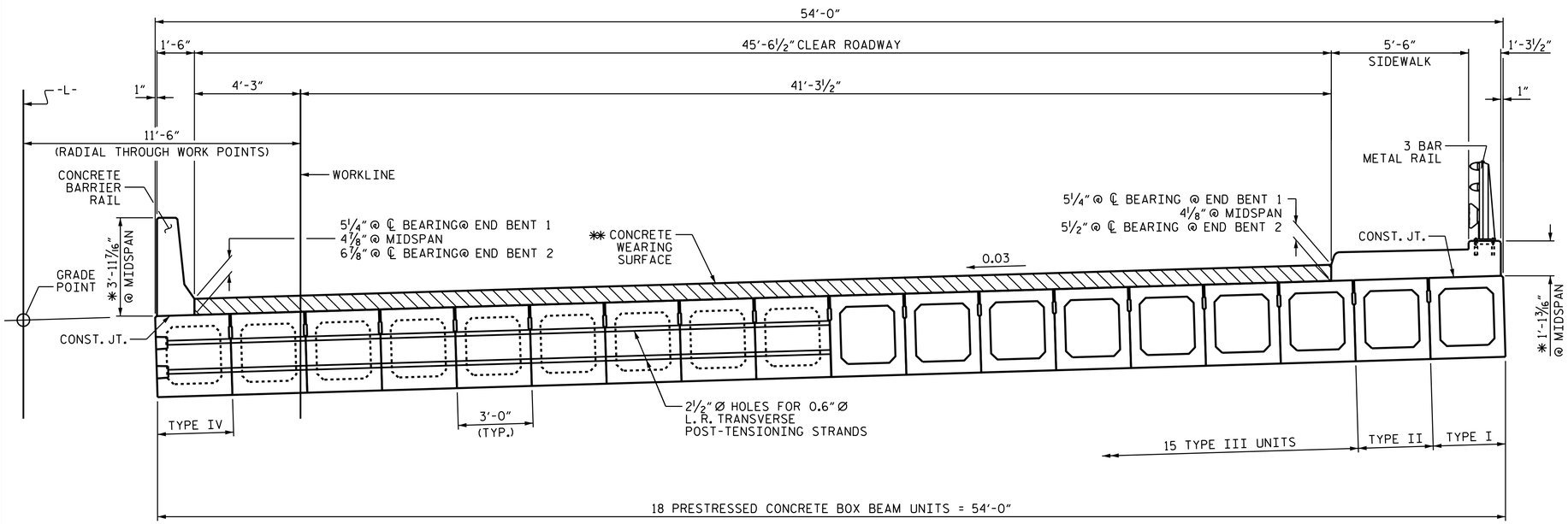


PART SECTION
AT INTERMEDIATE DIAPHRAGMS

PART SECTION
THROUGH VOIDS

TYPICAL SECTION

✱ THE MINIMUM HEIGHT OF THE SIDEWALK AND RAIL ARE SHOWN. THE HEIGHTS VARY WHILE THE TOP FOLLOWS THE PROFILE OF THE GUTTERLINE.

✱✱ THICKNESS IS BASED ON PREDICTED FINAL CAMBER & THEORETICAL GRADE LINE ELEVATIONS AND VARIES BETWEEN ℄ BEARING AND MID-SPAN. THE THICKNESS NEAR THE CENTER OF THE ROADWAY MIGHT BE SLIGHTLY REDUCED DUE TO SLIGHTLY HIGHER CAMBER VALUES. A MINIMUM THICKNESS OF 3½" SHALL BE MAINTAINED THROUGHOUT.

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.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2½" 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 6900 PSI.

ALL REINFORCING STEEL IN BARRIER RAIL, END POSTS, SIDEWALK, AND CONCRETE WEARING SURFACE 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.

WHEN A CONCRETE WEARING SURFACE IS DETAILED ON THE BOX BEAM BRIDGE TYPICAL SECTION, THE TOP SURFACE OF THE BOX BEAM UNITS SHALL HAVE A ⅜" RAKED FINISH.

PLACEMENT OF THE CONCRETE WEARING SURFACE SHALL OCCUR AFTER CASTING THE BARRIER RAIL AND SIDEWALK. THE COST OF THE REINFORCING STEEL CAST WITH THE CONCRETE WEARING SURFACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE WEARING SURFACE. FOR CONCRETE WEARING SURFACE, SEE SPECIAL PROVISIONS.

PAYMENT FOR SIDEWALK SHALL BE INCLUDED IN THE PAY ITEMS IN "TOTAL BILL OF MATERIAL" FOR CLASS AA CONCRETE AND EPOXY COATED REINFORCING STEEL.

VERTICAL GROOVED CONTRACTION JOINTS, ½" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND SIDEWALK 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.

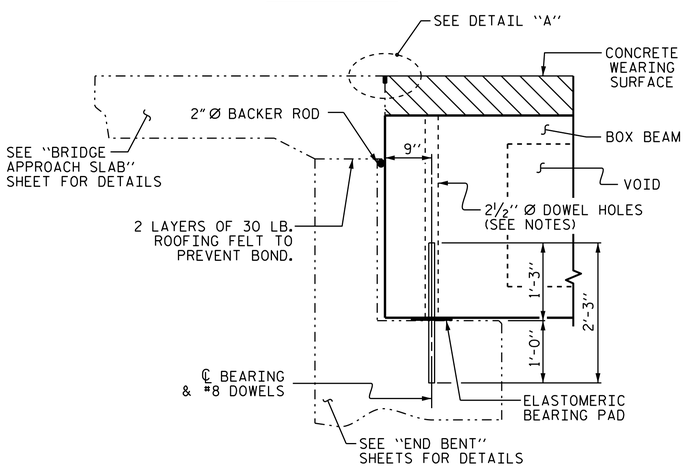
THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.

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.

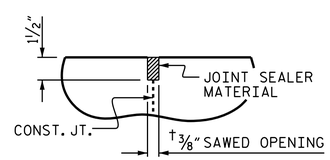
THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.

THE COST OF THE PERMITTED THREADED INSERTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PRECAST UNITS.

FIXED END



SECTION AT END BENT

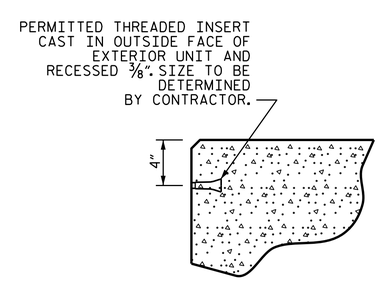


DETAIL "A"

† NORMAL TO END BENT

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THE END BENT CAP ELEVATIONS FOR END BENT 2 ARE ADJUSTED TO FACILITATE PARALLEL CAP SLOPES AT EACH END BENT.

THE CONCRETE WEARING SURFACE THICKNESS WILL VARY ACCORDINGLY.



THREADED INSERT DETAIL

PROJECT NO. U-3615B
GUILFORD COUNTY
STATION: 233+87.56 -L-

SHEET 1 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
3'-0" X 3'-3"
PRESTRESSED CONCRETE
BOX BEAM UNIT
RIGHT LANE

REVISIONS								SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:			S-73
1			3					TOTAL SHEETS
2			4					91

NORTH CAROLINA PROFESSIONAL SEAL 16301 ENGINEER TING HSILING FANG

DocuSigned by: Ting H. Fang
E72088400977435...
12/3/2014

ASSEMBLED BY :	P. K. NEWTON	DATE :	10/10/14
CHECKED BY :	T. H. FANG	DATE :	10/13/14
DESIGN ENGINEER OF RECORD:	P. K. NEWTON	DATE :	10/14/14

DRAWN BY : TLA	5/05	REV. 5/1/06R	KMM/GM
CHECKED BY : GM	6/05	REV. 10/1/11	MAA/GM
		REV. 6/13	MAA/GM

03-DEC-2014 12:06
K:\TIPProjects-U\U3615b\Structures\Plans\Str3\Final plans\u3615b3_sd_bb.dgn
ttfang

STR. #3

STD. NO. PCBB1