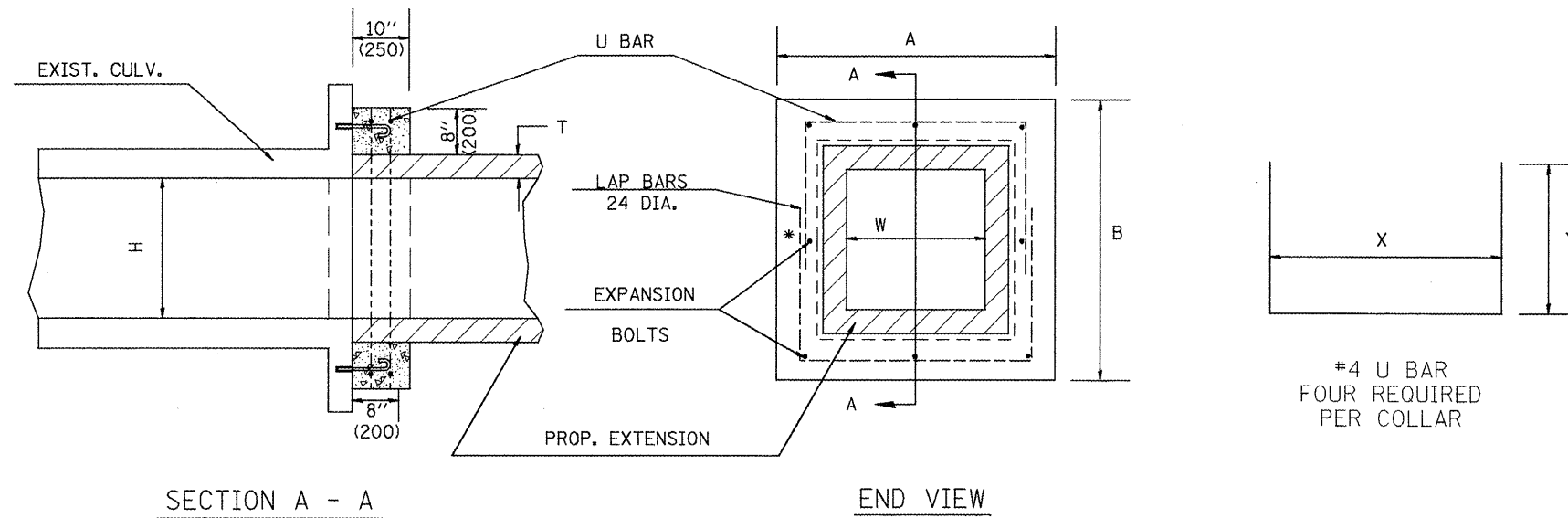


* MINIMUM 1' LAP ON U BARS



GENERAL NOTES

1. The collar shall be constructed entirely of CLASS SI CONCRETE and in accordance with the applicable portions of section 503 of the Standard Specifications. REINFORCEMENT BARS shall conform to section 508.
2. Expansion bolts shall consist of approved expansions anchors, and 3/4" (M20) hook bolts which conform to Section 1006.09. These bolts shall extend at least 8"(200) into the new concrete.

* Dimensions for ASTM C789.

DIMENSIONS

| EXISTING BOX | | A | B | T * | EACH COLLAR | | | | |
|--------------|--------------|----------------|----------------|--------|----------------------------------|--------------------|----------------|-----------------|----|
| W ft (mm) | H ft (mm) | | | | CL SI CU YD (m ³) | REINFORCEMENT BARS | | EXPANSION BOLTS | |
| | | | | | X | Y | POUNDS (kg) | NO. | |
| 2 (600) | 2 (600) | 4'-0" (1.22m) | 4'-0" (1.22m) | 4(100) | 0.27(0.21) | 3'-4" (1.02m) | 26(660) | 20 (9) | 8 |
| 3 (900) | 2 (600) | 5'-0" (1.52m) | 4'-0" (1.22m) | 4(100) | 0.32(0.24) | 4'-4" (1.32m) | 26(660) | 23 (10.5) | 8 |
| 3 (900) | 2.5 (750) | 5'-0" (1.52m) | 4'-6" (1.37m) | 4(100) | 0.34(0.26) | 4'-4" (1.32m) | 29(737) | 24.5 (11) | 8 |
| 3 (900) | 3 (900) | 5'-0" (1.52m) | 5'-0" (1.52m) | 4(100) | 0.36(0.28) | 4'-4" (1.32m) | 32(813) | 26 (12) | 8 |
| 3 (900) | 4 (1200) | 5'-2" (1.57m) | 6'-2" (1.88m) | 5(125) | 0.41(0.31) | 4'-6" (1.37m) | 39(991) | 29 (13) | 10 |
| 4 (1200) | 3 (900) | 6'-2" (1.88m) | 5'-2" (1.57m) | 5(125) | 0.41(0.31) | 5'-6" (1.68m) | 33(838) | 29 (13) | 10 |
| 4 (1200) | 4 (1200) | 6'-2" (1.88m) | 6'-2" (1.88m) | 5(125) | 0.45(0.34) | 5'-6" (1.68m) | 39(991) | 32 (14.5) | 12 |
| 4 (1200) | 5 (1500) | 6'-4" (1.93m) | 7'-4" (2.24m) | 6(150) | 0.51(0.39) | 5'-8" (1.73m) | 3'-10" (1.17m) | 36 (16) | 14 |
| 5 (1500) | 4 (1200) | 7'-4" (2.24m) | 6'-4" (1.93m) | 6(150) | 0.51(0.39) | 6'-8" (2.03m) | 3'-4" (1.02m) | 35 (16) | 14 |
| 5 (1500) | 5 (1500) | 7'-4" (2.24m) | 7'-4" (2.24m) | 6(150) | 0.55(0.42) | 6'-8" (2.03m) | 3'-10" (1.17m) | 38 (17) | 16 |
| 5 (1500) | 6 (1800) | 7'-6" (2.29m) | 8'-6" (2.59m) | 7(175) | 0.60(0.46) | 6'-10" (2.08m) | 4'-5" (1.35m) | 42 (19) | 16 |
| 6 (1800) | 4 (1200) | 8'-6" (2.59m) | 6'-6" (1.98m) | 7(175) | 0.56(0.43) | 7'-10" (2.39m) | 3'-5" (1.04m) | 39 (18) | 14 |
| 6 (1800) | 5 (1500) | 8'-6" (2.59m) | 7'-6" (2.29m) | 7(175) | 0.60(0.46) | 7'-10" (2.39m) | 3'-11" (1.19m) | 42 (19) | 16 |
| 6 (1800) | 6 (1800) | 8'-6" (2.59m) | 8'-6" (2.59m) | 7(175) | 0.64(0.49) | 7'-10" (2.39m) | 4'-5" (1.35m) | 44.5 (20) | 16 |
| 6 (1800) | 8 (2400) | 8'-8" (2.64m) | 10'-8" (3.25m) | 8(200) | 0.74(0.57) | 8'-0" (2.44m) | 5'-6" (1.68m) | 51 (23) | 18 |
| 8 (2400) | 8 (2400) | 10'-8" (3.25m) | 10'-8" (3.25m) | 8(200) | 0.82(0.63) | 10'-0" (3.05m) | 5'-6" (1.68m) | 56 (25.5) | 20 |

QUANTITIES

CALC. BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE, BUREAU OF PROJECT IMPLEMENTATION, DOCUMENTATION SECTION

| | | |
|----------|--|------|
| 01-01-97 | RENUM. J-12.01, METRICS, NEW REVISION BOX, REVISED | T.P. |
| | TITLE BOX, ADDED QUANTITY CALCULATION BOX | |
| 10-16-06 | REV. TO 2007 SPEC., REINF. BARS COL. | M.A. |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

COLLAR FOR BOX CULVERT EXTENSIONS

NOT TO SCALE

CADD STD. 540001-D4

All dimensions are in Inches (millimeters) unless otherwise noted.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|---------|--------|--------------|-----------|
| 685 | .. | . | 329 | 199 |
| CONTRACT NO. 68599 | | | | |

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT