CITY OF PORTLAND, OREGON - BUREAU OF DEVELOPMENT SERVICES

1900 SW Fourth Avenue, Suite 5000 • Portland, Oregon 97201 • www.portlandonline.com/bds • Fax 503-823-7425

Facility Permit Plan Intake Form

FOR INTAKE, STAFF USE ONLY

Date Received 3/7/12

Building Registration # 11-126455-FC

Fixed Bid _____

Bin # F5

Building Permit # 12-119408-FA

Mechanical # _____

Plumbing Permit # _____

Electrical Permit # _____

Building/Mechanical Tom 1

Electrical _____

Plumbing _____

Fire Jeff 3

Planning Kim 2

BES _____

PDOT _____

Structural Brie 4

Other _____

APPLICANT: Complete all sections below that apply to the project. Please print legibly.

Print Name MILLER CONSULTING ENGINEERS Sign Name _____

Street Address 529 SW 3RD

City PORTLAND State OR Zip Code _____

Day Phone 503 246 1250 FAX 503 246 1395 email brian@miller-se.com

Plans / permits available for pick up at 1900 SW 4th Avenue, 2nd floor between 8:00 am to 5:00 pm

Contact Name for plan permit pick up BRIAN HOGUE

Day Phone 503 246 1250 email brian@miller-se.com

Project Building Name / # HAMILTON BUILDING

Project Address or Location 529 SW 3RD

Project Name and Description FIRE ESCAPE LOAD TESTING / LANDING INFILL (FIRE ESCAPE) repairs

Total Project Value $ 5,000 Project Reference #/Billing ID # FPP# 532895 (REDSIDE)

Building Contractor REDSIDE CRE CCB # 186872

MechanicalContractor _____ CCB # _____

Electrical Contractor _____ CCB# _____ License # _____

Plumbing Contractor _____ CCB# _____ License # _____

☐ **Building Permit**

No. of Stories 5

Const. Type _____

[Y] [N] Alarms Required

[Y] [N] Smoke Det. Req'd

[Y] [N] Sprinklers Req'd

(Y) [N] Struct. Eng / Calcs Submitted

☐ **Electrical Permit**

Please provide a completed standard electrical permit application form. You may mail or deliver it to 1900 SW 4th Avenue, Portland, Oregon 97201 or FAX to 503-823-7425.

☐ **Mechanical Permit**

Mechanical Valuation _____

Description _____

☐ **Plumbing Permit**

Number of Fixtures _____

Back Flow Devices _____

Water Service (# of Feet) _____

Medical Gas _____

Other _____

Zimbra **andrew@pdx.miller-se.com**

Re: Hamilton Fire Escape

From : Andrew Leichty <andrew@pdx.miller-se.com> Mon, Mar 05, 2012 04:45 PM
Subject : Re: Hamilton Fire Escape 1 attachment
To : Melynda Retallack <mel@redsidecre.com>
Cc : Todd Hepp <todd@redsidecre.com>
Reply To : Andrew Leichty <andrew@miller-se.com>

Mel,
I was able to speak to Tim Heron with the City of Portland this afternoon, and he informed me that removing the counterbalance stair on the fire escape does **not** trigger a historic design review. He gave me a reference number, which is 12-118019 IQ, so that his response is in writing.

A building permit is still required for the fire escape work. Generally, when we obtain a building permit for a client, we send our drafting staff down to the City, which bills at \$64/hour. Unfortunately, the time it takes to get a permit can vary from project to project, so we typically prefer to get building permits on an hourly rate schedule. I would estimate the fee from our side will be around a maximum of \$700 plus reimbursable expenses, which would be the building permit and document reproduction.

If you would like us to get the permit, please sign and return a copy of the scope adjustment, and I will get the documents together and we can head down to the City.

Thanks

Andrew Leichty, PE, SE
Principal

Miller Consulting Engineers, Inc.
9570 SW Barbur Blvd., Ste. 100
Portland, Oregon 97219
Phone: (503)246-1250; Fax: (503) 246-1395
Web: www.millerengrs.com

"Engineering practical, diverse, structural solutions."

From: "Melynda Retallack" <mel@redsidecre.com>
To: "Andrew Leichty" <andrew@miller-se.com>
Cc: "Todd Hepp" <todd@redsidecre.com>
Sent: Wednesday, February 29, 2012 2:38:08 PM
Subject: RE: Hamilton Fire Escape

Andrew-
Please give us a proposal to get permits for the Hamilton fire escape stair repair/ladder removal. We will want to move forward with permits as soon as I get approval on the costs.
Thanks,
Mel

PORTLAND FIRE & RESCUE

Randy Leonard, Commissioner
John Klum, Chief
55 SW Ash Street
Portland, Oregon 97204
(503) 823-3700
Fax (503) 823-3710

December 28, 2011

Andrew Leichty
Miller Consulting Engineers, Inc.
9570 SW Barbur Blvd., Suite 100
Portland, Oregon 97219

RE: 529 SW 3rd Ave
APPEAL ID #8150; Case #11-12

Dear Andrew Leichty:

The Administrative staff has reviewed your appeal regarding the removal of the counterbalance stairs and the **appeal is APPROVED as proposed**.

If you have any question regarding the appeal outcome or the Board of Appeal process, please call me at 823-3930.

Sincerely,

Nate Takara, Assistant Fire Marshal
Appeal Board Coordinator

NT:eb
Attachment
cc: Standard distribution list
Jeff Galvan, Fire Inspector

MILLER
CONSULTING
ENGINEERS

1

STRUCTURAL CALCULATIONS

The Hamilton Building Fire Escape Landing Infill
529 SW 3rd Ave., Portland, Oregon
Chesapeake Holdings Logan, LLC

January 4, 2012
Project No. 110828
2 pages

Principal Checked: PRA

THESE CALCULATIONS ARE VOID IF SEAL

AND SIGNATURE ARE NOT ORIGINAL

***** LIMITATIONS *****

ENGINEER WAS RETAINED IN A LIMITED CAPACITY FOR THIS PROJECT.
DESIGN IS BASED UPON INFORMATION PROVIDED BY THE CLIENT,
WHO IS SOLELY RESPONSIBLE FOR ACCURACY OF SAME.
NO RESPONSIBILITY AND / OR LIABILITY IS ASSUMED BY,
OR IS TO BE ASSIGNED TO THE ENGINEER FOR ITEMS
BEYOND THAT SHOWN ON THESE SHEETS.

9570 SW BARBUR, #100
PORTLAND, OR 97219
PHONE (503) 246-1250
FAX (503) 246-1395

12-119408-FA

Building Code: 2010 Oregon Structural Specialty Code

Soils Report: No **Soils Report by:** N/A **Dated:** N/A

Soil Bearing: N/A PSF **Retaining Walls:** No

Equivalent Fluid Pressure (active): N/A PCF **Passive bearing:** N/A PCF **Friction:** N/A

Structural System: Building Structure

Vertical System: Existing Steel Framed Fire Escape **Lateral Sys:** N/A

Basic Design Loads:	**Element**		Floor		
	Load Type		Dead		
	Value (PSF)		5		
	Load Type		Floor Live		
	Value (PSF)		100		
	Deflection Criteria		L/360		

Lateral Design Parameters:

Wind Design: N/A MPH

Exposure

Importance Factors I_W = 1.00 (wind) I_E = 1.00 (seismic) I_S = 1.00 (snow) I_i = 1.00 (ice) **Occupancy Cat:** II

(Iw = 1.0 with wind concurrent with ice)

Seismic Design N/A

Design Summary:

The following calculations are for the new bar grating to infill the hole in the existing fire escape landing that is created by the removal of the counterbalance stair assembly.

MILLER Consulting Engineers

9570 SW Barbur Blvd.
Suite One Hundred
Portland, OR 97219

(503)246-1250
FAX: 246-1395

Project Name: The Hamilton Building Fire Escape Evaluation Project #: 110828

Location: 529 SW 3rd Ave., Portland, Oregon

Client: Chesapeake Holdings Logan, LLC

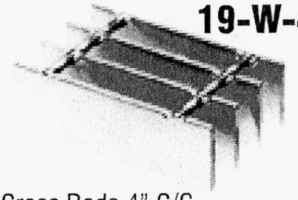
BY: ARL Ck'd: PRT Date: 01/04/12

Steel Bar Grating

FOR REFERENCE ONLY

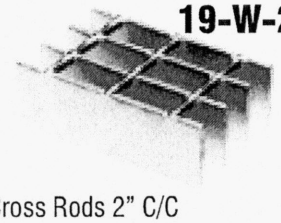
WELDED (W) 1-3/16" C/C Bearing Bars

19-W-4



Cross Rods 4" C/C

19-W-2

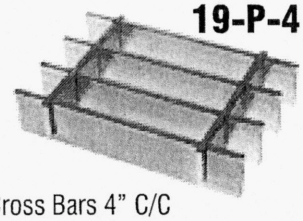


Cross Rods 2" C/C

NON-SERRATED & SERRATED

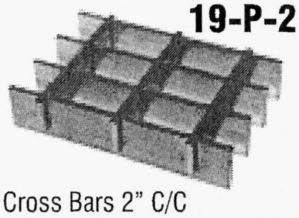
PRESS-LOCKED (P) 1-3/16" C/C Bearing Bars

19-P-4



Cross Bars 4" C/C

19-P-2



Cross Bars 2" C/C

NON-SERRATED & SERRATED

LOAD & DEFLECTION TABLE

General: Loads and deflections are theoretical and based on static loading.

U = safe uniform load, psf
C = safe concentrated load, psf
D = deflection, inches
E = modulus of elasticity, 29,000,000 psi
F = fiber stress, 18,000 psi
Material: ASTM A-1011 standard

Deflection: Spans and loads to the right of the bold line exceed 1/4" deflection for uniform load of 100 psf which provides safe pedestrian comfort. These can be exceeded for other types of loads with engineer's approval.

Serrated Bars: For serrated grating, the depth of grating required for a specified load is 1/4" deeper than that shown in the table.

W ALLOW = 404 psf OKAY

P ALLOW = 297# ≈ 300# OKAY

Bar Size	Symbol	Approx. Weight psf	Sec. Mod Per Ft. Of Width		SPAN (Direction of Bearing Bar) 24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"	96"	108"
3/4" x 1/8"	19-W-4	3.9		U	355	227	158	116	89	70							
				D	0.099	0.155	0.223	0.304	0.397	0.503							
Non-Serrated Only	19-P-4	4.3	0.118	C	355	284	237	203	178	158							
	19-P-2	5.2		D	0.079	0.124	0.179	0.243	0.318	0.402							
3/4" x 3/16"	19-W-4	5.6		U	533	341	237	174	133	105							
				D	0.099	0.155	0.223	0.304	0.397	0.503							
Non-Serrated Only	19-P-4	6.4	0.178	C	533	426	355	305	266	237							
	19-P-2	7.8		D	0.079	0.124	0.179	0.243	0.318	0.402							
	19-W-4	5.0		U	632	404	281	206	158	125	101	84					
1" x 1/8"	19-W-2	5.5		D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563					
	19-P-4	5.4	0.211	C	632	505	421	361	316	281	253	230					
	19-P-2	6.3		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451					
	19-W-4	7.2		U	947	606	421	309	237	187	152	125					
1" x 3/16"	19-W-2	7.8		D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563					
	19-P-4	8.1	0.316	C	947	758	632	541	474	421	379	344					
	19-P-2	9.5		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451					
	19-W-4	6.1		U	987	632	439	322	247	195	158	130	110	93	81		
1-1/4" x 1/8"	19-W-2	6.6		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
	19-P-4	6.8	0.329	C	987	789	658	564	493	439	395	359	329	304	282		
	19-P-2	8.1		D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584		
	19-W-4	8.9		U	1480	947	658	483	370	292	237	196	164	140	121		
1-1/4" x 3/16"	19-W-2	9.5		D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
	19-P-4	10.2	0.493	C	1480	1184	987	846	740	658	592	538	493	455	423		
	19-P-2	12.1		D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584		
	19-W-4	7.2		U	1421	909	632	464	355	281	227	188	158	135	116	89	70
1-1/2" x 1/8"	19-W-2	7.7		D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
	19-P-4	7.9	0.474	C	1421	1137	947	812	711	632	568	517	474	437	406	355	316
	19-P-2	9.2		D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
	19-W-4	10.5		U	2132	1364	947	696	533	421	341	282	237	202	174	133	105
1-1/2" x 3/16"	19-W-2	11.2		D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
	19-P-4	11.8	0.711	C	2132	1705	1421	1218	1066	947	853	775	711	656	609	533	474
	19-P-2	13.8		D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
	19-W-4	12.2		U	2901	1857	1289	947	725	573	464	384	322	275	237	181	143
1-3/4" x 3/16"	19-W-2	12.8		D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
	19-P-4	13.5	0.967	C	2901	2321	1934	1658	1451	1289	1161	1055	967	893	829	725	645
	19-P-2	15.4		D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
	19-W-4	13.9		U	3789	2425	1684	1237	947	749	606	501	421	359	309	237	187
2" x 3/16"	19-W-2	14.5		D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
	19-P-4	15.2	1.263	C	3789	3032	2526	2165	1895	1684	1516	1378	1263	1166	1083	947	842
	19-P-2	17.1		D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
	19-W-4	15.5		U	4796	3069	2132	1566	1199	947	767	634	533	454	392	300	237
2-1/4" x 3/16"	19-W-2	16.1		D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670
	19-P-4	16.8	1.599	C	4796	3837	3197	2741	2398	2132	1918	1744	1599	1476	1370	1199	1066
	19-P-2	18.7		D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536
	19-W-4	17.2		U	5921	3789	2632	1933	1480	1170	947	783	658	561	483	370	292
2-1/2" x 3/16"	19-W-2	17.8		D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
	19-P-4	18.5	1.974	C	5921	4737	3947	3383	2961	2632	2368	2153	1974	1822	1692	1480	1316
	19-P-2	20.4		D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483

W/P-19 PANEL WIDTH (inches) Note: P-Press-Locked cross bars typically extend 1/8" each side. W-Welded cross rods may extend 1/8" each side. Panel widths do not include these extensions.

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/8" Bar	1 5/16	2 1/2	3 11/16	4 7/8	6 1/16	7 1/4	8 7/16	9 5/8	10 13/16	12	13 3/16	14 3/8	15 9/16	16 3/4	17 15/16
3/16" Bar	1 3/8	2 9/16	3 3/4	4 15/16	6 1/8	7 5/16	8 1/2	9 11/16	10 7/8	12 1/16	13 1/4	14 7/16	15 5/8	16 13/16	18
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/8" Bar	19 1/8	20 5/16	21 1/2	22 11/16	23 7/8	25 1/16	26 1/4	27 7/16	28 5/8	29 13/16	31	32 3/16	33 3/8	34 9/16	35 3/4
3/16" Bar	19 3/16	20 3/8	21 9/16	22 3/4	23 15/16	25 1/8	26 5/16	27 1/2	28 11/16	29 7/8	31 1/16	32 1/4	33 7/16	34 5/8	35 13/16

MILLER
CONSULTING
ENGINEERS

1

FIRE ESCAPE LOAD TEST PROCEDURE

Hamilton Building
529 SW 3rd., Portland, Oregon
Chesapeake Holdings Logan, LLC

November 21, 2011
Project No. 110828
17 pages

Principal Checked: AR

MILLER CONSULTING ENGINEERS, INC.

***** LIMITATIONS *****
ENGINEER WAS RETAINED IN A LIMITED CAPACITY FOR THIS PROJECT.
DESIGN IS BASED UPON INFORMATION PROVIDED BY THE CLIENT,
WHO IS SOLELY RESPONSIBLE FOR ACCURACY OF SAME.
NO RESPONSIBILITY AND / OR LIABILITY IS ASSUMED BY,
OR IS TO BE ASSIGNED TO THE ENGINEER FOR ITEMS
BEYOND THAT SHOWN ON THESE SHEETS.

9570 SW BARBUR, #100
PORTLAND, OR 97219
PHONE (503) 246-1250
FAX (503) 246-1395

12-139408-FA

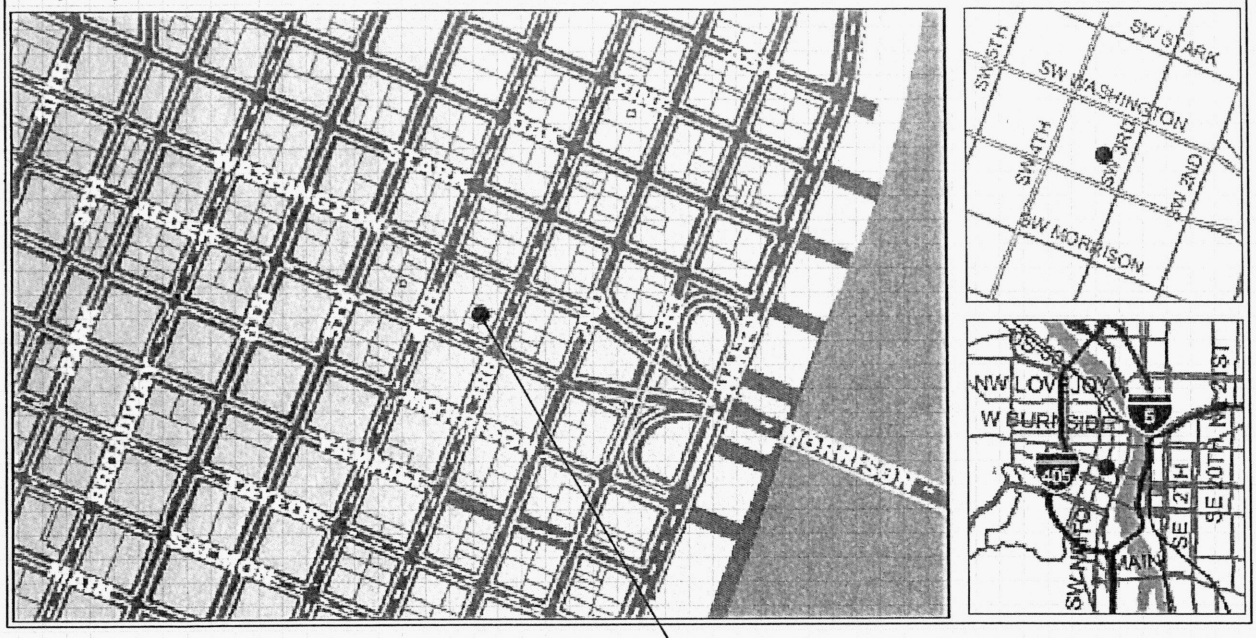
Fire Escape Testing Criteria
Hamilton Building

The following is the testing criteria for the exterior Fire Escape at the Hamilton Building located at 529 SW 3rd, Portland, Oregon. The intent of the testing criteria is to verify that deterioration of the original fire escape assembly has not caused a decrease in the load carrying capacity of the structural members. Therefore, many of the following test loads are based on the original design capacity of the fire escape members as described in the City of Portland's "Specifications for Construction of Fire Escapes" (Section 479.040). The original member capacities have been determined based on an assumed steel yield strength of 30 ksi.

1. Prior to beginning the tests, the testing agency shall familiarize themselves with all of the following procedures and diagrams. It is recommended that the tests be conducted in the order which they are labeled (Test #1 – Test #11).
2. Fireman's ladders shall support a total test vertical load equal to 2,400 lbs. The test load may be applied to the bottom of the ladder or uniformly loaded along the entire height, but the entire load must be applied at one time. This test load is based on (8) 300 lb firemen on the ladder simultaneously. **(See attached Test #1 Diagram)**
3. Fireman's ladder rungs shall support a test load of 500 pounds applied at the center of the ladder and a non-simultaneous 500 pound load applied at the end of the ladder rung. Three rungs shall be tested per level. The test rungs shall be randomly selected, except rungs with visible corrosion shall be selected for the test. **(See attached Test #2 Diagram)**
4. Fireman's ladders shall support a horizontal test load of 100 pounds per foot (plf) applied toward and away from the building. In order to test the connection to the structure, a minimum of two consecutive levels shall be tested simultaneously. **(See attached Test #3 Diagram)**
5. Stairway treads shall support a test load of 300 pounds applied over 3" length. Three stair treads per level shall be tested with the location of the applied load changed at each test. The tested treads shall be randomly selected, except treads with visible corrosion shall be selected for the test. **(See attached Test #4 Diagram)**
6. Fire escape stairways shall support an applied test load of 100 pounds per square foot (psf) over the effective horizontal projected area. **(See attached Test #5 Diagram)**
7. All balcony railings shall have a test load applied horizontally to the top rail. The loading shall be equivalent to the design capacity of the railing when originally constructed under Section 479.040 "Specifications for Construction of Fire Escapes" as outlined by the City of Portland. However, the load need not exceed 50 plf or a 200 lb concentrated load (whichever creates the maximum stress). The rail loading shall be determined by the E.O.R. **(See attached Test #6 and Test #7 Diagrams)**

8. All stairway railings shall have a test load applied horizontally to the top rail. The loading shall be equivalent to the design capacity of the railing when originally constructed under Section 479.040 "Specifications for Construction of Fire Escapes" as outlined by the City of Portland. However, the load need not exceed 50 plf or a 200 lb concentrated load (whichever creates the maximum stress). The rail loading shall be determined by the E.O.R. **(See attached Test #8 and Test #9 Diagrams)**
9. Fire escape landings shall support a test load of 300 pounds applied over a 2"x2" area. The concentrated loads shall be placed at locations that produce the maximum stress on the landing bar grates and shall be identified by the E.O.R. **(See attached Test #10 Diagram)**
10. Fire escape landings shall support a test load of 100 psf applied uniformly over the walkable area of the landing. An additional load shall be applied at the location of the stairway that is equivalent to one half of the horizontal projected area of the stairway multiplied by 100 psf. It is the option of the testing agency whether to load test all of the landings simultaneously or disconnect the components interconnecting the landings and test each landing individually. **(See attached Test #11 Procedure and Diagrams)**
11. All test loading shall be monitored using load cells, and the test shall be considered to pass the criteria if the load cell reading increases linearly with the applied load up to the specified test loading. The test load must then be held for the specified duration without applying additional force. If the tested element can not hold the required loading for the specified duration, the E.O.R. shall be contacted in order to develop details to reinforce the failing element(s). In addition, if permanent deformation of any member is observed, the test is considered to have failed.
12. It is recommended that the contractor and/or testing agency conducting the load test provide a means for preventing collapse of the fire escape and its supporting members during the load test.
13. If the testing agency performing the load test is certified by the City of Portland, the E.O.R. is not required to be present during the load testing. However, if the testing agency is not certified by the City of Portland, the E.O.R. is required to observe the load testing being performed. It is the responsibility of the testing agency to contact the E.O.R. prior to load testing being performed.

Property & Location



529 SW 3RD AVENUE
PORTLAND, OREGON

N

VICINITY MAP/SITE PLAN

N.T.S.

MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

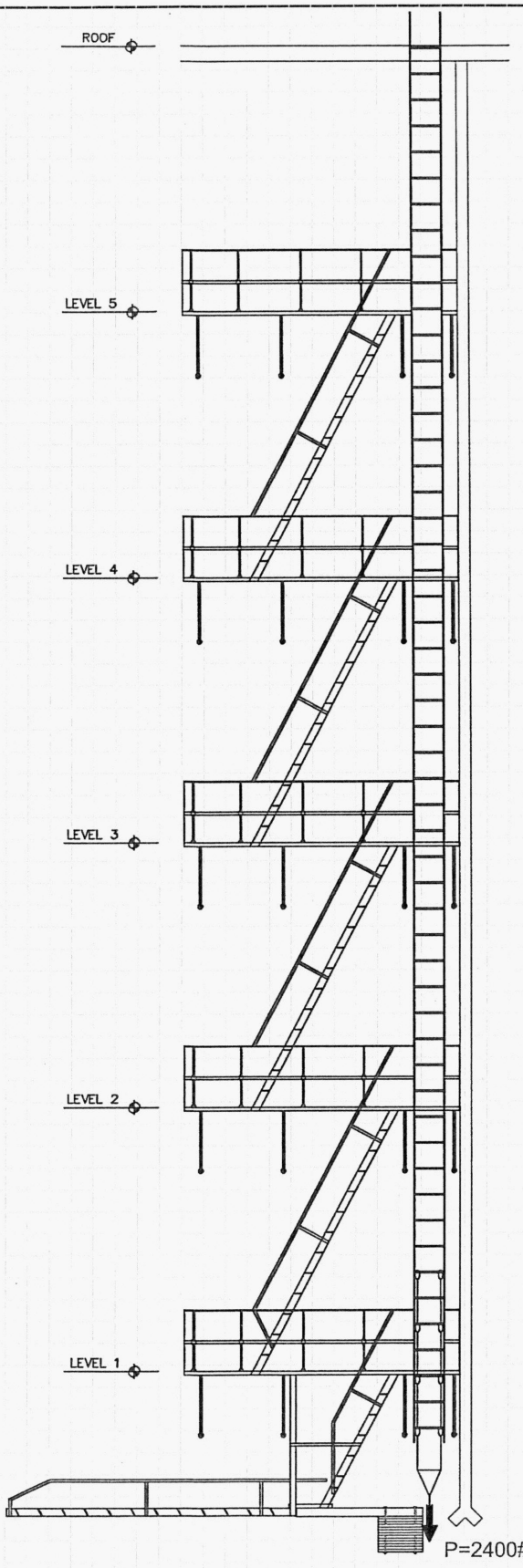
(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/18/11 Page 3 of 17



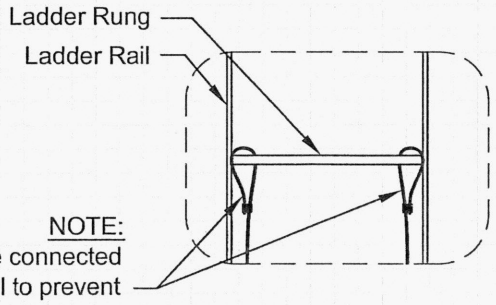
TEST #1 - FIREMAN'S LADDER VERTICAL LOADING

1. Loop cables around a minimum of (4) ladder rungs as shown, placing cables adjacent to the ladder rail and connect to rail.

2. Load cables equally to a total load = 2,400 lbs

3. Hold load for (10) minutes

4. Load is equivalent to (8) 300 lb people on ladder simultaneously.



NOTE:
Cables to be connected to ladder rail to prevent cables from slipping to the center of the rungs

MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

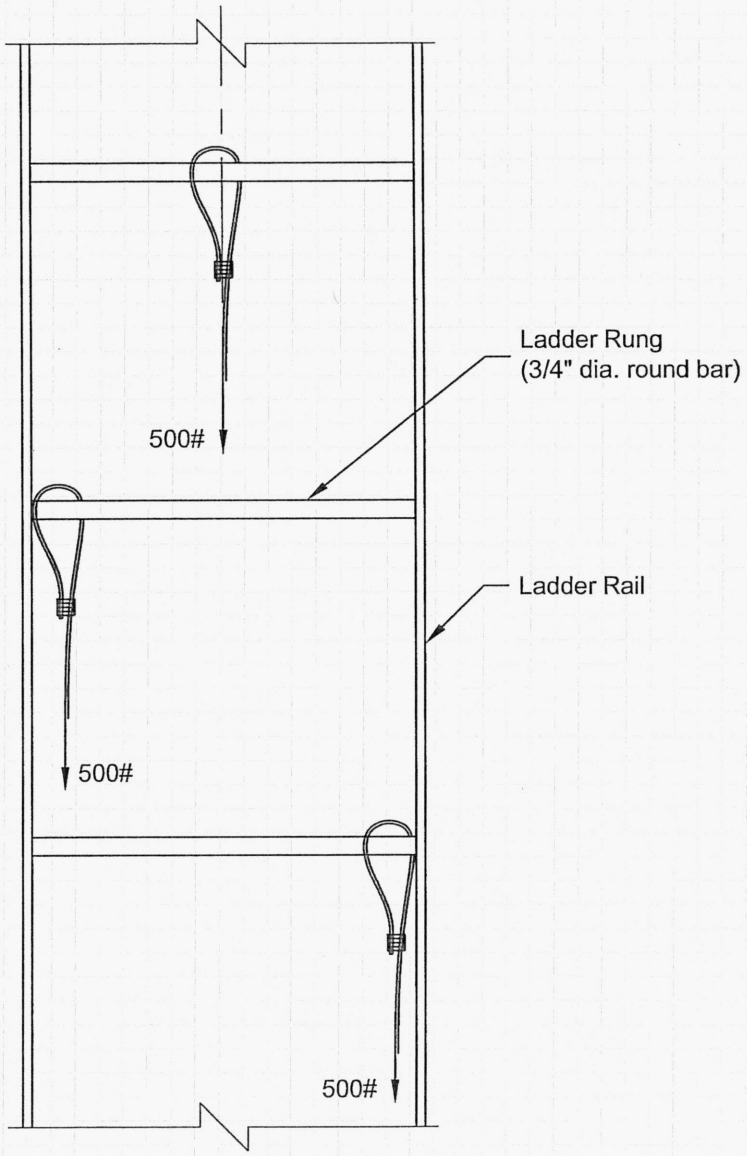
Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/21/11 Page 4 of 17

TEST #2 - FIREMAN'S LADDER RUNGS

1. Test (3) Ladder Rungs per level. Tested rungs to be randomly selected, except rungs with visible corrosion shall be selected for the test.

2. Hold load for (2) minutes



MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

Client Chesapeake Holdings Logan, LLC

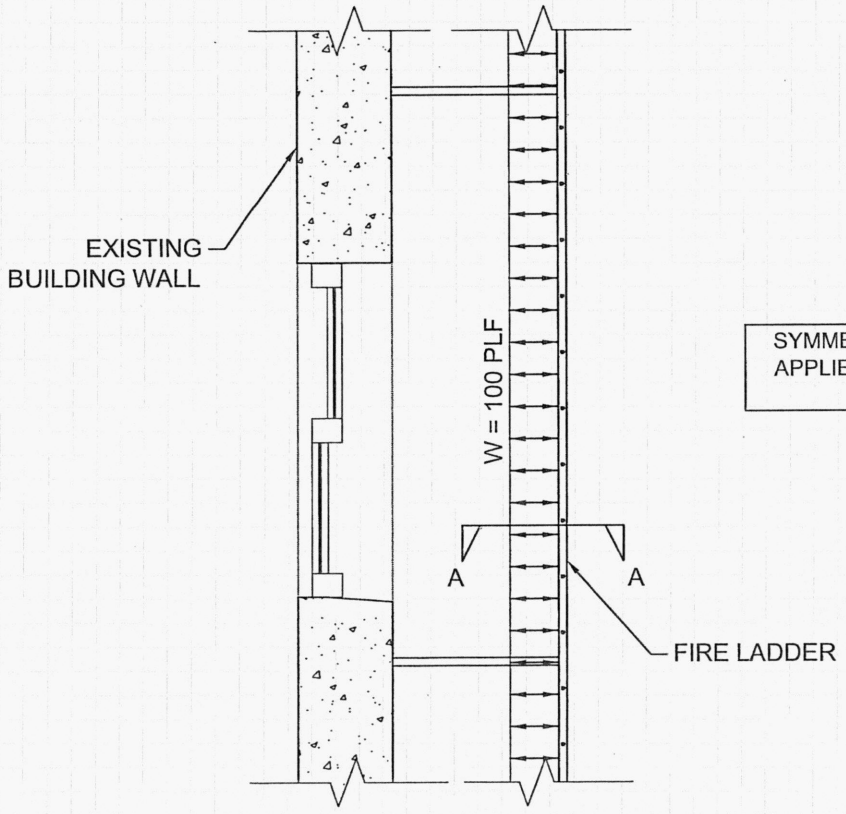
By CMR Ck'd ARL Date 11/18/11 Page 5 of 17

TEST #3 - FIREMAN'S LADDER OUT-OF-PLANE LOADING

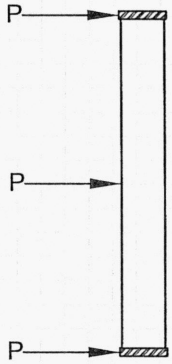
1. TEST LADDER BETWEEN (2) CONSECUTIVE LEVELS CONCURRENTLY.

2. HOLD LOAD FOR (10) MINUTES.

3. REPEAT TEST FOR OPPOSITE LOAD DIRECTION.



SYMMETRIC LOAD MAY BE APPLIED TO EITHER RAILS OR RUNG



SECTION A-A

MILLER CONSULTING ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

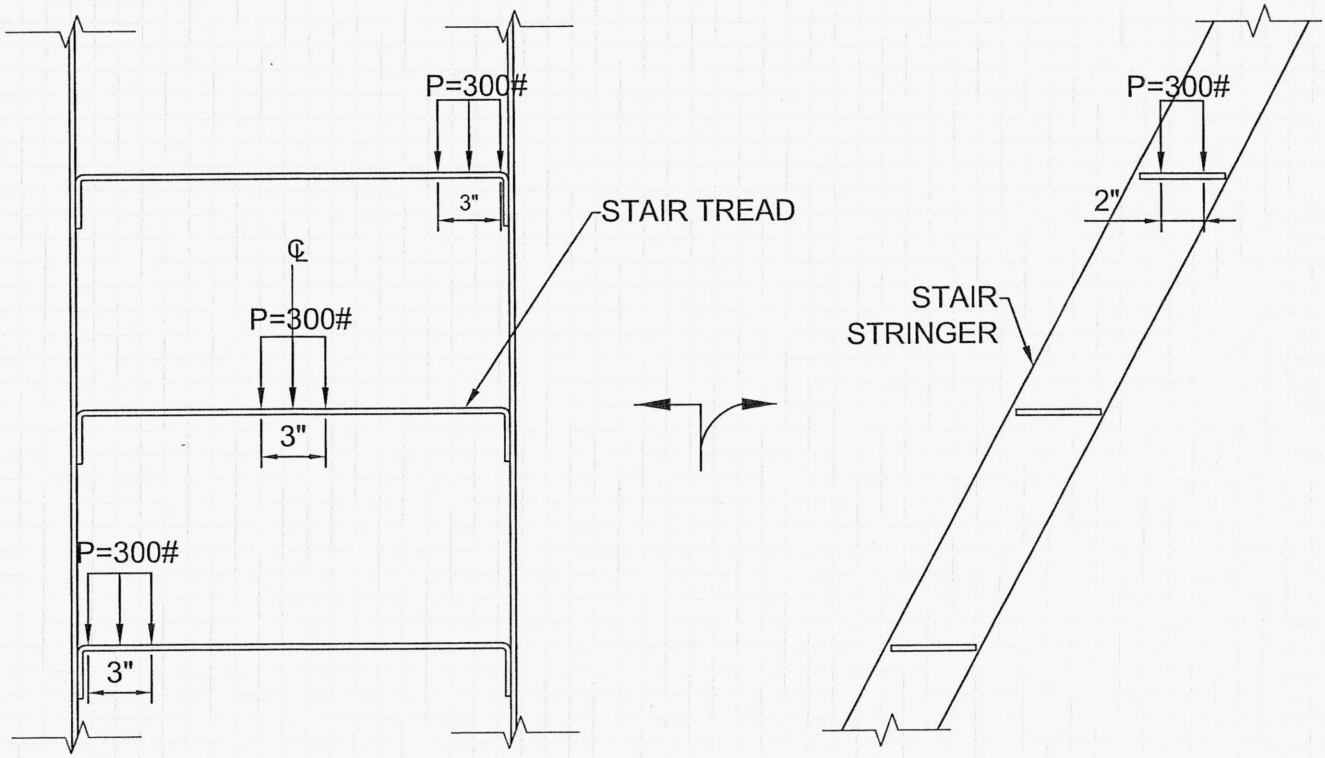
Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/18/11 Page 6 of 17

TEST #4 - STAIR CONCENTRATED LOAD

1. TEST (3) TREADS PER LEVEL. THE TESTED TREADS SHALL BE RANDOMLY SELECTED BY THE TESTING AGENCY, EXCEPT TREADS WITH VISIBLE CORROSION SHALL BE SELECTED FOR THE TEST.

2. HOLD LOAD FOR (2) MINUTES.



MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/18/11 Page 7 of 17

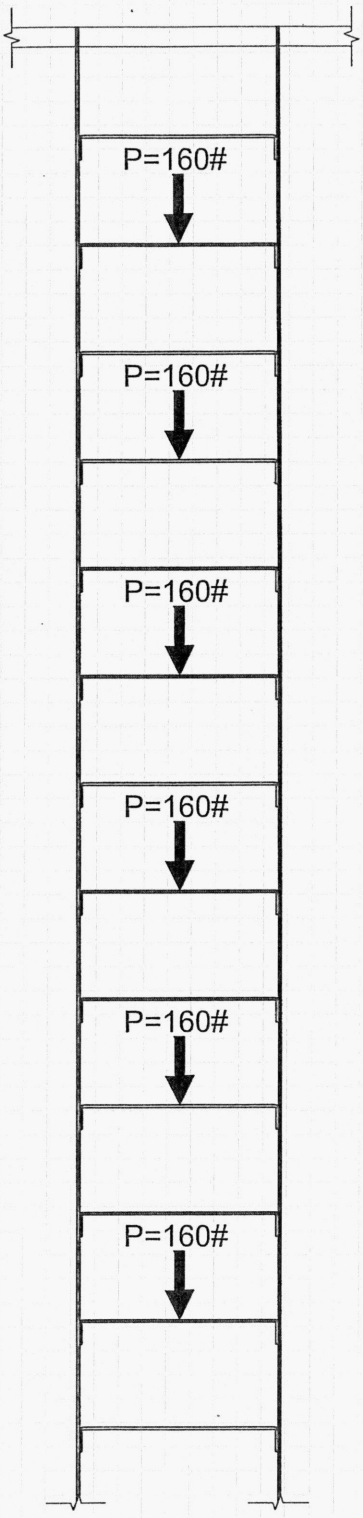
TEST #5 - STAIRWAY VERTICAL LOADING

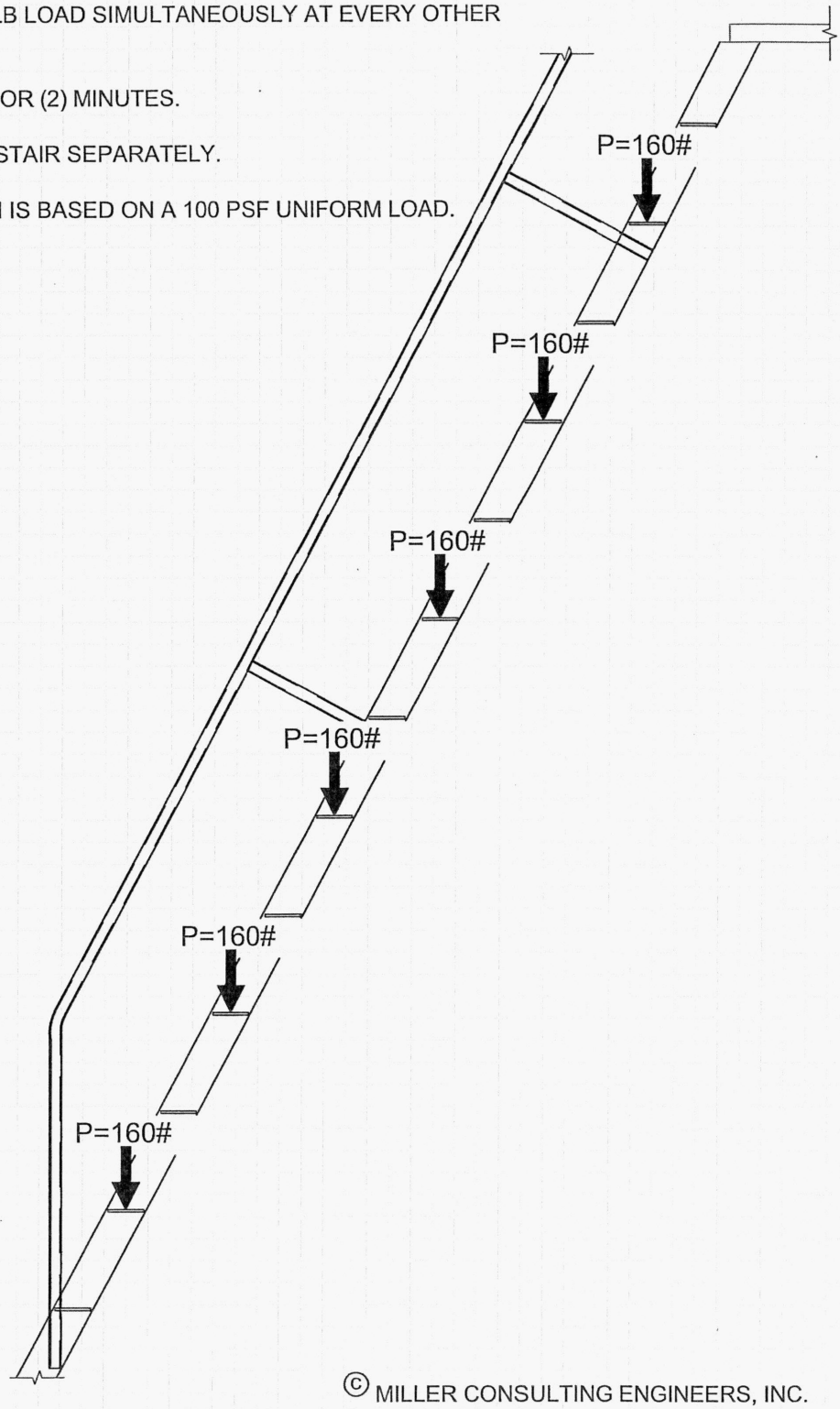
1. APPLY A 160 LB LOAD SIMULTANEOUSLY AT EVERY OTHER STAIR TREAD

2. HOLD LOAD FOR (2) MINUTES.

3. TEST EVERY STAIR SEPARATELY.

4. LOAD SHOWN IS BASED ON A 100 PSF UNIFORM LOAD.





MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

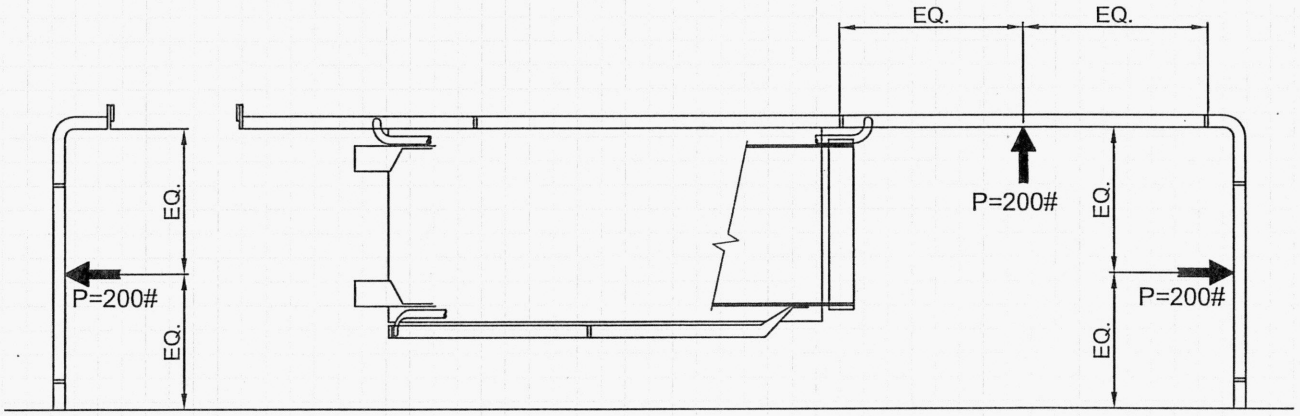
Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/18/11 Page 8 of 17

TEST #6 - TYPICAL LANDING GUARDRAIL LOADING

1. APPLY LOADING SHOWN TO THE TOP RAIL. LOADS ARE NOT REQUIRED TO BE APPLIED SIMULTANEOUSLY.

2. HOLD EACH LOAD FOR (2) MINUTES.



FIRE ESCAPE

MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

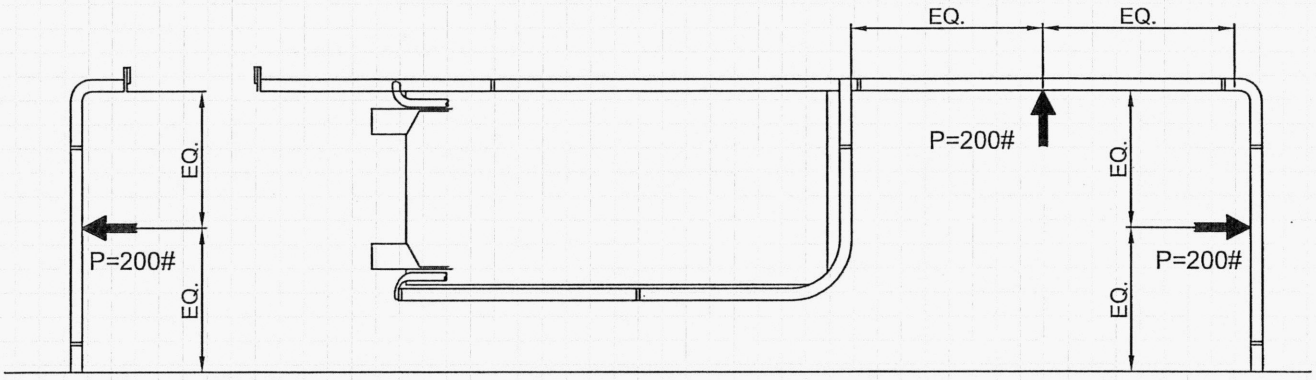
Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/21/11 Page 9 of 17

TEST #7 - TOP LANDING GUARDRAIL LOADING

1. APPLY LOADING SHOWN TO THE TOP RAIL. LOADS ARE NOT REQUIRED TO BE APPLIED SIMULTANEOUSLY.

2. HOLD EACH LOAD FOR (2) MINUTES.



FIRE ESCAPE

MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

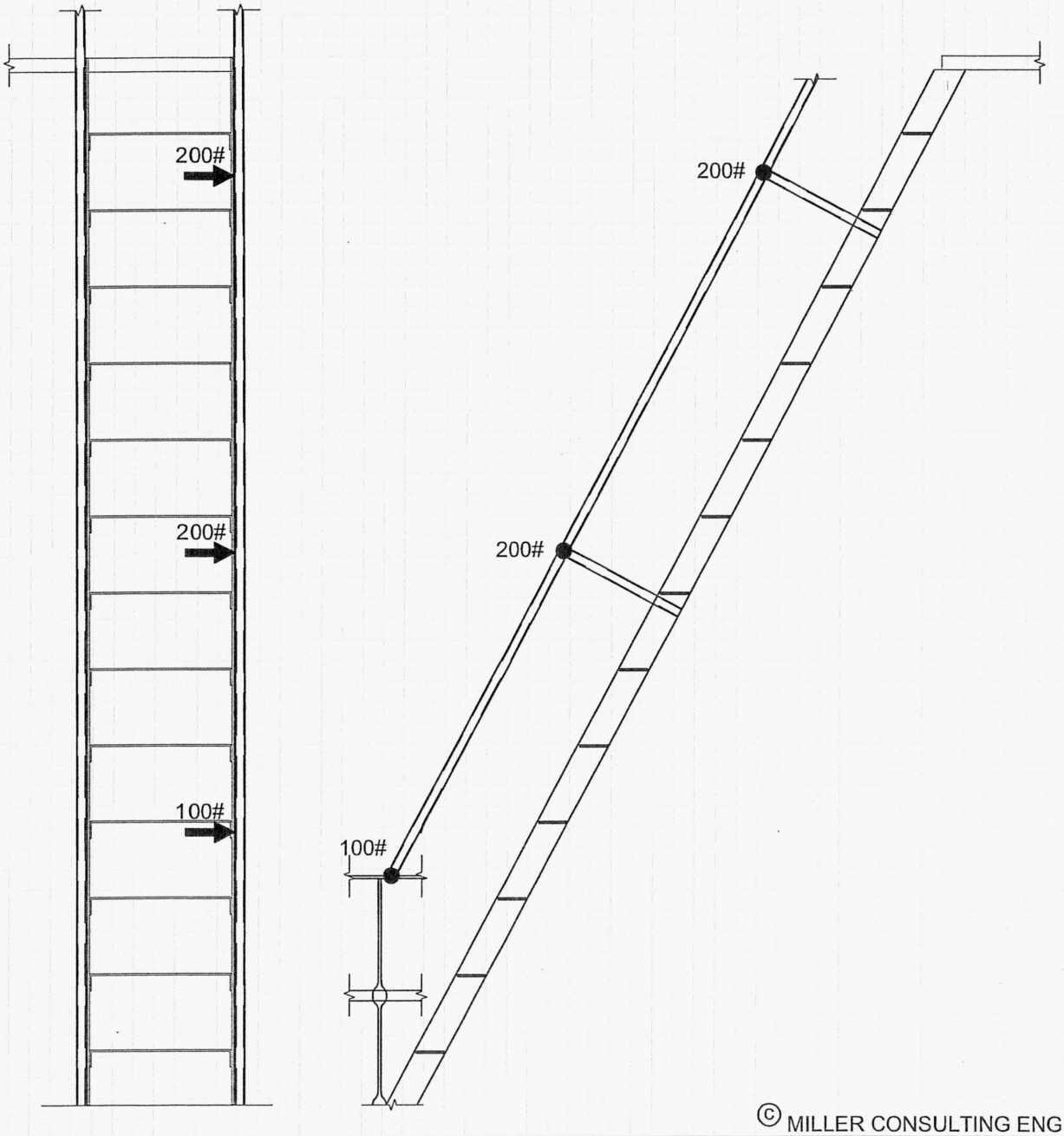
Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/21/11 Page 10 of 17

TEST #8 - EXTERIOR STAIR RAIL LOADING

1. APPLY POINT LOADS SHOWN SIMULTANEOUSLY TO THE TOP STAIR RAIL. THE LOAD DIRECTION TO BE OUTWARD WHEN STANDING ON THE STAIRWAY.

2. HOLD LOAD FOR (2) MINUTES.



MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

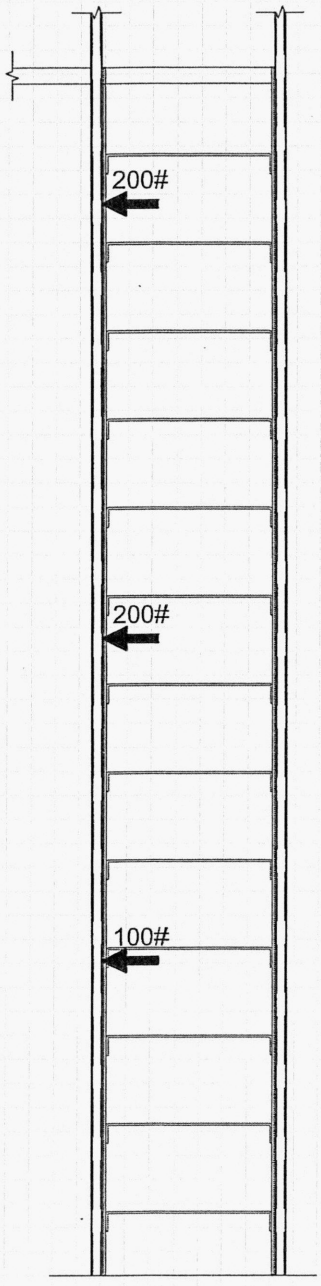
Client Chesapeake Holdings Logan, LLC

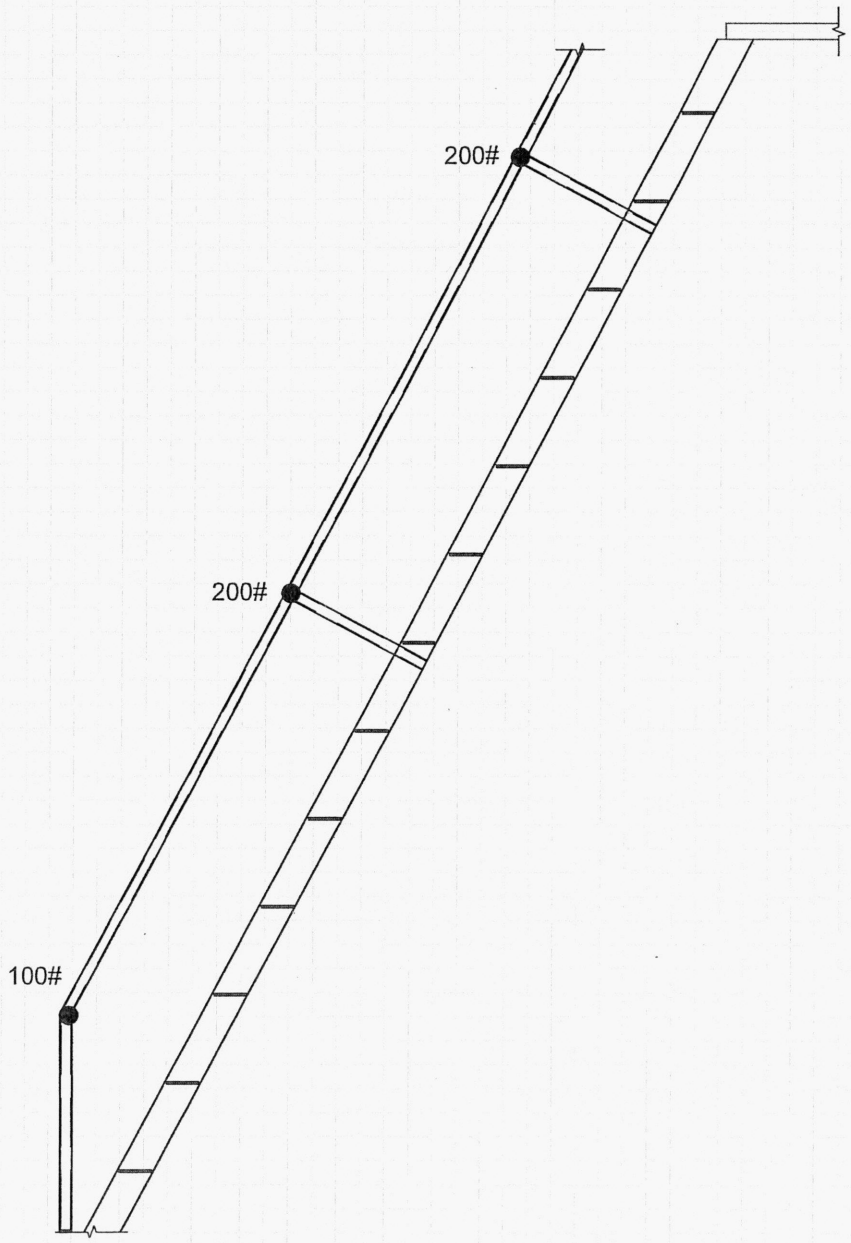
By CMR Ck'd AEL Date 11/18/11 Page 11 of 17

TEST #9 - INTERIOR STAIR RAIL LOADING

1. APPLY POINT LOADS SHOWN SIMULTANEOUSLY TO THE TOP STAIR RAIL. THE LOAD DIRECTION TO BE OUTWARD WHEN STANDING ON THE STAIRWAY.

2. HOLD LOAD FOR (2) MINUTES.





MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

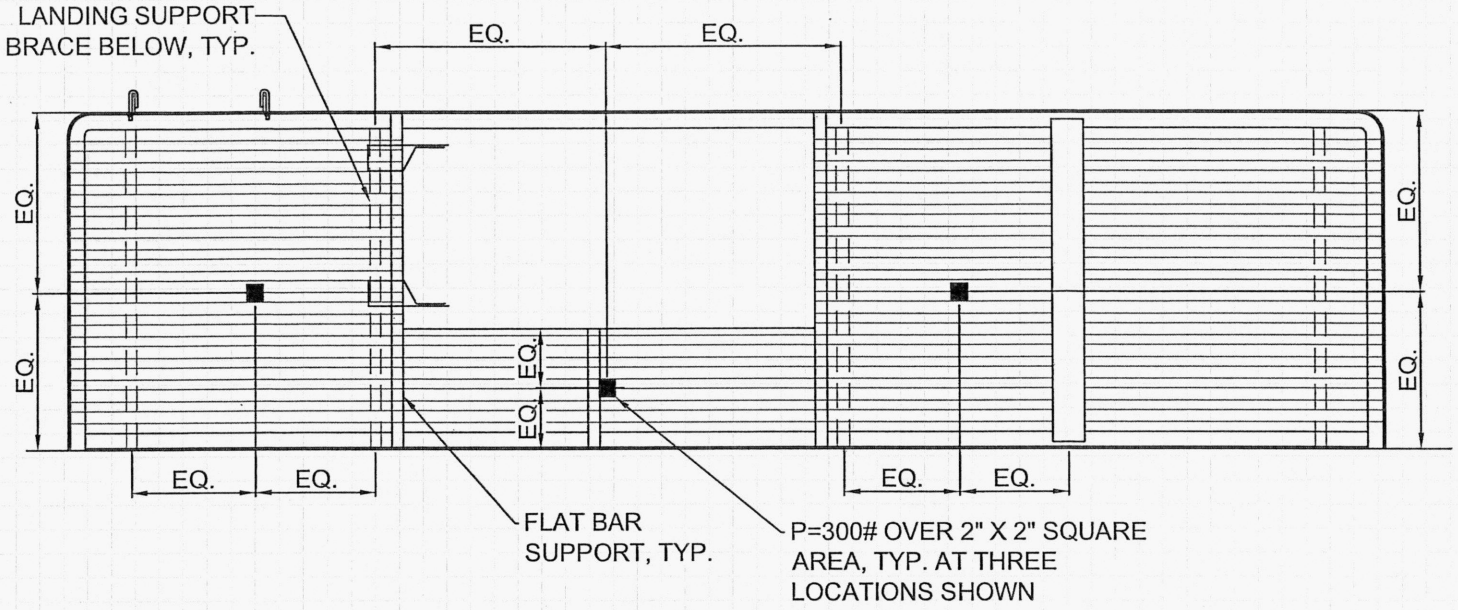
Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/18/11 Page 12 of 17

TEST #10 - CONCENTRATED LOAD ON LANDING

1. LOADS SHOWN ARE NOT REQUIRED TO BE APPLIED SIMULTANEOUSLY.

2. HOLD EACH LOAD FOR (2) MINUTES.



FIRE ESCAPE

MILLER CONSULTING ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/18/11 Page 13 of 17

PROCEDURE FOR TEST #11 - UNIFORM LOADING ON LANDINGS

It is the option of the testing agency to select either Procedure A or Procedure B below.

Procedure A

1. It is recommended that the contractor and/or testing agency conducting the load test provide a means for preventing collapse of the fire escape and its supporting members during the load test.

2. Place 6x10 spreader beams in locations shown on all landings (reference the following load diagrams).

3. Place load on spreader beams in locations shown.

4. Apply all loads to all levels simultaneously.

5. Hold load for (10) minutes.

6. Loads shown are based on a 100 psf uniform load.

Procedure B

1. It is recommended that the contractor and/or testing agency conducting the load test provide a means for preventing collapse of the fire escape and its supporting members during the load test.

2. Interconnectiong elements between all levels must be disconnected prior to application of load (reference steps 1-5 below)

For all levels follow the following procedure prior to application of load (reference attached Diagram #1 and Diagram #2 for a pictorial description of steps listed below):

1. Loosen U-bolt connecting stand pipe to landing.

2. Loosen U-bolts connecting fireman's ladder to landing.

3. Detach guardrail from fireman's ladder.

4. Detach stair rail from guardrail.

5. Detach stair from landing.

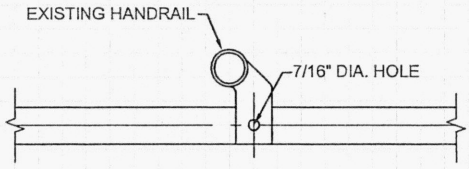
6. Place 6x10 spreader beams onto one landing at locations shown (reference the following load diagrams).

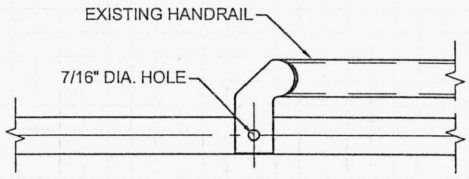
7. Apply loads shown simultaneously to the individual level being tested.

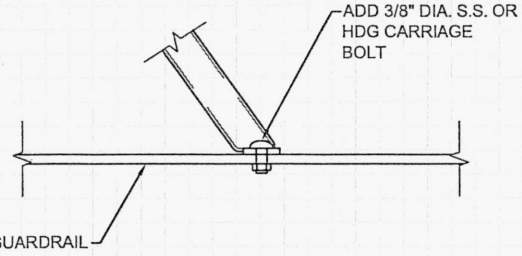
8. Hold load for (10) minutes.

9. After test has concluded, reattach items that were removed or loosened in steps 1-5. See details 'A' and 'B' on diagram #1 for reconnecting the handrails using bolts as an alternate to welding.

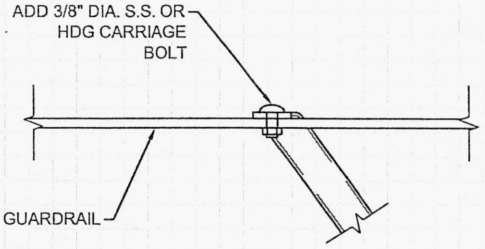
10. Repeat steps 1-9 for the next landing above until all landings have been tested.



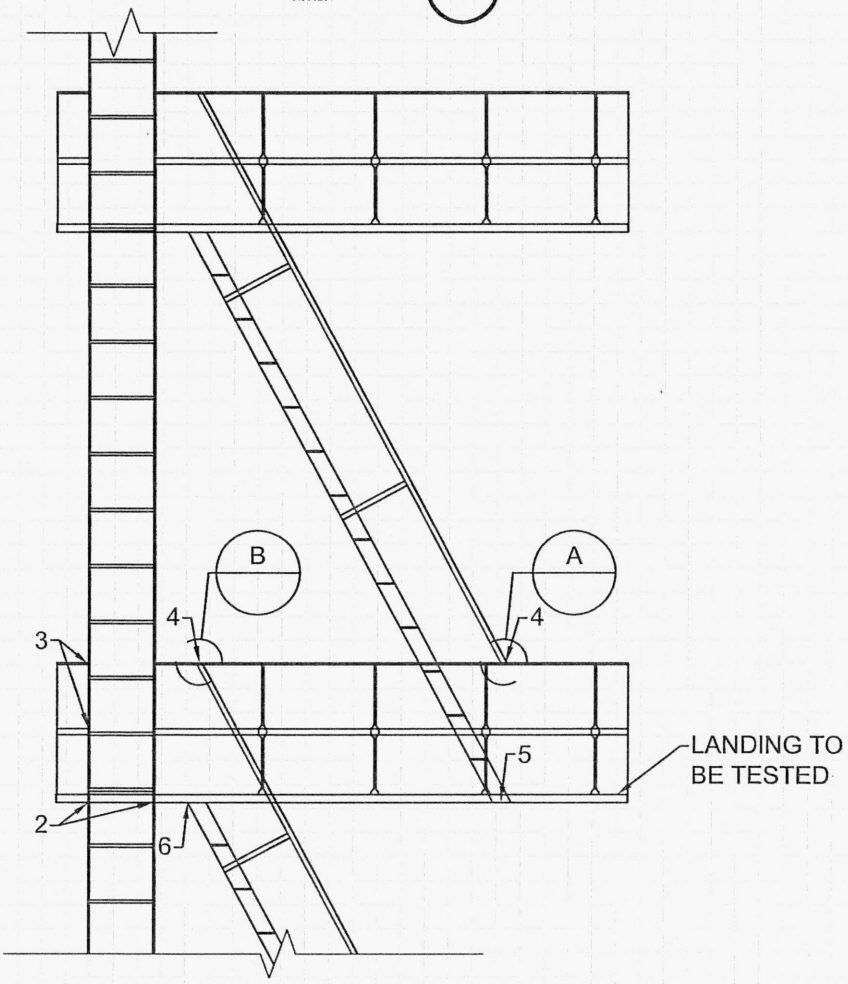




A RE-CONNECTING HANDRAIL N.T.S.



B RE-CONNECTING HANDRAIL N.T.S.



PROCEDURE B - TEST #11
DIAGRAM #1 - ELEVATION

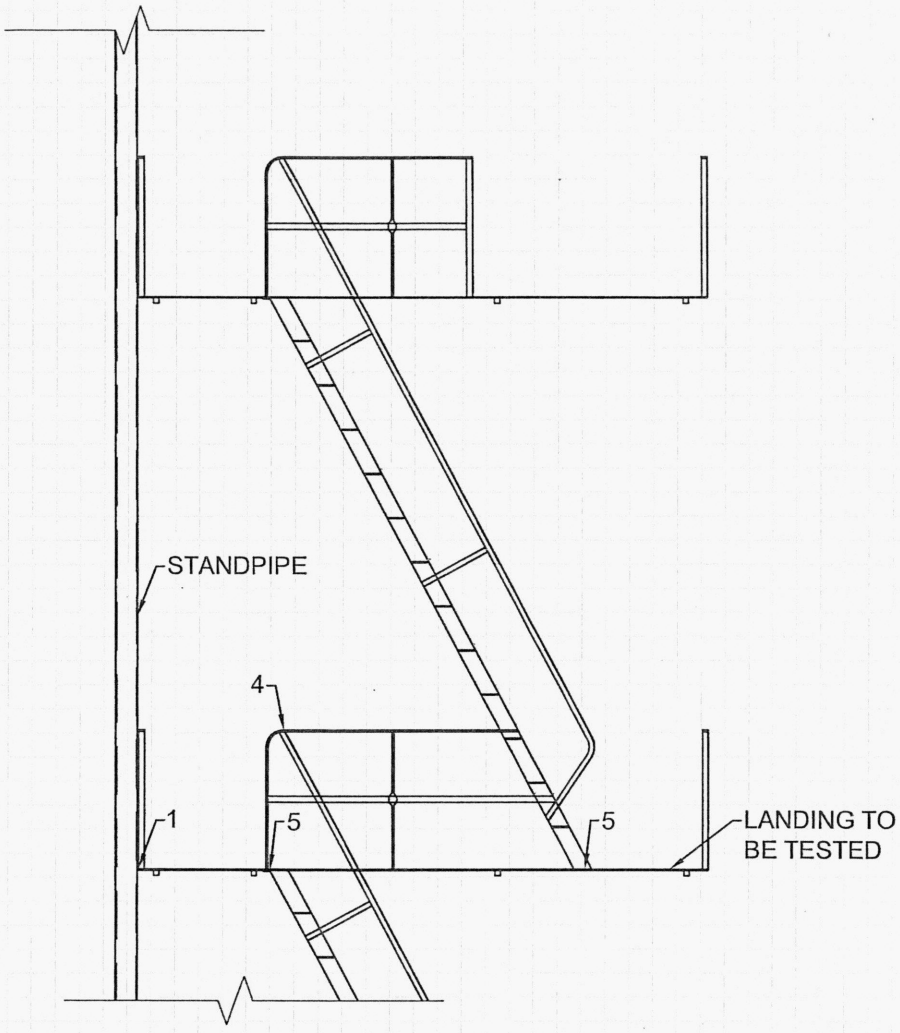
MILLER CONSULTING ENGINEERS
9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412
(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

Location 529 SW 3rd Ave., Portland, Oregon

Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/18/11 Page 15 of 17



PROCEDURE B - TEST #11
DIAGRAM #2 - SECTION THROUGH STAIRS

MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412

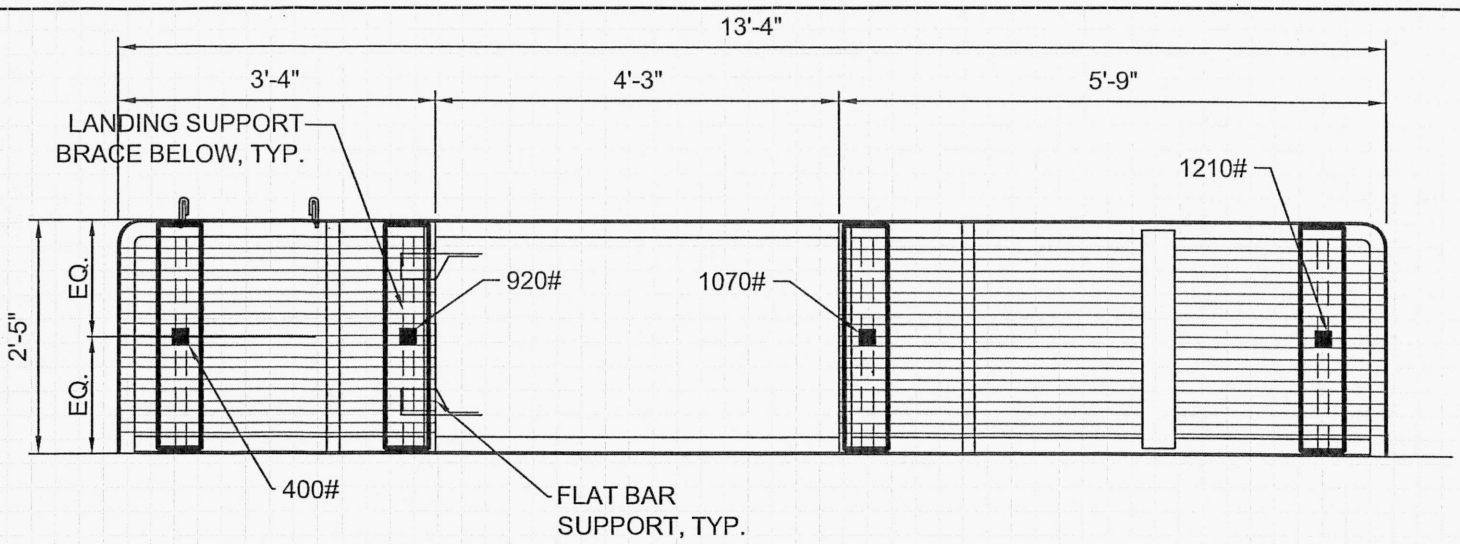
(503)246-1250
Fax: 246-1395

Project Name The Hamilton Building Fire Escape Evaluation Project # 110828

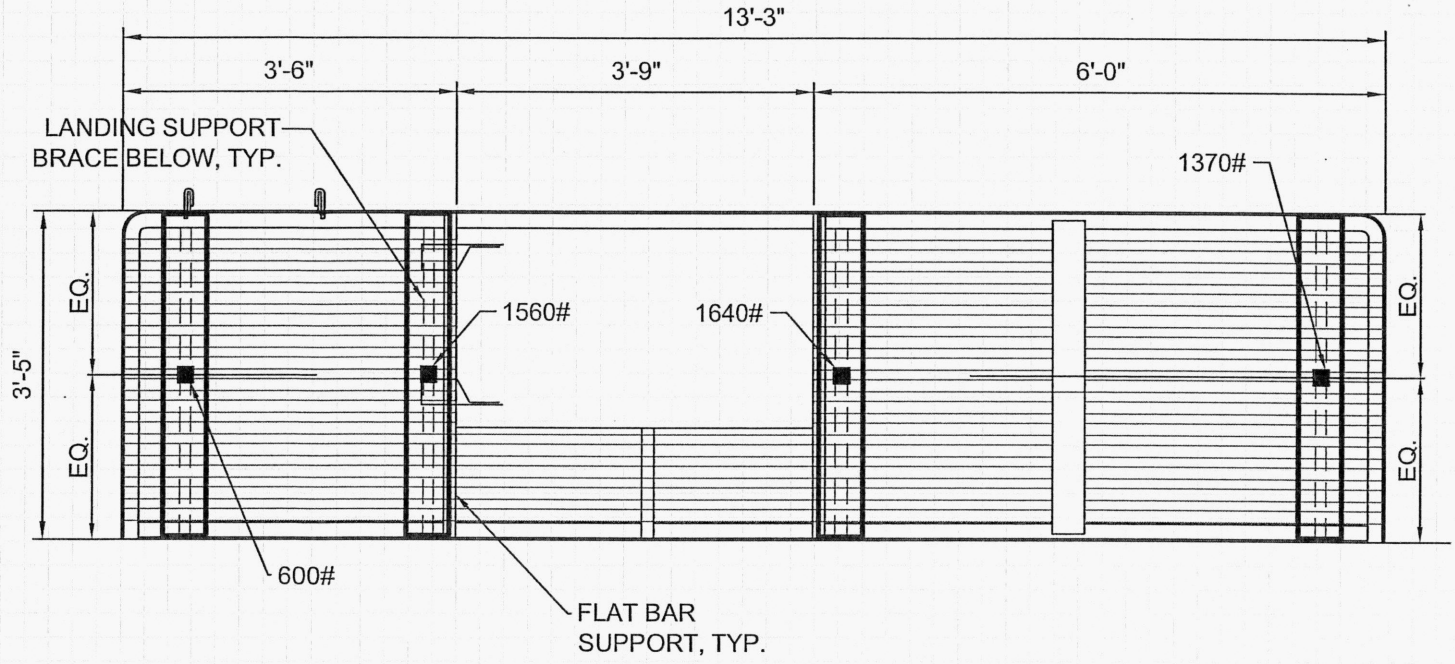
Location 529 SW 3rd Ave., Portland, Oregon

Client Chesapeake Holdings Logan, LLC

By CMR Ck'd ARL Date 11/18/11 Page 16 of 17



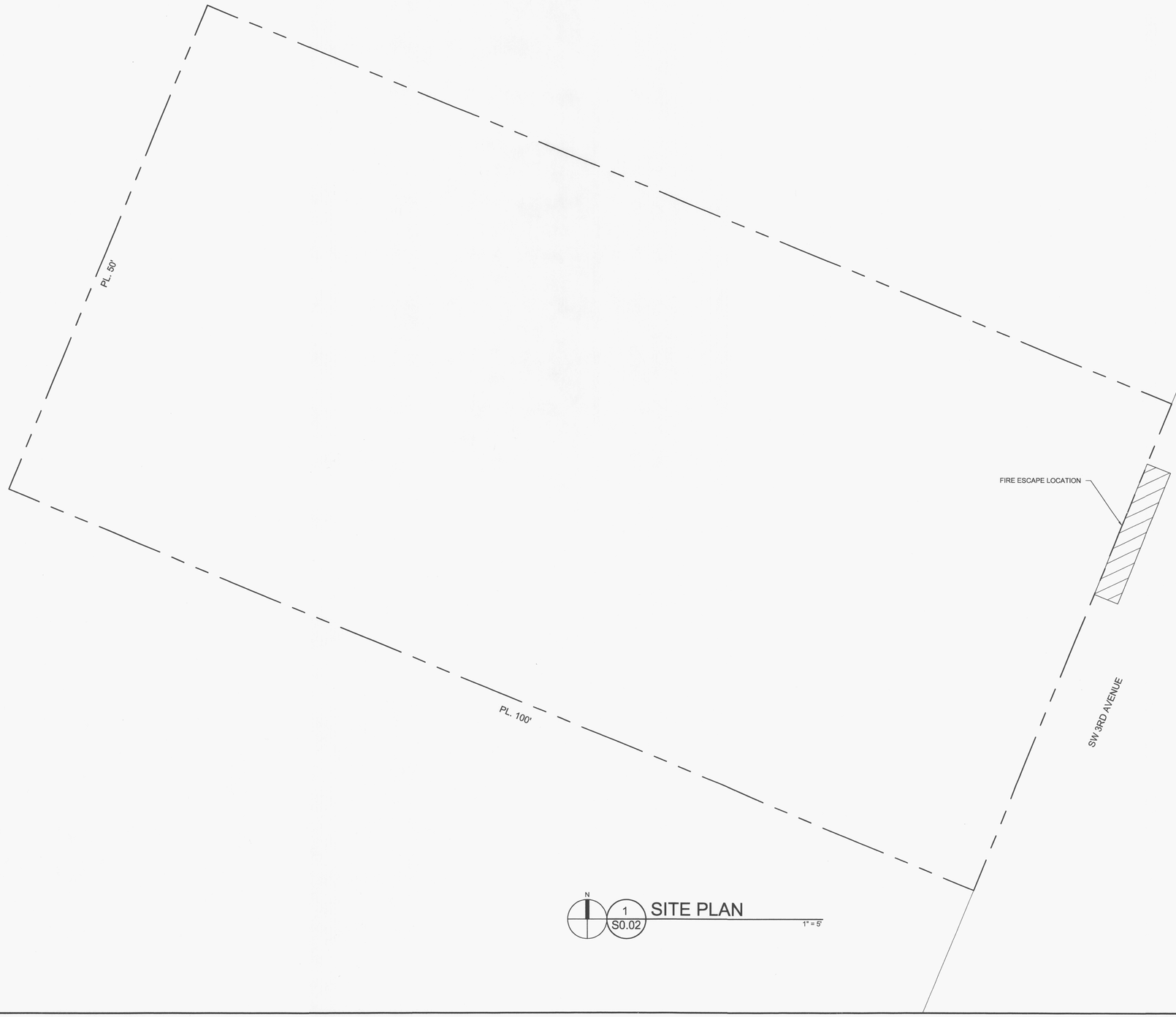
FIRE ESCAPE - LEVEL 1



FIRE ESCAPE - TYPICAL

TEST #11 - UNIFORM LOAD ON LANDINGS (SEE PROCEDURE ON PG. 10)

MILLER CONSULTING ENGINEERS
9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219-5412
(503)246-1250
Fax: 246-1395



N

1 / S0.02 SITE PLAN

1" = 5'

LINE IS 2 INCHES AT FULL SCALE

(IF NOT 2" - SCALE ACCORDINGLY)

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER
65401PE
OREGON
June 29, 2011
ANDREW RYAN LEICHTY
EXPIRES: 12-31-2012

MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219
Phone 503.246.1250
Fax 503.246.1395
www.miller-se.com

FIRE ESCAPE REPAIR

HAMILTON BUILDING
CHESAPEAKE HOLDINGS LOGAN, LLC

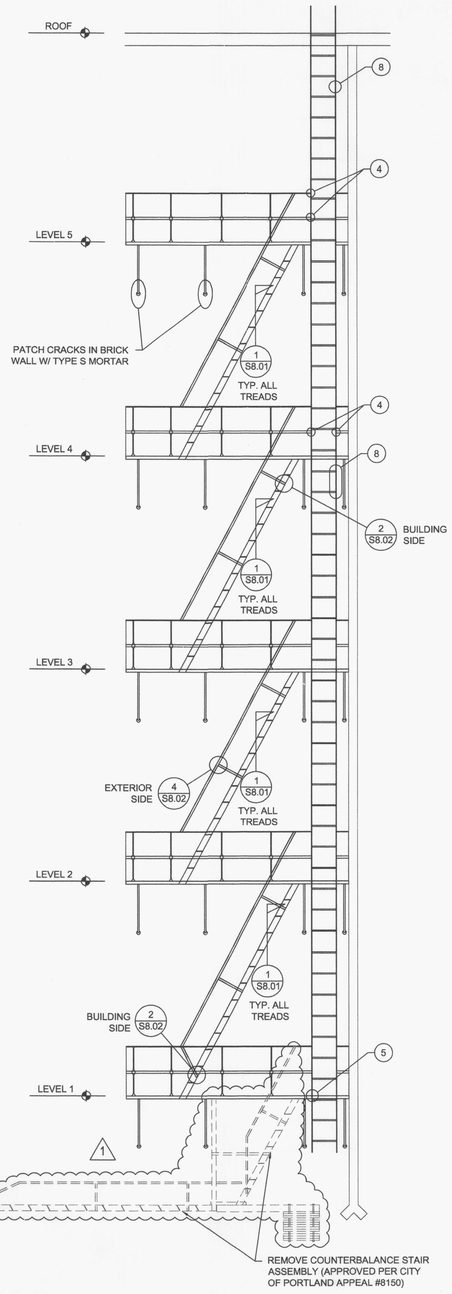
528 SW 3RD AVENUE
PORTLAND, OREGON

DRAWN BY:	BCH
CHECKED BY:	AEL
PROJECT NO:	110828
ISSUE DATE:	11.17.11

REV.	DATE	DESCRIPTION

SHEET CONTENT
SITE PLAN

SHEET
S0.02



1 S3.01 FIRE ESCAPE EXTERIOR ELEVATION

1/4" = 1'-0"

KEYNOTES: (NOT ALL KEYNOTES MAY APPLY)

1. REPAIR RUST DAMAGE TO (E) ANGLE -SEE DETAIL 2/S8.01.
2. REPAIR RUST DAMAGE AT (E) CONNECTIONS -BUILD UP CORRODED STEEL W/ WELD METAL AND REPLACE ALL FASTENERS W/ H.D.G. BOLTS OF SAME DIAMETER.
3. DISASSEMBLE GUARDRAIL POST BASE CONNECTION, REMOVE ALL RUST, AND PREP, PRIME AND PAINT BEFORE RE-ASSEMBLING CONNECTION W/ (N) H.D.G. BOLT OF SAME DIAMETER.
4. DISASSEMBLE CONNECTION OF GUARDRAIL TO LADDER, REMOVE ALL RUST, AND PREP, PRIME AND PAINT BEFORE REASSEMBLING CONNECTION W/ (N) H.D.G. BOLT.
5. REMOVE U-BOLT FROM LADDER TO (E) EDGE ANGLE TO ALLOW FOR CLEANING/PAINTING OF CONNECTION. REINSTALL U-BOLT AFTER PAINTING.
6. DISASSEMBLE GUARDRAIL POST MID-RAIL CONNECTION, REMOVE ALL RUST, AND PREP, PRIME AND PAINT BEFORE RE-ASSEMBLING CONNECTION W/ (N) H.D.G. BOLT OF SAME DIAMETER.
7. DISASSEMBLE GUARDRAIL POST TOP-RAIL CONNECTION, REMOVE ALL RUST, AND PREP, PRIME AND PAINT BEFORE RE-ASSEMBLING CONNECTION W/ (N) H.D.G. BOLT OF SAME DIAMETER.
8. DISASSEMBLE LADDER SPLICE CONNECTION, REMOVE ALL RUST, AND PREP, PRIME AND PAINT BEFORE REASSEMBLING CONN. W/ (N) H.D.G. BOLT.
9. REMOVE WELD FROM HANDRAIL TO GUARDRAIL. REPLACE W/ 3/8" DIA. H.D.G. CARRIAGE BOLT.

LINE IS 2 INCHES AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 65401PE OREGON June 29, 2011 ANDREW RYAN LEIGHEY
EXPIRES: 12-31-2012

MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219
Phone 503.246.1250
Fax 503.246.1395
www.miller-se.com

FIRE ESCAPE REPAIR

HAMILTON BUILDING
CHESAPEAKE HOLDINGS LOGAN, LLC

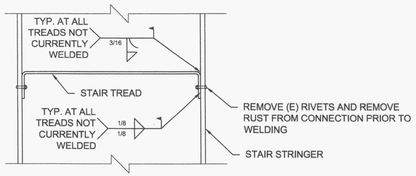
529 SW 3RD AVENUE
PORTLAND, OREGON

DRAWN BY: BCH
CHECKED BY: ARL
PROJECT NO: 110828
ISSUE DATE: 11.17.11

REV.	DATE	DESCRIPTION
1	01.05.12	REMOVED STAIR

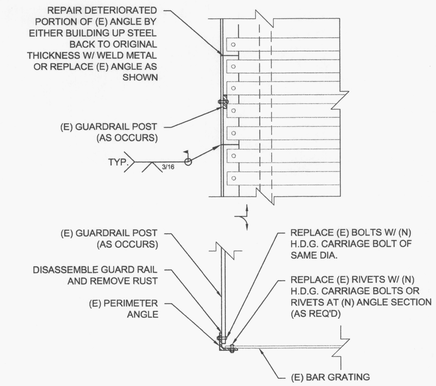
SHEET CONTENT
FIRE ESCAPE
EXTERIOR ELEVATIONS

SHEET
S3.01



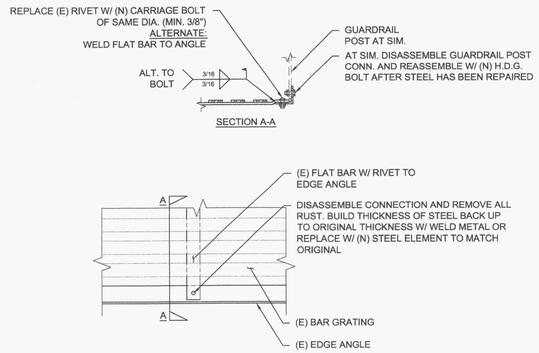
1 S8.01 STAIR TREADS-STRINGER REPAIR

1 1/2" = 1'-0"



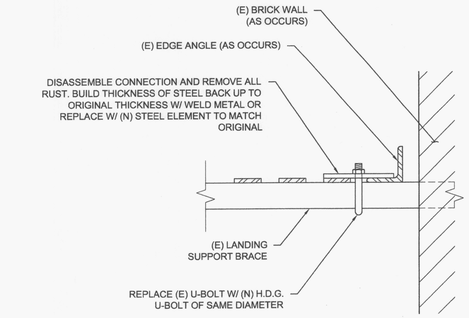
2 S8.01 PERIMETER ANGLE REPAIR

1 1/2" = 1'-0"



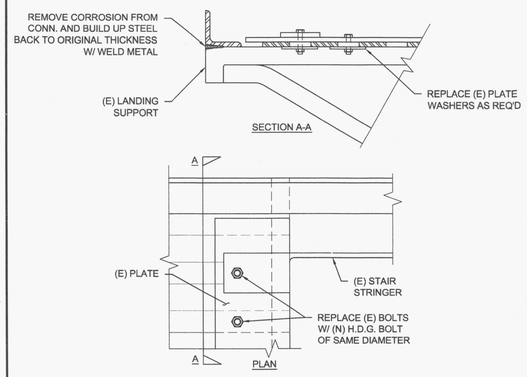
3 S8.01 FLAT BAR CONN. REPAIR

1 1/2" = 1'-0"



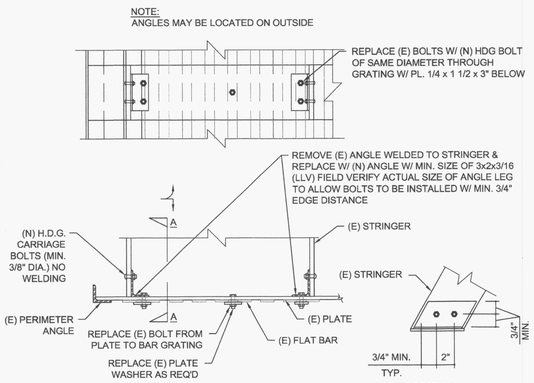
4 S8.01 LANDING CONN. REPAIR

3" = 1'-0"



5. S8.01 STAIR STRINGER TOP CONNECTION REPAIR

3" = 1'-0"

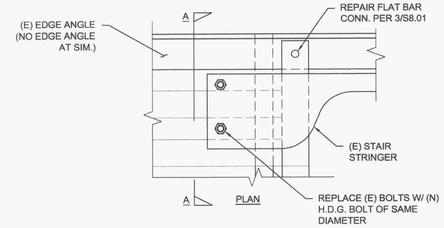


6 S8.01 STAIR STRINGER BASE CONNECTION

1 1/2" = 1'-0"

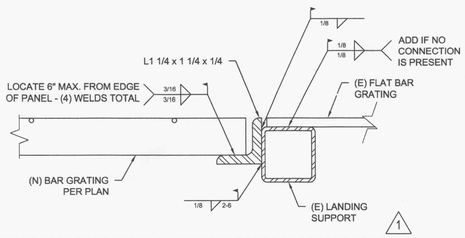
7 S8.01 SECTION AT LANDING

6" = 1'-0"



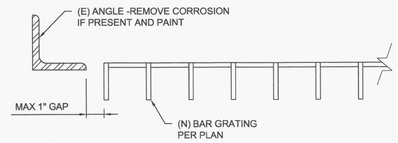
8 S8.01 STAIR STRINGER TOP CONNECTION REPAIR

3" = 1'-0"



9 S8.01 BAR GRATING SUPPORT

6" = 1'-0"



10 S8.01 SECTION AT EDGE OF BAR GRATING

6" = 1'-0"

LINE IS 2 INCHES AT FULL SCALE

(IF NOT 2" - SCALE ACCORDINGLY)

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 65401PE OREGON June 29, 2011 ANDREW RYAN LEICHTY

EXPIRES: 12-31-2012

MILLER
CONSULTING
ENGINEERS

9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219
Phone 503.246.1250
Fax 503.246.1395
www.miller-se.com

FIRE ESCAPE REPAIR

HAMILTON BUILDING
CHESAPEAKE HOLDINGS LOGAN, LLC

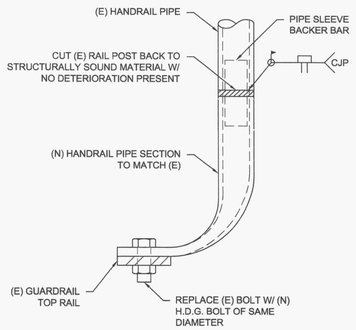
529 SW 3RD AVENUE
PORTLAND, OREGON

DRAWN BY:	BCH
CHECKED BY:	ARL
PROJECT NO:	110828
ISSUE DATE:	11.17.11

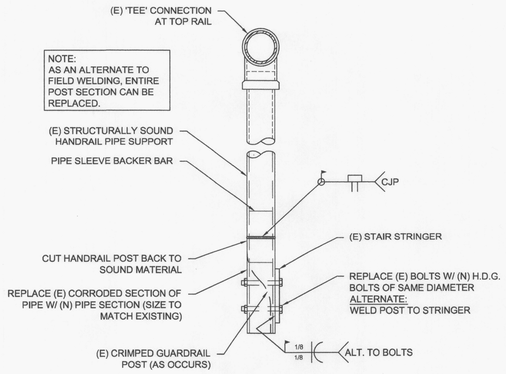
REV.	DATE	DESCRIPTION
1	01.05.12	REMOVED STAIR

SHEET CONTENT
DETAILS

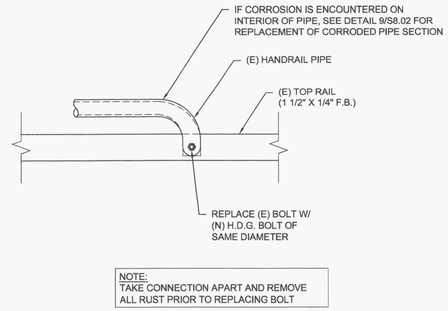
SHEET
S8.01



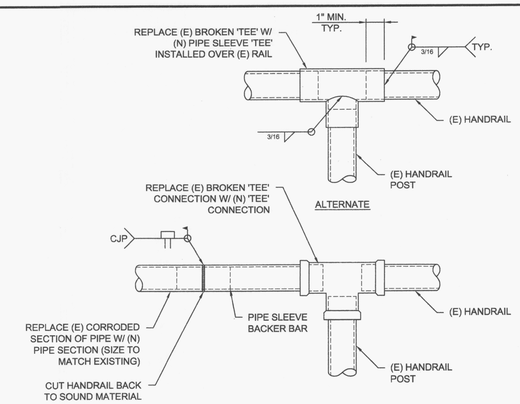
1 S8.02 HANDRAIL CONNECTION REPAIR 6" = 1'-0"



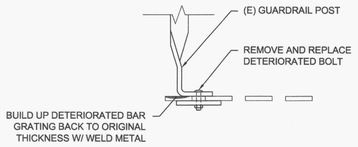
2 S8.02 HANDRAIL POST REPAIR 3" = 1'-0"



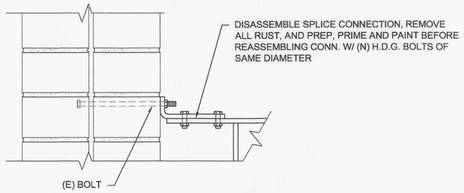
3 S8.02 HANDRAIL CONNECTION REPAIR 3" = 1'-0"



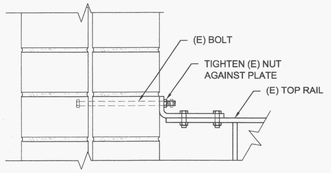
4 S8.02 HANDRAIL CONN. REPAIR 3" = 1'-0"



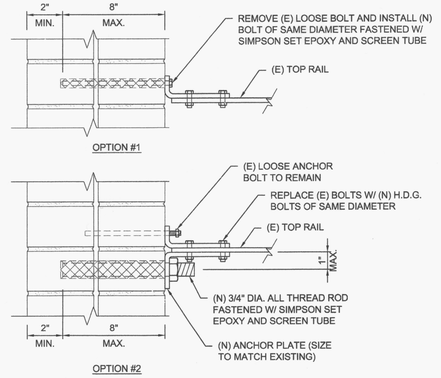
5 S8.02 GUARDRAIL POST CONNECTION REPAIR 3" = 1'-0"



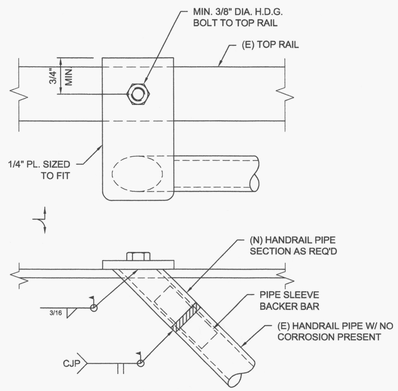
6 S8.02 GUARDRAIL CONNECTION REPAIR 3" = 1'-0"



7 S8.02 GUARDRAIL CONNECTION REPAIR 3" = 1'-0"



8 S8.02 GUARDRAIL CONNECTION REPAIR 3" = 1'-0"



9 S8.02 HANDRAIL CONNECTION REPAIR 6" = 1'-0"

LINE IS 2 INCHES AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 45401PE OREGON June 29, 2011 ANDREW RYAN LEIGHEY
EXPIRES: 12-31-20/2

MILLER
CONSULTING
ENGINEERS
9570 SW Barbur Blvd
Suite One Hundred
Portland, OR 97219
Phone 503.246.1250
Fax 503.246.1395
www.miller-se.com

FIRE ESCAPE REPAIR

HAMILTON BUILDING
CHESAPEAKE HOLDINGS LOGAN, LLC
529 SW 3RD AVENUE
PORTLAND, OREGON

DRAWN BY:	BCH
CHECKED BY:	AEL
PROJECT NO:	110828
ISSUE DATE:	11.17.11

DESCRIPTION | DATE | REV.

SHEET CONTENT
DETAILS

SHEET
S8.02