

NOTE: ALL BARS TO BE EPOXY COATED.

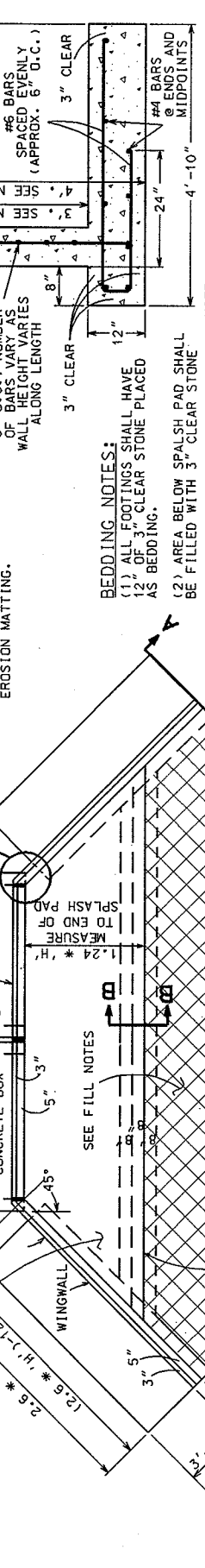
SPLASH PAD
BENT WITH 1/4" AND
7/8" DIMENSIONS OF
3" x 4" x 8" x 8"
SPACED EVENLY
APPROX. 24" O.C.
8" LEG ALTERNATES
INTO FOOTING LEG
AND 6" LEG EMBEDDED
INTO SPLASH PAD

FOR UPSTREAM BOX CULVERTS,
THE ENTRANCE SHALL HAVE 45°
CHAMFERED ROOF AND SIDE EDGES.
MITER ALL EXPOSED
POURED WALLS 45°
WINGWALLS SHALL BE ONE
CONTINUOUS POUR FROM
CONSTRUCTION JOINT ABOVE
FOOTING TO TOP OF WALL -
NO CONSTRUCTION JOINT
AT SPLASH PAD

SEE REINFORCEMENT DETAIL
FOR DIMENSIONS AND INSET
FOR ORIENTATION; 1/2" FELTS
TO BE PLACED EACH JOINT AND
AT CONNECTION TO WINGWALLS

HEADER
FOR DIMENSIONS AND INSET
FOR ORIENTATION; 1/2" FELTS
TO BE PLACED EACH JOINT AND
AT CONNECTION TO WINGWALLS

FILL NOTES:
(1) WINGWALLS WITH SPLASH
PAD DOWNSTREAM; 1/2" FELTS
SEE S.D.D. 5.5.2 FOR
INSTALLATION OF RIPRAP
AT BOX CULVERT WINGWALLS.
(2) WINGWALLS WITH SPLASH
PAD UPSTREAM;
FILL AREA WITH NON-GRANULAR
GENERAL FILL OVERLAID WITH
EROSION MATTING.

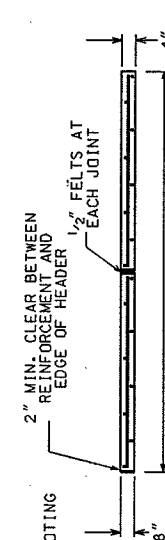


NOTE:
(1) VERTICAL DIMENSION SHOWN IS
AT END OF WALL DIMENSION INCREASES
ALONG WALL LENGTH. SEE SIDE VIEW.
(2) THE WINGWALL SHALL BE ONE
CONTINUOUS POUR FROM CONSTRUCTION
JOINT ABOVE FOOTING TO TOP OF WALL.

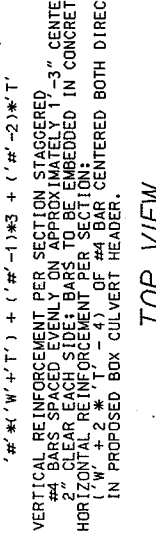
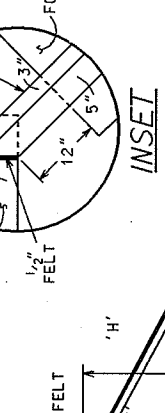
BEDDING NOTES:
(1) ALL FOOTINGS SHALL HAVE
12" OF 3" CLEAR STONE PLACED
AS BEDDING.
(2) AREA BELOW SPLASH PAD SHALL
BE FILLED WITH 3" CLEAR STONE



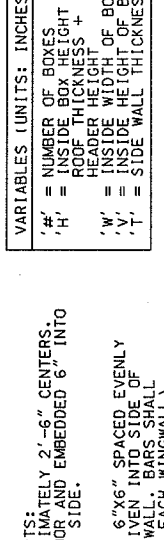
SECTION A-A
WINGWALL DETAIL AT END OF WALL



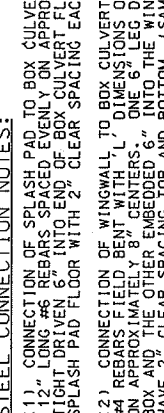
SECTION B-B
CUT-OFF WALL DETAIL



TOP VIEW
BOX CULVERT HEADER REINFORCEMENT DETAIL



FRONT VIEW
WINGWALLS WITH SPLASHPAD



STEEL CONNECTION NOTES:

- (1) CONNECTION OF SPLASH PAD TO BOX CULVERTS:
12" LONG #6 REBARS SPACED EVENLY ON APPROXIMATELY 2'-6" CENTERS,
TIGHT DRIVEN 6" INTO END OF BOX CULVERT FLOOR AND EMBEDDED 6" INTO
SPLASH PAD FLOOR WITH 2" CLEAR SPACING EACH SIDE.
- (2) CONNECTION OF WINGWALL TO BOX CULVERT:
#4 REBARS FIELD BENT WITH L₁ DIMENSIONS OF 6"x6" SPACED EVENLY
ON APPROXIMATELY 8" CENTERS. ONE 6" LEG DRIVEN INTO SIDE OF
BOX AND THE OTHER EMBEDDED 6" INTO THE WINGWALL. BARS SHALL
HAVE 2" CLEAR SPACING TOP AND BOTTOM. (SAME EACH WINGWALL)
- (3) CONNECTION OF SPLASH PAD TO WINGWALLS:
#4 REBARS FIELD BENT WITH L₁ DIMENSIONS OF 12"x8"
SPACED EVENLY ON APPROXIMATELY 12" CENTERS. THE
12" LEG EMBEDDED INTO THE SPLASH PAD AND THE 8" LEG
EMBEDDED DOWNWARD INTO THE WINGWALL. BARS SHALL BE
CENTERED IN THE SPLASH PAD AND THE WINGWALL. WINGWALLS
SHALL BE ONE CONTINUOUS POUR FROM CONSTRUCTION JOINT
ABOVE FOOTING TO TOP OF THE WALL. THERE SHOULD BE NO
CONSTRUCTION JOINT AT PAD ELEVATION.
- (4) CONNECTION OF SPLASH PAD TO THE CUT-OFF WALL:
(SEE CUT-OFF WALL DETAIL) THE #6 BAR REINFORCING OF
THE CUT-OFF WALL SHALL BE FIELD BENT INTO A C AND Z
SHAPE APPROXIMATELY 24" CENTERS. THE 8" LEG EMBEDDED
INTO FOOTING LEG AND 6" EMBEDDED INTO SPLASH PAD. THE
BARS SHALL BE CENTERED IN THE CUT-OFF WALL.

REINFORCEMENT PER SECTION:

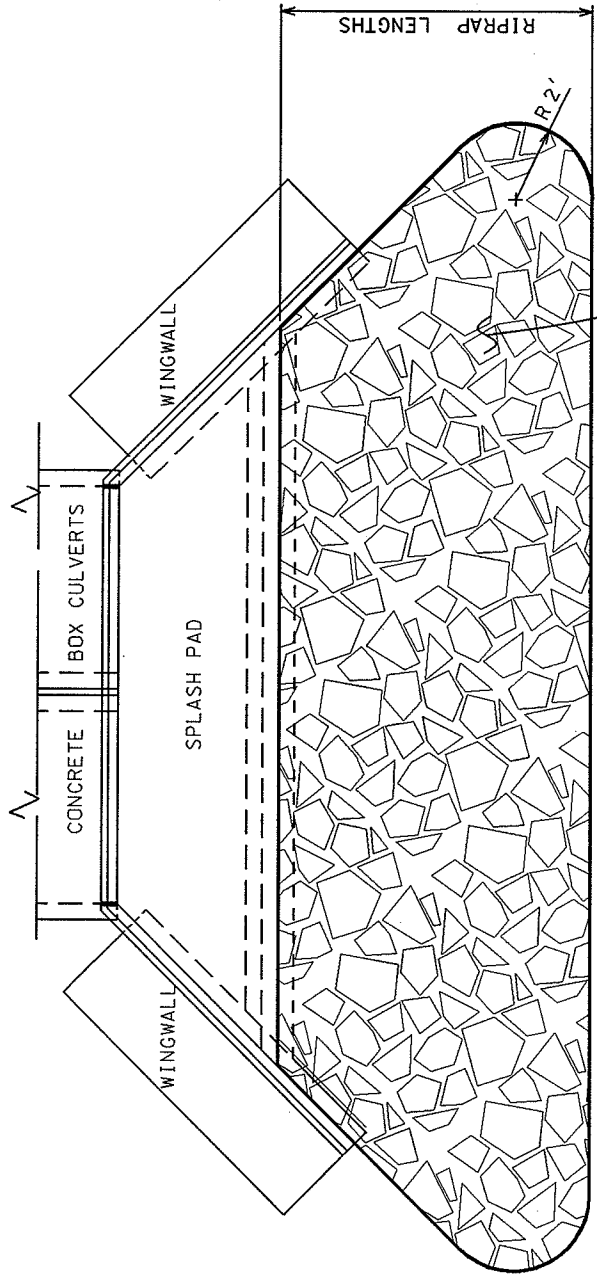
- #4 BARS SPACED EVENLY ON APPROXIMATELY 1'-3" CENTERS.
- HORIZONTAL REINFORCEMENT PER SECTION:
(W + 2 * T - 4) OF #4 BAR CENTERED BOTH DIRECTION
IN PROPOSED BOX CULVERT HEADER.

VARIABLES (UNITS: INCHES)

- 'H' = NUMBER OF BOXES
- 'H' = INSIDE BOX HEIGHT +
ROOF THICKNESS +
HEADER HEIGHT
- 'W' = INSIDE WIDTH OF BOX
- 'T' = INSIDE HEIGHT OF BOX
- 'T' = INSIDE WALL THICKNESS

DRAWING NOT TO SCALE
2004
CITY OF MADISON
ENGINEERING DIVISION
BOX CULVERT
WINGWALL
STANDARD DETAIL DRAWING 5.5.1

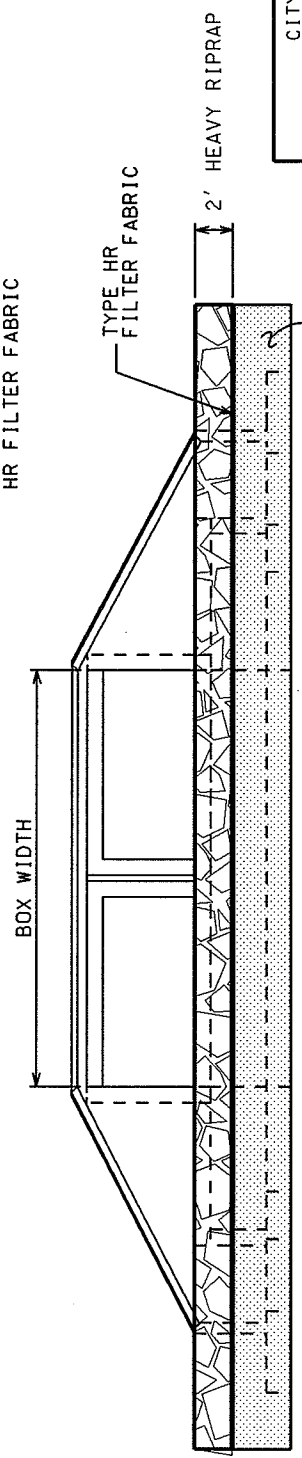
CONSTRUCT WINGWALLS AND SPLASH PAD PER S.D.D. 5.5.1



TOP VIEW
WINGWALLS WITH SPLASHPAD

RIPRAP LENGTHS	
BOX WIDTH FT	RIPRAP LENGTH FT
4	10
6	12
8	15
10	20
10+	20

FILL AREA WITH COMPACTED NON-GRANULAR FILL, INSTALL 2' HEAVY RIPRAP OVER TYPE HR FILTER FABRIC



FRONT VIEW
WINGWALLS WITH SPLASHPAD

2004

CITY OF MADISON
ENGINEERING DIVISION

RIPRAP AT BOX
CULVERT WINGWALLS

STANDARD DETAIL DRAWING 5.5.2