REHABILITATION OF
131 WASHINGTON AVE, PORTLAND MAINE

02 OCTOBER 2015

DRAWING LIST

S-0	STRUCTURAL NOTES AND MATERIAL SPECIFICATIONS
S-1	MAIN BLOCK & ELL FOUNDATION PLAN AND SECTIONS
S-2	MAIN BLOCK & ELL FRAMING PLANS & SECTIONS
S-3	FRAMING SECTIONS & DETAILS

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL AND LOCAL SAFETY REQUIREMENTS. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ADJACENT PORTIONS OF THE BUILDING.

2. THE STRUCTURAL DESIGN OF THESE REPAIRS IS BASED ON THE FULL INTERACTION OF ALL CONNECTED COMPONENTS. NO PROVISIONS HAVE BEEN MADE FOR ANY TEMPORARY CONDITIONS THAT MAY ARISE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS, SHORING, AND TEMPORARY BRACING DURING THE PROGRESS OF THE PROJECT.

3. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE INCLUDED.

4. THE CONTRACTOR SHALL, PRIOR TO WORK, REVIEW WITH DESIGN TEAM AND OWNER ALL ASPECTS OF SITE ACCESS, WORK SCHEDULE, AND COORDINATION WITH OTHERS TO ENSURE SMOOTH PROJECT FLOW.

5. NOTIFY OWNER AND ENGINEER OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING CONDITIONS THAT MAY AFFECT THE WORK.

6. THE INSTALLATION AND OR REMOVAL OF PROPOSED MATERIALS SHALL NOT DAMAGE EXISTING COMPONENTS.

7. ANY MODIFICATION OR ALTERATION OF THESE CONSTRUCTION DOCUMENTS OR CHANGES IN CONSTRUCTION FROM THE INTENT OF THESE DRAWINGS BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL OF THE ENGINEER SHALL REMOVE ALL PROFESSIONAL AND LIABILITY RESPONSIBILITY OF THE ENGINEER.

8. DO NOT SCALE FROM THE DRAWINGS.

GENERAL REQUIREMENTS

1. COORDINATE CONSTRUCTION TO ENSURE EFFICIENT AND ORDERLY INSTALLATION OF EACH PART OF THE WORK.

2. CONDUCT PROGRESS MEETINGS AT SITE AS NECESSARY.

3. IDENTIFY DEVIATIONS FROM CONTRACT DOCUMENTS ON SUBMITTALS. REVIEW EACH SUBMITTAL AND CHECK FOR COORDINATION WITH OTHER WORK AND FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. MARK WITH APPROVAL STAMP BEFORE SUBMITTING TO ENGINEER.

4. SUBMIT SAMPLES FINISHED AS SPECIFIED AND PHYSICALLY IDENTICAL WITH PROPOSED MATERIAL OR PRODUCT. INCLUDE NAME OF MANUFACTURER AND PRODUCT NAME ON LABEL.

5. DELIVER, STORE, AND HANDLE PRODUCTS USING MEANS AND METHODS THAT WILL PREVENT DAMAGE, DETERIORATION, AND LOSS, INCLUDING THEFT. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

6. SCHEDULE DELIVERY TO MINIMIZE LONG-TERM STORAGE AT PROJECT SITE AND TO PREVENT OVERCROWDING OF CONSTRUCTION SPACES. DELIVER PRODUCT IN MANUFACTURER'S ORIGINAL, SEALED CONTAINER OR PACKAGING, COMPLETE WITH LABELS AND INSTRUCTIONS FOR HANDLING, STORING, UNPACKING, PROTECTING, AND INSTALLING.

7. STORE PRODUCTS THAT ARE SUBJECT TO DAMAGE BY THE ELEMENTS UNDER COVER IN A WEATHERTIGHT ENCLOSURE ABOVE GROUND, WITH VENTILATION ADEQUATE TO PREVENT CONDENSATION.

8. WHERE DRAWINGS SPECIFY A SINGLE PRODUCT OR MANUFACTURER, PROVIDE THE ITEM INDICATED THAT COMPLIES WITH REQUIREMENTS.

STRUCTURAL DESIGN CRITERIA

1. MAINE UNIFORM BUILDING AND ENERGY CODE, 2009 EDITION, INCLUDING CONSIDERATION OF ASCE 7-05, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES".

WIND LOAD: PER IBC SECTION 1609.0/ASCE 7-02 CHAPTER 6

BASIC WIND SPEED, (3 SEC GUST	100 MPH
IMPORTANCE FACTOR IW	1.00
EXPOSURE CATEGORY	C
BUILDING CLASSIFICATION	III
VELOCITY PRESSURE COEF, KZ	0.85
TOPOGRAPHIC PRESSURE COEF KZT	1.0
DIRECTIONALITY FACTOR, KD	0.85
VELOCITY PRESSURE QH	26.79 PSF

DESIGN ROOF TRUSSES FOR UPLIFT LOADS RESULTING FROM THESE WIND DESIGN PARAMETERS

SNOW LOAD: PER ASCE 7-05, CHAPTER 7:

GROUND SNOW LOAD PG	60 PSF (FIGURE 7-1)
EXPOSURE FACTOR CE	1.0 (TABLE 7-2)
THERMAL FACTOR CT	1.1 (TABLE 7-3)
IMPORTANCE FACTOR IS	1.0 (CATEGORY IV, TABLE7.4)
FLAT ROOF SNOW LOAD	46.2 PSF

DRIFTED SNOW LOADS AND DRIFT PER SECTION 7.6 OF ASCE 7-05

SEISMIC LOAD: IBC SECTION 1615.0; EARTHQUAKE DATA PER SECTION 1616.3:

SEISMIC USE GROUP	III
OCCUPANCY IMPORTANCE FACTOR, IE	1.0
SHORT-PERIOD ACCELERATION SS	0.32G
1.0 SECOND ACCELERATION S1	0.10G
SITE CLASSIFICATION SOIL TYPE	D
MAXIMUM CONSIDERED EQ. ACCEL. PARAMETER FA	1.53
MAXIMUM CONSIDERED EQ ACCEL. PARAMETER FV	2.40
SHORT PERIOD ACCELERATION (ASCE 9.4.1.2.4-1, SMS)	0.49G
1.0 SECOND ACCELERATION (ASCE 9.4.1.2.4-2, SM1)	0.192G
SHORT PERIOD DESIGN SPECTRAL RESPONSE ACC.	0.326G, SDC B
1.0 SECOND DESIGN SPECTRAL RESPONSE ACC.	0.128G, SDC B

FOUNDATIONS

1. NO SUBSURFACE TESTING HAS BEEN PERFORMED PRIOR TO CONSTRUCTION. FOUNDATION DESIGN IS BASED ON SHALLOW SPREAD FOOTINGS BEARING ON SUITABLE COMPACTED FILL OR LEDGE. FOUNDATION DESIGN IS BASED UPON THE FOLLOWING ASSUMED MINIMUM ALLOWABLE BEARING PRESSURES:
   SLABS ON GRADE: 500 PSF
   FOOTINGS: 2000 PSF

2. USE GROUNDWATER CONTROL TO PROVIDE A DRY, STABLE WORK AREA DURING ALL TEMPORARY CONSTRUCTION CONDITIONS INCLUDING, BUT NOT LIMITED TO, UNDERPINNING, STRIPPING AND RECOMPACTION, EXCAVATION, PLACEMENT, AND COMPACTION OF BACKFILL, FORMWORK INSTALLATION, AND CONCRETE PLACEMENT.

3. PLACE NO FOUNDATIONS IN WATER, ON SNOW, OR ON FROZEN GROUND.

4. FOUNDATION BACKFILL SHALL OCCUR IN MAXIMUM 12-INCH LIFTS, COMPACTED TO 95 PERCENT OF THE MATERIAL'S MAXIMUM DRY DENSITY.

5. DO NOT BACKFILL UNBRACED FOUNDATION WALLS TO AN UNBALANCED BACKFILL HEIGHT OF MORE THAN 3 FEET.

6. COMPACTED STRUCTURAL FILL FOR FOOTING SUBGRADES AND BELOW SLABS SHALL BE A CLEAN SAND AND GRAVEL MIXTURE CONFORMING WITH THE FOLLOWING REQUIREMENTS:

SCREEN OR SIEVE SIZE	PERCENT PASSING
3 INCH	100
¼ INCH	25-70
No. 40	0-30
No. 200	0-5

7. SLOPE ANY FOOTING EXCAVATIONS AS REQUIRED FOR STABILITY AND SAFETY IN ACCORDANCE WITH OSHA REQUIREMENTS.

CONCRETE

1. ALL CONCRETE WORK AND REINFORCING BAR DETAILS, INCLUDING LAP SPLICES, SHALL CONFORM TO THE LATEST ACI STANDARDS, ACI 301AND 318.

2. WALL CONCRETE SHALL BE AIR ENTRAINED (5% TO 7%) AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED. WALL FOOTING CONCRETE MAY HAVE A COMPRESSIVE STRENGTH OF 3000 PSI.

3. PLACE CONCRETE WITH CONSTRUCTION JOINTS AS INDICATED ON THE DRAWINGS.

4. PLACE NO BACKWALL CONCRETE WITHOUT ENGINEER'S REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS.

5. FIRMLY SECURE ALL EMBEDMENTS IN CONCRETE, INCLUDING REINFORCING BARS. BY NONMETALLIC TIE WIRE TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT. VERIFY AND COORDINATE ALL DIMENSIONS AND LOCATIONS OF CONDUIT, ANCHOR BOLTS, AND OTHER EMBEDDED ITEMS AS REQUIRED.

6. ALL CONCRETE MATERIALS, REINFORCEMENT AND FORMS SHALL BE FREE FROM FROST OR DEBRIS.

7. CONSOLIDATE ALL CONCRETE WITH A VIBRATOR OR OTHER MEANS RECOMMENDED BY ACI 301.HONEYCOMBED SURFACES WILL NOT BE PERMITTED.

8. ROUGHEN CONCRETE SURFACE TO A FULL AMPLITUDE OF ¼" WHERE KEYED CONSTRUCTION JOINTS ARE NOT INDICATED.

9. ALL CONCRETE REINFORCING SHALL BE ASTM A60 DEFORMED BARS; PROVIDE 3" CLEAR COVER TO ALL CONCRETE EXPOSED TO EARTH AND 1½" COVER TO ALL OTHER CONCRETE..

10. PROVIDE COMPLETE SHOP DRAWINGS AND SCHEDULES FOR REINFORCEMENT FOR ENGINEER TO REVIEW.

11. CONSTRUCTION JOINTS IN WALLS SHALL BE LESS THAN 40 FEET ON CENTER, AND WITHIN 15 FEET AWAY FROM WALL CORNERS.

12. PROVIDE WELDED WIRE FABRIC IN FLAT SHEETS, AND IN ACCORDANCE WITH ASTM A-185.

STRUCTURAL LUMBER AND COMPOSITE WOOD FRAMING

1. ALL LUMBER USED ON THIS JOB SHALL BE SPRUCE-PINE-FIR SOUTH (SP-F-s) NO 2 OR BETTER, KILN DRIED TO A MOISTURE CONTENT OF 15 PERCENT OR LESS. DO NOT USE LUMBER THAT HAS BEEN STORED IN DAMP CONDITIONS. USE PRESSURE -TREATED LUMBER WHERE INDICATED.

2. COMPOSITE LUMBER, WHERE INDICATED, SHALL BE VERSA-LAM, MANUFACTURED BY BOISE ENGINEERED WOOD PRODUCTS : BENDING STRESS Fb = 3,000 psi, ELASTIC MODULUS E=2000ksi.

3. WHERE SPECIFIED, ANTHONY ENGINEERED WOOD PRODUCTS POWER BEAM AND POWER PRESERVED GLULAM WILL BE USED.

4. ALL JOIST HANGERS, HURRICANE TIES, AND ATTACHMENT HARDWARE ARE TO BE AS SPECIFIED, MANUFACTURED BY SIMPSON STRONG-TIE. CONNECT ALL JOIST HANGERS PER SIMPSON STRONG-TIE REQUIREMENTS. ALL SIMPSON HARDWARE SHALL BE "Z-max" PROTECTED WTH ADDITIONAL GALVANIZING OR STAINLESS STEEL WHERE SPECIFIED.

5. DO NOT NOTCH JOISTS IN THE MIDDLE THIRD OF THEIR SPAN. CUT HOLES IN COMPOSITE JOISTS IN ACCORDANCE WITH MANUFACTURER'S ALLOWANCES.

6. FLOOR DECKING SHALL BE 3/4" ADVENTECH SHEATHING,GLUED AND NAILED TO THE FLOOR FRAMING MEMBERS

7 WALL SHEATHING TO BE A MINIMUM 1/2" PLY OR COMPOSITE BOARD, NAILED AT SIX INCHES ON CENTER WITH MINIMAL COUNTERSINKING OF NAILS.

8. ROOF SHEATHING TO BE A MINIMUM OF 5/8" PLY OR COMPOSITE BOARD, NAILED AT SIX INCHES ON CENTER WITH MINIMAL COUNTERSINKING OF NAILS. INSTALL SIMPSON STRONG-TIE PANEL SHEATHING CLIPS (PSCL5/8) ON ALL SPANS GREATER THAN 16'.

9. AJS JOISTS SHALL BE PROVIDED BY BOISE ENGINEERED WOOD PRODUCTS, INC. ALTERNATE MANUFACTURER'S PRODUCTS MAY BE SUBSTITUTED, PROVIDED THAT THEY MEET OR EXCEED THE LOAD -CARRYING CAPACITIES OF THE AJS JOISTS INDICATED.

KEY PLAN

PERMIT SET

Reviewed for Code Compliance
Inspections Division
Portland, Maine
Date: 12/30/15

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STATE OF MAINE
ALFRED H. HODSON III
No. 9246
LICENSED
PROFESSIONAL ENGINEER

ENGINEER OF RECORD

Rehabilitation of the Main Block and Ell at
131 Washington Avenue
Jonathan Edwards Lofts
Portland, Maine

Date: 2 October 2015
Scale: As Shown
Revisions:

Title:
Structural Notes and Material Specifications

Sheet No: S-0