Rev 01 RS11-116344

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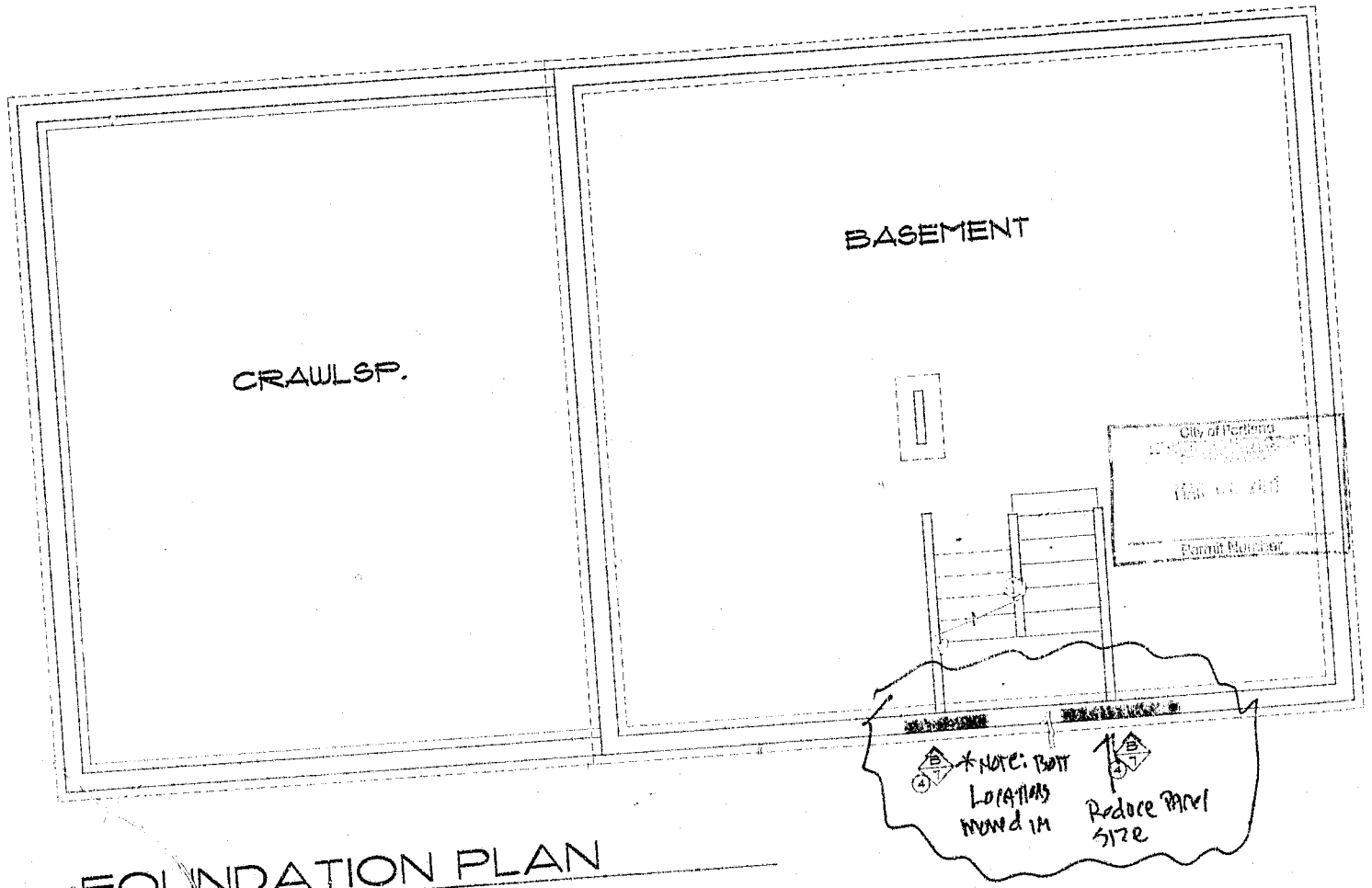


FOUNDATION PLAN

11-116344 REV01 RS

DATE: 01/27/11 **PROJECT: DEREIKO REMODEL**

WALL SUMMARY

	WIND UNIT SHR	Narrow Panel Increase	INCR SEIS SHR	CONTR. DESGN W	CONTR. DESGN S	MAX. UNIT SHEAR	UPLIFT	SHEAR WALL w/narw incr	SHEAR WALL w/o incr	HOLDOWN	min sill plt.	NOTES
V1	0	1.00	0			0	0			0 OR 0		
V2	0	1.00	0			0	0			0 OR 0		
V3	0	1.00	0			0	0			0 OR 0		
V4	0	1.00	0			0	0			0 OR 0		
V5	0	1.00	0			0	0			0 OR 0		
V6	0	1.00	0			0	0			0 OR 0		
V7	0	1.00	0			0	0			0 OR 0		
V8	0	1.00	0			0	0			0 OR 0		
V9	0	1.00	0			0	0			0 OR 0		
V10	0	1.00	0			0	0			0 OR 0		
V11	0	1.00	0			0	0			0 OR 0		
V12	0	1.00	0			0	0			0 OR 0		
V13	0	1.00	0			0	0			0 OR 0		
V14	0	1.00	0			0	0			0 OR 0		
V15	0	1.00	0			0	0			0 OR 0		
V16	0	1.00	0			0	0			0 OR 0		
M1	436	1.33	594		X	594	3572	B	B	3 OR 7	2x	
M2	0	1.00	0			0	0			0 OR 0		
M3	0	1.00	0			0	0			0 OR 0		
M4	0	1.00	0			0	0			0 OR 0		
M5	0	1.00	0			0	0			0 OR 0		
M6	0	1.00	0			0	0			0 OR 0		
M7	0	1.00	0			0	0			0 OR 0		
M8	0	1.00	0			0	0			0 OR 0		
M9	0	1.00	0			0	0			0 OR 0		
M10	0	1.00	0			0	0			0 OR 0		
M11	0	1.00	0			0	0			0 OR 0		
M12	0	1.00	0			0	0			0 OR 0		
M13	0	1.00	0			0	0			0 OR 0		
M14	0	1.00	0			0	0			0 OR 0		
M15	0	1.00	0			0	0			0 OR 0		
M16	0	1.00	0			0	0			0 OR 0		
L1	0	1.00	0			0	0			0 OR 0		
L2	0	1.00	0			0	0			0 OR 0		
L3	0	1.00	0			0	0			0 OR 0		
L4	0	1.00	0			0	0			0 OR 0		
L5	0	1.00	0			0	0			0 OR 0		
L6	0	1.00	0			0	0			0 OR 0		
L7	0	1.00	0			0	0			0 OR 0		
L8	0	1.00	0			0	0			0 OR 0		
L9	0	1.00	0			0	0			0 OR 0		
L10	0	1.00	0			0	0			0 OR 0		
L11	0	1.00	0			0	0			0 OR 0		
L12	0	1.00	0			0	0			0 OR 0		
L13	0	1.00	0			0	0			0 OR 0		
L14	0	1.00	0			0	0			0 OR 0		
L15	0	1.00	0			0	0			0 OR 0		
L16	0	1.00	0			0	0			0 OR 0		

(5)

DATE: 01/27/11 **PROJECT: DEREIKO REMODEL**

SEISMIC

	SEIS. DIREC. F-B	SEIS. DIREC. L-R	TOTAL FLOOR SHEAR	SQR FEET SEIS.	% OF FLR SHEAR	WALL SEIS.	BRICK SEIS.	FROM ABOVE	TOTAL SEISMIC	SEIS. UNIT SHEAR	REDUN. FACT.	MAX. REDUN. FACT.	ADJUST UNIT SHEAR
V1			0		0%	0	0		0	0	1.00		0
V2			0		0%	0	0		0	0	1.00		0
V3			0		0%	0	0		0	0	1.00		0
V4			0		0%	0	0		0	0	1.00		0
V5			0		0%	0	0		0	0	1.00		0
V6			0		0%	0	0		0	0	1.00		0
V7			0		0%	0	0		0	0	1.00		0
V8			0		0%	0	0		0	0	1.00		0
V9			0		0%	0	0		0	0	1.00		0
V10			0		0%	0	0		0	0	1.00		0
V11			0		0%	0	0		0	0	1.00		0
V12			0		0%	0	0		0	0	1.00		0
V13			0		0%	0	0		0	0	1.00		0
V14			0		0%	0	0		0	0	1.00		0
V15			0		0%	0	0		0	0	1.00		0
V16			0		0%	0	0		0	0	1.00		0
					0%			0	0				
M1		X	4519		50%	2259	0		2260	343	1.30	1.30	446
M2			4519		0%	0	0		0	0	1.00		0
M3			4519		0%	0	0		0	0	1.00		0
M4			4519		0%	0	0		0	0	1.00		0
M5			4519		0%	0	0		0	0	1.00		0
M6			4519		0%	0	0		0	0	1.00		0
M7			4519		0%	0	0		0	0	1.00		0
M8			4519		0%	0	0		0	0	1.00		0
M9			4519		0%	0	0		0	0	1.00		0
M10			4519		0%	0	0		0	0	1.00		0
M11			4519		0%	0	0		0	0	1.00		0
M12			4519		0%	0	0		0	0	1.00		0
M13			4519		0%	0	0		0	0	1.00		0
M14			4519		0%	0	0		0	0	1.00		0
M15			4519		0%	0	0		0	0	1.00		0
M16			4519		0%	0	0		0	0	1.00		0
					50%			0	2260				
L1			1022		0%	0	0		0	0	1.00		0
L2			1022		0%	0	0		0	0	1.00		0
L3			1022		0%	0	0		0	0	1.00		0
L4			1022		0%	0	0		0	0	1.00		0
L5			1022		0%	0	0		0	0	1.00		0
L6			1022		0%	0	0		0	0	1.00		0
L7			1022		0%	0	0		0	0	1.00		0
L8			1022		0%	0	0		0	0	1.00		0
L9			1022		0%	0	0		0	0	1.00		0
L10			1022		0%	0	0		0	0	1.00		0
L11			1022		0%	0	0		0	0	1.00		0
L12			1022		0%	0	0		0	0	1.00		0
L13			1022		0%	0	0		0	0	1.00		0
L14			1022		0%	0	0		0	0	1.00		0
L15			1022		0%	0	0		0	0	1.00		0
L16			1022		0%	0	0		0	0	1.00		0
					0%			0	0				

DATE: 1/27/11

PROJECT: DEREIKO REMODEL

WIND

	LOAD	FROM ABOVE	110/B TOTAL LOAD	100/B TOTAL LOAD	SHEAR WALL LENGTH	110/B PLF	ADJ. 100/B PLF	X= FRAME Y=CANT.	NOTES
V1	0		0	0	0.0	0	0		
V2	0		0	0	0.0	0	0		
V3	0		0	0	0.0	0	0		
V4	0		0	0	0.0	0	0		
V5	0		0	0	0.0	0	0		
V6	0		0	0	0.0	0	0		
V7	0		0	0	0.0	0	0		
V8	0		0	0	0.0	0	0		
V9	0		0	0	0.0	0	0		
V10	0		0	0	0.0	0	0		
V11	0		0	0	0.0	0	0		
V12	0		0	0	0.0	0	0		
V13	0		0	0	0.0	0	0		
V14	0		0	0	0.0	0	0		
V15	0		0	0	0.0	0	0		
V16	0		0	0	0.0	0	0		
		0	0						
M1	3472		3472	2870	6.6	528	436		
M2	0		0	0	0.0	0	0		
M3	0		0	0	0.0	0	0		
M4	0		0	0	0.0	0	0		
M5	0		0	0	0.0	0	0		
M6	0		0	0	0.0	0	0		
M7	0		0	0	0.0	0	0		
M8	0		0	0	0.0	0	0		
M9	0		0	0	0.0	0	0		
M10	0		0	0	0.0	0	0		
M11	0		0	0	0.0	0	0		
M12	0		0	0	0.0	0	0		
M13	0		0	0	0.0	0	0		
M14	0		0	0	0.0	0	0		
M15	0		0	0	0.0	0	0		
M16	0		0	0	0.0	0	0		
		0	3472						
L1	0		0	0	0.0	0	0		
L2	0		0	0	0.0	0	0		
L3	0		0	0	0.0	0	0		
L4	0		0	0	0.0	0	0		
L5	0		0	0	0.0	0	0		
L6	0		0	0	0.0	0	0		
L7	0		0	0	0.0	0	0		
L8	0		0	0	0.0	0	0		
L9	0		0	0	0.0	0	0		
L10	0		0	0	0.0	0	0		
L11	0		0	0	0.0	0	0		
L12	0		0	0	0.0	0	0		
L13	0		0	0	0.0	0	0		
L14	0		0	0	0.0	0	0		
L15	0		0	0	0.0	0	0		
L16	0		0	0	0.0	0	0		
		0	0						

DATE: 01/27/11 PROJECT: DEREIKO REMODEL

WALLS

LOAD LINE	LENGTH OF SHEAR WALLS (FEET)	TOTAL	WALL HGHT.	SQ. FT. BRICK	NOTES
V1		0.0			
V2		0.0			
V3		0.0			
V4		0.0			
V5		0.0			
V6		0.0			
V7		0.0			
V8		0.0			
V9		0.0			
V10		0.0			
V11		0.0			
V12		0.0			
V13		0.0			
V14		0.0			
V15		0.0			
V16		0.0			
		0.0			
M1	3.6 3.0	6.6	8.0		
M2		0.0			
M3		0.0			
M4		0.0			
M5		0.0			
M6		0.0			
M7		0.0			
M8		0.0			
M9		0.0			
M10		0.0			
M11		0.0			
M12		0.0			
M13		0.0			
M14		0.0			
M15		0.0			
M16		0.0			
		6.6			
L1		0.0			
L2		0.0			
L3		0.0			
L4		0.0			
L5		0.0			
L6		0.0			
L7		0.0			
L8		0.0			
L9		0.0			
L10		0.0			
L11		0.0			
L12		0.0			
L13		0.0			
L14		0.0			
L15		0.0			
L16		0.0			
		0.0			

DATE: 01/27/11 **PROJECT: DEREIKO REMODEL**

ver012208 DESCRIPTION: 2009 IBC, Binder-Stock

SIMPLIFIED STATIC PROCEDURE - 2009 IBC BY: JY

WIND SPEED:	100
EXPOSURE:	B
SEISMIC CAT:	D
(S_{DS}=2/3 S_{MS})	0.850
R:	6.5
A upper:	0
A main:	2496
A lower:	0

Adjustment Factor for Building Height λ = 1.00

Increase 110/B wind loads by 0.83

to obtain 100/B

1.2SDS 1.02

snow load = 30

mean roof height, h = 25 ft

$V=1.2S_{DS}W_{DL}/R$

ASD Load Combination = V/1.4

UPPER FLOOR	PSF	WALL HT. HEIGHT	LINEAL FEET	SQUARE FEET	W_{DL} DEAD LOAD POUNDS	V SEISMIC POUNDS	ASD LOAD COMB. Eq. 16-18
ROOF/CEILING	15				0	0	0
EXT. WALLS	10	0			0	0	0
INT. WALLS	8	0			0	0	0
BRICK	40			0	0	0	0
TOTAL					0	0	0
MAIN FLOOR							
ROOF/CEILING	15			1248	18720	2938	2098
FLOOR	10			1248	12480	1958	1399
EXT. WALLS	10	8	148		5920	929	664
INT. WALLS	8	8	100		3200	502	359
WALLS ABOVE					0	0	0
DECK	10				0	0	0
BRICK	40			0	0	0	0
TOTAL					40320	6327	4519
LOWER FLOOR							
ROOF/CEILING	15				0	0	0
FLOOR	10				0	0	0
EXT. WALLS	10	0			0	0	0
INT. WALLS	8	0			0	0	0
WALLS ABOVE					9120	1431	1022
DECK	10				0	0	0
BRICK	40			0	0	0	0
TOTAL					9120	1431	1022

REDUNDANCY FACTOR = 1.0 or 1.3
per ASCE 7-05 12.3.4.1 and 12.3.4.2

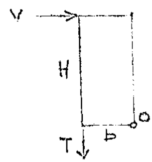
Shear wall	Allowable Load (plf) wind/seis	Floor to Floor Holdown Tag	Load	Type	Floor to Foundation Holdown Tag	Load	Type
S	260/260	1	1630	CMST12X36'	6	3280	STHD14RJ
A	350/350	2	3500	CMST12X48'	7	4165	HTT22
B	600/600	3	4800	CMST12X60'	8	7870	HDU8
C	896/640	4	6350	CMST12X72'	9	9535	HDU11
D	980/980	5	8550	CMST12X90'	10	14925	HDU-14
E	1280/1280				2	14926	to high
F	1540/1540						

Seismic Revision

Hold down Design

5/8" SIMP SET = 3410 x 1.33 = 4535 #

3' wall V = 446 plf x 3' = 1338# per shear wall



b = 29.5/12 = 2.46'

$\Sigma M_o = VH - Tb = 0$

$T = \frac{VH}{b}$

T = 4351 # < 4535 ✓

3.6' wall V = 446 plf x (43/12)' = 1598# b = 33/12 = 2.75'

$T = \frac{VH}{b}$ = 4648 − 5% = 4415 < 4535 ✓

USE HTT5 w/ 5/8"⌀ ANCHOR w/ Simpson set epoxy

Anchor bolt design

446 plf x 6.6 = 2943   2943/4 = 736 # < 890 ✓

USE (2) 5/8" AB @ EA. shear wall

Furring strip nailing

16d allow shear = 141#

8d allow shear = 90#

@ wall panel edges 2" nailing

141/90 = x/2   x = 3"

nail strips @ 3" o.c. alternating dbl stud @ [illegible]

ROWELL ENGINEERING & DESIGN By ________ Date ________

Project ________ Sheet ____ of ____

ROWELL ENGINEERING
CIVIL — STRUCTURAL ENGINEERS

10570 SE Washington St.
Suite 212
Portland, OR 97216
Tel. 503-254-6292
Fax 503-254-6761

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March 7, 2011

PROJECT: Mascord Plan Derelko Remodel
48 SW Bancroft St, Portland, Oregon
Builder: LHL Construction

SUBJECT: Shear wall revision.

I visited the project site on Thursday, March 3, 2011 to observe the construction of the specified shear walls and the existing site condition.

Facing the left side of the house, the left shear wall sheathing length along drag line M1 has been changed to 3'-7" long. The length of the right shear wall sheathing has been changed to 3'-0". The change in length did not change the shear wall nailing—both shear walls in drag line M1 remain "B" walls per the shear wall schedule.

The holdown locations have been moved in at each wall. The 3'-7" wall holdown studs are now 25 ¼ inches apart, while the 3'-0" wall holdown studs are 27 inches apart. Both walls require HTT5 holdowns with 5\8" anchors embedded 10" and attached with Simpson SET epoxy. Furring strips were added to the shear wall studs, requiring calculations for nailing. The provided calculations show that 16d nails at 3" o.c. is equivalent to the "B" wall nailing. Therefore, use 16d nailing at 3" o.c. on the furring strips around the edge of the shear wall.

Two 5/8" standard anchor bolts are required at each shear wall to transfer the lateral loads from the existing sill plate, which appears to be in good condition, to the concrete stem wall. The retrofit standard anchor bolts may be embedded 5 inches and secured with SET epoxy, or they may be 5/8 inch diameter expansion bolts embedded 5 inches into the concrete. Please see the following calculations for all the above shear wall changes.

Questions or comments regarding this letter are to be addressed to Todd Rowell at 503-254-6292.

Sincerely,
Todd T. Rowell, P.E.

REGISTERED PROFESSIONAL ENGINEER
58367RE
OREGON
OCT 22, 1982
TODD T. ROWELL

EXPIRES: DEC. 31, 12

City of Portland
Permit Number

11-116344 REV01 RS