



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

**74-76 MUNJOY STREET**  
 RENOVATION/ADDITION FOUR UNIT APARTMENT BUILDING

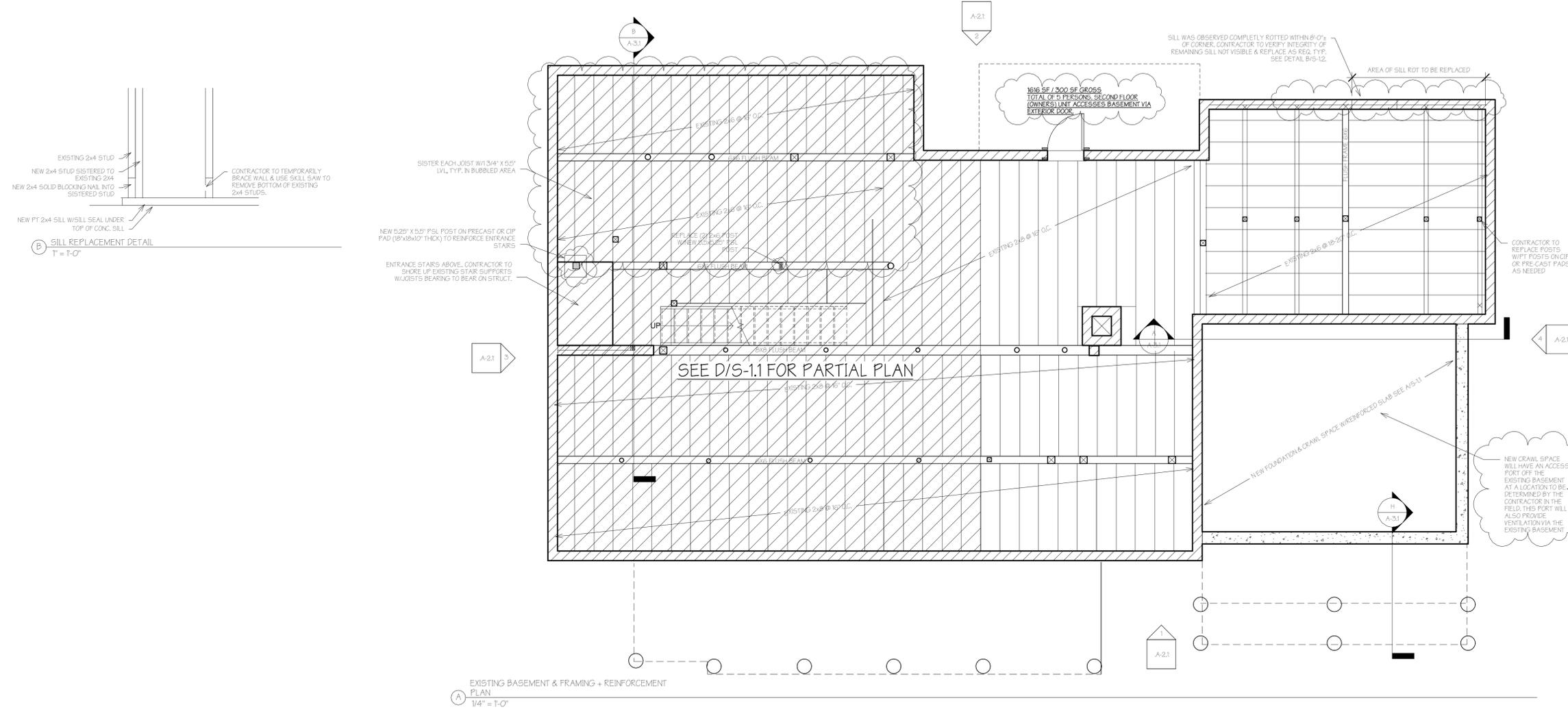
OWNER:  
 DEANEVITT & ELIZABETH ATTERBURY  
 PENNSULA PROPERTIES LLC  
 82 BECKETT ST # 1  
 PORTLAND, ME 04101



PROJECT TEAM

**GENERAL CONTRACTOR**  
 J.C. NEVITT  
 PENNSULA PROPERTIES LLC  
 82 BECKETT ST # 1  
 PORTLAND, ME 04101

**STRUCTURAL ENGINEER**  
 AL HODSON  
 RESURGENCE ENGINEERING  
 61 INDIA STREET, SUITE 7  
 PORTLAND, ME 04101  
 AL@RESURGENCEENGINEERING.COM  
 207.635.9395 (CELL)



**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 AT WEEKLY INTERVALS OR 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.
5. SUBMIT SAMPLES FINISHED AS SPECIFIED AND PHYSICALLY IDENTICAL WITH PROPOSED MATERIAL OR PRODUCT. INCLUDE NAME OF MANUFACTURER AND PRODUCT NAME ON LABEL.
6. DELIVER, STORE, AND HANDLE PRODUCTS USING MEANS AND METHODS THAT WILL PREVENT DAMAGE, DETERIORATION, AND LOSS, INCLUDING THEFT. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
7. 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.
8. STORE PRODUCTS THAT ARE SUBJECT TO DAMAGE BY THE ELEMENTS UNDER COVER IN A WEATHERTIGHT ENCLOSURE ABOVE GROUND, WITH VENTILATION ADEQUATE TO PREVENT CONDENSATION.
9. WHERE DRAWINGS SPECIFY A SINGLE PRODUCT OR MANUFACTURER, PROVIDE THE ITEM INDICATED THAT COMPLIES WITH REQUIREMENTS.

**STRUCTURAL DESIGN CRITERIA**

1. STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE MAINE UNIFORM BUILDING AND ENERGY CODE.
2. DECK AND STAIR LOADS:  
 A. FLOOR FRAMING AND STAIRS 100 PSF  
 B. LATERAL LOAD ON RAILINGS - 200 POUNDS OR 50 POUNDS PER LINEAL FOOT ANY DIRECTION.
3. SNOW LOAD IS BASED UPON A GROUND SNOW LOAD OF 60 PSF, ON AN UNHEATED STRUCTURE (THE DECK) OR IN A VENTILATED COLD ROOF STRUCTURE (THE MAIN ATTIC), NET FLAT ROOF SNOW LOAD IS 46.2 PSF.
4. WIND LOAD: PER IBC SECTION 1609.0/ASCE 7-02 CHAPTER 6  

BASIC WIND SPEED, 3 SECOND GUST	100 mph
IMPORTANCE FACTOR <i>I<sub>w</sub></i>	1.0
EXPOSURE CATEGORY	C
BUILDING CLASSIFICATION	II
BASIC WIND PRESSURE	20 psf
COMPONENT AND CLADDING PRESSURE	+22.7, -35.8 psf

SEISMIC LOAD: IBC SECTION 1615.0, EARTHQUAKE DATA PER SECTIONS 1616.3:	
SEISMIC USE GROUP	II
OCCUPANCY IMPORTANCE FACTOR, <i>I<sub>e</sub></i>	1.0
SHORT PERIOD ACCELERATION <i>S<sub>s</sub></i>	0.314
1.0 SECOND ACCELERATION <i>S<sub>1</sub></i>	0.077g
SITE CLASSIFICATION SOIL TYPE	D
MAXIMUM CONSIDERED EQ. ACCEL. PARAMETER <i>F<sub>a</sub></i>	1.55
MAXIMUM CONSIDERED EQ. ACCEL. PARAMETER <i>F<sub>v</sub></i>	2.40
SHORT PERIOD ACCELERATION (ASCE 9.4.1.2.4-1, <i>S<sub>ms</sub></i> )	0.485g
1.0 SECOND ACCELERATION (ASCE 9.4.1.2.4-1, <i>S<sub>m1</sub></i> )	0.184g
SHORT PERIOD DESIGN SPECTRAL RESPONSE ACC.	0.324g, SDC B
1.0 SECOND DESIGN SPECTRAL RESPONSE ACC.	0.123g, SDC B

**FOUNDATION REQUIREMENTS and EXCAVATION STABILITY**

1. NO GEOTECHNICAL INVESTIGATION HAS BEEN PERFORMED AT THIS SITE. NOTIFY ENGINEER DURING EXCAVATION SO THAT ENGINEER MAY OBSERVE SOIL CONDITIONS ENCOUNTERED ONSITE. ENGINEER MAY ELECT TO REQUIRE SOIL INVESTIGATION BY A GEOTECHNICAL ENGINEER.
2. PROOF ROLL EXISTING UNDISTURBED SOIL PRIOR TO PLACING FOUNDATION BACKFILL OR CONSTRUCTION FOOTINGS. PROOF ROLLING SHOULD CONSIST OF A MINIMUM OF THREE PASSES IN A NORTH-SOUTH DIRECTION AND THEN THREE PASSES IN AN EAST-WEST DIRECTION USING A VIBRATORY PLATE COMPTCTOR.
3. FOR FROST PROTECTION, BACKFILL FOOTINGS WITH FOUNDATION BACKFILL HAVING A MAXIMUM PARTICLE SIZE LIMITED TO 6 INCHES. THE PORTION PASSING THROUGH A 3-INCH SIEVE SHALL MEET THE GRADATION SPECIFICATIONS OF MDOT SPECIFICATION 703.06, TYPE F.
4. FOUNDATION BACKFILL SHOULD BE PLACED IN 6 TO 12-INCH LIFTS AND SHOULD BE COMPACTED TO 95 PERCENT OF ITS MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557.

**CAST-IN-PLACE CONCRETE**

1. ALL CONCRETE WORK AND REINFORCING BAR DETAILS SHALL CONFORM TO THE LATEST ACI STANDARDS, ACI 301 AND 318.
2. FOUNDATION CONCRETE SHALL BE AIR-ENTRAINED, (5 TO 7%), AND HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 psi. PROVIDE BATCH TICKETS TO ENGINEER FOR REVIEW.
3. SLAB CONCRETE SHALL BE AIR-ENTRAINED, (5 TO 7%), AND HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 psi. REINFORCE SLAB CONCRETE WITH WIRE REINFORCING IN ACCORDANCE WITH ASTM A185. PROVIDE A 15-MIL STEGOWRAP VAPOR BARRIER DIRECTLY BELOW ALL SLABS ON GRADE. OVERLAP SEAMS AND TAPE ADJACENT PIECES TO PREVENT MOVEMENT.
4. PLACE NO CONCRETE WITHOUT REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS BY THE CITY AND BY THE ENGINEER.
5. ALL CONCRETE MATERIALS, REINFORCEMENT, AND FORMS SHALL BE FREE OF FROST OR DEBRIS.
6. CONSOLIDATE ALL CONCRETE WITH A VIBRATOR OR OTHER MEANS RECOMMENDED BY ACI 301.
7. PROVIDE DIAGONAL REINFORCING BARS AROUND INSIDE CORNERS OF ALL OPENINGS IN CONCRETE.
8. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:  
 CONCRETE CAST AGAINST EARTH 3 INCHES  
 FORMED CONCRETE EXPOSED TO EARTH OR WEATHER 1 1/2 INCHES - #6 BARS  
 2 INCHES #6 OR GREATER
9. CALCIUM CHLORIDE IS PROHIBITED FROM ALL CONCRETE MIXES.
10. PLACE WALL CONTROL JOINTS AS SHOWN ON DRAWINGS OR AT A MAXIMUM OF 40 FEET ON CENTER.
11. BACKFILL BOTH SIDES OF FOUNDATION WALLS SIMULTANEOUSLY TO PREVENT UNEVEN LATERAL LOADING.

**ROUGH CARPENTRY MATERIALS**

1. DIFFERING LUMBER AND COMPOSITE LUMBER MATERIALS ARE SPECIFIED AT VARIOUS LOCATIONS. MATERIAL GRADES SHALL CONFORM TO THE FOLLOWING SPECIES AND GRADES:  

<b>PERIMETER SILLS (WALL SILLS):</b>	PRESSURE-TREATED SOUTHERN YELLOW PINE, SUITABLE FOR GROUND CONTACT PLACED ON TOP OF CONCRETE.
<b>EXPOSED FINISH TIMBERS:</b>	PRESSURE-TREATED SOUTHERN YELLOW PINE.
<b>(EXPOSED EXTERIOR POSTS):</b>	
<b>PRESSURE-TREATED LUMBER:</b>	SOUTHERN YELLOW PINE NO. 1 GRADING
<b>COMPOSITE LUMBER:</b>	VERSA-LAM BY BOISE-CASCADE, Fb=3,100 psi, E=2000ksi (INTERIOR FRAMING AS NOTED). ANTHONY POWER-PRESERVED BEAMS FOR EXTERIOR USE.
<b>CONVENTIONAL LUMBER:</b>	S-P-F-s NO. 2 OR BETTER
2. ALL LEDGER BOLTS EXTENDING THROUGH PRESSURE-TREATED LUMBER SHALL BE STAINLESS STEEL.
3. ALL LUMBER AND TIMBER FRAMING MATERIAL SHALL BE STORED IN A PROTECTED, DRY AREA OFF OF THE GROUND AND GROUND FLOOR SURFACES. STORE MATERIAL OUT OF DIRECT SUNLIGHT TO PREVENT DIFFERENTIAL DRYING AND WARPING.
4. JOIST HANGERS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE, INC. WHERE NOTED, HANGERS SHALL BE STAINLESS STEEL, ATTACHED WITH STAINLESS STEEL 10d x 1 1/2" HANGER NAILS INSTALLED IN PREDRILLED HOLES AS REQUIRED OR DIRECTED BY ENGINEER. REFER TO PLAN SHEETS AND SCHEDULE FOR HANGERS AND LOCATIONS.
5. REFER TO STRUCTURAL DRAWINGS FOR APPROPRIATE SELF-DRIVING FASTENERS, EITHER MANUFACTURED BY FASTENMASTER, INC. OR BY GRK, INC. INSTALL FASTENERS AS INDICATED ON DRAWINGS.
6. DO NOT NOTCH JOISTS IN THE MIDDLE-THIRD OF THEIR SPANS, AND PROVIDE TAPERED CUTS AT ENDS OF JOISTS WHERE NOTED, TO PREVENT SPLITTING OF LUMBER AT STRESS CONCENTRATION POINTS.
7. FLOOR SHEATHING SHALL BE ADVANTEK SHEATHING, IN THICKNESS INDICATED ON DRAWINGS. GLUE AND NAIL FLOOR DECKING TO SHEATHING AS NOTED. PROVIDE 1/8" SPACING BETWEEN SHORT ENDS OF PANELS AS REQUIRED BY MANUFACTURER.

No.	Description	Date
1	Revision 1	Date 1

**Struct. Plans and D-tails Cont.**

Project number: 16-28\_74 MUNJOY  
 Date: 04.10.17  
 Drawn by: Author  
 Checked by: Checker

**S-12**  
 Scale: As indicated