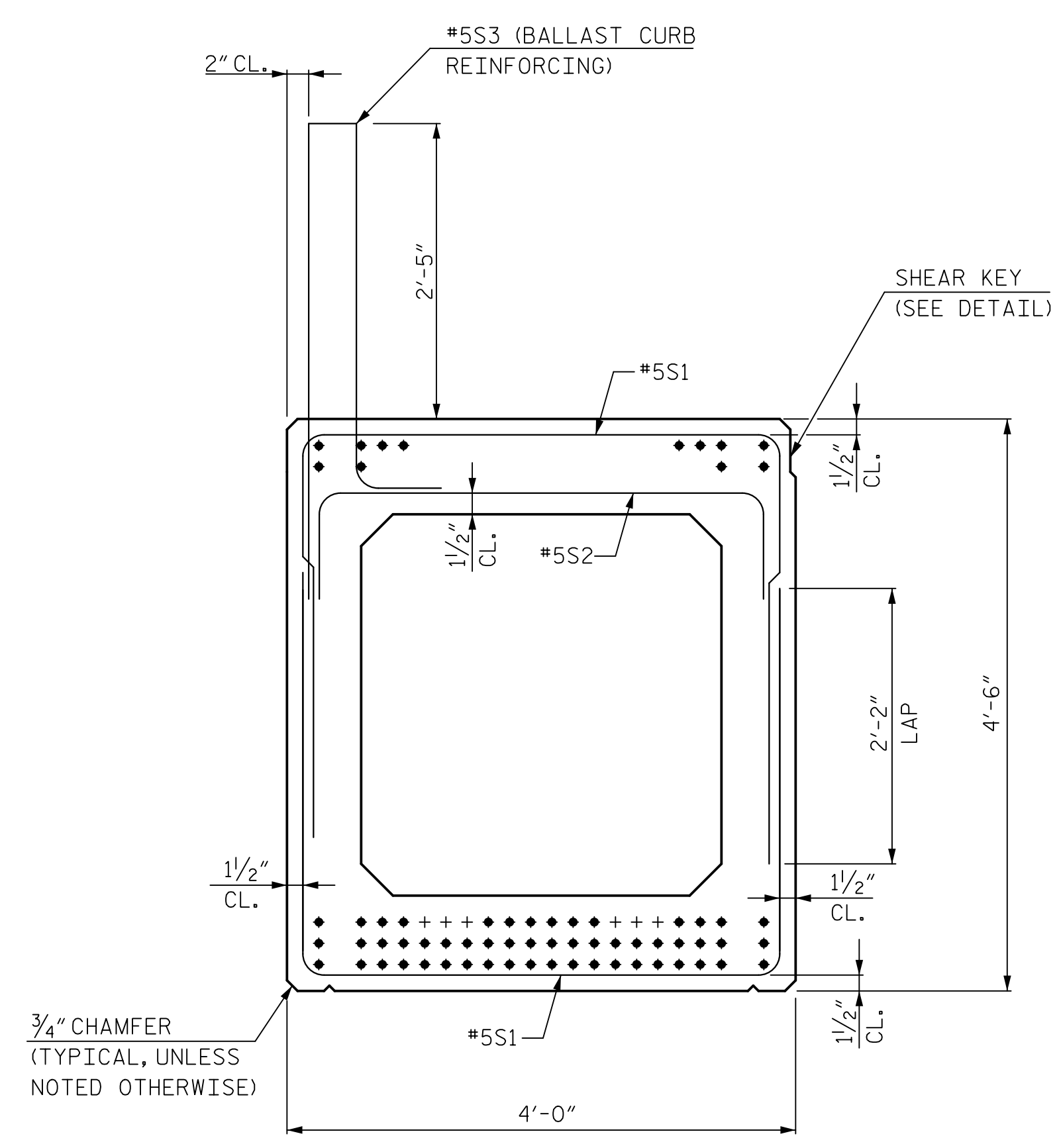
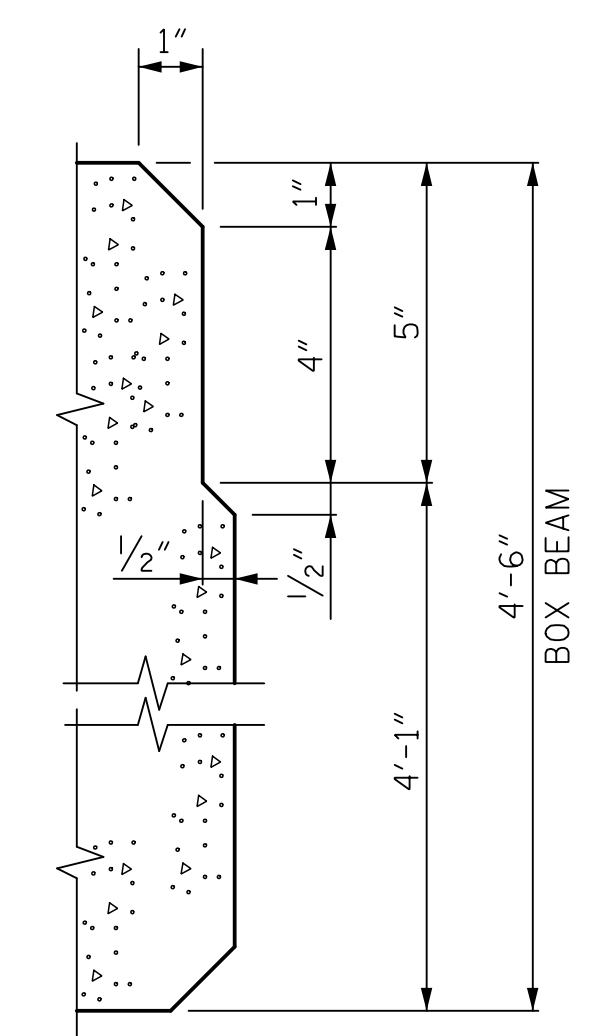


TYPICAL BEAM SECTION
 (EXTERIOR BEAM SECTION SHOWN, INTERIOR BEAM SECTION SIMILAR EXCEPT SHEAR KEY LOCATION AND OMIT BALLAST CURB)

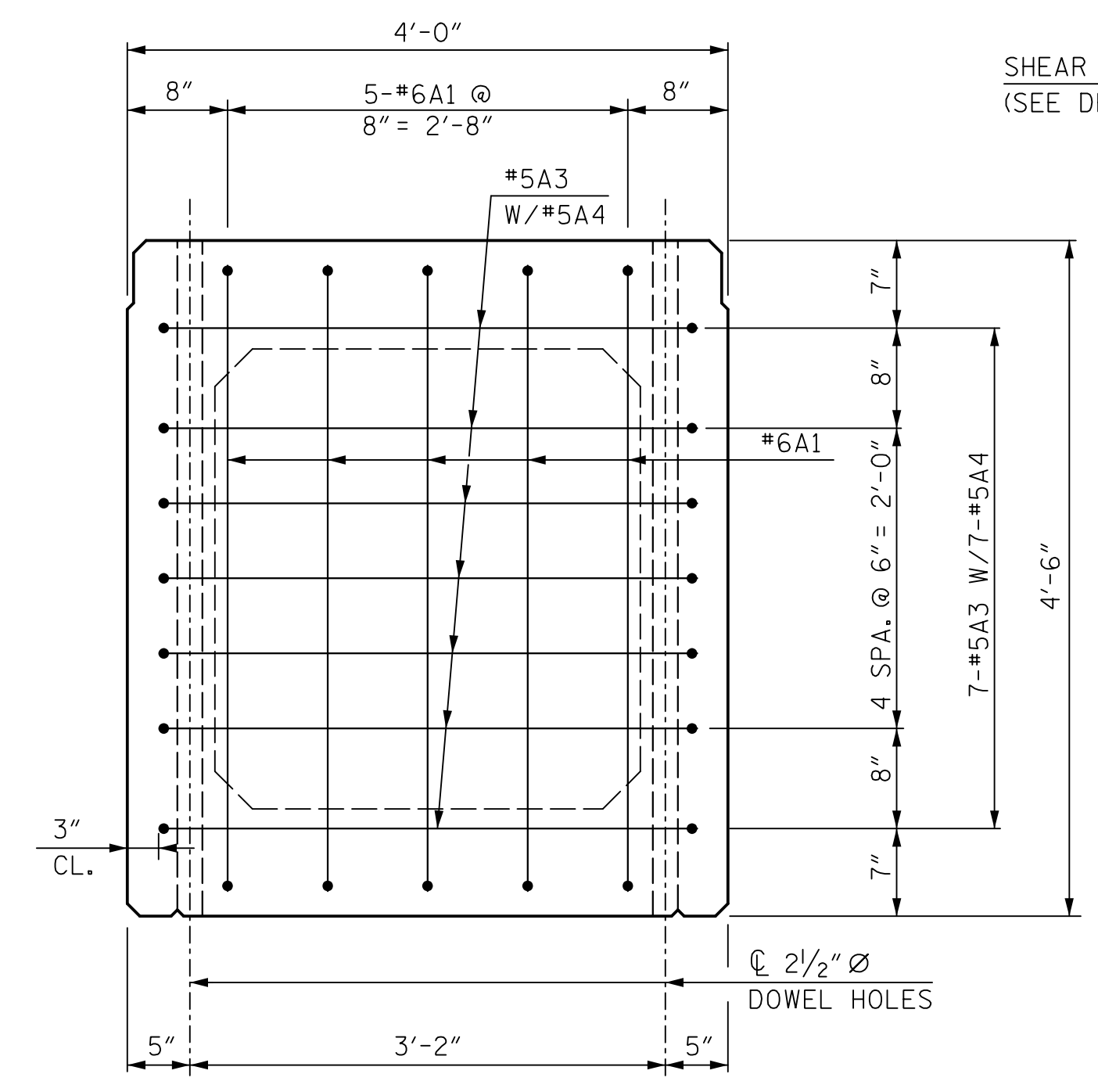


TYPICAL BOX BEAM REINFORCING PATTERN
 (EXTERIOR BEAM SECTION SHOWN, INTERIOR BEAM SECTION SIMILAR EXCEPT SHEAR KEY LOCATION AND OMIT BALLAST CURB REINFORCING)

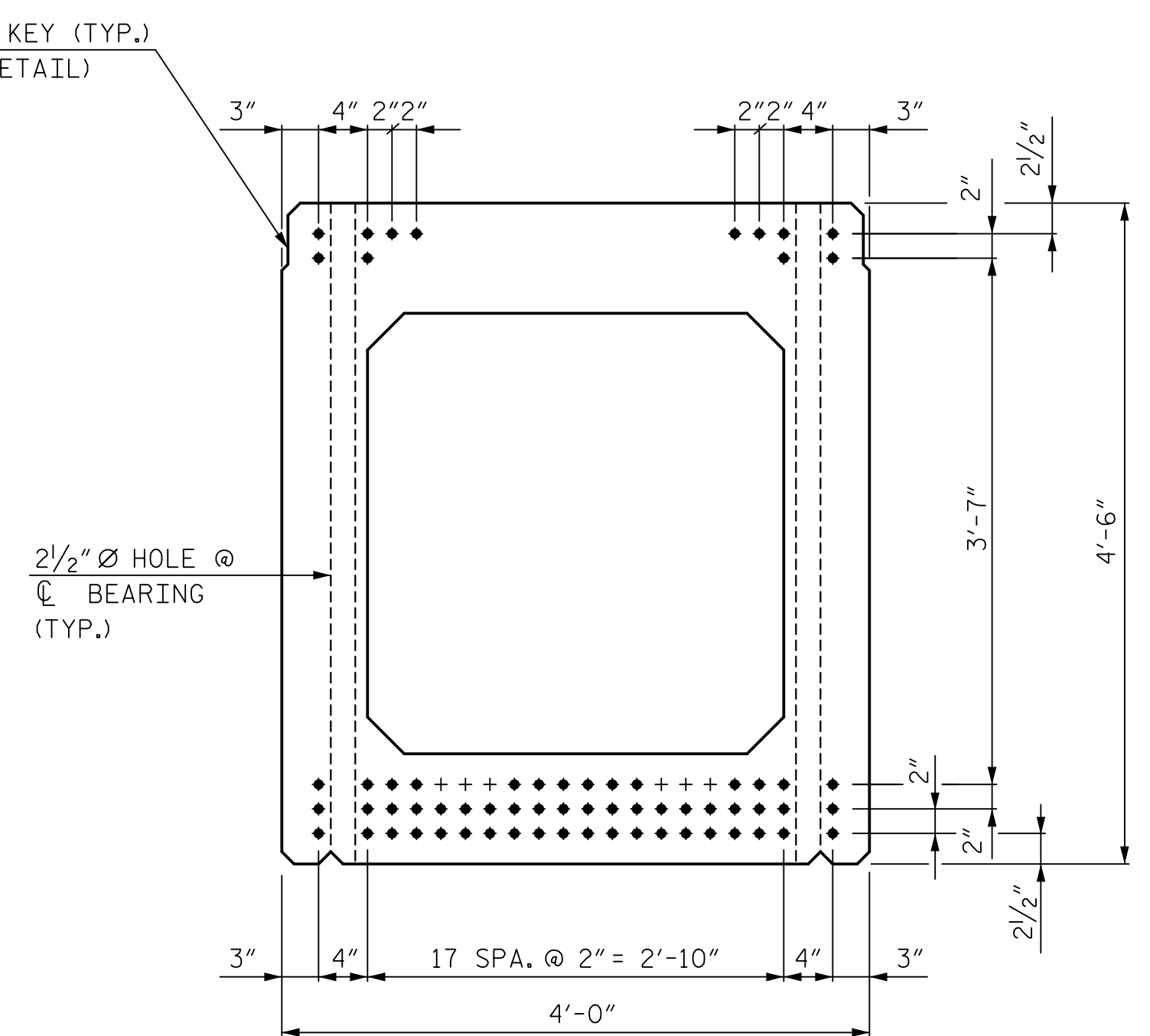
| BAR TYPES | | | | BILL OF MATERIAL FOR ONE BOX BEAM SECTION | | | |
|-----------------------|-------|------|---------|---|--------|---------------|--------|
| BAR | SIZE | TYPE | LENGTH | EXTERIOR UNIT | | INTERIOR UNIT | |
| | | | | NO. | WEIGHT | NO. | WEIGHT |
| A1 | 4'-0" | | 6'-0" | 20 | 180 | 20 | 180 |
| A2 | 3'-6" | | 9'-10" | 20 | 131 | 20 | 131 |
| A3 | 5 | 1 | 16'-8" | 14 | 243 | 14 | 243 |
| A4 | 5 | 1 | 12'-10" | 14 | 187 | 14 | 187 |
| S1 | 3'-9" | | | | | | |
| S2 | 3'-9" | | | | | | |
| K1 | 4 | 2 | 11'-4" | 10 | 76 | 10 | 76 |
| K2 | 4 | STR. | 3'-8" | 4 | 10 | 4 | 10 |
| S1 | 5 | 1 | 10'-3" | 242 | 2,587 | 242 | 2,587 |
| S2 | 5 | 1 | 5'-5" | 84 | 475 | 84 | 475 |
| S3 | 5 | 3 | 7'-11" | 55 | 454 | | |
| REINFORCING STEEL | | | | LBS. 4,343 | | LBS. 3,889 | |
| 7,000 P.S.I. CONCRETE | | | | CU. YDS. 24.2 | | CU. YDS. 24.2 | |
| 1/2" Ø L.R. STRANDS | | | | No. 66 | | No. 66 | |



PART ELEVATION SHEAR KEY DETAIL
 NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR BOX BEAMS.



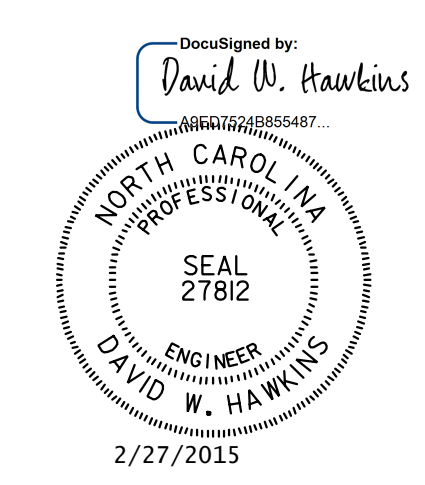
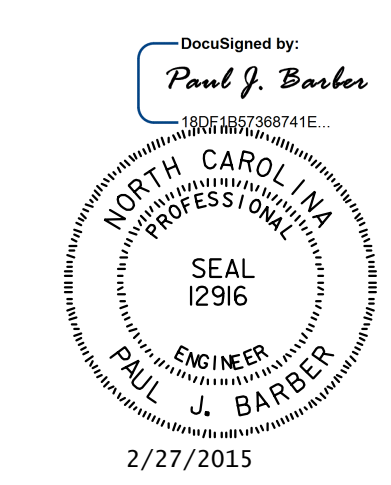
END ELEVATION
 SHOWING PLACEMENT OF "A" BARS AND LOCATION OF DOWEL HOLES AT BEARINGS. (INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION AND BALLAST CURB REINFORCING). STRAND LAYOUT NOT SHOWN.



TYPICAL STRAND LOCATION
 (1/2" Ø LOW RELAXATION STRAND LAYOUT) (66 STRANDS REQUIRED)
 (INTERIOR BOX BEAM SECTION SHOWN - EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION AND BALLAST CURB REINFORCING).

| GRADE 270 STRANDS | |
|--------------------------------------|-------------|
| | 1/2" Ø L.R. |
| AREA (SQUARE INCHES) | 0.153 |
| ULTIMATE STRENGTH (LBS. PER STRAND) | 41,300 |
| APPLIED PRESTRESS (LBS. PER STRAND) | 30,980 |

NOTE: ALL STRANDS ARE BONDED FULL LENGTH.



PROJECT NO. P-4900A
ROBESON COUNTY
 STATION: POS 22+07.07 -L-
 MILE POST: 0.23

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 4'-0" x 4'-6"
BOX BEAM DETAILS

| REVISIONS | | | | | | SHEET NO. | |
|-----------|-----|-------|-----|-----|-------|--------------|--|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-7 | |
| 1 | | | 3 | | | TOTAL SHEETS | |
| 2 | | | 4 | | | 54 | |

HNTB HNTB NORTH CAROLINA, P.C.
 License No. C-1554
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DRAWN BY M. WRIGHT DATE 8/14
 CHECKED BY P. BARBER DATE 9/14 DWG. NO. 7