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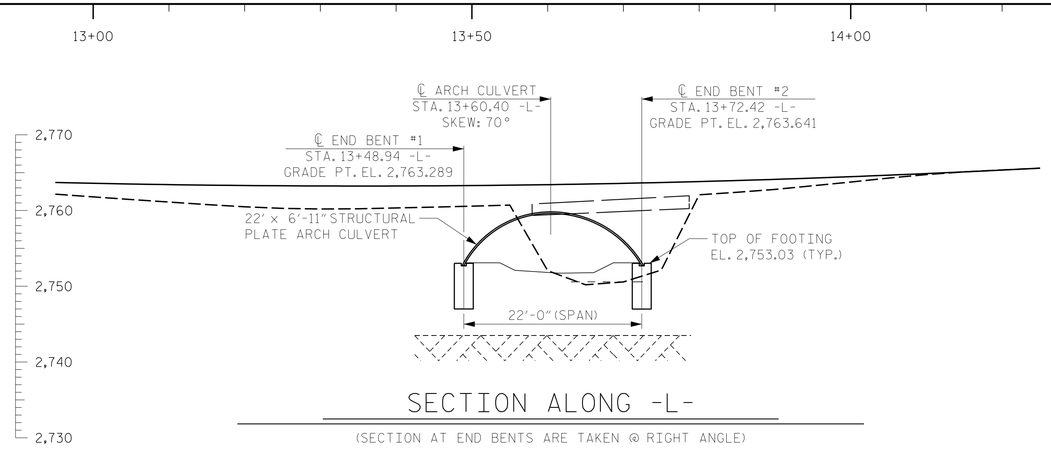
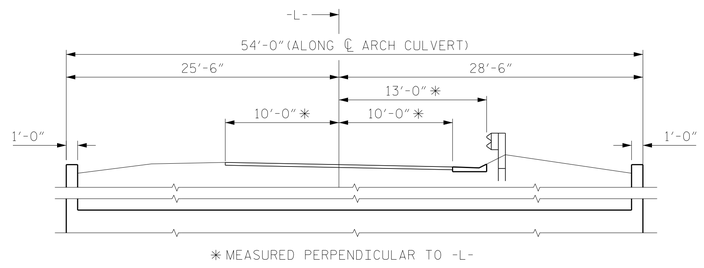


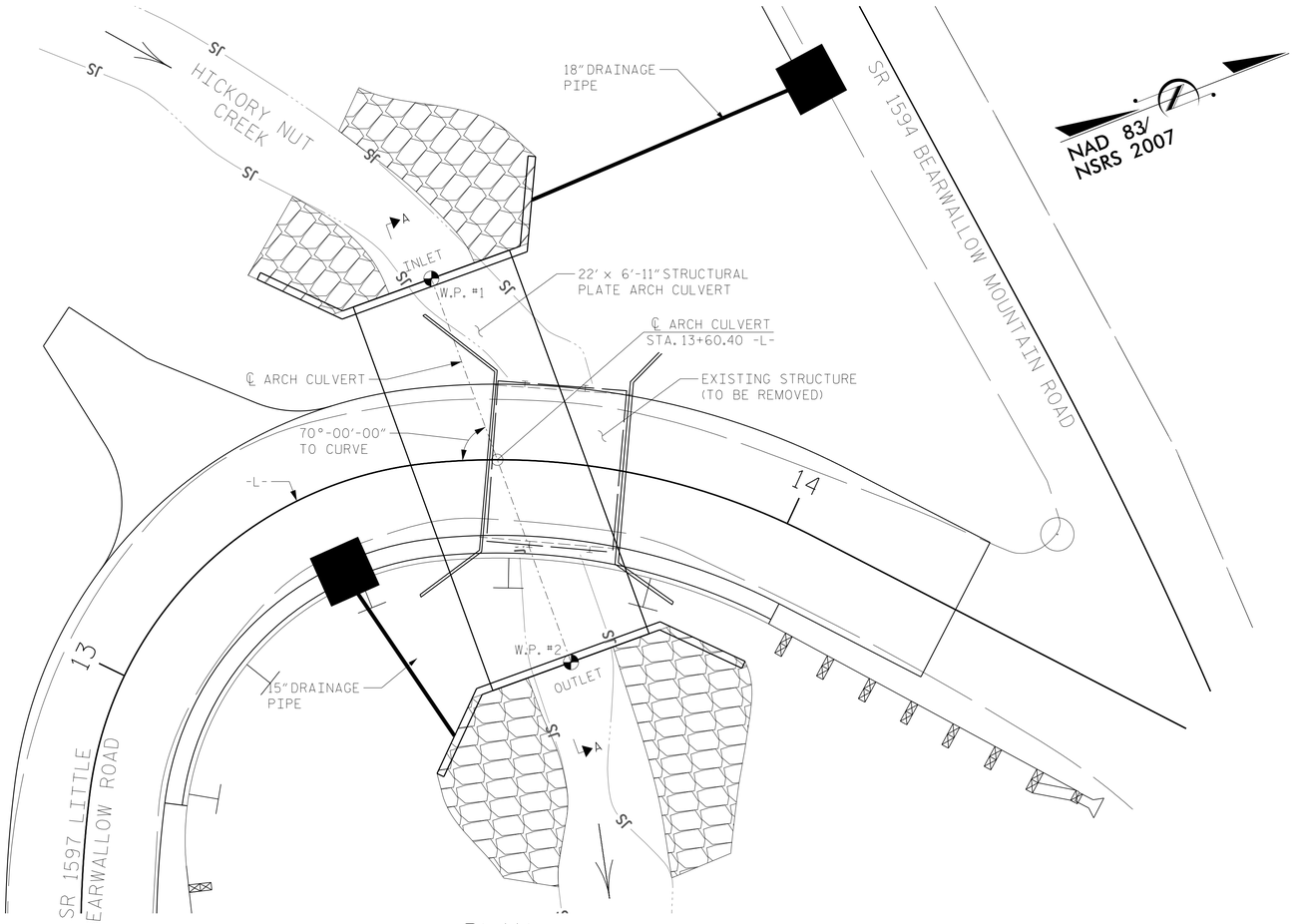
SECTION ALONG -L-

(SECTION AT END BENTS ARE TAKEN @ RIGHT ANGLE)



SECTION A-A

(THRU CULVERT)



PLAN

(CULVERT FOOTING NOT SHOWN FOR CLARITY)

NOTES

1. ASSUME LIVE LOAD = HL-93 OR ALTERNATE.
2. 22′ x 6′-11″ STRUCTURAL PLATE ARCH CULVERT AND WING WALLS TO BE DESIGNED BY A N.C. REGISTERED ENGINEER IN ACCORDANCE WITH APPLICABLE PORTIONS OF STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES ADOPTED BY AASHTO. CONSTRUCTION SHALL MEET THE APPLICABLE SECTIONS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.
3. REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER, IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.
4. FOR BLASTING ADJACENT TO HIGHWAY STRUCTURES, SEE ARTICLE 410-9 OF THE STANDARD SPECIFICATIONS.
5. FOR COMPLETE HORIZONTAL AND VERTICAL ALIGNMENT DATA, SEE ROADWAY PLANS.

EXISTING BRIDGE

SUPERSTRUCTURE: 1 SPAN @ 18′-8″ TIMBER DECK
SUBSTRUCTURE: TIMBER ABUTMENTS AND TIMBER PILES

HYDRAULIC DATA

DESIGN DISCHARGE	=	490 CFS
FREQUENCY OF DESIGN FLOOD	=	25 YR.
DESIGN HIGH WATER ELEV.	=	2,757.80 FT.
DRAINAGE AREA	=	0.89 SQ. MI.
BASE FLOOD DISCHARGE (Q_{100})	=	800 CFS
BASE FLOOD HIGH WATER ELEV.	=	2,760.68 FT.

OVERTOPPING INFO.

ELEVATION	=	2,762.90 FT.
FREQUENCY	=	500+ YR.
DISCHARGE	=	1,200 CFS

WORK POINTS

WORK POINT	STATION	OFFSET
#1	13+53.50 -L-	24.29′ LT.
#2	13+74.09 -L-	26.05′ RT.

PROJECT NO. 44-0261
HENDERSON COUNTY
STATION: 13+60.40 -L-
SHEET OF

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE #261 ON SR 1597 OVER HICKORY NUT CREEK

20′ CL. ROADWAY 70°-00′ SKEW

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NORTH CAROLINA LICENSE NO. C-2213

NORTH CAROLINA PROFESSIONAL SEAL 035565 ENGINEER MICHAEL K. ALBANO

DocuSigned by: Mike Albano
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DRAWN BY : J. TUELL DATE : 08-2013
CHECKED BY : J. HERRERA DATE : 12-2013

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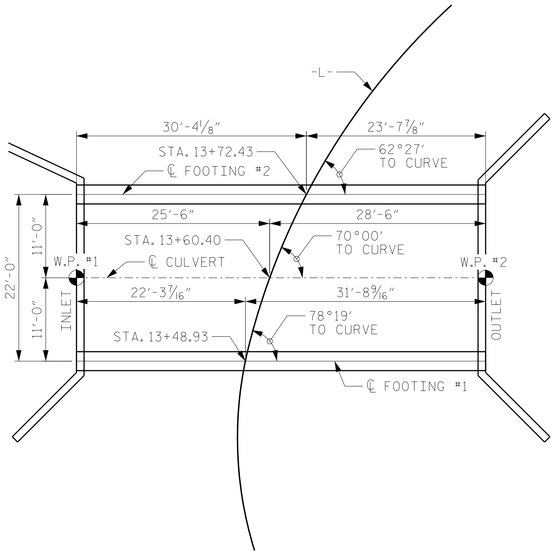
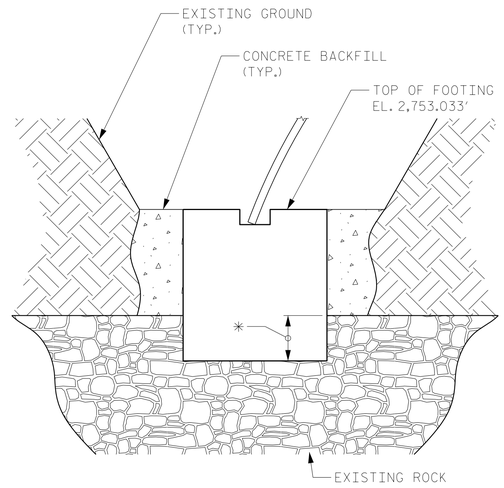


FOUNDATION PLAN

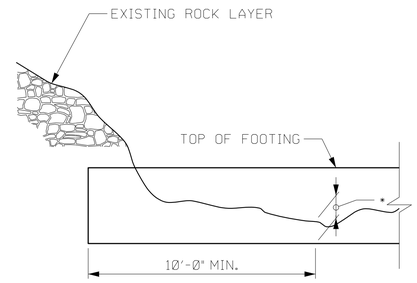
NOTE: WING WALLS AND WING WALL FOOTINGS SHALL BE DESIGNED BY CULVERT SUPPLIER. WING WALL FOOTINGS SHALL ATTACH TO CULVERT FOOTING.



DETAIL OF CONCRETE BACKFILL

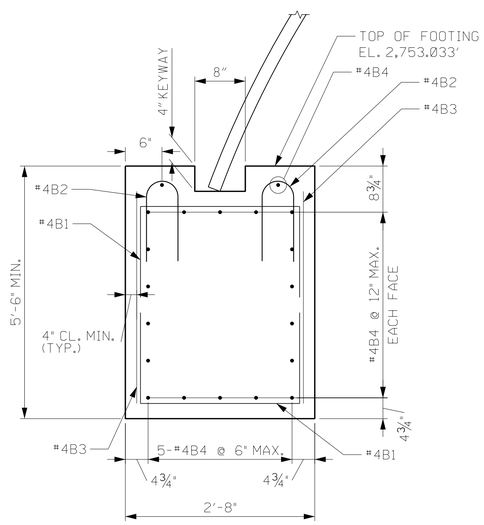
(SEE SPECIAL PROVISIONS)

* WHERE INDICATED IN SECTION B-B, 6" MIN. FOR CRYSTALLINE ROCK OR 12" MIN. FOR WEATHERED ROCK.



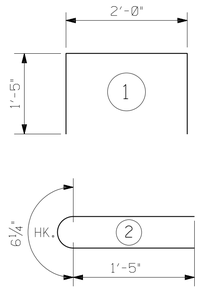
SECTION B-B

* 6" MIN. FOR CRYSTALLINE ROCK OR 12" MIN. FOR WEATHERED ROCK.



FOOTING SECTION

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF REINFORCING

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	432	4	1	4'-10"	1395
B2	432	4	2	3'-4 1/4"	968
*B3	432	4	STR	10'-0"	2886
B4	40	4	STR	53'-4"	1426

TOTAL REINFORCING STEEL 6,675 LBS.

CLASS AA CONCRETE - 4,000 PSI

FOOTINGS	CU. YDS.	57.8
TOTAL	CU. YDS.	57.8

*BARS TO BE FIELD CUT TO MEET ADEQUATE CLEARANCE

NOTES:

1. CONCRETE QUANTITY IS CALCULATED USING THE MINIMUM DEPTH SHOWN. ACTUAL DEPTH MAY VARY TO ACHIEVE THE REQUIRED MINIMUM EMBEDMENT INTO ROCK AS SHOWN IN SECTION B-B.
2. ADDITIONAL #4B4 BARS MAY BE REQUIRED WHERE FOOTING DEPTH INCREASES. MAXIMUM SPACING BETWEEN BARS ON EACH FACE SHALL BE AS SHOWN IN THE FOOTING SECTION.

PROJECT NO. 44-0261

HENDERSON COUNTY

STATION: 13+60.40 -L-

SHEET OF

STATE OF NORTH CAROLINA
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RALEIGH

STRUCTURAL PLATE ARCH CULVERT

DETAILS AND FOUNDATION LAYOUT

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NORTH CAROLINA LICENSE NO. C-2213

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DocuSigned by: Mike Albano
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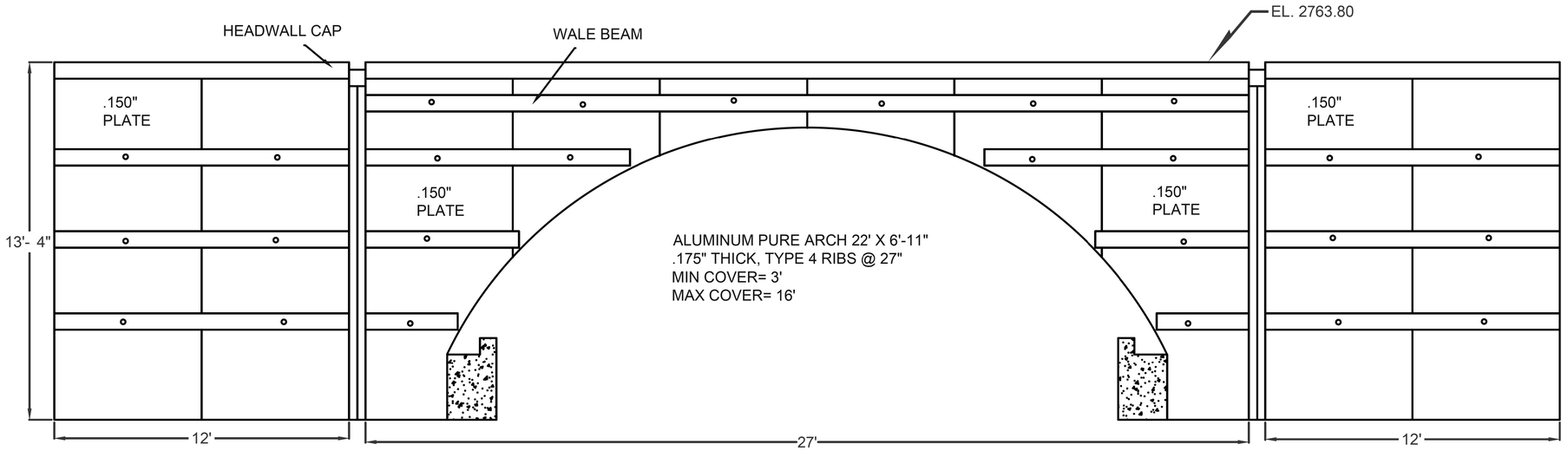
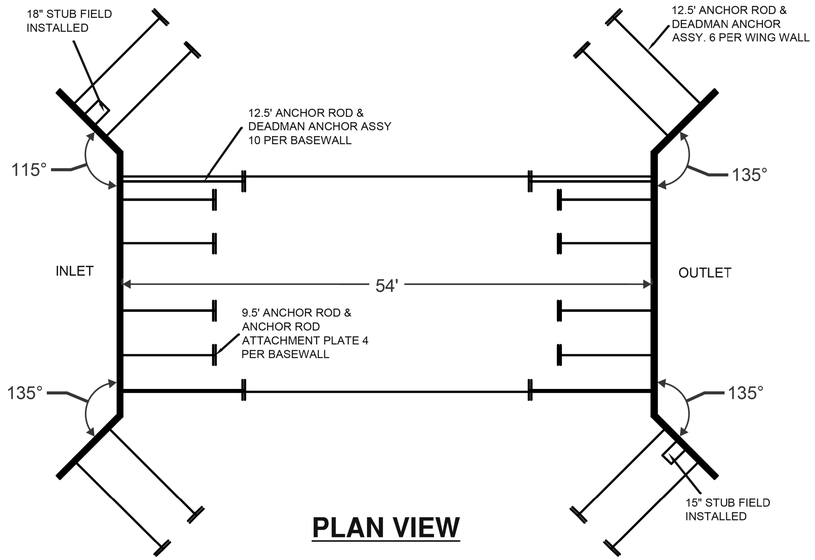


EXPANDED END VIEW-INLET & OUTLET HEADWALL



PLAN VIEW

NOTE

1. SEE NOTE 2 ON SHEET 2-A.

PROJECT NO. 44-0261

HENDERSON COUNTY

STATION: 13+60.40 -L-

SHEET OF

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STRUCTURAL PLATE ARCH CULVERT

HEADWALL DETAILS

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