

PROJECT SPECIAL PROVISION

(10-18-95)

Z-1

PERMITS

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

PERMIT

AUTHORITY GRANTING THE PERMIT

Buffer Certification

Division of Environmental Management, DENR
State of North Carolina

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

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

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

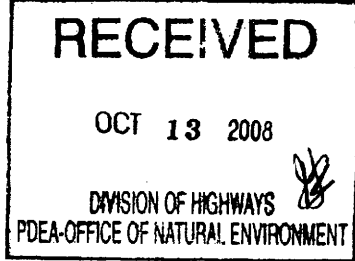
Should the Contractor propose to utilize construction methods (such as temporary structures or fill in waters and/or wetlands for haul roads, work platforms, cofferdams, etc.) not specifically identified in the permit (individual, general, or nationwide) authorizing the project it shall be the Contractor's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

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



Michael F. Lacey, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources
Coleen Sullins, Director
Division of Water Quality

Willie



October 6, 2008
Edgecombe County
DWQ Project No. 20081436
Bridge 52 on SR 1505
TIP No. B-4504

APPROVAL of TAR-PAMLICO BUFFER AUTHORIZATION with ADDITIONAL CONDITIONS

Dr. Gregory J. Thorpe, Ph.D., Environmental Management Director
NCDOT, PDEA
1598 Mail Service Center
Raleigh, NC 27699

Dear Dr. Thorpe:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing Bridge 52 in Edgecombe County:

Tar-Pamlico Riparian Buffer Impacts

Site	Zone 1 Impact (sq ft)	minus Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	minus Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
1	1553	0	1553	N/A	743	0	743	N/A
2	2008	0	2008	N/A	335	0	335	N/A
Totals	3561	0	3561	0	1078	0	1078	0

* n/a = Bridge impact "allowable", no mitigation required
Total Buffer Impact for Project: 4,640 square feet.

The project shall be constructed in accordance with your application dated received September 18, 2008. This approval is valid for the Tar-Pamlico Riparian Buffer Rules (15A NCAC 2B.0259). In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the DWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed below.



Conditions of Certification:

1. Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.
2. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*.
3. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species.
4. All stormwater runoff shall be directed as sheetflow through stream buffers at nonerosive velocities, unless otherwise approved by this certification.
5. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For the purpose of this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular DOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated, with native woody species before the next growing season following completion of construction.
6. Pursuant to NCAC15A 2B.0259(6), sediment and erosion control devices shall not be placed in Zone 1 of any Tar-Pamlico Buffer without prior approval by the NCDWQ. At this time, the NCDWQ has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.
7. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
8. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
9. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions.
10. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage.
- * 11. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.
12. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
13. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream.



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

Coleen Sullins, Director
Division of Water Quality

14. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.
15. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
16. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
17. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If DWQ determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, DWQ may reevaluate and modify this certification.
18. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification..
19. A copy of this Approval shall be maintained on site at the construction site at all times. In addition, this approval and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
20. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.
21. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
22. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
- * 23. Upon completion of the project (including any impacts at associated borrow or waste site), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the Certification has been completed.
24. Native woody riparian vegetation (i.e., trees and shrubs native to your geographic region) must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
25. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.
26. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.



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

Coleen Sullins, Director
Division of Water Quality

27. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:

- a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
- b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
- c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
- d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

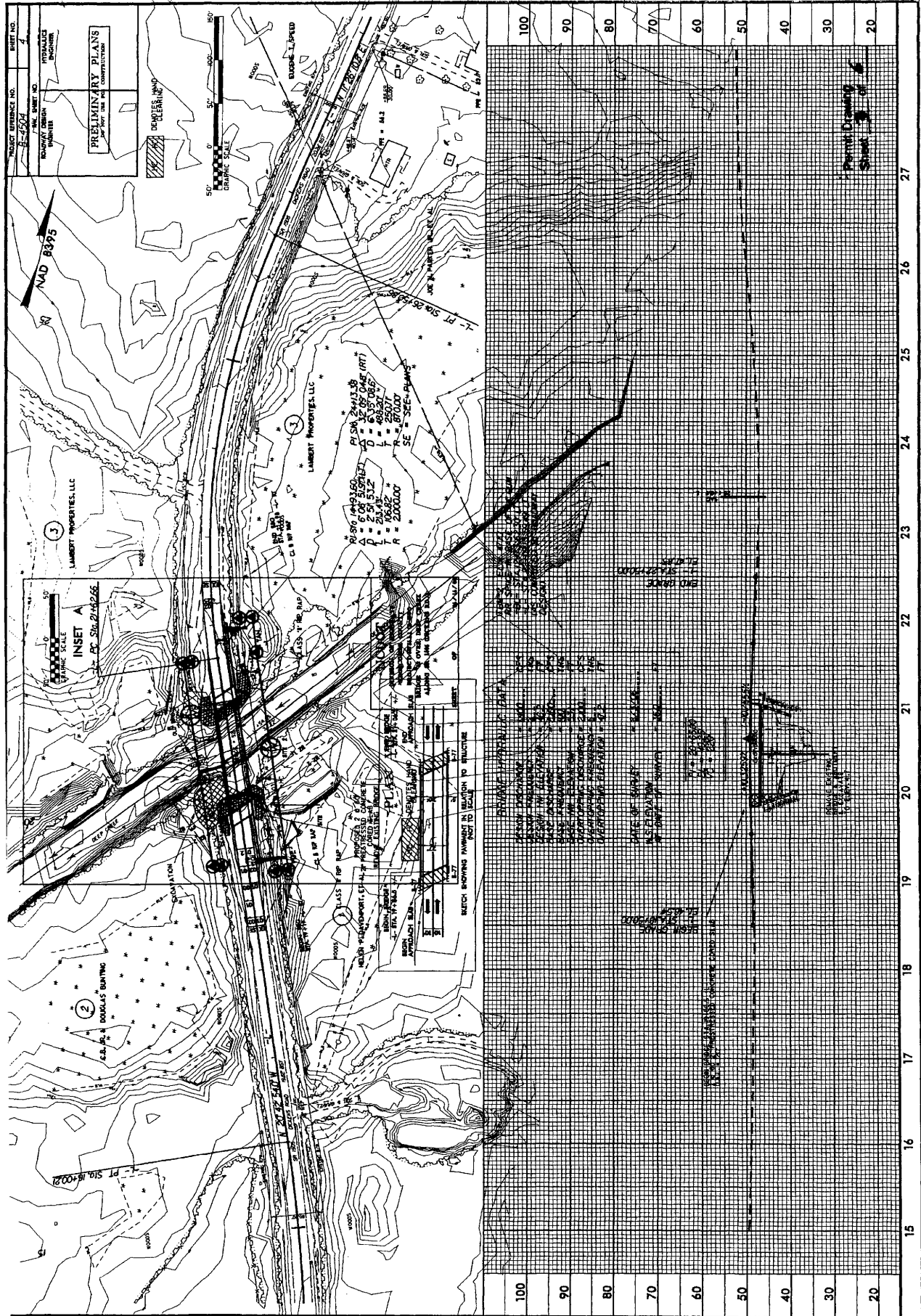
If you do not accept any of the conditions of this certification, you may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. To ask for a hearing, send a written petition that conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699. This certification and its conditions are final and binding unless you ask for a hearing. This letter completes the review of the Division of Water Quality under Section 401 of the Clean Water Act. If you have any questions, please contact Rob Ridings at (919) 733-9817

Sincerely,

Coleen Sullins,
Director

Attachment (Certificate of Completion form)

cc: Chad Coggins, Division 4 Environmental Officer
William Wescott, US Army Corps of Engineers, Washington Field Office
Travis Wilson, NC Wildlife Resources Commission
Megan Willis, NCDOT NEU
File Copy



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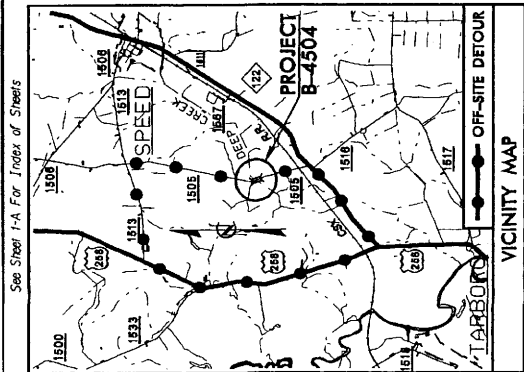
Property Owner Contact Report

TIP # B-4504

Owner Last

Owner Name/ Business	Owner First Name	Address	City/Town	State	Zip Code	Contact/ Relationship	Home Phone	Contacted By	Contact Date	How Contacted	Comments
2	Bunting	C. B.	RT 1 Box 144B	Pinetops	NC	27864	Self	K.E.Honeycutt	2-1-05	Letter	
	Cooper	Joseph	908 Dickens Road	Tarboro	NC	27886	Joseph Parker	R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
	Cooper	Rosa Lee	876 Dickens Road	Tarboro	NC	27886	Joseph Cooper	R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
1	Davenport, et al	Helen P.	1677 NC 122 N	Tarboro	NC	27886	Helen Davenport	R.T.Poythress/K. E.Honeycutt	1-31-05	Phone/Letter	
	Dew, Jr.	Billy D.	137 Colonial Rd.	Tarboro	NC	27886	Self	K.E.Honeycutt	2-1-05	Letter	
3	Lambert Properties, LLC		P.O.Box 417	Sharpsburg	NC	27878	Self	K.E.Honeycutt	2-1-05	Letter	
	Parker, Jr.	Joe N.	848 Dickens Road	Tarboro	NC	27886	Joseph Cooper	R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
	Speed, III	Eugene T.	227 Taylor Norton Rd.	Swansboro	NC	28584	Mrs. E.T. Speed, Jr	R.T.Poythress/K. E.Honeycutt	1-31-05	Phone/Letter	

Permit Drawing
Sheet 5 of 6



See Sheet 1-A For Index of Streets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

EDGECOMBE COUNTY

LOCATION: BRIDGE NO. 52 OVER DEEP CREEK AND APPROACHES ON SR 1505 (DICKENS ROAD)

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

TAR-PAMLICO RIVER BASIN
RIPARIAN BUFFER ZONE DRAWINGS
05/15/2008

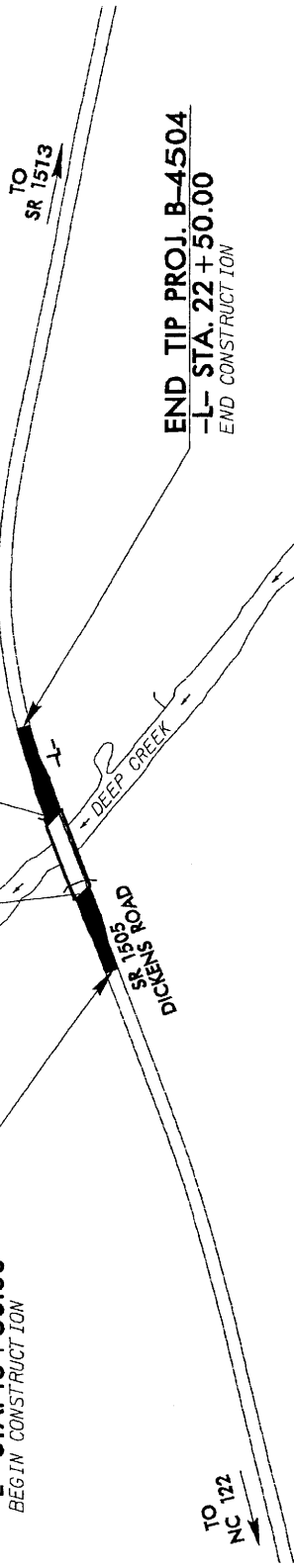


BEGIN BRIDGE
-L- STA. 19+86.5 +/-

END BRIDGE
-L- STA. 21+06.5 +/-

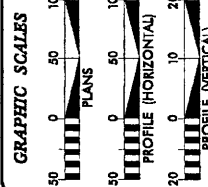
BEGIN TIP PROJ. B-4504
-L- STA. 18+50.00
BEGIN CONSTRUCT ION

END TIP PROJ. B-4504
-L- STA. 22+50.00
END CONSTRUCT ION



PRELIMINARY PLANS
DO NOT BE FOR CONSTRUCTION

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDRIES CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.



DESIGN DATA

ADT 2008	= 237
ADT 2030	= 400
DHV	= 10 %
D	= 60 %
T	= 3 % *
V	= 45 MPH
* TTST 1% + DUAL 2%	
FUNC CLASS = RURAL LOCAL	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4504	= 0.053 +/- MILES
LENGTH STRUCTURE TIP PROJECT B-4504	= 0.023 +/- MILES
TOTAL LENGTH OF TIP PROJECT B-4504	= 0.076 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 State Street Dr., Raleigh, NC, 27616

2008 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 31, 2008

LETTING DATE: MARCH 17, 2009

PROJECT ENGINEER: ROGER D. THOMAS, P.E.

PROJECT MANAGER: SAMUEL L. ST. CLAIR

HYDRAULICS ENGINEER

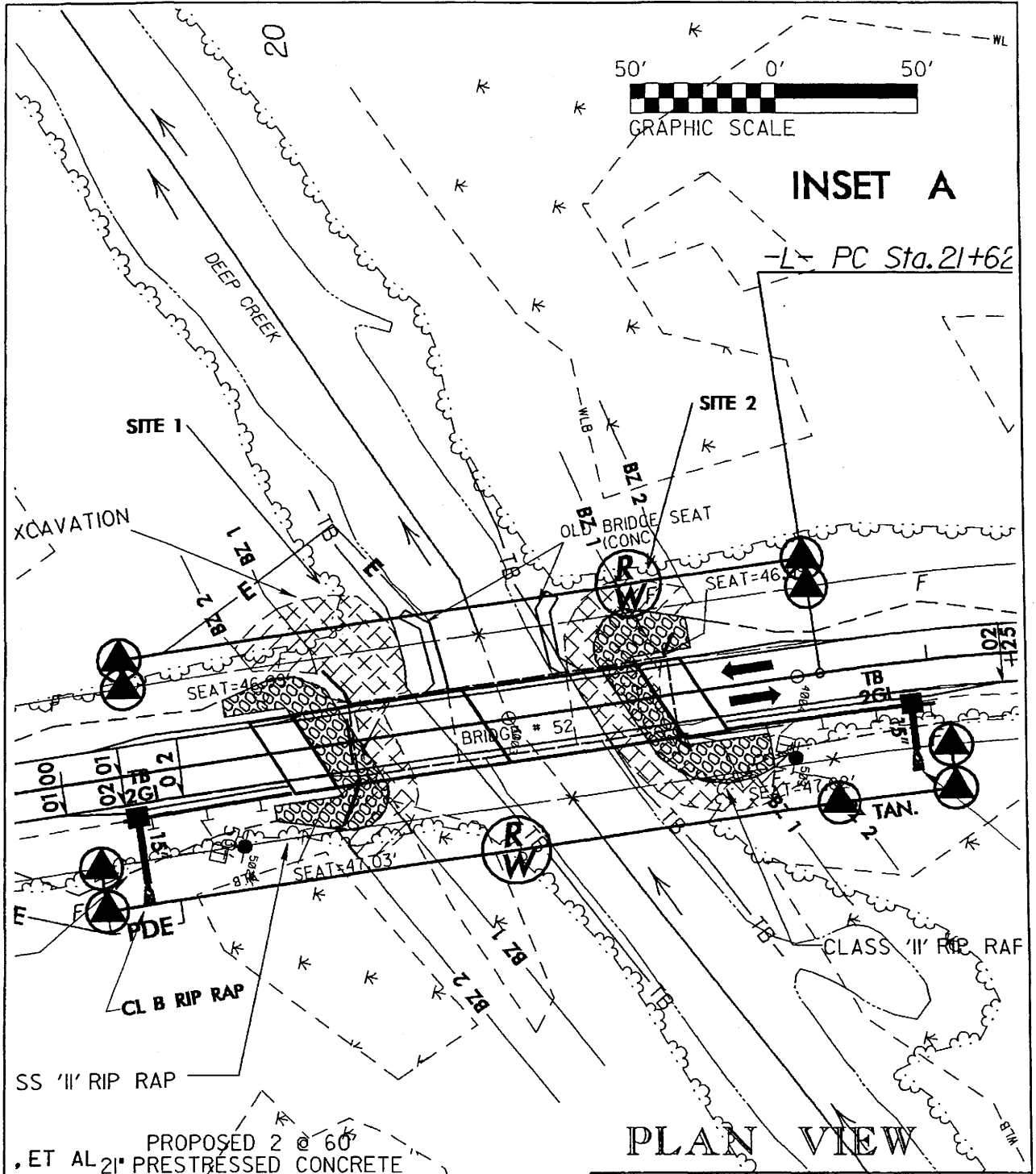
ROADWAY DESIGN ENGINEER

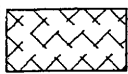
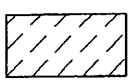
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Buffer Drawing
Sheet 1 of 6
DATE HIGHWAY DESIGN REVISION

TIP PROJECT: B-4504

CONTRACT:



-  ALLOWABLE BUFFER IMPACTS ZONE 1
-  ALLOWABLE BUFFER IMPACTS ZONE 2

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

PROJECT: 33735.1.1 (B-4504)
 BRIDGE #52 OVER DEEP CREEK
 ALONG SR 1505. (DICKENS RD.)

SHEET 4 OF 6 05/15/08



Property Owner Contact Report

TIP # B-4504

Owner Last Name/ Business	Owner First Name	Address	City/Town	State	Zip Code	Contact/ Relationship	Home Phone	Contacted By	Contact Date	How Contacted	Comments
2 Bunting	C. B.	RT 1 Box 144B	Pinetops	NC	27864	Self		K.E.Honeycutt	2-1-05	Letter	
Cooper	Joseph	908 Dickens Road	Tarboro	NC	27886	Joseph Parker		R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
Cooper	Rosa Lee	876 Dickens Road	Tarboro	NC	27886	Joseph Cooper		R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
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Speed, III	Eugene T.	227 Taylor Norton Rd.	Swansboro	NC	28584	Mrs. E.T. Speed, Jr		R.T.Poythress/K. E.Honeycutt	1-31-05	Phone/Letter	

Buffer Drawing Sheet 5 of 6

BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	TYPE				IMPACT			MITIGABLE			BUFFER REPLACEMENT				
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)				
														ALLOWABLE			
1	2 @ 60' 21" P.C.C.S.	19+64 TO 20+23 -L-		X		1553	743	2297									
2	SAME	20+76 TO 22+53 -L-		X		2008	335	2343									
						3661	1078	4640	0	0	0	0					
TOTAL:																	

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
EDGECOMBE CO.
PROJECT: 33735.1.1 (B-4504)
5/15/2008
SHEET OF

METHOD III CLEARING WILL BE UTILIZED ON THIS PROJECT.
PROPOSED BRIDGE WILL BE 2 @ 60' : 21" PRESTRESSED CONCRETE CORED SLAB.

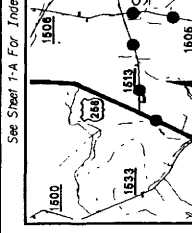
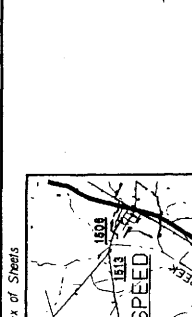
STATE	FEDERAL PROJECT NUMBER	SHEET	TOTAL SHEETS
N.C.	B-4504	I	1
DATE	BY	CHKD BY	APPR. BY
3/7/95 (J)	BKZ (J)	BKZ (J)	RW & UTIL
3/7/95 (J)	BKZ (J)	BKZ (J)	RW & UTIL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

EDGECOMBE COUNTY

LOCATION: BRIDGE NO. 52 OVER DEEP CREEK AND APPROACHES ON SR 1505 (DICKENS ROAD)

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



BEGIN TIP PROJ. B-4504
-L- STA. 18+50.00
BEGIN CONSTRUCTION

END TIP PROJ. B-4504
-L- STA. 22+50.00
END CONSTRUCTION

TO SR 1513

TO NC 122

Presented in the Office of:
DIVISION OF HIGHWAYS
1410 Fifth Floor Drive, Raleigh, NC 27609

HYDRAULICS ENGINEER

REGISTERED: _____ P.E.

ROADWAY DESIGN ENGINEER

REGISTERED: _____ P.E.

PROJECT MANAGER

REGISTERED: _____ P.E.

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4504 = 0.053 +/- MILES

LENGTH STRUCTURE TIP PROJECT B-4504 = 0.023 +/- MILES

TOTAL LENGTH OF TIP PROJECT B-4504 = 0.076 MILES

DESIGN DATA

ADT 2008 = 237
ADT 2030 = 400
DHY = 10 %
D = 60 %
T = 3 % *
V = 45 MPH
* TTST 1% + DUAL 2%
FUNC CLASS = RURAL LOCAL

GRAPHIC SCALES

PLANS: 1" = 100'

PROFILE (HORIZONTAL): 1" = 100'

PROFILE (VERTICAL): 1" = 20'

CONTRACT:

21-MAY-2008 14:01
F:\p09d\kay\proj\p4504_rdy-f.rdg
****USE RENAME****

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT BOUNDARIES

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4504 = 0.053 +/- MILES

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CONTRACT:

21-MAY-2008 14:01
F:\p09d\kay\proj\p4504_rdy-f.rdg
****USE RENAME****

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

PROJECT NUMBER NO. 8-5024
SHEET NO. 1-A

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin
- Property Corner
- Property Monument
- Parcel/Sequence Number
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Proposed Wetland Boundary
- Proposed Wetland Boundary
- Existing Endangered Animal Boundary
- Existing Endangered Plant Boundary

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or UG Tank Cap
- Sign
- Well
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream
- Buffer Zone 1
- Buffer Zone 2
- Flow Arrow
- Disappearing Stream
- Spring
- Swamp Marsh
- Proposed Lateral, Tail, Head Ditch
- False Sump

RAILROADS:

- Standard Gauge
- RR Signal Mastpost
- Switch
- RR Abandoned
- RR Diamonded

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line
- Proposed Right of Way Line with Iron Pin and Cap Marker
- Proposed Right of Way Line with Concrete or Granite Marker
- Existing Control of Access
- Proposed Control of Access
- Existing Easement Line
- Proposed Temporary Construction Easement
- Proposed Temporary Drainage Easement
- Proposed Permanent Drainage Easement
- Proposed Permanent Utility Easement

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut
- Proposed Slope Stakes Fill
- Proposed Wheel Chair Ramp
- Proposed Wheel Chair Ramp Curb Cut
- Curb Cut for Future Wheel Chair Ramp
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guidrail
- Proposed Cable Guidrail
- Equality Symbol
- Pavement Removal

VEGETATION:

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

WATER:

- Water Manhole
- Water Meter
- Water Valve
- Water Hydrant
- Recorded UG Water Line
- Designated UG Water Line (S.U.E.)*
- Above Ground Water Line

EXISTING STRUCTURES:

- MAJOR: Bridge, Tunnel or Box Culvert
- MINOR: Bridge Wing Wall, Head Wall and End Wall
- Head and End Wall
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB
- Paved Ditch Gutter
- Storm Sewer Manhole
- Storm Sewer

UTILITIES:

- POWER: Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole
- Power Line Tower
- Power Transformer
- UG Power Cable Hand Hole
- H-Frame Pole
- Recorded UG Power Line
- Designated UG Power Line (S.U.E.)*

GAS:

- Gas Valve
- Gas Meter
- Recorded UG Gas Line
- Designated UG Gas Line (S.U.E.)*
- Above Ground Gas Line

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- UG Sanitary Sewer Line
- Above Ground Sanitary Sewer
- Recorded SS Forc'd Main Line (S.U.E.)*
- Designated SS Forc'd Main Line (S.U.E.)*

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole
- Telephone Booth
- Telephone Pedestal
- Telephone Call Tower
- UG Telephone Cable Hand Hole
- Recorded UG Telephone Cable
- Designated UG Telephone Cable (S.U.E.)*
- Recorded UG Telephone Conduit
- Designated UG Telephone Conduit (S.U.E.)*
- Recorded UG Fiber Optic Cable
- Designated UG Fiber Optic Cable (S.U.E.)*

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box
- Utility Unknown UG Line
- UG Tank: Water, Gas, Oil
- AG Tank: Water, Gas, Oil
- UG Test Hole (S.U.E.)*
- Abandoned According to Utility Records
- End of Information

SURVEY CONTROL SHEET B-4504

PROJECT REFERENCE NO.:	SHEET NO.:
B-4504	1 C
Location and Surveys	

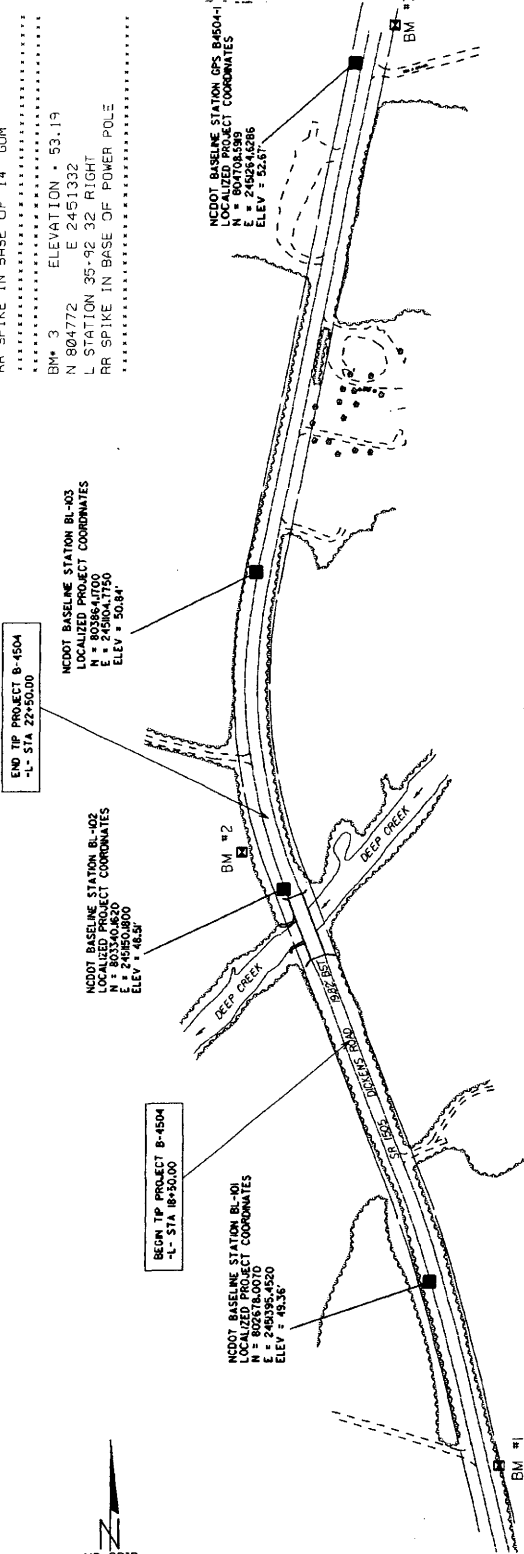
CONTROL DATA

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L. STATION	OFFSET
101	BL-101		802678.0070	2451395.4520	49.36	14+23.01	13.51 LT
102	BL-102		805340.1520	2451150.1600	48.51	21+30.55	16.50 LT
103	BL-103		803864.1700	2451104.7750	50.84	26+56.51	11.86 LT
1	GPS B4504-1		804708.5519	2451264.6286	52.67	35+15.93	22.18 LT



BENCHMARK DATA

BM* 1	ELEVATION = 54.32
N 802375	E 2451513
L STATION 11+00 27 RIGHT	
RR SPIKE IN BASE OF 10' GUM	
BM* 2	ELEVATION = 47.10
N 803402	E 2451082
L STATION 22+09 59 LEFT	
RR SPIKE IN BASE OF 14' GUM	
BM* 3	ELEVATION = 53.19
N 804772	E 2451332
L STATION 35+92 32 RIGHT	
RR SPIKE IN BASE OF POWER POLE	



NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.DOR.DOT.STATE.NC.US/PRECONSTR/HGHWAY/LOCATION/PROJECT](http://www.dor.dot.state.nc.us/preconstr/hghway/location/project)
 FILE : B4504 LS CONTROL 061011.TXT
- SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT BY THE NCDOT LOCATION AND SURVEYS UNIT.
- INDICATES GROUND CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM. CONTROL NETWORK FOR B4504 ESTABLISHED FROM NGS ONLINE POSITIONING USER SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B4504-1" WITH HAD 1983/95 STATE PLANE GRID COORDINATES OF NORTING: 804085940) EASTING: 24510542870) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999503

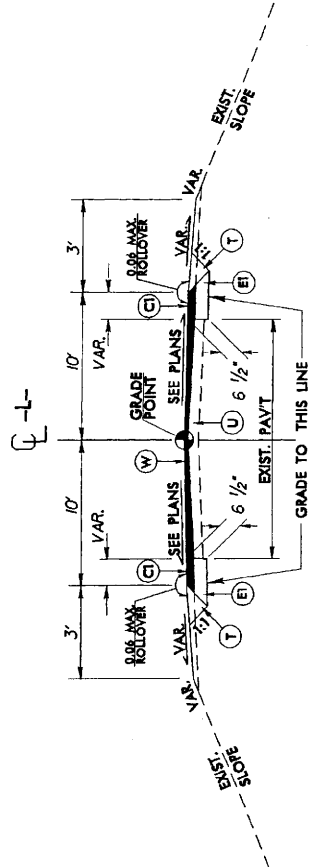
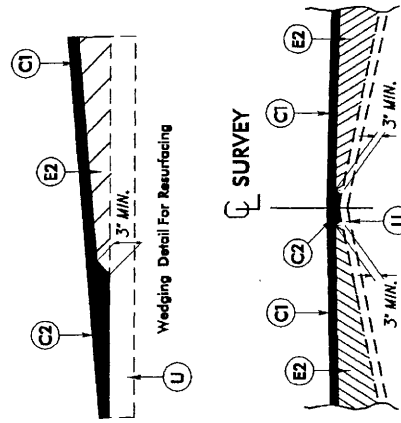
THE NAD 83 UTM GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B4504-1" TO "L STATION 17+5000 IS 501.1111'-E 171.651'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED: IS MVD 88

PAVEMENT SCHEDULE

Code	Description	Material
C1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE BPA-0A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	T
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE BPA-0A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 3" IN DEPTH.	U
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE BBA-0B, AT AN AVERAGE RATE OF 466 LBS. PER SQ. YD.	W
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE BBA-0B, AT AN AVERAGE RATE OF 114 LBS. PER 1" DEPTH.	

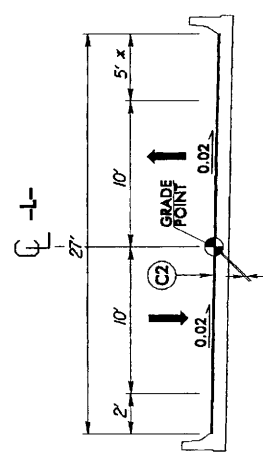
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



USE TYPICAL SECTION NO. 1
 FROM -L- STA. 18+50.00 TO -L- STA. 19+00.00
 FROM -L- STA. 21+00.00 TO -L- STA. 22+50.00

TYPICAL SECTION NO. 1

Detail Showing Method of Wedging

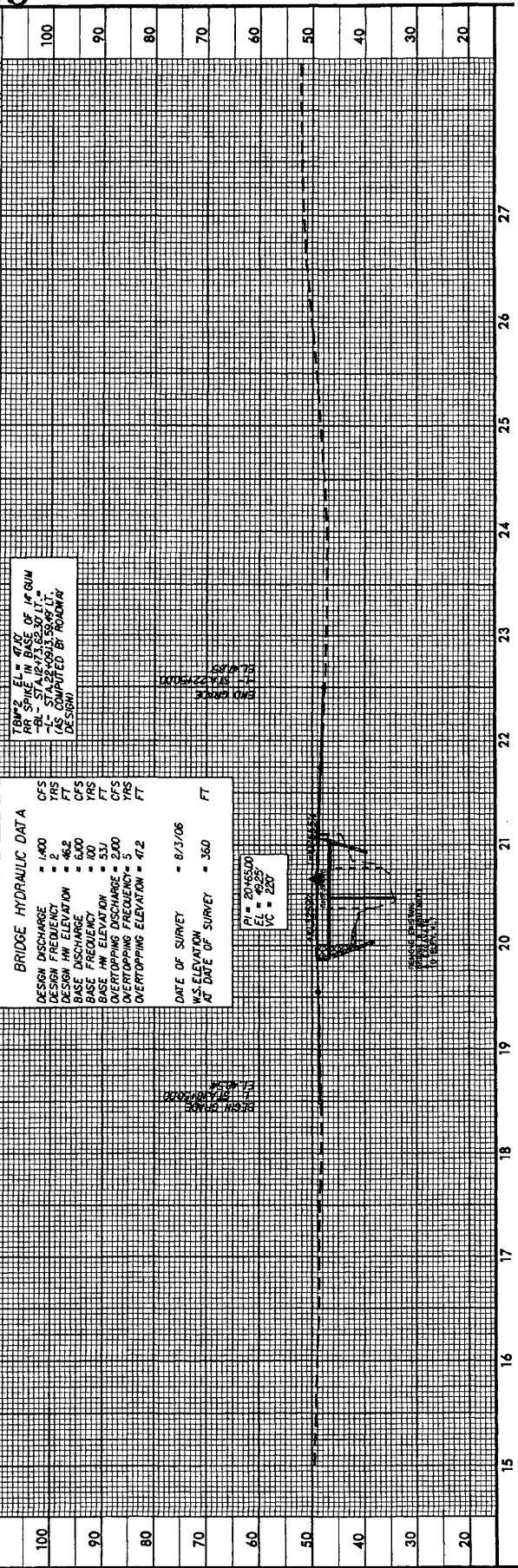
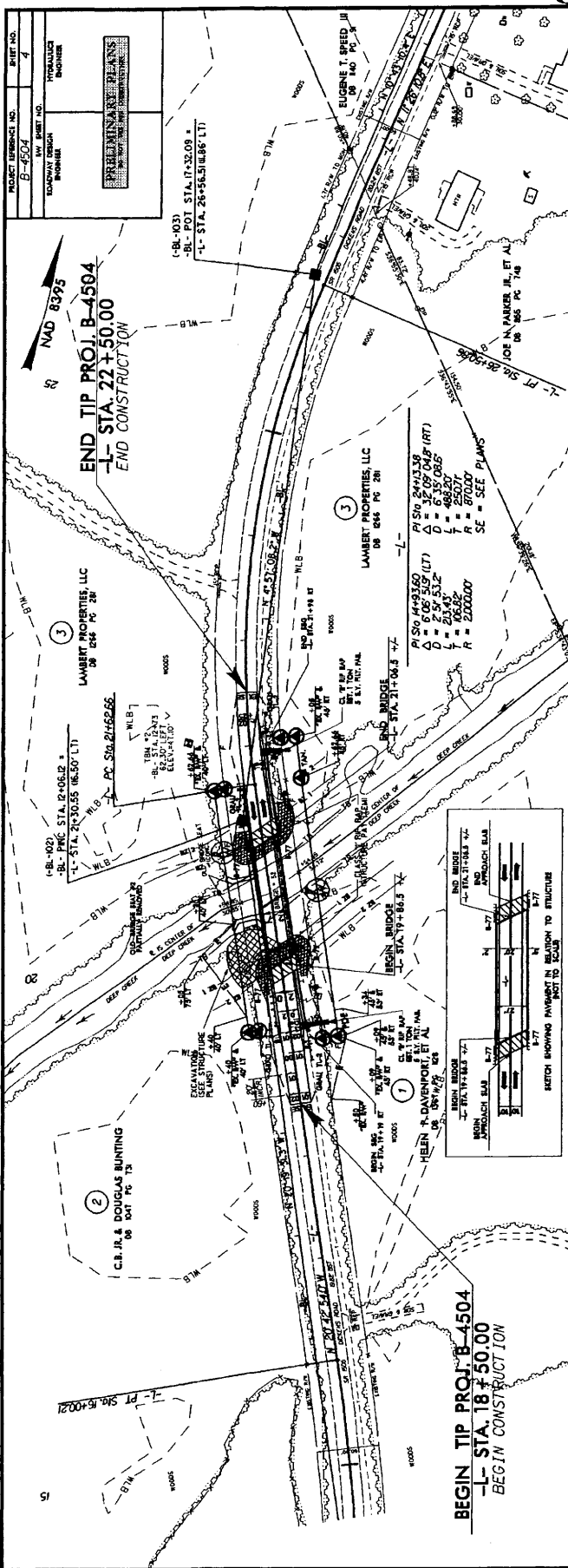


TYPICAL SECTION ON STRUCTURE
 INCLUDES ASPHALT WEARING SURFACE
 FROM -L- STA. 19+86.5 +/- TO 21+06.5 +/-

* ADDITIONAL WIDTH NEEDED TO
 ACCOMMODATE HYDRAULIC SPREAD

USE TYPICAL SECTION NO. 2
 FROM -L- STA. 19+00.00 TO -L- STA. 19+86.5 +/- (BEGIN BRIDGE)
 FROM -L- STA. 21-06.5 +/- (END BRIDGE) TO -L- STA. 22+00.00

TYPICAL SECTION NO. 2



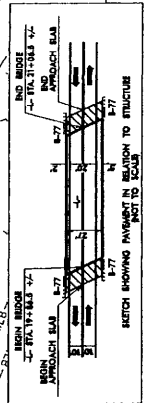
PI STA. 24+13.58
 $\Delta = 32.09$ O.A.P. (RT)
 $\Delta = 68.20$ O.A.P. (LT)
 $\Delta = 21.43$ O.A.P. (RT)
 $\Delta = 106.82$ O.A.P. (LT)
 $\Delta = 25.07$ O.A.P. (RT)
 $\Delta = 870.00$ O.A.P. (LT)
 $R = 2000.00$
 SE = SEE PLANS

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 1400 CFS
DESIGN FREQUENCY	= 2 FT
DESIGN HW ELEVATION	= 46.8 FT
BASE DISCHARGE	= 600 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 53.1 FT
OVERTOPPING DISCHARGE	= 2.00 CFS
OVERTOPPING FREQUENCY	= 5 YRS
OVERTOPPING ELEVATION	= 47.2 FT

DATE OF SURVEY = 8/13/06
 VS. ELEVATION = 360 FT
 AT DATE OF SURVEY

PI = 20+65.00
 $E_1 = 49.25'$
 $VC = 220'$



PROJECT REFERENCE NO. B-4504
 SHEET NO. 4
 CONTRACTOR: HARRIS ENGINEERS
 DESIGNER: HARRIS ENGINEERS

REVISIONS

27-MAY-2008 14:01
 R:\Projects\B-4504\rev-pk.dgn
 13:58:53

