

March 25, 2011

Mr. Dan Cook
Allied/Cook Construction
PO Box 1396
Portland, Maine 04104

Re: Munjoy Commons, Emerson School
Pricing Request #29
Roof Hatch Options

Dear Dan,

The contractor is requested to provide pricing for two roof hatch options. Option 1 is a 48"x48" roof hatch with a fixed ladder. Option 2 is a 30"x96" roof hatch with an alternating tread ladder. The scopes of work include the following items:

Option 1. Install Bilco Type F-50T roof hatch and wall-mounted ladder. 1/SKA-30

- Coordinate MEP and insulation systems around the roof hatch location;
- Remove a section of soffit along the steel truss, frame new wood-stud wall and wood infill at the steel truss to support the wall-mounted steel ladder;
- Install sistered roof rafters. Install 2x10, sistered to the rafter at both sides of the roof hatch. The rafters are to bear on the steel trusses at each end of the fire escape stairs;
- Head off cut rafters with (2) 2x10 full length of the roof hatch with Simpson double hangers at the ends onto sistered rafters;
- Re-support and head off cut ceiling joists with (2) 2x6 the width of the opening;
- Infill between rafters and joists with 2x framing to support GWB finishes;
- Complete GWB from roof hatch to suspended GWB ceiling;
- Install roof hatch (orient hatch opposite as shown so that the handle is above the ladder) with LadderUP® Safety Post (LU-1) and ladder based on IMC 2003 requirements;
- Paint finishes according to specifications. Do not paint primed ladder rungs.

~~Option 2. Install Bilco Type L-50T roof hatch and alternating-tread ladder. 2/SKA-30~~

- ~~• Coordinate MEP and insulation systems around the roof hatch location;~~
- ~~• Install sistered roof rafters. Install 2x10, sistered to the rafter at both sides of the roof hatch. The rafters are to bear on the steel trusses at each end of the fire escape stairs;~~
- ~~• Head off cut rafters with (2) 2x10 with Simpson double hangers at the ends at sistered rafters;~~
- ~~• Re-support and head off cut ceiling joists with (2) 2x6 the width of the opening;~~
- ~~• Infill between rafters and joists with 2x framing to support GWB finishes;~~
- ~~• Complete GWB from roof hatch to suspended GWB ceiling;~~
- ~~• Install and flash roof hatch (see attached specification)~~
- ~~• Modify fire escape stair railings and install alternating tread ladder (see attached specification);~~
- ~~• Paint finishes according to specifications.~~

Attachments: SKA-30, Bilco roof hatch specification, alternating tread ladder specification.

CWS Architects

Architecture • Planning • Construction Services

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Please provide pricing with supporting documentation.

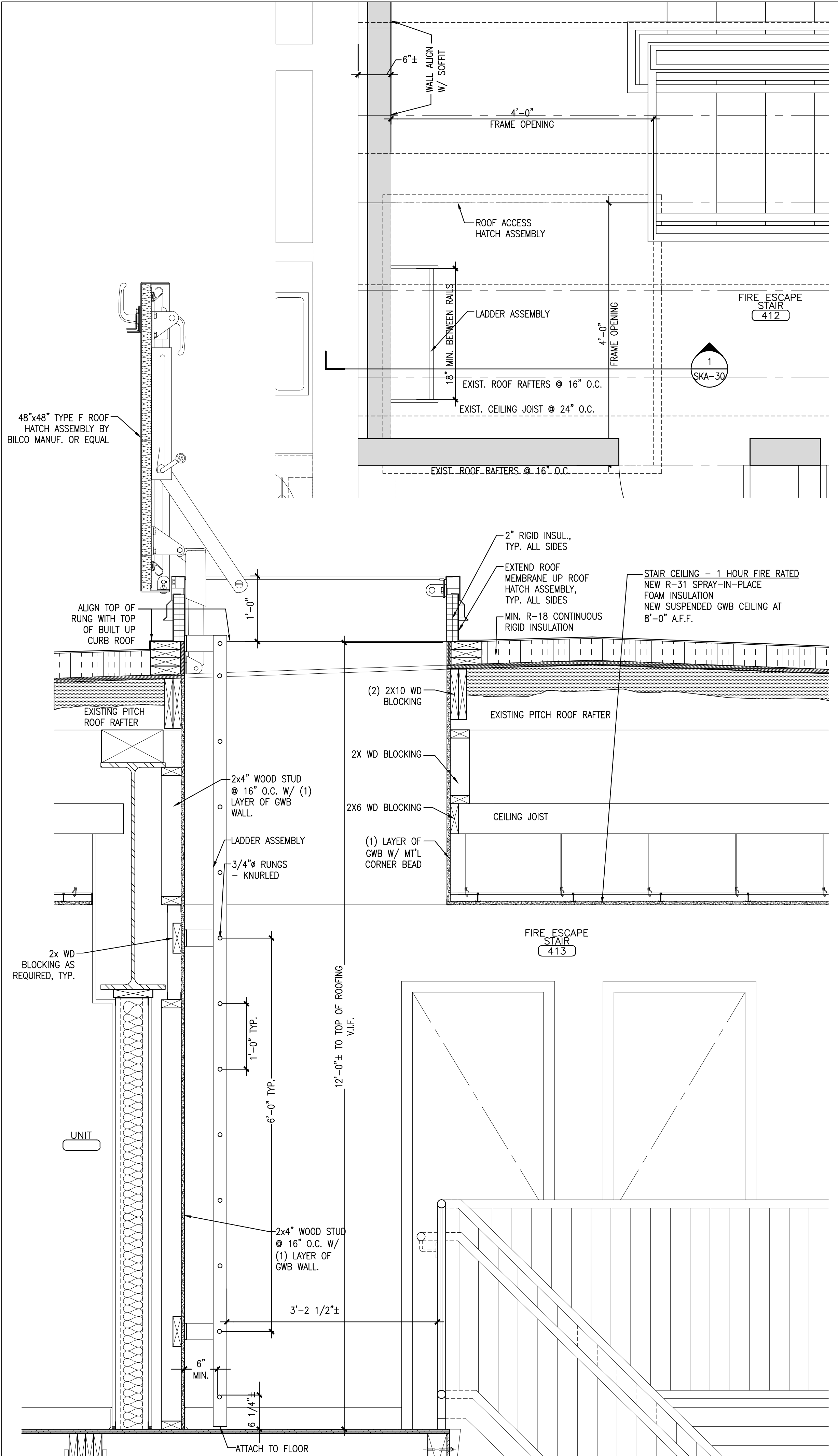
Very truly yours,

CWS ARCHITECTS

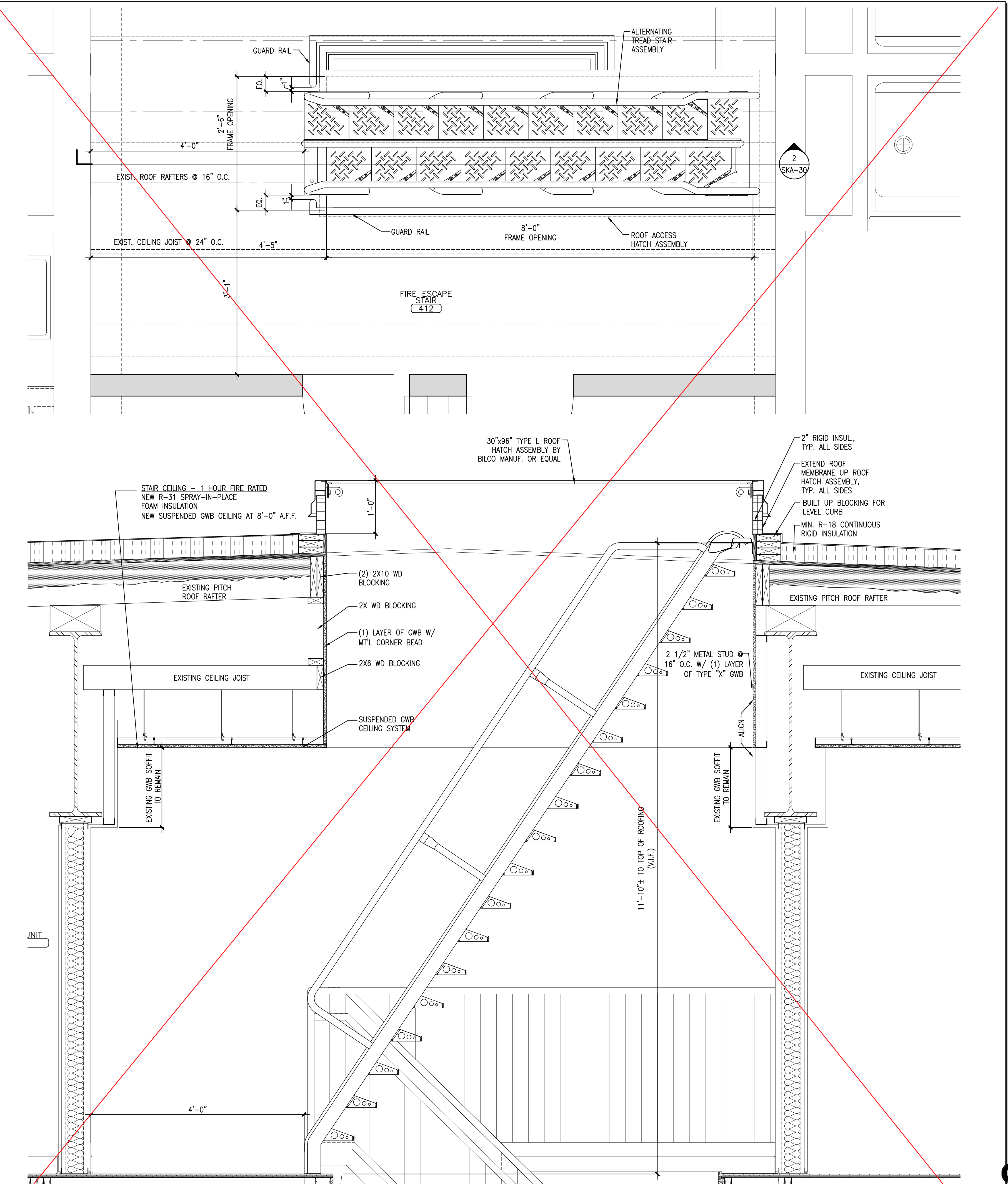


Benedict B. Walter, Architect
President

cc: file, Construction and Financing Team



1 48"x48" ROOF HATCH AND A LADDER @ FIRE ESCAPE STAIR (412)
 REFERENCED FROM: SCALE: 1" = 1'-0"



2 30"x96" ROOF HATCH AND ALTERNATING TREAD STAIR @ FIRE ESCAPE STAIR (412)
 REFERENCED FROM: SCALE: 1" = 1'-0"

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 Client:

Munjoy Commons Apartments
 Portland, Maine
 Project No: 07429
 Drawing Title: **EMERSON ROOF HATCHES**
 Scale: AS NOTED
 Date: March 25, 2011
 Revisions:
 Drawing Number: **EMERSON SKA-30**

Enhanced Performance Roof Hatches

Our Most Energy-Efficient Model Yet!

The new thermally enhanced design features special gasketing and increased insulation for superior thermal performance to improve the energy efficiency of your building.

- Energy efficiency exceeds standard hatches by more than 48%
- Meets LEED® standards for recycled content
- High solar reflective index (SRI)
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Type S-50T Roof Hatch

Available in a Number of Standard Sizes



Type L-50T



Type NB-50T



www.bilco.com



Specifications

Furnish and install where indicated on plans metal roof hatch. Length denotes hinge side. These roof hatches shall be single leaf. The roof hatch shall be pre-assembled from the manufacturer.

Performance Characteristics: Cover shall be reinforced to support a minimum live load of 40 psf (195 kg/m²) with a maximum deflection of 1/150th of the span or 20 psf (97 kg/m²) wind uplift. Operation of the cover shall be smooth and easy with controlled operation throughout the entire arc of opening and closing. Operation of the cover shall not be affected by temperature. Entire hatch shall be weathertight with fully welded corner joints on cover and curb.

Cover: .090 (2.3mm) aluminum with a 4" (102mm) beaded flange with formed reinforcing members. Cover shall have a heavy extruded EPDM rubber gasket which is bonded to the cover interior to ensure a continuous seal when compressed to the top surface of the curb.

Cover Insulation: Shall be polyisocyanurate of 2" (50mm) thickness with an R-value of 12. Insulation shall be fully covered and protected by an aluminum liner.

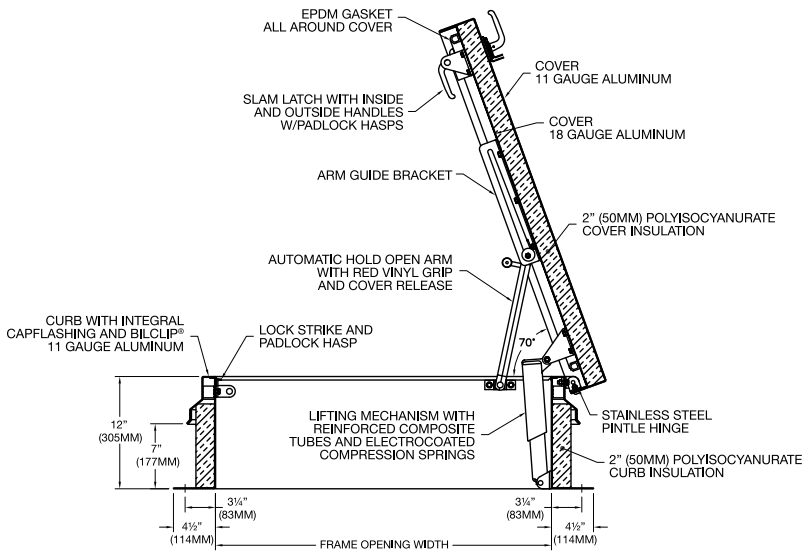
Curb: Shall be 12" (305mm) in height and of .090 (2.3mm) aluminum. The curb shall be formed with a 4 1/2" (114mm) flange with 7/16" (11mm) holes provided for securing to the roof deck. The curb shall be equipped with an integral metal capflashing of the same gauge and material as the curb, fully welded at the corners, that features the Bilclip® flashing system, including stamped tabs, 6" (153mm) on center, to be bent inward to hold single ply roofing membrane securely in place.

Curb Insulation: Shall be polyisocyanurate of 2" (50mm) thickness with an R-value of 12.

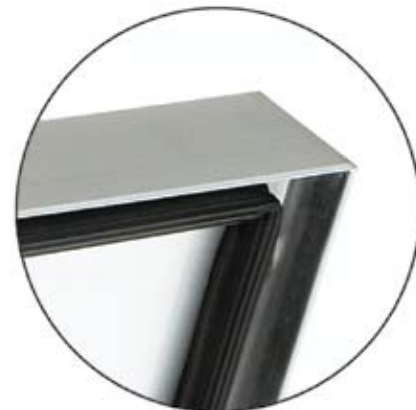
Lifting Mechanisms: Manufacturer shall provide compression spring operators enclosed in telescopic tubes to provide smooth, easy, and controlled cover operation throughout the entire arc of opening and closing. The upper tube shall be the outer tube to prevent accumulation of moisture, grit, and debris inside the lower tube assembly. The lower tube shall interlock with a flanged support shoe that is bolted to the curb assembly.

Hardware: Heavy stainless steel pintle hinges shall be provided. Cover shall be equipped with a spring latch with interior and exterior turn handles. Shall be equipped with interior and exterior padlock hasps. The latch strike shall be bolted to the curb assembly. Cover shall automatically lock in the open position with a rigid hold open arm equipped with a 1" (25mm) diameter red vinyl grip handle to permit easy release for closing. Compression spring tubes shall be an anti-corrosive composite material and all other hardware shall be zinc plated and chromate sealed. Springs shall have an electrocoated acrylic finish for corrosion resistance. [For installation in highly corrosive environments or when prolonged exposure to hot water or steam is anticipated, specify Type 316 stainless steel hardware]. Cover hardware shall be bolted into heavy gauge channel reinforcing welded to the underside of the cover and concealed within the insulation space.

Finishes: Factory finish shall be mill finish aluminum.



Type S-50T and E-50T shown. All other models open to 90°.



EPDM Finger Type Gasket



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Standard Sizes & Weights

TYPE	SIZE		WEIGHT	
	Inside Frame Opening		lbs.	kg.
	inches	mm		
S-50T	36 x 30 (H)	915 x 760 (H)	132	60
E-50T	36 x 36	915 x 915	143	65
NB-50T	30 x 54 (H)	760 x 1370 (H)	168	76
L-50T	30 x 96 (H)	760 x 2440 (H)	287	130
F-50T	48 x 48	1220 x 1220	249	113

H = Hinge Side

Special sizes available upon request