

OUTLINE SPECIFICATIONS

Div. 0 Contract Documents

Contract Documents

The Contract Documents refer to:

- The Contract between the Owner and General Contractor.
- Construction Documents (all drawings, specifications and surveys).
- Consultant's Drawings and Reports.
- SYNTHESIS DESIGN, INC. will not be responsible for any costs incurred to Owner or Contractor through errors or omissions in the Contract Documents after building permit is issued.
- SYNTHESIS DESIGN, INC. will not be responsible for any alterations or changes during the construction process that are not documented in the Contract Documents.
- All Contract Documents assume the existing structures are built to current Municipal and British Columbia Building Code (BCBC) standards, unless otherwise noted. Any existing deficiencies or deteriorated areas are not the responsibility of SYNTHESIS DESIGN, INC., but will be addressed upon their discovery, at the Owners expense.

Div. 1 General Requirements

Summary of Work

- The General Contractor, herein referred to as the Contractor, shall provide all labour, products, plants, equipment and materials required to complete the project as described in the Contract Documents.
- The Contractor is to be responsible for all taxes, licenses, bonds, insurance for fire and liability, WCB coverage and all municipal and engineering inspections.
- The Building permit shall be posted in a prominent location and the municipally approved drawings protected from the elements and on site at all times.
- The Owner retains the right of access and occupancy during construction and / or prior to final completion but will maintain the Contractor's ability to execute the prescribed work.
- Care must be taken to ensure safety of the public and adjoining properties at all times.

Coordination and Supervision

- HOBBS WINTER MACDONALD (604-986-1371) will be retained as the Surveyors, PEBETON ENGINEERING, LTD. (780) 285-6643) will be retained as the Structural Engineers.
- All construction, materials and workmanship shall conform to current WCB & BCBC Standards.
- The Contractor shall take adequate and reasonable precautions to protect the public from hazards and dangers arising from all operations.
- The Contractor will ensure that all trades observe all local construction and noise regulations; ensure also that all preceding or adjacent work enables continuation or subsequent trade work can be undertaken properly.
- The Contractor shall distribute all Consultants' reports, drawings, schedules, etc. upon receipt.
- The Contractor shall ensure fulfillment of all requirements within the Consultants' reports, drawings, schedules, etc., and arrange appropriate municipal inspections.

Field Engineering

- The Contractor will verify all grades and property lines as established by the Owner and report any errors or inconsistencies to SYNTHESIS DESIGN, INC. before commencing work.
- The Contractor is to check and verify all dimensions and conditions on the drawings and job site prior to construction and report any discrepancies to SYNTHESIS DESIGN, INC. - written dimensions have precedence over scaled dimensions.

Quality Control

- The Contractor shall arrange all inspections, municipal and provincial, obtain form work and foundation surveys, and advise the Engineers of construction progress, specifically enabling them to view form work 24 hours before pouring concrete.
- The Contractor shall coordinate all storm, sanitary and water main work with the Municipal Works Department, as required by the Municipal Engineering Department.
- The Contractor shall issue a one-year warranty against defective materials and workmanship plus an additional five years against major structural defects.
- The Contractor is required to be licensed by the Homeowner Protection Office and arrange for third-party home warranty insurance on proposed new homes. Coverage includes 2 years on labour and materials (some limits apply), 5 years on the building envelope and 10 years on the structure of the home.
- All materials, species, grades, colours, and finishes are to be approved by SYNTHESIS DESIGN, INC. and / or Owner, with samples to be provided on request, prior to ordering.

Construction Facilities & Temporary Controls

- The Contractor shall provide municipal water and sewer connections as required by the Municipality, as well as temporary water, power, light, heat, telephone, sanitary facilities and first aid as may be required during construction.

Material and Equipment

- The Contractor shall protect all materials, executed work and the site from damage by the elements, the public or any other source and shall repair or replace an item or work so damaged.

Contract Close-Out Procedures

- The Contractor shall maintain a continuously clean work site and provide a final professional clean up of glass, painted surfaces, floors and fixtures. All stains are to be removed and scratched or broken glass replaced.
- All ducts, furnaces and air exchange systems to be professionally cleaned.
- Deficiencies and defects are to be corrected within 30 days of Substantial Performance. Those items incomplete will be undertaken by the Owner with costs deducted from the final payment.
- All bid and construction sets of contract documents are to be returned to SYNTHESIS DESIGN, INC. at completion of work.

Div. 2 Sitework

Subsurface Investigation

- Standard penetration tests such as drilling and subsurface investigations are the responsibility of the Contractor and are to be carried out by trades experienced in such work.

Demolition

- The Contractor shall remove and dispose of existing carpet.
- The Contractor shall ensure that the alteration or removal of existing structures and services will not alter or endanger those to remain which may require shoring, underpinning, and / or bracing.
- The job site must be clean and any debris left on site must be placed in locations (as approved by the Owner) to maintain safe conditions for the Owners, Contractor, and Sub Trades.

Site Preparation

- Site preparation, tree cutting, excavation, rock removal, trenching for services, backfill and rough grading are the responsibility of the Contractor and are to be carried out by trades experienced in such work and performed in a manner that avoids unnecessary loss, damage, or disturbance to the site proper.
- Materials shall be handled and stored according to local regulations.

Dewatering (if applicable)

- The Contractor will provide trenches, piping and holding ponds necessary to control site drainage during construction.
- The Contractor shall provide concrete pump(s) as required by the Municipal Engineering Department and / or Geotechnical Engineer to deal with existing and added perimeter drainage and rain water run off.

Earthwork

- Contractor to follow municipal regulations for dealing with sediment and erosion (refer to sediment and erosion plan where applicable).
- Excavation for footings is to be at least 18" below grade to solid bearing and remain so until the concrete is in place.
- Unexpected soil conditions are to be reported to the Engineer before start of form work.
- Excavate to required levels for footings and finish grades as required, making allowance for perimeter drains, required form work, wall coatings and thickness of base and surfacing material specified.
- Footing base shall be firm, clean and free of mud and water; rock bases to be washed and dirt free with grouted pins as per Engineer and / or BCBC.
- No backfilling shall be done until all form work has been removed, walled coated, and drain lines viewed by the Engineer, and approved by the Municipal Inspector.
- Backfill against cast-in-place concrete only after 14 days with joints in place and coatings dry.
- Backfill material shall be frost free and contain no discarded building or organic material which might deteriorate.
- Provide and place any additional subsoil, fill or gravel required to bring existing grades to finish grades indicated.
- Such material shall be of acceptable low moisture content, applied in 1' (300 mm) layers, and compacted.
- Provide continuous positive slope around the entire building.

Paving and Surfacing

- Sub grade under paved areas is to be well drained and compacted to 95% standard proctor density.
- Sand base courses to be clean and free of deleterious material, and compacted.

Landscaping

- Finished landscaping - including screened top soil, sod, and plants - are not included in contract.
- All finished landscape work to be coordinated by the Owner following the completion of the job and final grading.
- Existing plants and topsoil are to be stripped from the construction area, stored in an Owner approved protected area.
- All trees and shrubs outside the essential excavation shall be preserved and protected against damage.

Div. 3 Concrete

Form Work

- Form work shall be constructed to dimension and profiles shown, properly braced to maintain position and shape during and after pour to prevent leakage of concrete.
- Allow through wall blocking for electric wiring, drainage, piping, vents, grilles and beam pockets.
- Forms shall be moistened just prior to concrete pour.
- Maximum deflection permitted: 12 mm (1/2") for foundation 6 mm (1/4") for columns, or as per Engineer.

Concrete Reinforcement

- Reinforcing steel shall comply with CSA specifications for intermediate grade (40) bars. All bars shall be deformed according to ASTM A305.
- All reinforcing steel shall be firmly positioned and secured against displacement, by chairs, spacers and hangers.

Cast-in-place Concrete

- Standard concrete shall be machine mixed from clean and properly graded aggregates, clean water and Portland Cement, and shall have a strength at 28 days of 21 MPa (3000 psi) min, for reinforced concrete, or as per Engineer.
- Concrete shall be deposited, vibrated and compacted so as to prevent honeycombing or segregation.
- Rein and rebar cost in place concrete for foundations and building structure shall conform to CAN3-A23.1 & A23.3.
- Top of slabs to be true and level surface; grouting as required.
- Flat footings are required as per Structural Engineer.
- Provide concrete spread footings under all load bearing walls, as per the Structural Engineer.
- Coordinate work of other trades in placing of sleeves and services in slabs or foundations.
- Rebar shall be given priority to the pouring of slabs to allow trades to position their work.
- Lay concrete slabs, reinforced as shown, with necessary expansion and control joints, screed to level surface.
- Thoroughly float before final set, steel trowel to a hard, smooth finish. (Do not dust with cement before troweling).

Concrete Accessories (as per Structural Engineer)

- Embed 1/2" anchor bolts for slabs at 1.2M, 4"-0" o.c., unless noted, minimum two bolts per straight plate length.
 - Rebar posts to footings to resist uplift, as per the Structural Engineer.
 - Other concrete reinforcing, dowels, shoes and connections for columns etc. shall be supplied and installed as detailed.
- #### Concrete Curing
- Ensure that weather conditions will not alter concrete mixture or curing.
 - All concrete shall be left in forms for three days and kept moist for seven days.

Div.4 Masonry

-N/A

Masonry Removals

- Existing Chimney to be removed

Masonry Flues & Chimneys (IF APPLICABLE)

- Chimney height must conform to BCBC #9.21.4.4 - A chimney flue shall extend not less than 3'-0" above the highest point at which the chimney comes in contact with the roof, and not less than 2'-0" above the highest roof surface or structure within 10'-0" of the chimney.
- Provide a minimum of 2" clearance between chimney and combustible framing. Refer to BCBC 9.21.5.
- Provide a minimum of 4" clearance between fireplace and combustible framing. Refer to BCBC 9.22.9.
- Provide a minimum of 6" clearance to clean out.
- Fireplaces shall have a non-combustible hearth extending not less than 1'-4" in front of the fireplace opening and not less than 8" beyond each side of the fireplace opening except where the hearth fire is elevated more than 6" above the hearth extension, the width of the hearth extension shall be increased by 2" for an elevation above 6" and not more than 12" and an additional 1" for every 2" in elevation above 1'-0"
- The walls of any chimney or flue pipe shall be constructed to be smoke tight and flame tight.

Div. 5 Metals

Structural Steel

- All nails, spikes, screws, bolts, plates, fasteners, and brackets to be in accordance with BCBC.
- All hangers and saddles to be sized to suit the intended load.
- Shop drawings are to be submitted for all metal work and other specified work upon request of SYNTHESIS DESIGN, INC.
- Structural hardware to be shop primed or hot dipped if in contact with water.
- All paint metal work to be coated with rust proof paint or powder coating.
- See Structural Drawings for steel beam sizes and details, if necessary.

Fabricated Metal & Aluminium Rails

- Supply and install 42" high aluminium guardrails c/w tempered glass panels (see drawings for locations).
- Existing guard rails to be minimum 42" - maximum 4" opening in all stair, deck and balcony guards (except space between bottom rail and stair tread), or equivalent. Refer to BCBC 9.8.8.3.

Div. 6 Woods & Plastics

Rough Carpentry

- The Contractor shall provide lumber, plywood, fasteners etc. for framing and coordination of work of other trades.
- Techniques, fastening, blocking, fire stops, bracing and sheathing to BCBC Residential Standards.
- All lumber to be SPF and all sheathing shall be plywood - grades shall conform to BCBC and local codes.
- Supporting wood posts to be 6x6 minimum as per Structural Engineer.
- All subfloor sheathing to be 3/4" tongue and groove plywood, glued and screwed to joists.
- Twisted, misaligned or structurally inadequate framing members to be replaced prior to finish as per Engineer.
- Provide cross bridding at maximum of 7'-0" o.c. for roof and floor joists.
- Provide blocking, backing and bracing for doors, stairs, railings, cabinets, pedestal sinks, wall fittings and attachments.
- Stair handrails to be located between 34" & 38" above the nosing of each tread.

Glue-Laminated Structural Units

- Provide as per Structural Drawings.

Manufactured Wood Trusses

- Provide as per Truss Manufacturer's drawings (c/w raised heel to match existing) confirm slope and heel depth on site.
- Contractor to note placement of new bulkheads, and peaks prior to ordering trusses.
- Truss layout to be confirmed by SYNTHESIS DESIGN, INC. and Owner prior to ordering.

Finish Carpentry

- All added door and window frames are to be within 1/16" of finish wall to accept casings.
- Installed moldings to be caulked with appropriate coloured, paintable latex caulk and receive two finish coats of semi-gloss latex paint.

Millwork

- Provide kitchen cabinets, built in units, washroom vanities as indicated on drawings.
- All cabinets to be approved by Owner and installed in a professional manner.
- Do not deliver, store, or install finish cabinets or trim until building is fully enclosed, heated, and lockable.
- Coordinate work of kitchen, bathroom and storage cabinets / organizers with related trade.

Counter Tops

- All counter tops and backsplashes to be approved by Owner and installed in a professional manner.

Wood Treatment

- Any lumber likely to come into contact with water shall be pressure treated with approved preservative and bear on rolled form gasket.
- Protect exposed beams and structural elements from water damage; clean or replace as per Engineer.
- Provide treated studs - c/w 0.5" air space when turning out concrete walls in Basement.
- Provide treated sleepers when adding sub floor systems in Basements.

Railings and Guards

- Semi-frameless glass railings to be supplied and installed as per manufacturer specifications.
- Provide railings / guards for exterior decks - see drawings for details.
- Guard rails to be minimum 42" exterior (where the walking surface served by the guard is more than 6 feet above the finished ground level) & 36" interior - maximum 4" opening in all stair, deck and balcony guards (except space between bottom rail and stair tread). Refer to BCBC 9.8.8.3.

Div. 7 Thermal & Moisture Protection

Waterproofing

- All decking material to match existing unless noted.
- Minimum slope of decks over living spaces is to be 1/4":12".

- Provide overflow drain below door level on sun decks.
- Ensure that concrete patios, walkways and driveways have positive slopes of 1/8":12".
- Ceramic / slate tile or equivalent required to bathroom floors.

Damp Proofing

- Apply two coats of bituminous damp proofing and dimpled membrane (Delta MS or equivalent, as per manufacturer's specifications) to perimeter foundation to line established on site; not to exceed height of first ground level, ensure all holes are plugged, patched and cured prior to application of coatings; coat top of footings and apply to manufacturer's specifications; remove excess and smears.
- Provide rolled form sill gaskets between wood sill plates and concrete slabs.
- Provide 4" diameter PVC drain tile around perimeter of concrete strip footings (c/w 6" drain rock above) to tie into existing perimeter drain tile system.

Insulation

- Thermal insulation located and sized as per drawings; use mineral wool batts for roof, walls and floors as per local municipal codes; rigid polystyrene rated at 5R/inch for foundation, slab and roof deck applications (ensure foamed plastic insulation receives protection).
- Provide continuous fully caulked 6 mil UV poly vapour barrier around entire building envelope, including below all concrete slabs as per BCBC #9.25.4.
- Provide minimum 1" clearance between top of roof joist and insulation BCBC #9.19.1.2.
- Provide minimum 2.5" clearance between roof sheathing and insulation BCBC #9.19.1.3.
- Spray applied polyurethane insulation shall be installed in accordance with CAN/ULC-S705.2, "Thermal Insulation - Spray-Applied Rigid Polyurethane Foam, Medium Density, Installers Responsibilities - Specification as per BCBC # 9.25.2.5. See drawings for locations.

1. Vaulted Ceiling:

- Flat footings are required as per Structural Engineer.
- Uniformly distribute roof ventilation to 1/150 of ceiling area with minimum 50% at top of roof and minimum 50% in soffit vents.
- Roof assemblies without attic space (cathedral ceilings, decks over living spaces) are to receive Rockwool ComfortBat®/ spray-applied polyurethane foam up to R-32 insulation.
- Provide 2x2 or 2x4 cross purins to roof assemblies without attic space (cathedral ceilings, decks over living spaces) to conform to BCBC #9.19.1.3.

2. Attic Space:

- Uniformly distribute roof ventilation to 1/300 of insulated ceiling area with minimum 50% at top of roof and minimum 50% in soffit vents.
- Attic or roof spaces to receive R-50 insulation.

3. Crawlspace:

-N/A

4. New Exterior Walls:

- All exterior 2x4 to receive R-14 (Furred out basement walls) and 2x6 wood framed walls to receive R-22 insulation.

5. Suspended Floors:

-N/A

6. Renovation of Existing Walls:

- If drywall is removed from an existing exterior wall, the wall assembly and insulation may be required to be brought to current building code requirements. Report to SYNTHESIS DESIGN, INC. and / or Owner prior to commencement of the work.

7. Acoustic Insulation:

-N/A

Shingles and Roofing

- Supply and install architectural series fiberglass laminate shingles on roof to match existing- Owner to approve final style and colour.
- Existing roofing material to be to remain where possible and all new overhangs to match existing conditions, c/w soffits and venting as required to match existing - unless otherwise noted.
- All added roofing to be installed over approved roofing underlay, in a professional manner, by an established, licensed, bonded, and insured (including WCB) roofing Contractor.
- Contractor to ensure that roofing contractor will provide Owner with copies of all warranties, including: 1) Manufacturer's Material; 2) Roofing Contractor's Labour, and; 3) Third Party Association Guarantee.

Membrane Roofing

- All membrane roofing to be installed over approved roofing underlay, in a professional manner, by an established, licensed, bonded, and insured (including WCB) roofing contractor.
- Contractor to ensure that roofing contractor will provide Owner with copies of all warranties, including: 1) Manufacturer's Material; 2) Roofing Contractor's Labour, and; 3) Third Party Association Guarantee.
- Flat roofs to have a minimum positive slope of 1: 50 or to manufacturer's specifications.
- Flat roofs to be 20 year, black, TORCH-ON installed with positive slope and to manufacturer's specifications.

Soffits

- Provide vented, open, 1x4 t&g v-groove painted pine, raked soffits to match existing conditions, as per drawings.
- Provide vinyl soffits strips to run parallel to exterior walls
- Soffits to have two coats of exterior paint.

Cladding and Siding

- Provide 3/4", tight knot bevelled cedar cladding c/w exposure to match existing, as required. See drawings for locations.
- All wood cladding to be pre-primed (4 sides) with one coat primer and installed over 2 layers of approved 30-minute building wrap.
- Be sure to stagger the joints of all added cladding that abut existing cladding and cut all joints @ 45 degrees.
- Caulk unprotected seams and openings with appropriate coloured latex or silicone.
- Provide second coat exterior point to cladding following installation and caulking.
- Provide 8" clearance between grade and siding.

Rain Screen

- Provide approved rain screen assembly for all new cladding applications (see drawings for details).
- Confirm assemblies with municipal regulations.

Exterior Trim

- Provide pre-primed (4 sides) bonded faced spruce 2x4's @ corners; 1x6's @ fascia; 1x8's @ barge board to match existing
- Provide pre-painted (4 sides) S4S cedar: 2x 3.5" @ door and window trims c/w canted 2x 2.5" sill and aprons to match existing.
- Pre-primed exterior trim to have one finish coat of enamel.

Flashing and Sheet Metal

- Provide continuous flashing; at all edges for wind and watertight installation; over all exterior windows and doors and at all horizontal intersections of differing cladding materials.
- All roof flashings, caps and fittings to match colour of roofing as close as possible.

Roof, Specialties and Accessories

- All new gutters are to match existing c/w screened rain water leaders, unless noted. Locations to be confirmed by Owner.
- Ensure that tempered glass displays manufacturer's authentication markings.

Div. 8 Doors, Windows, Glazing & Mirrors

Wood and Vinyl Doors

- Before the door order is placed, the Contractor is to measure on site to confirm whether or not any existing or proposed openings require a custom sized door.
- Ensure that every door has 2.5" minimum of framing material around the entire door jamb.
- All exterior doors to have solid blocking (vertical and horizontal), for two stud spaces, both sides at locking height so that the jambs will resist spreading by force.
- All exterior wood doors to be paint grade solid core c/w weather stripping.
- All interior doors to be paint grade, solid core, Owner to approve style.
- Contractor to install Owner supplied hardware (including astragals and hinges) for all exterior and interior doors, including: dead bolts with a cylinder not having less than 5 pins and a bolt throw not less than 25 mm operable from the interior without the use of keys, strike plates fastened to wood frames with wood screws providing a minimum 25 mm penetration into wood studs on all exterior swinging doors, and locking passage sets on interior bathroom doors.
- Door viewer required on solid front doors with a viewing angle not less than 160 degrees.
- Glazing in all added doors to be tempered and double glazed (exterior doors only), 6s per municipal codes, in all sliding, glass paneled and French style doors - ensure that tempered glass displays manufacturer's authentications.
- Furnace/Utility room doors to be 2"-8" minimum as per BCBC #9.5.5.1.
- Attic access doors / panels to be minimum 20" x 28" c/w weather stripping.
- All new exterior doors to receive performance grade 30 and Water Penetration Resistance Test Pressure of 290 Pa as per BCBC #9.7.4.3. (1).
- See "Door Schedule" on drawings

Windows

- Contractor is not to order windows until all rough openings are approved by Owner.
- Final style, colour and material of windows are to be approved by Owner.
- All vinyl windows shall be double glazed with double thermal break or as per municipal codes unless noted.
- All windows to be supplied with exterior sills to match existing and pre-painted on both sides with one colour.

- Glazing to be float in windows, with oversized windows to conform to BCBC #9.7.3.2. - provide manufacturer's specifications.
- Glass side lights, windows within 3'-0" of an exterior door lock and windows less than 8" from the floor shall be tempered.
- The bottom of an operable window in a bedroom is not to exceed 4'-11" above the floor, and have a minimum opening dimension 15" with an area of 3.75 sq. ft. (supplier to ensure that windows meet BCBC egress requirements).
- Windows in walls enclosing shower and tub must be tempered and waterproofed if located at or below first ground level, ensure all holes are plugged, patched and cured prior to application of coatings; coat top of footings and apply to manufacturer's specifications; remove excess and smears.
- Provide rolled form sill gaskets between wood sill plates and concrete slabs.
- Provide 4" diameter PVC drain tile around perimeter of concrete strip footings (c/w 6" drain rock above) to tie into existing perimeter drain tile system.

Glazing & Mirrors

- All mirrors to be approved by Owner and to be installed by a qualified glazier.
- Glass doors and partitions around showers are to be tempered glass.

Div. 9 Finishes

Gypsum Board

- GWB to walls to be 1/2" (screwed to walls) and installed in a professional manner with a minimum of 3 coats of mud.
- All ceilings to be smooth painted finish, unless otherwise noted.
- 5/8" or 6/8" 1/2" drywall required to ceiling members at 24" o.c.
- Install 5/8" or (2) layers of 1/2" GWB to create a 45-minute fire separation between principal house and secondary suites.

Tile

- All ceramic/slate tiles to be approved by Owner and installed in a professional manner.
- Ceramic/slate tile flooring to be set on minimum 1.25" (3/4"+1/2") t&g plywood subfloor c/w thin set base, unless noted.
- Ceramic tile tub and shower surrounds to be mounted on 1/2" Dens Shield Tile Backer, or equivalent.

Wood Flooring

- Supply and install engineered hardwood flooring (as per owner).

Painting

- All interior paint to be approved by Owner and applied in a professional manner.
- All interior walls to have one primer coat and two finish coats of egg shell latex - provide water-based enamel in Kitchens, Bathrooms and Laundry Rooms.
- All pre-primed interior trims and doors to have two finish coats of semi gloss latex.

Div. 10 Specialties

Fireplaces and Stoves

- Supply and install gas fireplace c/w thermostat and trim - Unit as per owner
- Manufactured gas fireplace and flue to conform to #9.22.8 of NBC and to be installed in accordance with manufacturer's installation instructions and CAN / ULC S 610 standard for factory-built fireplaces.
- Maintain height and width to conform with fire place unit's installation instructions.
- Maintain minimum 2" clearance between metal flue and combustible framing.
- Provide 1/2" fibre cement board as protection under non-combustible hearth finish.

Storage Shelving

- All shelving as per closet organizer supplier.

Wardrobe and Closet Appliances

- All shelving as per closet organizer supplier.

Div. 11 Equipment

Appliances

- Allow for Owner supplied kitchen appliances.
- Provide required ducting for range hood vents and dryers where necessary.

Div. 12 Furnishings

Book Shelves

- Refer to Interior Design specifications.

Div. 14 Plumbing

Water Supply & Drainage Waste

- Supply and install copper piping / PEX tubing for water supply as required, collector, Routes and location to be determined by mechanical contractor and to be approved by Owner.
- Supply and install copper water supply piping to Owner supplied Refrigerator in Kitchen.
- Supply and install plastic drainage waste and vent piping as required - note: provide cast iron over and through Main Floor living spaces.
- Where cast iron venting is used ensure all elbows are cast iron to the main trunk
- Install plumbing drops and venting within the walls, ceilings, and designated bulkheads if applicable. If additional bulkheads or dropped ceilings are required for the drops and venting that are not shown on the drawings, please report to SYNTHESIS DESIGN, INC. prior to installation.

Plumbing Fixtures

- Supply and install fixtures (to be confirmed with Owner). See drawings for locations.

Toilet and Bath Accessories

- Install Owner supplied bathroom accessories including toilet paper holders, soap dish and grab bars, towel rails (minimum 1 per room).

Pump Systems (if Applicable)

- Supply and install under slab sewage pump system, as/if specified by Engineer.
- Supply and install exterior sump and pump system, as/if specified by Engineer.

Hot Water Heaters

- Supply and install tankless combination unit water heater. Mechanical contractor to verify adequacy for entire house.</

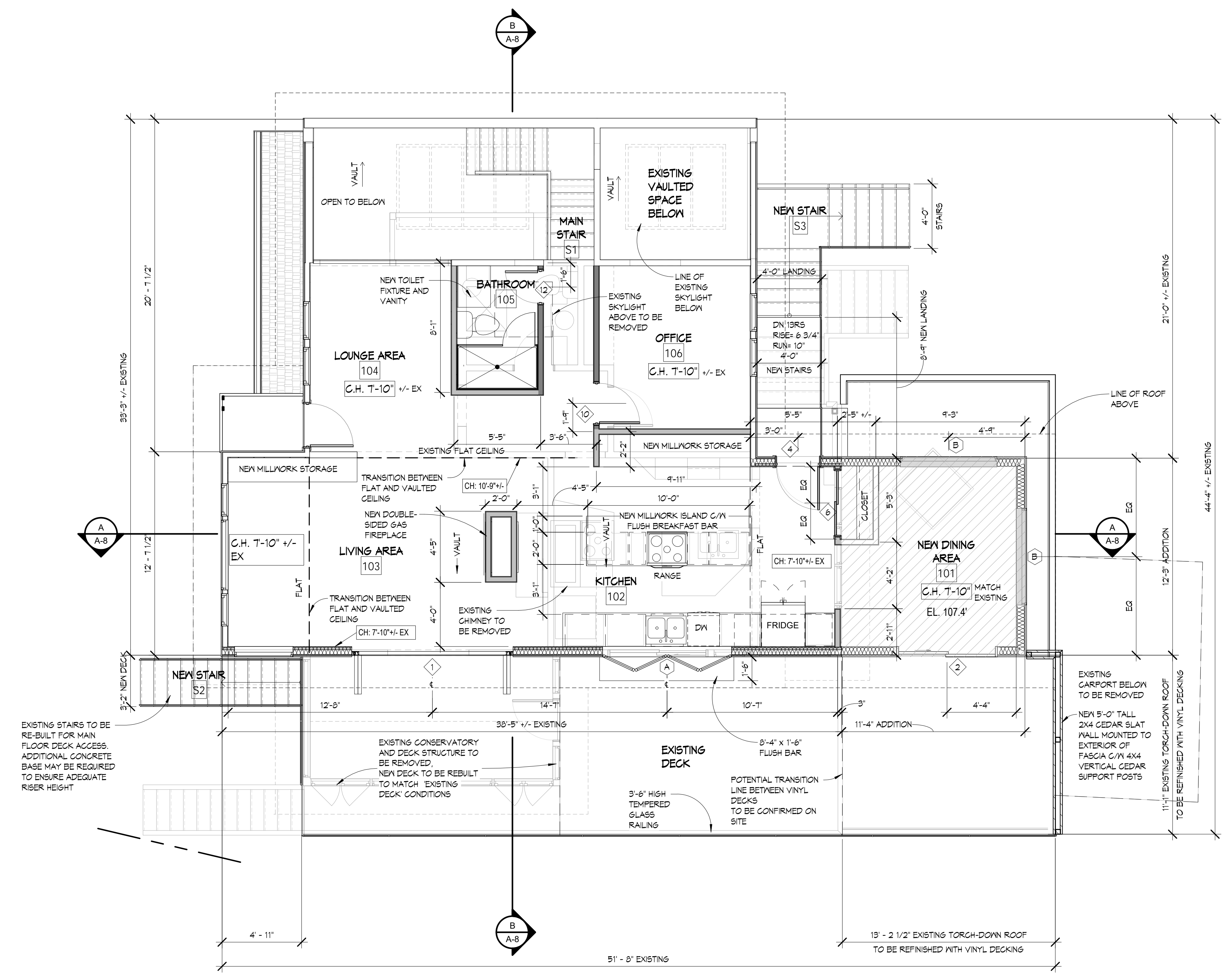


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STRINGHAM ADDITION / RENOVATION
3092 Marine Drive
West Vancouver, BC

Drawing Title
MAIN FLOOR PLAN

Date 03.26.2021
Scale 1/4" = 1'-0"
Drawn JPAS/BKI
Job No. 20067
Sheet **A-3**

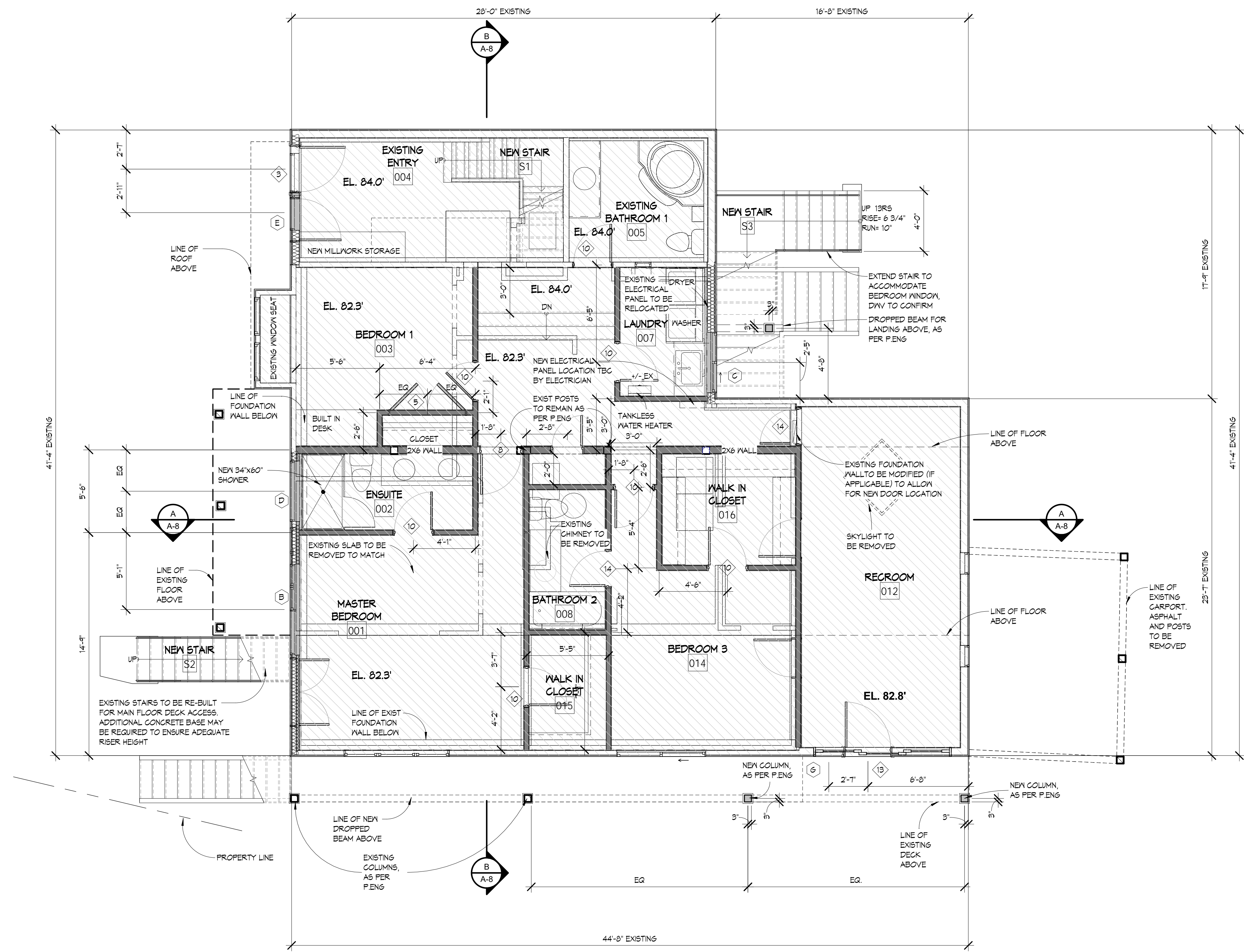


LEGEND

- EXISTING WALL
- EXISTING WALL OR STRUCTURE TO BE REMOVED
- NEW INTERIOR WALL
- EXISTING 2x4 (TO BE CONFIRMED ON SITE) FURRED OUT AND UPGRADED WITH 2-22 INSULATION
- EXISTING DOOR TO BE REMOVED
- NEW DOOR
- EXISTING WINDOW
- EXISTING WINDOW TO BE REMOVED
- NEW WINDOW
- AREA OF ADDITION

- NOTES:**
- ALL DOOR & WINDOW HEADER HEIGHTS ON MAIN FLOOR TO BE 6'-8" TO MATCH EXISTING CONDITIONS WHERE APPLICABLE.
 - IF ADDITIONAL BULKHEADS OR DROPPED CEILINGS ARE REQUIRED FOR PLUMBING DROPS, DUCTING, OR VENTING WHICH ARE NOT SHOWN ON THE DRAWINGS, PLEASE REPORT TO OWNER PRIOR TO INSTALLATION.
 - IF DRYWALL IS REMOVED FROM AN EXISTING EXTERIOR WALL, THE WALL ASSEMBLY AND INSULATION MAY BE REQUIRED TO BE BROUGHT TO CURRENT CODE STANDARDS. PLEASE REPORT TO SYNTHESIS DESIGN PRIOR TO THE COMMENCEMENT OF WORK.
 - PROVIDE INTERCONNECTED SMOKE ALARM IN BOTH PRINCIPAL DWELLING AND SECONDARY SUITE.

MAIN FLOOR
1/4" = 1'-0"



LEGEND

- EXISTING WALL
- EXISTING WALL OR STRUCTURE TO BE REMOVED
- NEW INTERIOR WALL
- NEW INSULATED EXTERIOR WALL
- WALL BETWEEN PRINCIPAL DWELLING AND SECONDARY SUITE
ENSURE 90-MINUTE FIRE RATED SEPARATION, C/M 43 STC RATING (15/30 MIN. PRESCRIPTIVE ASSEMBLY IN TABLE 1.1.1.1.(6))
- EXISTING DOOR TO REMAIN
- EXISTING DOOR TO BE REMOVED
- RELOCATED OR NEW DOOR
- EXISTING WINDOW
- EXISTING WINDOW TO BE REMOVED
- NEW WINDOW
- EXISTING POST
- NEW POST
- AREA OF SECONDARY SUITE
- AREA OF LOWERED FOUNDATION SLAB

NOTES:

- ALL DOOR & WINDOW HEADER HEIGHTS ON BASEMENT FLOOR TO BE 8'-0" TO MATCH EXISTING CONDITIONS WHERE APPLICABLE.
- IF ADDITIONAL BULKHEADS OR DROPPED CEILINGS ARE REQUIRED FOR PLUMBING DROPS, DUCTING, OR VENTING WHICH ARE NOT SHOWN ON THE DRAWINGS, PLEASE REPORT TO SYNTHESIS DESIGN PRIOR TO INSTALLATION.
- IF DRYWALL IS REMOVED FROM AN EXISTING EXTERIOR WALL, THE WALL ASSEMBLY AND INSULATION MAY BE REQUIRED TO BE BROUGHT TO CURRENT CODE STANDARDS. PLEASE REPORT TO SYNTHESIS DESIGN PRIOR TO THE COMMENCEMENT OF WORK.

LOWER FLOOR
1/4" = 1'-0"

FRONT SPATIAL SEPARATION

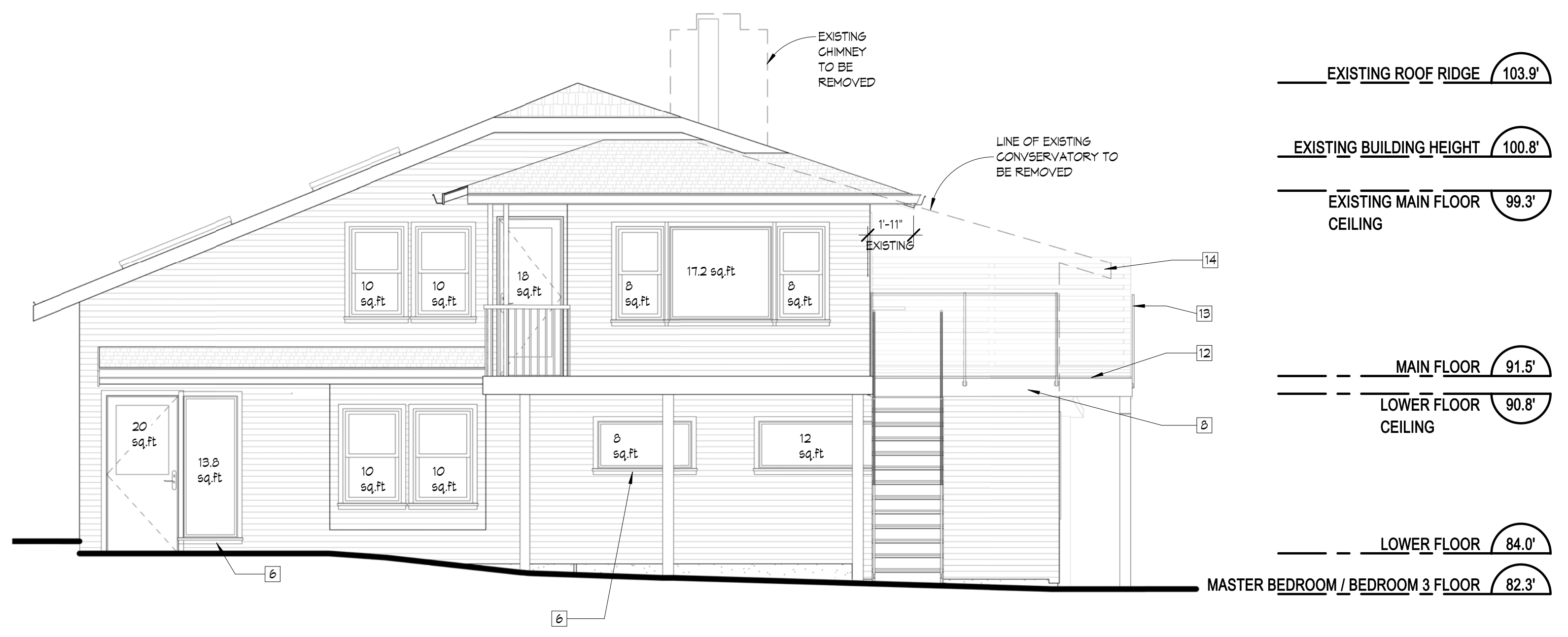
AREA OF FACE
500 sq.ft. (59.9 m²)

LIMITING DISTANCE
23.75 ft. (7.2 m)

ALLOWABLE OPENINGS
97% x 500 ft.sq. = 330.6 sq.ft.

AREA OF OPENING
163 sq.ft.

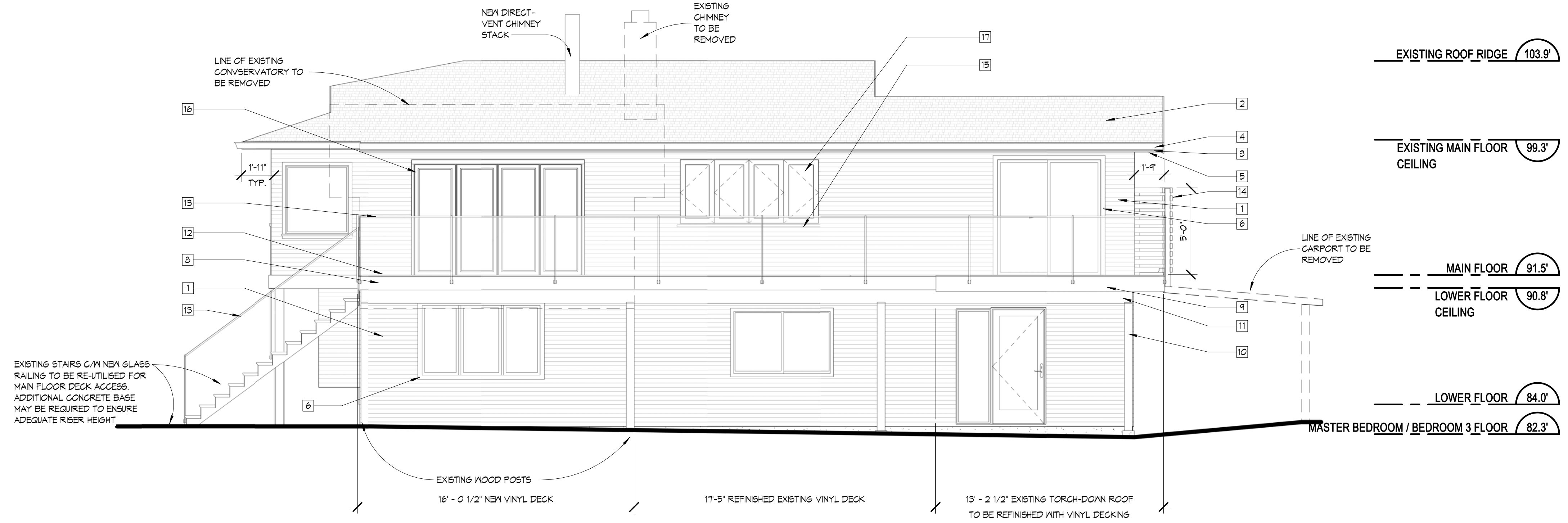
CONFORMS
YES



- EXISTING ROOF RIDGE 103.9'
- EXISTING BUILDING HEIGHT 100.8'
- EXISTING MAIN FLOOR CEILING 99.3'
- MAIN FLOOR 91.5'
- LOWER FLOOR CEILING 90.8'
- LOWER FLOOR 84.0'
- MASTER BEDROOM / BEDROOM 3 FLOOR 82.3'

FRONT ELEVATION
1/4" = 1'-0"

MATERIAL LEGEND	
1	NEW HORIZONTAL BEVELLED CEDAR SIDING C/M EXPOSURE AND CORNER BOARDS (MATCH EXISTING)
2	NEW FIBREGLASS LAMINATE SHINGLES (MATCH EXISTING) (AS PER OWNER)
3	NEW 2x6 COMB FACED SPRUCE FASCIA (MATCH EXISTING) (AS PER OWNER)
4	NEW 4" ALUMINUM GUTTERS (MATCH EXISTING) (AS PER OWNER)
5	NEW 1x4 PAINT GRADE PINE TAG V-GROOVE PAINTED SOFFIT THROUGHOUT (MATCH EXISTING OPEN AND RAKED SOFFIT) (AS PER OWNER)
6	NEW 2x4 S4S CEDAR TRIM AROUND ALL NEW OPENINGS C/M 2x4 SILL & 2x4 S4S APRON UNDER ALL NEW WINDOWS (MATCH EXISTING) (AS PER OWNER)
7	NEW 2x8 COMB FACED SPRUCE BARGE BOARD (MATCH EXISTING) (AS PER OWNER)
8	NEW 2x10 COMB FACED SPRUCE FASCIA BOARD (MATCH EXISTING) (AS PER OWNER)
9	NEW 2x12 COMB FACED SPRUCE FASCIA BOARD (TO REPLACE EXISTING TORCH-DOWN ROOF CURB) (AS PER OWNER)
10	NEW 6x6 STRUCTURAL COLUMN (CONFIRM WITH STRUCTURAL ENGINEER)
11	NEW 6x10 DROPPED STRUCTURAL BEAM (CONFIRM WITH STRUCTURAL ENGINEER) (AS PER OWNER)
12	SUN DECK C/M NEW VINYL DECKING
13	NEW TEMPERED GLASS RAILING C/M METAL TOP RAIL (STYLE AS PER OWNER)
14	NEW 60" HIGH CEDAR PRIVACY SCREEN C/M 4x4 POSTS TO BE MOUNTED TO EXTERIOR OF EXISTING FASCIA (EXISTING STRUCTURAL CONDITIONS TO BE CONFIRMED ON SITE), 2x4 SCREEN (3/4" GAP MAX.)
15	NEW 8'-4" x 1'-6" FLUSH SERVICE BAR SUPPORTED BY KNEE BRACES (STYLE AS PER OWNER)
16	NEW ACCORDION STYLE FOLDING DOOR (BEAM AS PER P.ENG)
17	NEW ACCORDION STYLE FOLDING WINDOW (BEAM AS PER P.ENG)
18	NEW WOOD STAIR C/M 3" THICK STAIN GRADE CEDAR TREADS, 2x12 CEDAR STRINGERS & OPEN RISERS



- EXISTING ROOF RIDGE 103.9'
- EXISTING MAIN FLOOR CEILING 99.3'
- MAIN FLOOR 91.5'
- LOWER FLOOR CEILING 90.8'
- LOWER FLOOR 84.0'
- MASTER BEDROOM / BEDROOM 3 FLOOR 82.3'

RIGHT ELEVATION
1/4" = 1'-0"

NOTE: ALL RAIN SCREEN DETAILS TO BE CONFIRMED ON SITE WITH BUILDING INSPECTOR

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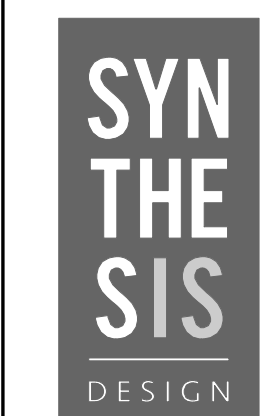
STRINGHAM ADDITION / RENOVATION
3092 Marine Drive
West Vancouver, BC

Drawing Title
ELEVATIONS

Date 03.26.2021
Scale 1/4" = 1'-0"
Drawn JPAS/BKI
Job No. 20067
Sheet **A-5**

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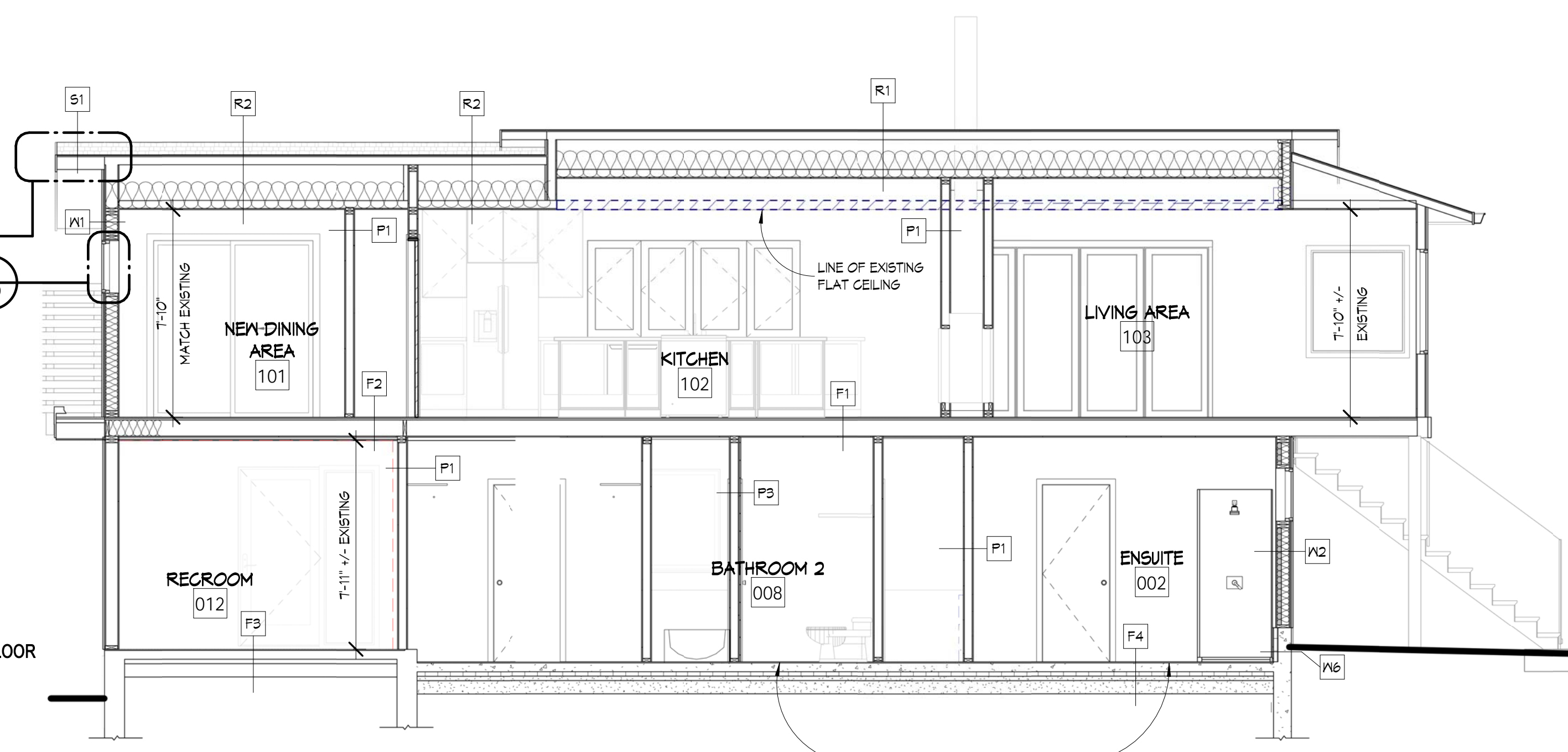
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STRINGHAM ADDITION / RENOVATION
3092 Marine Drive
West Vancouver, BC

Drawing Title
SECTIONS

Date 03.26.2021
Scale 1/4" = 1'-0"
Drawn JPAS/BKI
Job No. 20067
Sheet A-8

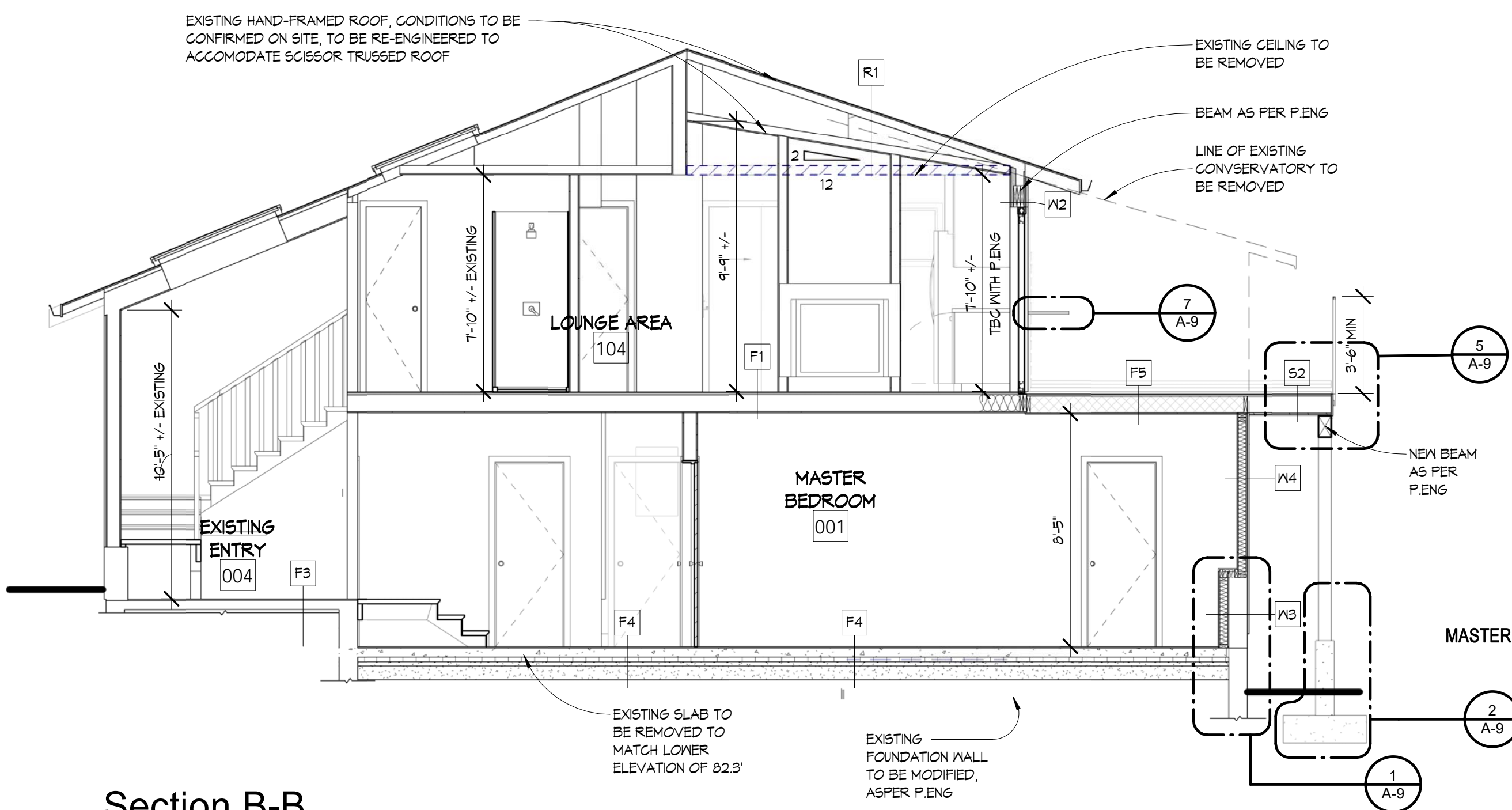
- 103.9' EXISTING ROOF RIDGE
- 100.8' EXISTING BUILDING HEIGHT
- 99.3' EXISTING MAIN FLOOR CEILING
- 91.5' MAIN FLOOR
- 90.8' LOWER FLOOR CEILING
- 84.0' LOWER FLOOR
- 82.3' MASTER BEDROOM / BEDROOM 3 FLOOR



Section A-A
1/4" = 1'-0"

WALL ASSEMBLIES		FLOOR ASSEMBLIES	
Exterior			
W1	<ul style="list-style-type: none"> - NEW BEVELLED CEDAR SIDING (TO MATCH EXISTING) - VERTICAL 1 1/2" x 1/2" TREATED PLYWOOD VERTICAL FURRING STRIPS @ 12" O/C - 2 LAYERS 30 MIN. BUILDING PAPER, LAP SEAMS - 1/2" PLYWOOD SHEATHING - 2x6 STUDS @ 16" O/C, R-22 BATT INSULATION - 6 MIL. CONTINUOUSLY CAULKED POLY VAPOUR BARRIER - 1/2" GNB 	F1	<ul style="list-style-type: none"> - NEW FLOOR FINISH (STYLE AS PER OWNER) - EXISTING SHEATHING AND EXISTING FLOOR STRUCTURE (CONDITIONS TO BE CONFIRMED ON SITE, REIRE IF APPLICABLE) - 1/2" GNB
W2	<ul style="list-style-type: none"> - NEW BEVELLED CEDAR SIDING (EXISTING CONDITIONS TO BE CONFIRMED ON SITE) - NEW VERTICAL 1 1/2" x 1/2" TREATED PLYWOOD VERTICAL FURRING STRIPS @ 12" O/C - NEW 2 LAYERS 30 MIN. BUILDING PAPER, LAP SEAMS - EXISTING SHEATHING TO REMAIN, CONDITIONS TO BE CONFIRMED ON SITE - EXISTING STUDS TO REMAIN, CONDITIONS TO BE CONFIRMED ON SITE - NEW 2" FURRINGS IF REQUIRED TO ACCEPT NEW INSULATION - NEW R-22 BATT INSULATION - NEW 6 MIL. CONTINUOUSLY CAULKED POLY VAPOUR BARRIER - NEW 1/2" GNB 	F2	<ul style="list-style-type: none"> - SEPARATION BETWEEN PRINCIPAL DWELLING AND SECONDARY SUITE - FLOOR FINISH (STYLE AS PER OWNER) - EXISTING FLOOR SHEATHING TO REMAIN (EXISTING CONDITIONS TO BE CONFIRMED ON SITE BY P.ENG.) - EXISTING FLOOR JOISTS (EXISTING CONDITIONS TO BE CONFIRMED ON SITE BY P.ENG.) - EXISTING 1/2" GNB (EXISTING CONDITIONS TO BE CONFIRMED ON SITE) - RESILIENT METAL CHANNELS @ 16" OR 24" O/C (TBC WITH BUILDING INSPECTOR) - 1/2" GNB
W3	<ul style="list-style-type: none"> - EXISTING FOUNDATION WALL (CONDITIONS TO BE CONFIRMED ON SITE) TO UPGRADED WITH R-14 INSULATION - 1/2" AIR SPACE - 2x4 STUDS @ 16" O/C /V/ PRESSURE TREATED BOTTOM PLATE - R-14 BATT INSULATION - 6 MIL. CONTINUOUSLY CAULKED POLY VAPOUR BARRIER - 1/2" GNB 	F3	<ul style="list-style-type: none"> - NEW FLOOR FINISH (STYLE AS PER OWNER) - EXISTING CONCRETE SLAB (CONDITIONS TO BE CONFIRMED ON SITE, REIRE IF APPLICABLE)
W4	<ul style="list-style-type: none"> - EXISTING BEVELLED CEDAR SIDING - EXISTING 2x4 WALL STRUCTURE (CONDITIONS TO BE CONFIRMED ON SITE), REIRE AS REQUIRED - NEW R-14 INSULATION (TO BE CONFIRMED WITH THE BUILDING INSPECTOR) - 6 MIL. CONTINUOUSLY CAULKED POLY VAPOUR BARRIER - 1/2" GNB 	F4	<ul style="list-style-type: none"> - NEW FLOOR FINISH (STYLE AS PER OWNER) - 4" CONCRETE SLAB - CONTINUOUS WIRE MESH - 6 MIL. CONTINUOUSLY CAULKED POLY VAPOUR BARRIER - R-12 RIGID INSULATION - 2" SAND - 6" COMPACTED GRAVEL - NEW 60 MIL. HEAVY DUTY VINYL DECKING - NEW 3/4" EXTERIOR GRADE PLYWOOD SLOPED TO DRAIN AT 1/4" PER 12" - NEW FLOOR JOISTS PER STRUCTURAL - NEW EXTRUDED FOAM INSULATION TO R-32 MIN. - NEW 1/2" GNB
Foundation		F5	
W6	<ul style="list-style-type: none"> - EXISTING FOUNDATION WALL TO BE MODIFIED TO ACCEPT 2" ISOBOARD INSULATION - 2" ISOBOARD - 1/2" GNB 	F6	<ul style="list-style-type: none"> - NOT SHOWN ON SECTION - NEW 60 MIL. HEAVY DUTY VINYL FINISH (AS PER OWNER) - EXISTING ROOF STRUCTURE (CONDITIONS TO BE CONFIRMED ON SITE) - REIRE EXISTING POLY VAPOUR BARRIER (ENSURE 6 MIL MINIMUM) - NEW 1/2" GNB
Interior		ROOF ASSEMBLIES	
P1	<ul style="list-style-type: none"> - 1/2" GNB - 2x4 STUDS @ 16" O/C - 1/2" GNB 	Roof	
P2	<ul style="list-style-type: none"> - 1/2" GNB - 2x6 STUDS @ 16" O/C - 1/2" GNB 	R1	<ul style="list-style-type: none"> - EXISTING ROOF ASSEMBLY (CONDITIONS TO BE CONFIRMED ON SITE) - RESTRUCTURE UNDERSIDE OF EXISTING ASSEMBLY AS PER STRUCTURAL DRAWINGS - RAFTERS AS PER STRUCTURE ENGINEER (TO CREATE SCISSOR TRUSS) - R-32 HIGH-DENSITY INSULATION - 6 MIL. CONTINUOUSLY CAULKED POLY VAPOUR BARRIER - 5/8" GNB OR 1/2" C.D. BOARD
P3	<ul style="list-style-type: none"> - TILE (STYLE AS PER OWNER) - SCHLUTER KERDI MAT - 1/2" DENSISHELD OR EQUIVALENT - 2x4 STUDS @ 16" O/C - 1/2" GNB 	R2	<ul style="list-style-type: none"> - NEW FIBREGLASS LAMINATE SHINGLES (MATCH EXISTING) - APPROVED ROOFING UNDERLAY - 1/2" PLYWOOD SHEATHING C/M "H" CLIPS - MANUFACTURED TRUSSES - R-50 BATT INSULATION - 6 MIL. CONTINUOUSLY CAULKED POLY VAPOUR BARRIER - 5/8" GNB OR 1/2" C.D. BOARD
		R3	<ul style="list-style-type: none"> - EXISTING TORCHDOWN ROOF TO BE REFINISHED WITH VINYL DECKING (NOT SHOWN ON SECTION) - NEW 60 MIL. VINYL DECKING (AS PER OWNER) - EXISTING TORCH DOWN ROOFING TO BE REMOVED - EXISTING ROOF STRUCTURE (CONDITIONS TO BE CONFIRMED WITH STRUCTURAL ENGINEER), ADDITIONAL STRENGTHENING PER STRUCTURE ENGINEER IF REQUIRED - EXTRUDED FOAM INSULATION TO R-32 MIN. - 1/2" GNB
		Skirt Roof/Overhang	
		S1	<ul style="list-style-type: none"> - FIBREGLASS LAMINATE SHINGLES (TO MATCH EXISTING) - APPROVED ROOFING UNDERLAY - 1/2" PLYWOOD SHEATHING C/M "H" CLIPS - RAFTERS PER STRUCTURAL ENGINEER
		S2	<ul style="list-style-type: none"> - NEW 1/4" PAINT GRADE SOFFIT TO MATCH EXISTING (PROVIDE VENTING) - NEW 60 MIL. VINYL DECKING (AS PER OWNER) - NEW 3/4" EXTERIOR GRADE PLYWOOD - PURLINS TO PROVIDE SLOPE TO DRAIN AT 1/8" PER 1'-0" (CONFIRM EXISTING VINYL DECK CONDITIONS) - NEW FLOOR JOISTS PER STRUCTURAL (IF NO PURLINS IN EXISTING CONDITIONS, TAPER JOISTS AS REQUIRED) - NEW 1/4" PAINT GRADE SOFFIT TO MATCH EXISTING (PROVIDE VENTING)
		S3	<ul style="list-style-type: none"> - EXISTING TORCH-DOWN ROOF TO BE REFINISHED WITH VINYL DECK (NOT SHOWN IN SECTION) - NEW 60 MIL. VINYL DECKING (AS PER OWNER) - EXISTING TORCH-DOWN ROOF TO BE REMOVED - EXISTING ROOF STRUCTURE (CONDITIONS TO BE CONFIRMED ON SITE) - EXISTING WOOD SOFFIT

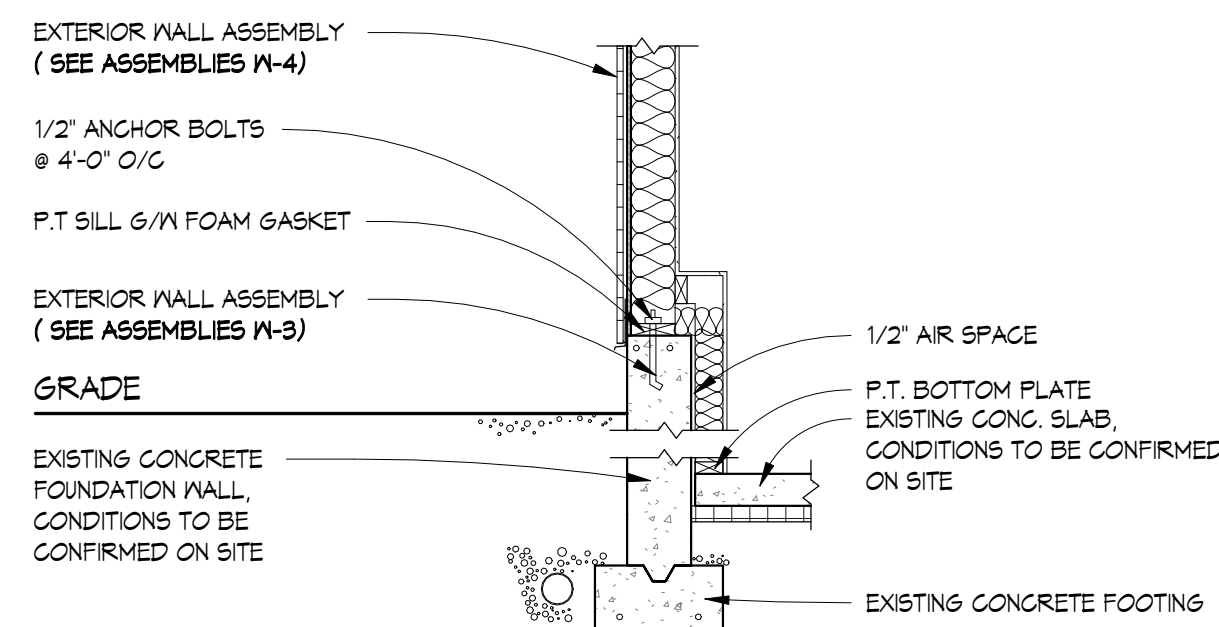
NOTE:
ALL BUILDING AND RAIN SCREEN ASSEMBLIES TO BE CONFIRMED WITH BUILDING INSPECTOR ON SITE



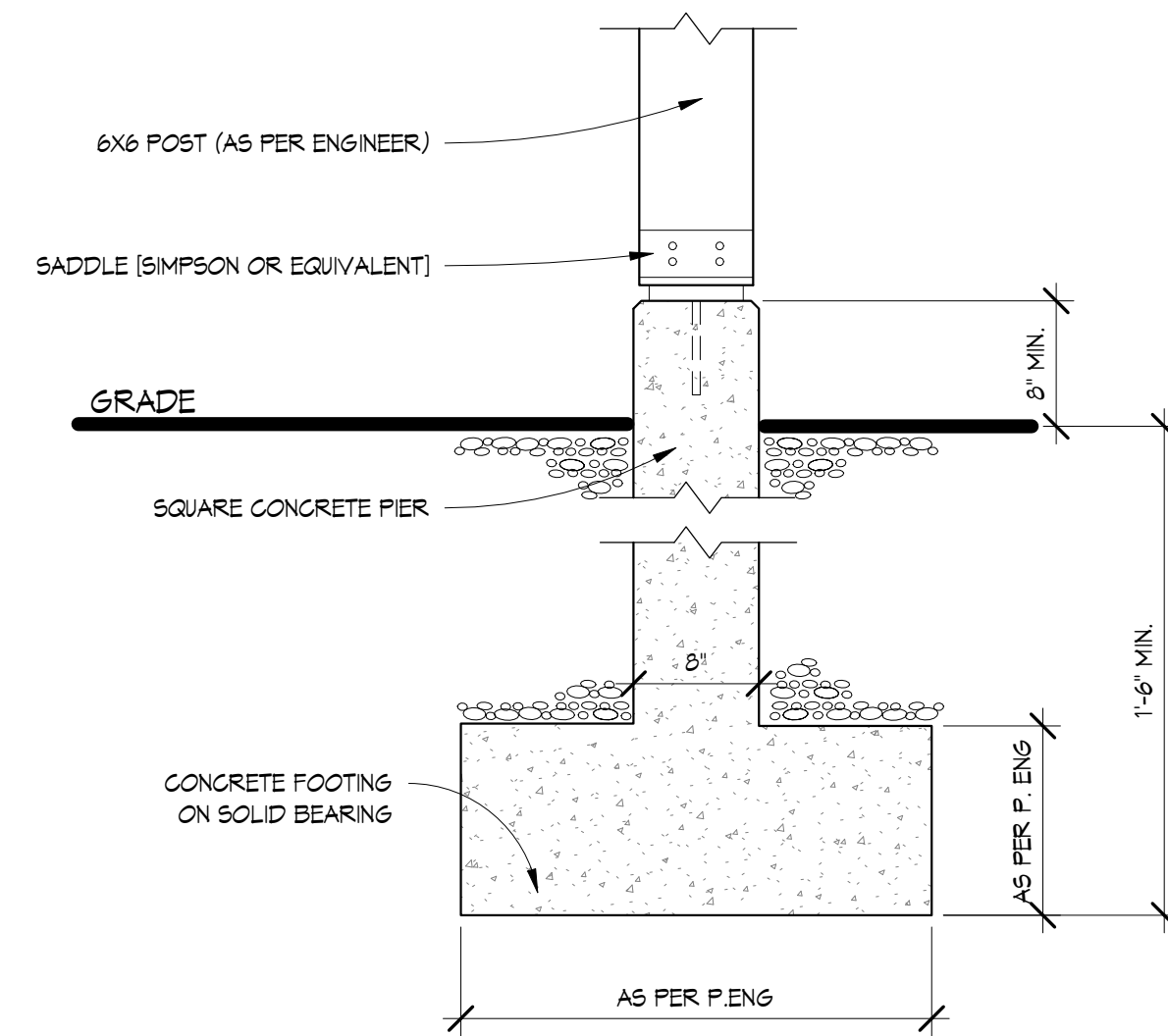
Section B-B
1/4" = 1'-0"

- EXISTING ROOF RIDGE 103.9'
- EXISTING BUILDING HEIGHT 100.8'
- EXISTING MAIN FLOOR CEILING 99.3'
- MAIN FLOOR 91.5'
- LOWER FLOOR CEILING 90.8'
- LOWER FLOOR 84.0'
- MASTER BEDROOM / BEDROOM 3 FLOOR 82.3'

NOTE: ALL RAIN SCREEN DETAILS TO BE CONFIRMED ON SITE WITH BUILDING INSPECTOR



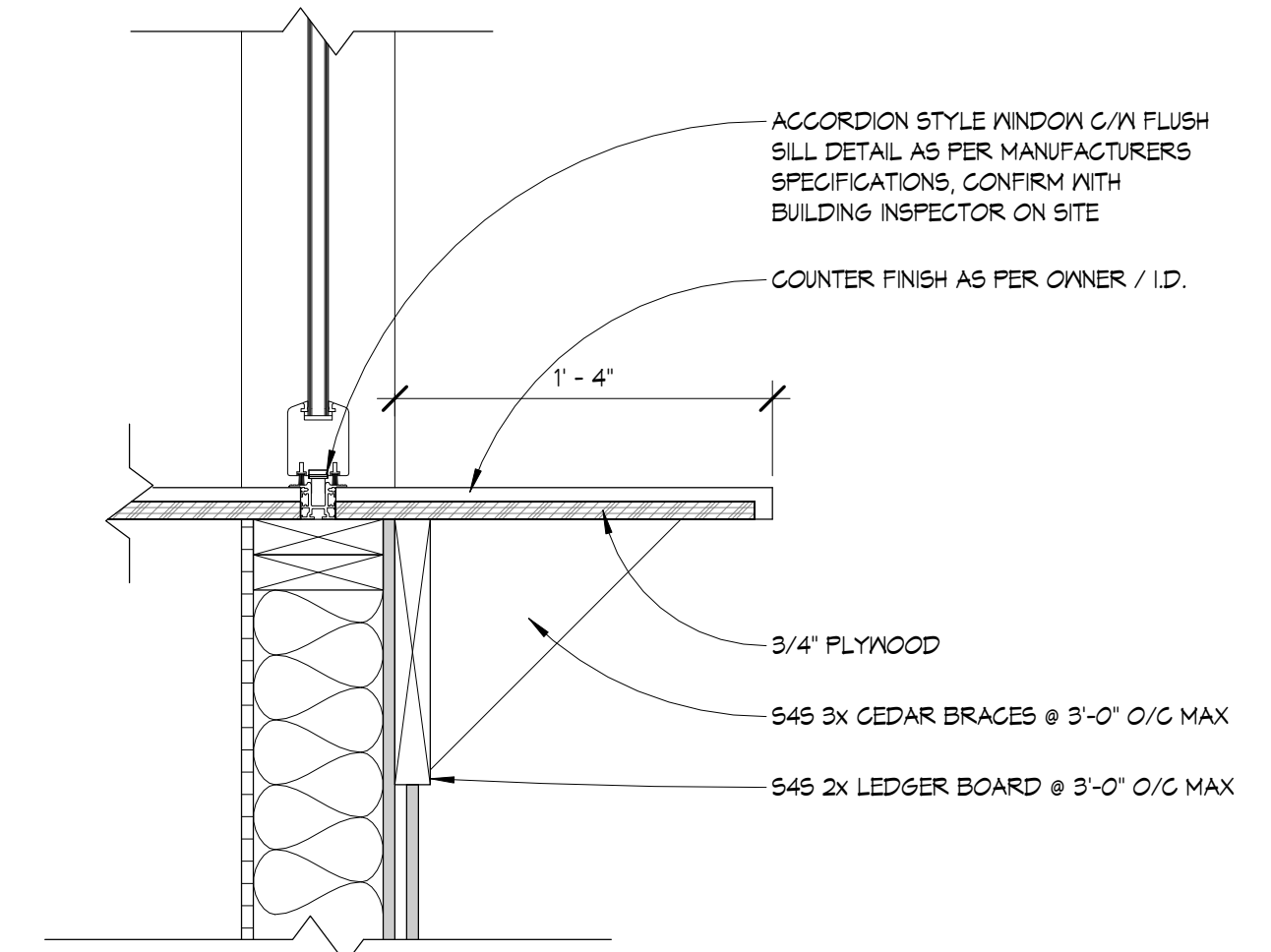
1
A-8 Insulated Existing Foundation Wall
1/2" = 1'-0"



2
A-8 Pier Footing
1" = 1'-0"

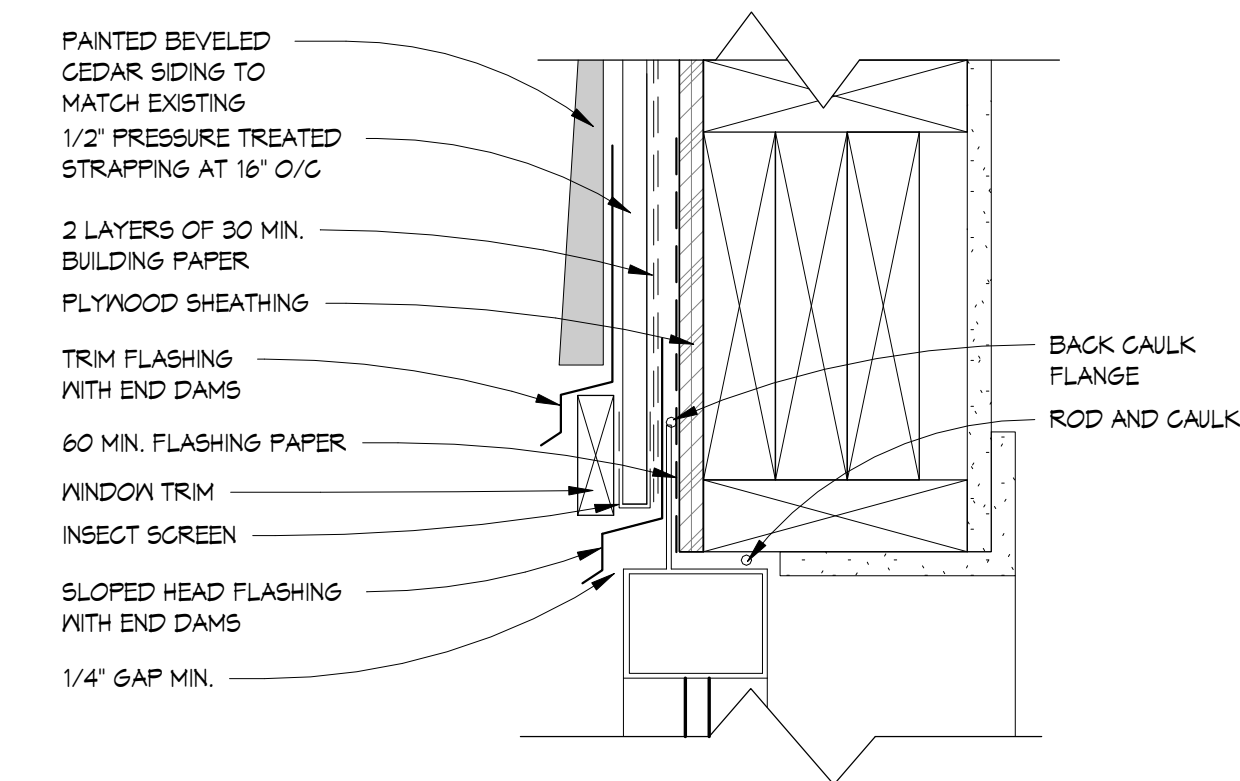
DOOR SCHEDULE							
ID	COUNT	WIDTH	HEIGHT	FAMILY	MATERIAL	ASSEMBLY	NOTES
1	1	10'-0"	6'-8"	Exterior, Nana Wall	WOOD, TEMPERED GLASS	Aluminum-Clad Over Wood Folding System	WEATHER STRIPPING, NPR HINGES, TEMPERED GLASS
2	1	6'-0"	6'-8"	Exterior, Sliding, Full Lite	WOOD PAINT GRADE, TEMPERED GLASS	SOLID CORE	WEATHER STRIPPING, TEMPERED GLASS
3	1	3'-0"	6'-8"	Exterior, Swing, Single, 1 Lite, Half Flat Top	WOOD PAINT GRADE, TEMPERED GLASS	SOLID CORE	WEATHER STRIPPING, TEMPERED GLASS
4	1	2'-8"	6'-8"	Exterior, Swing, Single, Full Lite	WOOD PAINT GRADE, TEMPERED GLASS	SOLID CORE	STYLE AS PER OWNER
5	1	5'-0"	6'-8"	Interior, Swing, Double, Flush Panel	WOOD PAINT GRADE	SOLID CORE	STYLE AS PER OWNER
6	1	4'-0"	6'-8"	Interior, Sliding, Double, Flush Panel	WOOD PAINT GRADE	SOLID CORE	STYLE AS PER OWNER
8	5	2'-8"	6'-8"	Interior, Swing, Single, Flush Panel		SOLID CORE	STYLE AS PER OWNER
10	9	2'-8"	6'-8"	Interior, Swing, Single, Flush Panel		SOLID CORE	STYLE AS PER OWNER
12	2	2'-0"	6'-8"	Interior, Swing, Single, Flush Panel		SOLID CORE	STYLE AS PER OWNER
13	1	3'-0"	6'-8"	Exterior, Swing, Single, Full Lite	WOOD PAINT GRADE, TEMPERED GLASS	SOLID CORE	WEATHER STRIPPING, NPR HINGES, TEMPERED GLASS
14	2	2'-4"	6'-8"	Interior, Swing, Single, Flush Panel		SOLID CORE	STYLE AS PER OWNER
TOTAL: 25							

WINDOW SCHEDULE						
ID	COUNT	WIDTH	HEIGHT	FAMILY	MATERIAL	NOTES
A	1	8'-0"	3'-8"	Accordion, Four Panel	VINYL	STYLE TO MATCH EXISTING
B	3	6'-0"	2'-0"	Fixed	VINYL, TEMPERED GLASS	STYLE TO MATCH EXISTING
C	1	4'-0"	4'-0"	Sliding, Double	VINYL	ENSURE EGRESS, STYLE TO MATCH EXISTING
D	1	4'-0"	2'-0"	Fixed	VINYL	STYLE TO MATCH EXISTING
E	1	2'-4"	6'-0"	Fixed	VINYL, TEMPERED GLASS	STYLE TO MATCH EXISTING
F	2	2'-0"	4'-0"	Skylight, Flat	ALUMINUM, TEMPERED GLASS	STYLE TO MATCH EXISTING
G	1	2'-0"	6'-8"	Fixed	VINYL	STYLE TO MATCH EXISTING
TOTAL: 10						

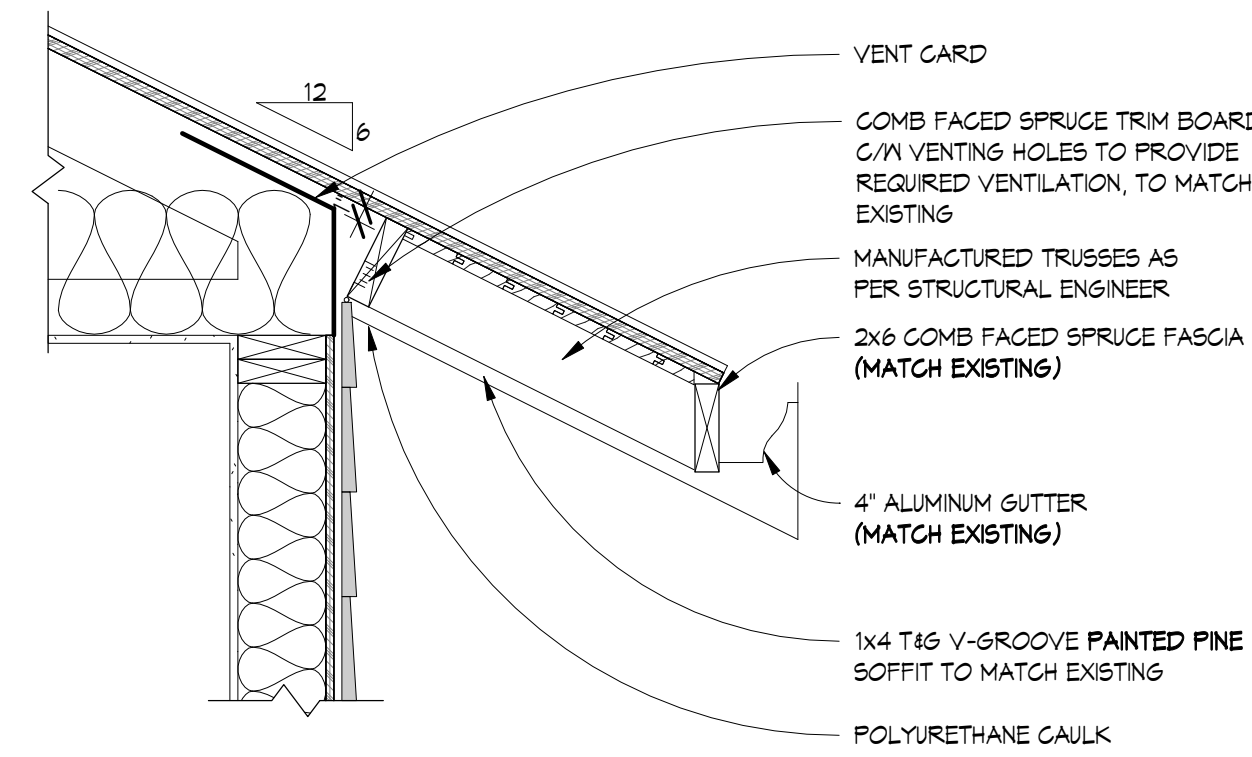


7
A-8 Servery Window
1 1/2" = 1'-0"

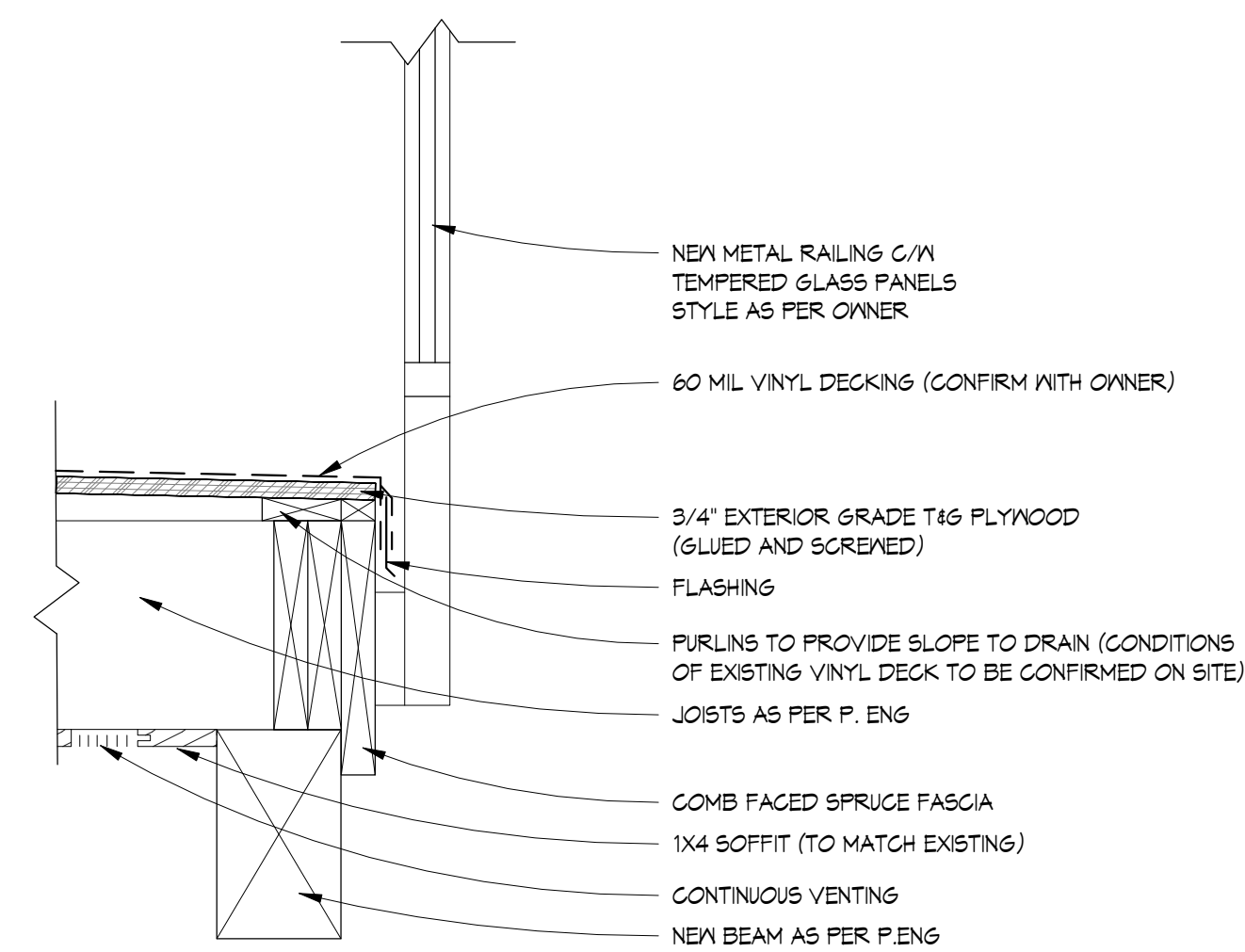
NOTE: ALL RAIN SCREEN DETAILS TO BE CONFIRMED ON SITE WITH BUILDING INSPECTOR



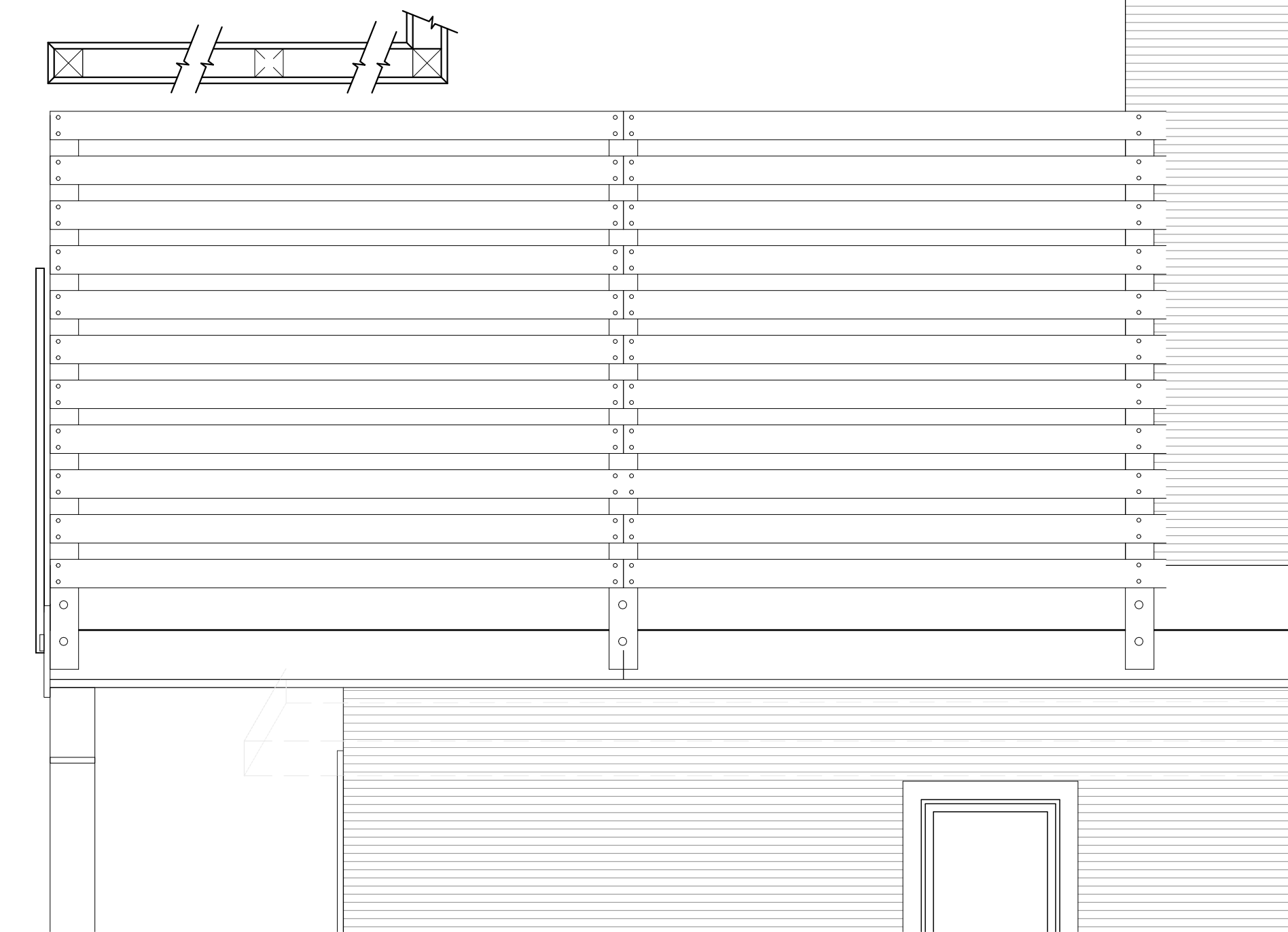
3
A-8 New Walls with Rainscreen
3" = 1'-0"



4
A-8 New Trussed Roof Venting
1" = 1'-0"



5
A-8 Vinyl Deck Roof Venting
1 1/2" = 1'-0"



6
A-6 Slat Wall Detail
3/4" = 1'-0"