



Architectural Specification

Kimmelman May Mountain House

Issued for Construction
MacKay-Lyons Sweetapple Architects Limited
August 10, 2017
Summit Powder Mountain
Eden, Utah

00. PROCUREMENT AND CONTRACTING REQUIREMENTS

- A. All materials, processes, and workmanship must be in full compliance with applicable laws, codes, regulations, and instruction for authorities having jurisdiction.
- B. Work shall comply with requirements of International Residential Code.
- C. All work shall be carried out in accordance with the Utah Occupational Health & Safety Act.
- D. Contractor is responsible for obtaining all required permits including final occupancy permit.
- E. Liability insurance for subcontractors to be supplied by subcontractors.
- F. Liability insurance for all others to be supplied by Contractor.
- G. Worker's Compensation for all workers to be provided by Contractor as required by law and regulations.
- H. Builder's Risk Insurance (fire, theft etc.) to be provided by Contractor.

01. GENERAL REQUIREMENTS

- A. The Contractor and all subcontractors shall provide the Owner with written guaranties and warranties for all materials and workmanship for a period of not less than one year.
- B. Material or work found defective or in distress at that time will be replaced by the Contractor or subcontractor at no additional cost to the Owner.
- C. Material and work replaced will receive the same warranty and guarantee as original material and work.
- D. On-site storage of materials shall protect against deterioration by weather or other atmospheric conditions.
- E. SUBMITTALS
 - 1. All products, materials, and systems requiring submittal to the Owner and/or Architect shall be submitted with adequate time for review and revision if necessary.
 - 2. No work related to submitted products, materials, or systems may commence until approved by the Architect.
 - 3. Mockups for approval shall be provided where indicated.
- F. COORDINATION OF STRUCTURAL REQUIREMENTS
 - 1. Refer to structural contract documents for detailed specifications and drawings or related work.
- G. DISCREPANCIES WITHIN DOCUMENTS
 - 1. The Contractor shall examine all drawings, check all dimensions, and report any discrepancies before proceeding with the work.
 - 2. In the event discrepancies or contradictions are discovered within the contract documents, both within the architectural documents and between architectural and other discipline documents, the Contractor shall inform the Architect. The Architect shall advise the Contractor regarding the applicable requirements.
 - 3. Where discrepancies or contradictions are noted, work shall not proceed until the Architect has rendered an interpretation.

02. EXISTING CONDITIONS

- A. This project is located within a planned community, with applicable regulations related to construction. Contractor shall comply with all such regulations.

03. CONCRETE

- A. FOUNDATION LOCATION
 - 1. The Contractor shall meet with the Architect on site prior to excavating to ensure proper location.
- B. FOUNDATION WALLS AND FOOTINGS
 - 1. Refer to structural drawings for specification.

SPECIFICATIONS
AND OTHER REQUIREMENTS

2. All concrete walls to be reinforced as shown on structural drawings.
 3. Footings shall be placed on undisturbed soil, at a depth complying with local codes and ordinances.
 4. Refer to "Cast-in-Place Architectural Concrete" requirements below for all concrete exposed to view.
 5. Use clean forms, free of irregularities, with tight joints, and provide adequate vibration to ensure minimal defects and honeycombs.
 6. All finished, exposed surfaces to be free of voids and defects.
 7. Form Ties: Removable or snap-off stainless steel metal ties, fixed or adjustable length, free of devices leaving holes larger than 1 inch diameter in concrete surface.
 8. Location of control joints and construction joints as per structural drawings, coordinate and confirm with Architect before proceeding with any work.
 9. Approvals
 - a. Meet with Architect on site prior to concrete pour to ensure proper formwork.
 - b. Provide mock-up test panel with all surface finished included for approval by the Architect prior to completion of foundation walls.
- C. FOUNDATION DRAINAGE
1. Supply and install 4" weeping tile drainage at footings and grade beams of all perimeter foundation walls as indicated in architectural drawings.
- D. CONCRETE, REINFORCING STEEL, FOOTINGS, DRAINAGE
1. Refer to structural drawings for specification.
 2. All concrete walls to be reinforced as shown on structural drawings.
 3. Structural engineer shall approve the placement of all reinforcing bar on site prior to pouring concrete.
 4. Set sleeves, ties, pipe hangers, and other inserts, and openings as indicated or specified elsewhere. Sleeves and openings greater than 102 mm x 102 mm not indicated on structural drawings must be approved by consultant.
 5. No sleeves, ducts, pipes, or other openings shall pass through joists, beams, column capitals, or columns, except where expressly detailed on structural drawings or approved by consultant.
- E. CAST-IN-PLACE ARCHITECTURAL CONCRETE
1. Work shall comply with latest standards of American Concrete Institute "Guide to Cast-in-Place Architectural Concrete Practice" ACI-303.
 2. SMOOTH-FORMED CONCRETE
 - a. Smooth-formed concrete shall be smooth, and may not have defects, such as honeycombing, visible cold joints, voids from form leakage, or evidence of form lines.
 - b. Exposed sharp edges of concrete with shall be rubbed with carborundum to produce 1/8" inch radiused edges unless otherwise detailed.
- F. SLAB ON GRADE
1. Reinforced slab on grade as noted in architectural drawings.
 2. Provide slab depressions where noted on architectural drawings
 3. Refer to structural and architectural drawings for specification.
 4. Provide control joints for interior structural slabs as per structural and architectural drawings, coordinate and confirm with Architect before proceeding with any work.
 5. Interior slabs to be absolutely level, without slope for drainage, unless otherwise noted on the drawings.
 6. FINISHES
 - a. POLISHED CONCRETE FINISHING
 - i. Contractor shall achieve a Level 3 - Semi Polished classification, following recommendations of the Concrete Polishing Association of America.
 - ii. Apply sealer/hardener as approved by the Architect.
 - b. SMOOTH TROWELED FINISH
 - i. Required for areas where floor slabs are exposed to view that are not called for polished concrete finish.

- ii. Smooth troweled finish floors shall have applied sealer/hardener as approved by the Architect.
 - c. ROUGH TROWELED FINISH
 - i. In areas where concrete slab is scheduled to receive mortar-set tile, polished concrete, or gypsum cement underlayment, the finish may remain rough, to permit bonding with the floor finish assembly.
- G. GYPSUM CEMENT UNDERLAYMENT
 - 1. Product: Gyp-Crete 2000/3.2K Floor Underlayment as manufactured by Maxxon Corporation, Hamel MN.
 - 2. Install in thicknesses indicated in strict accordance with manufacturer's recommendations.
 - 3. Seal gypsum cement underlayment as recommended for final floor finish product.

05. METALS

- A. Refer to structural drawings for structural steel specification.
- B. All exposed interior steel to be AESS 4, shop-primed and painted unless otherwise noted. Paint color to be selected by Architect. No exposed fasteners are acceptable.
- C. Weld and grind flush all nuts and bolts where their position affects continuity of interior finish.
- D. Shop drawings are required. Submit for review by Architect prior to fabrication and installation.
- E. HOT ROLLED STEEL PLATE
 - 1. Minimum 0.105" (12 GA.) Mild Steel A569/ASTM A1011 Hot Rolled Sheet
 - 2. Apply clear polyurethane finish
 - 3. Submittal: 12" x 12" sample of finished material for approval prior to fabrication.
- F. TEMPERED GLASS RAILING SYSTEM
 - 1. Basis of Design: FSC Frameless Glass Clamp Railing System as manufactured by C.R. Laurence Co., Inc.
 - 2. Stainless Steel Components: Conforming to ASCE 8-02, Specification for the Design of Cold-Formed Stainless Steel Structural Members.
 - 3. Glass Components: Conforming to GANA Glazing Manual, Tempered Glass Engineering Standards Manual and Laminated Glazing Reference Manual.
 - 4. Submittals Required prior to fabrication:
 - a. Product Data: Submit Manufacturer's technical product data for railing components and accessories.
 - b. Shop Drawings: Dimensioned drawings of railing assemblies indicating the following:
 - i. Elevations; include joint locations, transitions, and terminations.
 - ii. Glass light fabrication plans with dimensions, holes and finishes.
 - iii. Point support layout, details and attachment to support structure.
 - iv. Manufacturer's installation and maintenance instructions.
 - v. Engineering Design Report: Calculations showing point support reactions and glass stresses.
 - vi. Samples of manufacturer's finishes (As selected by Architect.)

06. WOOD, PLASTICS, AND COMPOSITES

- A. GENERAL
 - 1. Refer to structural drawings for specifications and other requirements.
 - 2. Refer to structural drawings for framing requirements.
 - 3. Refer to architectural drawings for wall assemblies.
- B. ROUGH CARPENTRY
 - 1. DIMENSION LUMBER
 - a. Comply with PS 20 and requirements of specified grading agencies.
 - b. Species: Douglas Fir-Larch, unless otherwise indicated.
 - c. Grade shall be #2 and better, unless noted otherwise.
 - 2. WALLS

SPECIFICATIONS
AND OTHER REQUIREMENTS

- a. Framing as per structural drawings.
 - b. Exceptions to standard 2x6 framing shown on structural and architectural drawings.
 - c. Exterior sheathing to be blocked as per structural drawings.
 - d. Provide solid blocking at the underside of all bearing walls.
 - e. Provide solid blocking on all swinging entry doors at lock height, between jambs, and structural framing.
 - f. All posts and lintel supports shall have continuous bearing to top of steel perimeter beam as per structural drawings.
 - g. Pre-drill all lag bolt holes prior to installing bolts.
 - h. Recess bolt heads and nuts into lumber to make flush as per structural drawings.
3. SHEATHING
- a. Sheathing material and thickness shall be as indicated in architectural assemblies.
4. STRAPPING
5. Strapping on exterior walls and roof for ventilated rain screen wall and vented roof cladding as per architectural drawings.
 6. See details for variation on strapping requirement.
 7. Finished ceiling to be mounted on resilient channels or strapping @ 16" c/c when necessary as per architectural drawings.
- C. PRESSURE TREATED LUMBER
1. Provide pressure treated lumber for all lumber in the following locations:
 - a. Lumber in exterior locations
 - b. Lumber in contact with concrete
 - c. Lumber used for cants or other similar transitions below roofing membranes.
- D. LINTELS
1. Refer to structural drawings for lintel locations and sizes.
 2. Lintels to be flush with exterior face of framing unless otherwise noted.
 3. One full height stud and double jack studs at each end unless otherwise noted. Refer to structural drawings.
- E. EXTERIOR PINE WALL CLADDING
1. Species:
 - a. Preferred species is Eastern White Pine (*Pinus Strobus*). Western White Pine (*Pinus Monticola*) will be considered, subject to review and approval of the Architect.
 2. Grade: Select D or better
 3. Surfaces exposed to view to be smooth.
 4. Sizes and configurations as shown and detailed.
 5. Fasteners shall be stainless steel ring shank nails or screws, as approved by the Architect. Electro galvanized staples or nails shall not be used.
 6. Material shall be stained and sealed, as approved by the Architect.
 7. Submittal: Three 3'-0" long samples of finished product, with stain and sealer.
 8. Mockup: 8'-0" x 8'-0" panel of proposed installation in place on the exterior wall of the building. Mockup shall be approved by the Architect prior to proceeding with the work.
- F. INTERIOR CEDAR CEILING AND WALL CLADDING
1. Species: *Thuja Plicata*
 2. WRCLA Custom Grade, kiln dried.
 3. Surfaces exposed to view to be smooth.
 4. Sizes and configurations as shown and detailed.
 5. Fasteners shall be stainless steel ring shank nails or screws, as approved by the Architect. Electro galvanized staples or nails shall not be used.
 6. Submittal: Three 3'-0" long samples of finished product, with stain and sealer.
 7. Mockup: 8'-0" x 8'-0" panel of proposed installation in place on an interior wall of the building. Mockup shall be approved by the Architect prior to proceeding with the work.
- G. SHIPLAP WOOD SCREEN
1. Cedar wall paneling shall have profile as detailed.

2. Visible framing members shall be Douglas Fir, #1 and Better Grade, free of knots or other visible defects.
- H. FINISH CARPENTRY
1. Use solid wood with wood returns on all visible trim ends.
 2. Woods shall be poplar, free of knots and defects, painted in color to be selected by Architect, on all door frames and other locations as per architectural drawings.
 3. All gypsum board finished walls to receive MDF baseboard in thickness to match gypsum board, flush mounted and painted, color to be selected by Architect.
- I. ARCHITECTURAL WOOD CASEWORK
1. Refer to architectural drawings.
 2. Provide European style cabinetry (no face frames).
 3. Drawer and drawer fronts:
 - a. Kitchen cabinet doors and drawer fronts: Vertical cedar shiplap on solid wood frame, as shown.
 - b. Other locations: 3/4" spray lacquered MDF. Color to be selected by Architect.
 4. Cabinet interiors: 1/2" paint grade plywood with 3/16" hardwood edges where exposed spray lacquered plywood. Color to be selected by Architect.
 5. Cabinet drawer boxes: 1/2" Baltic birch plywood with clear finish. Color to be selected by Architect.
 6. Cabinet doors over 4 feet high to be solid core anti-warp doors to match cabinet doors or interior finish.
 7. Cabinet and Drawer Hardware
 - a. All concealed, reverse, Blum steel hinges with +/- 110-degree swing.
 - b. All pulls in casework to be Richelieu (#BP39660900) finish #900, or approved equivalent by Architect.
 - c. All bathroom pulls in casework to be Richelieu (#BP39660195) finish #195, or approved equivalent by Architect.
 - d. Double magnetic latches to be Richelieu (#509830) finish white, or approved equivalent by Architect, location to be selected by Architect.
 - e. Drawer boxes shall have Blumotion nylon rollers in a full-extension metal track, or approved equivalent by Architect, color to be selected by Architect.
 - f. Door hinges in floor-to-ceiling millwork doors to be Schlage 4" square hinges (#1020-619) in satin nickel, or approved equivalent by Architect.
 - g. Exterior door hinges to be selected by Architect.
 - h. Alternates will be permitted only if approved by Architect.
 8. Provide shop drawings of all Architectural Wood Casework for review by Architect.
 9. Supply a typical cabinet sample to Architect.
- J. EXTERIOR SHEATHING
1. Exterior gypsum sheathing shall be 5/8" DensGlass Sheathing as manufactured by Georgia Pacific Gypsum, or equivalent as approved by the Architect.
 2. Exterior gypsum sheathing shall be Type X fire rated.

07. THERMAL AND MOISTURE PROTECTION

- A. FOUNDATION DAMPPROOFING
1. Install spray-applied Liquid TREMproof, as manufactured by Tremco Commercial Sealants & Waterproofing. Install in accordance with manufacturer's recommendations.
 2. Install TremDrain Drainage panel in accordance with manufacturer's recommendations
 3. Provide waterproofing membrane on footing and exterior face of foundation walls of habitable spaces up to 2" below grade.
 4. Ensure continuous seal of waterproofing membrane as per manufacturing specification around all concrete foundation walls below grade and at all connection with footings.
- B. WEATHER BARRIER MEMBRANE

SPECIFICATIONS
AND OTHER REQUIREMENTS

1. Spunbonded polyolefin, non-woven, non-perforated, weather barrier: DuPont Tyvek DrainWrap™ and related assembly components.
 2. Accessories
 - a. Seam Tape: 3 inch wide, DuPont™ Tyvek® Tape.
 - b. Fasteners: Tyvek® Wrap Cap staples, or 1-inch plastic cap staples with leg length sufficient to achieve a minimum penetration of 5/8-inch into the wood stud.
 3. Ensure all seams and corners of entire building membrane are properly sealed to prevent leakage.
- C. VENTED AIRSPACE LAYER
1. Vented airspace material shall be Ventgrid12, as manufactured by Ventgrid, Inc., Chester, Nova Scotia, or alternate as approved by Architect.
 2. Contractor shall submit material for approval by the Architect prior to installation.
- D. THERMAL INSULATION
1. Provide moisture protection between all wood and concrete connections.
 2. Extruded Polystyrene
 - a. Supply and install rigid extruded polystyrene insulation below slab on grade in thicknesses indicated and as detailed in architectural drawings.
 - b. Supply and install continuous extruded polystyrene insulation as part of exterior wall assemblies in thicknesses indicated and as detailed in architectural drawings.
 3. Closed Cell Foam
 - a. Supply and install 2lb. closed cell insulation as per manufacturer's specification; thickness as per architectural drawings in all exterior wall assemblies.
 4. Batt Insulation
 - a. Owens Corning EcoTouch FIBERGLAS, or alternate approved by the Architect.
 - b. Minimum 5-1/2" thickness.
 - c. Kraft paper faced.
 5. Contractor shall verify that final construction conforms with applicable building and energy codes.
 6. Certification:
 - a. A permanent certificate shall be completed and located in an approved location that lists the predominant R-values of the insulation installed in the ceiling/roof, walls, foundation and ducts outside conditioned spaces, and U-factors for fenestration.
- E. ACOUSTIC INSULATION
1. Supply and install acoustic batt insulation to fill wall and floor cavities in walls around toilets and bedrooms and as indicated in all interior wall and floor partitions for acoustic privacy.
- F. STEEL ROOFING
1. Continuous ASTM A-606 weathering steel standing seam steel sheet roofing system, including concealed cleats and fasteners, as indicated in architectural drawings.
 - a. Minimum 22 gauge thickness.
 2. Install for alignments as indicated by architectural drawings.
 3. All fasteners to be stainless steel. Fastener pattern to be equally spaced vertically and horizontally (continuous) for all roof surfaces.
- G. SNOW GUARDS
1. Guards shall be as manufactured by TRA Snow and Sun, American Fork, UT.
 2. Snow Bracket Type H, steel, with finish and color as selected by Architect.
 3. Contractor shall submit samples for approval prior to installation.
 4. Install in accordance with manufacturer's recommendations, using stainless steel screws at each snow bracket.
- H. ROOFING UNDERLAYMENT
1. Product: SlopeShield SA Self-Adhered as manufactured by VaproShield, LLC, Gig Harbor, WA.
 2. Install in accordance with manufacturer's recommendations.
- I. ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING

1. EPDM: ASTM D 4637, Type II, scrim or fabric internally reinforced, uniform, flexible EPDM sheet.
 2. Acceptable Manufacturers:
 - a. Carlisle SynTec Incorporated.
 - b. Firestone Building Products.
 - c. GAF Materials Corporation.
 - d. Johns Manville.
 3. Thickness: 60 mils (1.5 mm), nominal.
 4. Minimum Class A roof assembly.
 5. Install in full compliance with manufacturer's recommendations.
 6. Warranty minimum 20 years.
 7. Submittals:
 - a. Product Data: For each type of product indicated.
- J. POLYVINYL CHLORIDE (PVC) ROOFING
1. Required for installation below exterior stair assembly, or where indicated.
 2. Product: Sarnafil G410-16, 60 mil, as manufactured by Sika Corporation, Canton, MA.
 3. Install in full accordance with manufacturer's recommendations, including flashings and perimeter detailing.
- K. TRAFFIC COATING
1. Required for installation below stone paver assembly.
 2. Acceptable Products:
 - a. Gaco Gacoflex U-66 Liquid Polyurethane Coating
 - b. Tremco Vulkem OC 810
 3. Install in full compliance with manufacturer's recommendations.
 4. Warranty minimum 5 years.
 5. Submittals:
 - a. Product Data: For each type of product indicated.
- L. SHEET METAL FLASHING & TRIM
1. Black anodized aluminum flashing as per architectural drawings. Flashing to be provided and installed by window supplier/installer. Provide a sample to Architect. Joint location as per architectural drawings.
 2. Black anodized aluminum flashing around and above windows and doors to match window assemblies as per architectural drawings. Flashing to be provided and installed by window supplier/installer. Provide a sample to Architect. Joint location as per architectural drawings.
 3. All window head/sill/jamb flashing to be black anodized aluminum to match windows as per architectural detail drawings. Flashing to be provided and installed by window supplier/installer. Provide a sample to Architect. Joint location as per architectural drawings.
- M. MEMBRANE FLASHING
1. DuPont™ FlexWrap™, as manufactured by DuPont Building Innovations: flexible membrane flashing materials for window openings and penetrations. AND/OR
 2. DuPont™ FlexWrap™ NF, as manufactured by DuPont Building Innovations: flexible membrane flashing materials for window openings and penetrations. AND/OR
 3. DuPont™ StraightFlash™, as manufactured by DuPont Building Innovations: straight flashing membrane materials for flashing windows and doors and sealing penetrations.
 4. Fully seal all joints and around all openings in wall and roofing assemblies.
- K. ROOF PAVERS
1. Stone pavers as selected by Architect.
 2. Set on pedestals recommended by Therma-HEXX Corporation, as referenced in "PAVEMENT SNOW MELTING SYSTEMS" below.

08. OPENINGS

A. WINDOWS

1. Weather Shield windows, as manufactured by Weather Shield Mfg., Inc., Medford, WI.
 - a. Direct-Set Windows:
 - i. Contemporary Collection (8306)
 - b. Other Windows:
 - i. Premium Awning (8211)
 - ii. Premium Casement (8211)
 - iii. Sliding Doors (8717)
 - iv. 1 Panel Patio Door (8617) – inswing and outswing.
2. Exterior Finish: Jet Black
3. Interior Finish: Clear Satin
4. Jamb Sizes: Custom, as indicated
5. Jamb Thickness: 1-3/16"
6. Frame Profile: Flush Frame
7. Glazing: Low-E Insulating Glass, Air filled.
8. U-factors shall be determined by testing in accordance with NFRC 100 and labeled as such by the manufacturer, per IECC R402.3.
9. Certification:
 - a. A permanent certificate shall be completed and located in an approved location that lists the predominant R-values of the insulation installed in the ceiling/roof, walls, foundation and ducts outside conditioned spaces, and U-factors for fenestration.
10. All operable windows shall have screens as indicated below, unless noted otherwise. Review screen type with Architect prior to installation.
11. Submittals: Product literature of all installed types.

B. ENTRY DOORS

1. Entry doors shall be single doors identical to Premium Series French Door, as manufactured by Weather Shield Mfg., Inc., Medford, WI.
2. Exterior Finish: Jet Black
3. Interior Finish: Clear Satin
4. Jamb Sizes: Custom, as indicated.
5. Glazing: Low-E Insulating Glass, Air filled.
6. U-factors shall be determined by testing in accordance with NFRC 100 and labeled as such by the manufacturer, per IECC R402.3.
7. Certification:
 - a. A permanent certificate shall be completed and located in an approved location that lists the predominant R-values of the insulation installed in the ceiling/roof, walls, foundation and ducts outside conditioned spaces, and U-factors for fenestration.
8. Submittals:
 - a. Product literature of all installed types.
 - b. Shop drawings of all installation conditions.

B. OPERABLE GLAZING WALL

1. NanaWall WA67 Floor Supported Units with 66 mm Profile, as manufactured by Nana Wall Systems, Inc., Corte Madera, CA.
2. Assembly shall include:
 - a. Aluminum-clad wood frame
 - b. Threshold
 - c. Panels
 - d. Sliding-folding and locking hardware
 - e. Spines
 - f. Weatherstripping
 - g. Glass and glazing
 - h. Insect screen
 - i. Accessories as required for a complete working installation.
3. Glazing: Double IG, Low-E, Air filled.

4. U-factors shall be determined by testing in accordance with NFRC 100 and labeled as such by the manufacturer, per IECC R402.3.
 5. Certification:
 - a. A permanent certificate shall be completed and located in an approved location that lists the predominant R-values of the insulation installed in the ceiling/roof, walls, foundation and ducts outside conditioned spaces, and U-factors for fenestration.
 6. Exterior Finish: Black
 7. Submittals:
 - a. Shop Drawings: Indicating Folding Glass Storefront system component sizes, dimensions and framing R.O., configuration, swing panels, direction of swing, stacking layout, typical head jamb, side jambs and sill details, type of glazing material, handle height and field measurements.
- C. INSECT SCREENING
1. Required at all operable windows and sliding doors.
 2. Aluminum mesh type, with color to be selected to be selected by Architect. Architect to approve prior to installation. Provide a sample to Architect.
 3. Screen control options to be selected by Architect.
 4. Contractor to coordinate requirements and installation with dealer.
 5. Provide shop drawings to Architect for review prior to fabrication.
- D. WOOD DOORS
1. Wood doors over 4'-0" high to be solid core, MDF face, painted, color to be selected by Architect, unless noted otherwise.
 2. All wood doors to be mounted with premium grade mortised barrel hinges as per manufacturer's instruction, unless otherwise noted. Hinge size and carrying capacity shall be verified by the Contractor prior to installation.
 3. Hardware finish shall be brushed nickel, unless noted otherwise.
 4. Provide shop drawings for review by Architect on all doors and prior to fabrication.
 5. All door hardware types to be verified by Architect.
- E. GARAGE DOOR
1. Garage door shall be power operated remote controlled horizontal bifold type door clad with wall paneling to match adjacent walls.
 2. Contractor shall submit details, with manufacturer and model number, to Architect for approval prior to installation.

09. FINISHES

- A. PAINT
1. Paint assemblies shall be from same manufacturer (e.g., preparation, primer & finish) in premium quality level.
 2. Painting schedule indicating all proposed applications shall be submitted to the Architect for approval prior to the application of any material.
 3. All colors to be selected by Architect.
 4. Apply primer plus minimum 2 coats of paint to all drywall.
 5. Finish:
 - a. Ceiling flat finish
 - b. Walls eggshell finish
 - c. Trim semi-gloss finish.
 6. Sand and 3 coats of satin urethane, sanding between coats on all wood that is to be left natural.
- B. FLOORS
1. All lower level floors, except where noted, to be polished and sealed concrete fill with shallow saw cut control joints as specified in structural and architectural drawings.
 - a. Refer to "Slab on Grade" requirements in "03. Concrete".
 - b. Confirm control joint locations with Architect prior to cut.

- c. Control joints in finished concrete surface to be cut prior to the erection of framed walls. All joints to be cut straight through to the edge of the concrete to prevent cracking.
- d. Finished concrete surface to be protected at all times during the construction process to ensure damage does not occur.
- 2. All upper level floors to be floating type engineered hardwood with underlayment layer, except where noted. Engineered hardwood assembly to be selected by Architect.
- 3. Bathroom shower floors to receive tiles. Tile to be selected by Architect. Tile alignment as per architectural drawings.
- C. WALLS, INTERIOR
 - 1. Typical interior walls to be 1/2" drywall, taped, filled, sanded, and painted, color to be selected by Architect, unless otherwise noted.
 - 2. Provide 1/2" aluminum Z reveal molding to finish all end of drywall conditions.
 - 3. Mold and moisture resistant 1/2" drywall, taped, filled, sanded, painted, color to be selected by Architect, in bathroom where tile is not indicated.
- D. CEILINGS
 - 1. Interior ceilings to have 5/8" drywall, taped, filled, sanded, painted unless otherwise noted, color to be selected by Architect.
 - 2. Mold and moisture resistant 5/8" drywall in bathrooms, taped, filled, sanded, painted, color to be selected by Architect.
 - 3. Ceiling drywall shall be suspended or attached to underside of floor joists with resilient furring.
- E. CERAMIC TILE ASSEMBLIES
 - 1. The following assemblies shall incorporate full components as manufactured Schluter Systems:
 - a. Bathroom Shower assemblies
 - b. Kitchen backsplash assemblies
 - 2. Floor tile assemblies shall include mortar beds as recommended by Schluter Systems.
 - 3. Systems shall include backer boards, substrates, Kerdi-board components, membranes, and setting materials as recommended by Schluter Systems.
 - 4. Tile to be selected by Architect. Tile alignment as per architectural drawings.
 - 5. IN-FLOOR RADIANT HEATING
 - a. Assembly shall be Schluter-DITRA-HEAT by Schluter Systems
 - b. Install in strict accordance with manufacturer's recommendations.

10. SPECIALTIES

- A. BATHROOM ACCESSORIES
 - 1. Provide one toilet paper holder in each bathroom, type, location, and finish to be selected by Architect.
- B. SHOWER ENCLOSURE
 - 1. All hardware to be provided by C.R. Laurence Co., Inc. or approved equivalent by Architect.
 - 2. All hardware to have a brushed stainless steel finish unless otherwise noted on architectural drawings.
 - 3. Glass to be minimum 3/8" thickness clear, tempered.
 - 4. Provide shop drawings to Architect for review prior to fabrication.
- C. FIREPLACES
 - 1. Wood Burning Fireplace
 - a. Wood burning fireplace shall be Stûv 21/105, as manufactured by Stûv America, Saint-Laurent, Quebec
 - 2. Gas Burning Fireplace
 - a. Regency Horizon Model HZ30E-LP10 for propane fuel, as manufactured by Regency Fireplace Products US, Blaine WA.
 - 3. Vent openings:

- a. Vent openings through vertical exterior walls or through the roof may not exceed 144 sq. inches. Any such openings shall be covered with a mesh that meets the requirements of International Wildland-Urban Interface Code IWUIC 504.10.
- 4. Submittals: Manufacturer's product literature and recommended installation details.
- D. CHIMNEYS AND STEEL FLUES
 - 1. Provide stainless steel flue and chimney pipe.
 - 2. Provide stainless steel chimney pipe heat shield, continuous to exterior wall, as per architectural drawings and details.
 - 3. Products as manufactured by Industrial Chimney Company, Jerome, Quebec.
 - 4. Spark Arrestors:
 - a. Spark arresters shall be installed that meet the requirements of International Wildland-Urban Interface Code IWUIC 605.
 - 5. Submit shop drawings for review prior to installation.
- E. STAIR ACCESSORIES
 - 1. Refer to architectural drawings for stair details.
 - 2. Guard rail to be selected by Architect. Refer to architectural drawings.
 - 3. Handrails to be selected by Architect. Refer to architectural drawings.
- F. ROOFING HEAT TRACE ASSEMBLY
 - 1. Metal roofing shall be provided with self-regulating heating cables for snow and ice melting as manufactured by Thermon Manufacturing Company, San Marcos Texas, or equivalent approved by the Architect.
 - 2. Contractor shall submit all installation details to Architect prior to installation.

11. EQUIPMENT

- A. RESIDENTIAL APPLIANCES
 - 1. All appliances to be selected by Architect, supplied by Owner, and installed by Contractor.
 - 2. Installation shall comply with manufacturer's recommendations.
 - 3. Verify all dimensions, electrical requirements, water supply requirements, and exhaust requirements prior to construction. Coordinate with Architect.
 - 4. Washer to be selected by Architect.
 - 5. Dryer to be selected by Architect.
 - 6. Dishwasher to be selected by Architect, must be panel ready.
 - 7. Refrigerator to be selected by Architect, must be panel ready.
 - 8. Oven to be selected by Architect.
 - 9. Cooktop to be selected by Architect.
 - 10. Range hood to be selected by Architect.
 - 11. Microwave to be selected by Architect.

12. FURNISHINGS

- A. COUNTER TOPS
 - 1. Kitchen counter top to be 1-1/4" honed black granite, square edge, typical, or equivalent alternate as approved by Architect.
 - 2. Master Bath and Bath 1 countertops to be 1-1/4" thick square-edged solid marble as selected by the Architect. Marble finish shall be as selected by the Architect.
 - 3. All other bathroom countertops to be 30mm pure white Caesarstone quartz, square edge, typical, or equivalent alternate as approved by Architect and Owner.
 - 4. Prepare all counter tops for under-mount sinks (see plumbing fixtures).
 - 5. Submittals: 12" x 12" samples of finished countertop material.
- B. CLOSETS
 - A. Provide (1) fixed 3/4" spray lacquered paint grade plywood with 3/16 hardwood edges where exposed shelf and (1) 1 5/16" chrome rod with flanges in all closets.
 - B. Rod to be Richelieu 122208140, or approved equivalent by Architect.

- C. Flanges to be Richelieu 1223140 and 1225140, or approved equivalent by Architect.

22. PLUMBING

A. GENERAL

- 1. Supply and install all plumbing lines, fixtures, fittings and equipment as required in drawings, and as required by authorities having jurisdiction to connect to municipal sources within 5 feet of building.
- 2. Acoustically isolate plumbing and mechanical from habitable spaces.
- 3. Insulate hot water lines.
- 4. Location of all control devices (valves, faucets, mixing devices, etc.) shall be approved by the Architect prior to installation.
- 5. Provide all cut sheets for final approval by Architect.

B. WATER HEATER

- 1. Heating Contractor to determine size of domestic hot water heater for domestic hot water.
- 2. Determine and, if necessary, supply and install water softener.

C. PLUMBING FIXTURES

- 1. The plumbing systems are to be installed in accordance with the latest edition of applicable codes.
- 2. Kitchen sink to be under mounted to be selected by Architect.
- 3. Kitchen faucet to be selected by Architect.
- 4. Bathroom sinks to be selected by Architect.
- 5. Half bathroom sink to be selected by Architect.
- 6. Bathroom / half bathroom faucets to be selected by Architect.
- 7. Bathroom showerheads to be selected by Architect.
- 8. Bathroom shower volume/temperature controls to be selected by Architect.
- 9. Bathroom hand showers to be selected by Architect.
- 10. All toilets to be selected by Architect.
- 11. All fixtures provided by an allowance, approved by Architect, installed by Contractor.
 - a. Installation by Contractor shall be full and complete, including
 - i. Plumbing all bathroom and kitchen fixtures and drains.
 - ii. Plumb for all appliances as required including, but not limited, to dishwasher and refrigerator in kitchen.
 - iii. Supply and install supplies and drain for washer.

23. HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

A. HVAC DESIGN

- 1. HVAC design by HVAC Contractor.

B. SPACE HEATING

- 1. Space heating shall be primarily provided by in-floor radiant hot water PEX piping embedded in concrete.
- 2. Areas of Ceramic tile shall be heated with electric heating systems. Refer to "CERAMIC TILE ASSEMBLIES, IN-FLOOR RADIANT HEATING" requirements above.
- 3. Submit all design documents and drawings to Architect for review. Documents shall clearly indicate all system components, including any outdoor equipment and/or propane storage tanks.
- 4. Design and installation of heating system shall be in accordance with the latest edition of applicable codes.
- 5. Supply and install propane-fueled furnace, located as indicated in architectural documents.
- 6. All pipes below grade shall conform to all applicable codes, be carefully supported and every precaution taken against injury to pipe and joints.
- 7. Provide accurate as-built documentation of complete installation.

8. All thermostats to be Nest Thermostats or approved equivalent by Architect. Color and finish to be selected by Architect. Location to be coordinated with Architect.
 9. Provide shop drawing and heat-loss calculations for review prior to installation.
- C. VENTILATION & EXHAUST
1. Design and installation of heating system shall be in accordance with the latest edition of applicable codes.
 2. All visible grills and registers to be specified by Architect.
 3. All ducts to be air-tight.

26. ELECTRICAL

- A. SERVICE
1. Electrical design by Electrical Contractor.
 2. The electrical systems are to be installed in accordance with the latest edition of applicable Codes.
 3. Provide underground electrical service from within 5 feet of building.
 4. Electrical Contractor to determine proper amperage for electrical service.
 5. Rough-in pre-wiring and supply installation of electrical fixtures and equipment.
 6. Architect to review location of all electrical units with electrical Contractor prior to execution of work.
- B. SWITCHES/OUTLETS
1. Typical switch boxes to be mounted at 3'-6" (center of box) above finish floor.
 2. Use toggle dimmer switches for all lighting fixtures except in storage areas.
 3. Use 'Lutron Diva Series' switches (white) and cover plates (white) or approved equivalent by Architect.
 4. Floor duplexes to be Hubbell Flush Round Multi Service Non-Metallic Concrete Floor outlets w/ one piece crass cover and carpet flange (#SF3925), or approved equivalent by Architect, location as per architectural drawings.
 5. Typical outlet boxes to be mounted at 8" (center of box) above finished floor. White finish.
 6. Install ground fault interceptor (GFI) outlets in bathrooms, kitchen and exterior outlet locations or where close to water.
 7. Install stainless steel exterior grade electrical boxes and connectors at all exterior applications. Seal around all penetrations in cladding. Seal all fittings.
- C. FIXTURES
1. All fixtures selected by Architect, supplied and installed by Contractor.
 2. Where possible, lighting shall have high efficiency LED lamps that are user replaceable.
 3. Contractor shall submit lighting fixture schedule, showing manufacturer and model number prior to any installation.
 4. Contractor to verify location and sizes of all blockouts in concrete to receive light fixtures.
 5. All luminaires to be on dimmers.
 6. Contractor shall make provisions for undercabinet lighting in kitchen.
 7. Exterior wall mounted lights to be selected by Architect.
 8. Interior ceiling mounted dining space pendant lights to be selected by Architect.
 9. Interior wall mounted lighting to be selected by Architect.
 10. All pot lights to be standard LED PAR-Type Open Downlights with true light trim as manufactured by Philips Lightolier or equivalent as selected by Architect.
- D. SMOKE AND CARBON DETECTORS
1. Devices shall be combination smoke and carbon detectors to meet building code.
 2. Devices shall be Nest Protect (white), hard wired with battery backup, or approved equivalent. Coordinate location with Architect.

27. COMMUNICATIONS

- A. COMMUNICATIONS SYSTEMS

1. To be selected by Owner, supplied and installed by Contractor.
2. Contractor shall indicate proposed locations for the following:
 - a. Telephone Service entry
 - b. Internet Service entry
 - c. Television Service entry
 - d. Telephone outlets
 - e. Internet of network outlets
 - f. Television outlets
3. Locations shall be approved by the Architect prior to installation.
4. All distribution wiring shall be completed prior to installation of finishes.

28. ELECTRONIC SAFETY AND SECURITY

B. SECURITY SYSTEM

1. To be selected by Owner, located approved by Architect, supplied and installed by Contractor.

31. EARTHWORK

A. EXCAVATION/BACKFILL

1. Where excavation is necessary, excavate and store material with minimum disturbance to existing site drainage pattern.

B. PROTECTION OF STORED MATERIAL

1. Store topsoil and cover in area designated by Owner.
2. Material protection shall be adequate to prevent erosion or other deterioration.

C. ROUGH GRADING/SITE DRAINAGE

1. Grade building perimeter and foundation exposure in accordance with civil and architectural drawings.
2. Maintain surface drainage away from building.
3. Maintain existing site perimeter drainage pattern where possible.

32. EXTERIOR IMPROVEMENTS

A. EXTENT OF LANDSCAPING

1. Material removed for excavation to remain on site.
2. Re-grade to existing contours and drainage patterns all areas affected or altered during the construction process except where drainage is required from buildings and paths.

B. Construct finished paths as per civil and architectural drawings at completion of project.

C. UNIT PAVERS

1. Stone pavers shall match those provided and installed in accordance with "ROOF PAVERS" above.

D. PAVEMENT SNOW MELTING SYSTEMS

1. Therma-PANEL snow and ice melting radiant heating system as manufactured by Therma-HEXX Corporation, Portsmouth, NH.
2. Provide both "Pedestal Mount Details" and "Ground Mount Details" as required for specific location of paver assembly.
3. Submittals:
 - a. Product Data: Data sheets for each product to be used
 - b. Shop Drawings of full installation, including
 - i. Product Installation
 - ii. Sequencing

33. UTILITIES

SPECIFICATIONS
AND OTHER REQUIREMENTS

- A. Supply and install sewage system and/or piping system in accordance with community regulations and all applicable governmental regulations.
- B. Obtain approval from all authorities having jurisdiction.
- C. Provide below ground electrical services to building for:
 - 1. internet, power, telephone, and television. Services to be connected to be coordinated with Owner and Owner's servicing Contractor(s) requirements.

END OF SPECIFICATION