

Hill PHOENIX

W A L K I N S

PANEL STRUCTURAL DATA

REV 10-30-15 LTC

PANEL CONSTRUCTION							ROOF PANEL SPANS											WALL PANEL HEIGHTS							
FRAMING ⁹	FINISH / SKIN	SKIN THICKNESS ⁸	PANEL THICKNESS	DEAD LOAD (PSF)	R-VALUE ¹		LIVE LOADS ³ (PSF)											LIVE LOADS ⁵ (PSF)							
					Cooler	Freezer	INDOOR ²		OUTDOOR ^{4,7}									INDOOR ²	OUTDOOR ⁶						
							10	20	20	30	40	50	60	70	80	90	100	5	10.8	12.9	15.1	17.6	20.2	23	25.9
																		WIND SPEED (MPH)							
																		110	120	130	140	150	160	170	
WOOD (SPF)	Galv.	26ga	3.5"	3.5	25	28	18'-3"	14'-4"	12'-0"	10'-6"	9'-4"	8'-8"	7'-10"	7'-6"	7'-3"	6'-10"	6'-8"	23'-6"	16'-3"	15'-0"	13'-9"	12'-6"	11'-6"	10'-9"	9'-9"
			4"	4.0	29	32	19'-10"	15'-10"	13'-4"	11'-8"	10'-6"	9'-9"	9'-0"	8'-6"	8'-0"	7'-9"	7'-6"	25'-0"♦	17'-9"	16'-3"	15'-3"	14'-0"	13'-0"	12'-0"	11'-3"
			5"	4.5	36	40	23'-0"	18'-9"	16'-0"	14'-0"	12'-9"	11'-9"	11'-0"	10'-4"	9'-10"	9'-6"	9'-0"	25'-0"♦	19'-9"	18'-4"	17'-3"	15'-9"	14'-9"	14'-0"	13'-3"
	Galv.	20ga	3.5"	3.5	25	28	21'-6"	16'-9"	14'-9"	12'-6"	11'-3"	10'-3"	9'-6"	9'-0"	8'-6"	8'-0"	7'-10"	25'-0"	19'-6"	17'-6"	16'-0"	14'-6"	13'-3"	12'-0"	11'-0"
			4"	4.0	29	32	23'-6"	18'-6"	16'-4"	14'-0"	12'-6"	11'-6"	10'-9"	10'-0"	9'-6"	9'-2"	8'-9"	20'-6"♦	19'-9"	19'-9"	18'-0"	16'-4"	14'-10"	13'-8"	12'-6"
			5"	4.5	36	40	25'-0"	22'-2"	19'-6"	16'-10"	15'-2"	14'-0"	13'-0"	12'-3"	11'-8"	11'-2"	10'-9"	22'-10"♦	19'-9"	19'-9"	19'-9"	19'-9"	18'-0"	16'-6"	15'-3"
HIGH DENSITY URETHANE	Galv.	26ga	3.5"	3.5	25	28	17'-0"	13'-4"	11'-3"	9'-6"	8'-6"	7'-9"	6'-9"	6'-0"	5'-8"	5'-3"	4'-9"	22'-9"	16'-0"	14'-9"	13'-8"	12'-6"	11'-6"	10'-8"	9'-9"
			4"	4.0	29	32	18'-8"	14'-8"	12'-4"	10'-8"	9'-6"	8'-6"	7'-6"	6'-9"	6'-3"	5'-9"	5'-4"	24'-9"	17'-0"	15'-9"	14'-8"	13'-8"	12'-9"	12'-0"	11'-0"
			5"	4.5	36	40	21'-6"	17'-3"	14'-6"	12'-8"	11'-4"	10'-0"	8'-9"	8'-0"	7'-4"	6'-9"	6'-4"	25'-0"♦	19'-0"	17'-9"	16'-5"	15'-0"	14'-3"	13'-6"	12'-9"
	Galv.	20ga	3.5"	3.5	25	28	20'-9"	16'-0"	14'-2"	11'-10"	10'-6"	9'-8"	9'-0"	8'-4"	8'-0"	7'-6"	7'-0"	24'-8"	16'-4"	14'-8"	13'-2"	11'-10"	10'-8"	9'-8"	8'-9"
			4"	4.0	29	32	22'-6"	17'-8"	15'-6"	13'-3"	11'-10"	10'-10"	10'-0"	9'-4"	8'-10"	8'-4"	7'-9"	25'-0"	18'-3"	16'-3"	14'-10"	13'-4"	12'-0"	11'-0"	10'-0"
			5"	4.5	36	40	25'-0"	21'-0"	18'-6"	15'-10"	14'-3"	13'-0"	12'-2"	11'-4"	10'-8"	9'-9"	9'-3"	25'-0"	19'-9"	19'-9"	18'-0"	16'-3"	14'-9"	13'-4"	12'-3"

♦ Maximum span based on manufacturing limitations

Note 1: Data based on ASTM C518-04 test procedure. Mean temperature of 20°F for freezers and 55°F for coolers.

Note 2: Interior L/180 deflection criteria

Note 3: Uplift on roof panel due to wind load may exceed vertical down load. For example on smaller boxes,

110 MPH, Exposure B	25 PSF
120 MPH, Exposure B	30 PSF
130 MPH, Exposure B	35 PSF
140 MPH, Exposure B	40 PSF
150 MPH, Exposure B	46 PSF

Note 4: Exterior - includes additional 2 PSF dead load for roofing material; L/240 deflection criteria

Note 5: 500 PLF vertical load assumed on wall panel. Maximum exterior box height = 19'-9"

Note 6: Exterior - ASCE7-10, Exp. B, Risk Category II, III and IV buildings; not on hill or escarpment; enclosed structure Allowable stress design wind loads

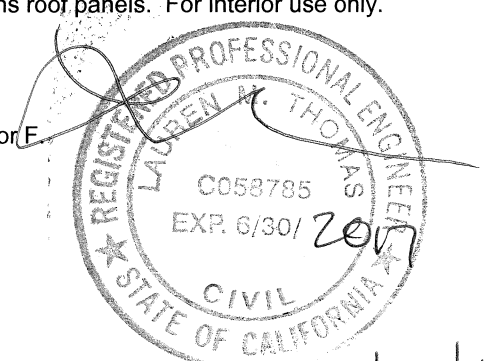
Note 7: Exterior roof to be sloped to eliminate pooling issues.

Note 8: All panels must be skinned with the same metal on both faces. The following substitutions are acceptable:
 3/4" plywood can be substituted for the 20ga steel exterior skin on the 20ga skins roof panels. For interior use only.
 1/2" plywood can be substituted for the 26ga steel exterior skin on the 26ga skins roof panels. For interior use only.

Note 9: Framing with Polyurethane core (foamed in place)

Note 10: Check with engineer for heavy roof loads in seismic design category D, E, or E.

Note 11: Ec = 584 psi Gc = 196 psi Er = 3000psi



10/30/15

LARR #24553