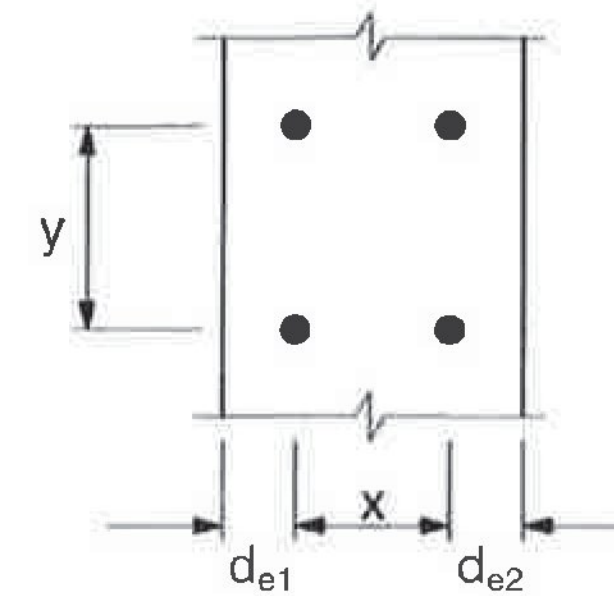


Figure 6.15.7A (continued) Design tensile strength for $h \geq h_{min}$, ϕP_{c1} —Case 3



x and y are the overall dimensions (width and length) of the stud group.

Case 3: Free edges on two opposite sides

$$\phi P_{c1} = \phi 2.67 \lambda \sqrt{f'_c} (x_1)(y_1 + 2\ell_e)$$

$$\phi = 0.85$$

where: x_1 and y_1 are the dimensions of the flat bottom of the part of the truncated pyramid.

For Case 3: $x_1 = x + d_{e1} + d_{e2}$ $y_1 = y$

Note: Table values are based on

$\lambda = 1.0$ and $f'_c = 5000$ psi;

for different material properties, multiply table

values by $\lambda \sqrt{f'_c / 5000}$

ℓ_e in.	y_1 , in.	x_1 , in.	Design tensile strength, ϕP_{c1} (kips)														
			2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
3	0	2	4	6	8	9	11	13	15	17	19	21	23	25	27	29	
	2	3	5	8	10	13	15	18	21	23	25	28	31	33	36	39	
	4	3	7	9	13	16	19	23	25	29	32	35	39	42	45	48	
	6	4	8	11	15	19	23	27	31	35	39	42	46	50	54	58	
	8	5	9	13	18	23	27	31	36	41	45	49	54	59	63	67	
	10	5	10	15	21	25	31	36	41	46	51	57	61	67	72	77	
	12	6	11	17	23	29	35	41	46	52	58	63	69	75	81	87	
	14	7	13	19	25	32	39	45	51	58	64	71	77	83	90	96	
16	7	14	21	28	35	42	49	57	63	71	77	85	92	99	106		
4	0	3	5	8	10	13	15	18	21	23	25	28	31	33	36	39	
	2	3	7	9	13	16	19	23	25	29	32	35	39	42	45	48	
	4	4	8	11	15	19	23	27	31	35	39	42	46	50	54	58	
	6	5	9	13	18	23	27	31	36	41	45	49	54	59	63	67	
	8	5	10	15	21	25	31	36	41	46	51	57	61	67	72	77	
	10	6	11	17	23	29	35	41	46	52	58	63	69	75	81	87	
	12	7	13	19	25	32	39	45	51	58	64	71	77	83	90	96	
	14	7	14	21	28	35	42	49	57	63	71	77	85	92	99	106	
16	8	15	23	31	39	46	54	61	69	77	85	92	100	108	115		
6	0	4	8	11	15	19	23	27	31	35	39	42	46	50	54	58	
	2	5	9	13	18	23	27	31	36	41	45	49	54	59	63	67	
	4	5	10	15	21	25	31	36	41	46	51	57	61	67	72	77	
	6	6	11	17	23	29	35	41	46	52	58	63	69	75	81	87	
	8	7	13	19	25	32	39	45	51	58	64	71	77	83	90	96	
	10	7	14	21	28	35	42	49	57	63	71	77	85	92	99	106	
	12	8	15	23	31	39	46	54	61	69	77	85	92	100	108	115	
	14	9	17	25	33	42	50	59	67	75	83	92	100	109	117	125	
16	9	18	27	36	45	54	63	72	81	90	99	108	117	125	135		
8	0	5	10	15	21	25	31	36	41	46	51	57	61	67	72	77	
	2	6	11	17	23	29	35	41	46	52	58	63	69	75	81	87	
	4	7	13	19	25	32	39	45	51	58	64	71	77	83	90	96	
	6	7	14	21	28	35	42	49	57	63	71	77	85	92	99	106	
	8	8	15	23	31	39	46	54	61	69	77	85	92	100	108	115	
	10	9	17	25	33	42	50	59	67	75	83	92	100	109	117	125	
	12	9	18	27	36	45	54	63	72	81	90	99	108	117	125	135	
	14	9	19	29	39	48	58	67	77	87	96	106	115	125	135	144	
16	10	21	31	41	51	61	72	82	92	103	113	123	133	143	154		