

ISOMETRIC VIEW

- MATERIAL NOTES:**
1. ALUMINUM SHEETS SHALL BE STRUCTURAL PLATE (2-1/2" x 9" CORRUGATIONS) 0.100" THICKNESS AND SHALL BE ALLOY 5052 CONFORMING TO ASTM B 209 OR AASHTO M21.
 2. ALUMINUM ANGLES SHALL BE ALLOY 6061-T6 CONFORMING TO ASTM B 308.
 3. BOLTS SHALL BE 3/4" DIAMETER AND GALVANIZED CONFORMING TO ASTM A 307.
 4. ASPHALT MASTIC SHALL BE SIMILAR IN TYPE AND EQUAL IN QUALITY TO TRUMBULL 5X ASPHALT MASTIC, KNIFE OR TROWEL GRADE, AS MANUFACTURED BY THE TRUMBULL ASPHALT COMPANY.
 5. FILTER DRAIN SHALL CONSIST OF SAND, GRAVEL, OR CONCRETE AGGREGATE MIXTURE WITH 50 TO 80% PASSING A NO. 4 (1/4") SIEVE, MAXIMUM SIZE OF 3" AND NOT MORE THAN 5% PASSING A NO. 200 SIEVE.
 6. RIPRAP SHALL CONSIST OF WELL-GRADED ROCK, MAXIMUM SIZE OF 8", MINIMUM SIZE OF 4".

- CONSTRUCTION NOTES:**
1. FORMS ARE NOT REQUIRED FOR CONCRETE APRON, CONCRETE TOEWALL, OR SPREAD FOOTINGS (WHEN REQUIRED) IF EXCAVATED SOIL WILL STAND VERTICALLY. SIDE SLOPES ABOVE THE TOP OF THE CONCRETE SHALL BE 1:1 OR FLATTER.
 2. PLACE REINFORCING BARS AND SET ALUMINUM STRUCTURE TO GRADE. APPLY ASPHALTIC MASTIC BETWEEN ALUMINUM SHEETS BEFORE BOLTING TOGETHER.
 3. ALL ALUMINUM SURFACES, INCLUDING 2" x 2" SUPPORT ANGLES, IN CONTACT WITH REINFORCING STEEL SHALL BE INSULATED WITH AT LEAST TWO LAYERS OF ELECTRICAL TAPE OR EQUAL PRIOR TO PLACING THE CONCRETE. PLACE CONCRETE FOR TOEWALL AND APRON.
 4. PLACE FILTER DRAIN. CONNECT TILE OUTLET TO STUB WHERE APPLICABLE.
 5. BACKFILL AROUND THE STRUCTURE IN ACCORDANCE WITH WISCONSIN CONSTRUCTION SPECIFICATION 3.
 6. THE RIPRAP SHALL BE INSTALLED 3 FEET UPSTREAM AND AROUND THE WEIR TO THE INLET CHANNEL SIDE SLOPES. INSTALL OUTLET CHANNEL RIPRAP BY THE APRON.
 7. COMPLETE SHAPING AND GRADING.
 8. SEED ALL DISTURBED AREAS.

EMERGENCY SPILLWAY - SEE CROSS SECTION FOR LOCATION AND DETAILS.

ESTIMATED QUANTITIES

STRUCTURE	_____	EACH
CONCRETE - WI CONST. SPEC. 4.....	_____	CU. YD.
REINFORCING BARS - WI CONST. SPEC. 4	_____	
#4 (1/2" DIA.) _____ FEET	_____	POUNDS
FILTER DRAIN (0.04L) - WI CONST. SPEC. 8	_____	CU. YD.
RIPRAP (1.10 + 0.12W + 0.09L) - WI CONST. SPEC. 9.....	_____	CU. YD.
DRAIN TILE OUTLET STUB - WI CONST. SPEC. 6	_____	EACH

WINGWALL AT WATERWAY STATION _____

ELEVATIONS		STRUCTURE DIMENSIONS	
TOP OF EMBANKMENT.....	_____	F	_____
EMERGENCY SPILLWAY.....	_____	H	_____
WEIR CREST	_____	W	_____
CONCRETE APRON	_____	B	_____
BENCH MARK		L	_____
DESCRIPTION	_____	A	_____
_____	_____	S	_____
_____	_____		

Date _____

Designed _____

Drawn _____

Checked _____

Approved _____

**FABRICATED CORRUGATED ALUMINUM TOEWALL
DROP SPILLWAY**

OWNER: _____

COUNTY: _____



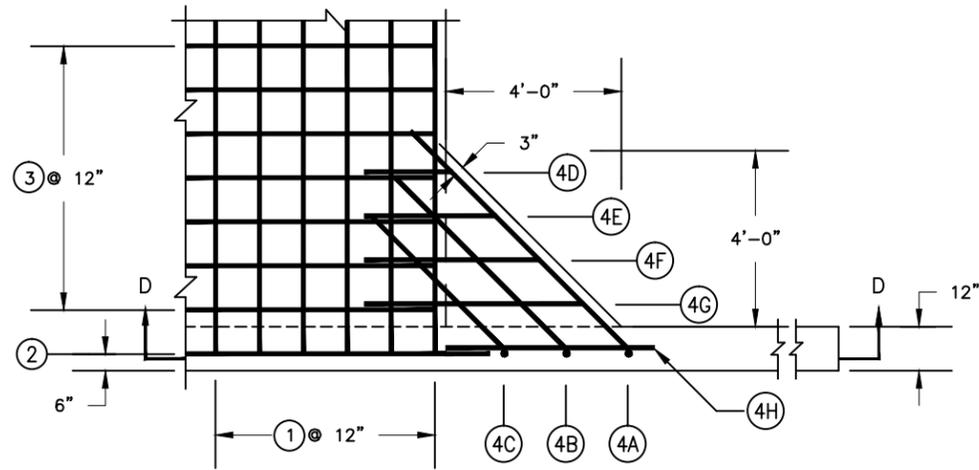
Drawing No. WI-301

Date 07/14

Sheet _____ of _____

4 FOOT SPREAD FOOTING DETAIL

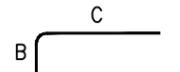
REQUIRED ON OVERFALLS OF 3 AND 4 FEET
 USE THIS DETAIL WHEN $\frac{W}{2} + B + 0.50 < 8.0$ FEET.



PLAN

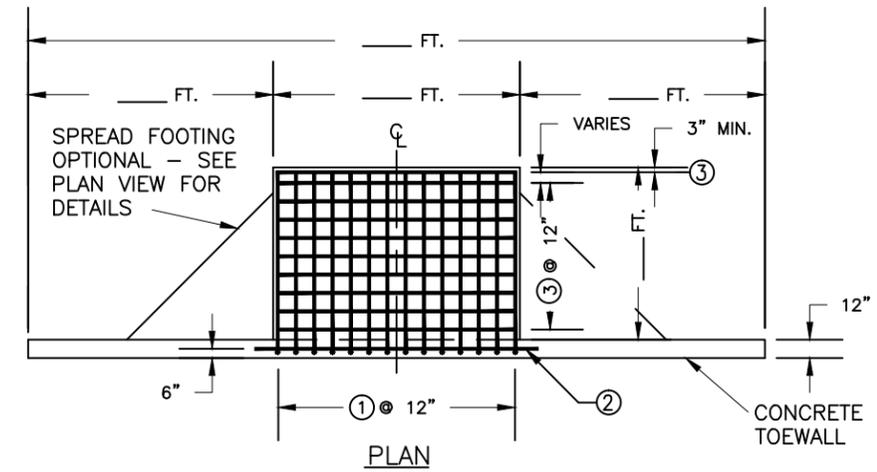
STEEL SCHEDULE						
MARK	QUAN	LENGTH	TYPE	B	C	TOTAL
1			21	1'-6"		
2	3		1	--	--	
3			1	--	--	
4A	2	8'-6"	21	1'-6"	7'-0"	17'-0"
4B	2	7'-0"	21	1'-6"	5'-6"	14'-0"
4C	2	5'-9"	21	1'-6"	4'-3"	11'-6"
4D	2	2'-0"	1	--	--	4'-0"
4E	2	3'-0"	1	--	--	6'-0"
4F	2	4'-0"	1	--	--	8'-0"
4G	2	5'-0"	1	--	--	10'-0"
4H	6	4'-9"	1	--	--	28'-6"
TOTAL LIN. FT. =						99'-0"

MINIMUM SPLICE IS 16".
 ALL REINFORCING BARS ARE NO. 4 BARS.
 ALL REINFORCING BARS HAVE 12" SPACING

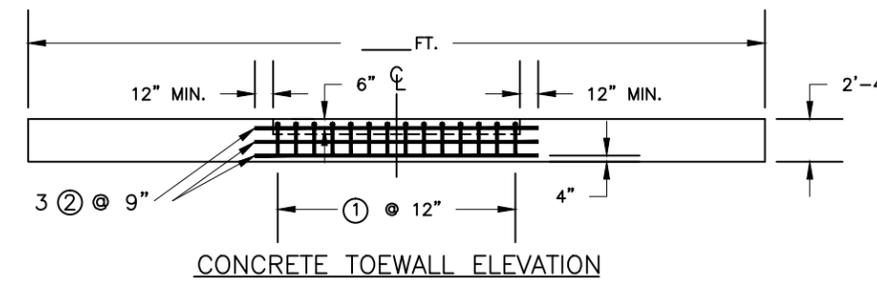


TYPE 21 BAR

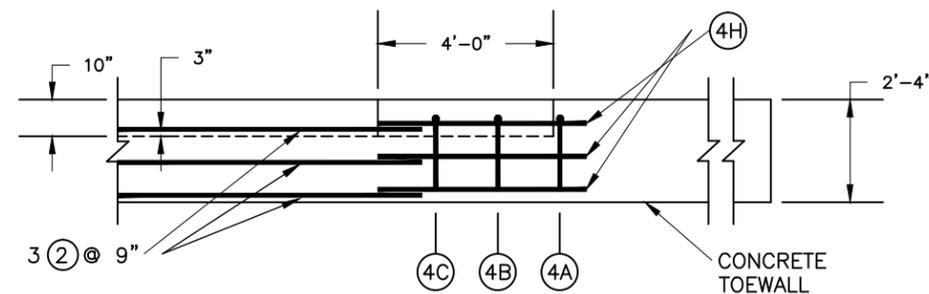
TYPE 1 BAR - STRAIGHT



PLAN



CONCRETE TOEWALL ELEVATION



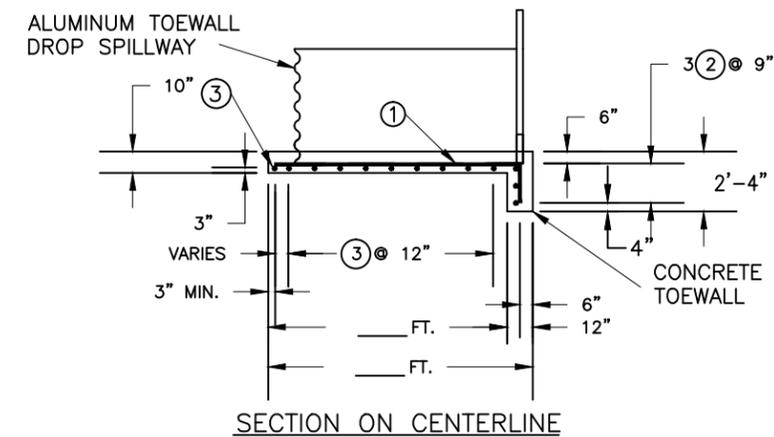
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SPREAD FOOTING QUANTITIES *

CONCRETE _____ 0.5 CU. YD.
 REINFORCING STEEL (99'-0") 66 POUNDS
 * INCLUDED IN ENGINEERING FIELD HANDBOOK
 TABLES, CHAPTER 6.

FORMULAS FOR DETERMINING BAR LENGTHS

MARK 1C LEG = $\frac{W}{2} + B + 0.75$ FT.
 MARK 2 = $W + 3.5$ FT. MIN.
 MARK 3 = $W + 1.0$ FT.

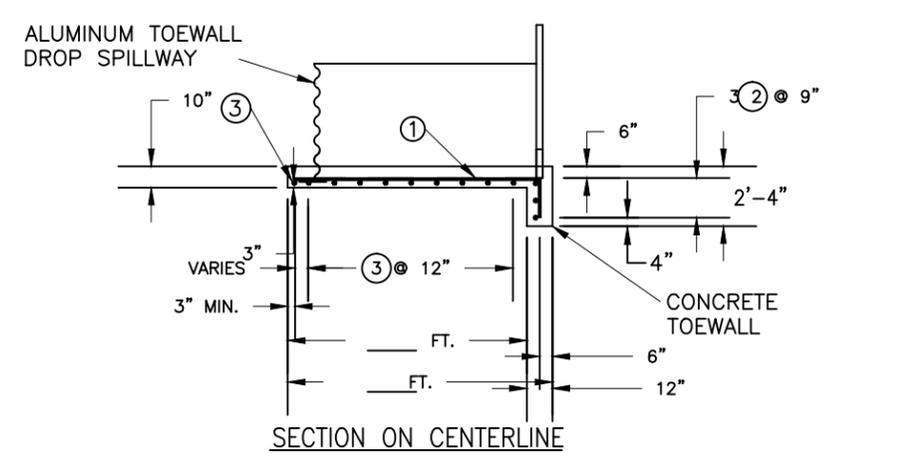
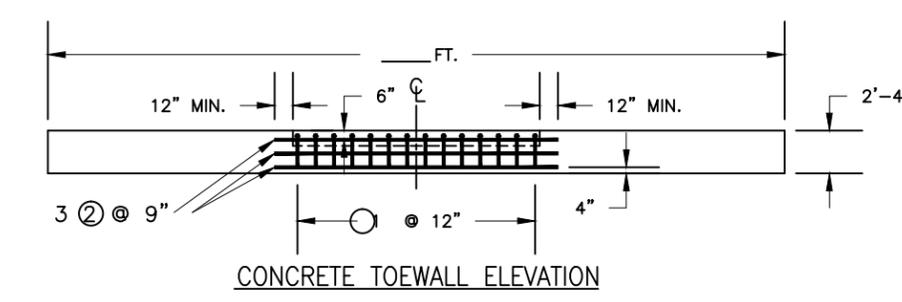
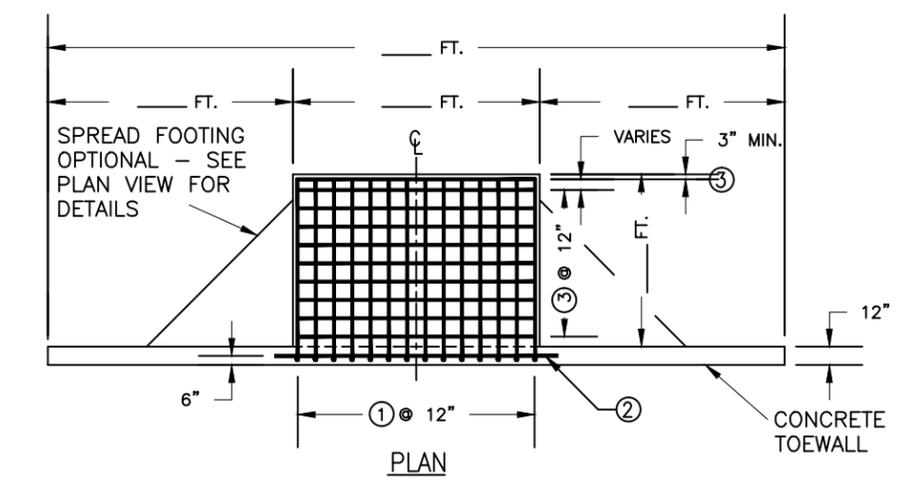
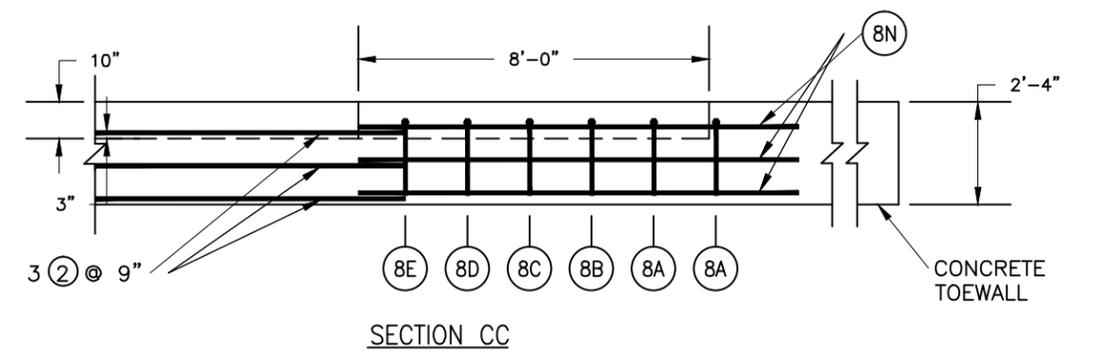
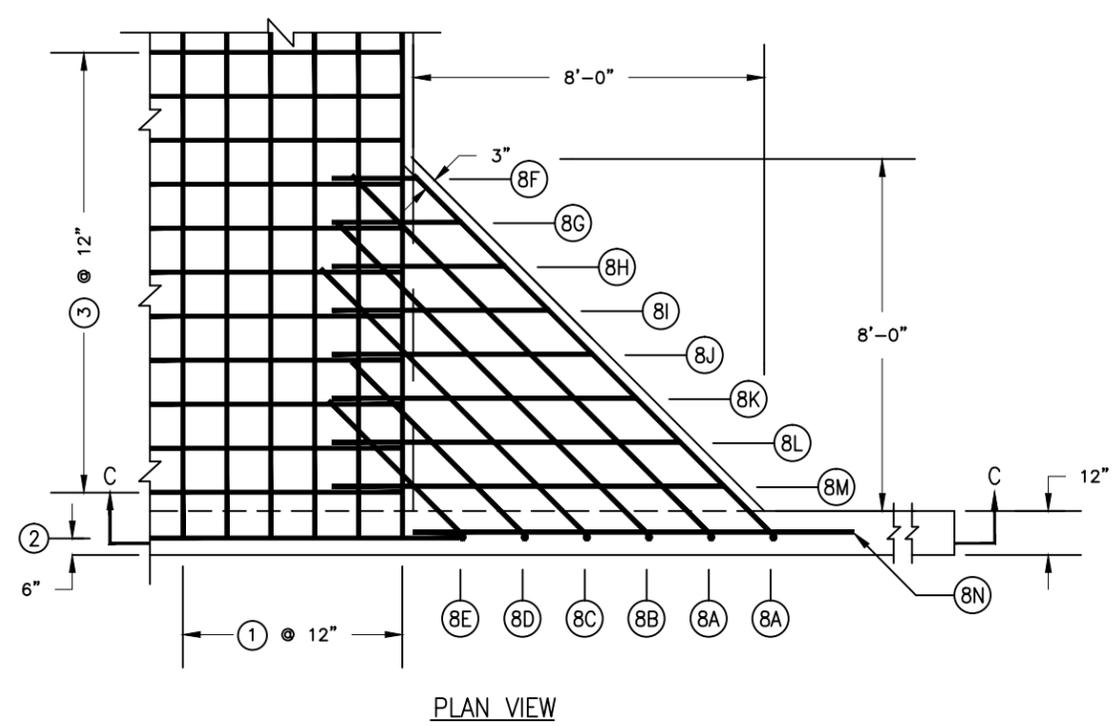


SECTION ON CENTERLINE

8 FOOT SPREAD FOOTING DETAIL
 REQUIRED ON OVERFALLS OF 3 AND 4 FEET
 USE THIS DETAIL WHEN $\frac{W}{2} + B + 0.50 \geq 8$ FEET.

STEEL SCHEDULE

MARK	QUAN	LENGTH	TYPE	B	C	TOTAL
1			21	1'-6"		
2	3		1	---	---	
3			1	---	---	
8A	4	13'-0"	21	1'-6"	11'-6"	52'-0"
8B	2	11'-6"	21	1'-6"	10'-0"	23'-0"
8C	2	10'-0"	21	1'-6"	8'-6"	20'-0"
8D	2	7'-0"	21	1'-6"	5'-6"	14'-0"
8E	2	5'-9"	21	1'-6"	4'-3"	11'-6"
8F	2	2'-0"	1	---	---	4'-0"
8G	2	3'-0"	1	---	---	6'-0"
8H	2	4'-0"	1	---	---	8'-0"
8I	2	5'-0"	1	---	---	10'-0"
8J	2	6'-0"	1	---	---	12'-0"
8K	2	7'-0"	1	---	---	14'-0"
8L	2	8'-0"	1	---	---	16'-0"
8M	2	9'-0"	1	---	---	18'-0"
8N	6	8'-9"	1	---	---	52'-6"
TOTAL LIN. FT. =						261'-0"



MINIMUM SPLICE IS 16".
 ALL REINFORCING BARS ARE NO. 4 BARS.
 ALL REINFORCING BARS HAVE 12" SPACING

C
 B
 TYPE 21 BAR TYPE 1 BAR -- STRAIGHT

SPREAD FOOTING QUANTITIES *

CONCRETE	— — — —	2.0 CU. YD.
REINFORCING STEEL (261'-0")		174 POUNDS

* INCLUDED IN ENGINEERING FIELD HANDBOOK TABLES, CHAPTER 6.

FORMULAS FOR DETERMINING BAR LENGTHS

MARK 1 C LEG	=	$\frac{W}{2} + B + 0.75$ FT.
MARK 2	=	W + 3.5 FT. MIN.
MARK 3	=	W + 1.0 FT.