

ANCHORPANEL PERIMETER FOUNDATION SYSTEM - ALLOWABLE LOADS
 DRAFT LOAD TABLE - FOR ICC-ER (ICBO-ER) FILE # 06-08-11 APPLICATION IN PROGRESS

TABLE 1 - ALLOWABLE AXIAL LOADS

DESIGN LOADS - AXIAL ONLY 1 2 3	
MAXIMUM PANEL HEIGHT 6 (inches)	MAXIMUM AXIAL LOAD (plf)
48	6566
72	5000
100	3433



TABLE 2 - ALLOWABLE COMBINED LOADS

DESIGN LOADS FOR FOUNDATION-WALLS, AXIAL LOADS COMBINED WITH SHEAR/RACKING										
MAXIMUM PANEL HEIGHT 6 (Inches)	MAXIMUM AXIAL LOAD 2 3 4 (plf)	SHEAR/RACKING LOAD FROM WIND OR SEISMIC FORCES (plf) 5 9 10								
		WOOD SPECIES OF G = 0.35			WOOD SPECIES OF G = 0.42			WOOD SPECIES OF G = 0.49		
		NORMAL 2 Lags/Ft.	+ 50% 3 Lags/Ft.	+ 100% 4 Lags/Ft.	NORMAL 2 Lags/Ft.	+ 50% 3 Lags/Ft.	+ 100% 4 Lags/Ft.	NORMAL 2 Lags/Ft.	+ 50% 3 Lags/Ft.	+ 100% 4 Lags/Ft.
72	2000	796	1194	1240	822	1233	1240	882	1240	1240
72	3000	796	850	850	822	850	850	850	850	850
48	3000	796	1194	1592	822	1233	1644	882	1323	1730

- 1 These allowable loads are based upon Allowable Stress Design (ASD) loads. No design load reduction or allowable load increase is permitted for use with these allowable loads.
- 2 Allowable loads are not to exceed local soil allowable bearing values.
- 3 Axial loads combined with backfill equivalent to 30" high maximum fluid pressure of 40 pcf, or 24" high maximum of 64 pcf.
- 4 This is a maximum axial allowable load in combination with allowable shear and backfill loads. Where the enforced Model Code permits, the live and snow load portions of the design axial load combinations may be reduced 25% maximum. May use TABLE 1 for any panels with gravity loading only (panels not required for shear/racking resistance).
- 5 These allowable loads are for Model Codes that permit a 25% reduction of transient design loads, or a 33% allowable stress increase. Where the local code does not allow either of these adjustments, these allowable loads must be reduced by 25%.
- 6 Panel Height is the total height including 4.5" embedment into concrete. Net panel height is 4.5" less than these values.
- 7 Minimum species density factor of member accepting lag screws from panels. G of 0.49 includes DF-Larch, 0.42 includes Hem-Fir and Spruce-Pine-Fir, and 0.35 includes Redwood and Cedar.
- 8 This indicates the number of lag screws per lineal foot of attached panel: "NORMAL" = 2; "+50%" = 3; "+100%" = 4.
- 9 A 0.25" diameter by 2" long lag screw, minimum. Must be standard "full body" diameter dimension per NDS. Fasteners are assumed to be loaded parallel to wood grain, a 33% reduction must be taken for perpendicular loading. Any other fastening or connection design must be shown by rational analysis to meet the required loadings.
- 10 Seismic force design factors are as follows: Under the 2003 IBC table 1617.6.2, R = 6.5, $\Omega_o = 3$, Cd = 4. Under the 2002 ACSE-7 table 9.5.2.2, R = 6, $\Omega_o = 3$, Cd = 4. Under the 1997 UBC table 16-N, R = 5.5, $\Omega_o = 2.8$.

TABLE OF ANCHORPANEL STRENGTH TEST RESULTS

Test Results for an ICC-ER (ICBO-ER) Listing in Progress

AXIAL TESTS (maximum supporting strength)

3' WIDE PANELS, 3 TESTS FOR EACH HEIGHT = 12 PANELS TESTED

STRENGTH OF SPECIMEN TESTED, KIPS*:					AVERAGE	AVERAGE	
PANEL HEIGHT, INCHES	1	2	3		KIPS*	KLF*	VARIANCE
32	65.2	64.2	69.1		66.2	22.1	0.0440
52	61.2	55.9	61.2		59.4	19.8	0.0600
72	57.8	53.2	55.9		55.6	18.5	0.0440
100	40.7	32.0	40.2		37.6	12.5	0.1497

RACKING TESTS (maximum panel shear strength)

3- 3' PANELS, 6 TESTS FOR EACH HEIGHT = 54 PANELS TESTED

STRENGTH OF SPECIMEN TESTED, KIPS*:					AVERAGE	AVERAGE	
PANEL HEIGHT, INCHES		1	2	3	KIPS*	KLF*	VARIANCE
32	WEIGHTED	48.18	48.84	54.12	50.38	5.60	0.074
32	UNWEIGHTED	51.48	50.16	50.16	50.60	5.62	0.017
52	WEIGHTED	47.52	46.86	46.20	46.86	5.21	0.014
52	UNWEIGHTED	35.45	39.89	42.24	39.19	4.35	0.096
72	WEIGHTED	29.73	34.09	27.27	30.36	3.37	0.123
72	UNWEIGHTED	25.91	32.73	29.32	29.32	3.26	0.116

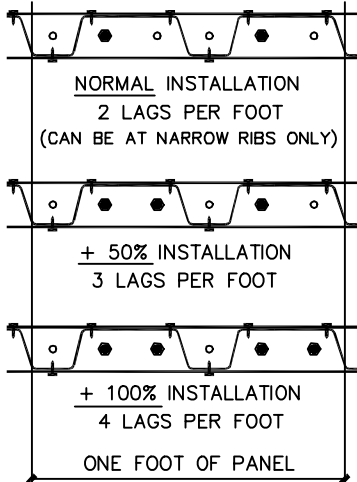
Notes:

Weighted racking tests included 3 KLF down-load (27 KIPS to the specimen).
 All tests included a 24" column of water "backfill" load, weakest direction of panel.
 These values are final strength of panels, not working loads. Typical ICC allowable values are 1/3 of average tested strengths (Factor of Safety = 3).

* 1 KIP = 1000 lbs, KLF= 1000 pounds per lineal foot of panel

LAG SCREW INSTALLATION

PANEL TOP HOLES ARE AT 2" O.C.



LAG SCREWS AT HOLES IN NARROW RIBS CAN REPLACE ANY LAGS SHOWN HERE, IN ORDER TO AVOID OBSTACLES OR FLAWS IN WOOD FRAMING.

SHEAR WALL(S) ABOVE MUST TRANSFER SHEAR TO FLOOR DIAPHRAGM AND TO MEMBER AT FOUNDATION WALL

SHEAR NAILING INTO SAME MEMBER HAVING ANCHORPANEL LAGS

1/4" DIA x 2" MIN LAG SCREWS PER THE INSTALLATION SCHEDULE

16 GAGE CHANNEL PER MANUFACTURER

FASTENERS PER MANUF.

ANCHORPANEL FOUNDATION

HANGERS OR OTHER MEANS OF SUPPORT FOR FLOOR JOISTS.

FLOOR DIAPHRAGM

SECTION AT TOP

FLOOR MEMBER ACCEPTING LAG SCREWS IF THIS MEMBER IS A SINGLE 2x ON EDGE, IT MUST BE BRACED 4 FT. O.C. MAX. BLOCKING OR FLOOR JOISTS ARE OK.

FLOOR DIAPHRAGM

JOISTS IN HANGERS OR WITH OTHER MEANS OF SUPPORT

LAG SCREWS FASTEN UP INTO FLOOR RIM TYPICAL ACCORDING TO SCHEDULE

PANELS MUST BE POSITIONED SECURELY (BY ANY MEANS) BEFORE PLACING CONCRETE

CUT-AWAY VIEW OF THE PANEL CAST INTO CONCRETE FOOTING

#4 REBAR, TYPICAL

FOOTING TRENCH

ANCHORAGE FLANGE CONCRETE BEING PLACED

4 MIN REBAR TOP AND BOTTOM, 18" MINIMUM LAPS

EXCAVATION AND FOOTING TO MEET MINIMUM REQUIREMENTS OF MODEL CODE ENFORCED, AND INCLUDING LOCAL SOIL AND FROST REQUIREMENTS, FOR 1 OR 2 STORY CONST. EXCAVATION MUST STEP LEVEL WHERE SITE SLOPES > 10%.

SECTION AT BOTTOM

MALE/FEMALE JOINTS MUST BE CAULKED W/ WATERPROOF COMPOUND

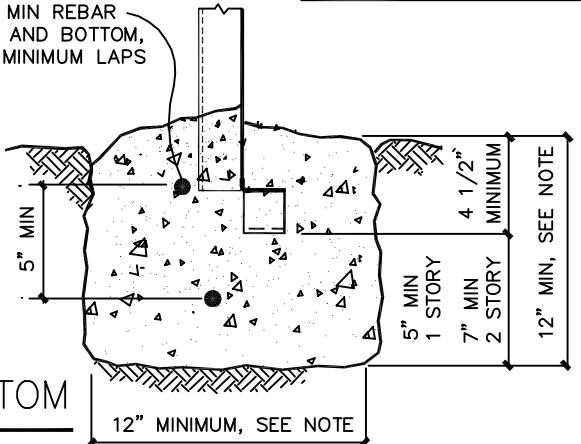
PREPOSITIONED FLOOR RIM SHOWN HERE, CAN VARY.

PANEL TO BE POSITIONED FOR CASTING IN CONCRETE. FLANGE CAN FACE INTERIOR OR EXTERIOR

PANEL MUST BE SET FLAT TO BEND STOP
1/2" MAX CHAMFER

FLANGE BENDING TOOL

SLOT FOR TAB BENDING TOOL IS 1/8" WIDE X 1 1/2" DEEP.



ANCHORPANEL™ FOUNDATION, INSTALLATION DIAGRAM

FOR THE ICC (ICBO) EVALUATION REPORT APPLICATION FILE #01-05-15

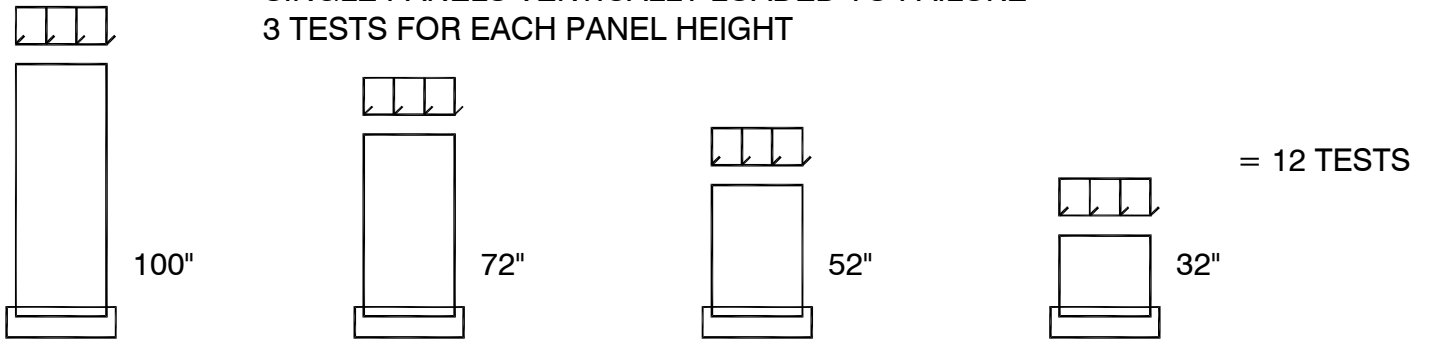
ANCHOR PANEL COMBINED -LOADS TESTING

ARRAY OF PANEL HEIGHTS

24" HIGH COLUMN OF WATER APPLIED TO PANELS' FACE FOR OUT-OF-PLANE LOADING ON ALL TESTS

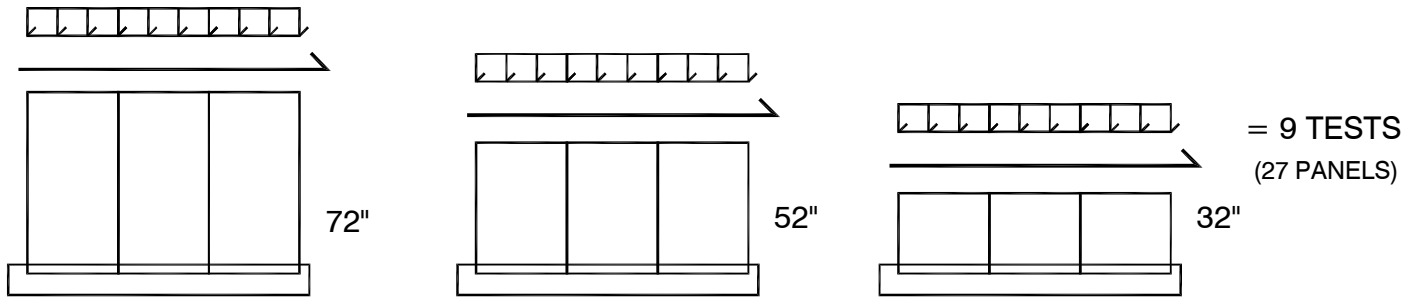
AXIAL TESTS:

SINGLE PANELS VERTICALLY LOADED TO FAILURE
3 TESTS FOR EACH PANEL HEIGHT

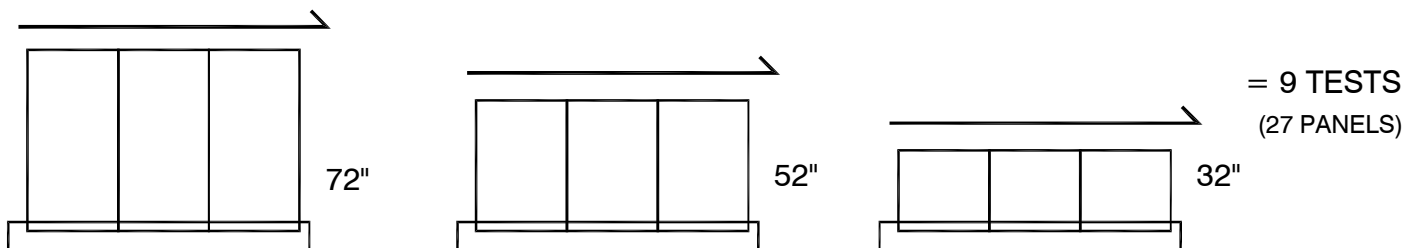


TRIAxIAL TESTS:

A) LATERAL TAKEN TO FAILURE WITH A 3000 PLF VERTICAL LOAD APPLIED
3 TESTS FOR EACH HEIGHT OF TRIPLE-PANEL-SETS



B) LATERAL TAKEN TO FAILURE WITH NO VERTICAL LOAD APPLIED
3 TESTS FOR EACH HEIGHT OF TRIPLE-PANEL-SETS



= 30 TESTS
TOTAL