#### ADDENDUM

Project:

Science Building Research Wing Expansion

Project No. 03049

Owner:

University of Southern Maine

Portland, Maine

Architect:

Symmes Maini and McKee Associates

1000 Massachusetts Avenue Cambridge, MA 02138

(617) 547-5400; FAX (617) 354-5758

Addendum:

No. 1

Date: April 28, 2004

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated February 20, 2004. Portions of the Bidding and Contract Documents not altered by this addendum remain in full force.

Acknowledge receipt of this addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

#### **ATTACHMENTS**

Table of Contents.

Section 00300, Proposal Form

Section 00310, Maine Construction Bid Depository Proposal Form for Subcontractor.

Sketches: SKA-1 through SKA-8, SKS-1 through SKS-9, SKE-01 through SKE-06.

Note that Section 13080, "Rooftop Equipment Screens," listed in the revised Table of Contents, has not been issued yet. It will be issued with Addendum No. 2, along with appropriate sketches. HVAC subbidders may assume that work under section 13080 will not affect their bid.

#### CHANGES TO SPECIFICATIONS

Replace Table of Contents with revised version, dated April 28, 2004.

00300, Proposal Form

Replace with revised form dated April 28, 2004.

00310, Maine Construction Bid Depository Proposal Form for Subcontractor

1. Replace with revised form dated April 28, 2004.

#### 01230, Alternates

- 1. 3.01 B: Delete Alternate No. 2.
- 2. 3.01: Add Paragraph H, Alternate No. 8, as follows:
  - H. Alternate 8: Rooftop Acoustical Screens:
    - Base Bid: No rooftop acoustical screens.
    - Alternate: Acoustical panels on structural supports at roof perimeter and acoustical
      panels mounted on exterior walls, as specified in Section 13080; refer to Drawings
      for extent. Alternate includes cutting and patching of existing roofing.

#### 01400, Quality Requirements

. 1. 1.07 E: Change "Commonwealth of Massachusetts" to "State of Maine."

#### 03310, Cast-In-Place Concrete

 Section 03310.2.05D: Change the wording of "normal weight" concrete to read "lightweight concrete." The term lightweight concrete applies to all slab on metal deck concrete. Concrete fill for steel pan stairs shall be normal weight concrete.

#### 05500, Metal Fabrications

- 1. 1.02 A: Add subparagraph 5 as follows: "5. Bar grating over elevator pit sump."
- 2. In Part 2, add new Article 2.12 as follows:
  - 2.12 BAR GRATING FOR ELEVATOR PIT SUMP.
    - A. Aluminum Bar Grating: 1/4" x1" aluminum bars with 1/8" clear spacing between bars. Provide a frame of 2"x2" aluminum angles pre drilled for expansion bolts to all 4 sides of sump pit, flush with pit floor. Construct to field measured dimensions. Drill holes as necessary for penetrations for sump pump piping."
- In Part 3, insert new Article 3.05 as follows, as renumber 3.05 and 3.06 as 3.06 and 3.07, respectively.
  - 3.05 INSTALLATION OF BAR GRATING
    - A Set bar grating flush with adjacent floor surface. Install with expansion bolts into concrete wall.

#### 08710, Door Hardware

- 3.07: Make the following changes to the Hardware Sets:
  - Add to Set No. 5, 1 Closer.
  - 1b. Add to Set No. 6, 2 Kick Plates

#### 15050, Basic Mechanical Materials and Methods

- 1.00: Add new paragraph D, as follows:
  - D. The HVAC filed sub-bid shall include all the work specified in Division 15 and shown on Drawings M0.1 through M2.2 and P.01 through P2.2, inclusive.

#### 15910, Control Systems

- 1. 1.02: Change paragraph B to read as follows:
  - B. The direct digital control system is an extension of the existing system. This existing system has an open system architecture by means of ANSI/ASHRAE standard 135-1995 BACnet protocol.
- 2. 1.02 C.13: Change this subparagraph to read as follows:
  - 13. New controls for existing equipment:
    - a. Constant Volume Reheat Terminal Unit Control
    - b. Air Conditioning Unit Control #1 (AC-6 & 7)
    - c. Air Conditioning Unit Control #2 (AC-5)
    - d. Reset Hot Water Control
    - e. Air Handling Unit Control System (AH-2)
    - f. Hood Exhaust Fans
    - g. General Exhaust
- 3. 1.02 D: Change paragraph D to read as follows:
  - D. Provide complete, effective and efficient control of the following:
    - 1. Revisions to existing systems and equipment as indicated.
    - 2. New HVAC systems and equipment added as work of this contract.
- 2.01: Add new paragraphs as follows:
  - E. Building Automation System: IB Controls Delta native BACNET system.
  - F. Variable Frequency Drives: Delta/Omron P5
- 2.02: Change paragraph A to read as follows:
  - A. The direct digital control system is an extension of the existing system. This existing system has an open system architecture by means of ANSI/ASHRAE standard 135-1995 BACnet protocol.
- 2.03 B: Change the subparagraphs to read as follows:
  - Second tier networks shall provide Native BACnet MS/TP communications, and shall operate at a minimum communication speed of 78,000 baud.
  - 2. DDC System Controllers shall reside on the second tier and be certified as native BACnet (plug & play technology).
- 3.05 F.1: Change Room No. 352A to 352.

- 8. 3.08: Add new paragraph B, as follows:
  - B. Comply with USM IDAT requirements.

#### 15950, Testing Adjusting and Balancing

- 1. 3.11 A: Change "01400" to "Section 01450."
- 2. 3.12 A: Change "01400" to "Section 01450."
- 3.12: Add new paragraphs as follows:
  - J. Fan Test Reports (Supply and exhaust):
    - 1. Fan Data: Include the following:
      - a. System identification.
      - b. Location.
      - c. Make and type.
      - d. Model number and size.
      - e. Manufacturer's serial number.
      - f. Arrangement and class.
      - g. Sheave make, size in inches, and bore.
      - h. Sheave dimensions, center-to-center and amount of adjustments in inches.
    - 2. Motor Data: Include the following:
      - a. Make and frame type and size.
      - b. Horsepower and rpm.
      - c. Volts, phase, and hertz.
      - d. Full-load amperage and service factor.
      - e. Sheave make, size in inches, and bore.
      - f. Sheave dimensions, center-to-center and amount of adjustments in inches.
      - g. Number of belts, make, and size.
    - 3. Test Data: Include design and actual values for the following:
      - a. Total airflow rate in cfm.
      - b. Total system static pressure in inches wg.
      - c. Fan rpm.
      - d. Discharge static pressure in inches wg.
      - e. Suction static pressure in inches wg.
  - K. Duct Traverse Reports: Include a diagram with a grid representing the duct cross-section and record the following:
    - Report Data: Include the following:
      - a. System and air-handling unit number.
      - b. Location and zone.
      - c. Traverse air temperature in deg F.
      - d. Duct static pressure in inches wg.
      - e. Duct size in inches.
      - f. Duct area in sq. ft.

- g. Design airflow rate in cfm.
- h. Design velocity in fpm.
- i. Actual airflow rate in cfm.
- j. Actual average velocity in fpm.
- k. Barometric pressure in psig.

#### L. System-Coil Reports (Energy Recovery Unit):

- 1. Unit Data: Include the following:
  - a. System identification.
  - b. Location and zone.
  - c. Coil make and size.
  - e. Flow meter type.
- 2. Test Data: Include design and actual values for the following:
  - a. Airflow rate in cfm.
  - b. Entering-water temperature in deg F.
  - c. Leaving-water temperature in deg F.
  - d. Water pressure drop in feet of head or psig.
  - e. Entering-air temperature in deg F.
  - f. Leaving-air temperature in deg F.

#### M. Existing Air-Terminal-Device Reports including hot water coils:

- 1. Unit Data: Include the following:
  - a. System and air-handling unit identification.
  - b. Location and zone.
  - c. Test apparatus used.
  - d. Area served.
  - e. Air-terminal-device make.
  - f. Air-terminal-device number from system diagram.
  - g. Air-terminal-device type and model number.
  - h. Air-terminal-device size.
  - i. Air-terminal-device effective area in sq. ft.
  - j. Coil make and size.
  - k. Flow meter type.
- Test Data: Include design and actual values for the following:
  - a. Airflow rate in cfm.
  - b. Air velocity in fpm.
  - c. Preliminary airflow rate as needed in cfm.
  - d. Preliminary velocity as needed in fpm.
  - e. Final airflow rate in cfm.
  - f. Final velocity in fpm.
  - g. Space temperature in deg F.
  - h. Entering-water temperature in deg F.
  - i. Leaving-water temperature in deg F.
  - j. Water pressure drop in feet of head or psig.
  - k. Entering-air temperature in deg F.

1. Leaving-air temperature in deg F.

#### N. Hot Water Unit Heaters:

- 1. Unit Data: Include the following:
  - a. Unit identification.
  - b. Location and area served.
  - c. Test apparatus used.
  - e. Make and model number.
  - f. Device number from plans.
  - g. Flow meter type.
- 2. Test Data: Include design and actual values for the following:
  - a. Space temperature in deg F.
  - b. Entering-water temperature in deg F.
  - c. Leaving-water temperature in deg F.
  - d. Water pressure drop in feet of head or psig.
  - e. Entering-air temperature in deg F.
  - f. Leaving-air temperature in deg F.

#### 4. 3.13: Add new paragraph B, as follows:

- B. Existing Fume Hood Test Reports:
  - 1. Unit Data: Include the following:
    - a. Unit identification.
    - b. Location.
    - c. Fume hood manufacturer
    - d. Make and size.
    - e. Model and serial numbers.
    - f. Attach a label on the lower right hand corner of the sash on each hood clearly and legibly marked with the following information: Test and balance agency, Hood No., Date, Maximum sash opening, average face velocity, lowest velocity reading, CFM, TBE, Instrument and Instrument calibration date.
  - Exhaust fan and motor
    - a. Fan manufacturer, model and serial number
    - b. Fan description: such as fan type, size, arrangement, class, discharge, type sheave and drive, speed (RPM), specified design total exhaust CFM
    - Motor manufacturer, model and serial number. Motor description such as: HP, voltage, phase, cycles, rated amperes, running amperes – each phase, speed (RPM).
  - Performance Test Data:
    - a. Position of operable sash percent full open
    - Exhaust volume rate (CFM) measured in exhaust duct. Include average duct velocity and cross sectional area of duct used for calculations
    - Exhaust volume rate (CFM) measured at hood duct opening. Include average duct velocity and cross sectional area of duct used for calculations

- d. Sketch of hood sash opening showing center point areas and corresponding velocity readings
- e. Average face velocity. Compare with specified design face velocity.
- f. Exhaust volume rate (CFM) calculated from face velocity measurements. Compare with exhaust volumes of 2. b. & c.
- g. Whether reverse flows or dead air spaces were observed at hood face. (titanium tetrachloride test)
- h. Whether reverse flows were observed at each end of the working surface and across the working surface of hood. (titanium tetrachloride test).
- Observation and results of hood smoke test with hood door open and door closed.
- Observations and results of hood dry-ice test.
- Average face velocity with hood sash open 3 inches. Compare with specific limitations.
- 1. Brief summary of tests.

#### CHANGES TO DRAWINGS

#### A0.3, Schedules and Legends

In Door Types, change Door Type F from "Flush wood Door" to "Flush HM door."

#### A1.6, Roof Plan

- 1. Add detail key to detail 3/A1.6 as shown on sketch SKA-1.
- 2. Add detail key to detail 6/A1.6 as shown on sketch SKA-2.
- Add detail key to detail 7/A1.6 as shown on sketch SKA-3.
- 4. Add new detail 8/A1.6 as shown on sketch SKA-4.
- Add new detail 9/A1.6 as shown on sketch SKA-5.

#### A4.4, Details

 Add new detail 17/A4.4 showing typical framing of stair landing at Stair #6 exterior wall, as shown on sketch SKA-8.

#### A4.5, Details

- 1. Add new detail 4/A4.5 showing flashing and expansion joint at intersection of Stair #6 to roof, as shown on sketch SKA-6.
- Add new detail 5/A4.5 showing flashing, expansion joint and threshold at door #601, as shown on sketch SKA-7.

#### A5.1, Stair and Elevator Plans and Sections

- On enlarged plan 6/A5.1, add a detail key to new detail "4/A4.5 (typ.)", at the exterior wall to the west of door #601.
- 2. On enlarged plan 6/A5.1, add a detail key to new detail "5/A4.5", at the threshold of door #601.
- 3. On enlarged plan 6/A5.1, add a detail key to new detail "17/A4.4(typ.)", at the north wall of stair #6.

#### S0.02, General Notes and Typical Details

 Change the second note under Concrete to read, "Concrete slab on metal deck 3500psi Lightweight Concrete." This applies to all concrete on metal deck at the new fourth, fifth, and roof levels.

#### S1.11, Existing First Floor Framing Plan

1. Increase size of existing area way, and add grating as shown on sketch ADD-1/SKS-1

#### S1.41, New Fourth Floor Framing Plan

- Revise mechanical shaft dimensions and remove existing steel girts as shown on sketch ADD-1/SKS-2.
- 2. Omit sawcut opening note at section 15/S4.01in the area of gridline 4.3 and F. Locate the opening in the same area on the third floor. Refer to the architectural drawings for size and location.

#### S1.51, New Fifth Floor Framing Plan

1. Revise mechanical shaft dimensions as shown on sketch ADD-1/SKS-3.

#### S1.61, New Roof Framing Plan

- Provide additional C6 Hangers for extended roof parapet support as shown on sketches ADD1/SKS-4 and ADD-1/SKS-5.
- 2. At Stair No. 6, make the top of the steel tubes at the exterior/perimeter of the stair tower equal to 123-7".

#### S2.03, Bracing Elevations and Details

- Revise Brace Frame no. 7 as shown on sketch ADD-1/SKS-6.
- 2. Revise the top of steel elevation at the roof level at Braces 4, 5, 6, and 7.

#### S4.01, Sections and Details

- Add new Section 2a as shown on sketch ADD-1/SKS-7.
- Add new Section 20a as shown on sketch ADD-1/SKS-8.

#### S4.02, Sections and Details

- 1. Revise Section 13 as shown on sketch ADD-1/SKS-9.
- 2. In Sections 11 and 12 make the top of steel elevation at the stair landing equal to 123'-7".
- M2.1 Second Floor and Penthouse Plans
- Change note at EF/22 to read "Extend 4" ERS7R across roof I connect to coil in EF-22-ERU.
  Provide shut-off and balance valves."
- M2.2 Part Plans, Section and Details
- Refer to Detail 4/M2.2. Change note to read "Extend 1" chilled water horizontally for cross connection to Science Wing CHWS&R."
- E0.1 Legend, Details and Schedules
- Make changes shown on SKE-01.
- E1.3 Third and Fourth Floors, Power and Lighting
- Make changes shown on SKE-02 and SKE-03.
- E1.4 Fifth Floor and Roof Plan, Power and Lighting
- 1. Make changes shown on SKE-04.
- E1.5 Penthouse Plan and Basement Partial Plan
- Make changes shown on SKE-05.
- E4.1 Power One-Line Diagram, Phase 2
- Make changes shown on SKE-06.

END OF ADDENDUM

# UNIVERSITY OF SOUTHERN MAINE, PORTLAND CAMPUS SCIENCE BUILDING RESEARCH WING EXPANSION

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NOT APPLICABLE TO THIS PROJECT.

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05510 METAL STAIRS

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NOT APPLICABLE TO THIS PROJECT

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16120	CONDUCTORS
16130	RACEWAYS
16135	BOXES
16140	WIRING DEVICES

# Division 16 - Electrical (continued)

DISCONNECT SWITCHES
MOTOR STARTERS
PANELBOARDS
FUSES
LIGHTING

END OF INDEX

### SECTION 00300 PROPOSAL FORM

BIDDER:			
	•		
6	Board of Trustees University of Maine Portland		20
	c/o Mr. David Barbour Director of Facilities Management Facilities Management, University of Se 96 Falmouth Street P.O. Box 9300	outhern Maine	
contained there well as the pres	Portland, ME 04104-9300  ly examined the form of contract, general in for the "Science Building Research on the "Science Building Research on the work, materials necessary for and reasonably in the sum of	Wing Expansion we the undersign	n, USM Portland, Maine," as ned propose to furnish all labor,
		Dollars	s (\$).
Alternate price	s as follows:		
Alternate	#1, Elevator:	Add:	
Alternate	e #2, Existing HVAC Systems Controls U	Jpgrade:	DELETED
Alternate	#3, Damper for existing AHU 2:	Add:	
Alternate	#4, Chilled Water Tie-In:	Add:	
Alternate	#5, Science Wing Exhaust System:	Add:	
Alternate	e #6, Concrete Coating on Existing Build	ing: Add:	
Alternate	#7, Thin Brick System:	Add:	
Alternate	e #8, Rooftop Acoustical Screens:	Add:	
This proposal i	ncludes the cost of 100% Performance B	ond plus 100%	Payment Bond.
The receipt of	the following addenda to plans and speci:	fications is herel	by acknowledged:
Addendum	1 # dated	Addendum#_	dated
Addendum	n#dated	Addendum#_	dated
Addendum	1#dated	Addendum#_	dated

Any material or materials not specified in the bidding document but worthy of consideration may be introduced by the bidder by a separate letter attached to this Proposal. A cost comparison must be included giving the comparison with the Material specified and the reason for the suggested substitution. The basic bid shall be as specified.

Filed Subcontract Proposals as follows:

Specifica	tion Division	Subcontractor Name	Amount
Heating, Air Cond	Ventilating and itioning		
the Plans and S substitution is r Bidders". In the Contractor may	pecifications and nade by mutual a e event Alternate use properly file	above named Subcontractor represents a bona fide Subpro will be used for the Work indicated at the Amount stated, agreement as provided for in Section 00120, "Supplemental Prices are requested and various trades are involved, the Ced Subproposals even though a change in Subcontractors befor shall use supplemental sheets attached to the Proposal F	unless a l Instruction to General ecause of
and affidavits f such acceptance fulfilled if the r	or all insurance s e, except if the 12 equired documen	proposal is accepted to sign a contract and deliver it, along pecified within twelve (12) calendar days after the date of 2th day falls on a Saturday, Sunday or holiday, then the conts are received before 12 o'clock noon on the day following turday or Sunday, and as a guarantee thereof, herewith sub	notification of aditions will be g the holiday,
	d also agrees, if	ded the Contract, to complete the work on or beforeawarded the Contract, that no more than 80% of the contra	ct amount will
	Signed		
	Ву		
×	P. O. Address		
	bidder is a corpor	ration, write State of Incorporation, and if a partnership, gi	ve full names

## SECTION 00310

# Maine Construction Bid Depository Proposal Form for Subcontractor Revised April 28, 2004 (Addendum No. 1)

To:			
	For green envelope copy, list any general contractor(s) excl	uded from your bid:	
			8
Proje	sct: SCIENCE BUILDING RESEA	RCH WING EXPAI	NSION
Secti	on(s) Quoted:		
Price	Quoted: \$(w		)
	(w	ritten figures)	a a
UNI	T PRICES (if applicable)		
	Item	A	mount \$
A.	The undersigned proposes to furnish all labor with the plans, specifications, general condition of the specifications listed above and in the C Addenda listed in Paragraph C), prepared by	ons and addenda, all contract Drawings dat	the work specified in the sections ed February 20, 2004 (including
B.	Alternate Prices are submitted as follows: (U	se separate sheets as	necessary)
	Alternate #1, Elevator:	Add: _	-
	Alternate #2, Existing HVAC Systems Control	ols Upgrade:	DELETED
	Alternate #3, Damper for existing AHU 2:	Add: _	
	Alternate #4, Chilled Water Tie-In:	Add: _	
	Alternate #5, Science Wing Exhaust System:	Add: _	
	Alternate #6, Concrete Coating on Existing E	Building: Add: _	and the second s
	Alternate #7, Thin Brick System:	Add: _	
	Alternate #8, Rooftop Acoustical Screens:		Not Applicable
C.	The subcontractor proposal includes the follo (List addenda and issue date of each)	wing addenda to the	Drawings and Specifications
	Addendum # dated	Addendum#_	dated
-	Addendum # dated	Addendum #	dated

Subcont	ractor's portion of	f the Work.			
E		_ License # (if applicable)			
Company					
Signed by			Date		
Address					
St	reet	City		State	Zip

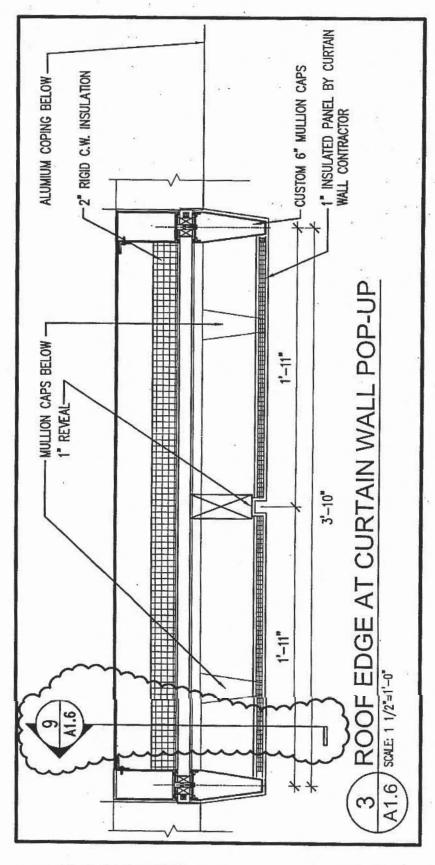
General Contractor with a 100% Performance Bond and a 100% Payment Bond for the

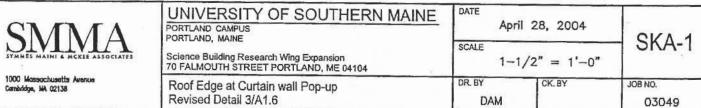
The undersigned agrees that, if selected as a Subcontractor, he or she will execute with the selected

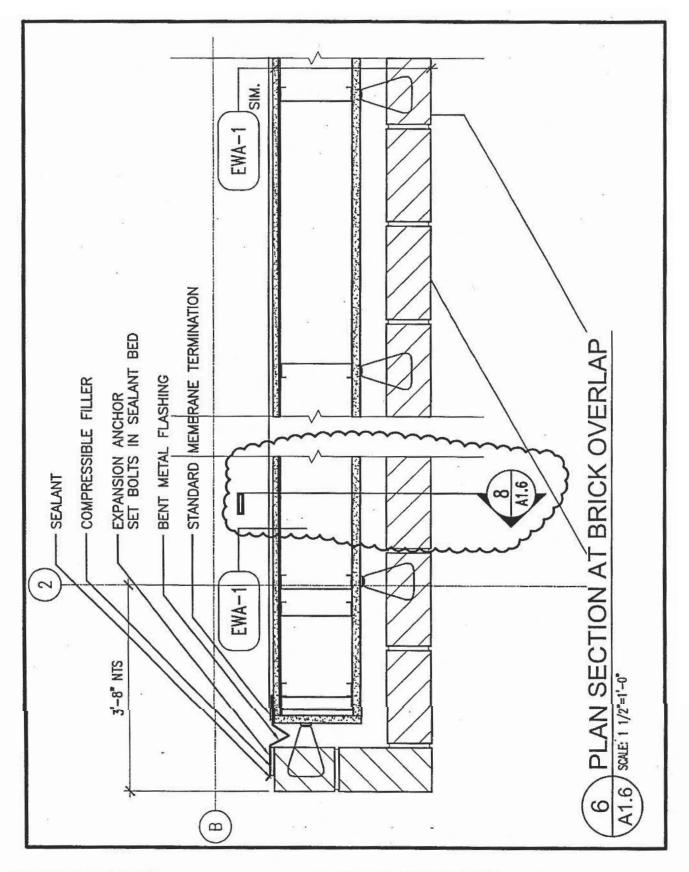
General Contractor a subcontract in accordance with the terms of the subproposal, and furnish the

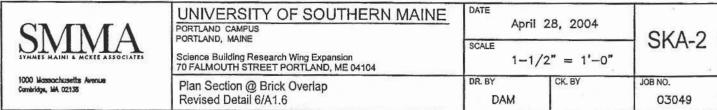
D.

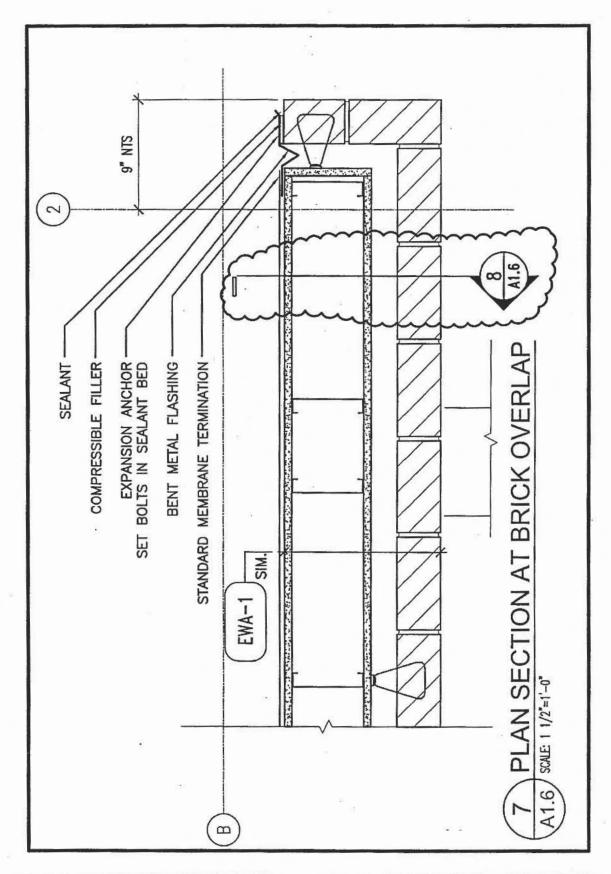
F. All foreign corporations intending to do business in Maine must comply with the provisions of 13A MRSA Chapter 12 and shall contact the secretary of State for Compliance.

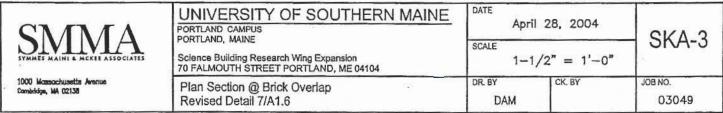


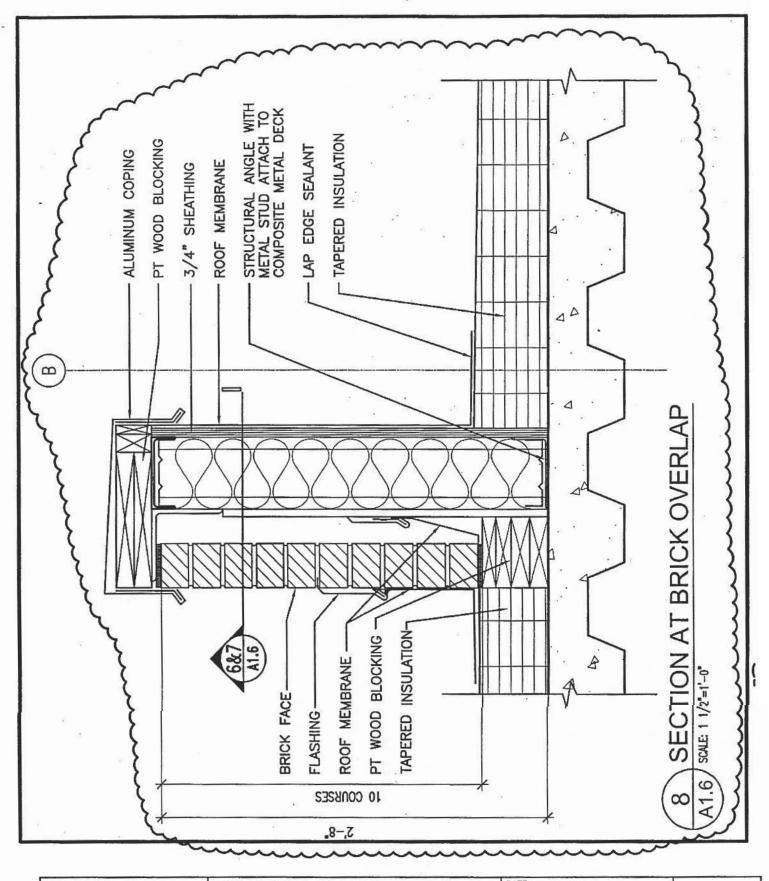




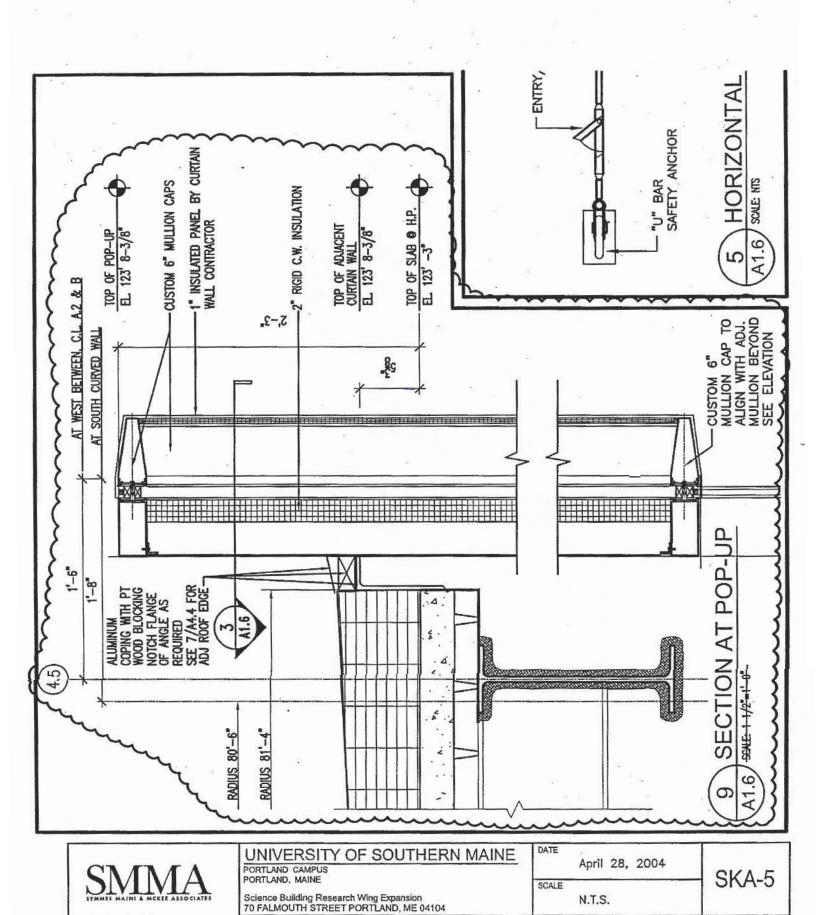








CMANA	UNIVERSITY OF SOUTHERN MAINE PORTLAND CAMPUS PORTLAND, MAINE	April 28, 2004		SKA-4
SYMMES MAINI & MCKEE ASSOCIATES	Science Building Research Wing Expansion 70 FALMOUTH STREET PORTLAND, ME 04104	SCALE $1-1/2" = 1'-0"$		
1000 Massochusetts Avenus Cambridge, MA 02138	Section @ Brick Overlap New Detail 8/A1.6	DR. BY	CK. BY	JOB NO. 03049



Section at Pop-up

New Detail 9/A1.6

Cambridge, MA 02138

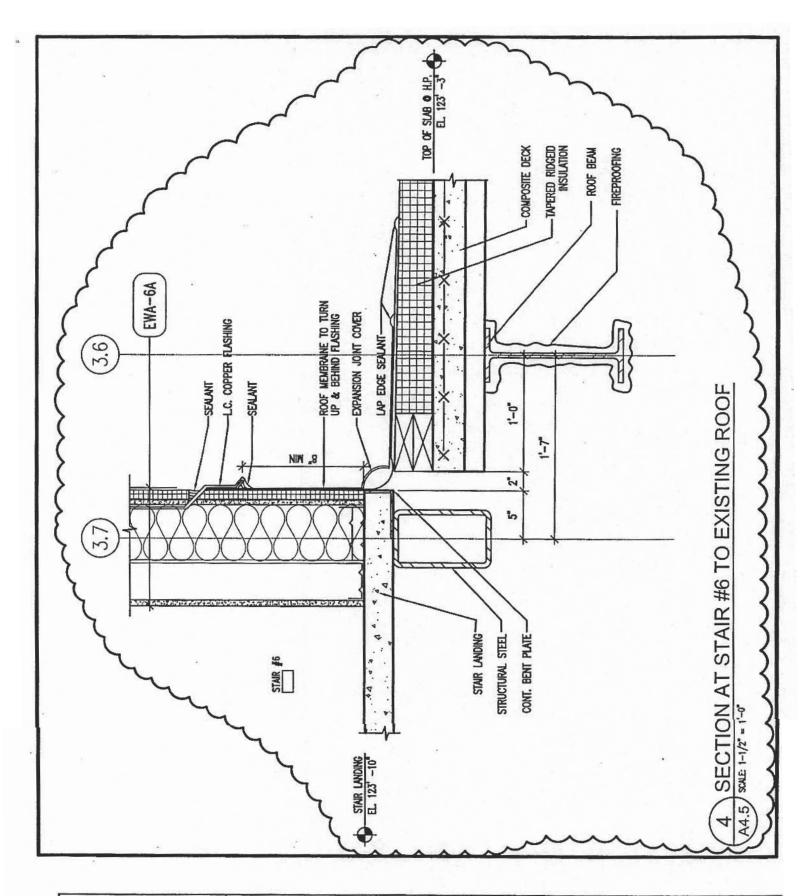
DR. BY

DAM

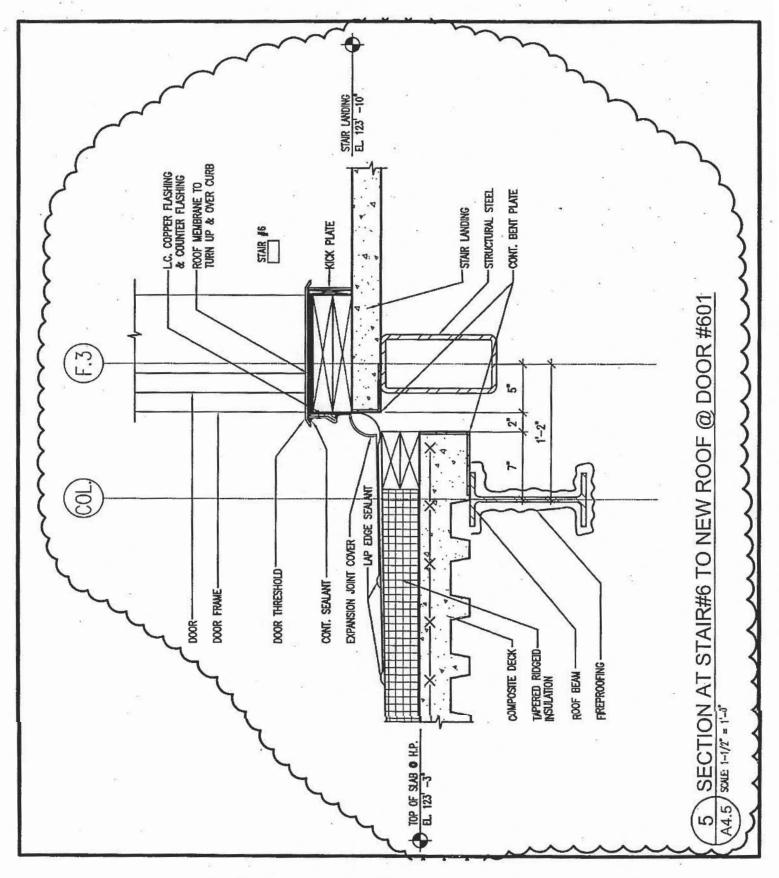
CK, BY

JOB NO.

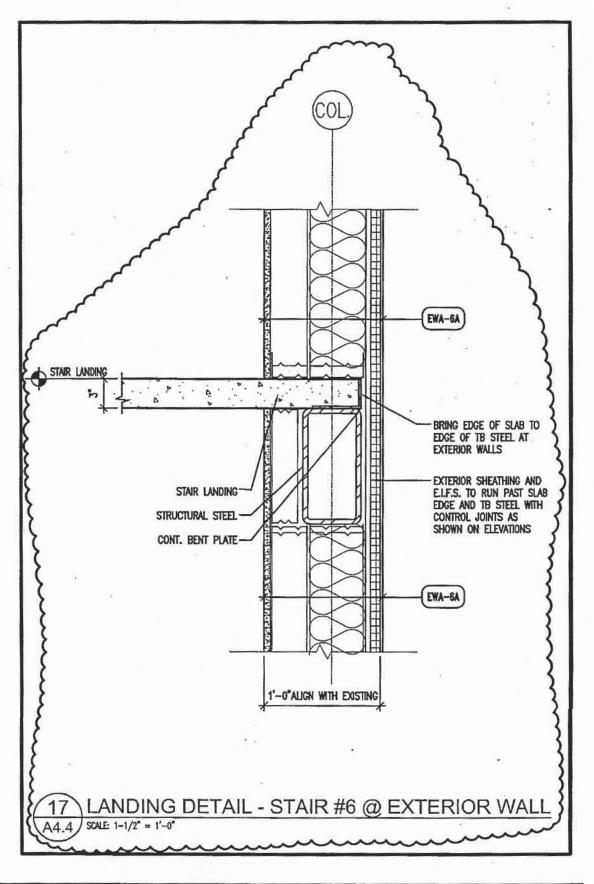
03049



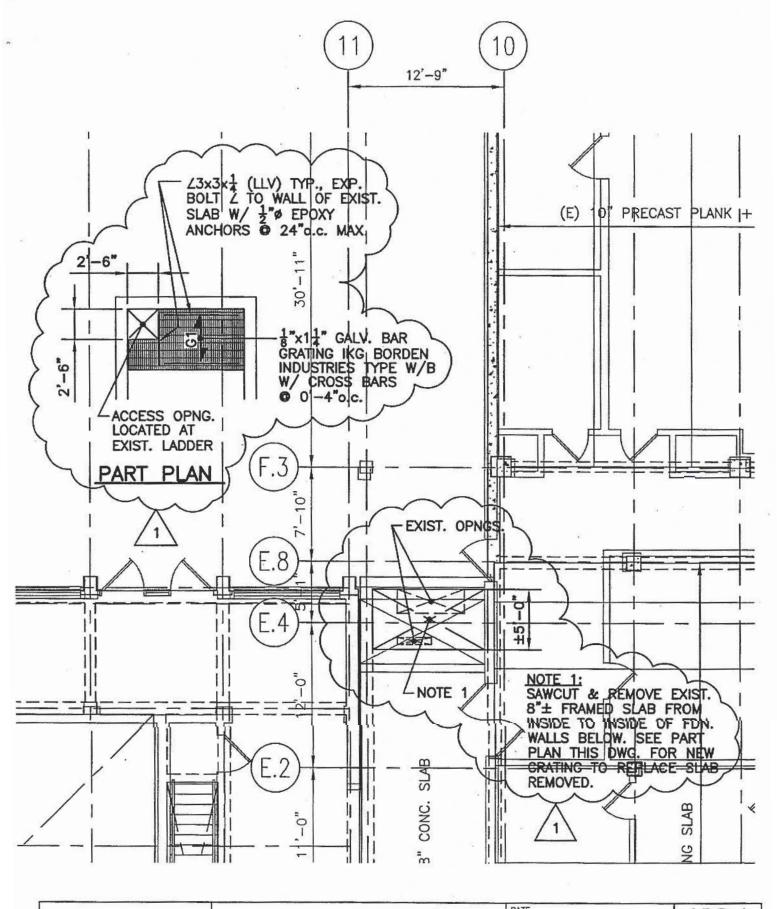
SMMA	UNIVERSITY OF SOUTHERN MAINE PORTLAND CAMPUS PORTLAND, MAINE	DATE	ril 28, 2004	SKA-6
SYMMES MAINI & MCKEE ASSOCIATES	Science Building Research Wing Expansion 70 FALMOUTH STREET PORTLAND, ME 04104	SCALE 1-	1/2" = 1'-0"	SNA-0
1000 Massachusetts Avenue Combridge, MA 02138	Section Stair #6 to Existing Roof New Detail 4/A4.5	DR. BY	CK. BY	JOB NO. 03049



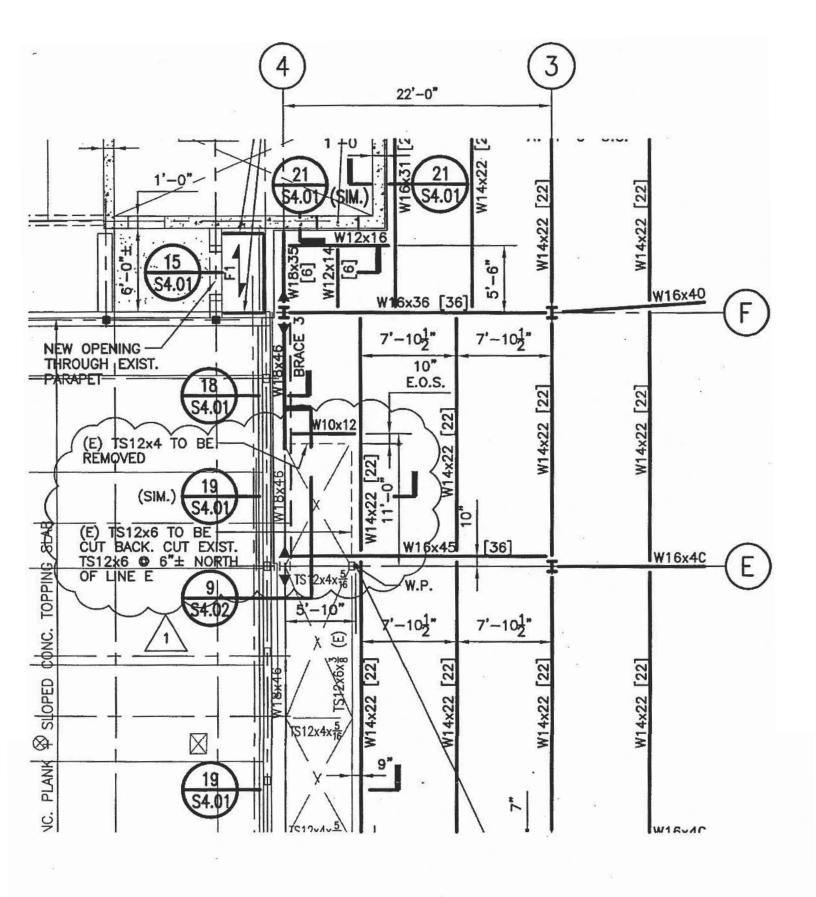




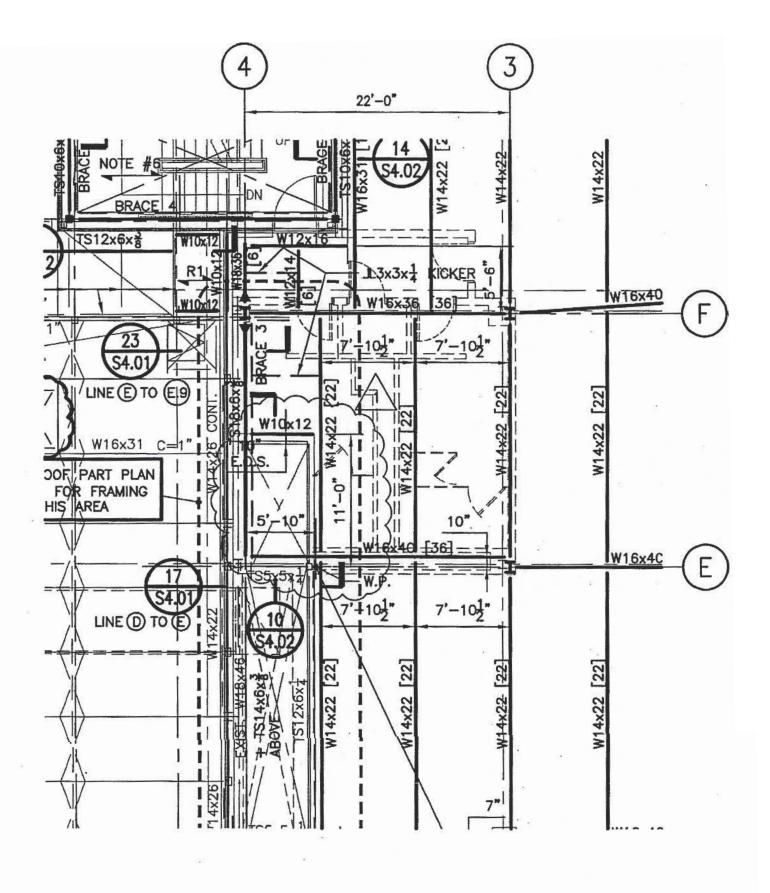
SMMA	UNIVERSITY OF SOUTHERN MAINE PORTLAND, MAINE PORTLAND, MAINE	DATE April	28, 2004	SKA-8
SYMMES MAINT & MCKEE ASSOCIATES	Science Building Research Wing Expansion 70 FALMOUTH STREET PORTLAND, ME 04104	SCALE 1-1/	2" = 1'-0"	SIVA-0
1000 Massachusetts Avenue Combridge, MA 02138	Landing detail - Stair#6@ Exterior Wall New Detail 17/A4.4	DR. BY DAM	CK. BY	JOB NO. 03049



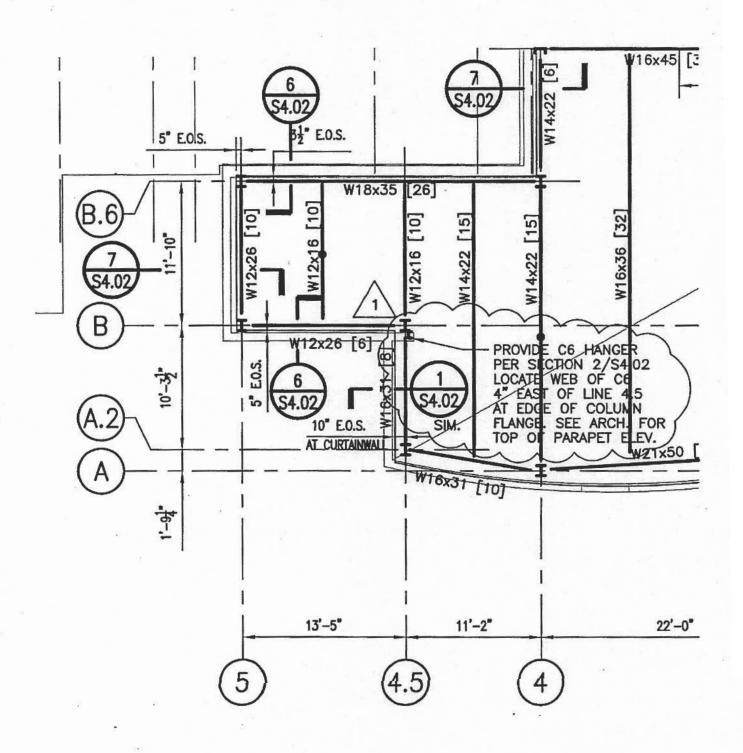
SMMA	UNIVERSITY OF SOUTHERN MAINE SCIENCE BUILDING RESEARCH WING EXPANSION	DATE 4-2	27-04	ADD-1
SYMMES MAINT & MCKEE ASSOCIATES	70 FALMOUTH STREET PORTLAND, MAINE	SCALE 1/8	<b>*</b> =1'-0 <b>*</b>	SN3-1
1000 Massochusetts Avenue Combridge, MA 02138	PART FIRST FLOOR PLAN REFERENCE DWG. S1.11	DR. BY RTL	CK. BY	JOB NO. 03049,00



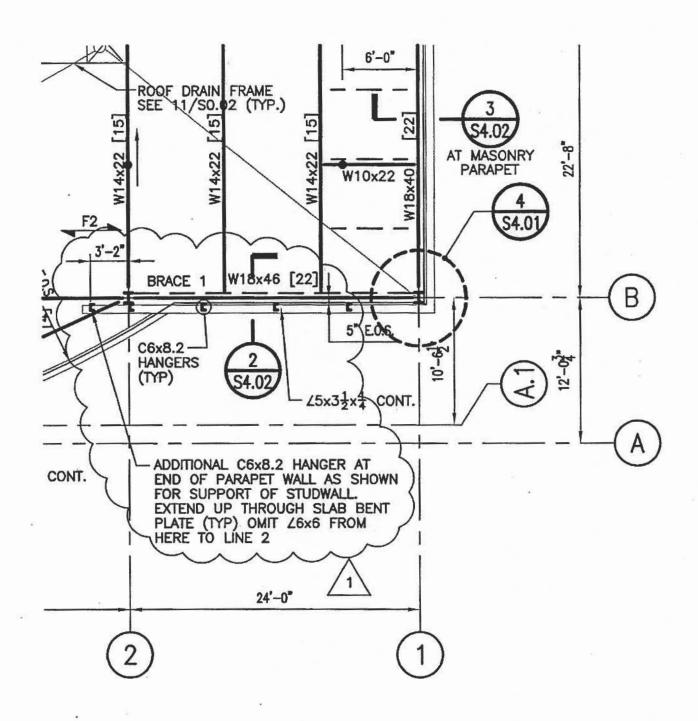
CMANA	UNIVERSITY OF SOUTHERN MAINE SCIENCE BUILDING RESEARCH WING EXPANSION	DATE 4-2	7-04	ADD-1 SKS-2
SYMMES MAIN! & MCKEE A230CIATES	70 FALMOUTH STREET PORTLAND, MAINE	SCALE 1/8	'=1'-0"	SN3-2
1000 Massachusetts Avenue Cambridge, MA 02138	PART FOURTH FLOOR PLAN REFERENCE DWG. \$1.41	DR. BY RTL	CK. BY	JOB NO. 03049,00



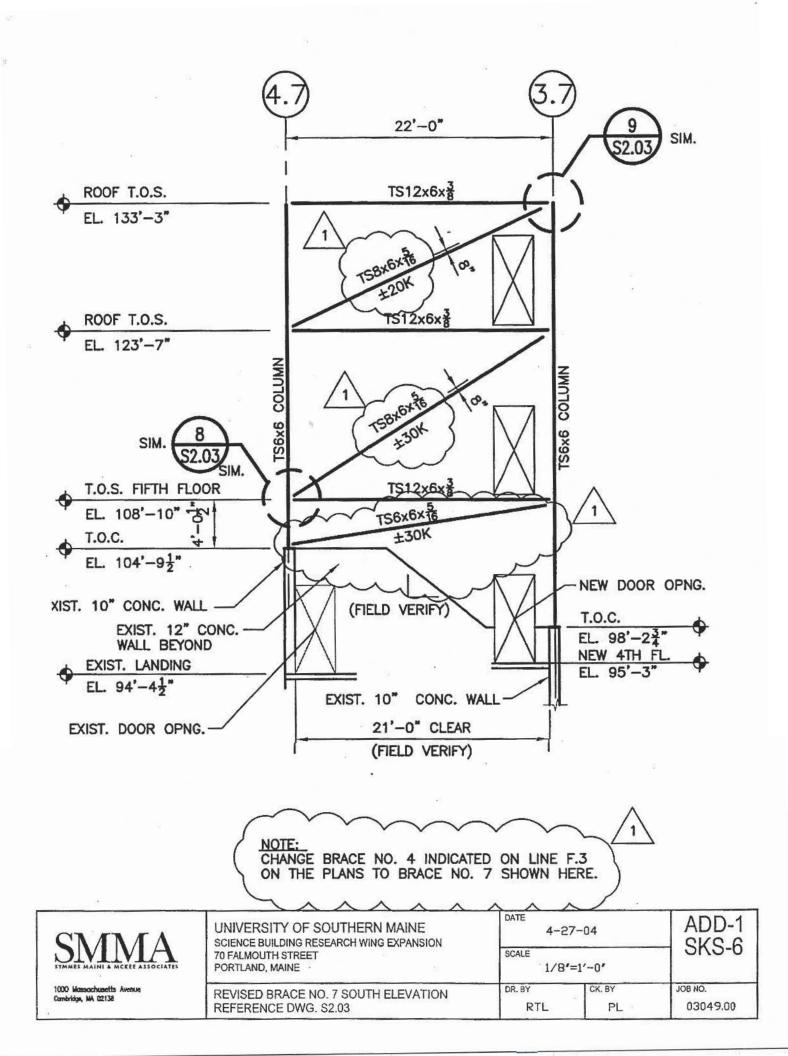
CMMA	UNIVERSITY OF SOUTHERN MAINE SCIENCE BUILDING RESEARCH WING EXPANSION	DATE 4-2	7-04	ADD-1 SKS-3
SYMMES MAINT & MCKER ASSOCIATES	70 FALMOUTH STREET PORTLAND, MAINE	SCALE 1/8	'=1'-0'	SN3-3
1000 Massachusetts Avenue Combridge, MA 02138	PART FIFTH FLOOR PLAN REFERENCE DWG. \$1.51	DR. BY	CK. BY	JOB NO. 03049.00

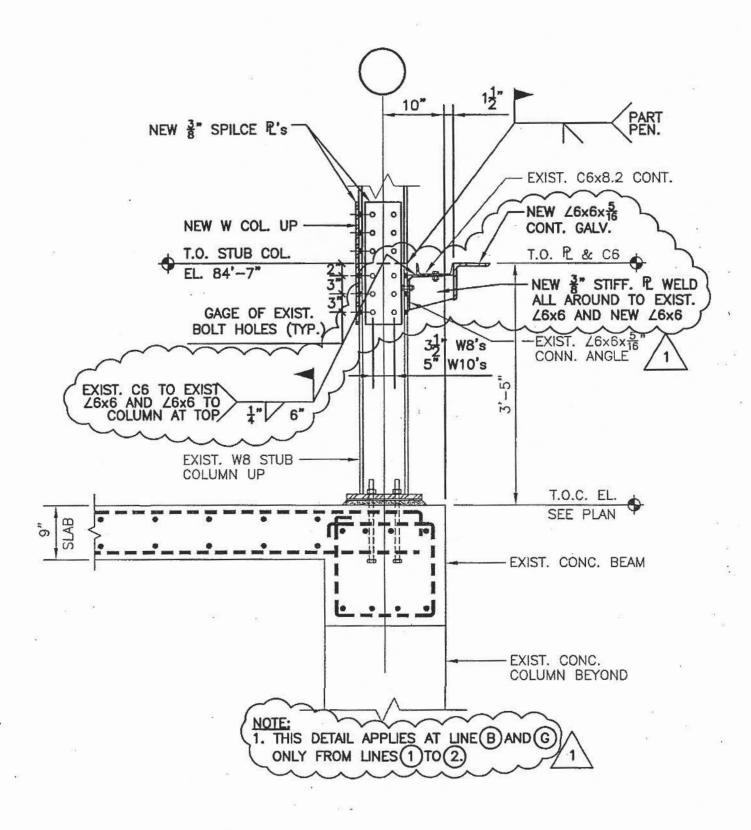


CNANAA	UNIVERSITY OF SOUTHERN MAINE SCIENCE BUILDING RESEARCH WING EXPANSION	DATE 4-2	7-04	ADD-1
SYMMES MAINI & MCKEE ASSOCIATES	70 FALMOUTH STREET PORTLAND, MAINE	SCALE 1/8	'=1'-0 <b>'</b>	5NS-4
1000 Massachusetts Avenue Combridge, MA 02138	PART ROOF FRAMING PLAN REFERENCE DWG. 1.61	DR. BY	CK. BY	JOB NO. 03049.00

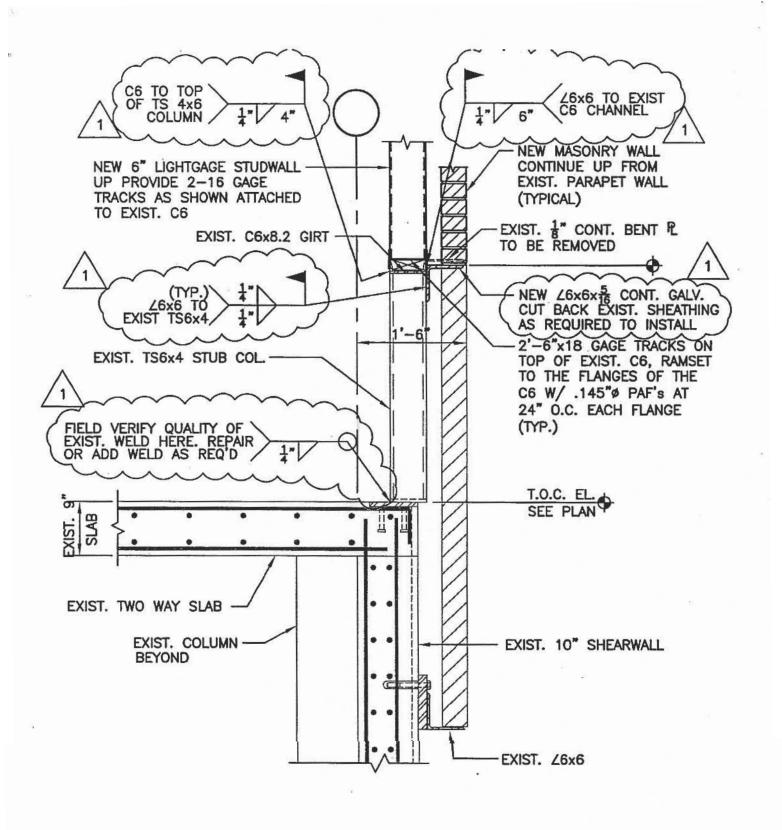


SMMA	UNIVERSITY OF SOUTHERN MAINE SCIENCE BUILDING RESEARCH WING EXPANSION	DATE 4-2	7-04	ADD-1 SKS-5
SYMMES MAINI & MCKEE ASSOCIATES	70 FALMOUTH STREET PORTLAND, MAINE	SCALE 1/8	'=1'-0 <b>'</b>	3110-3
1000 Massachusetts Avenue Cambridge, MA 02138	PART ROOF FRAMING PLAN REFERENCE DWG. S1.61	DR. BY RTL	CK. BY	JOB NO. 03049.00

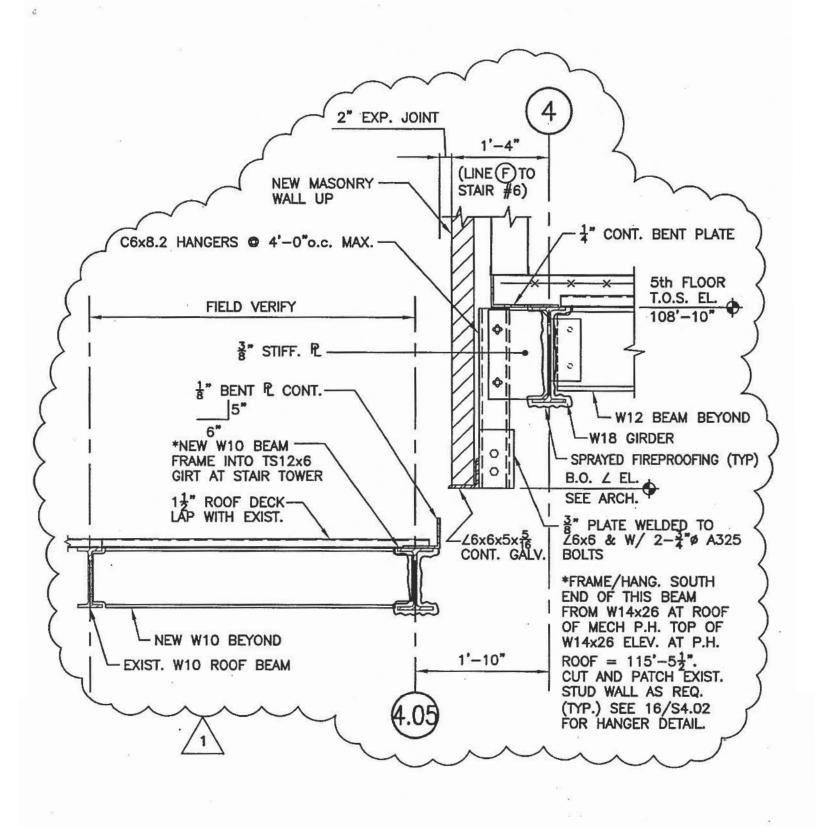




CNANA	UNIVERSITY OF SOUTHERN MAINE SCIENCE BUILDING RESEARCH WING EXPANSION	DATE 4-2	7-04	ADD-1 SKS-7
SYMMES MAINI & MCKEE ASSOCIATES	70 FALMOUTH STREET PORTLAND, MAINE	SCALE	<b>*</b> =1'-0 <b>*</b>	SN3-1
1000 Massochusetts Avenue Combridge, MA 02138	NEW DETAIL REFERENCE 2a/S4.01	DR. BY	CK. BY	JOB NO. 03049.00



CNANAA	UNIVERSITY OF SOUTHERN MAINE SCIENCE BUILDING RESEARCH WING EXPANSION	DATE 4-2	7-04	ADD-1
SYMMES MAINI & MCKEE ASSOCIATES	70 FALMOUTH STREET PORTLAND, MAINE	SCALE 3/4	<b>"</b> =1'-0 <b>"</b>	SKS-8
1000 Massochusetts Avenue Combridge, MA 02138	REVISED DETAIL REFERENCE 20/S4.01	DR. BY	CK. BY	JOB NO. 03049.00

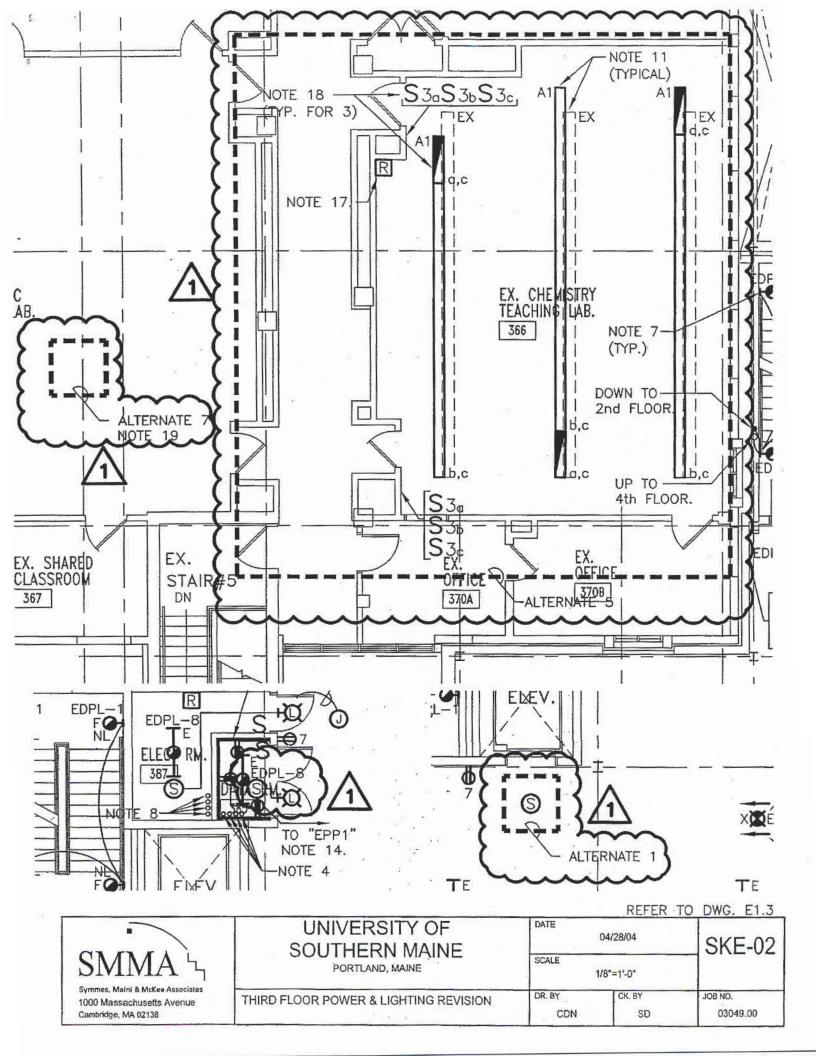


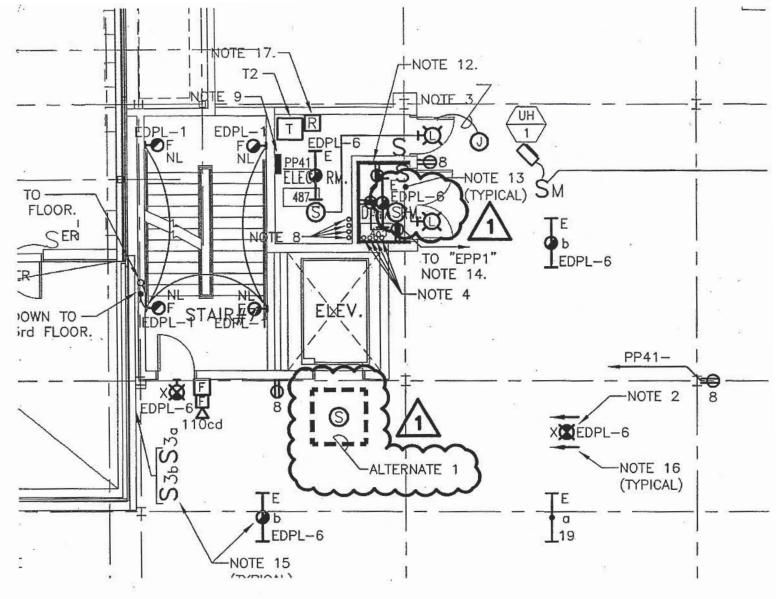
CIAIA	UNIVERSITY OF SOUTHERN MAINE SCIENCE BUILDING RESEARCH WING EXPANSION	DATE 4-2	7-04	ADD-1
SYMMES MAIN! & MCKEE ASSOCIATES	70 FALMOUTH STREET PORTLAND, MAINE	SCALE 3/4	<b>"</b> =1'-0"	SKS-9
1000 Massochusetts Avenue Combridge, MA 02138	REVISED DETAIL REFERENCE 13/S4.02	DR. BY RTL	CK. BY	JOB NO. 03049,00

277/480V 400A MLO	277/480V, 3¢, 400A MLO	ø, 4W		PA	PANELBOARD (EXISTING)	"MDPP"	S.C.I.=35,000A  MECH. PENTHOUSE RM.
CKT.	CKT.	CKT. BKR.	LOAD	LOAD (CONN.)			FOUIDAGNT
NO.	AMPS	POLES	모	KVA	FEEDER		ECCIPMEN
-	100	ъ	50.0	54.0	1"C 3#4 & 1#8GND.	D.	AHU-3
2	30	ы	1	10,0	1"C 3#10 & 1#10GND.		15 KVA TRANSFORMER (PANEL "MPP")
}	125	3	3	0.79	1.12"S - 342 & 1#BGNP	をして	more
4	70	3	25.0	28	3/4"C 3#8 & 1#8GND.	) EF_22	
کی	Se .	<b>}</b>	\$	}	3/4C 3#10 - & 1#10	T# TOGNO.	PUMP P-6
9	20	м	15.0	17.5	3/4"C 3#10 & 1#10GND.	GND.	PUMP P-7
1	20	-	,	2.0	1/2"C 2#12 & 1#12GND.	2GND.	LIGHTING
80	15	2	0.5	6.0	1/2"C 3#12 & 1#12GND.	SGND.	EF-4
6	15	2	0.5	6.0	1/2"C 3#12 & 1#12GND.	ZGND.	EF-9
10	15	2	2.0	2.8	1/2"C 3#12 & 1#12GND.	ZGND.	EF-8
11	15	3	0.5	6.0	1/2"C 3#12 & 1#12GND.	2GND.	EF-10
.,	1.	,	40	0	2:00:2: 00:2:		i i

			LIGH	TING	LIGHTING FIXTURE SCHEDULE	CHEDULE	
FIXT.	MANUFACTURER	CATALOG NO.	VOLTS	VOLTS NO. OF		MOUNTING	DESCRIPTION
A 1	CORELITE	NAVIGATOR NBLM3T8-2C-AC (2)	772	3 O	F032/835/XPS/EC0 OR F32T8/SXL/SP35/ECC	PENDANT 7'-6" A.F.F. TO BOTTOM	DIRECT/INDIRECT FIXTURE, 30% UP/DOUBLE—SWITCHED WITH FIELD—ADJAIRCRAFT CABLE. FOR FIXTURE LENG PLANS.
ш	METALUX .	IA-232 ②	772	2	F032/835/XPS/EC0 OR F32T8/SXL/SP35/ECd	CHAIN-MTD.	4' FLUORESCENT INDUSTRIAL FIXT. WITH 5% UPLIGHT
					$\Box$		

REFER TO DWG. E0.1 UNIVERSITY OF DATE 04/28/04 SKE-01 SOUTHERN MAINE SCALE PORTLAND, MAINE N.T.S. Symmes, Maini & McKee Associates DR. BY CK. BY JOB NO. ELECTRICAL PANELBOARD AND LIGHTING 1000 Massachusetts Avenue CDN 03049.00 FIXTURE SCHEDULE REVISION SD Cambridge, MA 02138





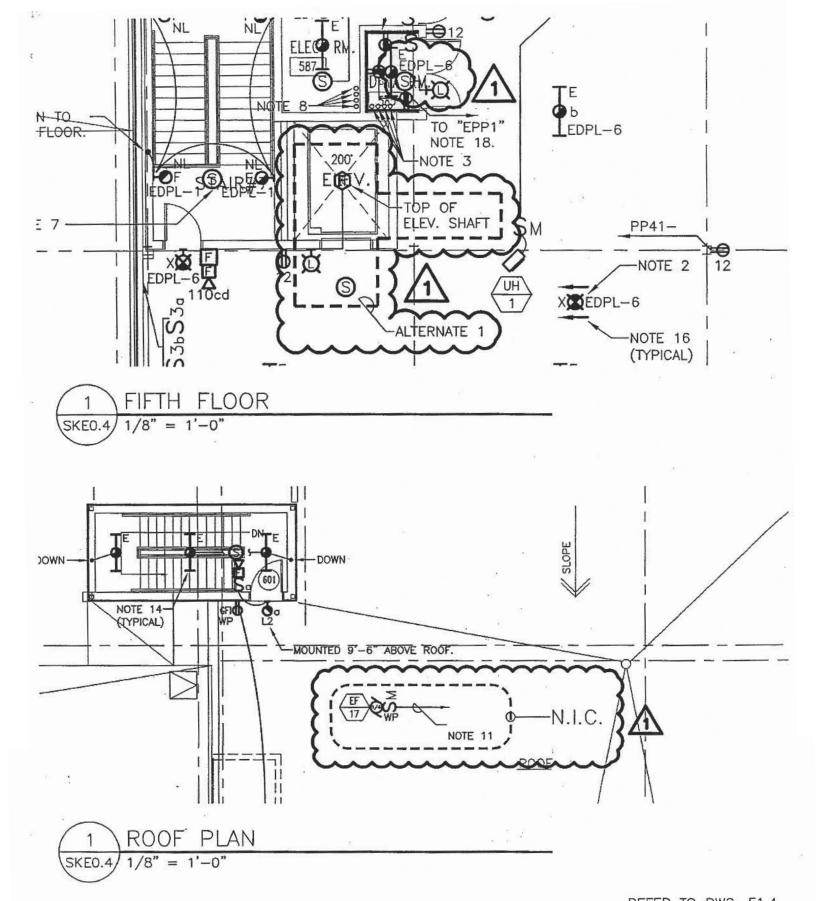
11. DUE TO CEILING LOWERING IN THIS ROOM, EXISTING LIGHTING FIXTURES SHALL BE DISCONNECTED AND REMOVED. NEW LIGHTS TYPE "A1" SHALL BE WIRED TO EXISTING LIGHTING CIRCUIT PROVIDE NEW SWITCHING ARRANGEMENT AS INDICATED SWITCHES "a" & "b" CONTROL ALL OUTER LAMPS, SWITCH "c" CONTROLS ALL INNER LAMPS.

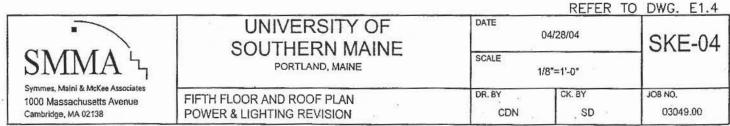
12. PROVIDE 3/4" THICK, 8' HIGH PLYWOOD BOARD, PAINTED BLACK WITH FIRE RESISTANT

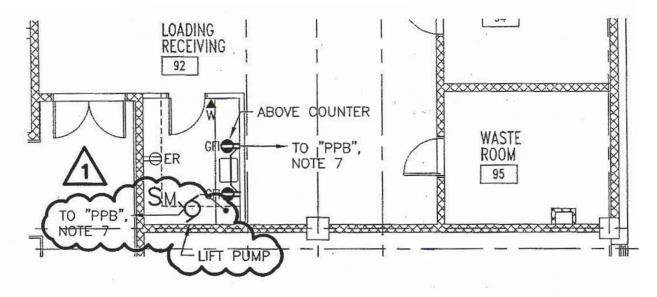
SWITCH BYPASS KELAY LUCATED IN THIS KUOM, KEFER TO NOTE TO FOR LUCATION. FOR WIRING DIACRAM REFER TO DETAIL ON DRAWING EO.1.

ALTERNATE 7 SCOPE OF WORK CONSISTS OF: DUE TO EXTERIOR WALL RENOVATION DISCONNECT EXISTING ROOF-MOUNTED CONDENSING UNIT (LOCATED AT INTERSECTION OF GRIDS C AND 10, REFER TO ARCHITECTURAL ELEVATION DETAIL A3/2.2), RE-INSTALL ASSOCIATED EXISTING EXTERIOR DISCONNECT SWITCH AND RE-CONNECT CONDENSING UNIT.

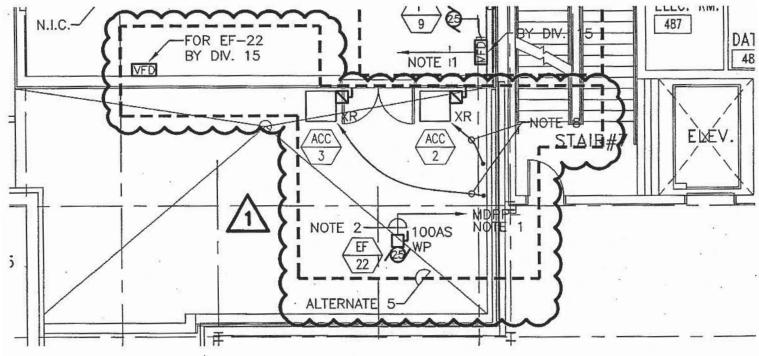
REFER TO DWG. E1.3 DATE UNIVERSITY OF 04/28/04 SKE-03 SOUTHERN MAINE SCALE PORTLAND, MAINE 1/8"=1'-0" DR. BY CK, BY JOB NO. FOURTH FLOOR POWER & LIGHTING REVISION 1000 Massachusetts Avenue CDN 03049.00 SD Cambridge, MA 02138









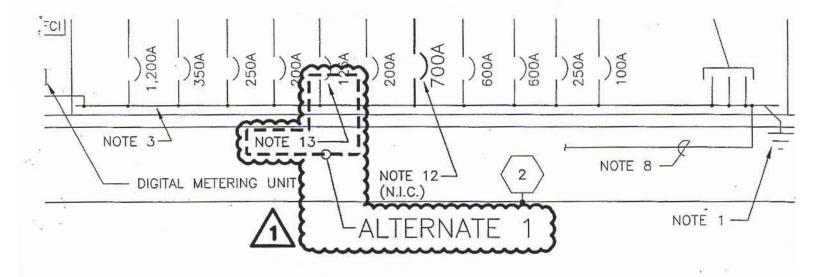


2 PENTHOUSE PLAN SKE0.4 1/8" = 1'-0"

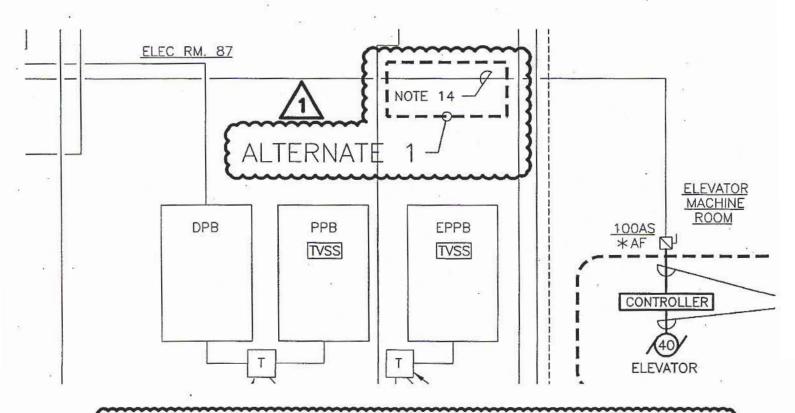
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DUE TO UNITS' RELOCATION, E.C. SHALL DISCONNECT THESE UNITS, EXTEND POWER FEEDERS (PANEL "MPP") TO NEW LOCATION AND RE-CONNECT THEM BACK.

			REFER	TO DWG. E1.5
•	UNIVERSITY OF SOUTHERN MAINE PORTLAND, MAINE	DATE 04/28/04		SKE-05
SYMMA  Symmes, Maini & McKee Associates  1000 Massachusetts Avenue Cambridge, MA 02138		SCALE 1/8"=1'-0"		- OKE 00
	PENTHOUSE PLAN & BASEMENT PARTIAL PLAN POWER REVISION	DR. BY CDN	CK. BY	JOB NO. 03049.00



EXISTING BUILDING



 $\triangle$ 

- EXISTING CIRCUIT BREAKER WITH SHUNT TRIP SHALL BE FEILD—RETROFITTED WITH AUXILLARY SWITCH CONTACTS, TYPE AS REQUIRED TO SWITCH POWER TO EMERGENCY BATTERY—POWERED LOWERING UNIT.
- 4. E.C. SHALL VERIFY IF ELEVATOR WIRING FROM MAIN SWITCHBOARD HAS BEEN PULLED WITHIN SCOPE OF PREVIOUS PHASES. IF NOT, IT SHALL BE CONSIDERED IN SCOPE OF THIS PROJECT: PROVIDE 3#4 & 1#6GND. IN EXISTING 1-1/4"CONDUIT.

REFER TO DWG. E4.1

ALTERNATE 1



# UNIVERSITY OF SOUTHERN MAINE

PORTLAND, MAINE	SCALE
3	
POWER ONE-LINE DIAGRAM	DR. BY
PHASE 2 REVISION	C

04/28/04 SKE-06

DATE