

# DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND

## BUILDING INSPECTION

Please Read Application And Notes, If Any, Attached

### PERMIT

Permit Number: 100067

PERMIT ISSUED

This is to certify that STONE COAST PROPERTIES LLC / P & S

has permission to Replace Plaster ceiling w/ gypsum wall board

AT 603 CONGRESS ST

CB # 046 D031001

FEB - 2 2010

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and written permission procured before this building or part thereof is lathed or otherwise worked-in. 24 HOUR NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

#### OTHER REQUIRED APPROVALS

Fire Dept. CAPT. K. Justice

Health Dept. \_\_\_\_\_

Appeal Board \_\_\_\_\_

Other \_\_\_\_\_

Department Name

*[Signature]*  
Director - Building & Inspection Services

**PENALTY FOR REMOVING THIS CARD**

**City of Portland, Maine - Building or Use Permit Application**

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 10-0067	Issue Date:	CBL: 046 D031001
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Location of Construction: 603 CONGRESS ST (604 Congress)	Owner Name: STONE COAST PROPERTIES LL	Owner Address: 142 HIGH ST STE 320	Phone:
Business Name:	Contractor Name: P & G Masonry	Contractor Address: P.O. Box 729 Old Orchard	Phone: 2079348584
Lessee/Buyer's Name	Phone:	Permit Type: Alterations - Commercial	Zone: B-3

Past Use: Commercial - Vacant Space <i>theater</i>	Proposed Use: Commercial - <del>Vacant Space</del> <i>theater</i> - Replace Plaster ceiling w/ gypsum wall board	Permit Fee: \$1,020.00	Cost of Work: \$100,000.00	CEO District: 2
		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied <i>*See Conditions</i>	INSPECTION: Use Group: <i>A-1</i> Type: <i>3B</i> <i>IBC 2003</i>	

Proposed Project Description: Replace Plaster ceiling w/ gypsum wall board	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)		
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied		
Signature:	Date:	

Permit Taken By: Ldobson	Date Applied For: 01/22/2010	<b>Zoning Approval</b>
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1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

<b>Special Zone or Reviews</b> <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> <i>Ok w/ conditions.</i> Date: <i>1/25/10 AM</i>	<b>Zoning Appeal</b> <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date:	<b>Historic Preservation</b> <i>Yes</i> <input type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date: <i>1/25/10</i> <i>[Signature]</i>
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**PERMIT ISSUED**

FEB - 2 2010

City of Portland

**CERTIFICATION**

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT ADDRESS DATE PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE DATE PHONE

**City of Portland, Maine - Building or Use Permit**

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

<b>Permit No:</b> 10-0067	<b>Date Applied For:</b> 01/22/2010	<b>CBL:</b> 046 D031001
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<b>Location of Construction:</b> 603 CONGRESS ST (609)	<b>Owner Name:</b> STONE COAST PROPERTIES LL	<b>Owner Address:</b> 142 HIGH ST STE 320	<b>Phone:</b>
<b>Business Name:</b>	<b>Contractor Name:</b> P & G Masonry	<b>Contractor Address:</b> P.O. Box 729 Old Orchard	<b>Phone:</b> (207) 934-8584
<b>Lessee/Buyer's Name</b>	<b>Phone:</b>	<b>Permit Type:</b> Alterations - Commercial	

<b>Proposed Use:</b> Commercial - theter (vacant) - Replace Plaster ceiling w/ gypsum wall board	<b>Proposed Project Description:</b> Replace Plaster ceiling w/ gypsum wall board
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**Dept:** Historic      **Status:** Approved with Conditions      **Reviewer:** Deborah Andrews      **Approval Date:** 01/25/2010  
**Note:** **Ok to Issue:**

- 1) HP Approval not required, as this is an interior alteration. However, HP staff recommends that a sample section of plaster ceiling be salvaged on site for potential future paint analysis should the current or future owner wish to replicate all or a portion of the decorative painting.

**Dept:** Zoning      **Status:** Approved with Conditions      **Reviewer:** Ann Machado      **Approval Date:** 01/25/2010  
**Note:** **Ok to Issue:**

- 1) ANY exterior work requires a separate review and approval thru Historic Preservation. This property is located within an Historic District.  
2) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

**Dept:** Building      **Status:** Approved with Conditions      **Reviewer:** Tammy Munson      **Approval Date:** 02/02/2010  
**Note:** **Ok to Issue:**

- 1) This permit authorizes the replacement of the ceiling only. Any other work requires separate permits.  
2) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm or HVAC or exhaust systems. Separate plans may need to be submitted for approval as a part of this process.  
3) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work.

**Dept:** Fire      **Status:** Approved with Conditions      **Reviewer:** Capt Keith Gautreau      **Approval Date:** 01/28/2010  
**Note:** **Ok to Issue:**

- 1) All construction shall comply with NFPA 101

**PERMIT ISSUED****Comments:**

2/2/2010-tmm: As discussed during our meeting, the ceiling is part of a historic building. There is historical significance with various features of the ceiling. In order to install a rated ceiling, these features would be removed. 3407.1 of the IBC allows for the AHJ to allow for the installation of 1/2" drywall to be installed in the area that is being replaced.

City of Portland



# STATE THEATRE

## General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: <u>609 Congress Street</u>		
Total Square Footage of Proposed Structure/Area	Square Footage of Lot	Number of Stories
Tax Assessor's Chart, Block & Lot Chart# <u>046</u> Block# <u>D031</u> Lot# <u>001</u>	Applicant * <b>must be owner, Lessee or Buyer</b> * Name <u>Stone Const Prop. LLC</u> Address <u>142 High St / Suite 320</u> City, State & Zip <u>Portland Maine 04101</u>	Telephone: <u>772-1540</u>
Lessee/DBA (If Applicable)	Owner (if different from Applicant) Name Address City, State & Zip	Cost Of Work: \$ <u>100,000</u> C of O Fee: \$ Total Fee: \$ <u>1,020</u>
Current legal use (i.e. single family) <u>Vacant</u> Number of Residential Units <u>0</u> If vacant, what was the previous use? <u>Dance Hall</u> Proposed Specific use: <u>Dance Hall</u> Is property part of a subdivision? <u>NO</u> If yes, please name _____ Project description: <u>Replace plaster ceiling with gypsum wall board</u>		
Contractor's name: <u>P+G Masonry</u> Address: <u>P.O. Box 729</u> City, State & Zip <u>Old Orchard Beach</u> Telephone: <u>934-8584</u> Who should we contact when the permit is ready: <u>Ferry Glidden</u> Telephone: <u>632-5244</u> Mailing address: _____		

**Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.**

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at [www.portlandmaine.gov](http://www.portlandmaine.gov), or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

RECEIVED

Signature: <u>Ferry Glidden</u>	Date: <u>1/22/10</u>	JAN 22 2010
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This is not a permit; you may not commence ANY work until the permit is issued.  
Dept. of Building Inspections  
City of Portland Maine



Scott Simons Architects

75 York Street  
Portland, Maine 04101  
phone 207 772 4656  
fax 207 828 4656  
www.simonsarchitects.com

## MEMORANDUM

**date:** 01/21/2010  
**project:** STATE THEATER CEILING: 2009-0160  
**to:** Richard McCarthy  
Office of State Fire Marshall  
52 State House Station  
Augusta, ME 04333-0052  
**phone:** (207) 626-3886  
**fax:** (207) 624-8968  
**subject:** Ceiling Replacement

In the past two years major improvements have been made to the State Theater in Portland in preparation for its future reopening. Fire escapes have been redesigned and replaced. Electrical wiring has been upgraded to current code. Fire alarms, exit lights and emergency lighting have been improved to meet code. Exit doors and egress hardware have been replaced. Men's restrooms have been relocated from the basement to the main entry level.

The major outstanding issue is the existing plaster ceiling. It has been damaged from past roof leaks and physical abuse from people walking on top of the suspended structure. There are documented incidences of plaster falling and evidence of several patches over the years. After close visual inspection of both the top and underside, it has been determined the only solution is to remove the plaster and replace the ceiling. Several options were reviewed and installing gypsum wall board (GWB) is the most reasonable solution.

L&L Structural Engineering has reviewed the existing metal supports and hanger structure. The proposal removes the existing heavy plaster, which averages 14lb/sf. New light gauge metal furring will be installed and 2 layers of ¼" GWB will be formed around the shallow barrel vaults. The GWB system is relatively light in weight but the structural system is designed for additional loading if mass needs to be added to adjust acoustical performance in the future.

Philip R. Sherman, P.E. has also reviewed the project in regards to fire and building codes. His review suggest it is reasonable not to fire rate the replacement ceiling as the existing ceiling is not fire rated. We presented this argument to the local building and fire departments along with the state fire inspector. There were some questions and concerns, especially with the volume of the space above the ceiling. It was agreed heat detectors could easily be added in this space to provide an added sense of security. They were all open to considering the proposal with more information and a formal application.

**project:** State Theater Ceiling  
2009-0160-CeilingLetter.doc

**date:** 01/21/2010

Attached with this memo is the following information:

Application for Construction Permit

\$150 check for application fee

Floor plan showing extent of ceiling area (SSA)

Structural code summary (L&L)

Section details of ceiling replacement connections (L&L)

Narrative code summary (Phil Sherman)

**GENERAL NOTES:**

1. The notes on the drawings are not intended to replace specifications. in addition to general notes. See specifications for requirements
2. Structural drawings shall be used in conjunction with job specifications and architectural, mechanical, electrical, plumbing, and site drawings. Consult, openings, chases, inserts, reglets, sleeves, depressions, and other details not shown on structural drawings.
3. All dimensions and conditions must be verified in the field. Any discrepancies shall be brought to the attention of the engineer before proceeding with the affected part of the work.
4. Do not scale plans.
5. Sections and details shown on any structural drawings shall be considered typical for similar conditions.
6. All proprietary products shall be installed in accordance with the manufacturers written instructions.
7. The structure is designed to be self supporting and stable after the erection is complete. It is the contractor's sole responsibility to determine erection procedures and sequencing to ensure the safety of the building and its components during erection. This includes the addition of necessary shoring, sheeting temporary bracing, guys or tiedowns. Such material shall remain the property of the contractor after completion of the project.
8. All applicable federal, state, and municipal regulations shall be followed, including the federal department of labor occupational safety and health act.

**DESIGN LOADS:**

1. Building code: IBC (2003) International Building Code.
2. Design Dead Loads:  
Ceiling ..... 10 psf (4 psf for drywall shown + 6 psf potential future weight for acoustical dampening).
3. Seismic and Internal Pressure Design per IBC 2003.

**STRUCTURAL STEEL NOTES:**

1. Structural steel fabrication, erection, and connection design shall conform to AISC "Specification for the design, fabrication, and erection of structural steel"—Ninth edition.
2. Structural steel:
  - a) Structural steel shall conform to ASTM A-36.
  - b) Structural tubing shall conform to ASTM A-500 GR-B
  - c) Structural pipe shall conform to ASTM A-53, TYPE E OR S
3. All welding shall conform to AWS D1.1—Latest edition. Welding electrodes shall be E70XX

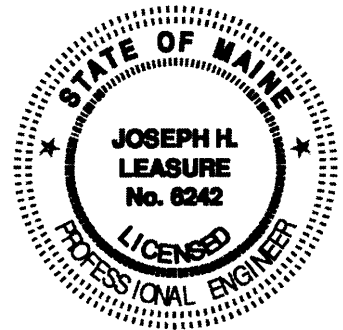
RECEIVED

JAN 22 2010

Dept. of Building Inspections  
City of Portland Maine

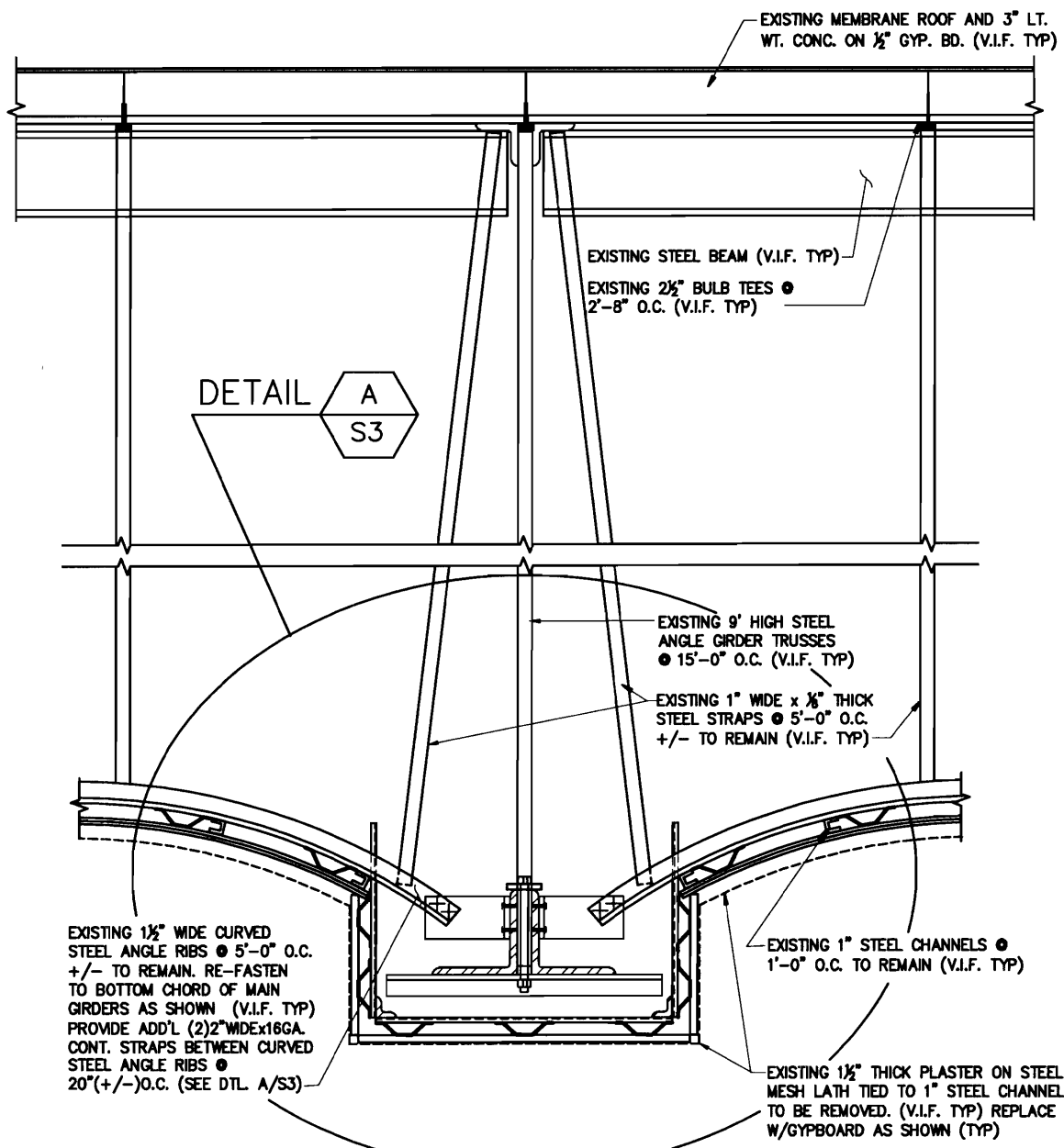
**LIGHT GAGE METAL FRAMING:**

1. Acceptable light gage Manufacturer: Dietrich, Marino, or approved equal.
2. The extent of the work for the lightgauge framing system is detailed on the drawings. These notes shall be worked in conjunction with those drawings and the specifications.
3. The following specifications and publications shall be followed.
  - a) American iron and steel institute cold form design manual, specification for the design of cold form steel structural members - latest edition.
  - b) American society for testing and materials (ASTM).
  - c) American institute of steel construction Manual of Steel Construction - 9TH Edition.
4. Fabrication of light gage steel shall conform with requirements of ASTM A446 with the following minimum yield points (Fy):
  - a) 16 gage. and heavier - Fy = 50,000 psi (Grade D)
  - b) 18 gage. - Fy = 33,000 Psi (Grade A)
  - c) 20 gage. - Fy = 33,000 PSI (Grade A)
5. Manufacturer of studs, runners, tracks and other framing members shall comply with ASTM C955.
6. Framing components and accessories shall be galvanized per ASTM A525 minimum G60 coating.
7. Screws and other attachment devices shall have a protective coating equivalent to cadmium or zinc plating and shall comply with ASTM A165 Type NS. self tapping screws shall be of the minimum diameter as indicated on the design drawings for each specific attachment detail. Penetration through joined materials shall not be less than three exposed threads.



29135

designed by: JHL	STATE THEATRE 609 CONGRESS STREET PORTLAND, MAINE	L & L STRUCTURAL ENGINEERING SERVICES, INC. SIX Q STREET SOUTH PORTLAND, MAINE 04106	PHONE: (207) 767-4830 FAX: (207) 798-5432
drawn by: AKB			
checked by: JHL			
scale: NONE			
date: 1-20-10	GENERAL NOTES		S1



EXISTING 1 1/2" WIDE CURVED STEEL ANGLE RIBS @ 5'-0" O.C. +/- TO REMAIN. RE-FASTEN TO BOTTOM CHORD OF MAIN GIRDERS AS SHOWN (V.I.F. TYP) PROVIDE ADD'L (2) 2"WIDEx16GA. CONT. STRAPS BETWEEN CURVED STEEL ANGLE RIBS @ 20" (+/-) O.C. (SEE DTL. A/S3)

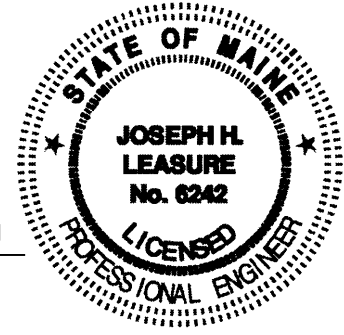
EXISTING 9' HIGH STEEL ANGLE GIRDER TRUSSES @ 15'-0" O.C. (V.I.F. TYP)  
 EXISTING 1" WIDE x 1/8" THICK STEEL STRAPS @ 5'-0" O.C. +/- TO REMAIN (V.I.F. TYP)

EXISTING 1" STEEL CHANNELS @ 1'-0" O.C. TO REMAIN (V.I.F. TYP)

EXISTING 1 1/2" THICK PLASTER ON STEEL MESH LATH TIED TO 1" STEEL CHANNELS TO BE REMOVED. (V.I.F. TYP) REPLACE W/GYPBOARD AS SHOWN (TYP)

NOTES:

- 1) SEE GENERAL NOTES ON DWG. S1.
- 2) CONNECTIONS OF EXISTING 1" STEEL CHANNEL TO CURVED STEEL ANGLES SHALL BE REVIEWED AND RE-CONNECTED TO MATCH EXISTING CONNECTIONS AFTER SELECTIVE DEMOLITION OF PLASTER AND STEEL MESH LATH REMOVAL. IN ADDITION 1" STEEL CHANNELS SHALL BE SUPPORTED IN THE SIDE WALLS OF THE THEATRE OR RE-GROUTED SOLID IN THE WALL AND AN ADDITIONAL 2"WIDEx16GA. STRAP SHALL BE INSTALLED ON TOP OF THE CHANNELS AT THE FACE OF THE WALL (TYP)



**SECTION 1 (SECTION AT EXISTING GIRDER)**  
 N.T.S. **A2**

29135

designed by:	JHL
drawn by:	AKB
checked by:	JHL
scale:	AS NOTED
date:	1-20-10

STATE THEATRE  
 609 CONGRESS STREET  
 PORTLAND, MAINE  
 SECTIONS AND DETAILS

L & L STRUCTURAL  
 ENGINEERING SERVICES, INC.  
 SIX Q STREET  
 SOUTH PORTLAND, MAINE 04106  
 PHONE: (207) 767-4830  
 FAX: (207) 798-5432

**S2**



FASTEN CURVED ANGLE TO BOTTOM CHORD OF GIRDER W/L6x2x14GA.x 0'-3" LONG LT. GA. CLIP ANGLE. FASTEN CLIP ANGLE TO EACH MEMBER W/(2)0.177" P.A.F. (TYP)

PROVIDE (2)2"WDEx16GA. CONT. STRAPS ON TOP OF EXISTING STEEL CHANNELS BETWEEN EACH CURVED ANGLE @ 20" O.C.+/- NOT SHOWN FOR CLARITY. FASTEN TO EVERY FOURTH CHANNEL W/#8 TEKS SCREWS OR APPROVED CLIPS @ 48" O.C. (TYP)

EXIST. GIRDER

EXISTING CURVED L1 1/2 x 1 1/2 STEEL ANGLE RIBS @ 5'-0" O.C. +/- TO REMAIN. FASTEN TO BOTTOM CHORD OF GIRDER AS SHOWN (TYP)

EXISTING 3/8" DEEPx3/8" STEEL CHANNELS @ 1'-0" O.C. TO REMAIN. SEE NOTE #2 ON SECTION S2 (TYP)

INSTALL 3/8" DEEPx25GA. (087F125-18 FURRING CHANNELS MANUF. BY DIETRICH OR APPROVED EQUAL) CONT. HAT CHANNELS ADJACENT TO EACH EXISTING STEEL CHANNEL (W/FLANGE AS CLOSE AS POSSIBLE TO STEEL CHANNEL). FASTEN HAT CHANNEL TO EACH EXISTING CURVED ANGLE W/(2)#10 SELF TAPPING TEKS SCREWS OR (2)0.177" P.A.F. AND FASTEN HAT CHANNEL TO EACH NEW 2"x20GA. STRAP W/(2)#8 TEKS SCREWS (TYP).

(2) LAYERS OF 1/4" THICK GYPBOARD. FASTEN EACH LAYER TO HAT CHANNELS W/DRYWALL SCREWS @ 12" O.C. AT PANEL EDGES AND INTERMEDIATE (TYP)

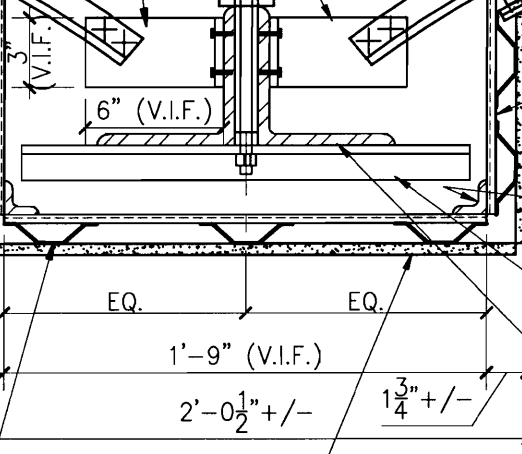
EXISTING 3/8" DEEPx3/8" STEEL CHANNELS @ 1'-0" O.C. WRAPPED AROUND BASE OF GIRDER TO REMAIN. VERIFY WIRE CONN. TO CONT. ANGLE AND CONT. CHANNEL AT TOP (TYP)

EXISTING CONT. L1 1/2 x 1 1/2 STEEL ANGLE BOTH SIDES OF GIRDER TO REMAIN. VERIFY WIRE CONN. TO CROSS ANGLE @ 5'-0" O.C. (TYP)

EXISTING L1 1/2 x 1 1/2 STEEL CROSS ANGLES @ 5'-0" O.C. TO REMAIN. VERIFY BOLTED CONN. TO BOTTOM CHORD OF GIRDER (TYP)

EXISTING J L BOTTOM CHORD OF GIRDER

1 3/4" +/-  
1 3/4" +/-



3/8" DEEPx25GA. (087F125-18 FURRING CHANNELS MANUF. BY DIETRICH OR APPROVED EQUAL) CONT. HAT CHANNELS @ 12" O.C. (2 MIN.) FASTEN TO EXISTING STEEL CHANNELS W/(2)#10x1" LONG SELF TAPPING TEKS SCREWS (TYP AT SIDES OF GIRDER BOX)

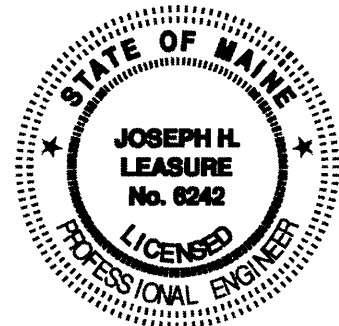
(3) 3/8" DEEPx25GA. (087F125-18 FURRING CHANNELS MANUF. BY DIETRICH OR APPROVED EQUAL) CONT. HAT CHANNELS @ 12" O.C. FASTEN TO EXISTING STEEL CHANNELS W/(2)#10x1" LONG SELF TAPPING TEKS SCREWS (TYP AT BOTTOM OF GIRDER BOX)

1/2" THICK GYPBOARD AT SIDES AND BOTTOM OF GIRDER BOX. FASTEN TO HAT CHANNELS W/DRYWALL SCREWS @ 12" O.C. AT PANEL EDGES AND INTERMEDIATE (TYP)

DETAIL



1 1/2" = 1'-0"



29135

designed by:	JHL
drawn by:	AKB
checked by:	JHL
scale:	AS NOTED
date:	1-20-10

STATE THEATRE  
609 CONGRESS STREET  
PORTLAND, MAINE

L & L STRUCTURAL  
ENGINEERING SERVICES, INC.  
SIX Q STREET  
SOUTH PORTLAND, MAINE 04106

PHONE: (207) 767-4830  
FAX: (207) 799-5432

SECTIONS AND DETAILS

S3

# PHILIP R. SHERMAN, P.E.

FIRE PROTECTION ENGINEERING AND BUILDING CODE CONSULTING

P.O. BOX 216  
444 WILMOT CENTER ROAD  
ELKINS, NH 03233-0216  
PHONE: 603-526-6190  
FAX: 603-526-4979  
EMAIL: PSHERMAN@PR Sherman.COM

Date: January 16, 2010

Proj: 1413.01

Scott Simons Architects  
75 York Street  
Portland, ME 04101

Attention: Mr. Stephen Fraser

Re: State Theater  
Portland, Maine  
Requirement for Fire Rated Ceiling

Dear Mr. Fraser:

Based on a site visit on December 17, 2009, here is my analysis of the requirement for fire rating of the proposed replacement ceiling in the house.

1. The building is a six story mixed occupancy building, including at least Group A1, B and M. The building is fully sprinklered.
2. The current roof steel is unprotected, and the current ceiling is not designed to be fire rated. Aside from the fire rating of the plaster ceiling, there are air grills and duct openings in the ceiling, and possibly other openings, that are not fire rated. The remainder of the building appears to have been constructed of fire rated construction to some unknown level. Columns, beams and the other roofs are of steel protected by "pyrobar", which appears to be gypsum blocks, floor and roof decks are concrete. No attempt to assess the level of fire rating was made.
3. 2003 IBC 102.6 indicates that "The legal occupancy of any structure... may continue without change except...as deemed necessary by the building official for the general safety and welfare of the occupants and the public."
  - a. The Portland City Code amends this as follows: Section 102.6 Existing structures, is amended by deleting the words "the International Property Maintenance Code or the International Fire Code" and adding the words "the Minimum Standards for Housing

and the NFPA Code as adopted by the City of Portland."; and by adding the words "and/or the Fire Chief" after the words "building official."

4. 2003 IBC 3403.1 requires alterations to conform with the requirements for new construction.
5. Per Chapter 5, the minimum construction type that would be required if the building were new is Type IIA, for the six story Group B. Depending on the area of the building, Type IB might be required.
6. Per Table 601, with note c1, and assuming that there are rated walls between the Group M and the Group A space, the roof would not need to be rated if every part of the roof construction is more than 20 feet above the floor immediately below. This is the case in the auditorium, except near the back of the balcony and in the light booth..
7. In terms of the building code, this then gives the building inspector some latitude.
  - a. A strict reading of the code would require the entire replacement portion of the ceiling to be one hour rated (one hour for Type IIA or IB). If the mural at the front is to remain, this means the expense of rating the ceiling, which the remaining portion is not effectively rated, with no requirement that it be upgraded. In lieu of this, the roof trusses could be sprayed or otherwise protected.
  - b. The building authorities might also be convinced that the portion of the roof structure which is within 20 feet of the (balcony) floor, is small, the fuel load is small (seating and incidental) and the area is sprinklered.
8. The occupant load of the house is slightly less than 1500 persons. Of this, about 550 seats are located at the balcony. 2006 NFPA 101 13.1.6, as it applies to existing buildings, requires Type II(111) construction, which equates to IBC Type IIA, with the same exception for roof structure more than 20 feet off the floor.
9. This means that the building as it sits does not comply with NFPA 101, as it applies to existing buildings. The ceiling, including the portion not being reworked, is therefore required to be one hour rated, or the roof structure needs to be otherwise protected. Again, an appeal based on the limited extent of the problem, the relatively low fuel load, and automatic sprinklers might be considered.

Based on the above information, I propose that the replacement ceiling not be required to be fire rated, due to the following:

- The concealed space above the ceiling does not require sprinklers, per 2002 NFPA 13 8.14.1.2.2. This section does not require sprinklers in noncombustible and limited combustible concealed spaces with limited access and not permitting occupancy or storage of combustibles, even if openings as for a plenum are provided.

- The only combustibles above the ceiling are plank catwalks. These will be sprayed with an intumescent finish to provide a Class A flame spread rating.
- Heat detection connected to the building fire alarm will be provided above the ceiling. The details of the spacing of these detectors will be agreed with the local building and fire authorities.
- According to the architect, the replacement ceiling reduces the live load of the ceiling from an average of about 14 lbs/sf to about 3 lbs/sf. The city will not require changes to the roof structure as the existing live load is being reduced.

Please review these issues and let me know if further information is required.

Yours truly:

Philip R. Sherman, P.E.

*C:\AaProj\1413\1413001.wpd*

