

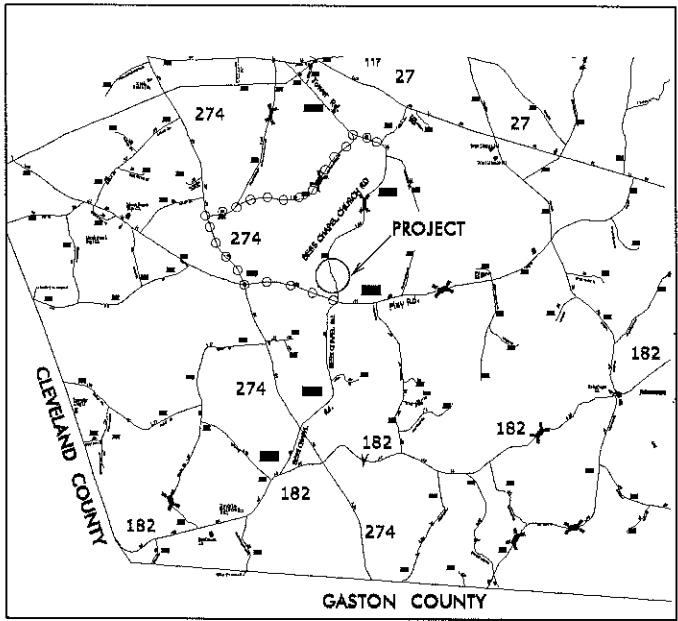
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.12.C.3	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

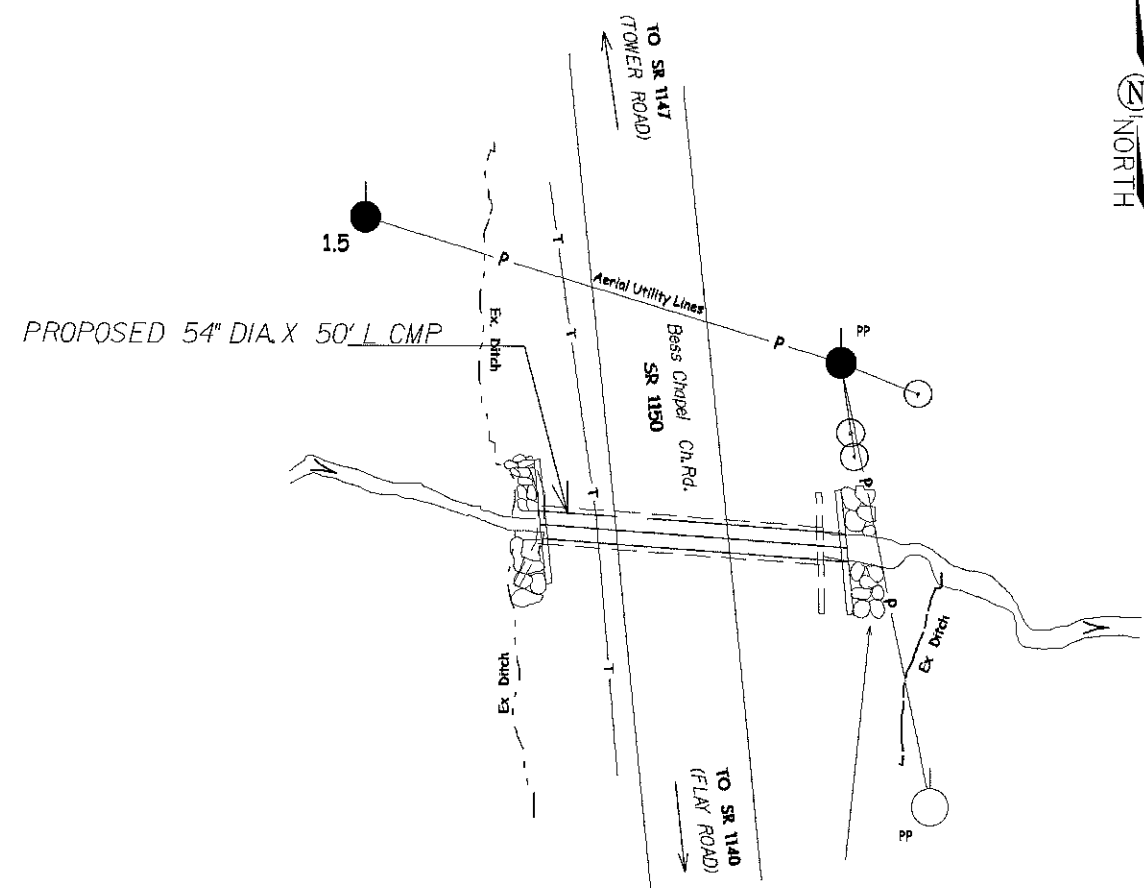
LINCOLN COUNTY

LOCATION: BESS CHAPEL CHURCH ROAD SR 1150

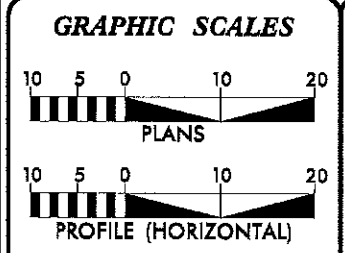
TYPE OF WORK: PIPE CULVERT REPLACEMENT



DETOUR ROUTE
VICINITY MAP (NOT TO SCALE)



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



PROJECT LENGTH	
LENGTH ROADWAY WBS PROJECT 17BP.12.C.3	= 0.010 MILES
LENGTH STRUCTURES WBS PROJECT 17BP.12.C.3	= 0.010 MILES
TOTAL LENGTH WBS PROJECT 17BP.12.C.3	= 0.01 MILES

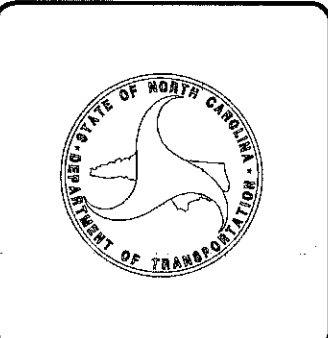
Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

STEVE RACKLEY, PE
PROJECT ENGINEER

RYAN BARBEE
DESIGN AND EROSION CONTROL PLANS

LETTING DATE:
MAY 24, 2016



05-MAY-2016 13:53
 S:\BTL\109\17BP.12.C.3\BESSNORTH.LS_dtl.dgn
 \$\$\$USERNAME\$\$\$

CONTRACT: DL00104 PROJECT: 17BP.12.C.3

04/06/15

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale *S.U.E. = Subsurface Utility Engineering

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
- Existing Wetland Boundary
- Proposed Wetland Boundary
- Existing Endangered Animal Boundary
- Existing Endangered Plant Boundary
- Existing Historic Property Boundary

- Known Contamination Area: Soil
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G 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
- Wetland
- Proposed Lateral, Tail, Head Ditch
- False Sump

RAILROADS:

- Standard Gauge
- RR Signal Milepost
- Switch
- RR Abandoned
- RR Dismantled

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 RW Marker
- Proposed Control of Access Line with Concrete CA 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 Drainage /Utility Easement
- Proposed Permanent Utility Easement
- Proposed Temporary Utility Easement
- Proposed Aerial Utility Easement
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut
- Proposed Slope Stakes Fill
- Proposed Curb Ramp
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line

- Orchard
- Vineyard

EXISTING STRUCTURES:

- MAJOR:
 - Bridge, Tunnel or Box Culvert
 - Bridge Wing Wall, Head Wall and End Wall
- MINOR:
 - 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
 - U/G Power Cable Hand Hole
 - H-Frame Pole
 - U/G Power Line LOS B (S.U.E.*)
 - U/G Power Line LOS C (S.U.E.*)
 - U/G Power Line LOS D (S.U.E.*)

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole
- Telephone Pedestal
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole
- U/G Telephone Cable LOS B (S.U.E.*)
- U/G Telephone Cable LOS C (S.U.E.*)
- U/G Telephone Cable LOS D (S.U.E.*)
- U/G Telephone Conduit LOS B (S.U.E.*)
- U/G Telephone Conduit LOS C (S.U.E.*)
- U/G Telephone Conduit LOS D (S.U.E.*)
- U/G Fiber Optics Cable LOS B (S.U.E.*)
- U/G Fiber Optics Cable LOS C (S.U.E.*)
- U/G Fiber Optics Cable LOS D (S.U.E.*)

WATER:

- Water Manhole
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E.*)
- U/G Water Line LOS C (S.U.E.*)
- U/G Water Line LOS D (S.U.E.*)
- Above Ground Water Line

TV:

- TV Pedestal
- TV Tower
- U/G TV Cable Hand Hole
- U/G TV Cable LOS B (S.U.E.*)
- U/G TV Cable LOS C (S.U.E.*)
- U/G TV Cable LOS D (S.U.E.*)
- U/G Fiber Optic Cable LOS B (S.U.E.*)
- U/G Fiber Optic Cable LOS C (S.U.E.*)
- U/G Fiber Optic Cable LOS D (S.U.E.*)

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*)
- U/G Gas Line LOS C (S.U.E.*)
- U/G Gas Line LOS D (S.U.E.*)
- Above Ground Gas Line

SANITARY SEWER:

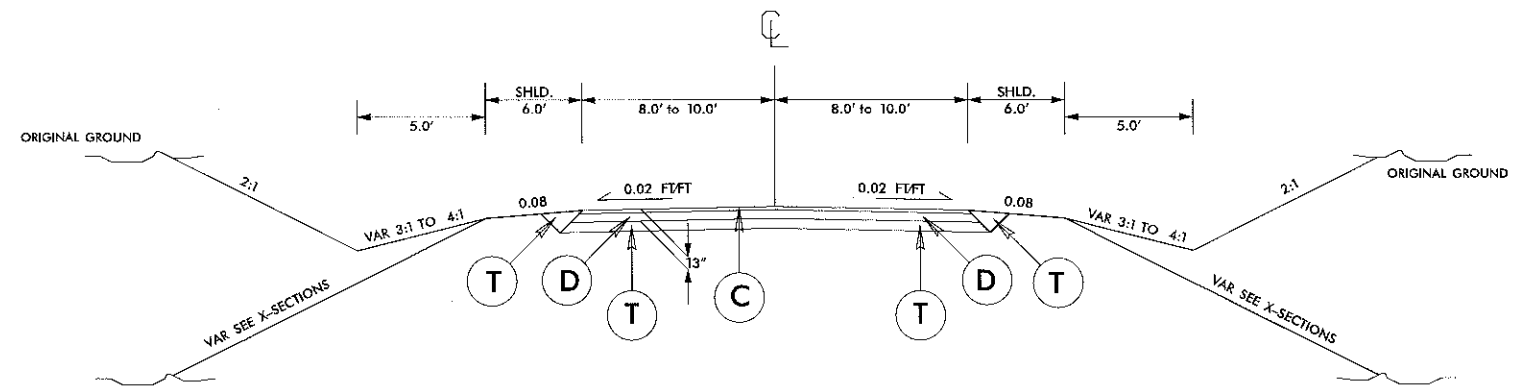
- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line
- Above Ground Sanitary Sewer
- SS Forced Main Line LOS B (S.U.E.*)
- SS Forced Main Line LOS C (S.U.E.*)
- SS Forced Main Line LOS D (S.U.E.*)

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box
- Utility Unknown U/G Line LOS B (S.U.E.*)
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc.
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)
- Abandoned According to Utility Records
- End of Information

8/17/99

PROJECT REFERENCE NO. 17BP12.C.3	SHEET NO. 3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



TYPICAL SECTION NO. 1

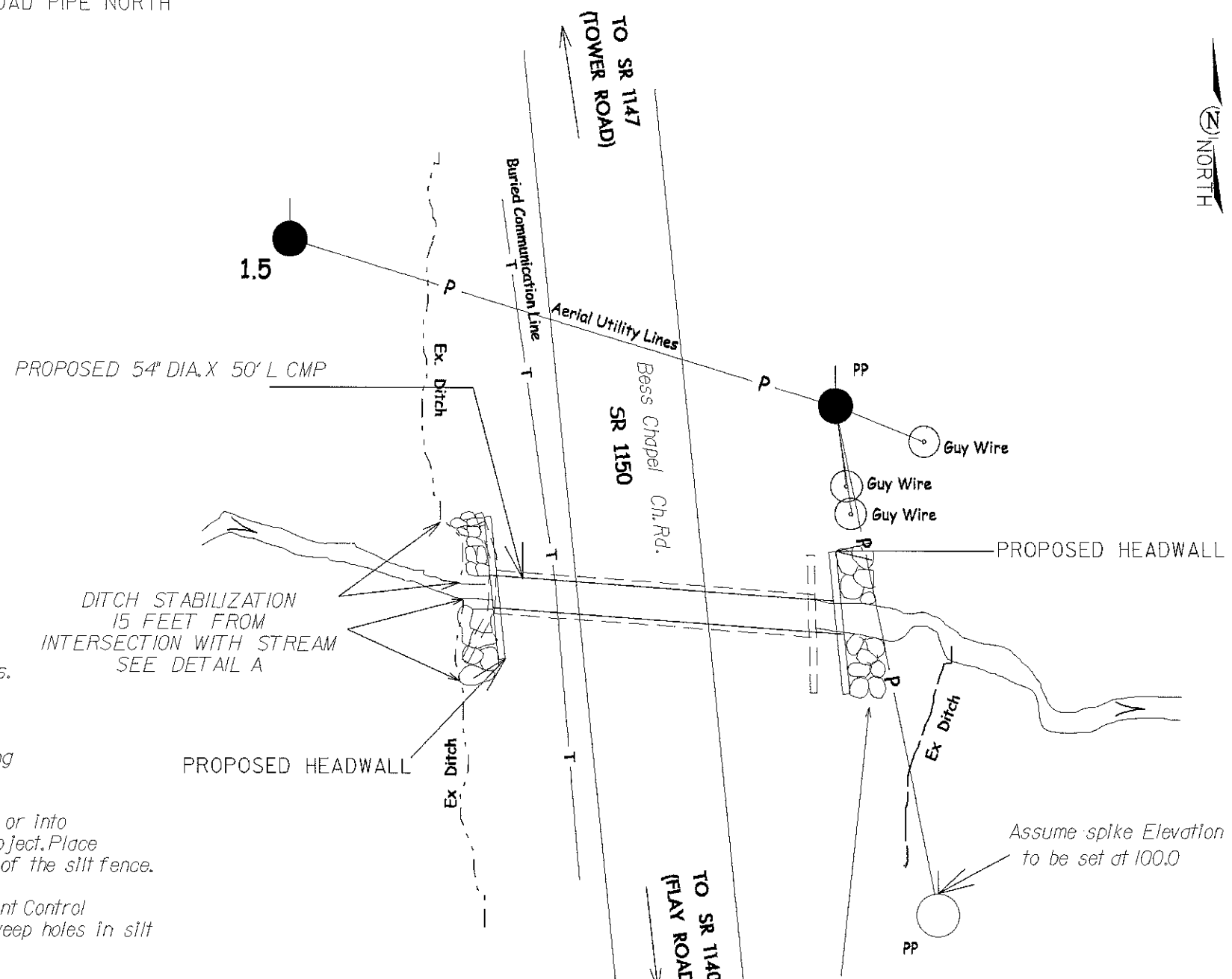
NTS

PAVEMENT SCHEDULE	
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE SB.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 11" B25.05 BASE COURSE
T	EARTH MATERIAL

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

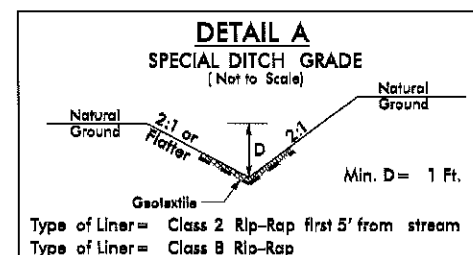
SYSTEMS
 ENGINEERING
 CONSULTANTS
 INC.

PROJECT REFERENCE NO. 17BPJ2C.3	SHEET NO. 4
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



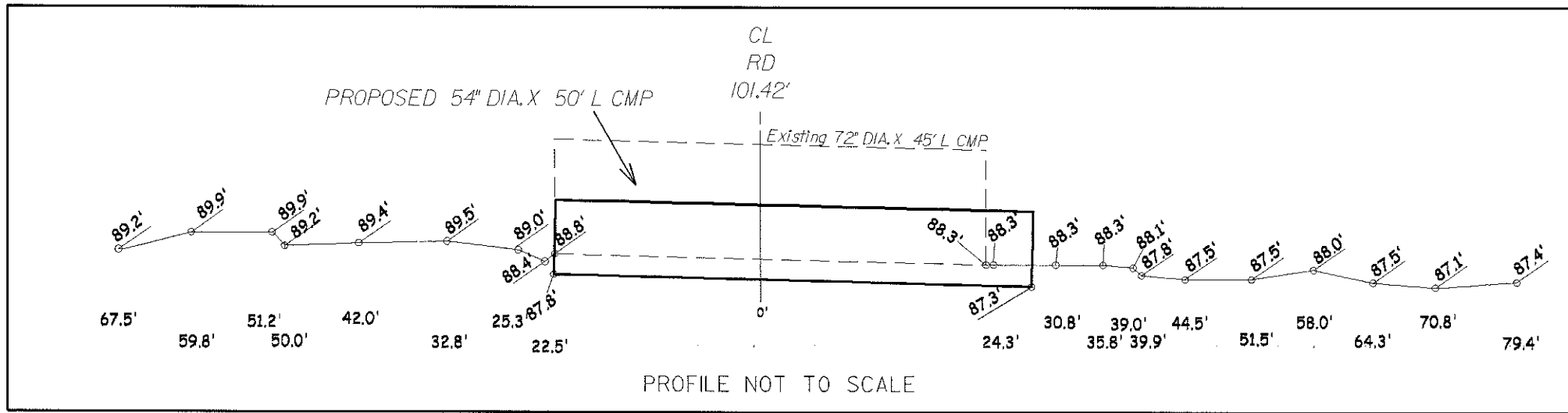
- 1) Pumping System to be used to divert the stream around the construction site as needed.
- 2) Any contaminated water within the construction site is to be pumped into a silt bag.
- 3) Silt fence is to be placed around stockpile and project as it allows.
- 4) Upon completion of the project all silt fences are to be placed as needed. Also seeding and mulching of disturbed areas.
- 5) Divert runoff into storage basins or into TRSC-A's before leaving the project. Place contaminated devices at the end of the silt fence.
- 6) Place TRSC-A's or special Sediment Control Fence in the low points with weep holes in silt fence as needed.
- 7) Reference the Best Management Practices for Construction and Maintenance Activities by the NCDOT Chapter 4.

DITCH STABILIZATION
15 FEET FROM
INTERSECTION WITH STREAM
SEE DETAIL A



Assume spike Elevation to be set at 100.0

Class II Rip Rap to be placed at all four corners approx. 5' out in front of the retaining wall.

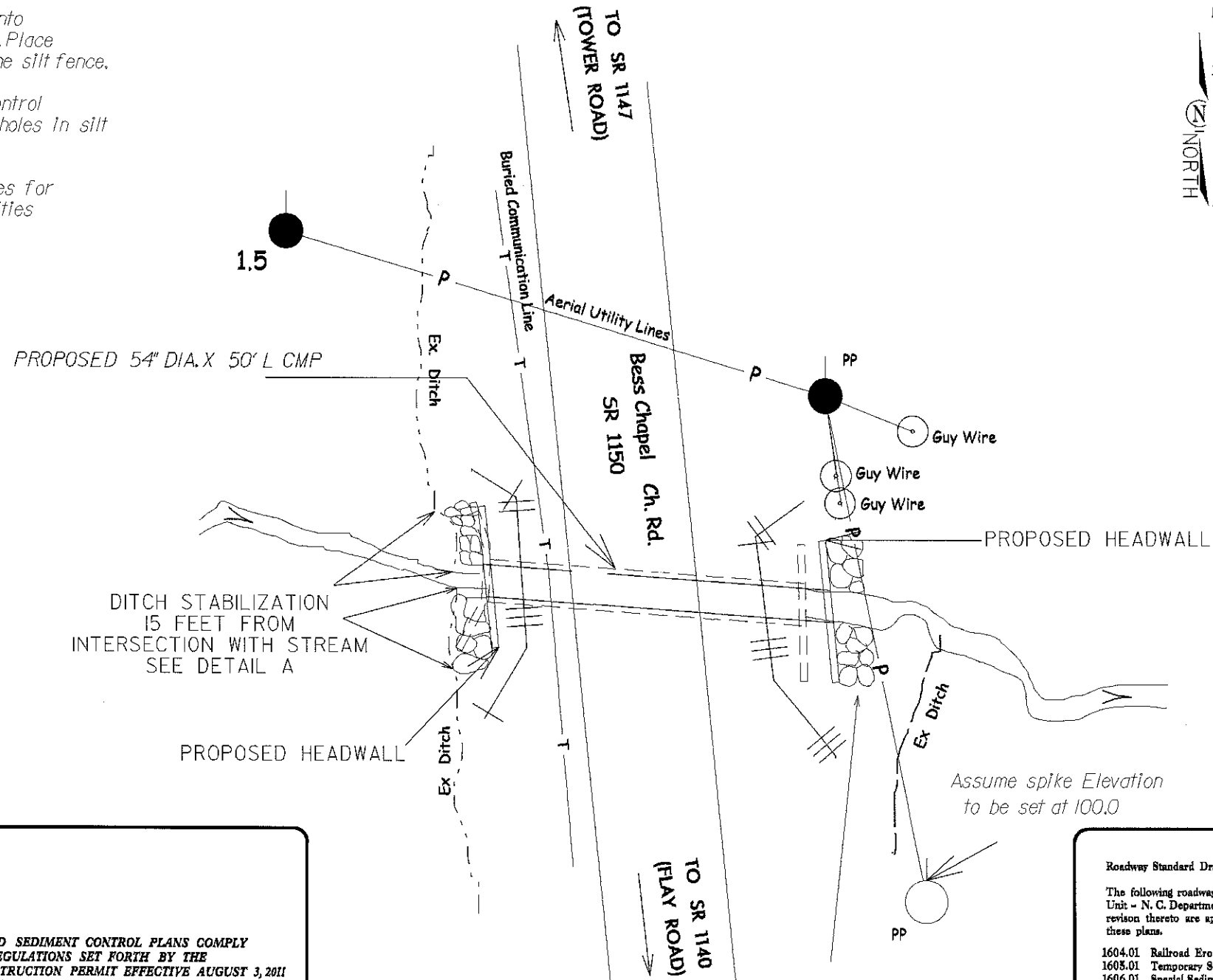


REVISIONS

PROJECT: 17BP.12.C.3

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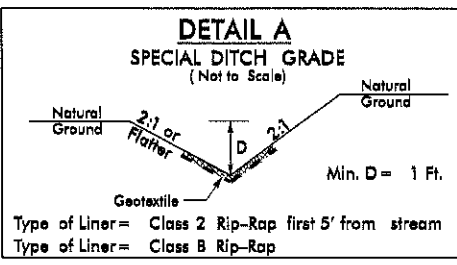
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
**PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.12.C.3	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

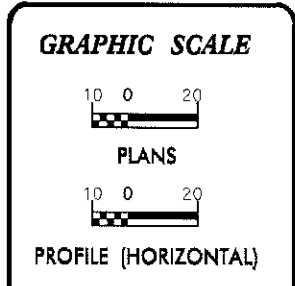
Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1632.01	Temporary Berms and Slope Drains	---
1630.02	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	▨
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	▨
1633.02	Temporary Rock Silt Check Type-B	▨
	Wattle / Coir Fiber Wattle	---
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	---
1634.01	Temporary Rock Sediment Dam Type-A	▨
1634.02	Temporary Rock Sediment Dam Type-B	▨
1635.01	Rock Pipe Inlet Sediment Trap Type-A	⊂
1635.02	Rock Pipe Inlet Sediment Trap Type-B	⊂
1630.04	Stilling Basin	▭
1630.06	Special Stilling Basin	▭
	Rock Inlet Sediment Trap:	
1632.01	Type A	▭
1632.02	Type B	▭
1632.03	Type C	▭
	Skimmer Basin	▭
	Tiered Skimmer Basin	▭
	Infiltration Basin	▭

**THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.**



RYAN BARBEE
LEVEL IIIA NAME

3466
LEVEL IIIA CERTIFICATION NO.



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrances	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

Class II Rip Rap to be placed at all four corners approx. 5' out in front of the retaining wall.

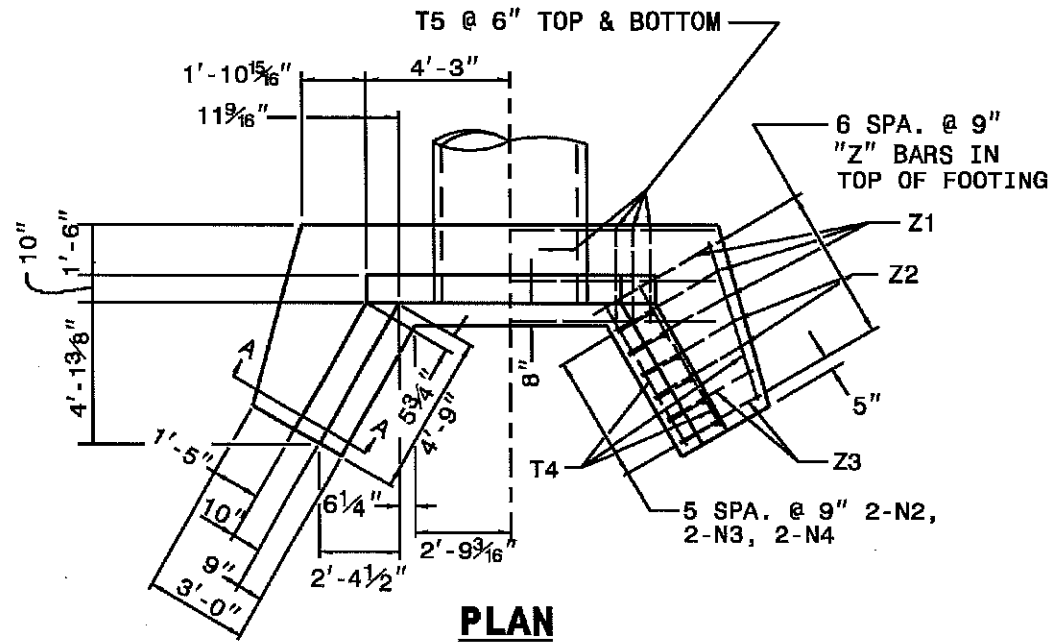
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>17BP12.C.3</i>	SHEET NO. <i>EC-2</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

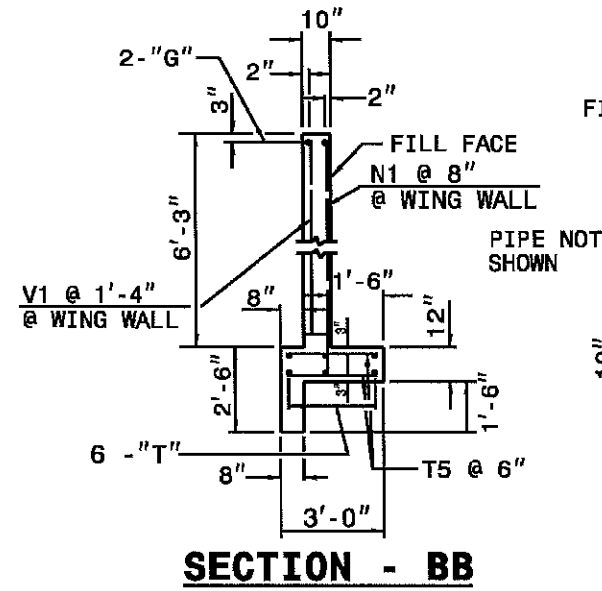
SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

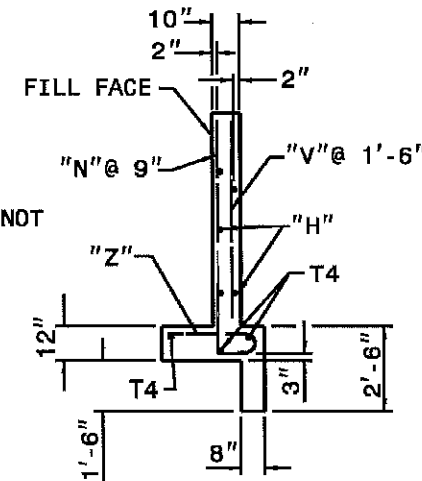
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PLAN

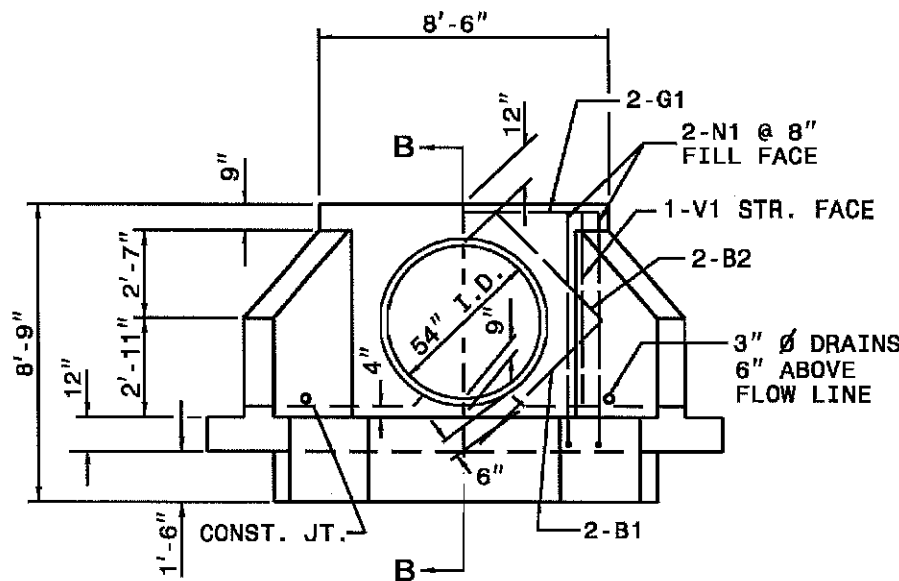


SECTION - BB

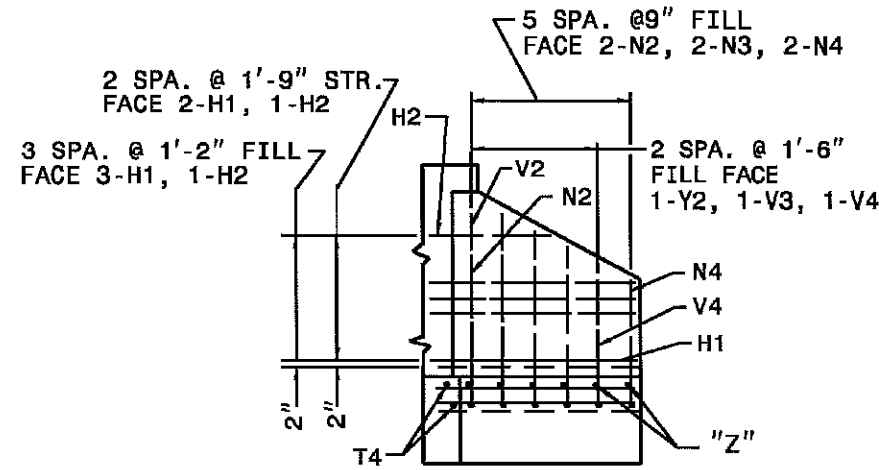


SECTION - AA

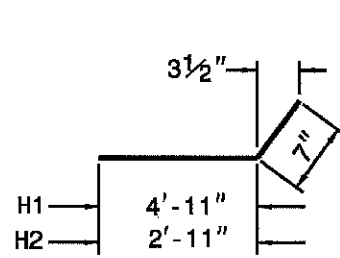
SEE STD. DWG. 838.45 FOR GENERAL NOTES.



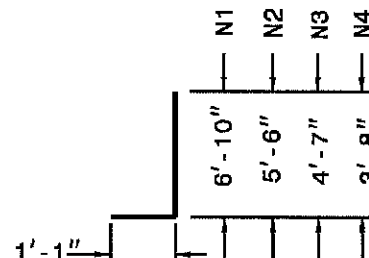
ELEVATION



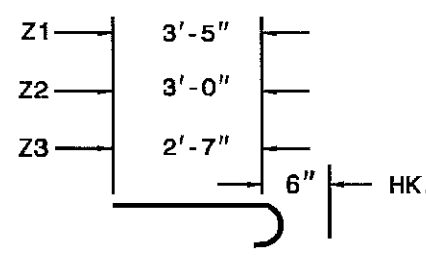
WING ELEVATION



"H" BARS



"N" BARS



"Z" BARS

"H", "N", & "Z" BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ENDWALL

REINF. STEEL		1 PIPE		
BAR	SIZE	LENGTH	NO.	WEIGHT
B1	#4	5'-6"	4	15
B2	#4	4'-6"	4	12
G1	#7	8'-2"	2	33
H1	#4	5'-6"	10	37
H2	#4	3'-6"	4	9
N1	#4	7'-11"	4	21
N2	#4	6'-7"	4	18
N3	#4	5'-8"	4	15
N4	#4	4'-9"	4	13
T1	#4	11'-10"	6	47
T4	#4	5'-3"	6	21
T5	#4	2'-6"	34	57
V1	#4	5'-9"	2	8
V2	#4	4'-10"	2	6
V3	#4	3'-11"	2	5
V4	#4	3'-1"	2	4
Z1	#4	3'-11"	6	16
Z2	#4	3'-6"	4	9
Z3	#4	3'-1"	4	8

REINF. STEEL LBS. 354

CON./R.C. CU. YDS 5.0

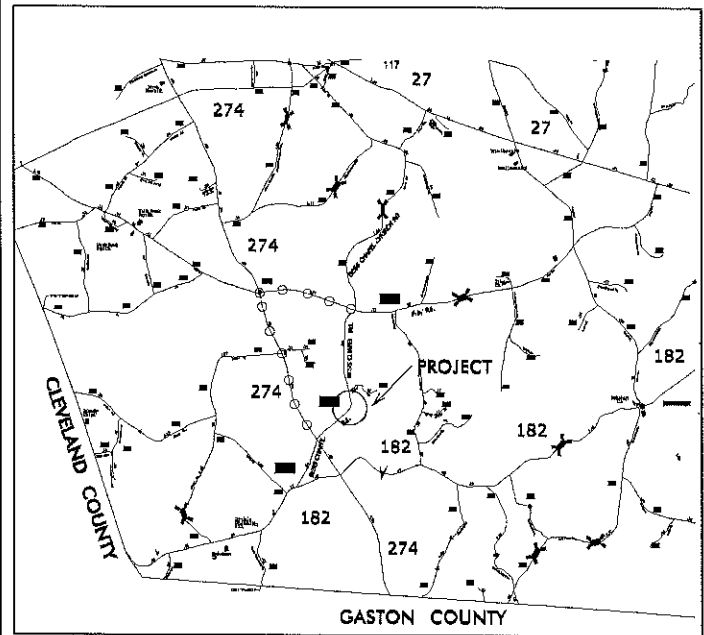
1-12

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.12.C.3	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

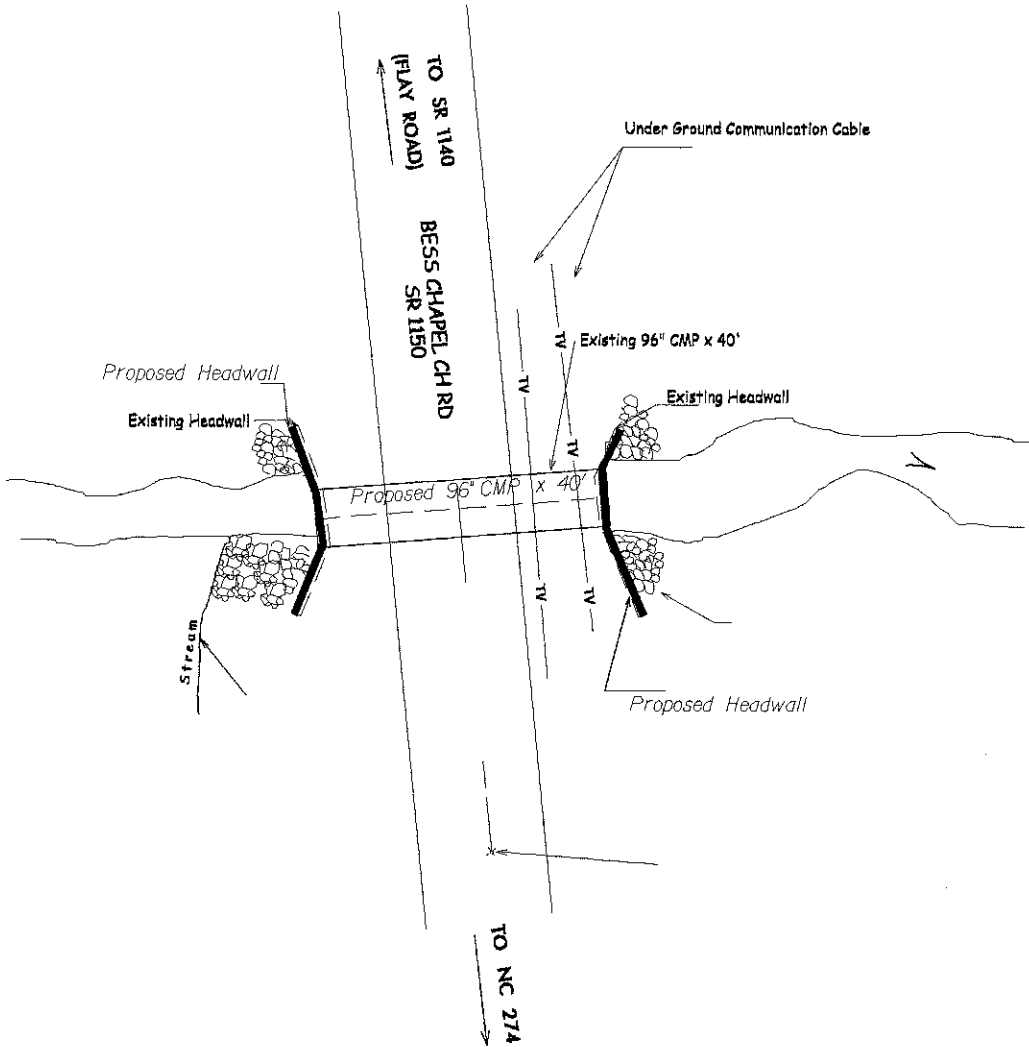
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

LINCOLN COUNTY

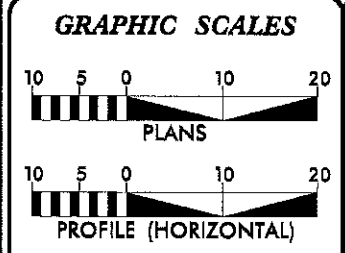
LOCATION: BESS CHAPEL CHURCH ROAD SR 1150
TYPE OF WORK: PIPE CULVERT REPLACEMENT



DETOUR ROUTE
VICINITY MAP
(NOT TO SCALE)



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



PROJECT LENGTH	
LENGTH ROADWAY WBS PROJECT 17BP.12.C.3	= 0.010 MILES
LENGTH STRUCTURES WBS PROJECT 17BP.12.C.3	= 0.010 MILES
TOTAL LENGTH WBS PROJECT 17BP.12.C.3	= 0.01 MILES

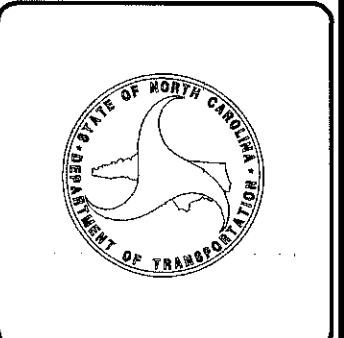
Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh, NC, 27610

2012 STANDARD SPECIFICATIONS

LETTING DATE:
MAY 24, 2016

STEVE RACKLEY, PE
PROJECT ENGINEER

RYAN BARBEE
DESIGN AND EROSION CONTROL PLANS



09/08/99
 05-MAY-2016 14:03
 S:\Bridges\17BP.12.C.3\BESSOUTH_2.d.dgn
 \$\$\$USERNAME\$\$\$

CONTRACT: DL00104
PROJECT: 17BP.12.C.3

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale *S.U.E. = Subsurface Utility Engineering

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
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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	-----
Existing Wetland Boundary	-----
Proposed Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----
Existing Historic Property Boundary	-----

Known Contamination Area: Soil	-----
Potential Contamination Area: Soil	-----
Known Contamination Area: Water	-----
Potential Contamination Area: Water	-----
Contaminated Site: Known or Potential	-----

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G 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	-----
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	-----
Switch	-----
RR Abandoned	-----
RR Dismantled	-----

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	-----
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Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
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Proposed Permanent Easement with Iron Pin and Cap Marker	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	-----
Pavement Removal	-----

VEGETATION:

Single Tree	-----
Single Shrub	-----
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

MAJOR:	-----
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	-----
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	-----
U/G Power Cable Hand Hole	-----
H-Frame Pole	-----
U/G Power Line LOS B (S.U.E.*)	-----
U/G Power Line LOS C (S.U.E.*)	-----
U/G Power Line LOS D (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	-----
Proposed Telephone Pole	-----
Telephone Manhole	-----
Telephone Pedestal	-----
Telephone Cell Tower	-----
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	-----
U/G Telephone Cable LOS C (S.U.E.*)	-----
U/G Telephone Cable LOS D (S.U.E.*)	-----
U/G Telephone Conduit LOS B (S.U.E.*)	-----
U/G Telephone Conduit LOS C (S.U.E.*)	-----
U/G Telephone Conduit LOS D (S.U.E.*)	-----
U/G Fiber Optics Cable LOS B (S.U.E.*)	-----
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----

WATER:

Water Manhole	-----
Water Meter	-----
Water Valve	-----
Water Hydrant	-----
U/G Water Line LOS B (S.U.E.*)	-----
U/G Water Line LOS C (S.U.E.*)	-----
U/G Water Line LOS D (S.U.E.*)	-----
Above Ground Water Line	-----

TV:

TV Pedestal	-----
TV Tower	-----
U/G TV Cable Hand Hole	-----
U/G TV Cable LOS B (S.U.E.*)	-----
U/G TV Cable LOS C (S.U.E.*)	-----
U/G TV Cable LOS D (S.U.E.*)	-----
U/G Fiber Optic Cable LOS B (S.U.E.*)	-----
U/G Fiber Optic Cable LOS C (S.U.E.*)	-----
U/G Fiber Optic Cable LOS D (S.U.E.*)	-----

GAS:

Gas Valve	-----
Gas Meter	-----
U/G Gas Line LOS B (S.U.E.*)	-----
U/G Gas Line LOS C (S.U.E.*)	-----
U/G Gas Line LOS D (S.U.E.*)	-----
Above Ground Gas Line	-----

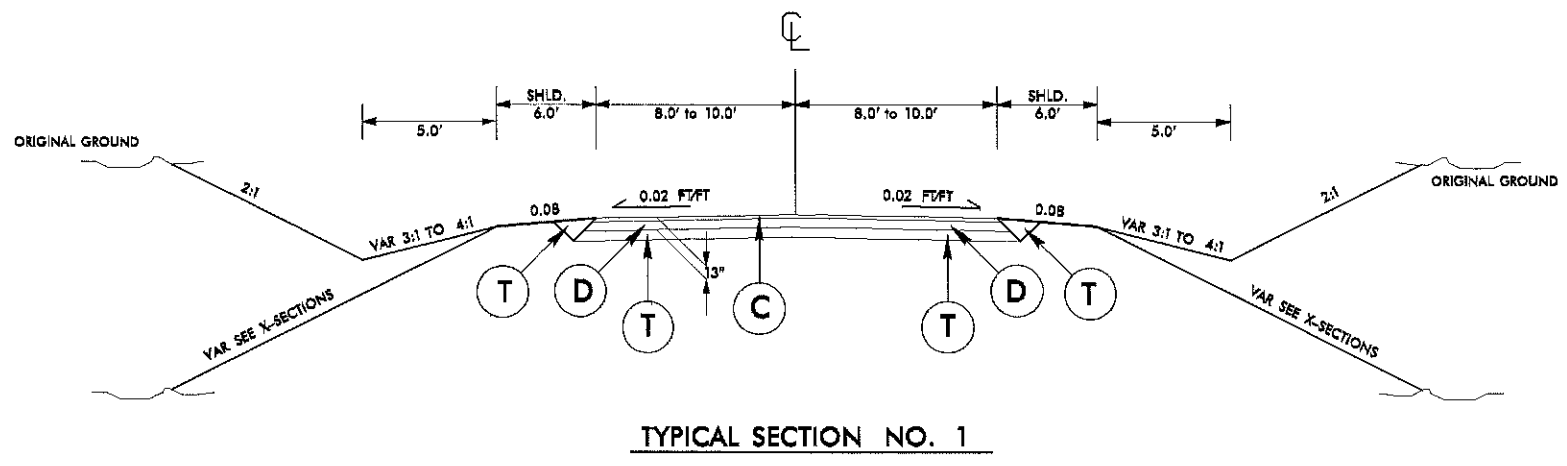
SANITARY SEWER:

Sanitary Sewer Manhole	-----
Sanitary Sewer Cleanout	-----
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
SS Forced Main Line LOS B (S.U.E.*)	-----
SS Forced Main Line LOS C (S.U.E.*)	-----
SS Forced Main Line LOS D (S.U.E.*)	-----

MISCELLANEOUS:

Utility Pole	-----
Utility Pole with Base	-----
Utility Located Object	-----
Utility Traffic Signal Box	-----
Utility Unknown U/G Line LOS B (S.U.E.*)	-----
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	-----
AG Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	-----
U/G Test Hole LOS A (S.U.E.*)	-----
Abandoned According to Utility Records	-----
End of Information	-----

PROJECT REFERENCE NO. 17BPJ2C.3	SHEET NO. 3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



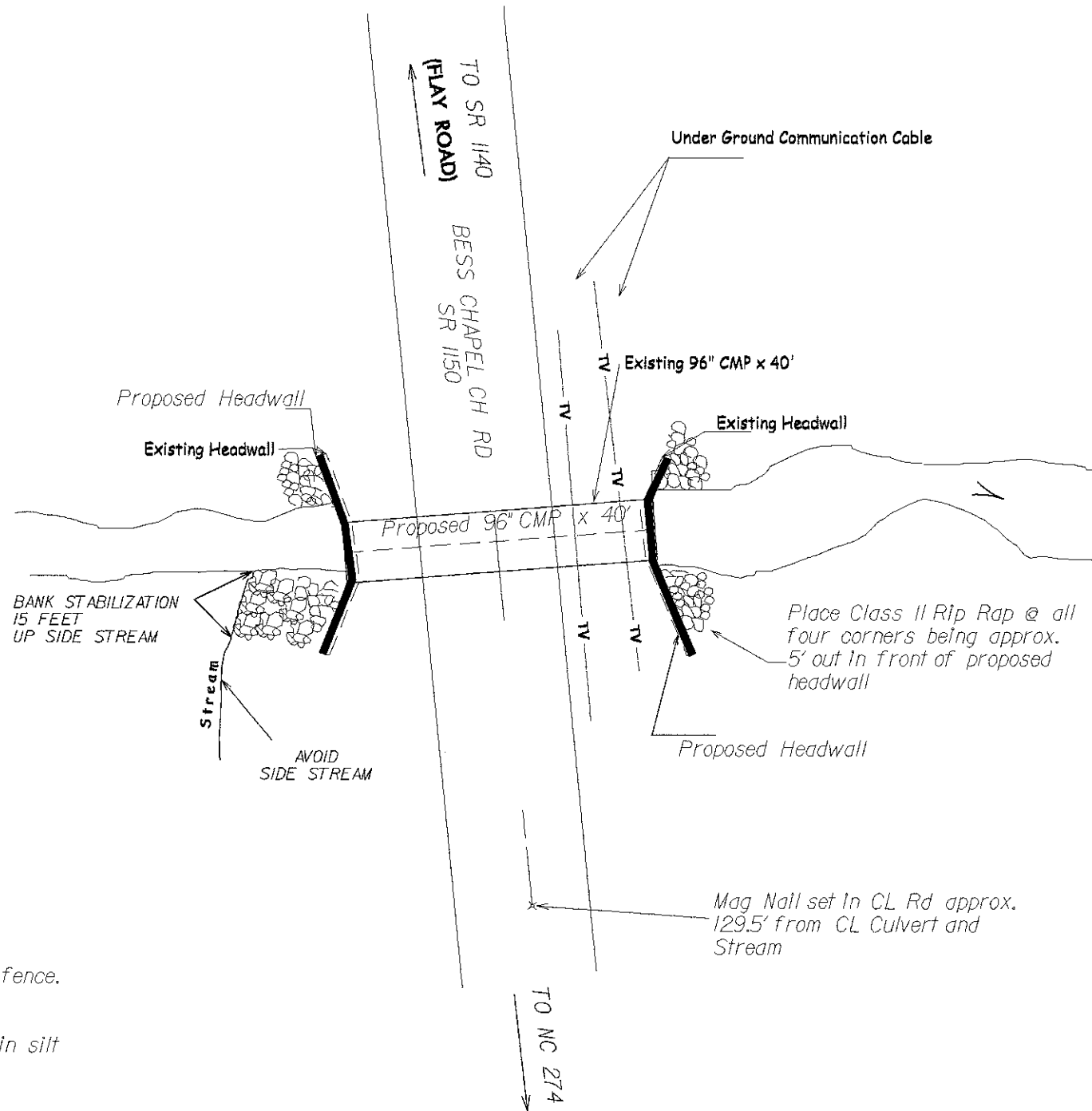
****NTS****

PAVEMENT SCHEDULE	
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 88.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
D	PROP. APPROX. 11" B25.0B BASE COURSE IN TWO LIFTS AT AN AVERAGE RATE OF 827 LBS. PER SQ. YD.
T	EARTH MATERIAL

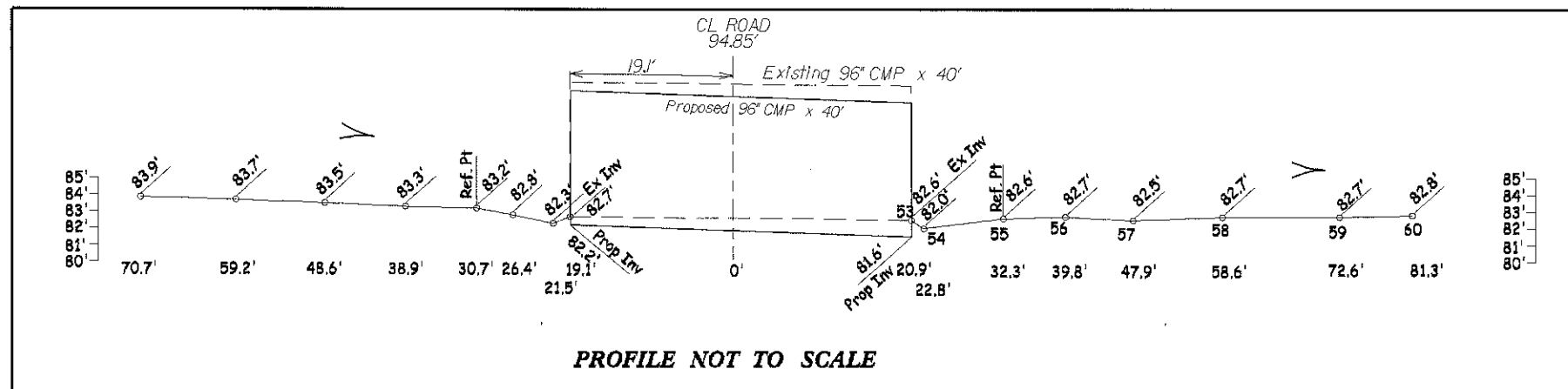
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

BESS CHAPEL CHURCH ROAD PIPE SOUTH

PROJECT REFERENCE NO. 17BPJ2C.3	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



- 1) Pumping System to be used to divert the stream around the construction site as needed.
- 2) Any contaminated water within the construction site is to be pumped into a silt bag.
- 3) Silt fence is to be placed around stockpile and project as it allows.
- 4) Upon completion of the project all silt fences are to be placed as needed. Also seeding and mulching of disturbed areas.
- 5) Divert runoff into storage basins or into TRSC-A's before leaving the project. Place contaminated devices at the end of the silt fence.
- 6) Place TRSC-A's or special Sediment Control Fence in the low points with weep holes in silt fence as needed.
- 7) Reference the Best Management Practices for Construction and Maintenance Activities by the NCDOT Chapter 4.



PROFILE NOT TO SCALE

REVISIONS

8/17/99

05-MAY-2016 14:04
S:\Bridges\17BPJ2C\3\BESSOUTH_2d.dgn
\$USER\$

TIP PROJECT: 17BP.12.C.3

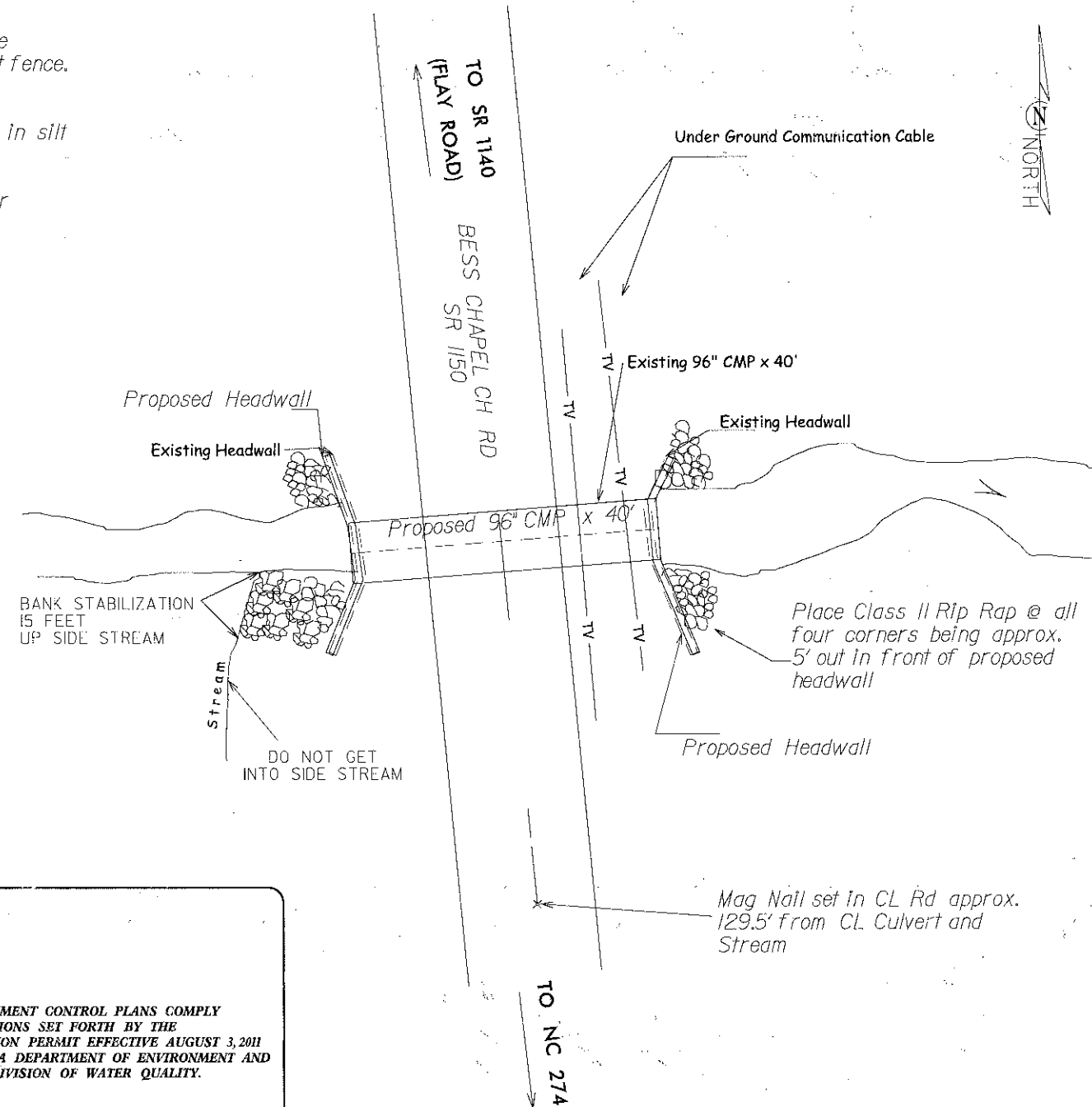
- 1) Pumping System to be used to divert the stream around the construction site as needed.
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- 6) Place TRSC-A's or special Sediment Control Fence in the low points with weep holes in silt fence as needed.
- 7) Reference the Best Management Practices for Construction and Maintenance Activities by the NCDOT Chapter 4.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
**PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.12.C.3	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

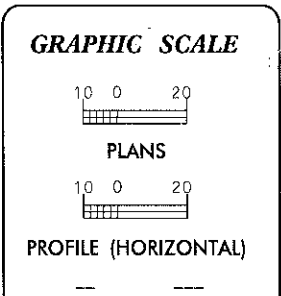
Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
1630.05	Temporary Diversion	---
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	---▲---
1622.01	Temporary Berms and Slope Drains	---
1630.02	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	▩
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	▩
1633.02	Temporary Rock Silt Check Type-B	▩
	Wattle/Coir Fiber Wattle	---
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	---
1634.01	Temporary Rock Sediment Dam Type-A	▩
1634.02	Temporary Rock Sediment Dam Type-B	▩
1635.01	Rock Pipe Inlet Sediment Trap Type-A	⊂
1635.02	Rock Pipe Inlet Sediment Trap Type-B	⊂
1630.04	Stilling Basin	▭
1630.06	Special Stilling Basin	▭
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	▭
	Tiered Skimmer Basin	▭
	Infiltration Basin	▭



THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.

RYAN BARBEE
LEVEL IIIA NAME

3466
LEVEL IIIA CERTIFICATION NO.



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES DIVISION OF WATER QUALITY.

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

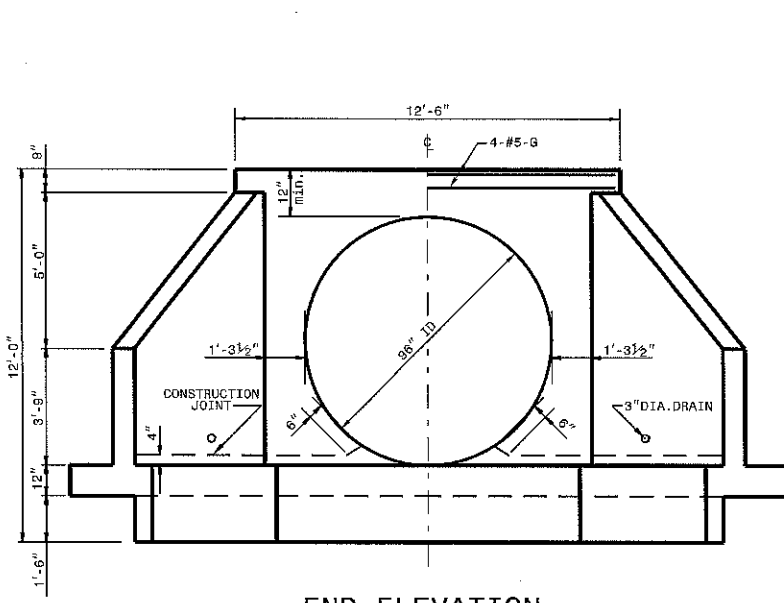
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 River Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

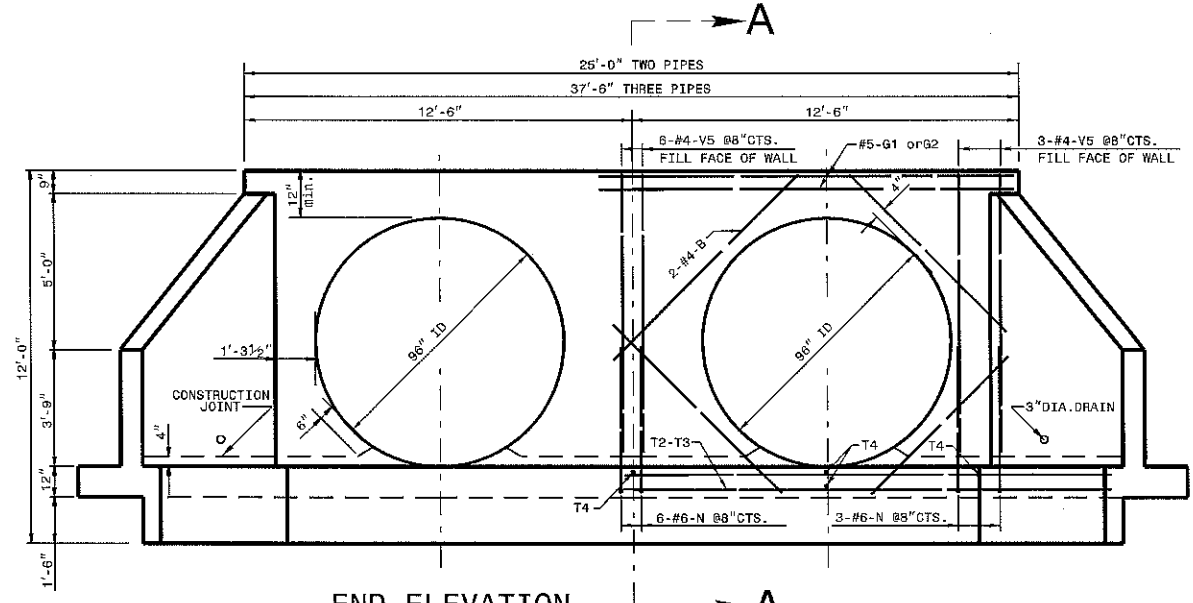
PROJECT REFERENCE NO. <i>17BP12.C.3</i>	SHEET NO. <i>EC-2</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

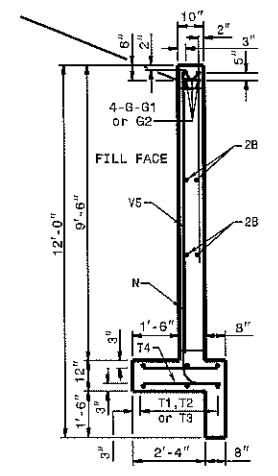
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.



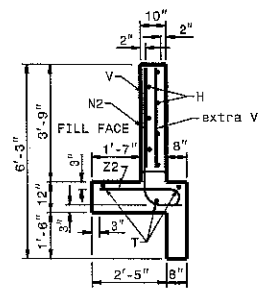
END ELEVATION



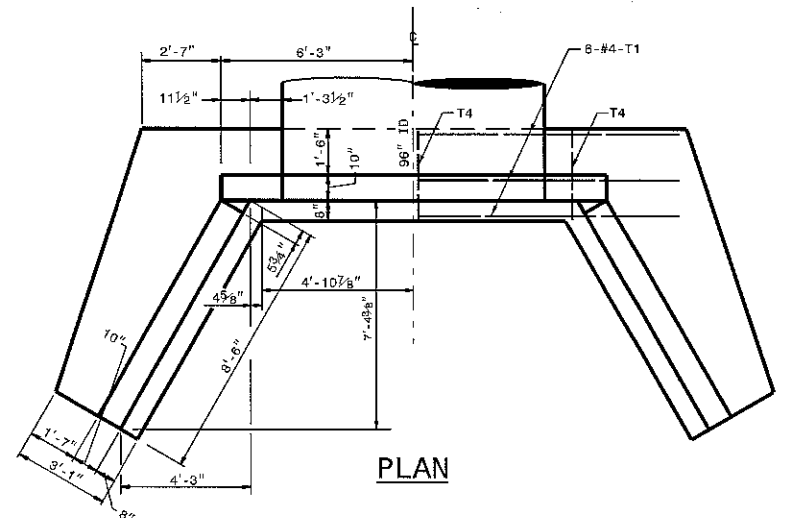
END ELEVATION



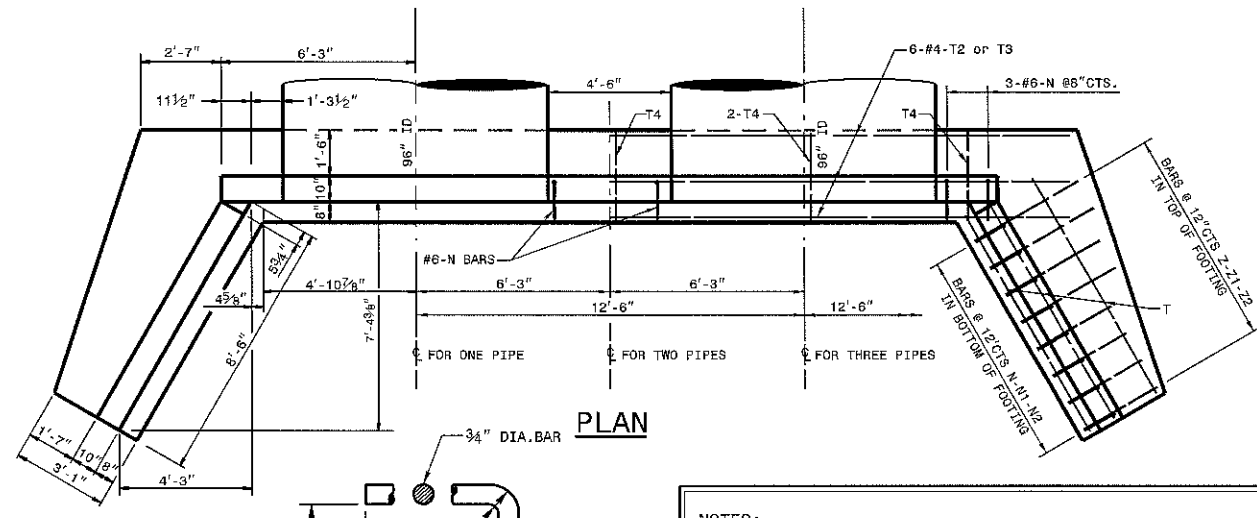
SECTION A-A



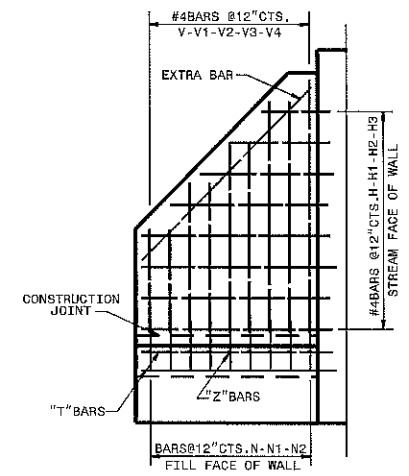
END OF WING



PLAN

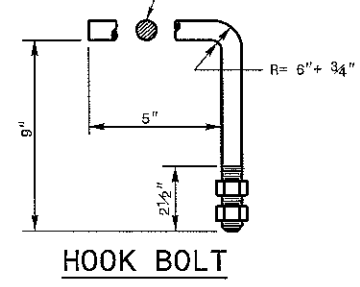


PLAN

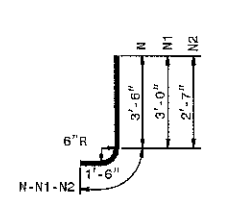


ELEVATION OF WING

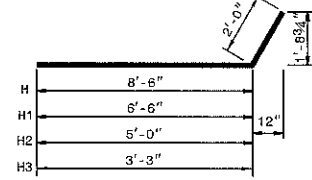
NOTE: CONSTRUCT HOOK BOLTS (ANCHORS) AT 24" CTS. ALONG THE CIRCUMFERENCE OF THE 96" CSPA. EMBED THE HOOK BOLTS 6" IN DEPTH. THE GALVANIZED 3/4" DIA. HOOK BOLTS MUST MEET ASTM A-307 OR ASTM A-836. BOTH BOLTS AND NUTS MUST BE IN ACCORDANCE WITH ASTM A-153 FOR GALVANIZING.



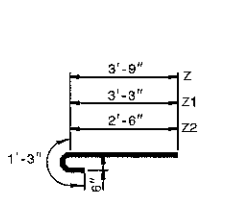
HOOK BOLT



BARS N-N1-N2



BARS H-H1-H2-H3



BARS Z-Z1-Z2

NOTES:
 ALL CONCRETE TO BE CLASS "A".
 ALL REINFORCING STEEL SHALL BE ASTMA615-GRADE 60.
 ALL REINFORCING STEEL SHALL BE DEFORMED BARS. WHERE SPLICING OF REINFORCEMENT IS NECESSARY, BARS ARE TO BE LAPPED 45 DIAMETERS. ALL DIMENSIONS RELATIVE TO REINFORCEMENT ARE TO CENTERS OF BARS.
 THE FOOTING, CURTAIN WALL AND 4 IN. OF WALL ARE TO BE POURED IN ONE OPERATION ALLOWING NO TIME FOR INITIAL SET TO TAKE PLACE BETWEEN THEM. THE REMAINING WALL SHALL THEN BE POURED IN ONE OPERATION.
 ALL EXPOSED CORNERS ARE TO BE CHAMFERED 1 IN.
 3 IN. DIAMETER DRAINS SHALL BE PLACED IN WALL AS SHOWN AND BE 6 IN. ABOVE NORMAL FLOW LINE.
 ALL MATERIAL AND WORKMANSHIP AS PER N.C. DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
 THE EXTRA BARS ARE PROVIDED FOR HOLDING REINFORCING STEEL IN CORRECT POSITION IN WING.

BILL OF MATERIALS FOR ONE ENDWALL

BAR	SIZE	LENGTH	QTY	WEIGHT	1 PIPE	2 PIPES	3 PIPES
B	4	6'-6"	8	35	16	69	104
G	5	12'-3"	4	51	--	--	--
G1	5	13'-6"	--	--	8	113	--
G2	5	19'-9"	--	--	--	--	8 165
H	4	10'-6"	12	84	12	84	12 84
H1	4	8'-6"	4	23	4	23	4 23
H2	4	7'-0"	2	9	2	9	2 9
H3	4	5'-3"	4	14	4	14	4 14
N	6	5'-0"	12	90	18	135	24 180
N1	5	4'-6"	4	19	4	19	4 19
N2	4	4'-1"	8	22	8	22	8 22
T	4	8'-6"	6	34	6	34	6 34
T1	4	17'-4"	6	69	--	--	--
T2	4	16'-0"	--	--	12	128	--
T3	4	22'-3"	--	--	--	12	178
T4	4	2'-9"	4	7	7	13	10 18
V	4	8'-0"	4	11	4	11	4 11
V1	4	7'-0"	4	19	4	19	4 19
V2	4	5'-6"	6	22	6	22	6 22
V3	4	4'-6"	4	12	4	12	4 12
V4	4	3'-3"	6	13	6	13	6 13
V5	4	9'-0"	6	36	12	72	18 108
Z	6	5'-0"	6	45	6	45	6 45
Z1	5	4'-6"	4	19	4	19	4 19
Z2	4	3'-9"	8	20	8	20	8 20
REINF. STEEL (lbs.)				654		896	1119
CLASS "A" CONC (cu.yds.)				10.1		13.9	17.6

* NO DEDUCTIONS HAVE BEEN MADE FOR PIPES

CONTRACT STANDARDS & DEVELOPMENT UNIT
 STANDARDS AND SPECIAL DESIGN
 Office 919-707-6950 FAX 919-250-4119

REINFORCED CONCRETE ENDWALL
 FOR
 96IN. DIAMETER PIPE - 90° SKEW

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: rnbritt DATE: 12-07-06
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: details/nbritr/english/hydro/96inEndwall190sk.dgn

I:\AUG-2011\08\45
 96inEndwall190sk.dgn
 I:\contracts\Special Details\nbritr/english\hydro\96in endwall 96sk.dgn