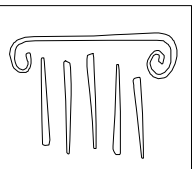




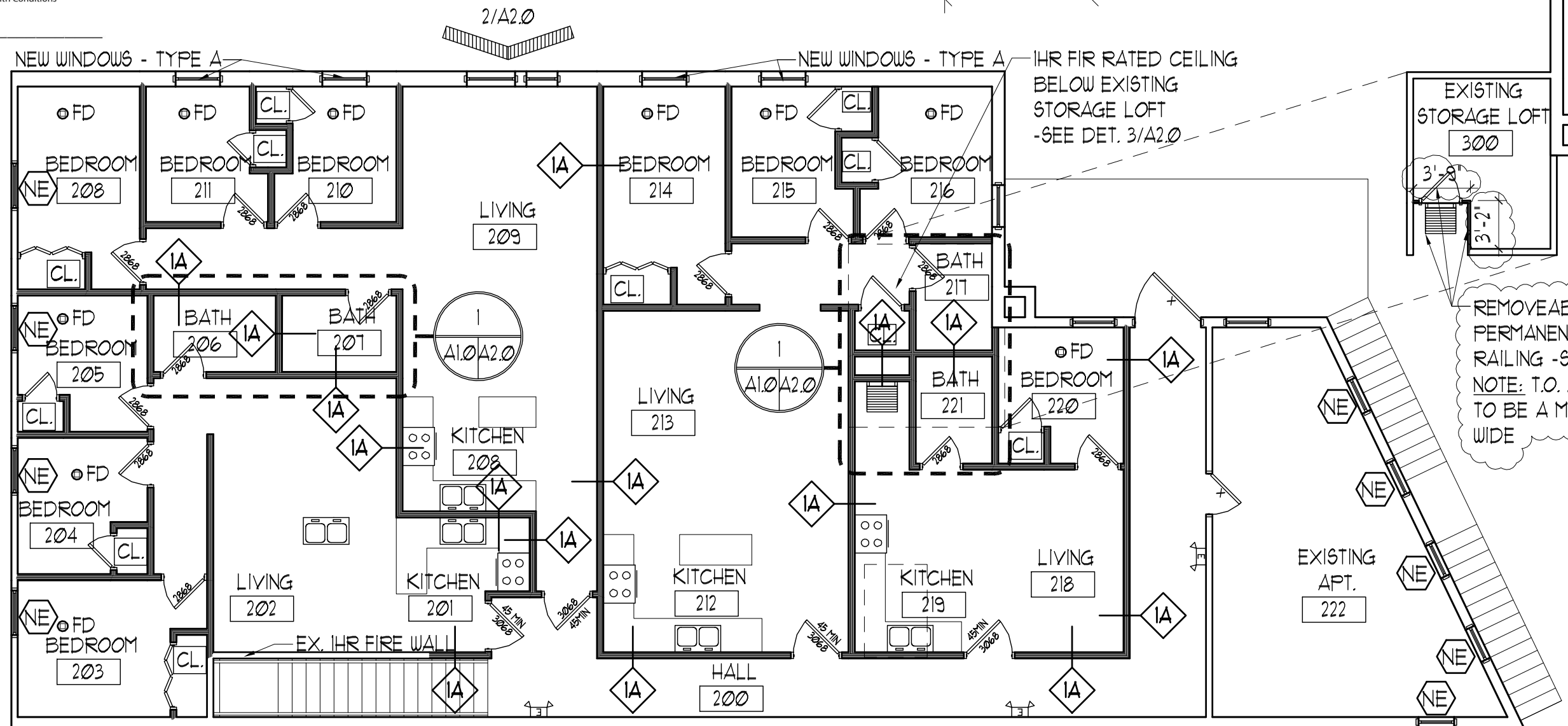
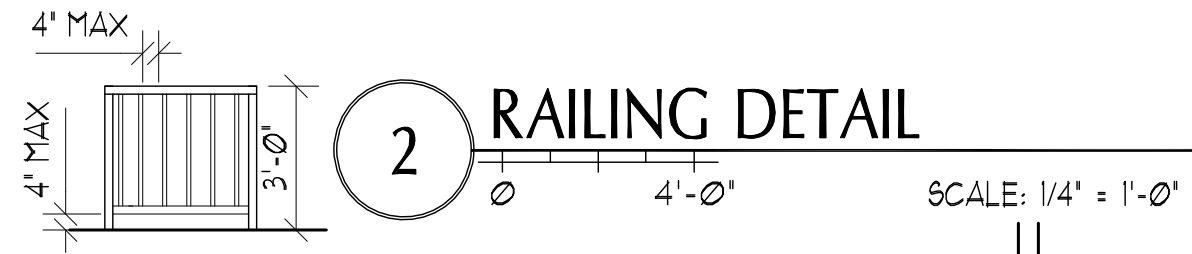
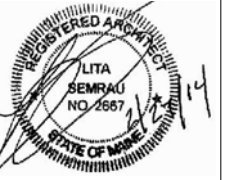
Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 10/27/14



PORT CITY ARCHITECTURE

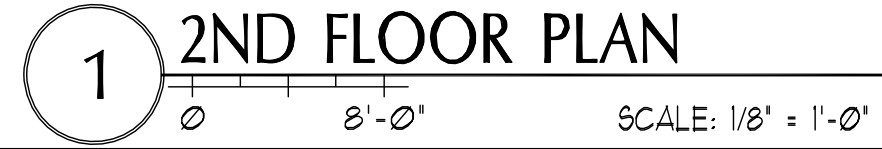
65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000
fax: 207.761.2010
info@portcityarch.com



REMOVEABLE LADDER,
PERMANENT GATE &
RAILING -SEE DET 2/A1.0
NOTE: T.O. LADDER GATE
TO BE A MINIMUM OF 34"
WIDE

GENERAL NOTES

- ALL INTERIOR FINISHES BY OWNER
PLUMBING FIXTURES FOR KITCHENS AND BATH BY OWNER
- ALL BATHROOMS TO HAVE MOISTURE-RESISTANT GYP BOARD.
- ALL INTERIOR PARTITIONS TO BE WALL TYPE AA UNO.
- INTERIOR STAIR PER PREVIOUS PERMIT - DWGs DATED 1.14.14
- ALL UNITS ARE TO BE SEPARATED FROM EACH OTHER WITH 1-HOUR FIRE-SEPARATIONS (WALLS AND FLOOR/CEILINGS). WALLS SHALL HAVE 5/8" GYP BOARD ON EACH SIDE OF THE WALL (U.L. #U495). ALL ASSEMBLIES SHALL BE FIRE-CAULKED AS REQUIRED.
- EXISTING 1-HOUR FIRE RATED SEPARATION BETWEEN 1ST AND 2ND FLOOR
- ○FD = HARD WIRED SMOKE/FIRE DETECTOR
- EMERGENCY LIGHTING
- AS PER IBC 2009 SECTION 1029.2.1, ALL EGRESS WINDOWS TO HAVE MINIMUM SIZED CLEAR OPENING OF 20" WIDE X 24" HIGH. WINDOWS MARKED (NE) AS NON EGRESS WINDOWS TO BE REPLACED WITH APPROVED EGRESS WINDOWS AS PER IBC 2009 SEC. 1029.2.1
- NEW PARTITIONS TO BE BUILT IN PLACE WHERE EXISTING STRUCTURAL MEMBERS ARE LOCATED



671-675 Forest Ave.
Apartments
Portland, Maine

REVISIONS	
#	DATE DESCRIPTION

Date Issued: OCTOBER 22, 2014
Project Number: 13118
Drawing Scale: SHEET NAME

FLOOR PLANS
Drawn By: JAP
Checked By: LAS
A1.0



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

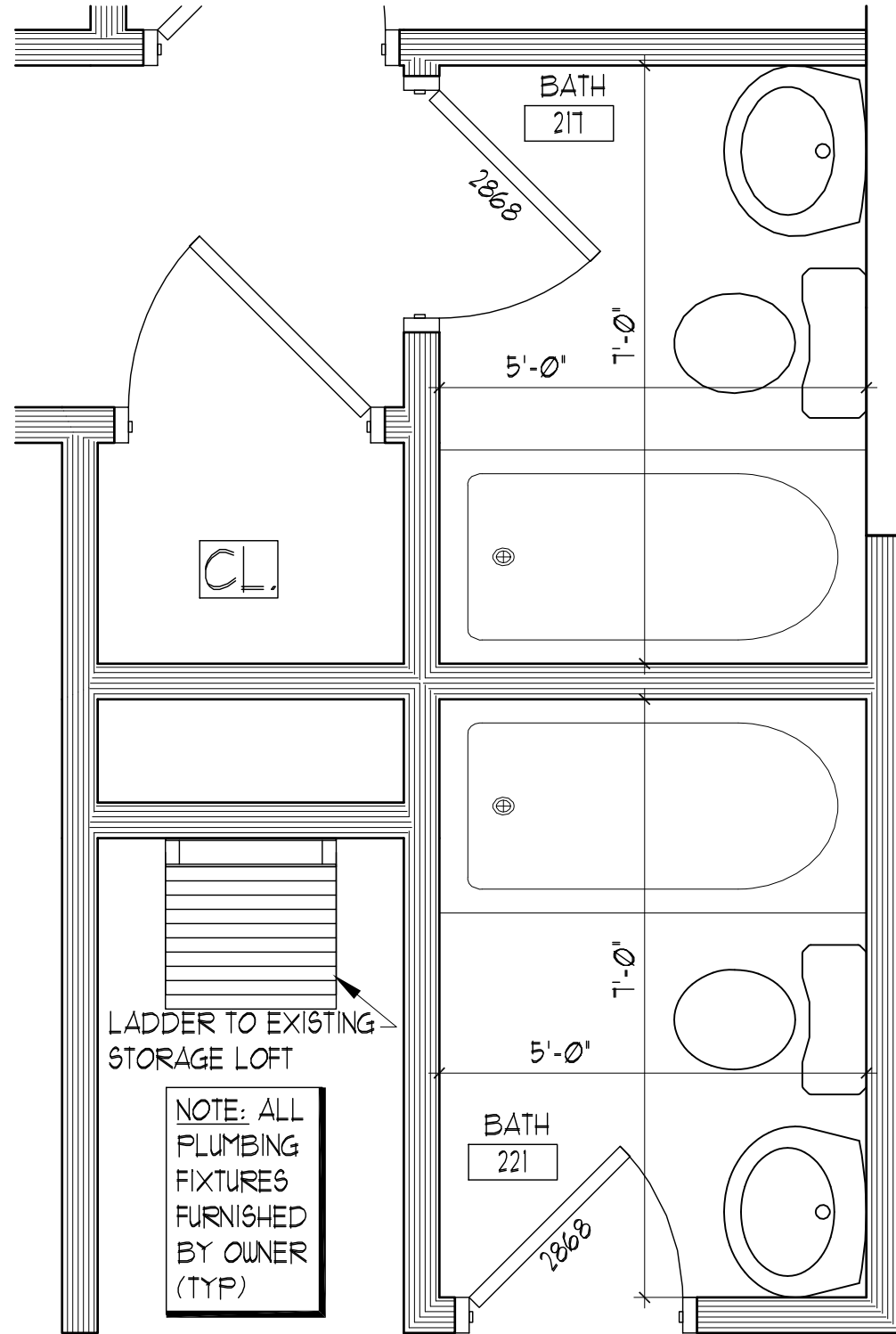
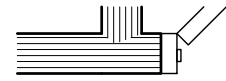
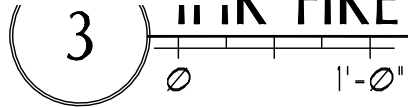
Date: 10/27/14

CEILING

HAN.

3 FIRE RATED CEILING

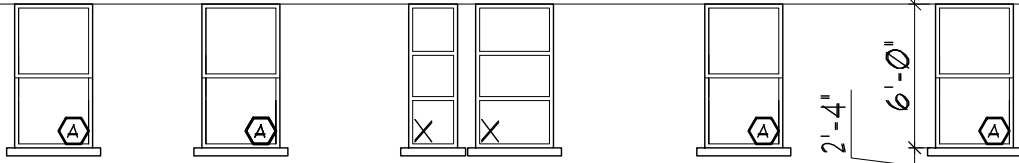
SCALE: 1" = 1'-0"



NOTE: ALL PLUMBING FIXTURES FURNISHED BY OWNER (TYP)

LADDER TO EXISTING STORAGE LOFT

3'-3 1/4" 6 3/4" 3'-3" 5'-4 1/2" 5'-11 3/4" 6'-4 1/2" 3'-3" 6'-4 1/2" 3'-3" 10'-7 1/4"



113-9 1/2" ±
2ND FL F.F.E.

100'-0"
1ST FL F.F.E.

NOTE:

-OWNER TO CONFIRM DIMENSIONS AND LOCATIONS OF EXISTING WINDOWS. WINDOW TYPE A SILLS AND HEADER TO MATCH EXISTING WINDOW LOCATIONS
-IN NEW WINDOW LOCATIONS, A GALVANIZED STEEL LINTEL IS TO BE USED

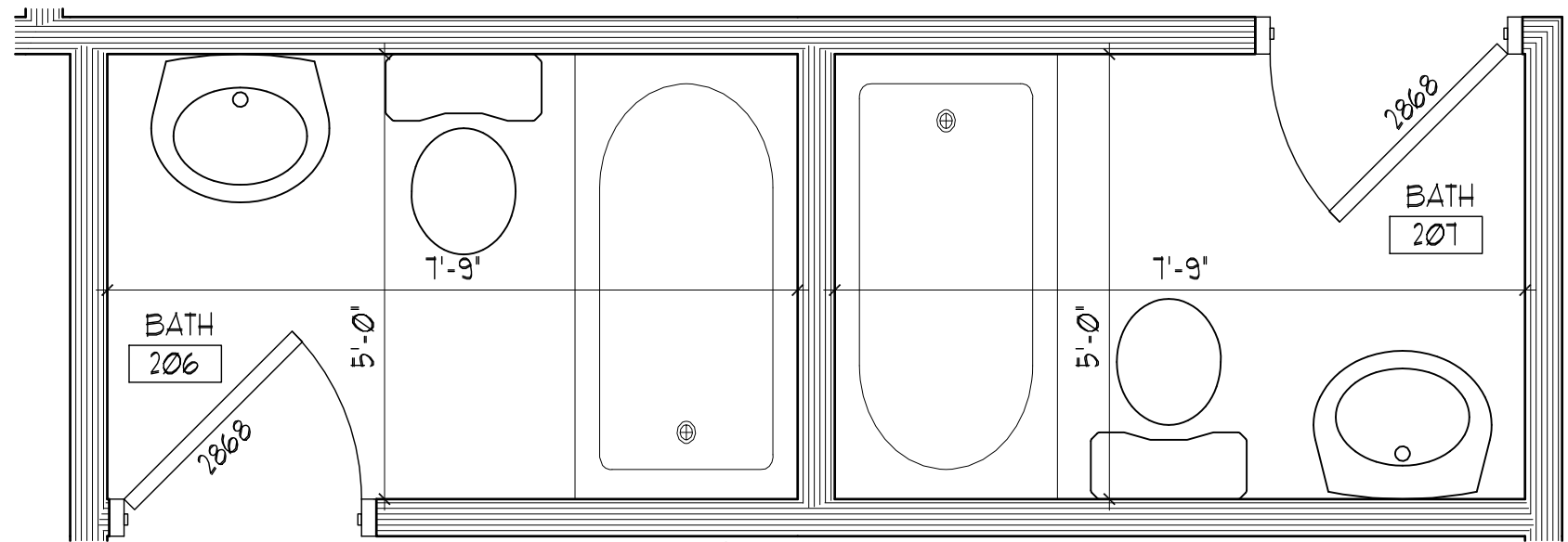
WINDOW TYPE:

A 3'-3" x 6'-0", WINDOW TO MATCH EXISTING DIMS. FURNISHED BY OWNER.

2

EXTERIOR ELEVATION

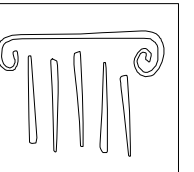
SCALE: 1/8" = 1'-0"



1

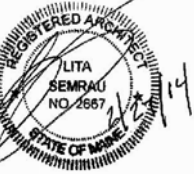
BATHROOM ENLARGEMENTS

SCALE: 1/2" = 1'-0"



PORT CITY ARCHITECTURE

65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000
fax: 207.761.2010
info@portcityarch.com



671-675 Forest Ave.
Apartments
Portland, Maine

REVISIONS		
#	DATE	DESCRIPTION

Date Issued: MAY 27, 2014
Project Number: 13118
Drawing Scale:

SHEET NAME: PLANS/ELEV.

Drawn By: JAP
Checked By: LAS
A2.0



Jeff Levine, AICP, Director
 Planning & Urban Development Department

Tammy Munson, Director
 Inspections Division

Electronic Signature and Fee Payment Confirmation

Notice: Your electronic signature is considered a legal signature per state law.

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a **legal signature** per Maine state law. You are also signifying your intent on paying your fees by the opportunities below.

I, the undersigned, intend and acknowledge that no permit application can be reviewed until payment of appropriate permit fees are **paid in full** to the Inspections Office, City of Portland Maine by method noted below:

- Within 24-48 hours, once my complete permit application and corresponding paperwork has been electronically delivered, I intend to **call the Inspections Office** at 207-874-8703 and speak to an administrative representative and provide a credit/debit card over the phone.
- Within 24-48 hours, once my permit application and corresponding paperwork has been electronically delivered, I intend to **hand deliver** a payment method to the Inspections Office, Room 315, Portland City Hall.
- I intend to deliver a payment method through the U.S. Postal Service mail once my permit paperwork has been electronically delivered.

Applicant Signature:

Date:

9/9/14

I have provided digital copies and sent them on:

Date:

NOTE: All electronic paperwork must be delivered to buildinginspections@portlandmaine.gov or by physical means ie; a thumb drive or CD to the office.



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 10/27/14

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.

Address/ Location of Construction: <u>671-675 Forrest Ave, Portland</u>		
Total Square Footage of Proposed Structure:		<u>Existing 9,900 Renovating 2,549</u>
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# <u>129 2 2</u>	Applicant Name: <u>United USA LLC</u> Address <u>630 Forest ave</u> City, State & Zip <u>Portland, ME 04101</u>	Telephone: <u>207-568-3530</u> Email:
Lessee/ Owner Name : <u>N/A</u> (if different than applicant) Address: City, State & Zip: Telephone & E-mail:	Contractor Name: <u>Ashraf</u> (if different from Applicant) <u>Eldeknawy</u> Address: <u>1783 Broadway</u> City, State & Zip: <u>So. Portland ME, 04106</u> Telephone & E-mail: <u>207-272-0227</u> <u>alb.012@hotmail.com</u>	Cost Of Work: <u>\$ 92,000</u> C of O Fee: \$ _____ Historic Rev \$ <u>N/A</u> Total Fees : \$ _____
Current use (i.e. single family) <u>Storage (2nd floor) + Retail (First)</u> If vacant, what was the previous use? <u>Retail + Residence</u> Proposed Specific use: <u>Retail + Residential</u> Is property part of a subdivision? <u> </u> If yes, please name _____ Project description: <u>Project is requesting subdivision for renovating existing second floor storage into Sapard merch. There are no planned changes to first floor. Fire separation between floors was in previous permit. Renovation to first floor</u>		
Who should we contact when the permit is ready: <u>Ashraf Eldeknawy</u> <u>in future will require additional permit</u>		
Address: <u>1783 Broadway</u>		
City, State & Zip: <u>So. Portland, ME, 04106</u>		
E-mail Address: <u>alb.012@hotmail.com</u>		
Telephone: <u>207-272-0227</u>		

Please submit all of the information outlined on the applicable checklist. Failure to do so causes an automatic permit denial.

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, 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.

Signature: <u>[Signature]</u>	Date: <u>5/27/14</u>
-------------------------------	----------------------

This is not a permit; you may not commence ANY work until the permit is issued.



Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/27/14

Certificate of Design Application

From Designer:

Port City Architecture - Lita Somrau

Date:

May 27th

Job Name:

671-675 Forest Avenue

Address of Construction:

671-675 Forest Avenue

2009 International Building Code

Construction project was designed to the building code criteria listed below:

Building Code & Year 2009 Use Group Classification (s) M + R-2

Type of Construction IB

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IBC Yes

Is the Structure mixed use? Yes If yes, separated or non separated or non separated (section 302.3) Separated

Supervisory alarm System? NO Geotechnical/ Soils report required? (See Section 1802.2) N/A

Structural Design Calculations Existing Building

Submitted for all structural members (106.1 – 106.11)

Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)

Floor Area Use	Loads Shown

Wind loads (1603.1.4, 1609)

- Design option utilized (1609.1.1, 1609.6)
- Basic wind speed (1809.3)
- Building category and wind importance Factor, K_b table 1604.5, 1609.5
- Wind exposure category (1609.4)
- Internal pressure coefficient (ASCE 7)
- Component and cladding pressures (1609.1.1, 1609.6.2.2)
- Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

- Design option utilized (1614.1)
- Seismic use group ("Category")
- Spectral response coefficients, SDs & SDI (1615.1)
- Site class (1615.1.5)

- Live load reduction
- Roof live loads (1603.1.2, 1607.11)
- Roof snow loads (1603.7.3, 1608)
- Ground snow load, P_g (1608.2)
- If $P_g > 10$ psf, flat-roof snow load P_f
- If $P_g > 10$ psf, snow exposure factor, C_e
- If $P_g > 10$ psf, snow load importance factor, I_s
- Roof thermal factor, C_t (1608.4)
- Sloped roof snowload, P_s (1608.4)
- Seismic design category (1616.3)
- Basic seismic force resisting system (1617.6.2)
- Response modification coefficient, R_I and deflection amplification factor, C_d (1617.6.2)
- Analysis procedure (1616.6, 1617.5)
- Design base shear (1617.4, 1617.5.1)

Flood loads (1803.1.6, 1612)

- Flood Hazard area (1612.3)
- Elevation of structure

Other loads

- Concentrated loads (1607.4)
- Partition loads (1607.5)
- Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)



Accessibility Building Code Certificate



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

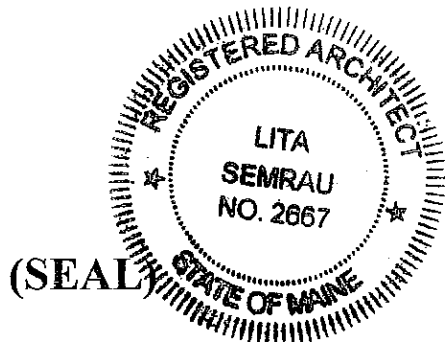
Date: 10/27/14

Designer: Port City architecture

Address of Project: 671-675 Forest Avenue

Nature of Project: Renovations of existing second floor into
5 apartments - work on first floor will be
in the future and under separate permit

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act. Residential Buildings with 4 units or more must conform to the Federal Fair Housing Accessibility Standards. Please provide proof of compliance if applicable.



Signature: [Handwritten Signature]

Title: VP

Firm: Port City Architecture

Address: 65 Newbury St
Portland, ME 04101

Phone: 207-761-9000

For more information or to download this form and other permit applications visit the Inspections Division on our website at www.portlandmaine.gov



Certificate of Design



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 10/27/14

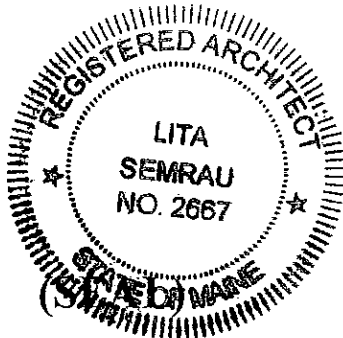
Date: May 27 / 2014

From: Port City Architecture

These plans and / or specifications covering construction work on:

Renovation of existing second floor into 3 apartments -
work on first floor will be in the future and under separate
permit

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the 2009 International Building Code and local amendments.



Signature: [Handwritten Signature]

Title: VP

Firm: Port City Architects

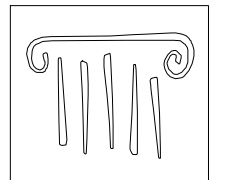
Address: 65 Newbury St
Portland, ME

Phone: 207-761-9000

For more information or to download this form and other permit applications visit the Inspections Division on our website at www.portlandmaine.gov



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Inspections Division
Approved with Conditions

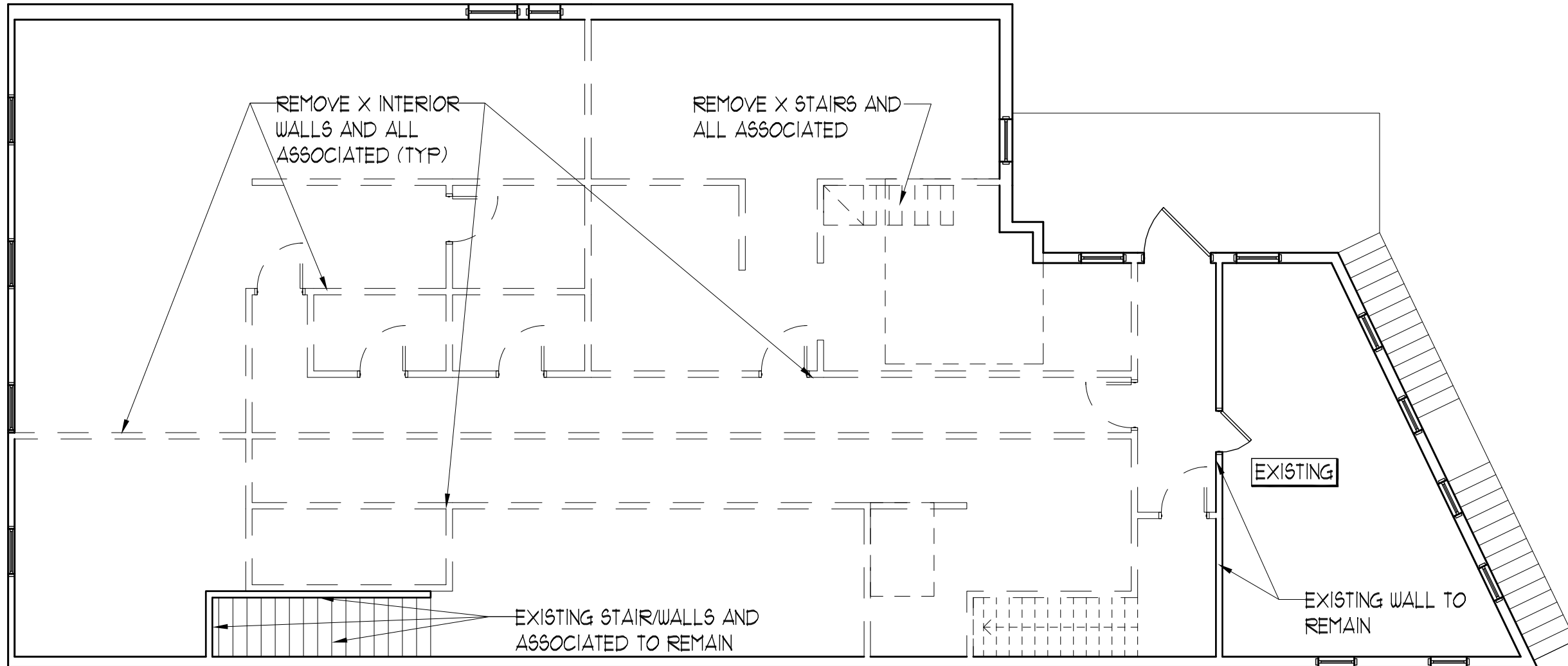


PORT CITY
ARCHITECTURE

65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000
fax: 207.761.2010
info@portcityarch.com



Date: 10/27/14



GENERAL DEMO NOTES

- OWNER TO REMOVE ALL EXISTING FINISHES INCLUDING X-FLOORING AND X-SAT CEILING.
- INTERIOR OF EXTERIOR WALLS TO REMAIN AND REPAIRED AS REQ'D
- OWNER TO REUSE SOME EXISTING FIXTURES, OWNER TO COORDINATE

671-675 Forest Ave.
Apartments
Portland, Maine

REVISIONS		
#	DATE	DESCRIPTION
-	-	-

Date Issued MAY 27, 2014

Project Number 13118

Drawing Scale

SHEET NAME

PLANS&ELEV

Drawn By JAP

Checked By LAS

D1.0

1 2ND FLOOR DEMO PLAN
0 8'-0" SCALE: 1/8" = 1'-0"



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

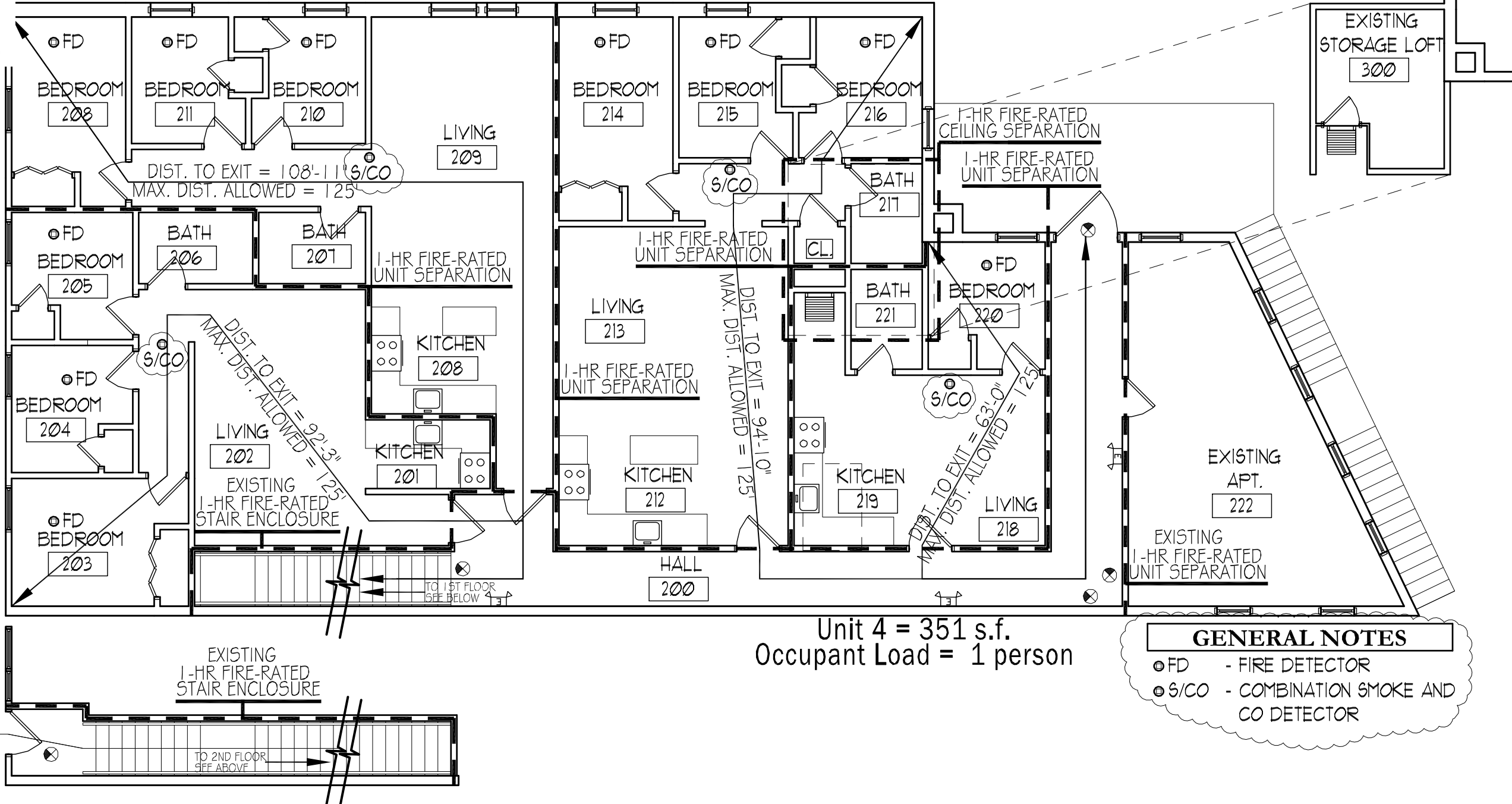
Date: 10/27/14

Unit 2 = 771 s.f.
Occupant Load = 3 persons

Unit 3 = 759 s.f.
Occupant Load = 3 persons

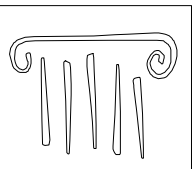
Unit 1 = 668 s.f.
Occupant Load = 3 persons

Unit 4 = 351 s.f.
Occupant Load = 1 person



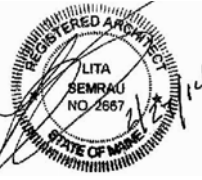
GENERAL NOTES

- FD - FIRE DETECTOR
- S/CO - COMBINATION SMOKE AND CO DETECTOR



PORT CITY
ARCHITECTURE

65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000
fax: 207.761.2010
info@portcityarch.com



671-675 Forest Ave.
Apartments

Portland, Maine

REVISIONS		
#	DATE	DESCRIPTION

Date Issued: OCTOBER 22, 2014

Project Number: 13118

Drawing Scale:

SHEET NAME

LIFE SAFETY

Drawn By

JAP

Checked By

LAS

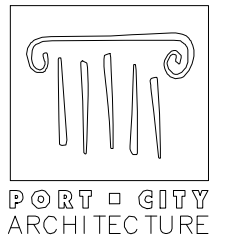
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Reviewed for Code Compliance
Inspections Division
Approved with Conditions

675 FOREST AVENUE APARTMENTS

675 FOREST AVENUE
Portland, Maine



65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000
fax: 207.761.2010
info@portcityarch.com



Date: 10/27/14

DRAWING LIST

DWG NUM	DRAWING TITLE	ISSUE OR MODIFICATION DATE
T-10	TITLE SHEET	●
T-11	CODE REVIEW	●
T-12	CODE REVIEW	●
T-13	CODE REVIEW	●
LS-10	LIFE SAFETY PLAN	●
D-10	DEMO PLAN	●
A-10	SECOND FLOOR PLAN	●
A-11	SECOND FLOOR PLAN-DIMENSIONS	●
A-20	DETAILS AND ELEVATIONS	●

PROJECT CODES

2009 INTERNATIONAL EXISTING BUILDING CODE
2009 NFPA 101 LIFE SAFETY CODE
CITY OF PORTLAND CODE OF ORDINANCES

PROJECT CONTACTS

ARCHITECT: (LITA SEMRAU)
PORT CITY ARCHITECTURE
65 NEWBURY STREET
PORTLAND, ME 04101
TEL: (207) 761-9000
E-MAIL: LITA@PORTCITYARCH.COM

OWNER: (ASHRAF ELDEKNAWEY)
PORTLAND'S CHOICE REAL ESTATE
TEL: (207) 272-0221
EMAIL: ALB.012@HOTMAIL.COM

PROJECT SUMMARY

EXISTING CONDITIONS:

THE CURRENT BUILDING IS A TWO (2) STORY BUILDING COMPRISED OF TWO ADDRESSES (671-675 FOREST AVENUE). THE BUILDING HAS TWO RETAIL UNITS ON THE FIRST FLOOR AND 5 RESIDENTIAL UNITS ON THE SECOND. THE WORK IS CONTAINED TO THE FIVE (5) APARTMENTS ABOVE THE RETAIL SPACE ON THE SECOND FLOOR. AT THIS POINT, NO WORK WILL BE DONE ON THE FIRST FLOOR. ALL WORK WILL BE CONFINED TO THE SECOND FLOOR.

NO WORK HAS BEEN DONE TO THE EXISTING BUILDING OUTSIDE OF THE WORK AREA.

SCOPE OF WORK:

IT IS THE INTENT OF THIS PROJECT TO REPLACE THE INTERIOR FINISH SHEATHING, FINISH FLOORING, ELECTRICAL, MILLWORK, TRIM, AND OTHER INTERIOR WALLS WITHIN THE WORK AREA. THESE DRAWINGS WILL ADDRESS THESE INTERIOR FINISHES ALONG WITH THE FIRE RESISTANCE REQUIREMENTS PER 2009 NFPA 101.

IN ADDITION, THERE ARE CERTAIN CODE REQUIREMENTS THAT NEED TO BE SATISFIED, AND ARE INCLUDED IN THIS PROJECT.

SPRINKLER SYSTEM:

DUE TO THE CODE REQUIREMENTS OF NFPA, A SPRINKLER SYSTEM IS REQUIRED. THIS SYSTEM SHALL MEET ALL REQUIREMENTS OF AN NFPA 13R SYSTEM. THESE DRAWINGS DO NOT ADDRESS THE REQUIREMENTS FOR THESE SYSTEMS. THE OWNER IS RESPONSIBLE FOR THE INSTALLATION OF THE SPRINKLER SYSTEM.

STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING:

THESE DRAWINGS DO NOT ADDRESS ANY ISSUES WITH REGARDS TO MECHANICAL, ELECTRICAL OR PLUMBING WITHIN THE WORK AREA. THE OWNER IS RESPONSIBLE FOR OBTAINING THE REQUIRED PERMITS FOR ANY WORK IN THESE DISCIPLINES.

FIRE ALARM SYSTEM:

THERE IS A FIRE ALARM SYSTEM CURRENTLY INSTALLED IN THIS BUILDING. THESE DRAWINGS DO NOT ADDRESS ANY ISSUES ASSOCIATED WITH THE REQUIREMENTS OF THIS SYSTEM. THE OWNER IS RESPONSIBLE FOR THIS SYSTEM AND ITS OPERATIONS.

THESE DRAWINGS DO NOT ADDRESS ANY ISSUES WITH REGARDS TO MECHANICAL, ELECTRICAL OR PLUMBING WITHIN THE WORK AREA. THE OWNER IS RESPONSIBLE FOR OBTAINING THE REQUIRED PERMITS FOR ANY WORK IN THESE DISCIPLINES.

THERE ARE NO NOTICEABLE STRUCTURAL ITEMS THAT NEED TO BE RECTIFIED IN THE AREA OF WORK. THESE DRAWINGS DO NOT ADDRESS ANY STRUCTURAL ISSUES. THE OWNER IS RESPONSIBLE FOR ANY STRUCTURAL ISSUES. AN ENGINEER, REGISTERED IN THE STATE OF MAINE, MAY BE REQUIRED.

LEGEND

- DETAIL NUMBER
- SHEET WHERE DETAIL IS DRAWN
- INDICATES BUILDING SECTION
- BUILDING SECTION LETTER
- SHEET WHERE BUILDING SECTION IS DRAWN
- INTERIOR ELEVATION NUMBER
- SHEET WHERE ELEVATION IS DRAWN
- LOBBY
- ROOM NAME AND NUMBER
- KEYED NOTE
- DOOR NUMBER
- COLUMN GRID LINE
- ELEVATION TARGET
- WALL TYPE
- WINDOW TYPE
- REVISION ITEM

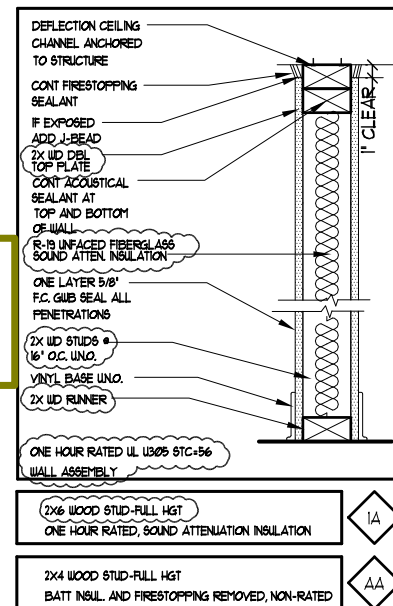
GENERAL NOTES

- ALL MATERIALS, COMPONENTS, AND WORK ARE NEW AND SHALL BE PROVIDED IN THIS CONTRACT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
- ALL WORK INCLUDED IN THIS CONTRACT SHALL CONFORM TO ALL STATE, NATIONAL AND OTHER CODES AND ORDINANCES WHICH APPLY TO THIS PROJECT.
- IT IS THE INTENT AND MEANING OF THESE DRAWINGS THAT THE CONTRACTOR AND EACH SUBCONTRACTOR PROVIDE ALL LABOR, MATERIALS, TRANSPORTATION, SUPPLIES, EQUIPMENT, ETC. TO OBTAIN A COMPLETE JOB TO INDUSTRY STANDARD IN A PROFESSIONAL WORKMANLIKE MANNER.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCY(IES) IMMEDIATELY TO THE ARCHITECT.
- AT THE END OF EACH WORKING DAY, THE CONSTRUCTION SITE SHALL BE LEFT IN A NEAT AND CLEAN MANNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS WHICH ARE REQUIRED FOR THE SATISFACTORY COMPLETION OF THE WORK AND FOR PAYING ALL FEES, HOOK UP CHARGES, ETC. (STATE FIRE MARSHAL PERMIT BY OWNER.)
- THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER FOR THE SEQUENCE AND TIMING OF OPERATIONS PRIOR TO COMMENCING WORK. AREAS FOR STAGING ETC. MUST BE APPROVED BY THE OWNER.
- THE CONTRACTOR SHALL DISPOSE OF AND / OR RECYCLE ANY CONSTRUCTION DEBRIS FROM THE PROJECT SITE AS REQUIRED BY THE STATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING DISPOSAL PERMITS WHICH ARE REQUIRED. CONSTRUCTION DEBRIS FROM THE PROJECT SITE SHALL BE DISPOSED OF IN A STATE APPROVED LANDFILL.
- ROOM NUMBERS ON THE DRAWING ARE FOR COORDINATION PURPOSES AND DO NOT NECESSARILY CORRESPOND TO ACTUAL ROOM NUMBERS.
- DUTY OF COOPERATION: RELEASE OF THESE PLANS CONTEMPLATES FURTHER COOPERATION AMONG THE OWNER, THE CONTRACTOR, THE ARCHITECT AND HIS CONSULTANTS. DESIGN AND CONSTRUCTION ARE COMPLEX. ALTHOUGH THE ARCHITECT AND HIS CONSULTANTS HAVE PERFORMED THEIR SERVICES WITH DUE CARE AND DILIGENCE, THEY CANNOT GUARANTEE PERFECTION. COMMUNICATION IS IMPERFECT, AND EVERY CONTINGENCY CANNOT BE ANTICIPATED. ANY AMBIGUITY OR DISCREPANCY DISCOVERED BY THE USE OF THESE PLANS SHALL BE REPORTED IMMEDIATELY TO THE OWNER. FAILURE TO NOTIFY THE OWNER COMPOUNDS MISUNDERSTANDING AND MAY INCREASE CONSTRUCTION COSTS. A FAILURE TO COOPERATE BY A SIMPLE NOTICE TO THE OWNER SHALL RELIEVE THE OWNER AND THE ARCHITECT FROM RESPONSIBILITY FROM ALL COSTS.
- THESE DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THE GENERAL CONTRACTOR SHALL PROVIDE FOR THE SAFETY, CARE OF UTILITIES AND ADJACENT PROPERTIES DURING CONSTRUCTION, AND SHALL COMPLY WITH STATE AND FEDERAL SAFETY REGULATIONS.
- ALL MATERIALS AND WORK SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM THE DATE OF FINAL PAYMENT.

DEMO NOTES

- REMOVE STRUCTURAL ELEMENTS AS NOTED ON PLANS. VERIFY THAT STRUCTURAL ELEMENTS TO BE REMOVED ARE NON-LOAD BEARING. NOTIFY THE ARCHITECT OR STRUCTURAL ENGINEER OF ANY DISCREPANCIES. BEFORE PENETRATION, JOISTS, BEAMS OR OTHER STRUCTURAL MEMBERS, CONSULT WITH THE ARCHITECT OR STRUCTURAL ENGINEER FOR APPROVAL.
- CARE SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SYSTEMS AND SURFACES TO REMAIN. ALL DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS APPROVED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- WHERE REMOVALS OCCUR PATCH HOLES AND AREAS OF MISSING FINISH (IE EXPOSED STUD AREAS WHERE WALLS ARE REMOVED, FLOOR FINISHES, ETC. TO MATCH EXISTING ADJACENT SURFACE). PROVIDE A SMOOTH CONTINUOUS SURFACE FREE OF SHADOW LINES.
- WHERE NEW WALLS OR INFILLS ABUT OR INTERSECT EXISTING WALLS, ALIGN NEW FINISH WITH EXISTING WALLS, ALIGN NEW FINISH WITH EXISTING FINISH AND FINISH JOINTS AT INTERSECTIONS SMOOTH AND CONTIGUOUS.
- IF SUSPECT ASBESTOS MATERIALS ARE UNCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY FOR TESTING AND / OR REMOVAL. ANY ASBESTOS REMOVAL NECESSARY FOR THE SAFE IMPLEMENTATION OF THIS PROJECT SHALL BE CONTRACTED DIRECTLY BY THE OWNER. IF NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER'S ABATOR ON THESE EFFORTS.
- UNLESS OTHERWISE NOTED, ALL ITEMS ON DEMOLITION PLANS ARE EXISTING.
- CONTRACTOR TO REPAIR ALL FINISH AND PROVIDE INFILL WALL AND FLOOR FINISHES WHERE REQUIRED.

Refer to design spec document for UL U305 for construction approval





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Inspections Division
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01 2009

ehabilitation

se this structure is undergoing "Modifications" (see 43.2.2.1.3 for definition), it shall comply with both Chapter 31 (Modifications) and Chapter 43.5 (Modifications).

mentary in this section, Chapter 31 (Existing Apartment Buildings) applies to the entire structure, not just the

Date: 10/27/14

Section 43.2.2.1.3 - This section provides a definition of "Modifications", which is considered the reconfiguration of any space; the addition, relocation, or elimination of any door or window; the addition or elimination of load bearing elements; the reconfiguration or extension of any system; or the installation of any kind of equipment.. It is this category of Modifications that will be utilized for this project.

Section 43.4 - The renovation work (except for interior finishes) must be in compliance with Chapter 31 for Existing Apartment Buildings. Interior finishes must comply with Section 43.4.3. Furthermore, the building must also comply with the requirements of Chapter 31.

Section 43.4.2 - The capacity of means of egress per Section 7.3 shall be sufficient for the occupant load.

Occupant Load per Table 7.3.1.2 : 1 person per 200 square feet.

Section 43.4.3 - New interior finishes shall meet the requirements for new construction.

Section 43.5.1.1 - The modifications will comply with section 43.4 (see above) and Section 43.5

Section 43.5.1.2 - This is not an Historic Building

Section 43.5.1.3 - This work will comply with all sections for New Construction.

Chapter 31 - Existing Apartment Buildings

Section 31.1.1.1 - The structure shall comply with one of the four options for fire protection as described in this section. Of the four options that are available, Option 4 is the option that is being considered for this project. This option consists of installing a sprinkler system throughout the structure.

Section 31.1.2.1 - Multiple occupancies shall be in accordance with 6.1.14.

6.1.14.2.3 - Due to a portion of the first floor (Units 1 and 2) being used for Mercantile, this building will be a Multiple Occupancy and further defined as a Separated Occupancy.

6.1.14.4.1 - Per the Table in this section, the separation between the Residential Apartment Building and the Mercantile shall be 2 hours. *Note:* This will be reduced to a 1-hour rating with a sprinkler system per Section 6.1.14.4.3. This may be further reduced per Section 31.1.2.3.

Section 31.1.2.2 - The dwelling units do not have their sole means of egress passing through the Mercantile occupancy.

Section 31.1.2.3 - Dwelling units may be located above a non-residential use (Mercantile) if the dwelling units and its exits are separated from the non-residential use by a 1-hour rating, or the non-residential use is sprinkled (also see 6.1.14.4.1). *Note:* Subsection 3 does not apply as there are more than 2 dwelling units above the Mercantile space.

Section 31.1.5 - For purposes of designing an automatic sprinkler system, the contents shall be classified as an "Ordinary" hazard.

Section 31.1.7 - Occupant load shall be determined per Table 7.3.1.2.

Table 7.3.1.2 - Occupant load for apartment buildings shall be 1 person per 200 s.f.

Occupant load for mercantile shall be 1 person per 30 s.f.

Section 31.2.1.1 - Means of egress from the dwelling units to the outside of the building shall comply with Chapter 7 of this code.

Section 31.2.1.2 - Means of escape within the dwelling unit shall comply with Section 24.2.

24.2.2.1.1 - Dwelling units of two rooms or more must have a primary means of escape and a secondary means of escape from every sleeping room and living area (i.e. egress windows).

24.2.2.1.2(2) - A secondary means of escape is not required if the dwelling unit is protected with an automatic sprinkler system.

Section 31.2.2.1.2 - In buildings using Option 4 (automatic sprinkler system throughout), exit enclosures shall be 1-hour rated, with 1-hour fire doors.

Section 31.2.2.2.2.1 - No door in any means of egress shall be locked against egress when the building is occupied.

Section 31.2.2.2.5 - No re-entry provisions are expected.

Section 31.2.2.3.1 - The existing stairs shall have the dimensional criteria per Table 7.2.2.2.1.1(b). The existing stairs do not appear to meet these dimensional criteria (also see 31.2.2.3.4 for Winder Stairs). However, existing noncomplying stairs as approved by the AHJ do not have to meet these criteria per 7.2.2.1.2(2).

Section 31.2.2.3.4 - Winder stairs per 7.2.2.2.4 are permitted. Existing winder stairs shall be permitted to remain in use per Section 7.2.2.2.4.3, provided they have a tread depth of not less than 6" and a tread depth of 9" at a point 12" away from the narrowest edge.

Section 31.2.2.5 - There are no horizontal exits anticipated in this project.

Section 31.2.2.6 - There are no ramps anticipated in this project.

Section 31.2.2.7 - There are no exit passageways anticipated in this project.

Section 31.2.2.8 - There are no escalators in this project.

Section 31.2.2.9 - There are no fire escape stairs in this project.

Section 31.2.2.10 - There are no fire escape ladders in this project.

Section 31.2.2.11 - There are no alternating tread devices in this project.

Section 31.2.2.12 - There are no areas of refuge in this project.

Section 31.2.3.2 - Street floor exits shall be sufficient for the occupant load of the street floor plus the required capacity of the stairs that discharge onto the street floor.

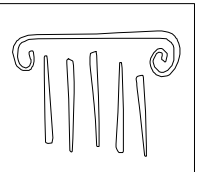
Note: The total occupant load of the top three floors of the work area is 24 (8 per floor). The occupant load of the ground floor Unit 1 is 26 for a total load of 52. Even if all occupants exited out one door, the required width would only be required to be 10 1/2" per Table 7.3.3.1.

Section 31.2.4.1 - Every dwelling unit shall have two separate exits remotely located from each other. *Note:* The dimensional distance of 1/2 of the diagonal between exits does not have to be met per Section 7.5.1.3.5.

Section 31.2.5.3.1 - The common path of travel (without a sprinkler system) shall be 35 feet. *Note:* The travel within a dwelling unit is not included.

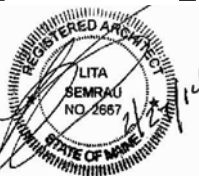
Section 31.2.5.3.2 - The common path of travel (with a sprinkler system) shall be 50 feet. *Note:* The travel within a dwelling unit is not included.

Section 31.2.5.4 - Dead-end corridors shall not exceed 50 feet.



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671-675 Forest Ave.
Apartments

Portland, Maine

REVISIONS		
#	DATE	DESCRIPTION
-	-	-

Date Issued MAY 27, 2014

Project Number 13118

Drawing Scale

SHEET NAME

CODE REVIEW

Drawn By JAP	T1.1
Checked By LAS	



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Inspections Division
Approved with Conditions

istance within a dwelling unit to the corridor (or exit) door shall not exceed 125 feet for Option 4.

e no exterior way of exit access in this project.

el distance from areas not within a dwelling unit, to an exit shall not exceed 200 feet (or 250 feet with a

gress shall be illuminated per Section 7.8

Emergency lighting shall be provided per Section 7.9.

Section 31.2.10 - Means of egress shall have signage per Section 7.10.

Section 31.3.3.2 - Interior wall and ceiling finishes for exits, lobbies, and corridors shall be Class A or B. Finishes for other spaces shall be Class A, B, or C.

Section 31.3.3.3 - Floor finishes shall not be less than Class II (unless a sprinkler system is provided).

Section 31.3.4.1.1 - A fire alarm system per Section 9.6 shall be provided.

Section 31.3.4.2.1 - The fire alarm system shall have manual initiation per Section 9.6.2

Section 31.3.4.2.5 - Due to the use of Option 4 (see Section 31.1.1.1) the fire alarm system shall also be initiated upon operation of the automatic fire sprinkler system.

Section 31.3.4.3.1 - The fire alarm system shall have automatic occupant notification per Section 9.6 and: visible signals shall be installed in units designed for the hearing impaired; positive alarm sequence per Section 9.6.3.4 shall be permitted; and existing approved presignal systems shall be permitted per Section 9.6.3.3.

Section 31.3.4.3.3 - An annunciator panel (location approved by the AHJ), shall be provided and connected to the fire alarm system.

Section 31.3.4.3.5 - Fire department notification shall be accomplished per Section 9.6.4.

Section 31.3.4.4.2 - Automatic fire detection devices shall be installed as follows:

- (1) Smoke detectors shall be installed in all common areas and work spaces outside of the dwelling unit, such as stairs, egress corridors, lobbies, storage rooms ect...
- (2) Heat detectors shall be located within each room of the living unit.

Section 31.3.4.5.1 - Unless an existing, complete automatic smoke detection system is installed throughout the building, smoke alarms shall be installed per Section 9.6.2.10, outside every sleeping room, on all levels of the dwelling units. Note: The smoke alarms are not required to be provided with secondary (standby) power per Section 31.3.4.5.2.

Section 31.3.4.5.3 - Unless an existing, complete automatic smoke detection system is installed throughout the building, or a complete, supervised automatic sprinkler system (per Section 31.3.5) is installed throughout the building, smoke alarms shall be located in every sleeping room per 9.2.6.10. Note: These smoke detectors may be battery powered per 31.3.4.5.4.

Section 31.3.4.6 - Smoke detection shall be provided at each fire alarm control unit (even if a sprinkler system is installed).

Section 31.3.5.4 - Where an automatic sprinkler system is installed, it shall be per Section 9.7. Because this structure is 4 stories, an NFPA 13R system shall be permitted. Per Section 31.3.5.4, sprinklers are not required in closets smaller than 24 s.f., or in bathrooms smaller than 55 s.f. If a closet contains washers, dryers, furnaces, or water heaters, the closet must be sprinkled.

Section 31.3.5.10 - Supervision of the sprinkler system per Section 9.7 is not required (building is not 7 or more stories).

Section 31.3.5.13 - Portable fire extinguishers are not required due to the sprinkler system.

Section 31.3.6.1 - Exit access corridor walls shall consist of fire barriers per Section 8.3 with a minimum of ½-hour fire rating.

Section 31.3.6.2.2 - When utilizing Option 4 (Section 31.1.1.1) doors opening into exit access corridors shall resist the passage of smoke only. The 20-min rating per 31.3.6.2.1 is not required.

Section 31.3.6.3.2 - Spaces shall be permitted to be open to the exit access corridor provided they do not contain guest rooms or hazardous areas, that they are sprinkled, and the space does not obstruct access to the exit.

Section 31.3.6.4 - Transoms, louvers, or grilles shall not be in walls or doors of exit access corridors.

Section 31.3.7.1 - Smoke partitions in exit access corridors as outlined in Section 31.3.7, are not required due to utilizing Option 4 (per Section 31.1.1.1).

Section 31.5.1 - Utilities shall comply with Section 9.1 of this code.

Section 31.5.2 - Heating, ventilating, and air-conditioning equipment shall comply with Section 9.2 of this code.

Section 31.5.3 - There are no elevators, escalators, or conveyors associated with this project.

Section 31.5.4 - There are no rubbish chutes, incinerators or laundry chutes associated with this project.

Section 31.7.1 - Emergency instructions shall be provided annually to each dwelling unit to indicate the location of alarms, egress paths, and action to be taken, both in response to a fire in the dwelling unit and in response to the sounding of the alarm system.

Section 31.7.2.1 - Contents and furnishings are not required to comply with Section 10.3 for fire-resistance.

Section 31.7.2.2 - Furnishings and decorations of an explosive or highly flammable character shall not be used outside of dwelling units.

Section 31.7.2.3 - Fire-retardant coatings shall be maintained to retain their effectiveness.

Code Review - Chapter 10, City of Portland, Code of Ordinances

Section 6-110 - (c) Sleeping space. Every room occupied for sleeping purposes in a dwelling unit and in a rooming unit shall contain at least fifty (50) square feet of habitable floor area for each occupant, except that children under one (1) shall not be counted and children more than one (1) but less than ten (10) shall be deemed one-half person.

(d) Size of habitable rooms. No habitable room, other than a kitchen or dining alcove, shall contain less than sixty-five (65) square feet of floor area, nor shall the least horizontal dimension of such room be less than seven (7) feet.

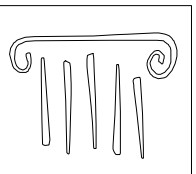
Section 10-3(i) - All new single and multiple station smoke alarm installations shall comply with Section 9.6.2.10 of NFPA 101. New detectors shall not use ionization detection technology.

Section 10-3(p) - Existing buildings shall comply with the AHJ's Standards for Building, Stair, Floor, Suite, and Room designation systems.

Section 10-18(h) - All structures with a life safety signaling system or a fire suppression system shall be provided with a Knox box. The number, make, model, and location of the box shall be determined by the AHJ. All keys required to operate the life safety signaling system or the fire suppression system, and building keys shall be placed within the box

Section 14-332 (a-4) - (Parking) for Residential development in the B-2, B-2b, B-2c zones:

- a. One (1) parking space per unit



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671-675 Forest Ave.
Apartments

Portland, Maine

REVISIONS		
#	DATE	DESCRIPTION
-	-	-

Date Issued MAY 27, 2014

Project Number 13118

Drawing Scale

SHEET NAME

CODE REVIEW

Drawn By JAP	T1.2
Checked By LAS	



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

09

1 of Work

area (per Chapter 2) is confined to the 2nd Floor.

use group for this building is R-2 (per IBC, section 310.1). The first floor (Units #1 and 2) are classified as ion 309.1).

it of the repairs in this project shall be classified as *Level 2 Alterations*.

Section 404.2 - Chapter 6 and 7 of the IEBC applies to this project.

Chapter 6 - Alterations - Level 1

Section 602.1 - Interior wall and ceiling finishes shall comply with Chapter 8 of IBC.

Section 602.2 - Interior floor finishes shall comply with Section 804 of IBC.

Section 602.3 - Interior trim materials shall comply with Section 806 of IBC.

Section 603.1 - Alterations shall be done in a manner that maintains (and does not lessen) the level of fire protection currently provided.

Section 604.1 - Alterations shall be done in a manner that maintains (and does not lessen) the level of protection provided for the means of egress.

Section 605.1 (ex. 1) - Only the altered elements that are primary functions are required to be on an accessible route. The remainder of the work area is not required to be on an accessible route.

Section 605.1 (ex. 2) - An accessible means of egress is not required.

Section 605.1 (ex. 3) - The dwelling units are not required to be Type B units.

Section 605.1 (ex. 4) - There are no Type A dwelling units associated with this project.

Section 605.1.1 - The existing entrances are not being altered.

Section 605.1.2 - There are no existing elevators.

Section 605.1.4 - It is not anticipated that any ramps will be needed. However, if a ramp is installed, the slope of the ramp cannot exceed 1:8 with a maximum rise of 3 inches, and 1:10 with a maximum rise of 6 inches.

Section 605.1.8 - This project includes altering dwelling units in an R-2 Use Group. Therefore, the requirements of Section 1107 of the IBC and Chapter 9 of the IBC are applicable.

Section 1107 (IBC):

1107.1 - Dwelling units shall be provided with accessible features.

1107.4 - This section requires accessible units to be on an accessible route. However, per Section 605.1(1), the accessible units are not primary functions and not required to be on an accessible route.

1107.6.2.1.1 - This section requires structures containing more than 20 dwelling units, to have Type A units. However, per Section 605.1.9 (IEBC), it limits the work to the altered units. This project is only altering 8 units, therefore, Type A units are not required.

1107.6.2.1.1 - This section requires structures containing 4 or more dwelling units to have those units be Type B units. However, per Section 605.1(4), these Type B units are not required.

Section 605.1.9 - Type A units are not required as this project is only altering 4 units.

Section 605.1.10 - There are currently no toilet/bathing facilities that are not located within dwelling units in the Apartment portion of the structure.

Section 605.1.11 - There are no Dressing Rooms, Fitting Rooms, or Locker Rooms associated with this project.

Section 605.1.13 - The maximum height of thresholds shall be 3/4".

Section 606 - This code review does not include a structural review. Please refer to the structural engineer drawings for all required updates and repairs.

Section 607.1 - Level 2 alterations are permitted without requiring the entire building to comply with the International Energy Conservation Code (IECC). However, the alterations must comply with the IECC as they relate to new construction.

Chapter 7 - Alterations - Level 2

Section 701.2 - All work complies with Chapter 6 level 1 Alterations, See above.

Section 701.3 - All work will be in compliance with the IBC.

Section 701.3 (ex. 1) - Windows will be added and do not need to comply with the light and ventilation requirements of IBC.

Section 701.3 (ex. 2) - Newly installed electrical equipment will meet the requirements of Section 708.

Section 701.3 (ex. 3) - There are no dead end corridors.

Section 701.3 (ex. 4) - The ceiling height of newly created habitable and occupiable spaces and corridors will be a minimum of 7'-0"

Section 703.2.1 - All existing vertical openings will be enclosed with 1-hr fire rated assemblies.

Section 703.2.2 - No other Vertical openings exist between the first and second floor.

Section 703.2.3 - Stairway enclosures are not required by IBC Section 1022.1 Ex. 3, and therefore do not require a smoke barrier. However stairway walls will be built with 1-Hr Fire rated walls.

Section 703.4 - The interior finish of walls and ceilings and exits will comply with the requirements in IB.

Section 704.1 - The second floor renovations will include an approved Sprinkler System and 1-Hr fire rated walls in all corridors and floor separations.

Section 704.2 - An automatic sprinkler system will be installed in accordance with Sections 704.2.1 through 704.2.5 and comply with IBC.

Section 704.3 - No Standpipes required, work level is less than 50' above fire access.

Section 704.4 - An approved fire alarm system will be installed in accordance with applicable sections including section 704.4.1.6

Section 705 - Means of egress shall comply with all requirements in IBC, IBEC and NFPA 101. The second floor has 2 Means of egress to the exterior ground level.

Section 706 - All accessibility requirements outlined in this section are met and comply with IBC.

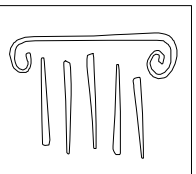
Section 707 - This code review does not include a structural review. Please refer to the structural engineer drawings for all required updates and repairs.

Section 708 - All electrical installations shall comply with NFPA and IBC.

Section 709 - All electrical installations shall comply with NFPA, IBC and IMC.

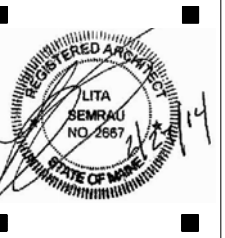
Section 710 - All plumbing installations shall comply with IBC.

Section 711 - Level 2 alterations are permitted without requiring the entire building to comply with the International Energy Conservation Code (IECC). However, the alterations must comply with the IECC as they relate to new construction.



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671-675 Forest Ave.
Apartments

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Drawing Scale

SHEET NAME

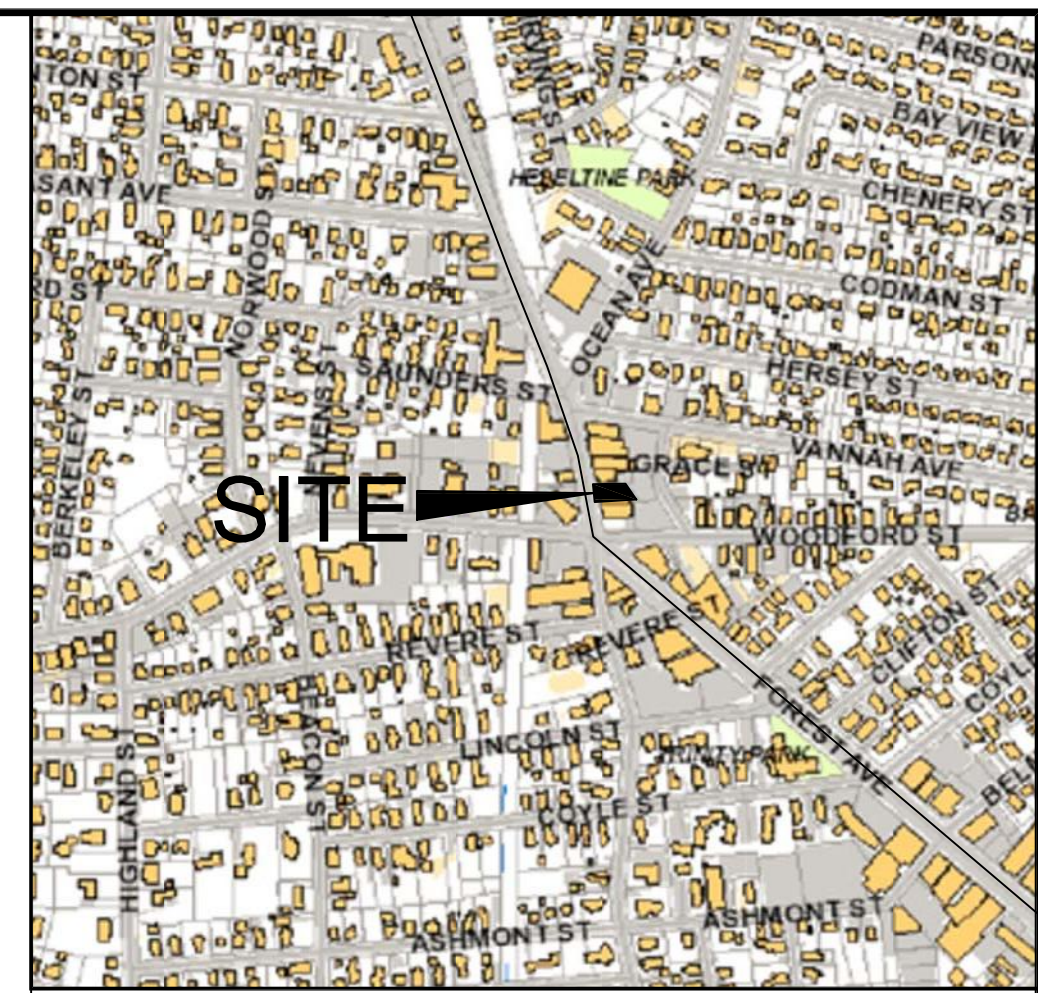
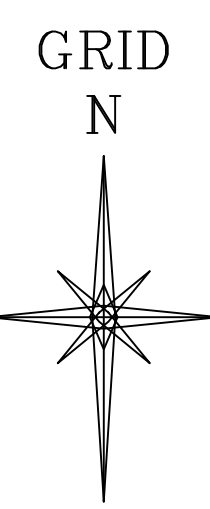
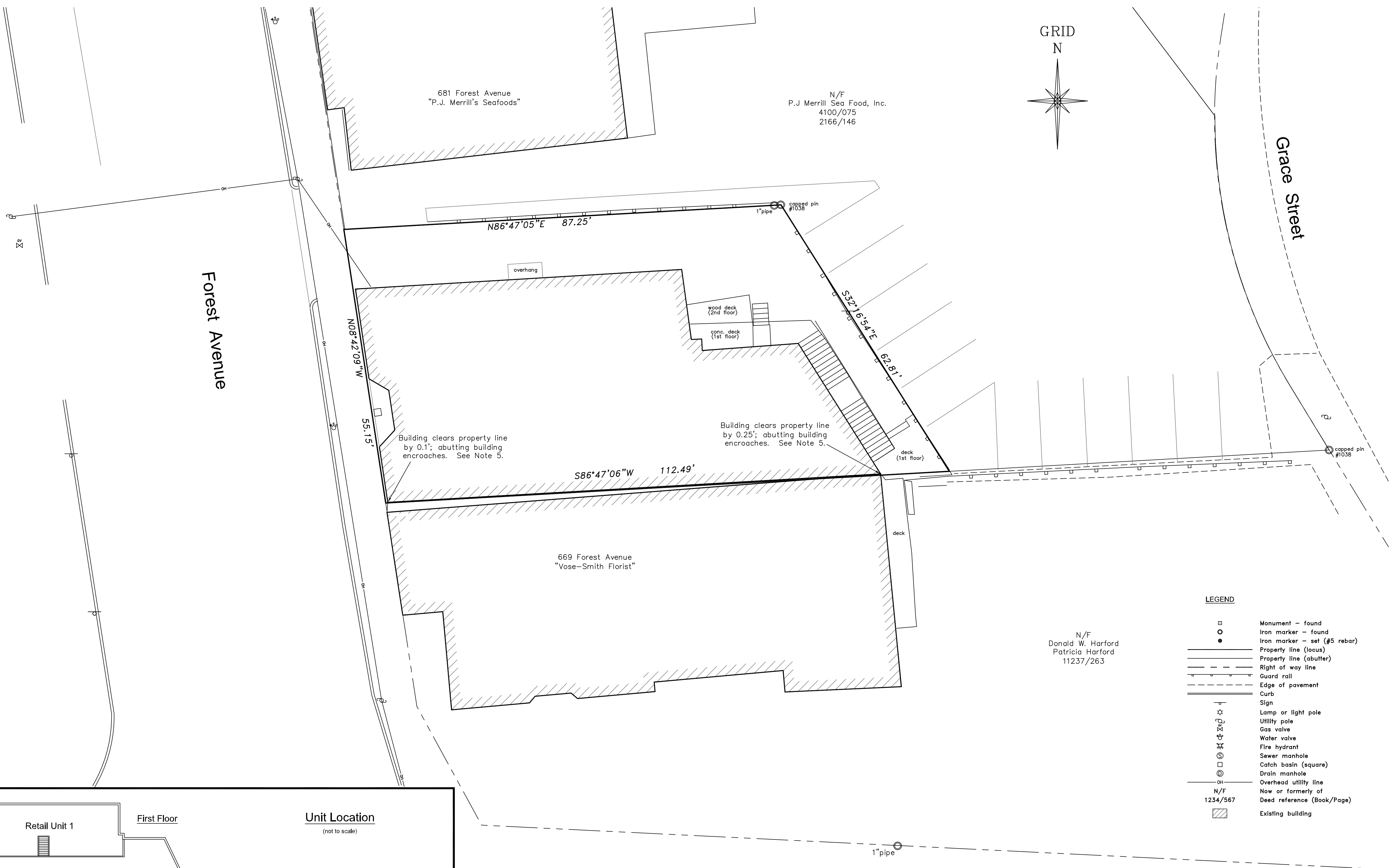
CODE REVIEW

Drawn By JAP	T1.3
Checked By LAS	



Reviewed for Code Compliance
Inspection Division
Approved with Conditions

Date: 10/27/14



VICINITY MAP
No Scale

NOTES

- 1) Book and Page references are to the Cumberland County Registry of Deeds.
- 2) Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.
- 3) Utility information on this plan is approximate, based on location of visible features. DigSafe and/or the appropriate utilities should be contacted prior to any construction.
- 4) Property lies within Zone C based on FIRM Community #230051 Panel #13B, dated July 17, 1986. It does not lie within a special flood hazard area.
- 5) The building situated at 669 Forest Avenue is connected to the building on the locus property from the second story to the top of the building. The connected portion of 669 Forest Avenue encroaches on the locus property.

PLAN REFERENCES

- 1) Plan of Saunders Field by Percy H. Richardson. Recorded in Book 13, Page 93 on August 21, 1917.
- 2) Plan of Land on Forest Avenue made for P.J. Merrill Seafood, Inc. by Owen Haskell, Inc. dated April 14, 1988. Unrecorded.
- 3) Plan of Property in Portland, Maine made for C.L.M. Corp. by H.L. & E.C. Jordan dated December 7, 1965, revised through May 26, 1976. Unrecorded.
- 4) Land in Deering Maine surveyed for Mrs. Abby Jones by E.C. Jordan & Co. Recorded in Plan Book 9, Page 143 on September 9, 1902.

LEGEND

- Monument - found
- Iron marker - found
- Iron marker - set (#5 rebar)
- Property line (locus)
- Property line (abutter)
- - - Right of way line
- Guard rail
- - - Edge of pavement
- Curb
- Sign
- ☆ Lamp or light pole
- Utility pole
- ⊕ Gas valve
- ⊕ Water valve
- ⊕ Fire hydrant
- ⊕ Sewer manhole
- Catch basin (square)
- ⊕ Drain manhole
- Overhead utility line
- N/F Now or formerly of
- Dead reference (Book/Page)
- ▨ Existing building

N/F
Donald W. Harford
Patricia Harford
11237/263

Subdivision approval is for the creation of additional units within the building located at 671-675 Forest Avenue.

Approved by the City of Portland Planning Board

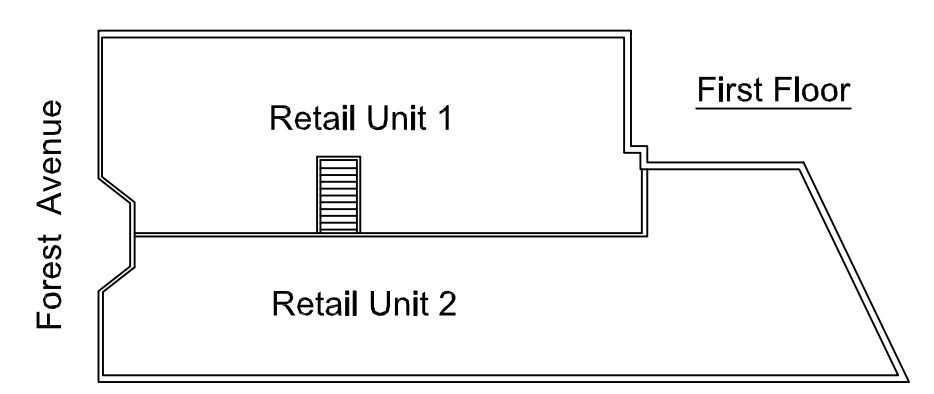
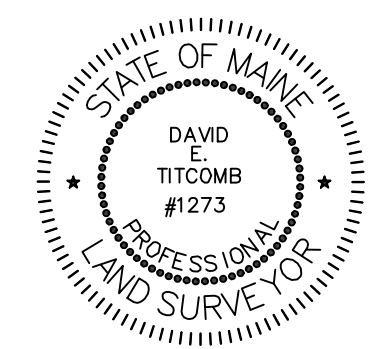
dated _____

Woodford Street

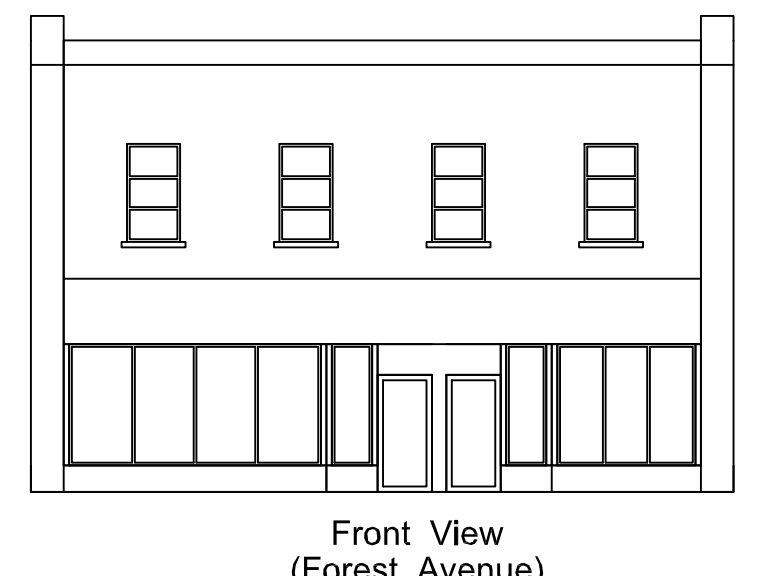
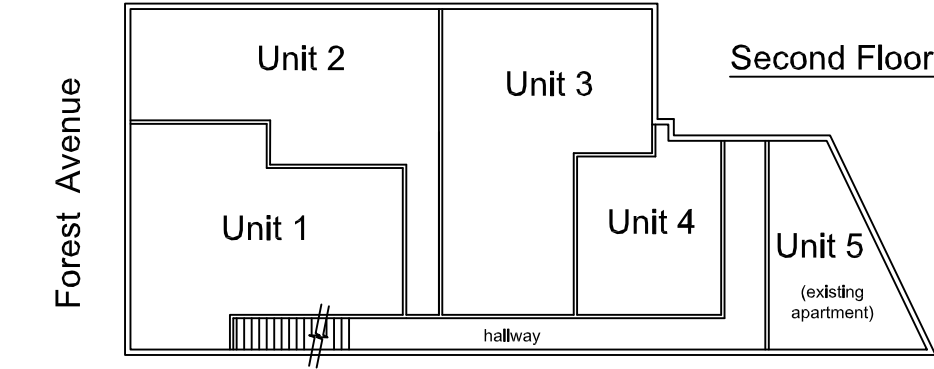
CERTIFICATION

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

David E. Titcomb, P.L.S. #1273



Unit Location
(not to scale)

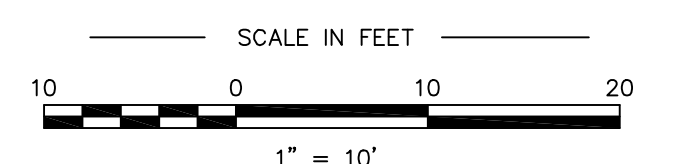


AREA

5843 square feet / 0.13 acres

OWNERS OF RECORD

United USA LLC Book 31169, Page 226



PLAN OF
Subdivision Plan

671-675 Forest Avenue Portland, Maine

MADE FOR

United USA LLC
Portland, Maine

JOB #213013 DATE: May 7, 2014 SCALE: 1" = 10'

BOOK #878

CP/2014/214013.dwg

FILE #9704





BXUV.U305
Fire Resistance Ratings - ANSI/UL 263

[Page Bottom](#)

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

[See General Information for Fire-resistance Ratings - ANSI/UL 263](#)

[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada](#)

Design No. U305

June 27, 2014

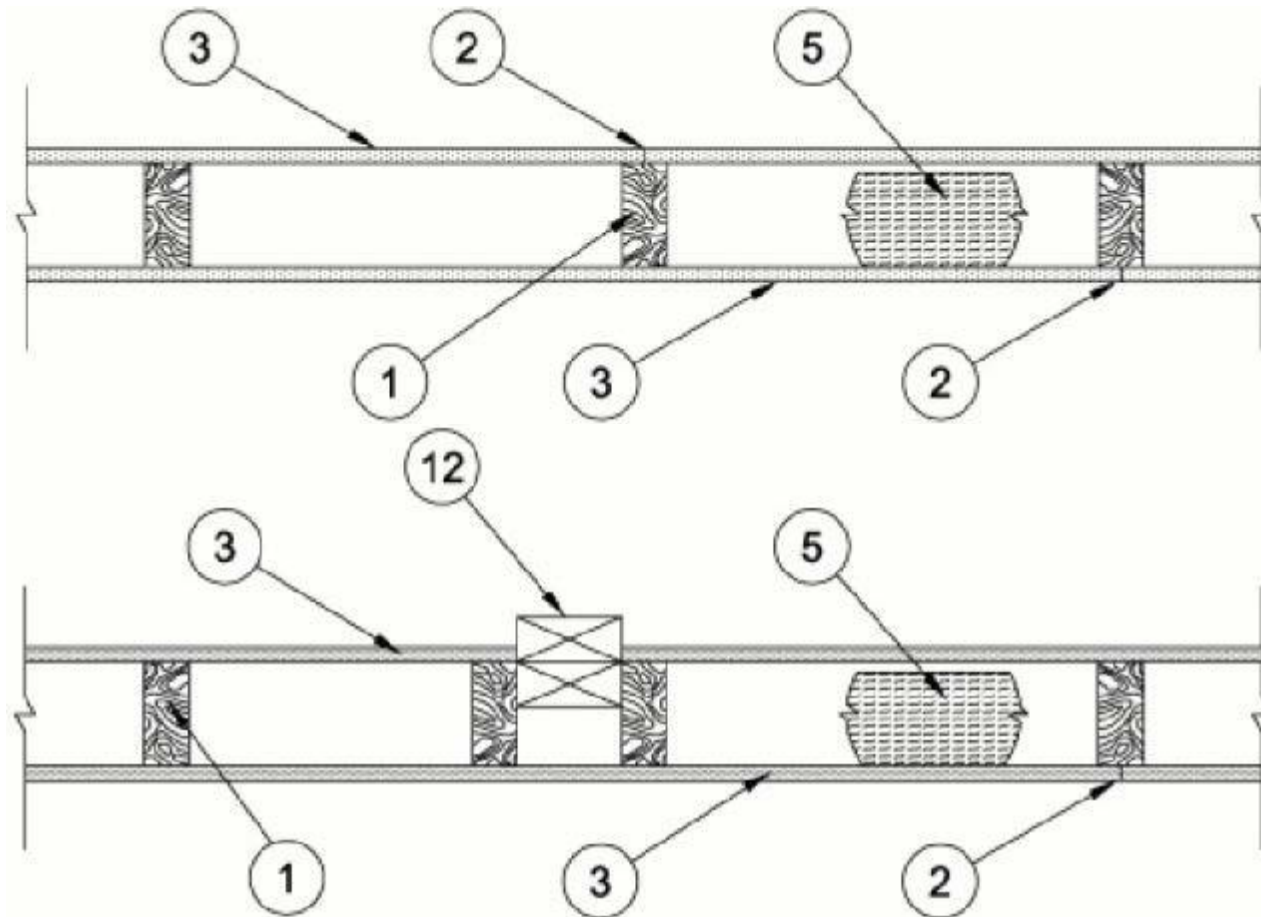
Bearing Wall Rating – 1 Hr

Finish Rating – See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L.

STC Rating - 56 (See Item 9)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used – See Guide [BXUV](#) or [BXUV7](#)

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**





1. Wood Studs — Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped.

2. Joints and Nail-Heads — Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum ve plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound.

3. Gypsum Board* — 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Item 6, 6A or 6B, **Steel Framing Members***.

When Item 6, 6B, or 6C **Steel Framing Members***, are used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 6A, **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.

ACADIA DRYWALL SUPPLIES LTD — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-11 (finish rating 26 min), Type LightRoc (finish rating 22 min) or Type AG-C

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 (finish rating 24 min).

CERTAINTED GYPSUM INC — Type 1, Type SF3 (finish rating 20 min) or FRPC, Type C or Type X (finish rating 26 min), Type EGRG or GlasRoc (finish rating 23 min)

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min).

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min).

GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type DAP (finish rating 26 min), Type DS, Type DAP, Type DD (finish rating 20 min), Type DA, Type DAPC, Type LS (finish rating 23 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Sheathing Type- DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Water Rated - Type LW2X (finish rating 22 min), Sheathing - Type LW2X (finish rating 22 min), Soffit - Type LW2X (finish rating 22 min), Type DGL2W (finish rating 22 min), Water Rated - Type DGL2W (finish rating 22 min), Sheathing - Type DGL2W (finish rating 22 min).

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min), Type



FSW-8.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2 (finish rating 20 min), (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Type 6 (finish rating 23 min), Types PG-3WS, PG-5WS, PGS-WRS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11 or Type PG-C.

PANEL REY S A — Type GREX, PRX; Types RHX, MDX, ETX (finish rating 22 min)

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min)

THAI GYPSUM PRODUCTS PCL — Type C, Type X (finish rating 26 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min).

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type ULX (finish rating 22 min).

3A. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), Type AG-C (finish rating 25 min.).

CERTAINTED GYPSUM INC — Type C or Type X (finish rating 26 min).

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min).

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type FRX-G (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min).

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX, Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min).

3B. Gypsum Board* — (As an alternate to Item 3) — Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A.

CGC INC — Types AR, IP-AR.



UNITED STATES GYPSUM CO — Types AR, IP-AR.

USG MEXICO S A DE C V — Types AR, IP-AR.

3C. Gypsum Board* — (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-1/4 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not required.

CGC INC — Type SHX.

UNITED STATES GYPSUM CO — Type SHX.

USG MEXICO S A DE C V — Type SHX.

3D. Gypsum Board* — (As an alternate to Items 3, 3A, 3B, or 3C — not shown) For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RAY-BAR ENGINEERING CORP — Type RB-LBG (finish rating 24 min).

3E. Gypsum Board* — (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

GEORGIA-PACIFIC GYPSUM L L C — GreenGlass Type X (finish rating 23 min).

3F. Gypsum Board* — (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) - 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter.

UNITED STATES GYPSUM CO — Type USGX (finish rating 22 min.)

3G. Gypsum Board* — (As an alternate to Items 3 through 3F) - 5/8 in. thick paper surfaced applied vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.

GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min).

3H. Gypsum Board* — (As an alternate to Items 3) - Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board



3I. Gypsum Board * — (As an alternate to Items 3 through 3H, not shown) — Nominal 5/8 in. thick, 4 ft panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES (finish rating 20 min).

3J. Gypsum Board* — (As an alternate to Items 3) - Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.

CERTAINTED GYPSUM INC — Type SilentFX

3K. Gypsum Board* — (As an alternate to Item 3) - 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min).

3L. Gypsum Board* — (As an alternate to Item 3) For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".

MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

3M. Gypsum Board* — (As an alternate to Items 3) For Direct Application to Studs Only- For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

3N. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3.

CERTAINTED GYPSUM INC — 5/8" Easi-Lite Type X (finish rating 24 min)

3O. Wall and Partition Facings and Accessories* — (As an alternate to Item 3, not shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.


PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527 (finish rating 24 min)

3P. Gypsum Board* — (As an alternate to Item 3, not shown) - Two layers nom. 5/16 in. thick gypsum applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same side between face and back layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long drywall nails spaced 8 in. OC starting with a 4" stagger.

NATIONAL GYPSUM CO — Type FSW (finish rating 25 min)

4. Steel Corner Fasteners — (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails.

5. Batts and Blankets* — (Optional - Required when Item 6A is used (RC-1)) Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities.

CERTAINTED CORP
GUARDIAN FIBERGLASS INC
JOHNS MANVILLE INTERNATIONAL INC
KNAUF INSULATION GMBH
MANSON INSULATION INC

OWENS CORNING HT INC, DIV OF OWENS CORNING — Corning Fiberglas Corp.

ROCK WOOL MANUFACTURING CO — Delta Board.

ROXUL INC — Acoustical Fire Batts

THERMAFIBER INC — Type SAFB.

5A. Fiber, Sprayed* — (Not shown - Not for use with Item 6) As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product. When Item 6B is used, Fiber, Sprayed shall be INS735, INS745, INS765LD or INS770LD.

U S GREENFIBER L L C — INS735& INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only.

5B. Fiber, Sprayed* — (Not shown - Not for use with Item 6) As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

5C. Batts and Blankets* — Required for use with resilient channels, Item 7, 3 in. thick mineral wool batts, friction-fitted to fill interior of wall.

THERMAFIBER INC — Type SAFB



5D. **Glass Fiber Insulation** — (As an alternate to Item 5C) — 3 in. thick glass fiber batts bearing the U Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

5E. **Batts and Blankets*** — (Required for use with Wall and Partition Facings and Accessories, Item 3C, Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5F. **Fiber, Sprayed*** — (Optional, Not Shown - Not for use with Item 6, 6A or 6B). As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ).

AMERROCK PRODUCTS L P — Rockwool

5G. **Fiber, Sprayed*** — (Optional, Not Shown - Not for use with Items 6, 6A or 6B). As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed stud cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft³.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

6. **Steel Framing Members (Optional, Not Shown)*** — Furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3. b. **Steel Framing Members*** — Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

PAC INTERNATIONAL INC — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

6A. **Steel Framing Members (Optional, Not Shown)*** — Furring channels and Steel Framing Members on one side of studs as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members*** — used to attach furring channels (Item 6Aa) to one side of studs only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC — Type Isomax.

6B. **Steel Framing Members** — (Optional, Not Shown)* — Furring channels and Steel Framing Members as



described below:

a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members* — Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

PLITEQ INC — Type Genie Clip

6C. Steel Framing Members — (Optional, Not Shown)* — Furring channels and resilient sound isolation clip as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 3. Side joint furring channels shall be attached to studs with RESILMOUNT Sound Isolation Clips located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

b. Steel Framing Members* — Resilient sound isolation clip used to attach furring channels (Item 6Ca) to studs. Clips spaced 16 in. OC, and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

7. Furring Channel — Optional - Not Shown - For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.

8. Caulking and Sealants — (not shown, optional) A bead of acoustical sealant applied around the partition perimeter for sound control.

9. STC Rating — The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except:

A. Item 2, above - Nailheads Shall be covered with joint compound.

B. Item 2, above - Joints As described, shall be covered with fiber tape and joint compound.

C. Item 5, above - Batts and Blankets* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide.

D. Item 6, above - Steel Framing Members* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.

E. Item 8, above - Caulking and Sealants (not shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.

F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.

10. Wall and Partition Facings and Accessories* — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 510.



11. **Cementitious Backer Units*** — (Optional Item Not Shown - For Use On Face Of 1 Hr Systems With Standard Items Required) - 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide.- Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used horizontal joints need not be backed by framing.

NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. **Non-Bearing Wall Partition Intersection** — (Optional) —Two nominal 2 by 4 in. studs or nominal 2 by 6 in. studs nailed together with two 3 in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

13. **Mesh Netting** — (Not shown) - Any thin, woven or non-woven fibrous netting material attached with staples to the outer face of one row of studs to facilitate the installation of the sprayed fiber from the opposite row.

14. **Mineral and Fiber Board*** — (Optional, Not shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

HOMASOTE CO — Homasote Type 440-32

14A. **Mineral and Fiber Board*** — (Optional, Not shown) — For use with Items 14B-14E) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

HOMASOTE CO — Homasote Type 440-32

14B. **Glass Fiber Insulation** — (For use with Item 14A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

14C. **Batts and Blankets*** — (As an alternate to Item 14B, For use with Item 14A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.

THERMAFIBER INC — Type SAFB

14D. **Adhesive** — (For use with Item 14A) - Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

14E. **Gypsum Board*** — (For use with Item 14A) - 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 14A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.

AMERICAN GYPSUM CO — Type AG-C

CERTAINTED GYPSUM INC — Type FRPC, Type C

CGC INC — Types C, IP-X2, IPC-AR



CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C.

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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