Outline Specification

Apartments for

Sepiessa II
West Tisbury, MA 02575

Prepared for:
Dukes County Regional Housing Authority
P.O. Box 4538
Vineyard Haven MA 02568

Designed by:
South Mountain Co, Inc.
15 Red Arrow Road
PO Box 1260
West Tisbury MA 02575

Revisions:
11 June 2013 (Island Housing Trust)
28 July 2008
11 November, 2008
9 December, 2008
9 January, 2009
30 March, 2009
25 June, 2009 - Bidset
DIVISION 1: GENERAL REQUIREMENTS

1.1 GENERAL CONDITIONS

• The specifications are in addition to Architectural Plan Set dated July 8, 2009 (consisting of sheets 1-13 and 16) and the septic plan dated June 11, 2009 revised March 6, 2013 and provide additional information concerning the buildings and related site for three apartments at 12 Clam Point Road (aka Sepiessa) off Tiah’s Cove Road in West Tisbury, MA (Assessor Parcel 13-1.1).
• The Owner is Island Housing Trust (referred to herein as Owner).
• The Designer is South Mountain Company Inc., West Tisbury, MA (referred to herein as Designer).
• The General Contractor is ________________________ (referred to here as Contractor. All work shall conform to Massachusetts State Building Code the Town of West Tisbury Zoning By-Laws and the Order of Conditions set forth by the West Tisbury Zoning Board of Appeals. The Outline Specifications, along with the plans referred to above, become part of the Construction Contract.
• Contractor is to provide all necessary on-site supervision of all trades to execute the described scope of work.
• Contractor is responsible for temporary and permanent utilities cost during construction.
• Contractor is responsible for shoring required by excavation.
• Contractor is responsible for providing materials and labor to ensure a completed project, based on drawings and specifications. Contractor is to include all general construction costs such as rubbish disposal, telephone, fax, and delivery costs.
• Contractor is responsible for maintaining on-site toilet facilities.
• Temporary protection; protect all in-place construction and stored material from the weather, including wind, hail, rain, and snow.
• Where there is a contradiction between the drawings and the specifications, the stricter, higher quality method or material shall apply. The General Contractor will notify Owner immediately if such discrepancies are found.
• Unit A is intended to be universally accessible. Clearances, fixtures, hardware and other aspects should be checked by General Contractor, and implemented for accessibility.

1.2 SPECIAL CONDITIONS

• The Contractor shall carry General Liability ($1,000,000) and complete workers’ compensation insurance for all people employed on the jobsite.
• All subcontractors employed on this project must carry a minimum of $500,000 General Liability insurance and, if they have employees, complete Worker’s Compensation coverage.
• The Owner shall carry all property-related insurance for work-in-progress and construction materials on site, and the Contractor shall be a named insured on the Builders Risk policy.
• Contractor will attempt, as much as possible, to use energy and resource efficient systems and materials, and will attempt to specify low-toxicity materials throughout. The Contractor will guarantee all work for a minimum of one year from the date of substantial completion and acceptance by the Owner. The following components will have longer warranty periods: Windows and glazing will be fully guaranteed for two (2) years. All window parts will be guaranteed for ten (10) years and glass will be guaranteed against seal failure for twenty (20) years.
The Contractor will attempt, as much as possible, to employ environmentally responsible construction methods and to minimize resource depletion and waste brought to local landfills. Careful purchasing of materials, recycling of construction debris where possible, and use of materials which use recycled or reconstituted material will be encouraged throughout the project.

1.3 PERMITS & FEES

- The Contractor will be responsible for acquiring all necessary permits, complying with the terms of such permits, and successfully completing all necessary inspections.

1.4 CLEAN UP, DISPOSAL

- The Contractor will have the premises professionally cleaned at completion to prepare the buildings for occupancy, including complete house cleaning and window washing.
- Site shall be fully cleaned of all construction debris.

1.5 PROJECT CLOSEOUT & POST OCCUPANCY

- All Subcontractors will be responsible for taking care of their own waste and debris. Dumpsters will be provided, but Subcontractors will be responsible for separating trash and waste as directed by the Jobsite Foreman, respecting all site constraints, and leaving both the site and the house clean and free of debris.
- Closeout submittals will include the following:
  - Operation and maintenance data and manuals including the following:
    - Ventilation system
    - Heating system
    - Potable water system
    - Electric power, telephone, and cable services
    - Lighting and Light bulbs
    - Appliances
    - Paint and Finishes
    - Tiles and other
    - Warranties
    - Massachusetts New Homes with Energy Star certification
    - Keys, and keying schedule (when appropriate)
    - Spare parts, maintenance materials, and extra materials as necessary
    - Evidence of compliance with requirements of governmental agencies having jurisdiction, including:
      - Occupancy Permit
      - Record documents
      - Construction photographs of all roughed walls and ceilings prior to drywall, keyed to plans, in the form of “roughing books”
- Contractor will instruct the Owner, in the proper operation and maintenance of systems, equipment and similar items which are provided as part of the Work.
- Systems Start-Up: The Contractor shall orchestrate complete start-up of systems and instruct Owner’s personnel in proper operation and routine maintenance of all systems and equipment, or have appropriate subcontractors do so.
- Punch List: The Contractor shall provide one punch list at substantial completion of any incomplete construction items prior to final cleaning and occupancy.

1.6 SUBMITTALS

- Contractor is responsible for submitting manufacturer’s data on the following:
- Manufactured windows and doors
- Insulation
- Light fixtures
- Plumbing fixtures
- Appliances
- HVAC and HRV systems

1.7 SUBSTITUTIONS

- Once Contractor’s final outline specifications have been approved by the Owner, no substitutions shall be made for specified products without approval from the Owner.
- When a substitution is proposed, the Contractor is to provide sufficient information to enable the Owner to make a comparison between the specified product and the proposed product.
- Owner is entitled to make substitutions. Additions or credits in project costs and time shall be determined by the following process:
  - Owner indicates proposed substitutions.
  - Contractor will provide a written proposal of changes which includes:
    1. Contractor’s costs, without markup, of material before change and after change.
    2. Cost of labor before change and after change.
    3. Incidental credits or expenses related to change.
    4. Tabulation of overhead and profit percentage.
- Overhead and profit percentage will remain the same for changes. A credit will receive the same percentage as an addition receives.
- Owner will review and approve all proposals prior to the Contractor proceeding with the revised scope of work.

1.8 WARRANTY/ NON-BILLABLE WORK

- Contractor will guarantee all work for a minimum of one year from the date of substantial completion and acceptance by the Owners. Warranty Repair: Approximately 30 days prior to expiration of the comprehensive warranty, Contractor will schedule an appointment with the Owner, if necessary, and return to the project if there are any items to be corrected by the Contractor under the terms of the comprehensive one-year warranty. Contractor shall make repairs listed within 30 days of the Owner’s issuance of the “Warranty Repair List”, unless otherwise agreed by the Owner. During the one-year period between substantial completion and warranty expiration, Contractor will make warranty repairs and adjustments on an as needed basis.
- Windows, doors and related hardware will be guaranteed as per manufacturers warranty.

1.9 ENERGY EFFICIENCY

- Contractor will be responsible for the following:
  - Achieve Tier III rating under Massachusetts New Homes with Energy Star.
  - Pass Sections 3 and 5 of the Energy Star’s “Thermal Enclosure System Rater Checklist”
  - Achieve a 45% or better over the 2011 MA Reference Home.

DIVISION 2: SITEWORK

2.1 SURVEYING & LAYOUT

- Survey and layout will be provided by Schofield, Barbini and Hoehn (SB&H).
• Site engineers to be SB&H
• Singular & Drip Disposal Septic system as designed by SB&H (11.6.09 & revised 3.6.13)
• Architectural Site Plan by SMC
• Contractor to call Dig-Safe to verify the precise location of all utilities on site prior to initiating demolition activities. Contractor shall protect utilities throughout construction.

2.3 SITE PROTECTION
• Protection of existing landscape features as “no disturbance zones” will be maintained by the Contractor and generally protecting specific plants and other natural features as required for the preservation during construction, and clearly delineated on-site, as indicated by the Owner.
• Contractor shall prevent loss of soil during construction by storm water runoff and/or wind erosion, including protection of topsoil stockpiled for reuse.
• Contractor shall prevent sedimentation of wetlands, streams and lakes.
• Contractor shall prevent pollution of the air with dust and particulate matter.
• Protect existing landscape and natural features as required for their preservation during construction.
• All natural areas should be treated as finished landscapes unless otherwise indicated to minimize disturbed area and all existing vegetation not to be removed to be protected against unnecessary cutting, breaking or skinning of roots or bark.
• Snow fence to be installed a required, with sufficient walkthroughs, and all placements by Contractor.
• Silt fencing will be installed as necessary to prevent erosion.
• Protect trees from vehicular traffic and parking of vehicles by keeping vehicles outside the drip line of trees.

2.4 SITE CLEARING & PREPARATION
• Efforts coordinated between Landscaper and excavation contractor.
• Clearing done with minimal site impact.
• Includes removal of trees, shrubs, groundcovers according to site plan and field markings.

2.5 EXCAVATION & BACKFILL
• To include excavation as required for new construction, sub-grade fill, footings, foundations wells, and underground utilities trenches from street to buildings.
• Contractor to promptly notify Owner of any unexpected sub-surface conditions.
• Excavation to be done according to site plan and elevation benchmarks, which shall be to 2” below top-of-footings.
• Foundations will be backfilled with clean well-draining sand.
• Footings; clean fill from below footings.
• Excess fill not suitable for road & parking areas is to be removed from site to minimize onsite storage.

2.6 TRENCHING
• To include the supply and burial of the following utilities in this order:
  o Water service at 4ft. minimum below finish grade from foundation to existing well w/ appropriate tie-in
  o Septic service pipes pitched to drain per approved plan
  o Electric power from existing transformer at 3ft. minimum below finish grade
2.7 ROAD & PARKING

- As laid out by SB&H and Contractor.
- All roadways and drivable paths to have a minimum 6” base of compacted suitable fill.
- All roadways and drivable paths to have a minimum 2” sand hardener surface.
- At least 90% of the site (excluding area under roof) will be permeable.

2.8 SITE GRADING

- Contractor to provide grading elevations and transitions. Sub-grading to be completed according to site plan, using soils recovered from on-site excavation and set 6” below final/finished grade.
- Grade to be raised as appropriate to allow for drainage away from house and as shown on the plan.
- Finished grad; finish grade to be completed after building exterior is completed. Care must be taken so that compaction of finished grading layer does not occur by vehicle or personnel. Utilize stockpiled topsoil, ensuring that only clean, loose topsoil with maximum grain size of 1” is utilized. Amend the stockpile with organic composted material (brown of black color with no unpleasant odor). Import equivalent topsoil as needed. Grade topsoil for final finish grade as shown on drawings.
- Include final grading at utility trenches, septic tanks, and septic field.

2.10 LAND CLEARING

- Designed and coordinated by Contractor.
- All marked trees to be cut and limbed. Hardwood to be cut to firewood, pine to be removed from site and all limbs and branches to be chipped.

2.11 SCREENING (Provide Allowance)

- By Owner and Contractor in co-operation with abutters.

2.13 SITE DRAINAGE

- All drainage directed away from buildings via surface pitch and ADS to daylight.

2.14 WALKS & PATHS

- Walkways to be prepared with 6” of brown stone-dust (or concrete as with other building?) from parking to edge of front porch ramp.
- Paths will be functional, and suitable as a base for later installation of stone, bluestone, brick, or other material as chosen and installed homeowner.
- Path and wooden ramp pitch to be at 1:20 maximum for easy wheelchair accessibility.

2.18 LOAM

- On-site loam tilled, stripped and stockpiled for use on site if of sufficient quantity.
- On-site loam (if utilized) will be augmented with off-site material, minerals, peat moss, or organic nutrients as necessary.
- Sufficient loam will be provided for all disturbed areas to be re-planted.
• All areas to be reseeded with lawn or meadow mix to be prepared with 6” loam.

2.19 LAWNS
• Install per landscape plans, blend edges with native plant material.
• Loam, fertilizer, lime, and seed (grasses, wild flowers, etc.).
• As detailed on plans, with 6” min. of rolled loam, spread with fertilizer and lime.
• All lawn shall be drought-tolerant.
• Grass Seeding; Seed mixture shall be: 25% hard fescue, 25% chewing fescue, 25% creeping red fescue, 25% sheep fescue. Seeding must be completed between April 30th and June 15th or September 1st and October 15th. Rake planting soil (remove all material larger than 1” in diameter), roll entire surface with roller weighing approximately 100 pounds per foot of width.

2.20 PLANTING BEDS
• Beds to be prepared as to material, depth, and size according to landscape plans, using loam, fertilizer, mulch, and peat moss.
• Bed depth, additional nutrients, etc. to be determined and specified.

2.21 PLANTINGS
• Installed per landscaping plan.
• Plant material tagged by Landscaper before delivery. Plants to be in good health before planting.
• Materials and fertilizers to include perennials, shrubs, and small trees, with all plants considered native, and at least 90% drought-tolerant, and to be in keeping with existing landscape.
• Use organic planting techniques to encourage good health and growth of plantings.
• All plantings to be native to MV (per Nature Conservancy requirements).

2.22 MISCELLANEOUS SITEWORK
• Coordinated by Contractor, thus insuring an integrated approach to construction of the site, as well as an understanding of the details, to include:
  o Pruning, cuttings, clean up, edges, etc.
  o Meetings, notes, weekly reporting, etc.

2.23 SHED
• Build or install a 20’ X 14’ wooden shed next to the parking, similar in style to the existing shed.

DIVISION 3: CONCRETE

3.1 FOUNDATION
• Install complete poured concrete crawl space consisting of 8” thick walls bearing on 8”x18” footings, with openings, and reinforcing steel as shown on foundation plan and building section.
• Footings: concrete mix specifications and application, reinforcing, size and configuration as shown on foundation plan. Hand dug with excess fill thrown to outside of foundation.
• Utility sleeves to be placed for septic and water per Contractor and SB&H specifications.
• Bituminous dampproofing shall be applied to all foundation walls below finish grade.
• Install 5/8” x 8” anchor bolts at 4 ft. on center and 1 ft. from all corners, with 3 ½” of thread exposed
• Foundation subcontractor to install STHD14* hold-down straps at exterior corners.
• Install rebar as shown per building section.
• All interior surfaces of foundation walls to have 2” Thermax Light Duty-white rigid insulation:
  o All rigid insulation joints to be taped fastened to concrete wall with Hilti IDP 6/8 Insulation Anchors as required,
  o Foam top edge for air barrier from rigid insulation to sill plate.

3.2 FLOOR SLABS & PREP
• General cope; reinforced concrete, concrete mix specification, reinforcing, size and configuration. As shown on foundation plans. Provide smooth manganese trowel finish with sealer/hardener.
• Reinforcing and control joints as shown on foundation plans.
• Install 4” concrete slab in crawl space over 4” rigid insulation, 6 mil reinforced polyethylene vapor barrier, and steel mesh reinforcing, on a clean sand compacted base.
• Concrete contractor will install rigid insulation, vapor barrier and steel mesh, and will be responsible for all slab setup and prep including necessary sand grading and backfill below slab.
• Sidewall insulation to be installed by Contractor prior to prepping and pouring floor slab, per construction drawings.

3.3 POST PIERS
• Post piers shown on plan are to be 8” or 10” diameter poured concrete, or PVC readi-footing piers, extending to 4’ below finish grade.

DIVISION 5: METALS

5.3 MISCELLANEOUS METALS
• All flashing for doors and windows to be pre-finished aluminum.

DIVISION 6: CARPENTRY

6.1 CONVENTIONAL FRAMING
• Includes all floor, wall and roof framing, strapping ceilings, and all necessary blocking.
• All framing lumber in contact with ground or concrete to be pressure treated ACQ southern yellow pine.
• All framing must be done so there are no un-insulated cavities in the finished frame.
• General Framing to be KD spruce, TJIs, and Microlams in accordance with framing plans.
• Framing materials are as follows:
  o Girders: 3 ½” x 9 ½” Versalam
  o Floor Joists: 9 ½” TJIs @ 16” OC
  o 2nd floor beams: 3 ½” x 9 ½” Versalam, flush-framed
  o 2nd floor joists: 9 ½” TJIs @ 16” OC
  o Walls: 2” x 6” @ 24” OC
  o Rafters (main roof): 9.5” TJIs @ 24” OC
  o Rafters (dormer roof): 9.5” TJIs @ 24” OC
  o Ridge: 1 7/8” x 18” Microlam (minimum)
  o Ceiling Joists: 2 x 8 spruce @ 24” OC
Ceiling joists to be installed after sheetrock is placed on underside of rafters in attic space to contain cellulose or approved equal
- Headers: As shown on framing plans, single headers wherever possible
  - Includes all nails, fasteners, and framing hardware
- Includes basement stairs: 2 x 12 spruce stringers and 2 x 10 spruce treads.
- Waste factor for all framing material will not exceed 10%.
- Unit A bathroom walls must be framed with sufficient blocking for current and future grab bars for safety and accessibility.

### 6.3 SHEATHING & SUBFLOORS
- Includes all sheathing and subfloors:
  - Walls: 1/2" “Zipwall” (all joints taped and sealed) and Atlas 2 1/2” nail base sheathing on exterior
  - 1 1/2” x 2 1/2” ACQ to be installed along bottom edge of sidewalls as insect shield below nail base
  - Roof: 5/8” “Ziproof” (all joints taped and sealed) and Atlas 2 1/2” nailbase sheathing on exterior
  - All cellulose insulation or approved equal to be contained by 3/8 plywood within attic spaces
  - Porch Roofs: 5/8” Ziproof
  - Sub-Floors: 3/4” Advantek T&G
  - Floors: Add 1/2” homosote for sound protection between subfloor and all carpet
  - Floors: Add 1/2” PTS plywood between subfloor and all linoleum

### 6.7 EXTERIOR TRIM & WOODWORK
- Includes all exterior casings, corner boards, rakes, soffits, light blocks, details, using unpainted red cedar or approved equivalent:
  - 5/4 material for wall trim
  - 4/4 material for roof trim

### 6.10 PORCH FRAME & FINISH
- Includes porches and wooden ramp as shown on plan; materials as follows:
  - Deck Framing: Pressure treated ACQ southern yellow pine
  - Decking: Correct Deck, grey, 5/4” x 6 recycled material decking or approved equivalent
  - Posts and beams: Fir
  - Rafters: 2 x 8 Spruce
  - Ceiling joists: 2 x 6 spruce
  - Ceiling finish: T&G pine

### 6.13 INTERIOR TRIM & FINISH WORK
- Includes all casings, base molding, trim details and closet finish.
- All interior woodwork to be poplar, painted or approved equivalent:
  - Includes Pantry, Linen & Book Shelving
- Misc. closet shelving & hanging bar: 12” shelf, wood closet pole

### 6.14, 6.15 CABINETRY & COUNTERTOPS
- Includes all pre-fabricated Kitchen cabinets, built ins and bathroom vanities:
  - Prefinished maple fronts, flat panel doors and drawer slabs
  - Boxes: 3/4” furniture board
  - Door Panels: 3/8” furniture board
  - No VOC finishes
  - No Urea-formaldehyde
- Counters will be formica in kitchens and baths with maple edge.
- Cabinet knobs are pre-finished turned maple 1 1/4” diam. from D. Lawless Inc.
• Hinges: Blum motion 973A 0500.01 or equivalent.

6.16 INTERIOR STAIRS & RAILINGS
• Includes Main stairs:
  o Stairways to be housed stringer construction; treads, risers, stringers to be Southern Yellow Pine
  o Handrails: Southern Yellow Pine, hung on Ives wall mounted handrail brackets

6.18 UNDERLAYMENT
• Includes all tile underlayment.
  • 1/2" Durock cement board
• Includes all linoleum underlayment.
  o ½" PTS plywood

DIVISION 7: THERMAL & MOISTURE CONTROL

7.1 CAULK & EXTERIOR SEALING
• All caulking to be first quality silicone, Termco acoustical sealant or PL Premium.
• Includes all sealing materials:
  o All wall flashing not supplied with item to be flashed to be copper
  o All caulking to be first quality urethane
  o All drip edge eave flashing to be copper or brown aluminum

7.2 ROOFING
• Includes all roofing:
  o Shingle roofs: Certainteed, Woodscape AR series, nailed (not stapled)
  o Color: Driftwood
  o Use tuff-guard (ice and water) membrane below roofing on all pitches under 4:12
• Asphalt shingles: 30 year ‘Architect Style’ asphalt shingles.
• All drip edge flashing: Aluminum (dark brown) w/ 3-coat Kynar paint system.
• All step edge flashing: Aluminum (dark brown) w/ 3-coat Kynar paint system.
• All window/ door edge flashing: Aluminum (dark brown) w/ 3-coat Kynar paint system.
• All flashing installed in strict accordance with manufacturer approved detailing, specifications and recommended procedures. Flashing and accessories; aluminum, see drawings for locations, detail and flashing profiles.
• General scope; comply with SMACNA recommendations and standards for sheet metal selection, forming, fabricating and installation, coordinate with roofing system flashing.
• Eave drip; aluminum 0.040 inch-thick, standard-fabricated as required.
• Rake drip; aluminum 0.040 inch-thick, standard-fabricated as required
• Step flashing; aluminum 0.040 inch-thick, standard-fabricated as required

7.3 SIDING
• White cedar wood shingles, with 5” max. exposure, nailed (not stapled) over Rain Drop housewrap.

7.4 GUTTERS
• Includes gutters and downspouts per plans:
  o Gutters to be aluminum. Color: Clay
7.5 **INSULATION**

- In addition to the rigid foam found in Sections 3.1, 3.2 and cellulose sheathing found in 6.3, the insulation system of this building is comprised of the following materials:
  - Exterior Walls: Fill 5 ½” wall cavity with blown in cellulose or approved equivalent
  - Roof Slopes: 9½” cavity with dense packed cellulose or approved equivalent. Above horizontal ceilings: 18” minimum of loose fill cellulose, or equivalent.
  - Add cellulose or approved equivalent in shared interior walls and ceiling cavities between apartments for sound deadening
  - Use high density closed cell spray foam at floor joist perimeter as per plan details.
  - All insulation to be inspected for fill continuity and density before being covered with sheetrock or other rigid material.

- Insulation shall be sufficient to achieve previously cited Energy Star Tier 3 standards: see Section 1.9

7.6 **VAPOR SEALING & AIR SEALING**

- The air barrier at the walls in these buildings will be provided by “Zip Wall” sheathing, caulk, flashing and tape to create a continuous air barrier as shown on the air barrier detail drawing.

- Typical Building Practices:
  - Seal windows, doors, louvers, vents, outdoor air ducts, etc. to their rough openings with low expansion polyurethane foam.
  - Seal at the flashing metal with caulk &/or vapor membrane;
  - Utility Penetrations: Seal all utility penetrations through exterior walls and ceilings with either low expansion polyurethane foam or caulk, depending on the size of the hole to be filled. As a guideline use foam for gaps or holes with a minimum dimension of 1/4”, caulk for smaller gaps or holes.
  - Plumbing Stacks: Seal the aluminum flange of an interior boot to the underside of sheathing with caulk. (The boot is installed at the same time as the stack is installed by plumbing contractor.)
  - Install sill seal and caulk between foundation and mudsill.
  - Seal all zip wall sheathing at corners, mudsill, wall plate, window openings, and door openings with caulk, as shown on Details Page of plan set.

- The building will be blower door tested per Energy Star requirements after installation of windows and doors and before completion of insulation before sheetrock is installed; and after completion of sheetrock. Final results not to exceed 0.10 CFM/50 per square foot of building shell.

- Materials:
  - Sealant: PL premium polyurethane sealant, silicone caulking, and/or gasket material
  - Tape: Zip Tape
  - Foamed InSitu Insulation/Sealant: Pur-Fill/1G, non-CFC, low expansion, water cure polyurethane foam

- High density spray foam insulation to be used as needed for difficult air sealing locations, and only with the approval of the Contractor.

- Interior Prep & Prime Vapor Barrier Water-Based Primer (1060) and 2 finished coats at all dry-walled surfaces.

**DIVISION 8: DOORS, WINDOWS, SKYLIGHTS**

8.1 **DOORS, JAMBS & HARDWARE - EXTERIOR**

- Exterior doors: ThermaTru or approved equivalent outswing fiberglass Doors @ 1 ¾” thick, or equivalent.
• Crawl space access doors/hatches: 2-6 x 3-0 insulated outswing fiberglass doors @ 1 ¾” thick w/ aluminum thresholds.
• Hinges: 4 x 4 satin nickel NRP.
• Bore: 2 1/8” w/ 2 3/8” backset.
• Locksets: Schlage Manhattan: Entrance, Satin Nickel.

8.2 DOORS, JAMBS & HARDWARE - INTERIOR
• Includes all interior doors.
• Doors: Composite Masonite 4 panel, solid core Jeldwen, Atherton 1 3/8” thick, or equivalent.
• Jambs: double rabbit 4 5/8 clear pine.
• Hinges: 3 ½ x 3 ½ satin nickel NRP.
• Bore: 2 1/8 w/ 2 ¾ backset.
• Lockset: Schlage Manhattan: Satin Nickel.
  o passage
  o privacy
  o half dummy

8.4 STORM & SCREEN DOORS & HARDWARE
• Screen doors:
  (1) Custom 3'-0”x7’x1” inswing screen door
  (1) Marvin Ultimate outswing screen door (or approved equivalent)
• Latches: roller catches.
• Hinges: 3”x3” bushed nickel
• Closer: hydraulic closer.

8.7 WINDOWS
• Windows to be Paradigm (or equivalent by performance ratings) vinyl casements and awnings, with quantity and sizes as listed in window schedule.
• All windows to have pre-made & pre-fit emergency plywood covers in order to meet 110 MPH wind code requirements. Covers to be numbered and stored in #4 bay of new shed.
• All windows to be triple glazed with very low U-factor, a high solar heat gain coefficient (SHGC), and a high visible light transmittance (VT). Contractor to provide window specifications and Energy (ER) numbers.
• Exterior Window Finishes: Factory finished. Color to be selected by Owner.
• Window Hardware: manufacture’s standard contemporary hardware.
• Insect Screens: conventional insect screen per manufacturer.
• Drywall returns on all window jambs.

DIVISION 9: FINISHES

9.1 WALLS & CEILINGS
• Walls, ceilings + window jambs: ½” sheet rock: taped, coated, sanded and primed.
• Primer: 1 coat.
• All waste sheetrock to be separated from other waste, stored dry and recycled.
9.2 **FINISH FLOORS - WOOD**
- Includes all first floor area except bathrooms.
- To be 3 ¼” ¾” maple T&G or approved equivalent.

9.3 **FINISH FLOORS - TILE/LINOLEUM**
- Bathrooms to be Forbo Series Real Marmoleum natural linoleum or approved equivalent; Color - TBD

9.4 **FINISH FLOORS – CARPET**
- Includes only 2nd floor bedroom over one-bedroom unit.
- Material: Key Carpet Mills & Enticing; Color - Pie Crust; with 100% recycle PET material pad.

9.5 **SPECIALTY TILE**
- Tub and shower surrounds to be 4x4 Dal white tile with white grout on ½” durock (or equivalent) backing, flashed at all corners, and caulked at all joints and corners.

9.6 **PAINTING – EXTERIOR**
- Exterior Doors: 2 coats latex over factory primed, exterior color to match prefinished windows.
- Ceiling boards at covered entry porches: Color TBD by owner.

9.7 **PAINTING - INTERIOR and FLOOR FINISHING**
- Walls and ceilings: Prep & Prime Vapor Barrier Water-Based Primer Sealer (1060) and Benjamin Moore Latex Flat, White Dove.
- Trim, Windows, and Other Woodwork: Benjamin Moore Semi-gloss, White Dove.
- Shelving: Benjamin Moore Semi-gloss, White Dove.
- Interior doors and jambs: Benjamin Moore Semi-gloss, White Dove.
- Cabinets: pre-finished, touch up only as necessary.
- Ceilings: 1 finish coat over vapor barrier primer.
- Walls: 2 finish coats over vapor barrier primer.
- Wood Floors: 3 coats low VOC polyurethane with satin top coat.

**DIVISION 10: SPECIALTIES**

10.1 **BATH ACCESSORIES**
- Medicine Cabinet: Recessed 20 x 27 wood cabinet with Mirror by Young Furniture from Vineyard Home Center.
- Shower rod: Moen curved shower rod or equivalent.

**DIVISION 11: EQUIPMENT**

11.1 **APPLIANCES**
- Includes the following appliances:
  - Refrigerator/Freezer: +/- 19c.f. Energy Star, 30” wide, white
  - Range/Oven: Energy Star 30” wide, (electric, self clean, white)
  - Kitchen exhaust hood: Broan QP130WW, 30” wide, white
  - Dishwasher: Energy Star, 24” wide, white
DIVISION 13: SPECIAL CONSTRUCTION

13.2 SHED
- Design proportions, materials and dimensions (20’ x 14’) to match existing.
- Shed to be divided into 4 stalls: One for each apartment, and one for exclusive use of Owner.
- Shed to incorporate trash and recycling bin(s) for residents.

DIVISION 15: MECHANICAL

All subcontractors will be responsible for taking care of their own waste and debris. Dumpsters will be provided, but Subcontractors will be responsible for separating trash and waste, respecting all site constraints, and leaving both the site and the house clean and free of debris.

15.1 WATER SUPPLY SYSTEM
- Water and electric lines to run from existing well to buildings.
- Each apartment to have dedicated WellTrol pressure tank.

15.2 SEWAGE DISPOSAL SYSTEM
- Install new septic system per SB&H plans, replacing and expanding existing system for existing building, along with the following:
  - Singulair 1500 with Perc-Rite per SB&H plans, to be installed and tied into existing well power

15.3 PLUMBING
- Before plumbing work is done pipe and fixture locations shall be approved by the job foreman.
- All water piping to be AquaPEX or copper tied into existing well.
- All waste schedule to be schedule 40PVC tied to shared septic.
- Install insulated piping to attic for future solar hot water heating: two (2) ¾” pex pipes from basement to accessible location in attic.
- High efficiency water conservation plumbing fixtures approved by Owner and installed by Contractor.
- Bathroom#1: UNIT A:
  - Lav: Kohler Pennington 2196-4 self rim, white
  - Lav Faucet: Delta 520 MPU, chrome
  - Toilet: Kohler Wellworth Lite K4277 bowl, K4620 tank
  - Shower: 3’ x 4’ one piece shower unit with low threshold for accessibility
  - Shower Valve: Symmons Classic Temptrol S-96-2 chrome
  - Showerhead: Jet Stream 1.5 gallon per minute
- Bathroom#2 UNIT A:
  - Lav: Kohler Pennington 2196-4 self rim, white
  - Lav Faucet: Delta 520 MPU, chrome
  - Toilet: Kohler Wellworth Lite K4277 bowl, K4620 tank
  - Tub/Shower: Kohler Mendota tub (or equivalent): White
  - Tub/Shower Valve: Symmons Classic Temptrol S-96-2 chrome
  - Showerhead: Jet Stream 1.5 gallon per minute
- Bathroom#1 UNIT B:
  - Lav: Kohler Pennington 2196-4 self rim, white
  - Lav Faucet: Delta 520 MPU, chrome
Outline Specifications: SEPIESSA II

Toilet: Kohler Wellworth Lite K4277 bowl, K4620 tank
Tub/Shower: Kohler Medota tub (or equivalent): White
Tub/Shower Valve: Symmons Classic Temptrol S-96-2 chrome
Showerhead: Jet Stream 1.5 gallon per minute

- Bathroom#1 UNIT C:
  - Lav: Kohler Pennington 2196-4 self rim, white
  - Lav Faucet: Delta 520 MPU, chrome
  - Toilet: Kohler Wellworth Lite K4277 bowl, K4620 tank
  - Shower: 3’ x 4’ one piece shower unit with low threshold for accessibility
  - Shower Valve: Symmons Classic Temptrol S-96-2 chrome
  - Showerhead: Jet Stream 1.5 gallon per minute

- Kitchen:
  - Dishwasher hookup: One per apt.
  - Sink: Elkay PSR - 2522-4
  - Faucet: Delta 420 kitchen faucet with sprayer, stainless finish

- Miscellaneous:
  - Kitchen & Lavs. with 1.5 gal/min. flow restrictor - Perlater Honeycomb VX#620-3
  - Upstairs Washing Machine units to include copper pan with integral drain.
  - (3) hose bibs (one per apt.) as shown on plans
  - Domestic water heating (see 15.5-b)

- Radon mitigation prep: Install 3” schedule 40 pvc pipe from crawl space ceiling to attic for future mitigation system if needed.

- All PEX hot water and cold water runs to be insulated with 3/8” wall AP Armaflex or better (seamless or integral adhesive tape).
- Install two Frost proof bibs per building.
- All roof vents will have roof boot both above and below roof surface for air sealing.
- Openings around all pipes to be sealed between living space and crawl space.
- Other tasks to complete job including clean-up and removal of all debris, packaging, etc.

15.5 HEAT AND DOMESTIC HOT WATER

- Provide and install exterior Fujitsu air-to-air heat-pump heating system or approved equivalent and interior wall mounted mini-splits on each floor for each apartment:
- Outside unit installed on a concrete condenser pad with 2” min. compacted and leveled sand. The outdoor unit is to be placed away from any obstructions in accordance with the manufacturers requirements.
- Line sets – Line sets penetrating through exterior wall to be drilled with a hole no more than 1/8 inch around the line sets. The gap between the pipe and the wall to be filled with caulk. Line sets to be installed with “Armaflex” UV resistant type insulation and protected with line set covers, set behind outdoor unit.

- Wall cassette – Installation of wall cassettes to be coordinated with carpenters. An OSB reinforcement block shall be installed, flush with the wall studs before the sheetrock is installed for mounting the unit (mounting block by Contractor).
- Condensate lines – The condensate lines shall run through the exterior wall, turned down after exiting the wall, with a 90 degree line set cover, fastened to a 5/4 block, aligned with sidewall coursing, to be provided by Contractor.
- Commissioning - Line set from cassette to compressor to be vacuumed according to manufacturers requirements. After this process, all fittings must be checked with an electronic leak detector to ensure that there are no leaks. In case of leakage the refrigerant should be
removed from the installation using a refrigerant recovery tank and returned to the supplier or injected back into the installation. The system will be monitored by installer during installation with R410 value tests and a charging manifold in the presences of the Contractor. The pressure should be indicated on the commissioning sheet for the next scheduled visit.

- Domestic hot water heater to be 50 gallon electric hot water heater. Outlet and inlet of water heater to be connected with hard cooper lines and fittings, fastened to wall with rigid fasteners.
- Water heater to be provided by plumbing contractor and installed with all piping laid out to minimize hot water runs to bathrooms and kitchen (as per page 69 of “LEED for Homes” specifications).

15.6  VENTILATION

- Provide ductwork, equipment and controls to circulate air to and from Heat Recovery Ventilator (HRV) for each apartment, to be located in crawl space below each unit.
  - Model: Fantech SH 704 with VT20M main control in 2nd floor bath and VT20A remote boost in 1st floor bath or approved equivalent.
- Provide and install 20-minute boost switch in bathrooms. Provide and install a full feature central control with on/off power button, digital humidity displaces continuous or intermittent operating modes, three fan speeds, over-ride timer and filter maintenance reminder.
- System exhausts to run from each bathroom, and be balanced so that exhaust flow is proportional to volumes of each exhausted space: 20 CFM continuous exhaust minimum from each bathroom.
- Bathroom door bottoms to be undercut by 1” in order for air to circulate between the supply and the return zone.
- System supplies to run to each bedroom with inlet locations to be coordinated with Contractor.
- Labor includes installation, complete supervision with needed subcontractors, start-up, balancing (balance before insulation / sheetrock, screw dampers set) and warranty.
- Ductwork includes semi-rigid duct (round), balancing diffusers, registers (TBD)
- Insulate cold side intake and exhaust ducts with minimum R4 from HRV unit to outside hood.
- All joints to be sealed with water based duct mastic before duct insulation is applied.
- Provide vent and smooth ductwork for dryer to a point over future dryer location, with smooth duct and elbows left on-site for connection to dryer from end of ductwork overhead.
- Vent Terminations/Hoods/Registers:
  - Interior: HRV – Fantech model PGE-4 exhaust grilles and PGS-4 supply grilles.
  - Exterior: HRV – Brown plastic hood w/screen; Dryer – Brown plastic hood w/flap

DIVISION 16: ELECTRICAL

16.1  SERVICE

- Complete 100 amp residential service for each apartment will include telephone, cable tv, and electric service from community system.

16.2  WIRING (Provide Allowance)

- Includes all electrical wiring.
- Devices and coverplates to be white, or as designated.
- Install new main service wire and disconnect.
- Install 100 amp panels in each apartment per drawings.
• All wiring as shown on electrical plans, including receptacles, switches / dimmers, installation of fixtures, smoke detectors as required, waterproof receptacles, lamps & bulbs, etc.
• Ground fault circuits as necessary.
• Supply 3” PVC conduit from attic to future inverter location in crawl space for PV Array.
• Wiring for bathroom fans and booster switches (locations and type - see plans & Division 15.6).
• All wiring and thermostats for heating system and domestic hot water heater.
• Wiring for all appliances, including all mechanical systems placed in crawl.
• Wiring and crawl space fixtures as noted on plans and schedules.
• Seal all holes where wiring passes between living space and crawl space.
• Install all light switches 42” above finish floor with easy touch rocker switches.
• All dimmers as shown on plan; to be slide dimmer with separate on/off switch.
• All necessary permits, fees, and inspections are included.
• All tasks necessary for completing job, including clean-up & removal of all debris, packaging etc.
• All exterior lighting controlled by motion sensors.

16.3  LIGHTING FIXTURES (Provide Allowance)
• As noted on lighting fixture schedule, to be supplied by electrical contractor.
• Include four (minimum) Energy Star fixtures in each apartment per lighting schedule.
• Utilize compact fluorescent lamps (CFLs) in 80% (minimum) of fixtures in each house.
• Community path light fixtures to be Alpan Carrington 15524, solar, stainless steel.

16.4  COMMUNICATIONS/ENTERTAINMENT
• Provide phone service and cable TV service as shown on electrical plan.
• Wiring for telephones: Use 3 pair, spun wire and make home runs for each jack.
• Provide cable wiring to outlets in each apartment (as shown on electrical plan) from three distribution locations (in basement).
• Provide duplex plug at each cable distribution location in basement.
• Provide 6x6 PT pole in appropriate exterior location for placement of any future satellite dishes by tenants, and install feed wires from pole to cable distribution locations in basement.
• For video and/or hi-speed internet: Use dual lead coaxial cable with 2200 MHZ rating and/ or Cat5e cable, from distribution block near electrical panel to outlets shown.
• Etcon Corp. ETDD1X1 telephone punch-down block & video splitter (or similar) to be located near electrical panel.

END OF SPECIFICATIONS