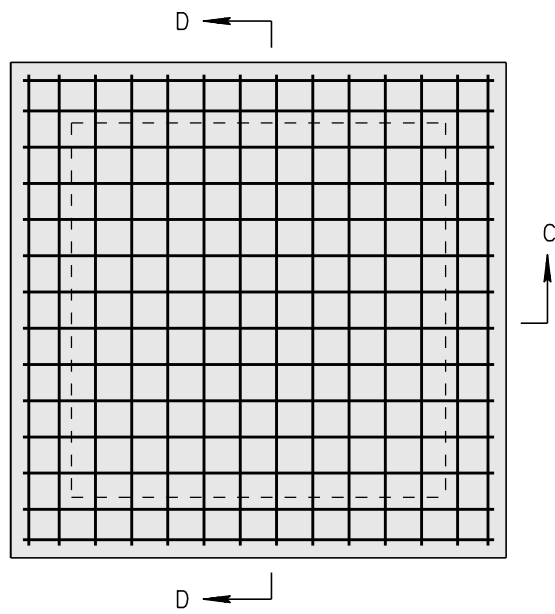
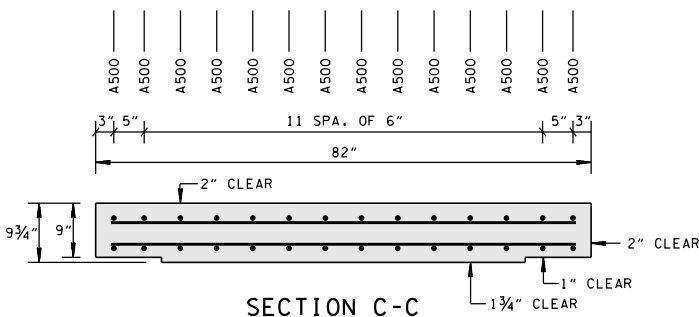


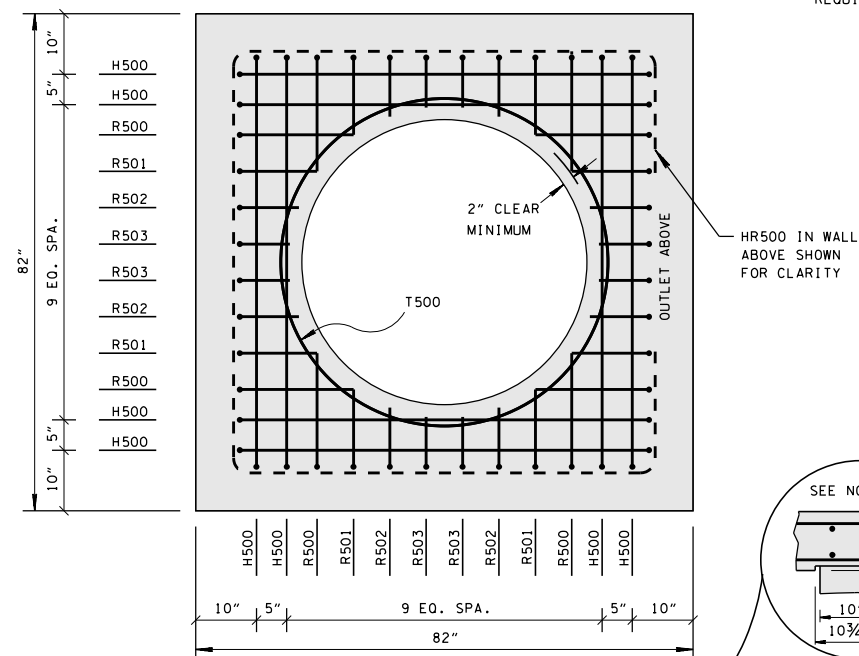
SECTION *-*
X-SECT. VIEW IS PROVIDED ON
STANDARD DRAWING D-CB-99
SHOWING REINFORCEMENT
REQUIREMENTS AROUND PIPE
OPENINGS



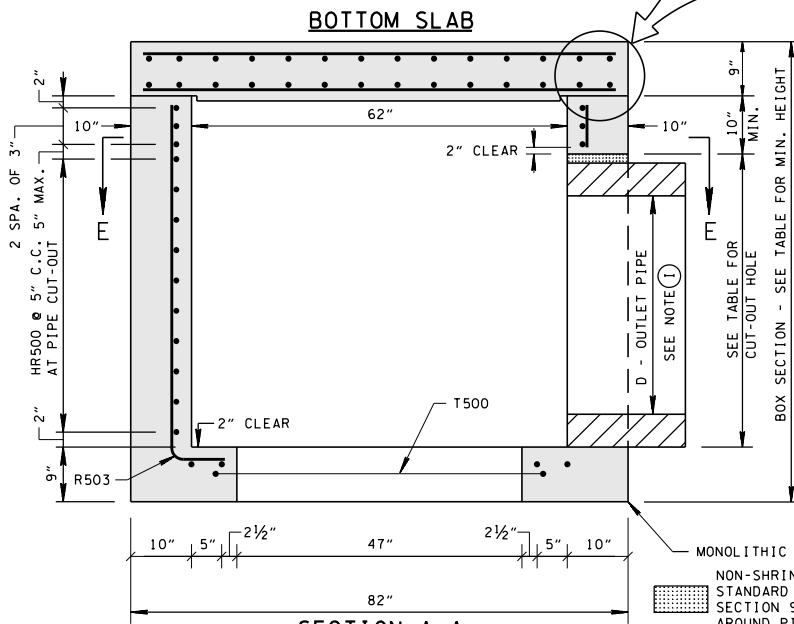
PLAN VIEW



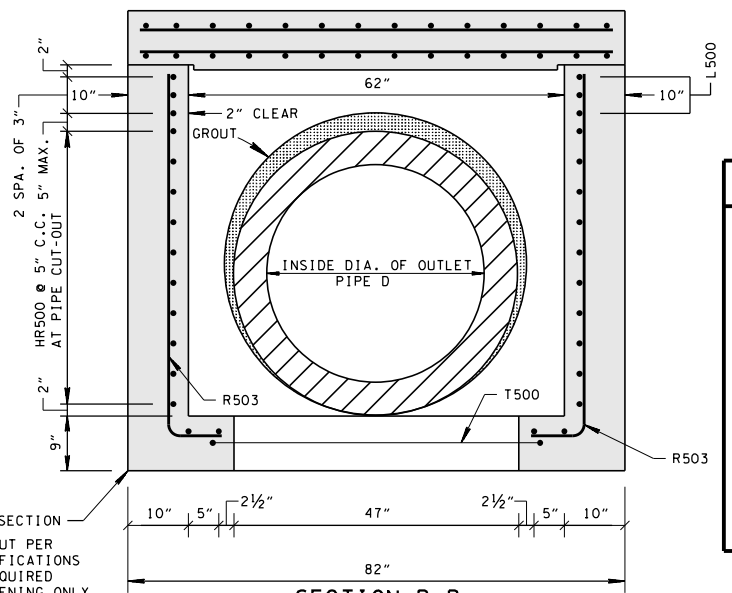
SECTION C-C



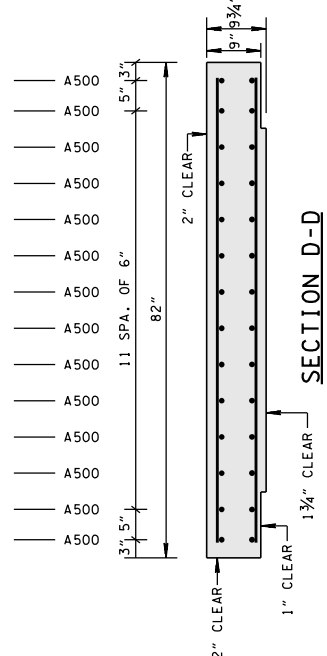
SECTION E-E



SECTION A-A



SECTION B-B



SECTION D-D

SPRING DRAIN DIMENSIONS				FOR DESIGN USE ONLY
INSIDE DIAMETER (D) OF PIPE (INCHES)	PIPE WALL THICKNESS (INCHES)	DIAMETER OF CUT-OUT HOLES (INCHES)	BOX SECTION HEIGHT (INCHES)	SPRING DRAIN MINIMUM DESIGN DEPTH (FEET)
36	4	46	74	5.00

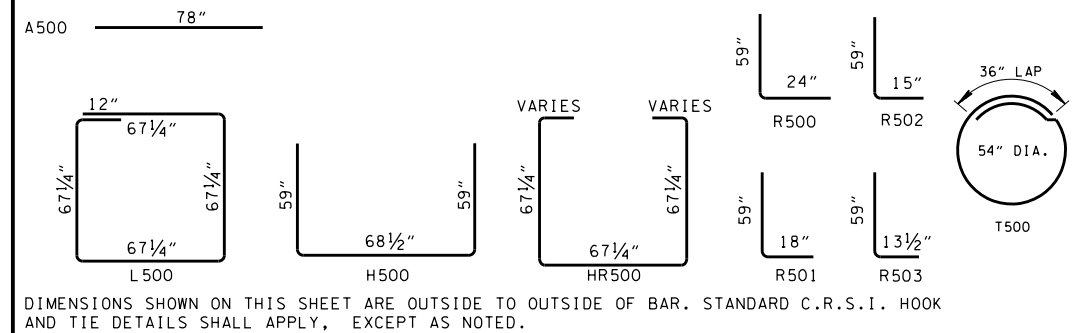
- CUT-OUT HOLES BASED ON REINFORCED CONCRETE PIPE WITH WALL TYPE "B".
- ALL FLEXIBLE PIPE MATERIALS REQUIRE GASKET. SEE STANDARD DRAWING D-PB-2.
- CUT-OUT HOLES FOR PRECAST STRUCTURES TO BE FORMED IN ORDER TO OBTAIN A SMOOTH EDGED HOLE. SCORED OR ETCHED HOLES WITH REINFORCING STEEL LEFT UN CUT WILL NOT BE PERMITTED.

GENERAL NOTES

- DRAWING TO BE USED FOR ALL CAST-IN-PLACE NO. 3A CONCRETE SPRING DRAIN BOXES AND ALL PRECAST NO. 3A CONCRETE SPRING DRAIN BOXES. SEE STANDARD DRAWING D-CB-99 FOR ADDITIONAL CONSTRUCTION NOTES AND DETAILS.
- EMBANKMENT OVER THIS STRUCTURE MAY BE PLACED AT A DEPTH UP TO 50 FEET. IF STRUCTURE IS LOCATED WITHIN THE CLEAR ZONE, A MINIMUM COVER OF 2 FEET IS REQUIRED.
- CAST-IN-PLACE CONCRETE SPRING DRAIN BOXES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 611 AND/OR SPECIAL PROVISIONS UNLESS SUPERSEDED BY THIS DRAWING. THE CONTRACTOR MAY WITH PERMISSION FROM THE ENGINEER SUBSTITUTE PRECAST SPRING DRAIN BOXES FOR CAST-IN-PLACE SPRING DRAIN BOXES PROVIDED THAT ALL PRECAST ELEMENTS MEET ASTM C913 (CURRENT EDITION) UNLESS SUPERSEDED BY THIS DRAWING.
- THE FOLLOWING MATERIAL PROPERTIES ARE REQUIRED FOR BOTH CAST-IN-PLACE AND PRECAST STRUCTURES:

CONCRETE: $f'_c = 4,000$ POUNDS PER SQUARE INCH AT 28 DAYS
REINFORCING STEEL: ASTM A615, $F_y = 60,000$ POUNDS PER SQUARE INCH
ALL REINFORCING IS TO BE INSTALLED AS DETAILED ON THIS DRAWING.
- PRECAST SPRING DRAIN BOX UNITS WHICH ARE DAMAGED DURING SHIPMENT OR INSTALLATION WILL BE REJECTED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE DAMAGED SPRING DRAIN BOX UNITS AT HIS OWN EXPENSE.
- APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR.
- THE CONTRACTOR IS TO PATCH ALL LIFTING DEVICE HOLES WITH GROUT AND PLACE A MINIMUM OF ONE (1) INCH OF COVER OVER THE HARDWARE OF THESE DEVICES ON BOTH TOP AND BOTTOM SURFACES.
- ALTERNATIVE JOINT DETAILS MAY BE ACCEPTABLE. SEE STANDARD DRAWING D-CB-99 FOR ADDITIONAL DETAILS.
- SEE ROADWAY PLANS DRAINAGE TABULATION FOR PIPE OUTLET ELEVATIONS. IF NEEDED, INVERT ELEVATIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER IN ORDER TO ACCOMMODATE OUTLET PIPES.
- PAYMENT FOR SPRING DRAIN BOX WILL BE MADE UNDER ITEM NUMBER 611-02.04 SPRING DRAIN BOX, TYPE 3A PER EACH.

REINFORCING STEEL LEGEND



MINOR REVISION -- FHWA
APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD
5'2" X 5'2" SQUARE
CONCRETE NO. 3A
SPRING DRAIN BOX

NOT TO SCALE 4-15-98 D-SDS-3A