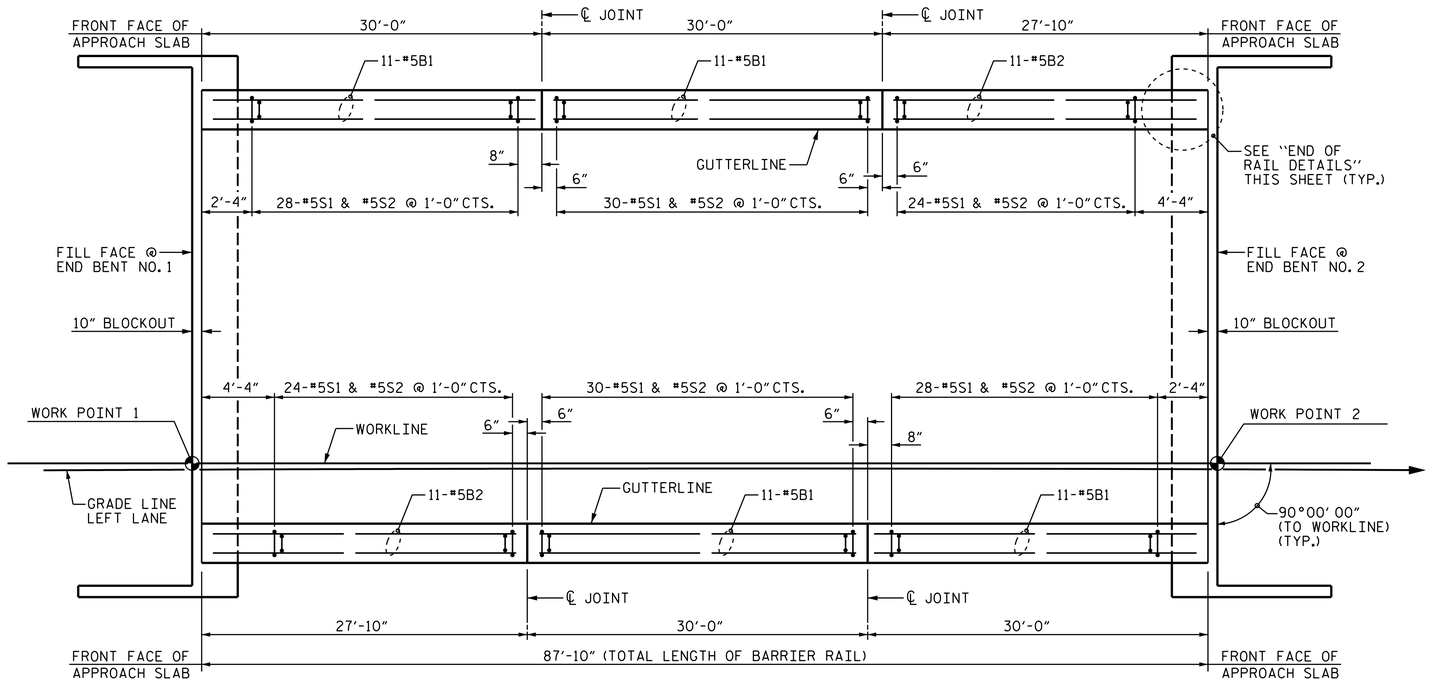


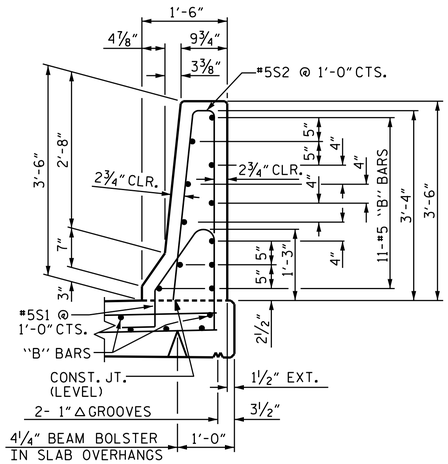

PLAN

## NOTES

THE BARRIER RAIL IN THE SPAN SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THE SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

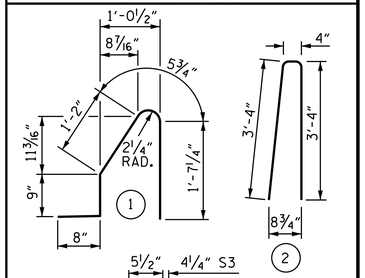
ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

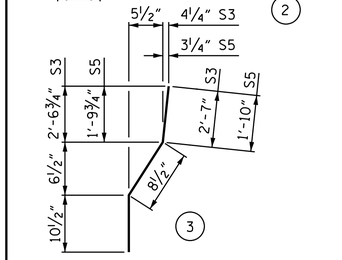
GROOVED CONTRACTION JOINTS, ½" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.




SECTION THRU RAIL

## BAR TYPES



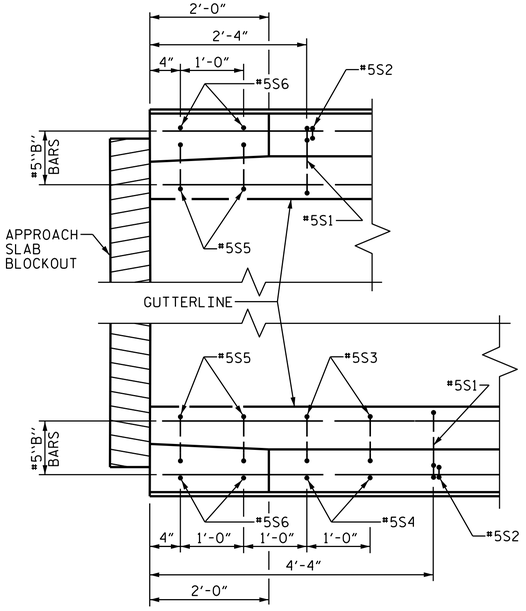

ALL BAR DIMENSIONS ARE OUT TO OUT.

## BILL OF MATERIAL

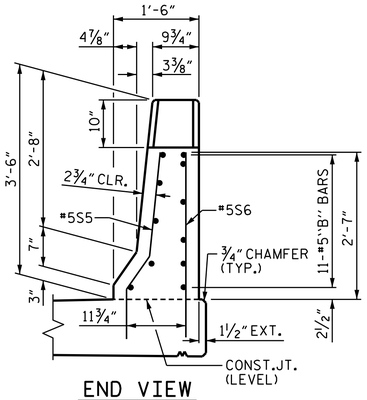
FOR CONCRETE BARRIER RAIL ONLY

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|
| | | | | | |
| ✱ S1 | 164 | #5 | 1 | 4'-8" | 798 |
| ✱ S2 | 164 | #5 | 2 | 7'-0" | 1197 |
| ✱ S3 | 4 | #5 | 3 | 4'-2" | 17 |
| ✱ S4 | 4 | #5 | STR | 4'-0" | 17 |
| ✱ S5 | 8 | #5 | 3 | 3'-5" | 29 |
| ✱ S6 | 8 | #5 | STR | 3'-3" | 27 |
| | | | | | |
| ✱ B1 | 44 | #5 | STR | 29'-8" | 1361 |
| ✱ B2 | 22 | #5 | STR | 27'-6" | 631 |

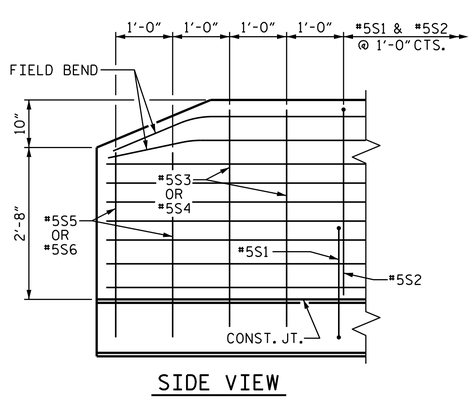
| | |
|---|---|
| ✱ EPOXY COATED REINFORCING STEEL | 4077 LBS. |
| CLASS AA CONCRETE | 23.9 CU. YDS. |
| CONCRETE BARRIER RAIL | 175.67 L.F. |




PLAN



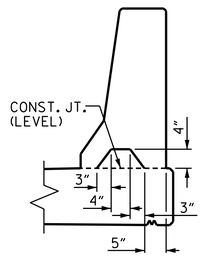

END VIEW




SIDE VIEW

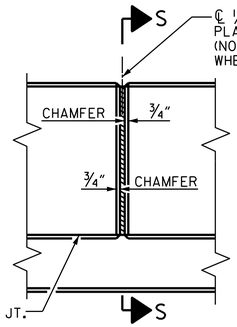
## END OF RAIL DETAILS

FOR ADHESIVE ANCHORING AT SAWED JOINTS




SECTION "S-S"

AT DAM IN OPEN JOINT
(THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)




ELEVATION AT EXPANSION JOINTS

## BARRIER RAIL DETAILS

DocuSigned by: Mark Gustafson 9E00EDB87408456... 3/23/2015

PROJECT NO. R-2514D

JONES COUNTY

STATION: 561+15.20 -L-
=17+04.80 -Y7-

| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY : | JD GOODIN | DATE : | 5/16/14 | | |
| CHECKED BY : | MEG / HMS | DATE : | 6/23/14 | | |
| QC / QA BY : | TG ZEBLO | DATE : | 7/7/14 | | |
| DRAWN BY : ARB 5/87 | | REV. 10/1/11 | | MAA/GM | |
| CHECKED BY : SJD 9/87 | | REV. 7/12 | | MAA/GM | |
| | | REV. 10/12 | | MAA/GM | |

PLAN PREPARED BY:

ALPHA & OMEGA GROUP
CIVIL & STRUCTURAL ENGINEERS
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Phone 919 981 0310 Fax 919 981 0451
Firm License No. C-1684 www.aogroup.com
A&O PROJECT NO. 2013.044

NOTE: THIS STANDARD DRAWING REVIEWED AND ADOPTED FOR USE AT THE REFERENCED LOCATION BY THE UNDERSIGNED.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 28601 MARK E. GUSTAFSON
Mark E. Gustafson 3-20-2015

REFERENCE NO. 13-12

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
CONCRETE
BARRIER RAIL
LEFT LANE

| REVISIONS | | | | | | SHEET NO. |
|---|---|---|---|---|---|---|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S13-12 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 21 |

STRUCTURE NO. 13

STD. NO. CBR1