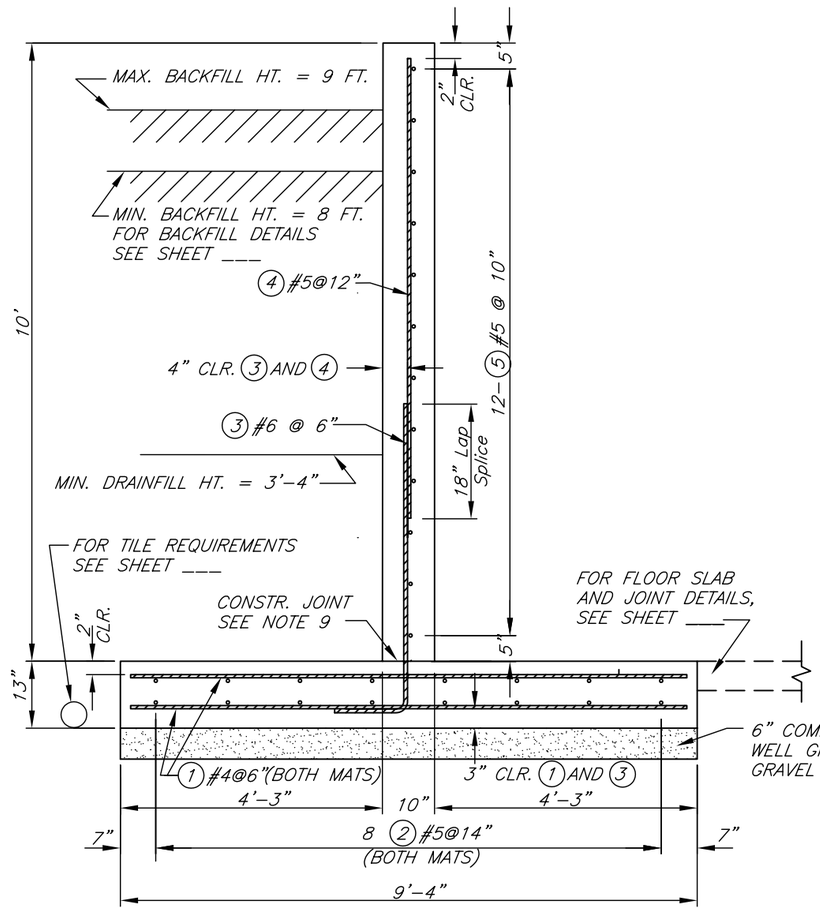


WALL SECTION

STEEL SCHEDULE

MARK	SIZE	QUAN.	TYPE	A	B	C	LENGTH	TOTAL LENGTH
1	#4		STR	---	---	---	8'-11"	
2	#5		STR	---	---	---		
3	#6		2	1'-0"	5'-0"	---	6'-0"	
4	#5		STR	---	---	---	7'-2"	
5	#5		STR	---	---	---		
6	#5		20	---	1'-0"	4'-0"	5'-0"	
7	#4		20	---	2'-0"	2'-0"	4'-0"	
8	#4		STR	---	---	---	3'-0"	
							#4 Bars Total Length	
							#5 Bars Total Length	
							#6 Bars Total Length	

STEEL DETAILS

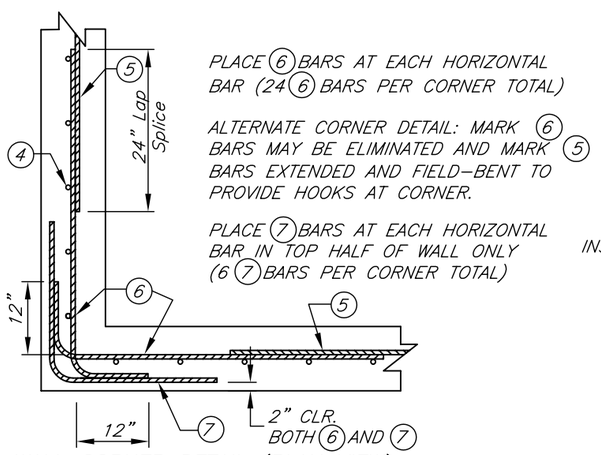
BAR SIZE	INSIDE BEND DIAMETER (D) INCHES	LONGITUDINAL STEEL LAP SPLICE LENGTH, INCHES (MIN.) Wall bars	Footing bars
#4	3	–	–
#5	3-3/4	24	18
#6	4-1/2	–	–

Total length of wall (measured along ℄ wall) = _____ ft.

ESTIMATED QUANTITIES

CONCRETE (0.683 CU.YD./FT OF WALL)=_____ CU.YD.
STEEL #4 BARS (0.668 LB./FT.)=_____ LB.
STEEL #5 BARS (1.043 LB./FT.)=_____ LB.
STEEL #6 BARS (1.502 LB./FT.)=_____ LB.

Steel quantity include splice lengths? Y__ N__

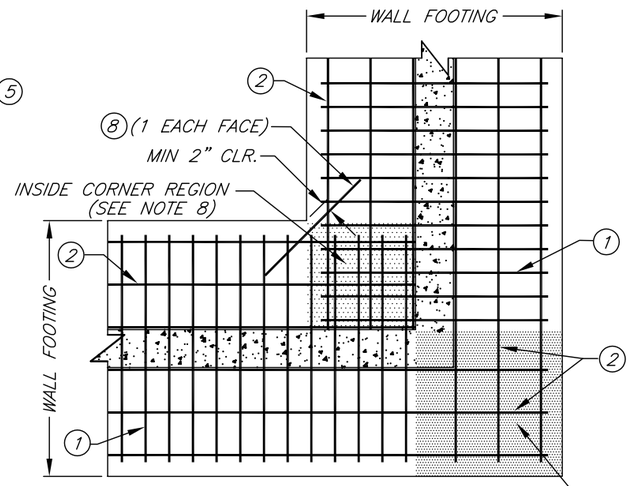


PLACE 6 BARS AT EACH HORIZONTAL BAR (24 6 BARS PER CORNER TOTAL)

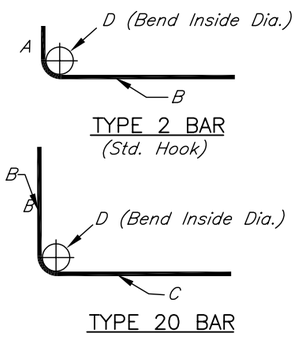
ALTERNATE CORNER DETAIL: MARK 6 BARS MAY BE ELIMINATED AND MARK 5 BARS EXTENDED AND FIELD-BENT TO PROVIDE HOOKS AT CORNER.

PLACE 7 BARS AT EACH HORIZONTAL BAR IN TOP HALF OF WALL ONLY (6 7 BARS PER CORNER TOTAL)

WALL CORNER DETAIL (PLAN VIEW)
Upper half of wall shown



FOOTING SLAB CORNER DETAIL (PLAN VIEW)
Schematic only – not all bars shown



TYPE 2 BAR
(Std. Hook)

TYPE 20 BAR

Adapted from Wisconsin drawing WI-594

CONDITIONS OF USE

Allowable backfill height = 8 to 9 ft
Soil backfill type = low to medium PI silts/clays, with 50% or more fines
Water table below footing
Machinery surcharge load NOT allowed
Not designed to support buildings or roofs

MATERIALS

Concrete compressive strength = 4,000 psi
Reinforcing steel shall be Grade 60
Concrete and reinforcing steel shall meet requirements of Construction Specification IA-31

WALL DESIGN LOADINGS

Manure load inside = 65 psf/ft EFP (Equivalent Fluid Pressure)
Soil backfill density = 110 pcf
Soil backfill load = 85 psf/ft EFP
Drainfill load = 50 psf/ft EFP

WALL SLIDING RESTRAINT REQUIREMENTS

Assumptions:
5-inch thick floor slab, factor of safety against sliding 1.5.
Coefficient of friction (soil/concrete) = 0.4 (well-graded, angular gravel/sand base)
No surcharge

Backfill Height, ft.	Min. Floor Slab Length, ft.*
9	154
8	111

* *Min. floor slab length for restraint is not required if T-wall forms a tank with opposing wall having approximately the same backfill height.*

GENERAL DESIGN NOTES

1. *Design loadings and soil pressures based upon criteria found in Conservation Practice Standard 313 (Waste Storage Facility).*
2. *Drainage shall be away from the wall.*
3. *Minimum width of backfill against the wall shall be equal to or greater than the backfill height.*
4. *Drainfill shall be placed against the base of the wall to a minimum height of 3"-4". Drainfill shall be a clean granular material containing less than 5% fines, with maximum stone size of 1 1/2".*
5. *Minimum required subgrade bearing capacity = 2000 psf.*
6. *Mark 2 and 5 bars shall extend to 2-3 inches from edge of concrete at ends of straight wall sections.*
7. *Mark 3 and 4 bars shall be placed a maximum of 3 inches from wall end or inside face of corner.*
8. *Footing slab reinforcement at corners: for Inside Corner Region (see detail), extend Mark 1 (transverse) bars into this region from both sides of corner. Extend Mark 2 (longitudinal) bars into Inside Corner to inside face of wall. For Outside Corner Region, discontinue Mark 1 bars. Extend Mark 2 bars into Outside Corner Region from both sides of corner, to 2-3 inches from edge of slab.*
9. *Construction joint shall be completed as described in Const. Spec. IA-31. Surface of construction joint shall be roughened to approximately 1/4" depth.*
10. *Important: steel location (clear distance from face of wall or slab) must be carefully maintained as shown on the drawings in order for structure to achieve its design load-carrying capacity.*

NOT TO SCALE

STANDARD DWG. NO. IA-1696b

DATE 03/08 | SHEET 1 OF 1

Date . . 07/08
Designed . . JGibbs
Drawn . . .
Checked . . .
Approved . . .

10-FT HIGH REINFORCED CONCRETE "T" WALL 8' TO 9', CL BACKFILL, NO SURCHARGE 10" WALL THICKNESS

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No. IA-1696b.dwg
Drawing No. ____
Sheet of