

HALF SECTION  
THROUGH VOIDS

HALF SECTION  
AT INTERMEDIATE DIAPHRAGM

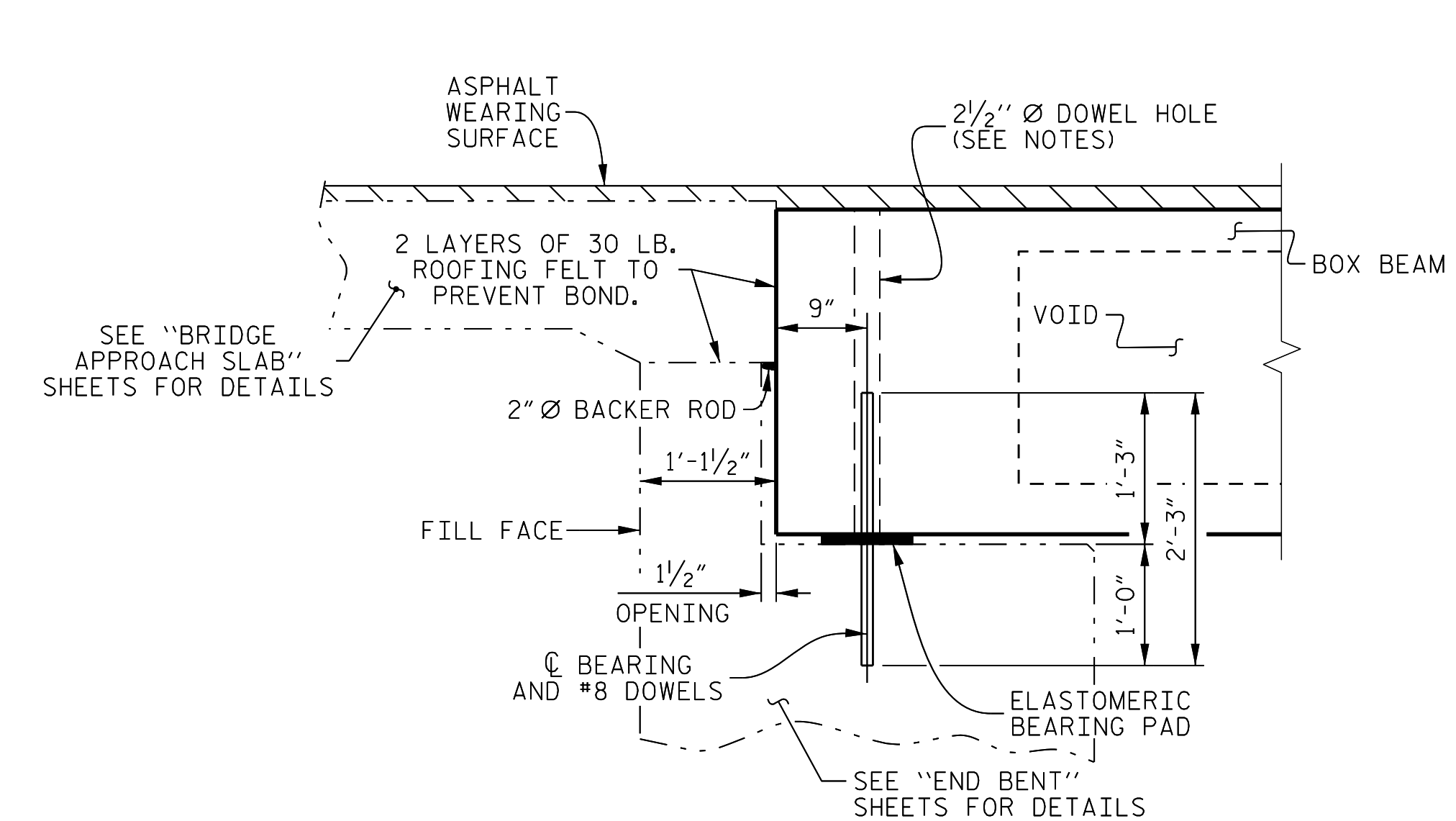
**TYPICAL SECTION**

\* - THE MAXIMUM BARRIER RAIL HEIGHT AND CONCRETE OVERLAY THICKNESS IS SHOWN. THE HEIGHT OF THE BARRIER RAIL AND CONCRETE OVERLAY THICKNESS VARIES WHILE THE TOP OF THE BARRIER RAIL FOLLOWS THE PROFILE OF THE GUTTERLINE. FOR RAIL HEIGHT DETAILS AND CONCRETE OVERLAY THICKNESS SEE THE "VERTICAL CONCRETE BARRIER RAIL DETAILS", SHEET 5 OF 5.

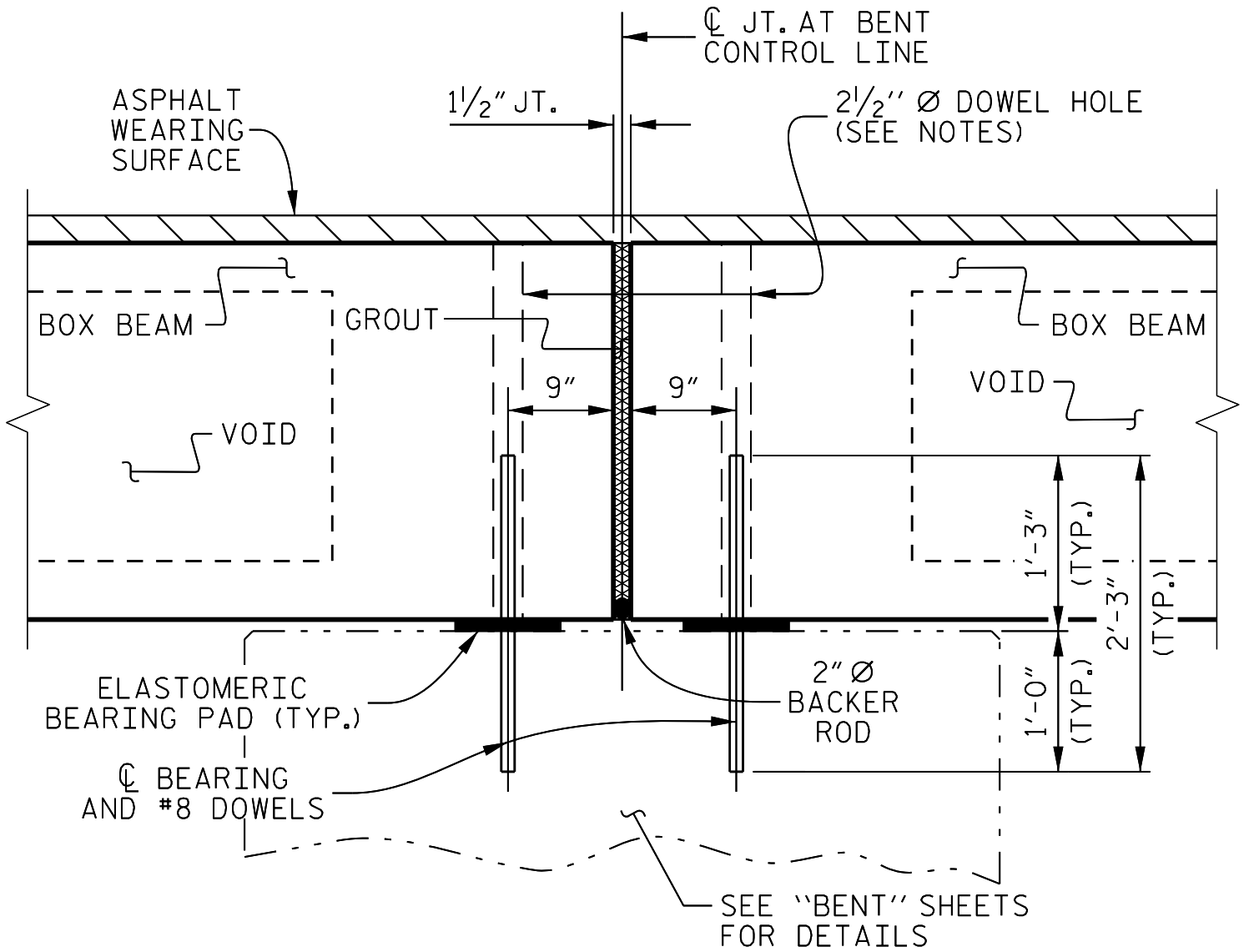
**NOTES**

- ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- ALL REINFORCING STEEL CAST WITH THE BOX BEAM SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE BOX BEAMS.
- FLAME CUTTING OF THE TRANSVERSE POST-TENSIONING STRAND IS NOT ALLOWED.
- RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.
- THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF BOX BEAM SECTIONS SHALL BE FILLED WITH NON-SHRINK GROUT.
- THE BACKER RODS SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.
- THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE BOX BEAM UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 6500 PSI.
- ALL REINFORCING STEEL IN VERTICAL CONCRETE BARRIER RAILS SHALL BE EPOXY COATED.
- PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE BOX BEAM UNIT ENDS.
- APPLY EPOXY PROTECTIVE COATING TO BOX BEAM UNIT ENDS.
- VERTICAL GROOVED CONTRACTION JOINTS, 1/2" 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. A VERTICAL 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.
- THE LOCATION OF THE VOID DRAINS MAY BE SHIFTED SLIGHTLY WHERE NECESSARY TO CLEAR PRESTRESSING STRANDS OR TRANSVERSE REINFORCING STEEL.

- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.
- THE PERMITTED THREADED INSERTS IN THE EXTERIOR UNITS SHALL BE SIZED BY THE CONTRACTOR, SPACED AT 4'-0" CENTERS AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS. STAINLESS STEEL THREADED INSERTS MAY BE USED AS AN ALTERNATE.
- THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.
- THE COST OF THE PERMITTED THREADED INSERTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PRECAST UNITS.
- THE DRAIN OPENING AT THE GUTTERLINE SHALL BE 5" x 6". THE HEIGHT OF THE BLOCKOUT IN THE VERTICAL CONCRETE BARRIER RAIL SHALL EXTEND FROM THE TOP OF THE BOX BEAM UNIT TO THE TOP OF THE DRAIN OPENING.
- APPLY EPOXY PROTECTIVE COATING TO EXTERIOR FACE OF THE EXTERIOR BOX BEAM UNITS THAT REQUIRE DRAINS IN THE BARRIER RAIL.



**SECTION AT END BENT**



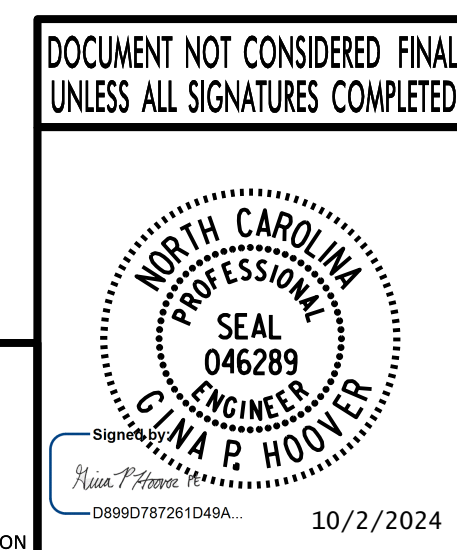
**SECTION AT BENT**



**THREADED INSERT DETAIL**

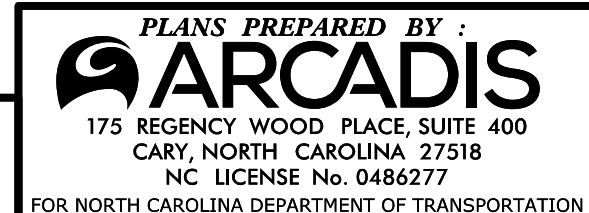
PROJECT NO. **BR-0063**  
**ANSON** COUNTY  
 STATION: **20+15.00 -L-**  
 SHEET 1 OF 5

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
**3'-0" x 3'-3"**  
**PRESTRESSED CONCRETE**  
**BOX BEAM UNIT**  
**90° SKEW**



ASSEMBLED BY : K. E. LOFTON	DATE : 6-22
CHECKED BY : G. P. HOOVER	DATE : 9-23
DRAWN BY : DGE 8/11	REV. 10/15 MAA/TMG
CHECKED BY : TMG 11/11	

DRAWN BY : K. E. LOFTON	DATE : 6-22
CHECKED BY : G. P. HOOVER	DATE : 9-23
ENGINEER OF RECORD : G. P. HOOVER	DATE : 9-23



REVISIONS						SHEET No.
No.	BY:	DATE:	No.	BY:	DATE:	TOTAL SHEETS
1			3			19
2			4			