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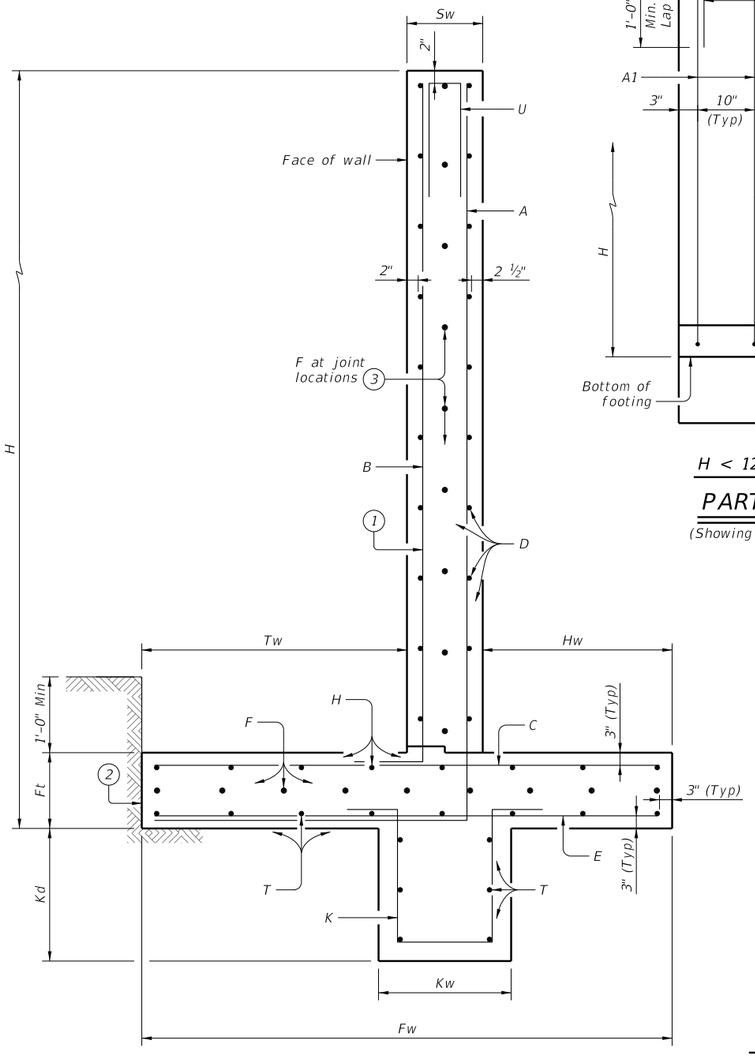
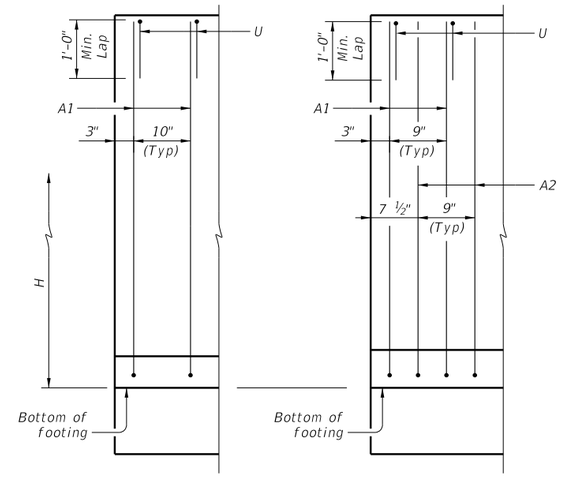
DATE:
FILE:

REINFORCING STEEL FOR ONE 32' PANEL (DESIGN B)

Wall Height "H"	PROPERTIES								Bars A1					Bars A2					Bars B					Bars C					Bars E					Bars K					D (#5) at 12" Max.		Dowel F at 12" Max.		H (#5) at 12" Max.		T (#5) at 12" Max.		U ~ #5 (5)		QUANTITY FOR ONE 32' PANEL		Wall Height "H"
	WALL DIMENSIONS							MAX SOIL PRESS	No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Weight	No.	Weight	No.	Weight	No.	Weight	Length	Weight	Conc (CY)	REINF (LB)	
(Ft)	Fw	Tw	Sw	Hw	Ft	Kw	Kd	T/SF																																										(Ft)
2	1'-4"	0'-4"	1'-0"	0'-0"	0'-9"	0'-9"	0'-9"	0.175	39	#4	10"	2'-6"	66						39	#4	10"	2'-2"	57												39	#4	10"	3'-1"	81	6	198	5	41	2	66	2	66	2'-5"	99	3.4	674	2
4	2'-5"	0'-8"	1'-0"	0'-9"	1'-0"	0'-9"	0'-9"	0.317	39	#4	10"	4'-10"	126						39	#4	10"	3'-11"	103	39	#4	10"	1'-11"	50	39	#4	10"	1'-11"	50	39	#4	10"	3'-1"	81	8	263	7	57	3	99	3	99	2'-6"	245	7.1	1173	4
6	4'-2"	1'-3"	1'-0"	1'-11"	1'-0"	0'-9"	0'-9"	0.390	39	#4	10"	7'-5"	194						39	#4	10"	5'-11"	155	39	#4	10"	3'-8"	96	39	#4	10"	3'-8"	96	39	#4	10"	3'-1"	81	12	395	11	89	5	165	5	165	8'-5"	343	11.6	1779	6
8	6'-3"	1'-8"	1'-0"	3'-7"	1'-0"	0'-9"	0'-9"	0.492	39	#4	10"	9'-10"	257						39	#4	10"	7'-11"	207	39	#4	10"	5'-9"	150	39	#4	10"	5'-9"	150	39	#4	10"	3'-1"	81	16	526	15	121	7	230	7	230	8'-5"	343	16.4	2295	8
10	8'-4"	2'-4"	1'-1"	4'-11"	1'-2"	1'-0"	1'-0"	0.593	39	#5	10"	12'-7"	512						39	#4	10"	9'-9"	255	39	#5	10"	7'-10"	319	39	#4	10"	7'-10"	205	39	#4	10"	3'-10"	100	20	658	19	153	9	296	9	296	8'-6"	346	24.1	3140	10
12	10'-6"	3'-0"	1'-2"	6'-4"	1'-4"	1'-3"	1'-3"	0.720	43	#4	9"	15'-4"	441	43	#4	9"	15'-4"	441	43	#4	9"	11'-7"	333	43	#6	9"	10'-0"	646	43	#4	9"	10'-0"	288	43	#4	9"	4'-7"	132	24	789	23	185	11	362	11	362	8'-7"	385	33.2	4364	12
14	12'-1"	3'-7"	1'-3"	7'-3"	1'-7"	1'-6"	1'-6"	0.833	43	#5	9"	18'-0"	808	43	#5	9"	18'-0"	808	43	#4	9"	13'-4"	383	43	#7	9"	11'-7"	1019	43	#4	9"	11'-7"	333	43	#4	9"	5'-4"	154	28	920	27	217	13	428	13	428	8'-8"	389	43.8	5887	14
16	13'-11"	4'-2"	1'-5"	8'-4"	1'-9"	1'-9"	1'-9"	0.951	43	#6	9"	20'-9"	1341	43	#5	9"	20'-9"	931	43	#4	9"	15'-2"	436	43	#8	9"	13'-5"	1542	43	#4	9"	13'-5"	386	43	#4	9"	6'-1"	175	32	1052	31	249	15	493	15	493	8'-10"	397	56.5	7495	16
18	15'-9"	4'-11"	1'-8"	9'-2"	2'-0"	2'-0"	2'-0"	1.065	43	#6	9"	23'-9"	1534	43	#6	9"	23'-9"	1534	43	#4	9"	16'-11"	486	43	#8	9"	15'-3"	1751	43	#4	9"	15'-3"	439	43	#4	9"	6'-10"	197	34	1118	34	273	17	559	17	559	9'-1"	408	73.7	8858	18
20	17'-6"	5'-5"	1'-9"	10'-4"	2'-3"	2'-0"	2'-0"	1.182	43	#7	9"	26'-4"	2315	43	#7	9"	26'-4"	2315	43	#4	9"	18'-8"	537	43	#9	9"	17'-0"	2486	43	#4	9"	17'-0"	489	43	#4	9"	6'-10"	197	38	1249	37	297	18	592	18	592	9'-2"	412	88.3	11481	20



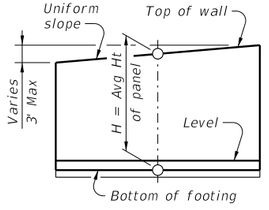
SECTION



H < 12' H ≥ 12'

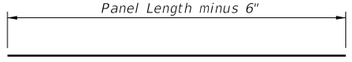
PARTIAL WALL ELEVATIONS

(Showing vertical reinforcing pattern in back face.)

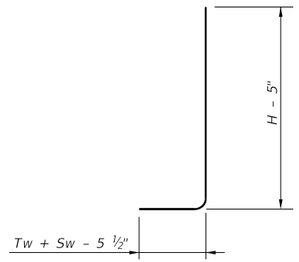


H DEFINITION

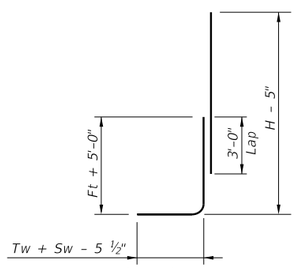
BARS F (3)



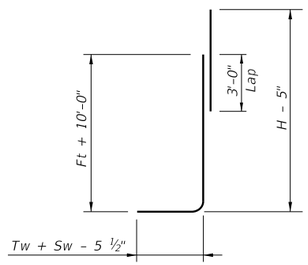
BARS D, H, and T



BARS A1 & A2

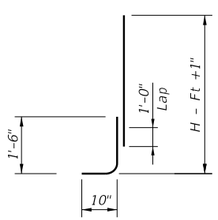


OPTIONAL BARS A1 (4)

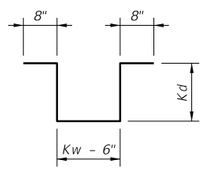


OPTIONAL BARS A2 (4)

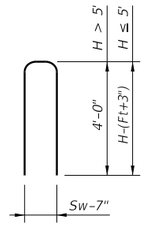
BARS B



OPTIONAL BARS B (4)



BARS K



BARS U

(1) Place vertical bars inside of horizontal bars (Typical both faces).

(2) Place footing toe against undisturbed soil.

(3) See Retaining Wall Miscellaneous Details (RW(SF)) standard for size.

(4) Optional bars splices not included in above table.

(5) Bars U lapped with Bars A1:
H ≤ 10'-0", 10" Max Spa, 39 bars.
H > 10'-0", 9" Max Spa, 43 bars.

MATERIAL NOTES:

Provide Class C concrete (f'c=3,600 psi.)
Provide Grade 60 reinforcing steel.

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.
Walls are designed assuming unit weight of soil = 120 pcf and a friction angle = 30 degrees for foundation and retained soil.
See Retaining Wall Miscellaneous Details (RW(SF)) standard for details and notes not shown.
These details provide designs for wall heights of 2 to 20 feet. For heights not shown, round up "H" to determine wall dimensions and reinforcing. (For example, a 9-foot high wall would use the 10-foot high dimensions and reinforcing.)
Quantities are based on "H" being average height of panel.
Retaining walls are designed to be coded as follows on Retaining Wall Layout Sheets:

B - 15 - 32
- 32 — Panel length ~ 32 ft. is standard; 28 ft. requires special quantities.
- 15 — Average height (H) of panel.
- B — Design A = No surcharge or slope above wall.
  Design B = No surcharge; slopes to 3:1.
  Design C = Traffic surcharge; no slope above wall.

Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing bar dimensions shown are out-to-out of bar.

Texas Department of Transportation

Bridge Division Standard

SPREAD FOOTING RETAINING WALL

RW(SFB)

FILE: RW-SFB-22.dgn	DN: TAR	CK: RLE	DW: JER	CK: TAR
©TxDOT June 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS				
8-22: Constructability update.	DIST	COUNTY		SHEET NO.