- 1. New Construction of a 4-story Two Family Dwelling located at 9 Moody Street on Portland's East End. Project requires razing of existing building and alterations to various utilities in the immediate vicinity. The building will be constructed in accordance with IBC 2009 Construction Type VB requirements. The first floor will consist of a parking garage, residential entries, and outdoor space. The second floor will consist of a one-story residential unit. Floors three and four will comprise a two-story residential unit for the building owners with a roof terrace on the roof of the 4th floor. The Project shall include Mechanical, Electrical, and Plumbing. MEP scope of work is design-build by the Contractor, the Architect has contracted with an MP engineer for "design-assist" engineering and a lighting designer, refer to their contact information on the
- 2. Refer to Civil Drawings and Specifications for Site Work associated with, but not limited to, erosion control, grubbing and stump removal, excavation and backfill for house, and rough grading around the house for drainage, connection to the public water supply, any necessary revisions to the connections of the existing overhead electrical power.
- General Contractor Responsibilities
- a. Owner shall provide the Building Permit. The contractor shall provide all other required permits.
- b. Project management, supervision, coordination, and safety program. c. Field layout, submittals, testing services, and quality control.
- d. Provision of all accessory types of items necessary to complete work.
- e. General liability, workers' compensation, builder's risk insurance.
- f. Scheduling of inspections. g. Temporary service (storage, electrical, water, sanitary, power, heat, fire protection,
- h. Erosion control fence, dust and water control.
- Construction cleaning, final cleanup, legal disposal of waste.
- Site Security. Field verification of all dimensions.
- I. Immediate notification of Architect if any discrepancies in the drawings are discovered.
- m. Installation of all products per manufacturer's instructions. n. <u>Integrated exterior mockups</u>
- o. Substitution Procedure

enclosures/barriers).

- p. Payment procedure
- 4. General Notes and Requirements
 - a. Provide shop drawings for approval by Architect/Owner prior to fabrication and ordering of windows, doors, elevator, Architectural Stairs, and any other specific items as noted in the <u>Architectural Drawing Set or in these Outline Specifications.</u>
 - b. Dimensions are to the face of framing, or face of concrete unless noted otherwise.
- c. Do not scale drawings, work from dimensions only. Consult with Architect for dimensions not shown.
- d. All work shall comply with applicable national, state, and local codes e. Contractor shall install blocking in walls for all cabinetry, closet rods, shelving, handrails, mirrors, and
- f. Provide double studs at door frames.
- g. Wood blocking in contact with concrete or masonry to be preservative treated by pressure process and where noted "P.T." Seal cuts in preservative treated wood with field applied preservative. h. Before penetrating or otherwise modifying joists, beams, or other structural members, consult with
- the Architect on maximum size and location. i. All materials in this building shall be new and not previously used, unless authorized by Architect and/or Owner.
- All penetrations through rated walls and floor/ceiling assemblies shall be fire-stopped by specific subcontract requiring penetration.
- k. Products may not be substituted without written consent of the Architect or the Owner. Different manufacturers may be used where items are indicated with "or equal"; the burden of proof that another manufacturer's product is equivalent to that specified is the General Contractor's

responsibility. Proposed substitutions will be reviewed with respect to proprietary information of manufacturer specified.

5. Project Coordination

- a. Contractor to establish Coordination Pre Construction meetings for all major building components this includes concrete foundation work, exterior brick installation, waterproofing and insulation, exterior finish installation, window installation, interior gyp finishing. In attendance should be the Owner, Architect, Contractor and subcontractor performing work.
- b. Coordinate activities included but not limited to structure, mechanical, plumbing and electrical systems to assure efficient and orderly installation of each component. Coordinate operations included under different Sections that are dependent on each other tor proper installation and operation.
- Schedule activities in the sequence required to achieve the best results. d. Coordinate the installation of components to assure the maximum accessibility for maintenance,
- e. Make provisions to accommodate items scheduled for later installation. f. Coordinate scheduling and timing of administrative procedures with other activities to avoid
- conflicts and ensure orderly progress. g. The installer of each component shall inspect the substrate and conditions under which the Work is
- performed. Do not proceed until unsatisfactory conditions have been corrected.
- h. Provide attachment and connection devices and methods necessary for securing each construction element.
- Visual effects: Provide uniform joint widths in exposed work. Arrange joints to obtain the best effect. When there is a question, consult with the Architect prior to installation.
- Install each component during weather conditions and project status that will ensure the best results. Protect construction from harmful exposures.
- k. Clean and protect construction in progress. Apply protective coverings where required to prevent
- damage or deterioration of materials in place. I. The fees associated with the setup of the permanent utilities, such as electrical, phone, and
- propane on the exterior of the building shall be provided by the Owner. m. Requests for Information (RFI) are to be submitted in writing via email to the Architect, through the
- Architect will make the best of their ability to respond to RFI's in a timely manner, the Contractor is to allow a minimum of 5 days to prepare a response n. Change Orders (CO) are to be submitted in writing via email to the Architect and Owner for
- o. Architectural Supplemental Sketches. The Architect will issue supplemental sketches through the construction period.
- p. Construction Closeout

6. Energy Efficiency

- a. The building envelope must be sealed to prevent air leaks to prevent energy loss through infiltration and cold surfaces on which water vapor can condense.
- b. Provide gaskets or sill seals under sill plates along foundation walls.
- c. Seal first floor band joists to the adjoining sill plates & plywood decking using adhesive or caulk (Quick Shield VOC-free sealant or equiv.). Use construction adhesive (Speed Grip construction adhesive or equiv.), or caulking (Quick Shield VOC-free sealant or equiv.) between multiple sill
- d. Seal any band joists between upper floors to the adjoining top plates & plywood decking. Use construction adhesive (Speed Grip construction adhesive or equiv.) or caulking (Quick Shield VOC-free sealant or equiv.) between multiple top plates.
- e. Seal bottom plates of exterior frame walls to the subfloor w/ construction adhesive (Speed Grip construction adhesive or equiv.) or caulking (Quick Shield VOC-free sealant or equiv.). If bath or shower is installed on exterior wall, insulate and air seal this area before shower/tub is installed.
- Window frames and door jambs must be sealed to their rough openings using low expansion foam (Todal Purfil or equiv.), backer rod and caulk (Quick Shield VOC-free sealant or equiv.), but not
- g. All penetrations through the building envelope must be carefully sealed. Typical penetrations include chimney, duct & plumbing chases and penetrations of pipes and wires through the top plates of top story walls.

- h. Electrical boxes on exterior walls and ceilings should either be air sealed/foamed (Todal Purfil or equiv.), placed in airtight enclosures (Lessco box or equivalent) or sealed with electrical box gasket (R&S Enviro products or equiv.)
- 7. Recycling: Every effort should be taken by the General Contractor to minimize the creation of construction and demolition waste on the job site. Recycle as many of the waste materials as economically feasible and minimize waste sent to landfills. A Diversion Goal of 50% of total project waste should be diverted from the landfill. A list of items to be diverted are as follows:
 - a. Site-clearing debris
 - b. Clean dimensional wood, pallet wood
 - c. Plywood, OSB, particle board,
 - d. Concrete, bricks, and CMUs e. Cardboard and paper
- f. Asphalt roofing shingles g. Miscellaneous metals, including roofing
- h. Unpainted gypsum wall board
- Plastics Carpets and pads
- Recyclable beverage containers m. Demolition materials shall be reused or recycled as much as economically feasible. Any items scheduled for demolition or removal that can be salvaged and resold can be done so by the General Contractor with permission from Owner. Refer to the above list of recyclable items that should be diverted from landfills.

012100 ALLOWANCES

- 1. Allowances to be coordinated between the Contractor and the Owner, Architect may provide assistance
 - a. Allowance #1 Stair: Ornamental Stair from the 3rd to 4th floor within Owner's suite is in progress. Allow \$100,000 for labor, materials and delegated design engineering with shop drawings for Architect
 - b. Allowance #2: Wall and Floor Tile, minimum \$22/sf for wall and floor tile in Owner's unit locations and \$15/sf for Rental unit locations. For quantities assume all showers/bathtubs to have full height tile wall and minimum one wet wall is fully-tiled.
 - c. Allowance #3: Bathroom Accessories and Mirrors, provide an allowance of \$3,500
 - d. Allowance #4: Lighting fixtures and controls allowance of \$76,000 e. Allowance #5: Landscape Allowance to be set at \$150,000. This will include all exterior planting, stonework, retaining wall, pavers and hardscapes beyond the exterior wall within the lot lines.
 - f. Allowance #6: Firepit. Provide \$10,000 for firepit on the upper roof
- 2. Contractor to verify items in contract that are Owner Furnished, Contractor Installed.
- 3. All residential casework is to be supplied by the Owner under separate contract. This would include all kitchen and pantry casework, bathroom vanities, bedroom and master closet wardrobes, mudroom closets, etc. This would also include all stone countertops for millwork and vanities. Contractor to provide allowance/bid for installation, blocking and coordination as necessary

012100 MOCK-UPS

- 1. Provide the following mock-ups before commencing the scope of work for the following items, contact
- Architect and Owner for review and approval:
 - a. Exterior Brick wall
- b. Exterior Wood wall c. Base and Door trims
- d. Window Installation
- 2. Mock-ups may remain in place if installed in-situ if approved.

DIVISION 02 - EXISTING CONDITIONS

024116 STRUCTURE DEMOLITION

1. Existing Site contains a foundation and site utilities. Refer to Civil drawings for remaining site utility demolition

024119 SELECTIVE DEMOLITION

DIVISION 03 – CONCRETE

030000 CONCRETE SUMMARY

Reserved

- Refer to Structural Specifications on Sheet S-1.0 for more information
- 2. Slabs on grade shall be placed on compacted soils over 15-mil vapor retarder. Control joints shall be preformed or saw cut within 24 hours of concrete placement. Saw cuts shall be a minimum of 1/4" wide and shall be at least ¼ of the total slab thickness. Joints shall be placed in a rectangular pattern with a maximum ratio of 1:1.5 short to long dimensions. Maximum distance between joints shall be 12 feet. Slabs shall conform to the requirements and recommendations of ACI 302.
- 3. Refer to drawings and related specification divisions for additional notes relating to foundations, concrete,
- 4. Concrete slab in garage to have polished finish and epoxy sealed
- 5. All concrete above grade to be formed smooth finish. DIVISION 04 – MASONRY
- 042000 UNIT MASONRY
- Brick to be installed in accordance with Brick Industry Association standards.
- a. Brick: Endicott Maganese Iron Spot Velour Modular, Norman; 3 5-8" inches wide by 2 ½" high by 11
- %" inches long, Grade: SW, Type FBS
- b. Mortar: TBD, provide initial color selection to Architect for approval. c. Weeps: Cellular Plastic Weep vent in locations as identified per the drawings or industry standard.
- 3. Contractor to provide mockup with specified brick, colored mortar, weep holes and flashing for review.
 - a. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.

DIVISION 05 – METALS

- 050000 METALS SUMMARY
- 1. Refer to Structural Specifications on Sheet S-1.0 for more information.

057000 DECORATIVE METALS

- 1. Metal Stairs at 4th Floor to roof terrace
- 2. Interior ornamental stair from 3rd Floor to 4th floor within Owner's unit, refer to "Allowances" section 057300 DECORATIVE METAL RAILINGS
- 1. Decorative Metal Railings Interior and exterior, refer to Drawings for details

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

- 061000 ROUGH CARPENTRY
 - Refer to Structural Specifications on Sheet S-1.0 for more information.
- Refer to Specification Section 011000-6 for requirements with energy efficiency related to Rough Carpentry. 3. Lumber, General: Provide dry lumber with 19% maximum moisture content for 2-inch nominal thickness.
 - a. Seal the sill and rim joist area to eliminate air/moisture penetration at all exterior walls and wall/floor
 - b. When structural sizing allows, provide rigid insulation within built-up window and door headers in exterior walls to minimize thermal bridging through framing members.

c. Provide foam sill sealer to match width of sill plate at top of foundation walls.

- d. Wood framing indicated in the drawings by nominal sizes (2x4, 2x6, etc.) shall be kiln dried Spruce-Pine-Fir, #2 or better. Wood framing with widths larger than 5" shall be Eastern Hemlock, #1 or better (unless noted otherwise). Wood framing that is in contact with concrete or within 6" of finished grade shall be pressure-treated southern yellow pine.
- e. Wood framing exposed to exterior elements shall be treated (TBD)

installation. #10 deck screws may be substituted for nails.

used; electroplated galvanized fasteners are not acceptable.

- 4. Engineered Lumber, General Refer to structural drawings for sizes and notes.
- b. Provide BC "Versa-Lam" unless otherwise specified
- 5. Pressure treated materials: Comply with requirements of AWPA C2 (lumber) and AWPA C9 (plywood) and AWPA C28 (glue-laminated framing members). 6. Plywood panels:
 - a. Roof surfaces shall be covered with 3/4" APA rated 40/20 sheathing AdvanTech by Huber, rated for exterior use. Panels shall be oriented with long dimension running perpendicular to supporting members. Fasten panels to supports with 10d nails spaced at 6" inches along panel edges and at
 - 12" on center to interior supports, unless otherwise noted in plan/section. b. Exterior walls shall be covered with 7/16" APA rated Zip System Sheathing with integral water resistant and air barriers by Huber, rated for exterior use. Panels shall be oriented with long dimension running horizontal (parallel to ground). Fasten panels to supports with 10d nails spaced at 6" inches along panel edges and at 12" on center to interior supports. Tape all seams as
 - recommended by the manufacturer. c. Floors shall be covered with 3/4" tongue and groove APA rated sheathing AdvanTech by Huber. Panels shall be oriented with long dimension running perpendicular to supporting members. Fasten panels to supports with 12d ring or spiral nails spaced at 6" inches along panel edges and at 12" on center to interior supports. Apply construction adhesive to top of all supports prior to sheathing
 - d. Underlayment for tile flooring shall be 3/8" APA B-C Underlayment Exterior plywood panels with fully sanded face or AdvanTech by Huber.
- 7. Metal framing anchors: Simpson Strong Tie Connectors or equal. a. Refer to Structural Specifications on Sheet S-1.0 for more information for metal framing anchors.
- b. Provide Simpson Strong-Tie connectors with standard paint or G90 galvanized connectors at interior locations when in contact with kiln-dried lumber. c. Provide ZMAX or HDG galvanized connectors at locations of pressure treated lumber and Grace

Vycor Deck Protector Self-Adhered Flashing. Hot-dipped galvanized fasteners (ASTM A153) must be

d. Provide Grace Vycor Deck Protector Self-Adhered Flashing for corrosion resistance of galvanized connectors. Do not use stainless fasteners in conjunction with Grace Vycor Deck Protector Self-Adhered Flashing when fastening to galvanized connectors.

062013 EXTERIOR FINISH CARPENTRY

- - a. At 2nd and 3rd floors, provide 1x6 Eastern White Cedar boards ran horizontally or vertical as shown on the elevations. Preferred Source: Yoder's Mill, Corinna, ME 207-278-3539. The boards are to be installed over concealed fastening strips (Climate Shield Rain Screen clips) Weave exterior corners. Courses to align with window and door casings. Avoid aligning joints vertically. Basis of Design color: Arborcoat by Benjamin Moore. Oil-based semi-solid 1 coat stain. Color selection is "Sea Gull Gray". Install finish per manufacturer's recommendations Final finish to be determined by Architect and Owner, Contractor to provide provide samples on actual wood substrate for installation to Owner/Architect for final selection and approval.
- 2. Exterior Window, Door, Standing and Running trim
 - a. Eastern White Cedar #2 or better 5/4x typical. Prime all sides. Basis of Design Paint color is to match
 - siding finish. Fasten with stainless steel fasteners. Provide sample for approval. b. Provide field installed 2x mahogany sills under all windows and mulled windows unless noted otherwise. Refer to details.
- 3. Exterior Ceilings and Soffits a. Reserved
- - a. 5/4x Decking material. Basis of design is natural Ipe, left to weather. Final selection TBD by Owner and Architect

062023 INTERIOR FINISH CARPENTRY

- 1. Interior Standing and Running Trim
- a. Refer to details, doors have no standing or running trim
- Interior Wood Ceilings Closet Rods
- a. 1." diameter maple, clear Tung Oil finish
- 4. Interior Stairs a. Treads and risers to match flooring, in sizes indicated on drawings
- Casework: See Section 123530 'Residential Casework'. 6. Wood flooring: see Section 096400 'Wood Flooring'

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

- 070000 THERMAL AND MOISTURE PROTECTION SUMMARY 1. Contractor is responsible for the construction of a complete weather tight building within the scope of the construction documents. If contractor feels conformance with the Construction Documents is in conflict with this goal he shall discuss conflicts with Architect. Install all insulation and flashing per manufacturer's
- 2. <u>Pre Construction Meeting: Contractor to hold a meeting to discuss Energy Efficiency and Air Tightness goals</u> before commencing work. In attendance shall be the Architect, Owner, General Contractor and subcontractor performing work

072500 WEATHER BARRIERS

1. TBD by the Contractor, to be provided in locations shown on the drawings 074213 INTERLOCKING TILE FACADE SYSTEM

- 1. 4th Level consists of an interlocking tile facade system. Basis of Design is Rheinzink. a. Custom fabricated, mechanically attached, prePATINA zinc alloy interlocking horizontal wall panels
 - as indicated on the Drawings, with all required accessories for a weatherproof installation. b. Provide product data for [zinc wall panels] including manufacturer's product specifications, standard details, and installation instructions.
- c. Shop Drawings: show layouts of panels on all wall elevations, details of panel terminations, edge conditions, joints, corners, panel profiles, supports, anchorages, trim, flashings, closures, and special details. Provide actual dimensions to the greatest extent possible for all plan, and detail conditions.

d. Available Manufacturers: Subject to compliance with requirements, manufacturers offering metal

- wall panel materials that may be incorporated in the work include: RHEINZINK America, Inc. Woburn, MA 01801 ph: (781) 729.0812
- 2. Submittals: Contractor to provide provide data, color chart for initial color selection and full sized sample before installation or procurement. 3. Alternates: Contractor may provide alternate material choice for Owner and Architect review

075563 GREEN ROOF SYSTEM 1. Roof above 3rd floor consists of an extensive green roof system. Basis of Design is a tray system by Recover Green Roofs: 9 Olive Square, Somerville, MA 02143. (617) 764-1310. Contact: Richie Harvey

077200 ROOF ACCESSORIES Reserved

078413 PENETRATION FIRESTOPPING 1. Penetrations through rated wall or floor assemblies are to be firestopped as required by local building code requirements

079200 JOINT SEALANTS Reserved

071353 ELASTOMERIC SHEET WATERPROOFING

1. Membrane roofing at upper roof under pedestal decking system, 16 oz. copper flashing and drip edge .60 mil EPDM fully adhered membrane roofing over 3/4" AdvanTech sheathing.

071413 HOT FLUID-APPLIED RUBBERIZED ASPHALT WATERPROOFING

Reserved.

072100 THERMAL INSULATION

- - a. Provide Dow Thermax Polyisocyanurate (or equal) below at above grade walls in sizes and thickness as indicated on wall and roof schedule.
- b. Provide min 4" Expanded Polystyrene (XPS) rigid insulation at interior of foundation walls below grade and 2" beneath
- concrete slabs.
- a. Provide Mineral wool batts by Roxul in thicknesses (or min R-values) and locations as shown in Drawings and on schedules. Install per manufacturer's recommendations.

bedrooms, and laundry room, including 4 feet in ceiling to either side of wall.

a. 3-1/2" Bonded Logic UltraTouch Natural Fiber Insulation Batts [Available through Energy Innovations, 846-1211] or Roxul sound batts. Provide in locations identified on the floor type schedule and wall schedule. Ensure, at a minimum, sound attenuation is provided in walls surrounding all bathrooms,

072119 FOAMED-IN-PLACE INSULATION

1. Provide closed-cell, water-based, HCFC-free, high-density polyurethane insulation as shown in Drawings at decks and where required when physical space would otherwise not achieve min R-values using other specified insulation.

072600 VAPOR RETARDERS

- 1. Provide 15 mil. Polyethylene below all concrete slabs. Tape seams with Polyken Shadowlastic, Siga Wigluv,
- 2. Tescon No. 1, Venture 1585 HT/W, or Dow Weathermate. Tape sides to concrete or wrap over top of concrete when possible.

076200 SHEET METAL FLASHING AND TRIM

DIVISION 08 – OPENINGS

1. Zinc flashing typical unless noted otherwise

- 081416 EXTERIOR/INTERIOR FLUSH WOOD DOORS 1. Provide aluminum-clad wood doors for exterior conditions by Loewen (or approved equal) in sizes and operations as indicated on the drawings. Provide solid wood doors (Manufacturer TBD) for interior
- 2. Refer to Door Schedule for Sizes, Glazing, Etc 3. Submittals: Contractor to provide product data and color ship selections to Architect and Owner for approval before procurement

conditions in sizes and operations as indicated on the drawings.

083219 SLIDING WOOD-FRAMED GLASS DOORS

083613 SECTIONAL DOORS

- 1. TBD, refer to Door Schedule for basis of design. Aluminum frame Glass Door by Overhead Door Company, series 521. Contractor to provide product date color selections to Architect and Owner for approval
- 2. Submittals: Contractor to provide product data and color ship selections to Architect and Owner for <u>approval before procurement</u>

085200 WINDOWS

- 1. Refer to window schedule for manufacturer and bidding instructions. Window manufacturer must provide DP ratings for the largest unit and all mulled units of significant size. Notify Architect of and provide performance-enhancing accessories as required to meet specified DP ratings. Submit three copies of Window Shop Drawings for review by Architect prior to purchasing windows, including structural mull details.
- 2. Basis of Design: Loewen triple glazed windows. Preferred supplier: Pinnacle Window Solutions, 82 Litchfield Rd, Hallowell, ME contact Kris Brill 207-588-6590 3. All windows must meet a minimum DP Rating of 50, in accordance with AAMA/WDMA 101/I.S.2/NAFS-02
- and must be certified in compliance with the WDMA hallmark program. 4. All windows must be rated, certified, and labeled according to the NFRC for Energy Star.
- 5. Exterior Cladding Color: a. See Window Schedule

a. See Window Schedule

- b. Cladding finish shall be Manufacturer's standard, meeting or exceeding ASTM 2605 6. Interior Frame: See Window Schedule
- 7. Glazing shall be low E II insulating glass with argon gas. 8. Provide tempered glass per code and wherever glass is located within 18" of finish floor, above
- bathtubs/whirlpools, or 24" from nearest vertical edge of a door in closed position.

11. Insect Screens shall be provided for all operable units, unless noted otherwise.

- 9. Weather-stripping shall be Manufacturer's standard in color, matching window, verify with Owner. 10. Jamb extensions shall be provided by General Contractor as required.
- 12. Window Hardware a. Casements and Awnings i. Manual lever locks
 - ii. Hardware finish TBD, see Window Schedule.
- i. Operation shall be push-out style, unless otherwise noted. 13. Window Accessories a. Provide nailing fins, unless noted otherwise on the drawings
- to installation. 14. Warranty a. All windows must have a minimum 10-year warranty to be free from defects in manufacturing,

b. Provide sill flashing. Coordinate window flashing details with Architect and General Contractor prio

materials, and workmanship from purchase date. b. All insulated glazing must have a minimum 20-year warranty against failure of the air seal from the

c. Provide Owner with written warranty and contact information for future window service. 15. <u>Submittals: Contractor to provide product data, shop drawings and corner sample with specified finish to</u> <u>Architect and Owner for approval before procurement</u>

086200 UNIT SKYLIGHTS Reserved.

DIVISION 09 - FINISHES

- 092900 GYPSUM BOARD
- 1. Provide Gypsum Board in sizes as indicated on Drawings. 2. Install Gypsum Board in accordance with manufacturer's recommendations
- 3. Provide heat-formed tear-away strips at all adjacent complex geometric components. 4. Provide gypsum accessories at door and base trim details as indicated on the Drawings

093013 CERAMIC TILING

Wall Tile

a. Wall tile TBD by Architect and Owner, Contractor to provide material allowance of minimum \$10/si and include installation in bid. All showers to be wall tile

b. Provide "DensShield Tile Backer" OR ½" Cementitious Backer Board under all ceramic wall Tile.