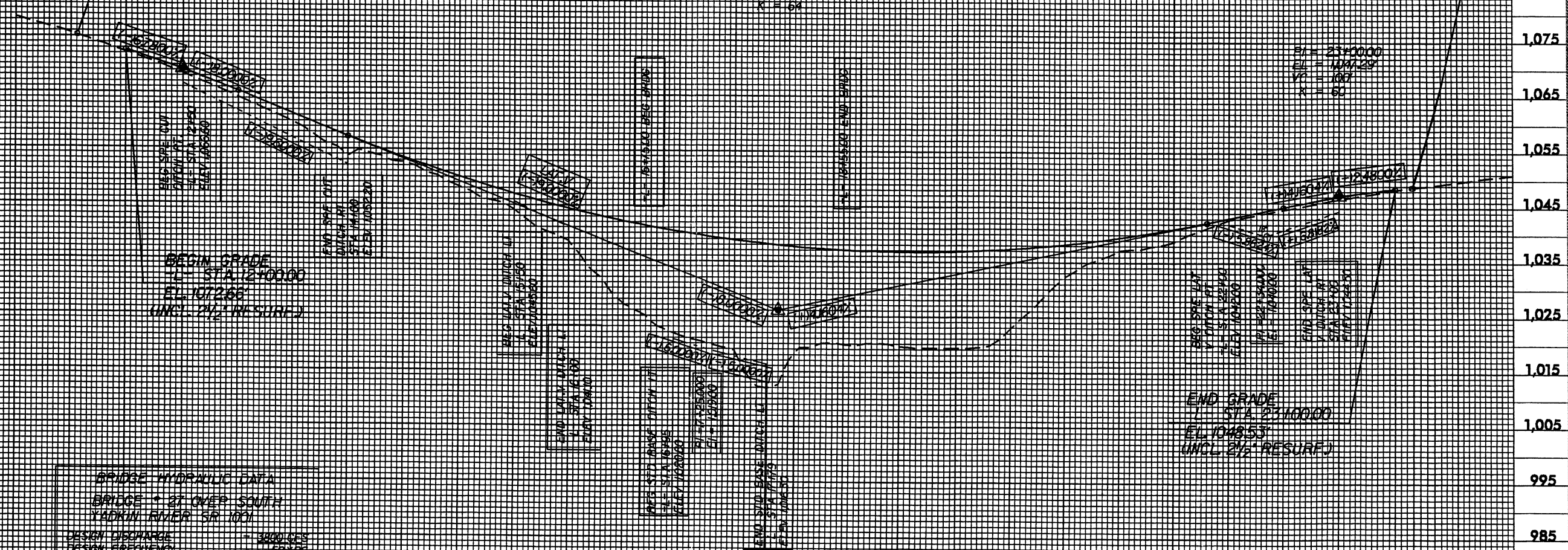
FEATHER RESURF.  
FROM -LT- STA 11+55.47  
BEGIN CONST.

PI = 12+50.00  
ELEV = 1080.27  
VC = 100'  
K = 82

PI = 17+50.00  
ELEV = 1026.01  
VC = 100'  
K = 64

FEATHER RESURF.  
TO -LT- STA 23+00.00  
END CONST.

PI = 23+00.00  
ELEV = 1044.29  
VC = 100'  
K = 60



BRIDGE HYDRAULIC DATA

BRIDGE # 27 OVER SOUTH YADKIN RIVER SR 1001

DESIGN DISCHARGE	= 300 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 1025.0 FT
100 YR BASE DISCHARGE	= 420 CFS
100 YR BASE FREQUENCY	= 100 YRS
100 YR BASE HW ELEVATION	= 1028.0 FT
OVERTOPPING DISCHARGE	= 500 CFS
OVERTOPPING FREQUENCY	= 10 YRS
OVERTOPPING ELEVATION	= 1030.0 FT
EST. NORMAL W. S. ELEV.	= 1028.0 FT
DATE OF SURVEY	6/3/1982
W. S. ELEVATION AT DATE OF SURVEY	= 1028.0 FT

PIPE HYDRAULIC DATA

URRANCE SIMULATION NO. 324

URRANCE AREA	= 81.146
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 7.1 CFS
DESIGN HW ELEVATION	= 1045.0 FT
100 YEAR DISCHARGE	= 0.5 CFS
100 YEAR HW ELEVATION	= 1042.0 FT
OVERTOPPING FREQUENCY	= 500 YRS
OVERTOPPING DISCHARGE	= 10.0 CFS
OVERTOPPING ELEVATION	= 1046.0 FT

\*\*\*\*\*SYSTEMTIME\*\*\*\*\*  
\*\*\*\*\*DATE\*\*\*\*\*  
\*\*\*\*\*TIME\*\*\*\*\*