

**CITY OF MERCER ISLAND**  
**DEVELOPMENT SERVICES GROUP**  
 9611 SE 36TH STREET | MERCER ISLAND, WA 98040  
 PHONE: 206.275.7605 | www.mercer.gov



**INSPECTION REQUESTS:**  
 online: [www.mercer.gov/BuildingPermit.com](http://www.mercer.gov/BuildingPermit.com)  
 voicemail: (206) 275-7730

NOTE: ALL RECORDS AND DRAWINGS ARE SUBJECT TO PUBLIC DISCLOSURE AS REQUIRED BY RCW 42.56

**APPLICANT TO COMPLETE THE FOLLOWING INFORMATION:**

**Applicant Contact Information prior to permit issuance:**  
 Name: Richard Flaks / RF Architecture  
 Address: 7421 214th Ave E Bonney Lake WA 98301  
 Phone: (253) 359-4039  
 Email: richard@rfarchitecture.com

**Applicant Contact Information post permit issuance:**  
 Name: Richard Flaks / RF Architecture  
 Address: 7421 214th Ave E Bonney Lake, WA 98301  
 Phone: (253) 359-4039  
 Email: richard@rfarchitecture.com

**REQUIRED SPECIAL INSPECTIONS / STRUCTURAL OBSERVATIONS:**

It is the Engineer of Record's responsibility to specify all required Special Inspections or Structural Observations (check items below). The owner is responsible for hiring an approved private Special Inspector for the checked inspections noted below. All Special Inspectors (except Geotechnical) must be WAIG certified. When Special Inspection or Structural Observation is required, the report shall be submitted to the City Building Inspector prior to the City Inspection. Note: Inspection by the City Inspector is required in addition to the Special Inspection or Structural Observation indicated below. Do not cover or conceal any work prior to the City Inspection.

**STRUCTURAL OBSERVATION BY ENGINEER OF RECORD (EOR):**  
 Engineer of Record: Terry Baldwin, PE Company: BAT design & Engineering Phone: (425) 503-1193  
 General Conformance to Construction Documents  Other:

**SOILS / GEOTECHNICAL:**  
 Special Inspector: Marc Majumdar Company: Geotech Consultants Phone: (425) 260-1116  
 Erosion control measures  Subsurface drainage placement  
 Shoring installation and monitoring  Verify fill material and compaction  
 Observe and monitor excavation  Retrievable installation  
 Verification of soil bearing  Pile placement (auger cast/driven pile)  
 Other:  Other:

**REINFORCED CONCRETE:**  
 Special Inspector: Not known yet Company: JAR Phone: (425) 881-5812  
 Concrete strength  Retaining wall construction  
 Reinforcing steel and concrete placement  Precast / Precast construction  
 Shotcrete placement  Other:  
 Other:

**STRUCTURAL STEEL:**  
 Special Inspector: \_\_\_\_\_ Company: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Fabrication and shop welds  Moment frame construction  
 Structural steel erection, field welds and bolting  Other:  
 Other:

**STRUCTURAL MASONRY:**  
 Special Inspector: \_\_\_\_\_ Company: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Mortar strength  Glass unit masonry installation  
 Masonry unit strength  Wall panel and veneer installation  
 Other:  Other:  
 Other:

**WOOD:**  
 Special Inspector / Engineer of Record: Terry Baldwin, PE Company: BAT Phone: (425) 503-1193  
 Lateral resisting system construction  High strength diaphragm construction  
 Other:  Other:

**OTHER SPECIAL INSPECTIONS:**  
 Special Inspector: Not known yet Company: JAR Phone: (425) 881-5812  
 Epoxy grout installations  Stucco installation  
 Expansion anchor installations  Infiltration System  
 Other post installed anchors  Exterior Insulation Finish System (EIFS) installation  
 Alternative construction methods:  Other:  
 Alternative construction materials:  Other:

The Applicant is required to select all deferred submittals / shop drawings for submittal to the City for review and approval prior to item fabrication / construction.

Connector plate wood trusses  Post tension layout  
 Metal joist / metal trusses  Exterior cladding  
 Premanufactured structures (stairs, etc.)  Window wall / curtain wall construction  
 Freshly concrete elements  Other:  
 Other:

**PERMIT INFORMATION AND OBSERVATIONS:**

Indicate where the following information is located in the drawing set. Alternatively, incorporate or include the Residential Energy Code Prescriptive Compliance (RECC) Form into the drawing set.

Sheet: \_\_\_\_\_

Building Envelope: [see table A-10.1](#)  Air Leakage Testing: [see table A-10.1.2.1](#)  
 Whole House Ventilation: [see table A-10.1.1](#)  Provide air leakage test report verifying air leakage rate does not to exceed 5 air changes per hour.  
 ENERGY Credit Information: [see table A-10.1.2](#)  Duct Leakage Testing: [see table A-10.1.2.2](#)  
 RECC Form Information: [see table A-10.1.3](#)  Post-construction Test: [see table A-10.1.2.3](#)  
 (If incorporated within drawing set)  Rough-in Test: [see table A-10.1.2.1](#)

FILE NAME: DSG CVR 2016 24436.PDF

TO BE COMPLETED BY DSG

**PROJECT ALERTS:**  
 Construction of the project shall be from approved plans only. No deviation from the approved project plans is allowed without prior approval from the City of Mercer Island. Approved plans must be kept on site and maintained in good condition.

Refer to "Conditions of Permit Approval" provided at permit issuance for required construction rules and regulations, including:  
 • Site Considerations • ROW restrictions • Additional Fire Code Requirements  
 • Hours of Work • Drainage Requirements • Planning Requirements  
 • Construction Vehicle Parking Restrictions • Sewer Requirements • Noise Abatement Certification  
 • Access Road Requirements • Water Service Requirements • Tree Requirements  
 Refer to "Preconstruction Meeting Checklist" provided at the preconstruction meeting for development related requirements.  
 Temporary site address with minimum of high numbers visible from the street must be installed.  
 Erosion control measures must be as shown on approved project drawings. All erosion control to be in place and inspected prior to the start of any site work.  
 A City of Mercer Island Business License is required for all subcontractors. Call (206) 275-7783 for more information.

Tree protection as shown on approved drawings shall be installed at tree dripline prior to start of any site work and must remain in place throughout the project.  
 No trees shall be cut without a City of Mercer Island tree permit.  
 Replacement trees must be a minimum of six feet tall at installation. They must be planted and approved prior to final inspection.  
 For this project, N/A - trees are authorized to be removed and replaced with N/A - trees.  
 This project appears to be within a protected eagle nest area. Contact Federal Fish and Wildlife at (360) 534-9304 or visit their website at <http://www.fws.gov/pacific/eagle>

**FIRE PROTECTION REQUIREMENTS:**  
 Separate Permits are required for ALL fire protection systems. For more information, see <http://www.mercer.gov/Permit.asp?navID=2614>

Fire Sprinkler: Western States  Monitored Household Fire Alarm per NFPA 72  
 NFPA 13D  Monitored Sprinkler  
 NFPA 13R  Water Flow Alarm  
 NFPA 13  Other:  
 Approved Fire Code Alternatives:  
 FCA1  FCA3  
 FCA2  FCA4

Fire sprinkler design calculations must be provided prior to determining water supply system requirements.  
 Water Supply system upgrade required  
 City installation.  
 Applicant installation.  
 Required Service Line Size: N/A Required Supply Line Size: N/A Required Meter Size: N/A  
 (water main to meter) (water main to house)  
 Abandonment of existing service and meter required at main.  
 Pressure reducing valve required if pressure exceeds 80 psi.  
 Reduced pressure backflow assembly (RPBA) required for all lots with waterfront or on-city water supply (private wells or lake irrigation).  
 Additional water supply requirements:

On site detention system required.  Direct discharge into the lake.  
 On site infiltration system required.  No Storm Water permit required.  
 As-built utility drawings required.  Connection to public storm drainage conveyance system req'd.  
 Full size drawings required.  Other:

Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is lower than the elevation of the upstream manhole rim or when side sewer is shared with one or more properties.  
 Video tape of existing sewer required (see standard details)  
 New connection.  Connect to existing.  Disconnect permit required.  Reconnect permit required.  
 Other:  
 Note: When side sewer is to be connected to the lake line you will need to schedule three (3) days in advance with the City of Mercer Island Maintenance Department at (206) 275-7820.

**Code alternatives must be inspected. Refer to the Inspection Checklist**  
 CA1: \_\_\_\_\_  CA2: \_\_\_\_\_

**SURVEY REQUIREMENTS:**

Surveyor shall verify points chosen for height calculations and point verification shall be submitted at the time of City foundation inspection. A property survey may be required to verify setbacks and in some cases buildings must be surveyed onto the lot. The City reserves the right to request an Impervious Area Survey at any time prior to issuance of Certificate of Occupancy.

Surveyor: Terrance Phone: \_\_\_\_\_  
 Building height survey  Building setback survey  
 Impervious surface survey  Other:  
 MAXIMUM 40 PERCENT ALTERATION INSPECTION: [see table A-10.1.2.1.1](#)  
 A Building Inspection prior to demolition is required for all legally nonconforming single family dwelling to ensure no more than 40 percent of the dwelling's exterior walls are structurally altered. Contact the Building Inspector at (206) 275-7730.  
 Civil / Drainage  LUP / Setback requirements

**GEOTECHNICAL INFORMATION:**

Land clearing, grading, filling and foundation work within geologic hazard areas is NOT PERMITTED between October 1 and April 1 without an approved Seasonal Development Limitation Waiver.

Geotechnical Report provided. All construction must comply with the recommendations of the Geotechnical Report. A copy of report and other geotechnical information must be kept on site at all times.  
Alan McGinnis Geotechnical Engineer Phone: (425) 260-1116

**SEASONAL DEVELOPMENT LIMITATION RESTRICTION:**  
 Applies (Geologic Hazard Area). Grading not permitted between October 1 through April 1.  
 Waiver approved. Grading and excavation permitted subject to all conditions noted in Seasonal Development Limitation Waiver Permit.

Permit number: \_\_\_\_\_ Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

TO BE COMPLETED BY DSG

TO BE COMPLETED BY DSG

**REQUIRED CONSTRUCTION INSPECTION:**

It is the applicant's responsibility to contact DSG to schedule ALL inspections appropriate for the project. Request inspections online at [www.mercer.gov/BuildingPermit.com](http://www.mercer.gov/BuildingPermit.com) or by calling the inspection Hotline at (206) 275-7730. Allow at least 24 hours (48 hours for Reinforcing steel) in advance of desired inspection. Be specific as to type of inspection.

Inspector shall initial and date appropriate inspection only if approved. Note: Items marked with an "\*" require a separate permit. It is the applicant's responsibility to apply for and obtain all City of Mercer Island permits.  
**INSPECTIONS:** (Select in order of typical sequencing)

Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

Pre-construction Meeting to Review Conditions of Permit Approval.  
 Tree protection  
 Erosion control  
 Sewer disconnect and cap. If applicable, separate side-sewer permit required  
 Right-of-way use or work / easement, material delivery, etc. If applicable, separate ROW permit required  
 Land clearing, grading and demolition  
 Temporary power  
 Piling / Shoring / Shotcrete. If applicable, provide survey letter (property line), Geotechnical Engineer / Special Inspector reports of inspections (pile and shoring installation, etc.)  
 Footings, setbacks, UFER ground. If applicable, provide survey letter (building height and setbacks). Special Inspector reports of inspections (soil bearing capacity, compaction, earthwork, pile installation, etc.)  
 Foundation walls / concrete columns  
 Roof and footing drains  
 Foundation dewatering  
 Storm drainage, including (but not limited to):  
 • Connections to storm main in ROW  
 • Detention systems  
 • Infiltration systems  
 • Catch basins including catch-water separator trees  
 Water Service  
 Water Supply  
 Water as-built drawings  
 Side sewer installation, including (but not limited to):  
 • Connections to side sewer main  
 • Connections to existing side sewer  
 Driveway / Access road  
 Underslab electrical / mechanical / plumbing  
 Underslab insulation / vapor barrier / reinforcing  
 Underfloor framing  
 Nailing-Roof sheathing. If applicable, provide Special Inspection letter for lateral wood inspection.  
 Nailing-Exterior wall and Shearwall. If applicable, provide Special Inspection letter for lateral wood inspection.  
 Rough hydraulic installation  
 Rough electric installation  
 Rough fire alarm (wiring inspection)  
 Rough plumbing installation (DWV, water)  
 Rough mechanical  
 Gas piping  
 Rough fire sprinkler / hydrostatic and flow (bucket) test  
 Framing and glazing. If applicable, provide Special Inspection letter for lateral wood inspection.  
 Masonry construction (replace / walls / veneer / etc.)  
 Insulation installation  
 Stucco (paper and lath)  
 Shower pan (for tub)  
 Miscellaneous  
 Code Alternative CA1:  
 Code Alternative CA2:  
 Impact Fees Paid (if applicable)

Final Inspection: Tree Restoration \_\_\_\_\_  TF  
 Final Inspection: Fire protection, including (but not limited to):  
 • Sprinkler  FF  
 • Access Road  Fuel Tank Installation  
 • Fire Code Alternatives (see below)  Fire Extinguishing System  
 FCA1: \_\_\_\_\_  FCA3:  
 FCA2: \_\_\_\_\_  FCA4:  
 Final Inspection: Water supply protection, including (but not limited to):  
 backflow devices for:  
 • Waterfront property  TW  
 • Fire / lawn sprinkler  Boiler  
 Final Inspection: Site and utility. Includes landscape, utilities and ROW. Site restoration complete and as-built drawings ready for submittal.  TS  
 Final Inspection: Building, including electrical / mechanical / plumbing. If applicable, provide closest (summary) letters from Engineer, Special Inspectors, Geotechnical Engineer, and exterior wall cladding Inspectors (EIFS).  TB

**READY FOR OCCUPANCY (CERTIFICATE OF OCCUPANCY REQUIRED):**  
 Applicant option. Additional fees will be required and must be approved prior to occupancy. TCO requires tree plantings be completed.

Approved: \_\_\_\_\_ Start Date: \_\_\_\_\_ End Date: \_\_\_\_\_

**ADDITIONAL REQUIRED CITY INSPECTIONS:**  
 Call the appropriate contact to arrange the inspection.  
 Required Inspection(s): \_\_\_\_\_ Contact: \_\_\_\_\_ Phone: \_\_\_\_\_ Scheduling: \_\_\_\_\_

**IMPACT FEES:** If applicable, \_\_\_\_\_  
 Impact fees apply and are due prior to Final Inspection or on \_\_\_\_\_ whichever occurs first.

**PLAN REVIEW APPROVALS:**  
 Not all review disciplines may be required to review the documents.  
 DC: \_\_\_\_\_  RP: \_\_\_\_\_  NA: \_\_\_\_\_  NA: \_\_\_\_\_  NA: \_\_\_\_\_  
 Building Planning Engineering Life

REVISED: JULY 2019

**SF**  
 PERMIT NUMBER  
**2012-069**

ISSUED AFTER ALL REQUIRED INSPECTIONS HAVE BEEN PERFORMED AND APPROVED.

**PROJECT NAME: Murray Residence**  
**PROJECT ADDRESS: 4803 Forest Ave SE**

APPROVED DRAWINGS MUST BE KEPT ON THE BUILDING SITE AT ALL TIMES  
 REQUIRED FOR CODE COMPLIANCE

## GENERAL NOTES

THESE DRAWINGS ARE THE PROPERTY OF THE ARCHITECT/DESIGNER AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF THE ARCHITECT/DESIGNER. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF THE ARCHITECT/DESIGNER. COPYRIGHT 2015 BY DME CONSTRUCTION. THESE DRAWINGS ARE FULLY PROTECTED BY FEDERAL AND STATE COPYRIGHT LAWS. ANY INFRINGEMENT WILL BE VIGOROUSLY PROSECUTED.

THIS PROJECT SHALL COMPLY WITH THE FOLLOWING CODES:

- 2015 INTERNATIONAL RESIDENTIAL CODE
- 2015 WASHINGTON STATE ENERGY CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2015 INTERNATIONAL PLUMBING CODE
- 2015 INTERNATIONAL FIRE CODE

### CONTRACTORS RESPONSIBILITY

CONTRACTOR TO VERIFY ALL DIMENSIONS AND STRUCTURAL MEMBER SIZES PRIOR TO CONSTRUCTION.

CONTRACTOR TO INFORM ARCHITECT/DESIGNER OF ANY DISCREPANCIES IN THE DRAWINGS OR FROM THE CODES.

CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT/DESIGNER AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON THE DRAWINGS ONLY WILL NOT SATISFY THE REQUIREMENT.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED, ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNICAL, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THIS WORK.

ALL STRUCTURAL SYSTEMS SUCH AS WOOD TRUSSES WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERRECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH THE INSTRUCTIONS PREPARED BY THE SUPPLIER.

THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ARCHITECT/DESIGNER IF UNUSUAL, UNFORESEASABLE, OR UNEXPECTED SUBSURFACE CONDITIONS ARE ENCOUNTERED.

### DRAWINGS

GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK. DO NOT SCALE DRAWINGS.

NOTIFY ARCHITECT CONCERNING QUESTIONS, CHANGES, CONFLICTS OR OMISSIONS, IN THE EVENT OF CONFLICTS OR CHANGES BETWEEN DETAILS OR BETWEEN THE PLANS AND SPECIFICATIONS, NOTIFY ARCHITECT IMMEDIATELY. OBTAIN CLARIFICATION BEFORE PROCEEDING.

FACE OF FRAMING IS TO BE FLUSH WITH FACE OF CONCRETE, UNLESS OTHERWISE INDICATED.

THE TYPICAL EXTERIOR DIMENSIONS ARE TO FACE OF CONCRETE AND/OR FACE OF FRAMING. INTERIOR DIMENSIONS ARE TO FACE OF FRAMING, UNLESS OTHERWISE INDICATED.

DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION, WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE SIMILAR IN CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. REFER TO ARCHITECTURAL DRAWINGS FOR OPENINGS, ARCHITECTURAL REQUIREMENTS AND DIMENSIONS.

INFORMATION CONTAINED WITHIN THESE DRAWINGS WITH REGARD TO EXISTING CONDITIONS IS PROVIDED FOR THE CONVENIENCE OF THE GENERAL CONTRACTOR. ALL ATTEMPT HAVE BEEN MADE TO ACCURATELY REPRESENT THE EXISTING BUILDING AND SURROUNDINGS. WA OWNER SUPPLIED AS-BUILTS AND FIELD VERIFICATION. THE GENERAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK TO AVOID UNREASONABLE DELAYS TO THE SCHEDULE.

ALL DRAWINGS OF EXISTING CONDITIONS ARE FOR REFERENCE ONLY, ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED.

### SITE

N/A

### SOILS

CONTRACTOR TO VERIFY ALL DIMENSIONS AND STRUCTURAL MEMBER SIZES PRIOR TO CONSTRUCTION.

CONTRACTOR TO INFORM ARCHITECT/DESIGNER OF ANY DISCREPANCIES IN THE DRAWINGS OR FROM THE CODES.

CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT/DESIGNER AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON THE DRAWINGS ONLY WILL NOT SATISFY THE REQUIREMENT.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED, ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNICAL, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THIS WORK.

ALL STRUCTURAL SYSTEMS SUCH AS WOOD TRUSSES WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERRECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH THE INSTRUCTIONS PREPARED BY THE SUPPLIER.

THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ARCHITECT/DESIGNER IF UNUSUAL, UNFORESEASABLE, OR UNEXPECTED SUBSURFACE CONDITIONS ARE ENCOUNTERED.

### PERVIOUS PAPERS

N/A

### MATERIALS / ASSEMBLIES

CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL WORK AND MATERIALS IN ACCORDANCE WITH ALL APPLICABLE COUNTY, LOCAL BUILDING AND FIRE CODES AS REQUIRED.

ALL WOOD AND SONITUBE FORMS USED FOR CONCRETE IN THE GROUND OR BETWEEN FOUNDATION SILLS & THE GROUND SHALL BE REMOVED.

ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED WOOD OR ANY SPECIES OR FOUNDATION GRADE CEDAR OR REDWOOD, ALL MARKED BY AN APPROVED TESTING AGENCY.

PROVIDE 90# FELT BETWEEN POSTS & CONCRETE.

PROVIDE DRAFT STOPS, FIRE BLOCKING, AND FIRESTOPS AS REQUIRED BY CODE.

FLASHING AND COUNTER FLASHING TO BE MIN. 24 GAUGE OF CORROSION- RESISTANT METAL, AND SHALL BE INSTALLED IN COMPLIANCE WITH LOCAL BUILDING CODES AND MANUFACTURERS RECOMMENDATIONS.

GENERAL CONTRACTOR SHALL PROVIDE BLOCKING FOR ALL WALL-MOUNTED HARDWARE, TOILET ACCESSORIES, TOWEL BARS, LIGHT FIXTURES, BUILT-INS, ETC., AS REQUIRED FOR SECURE AND PROPER INSTALLATION.

ALL INTERIOR WALLS & CEILINGS SHALL HAVE 5/8" TYPE 'C' GYP. BD. (FIRECODE C CODE).

PROVIDE AN APPLICATION OF JOHN MANVILLE IGNITION BARRIER COATING AS AN IGNITION BARRIER OVER OPEN AND CLOSED-CELL SPRAY FOAM INSULATION IN MAIN FLOOR CEILING AND FLOOR OVER OCCUPIED SPACE.

PROVIDE A UL RATED "CLASS A" FIRE RESISTANT ROOFING MEMBRANE WHERE APPLICABLE.

ALL EXTERIOR DECKS TO BE CONSTRUCTED WITH PRESSURE TREATED WOOD.

VAPOR BARRIER BELOW SLABS ON GRADE TO BE 6 MIL POLYETHYLENE, PER SPECIFICATIONS.

ALL COUNTERS TO BE 3/4" A.F.F. UNLESS OTHERWISE NOTED.

PROVIDE 1 HR. FIRE RATED ASSEMBLY BETWEEN GARAGE AND LIVING SPACE.

MINIMUM STAIRWAY REQUIREMENTS ARE AS FOLLOWS: 36" MIN. WIDTH, 6"-8" MIN. HEADROOM, 8" MAX. RISE, AND 9" MIN. RUN FOR (4) OR MORE RISES. PROVIDE A HANDRAIL 34"-38" A.F.F. HAND GRIP PORTION TO BE CONTINUOUS AND 1 1/4"-2" IN CROSS SECTION WITH BOTH ENDS RETURNED. THERE SHALL BE A SPACE OF NOT LESS THAN 1 1/2" BETWEEN THE WALL AND THE HANDRAIL. GUARD RAILS SHALL BE IN ACCORDANCE WITH 2012 IRC, SECTION R302.

BATHUB, SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND SHOWER ENCLOSURES SHALL BE FINISHED WITH A NONABSORBENT SURFACE A MINIMUM OF 6" ABOVE THE FLOOR PER 2012 IRC, R307.2.

### WALLS

INSULATED WITH R-21 BATT (FOR 2x6 WALLS) AND R-21 SPRAY (FOR 2x4 WALLS), UNLESS NOTED OTHERWISE.

### FLOORS

PROVIDE R-30 BATT INSULATION OVER UNHEATED SPACE, UNLESS NOTED OTHERWISE.

### ROOFS AND CEILINGS

INSULATED WITH R-49 BATT, UNLESS NOTED OTHERWISE. PROVIDE INSULATION IN CEILING WHERE POSSIBLE AND IN RAFTERS IF VALUED CEILING USE R-38 BATT, IF CONDITION EXISTS, MAINTAIN A MIN. OF 1" CLEAR BETWEEN TOP OF INSULATION AND BOTTOM OF SHEATHING FOR VENTING. VENTING MUST OCCUR IN EACH JOIST SPACE, WHERE CONTINUOUS VENTING WITHIN A JOIST SPACE IS INTERRUPTED BY A HEADER (I.E. SKYLIGHT OR AT HIP END), PROVIDE (12) 1/2" VENTING HOLES AT THE TOP OF THE RAFTER AT THE HEADER TO ALLOW FOR CONTINUAL THROUGH VENTING INTO THE ADJACENT JOIST SPACE.

### SLAB ON GRADE

PROVE EXTRUDED RIDG CELL INSULATION R-10, INSULATION TO PROVIDE THERMAL BREAK BETWEEN SLAB AND FOOTING AND RUN FROM TOP OF SLAB TO THE BOTTOM OF FOOTING. INSULATION MAY BE INTERRUPTED FOR 6" EVERY 2'-0" TO ALLOW FOR DOWELING TO THE SLAB AND FOOTING TOGETHER.

### VAPOR BARRIER

AN APPROVED 10 MIL VAPOR BARRIER SHALL BE INSTALLED AT EXTERIOR WALLS AND AT ROOF DECKS, BELOW ENCLOSED JOIST SPACES WHERE CEILING FINISHES ARE DIRECTLY INSTALLED TO JOIST, AND ANY OTHER WALL OR CEILING SURFACES WHICH RECEIVE INSULATION. THIS VAPOR BARRIER MAY BE A COMPONENT OF THE INSULATION MATERIAL. APPLICATION AND INSTALLATIONS OF THE INSULATION AND VAPOR BARRIERS SHALL COMPLY WITH STAT OF WASHINGTON THERMAL INSULATION STANDARDS (HB 9)

### ENERGY

ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE IRC 2012 AND THE WASHINGTON STATE ENERGY CODE, LATEST EDITION. VERIFY ALL CONDITIONS BEFORE PROCEEDING WITH WORK.

ALL WOOD AND SONITUBE FORMS USED FOR CONCRETE IN THE GROUND OR BETWEEN FOUNDATION SILLS & THE GROUND SHALL BE REMOVED.

ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED WOOD OR ANY SPECIES OR FOUNDATION GRADE CEDAR OR REDWOOD, ALL MARKED BY AN APPROVED TESTING AGENCY.

PROVIDE 90# FELT BETWEEN POSTS & CONCRETE.

PROVIDE DRAFT STOPS, FIRE BLOCKING, AND FIRESTOPS AS REQUIRED BY CODE.

FLASHING AND COUNTER FLASHING TO BE MIN. 24 GAUGE OF CORROSION- RESISTANT METAL, AND SHALL BE INSTALLED IN COMPLIANCE WITH LOCAL BUILDING CODES AND MANUFACTURERS RECOMMENDATIONS.

GENERAL CONTRACTOR SHALL PROVIDE BLOCKING FOR ALL WALL-MOUNTED HARDWARE, TOILET ACCESSORIES, TOWEL BARS, LIGHT FIXTURES, BUILT-INS, ETC., AS REQUIRED FOR SECURE AND PROPER INSTALLATION.

ALL INTERIOR WALLS & CEILINGS SHALL HAVE 1/2" GYP. BD.

APPLICATION INSTALLATIONS OF INSULATION AND VAPOR BARRIERS SHALL COMPLY WITH STATE OF WASHINGTON THERMAL INSULATION STANDARDS (HB 98).

PROVIDE A UL RATED "CLASS A" FIRE RESISTANT ROOFING MEMBRANE WHERE APPLICABLE.

FLOOR INSULATION SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT WITH THE UNDERSIDE OF THE SUBFLOOR DECKING. INSULATION SUPPORTS SHALL BE INSTALLED 50 SPACING IS NO MORE THAN 24" O.C. FOUNDATION VENTS SHALL BE PLACED SO THAT THE TOP OF THE VENT IS BELOW THE LOWER SURFACE OF THE FLOOR INSULATION PER 2012 IRC, R402.2.3.

PROVIDE AN EAVE BATTLE FOR AIR PERMEABLE INSULATION IN THE VENTED ATTIC MAINTAINING AN OPENING EQUAL OR GREATER THAN THE SIZE OF THE VENT EXTENDING OVER THE TOP OF THE INSULATION PER 2012 IRC, R402.2.3.

PROVIDE AND SPECIFY HIGH-EFFICIENCY FIXTURES FOR ALL OUTDOOR LIGHTING ATTACHED TO THE BUILDING OR PROVIDE PHOTO DAYLIGHT CONTROL AND A MOTION SENSOR PER 2012 IRC.

PROVIDE AND SPECIFY THAT 70% OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICIENCY LAMPS PER 2015 IRC, R404.1.

### SECTION R406

ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS  
PART 1 SCOPE: THIS SECTION ESTABLISHES OPTIONS FOR ADDITIONAL CRITERIA TO BE MET FOR ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES, AS DEFINED IN SECTION 101.2 OF THE INTERNATIONAL RESIDENTIAL CODE TO DEMONSTRATE COMPLIANCE WITH THIS CODE. R406.2 ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS (MANDATORY). EACH DWELLING UNIT IN ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES, AS DEFINED IN SECTION 101.2 OF THE INTERNATIONAL RESIDENTIAL CODE SHALL COMPLY WITH SUFFICIENT OPTIONS FROM TABLE R406.2.30 AS TO ACHIEVE THE FOLLOWING MINIMUM NUMBER OF CREDITS: 2015 WASHINGTON STATE ENERGY CODE RE-33

- SMALL DWELLING UNIT: -----, 0.5 POINTS DWELLING UNITS LESS THAN 1500 SQUARE FEET IN CONDITIONED FLOOR AREA WITH LESS THAN 300 SQUARE FEET OF PENETRATION AREA, ADDITIONS TO EXISTING BUILDING THAT ARE LESS THAN 750 SQUARE FEET OF HEATED FLOOR AREA.
- MEDIUM DWELLING UNIT: -----, 1.5 POINTS ALL DWELLING UNITS THAT ARE NOT INCLUDED IN #1 OR #3.
- LARGE DWELLING UNIT: -----, 2.5 POINTS DWELLING UNITS EXCEEDING 5000 SQUARE FEET OF CONDITIONED FLOOR AREA. THE DRAWINGS INCLUDED WITH THE BUILDING PERMIT APPLICATION SHALL INDICATE WHICH OPTIONS HAVE BEEN SELECTED AND THE POINT VALUE OF EACH OPTION, REGARDLESS OF WHETHER SEPARATE MECHANICAL, PLUMBING, ELECTRICAL, OR OTHER PERMITS ARE UTILIZED FOR THE PROJECT.

TABLE 406.2 – ENERGY CREDITS (DEBITS) OPTION DESCRIPTION CREDIT(S)

1a – EFFICIENT BUILDING ENVELOPE 1a:  
PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS:  
PENETRATION U = 0.28  
FLOOR R-38  
SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB  
BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB  
OR  
COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOTAL UA BY 5% 0.5

1b – EFFICIENT BUILDING ENVELOPE 1b:  
PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS:  
PENETRATION U = 0.25  
WALL R-21 PLUS R-4  
FLOOR R-38  
BASEMENT WALL R-21 INT PLUS R-5 C1  
SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB  
BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB  
OR  
COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOTAL UA BY 15% 1.0

1c EFFICIENT BUILDING ENVELOPE 1c:  
PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS: PENETRATION U = 0.22  
CEILING AND SINGLE-RAFTER OR LEFT-VALUED R-49 ADVANCED  
WOOD FRAME WALL R-21 INT PLUS R-12 C1  
FLOOR R-38  
BASEMENT WALL R-21 INT PLUS R-12 C1  
SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB  
BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB  
OR  
COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOTAL UA BY 30% 2.0

2a – AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2a:  
COMPLIANCE BASED ON R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 4.0 AIR CHANGES PER HOUR MAXIMUM AND  
ALL WHOLE HOUSE VENTILATION REQUIREMENTS AS DETERMINED BY SECTION M507.3 OF THE INTERNATIONAL RESIDENTIAL CODE SHALL BE MET WITH A HIGH EFFICIENCY FAN (MAXIMUM 0.35 WATTS/CFM), NOT INTERLOCKED WITH THE FURNACE FAN. VENTILATION SYSTEMS USING A FURNACE INCLUDING AN ECM MOTOR ARE ALLOWED, PROVIDED THAT THEY ARE CONTROLLED TO OPERATE AT LOW SPEED IN VENTILATION ONLY MODE.  
TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE MAXIMUM TESTED BUILDING AIR LEAKAGE AND SHALL SHOW THE HEAT RECOVERY VENTILATION SYSTEM.

3a – HIGH EFFICIENCY HVAC EQUIPMENT 3a:  
GAS, PROPANE OR OIL-FIRED FURNACE WITH MINIMUM AFUE OF 95% OR GAS, PROPANE OR OIL-FIRED BOILER WITH MINIMUM AFUE OF 92% TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE HEATING EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY.

5b – EFFICIENT WATER HEATING 5b:  
WATER HEATING SYSTEM SHALL INCLUDE ONE OF THE FOLLOWING: GAS, PROPANE OR OIL WATER HEATER WITH MINIMUM EF OF 0.82  
OR  
ELECTRIC HEAT PUMP WATER HEATER WITH A MINIMUM EF OF 2.0 AND MEETING THE STANDARDS OF NEEA'S NORTHERN CLIMATE SPECIFICATIONS FOR HEAT PUMP WATER HEATERS  
OR  
WATER HEATER HEATED BY GROUND SOURCE HEAT PUMP MEETING THE REQUIREMENTS OF OPTION 3c.  
TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE WATER HEATER EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY AND, FOR SOLAR WATER HEATING SYSTEMS, THE CALCULATION OF THE MINIMUM ENERGY SAVINGS.

### WINDOWS / DOORS

IN EACH SLEEPING ROOM AN EGRESS WINDOW OR DOOR SHALL BE PROVIDED THAT HAS 5.7 S.F. OF CLEAR NET OPERABLE AREA. THE SMALLEST CLEAR MIN. DIMENSION SHALL NOT BE LESS THAN 20" IN WIDTH OR 24" IN HEIGHT. WINDOW SILLS IN SLEEPING ROOMS NOT TO EXCEED 44" ABOVE FLOOR PER 2012 IRC, R302.1 & 303.1.

ALL WINDOWS TO BE DOUBLE-GLAZED WITH A MINIMUM U-VALUE OF 0. 30 OR BETTER.

ALL GLAZING IN A DOOR OR WITHIN 12" OF DOOR, OR WITHIN 18" OF FLOOR OR WITHIN 60" OF TUB FLOOR, OR ANY OTHER HAZARDOUS AREA PER CODE, TO BE TEMPERED SAFETY GLASS.

20 MIN., SELF-CLOSING DOOR W/ WEATHER STRIPPING REQUIRED AT GARAGE ENTRANCE TO LIVING SPACE.

PROVIDE AT LEAST ONE EGRESS DOOR THAT IS SIDE HINGED WITH A MINIMUM CLEAR OPEN WIDTH OF 32" (36" WIDE DOOR) AND MINIMUM CLEAR HEIGHT OF NOT LESS THAN 78" PER 2012 IRC, R310.2.

WINDOW SILLS – WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72" ABOVE FINISHED GRADE OR SURFACE BELOW, THE SILL SHALL BE A MINIMUM OF 24" ABOVE THE FINISHED FLOOR OF THE ROOM IT IS IN. OPERABLE SECTIONS OF WINDOWS SHALL NOT PROMPT OPENINGS THAT ALLOW PASSAGE OF 4" DIAMETER SPHERE WHERE OPENINGS ARE WITHIN 24" OF THE FLOOR PER 2015 IRC, R312.2.1.

SKYLIGHT GLAZING MATERIAL TO MEET ALL REQUIREMENTS PER 2012 IRC, R308.6.2.

PROVIDE MINIMUM 4" CURB HEIGHT FOR SKYLIGHTS PER 2012 IRC, R308.6.8.

### GLAZING

TO BE IN COMPLIANCE WITH IRC 2015, SECTION R308 AND WASHINGTON STATE SAFETY OR TEMPERED GLASS. EXCEPTIONS ARE AS OUTLINED IN IRC 2015, SECTION R308.4. HAZARDOUS LOCATIONS ARE

- GLAZING IN ALL FIXED AND PREAMBLE PANELS OF SWINGING, SLIDING AND BI-FOLD DOORS.
- GLAZING IN ALL INDIVIDUAL FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24" ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE.
- GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
  - THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 S.F.
  - THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE THE FLOOR.
  - THE TOP EDGE OF THE GLAZING IS MORE THAN 36" ABOVE THE FLOOR.
  - ONE OR MORE WALKING SURFACES ARE WITHIN 36", MEASURED HORIZONTALLY AND IN A STRAIGHT LINE OF THE GLAZING.
- ALL GLAZING IN RAILINGS REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE. INCLUDED ARE STRUCTURAL BALLUSTER PANELS AND NONSTRUCTURAL INFILL PANELS.
- GLAZING IN ENCLOSURES FOR OR WALLS FACING HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM-ROOMS, BATHTUBS AND SHOWERS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.

### ATTIC

APPLY ROOFING IN ACCORDANCE WITH IRC 2015, SECTION R905. PROVIDE ATTIC VENTILATION AS INDICATED ON ROOF FRAMING PLANS/ROOF DETAILS.

ATTIC VENTILATION: THE TOTAL NET FREE VENTILATION AREA SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED EXCEPT THAT REDUCTION OF THE TOTAL AREA TO 1/300 IS PERMITTED PROVIDED THAT AT LEAST 50% AND NOT MORE THAN 80% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE. TO BE VENTILATED AT LEAST 3 FEET ABOVE THE EAVE OR CORNER VENTS. AS AN ALTERNATE, THE NET FREE CROSS VENTILATION AREA MAY BE REDUCED TO 1/300 WHEN A CLASS 1 OR II VAPOR BARRIER IS INSTALLED ON THE WARM-IN-WATER SIDE OF THE CEILING (RC 2015, SECTION R906.2).

ATTIC CROSS OPENING MUST BE PROVIDED FOR ALL ATTIC AREAS THAT EXCEED 30 S.F. AND HAVE A VERTICAL HEIGHT OF 30' OR GREATER. ROUGH FRAMED OPENING MIN. 22"x30". ACCESS TO BE UNOBSTRUCTED AND READILY ACCESSIBLE WHEN LOCATED IN A CEILING, MIN. 30" UNOBSTRUCTED HEADROOM AT SOME POINT ABOVE THE ACCESS MEASURED VERTICALLY FROM THE BOTTOM OF CEILING FRAMING MEMBERS (RC 2015, SECTION R807.1)

PROVIDE 2" MIN. CONTINUOUS SCREEN VENT AT EACH END OF EACH RAFTER/ROOF TRUSS BAY.

### VENTILATION

– PROVIDE PROPER ROOF & CRAWL SPACE VENTILATION PER 2015 IRC.

- VENT DRYER TO OUTSIDE PER MECHANICAL CODE.
- VENT ALL FANS TO OUTSIDE W/ 3" MIN. SEPARATION TO BUILDING OPENINGS.
- VENT HOT WATER TANK TO EXPANSION TANK.
- VENT DISHWASHER AT SINK.

### EXHAUST MINIMUMS:

PROVIDE SOURCE SPECIFIC INTERMITTENT OPERATION EXHAUST FANS WITH THE FOLLOWING MINIMUM STANDARDS:

BATHROOMS: 80 CFM  
LAUNDRY ROOM: 180 CFM  
KITCHEN HOODS & DOWNRAFTS: 400 CFM

PROVIDE WHOLE HOUSE VENTILATION SYSTEM SO AS TO CONFORM WITH STATE VENTILATION AND INDOOR AIR CODE.  
– CURRENT EDITION AND SHALL BE CAPABLE WITH THE FOLLOWING MINIMUM STANDARDS:  
– BE SIZED ACCORDING TO TABLE 3–2 WSEC AT 0.25" W.G. & SOUND RATED AT 1.5 SONES MAX...  
– BE CONTROLLED BY READILY ACCESSIBLE 24 HR TIMER CAPABLE OF CONTINUOUS OPERATION WITH MANUAL & AUTOMATIC CONTROL.  
– INSULATED DUCTS SIZED TO MIN. R-4 & TERMINATED OUTSIDE BUILDING.

ALL UNITS WILL BE SEALED COMBUSTION DIRECT VENTS. THEY WILL HAVE TWO PVC VENTS OFF EACH UNIT, ONE EXHAUST AND ONE COMBUSTION.

DRYERS ON BOTH FLOORS WILL GO DOWN THROUGH THE FLOOR IN JOIST BAY AND OUT TO RIM. THEY WILL HAVE ONE ELBOW AND BE 12' LONG.

CRAWL VENTILATION:  
TOTAL CUBIC FEET DIVIDED BY 15,124 CFM CONTINUOUSLY RUNNING.  
TWO FANTECH FG-8 IN-LINE FANS, ONE INTAKE AND ONE EXHAUST.

### MECHANICAL & ELECTRICAL

ALL WASTE LINES TO BE INSULATED WITH ACOUSTIC INSULATION, CAST IRON PIPING AT KEY LOCATIONS PER PLAN.

ELECTRICAL WIRING SHALL CONFORM TO THE 2015 WASHINGTON STATE ELECTRICAL CODE.

INSTALL OUTLETS AND SWITCHES AT HEIGHTS AND LOCATIONS REQUIRED BY 2015 IRC AND THE 2015 WASHINGTON STATE ELECTRICAL CODE.

LIGHTING WATTAGE SHALL MEET THE 2015 WASHINGTON STATE ELECTRICAL CODE.

PROVIDE SMOKE DETECTORS TO MEET THE 2015 IRC AND 2015 INTERNATIONAL FIRE CODE. SMOKE DETECTORS SHALL BE HARD WIRED AND EQUIPPED WITH BATTERY BACK UP. SMOKE DETECTORS SHALL SOUND AN ALARM THAT IS AUDIBLE THROUGH OUT THE BUILDING. SMOKE DETECTORS SHALL BE PLACED AT LEAST ON PER LEVEL, ONE IN EACH SLEEPING ROOM, ONE IN HALLWAY GIVING ACCESS TO THE SLEEPING ROOMS.

PROVIDE CARBON MONOXIDE DETECTORS AT ALL LEVEL PER 2015 IRC.

INSTALL A MONITORED NFPA 72 LOW VOLTAGE FIRE ALARM SYSTEM WITH HEAT SENSOR IN THE GARAGE. MONITORING COMPANY TO BE LICENSED AND BONDED.

INSTALL AN EXTERIOR SIREN CONNECTED INTO THE ALARM SYSTEM.

VERTICAL DISTANCE BETWEEN COOK TOP OF RANGE AND HOOD SHALL BE NO LESS THAN 30".

HOT WATER HEATER SHALL BE ANCHORED OR STRAPPED FOR EARTHQUAKE AND PLACED ON R-10 PAD IF LOCATED IN UNHEATED SPACE OR CONCRETE FLOOR.

PROVIDE COMBUSTION AIR FOR FURNACE PER CODE.

FURNACE AND WATER HEATER WITH IGNITION SOURCE SHALL BE ELEVATED SUCH THAT THE SOURCE OF IGNITION IS NOT LESS THAN 18" PER IRC, M1307.

MECHANICAL EQUIPMENT (PER DEFERRED SUBMITTAL):  
NAVEN TANKLESS WATER HEATER – MODEL NPE-240A  
AMERICAN STANDARD TWO STAGE FURNACE – MODEL # R9BVA860  
AMERICAN STANDARD 13 SEER AC UNIT – MODEL # RA1336

### ELEVATOR (PER DEFERRED SUBMITTAL):

ELEVATOR TO BE INSTALLED PER CURRENT WASHINGTON ADMINISTRATIVE CODE REQUIREMENTS, SEE SHOP DRAWINGS.

ELEVATOR SHALL COMPLY WITH ASME A17.1 AND R321.

A SEPARATE PERMIT IS REQUIRED FOR ELEVATOR.

### DEFERRED SUBMITTALS:

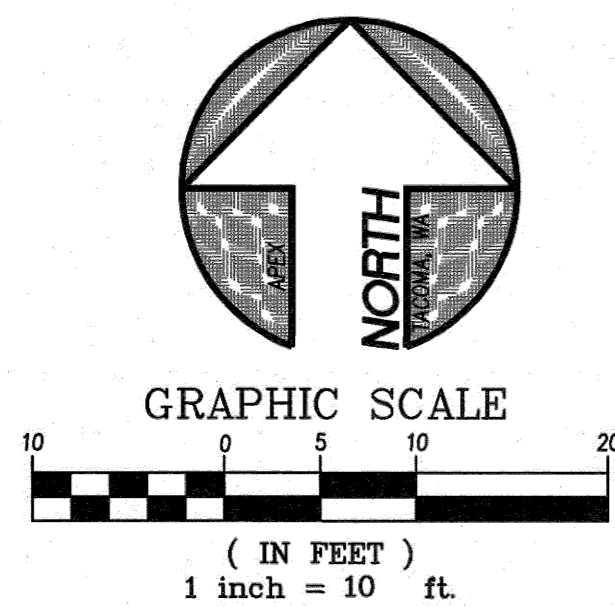
FOUNDATION & SHORING WATERPROOFING PRODUCTS & METHODS, GAS FIREPLACES, MECHANICAL EQUIPMENT, FIRE SPRINKLERS, APPLIANCES & VENTING, EXTERIOR RAILING, WATERPROOF DECK / BISON PAVER SYSTEM & WATERPROOF FLASHING.

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**TREE REFERENCE**

- #287 TO REMAIN
- #288 TO RETAIN
- #289 TO RETAIN
- #290 TO BE REMOVED
- #291 TO RETAIN
- #292 TO BE REMOVED
- #293 TO BE REMOVED
- #294 TO BE REMOVED
- #295 TO BE REMOVED
- #296 TO BE REMOVED
- #297 TO BE REMOVED
- #298 TO BE REMOVED
- #299 TO BE REMOVED
- #300 TO BE REMOVED
- #744 TO RETAIN
- #745 TO RETAIN
- #746 TO RETAIN
- #748 TO RETAIN
- #750 TO RETAIN
- #751 TO BE REMOVED



**DEMOLITION NOTES**

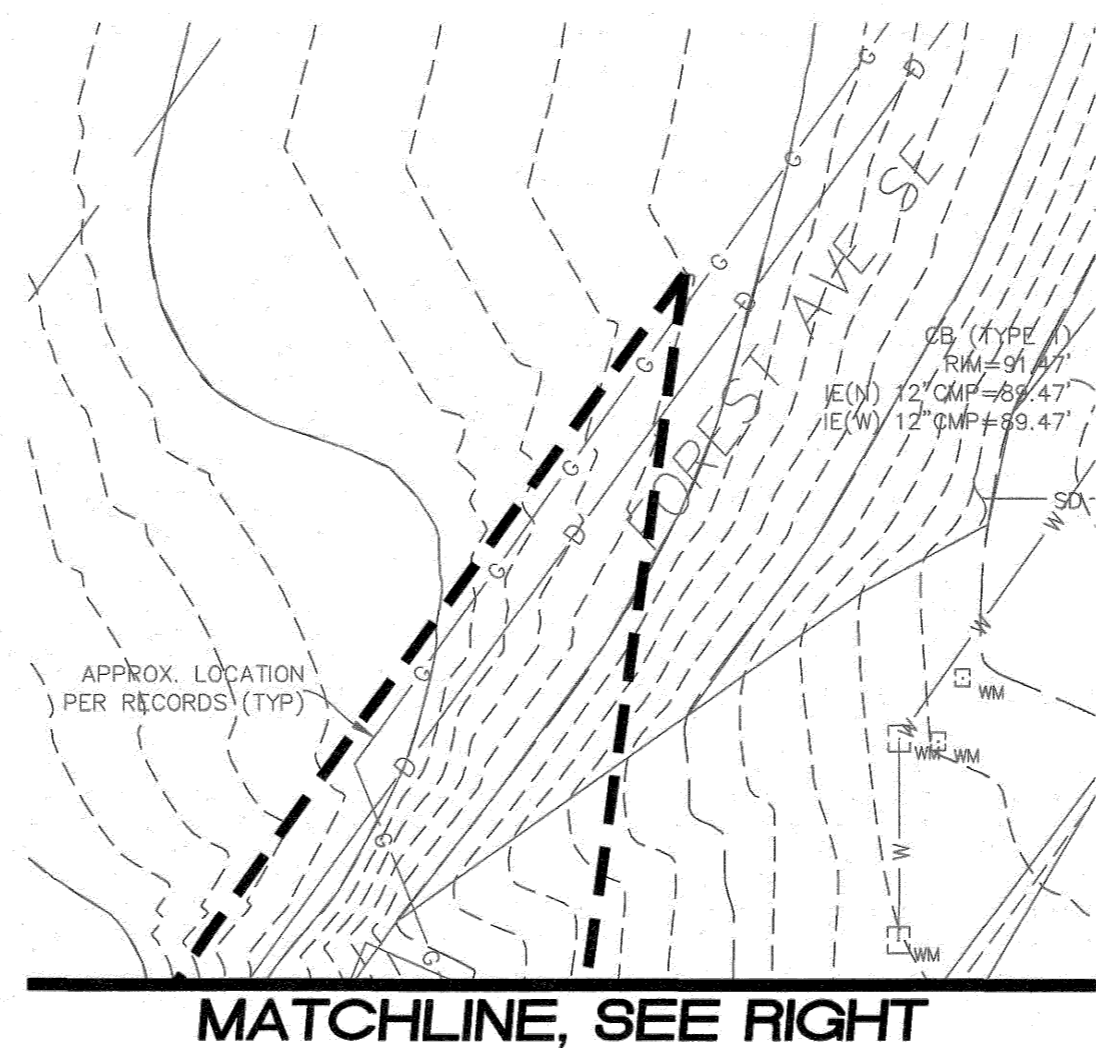
STRUCTURE REMOVAL: 1,716 SQ.FT.  
HARD SURFACE REMOVAL: 4,265 SQ.FT.

**DEMOLITION LEGEND**

- (1) FILTER FABRIC FENCE AT CLEARING LIMITS AND LIMITS OF EXCAVATION
- (2) INLET PROTECTION
- (3) CONSTRUCTION ENTRANCE
- (4) FILTER FABRIC FENCE
- EXISTING STRUCTURE, BUILDING, ROCKERY, PATIO, CONCRETE, ETC TO BE REMOVED
- (5) STRAW WATTLES
- TREE PROTECTION
- TREES TO BE REMOVED

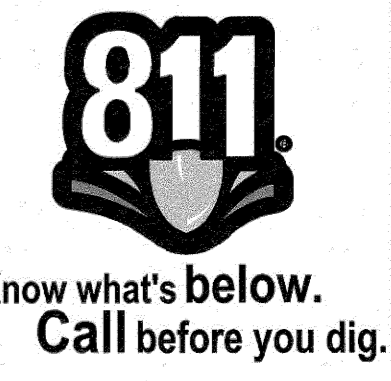
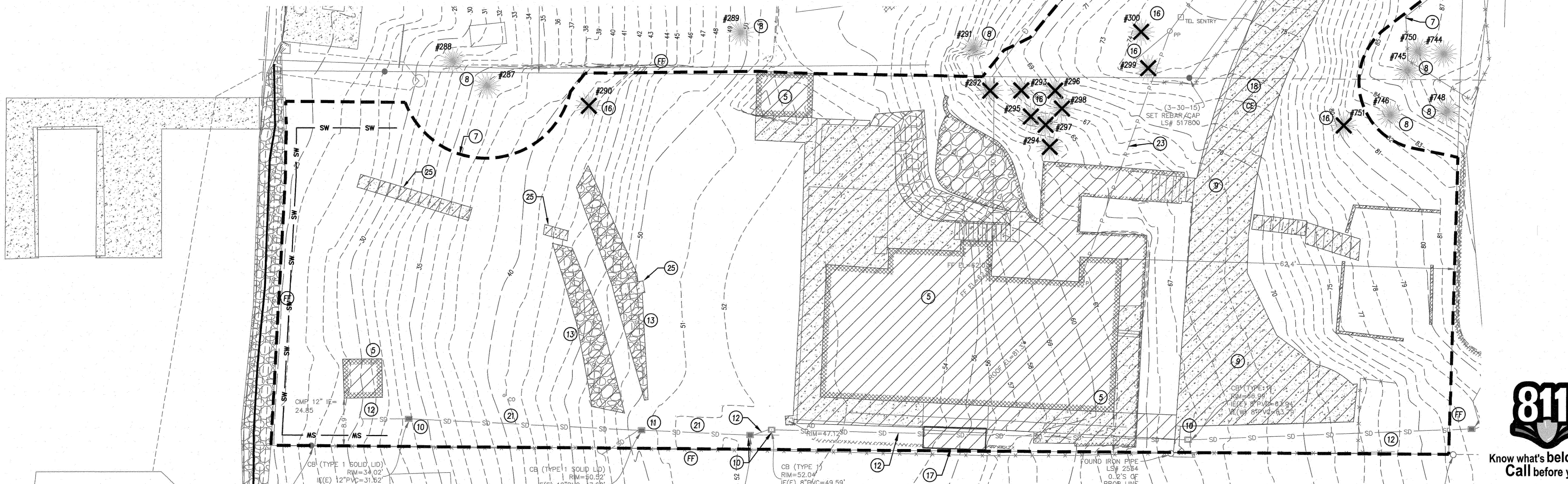
**PLAN NOTES**

1. PRIOR TO THE START OF ANY DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL INSTALL FILTER FABRIC FENCE, INLET PROTECTION, STRAW WATTLES, AND TREE PROTECTION.
2. THE EXISTING UTILITY LOCATIONS SHOWN ARE TO BE USED AS APPROXIMATE LOCATIONS ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CONTACT UTILITIES UNDERGROUND LOCATION CENTER (811).
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE PUBLIC AND/OR PRIVATE UTILITIES AND SERVICES WHICH ARE NOT THE RESPONSIBILITY OF THE UNDERGROUND LOCATION CENTER.
4. CAUTION - EXTREME HAZARD - OVERHEAD ELECTRICAL SERVICE LINES ARE GENERALLY NOT SHOWN ON THE DRAWINGS. ELECTRICAL LINES, IF SHOWN, ARE LOCATED POINT-TO-POINT, POWER POLE-TO-POWER POLE CONNECTION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXTENT OF HAZARD CREATED BY OVERHEAD ELECTRICAL POWER IN ALL AREAS AND SHALL FOLLOW PROCEDURES DURING CONSTRUCTION AS REQUIRED BY LAW AND REGULATION. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MEET WITH UTILITY OWNERS AND DETERMINE THE EXTENT OF HAZARD AND REMEDIAL MEASURES AND SHALL TAKE WHATEVER PRECAUTIONS MAY BE REQUIRED.
5. REMOVE EXISTING STRUCTURE.
6. THE CONTRACTOR AND OWNER SHALL COORDINATE ALL INSPECTIONS. ALL COSTS INCURRED SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
7. TREE PROTECTION. SEE DETAIL ON SHEET C3.1.
8. EXISTING TREE TO REMAIN.
9. REMOVE EXISTING CONCRETE DRIVEWAY. CONTRACTOR TO COORDINATE DRIVEWAY REMOVAL WITH NEW DRIVEWAY AND GRADING TO MAINTAIN A CONSTRUCTION ACCESS.
10. EXISTING CB TO REMAIN. DO NOT DISTURB.
11. EXISTING CB, REMOVE AND REPLACE (SEE SHEET C3.0).
12. EXISTING STORM CONVEYANCE TO REMAIN. DO NOT DISTURB.
13. REMOVE EXISTING ROCKERY.
14. SEE ARBORIST REPORT FOR TREE ANALYSIS.
15. REMOVE EXISTING FENCE.
16. EXISTING TREES TO BE REMOVED.
17. REMOVE EXISTING GREENHOUSE STRUCTURE. DO NOT DISTURB EXISTING STORM CONVEYANCE.
18. EXISTING DRIVEWAY TO BE USED AS THE CONSTRUCTION ACCESS.
19. ALL DEMOLISHED MATERIALS ARE TO BE LEGALLY DISPOSED OFFSITE.
20. CONTRACTOR TO NOTIFY AND COORDINATE WITH THE PROJECT ARBORIST PRIOR TO ANY TREE REMOVAL.
21. EXISTING CONVEYANCE TO BE REMOVED AND REPLACED (SEE SHEET C3.0).
22. SAWCUT DRIVEWAY TO PROVIDE A SMOOTH CONFORM.
23. CONTRACTOR TO COORDINATE WITH UTILITY PURVEYOR WHEN REMOVING EXISTING UTILITY CONNECTIONS.
24. REMOVE EXISTING DRAIN.
25. REMOVE EXISTING CONCRETE STAIRS.
26. RELOCATE EXISTING GENERATOR.

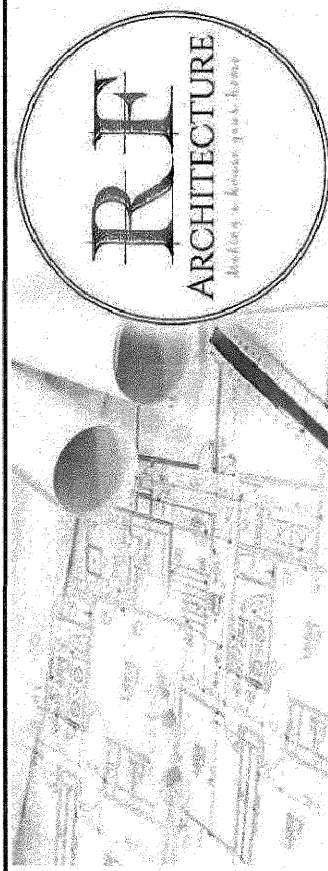


MATCHLINE, SEE LEFT

MATCHLINE, SEE RIGHT

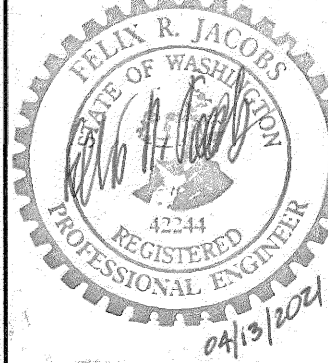


RF ARCHITECTURE  
4211 4TH AVENUE EAST  
BONNEVILLE, WA 98391  
253-399-4039

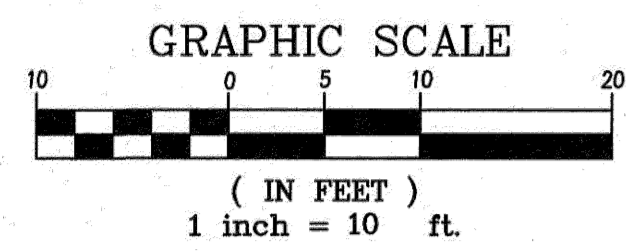
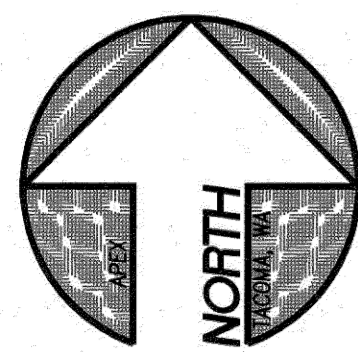


MURRAY RESIDENCE  
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APRIL 13, 2021  
SEC 13/24 T24N R04E  
DEMOLITION  
PLAN  
C10  
APEX JOB NO. 34578  
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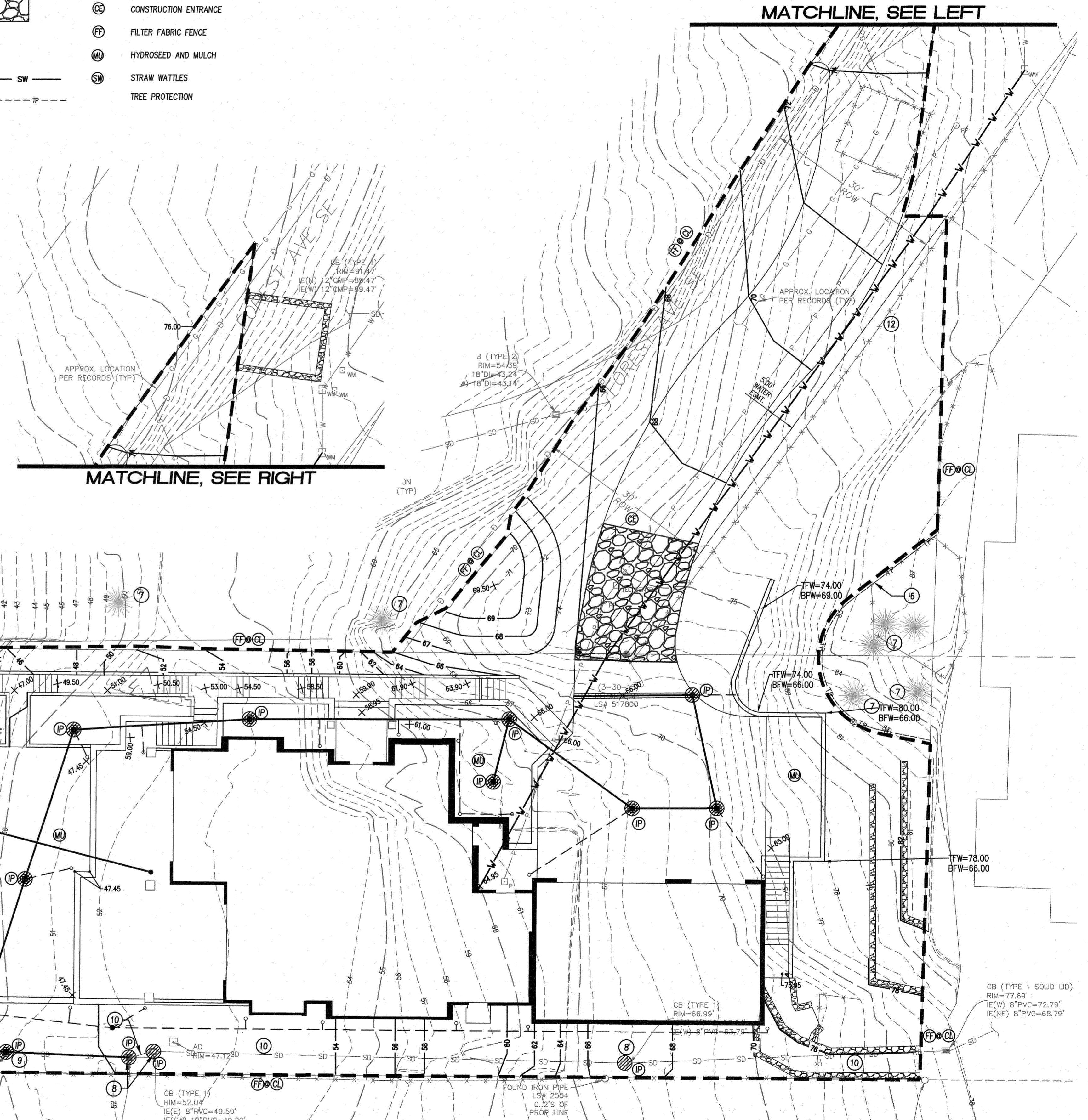
Know what's below.  
Call before you dig.

### T.E.S.C. LEGEND

- FILTER FABRIC FENCE AT CLEARING LIMITS AND LIMITS OF EXCAVATION
- IP INLET PROTECTION
- CE CONSTRUCTION ENTRANCE
- FF FILTER FABRIC FENCE
- ML HYDROSEED AND MULCH
- SW STRAW WATTLES
- TP TREE PROTECTION

### PLAN NOTES

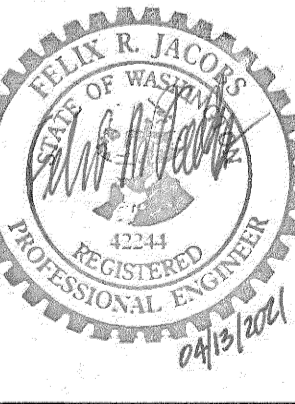
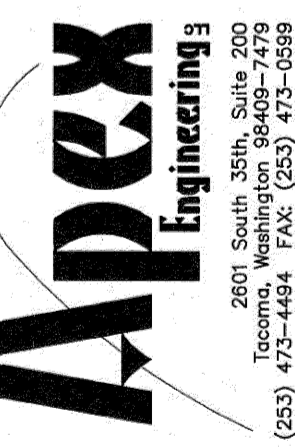
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2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE PUBLIC AND/OR PRIVATE UTILITIES AND SERVICES WHICH ARE NOT THE RESPONSIBILITY OF THE UNDERGROUND LOCATION CENTER.
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4. REMOVE ALL E.S.C. ITEMS AND LEGALLY DISPOSE OF THEM OFFSITE AFTER THE SITE IS PERMANENTLY STABILIZED.
5. THE CONTRACTOR AND OWNER SHALL COORDINATE ALL INSPECTIONS. ALL COSTS INCURRED SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
6. TREE PROTECTION. SEE DETAIL ON SHEET C3.1.
7. EXISTING TREE TO REMAIN.
8. EXISTING CB TO REMAIN. DO NOT DISTURB.
9. EXISTING CB, REMOVE AND REPLACE (SEE SHEET C3.0).
10. EXISTING STORM CONVEYANCE TO REMAIN. DO NOT DISTURB.
11. SEE ARBORIST REPORT FOR TREE ANALYSIS.
12. REMOVE EXISTING FENCE.



RF ARCHITECTURE  
7401 214TH AVENUE EAST  
BONNEY LAKE, WA 98391  
253-569-4039



MURRAY RESIDENCE  
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MERCER ISLAND, WA 98040

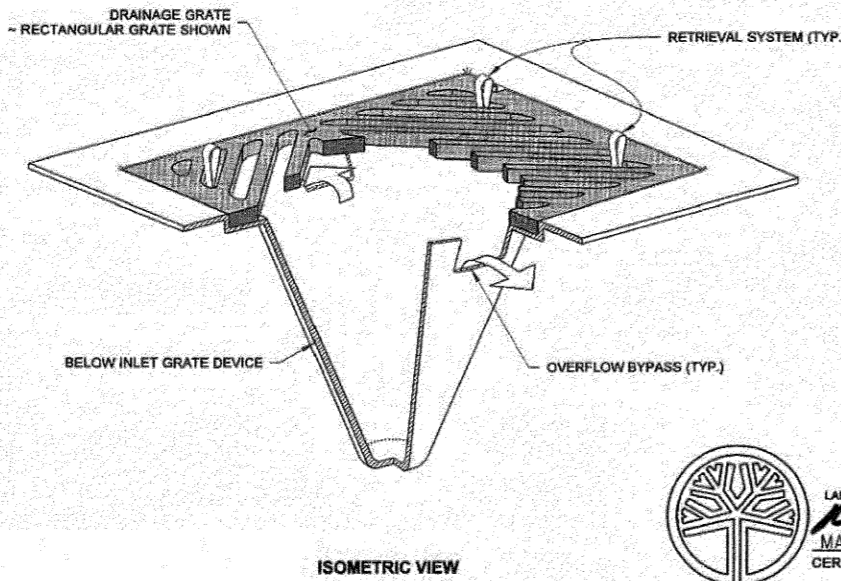
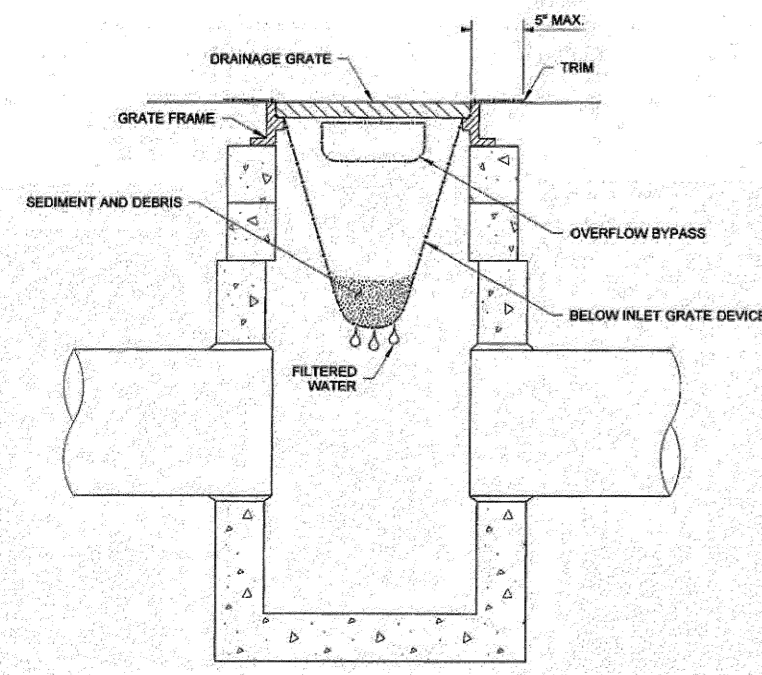


APRIL 13, 2021  
SEC 13/24 T24N R04E  
TESC AND GRADING  
C2.0  
APEX JOB NO. 34578  
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DRAWN BY: LISA CYCORS

**NOTES**

1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).

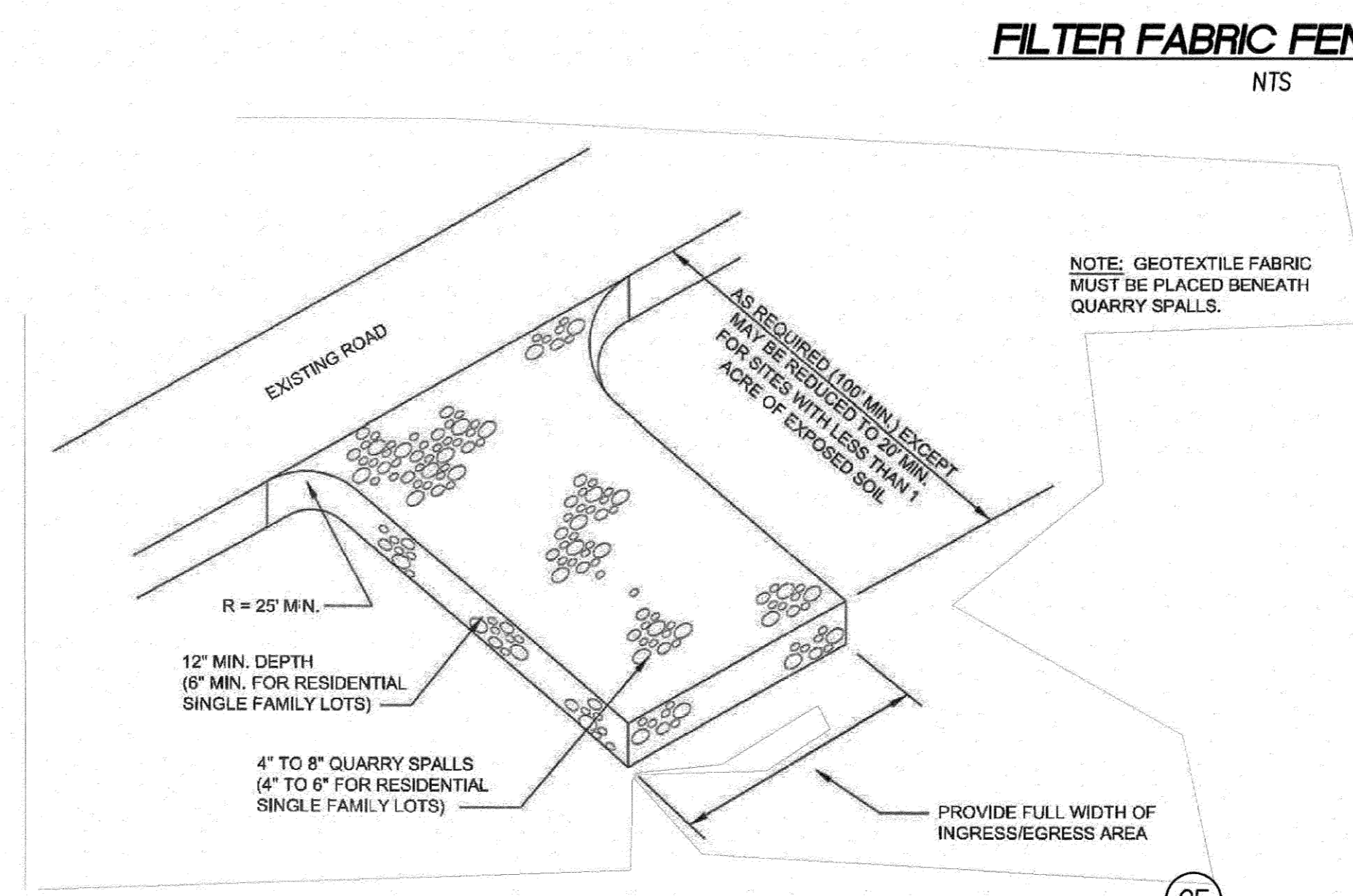


**STORM DRAIN INLET PROTECTION**  
**STANDARD PLAN I-40.20-00**  
 SHEET 1 OF 1 SHEET

IP

**TESC NOTES**

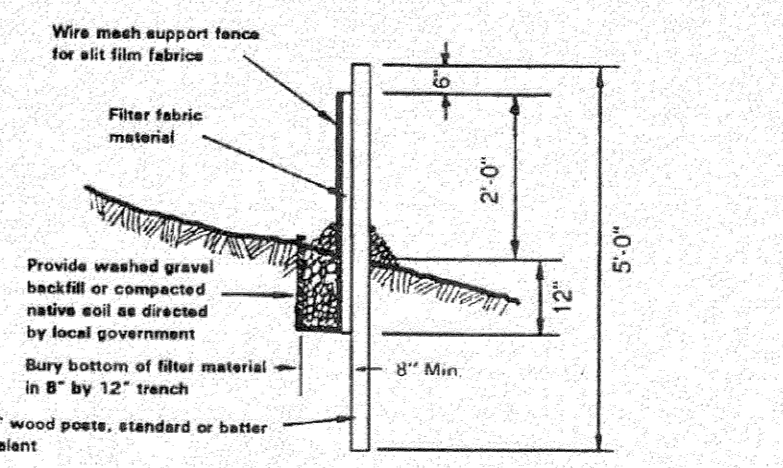
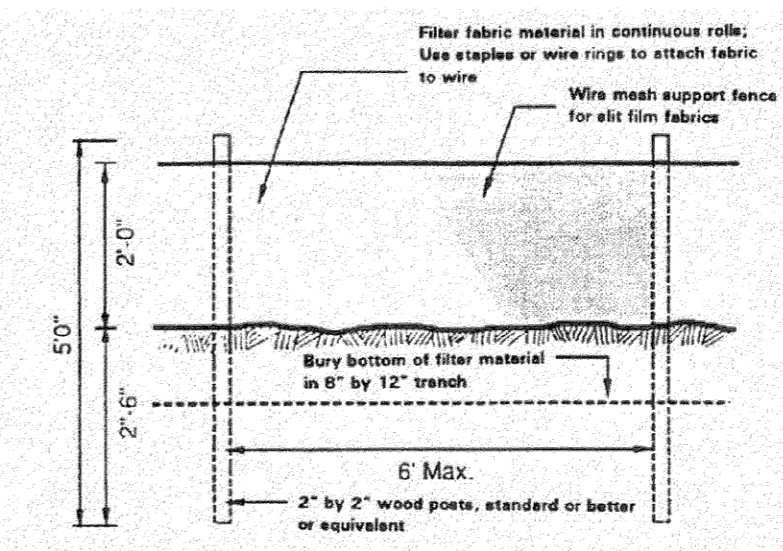
1. REMOVE EXCESS SOIL FROM THE SITE AS SOON AS POSSIBLE AFTER BACKFILLING.
2. STABILIZE DENUDED AREAS OF THE SITE BY MULCHING, SEEDING, PLANTING, OR SODDING.
3. ADJACENT PROPERTIES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION BY APPROPRIATE USE OF VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OR FILTERS, DIKES OR MULCHING, OR BY A COMBINATION OF THESE MEASURES AND OTHER APPROPRIATE BMPs.
4. CONSTRUCTION VEHICLE ACCESS SHALL BE, WHENEVER POSSIBLE, LIMITED TO ONE ROUTE AND SHALL USE THE CONSTRUCTION ACCESS. THIS MEASURE REQUIRES PERIODIC INSPECTION AND MAINTENANCE INCLUDING WASHING, TOP-DRESSING WITH ADDITIONAL STONE, REWORKING AND COMPACTION.
5. PROVIDE FOR PERIODIC STREET CLEANING TO REMOVE ANY SEDIMENT THAT MAY HAVE BEEN TRACKED OUT, OF THE PROJECT SITE. SEDIMENT SHOULD BE REMOVED BY SHOVELING OR SWEEPING AND CAREFULLY REMOVED TO A SUITABLE DISPOSAL AREA WHERE IT WILL NOT BE RE-ERODED.
6. REGULARLY INSPECT ALL EROSION AND SEDIMENT CONTROL BMPs INSTALLED, ESPECIALLY AFTER ANY LARGE STORMS. MAINTENANCE, INCLUDING REMOVAL AND PROPER DISPOSAL OF SEDIMENT SHOULD BE DONE AS NECESSARY (GENERALLY WHEN ONE-HALF OR MORE OF THE TOTAL CAPACITY OF THE SYSTEM IS FILLED WITH SEDIMENT).
7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.



**FILTER FABRIC FENCE DETAIL**

NTS

FF



**EROSION CONTROL SEEDING MIX:**

1. SEEDING MIXTURE SHALL BE AS FOLLOWS AND SHALL BE APPLIED AT THE RATE OF 120 LBS/ACRE:

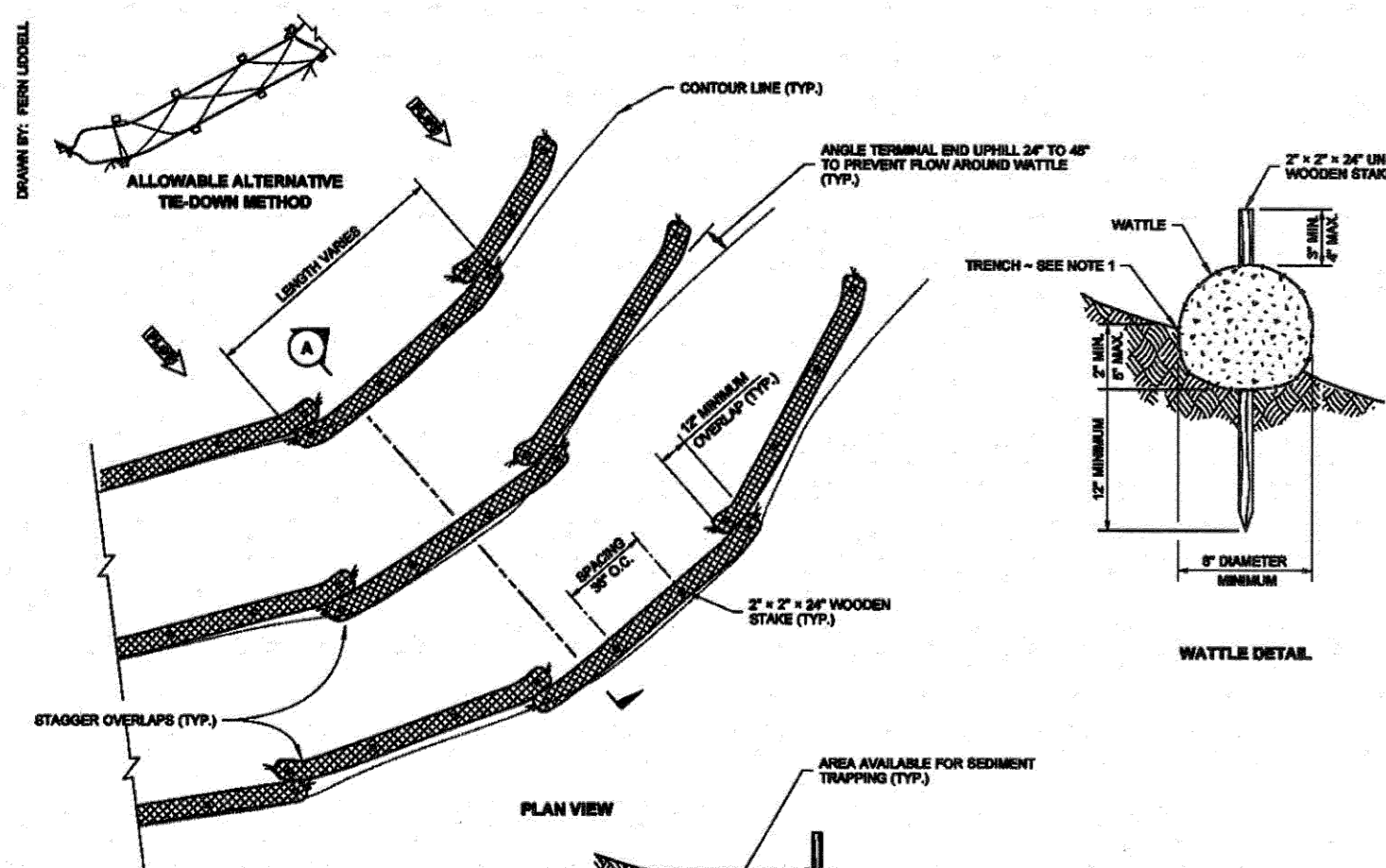
NAME	PROPORTIONS BY WEIGHT	PERCENT PURITY	PERCENT GERMINATION
REDDTOP (AGROSTIS ALBA)	10	92	90
ANNUAL RYE (LOLIUM MULTIFLORUM)	40	98	90
CHEWINGS FESCUE (FESTUCA RUBRA COMMUTATA)	40	97	80
WHITE DUTCH CLOVER (TRIFOLIUM REPENS)	10	96	90

**CONSTRUCTION ENTRANCE DETAIL**

NTS

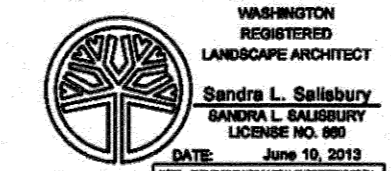
**SEED, FERTILIZE, AND MULCH NOTES:**

1. TIME OF PLANTING - PLANTING SHOULD PREFERABLY BE DONE BETWEEN APRIL 1 AND JUNE 30, AND SEPTEMBER 1 THROUGH OCTOBER 31. IF PLANTING IS DONE IN THE MONTHS OF JULY AND AUGUST, IRRIGATION MAY BE REQUIRED. IF PLANTING IS DONE BETWEEN NOVEMBER 1 AND MARCH 31, MULCHING SHALL BE REQUIRED IMMEDIATELY AFTER PLANTING. IF SEEDING IS DONE DURING THE SUMMER MONTHS, IRRIGATION OF SOME SORT WILL PROBABLY BE NECESSARY.
2. SITE PREPARATION - BEFORE SEEDING, INSTALL NEEDED SURFACE RUNOFF CONTROL MEASURES SUCH AS GRADIENT TERRACES, INTERCEPTOR DIKE/SWALES, LEVEL SPREADERS, AND SEDIMENT BASINS.
3. SEEDBED PREPARATION - THE SEEDBED SHOULD BE FIRM WITH A FAIRLY FINE SURFACE. PERFORM ALL CULTURAL OPERATIONS ACROSS OR AT RIGHT ANGLES TO THE SLOPE. A MINIMUM OF 2-4 INCHES OF TILLED TOPSOIL IS REQUIRED.
4. FERTILIZATION - AS PER SUPPLIERS AND/OR SOIL CONSERVATION SERVICE RECOMMENDATIONS. DEVELOPMENTS ADJACENT TO WATER BODIES MUST USE NON-PHOSPHORUS FERTILIZER.
5. "HYDRO-SEEDING" APPLICATIONS WITH APPROVED SEED-MULCH-FERTILIZER MIXTURES MAY ALSO BE USED.



**NOTES**

1. Wattles shall be in accordance with Standard Specification 8-4.0(5). Install Wattles along contours. Installation shall be in accordance with Standard Specifications 8-01.3(15).
2. Securely laced each end of Wattle. Overlap adjacent Wattle ends 12" behind one another and securely tie together.
3. Compact excavated soil and trenches to prevent undercutting. Additional staking may be necessary to prevent undercutting.
4. Install Wattle perpendicular to flow along contours.
5. Wattles shall be inspected regularly, and immediately after a rainfall produce runoff to ensure they remain thoroughly entrenched and in contact with the soil.
6. Perform maintenance in accordance with Standard Specification 8-01.3(15).
7. Refer to Standard Specification 8-01.3(15) for removal.



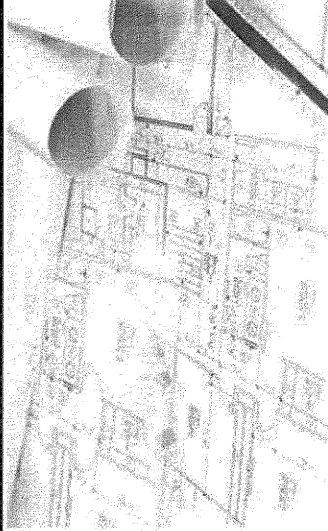
**WATTLE INSTALLATION ON SLOPE**  
**STANDARD PLAN I-30.30-01**  
 SHEET 1 OF 1 SHEET

SW

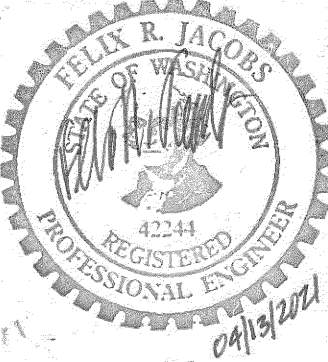
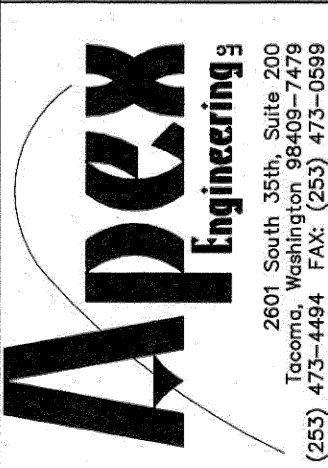
**4" DIAMETER WATTLE SPACING TABLE**

SLOPE	MAXIMUM SPACING
1H:1V	10'-0"
2H:1V	20'-0"
3H:1V	30'-0"
4H:1V	40'-0"

RF ARCHITECTURE  
 7407 PLATEAU AVENUE EAST  
 BONNEY LAKE, WA 98301  
 253-559-4039



**MURRAY RESIDENCE**  
**4803 FOREST AVENUE SE**  
**MERCER ISLAND, WA 98040**



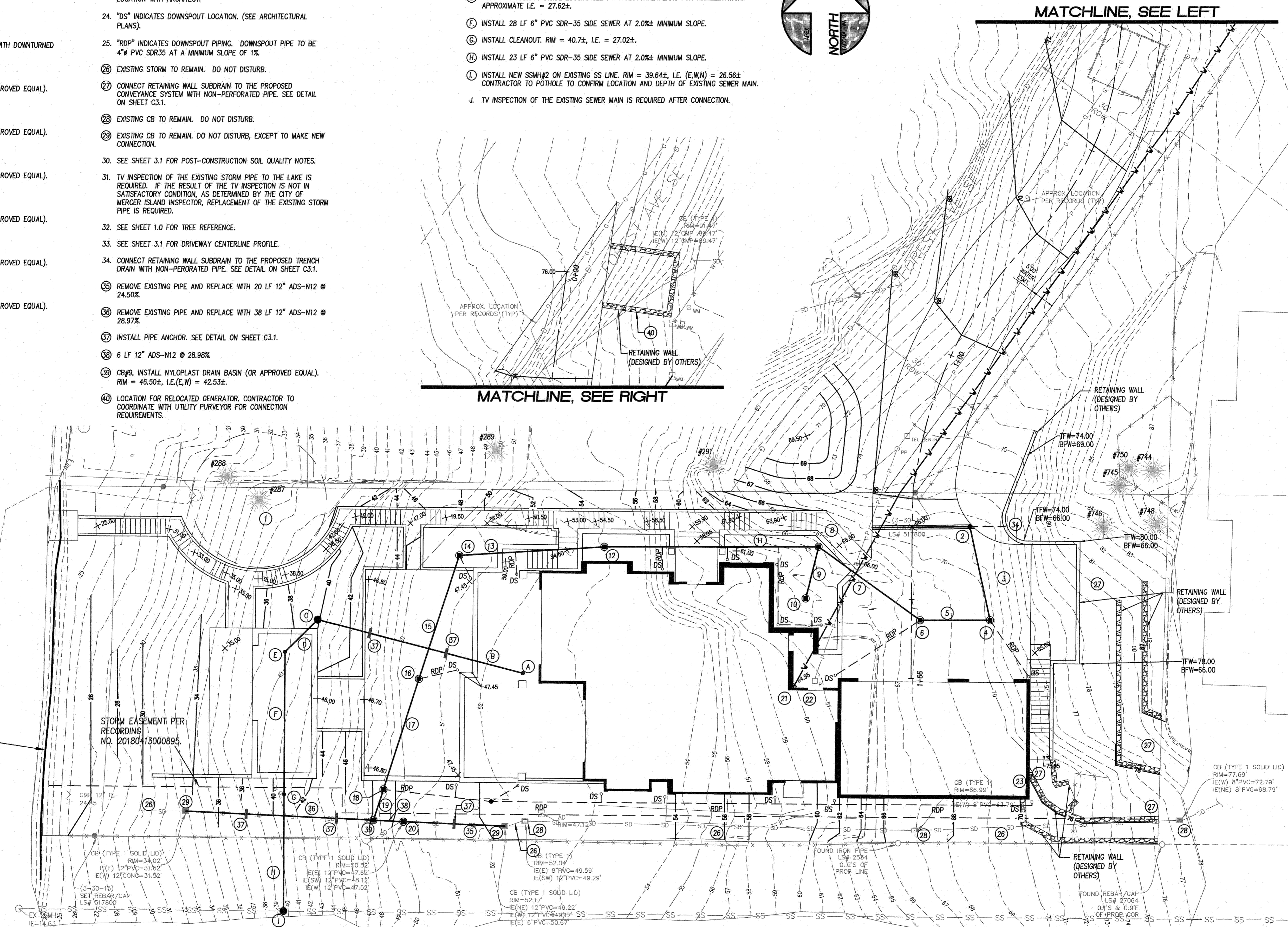
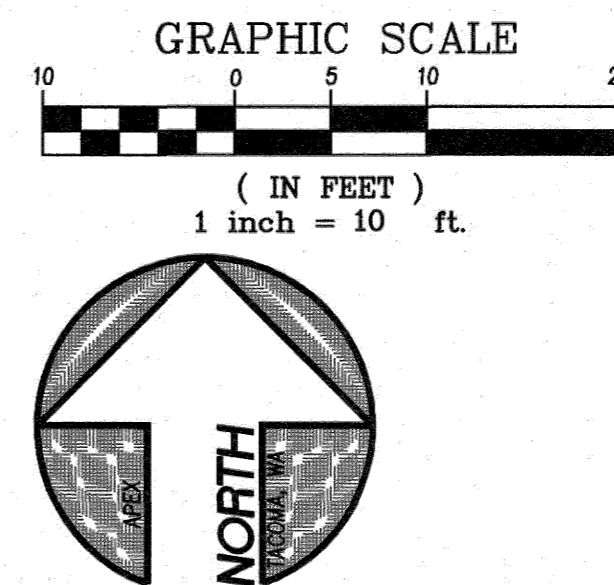
APRIL 13, 2021  
 SEC 13/24 T24N R04E  
**TESC NOTES AND DETAILS**  
**C2.1**  
 APEX JOB NO. 34578  
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**CONSTRUCTION NOTES:**

- ① AIR EXCAVATION REQUIRED FOR CONSTRUCTION WITHIN THE EXISTING TREE DRIFLINE. TRAG QUALIFIED ARBORIST TO BE PRESENT TO OBSERVE AND PROVIDE GUIDANCE DURING EXCAVATION OPERATIONS. SEE ALSO SHEET C1.0.
- ② INSTALL ACO TRENCH DRAIN W/ INLINE CB PER DETAIL SHEET C3.1. GRATE ELEV = 66.56±, I.E. 6" (S) = 64.29±, I.E. 4" (E) = 64.45±.
- ③ 19 LF 6" ADS-N12 @ 12.37%.
- ④ CB#1, (TYPE 1). RIM = 64.89±, I.E. = 61.94±.
- ⑤ 14 LF 6" ADS-N12 @ 4.21%.
- ⑥ CB#2, (TYPE 1). RIM = 64.89±, I.E. = 61.35±. WITH DOWNTURNED ELBOW. SEE DETAIL ON SHEET C3.1.
- ⑦ 25 LF 6" ADS-N12 @ 4.24%.
- ⑧ CB#3, INSTALL NYLOPLAST DRAIN BASIN (OR APPROVED EQUAL). RIM = 65.00±, I.E. = 60.29±.
- ⑨ 11 LF 6" ADS-N12 @ 2.0%.
- ⑩ CB#4, INSTALL NYLOPLAST DRAIN BASIN (OR APPROVED EQUAL). RIM = 65.00±, I.E. = 60.50±.
- ⑪ 43 LF 6" ADS-N12 @ 21.21%.
- ⑫ CB#5, INSTALL NYLOPLAST DRAIN BASIN (OR APPROVED EQUAL). RIM = 55.25±, I.E. = 51.17±.
- ⑬ 29 LF 6" ADS-N12 @ 21.10%.
- ⑭ CB#6, INSTALL NYLOPLAST DRAIN BASIN (OR APPROVED EQUAL). RIM = 48.50±, I.E. = 45.05±.
- ⑮ 26 LF 6" ADS-N12 @ 0.5%.
- ⑯ CB#7, INSTALL NYLOPLAST DRAIN BASIN (OR APPROVED EQUAL). RIM = 47.00±, I.E. = 44.92±.
- ⑰ 23 LF 6" ADS-N12 @ 8.24%.
- ⑱ CB#8, INSTALL NYLOPLAST DRAIN BASIN (OR APPROVED EQUAL). RIM = 47.00±, I.E. = 43.02±.
- ⑲ 6 LF 8" ADS-N12 @ 8.17%.
- ⑳ EXISTING CB, REMOVE AND REPLACE. RIM = 50.22±, I.E. 6" (N) = 44.77±, I.E. 12" (E,W) = 44.27±, I.E. 12" (SW) = 48.12±.
- ㉑ WATER SERVICE TO NEW STRUCTURE.
- ㉒ POWER CONNECTION FOR NEW STRUCTURE. COORDINATE FINAL LOCATION WITH ARCHITECT.
- ㉓ GAS CONNECTION FOR NEW STRUCTURE. COORDINATE FINAL LOCATION WITH ARCHITECT.
24. "DS" INDICATES DOWNSPOUT LOCATION. (SEE ARCHITECTURAL PLANS).
25. "RDP" INDICATES DOWNSPOUT PIPING. DOWNSPOUT PIPE TO BE 4" PVC SDR35 AT A MINIMUM SLOPE OF 1%.
- ㉖ EXISTING STORM TO REMAIN. DO NOT DISTURB.
- ㉗ CONNECT RETAINING WALL SUBDRAIN TO THE PROPOSED CONVEYANCE SYSTEM WITH NON-PERFORATED PIPE. SEE DETAIL ON SHEET C3.1.
- ㉘ EXISTING CB TO REMAIN. DO NOT DISTURB.
- ㉙ EXISTING CB TO REMAIN. DO NOT DISTURB, EXCEPT TO MAKE NEW CONNECTION.
30. SEE SHEET 3.1 FOR POST-CONSTRUCTION SOIL QUALITY NOTES.
31. TV INSPECTION OF THE EXISTING STORM PIPE TO THE LAKE IS REQUIRED. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, REPLACEMENT OF THE EXISTING STORM PIPE IS REQUIRED.
32. SEE SHEET 1.0 FOR TREE REFERENCE.
33. SEE SHEET 3.1 FOR DRIVEWAY CENTERLINE PROFILE.
34. CONNECT RETAINING WALL SUBDRAIN TO THE PROPOSED TRENCH DRAIN WITH NON-PERFORATED PIPE. SEE DETAIL ON SHEET C3.1.
- ㉚ REMOVE EXISTING PIPE AND REPLACE WITH 20 LF 12" ADS-N12 @ 24.50%.
- ㉛ REMOVE EXISTING PIPE AND REPLACE WITH 38 LF 12" ADS-N12 @ 28.97%.
- ㉜ INSTALL PIPE ANCHOR. SEE DETAIL ON SHEET C3.1.
- ㉝ 6 LF 12" ADS-N12 @ 28.98%.
- ㉞ CB#9, INSTALL NYLOPLAST DRAIN BASIN (OR APPROVED EQUAL). RIM = 46.50±, I.E.(E,W) = 42.53±.
- ㉟ LOCATION FOR RELOCATED GENERATOR. CONTRACTOR TO COORDINATE WITH UTILITY PURVEYOR FOR CONNECTION REQUIREMENTS.

**SIDE SEWER CONSTRUCTION NOTES:**

- A. INSTALL NEW CLEANOUT 3' FROM STRUCTURE. RIM = 47.00±, I.E. = 43.45±
- B. INSTALL 45 LF 6" PVC SDR-35 SIDE SEWER AT 34.73%± SLOPE.
- C. INSTALL NEW SSMH#1 RIM = 39.52±, I.E. = 27.82±
- D. INSTALL 9 LF 6" PVC SDR-35 SIDE SEWER AT 2.0%± MINIMUM SLOPE.
- E. INSTALL CLEANOUT INSIDE LOGGIA. SEE ARCHITECTURAL PLANS FOR RIM ELEVATION. APPROXIMATE I.E. = 27.62±.
- F. INSTALL 28 LF 6" PVC SDR-35 SIDE SEWER AT 2.0%± MINIMUM SLOPE.
- G. INSTALL CLEANOUT. RIM = 40.7±, I.E. = 27.02±.
- H. INSTALL 23 LF 6" PVC SDR-35 SIDE SEWER AT 2.0%± MINIMUM SLOPE.
- I. INSTALL NEW SSMH#2 ON EXISTING SS LINE. RIM = 39.64±, I.E. (E,W,N) = 26.56±. CONTRACTOR TO POT HOLE TO CONFIRM LOCATION AND DEPTH OF EXISTING SEWER MAIN.
- J. TV INSPECTION OF THE EXISTING SEWER MAIN IS REQUIRED AFTER CONNECTION.



ORDINARY HIGH WATER LINE (ELEVATION 21.85)

STORM EASEMENT PER RECORDING NO. 20180413000895.

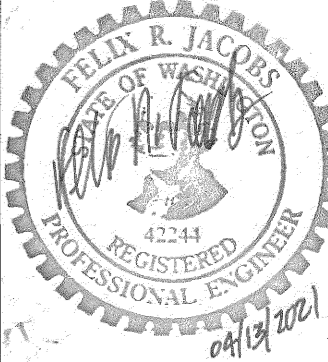


RF ARCHITECTURE  
7421 214TH AVENUE EAST  
BOWNEY LAKE, WA 98301  
253-569-4039

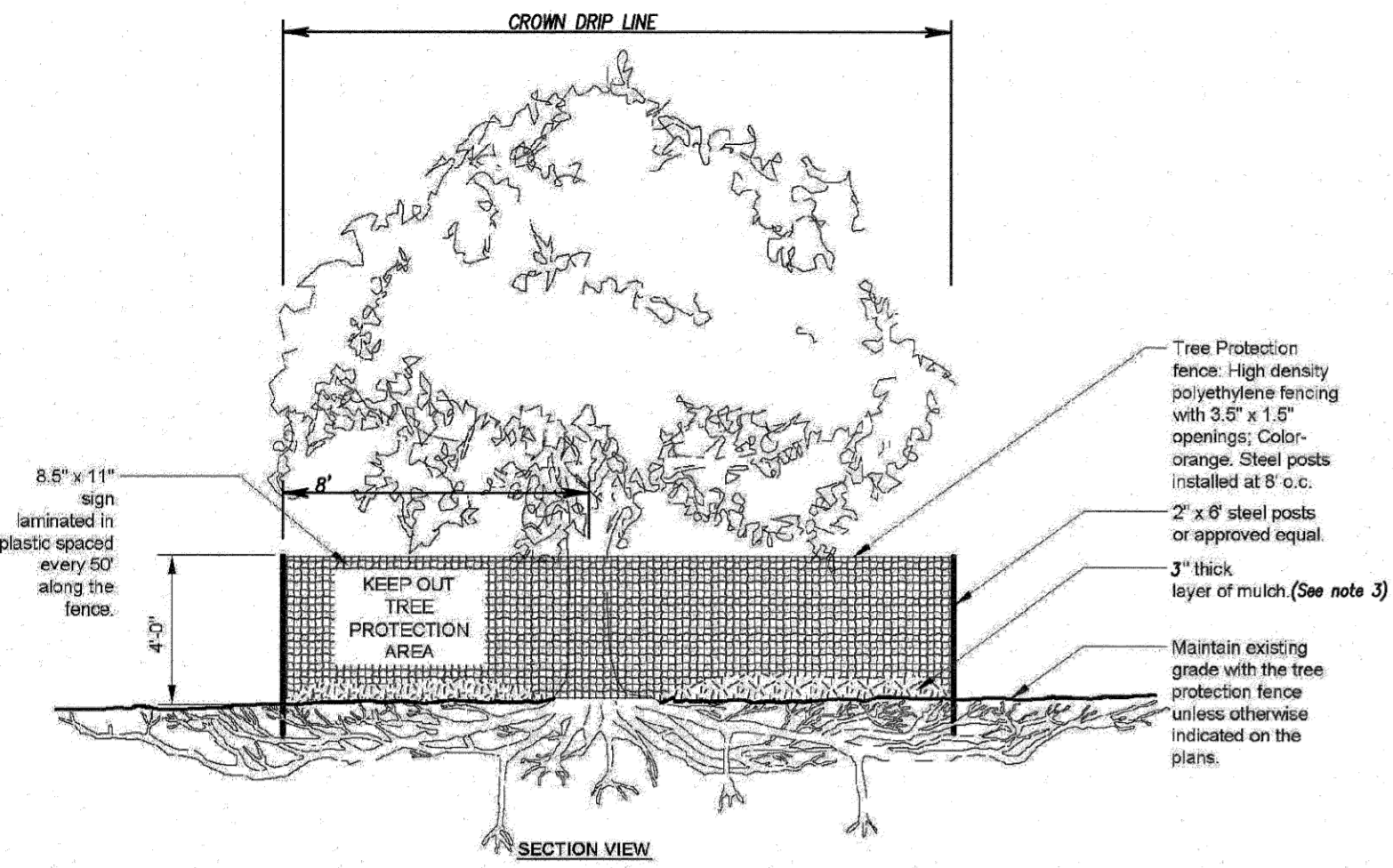


MURRAY RESIDENCE  
4803 FOREST AVENUE SE  
MERCER ISLAND, WA 98040

**Apex** Engineering  
2601 South 35th, Suite 200  
Tacoma, WA 98404  
TEL: (253) 473-4494 FAX: (253) 473-0589



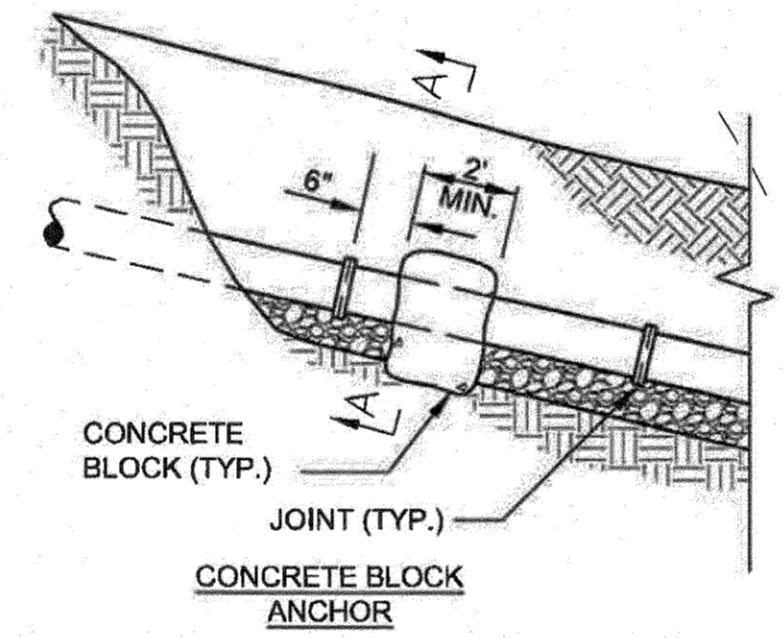
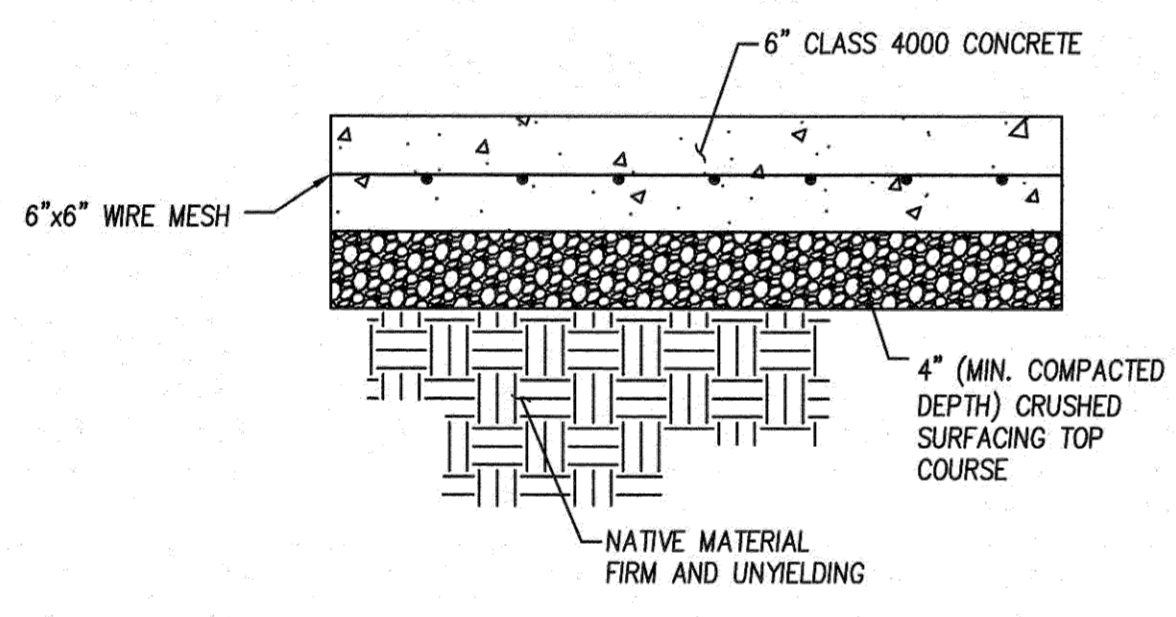
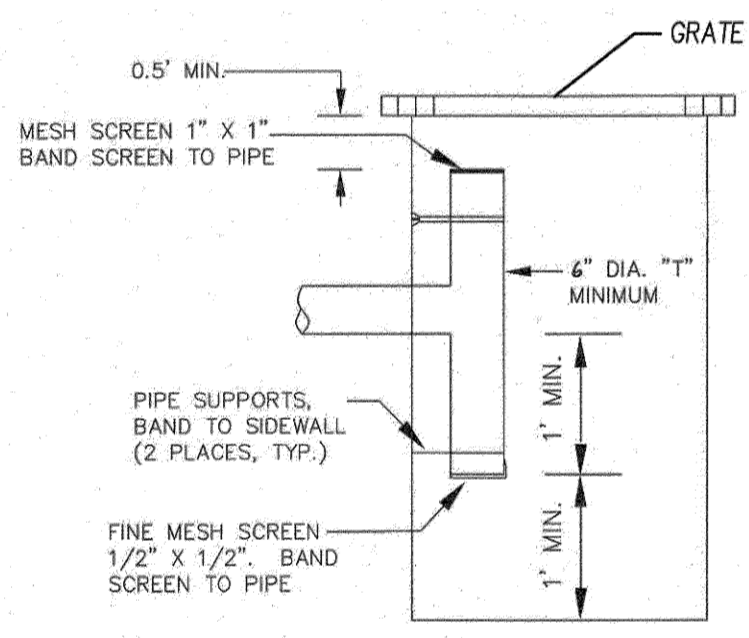
APRIL 13, 2021  
SEC 13/24 T24N R04E  
DRAINAGE AND UTILITIES  
C30  
APEX JOB NO. 34578  
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- NOTES**
- PROTECTIVE FENCING SHALL BE LOCATED WHERE SHOWN ON PLANS. AVOID DRIVING POSTS OR STAKING INTO MAJOR ROOTS. FENCE MUST REMAIN UP THROUGHOUT PROJECT.
  - NO STOCKPILING OF MATERIALS, GRADE CHANGES, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. CONTACT ARBORIST FOR MITIGATION MEASURES IF FENCING MUST COME DOWN.
  - TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER 1" IN DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP WITH CONTINUOUS IRRIGATION, TO PREVENT DRYING. COVER WITH SOIL AS SOON AS POSSIBLE - 3" OF MOIST MULCH RECOMMENDED.
  - APPLY 6" OF ORGANIC MULCH OVER THE SURFACE INSIDE THE TREE PROTECTION AREA.
  - DURING THE DRY MONTHS OF JULY, AUGUST, AND SEPTEMBER, PROVIDE DEEP HYDRATION OF SOILS BY SPRINKLER OR DRIP IRRIGATION INSIDE THE TREE PROTECTION AREA.

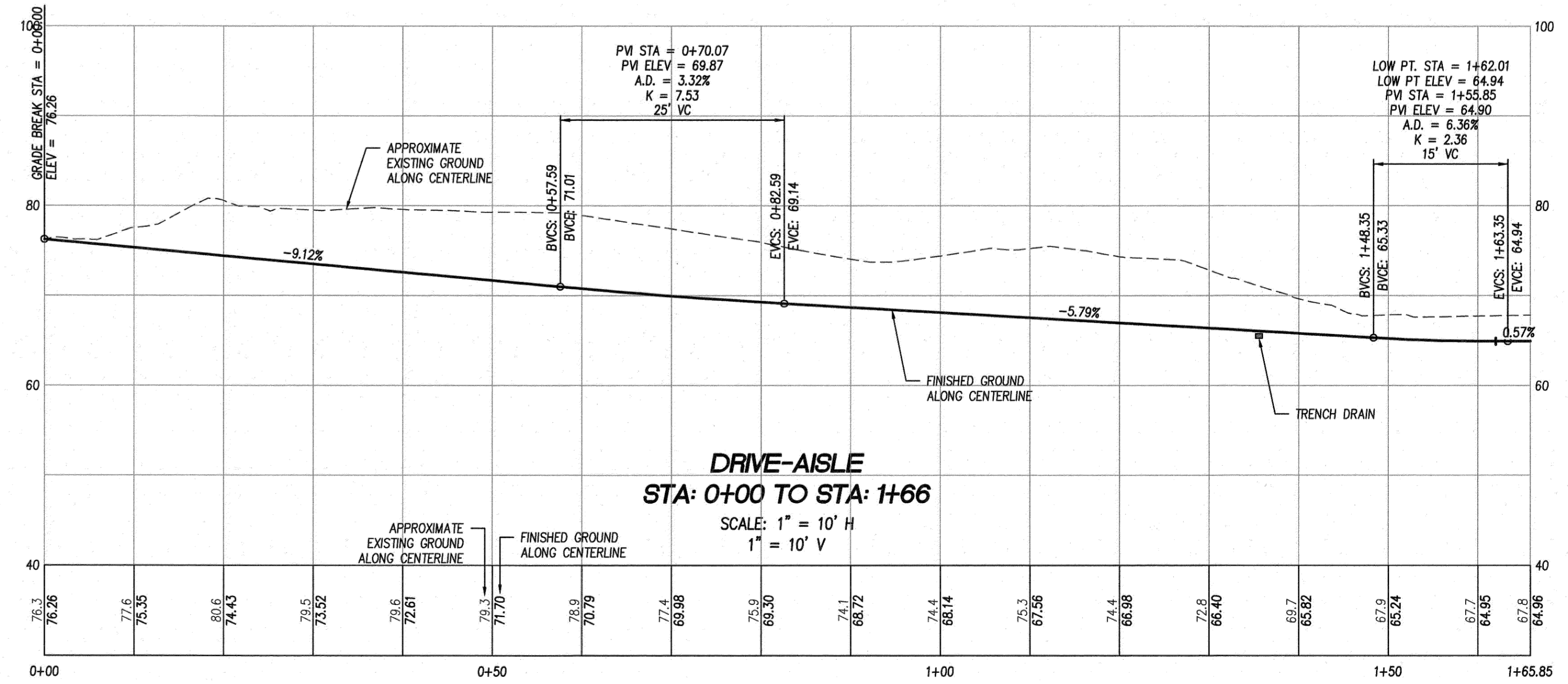
**TREE PROTECTION DETAIL**

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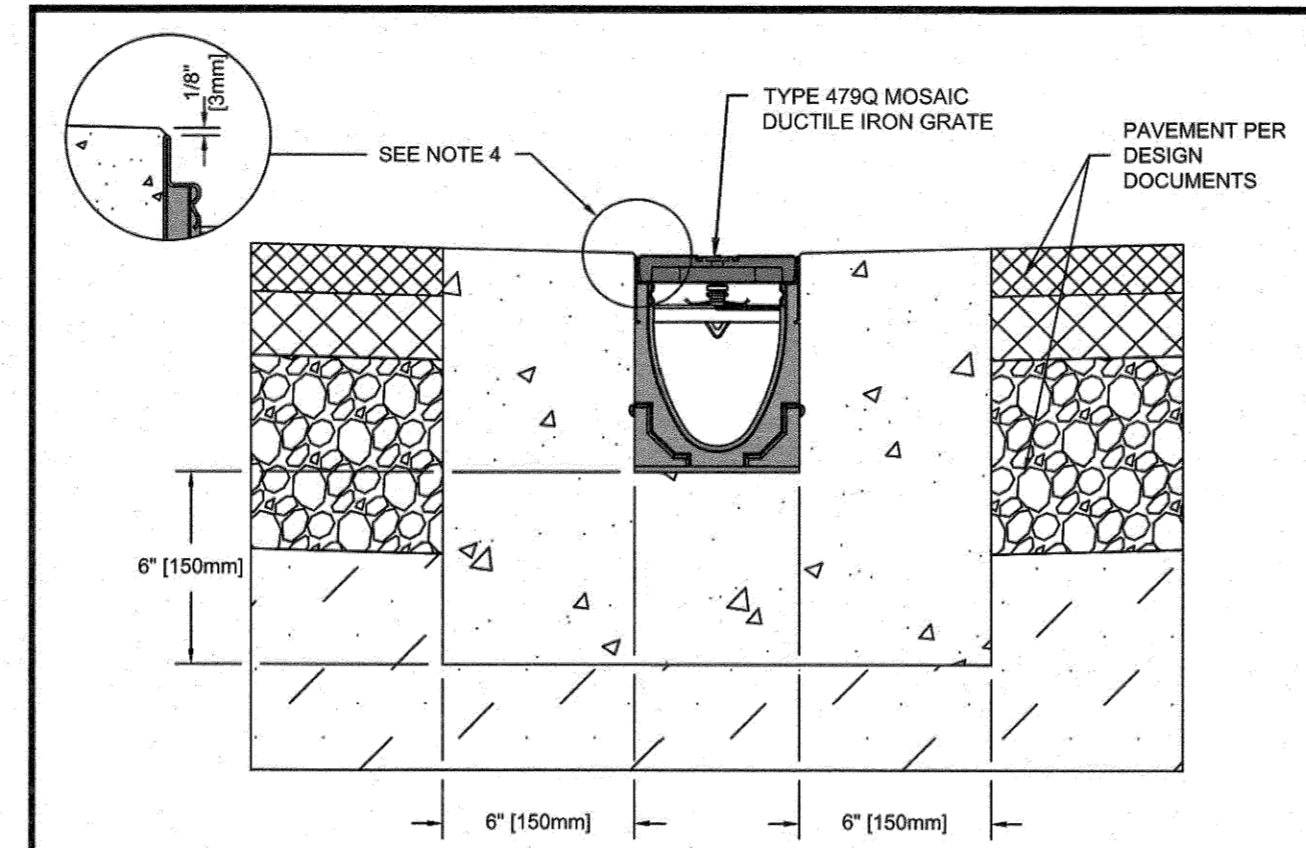
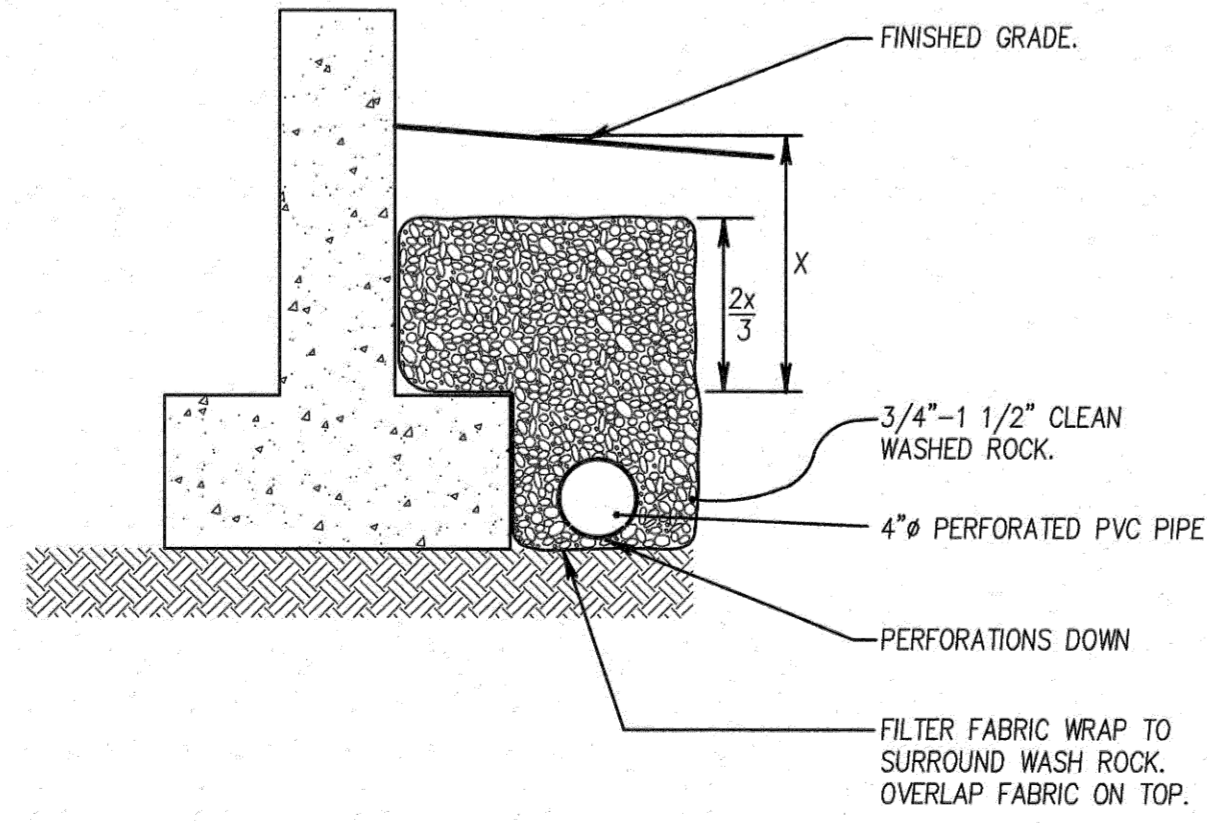
**PIPE ANCHOR DETAIL**

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**FOOTING DRAIN DETAIL**

NO SCALE



**SPECIFICATION CLAUSE**

**KS100 KLASIKDRAIN - LOAD CLASS C**

**GENERAL**  
THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE KS100 CHANNEL SYSTEM WITH STAINLESS STEEL EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

**MATERIALS**  
CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN STAINLESS STEEL EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:  
COMPRESSIVE STRENGTH: 14,000 PSI  
FLEXURAL STRENGTH: 4,000 PSI  
TENSILE STRENGTH: 1,500 PSI  
WATER ABSORPTION: 0.07%  
FROST PROOF: YES  
DILUTE ACID AND ALKALI RESISTANT: YES  
B117 SALT SPRAY TEST COMPLIANT: YES

THE SYSTEM SHALL BE 4" (100mm) NOMINAL INTERNAL WIDTH WITH A 5.1" (130mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "X" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

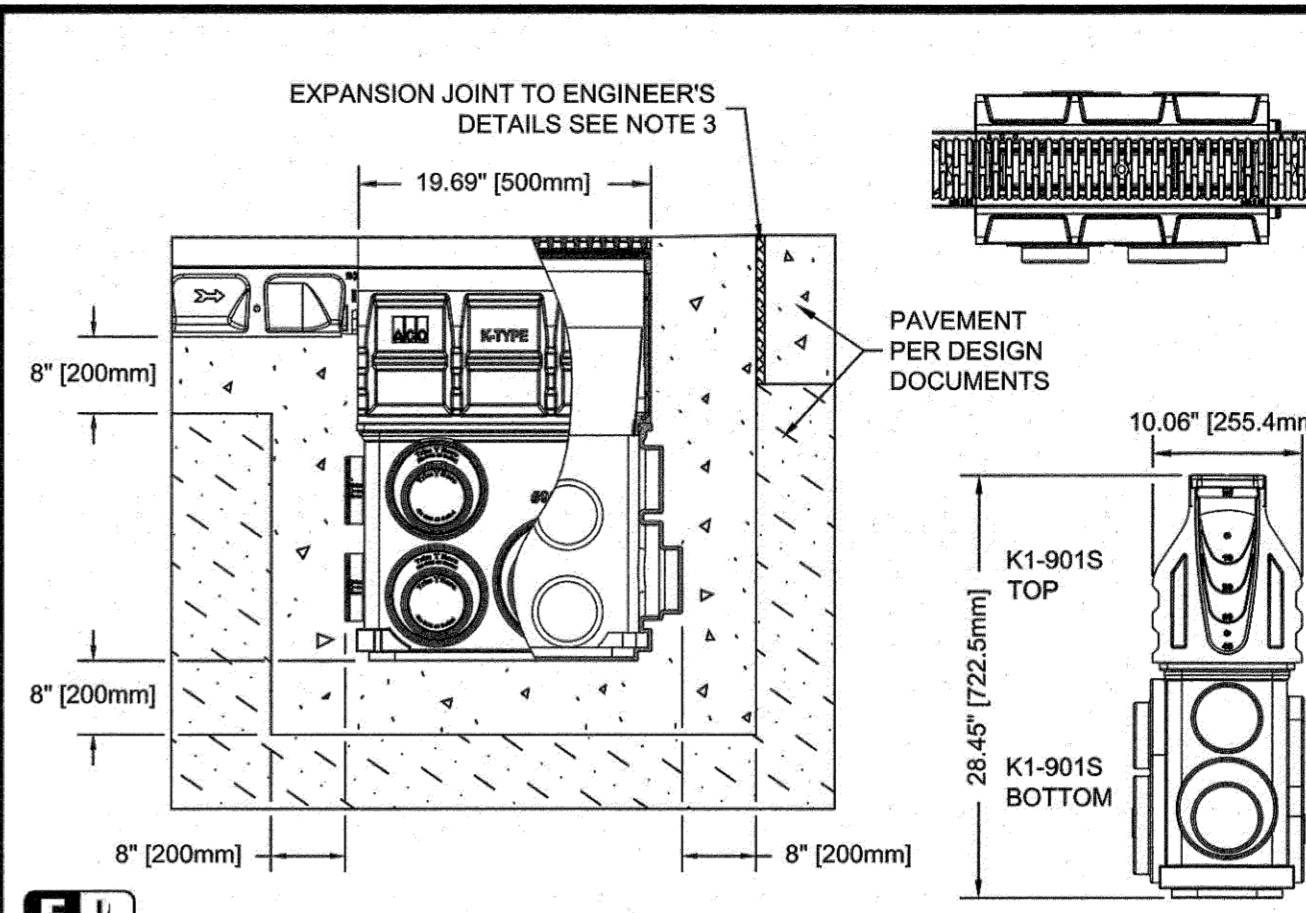
**CHANNEL** SHALL WITHSTAND LOADING TO PROPER LOAD CLASSES AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING QUICKLOK® BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.



**NOTES:**

- IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS. *ENGINEERING ADVICE MAY BE REQUIRED.*
- MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
- EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND. *ENGINEERING ADVICE MAY BE REQUIRED.*
- THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" (3mm) ABOVE THE TOP OF THE CHANNEL EDGE.
- CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS. *ENGINEERING ADVICE MAY BE REQUIRED TO DETERMINE PROPER LOAD CLASS.*
- REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

KS1-C-EAP	<b>KS100 - KLASIKDRAIN - LOAD CLASS: C</b> Exposed Asphalt Pavement	<b>ACO Polymer Products, Inc.</b>		
ACO	INSTALLATION DRAWING - ACO DRAIN	825 W. Beechcraft St. Casa Grande, AZ 85122 Tel: 520-421-9988 Fax: 520-421-9899	9470 Pinecone Dr. Mentor, OH 44060 Tel: 440-639-7230 Fax: 440-639-7235	4211 Pleasant Rd. Fort Mill, SC 29708 Tel: 440-639-7230 Fax: 803-802-1063
DATE: 08/25/15	Arizona Tel: 888-490-9552 e-mail: sales@acousa.com Ohio Tel: 800-543-4764	www.acousa.com	South Carolina Tel: 800-543-4764	



**SPECIFICATION CLAUSE**

**K1-901S CATCH BASIN - LOAD CLASS E**

**GENERAL**  
THE CATCH BASIN SHALL BE ACO DRAIN K1-901S SERIES MADE FROM POLYMER CONCRETE WITH A CAST-IN STAINLESS STEEL RAIL AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

**MATERIALS**  
POLYMER CONCRETE SHALL HAVE MATERIAL PROPERTIES OF:  
COMPRESSIVE STRENGTH: 14,000PSI  
FLEXURAL STRENGTH: 3,600PSI  
TENSILE STRENGTH: 1,500PSI  
WATER ABSORPTION: 0.07%  
FROST PROOF: YES  
DILUTE ACID AND ALKALI RESISTANT: YES  
B117 SALT SPRAY TEST COMPLIANT: YES

THE K1-901S SERIES CATCH BASIN COMPRISING OF TOP SECTION, QUICKLOK® GRATE, SHORT BASE AND TRASH BUCKET SHALL ACCEPT 4" ACO DRAIN TRENCH DRAIN MODEL KS100 IN SIDES AS SHOWN.

THE CATCH BASIN SHALL BE 19.69" (500mm) IN LENGTH AND 10.06" (255.4mm) IN WIDTH. K1-901S CATCH BASIN DEPTH IS 28.45" (722.5mm).

THE COMPLETE CATCH BASIN AND TRENCH DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

K1-901S SERIES CATCH BASIN SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE SHALL BE HELD IN PLACE WITH THE QUICKLOK® SYSTEM. CATCH BASIN, TRENCH CHANNEL AND GRATE SHALL BE INDEPENDENTLY CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS.

THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

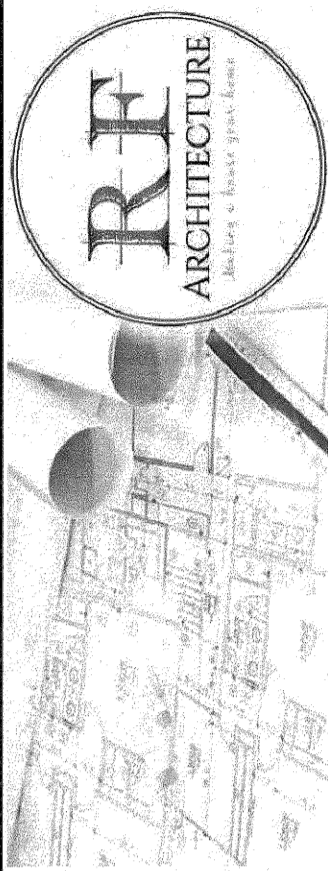


**NOTES:**

- IT IS NECESSARY TO ENSURE THE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR THE EXISTING GROUND CONDITIONS. *ENGINEERING ADVICE MAY BE REQUIRED.*
- A MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. THE CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
- EXPANSION AND CRACK CONTROL JOINTS ARE RECOMMENDED TO PROTECT THE CATCH BASIN AND THE CONCRETE SURROUND. *ENGINEERING ADVICE MAY BE REQUIRED.*
- THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" ABOVE THE TOP OF THE CATCH BASIN EDGE.
- REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.
- CONCRETE BASE THICKNESS SHOULD MATCH THE SLAB THICKNESS.
- REBAR OR STEEL MESH REINFORCEMENT MAY BE REQUIRED. *ENGINEERING ADVICE MAY BE REQUIRED.*

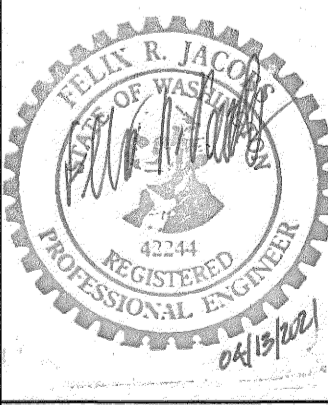
K1901S-E-EP	<b>K1-901S CATCH BASIN - LOAD CLASS: E</b> Exposed Concrete Pavement	<b>ACO Polymer Products, Inc.</b>		
ACO	INSTALLATION DRAWING - ACO DRAIN	825 W. Beechcraft St. Casa Grande, AZ 85122 Tel: 520-421-9988 Fax: 520-421-9899	9470 Pinecone Dr. Mentor, OH 44060 Tel: 440-639-7230 Fax: 440-639-7235	4211 Pleasant Rd. Fort Mill, SC 29708 Tel: 440-639-7230 Fax: 803-802-1063
DATE: 08/24/15	Arizona Tel: 888-490-9552 e-mail: sales@acousa.com Ohio Tel: 800-543-4764	www.acousa.com	South Carolina Tel: 800-543-4764	

RF ARCHITECTURE  
701 214TH AVENUE EAST  
BONNEY LAKE, WA 98391  
253-559-4039



MURRAY RESIDENCE  
4803 FOREST AVENUE SE  
MERCER ISLAND, WA 98040

**Apex Engineering**  
2601 South 35th, Suite 200  
Tacoma, WA 98404  
Tel: (253) 472-4484 FAX: (253) 472-0588

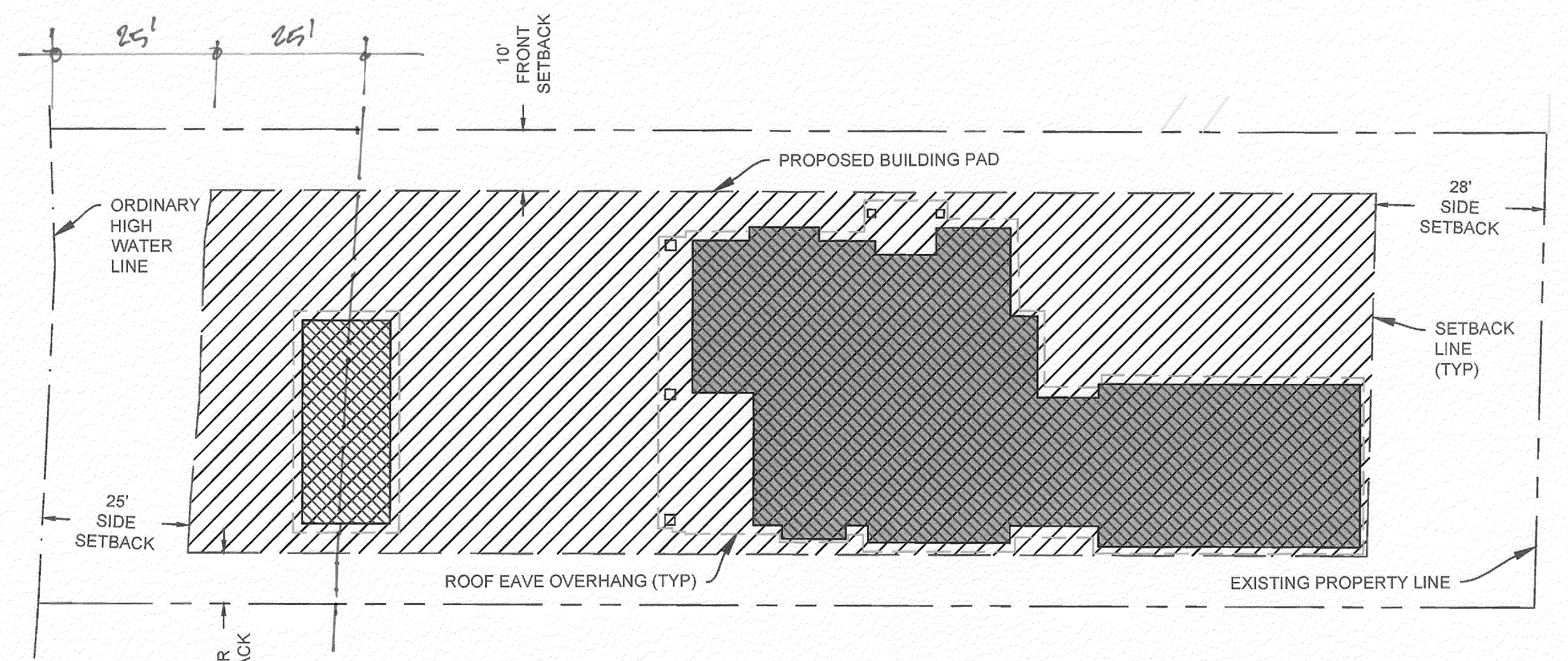


APRIL 13, 2021

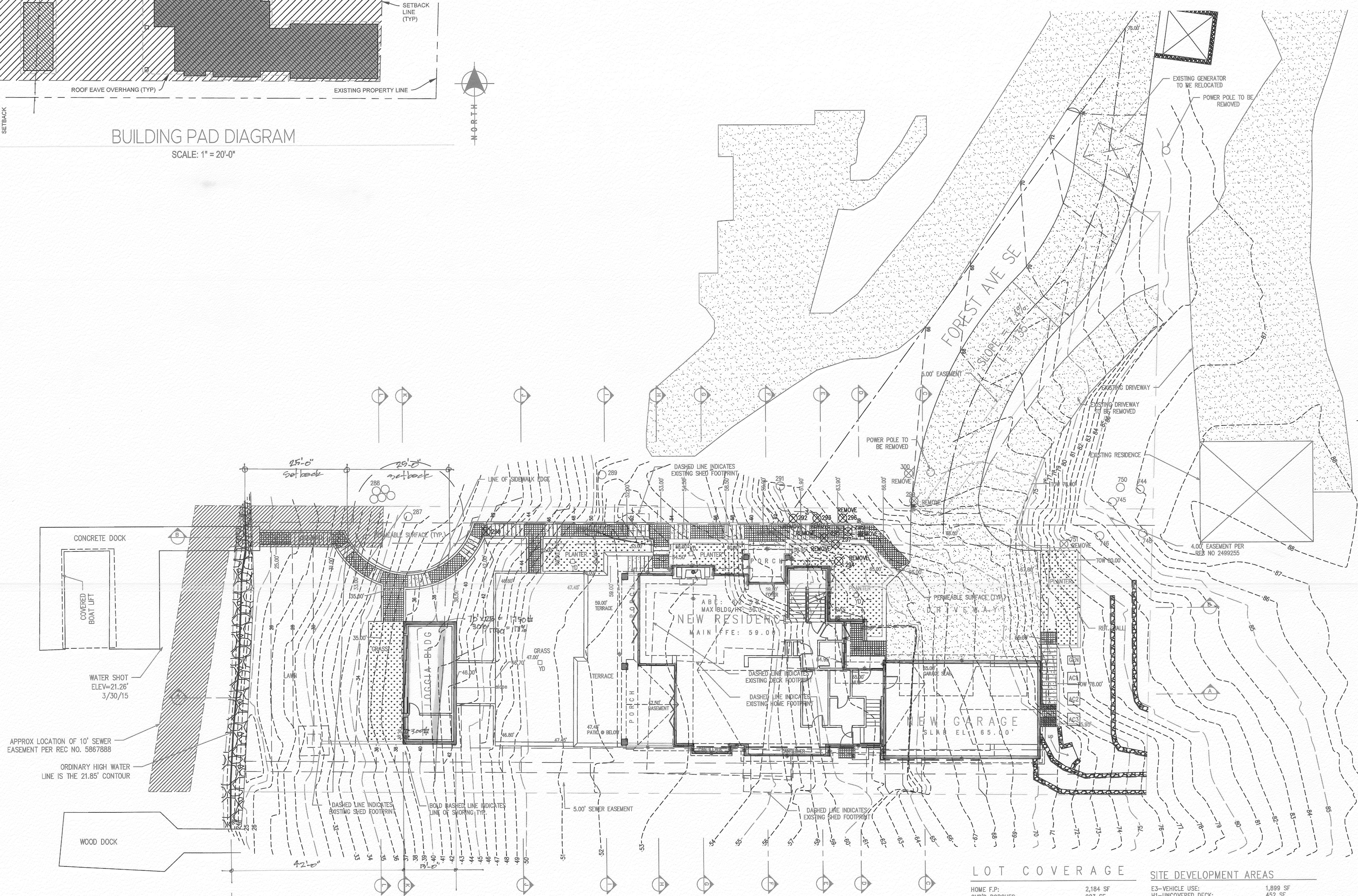
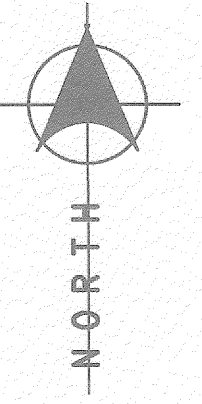
SEC 13/24 T24N R04E

NOTES AND DETAILS

**C31**  
APEX JOB NO. 34578  
© APEX ENGINEERING, LLC 2021

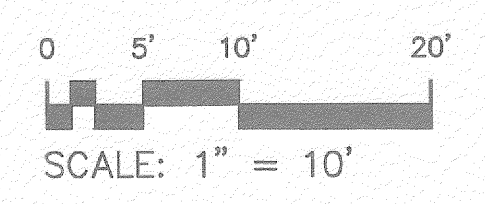


**BUILDING PAD DIAGRAM**  
SCALE: 1" = 20'-0"



**SITE PLAN DRIVEWAY OPTION #2**

SCALE: 1" = 10.0'



**LOT COVERAGE**

HOME F.P.:	2,184 SF
CUR'D PORCHES:	923 SF
GARAGE F.P.:	924 SF
ROOF O.H.'S:	253 SF
LOGGIA F.P.:	390 SF
TERRACE:	411 SF

**SITE DEVELOPMENT AREAS**

E3-VEHICLE USE:	1,899 SF
H1-UNCOVERED DECK:	452 SF
H2-UNCOVERED PATIOS:	61 SF
H3-WALKWAYS:	645 SF
H4-STAIRS:	301 SF
H5-RETAINING WALLS:	80 SF
H6-DRIVEWAYS:	1,182 SF
REMOVED DRIVEWAY:	734 SF

**MURRAY RESIDENCE**  
 NEW SINGLE FAMILY RESIDENCE  
 4803 FOREST AVE SE  
 MERCER ISLAND, WA 98040

DESIGN: RWF  
 DRAWN: RWF  
 CHECKED: RWF  
 REVISIONS:

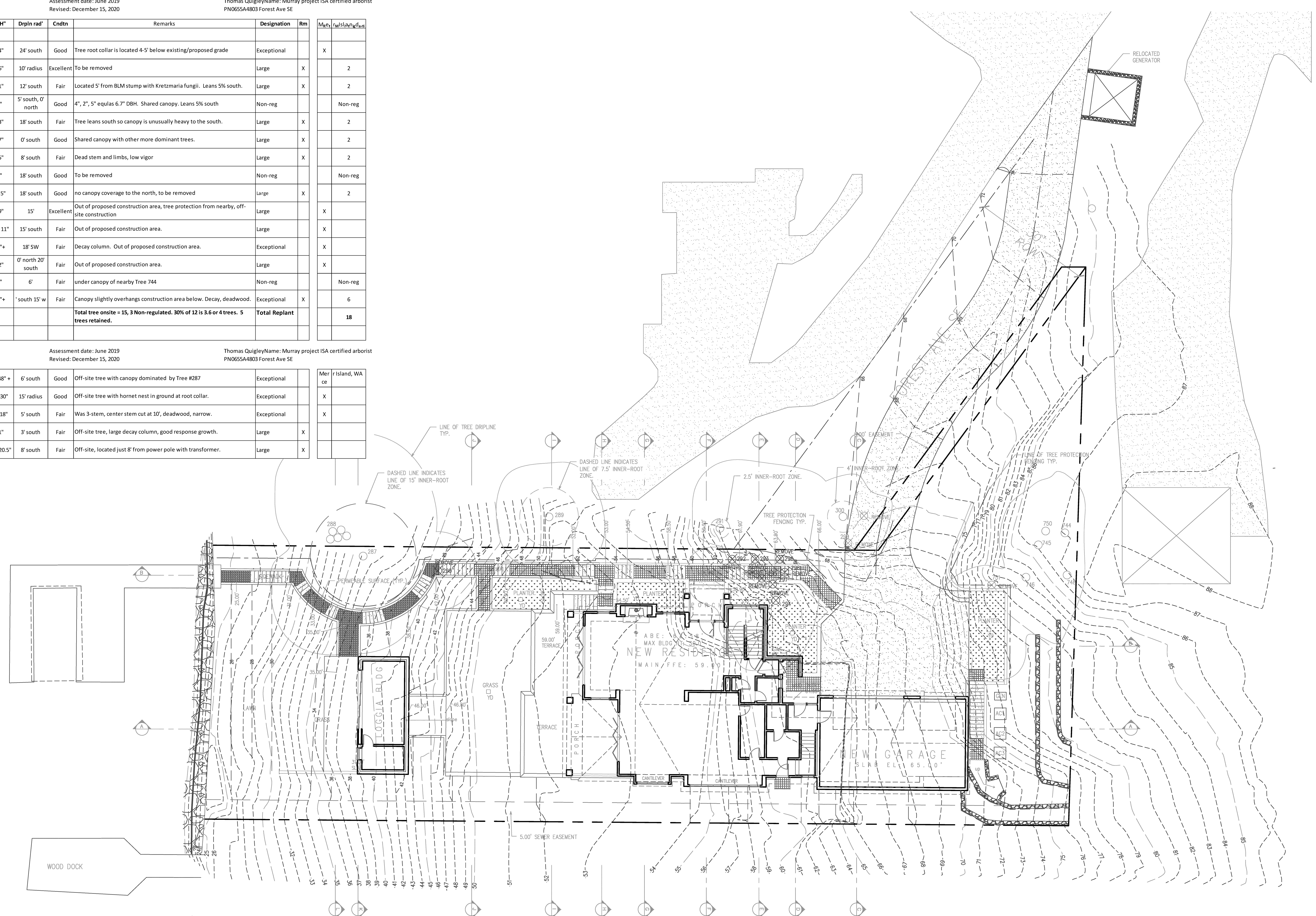


Name: Murray project 4803 Forest Ave SE  
Assessment date: June 2019  
Revised: December 15, 2020  
Thomas Quigley Name: Murray project ISA certified arborist  
PN0655A4803 Forest Ave SE

Mer	Is	Sp	DBH"	Drpln rad'	Cndtn	Remarks	Designation	Rm	Mer	Is	Sp	DBH"	Drpln rad'	Cndtn	Remarks	Designation	Rm
<b>On-site Trees</b>																	
287		Acer macrophyllum, Big leaf maple	34"	24' south	Good	Tree root collar is located 4-5' below existing/proposed grade	Exceptional		X								
290		Calocedrus decurrens. Incense cedar	16"	10' radius	Excellent	To be removed	Large	X									2
292		Acer macrophyllum, Big leaf maple	11"	12' south	Fair	Located 5' from BLM stump with Kretzmaria fungi. Leans 5% south.	Large	X									2
293		Acer macrophyllum, Big leaf maple	7"	5' south, 0' north	Good	4", 2", 5" equals 6.7" DBH. Shared canopy. Leans 5% south	Non-reg										Non-reg
294		Acer macrophyllum, Big leaf maple	13"	18' south	Fair	Tree leans south so canopy is unusually heavy to the south.	Large	X									2
295		Acer macrophyllum, Big leaf maple	17"	0' south	Good	Shared canopy with other more dominant trees.	Large	X									2
296		Acer macrophyllum, Big leaf maple	15"	8' south	Fair	Dead stem and limbs, low vigor	Large	X									2
297		Acer macrophyllum, Big leaf maple	9"	18' south	Good	To be removed	Non-reg										Non-reg
298		Acer macrophyllum, Big leaf maple	12.5"	18' south	Good	no canopy coverage to the north, to be removed	Large	X									2
744		Acer macrophyllum, Big leaf maple	19"	15'	Excellent	Out of proposed construction area, tree protection from nearby, off-site construction	Large		X								
745		Thuja plicata, Western red cedar	19", 11"	15' south	Fair	Out of proposed construction area.	Large		X								
746		Acer macrophyllum, Big leaf maple	36"+	18' SW	Fair	Decay column. Out of proposed construction area.	Exceptional		X								
748		Acer macrophyllum, Big leaf maple	22"	0' north 20' south	Fair	Out of proposed construction area.	Large		X								
750		Prunus, plum?	7"	6'	Fair	under canopy of nearby Tree 744	Non-reg										Non-reg
751		Acer macrophyllum, Big leaf maple	36"+	1' south 15' w	Fair	Canopy slightly overhangs construction area below. Decay, deadwood.	Exceptional	X									6
<b>Total tree onsite = 15, 3 Non-regulated. 30% of 12 is 3.6 or 4 trees. 5 Total Replant trees retained.</b>																	
<b>Off-site Trees</b>																	

Name: Murray project 4803 Forest Ave SE  
Assessment date: June 2019  
Revised: December 15, 2020  
Thomas Quigley Name: Murray project ISA certified arborist  
PN0655A4803 Forest Ave SE

Mer	Is	Sp	DBH"	Drpln rad'	Cndtn	Remarks	Designation	Rm	Mer	Is	Sp	DBH"	Drpln rad'	Cndtn	Remarks	Designation	Rm
288		Acer macrophyllum, Big leaf maple	est 48"+	6' south	Good	Off-site tree with canopy dominated by Tree #287	Exceptional										
289		Acer macrophyllum, Big leaf maple	est 30"	15' radius	Good	Off-site tree with hornet nest in ground at root collar.	Exceptional		X								
291		Acer macrophyllum, Big leaf maple	2 x 18"	5' south	Fair	Was 3-stem, center stem cut at 10', deadwood, narrow.	Exceptional		X								
299		Acer macrophyllum, Big leaf maple	21"	3' south	Fair	Off-site tree, large decay column, good response growth.	Large	X									
300		Acer macrophyllum, Big leaf maple	15", 20.5"	8' south	Fair	Off-site, located just 8' from power pole with transformer.	Large	X									



MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN : RWF  
DRAWN : RWF  
CHECKED : RWF  
REVISIONS :

# TOPOGRAPHIC & BOUNDARY SURVEY

measure success

## LEGAL DESCRIPTION

LOT 2 OF MERCER ISLAND SHORT PLAT, ACCORDING TO THE SHORT PLAT RECORDED UNDER KING COUNTY RECORDING NO. 9005099001, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

## BASIS OF BEARINGS

PER PLAT OF LAKE ISLE CENTERLINE OF FOREST AVE SE BEARS N 00°05'56" W BETWEEN FOUND MONUMENTS.

## REFERENCES

- R1. LAKE ISLE, RECORDED IN VOL. 19 OF PLATS, PAGE 35, IN KING COUNTY, WASHINGTON.
- R2. FLOODS ACRE GARDENS, RECORDED IN VOL. 7 OF PLATS, PAGE 26, IN KING COUNTY, WASHINGTON.

## VERTICAL DATUM

PER US ARMY CORPS OF ENGINEERS MONITORING OF LAKE WASHINGTON - BALLARD DATUM

## SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN AUGUST OF 2019. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 2577300021
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 17,448 S.F. (0.40 ACRES) (MEASURED TO ORDINARY HIGH WATER LINE)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

## LEGEND

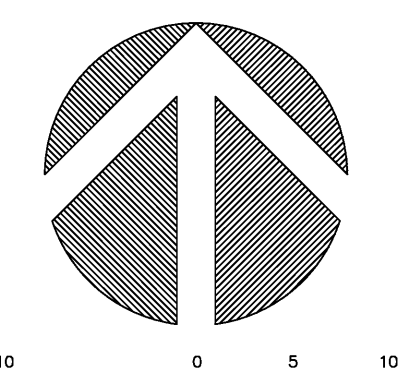
	AREA DRAIN		REBAR AS NOTED (FOUND)
	BOLLARD		REBAR & CAP (SET)
	BUILDING		ROCKERY
	CENTERLINE ROW		SEWER LINE
	CULVERT PIPE		SEWER MANHOLE
	CONCRETE SURFACE		SIGN (AS NOTED)
	RETAINING WALL		STORM MANHOLE
	EASEMENT AREA		STORM DRAIN LINE
	DECK		TELEPHONE SENTRY
	DITCH (FLOWLINE)		TREE (AS NOTED)
	FENCE LINE (CHAIN LINK)		WATER METER
	FENCE LINE (WOOD)		
	FLAGSTONE SURFACE		
	GAS LINE		
	GUY ANCHOR		
	INLET (TYPE 1)		
	INLET (TYPE 2)		
	IRON PIPE (FOUND)		
	MONUMENT IN CASE (FOUND)		
	POWER METER		
	POWER POLE		

## ABBREVIATIONS

- AD AREA DRAIN
- CB CATCH BASIN
- CLF CHAIN LINK FENCE
- CONC CONCRETE
- CRW CONCRETE RETAINING WALL
- CF CONSTRUCTION FENCE
- COR CORNER
- DEC DECIDUOUS
- ELEV ELEVATION
- EVG EVERGREEN
- FF FINISH FLOOR
- LS# LAND SURVEYOR NUMBER
- MON MONUMENT
- N, S, E, W NORTH, SOUTH, EAST, WEST
- NE, NW NORTHEAST, NORTHWEST
- PVC POLYVINYL CHLORIDE
- PROP PROPERTY
- R/R RAIL ROAD
- ROW RIGHT OF WAY
- SD SERVICE DRAIN
- SE, SW SOUTHEAST, SOUTHWEST
- SSMH SANITARY SEWER MANHOLE
- SSS SANITARY SIDE SEWER
- SF SQUARE FEET
- SQ FT SQUARE FEET

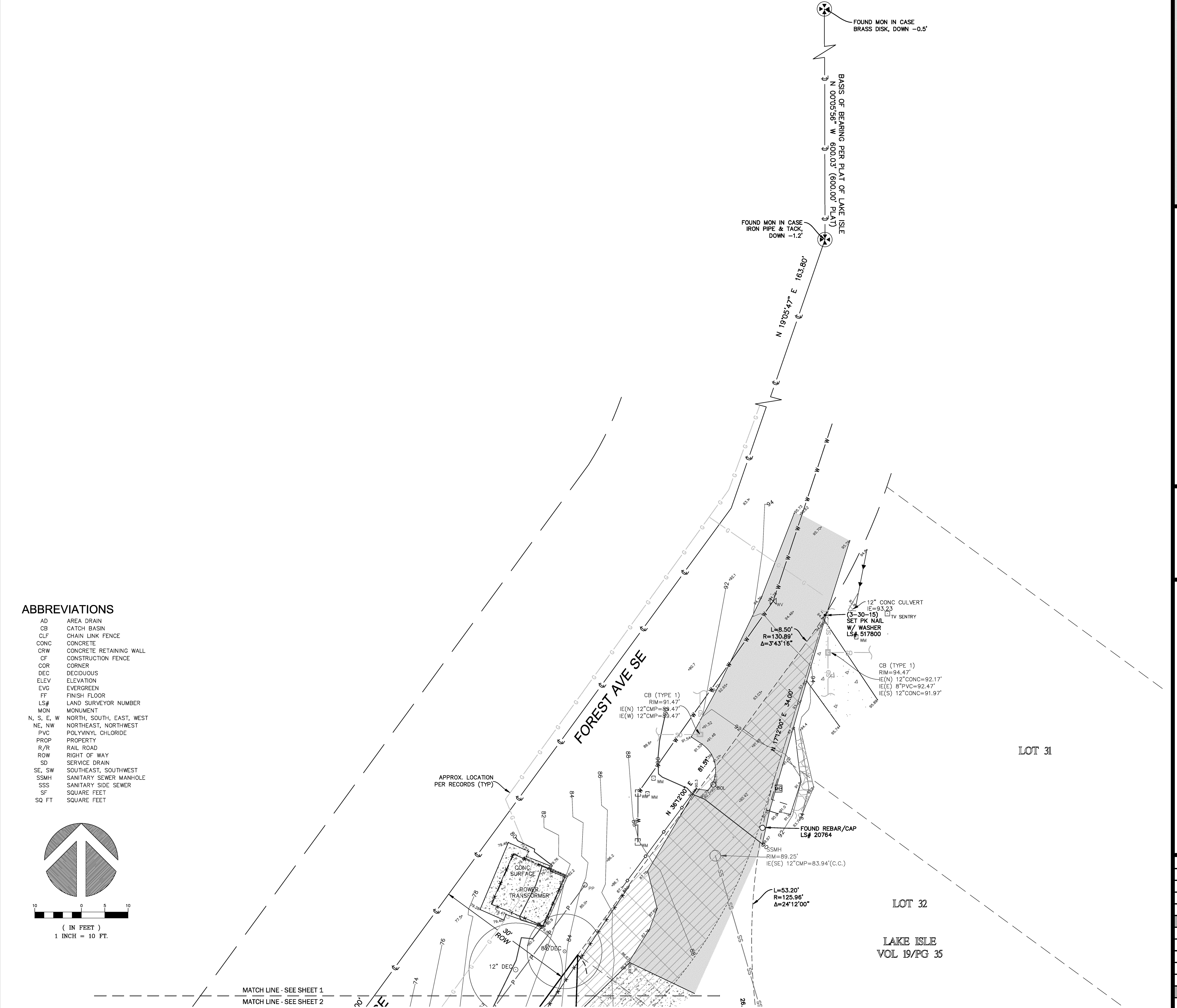
## VICINITY MAP

N.T.S.



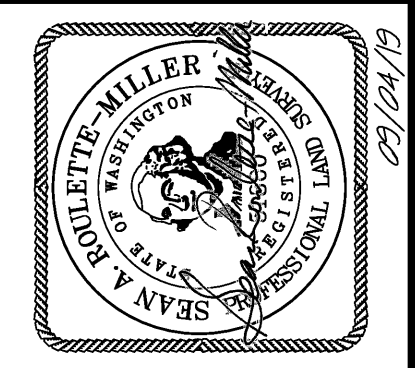
( IN FEET )  
1 INCH = 10 FT.

MATCH LINE - SEE SHEET 1  
MATCH LINE - SEE SHEET 2



TOPOGRAPHIC & BOUNDARY SURVEY  
SE 1/4, SE 1/4 SEC 13 & NE 1/4, NE 1/4, SEC 24, TWP. 24N., RGE 04E., W.M.  
PARCEL NO. 2577300021

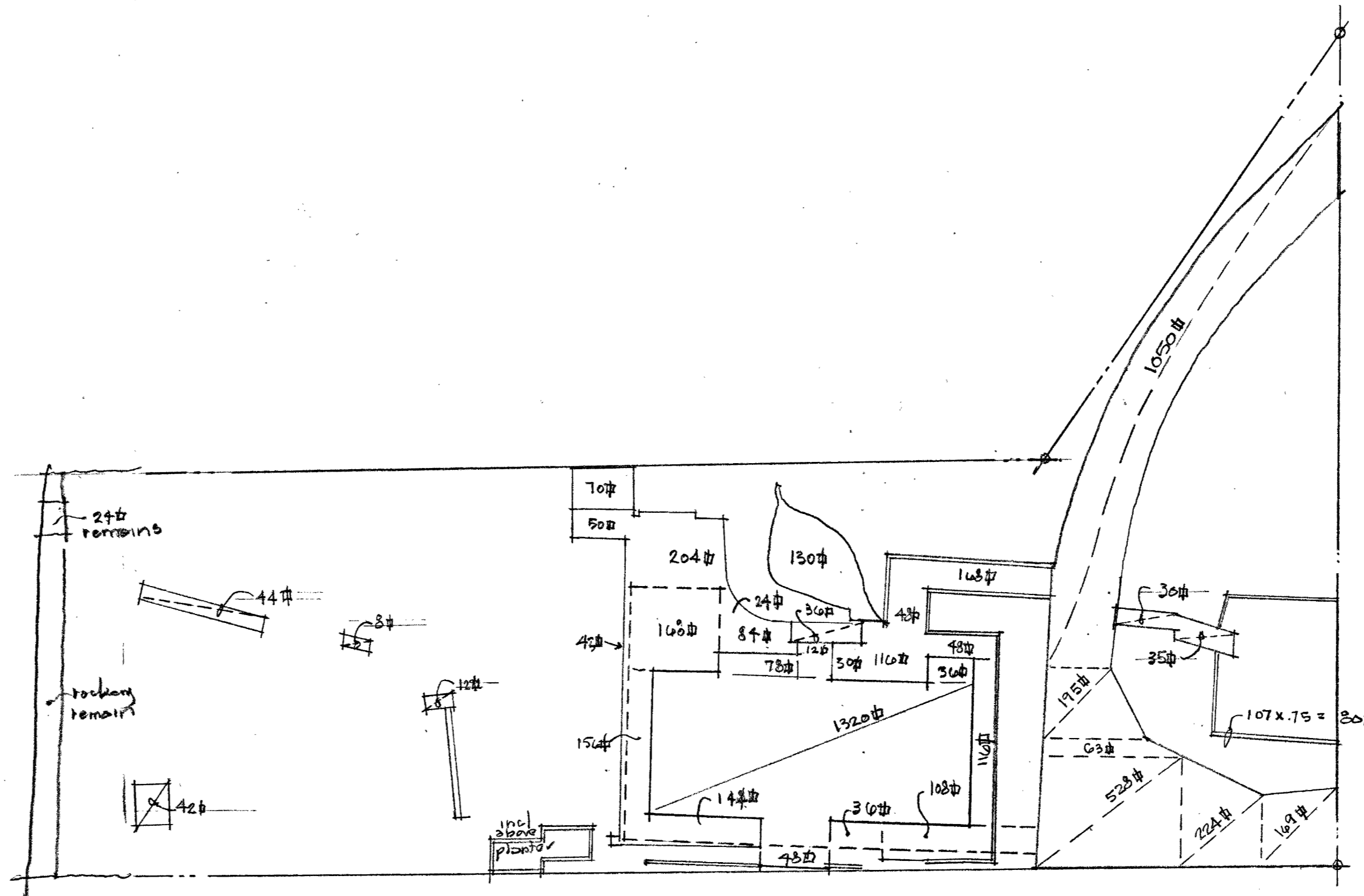
MURRAY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040



**Terrane**  
10801 Main Street, Suite 102, Bellevue, WA 98004  
phone 425.458.4488 support@terrane.net  
www.terrane.net

JOB NUMBER:	150137
DATE:	09/04/19
DRAFTED BY:	JPH
CHECKED BY:	SRM
SCALE:	N.T.S.
REVISION HISTORY	
SHEET NUMBER	
1 OF 2	





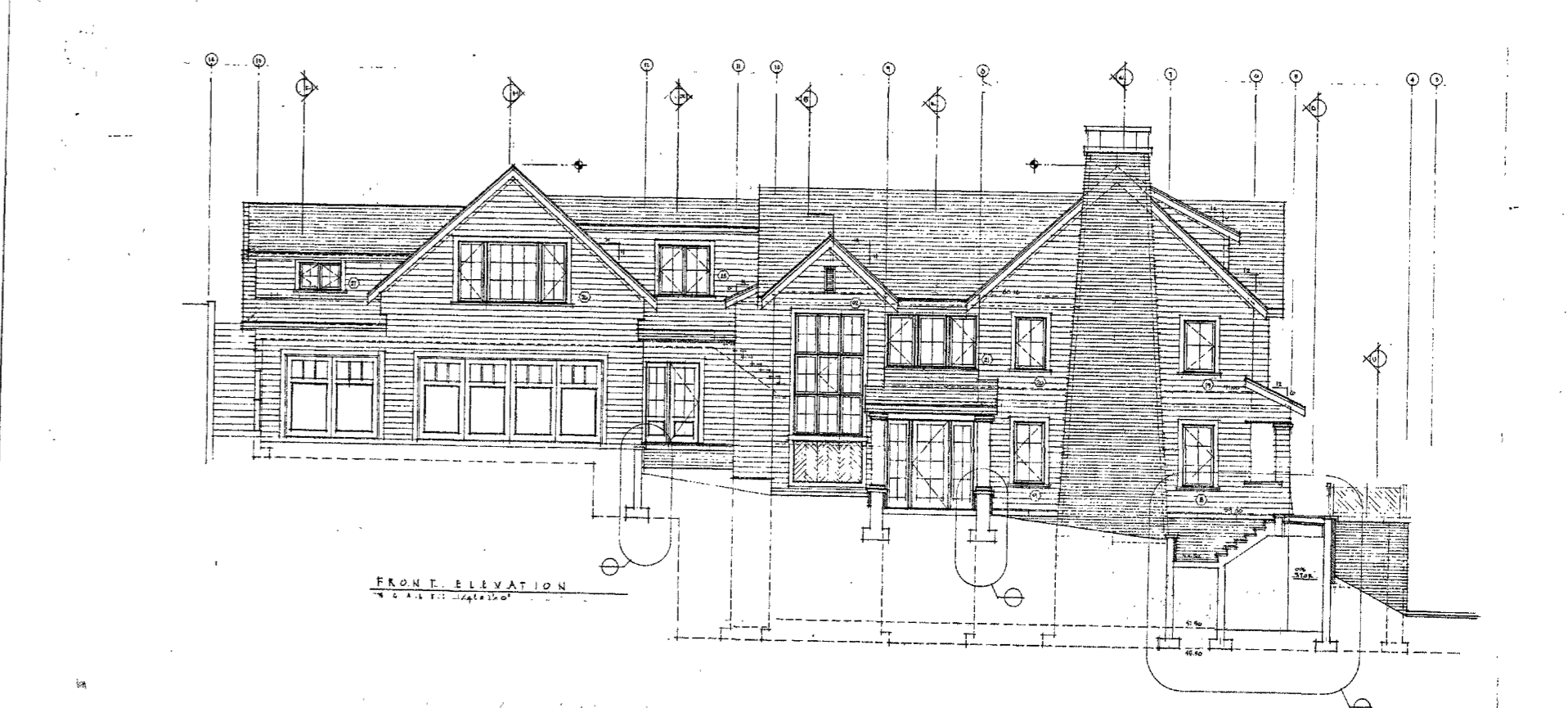
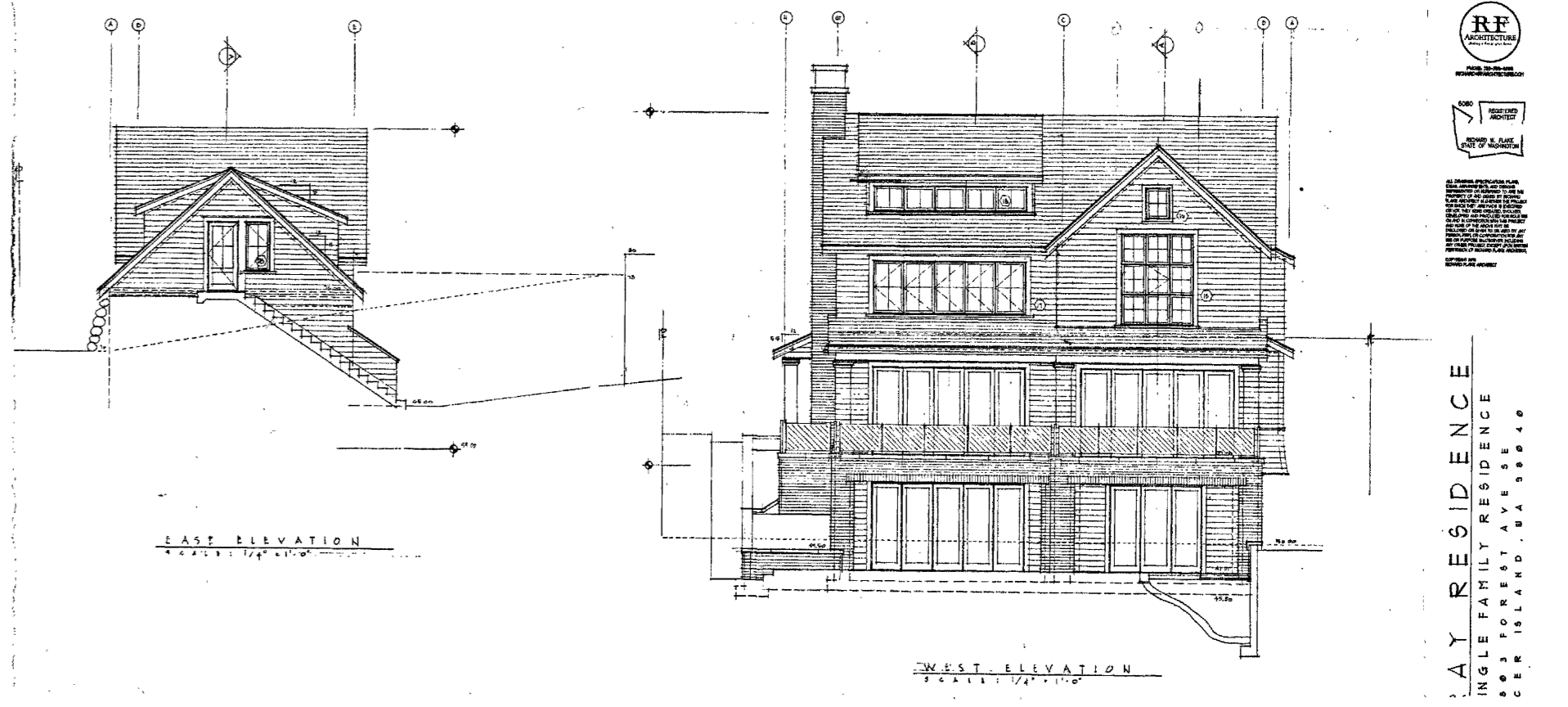
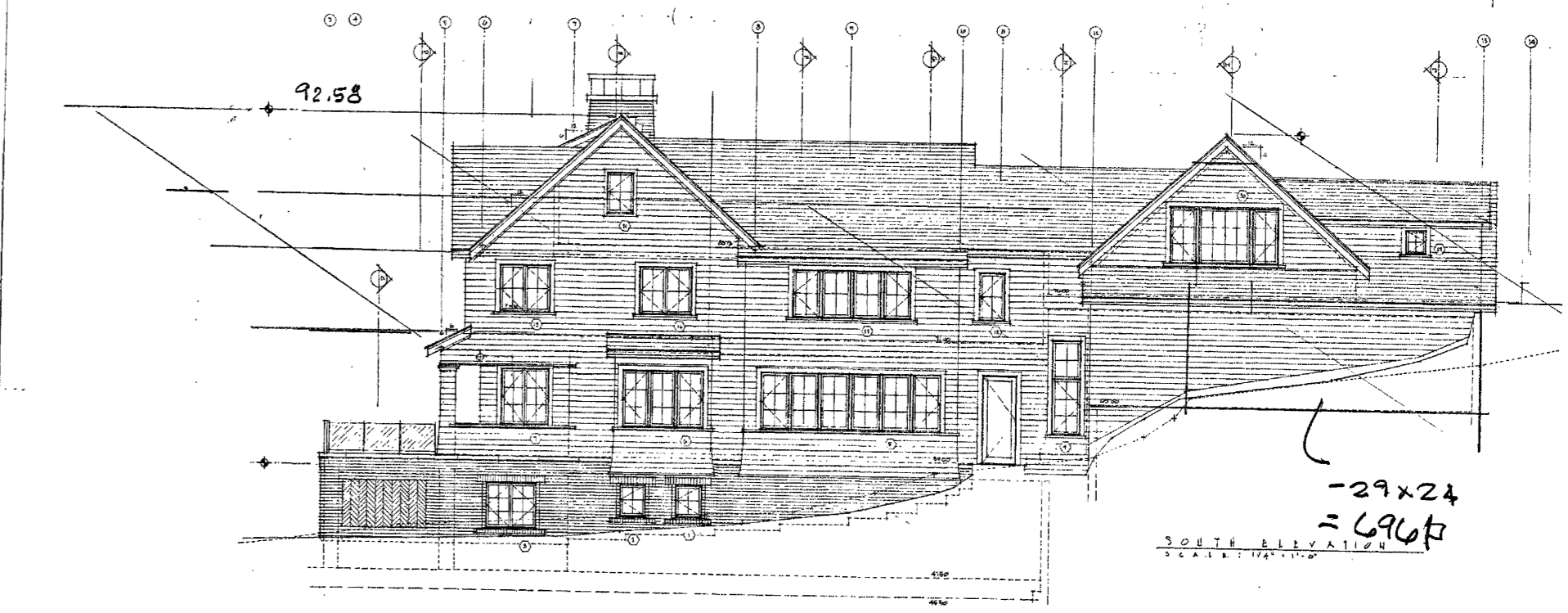
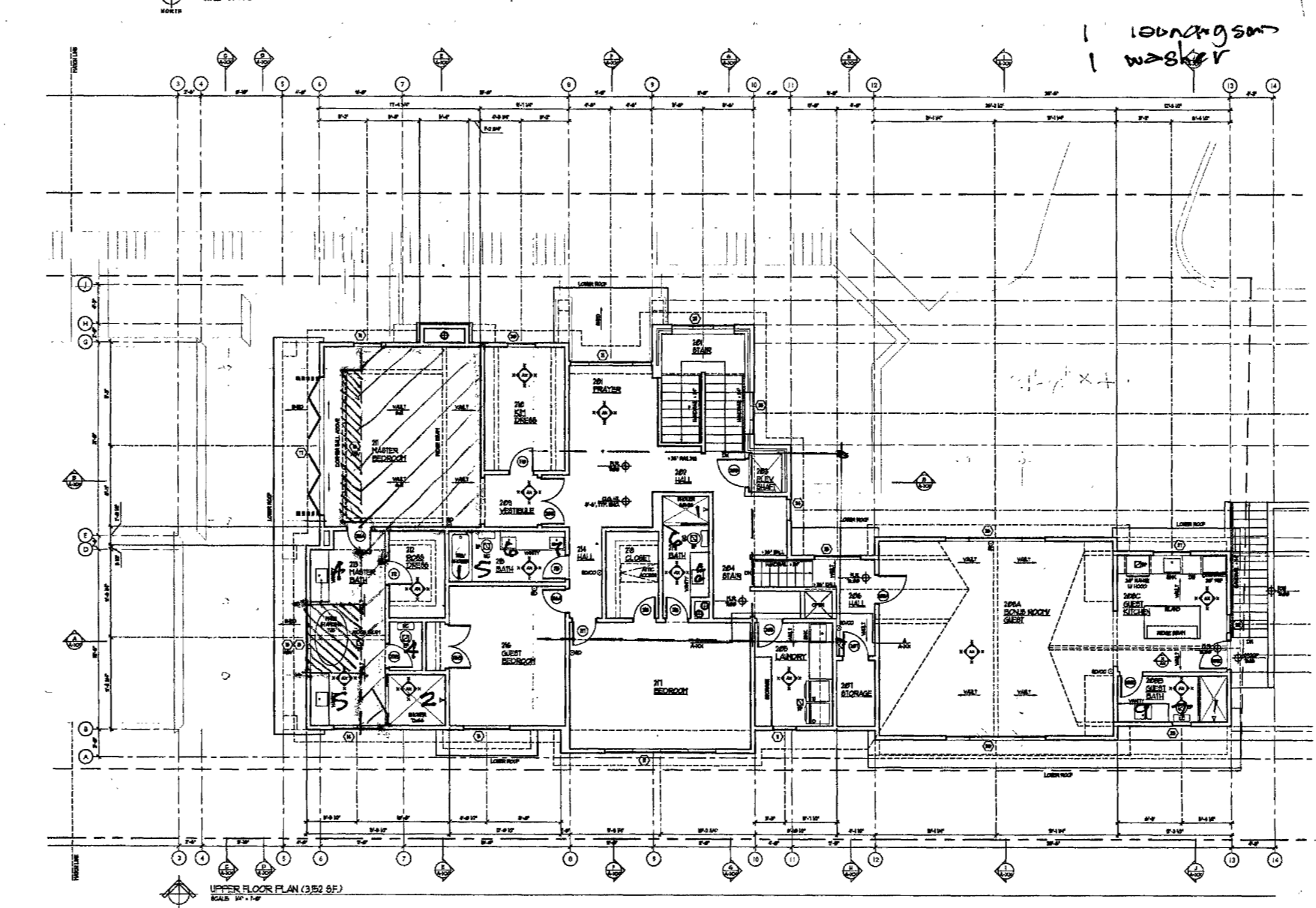
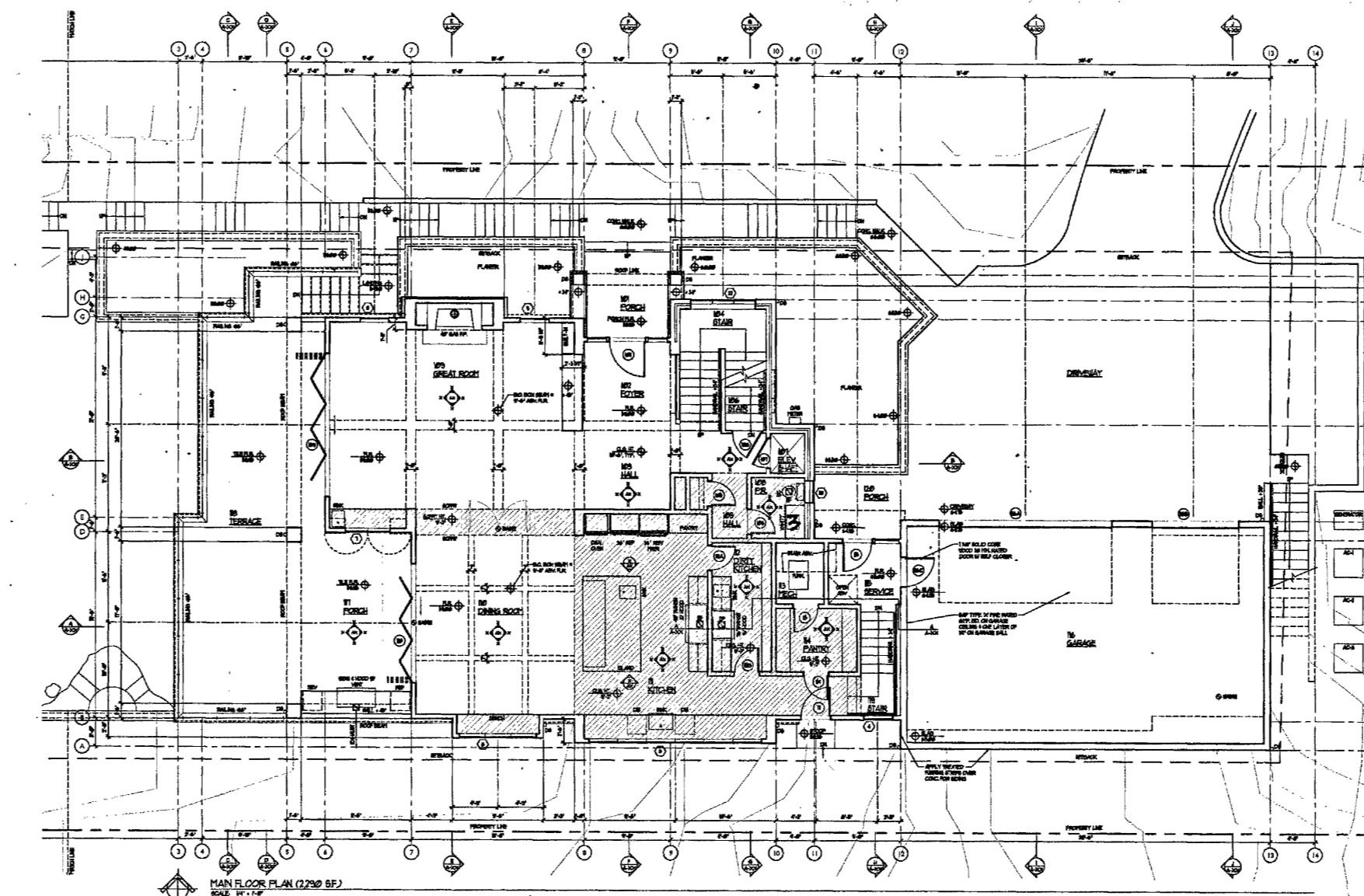
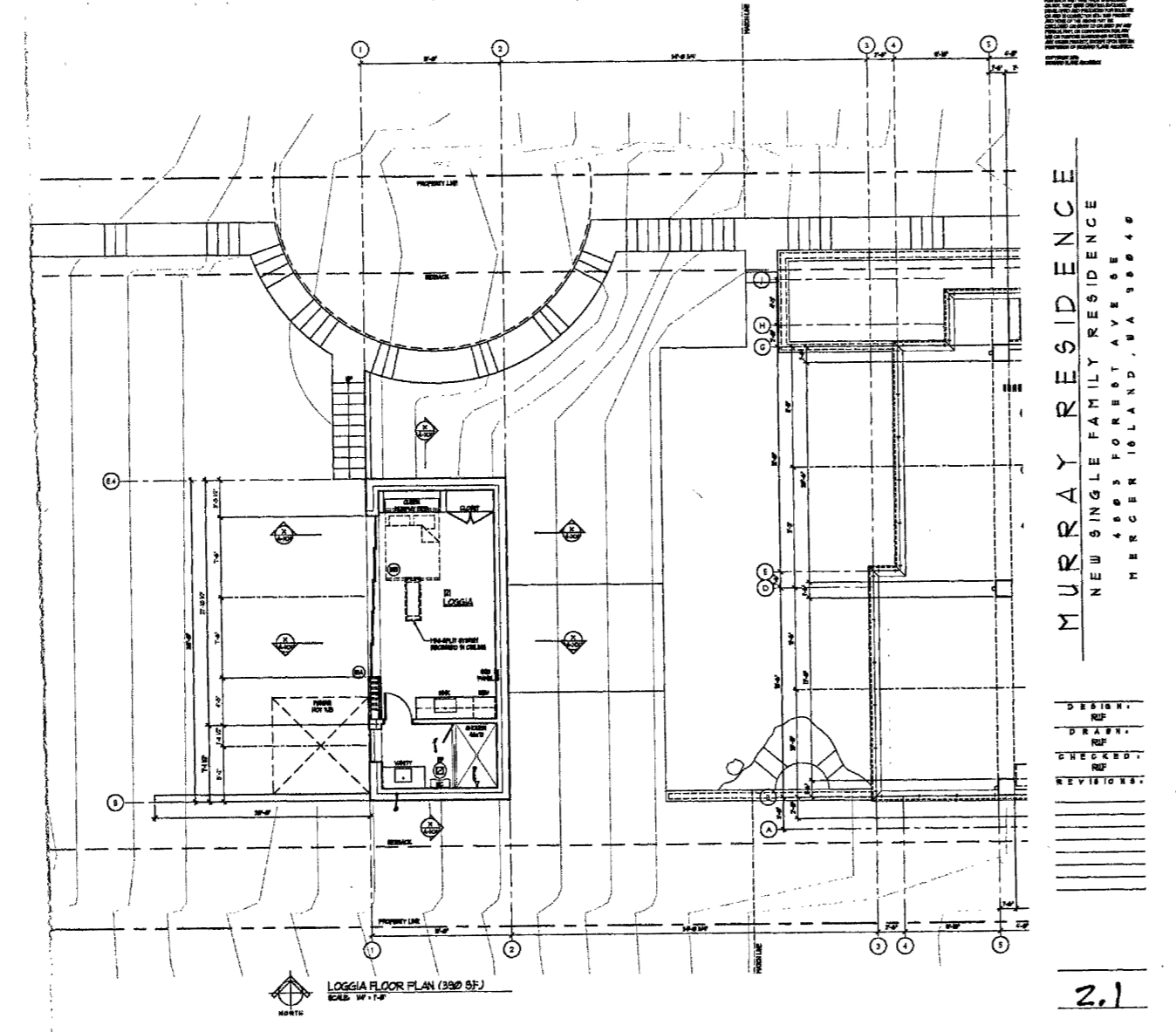
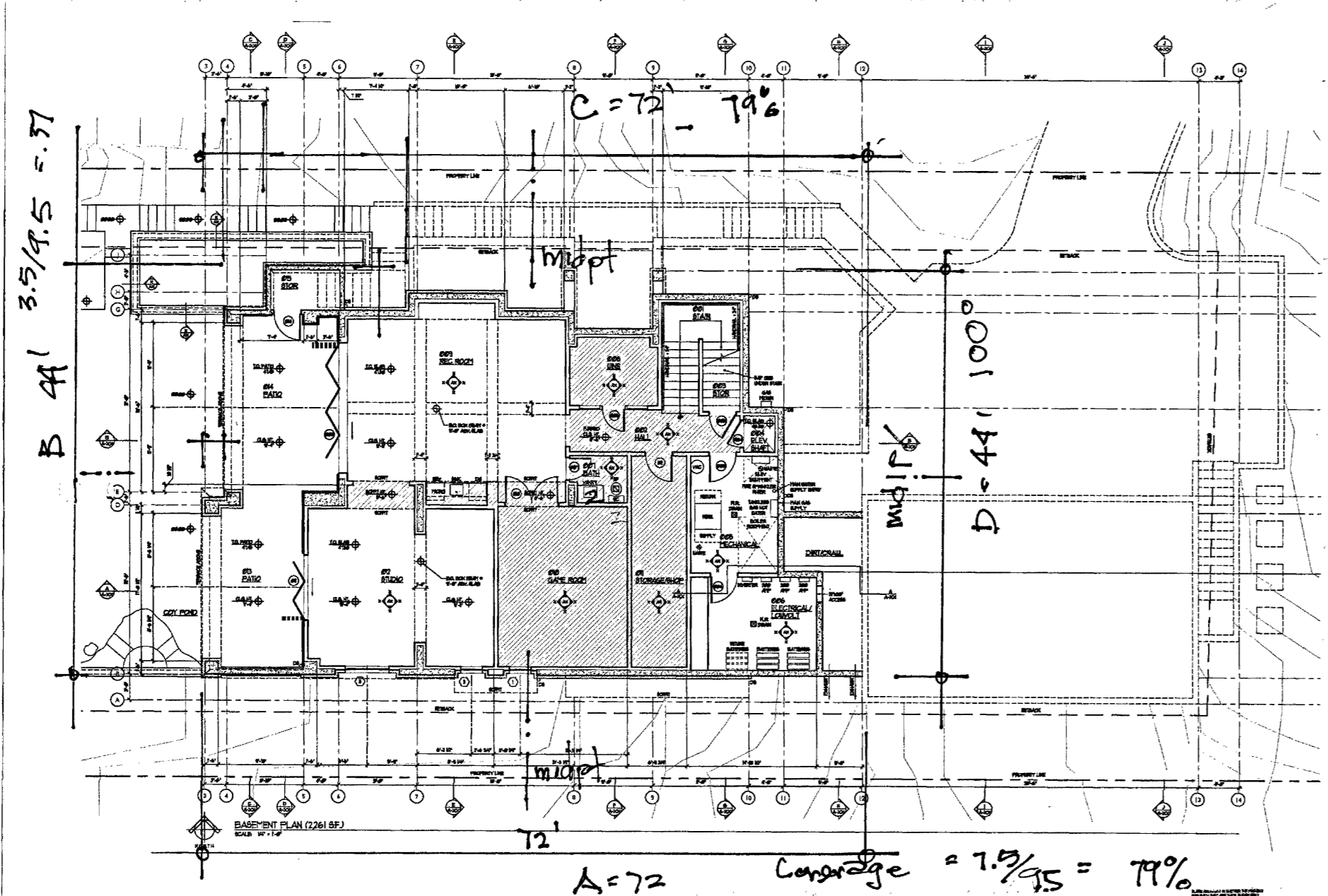
\*see side development worksheet  
 Site area - worksheet calcs  
 1" = 20'

Murray ABE

ave bldg hgt

11'	59.5	1054.5
3'	61.0	1839.0
10'	63.0	6390.0
13'	64.0	832.0
4'	64.5	268.0
12'	64.0	774.0
9'	65.0	585.0
2'	65.0	130.0
38.5	64.6	2496.5
24'	74.0	1770.0
38.5'	65.5	2537.25
3'	65	195.0
13'	64.5	838.5
25'	64.0	1600.0
21'	61.0	1281.0
25'	59.0	1475
35'	58.5	2047.5
2'	58.5	117
4.5'	57.5	546.25
2'	57.0	114.0
17'	56.0	952.0
42'	54.5	2289.0
12'	54.5	654.0
2'	55.0	110.0
11'	54.0	594.0
2'	57.0	114.0
7'	57.5	402.5
5'	58.0	290.0

322'      20151.75  
 ABE =  $\frac{20151.75}{322} = 62.58$   
 + 30'  
 max height = 92.58

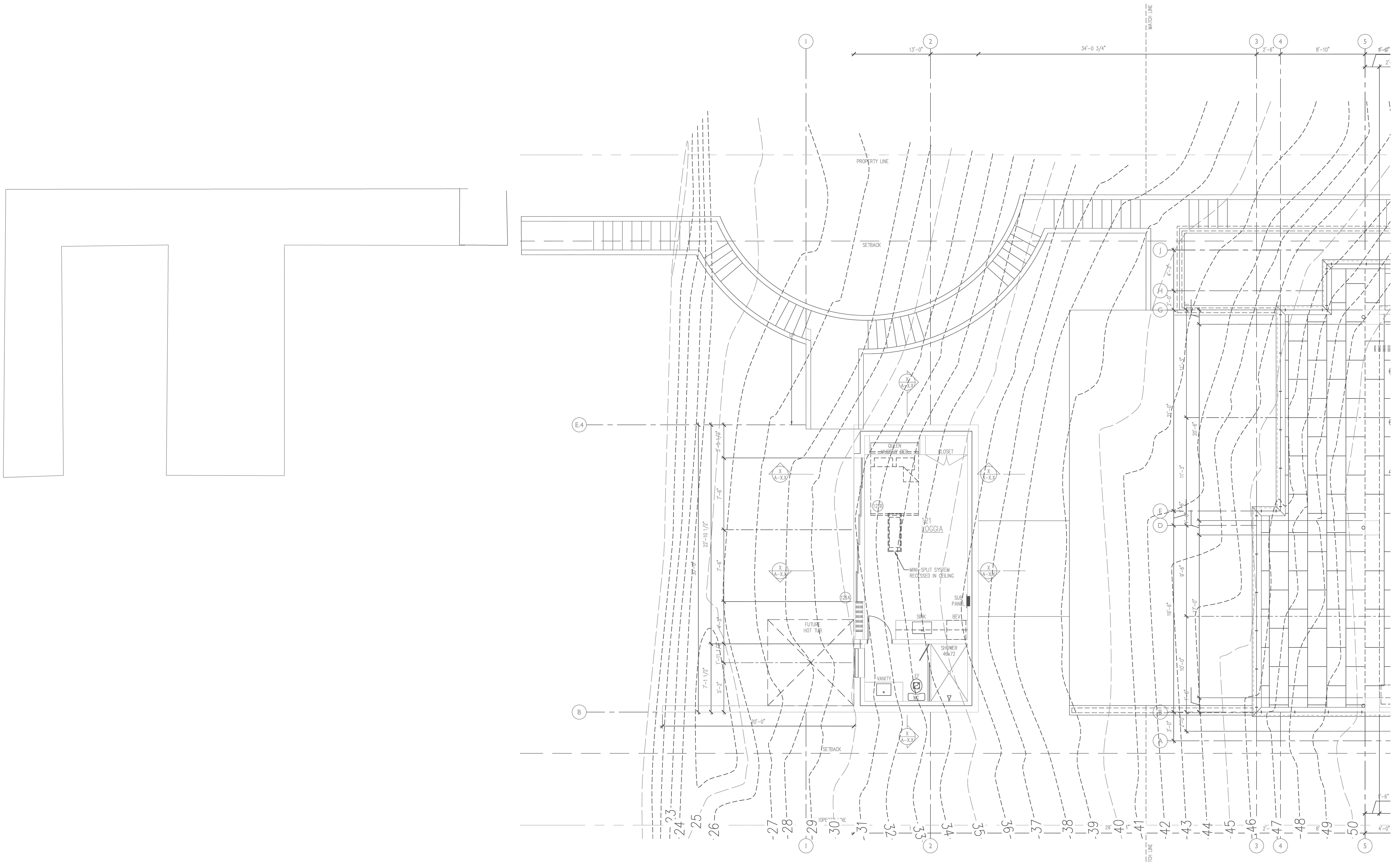


6080 REGISTERED ARCHITECT  
 RICHARD W. FLAKE  
 STATE OF WASHINGTON

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MURRAY RESIDENCE  
 NEW SINGLE FAMILY RESIDENCE  
 4803 FOREST AVE SE  
 MERCER ISLAND, WA 98044

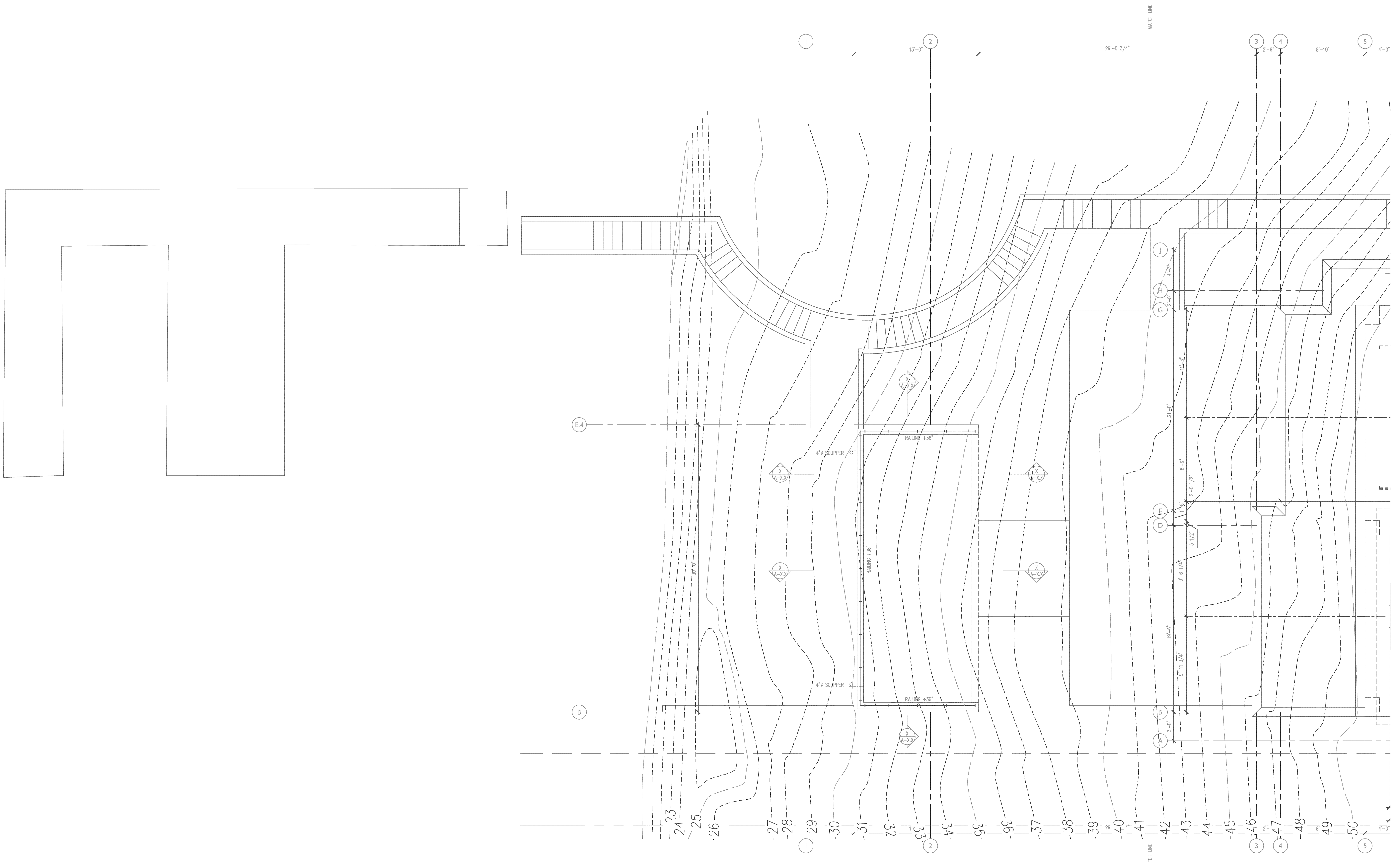
DESIGN: RUF  
 DRAWN: RUF  
 CHECKED: RUF  
 REVISIONS:



**LOGGIA FLOOR PLAN (390 S.F.)**  
SCALE: 1/4" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN :	RWF
DRAWN :	RWF
CHECKED :	RWF
REVISIONS :	

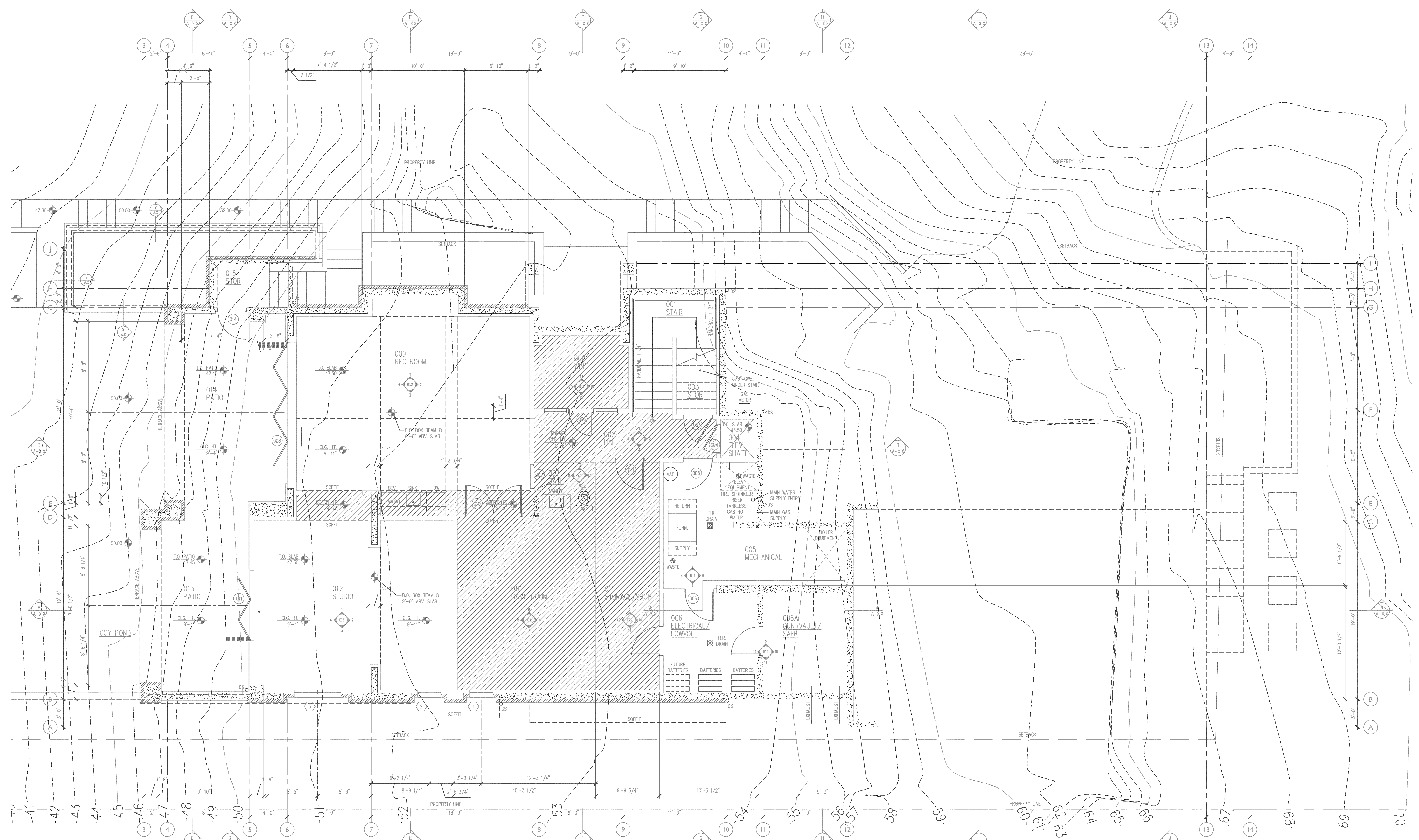


LOGGIA ROOF PLAN  
SCALE: 1/4" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN :	RWF
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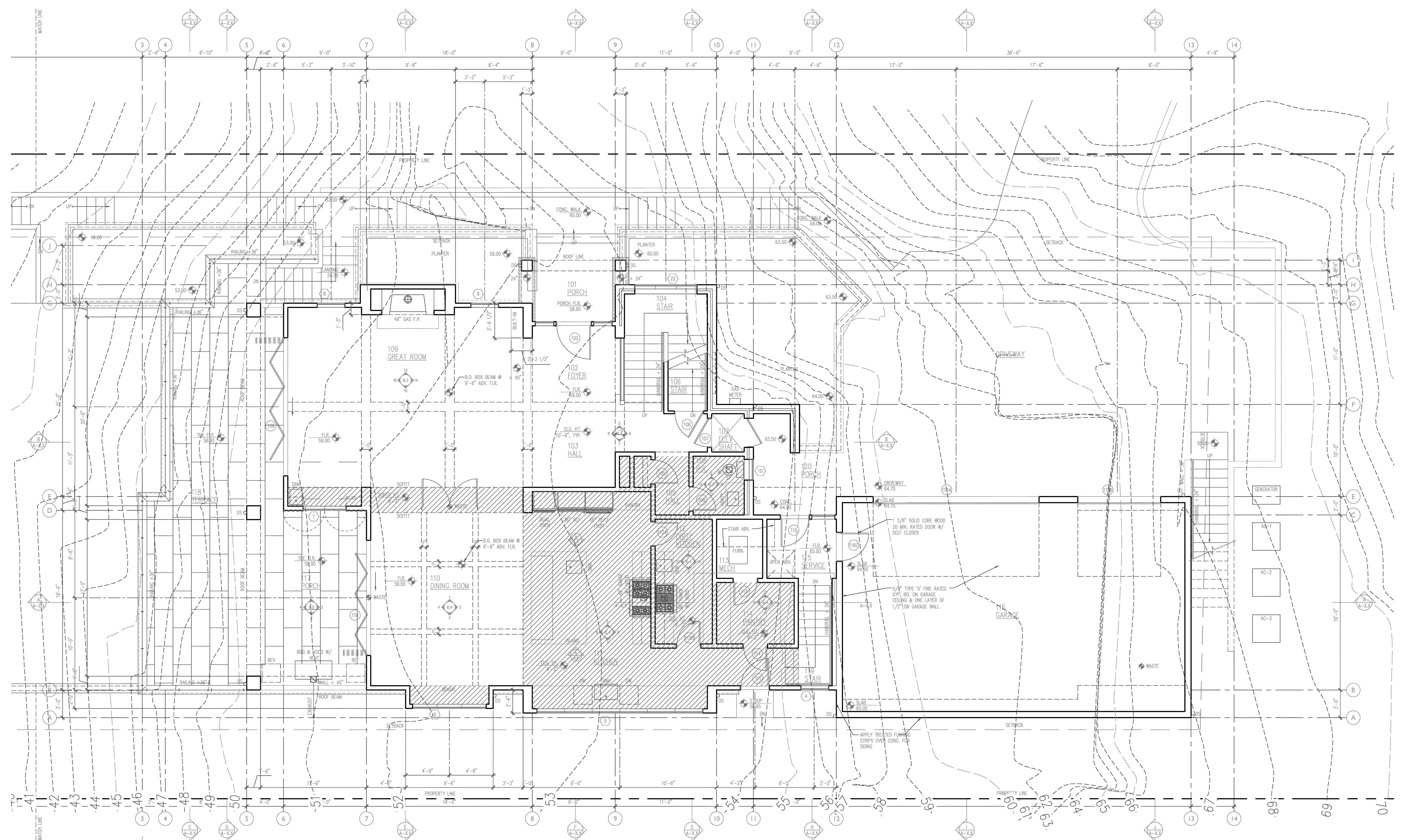
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**BASEMENT PLAN (2,261 S.F.)**  
SCALE: 1/4" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN :	RWF
DRAWN :	RWF
CHECKED :	RWF
REVISIONS :	



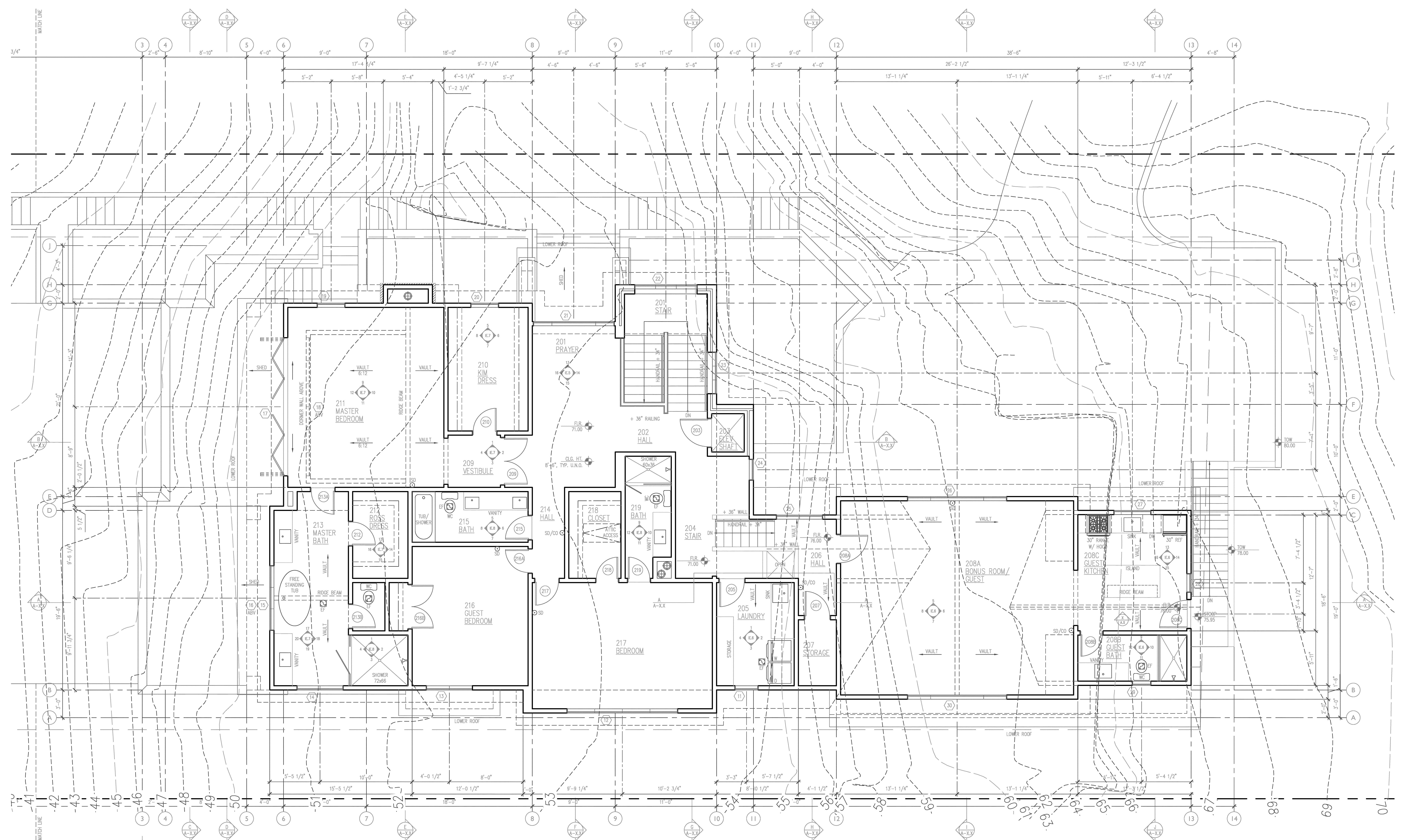
MAIN FLOOR PLAN (2,290 S.F.)  
SCALE: 1/4" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN :	RWF
DRAWN :	RWF
CHECKED :	RWF
REVISIONS :	



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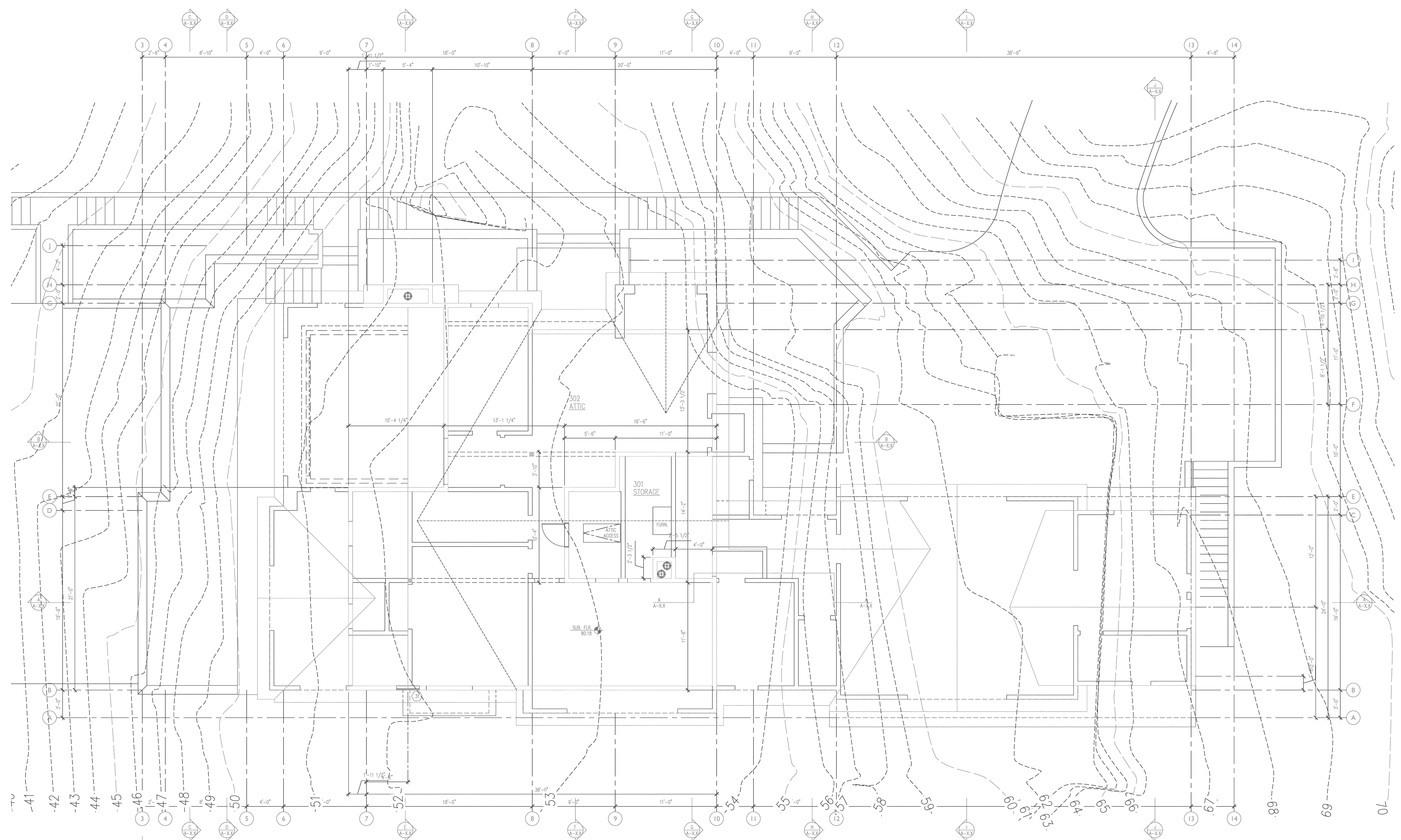


UPPER FLOOR PLAN (3,152 S.F.)  
SCALE: 1/4" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN :	RWF
DRAWN :	RWF
CHECKED :	RWF
REVISIONS :	

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ATTIC PLAN  
SCALE: 1/4" = 1'-0"  
NORTH

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN :	RWF
DRAWN :	RWF
CHECKED :	RWF
REVISIONS :	

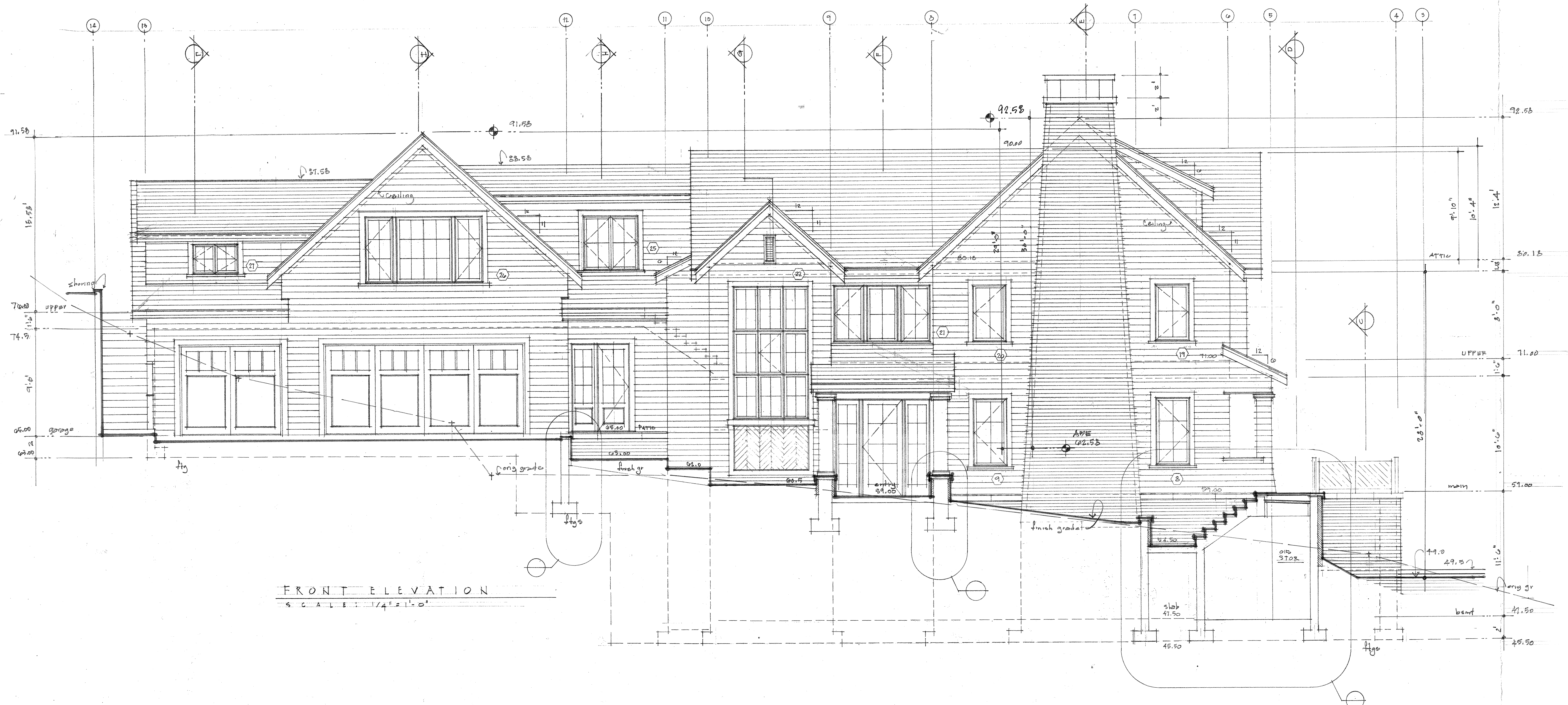


**ROOF PLAN**  
SCALE: 1/4" = 1'-0"

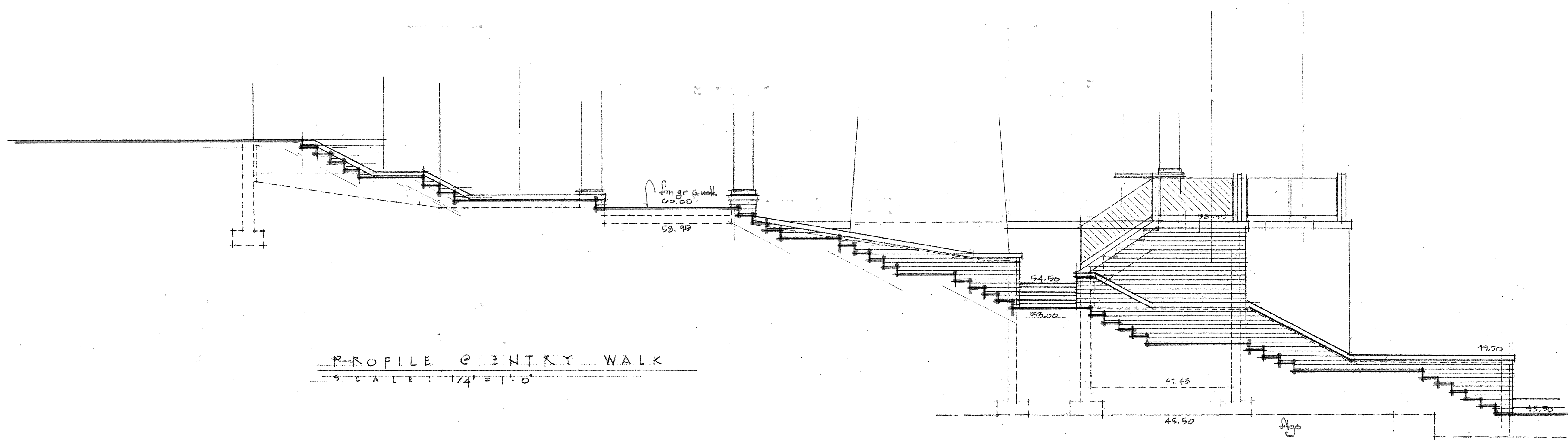
MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN :	RWF
DRAWN :	RWF
CHECKED :	RWF
REVISIONS :	

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



PROFILE @ ENTRY WALK  
SCALE: 1/4" = 1'-0"

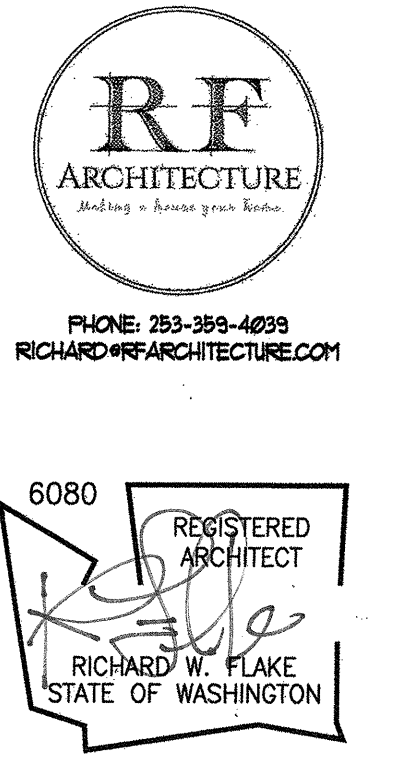
MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN: RUF  
DRAWN: RUF  
CHECKED: RUF  
REVISIONS:

detail materials base pt gutters



SOUTH ELEVATION  
SCALE: 1/4" = 1'-0"



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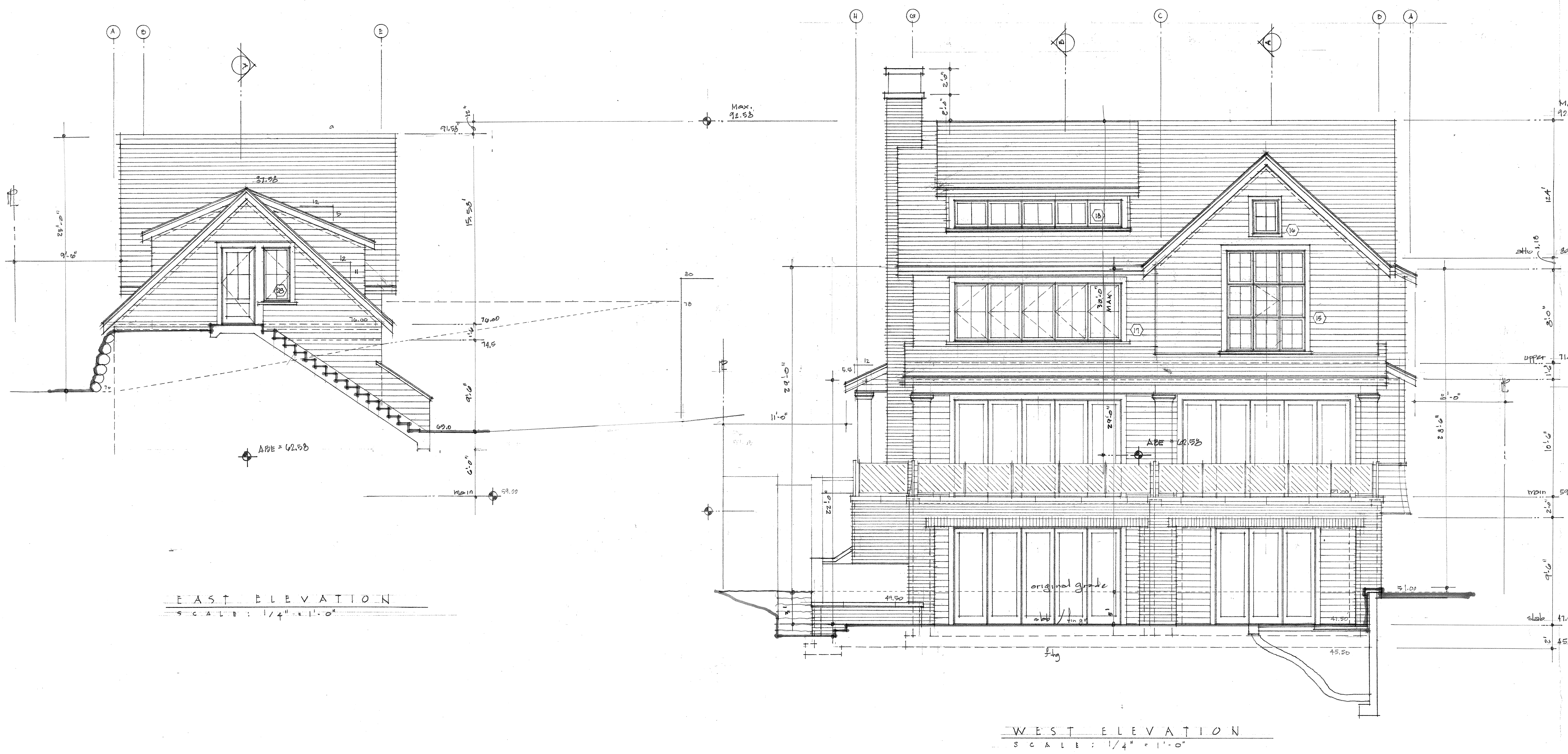
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MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN:	RF
DRAWN:	RF
CHECKED:	RF
REVISIONS:	

July 6, 2001  
A-72

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EAST ELEVATION  
SCALE: 1/4" = 1'-0"

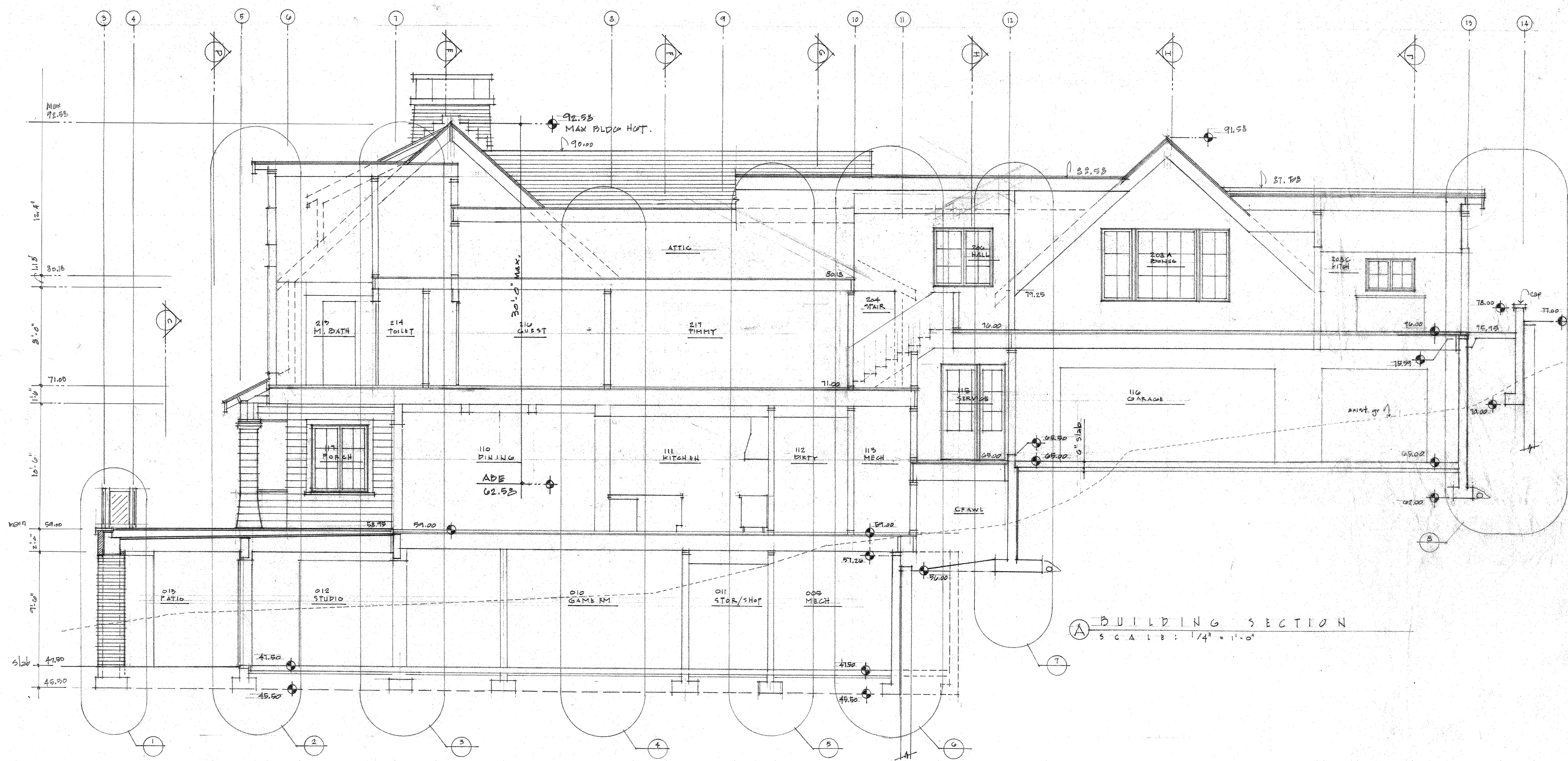
WEST ELEVATION  
SCALE: 1/4" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98004

DESIGN: RUF  
DRAWN: RUF  
CHECKED: RUF  
REVISIONS:

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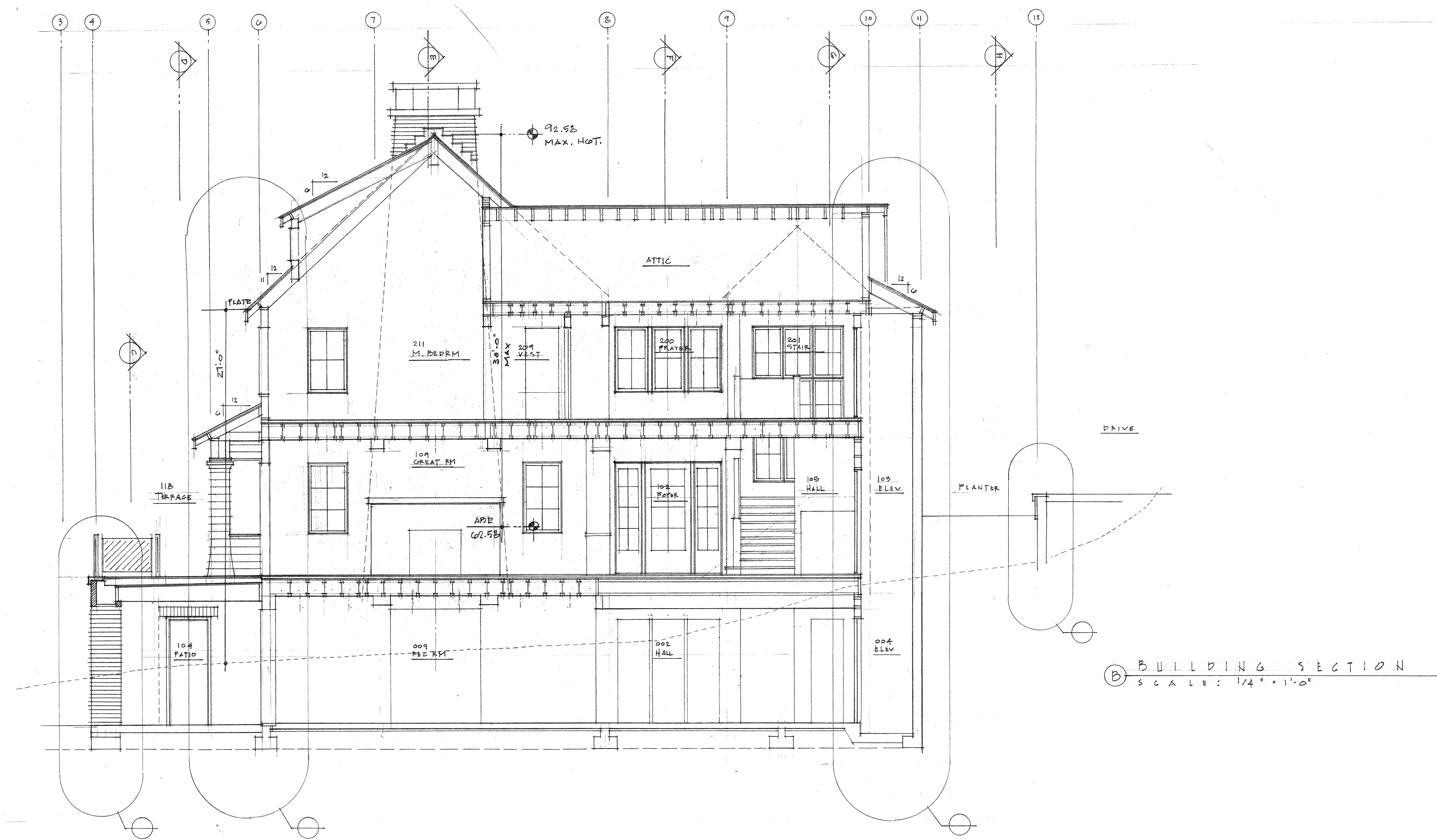


**A BUILDING SECTION**  
SCALE: 1/4" = 1'-0"

**MURRAY RESIDENCE**  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN:	RF
DRAWN:	RF
CHECKED:	RF
REVISIONS:	

July 6, 2021



(B) BUILDING SECTION  
 SCALE: 1/4" = 1'-0"

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MURRAY RESIDENCE  
 NEW SINGLE FAMILY RESIDENCE  
 4803 FOREST AVE SE  
 MERCER ISLAND, WA 98040

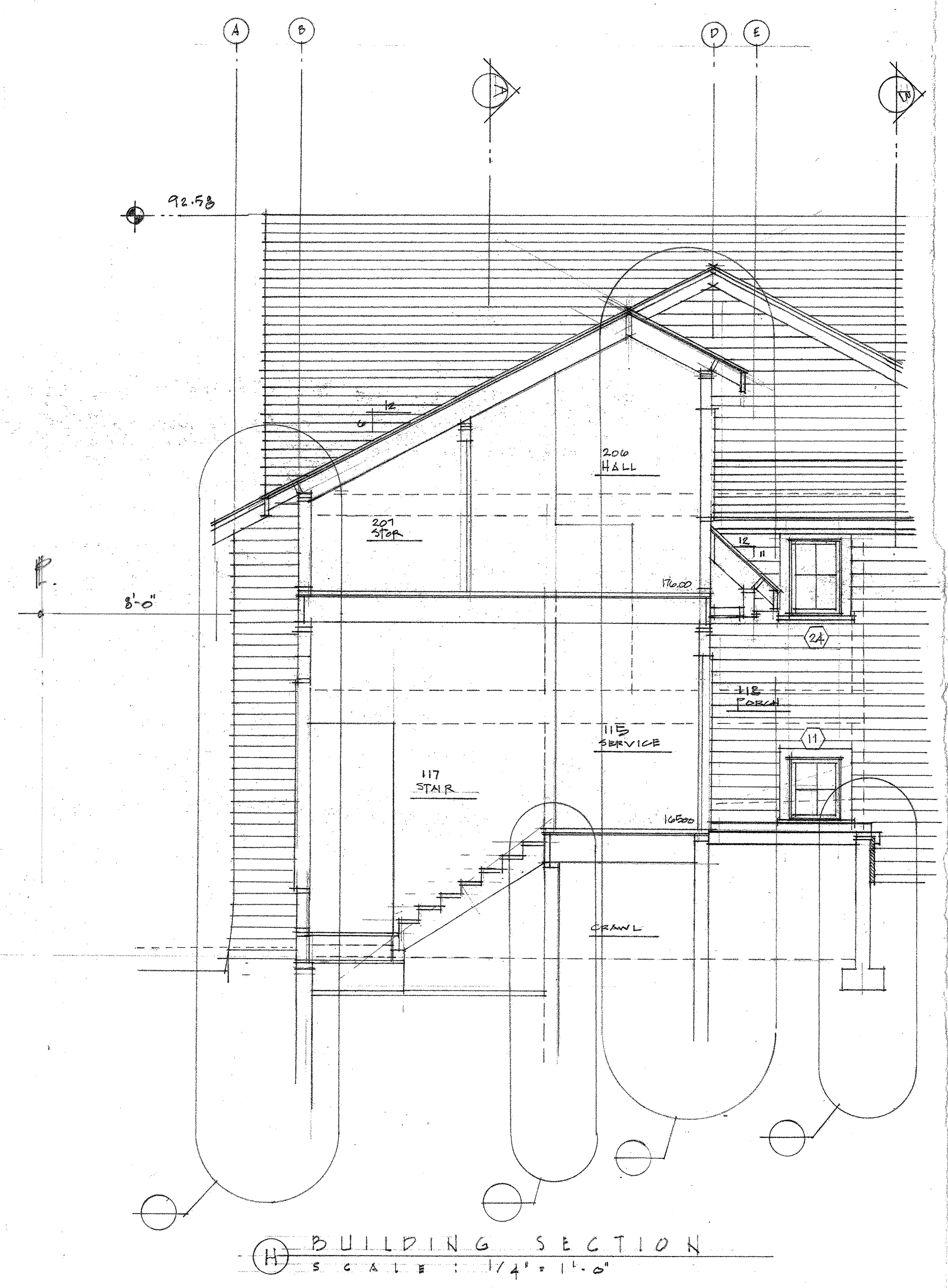
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 CHECKED: RLF  
 REVISIONS:


July 10, 2021

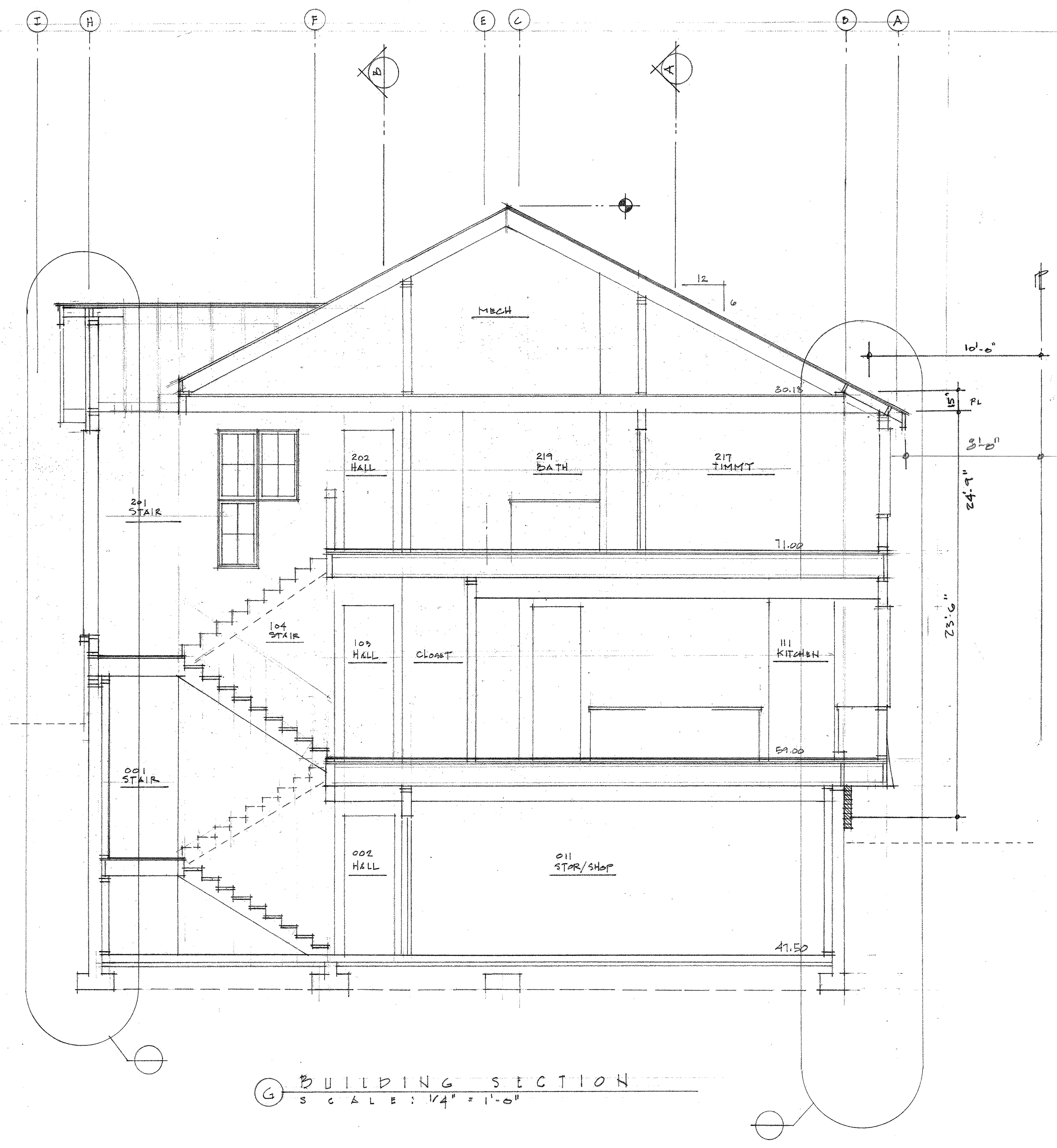


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H BUILDING SECTION  
SCALE: 1/4" = 1'-0"



G BUILDING SECTION  
SCALE: 1/4" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN: RUF  
DRAWN: RUF  
CHECKED: RUF  
REVISIONS:

July 6, 2021

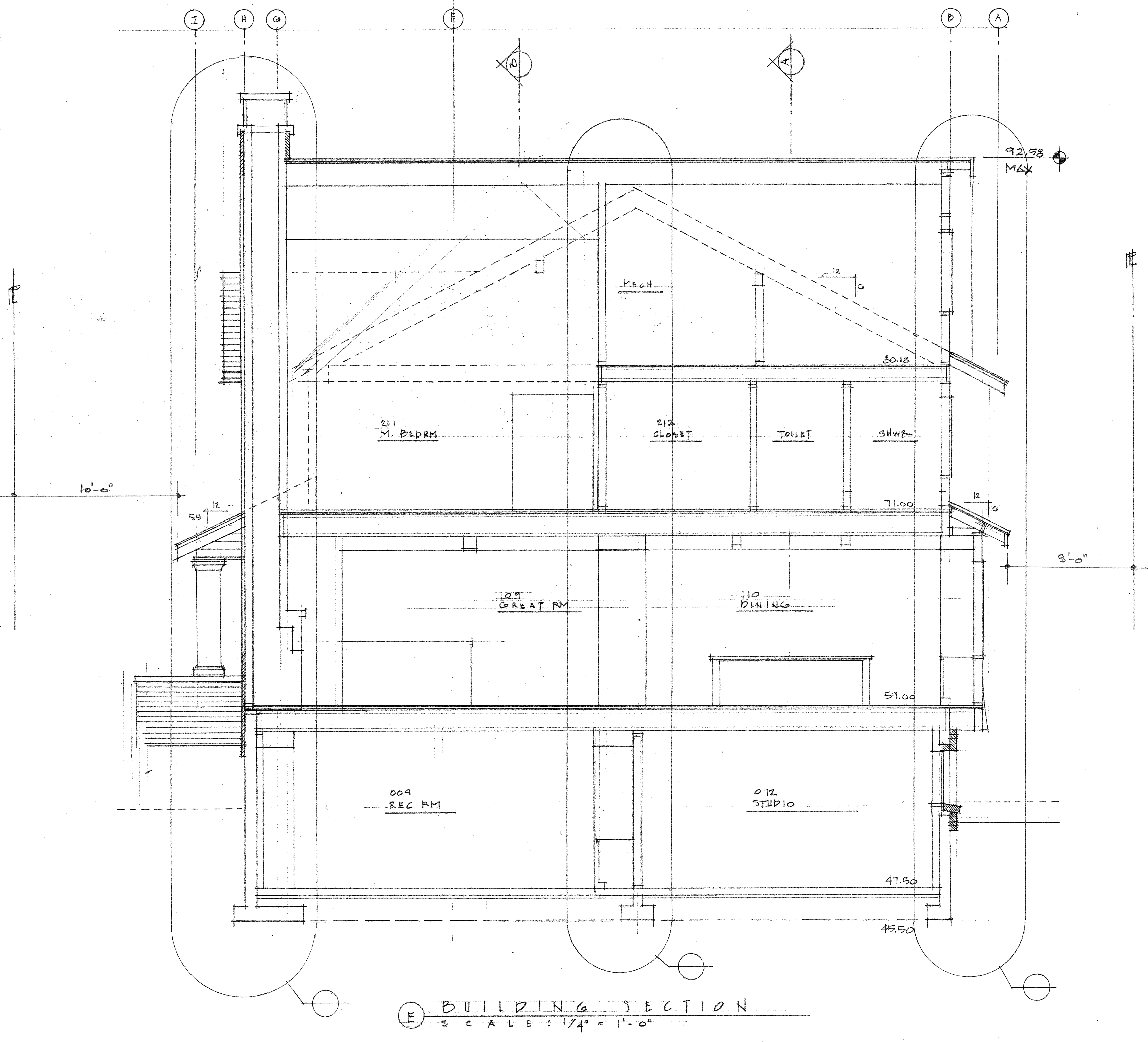
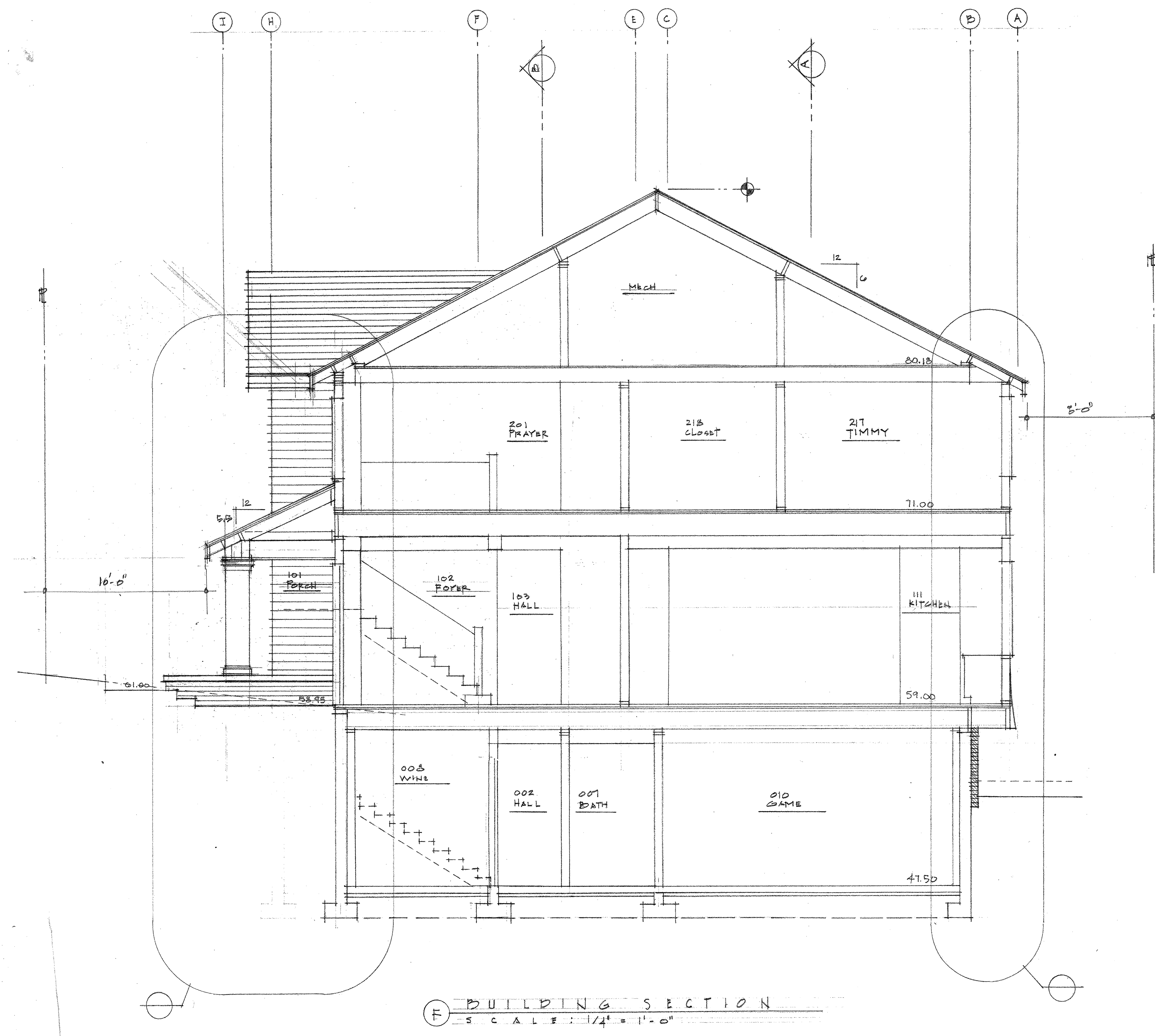
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MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

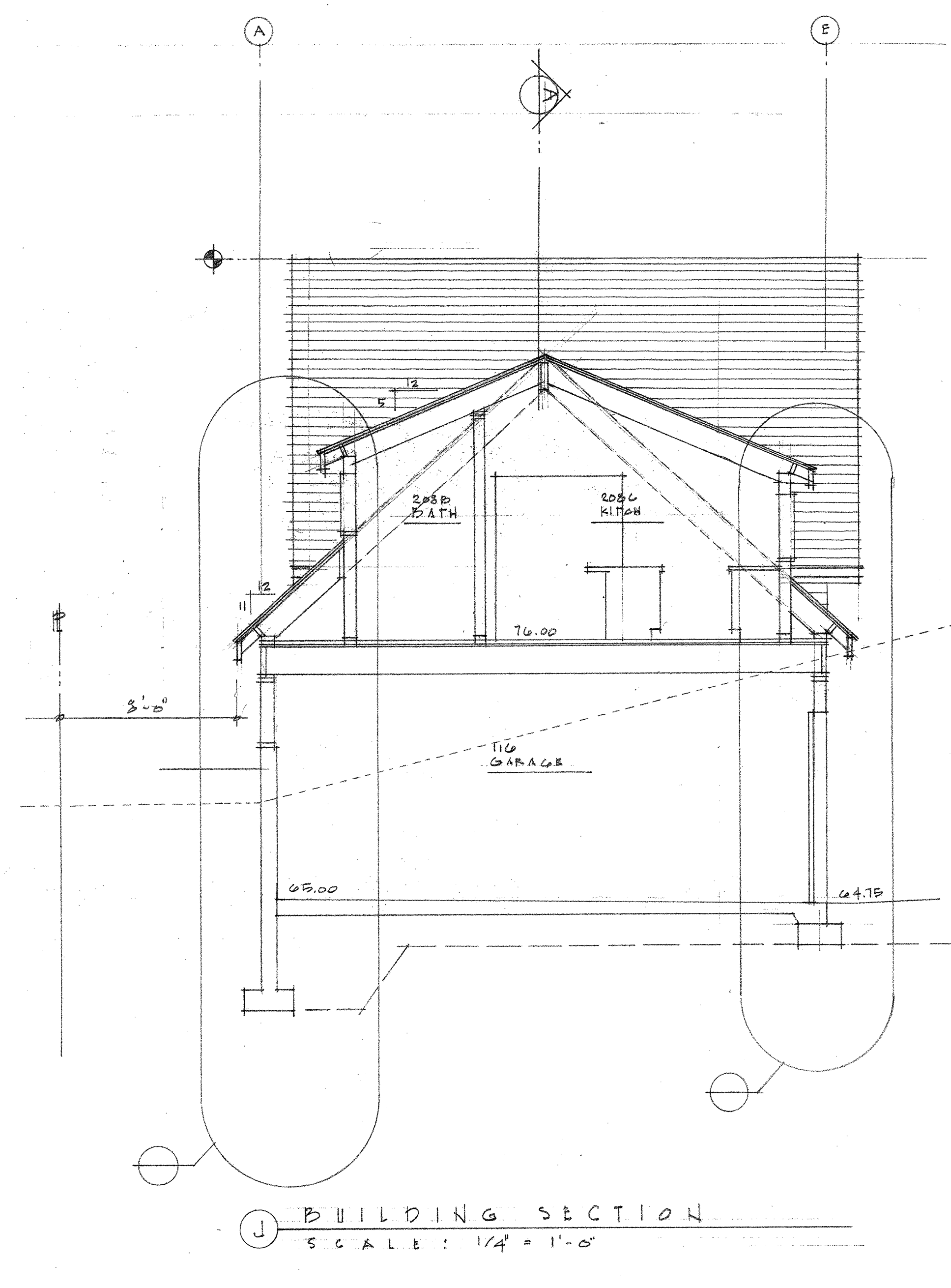
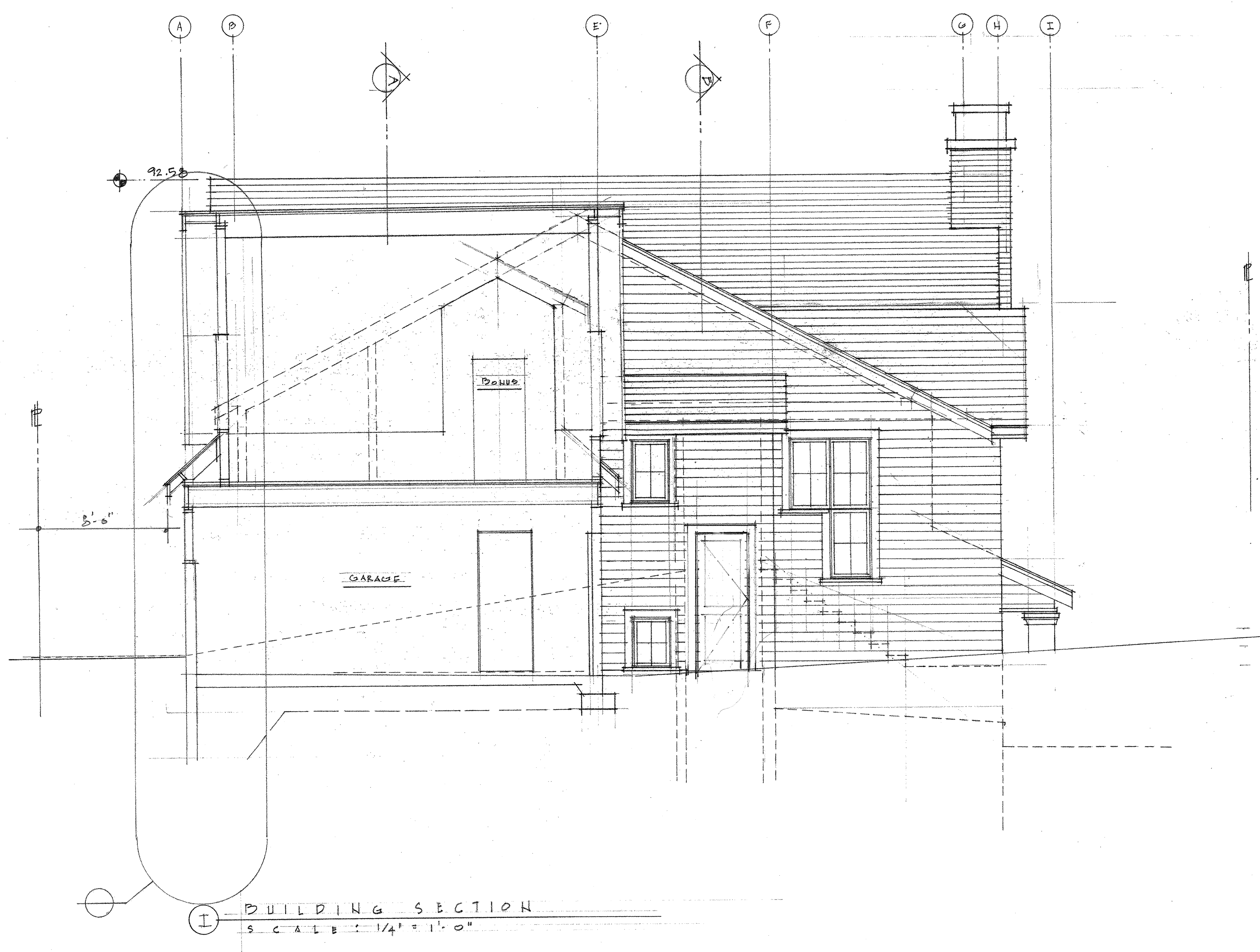
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REVISIONS:

July 6, 2021



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MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

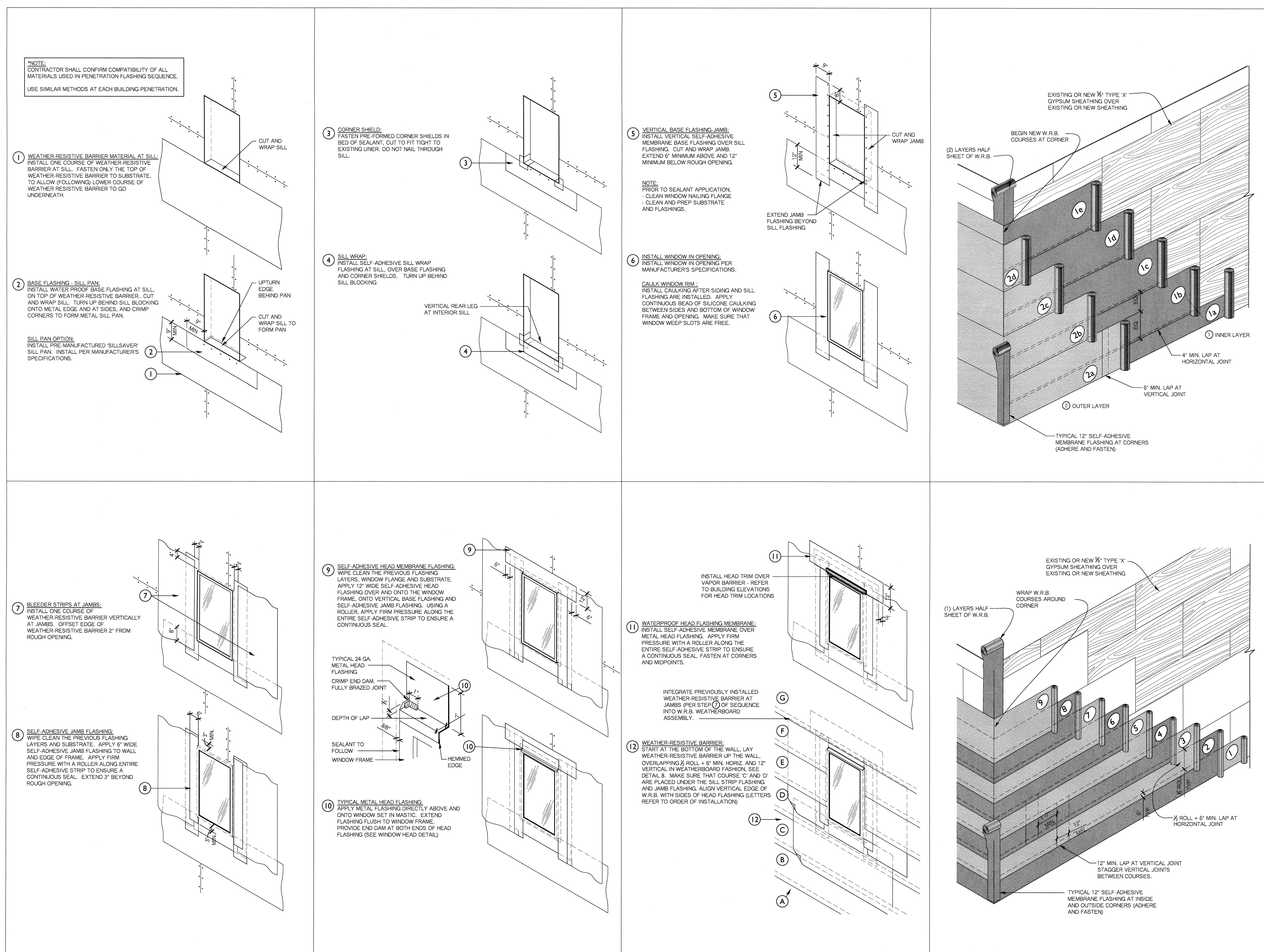
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CHECKED: RUF  
REVISIONS:


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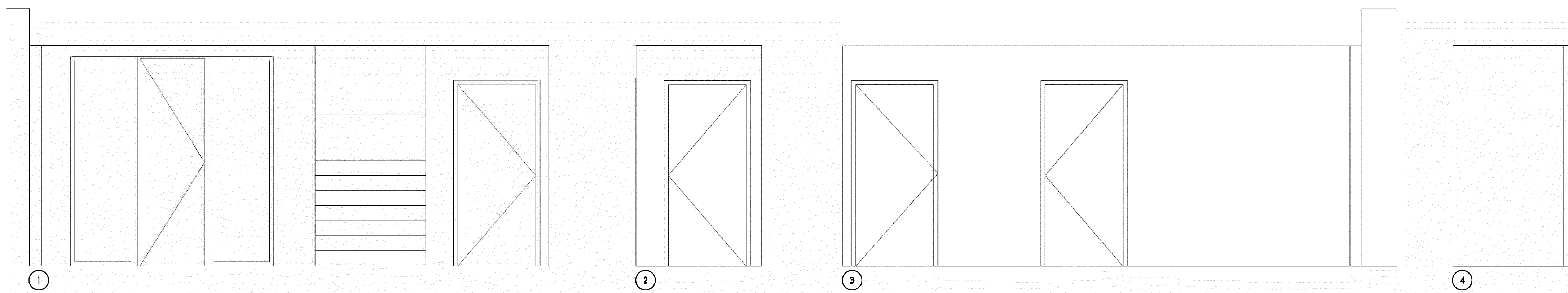
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NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

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REVISIONS:

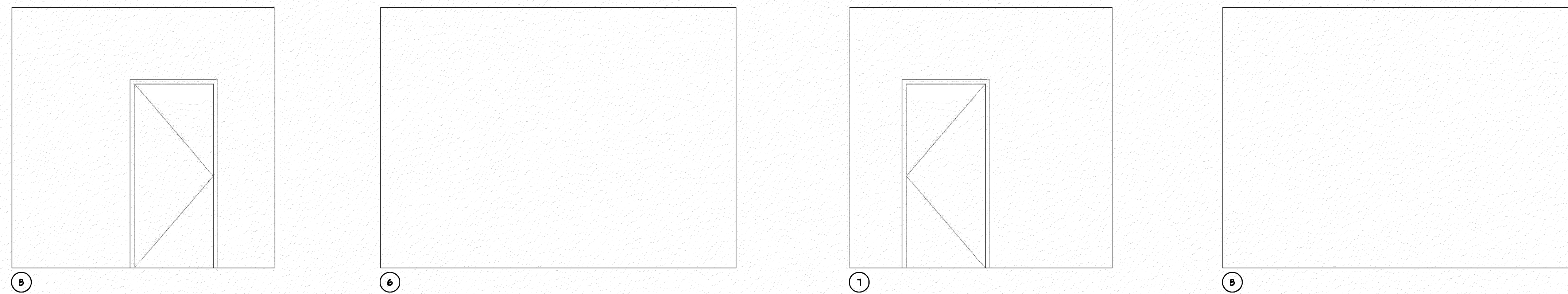




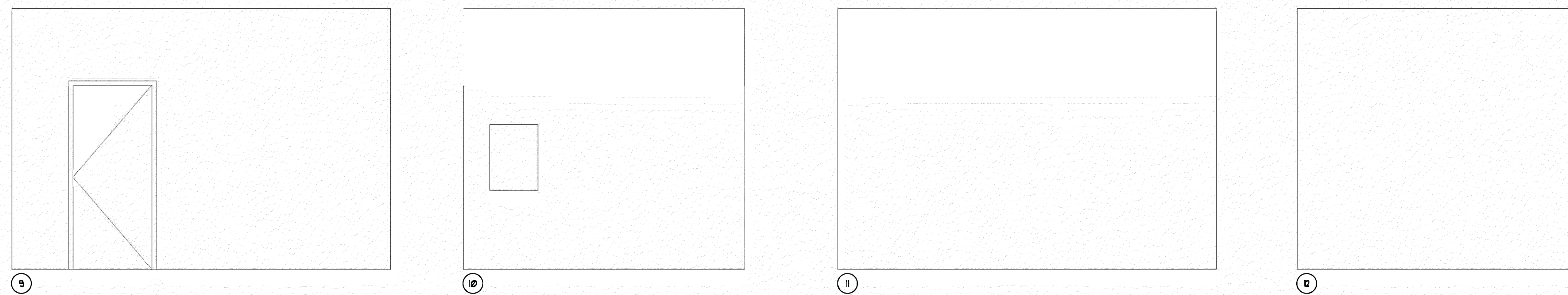




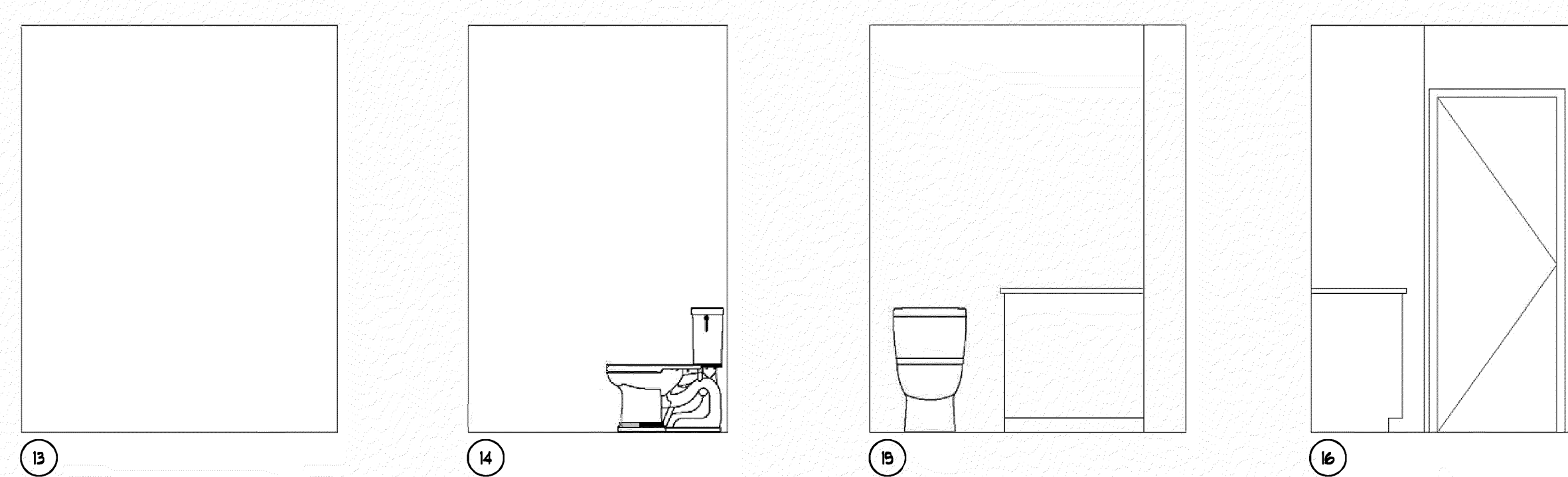
002 HALL  
SCALE: 3/8" = 1'-0"



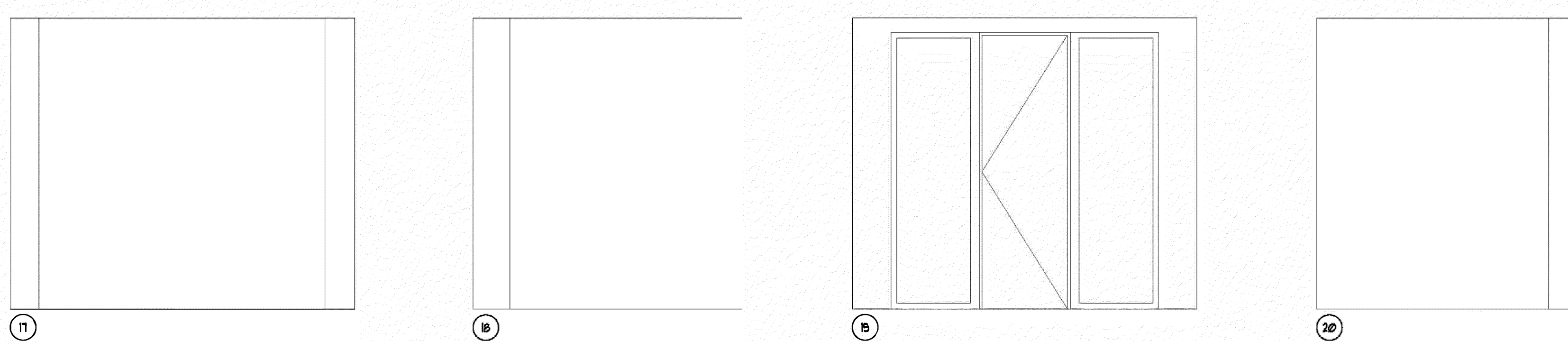
005 MECHANICAL  
SCALE: 3/8" = 1'-0"



006 ELECTRICAL/LOW VOLT  
SCALE: 3/8" = 1'-0"



001 BATH  
SCALE: 3/8" = 1'-0"



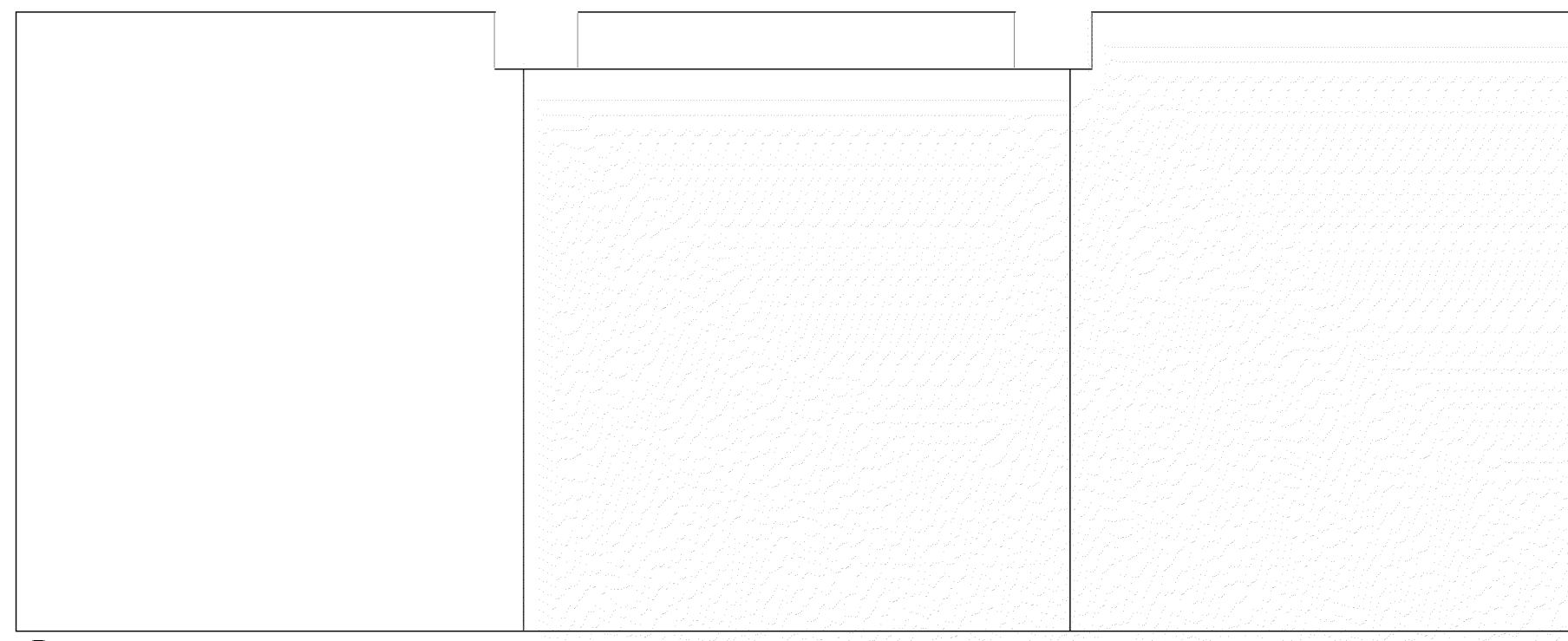
008 WINE  
SCALE: 3/8" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN: RLF  
DRAWN: RLF  
CHECKED: RLF  
REVISIONS:

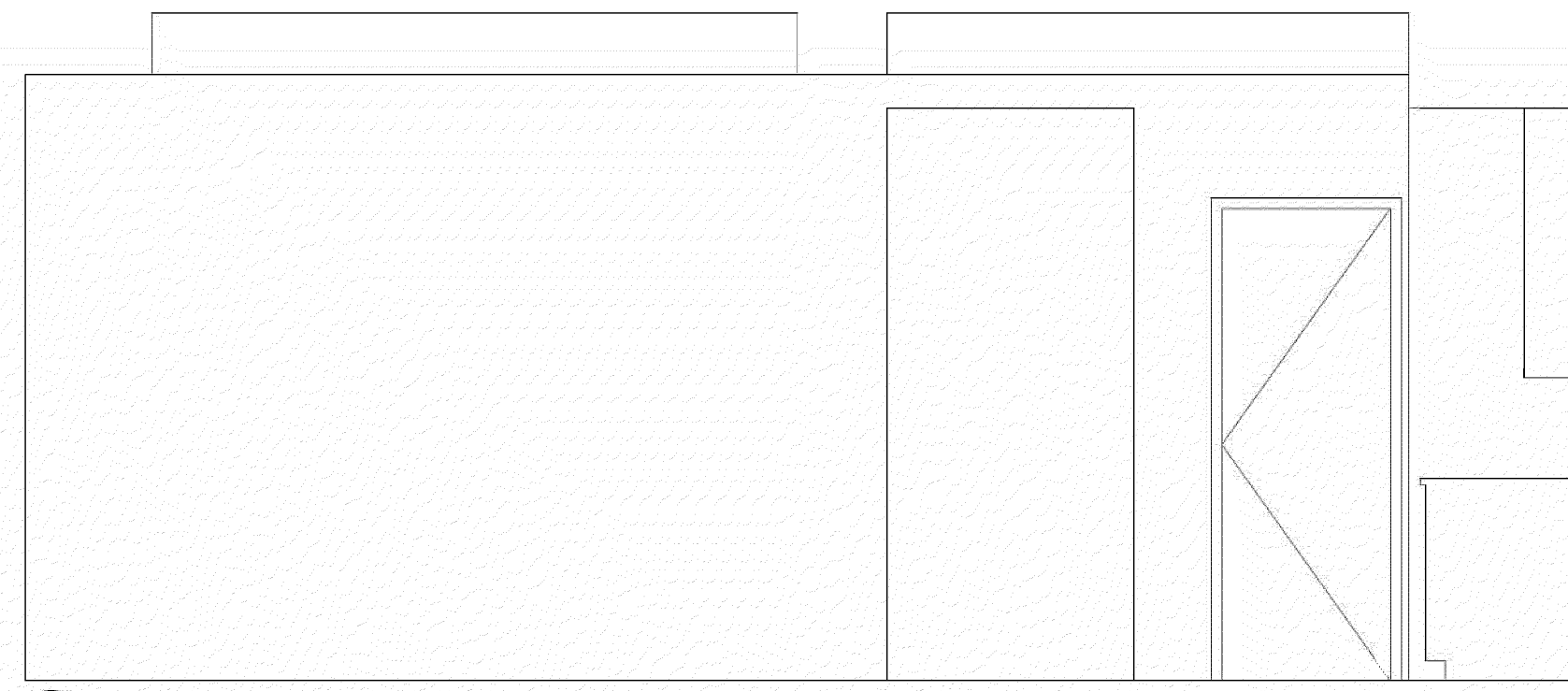
NO.	DATE	DESCRIPTION

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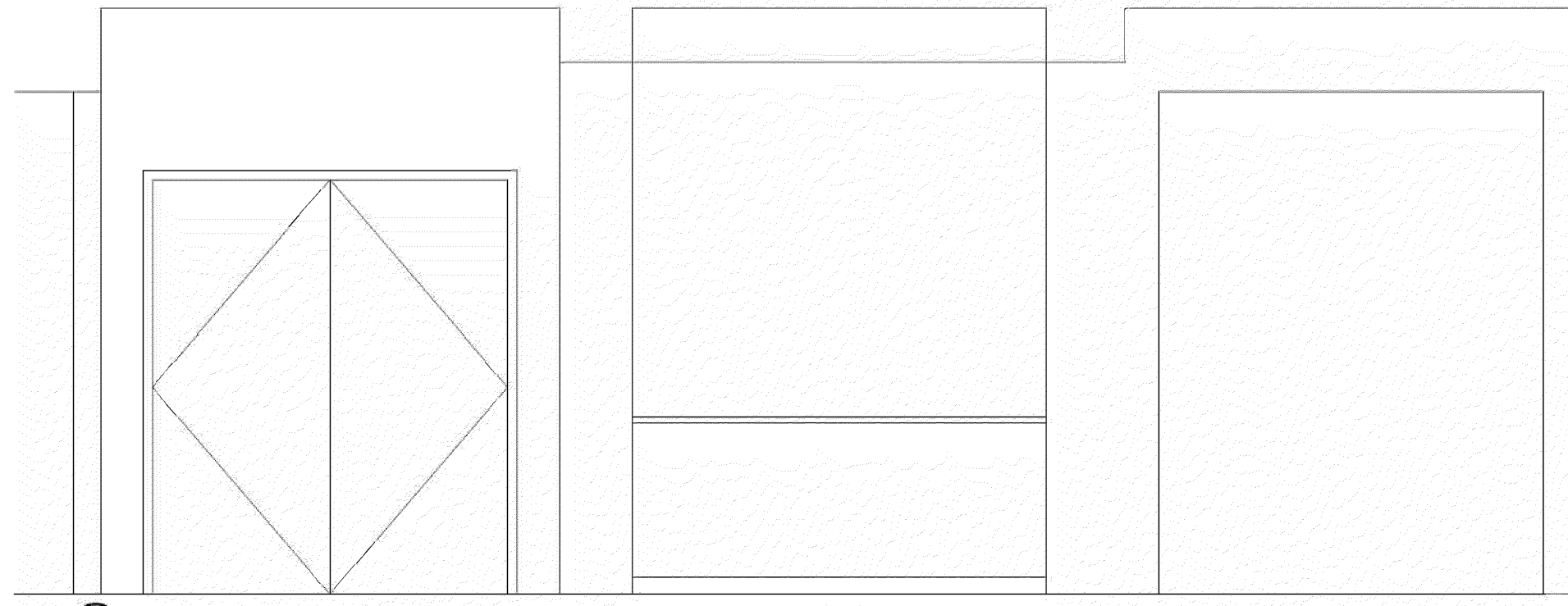


1

009 REC ROOM  
SCALE: 3/8" = 1'-0"

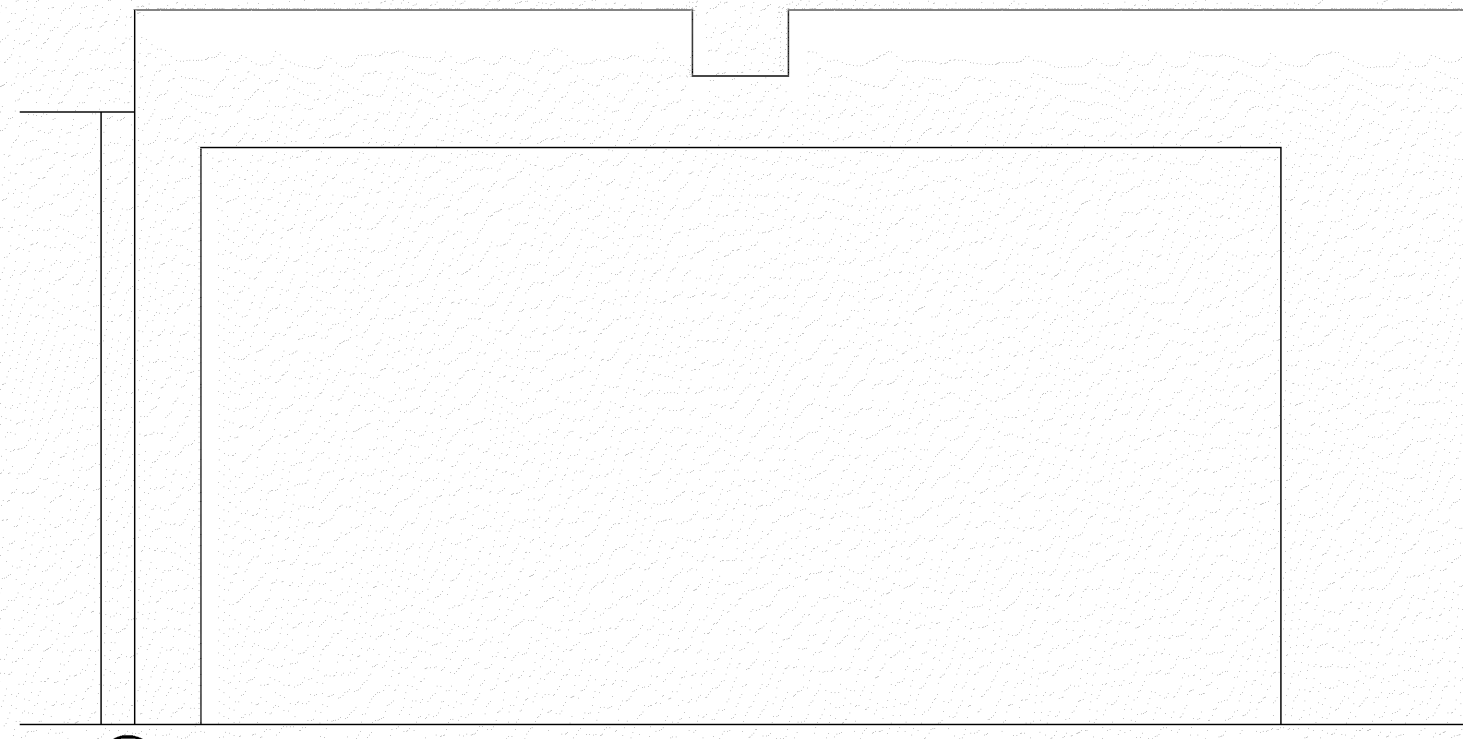


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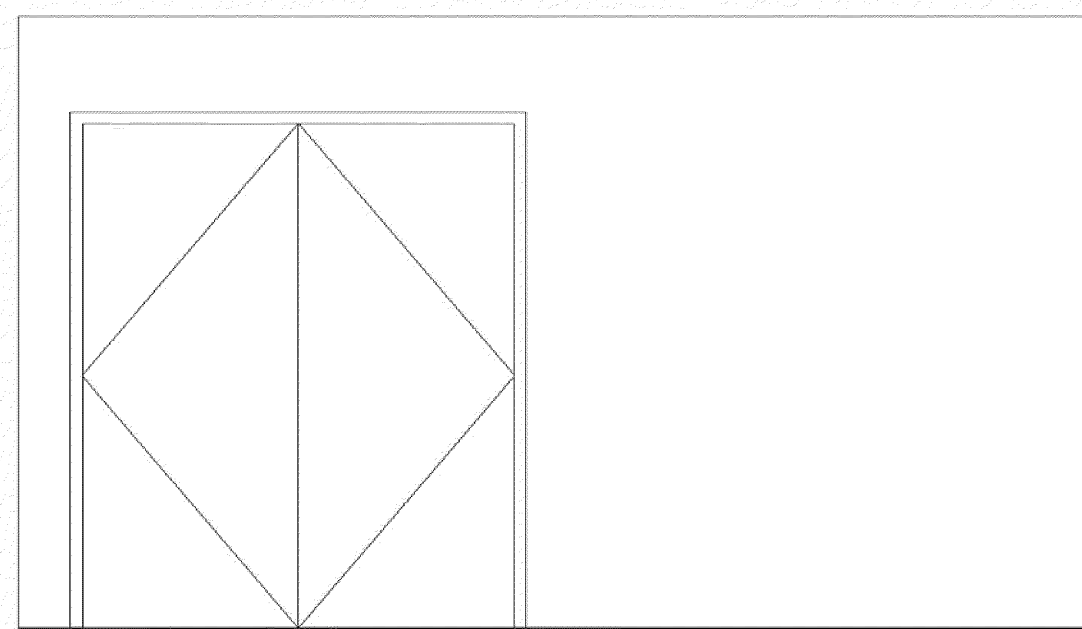


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009 REC ROOM  
SCALE: 3/8" = 1'-0"

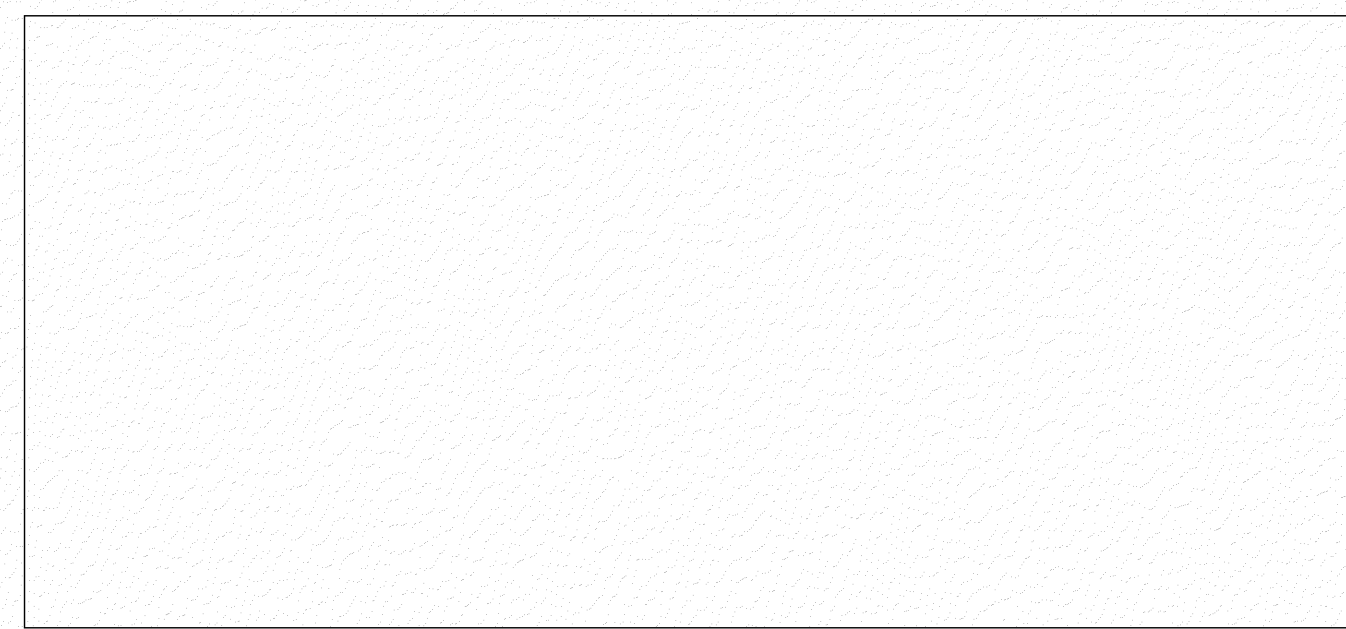


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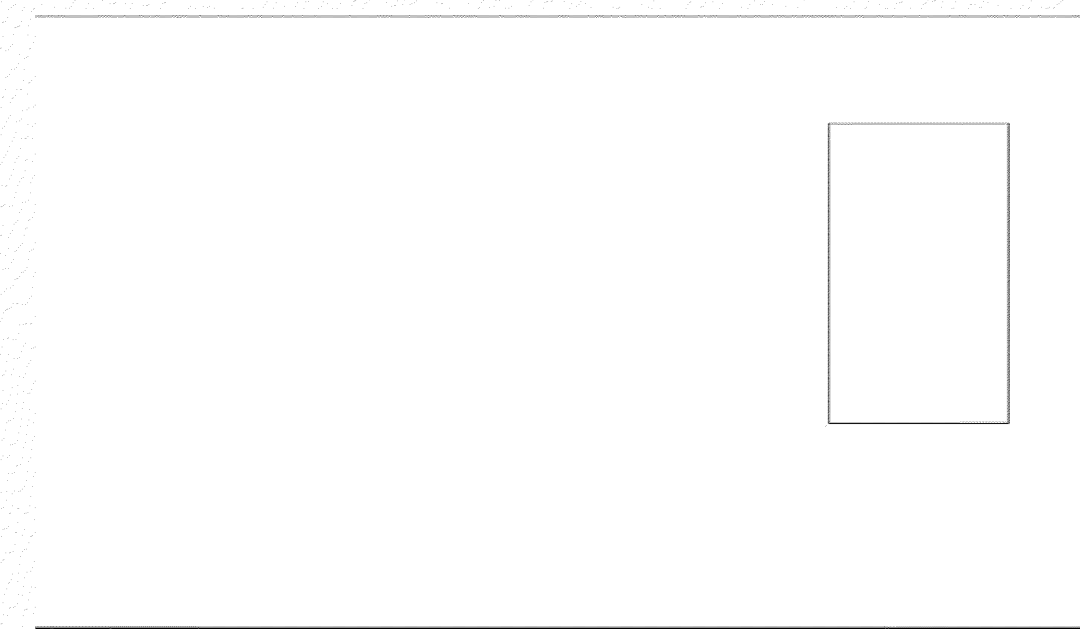


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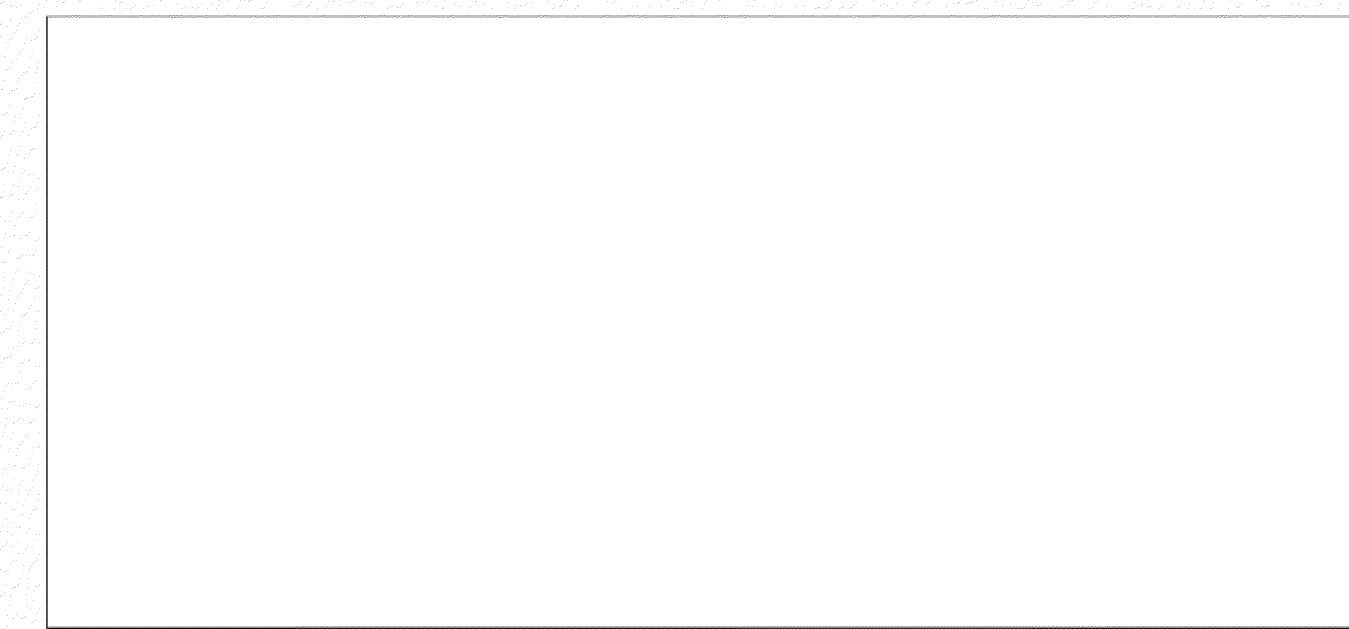
010 GAME ROOM  
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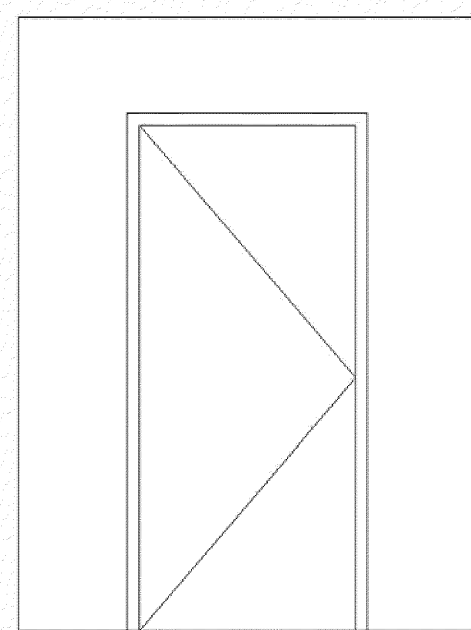
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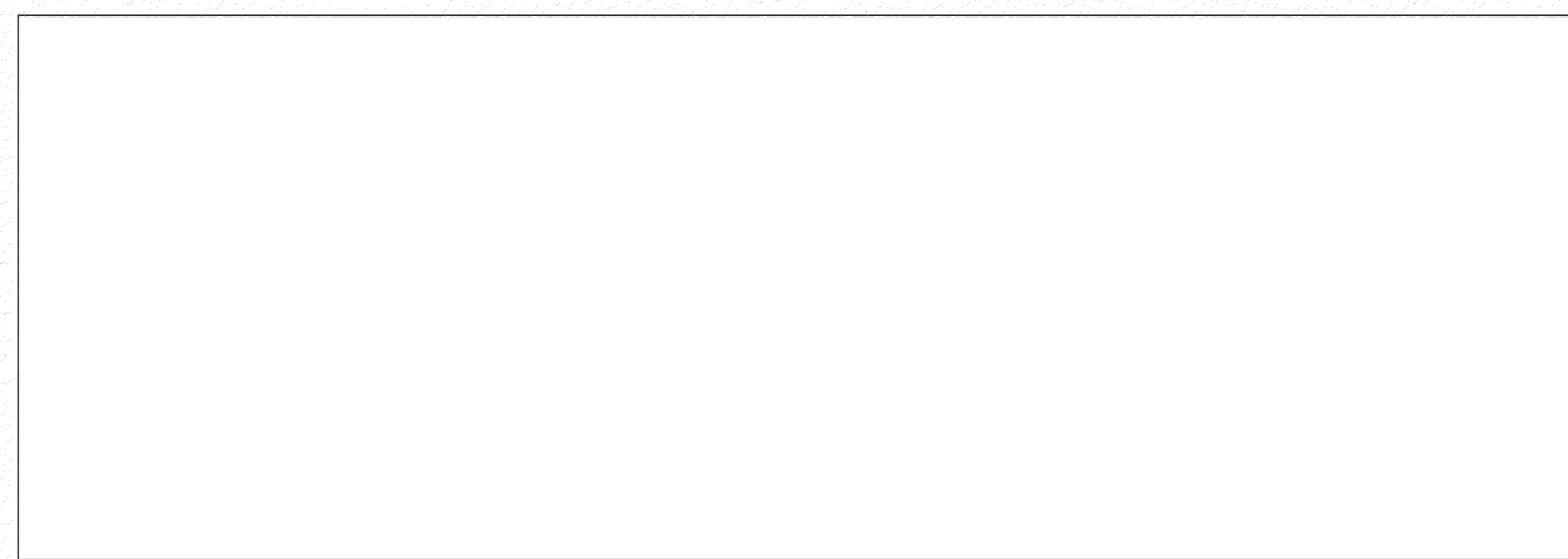


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9

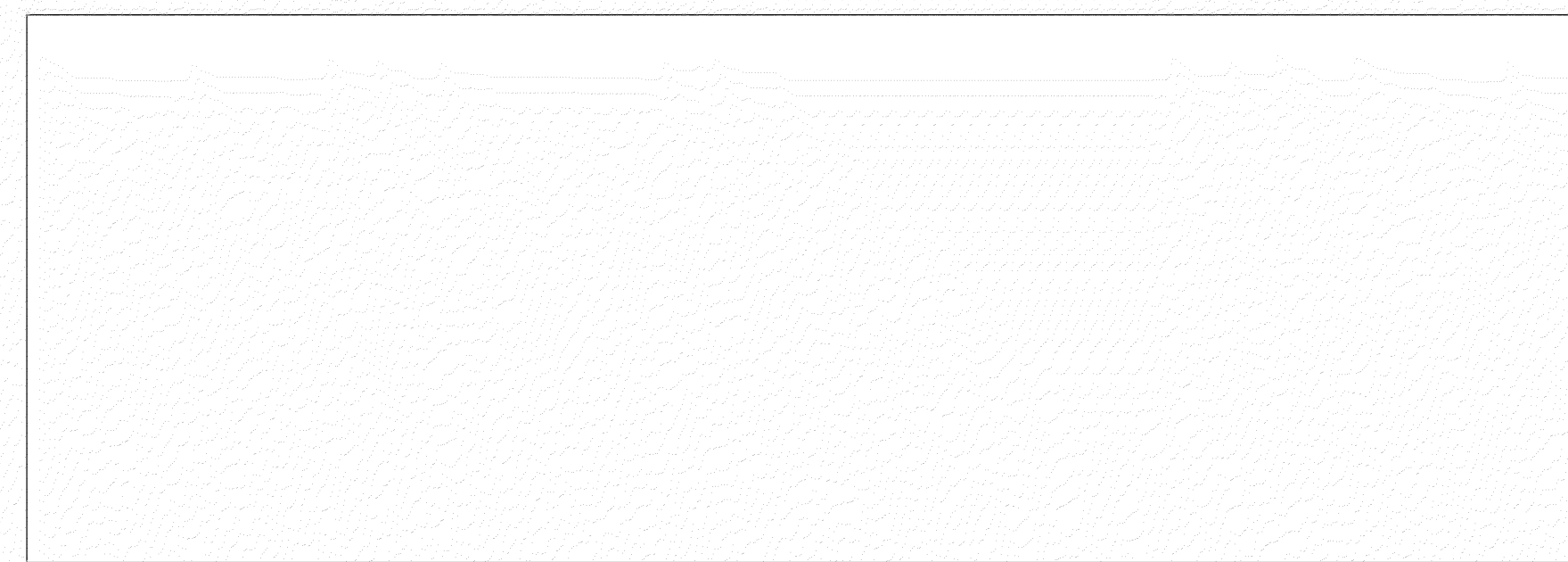
011 STORAGE/SHOP  
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10



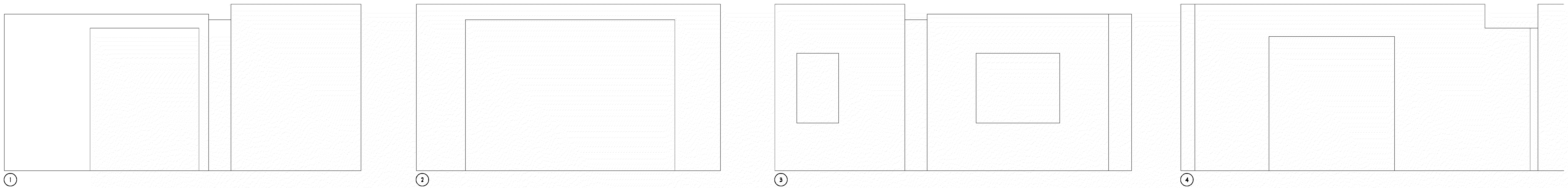
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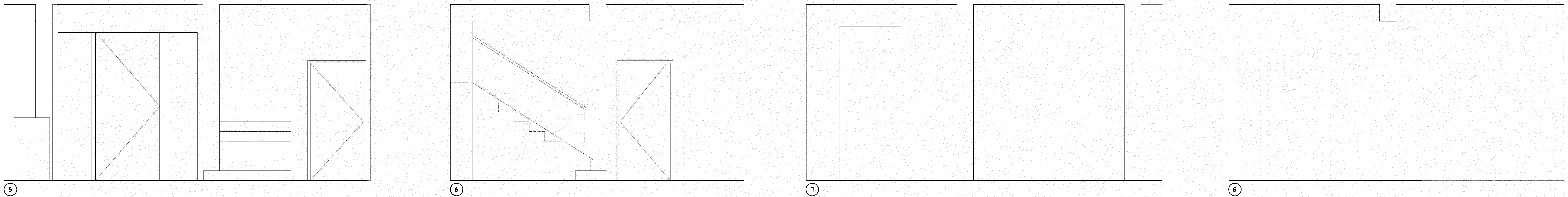
12

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

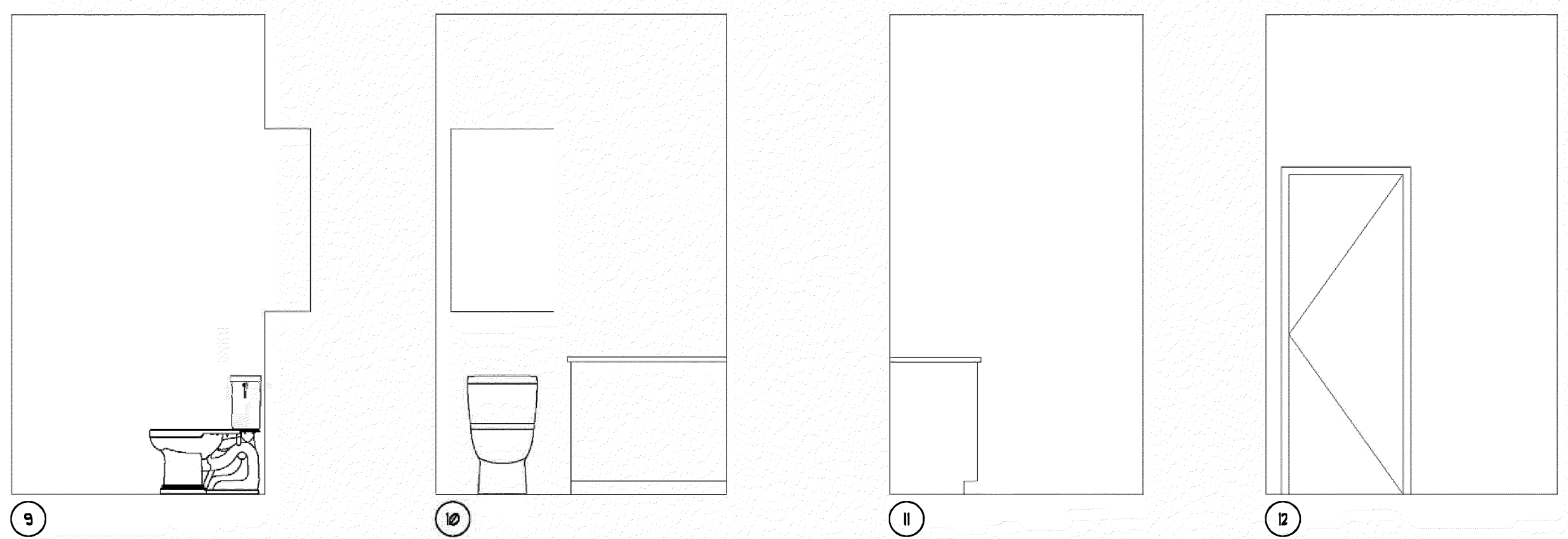
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DRAWN: RLF  
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REVISIONS:



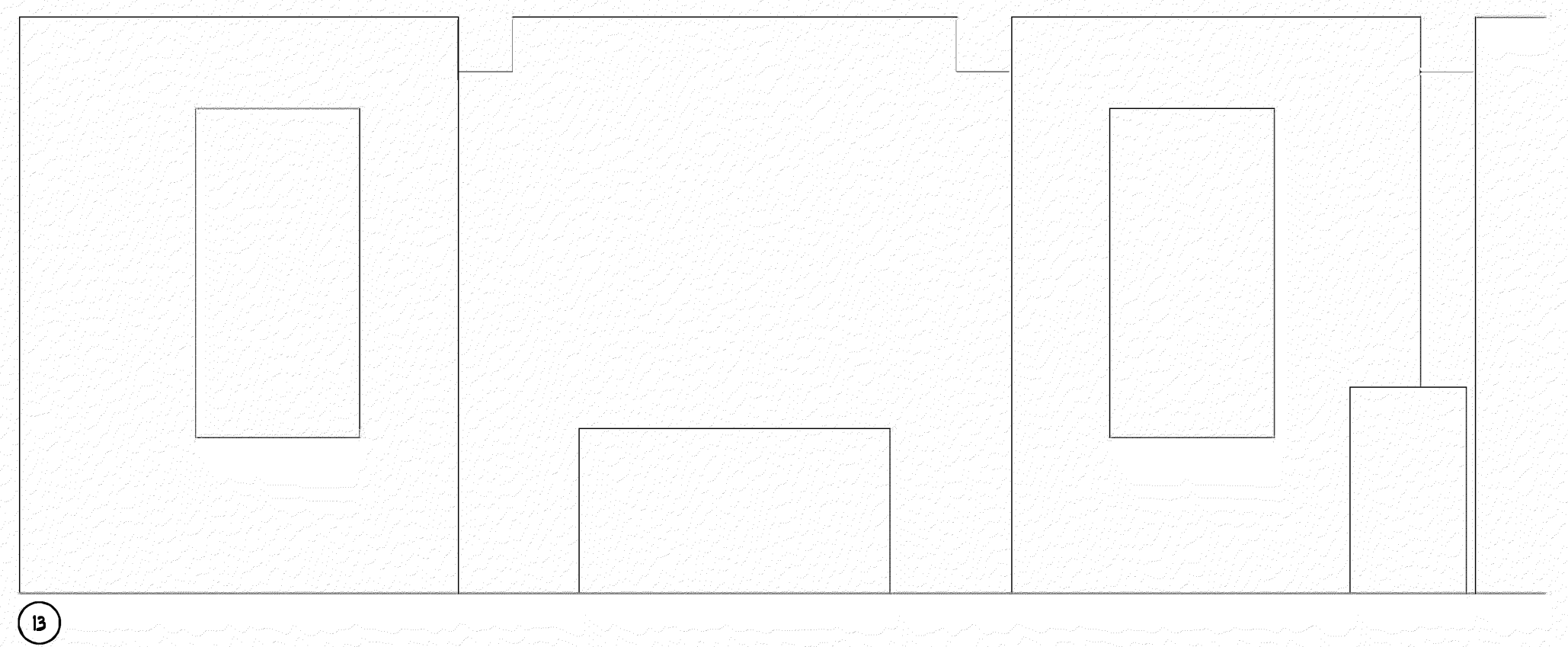
102 STUDIO  
SCALE: 3/8" = 1'-0"



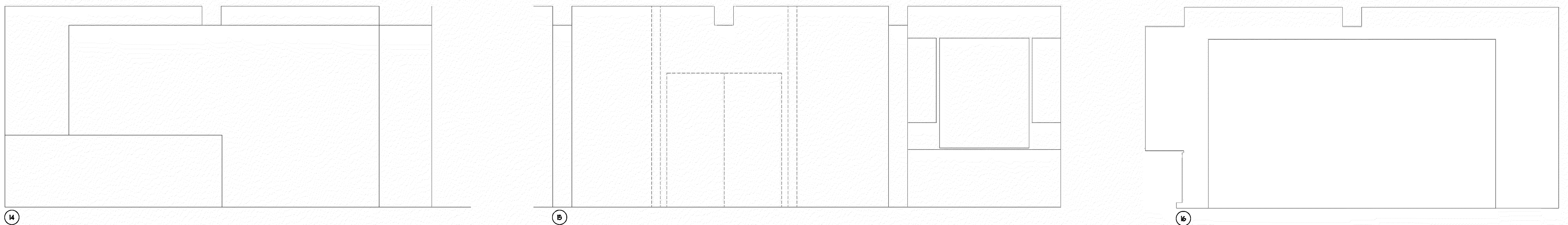
103 HALL  
SCALE: 3/8" = 1'-0"



108 POWDER ROOM  
SCALE: 3/8" = 1'-0"



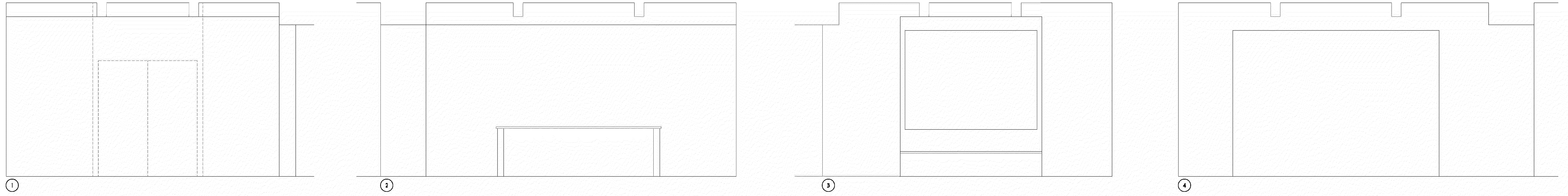
109 GREAT ROOM  
SCALE: 3/8" = 1'-0"



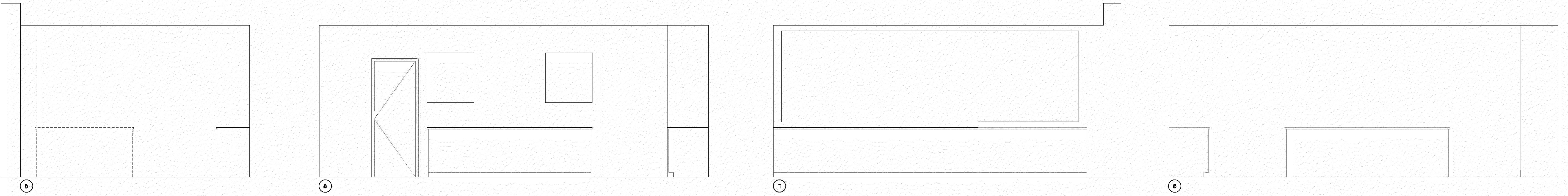
109 GREAT ROOM  
SCALE: 3/8" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

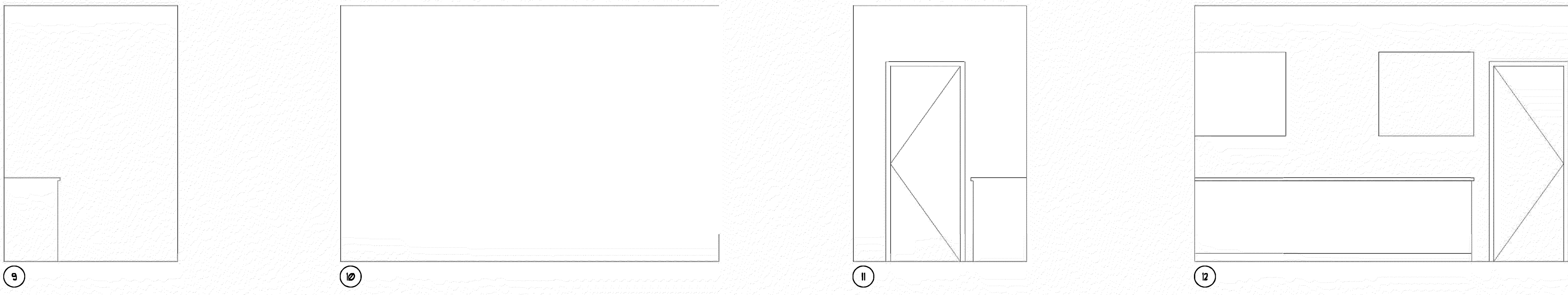
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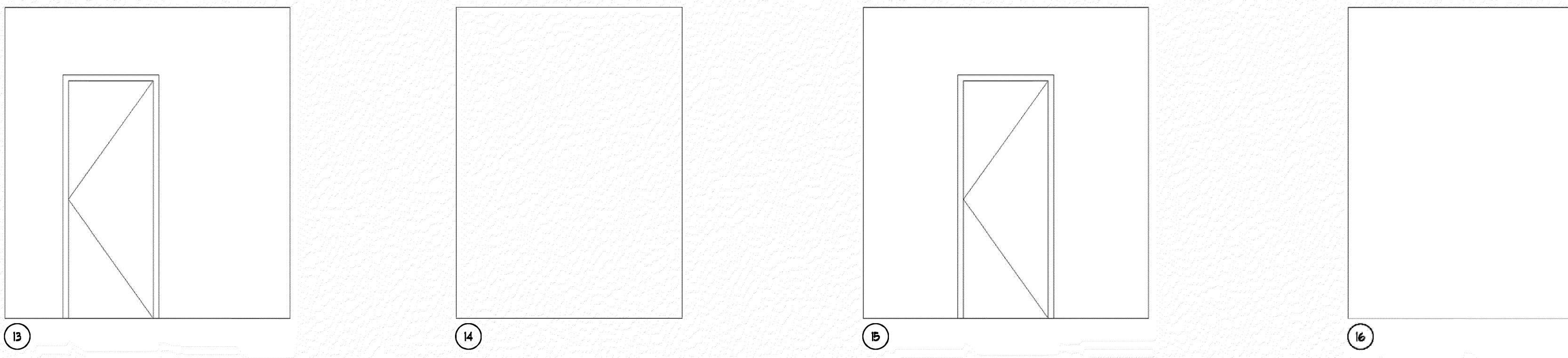
110 DINING ROOM  
SCALE: 3/8" = 1'-0"



111 KITCHEN  
SCALE: 3/8" = 1'-0"



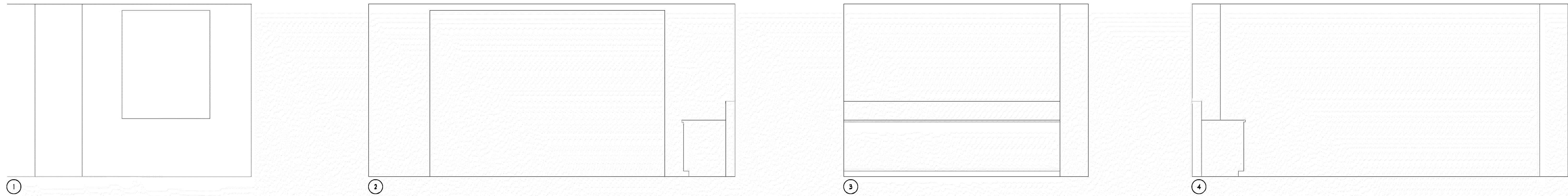
112 DIRTY KITCHEN  
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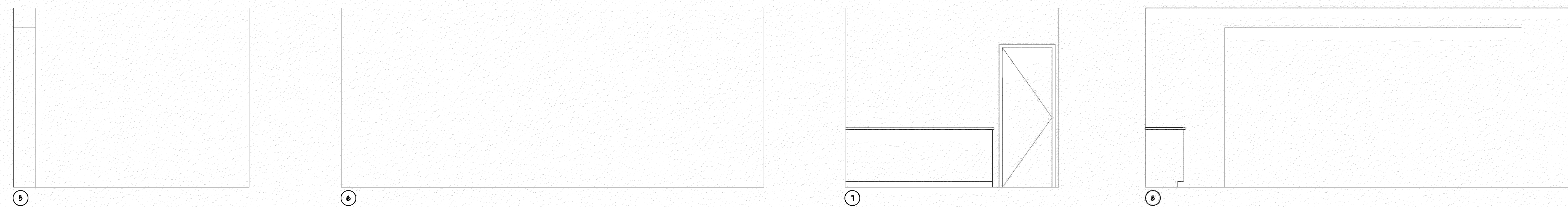
114 PANTRY  
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MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

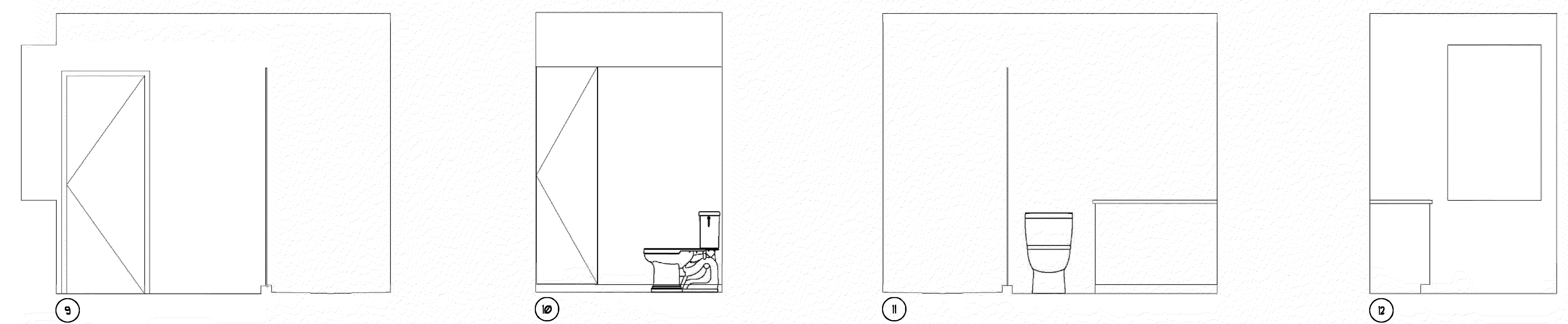
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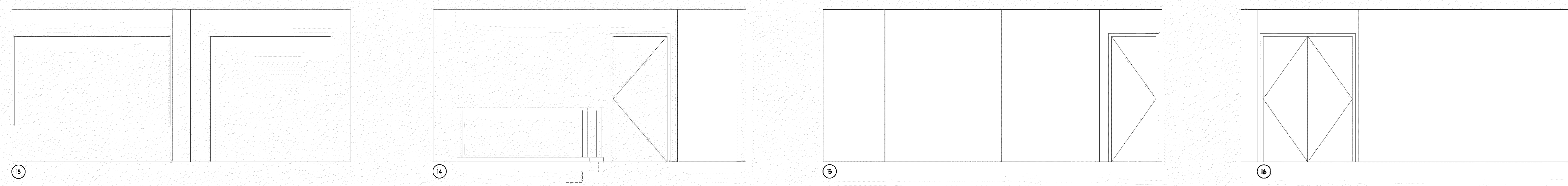
117 PORCH  
SCALE: 3/8" = 1'-0"



121 LOGIA  
SCALE: 3/8" = 1'-0"



121 LOGIA BATHROOM  
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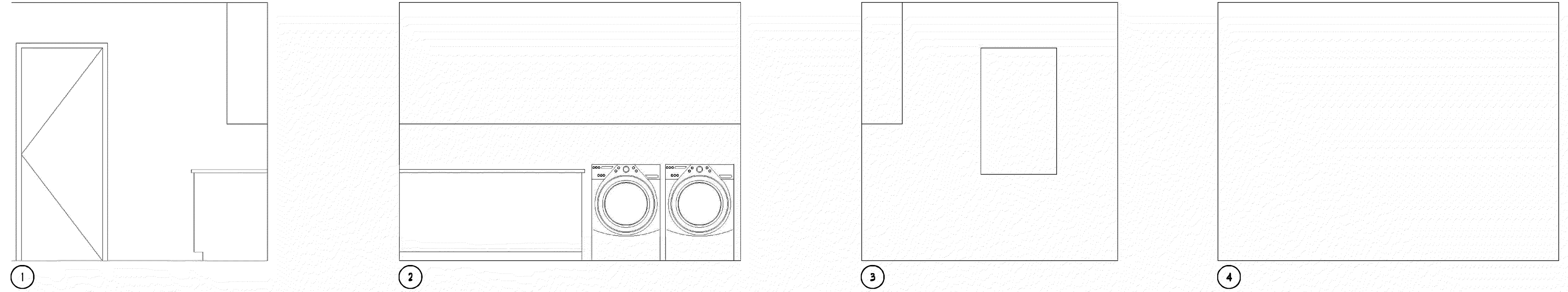


201 PRAYER  
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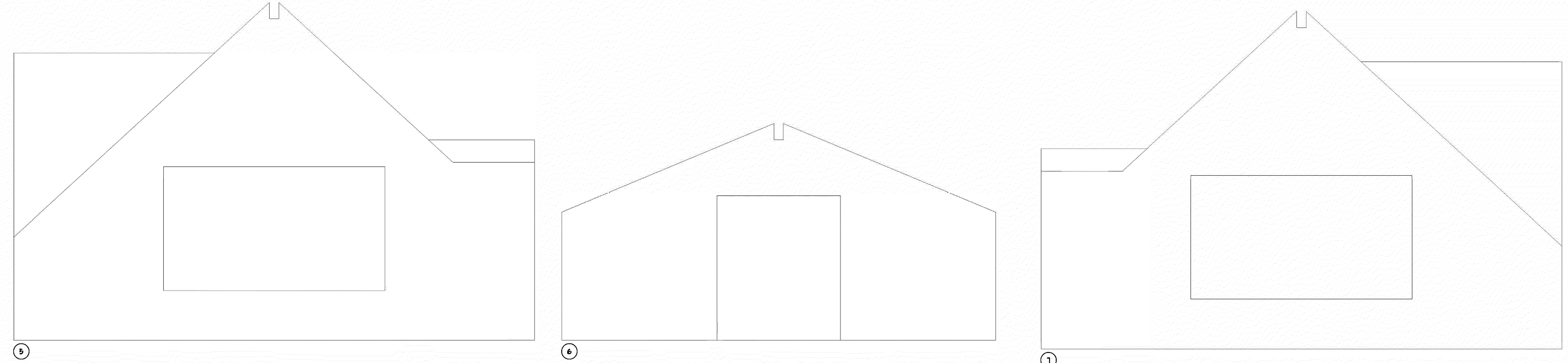
MURRAY RESIDENCE  
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MERCER ISLAND, WA 98040

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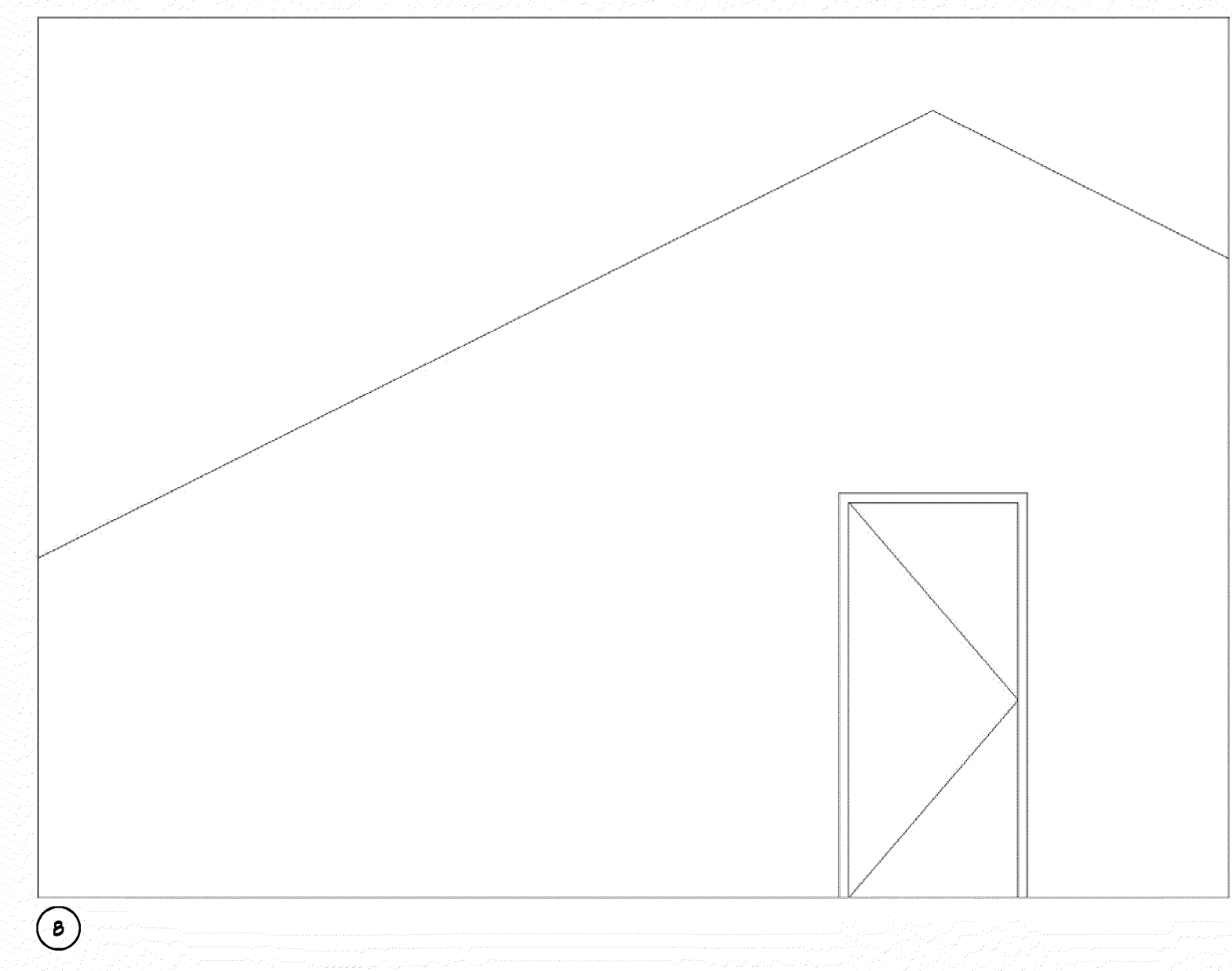
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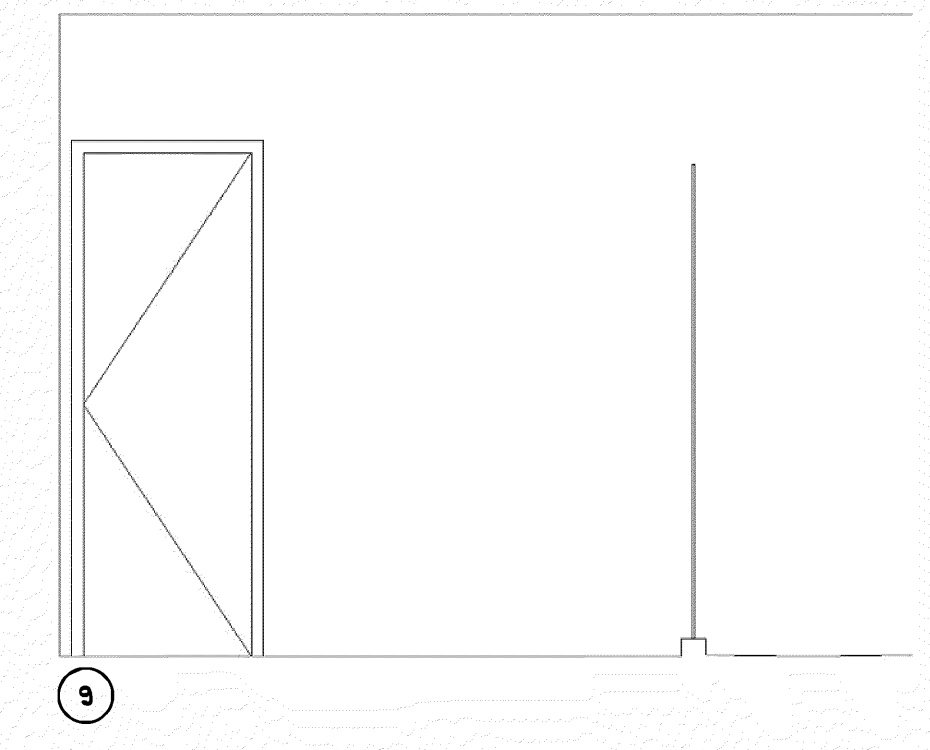
205 LAUNDRY  
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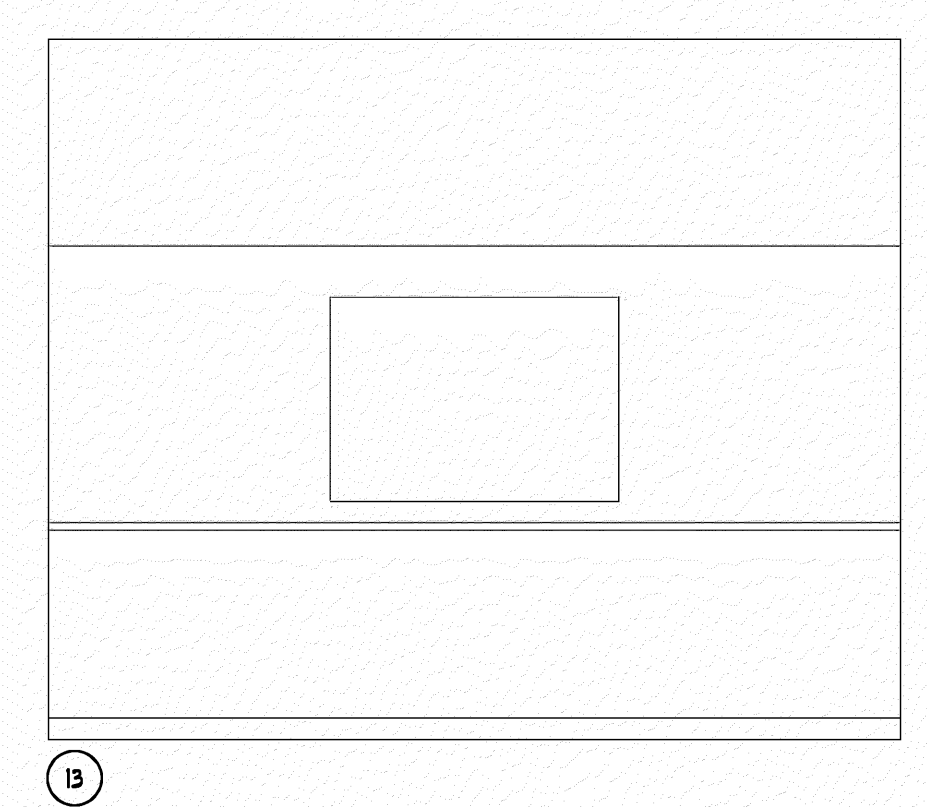
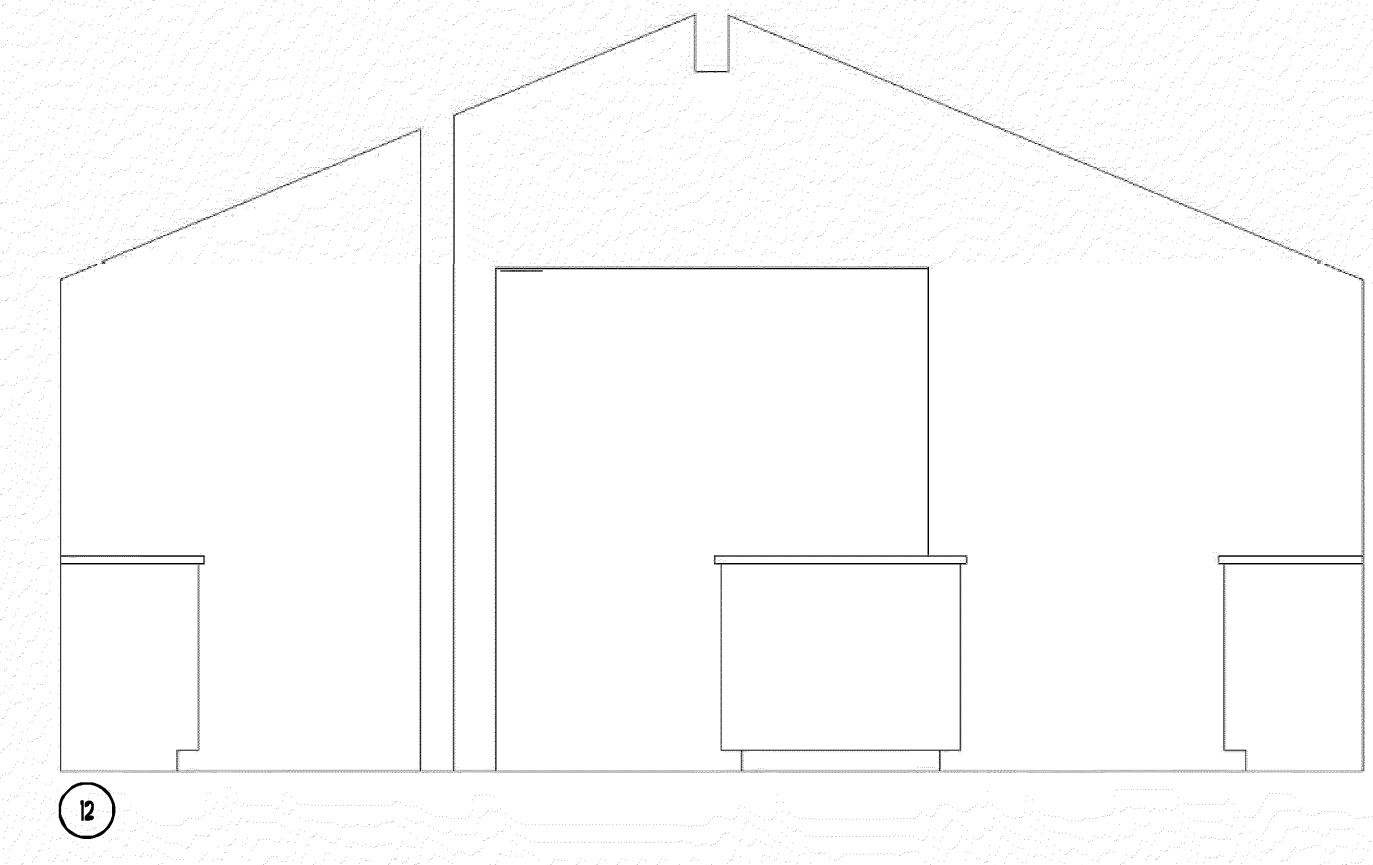
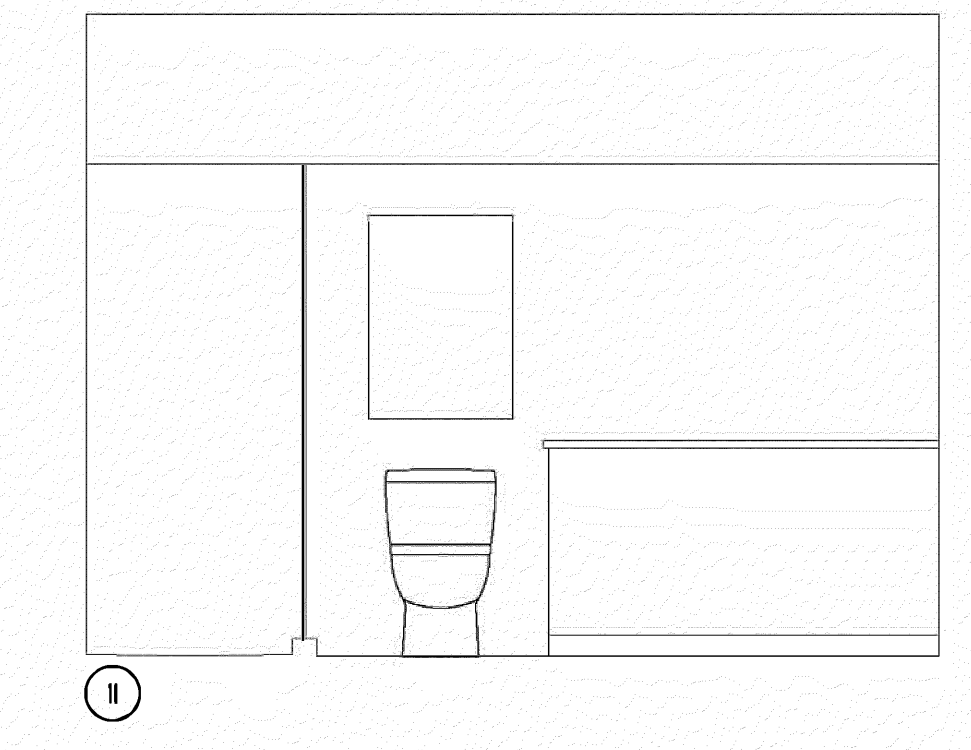
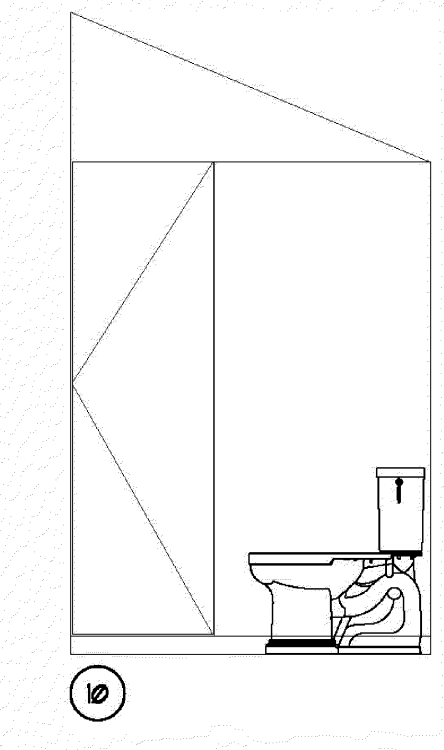
208A BONUS/GUEST ROOM  
SCALE: 3/8" = 1'-0"



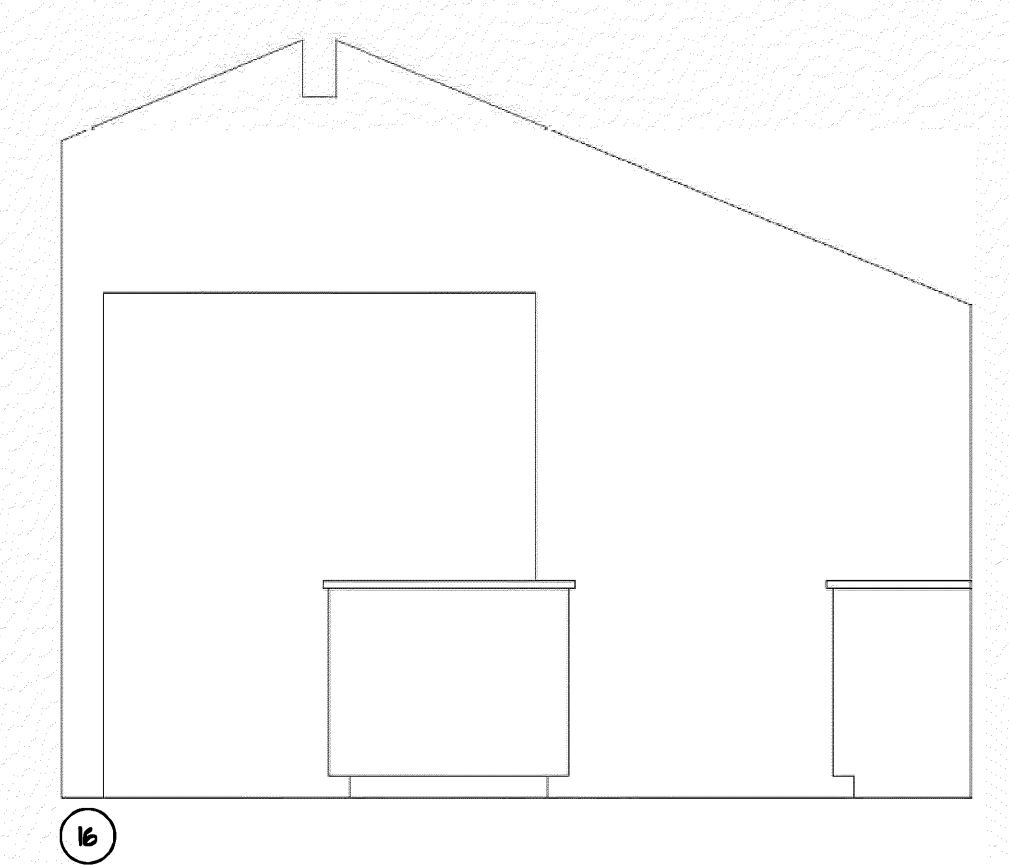
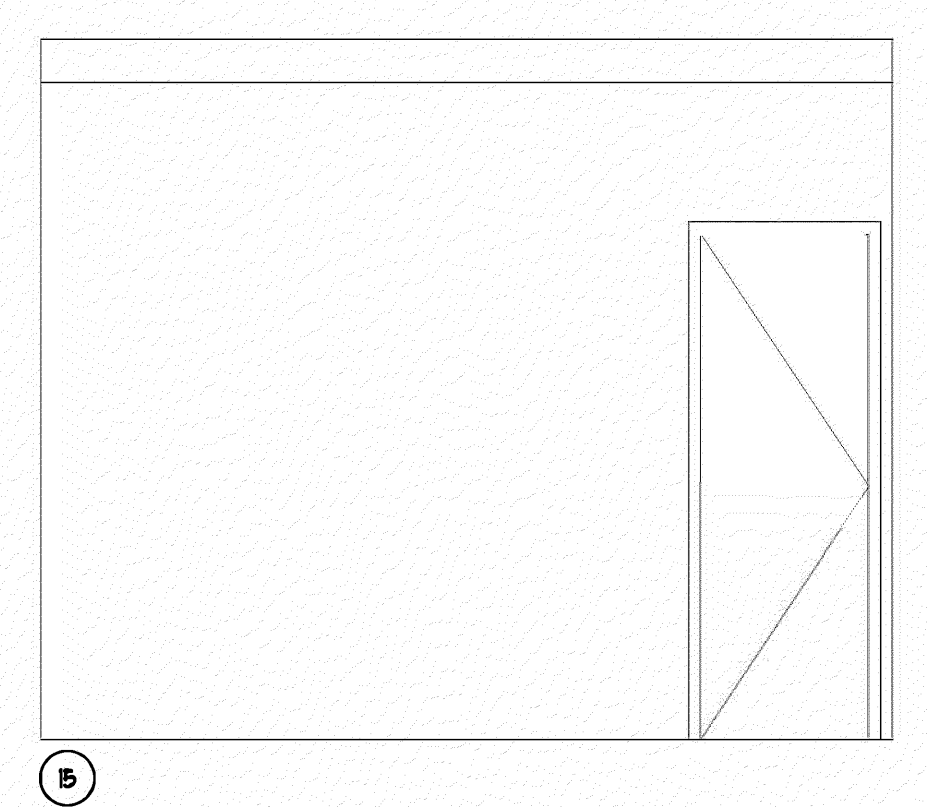
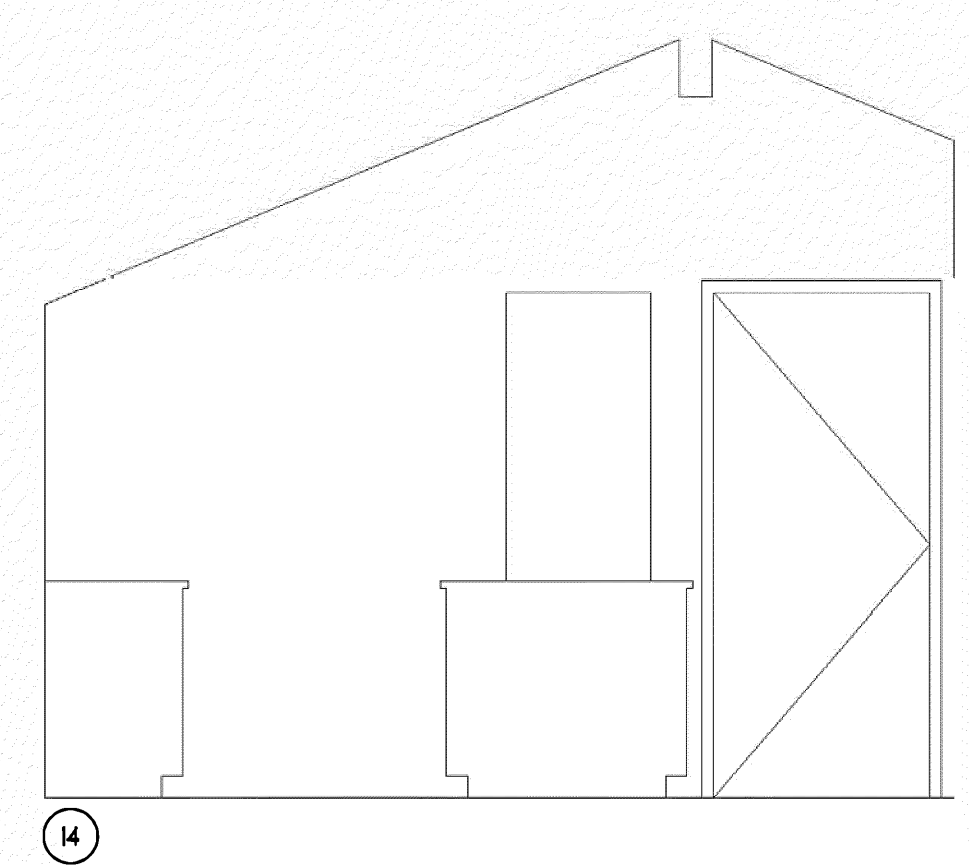
208A BONUS/GUEST ROOM  
SCALE: 3/8" = 1'-0"



208B GUEST BATH  
SCALE: 3/8" = 1'-0"



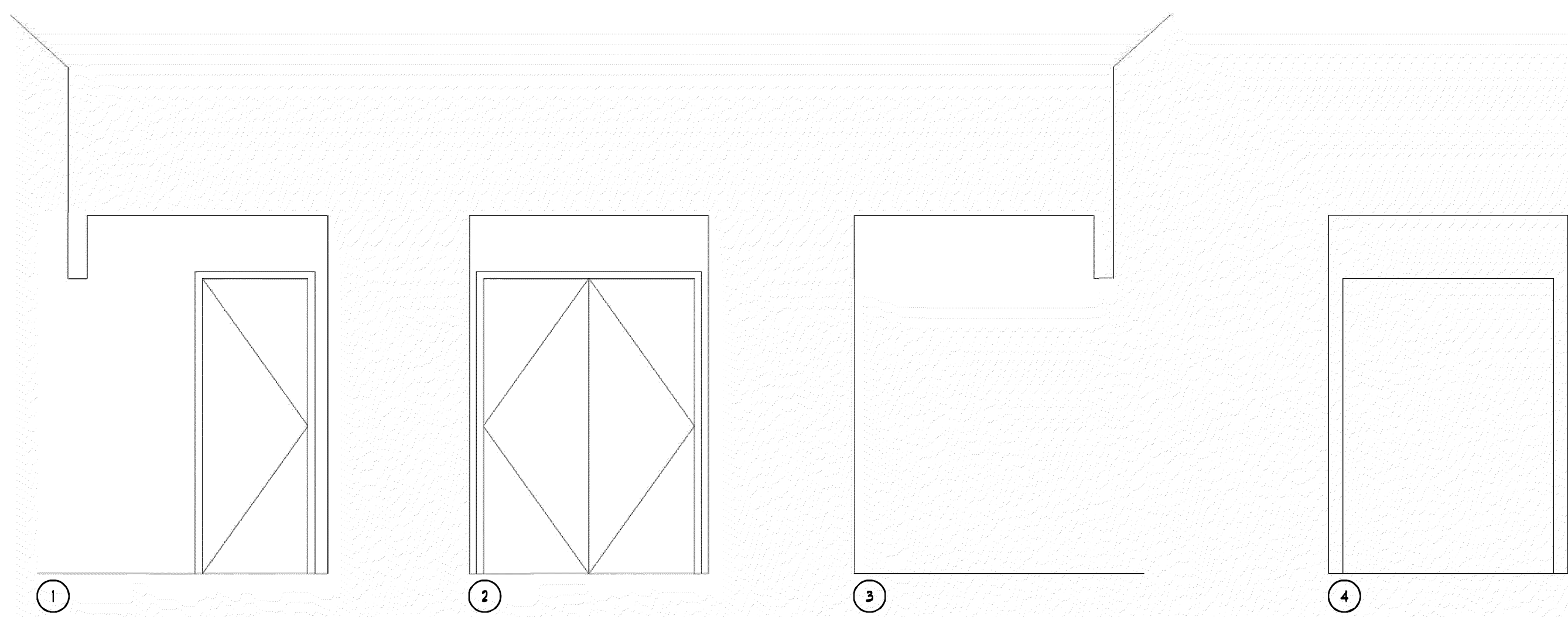
208C GUEST KITCHEN  
SCALE: 3/8" = 1'-0"



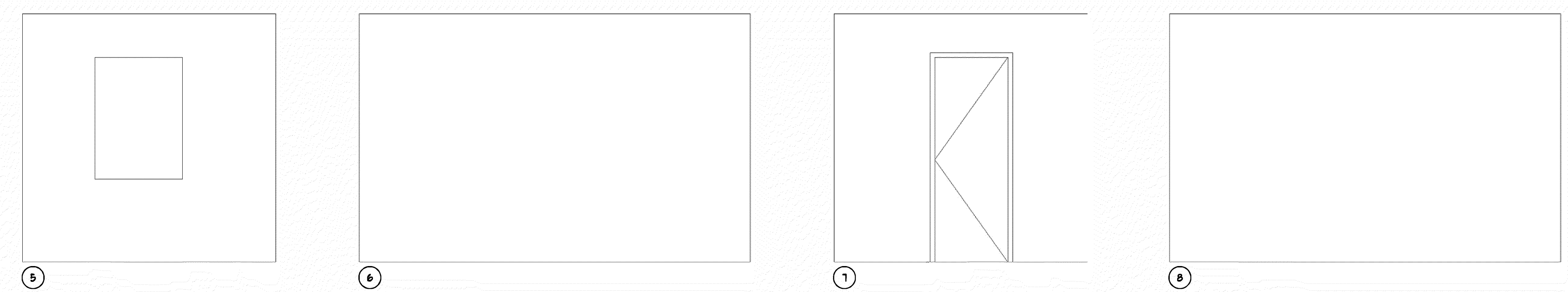
MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN: RLF  
DRAWN: RLF  
CHECKED: RLF  
REVISIONS:

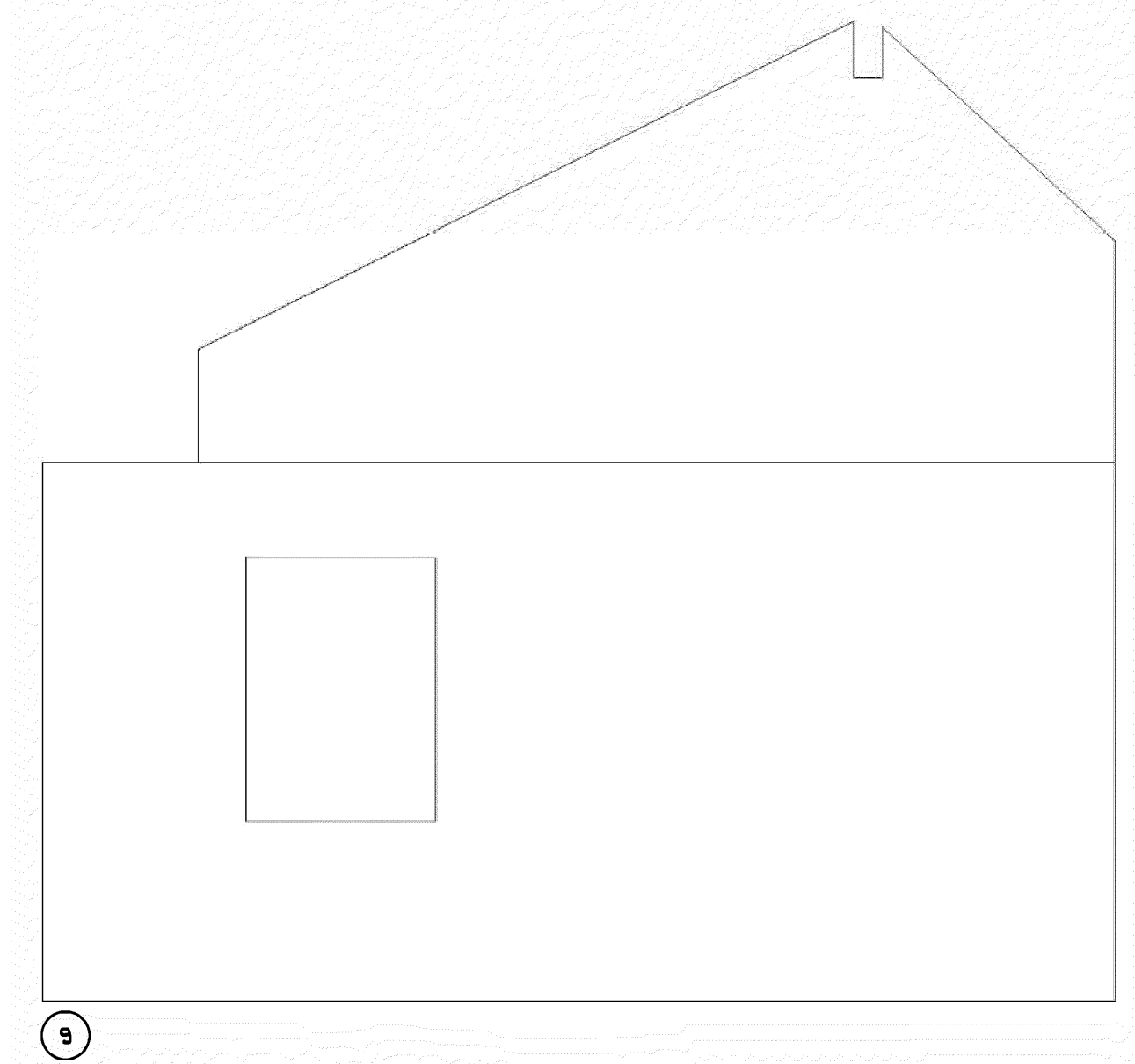
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RICHARD FLAKE ARCHITECT



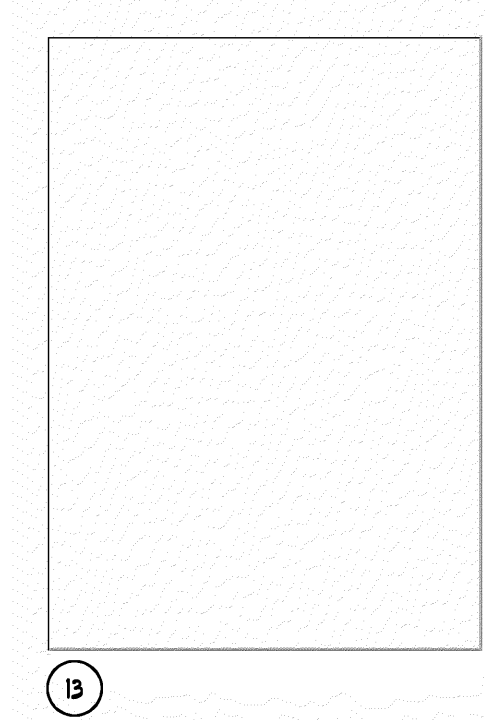
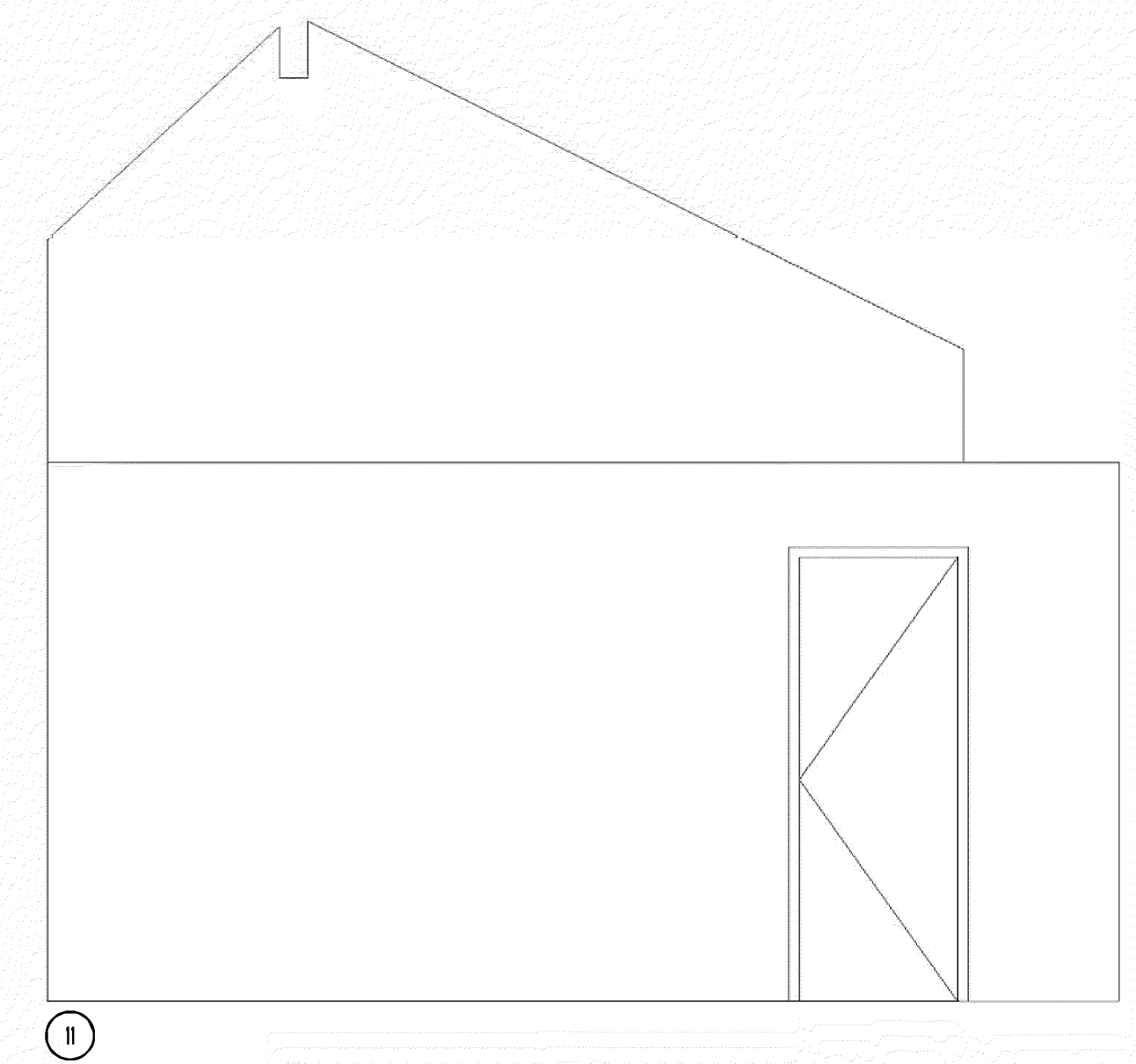
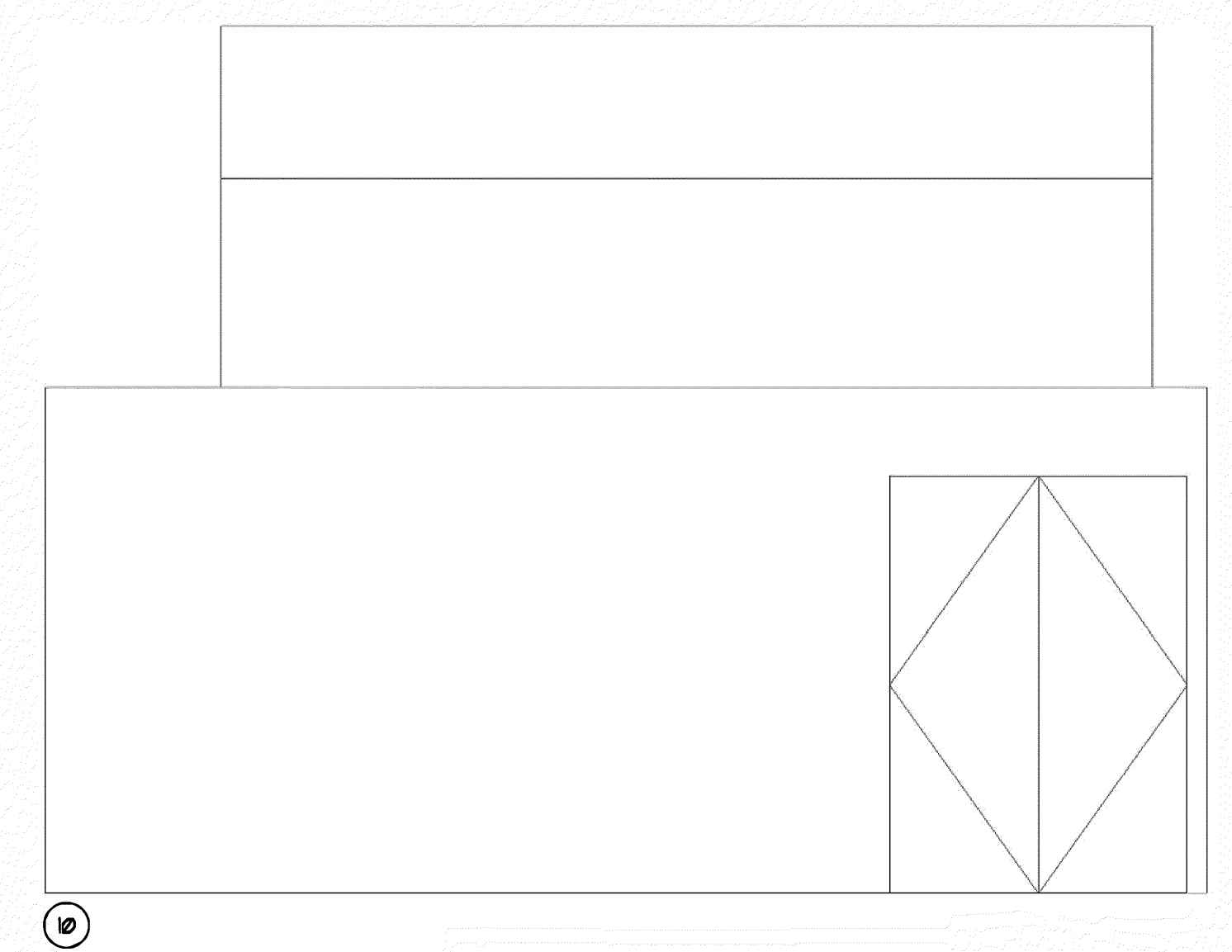
209 VESTIBULE  
SCALE: 3/8" = 1'-0"



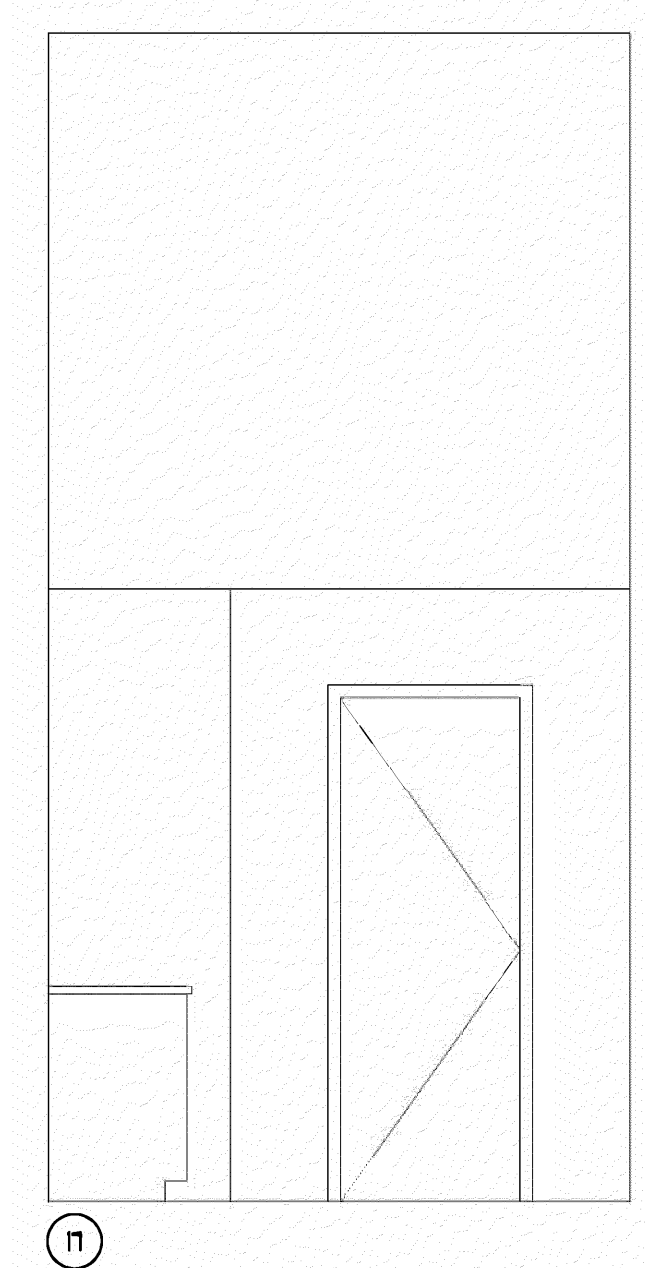
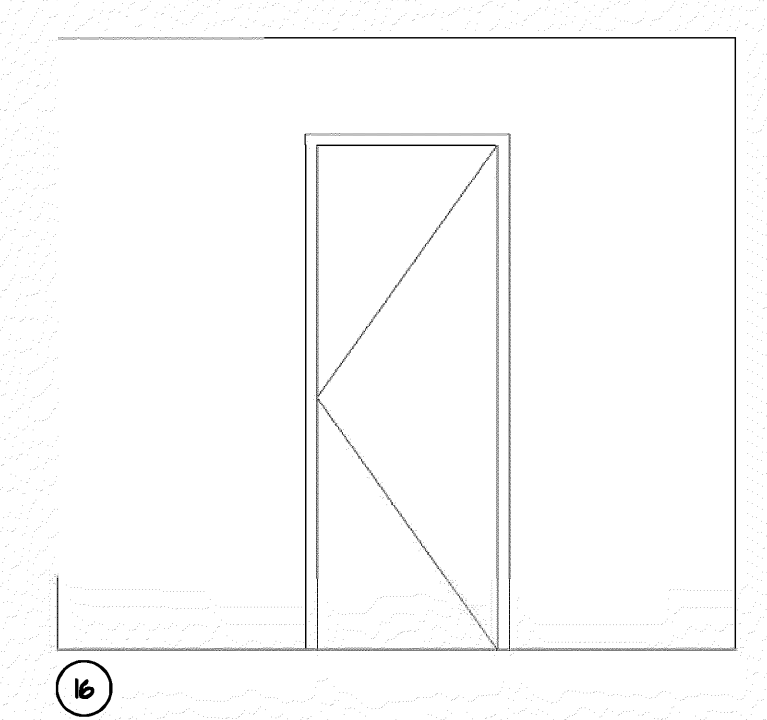
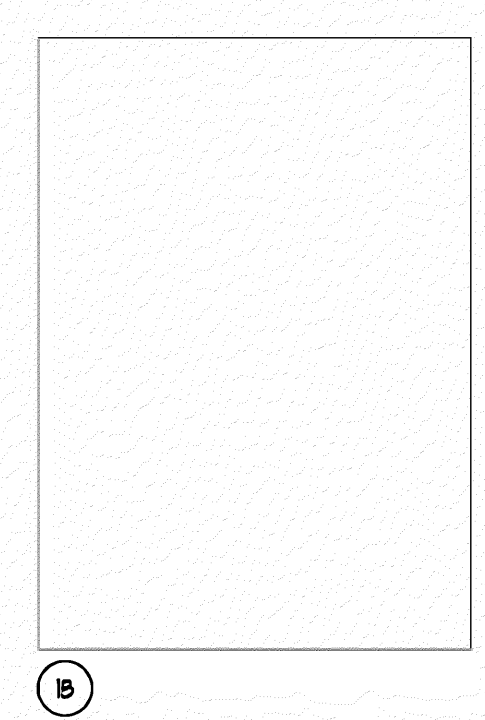
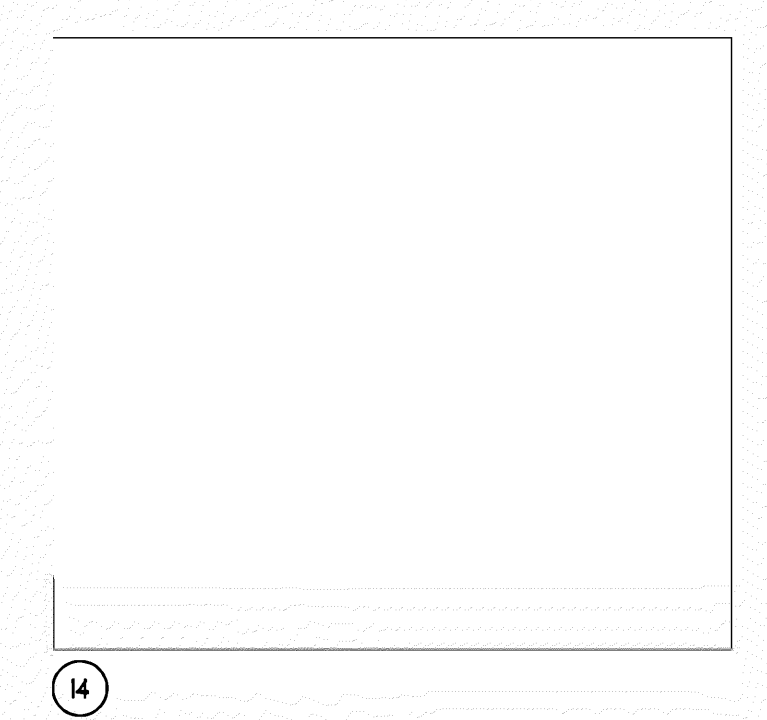
210 KIM DRESS  
SCALE: 3/8" = 1'-0"



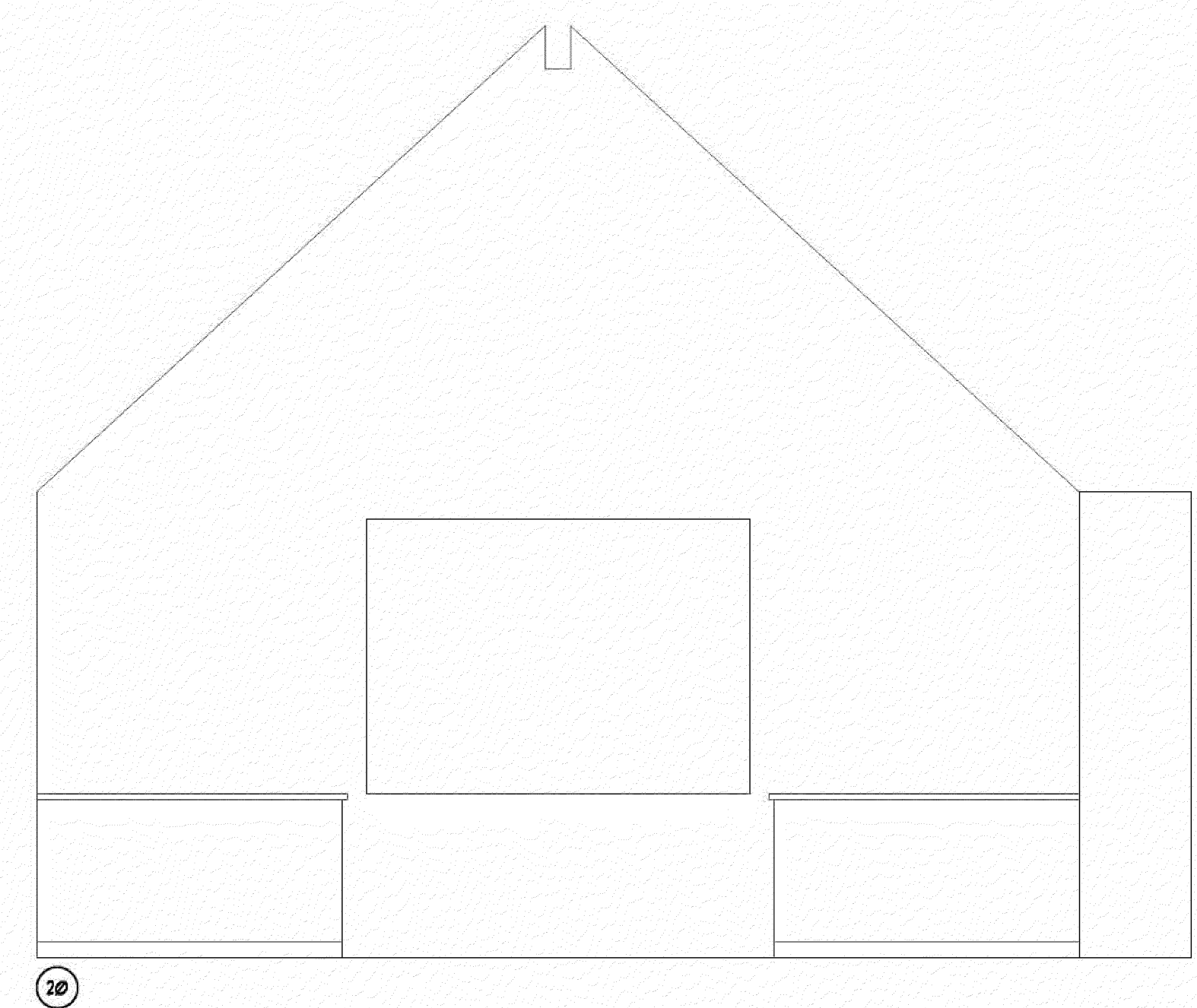
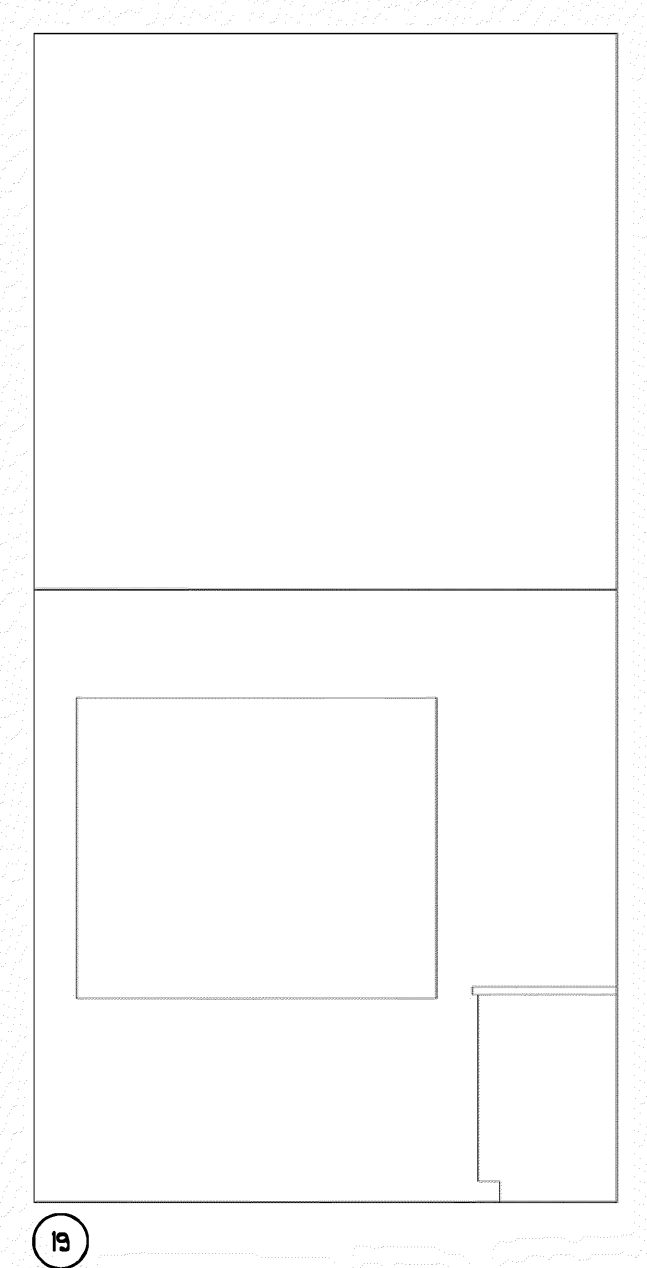
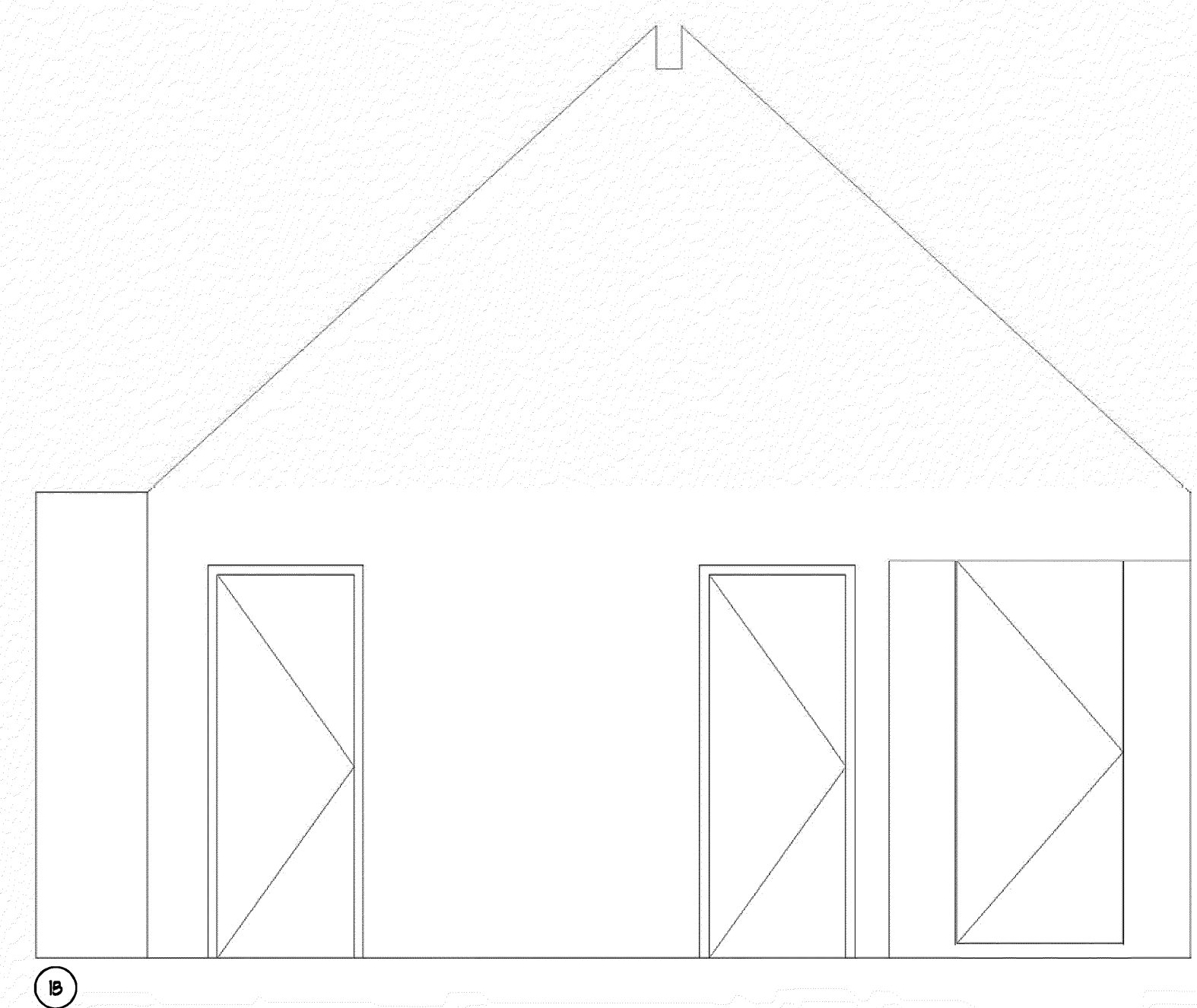
211 MASTER BEDROOM  
SCALE: 3/8" = 1'-0"



212 ROSS DRESS  
SCALE: 3/8" = 1'-0"



213 MASTER BATH  
SCALE: 3/8" = 1'-0"

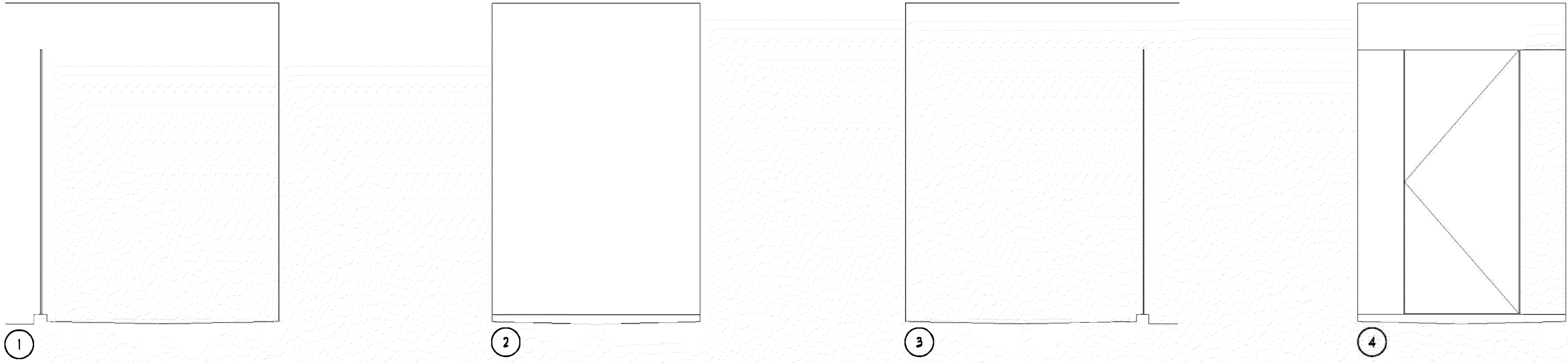


MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN: RLF  
DRAWN: RLF  
CHECKED: RLF  
REVISIONS:

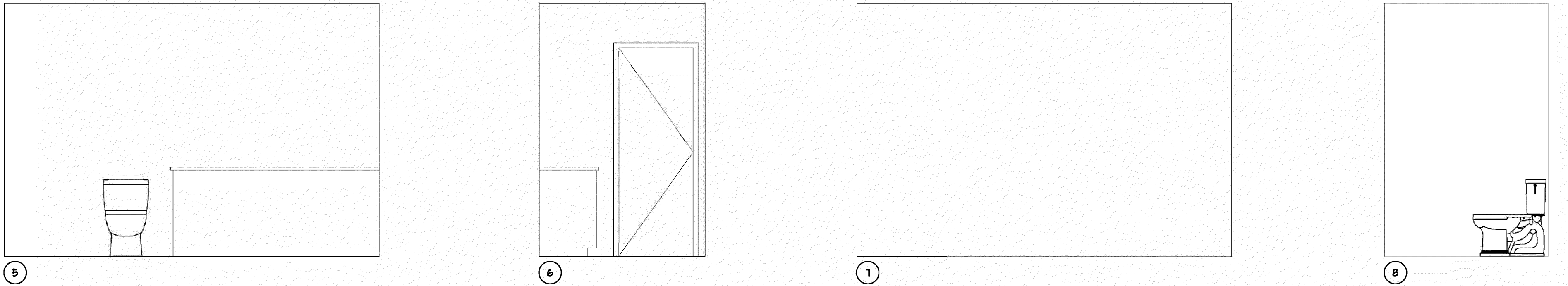
NO.	DATE	DESCRIPTION

ALL DRAWINGS, SPECIFICATIONS, PLANS, IDEAS, ARRANGEMENTS, AND DESIGNS REPRESENTED OR REFERRED TO ARE THE PROPERTY OF AND CONTROLLED BY RICHARD FLAKE ARCHITECT IN WHETHER THE PROJECT FOR WHICH THEY ARE MADE IS DISSEMINATED OR NOT. THEY WERE CREATED, EVOLVED, DEVELOPED AND PROVIDED FOR SCALE AND OR AND IN CONNECTION WITH THIS PROJECT AND NONE OF THE ABOVE MAY BE REPRODUCED OR USED IN CONNECTION WITH ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF RICHARD FLAKE ARCHITECT.  
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RICHARD FLAKE ARCHITECT

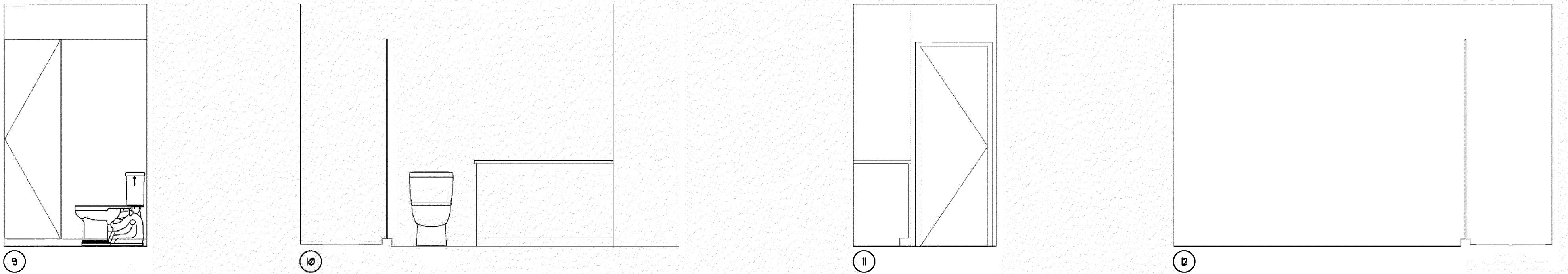


213 MASTER BATH SHOWER  
SCALE: 3/8" = 1'-0"

- Interior Elevations  
- Interior Elevations



215 BATH  
SCALE: 3/8" = 1'-0"



219 BATH  
SCALE: 3/8" = 1'-0"

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN:	RLF
DRAWN:	RLF
CHECKED:	RLF
REVISIONS:	



PLAN NOTES: (SHORING)

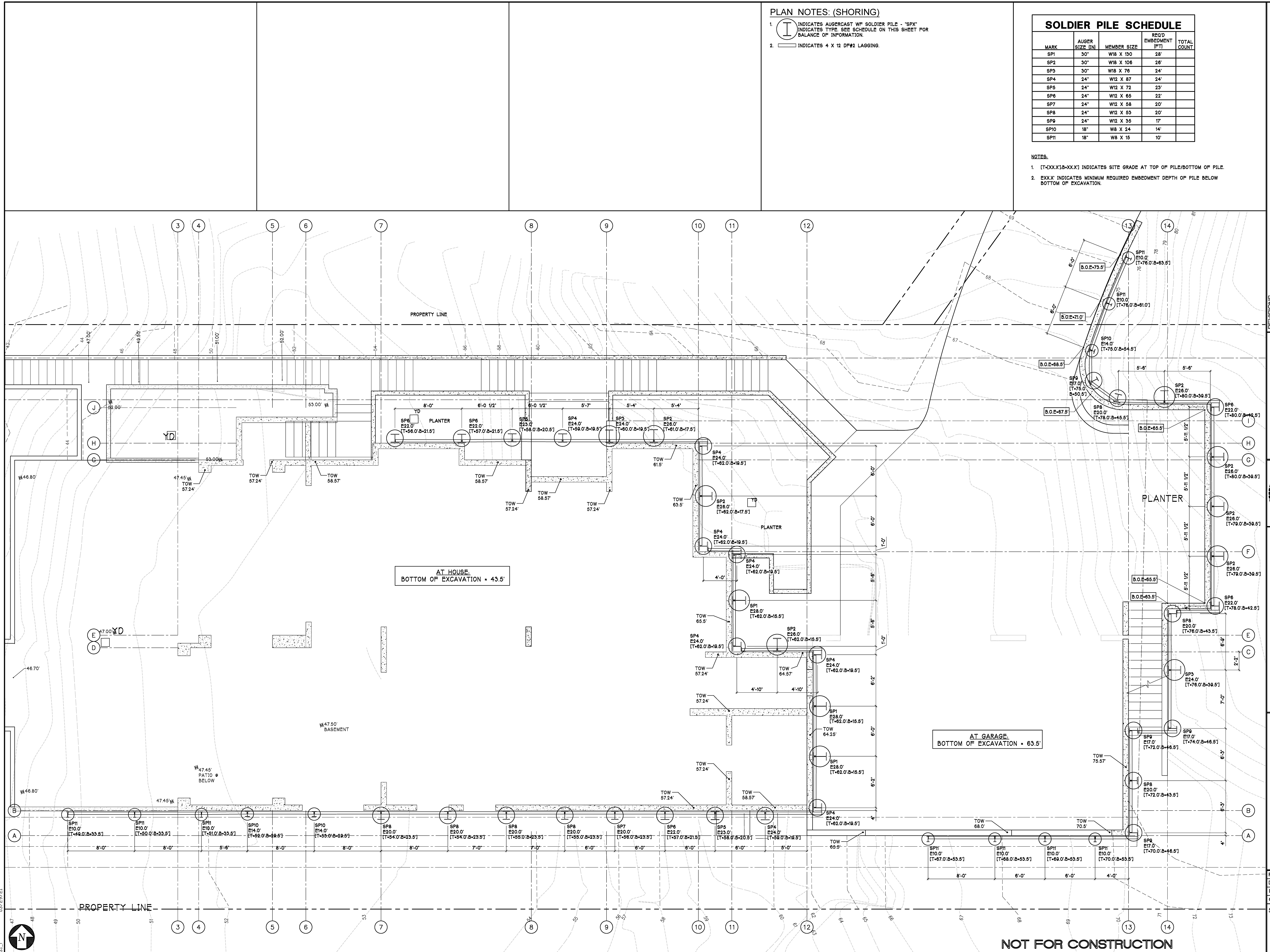
- INDICATES AUGERCAST WF SOLDIER PILE - "SPX"  
INDICATES TYPE. SEE SCHEDULE ON THIS SHEET FOR  
BALANCE OF INFORMATION.
- INDICATES 4 X 12 DF#2 LAGGING.

SOLDIER PILE SCHEDULE

MARK	AUGER SIZE (IN)	MEMBER SIZE	REQ'D EMBEDMENT (FT)	TOTAL COUNT
SP1	30"	W18 X 150	28'	
SP2	30"	W18 X 106	26'	
SP3	30"	W18 X 76	24'	
SP4	24"	W12 X 87	24'	
SP5	24"	W12 X 72	23'	
SP6	24"	W12 X 65	22'	
SP7	24"	W12 X 58	20'	
SP8	24"	W12 X 53	20'	
SP9	24"	W12 X 35	17'	
SP10	18"	W8 X 24	14'	
SP11	18"	W8 X 15	10'	

NOTES:

- [T-(XXX)B-XX.X] INDICATES SITE GRADE AT TOP OF PILE/BOTTOM OF PILE.
- EXXX' INDICATES MINIMUM REQUIRED EMBEDMENT DEPTH OF PILE BELOW BOTTOM OF EXCAVATION.



REVISIONS	DATE	DESCRIPTION
	02/04/21	ADDED PILE DIMENSIONS

B&T DESIGN & ENGINEERING  
 290 E. SUNSET WAY  
 ASH GARDENS WASHO  
 (425) 557-0965 FAX

MURRAY RESIDENCE  
 4603 FOREST AVE SE  
 MERCER ISLAND, WA 98040

SHORING PLAN

PROJECT 18156  
 DATE 03/29/21  
 DRAWN NH  
 CHKD. TB

SHEET 1 OF 1

**S1.0E**

NOT FOR CONSTRUCTION

1/4" = 1'-0"

SHORING PLAN

**PLAN NOTES: (SHORING)**

1. INDICATES AUGERCAST WF SOLDIER PILE - "SPX" INDICATES TYPE. SEE SCHEDULE ON THIS SHEET FOR BALANCE OF INFORMATION.
2. INDICATES 4 X 12 OF#2 LAGGING.

**PLAN NOTES: (FDN)**

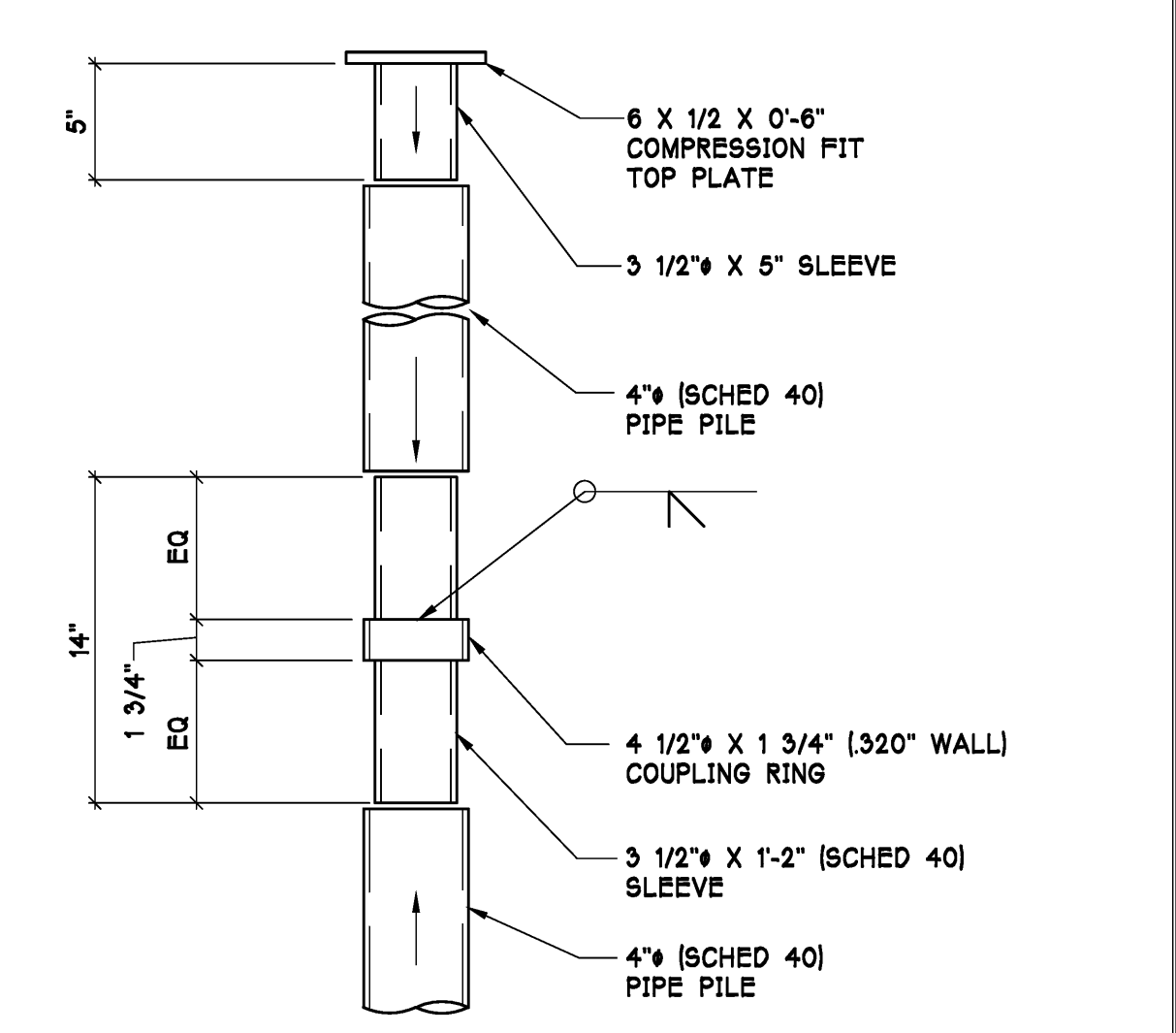
1. INDICATES 4-INCH DIAMETER SCHEDULE 40 PIPE PILE.

**SOLDIER PILE SCHEDULE**

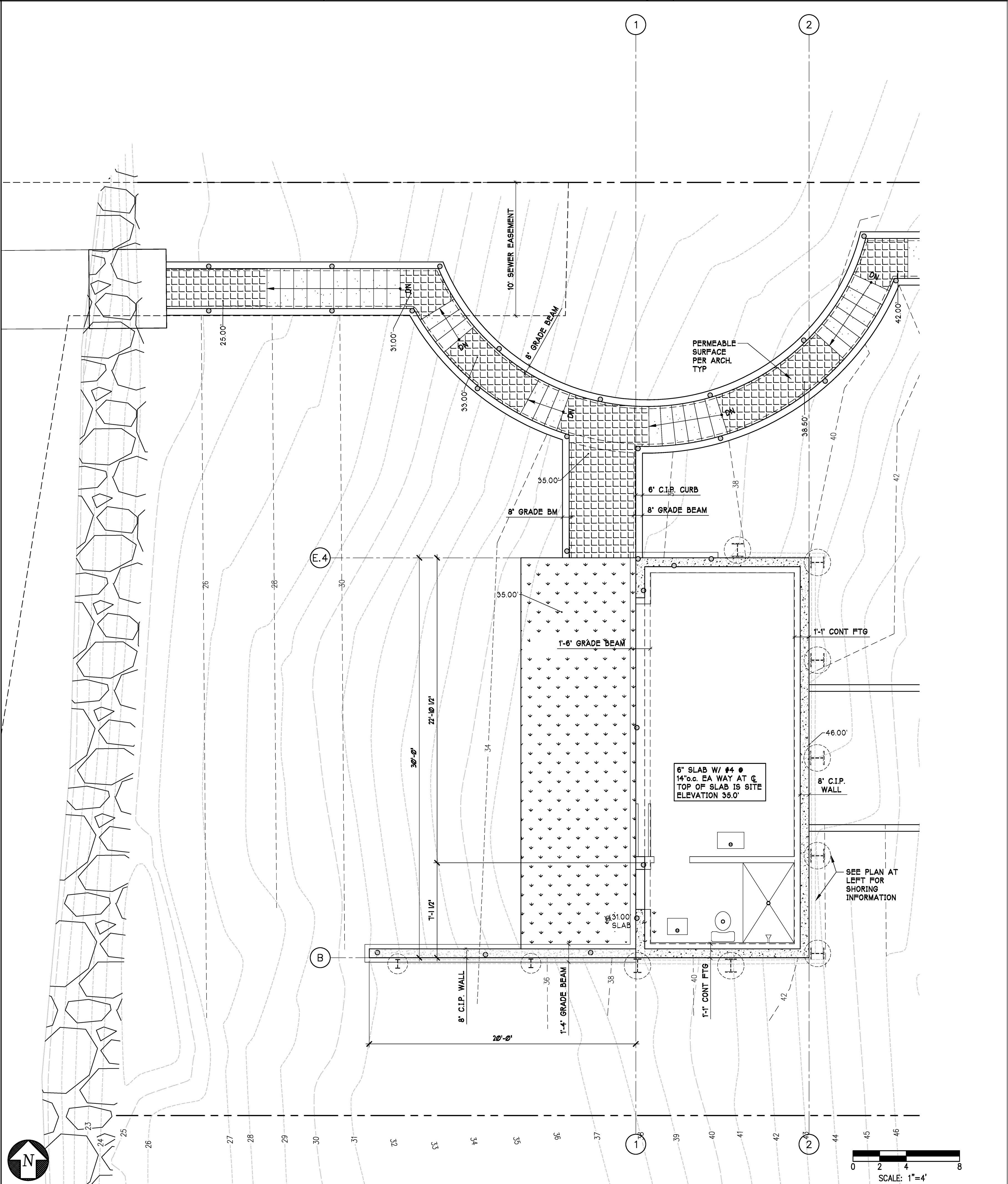
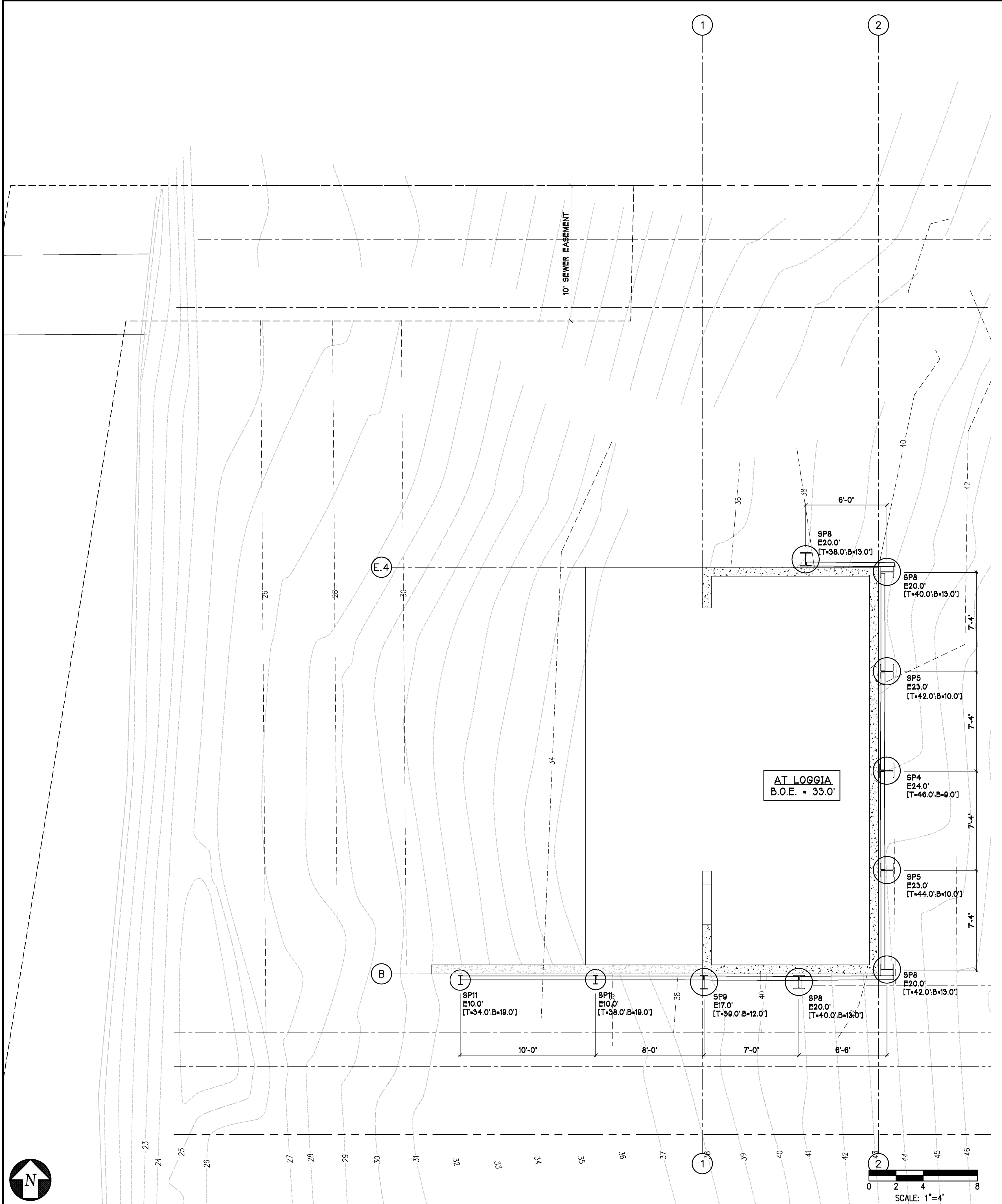
MARK	AUGER SIZE (IN)	MEMBER SIZE	REQ'D EMBEDMENT (FT)	TOTAL COUNT
SP1	30"	W18 X 130	28'	
SP2	30"	W18 X 106	28'	
SP3	30"	W18 X 76	24'	
SP4	24"	W12 X 87	24'	
SP5	24"	W12 X 72	23'	
SP6	24"	W12 X 65	22'	
SP7	24"	W12 X 58	20'	
SP8	24"	W12 X 53	20'	
SP9	24"	W12 X 35	17'	
SP10	18"	W8 X 24	14'	
SP11	18"	W8 X 15	10'	

**NOTES:**

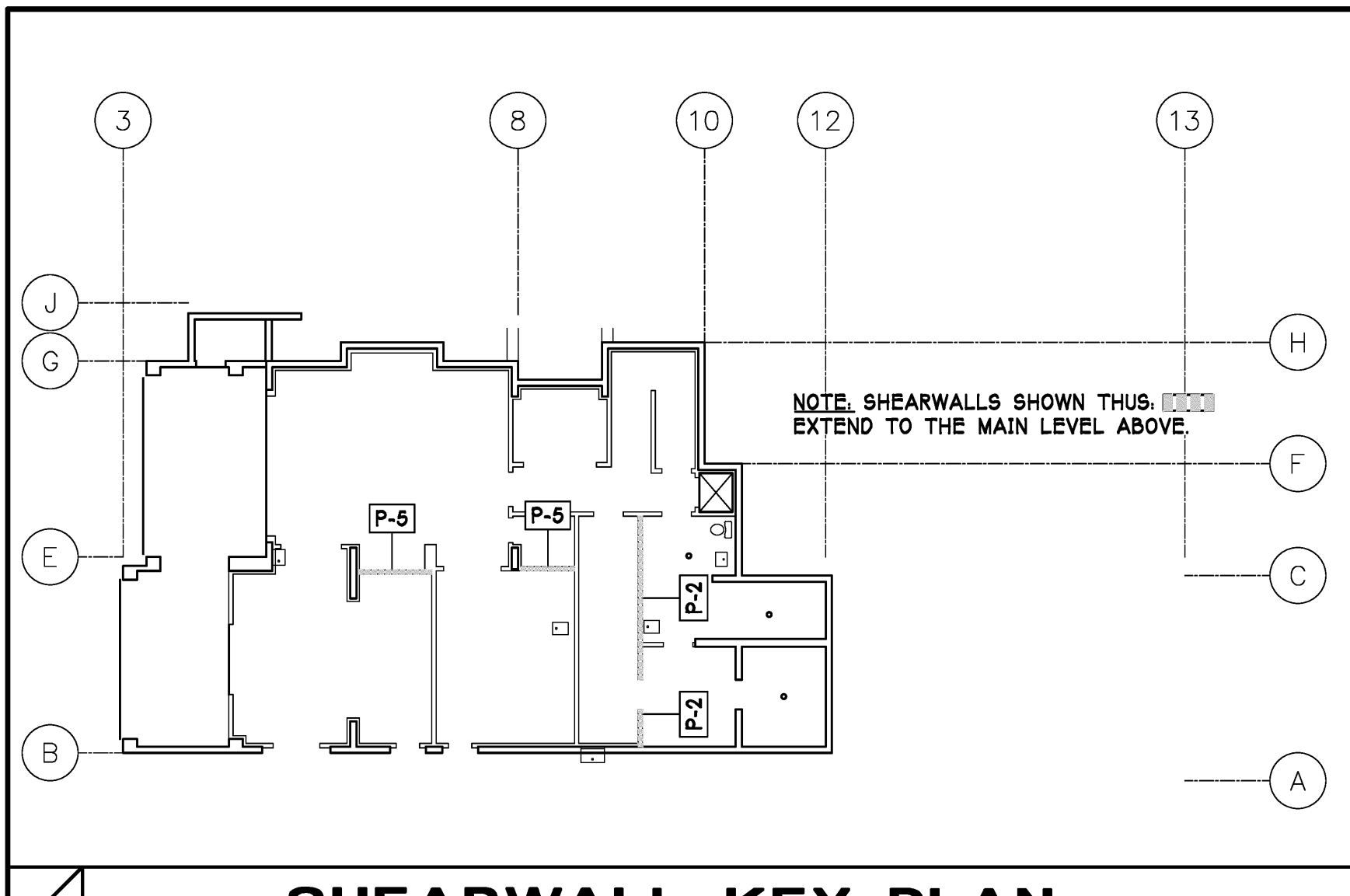
1. [T-XXX]B-XXX] INDICATES SITE GRADE AT TOP OF PILE/BOTTOM OF PILE.
2. EXXX' INDICATES MINIMUM REQUIRED EMBEDMENT DEPTH OF PILE BELOW BOTTOM OF EXCAVATION.



**NOT FOR CONSTRUCTION**



REVISIONS	DATE	DESCRIPTION
	02/04/21	ADDED PILE DIMENSIONS
<b>B&amp;T DESIGN &amp; ENGINEERING, INC.</b> 250 E. SUNSET WAY SUITE 200 SEASIDE, WA 98138 (206) 557-0765 FAX		
PROJECT: 18156 DATE: 03/29/21 DRAWN: ZH CHKD: TB		PROJECT TITLE: <b>MURRAY RESIDENCE</b> 4603 FOREST AVE SE MERCER ISLAND, WA 98040
SHEET: <b>S1.0W</b>		SHEET TITLE: <b>LOGGIA SHORING PLAN &amp; FOUNDATION PLAN</b>

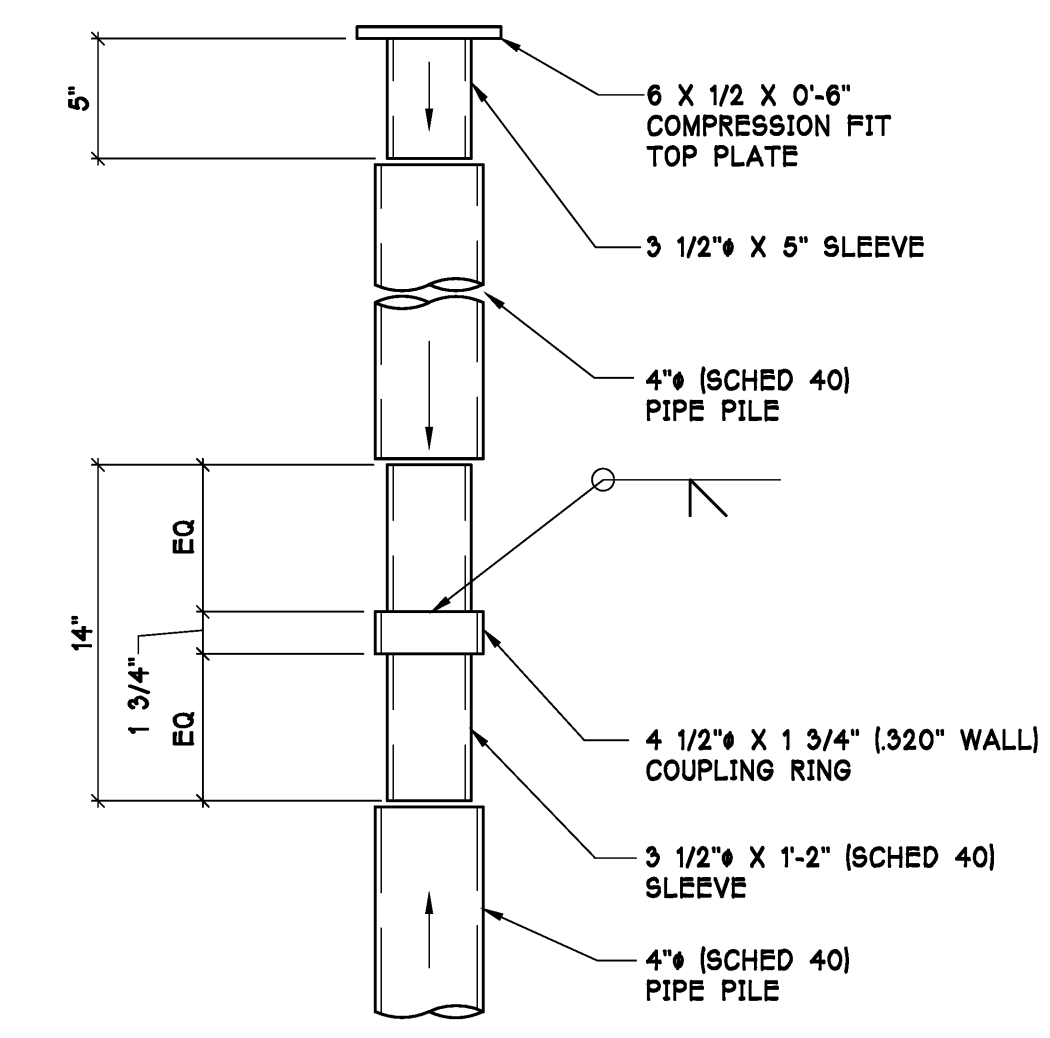


**SHEARWALL KEY PLAN** 1/16" = 1'-0"

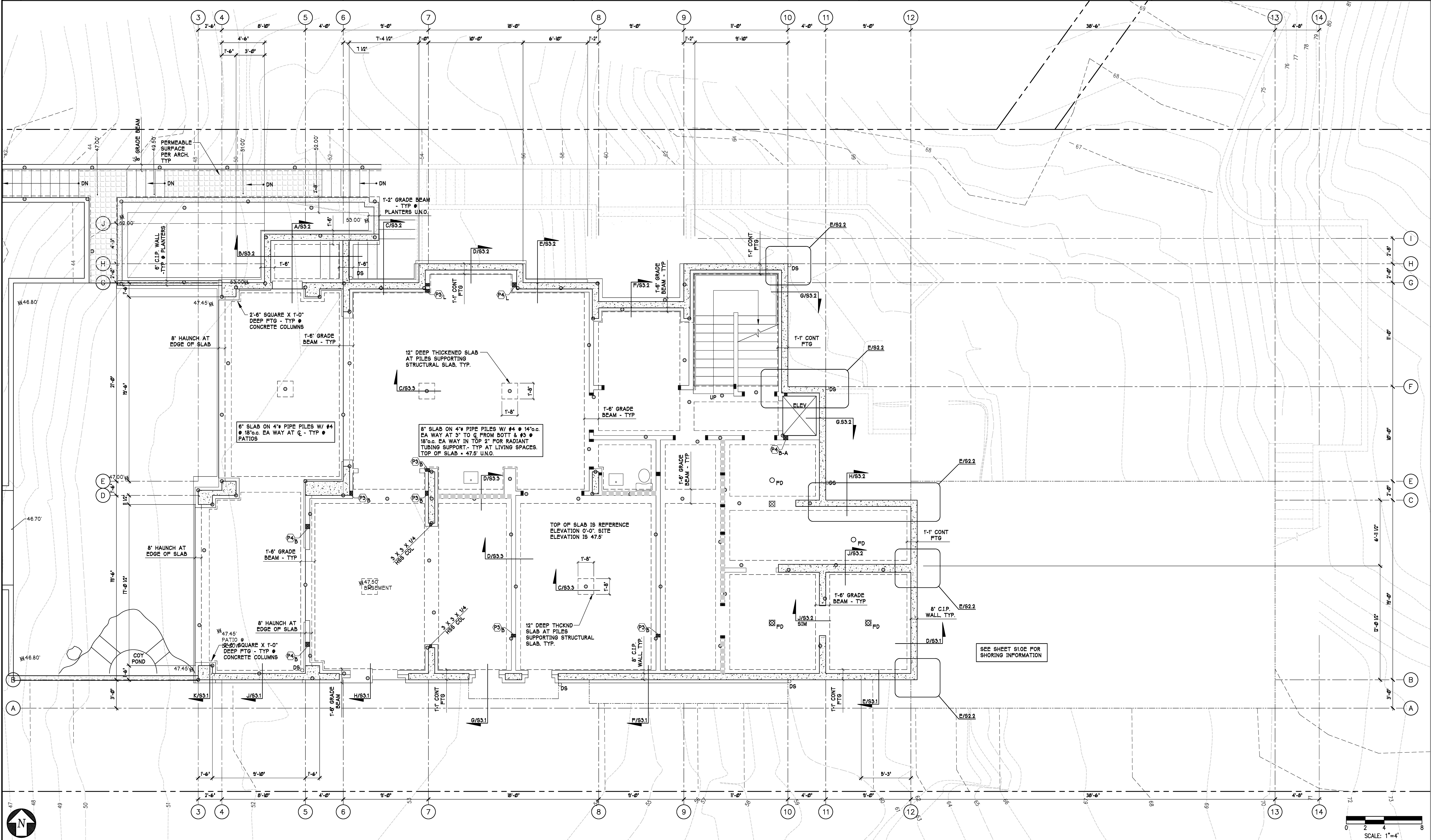
POST SCHEDULE			
MARK	SIZE & GRADE	COMMENTS	HARDWARE
(P1)	(2) 2 X 6 DP STUD		
(P2)	(3) 2 X 6 DP STUD		
(P3)	4 X 6 DP#2		
(P4)	6 X 6 DP#1		

**POST SCHEDULE**

- PLAN NOTES: (FDN)**
- INDICATES 4-INCH DIAMETER SCHEDULE 40 PIPE PILE (NOT ALLOWABLE LOAD).
  - TOP OF BASEMENT FLOOR STRUCTURAL SLAB IS REFERENCE ELEVATION 0'-0". SITE ELEVATION IS 47.5'.
  - [Symbol] INDICATES BASEMENT LEVEL SHEARWALLS ABOVE. SHEATH AND NAIL SHEARWALLS PER SCHEDULE ON SHEET S2.3. SEE SHEARWALL KEY PLAN AT LEFT FOR SHEARWALL TYPES FROM BASEMENT LEVEL TO MAIN LEVEL.
  - [Symbol] INDICATES KEY NOTE. SEE KEY NOTES ON THIS SHEET.
  - [Symbol] INDICATES SIMPSON HARDWARE. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
  - [Symbol] INDICATES POST TYPE. SEE POST SCHEDULE ON THIS SHEET FOR SIZE.
    - POST ABOVE U.N.O. ON PLAN.
    - POST BELOW.
 NOTE: (P) INDICATES LEVEL WHERE COLUMN STARTS/ENDS.
    - "B" = BASEMENT
    - "M" = MAIN FLOOR
    - "U" = UPPER FLOOR
    - "A" = ATTIC FLOOR
    - "R" = ROOF.
  - [Symbol] INDICATES SIMPSON HOLDOWN AT END OF SHEARWALL - LOCATE AT BASE OF BASEMENT LEVEL WALL. CONNECT TO DOUBLE STUD MINIMUM. (SEE SHEET S2.3 FOR HOLDOWN SCHEDULE & DETAILS.)
  - SEE SHEET S2.1 FOR BALANCE OF FRAMING NOTES AND SCHEDULES. SEE SHEETS S2.1, S2.2 & S2.3 FOR TYPICAL DETAILS.
  - SEE ARCHITECTURAL PLANS FOR DIMENSIONS.



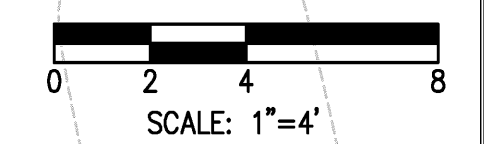
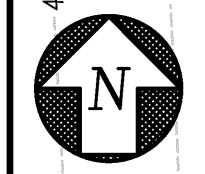
**TYP 4" PIPE PILE ASSEMBLY** 3/4" = 1'-0"

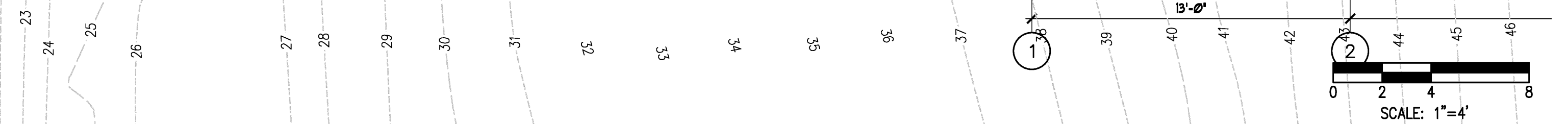
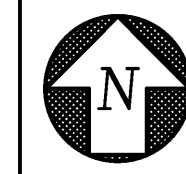


**BASMENT FOUNDATION PLAN**

REVISIONS	DATE	DESCRIPTION
<b>B&amp;T DESIGN &amp; ENGINEERING, INC.</b> 250 E. SUNSET WAY SEASIDE, WA 98138 (206) 555-0965 (FAX)		
<b>MURRAY RESIDENCE</b> <b>4603 FOREST AVE SE</b> <b>MERCER ISLAND, WA 98040</b>		
<b>PROJECT TITLE</b>		
<b>SHEET TITLE</b>		
PROJECT	18156	
DATE	03/29/21	
DRAWN	NH	
CHKD.	TB	
SHEET :	<b>S1.1E</b>	
OF		

18156-S1.1 03/29/21





10' SEWER EASEMENT

8" WIDE X 24" HIGH  
C.I.P. CURB

8" STRUCTURAL SLAB W/  
#5 @ 12" o.c. SHORT WAY  
#5 @ 18" o.c. LONG WAY  
BOTT.

(E.4)

(B)

(1)

(2)

9'-0"

### LOGGIA ROOF PLAN

PROJECT	18156
DATE	03/29/21
DRAWN	NH
CHKD.	TB

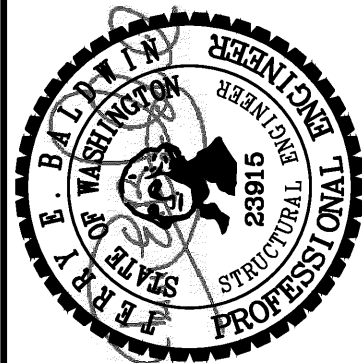
**S1.1W**

OF

SHEET TITLE	
LOGGIA ROOF PLAN	

MURRAY RESIDENCE  
4603 FOREST AVE SE  
MERCER ISLAND, WA 98040

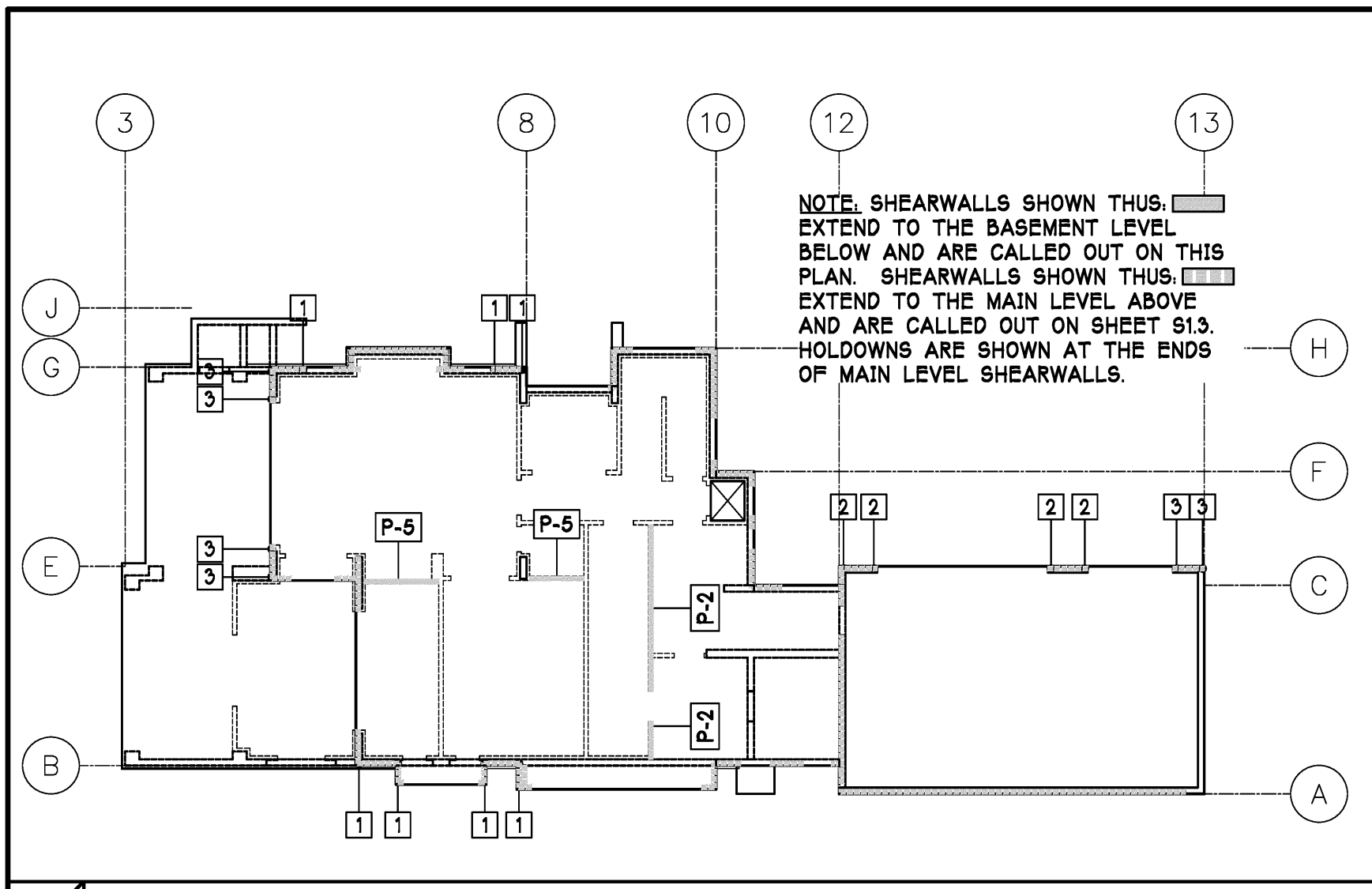
PROJECT TITLE



**B&T**  
DESIGN & ENGINEERING  
B. & T. FISHER & ENGINEERING, INC.  
250 E. SUNSET WAY  
SEASIDE, WA 98138  
(206) 557-0765 FAX

REVISIONS	DATE	DESCRIPTION

DATE	DESCRIPTION



POST SCHEDULE			
MARK	SIZE & GRADE	COMMENTS	HARDWARE
(P1)	2" X 6" DP STUD		
(P2)	3" X 6" DP STUD		
(P3)	4" X 6" DP#2		
(P4)	6" X 6" DP#1		

**PLAN NOTES: (FLR)**

- TOP OF MAIN FLOOR GYPCRETE IS 11'-0" ABOVE REFERENCE ELEVATION 0'-0". SITE ELEVATION IS 63.0'. TOP OF GARAGE FLOOR STRUCTURAL SLAB IS 17'-0" ABOVE REFERENCE ELEVATION 0'-0". SITE ELEVATION IS 65.0'.
  - INDICATES BASEMENT LEVEL SHEARWALLS BELOW.  
INDICATES MAIN LEVEL SHEARWALLS ABOVE.
  - SHEATH AND NAIL SHEARWALLS PER SCHEDULE ON SHEET S2.3. SEE KEY PLAN AT LEFT FOR SHEARWALL TYPES AT BASEMENT LEVEL. SEE KEY PLAN ON SHEET S1.3 FOR SHEARWALL TYPES AT MAIN LEVEL.
  - TYPICAL HEADER AT ALL INTERIOR AND EXTERIOR BEARING WALLS SHALL BE 4" X 8" DP#2 UNLESS NOTED OTHERWISE ON PLAN.
  - INDICATES KEY NOTE. SEE KEY NOTES ON THIS SHEET.
  - INDICATES SIMPSON HARDWARE. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
  - INDICATES POST TYPE. SEE POST SCHEDULE ON THIS SHEET FOR SIZE.  
POST ABOVE U.N.O. ON PLAN.  
POST BELOW.
- NOTE: (M-A) INDICATES LEVEL WHERE COLUMN STARTS-ENDS.  
 "B" - BASEMENT  
 "M" - MAIN FLOOR  
 "U" - UPPER FLOOR  
 "A" - ATTIC FLOOR  
 "R" - ROOF.

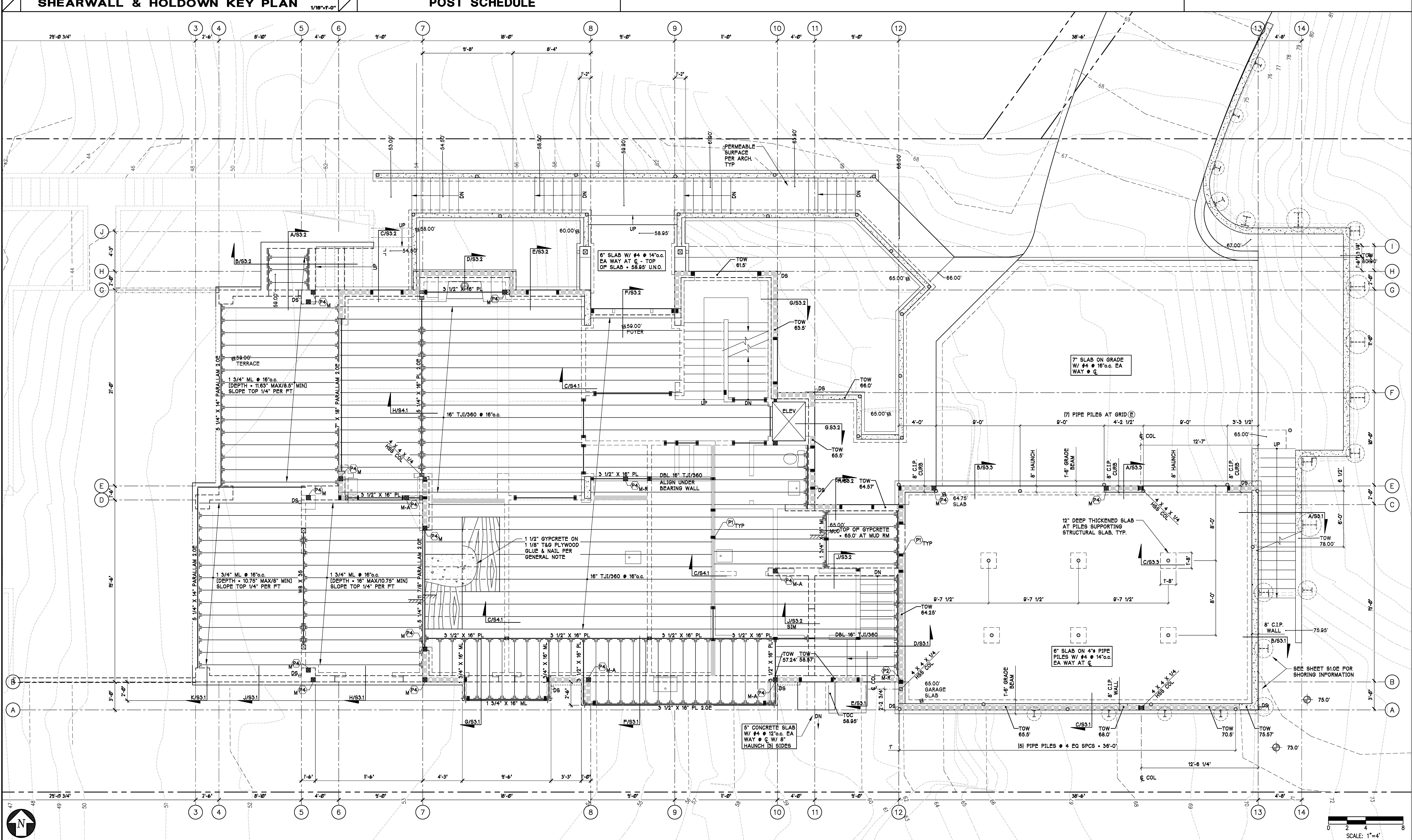
FLOOR FRAMING DESIGN LOADS.	
DEAD LOAD	28 PSF
LIVE LOAD	40 PSF
TOTAL DESIGN LOAD	68 PSF

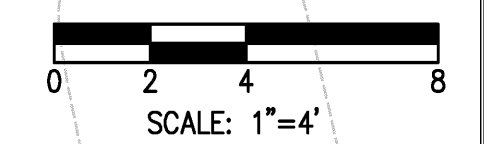
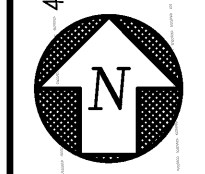
DECK FRAMING DESIGN LOADS.	
DEAD LOAD (INCLUDES PAVERS)	22 PSF
LIVE LOAD	60 PSF
TOTAL DESIGN LOAD	82 PSF

**PLAN NOTES: (FDN)**

- INDICATES 4-INCH DIAMETER SCHEDULE 40 PIPE PILE.

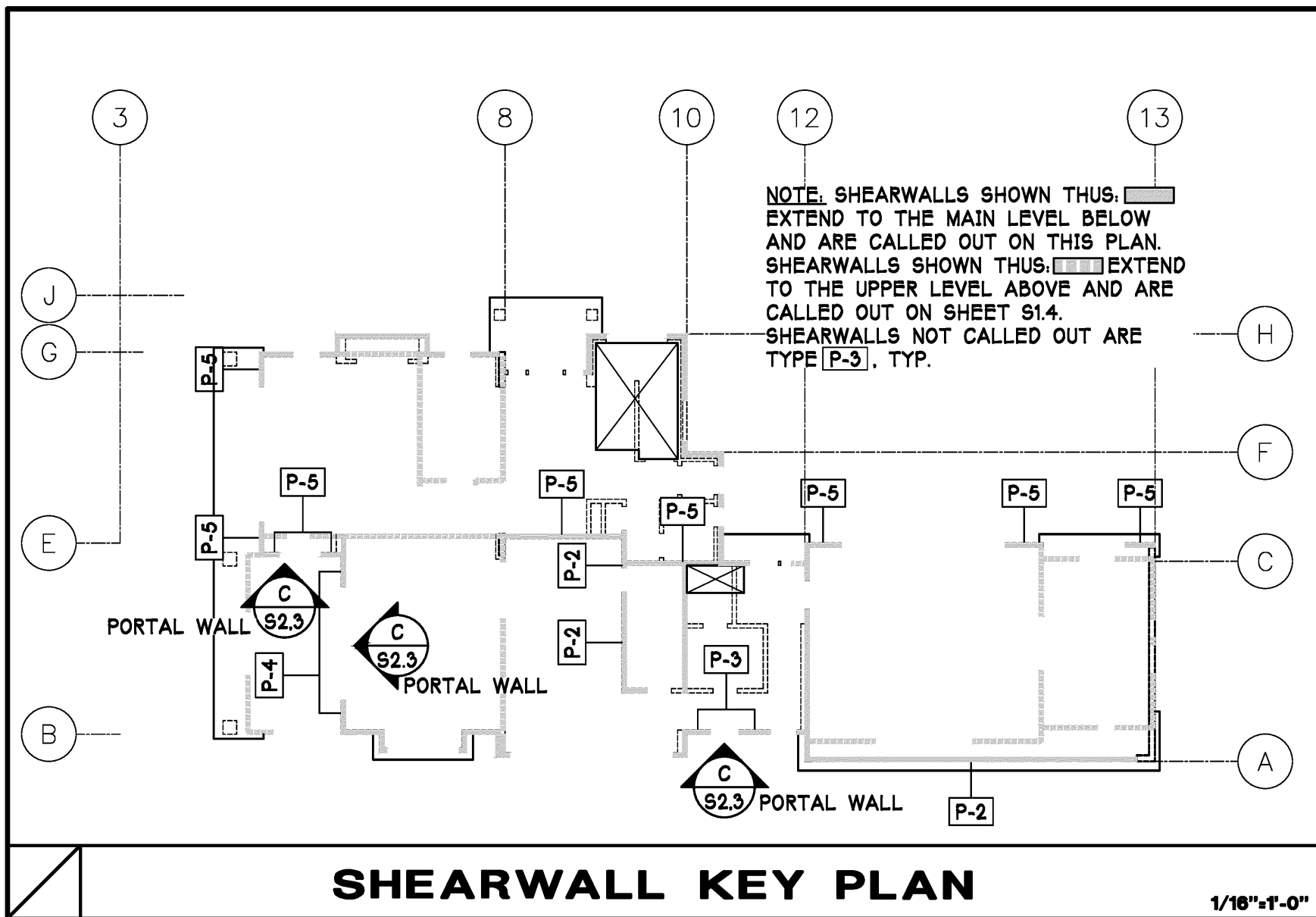


18156-S1.1 03/29/21



**MAIN FLOOR FRAMING & FOUNDATION PLAN**

<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>02/04/21</td> <td>ADDED PILE DIMENSIONS</td> </tr> </tbody> </table>	DATE	DESCRIPTION	02/04/21	ADDED PILE DIMENSIONS	<p>PROJECT TITLE</p> <p style="text-align: center;"><b>MURRAY RESIDENCE 4603 FOREST AVE SE MERCER ISLAND, WA 98040</b></p>				
DATE	DESCRIPTION								
02/04/21	ADDED PILE DIMENSIONS								
<p><b>SHEET TITLE</b></p> <p style="font-size: 2em; font-weight: bold;">S1.2</p>									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>PROJECT</td> <td>18156</td> </tr> <tr> <td>DATE</td> <td>03/29/21</td> </tr> <tr> <td>DRAWN</td> <td>NH</td> </tr> <tr> <td>CHKD.</td> <td>TB</td> </tr> </table>		PROJECT	18156	DATE	03/29/21	DRAWN	NH	CHKD.	TB
PROJECT	18156								
DATE	03/29/21								
DRAWN	NH								
CHKD.	TB								



**SHEARWALL KEY PLAN**  
1/16" = 1'-0"

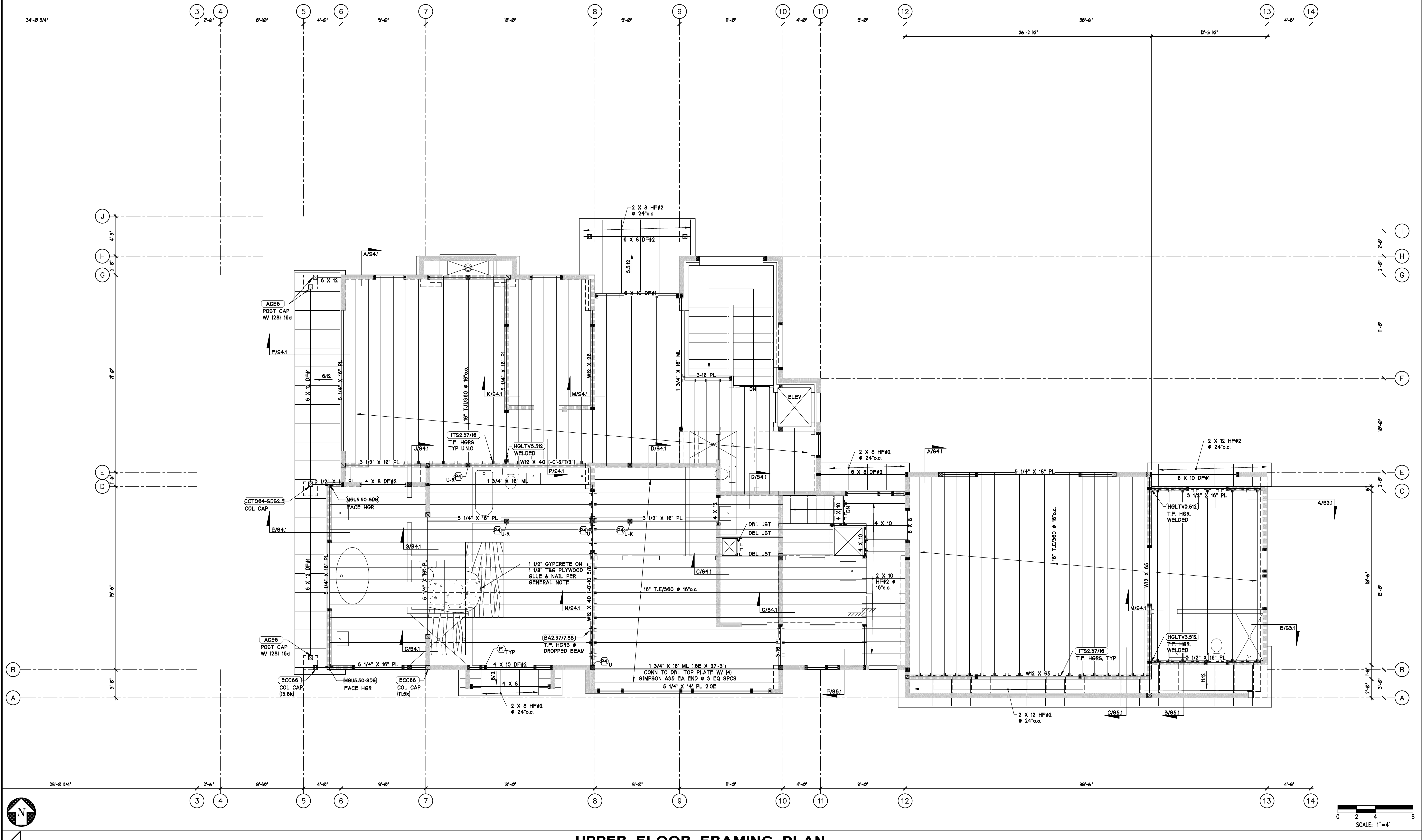
POST SCHEDULE			
MARK	SIZE & GRADE	COMMENTS	HARDWARE
(P1)	(2) 2 X 6 DF STUD		
(P2)	(3) 2 X 6 DF STUD		
(P3)	4 X 6 DF#2		
(P4)	6 X 6 DF#1		

**POST SCHEDULE**

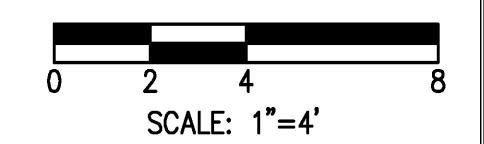
**PLAN NOTES:**

- TOP OF UPPER FLOOR GYPCRETE IS +25'-6" ABOVE REFERENCE ELEVATION 0'-0". SITE ELEVATION IS 71'0". TOP OF BONUS ROOM GYPCRETE IS +28'-6" ABOVE REFERENCE ELEVATION 0'-0". SITE ELEVATION IS 76'0".
- [Symbol] INDICATES MAIN LEVEL SHEARWALLS BELOW.
  - [Symbol] INDICATES UPPER LEVEL SHEARWALLS ABOVE.
- SHEATH AND NAIL SHEARWALLS PER SCHEDULE ON SHEET S2.3. SEE KEY PLAN AT LEFT FOR SHEARWALL TYPES AT MAIN LEVEL. WALLS NOT CALLED OUT SHALL BE TYPE [P-3].
- TYPICAL HEADER AT ALL INTERIOR AND EXTERIOR BEARING WALLS SHALL BE 4 X 8 DF#2 UNLESS NOTED OTHERWISE ON PLAN.
- [Symbol] INDICATES KEY NOTE. SEE KEY NOTES ON THIS SHEET.
  - [Symbol] INDICATES SIMPSON HARDWARE. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
  - [Symbol] INDICATES POST TYPE. SEE POST SCHEDULE ON THIS SHEET FOR SIZE.
  - [Symbol] POST ABOVE U.O. ON PLAN.
  - [Symbol] POST BELOW.
- NOTE: [Symbol] INDICATES LEVEL WHERE COLUMN STARTS-ENDS.
  - "B" = BASEMENT
  - "M" = MAIN FLOOR
  - "U" = UPPER FLOOR
  - "A" = ATTIC FLOOR
  - "R" = ROOF
- DIMENSIONS SHOWN THUS [-X'-X"] ARE TO TOP OF STEEL BEAM FROM BOTTOM OF 1-1/8" PLYWOOD SUBFLOOR.

FLOOR FRAMING DESIGN LOADS:	
DEAD LOAD	28 PSF
LIVE LOAD	40 PSF
TOTAL DESIGN LOAD	68 PSF



**UPPER FLOOR FRAMING PLAN**



REVISIONS	DATE	DESCRIPTION

**B&T**  
 DESIGN & ENGINEERING

**MURRAY RESIDENCE**  
**4603 FOREST AVE SE**  
**MERCER ISLAND, WA 98040**

**UPPER FLOOR FRAMING PLAN**  
 SHEET TITLE

**S1.3**  
 OF

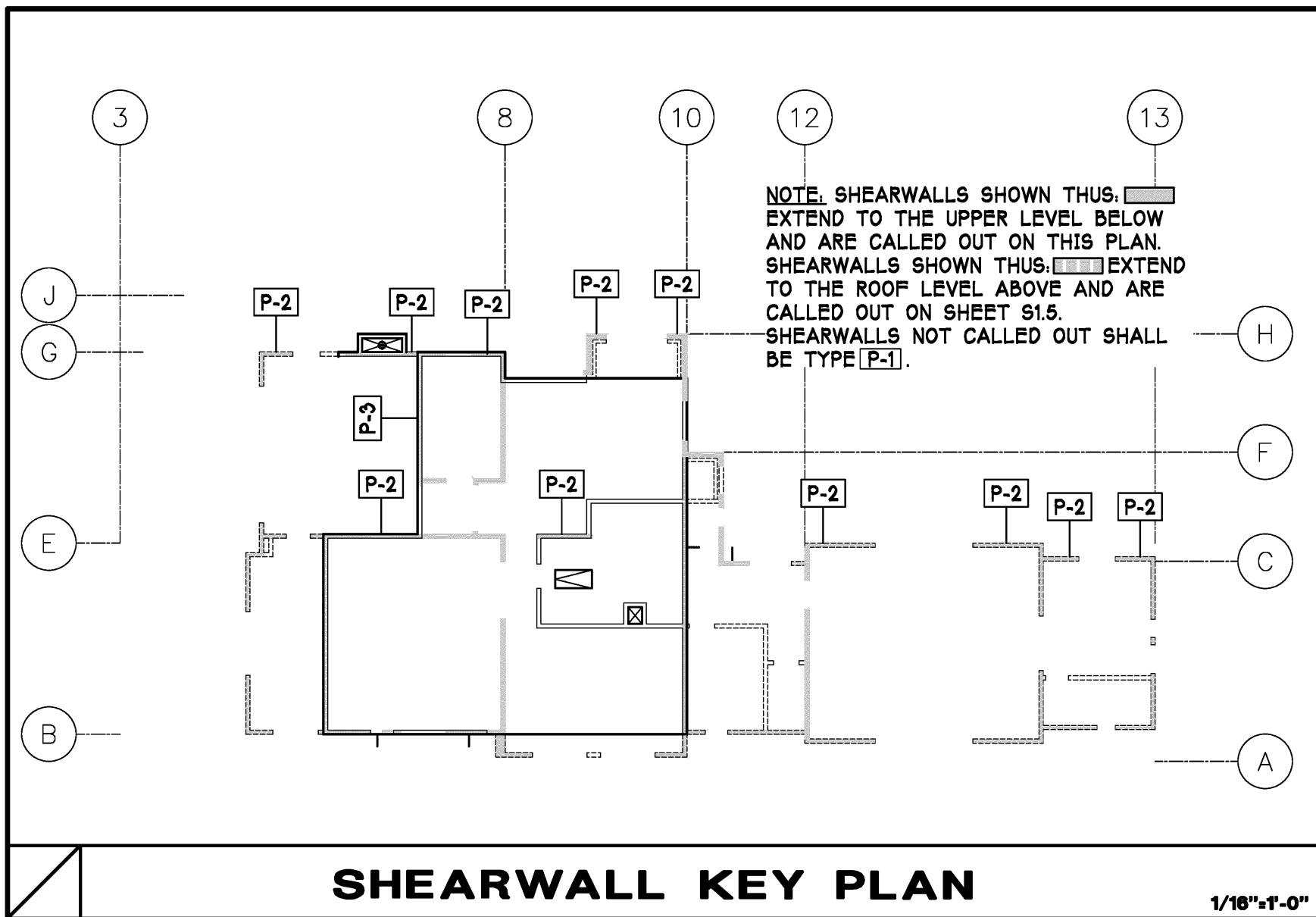
PROJECT	18156
DATE	03/29/21
DRAWN	NH
CHKD.	TB

SHEET :  
**S1.3**  
 OF

PROJECT TITLE  
 SHEET TITLE

SCALE: 1/4" = 1'-0"

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**SHEARWALL KEY PLAN**  
1/16" = 1'-0"

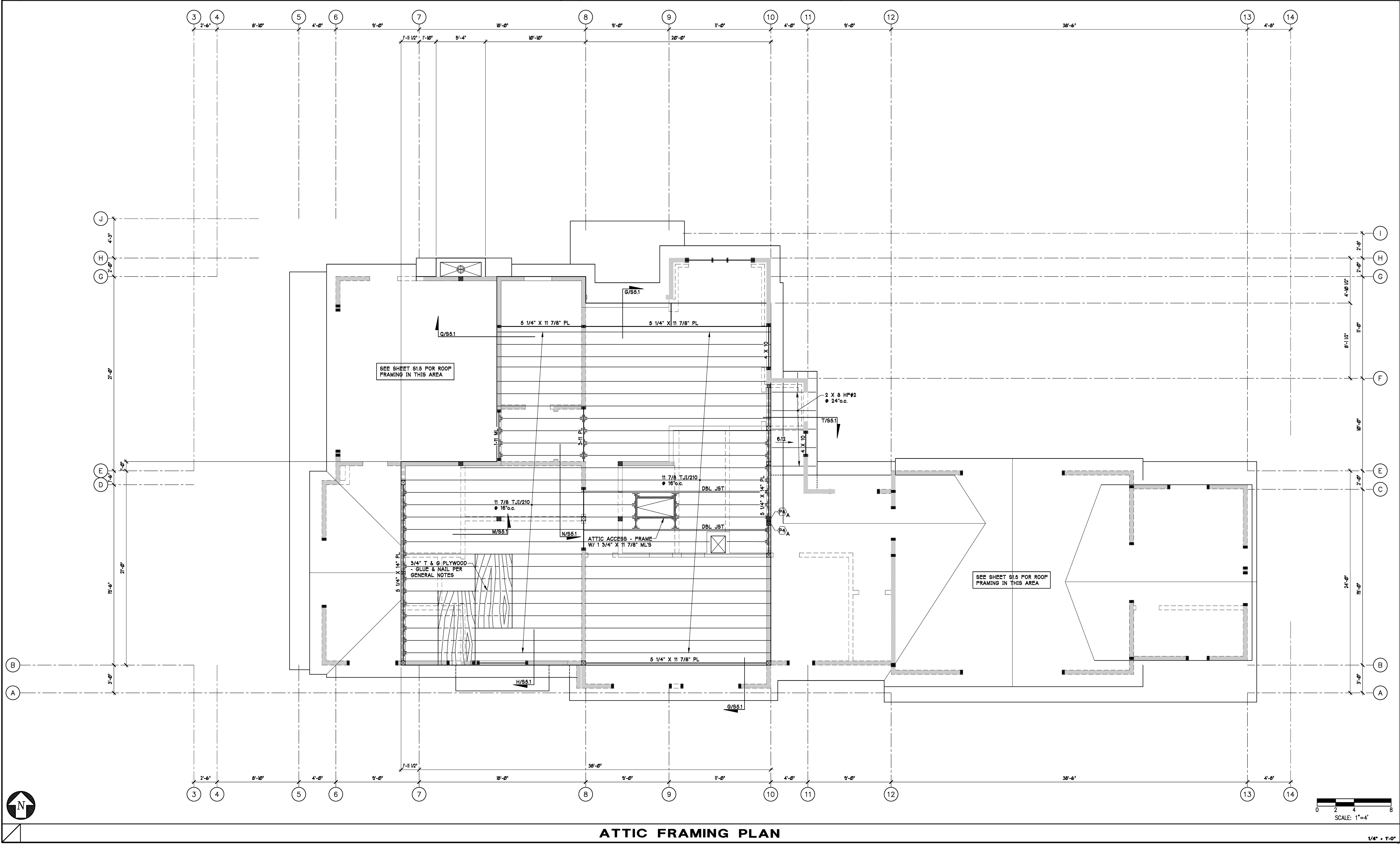
POST SCHEDULE			
MARK	SIZE & GRADE	COMMENTS	HARDWARE
(P1)	(2) 2 X 6 DF STUD		
(P2)	(3) 2 X 6 DF STUD		
(P3)	4 X 6 DF#2		
(P4)	6 X 6 DF#1		

**POST SCHEDULE**

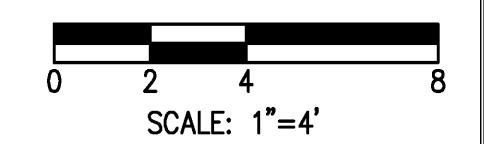
**PLAN NOTES:**

- TOP OF ATTIC PLYWOOD IS -32'-6 5/8" ABOVE REFERENCE ELEVATION 0'-0". SITE ELEVATION IS 80.052'.
- (K2) INDICATES UPPER LEVEL SHEARWALLS BELOW.  
(K3) INDICATES ROOF LEVEL SHEARWALLS ABOVE.
- SHEATH AND NAIL SHEARWALLS PER SCHEDULE ON SHEET S2.5. SEE KEY PLAN AT LEFT FOR SHEARWALL TYPES AT UPPER LEVEL. WALLS NOT CALLED OUT SHALL BE TYPE (P-1).
- (K-F) INDICATES KEY NOTE. SEE KEY NOTES ON THIS SHEET.
- (S) INDICATES SIMPSON HARDWARE. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- (P) INDICATES POST TYPE. SEE POST SCHEDULE ON THIS SHEET FOR SIZE.  
 [Symbol] POST ABOVE U.N.O. ON PLAN.  
 [Symbol] POST BELOW.  
 NOTE: (P4) INDICATES LEVEL WHERE COLUMN STARTS-ENDS.  
 "B" - BASEMENT  
 "M" - MAIN FLOOR  
 "U" - UPPER FLOOR  
 "A" - ATTIC FLOOR  
 "R" - ROOF
- SEE SHEET S2.1 FOR BALANCE OF FRAMING NOTES AND SCHEDULES. SEE SHEETS S2.1, S2.2 & S2.3 FOR TYPICAL DETAILS.
- SEE ARCHITECTURAL PLANS FOR DIMENSIONS.

ATTIC FLOOR FRAMING DESIGN LOADS.	
• DEAD LOAD	• 14 PSF
• LIVE LOAD	• 20 PSF
<b>TOTAL DESIGN LOAD</b>	<b>• 34 PSF</b>



**ATTIC FRAMING PLAN**



REVISIONS	DATE	DESCRIPTION

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 SUITE 200  
 SEASIDE, WA 98138  
 (206) 557-0765 FAX

**B&T**  
 DESIGN & ENGINEERING

**MURRAY RESIDENCE**  
**4603 FOREST AVE SE**  
**MERCER ISLAND, WA 98040**

**ATTIC FRAMING PLAN**  
 SHEET TITLE

PROJECT TITLE

PROJECT	18156
DATE	03/29/21
DRAWN	NH
CHKD.	TB

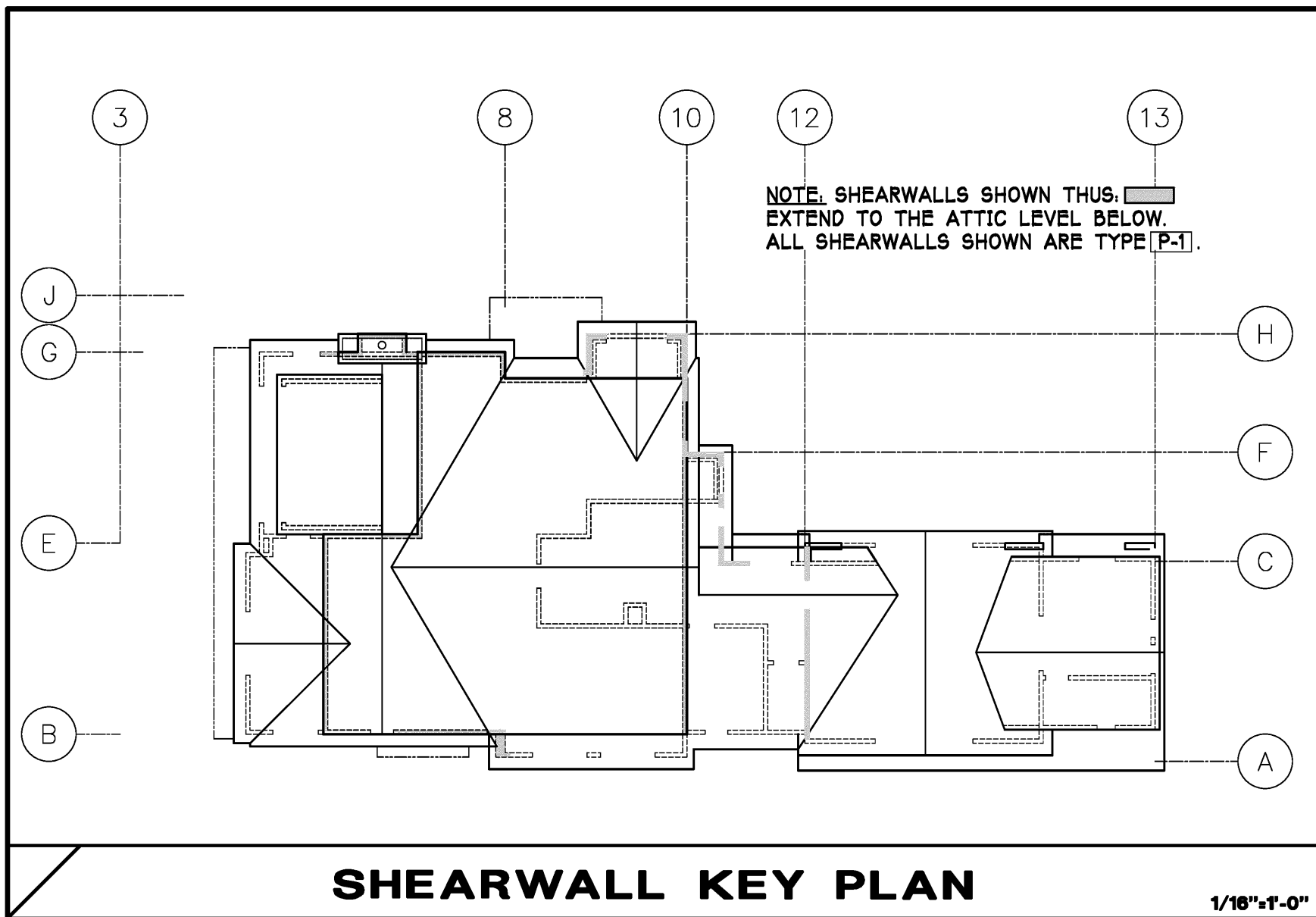
SHEET :

S1.4

OF

1/4" = 1'-0"

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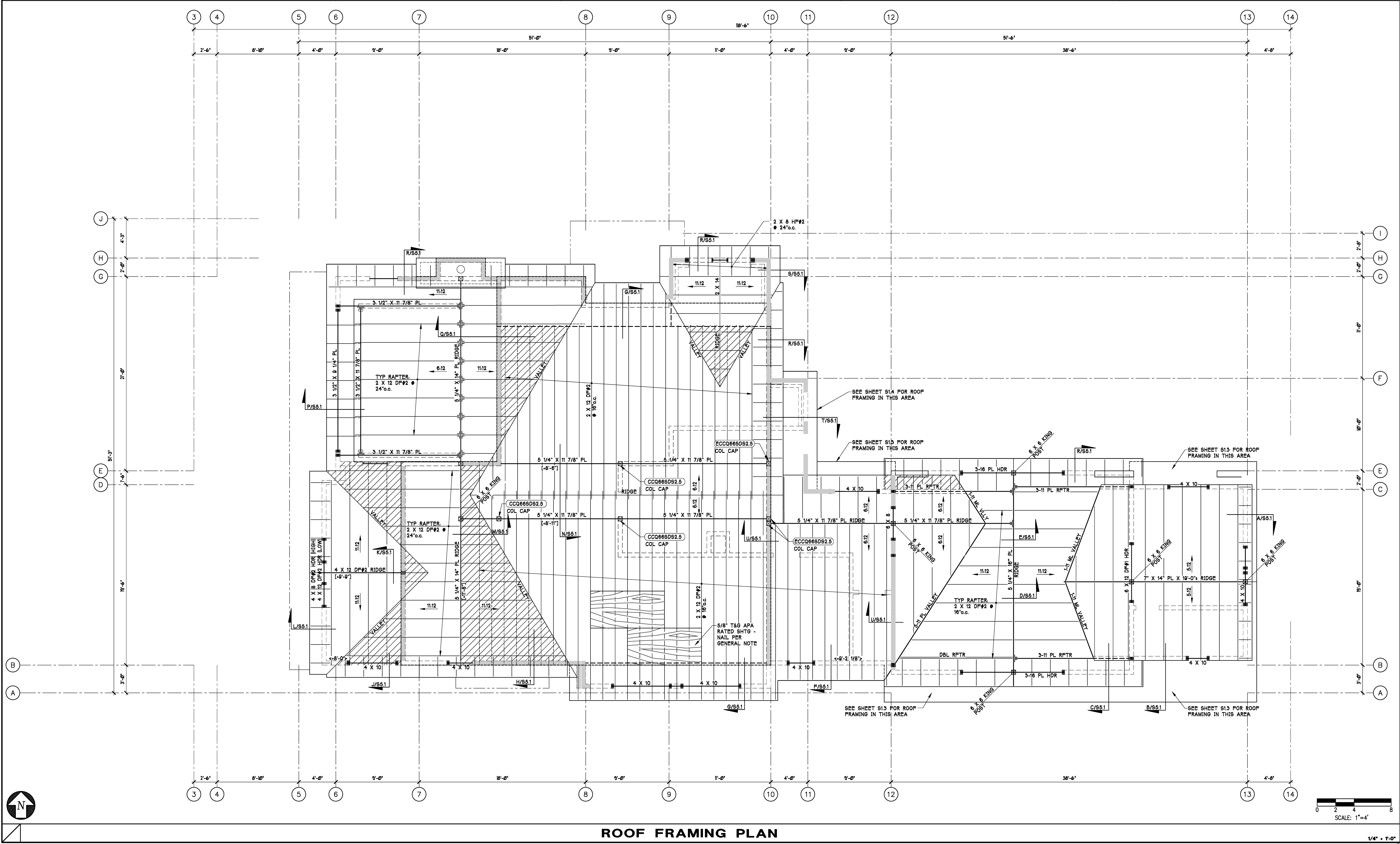


**SHEARWALL KEY PLAN**  
1/16" = 1'-0"

- PLAN NOTES: (ROOF)**
- TOP OF DOUBLE PLATE AT ROOF IS TYPICALLY +3'-0" ABOVE REFERENCE ELEVATION 0'-0". TOP OF DOUBLE PLATE AT RAISED ROOF IS +4'-6" ABOVE REFERENCE ELEVATION 0'-0".
  - [Symbol] INDICATES SHEARWALLS BELOW. SHEATH AND NAIL SHEARWALLS PER SCHEDULE ON SHEET S2.3. SEE KEY PLAN AT LEFT FOR SHEARWALL LAYOUT. ALL SHEARWALLS SHALL BE TYPE [Symbol].
  - [Symbol] INDICATES KEY NOTE. SEE KEY NOTES ON THIS SHEET.
  - [Symbol] INDICATES SIMPSON HARDWARE. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
  - [Symbol] INDICATES AREAS OF OVERFRAMING. USE PREMANUFACTURED VALLEY SETS OR 2 X 6 HF#2 @ 24" o.c. TYPICAL. MAXIMUM UNSUPPORTED LENGTH OF 2 X 6 RAFTER SHALL BE 8'. FOR LONGER SPANS, PROVIDE 2 X 4 BRACES TO FRAMING BELOW.
  - SEE SHEET S2.1 FOR BALANCE OF FRAMING NOTES AND SCHEDULES. SEE SHEETS S2.1, S2.2 & S2.3 FOR TYPICAL DETAILS.
  - SEE ARCHITECTURAL PLANS FOR DIMENSIONS.

**ROOF FRAMING DESIGN LOADS:**

• DEAD LOAD	• 18 PSF
• SOLAR PANEL READY LOAD	• 03 PSF
• LIVE LOAD (SNOW)	• 22 PSF
<b>TOTAL FLAT ROOF DESIGN LOAD</b>	<b>• 46 PSF</b>



**ROOF FRAMING PLAN**  
1/4" = 1'-0"

REVISIONS	DATE	DESCRIPTION

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**ROOF FRAMING PLAN**

PROJECT TITLE

SHEET TITLE

PROJECT	18156
DATE	03/29/21
DRAWN	NH
CHKD.	TB

SHEET :

**S1.5**

OF

SCALE: 1" = 4'

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REQUIRED VERIFICATION AND INSPECTION OF SOILS (TABLE 1705.6 IBC 2012)			
VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	
1. VERIFY MATERIALS BELOW SHALLOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTED FILL.	X	-	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X	

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION (TABLE 1705.3 IBC 2012)				
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT	-	X	ACI 318: 3.5, 7.1-7.7	1910.4
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1703.2.2, ITEM 2b	-	-	AWS D1.4 ACI 318: 3.5.2	-
3. INSPECTION OF ANCHORS CAST IN CONCRETE	-	X	ACI 318: D.9.2	-
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS <sup>a</sup> a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4a.	X	-	ACI 318: D.9.2.4	-
5. VERIFYING USE OF REQUIRED DESIGN MIX	-	X	ACI 318: CH 4, 5.2-5.4	1904.2, 1910.2, 1910.3
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	-	ASTM C 172 ASTM C 31 ACI 318: 5.8, 5.8	1910.10
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 5.9, 5.10	1910.6, 1910.7, 1910.8
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X	ACI 318: 5.11-5.13	1910.9
9. INSPECTION OF PRESTRESSED CONCRETE: a. APPLICATION OF PRESTRESSING FORCES b. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE-RESISTING SYSTEM	X	-	ACI 318: 18.20 ACI 318: 18.18.4	-
10. ERECTION OF PRECAST CONCRETE MEMBERS	-	X	ACI 318: CH. 16	-
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	-	X	ACI 318: 6.2	-
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	X	ACI 318: 6.1.1	-

NOTES:  
a. WHERE APPLICABLE, SEE ALSO SECTION 1705.11, SPECIAL INSPECTION FOR SEISMIC RESISTANCE.  
b. SPECIAL REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH ACI 308.4 OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

REQUIRED VERIFICATION AND INSPECTION OF STRUCTURAL STEEL CONSTRUCTION (SECTION 1705.2.1 IBC 2012, AISC 360)						
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	INSPECTION			REMARKS
			CONTINUOUS	PERIODIC	PERFORM	
CONTRACTOR QUALITY CONTROL REQUIREMENTS		AISC 360 CHAPTER N	-	X	X	CONTRACTOR TO PROVIDE QUALITY CONTROL FOR ALL ITEMS INDICATED TO BE OBSERVED AND/OR PERFORM IN TABLE
STEEL FABRICATION						
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.2	AISC 360 N2	-	X	-	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF STRUCTURAL STEEL	1705.2.1 2203.1 TABLE 1705.2	ASTM A6 ASTM A572 SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 N3.2	-	X	-	CERTIFIED MILL TEST REPORTS
FOR OTHER STEEL IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	TABLE 1705.2	APPLICABLE ASTM STANDARDS	-	X	-	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	TABLE 1705.2	ASTM A5 AISC 360 N3.2 APPLICABLE AWS AS- DOCUMENTS	-	X	-	MANUFACTURER'S CERTIFIED TEST REPORTS
STRUCTURAL STEEL WELDING						
VERIFYING USE OF PROPER WPS'S		ASTM A5 AISC 360 N3.2	-	-	-	RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS	1705.2.2.1		-	X	-	RETAIN A RECORD OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS			X	-	-	
MULTIPASS FILLET WELDS			X	-	-	
SINGLE PASS FILLET WELDS GREATER THAN 5/16"	TABLE 1705.2	AWS D1.1 SECTION 6	X	-	-	ALL WELDS VISUALLY INSPECTED PER AWS D1.16.9
PLUG SLOT WELDS			X	-	-	
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"			-	X	-	
WELDING STAIR AND RAILING SYSTEMS	1705.2(2)5	AWS D1.1 SECTION 6	-	X	-	ALL WELDS VISUALLY INSPECTED PER AWS D1.16.9
TS			-	-	X	

NOTES:  
1. FOR STEEL INSPECTIONS PER AISC 360 AND 341:  
a. QUALITY ASSURANCE (QA) IS REQUIRED FOR EACH ITEM IN TABLES UNLESS SPECIFICALLY NOTED OTHERWISE.  
b. QUALITY CONTROL (QC) TO BE PROVIDED BY THE FABRICATOR, ERECTOR OR OTHER RESPONSIBLE CONTRACTOR AS APPLICABLE. CONTRACTOR AND SPECIAL INSPECTOR TO DOCUMENT QUALITY CONTROL AS REQUIRED IN AISC 360 SECTION N3 AND AISC 341 SECTION J2.  
2. INSPECTION TYPES  
a. CONTINUOUS: THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.  
b. PERIODIC: THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.  
c. OBSERVE: OBSERVE THESE FUNCTIONS ON A RANDOM, DAILY BASIS. OPERATIONS NEED NOT BE DELAYED PENDING OBSERVATIONS.  
d. PERFORM: INSPECTIONS SHALL BE PERFORMED PRIOR TO THE FINAL ACCEPTANCE OF THE ITEM.

**GENERAL NOTE**  
INTERNATIONAL BUILDING CODE --- 2015 EDITION  
ALL ASTM'S CALLED OUT ARE TO BE THE LATEST EDITION

**LIVE LOADS**  
BUILDING RISK CATEGORY II (BC TABLE 1604.5)

**GRAVITY LOADS:**  
SNOW --- GROUND SNOW LOAD PG = 36 PSF  
FLAT ROOF SNOW LOAD PF = 25 PSF  
SNOW EXPOSURE FACTOR CE = 1.0  
SNOW IMPORTANCE FACTOR IS = 1.0  
THERMAL FACTOR CT = 1.0  
FLOOR --- 40 PSF

**LATERAL LOADS:**  
WIND --- V = 110 MPH  
EXPOSURE "C" KZT = 1.0  
SEISMIC --- SITE CLASS "D"  
SEISMIC DESIGN CATEGORY "D"  
IMPORTANCE FACTOR IE = 1.0  
Ss = 1.3010 S<sub>1</sub> = 0.3356  
Fa = 1.000 Fv = 1.500  
Ses = 0.927G S<sub>eh</sub> = 0.3356  
R = 5 (SPECIAL REINFORCED CONCRETE SHEARWALLS)

**FOUNDATION**  
FOUNDATION DESIGN WAS BASED UPON SOILS REPORT NO. JN20086 BY GEOTECH CONSULTANTS, INC. DATED MAY 5, 2020. THE FOLLOWING VALUES WERE USED:  
LATERAL EARTH PRESSURE: . . . . . 45 PCF EFP (ACTIVE-UNRESTRAINED; LEVEL BACKFILL)  
. . . . . 58 PCF EFP (ACTIVE-UNRESTRAINED; SLOPING BACKFILL)  
. . . . . 287 PCF EQUIVALENT FLUID PRESSURE (PASSIVE)  
COEFFICIENT OF FRICTION: . . . . . 0.3

ALL EXTERIOR FOOTINGS AND GRADE BEAMS SHALL BE A MINIMUM OF 1'-6" BELOW FINISH GRADE. SLABS AND FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR STRUCTURAL FILL COMPACTED TO 95% MAXIMUM DRY DENSITY PER ASTM D-1557 AS RECOMMENDED IN SOILS REPORT. CONTRACTOR SHALL PROVIDE PERMANENT DRAINAGE OF BUILDING PERIMETER. ALL SITE PREPARATION AND GRADING SHALL BE DONE IN ACCORDANCE WITH SOILS REPORT.

**DILLED PILES**  
PILE LENGTH SHOWN ON PLAN IS BASED ON DEPTH BELOW SITE ELEVATION 'X'. THE SOILS ENGINEER SHALL INSPECT THE INSTALLATION OF THE PILES AND WILL MAKE THE FINAL DETERMINATION OF PILE PENETRATION FOR LOADS SHOWN BELOW BASED ON CONDITIONS THAT HE/SHE OBSERVES DURING INSTALLATION OF EACH PILE. F<sub>c</sub> FOR GROUT FOR PILING IS 4000 PSI. USE 10 SACKS CEMENT PER CUBIC YARD OF CONCRETE MINIMUM. ALTERNATE MIX DESIGN MAY BE SUBMITTED TO ENGINEER FOR APPROVAL. SUBMIT PILING RECORDS TO THE ENGINEER AND BUILDING DEPARTMENT FOR APPROVAL PRIOR TO POURING PILE CAPS.

**PIPE PILES**  
GALVANIZED STEEL DRIVEN PIPE PILES ARE TO BE THE FOUNDATION SYSTEM TO SUPPORT THE DEAD LOADS ANTICIPATED FROM THE BUILDING AND ITS FOUNDATION.  
FOUR INCH DIAMETER (SCHEDULE 40) PIPE PILES DRIVEN WITH A MINIMUM 800 POUND HYDRAULIC HAMMER TO A FINAL PENETRATION RATE OF ONE INCH OR LESS FOR ONE MINUTE OF CONTINUOUS DRIVING MAY BE ASSIGNED AN ALLOWABLE COMPRESSIVE LOAD OF 10 TONS PER PILE.

PILE CAPS SIMILAR TO CONVENTIONAL FOOTINGS SHOULD BE USED TO TRANSMIT LOADS TO THE PILES. NO LESS THAN TWO PILES SHOULD BE INCLUDED IN EACH PILE CAP. THE PILES AND PILE CAPS SHOULD BE USED TO CONNECT SUBSEQUENT PIPE SECTIONS ON PILES THAT NEED TO EXTEND IN LENGTH. LOAD TESTS ARE REQUIRED ON 3 PERCENT OF THE INSTALLED PILES UP TO A MAXIMUM OF 5 PILES AND SHALL BE PER ASTM STANDARD D1143-07.

GEOTECH CONSULTANTS WILL BE REQUIRED TO DO ON SITE MONITORING OF PILE DRIVING TO DETERMINE THEIR FINAL PENETRATION.

**TIMBER**

2X MEMBERS . . . . . H.F.#2 (Fb=1270 psi REP.) (2 X 6 OR LESS)  
H.F.#2 (Fb=1035 psi REP.) (2 X 8 OR LARGER)  
4X MEMBERS . . . . . D.F.#2 (Fb=1080 psi) (4 X 10 OR LESS)  
D.F.#2 (Fb=990 psi) (4 X 12 OR LARGER)  
6X MEMBERS . . . . . D.F.#1 (Fb=1350 psi)  
LUMBER NOT NOTED TO BE . . . . . D.F.#1  
BOLTS IN WOOD CONFORM WITH ASTM A307

ALL GRADES SHALL CONFORM TO "NMPA GRADING RULES FOR WESTERN LUMBER --- LATEST EDITION." BOLT HEADS AND NUTS BEARING AGAINST WOOD SHALL BE PROVIDED WITH STANDARD OUT WASHERS. PLATE WASHERS A MINIMUM OF 3" X 3" X 1/4" SHALL BE USED AT ALL SILL PLATE ANCHOR BOLTS. ALL NEW FRAMING LUMBER SHALL HAVE 19% MAXIMUM MOISTURE CONTENT AT TIME OF INSTALLATION. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED. ALL NAILS ARE "COMMON" UNLESS INDICATED OTHERWISE. MINIMUM NAILING PER IBC TABLE 2304.9.1. S4S TYPES UNLESS NOTED OTHERWISE. SUBSTITUTION OF OTHERS SPECIES WITHOUT WRITTEN APPROVAL OF THE ENGINEER IS PROHIBITED. MISCELLANEOUS HANGERS TO BE SIMPSON OR I.C.C. APPROVED EQUAL. ALL CONNECTORS FOR PRESSURE TREATED LUMBER AND ALL WALLS IN EXTERIOR SHEATHING SHALL BE HOT-DIPPED GALVANIZED. NAIL ALL HOLES WITH NAILS AS SPECIFIED BY MANUFACTURER UNLESS NOTED OTHERWISE ON DRAWINGS. ANCHOR BOLTS INTO CONCRETE SHALL HAVE MINIMUM EMBEDMENT PER IBC TABLE 1908.2.

**NAILS**  
NAILS SHALL BE COMMON, AMERICAN OR CANADIAN MANUFACTURED ONLY WITH MINIMUM DIAMETERS AS FOLLOWS:

NAIL DESIGNATION	MINIMUM NAIL SHANK DIAMETER (IN)	MINIMUM NAIL LENGTH
8d	0.131"φ	2 1/2"
10d	0.148"φ	3"
16d SINKER OR 12d	0.148"φ	3 1/4"
16d	0.162"φ	3 1/2"
20d	0.192"φ	4"

**MICROLAM & PARALLAM MEMBERS**  
ALL MICROLAM & PARALLAM MEMBERS SHALL BE TRUSS JOIST OR ENGINEER APPROVED EQUAL WHICH DEMONSTRATES ICC AND NIB ACCEPTANCE. MINIMUM MEMBER PROPERTIES SHALL BE AS FOLLOWS:  
1 3/4" MICROLAM --- Fb = 2800 psi; Fv = 285 psi; E = 1900 KSI  
3 1/2" PARALLAM --- Fb = 2900 psi; Fv = 290 psi; E = 2000 KSI  
5 1/4" PARALLAM --- Fb = 2900 psi; Fv = 290 psi; E = 2000 KSI

**SIMPSON STRONG-TIE HARDWARE**  
ALL FRAMING HARDWARE SHALL BE SIMPSON STRONG-TIE OR ENGINEER APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL FRAMING HARDWARE WITH SIZE, TYPE AND NUMBER OF FASTENERS SPECIFIED BY THE MANUFACTURER.

**ROOF, FLOOR, DECK & SHEARWALL SHEATHING**  
ROOF SHEATHING SHALL BE 5/8" (NOMINAL) APA RATED SHEATHING 40/20, EXPOSURE 1, SIZED FOR SPACING. INSTALL PANELS WITH 1/8" SPACING AT END JOINTS AND 1/4" SPACING AT EDGE JOINTS. NAILING SHALL BE 10d (COMMON) AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS U.N.O. ON PLANS.

FLOOR SHEATHING SHALL BE 1 1/8" (NOMINAL) APA RATED T&G STURD-I-FLOOR, EXPOSURE 1 AT INTERIOR APPLICATIONS, EXTERIOR AT DECKS, SIZED FOR SPACING. INSTALL WITH 1/8" SPACING BETWEEN EDGE AND END JOINTS. GLUE AND NAIL ALL SUPPORTS AND BLOCKING. NAILING SHALL BE 10d (COMMON) AT 6" O.C. AT PANEL EDGES AND 10" O.C. AT INTERMEDIATE SUPPORTS U.N.O. ON PLANS.

DECK & ATTIC FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) APA RATED T&G STURD-I-FLOOR 48/24, EXPOSURE 1 AT INTERIOR APPLICATIONS, EXTERIOR AT DECKS, SIZED FOR SPACING. INSTALL WITH 1/8" SPACING BETWEEN EDGE AND END JOINTS. GLUE AND NAIL ALL SUPPORTS AND BLOCKING. NAILING SHALL BE 10d (COMMON) AT 6" O.C. AT PANEL EDGES AND 10" O.C. AT INTERMEDIATE SUPPORTS U.N.O. ON PLANS.

SHEARWALL SHEATHING SHALL BE 1/2" (NOMINAL) APA RATED SHEATHING WALL-16, EXPOSURE 1, SIZED FOR SPACING. ALLOW 1/8" SPACING AT PANEL ENDS AND EDGES UNLESS OTHERWISE RECOMMENDED BY THE PANEL MANUFACTURER. BLOCK ALL PANEL EDGES AND NAIL PER SHEARWALL SCHEDULE ON SHEET S2.1.

**SHOP DRAWINGS**  
SUBMIT THREE SETS OF SHOP DRAWINGS TO THE ENGINEER AND ONE SET TO THE BUILDING DEPARTMENT FOR APPROVAL PRIOR TO FABRICATION FOR:  
REINFORCING STEEL, MISC. & STRUCTURAL STEEL, PLYWOOD WEB JOISTS, MICROLAMS AND PARALLAMS.

**SPECIAL INSPECTIONS**  
INSPECTIONS ARE TO BE PER IBC CHAPTER 17, SECTIONS 1704 AND 1705 AND ARE TO BE BY AN INDEPENDENT TESTING LAB AND APPROVED BY THE OWNER AND BUILDING DEPARTMENT AND ENGAGED BY AND PAID FOR BY THE OWNER PRIOR TO STARTING CONSTRUCTION.

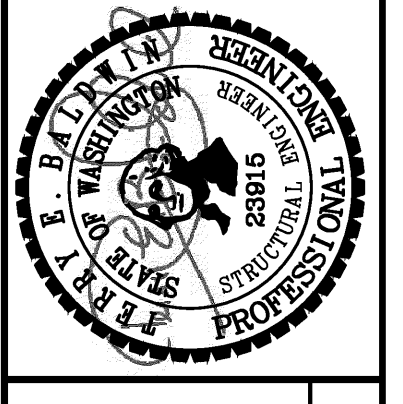
**FOUNDATION:** INSPECT FOOTINGS AND EXCAVATIONS JUST PRIOR TO CONCRETE PLACEMENT TO INSURE MATERIAL IS DRY AND DENSE.  
**CONCRETE:** TAKE CONCRETE CYLINDERS PER IBC SECTION 1705.3. VERIFY MIX DESIGN AND SLUMPS.  
**REINFORCING:** VERIFY ALL REINFORCING IS PLACED IN ACCORDANCE WITH APPROVED PLANS. CHECK FOR REQUIRED COVER, SIZE AND GRADE.  
**FLOOR & ROOF DIAPHRAGM:** NOTIFY BUILDING DEPARTMENT AND ENGINEER OF RECORD FOR INSPECTION 48 HOURS PRIOR TO COVERING.  
**WELDING:** INSPECT ALL FIELD WELDING. VERIFY CERTIFICATION OF WELDERS. CONTRACTOR SHALL PAY FOR REMELTING AND REINSPECTION OF ALL WELDS NOT MEETING SPECS. INSPECTOR SHALL NOTIFY STRUCTURAL ENGINEER OF WELDS NOT MEETING SPECS.  
**EPOXY ANCHOR:** SPECIAL INSPECTION IS REQUIRED.

**SPECIAL CONDITIONS**  
CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD AND SHALL PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL FIELD CHANGES PRIOR TO INSTALLATION.

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**MURRAY RESIDENCE**  
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PROJECT TITLE

INSPECTION SCHEDULES	
PROJECT	18156
DATE	03/29/21
DRAWN	NH
CHKD.	TB
SHEET :	
<b>S2.1</b>	
OF	

**INSPECTION TABLES**

**GENERAL NOTES**

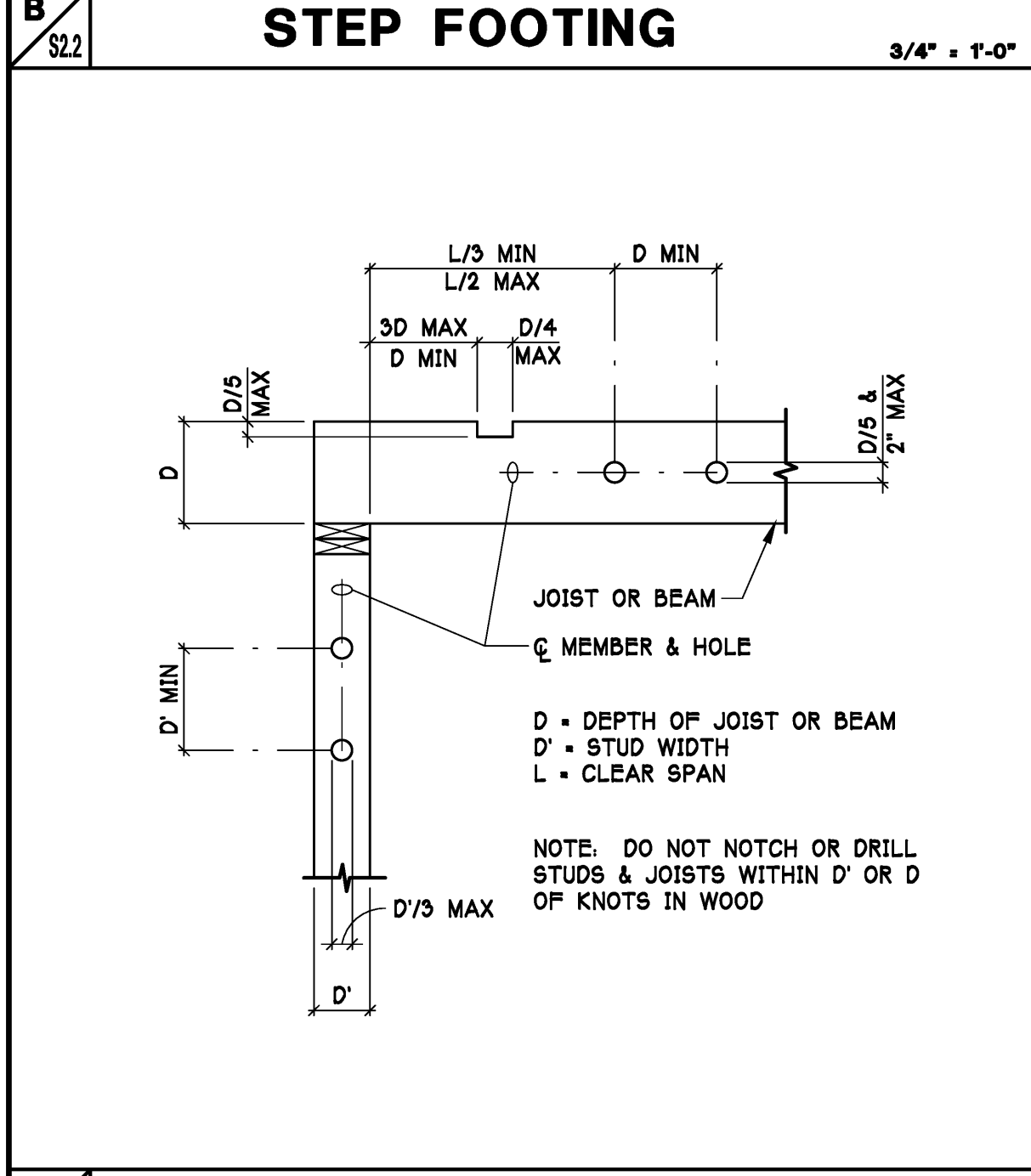
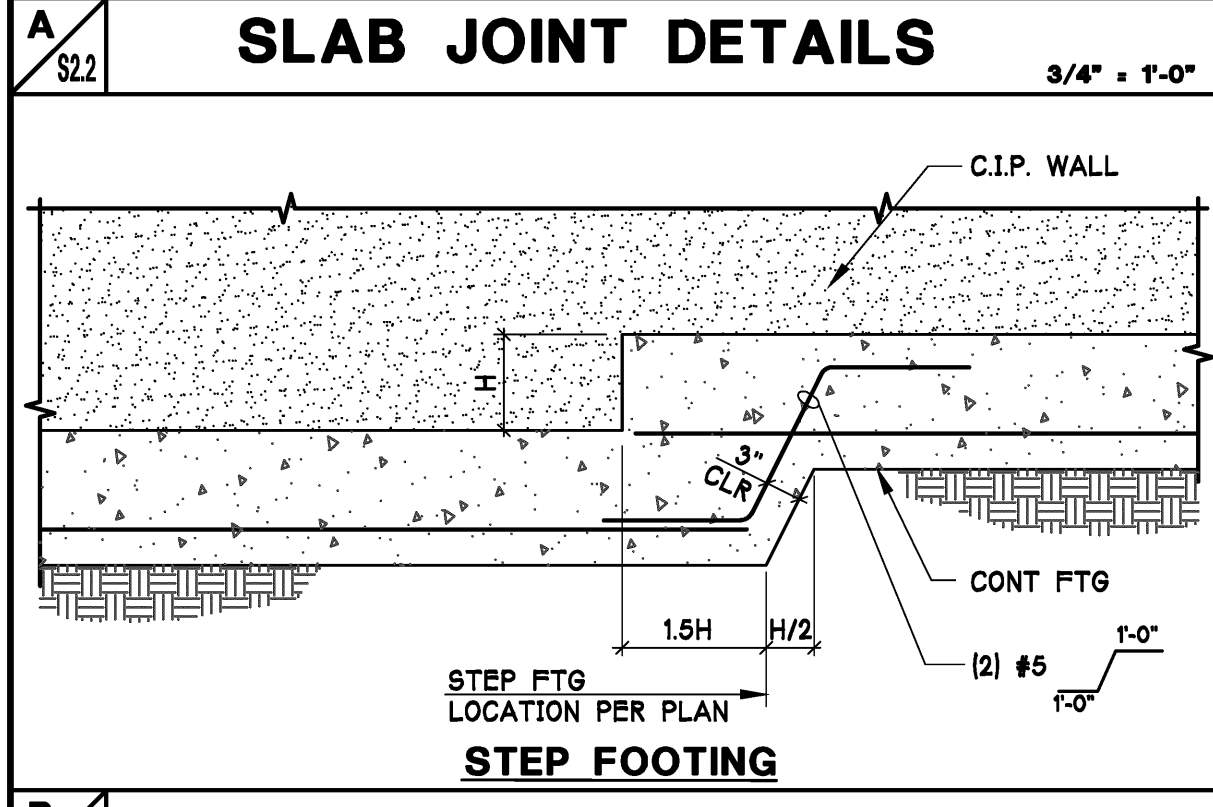
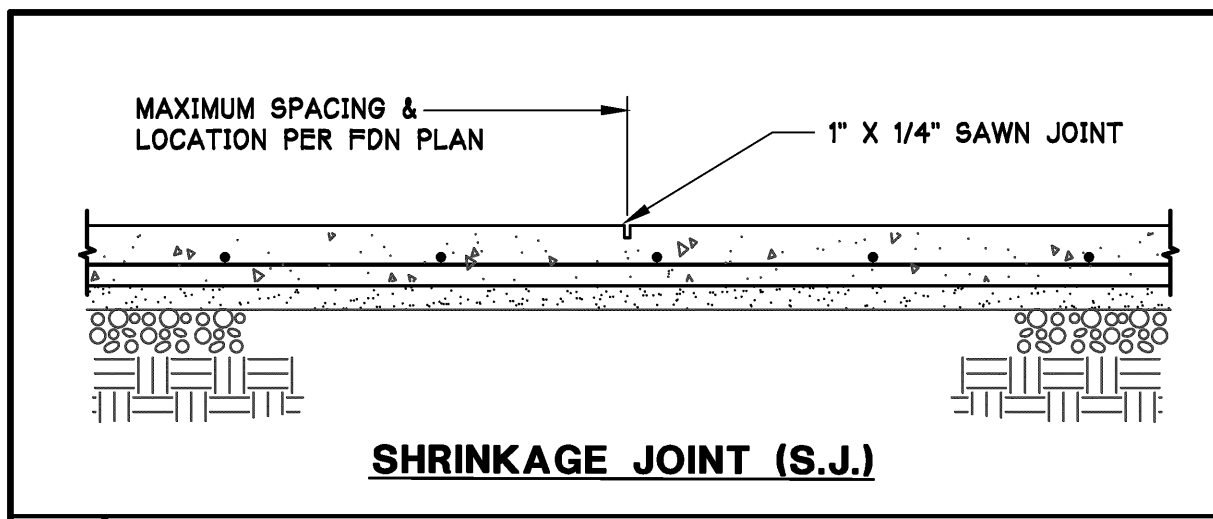
WOOD STUD SCHEDULE			
LEVEL #*	EXTERIOR WALLS	INTERIOR 2 X 6 WALLS	INTERIOR 2 X 4 WALLS <sup>b</sup>
BASEMENT - MAIN FLOOR	2 X 6 DF#2 @ 16" O.C.	2 X 6 DF#2 @ 16" O.C.	3 X 4 DF#2 @ 16" O.C.
MAIN FLOOR - UPPER FLOOR	2 X 6 DF#2 @ 16" O.C.	2 X 6 DF#2 @ 16" O.C.	2 X 4 DF#2 @ 16" O.C.
UPPER FLOOR - ROOF	2 X 6 DF#2 @ 24" O.C.	2 X 6 DF STUD GRADE OR BETTER	2 X 4 DF#2 @ 24" O.C.

TYPICAL NOTES:  
1. ALL STUDS SHALL ALIGN UNDER FRAMING.  
2. SEE SHEARWALL SCHEDULE FOR ADDITIONAL REQUIREMENTS FOR 3 X 4 FRAMING IN HIGH STRESS SHEARWALLS.  
3. PROVIDE (2) 2 X 4 STUDS AT STAIR OPENINGS WHERE LENGTH OF STUD EXCEEDS 10 FEET.

WOOD STUD SCHEDULE			
LEVEL #*	EXTERIOR WALLS	INTERIOR 2 X 6 WALLS	INTERIOR 2 X 4 WALLS <sup>b</sup>
BASEMENT - MAIN FLOOR	2 X 6 DF#2 @ 16" O.C.	2 X 6 DF#2 @ 16" O.C.	3 X 4 DF#2 @ 16" O.C.
MAIN FLOOR - UPPER FLOOR	2 X 6 DF#2 @ 16" O.C.	2 X 6 DF#2 @ 16" O.C.	2 X 4 DF#2 @ 16" O.C.
UPPER FLOOR - ROOF	2 X 6 DF#2 @ 24" O.C.	2 X 6 DF STUD GRADE OR BETTER	2 X 4 DF#2 @ 24" O.C.

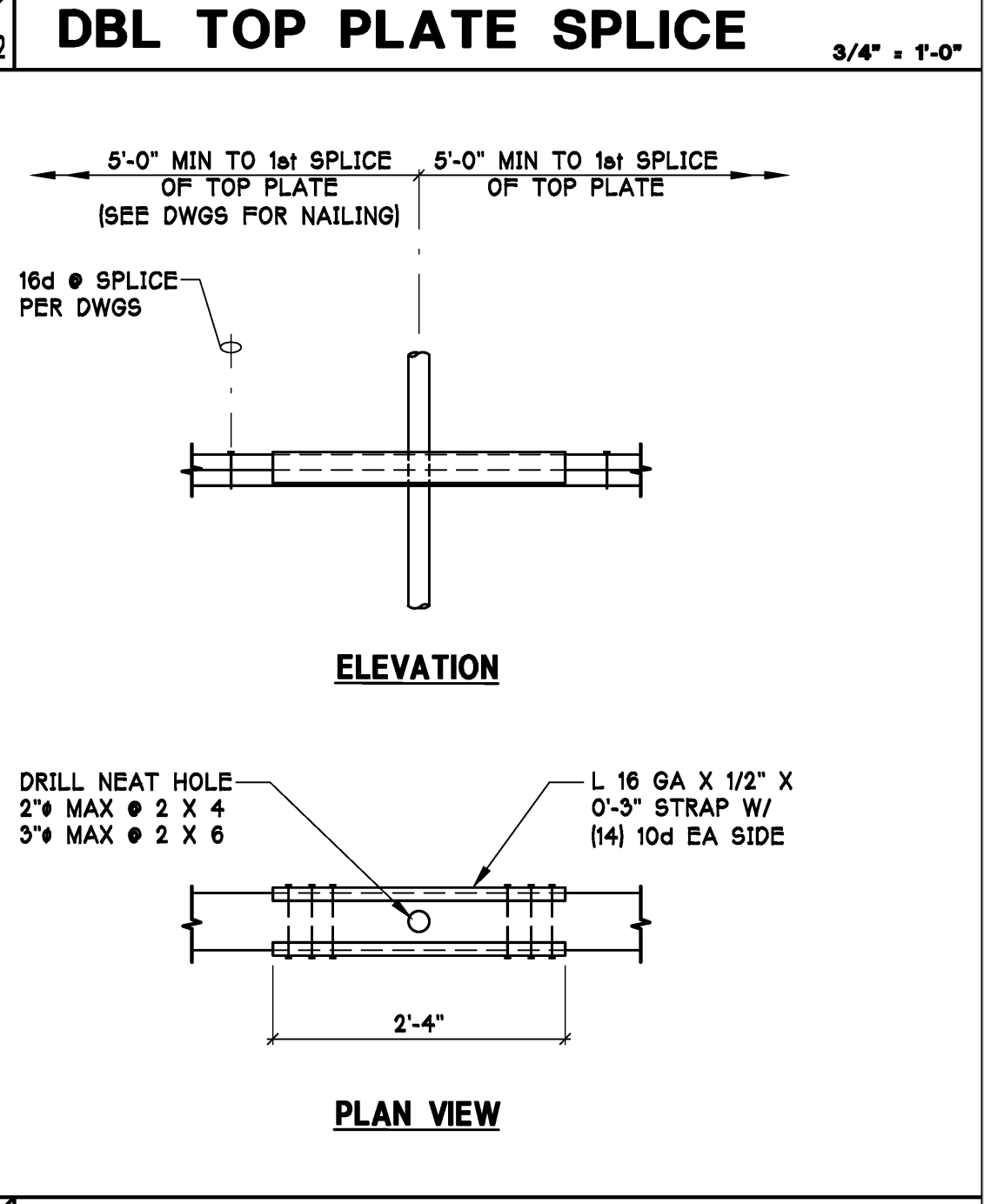
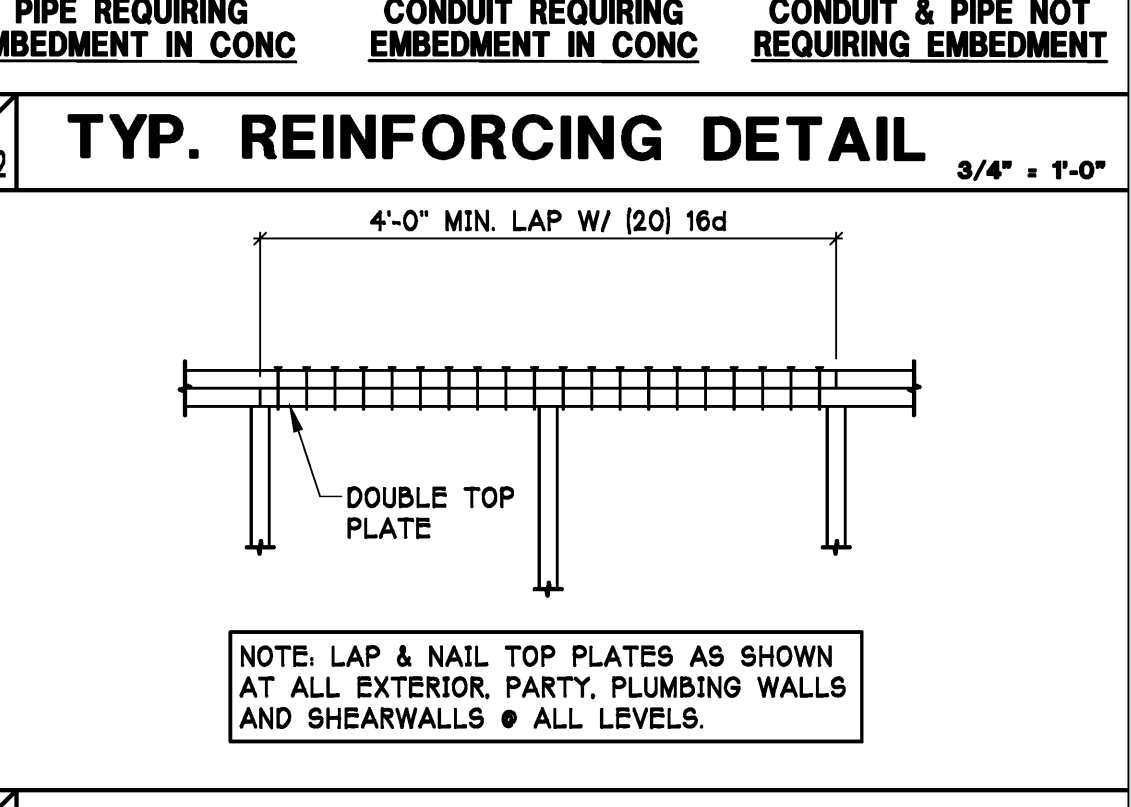
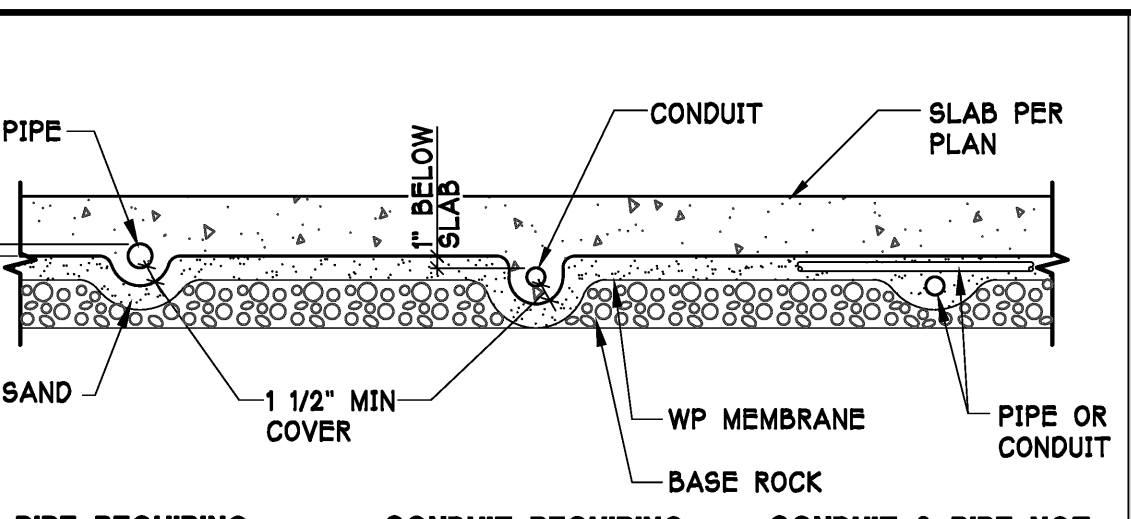
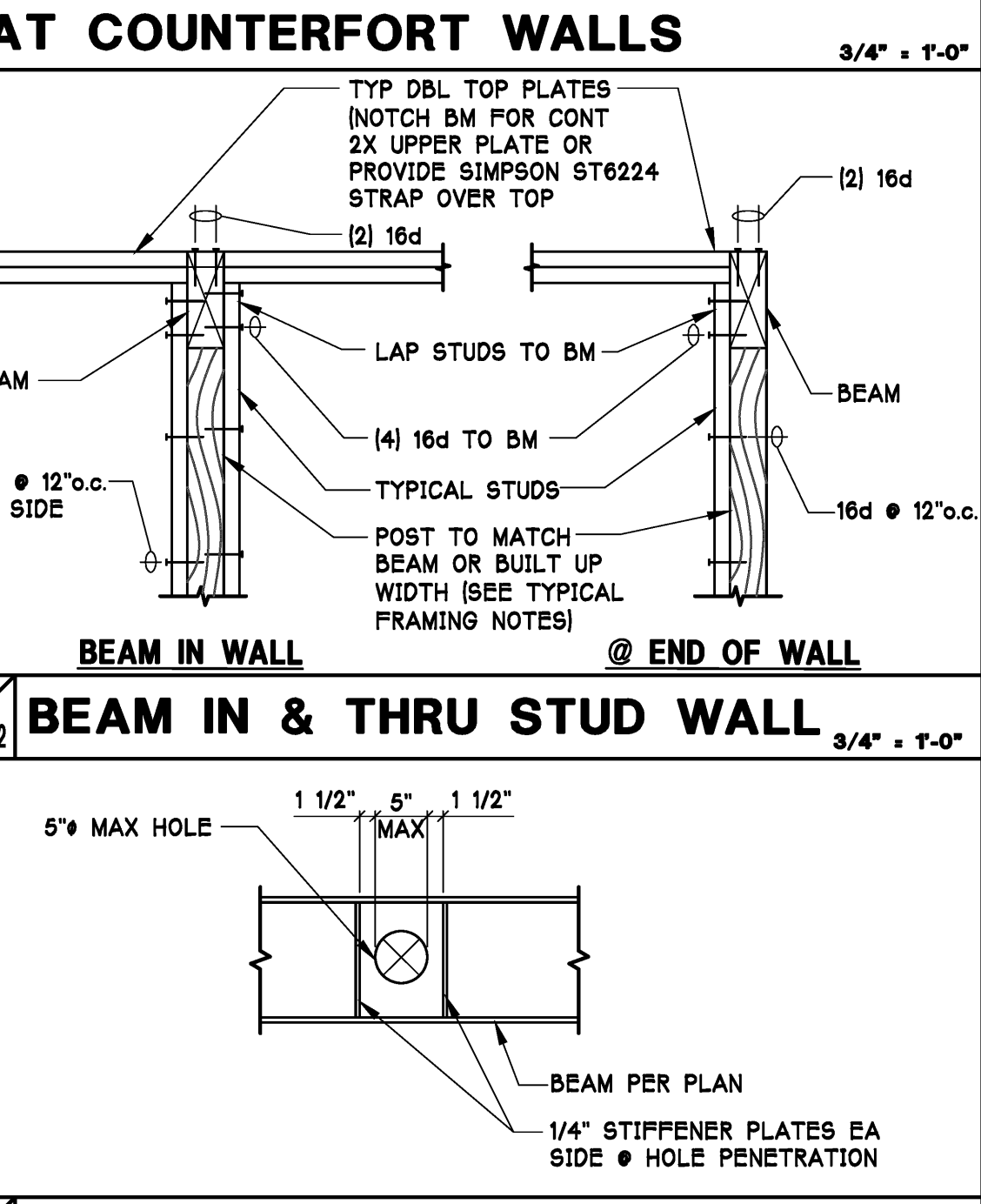
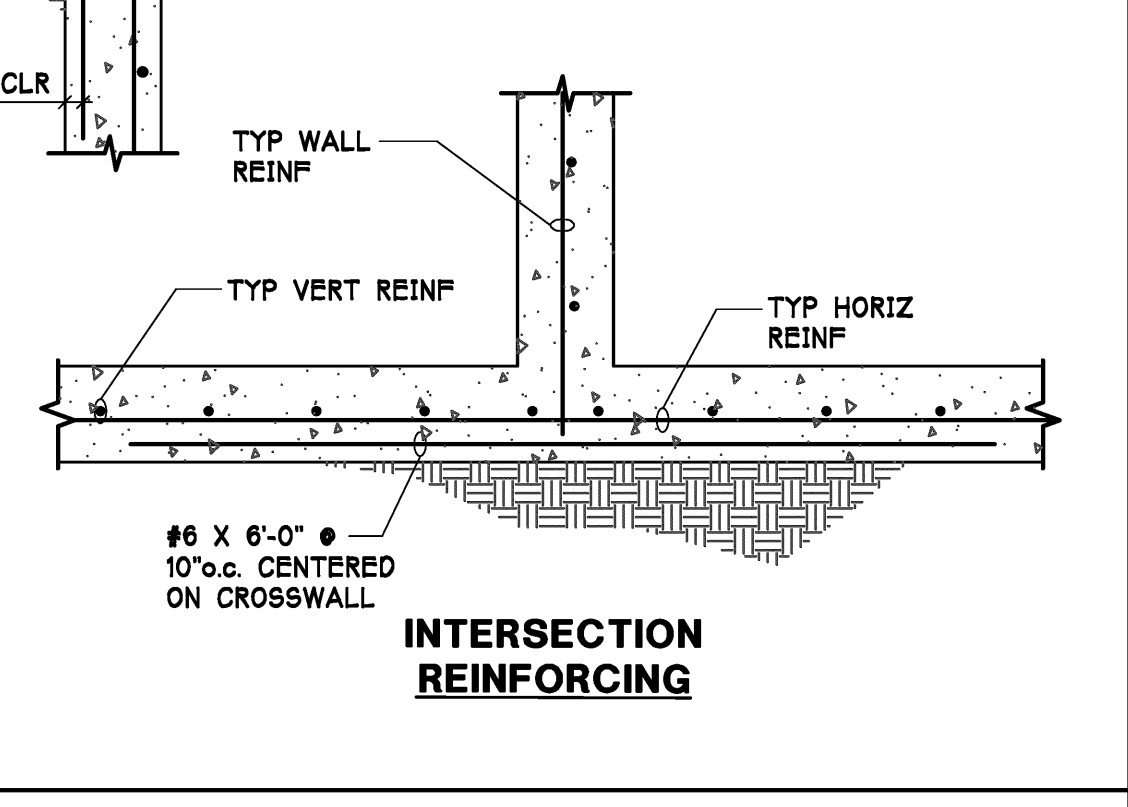
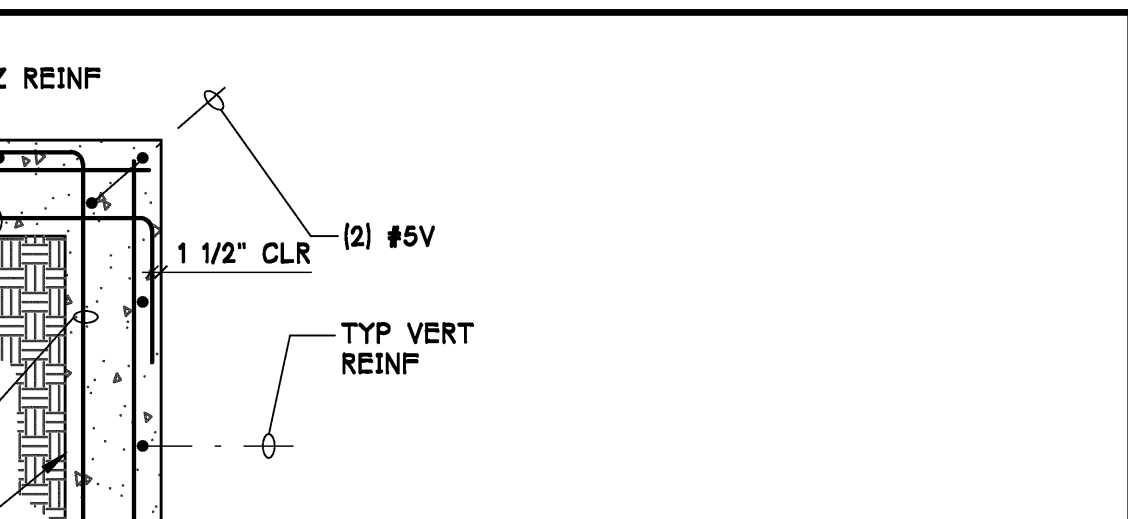
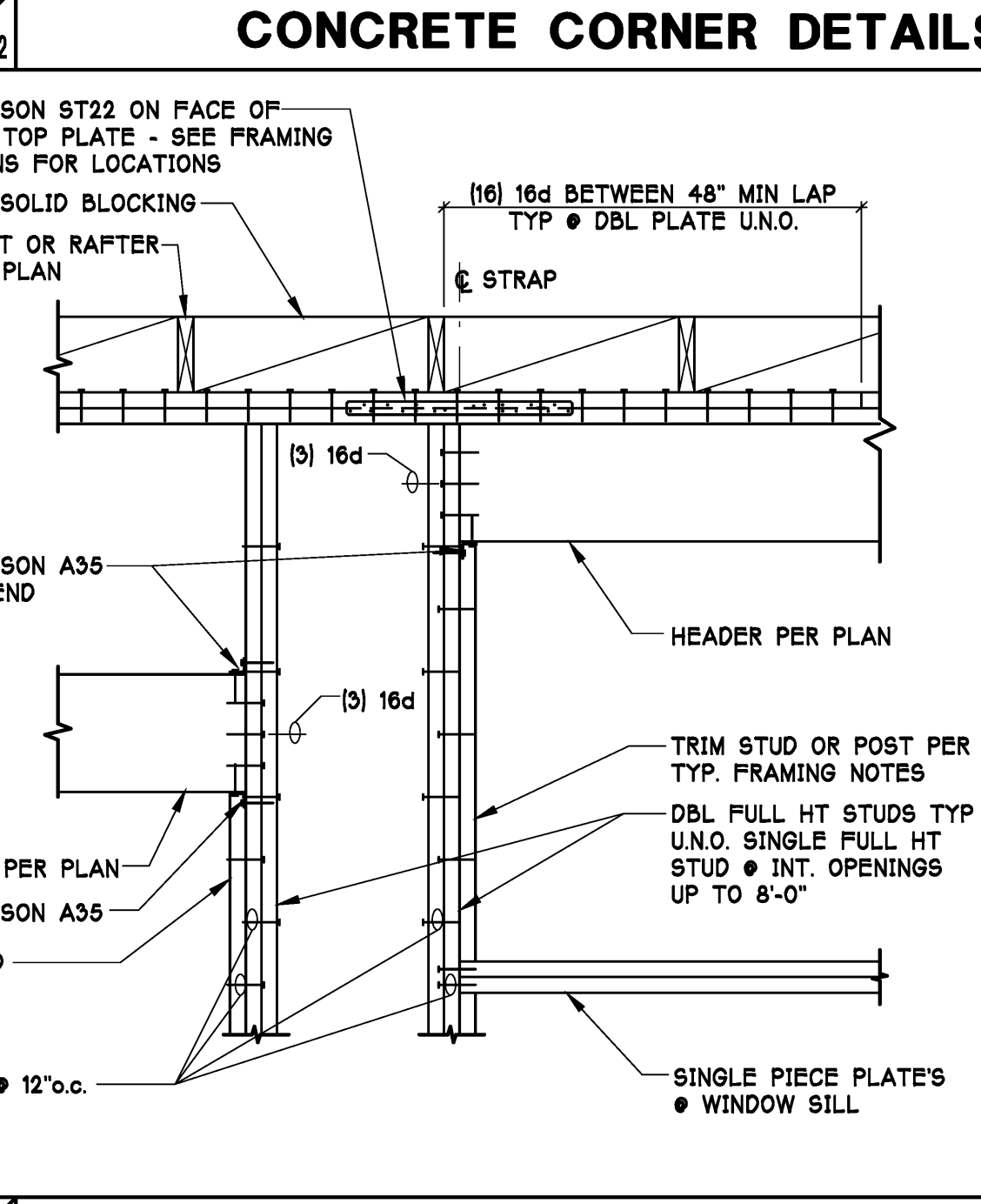
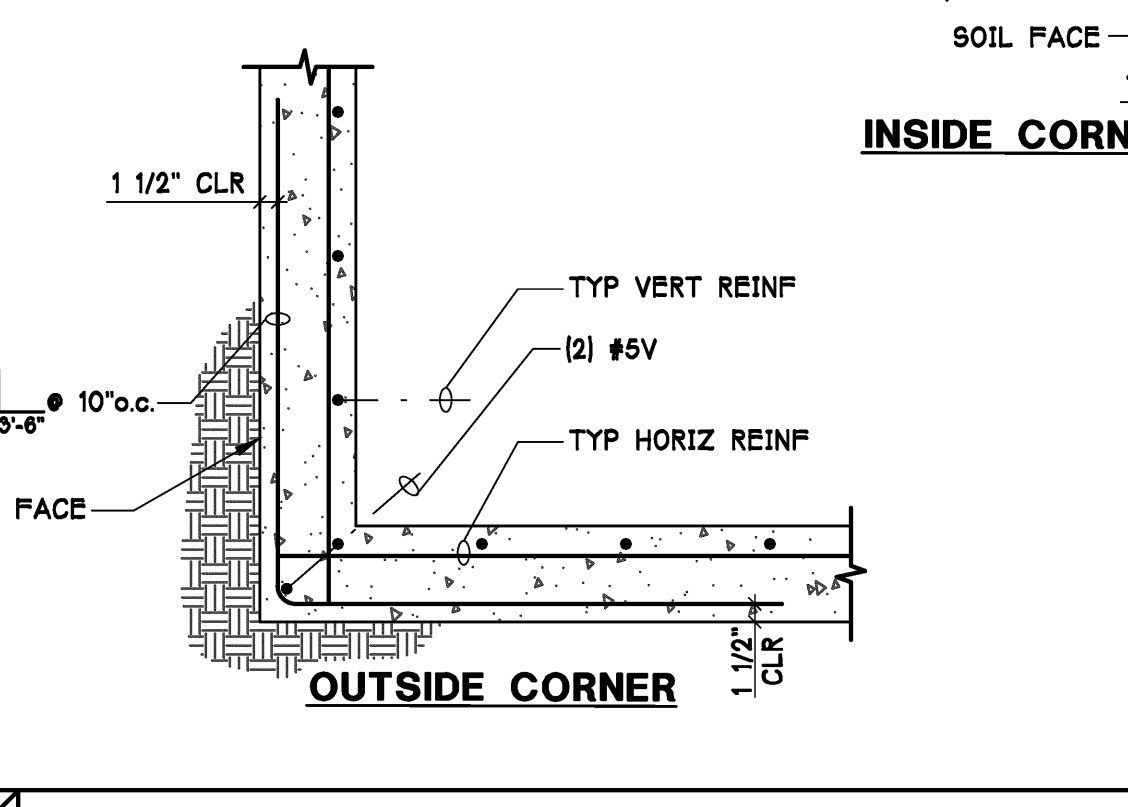
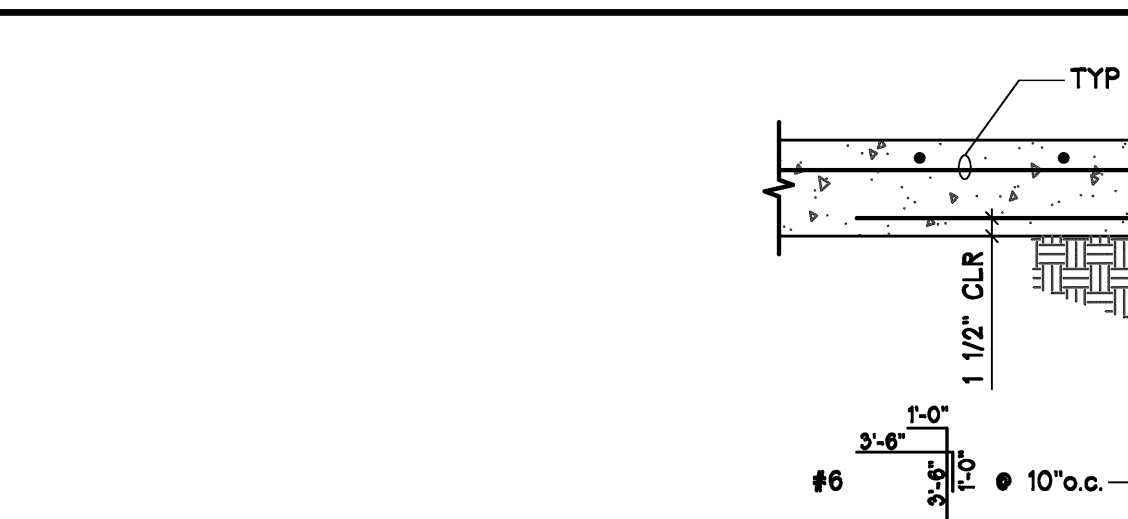
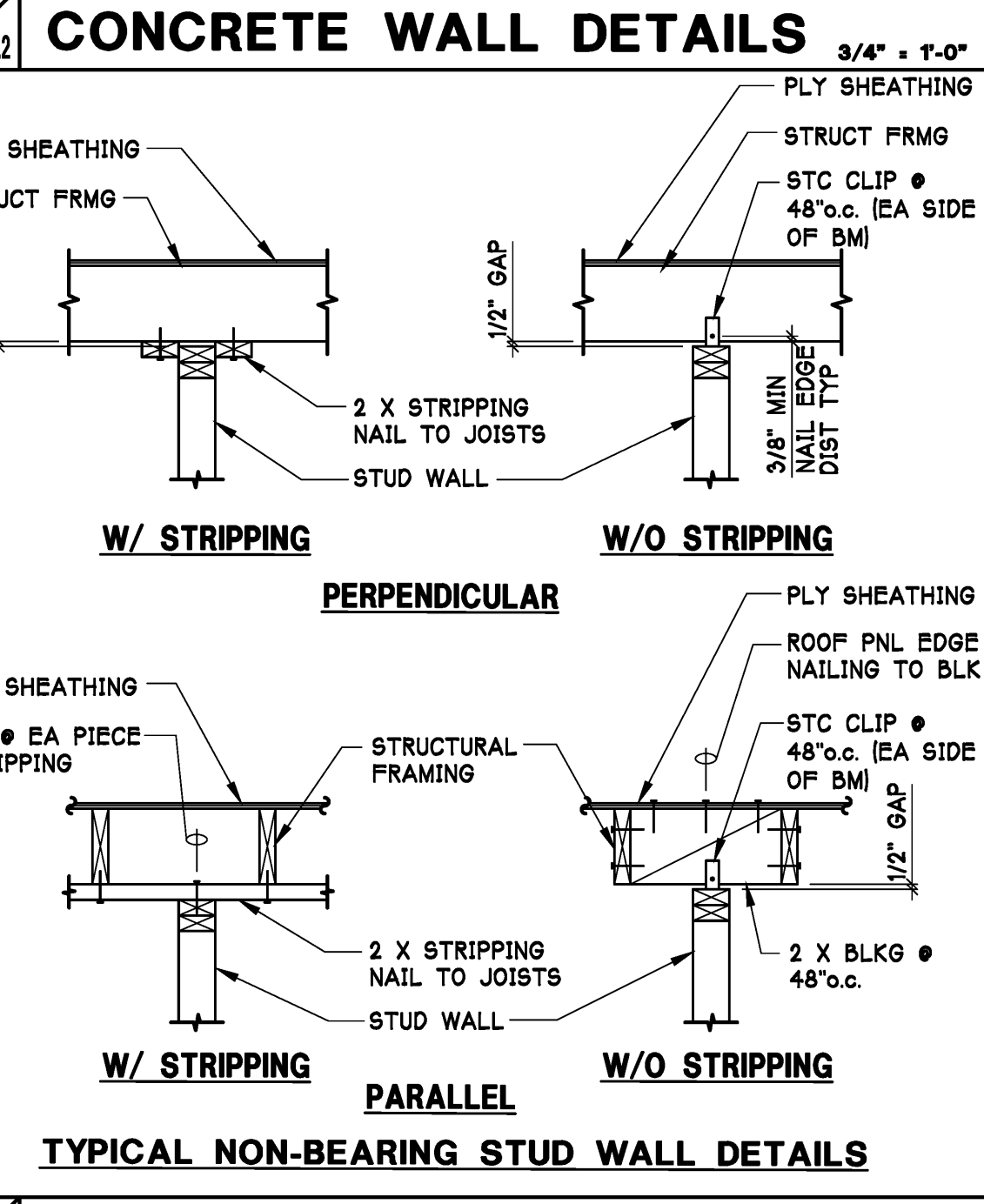
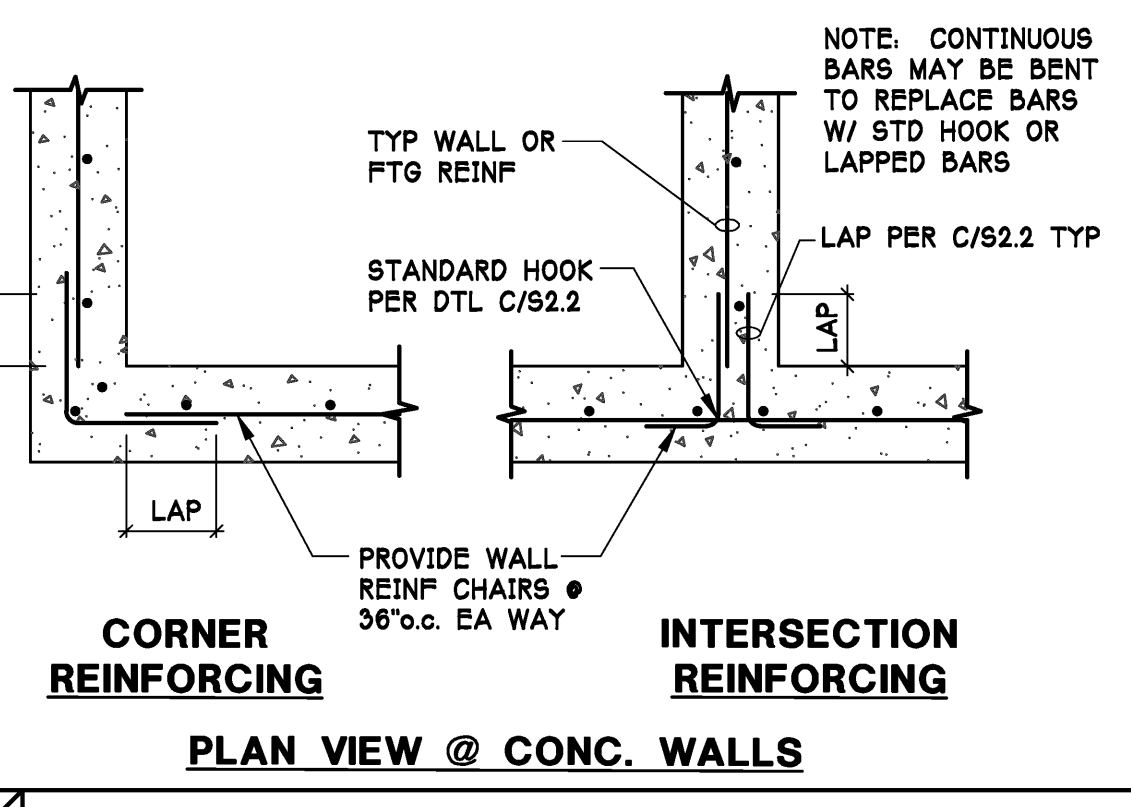
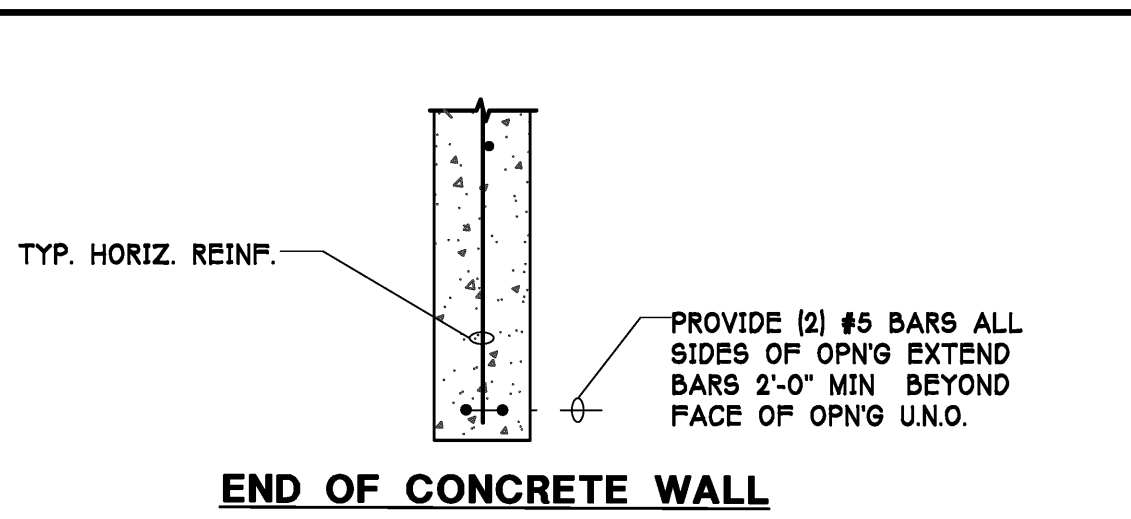
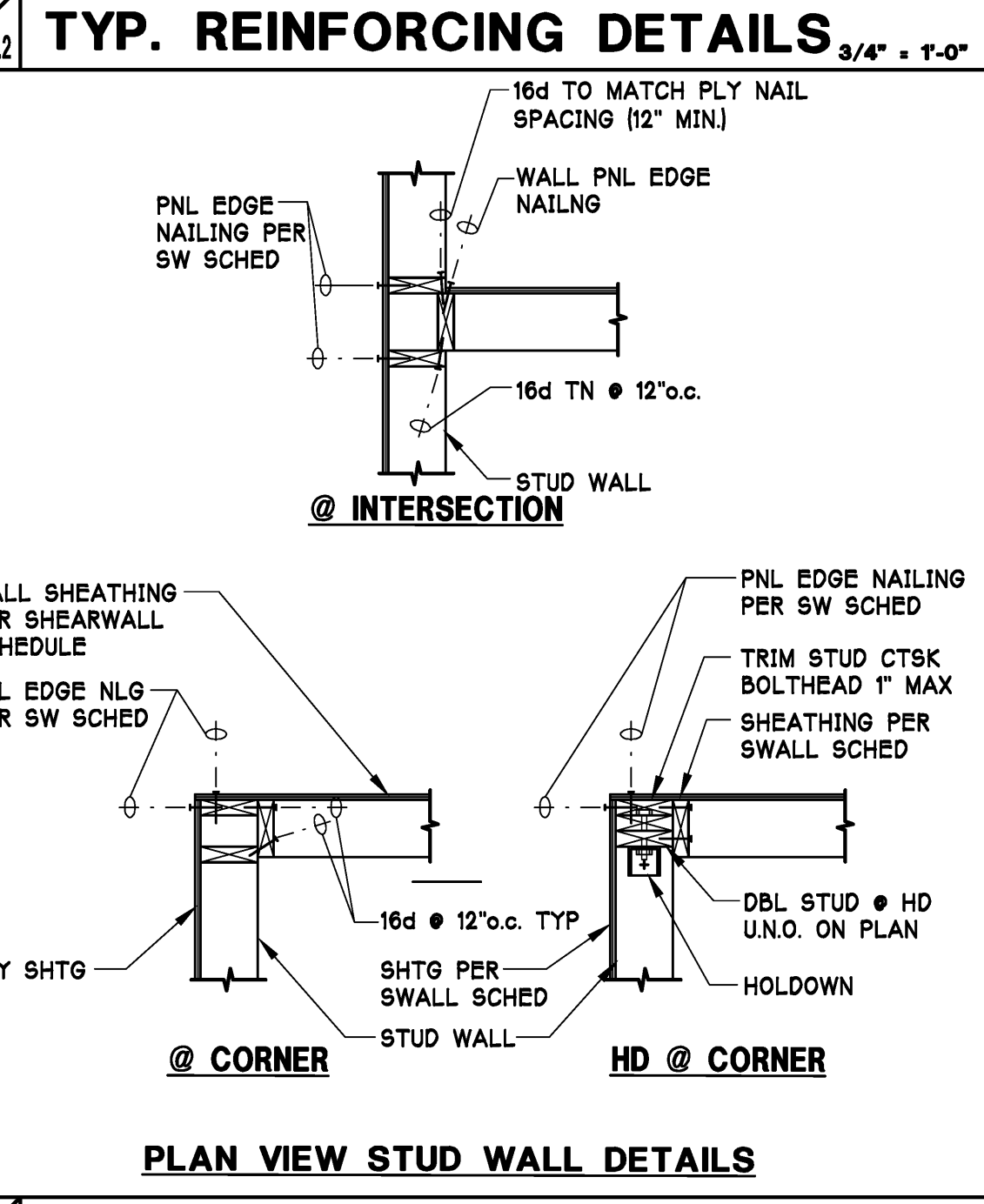
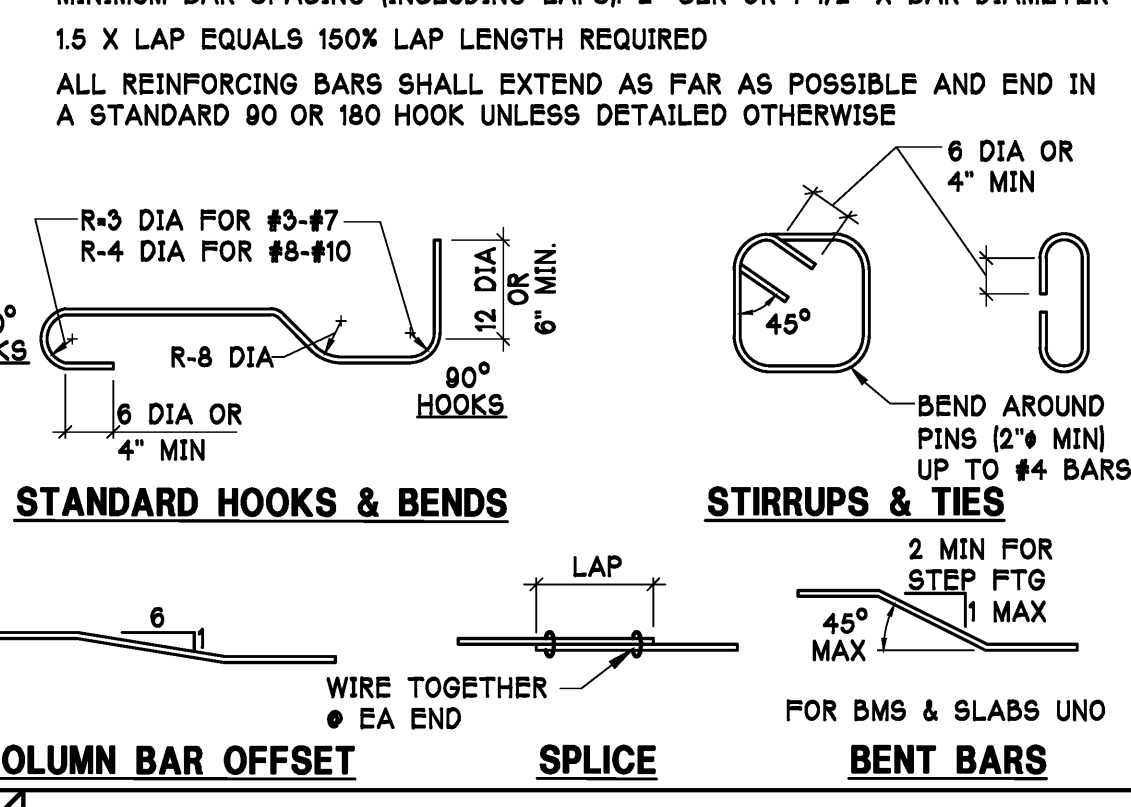
TYPICAL NOTES:  
1. ALL STUDS SHALL ALIGN UNDER FRAMING.  
2. SEE SHEARWALL SCHEDULE FOR ADDITIONAL REQUIREMENTS FOR 3 X 4 FRAMING IN HIGH STRESS SHEARWALLS.  
3. PROVIDE (2) 2 X 4 STUDS AT STAIR OPENINGS WHERE LENGTH OF STUD EXCEEDS 10 FEET.

POST SCHEDULE	
PROJECT	18156
DATE	03/29/21
DRAWN	NH
CHKD.	TB
SHEET :	
<b>S2.1</b>	
OF	



MINIMUM BAR LAPS FOR REINFORCING STEEL CONCRETE STRENGTH: SEE BELOW (CLASS B SPLICE - STAGGER SPLICES)

SIZE	LAP LENGTH		SIZE	LAP LENGTH	
	3000 PSI OR LESS	4000 PSI		3000 PSI OR LESS	4000 PSI
#3	24"	24"	#7	63"	54"
#4	29"	25"	#8	72"	62"
#5	36"	31"	#9	81"	69"
#6	45"	38"	#10	90"	77"



**H OLES IN STUDS, JOISTS & BEAMS**  
3/4" x 1'-0"

JOIST DEPTH	JOIST SERIES	ROUND HOLE SIZE												
		2"	4"	6"	8"	10"	12"	14"	16"	18"	20"			
11 7/8"	TJ/L65	A	B	E	-	-	-	-	-	-	-	-	-	-
16"	TJ/L65	A	B	C	E	-	-	-	-	-	-	-	-	-

MINIMUM DISTANCE (d) FROM INSIDE FACE OF ANY SUPPORT TO NEAREST EDGE OF HOLE

JOIST DEPTH	JOIST SERIES	SQUARE OR RECTANGULAR HOLE SIZE												
		1 1/4"	2 1/4"	3 1/2"	4 3/4"	6"	7"	8 1/4"	9 1/2"	10 3/4"	12"			
11 7/8"	TJ/L65	A	B	E	-	-	-	-	-	-	-	-	-	-
16"	TJ/L65	A	B	C	E	-	-	-	-	-	-	-	-	-

MINIMUM DISTANCE (d) FROM INSIDE FACE OF ANY SUPPORT TO NEAREST EDGE OF HOLE  
\*NOTE: RECTANGULAR HOLES BASED ON MEASUREMENT OF LONGEST SIDE.

NOTES:  
1. IF MORE THAN ONE HOLE IS TO BE CUT IN THE WEB, THE LENGTH OF THE UNOIT WEB BETWEEN HOLES MUST BE TWICE THE LENGTH OF THE LONGEST DIMENSION OF THE LARGEST ADJACENT HOLE. HOLES MAY BE LOCATED VERTICALLY ANYWHERE WITHIN THE WEB.  
2. TJ JOISTS ARE MANUFACTURED WITH 1 1/2" PERFORATED "KNOCKOUTS" IN THE WEB @ APPROXIMATELY 12" o.c. ALONG THE LENGTH OF THE JOIST.

NOTE: THIS INFORMATION IS TAKEN DIRECTLY FROM THE TRUS JOIST MACMILLAN CATALOG. ANY DISCREPANCIES BETWEEN THE DETAILS AND NOTES HEREIN AND INFORMATION OBTAINED BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO INSTALLATION.

**STUD WALL DETAILS**  
3/4" x 1'-0"

**STUD WALL DETAILS**  
3/4" x 1'-0"

W/ STRIPPING PERPENDICULAR  
W/O STRIPPING  
W/ STRIPPING PARALLEL  
W/O STRIPPING

**STUD WALL & HDR DETAIL**  
3/4" x 1'-0"

**TYP PENETRATION IN WF BEAM**  
3/4" x 1'-0"

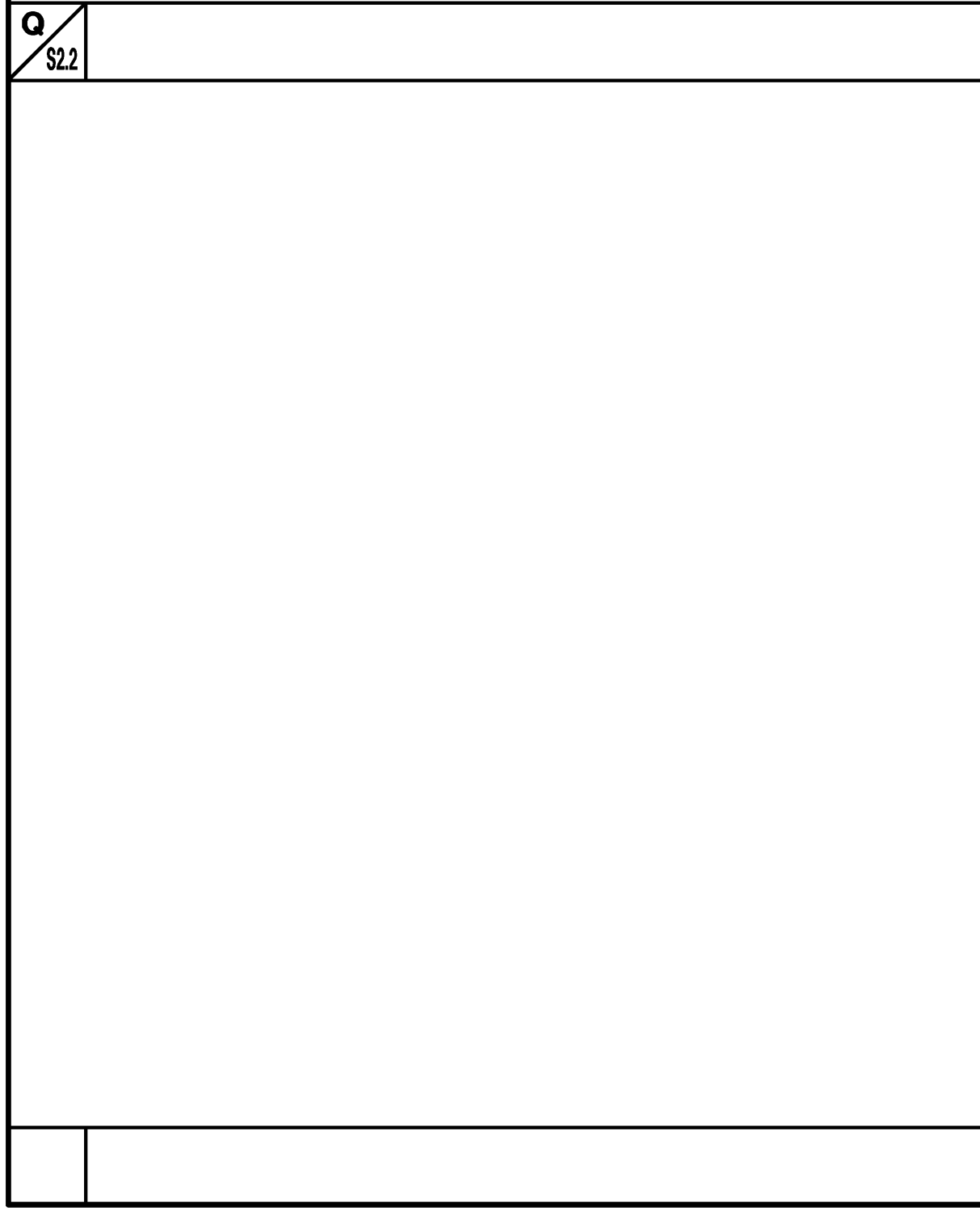
**PIPE THRU DBL TOP PLATE**  
3/4" x 1'-0"

**H OLES IN "TJ" JOISTS**  
3/4" x 1'-0"

JOIST SPAN CENTER TO CENTER OF SUPPORT	HOLE FACTOR				
	A	B	C	D	E
14'	1'-3"	2'-0"	2'-6"	3'-9"	5'-0"
16'	1'-3"	2'-3"	3'-3"	4'-6"	5'-9"
18'	1'-6"	3'-0"	4'-3"	5'-6"	6'-9"
20'	1'-9"	3'-0"	4'-3"	5'-6"	7'-0"
22'	2'-0"	3'-0"	4'-3"	5'-9"	7'-3"
24'	2'-3"	3'-3"	4'-6"	5'-9"	7'-6"
26'	2'-3"	3'-9"	4'-9"	6'-0"	7'-9"
28'	2'-6"	4'-0"	5'-3"	6'-6"	8'-0"
30'	2'-9"	4'-3"	5'-9"	7'-0"	8'-6"
32'	3'-0"	4'-6"	6'-0"	7'-6"	9'-3"
34'	3'-0"	5'-0"	6'-6"	8'-0"	9'-9"
36'	3'-3"	5'-0"	6'-9"	8'-6"	10'-3"

DO NOT CUT, DRILL OR NOTCH THRU TOP & BOTTOM CHORD

DO NOT CUT HOLES IN CANTILEVER



REVISIONS

DATE	DESCRIPTION

B&T DESIGN & ENGINEERING  
250 E. SUNSET WAY  
SEASIDE, WA 98138  
(425) 550-0760 (FAX)

**MURRAY RESIDENCE**  
4603 FOREST AVE SE  
MERCER ISLAND, WA 98040

PROJECT TITLE

STANDARD DETAILS

SHEET TITLE

PROJECT 18156  
DATE 03/29/21  
DRAWN NH  
CHKD. TB  
SHEET :

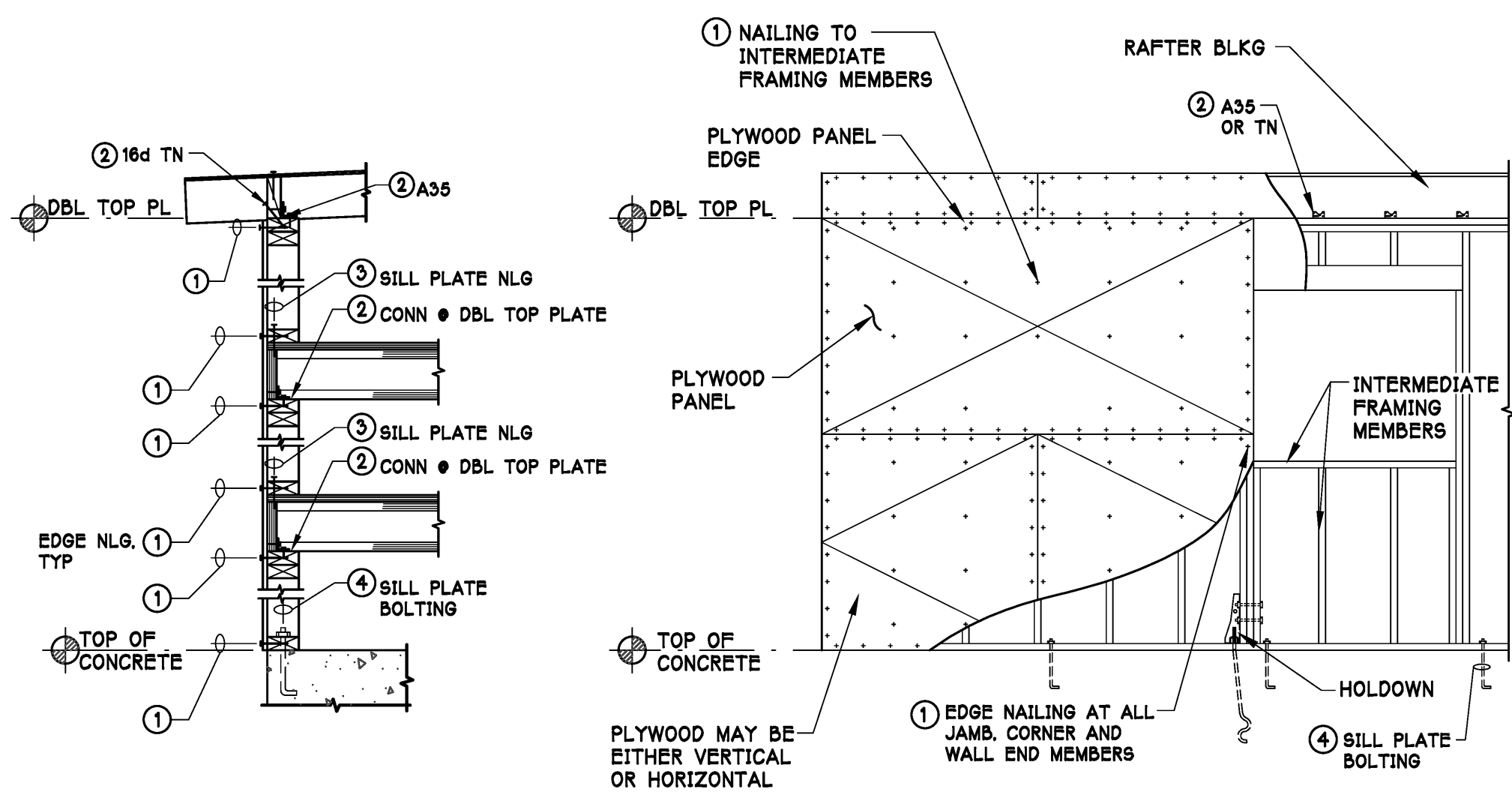
**S2.2**

OF

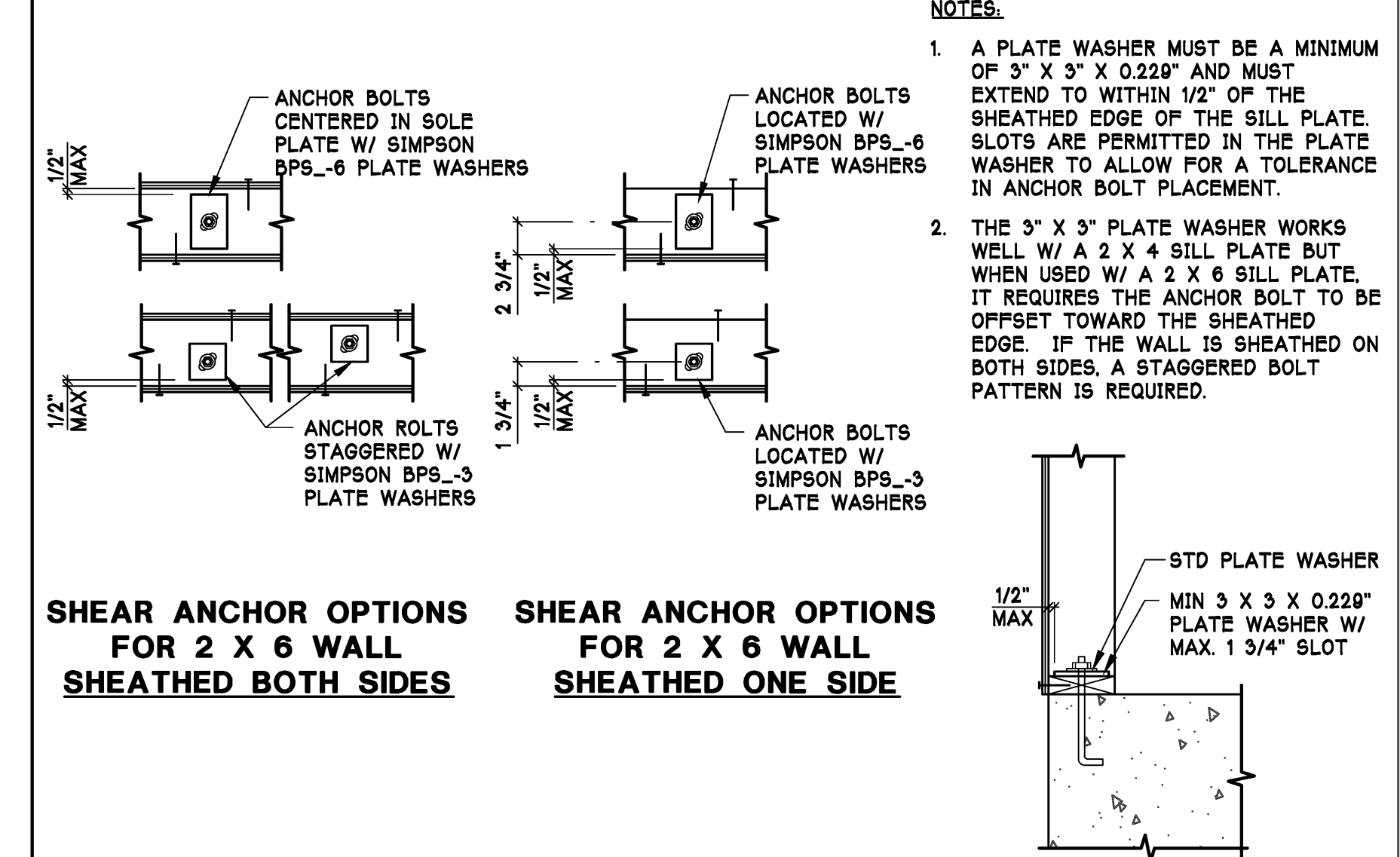
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WOOD STRUCTURAL PANEL SHEAR WALL SCHEDULE							
TYPE	CAPACITY EQ / WIND (PLF)	SHEATHING	BLKG REQ'D	CONNECTION AT SILL			
				① NAILING #10	② RIM JOIST/BLOCKING TO DBL TOP PL	③ WOOD	④ CONCRETE
P-1	240 / 335	1/2" PLYWOOD ONE SIDE	YES #5	8d @ 6" o.c. EDGE, 12" o.c. FIELD	SIMPSON A35 @ 16" o.c.	16d @ 6" o.c.	1/2" AB @ 2'-6" o.c. #2
P-2	350 / 490	1/2" PLYWOOD ONE SIDE	YES #5	8d @ 4" o.c. EDGE, 12" o.c. FIELD	SIMPSON A35 @ 12" o.c.	[2] ROWS 16d @ 6" o.c. STAGGER 3"	1/2" AB @ 1'-8" o.c. #2
P-3	480 / 670	1/2" PLYWOOD BOTH SIDES	YES #5	8d @ 6" o.c. EDGE, 12" o.c. FIELD	SIMPSON A35 @ 8" o.c.	[2] ROWS 16d @ 6" o.c. STAGGER 1 1/2"	1/2" AB @ 1'-9" o.c. #2
P-4	700 / 980	1/2" PLYWOOD BOTH SIDES	YES #5	8d @ 4" o.c. EDGE, 12" o.c. FIELD	SIMPSON L590 @ 8" o.c.	[2] ROWS 1/4" x 0'-4" LAG #4 SCREWS @ 8" o.c. STAGGER 4"	1/2" AB @ 0'-10" o.c. #2
P-5	980 / 1370	1/2" PLYWOOD BOTH SIDES	YES #5	8d @ 3" o.c. EDGE, 12" o.c. FIELD	SIMPSON L590 @ 8" o.c.	[2] ROWS 1/4" x 0'-4" LAG #4 SCREWS @ 6" o.c. STAGGER 3"	1/2" AB @ 0'-6" o.c. #2

- TYPICAL SHEAR WALL NOTES**
- WOOD STRUCTURAL PANEL SHEAR WALLS:
    - 8d NAILS SHALL BE COMMON (2 1/2" X 0.113" DIAMETER) WITH 1 3/8" MINIMUM PENETRATION INTO FRAMING. NO. 14 GAGE STAPLES WITH A MINIMUM 7/16" OD CROWN AND 1 1/2" LENGTH MAY BE USED ONE FOR ONE IN LIEU OF 8d NAILS. FASTENERS EXPOSED TO WEATHER SHALL BE ZINC COATED BY HOT DIP GALVANIZING, MECHANICALLY DEPOSITED, OR ELECTRO DEPOSITED.
    - WHERE PLYWOOD IS APPLIED BOTH SIDES OF SHEAR WALL, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, OR FRAMING MEMBERS SHALL BE 3" WIDE (NOMINAL) AND NAILS ON EACH SIDE SHALL BE STAGGERED.
    - FRAMING AT ADJOINING PANEL EDGES AND BOTTOM PLATES OF SHEAR WALLS SHALL BE 3-INCH NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED WHERE THE REQUIRED SHEAR CAPACITY EXCEEDS 700 plf.
    - ALLOWABLE SHEAR VALUES IN TABLE ABOVE ARE FOR HEM-FIR FRAMING MEMBERS (GROUP III) NO SUBSTITUTION OF LESSER GROUPS WILL BE ALLOWED.
  - PLATE WASHERS A MINIMUM OF 3 INCH X 3 INCH X 0.229 INCH THICK SHALL BE USED ON EACH ANCHOR BOLT. SEE DETAIL A/S2.3.
  - ALL BLOCKING SHALL BE 2X HEM-FIR STUD GRADE OR BETTER. (USE 3 X HF BLOCKING WHERE REQUIRED BY NOTE #1b. & 1c.)
  - PROVIDE DOUBLE BLOCKING OR RIM JOIST UNDER WOOD SILL WHERE (2) ROWS OF FASTENERS ARE REQUIRED. PROVIDE TRIPLE BLOCKING OR RIM JOIST UNDER WOOD SILL WHERE (3) ROWS OF FASTENERS ARE REQUIRED. (CLOSEST ALLOWABLE SPACING FOR 16d NAILS IN 1 1/4" TIMBERSTRAND LSL RIM IS 6" o.c.)
  - "①" INDICATES CONNECTION TYPE AS DESCRIBED IN SCHEDULE ABOVE - LOCATE PER DIAGRAM AT RIGHT.



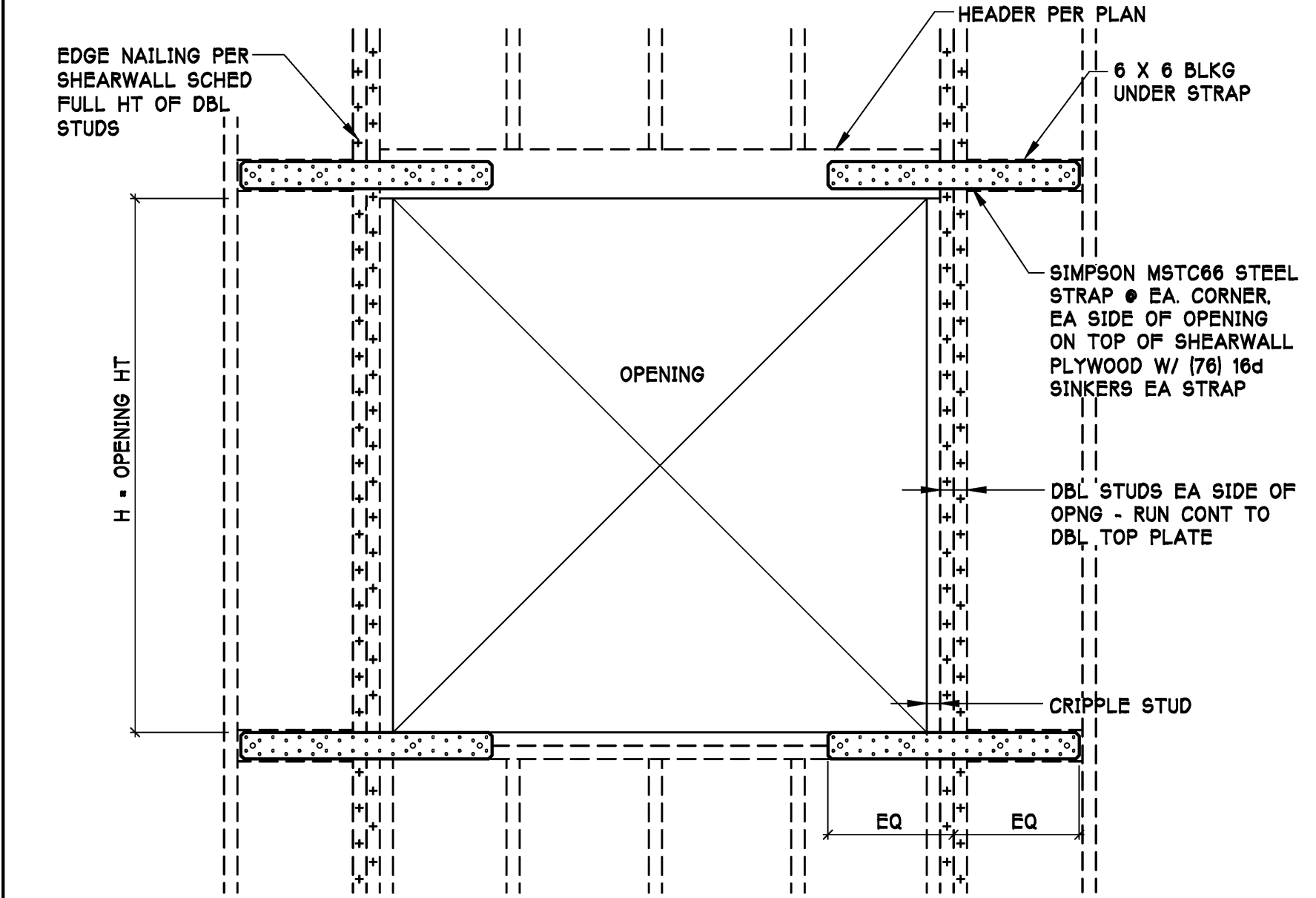
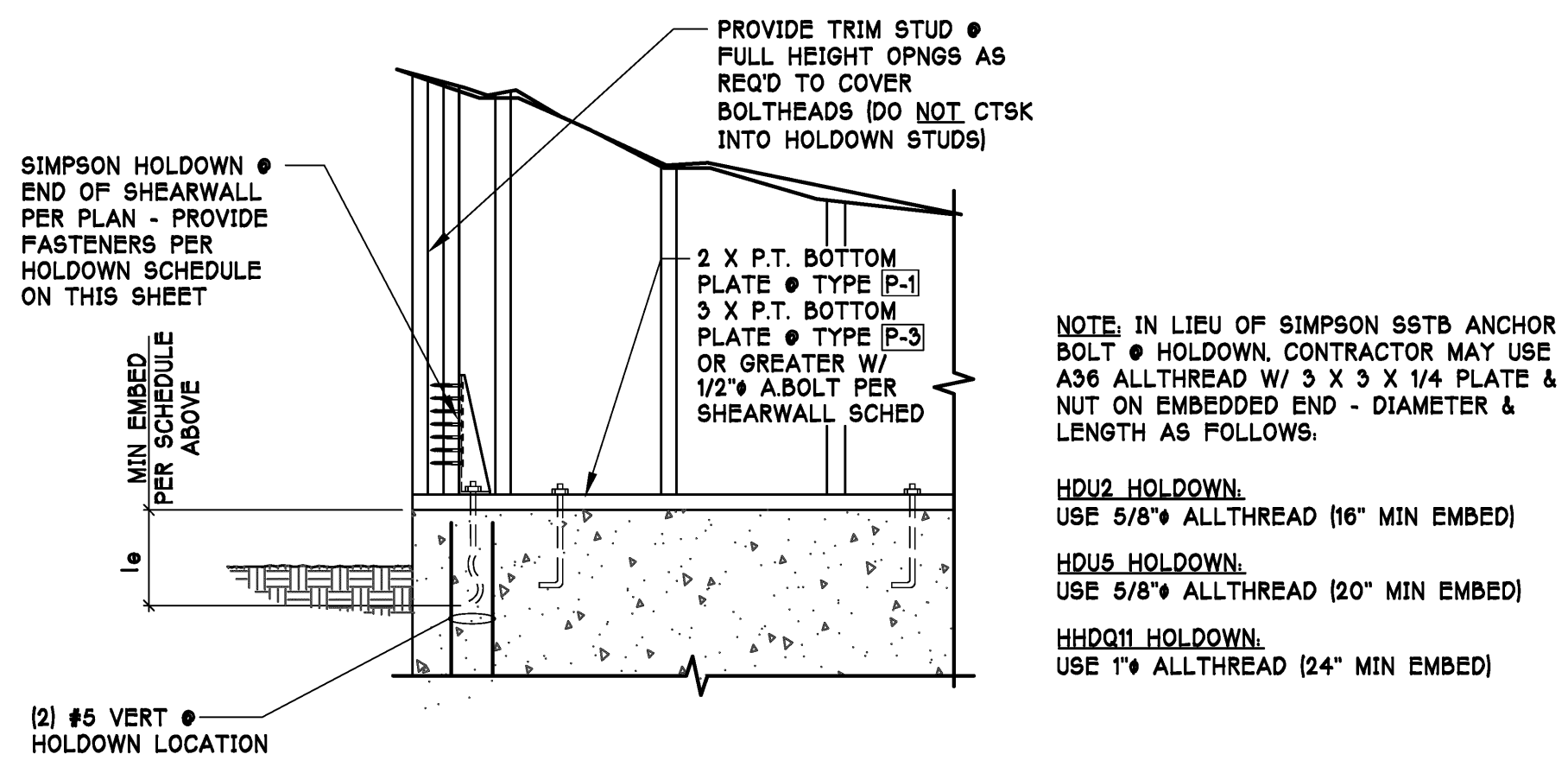
- SHEAR WALL SYSTEMS:**
- PANELS SHALL NOT BE LESS THAN 4' X 8', EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING. ALL EDGES OF ALL PANELS SHALL BE SUPPORTED BY AND FASTENED TO FRAMING MEMBERS OR BLOCKING.
  - NAILS SHALL BE LOCATED AT LEAST 3/8" FROM THE PANEL EDGES. MAXIMUM NAIL SPACING AT PANEL EDGES SHALL BE 6" ON CENTER.
  - NAILS ALONG INTERMEDIATE FRAMING MEMBERS SHALL BE THE SAME SIZE AS NAILS SPECIFIED FOR PANEL EDGE NAILING. AT INTERMEDIATE FRAMING MEMBERS, THE MAXIMUM NAIL SPACING SHALL BE 6" ON CENTER.
  - THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS AND BLOCKING SHALL BE 2" NOMINAL OR GREATER AT ADJOINING PANEL EDGES EXCEPT THAT A 3" NOMINAL OR GREATER WIDTH AT ADJOINING PANEL EDGES AND STAGGERED NAILING AT ALL PANEL EDGES ARE REQUIRED WHERE:
    - NAIL SPACING OF 2" ON CENTER OR LESS AT ADJOINING PANEL EDGES IS SPECIFIED, OR
    - 10d COMMON NAILS HAVING PENETRATION INTO FRAMING MEMBERS AND BLOCKING OF MORE THAN 1-1/2" ARE SPECIFIED AT 3" ON CENTER, OR LESS AT ADJOINING PANEL EDGES, OR
    - REQUIRED NOMINAL UNIT SHEAR CAPACITY ON EITHER SIDE OF THE SHEAR WALL EXCEEDS 700 plf IN SEISMIC DESIGN CATEGORY D, E, OR F.
  - MAXIMUM STUD SPACING SHALL BE 24" ON CENTER.
  - WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS FOR ITS TYPE IN DOC PS 1 OR PS 2.



**SHEARWALL SCHEDULE**

**SILL PLATE ANCHORAGE**

HOLDOWN SCHEDULE		
MARK	SIMPSON DESIGNATION	CONNECTION REQUIREMENTS
		FASTENERS
①	HDU2-SD92.5	(6) SDS 1/4 X 2 1/2 WOOD SCREWS INTO DOUBLE STUD S9TB20 ANCHOR BOLT INTO CONC.
②	HDU5-SD92.5	(14) SDS 1/4 X 2 1/2 WOOD SCREWS INTO DOUBLE STUD S9TB24 ANCHOR BOLT INTO CONC.
③	HHDQ1-SD92.5	(24) SDS 1/4 X 2 1/2 WOOD SCREWS INTO 6 X 6 POST 1" ALLTHREAD INTO CONC.



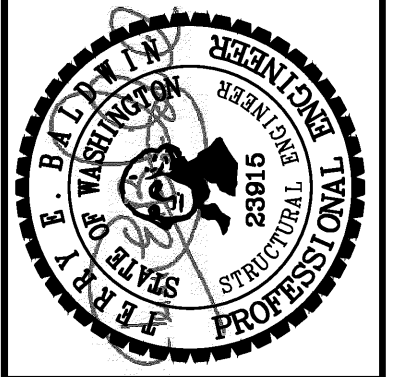
**HOLDOWN SCHEDULE & DETAILS**

**PORTAL SHEARWALL**

REVISIONS

DATE	DESCRIPTION

B&T DESIGN & ENGINEERING, INC.  
250 E. SUNSET WAY  
MERCER ISLAND, WA 98040  
(206) 550-0760 FAX  
(206) 550-0760



MURRAY RESIDENCE  
4603 FOREST AVE SE  
MERCER ISLAND, WA 98040

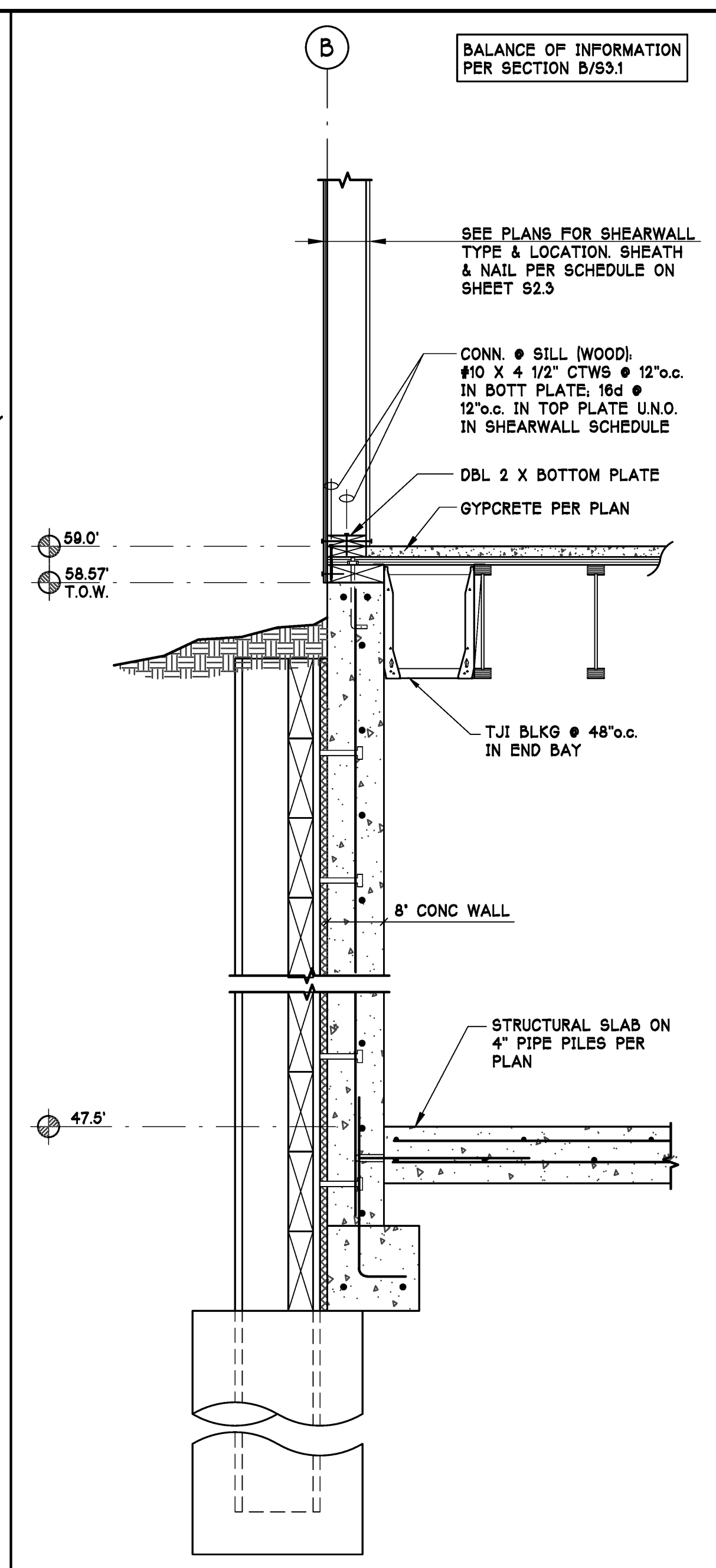
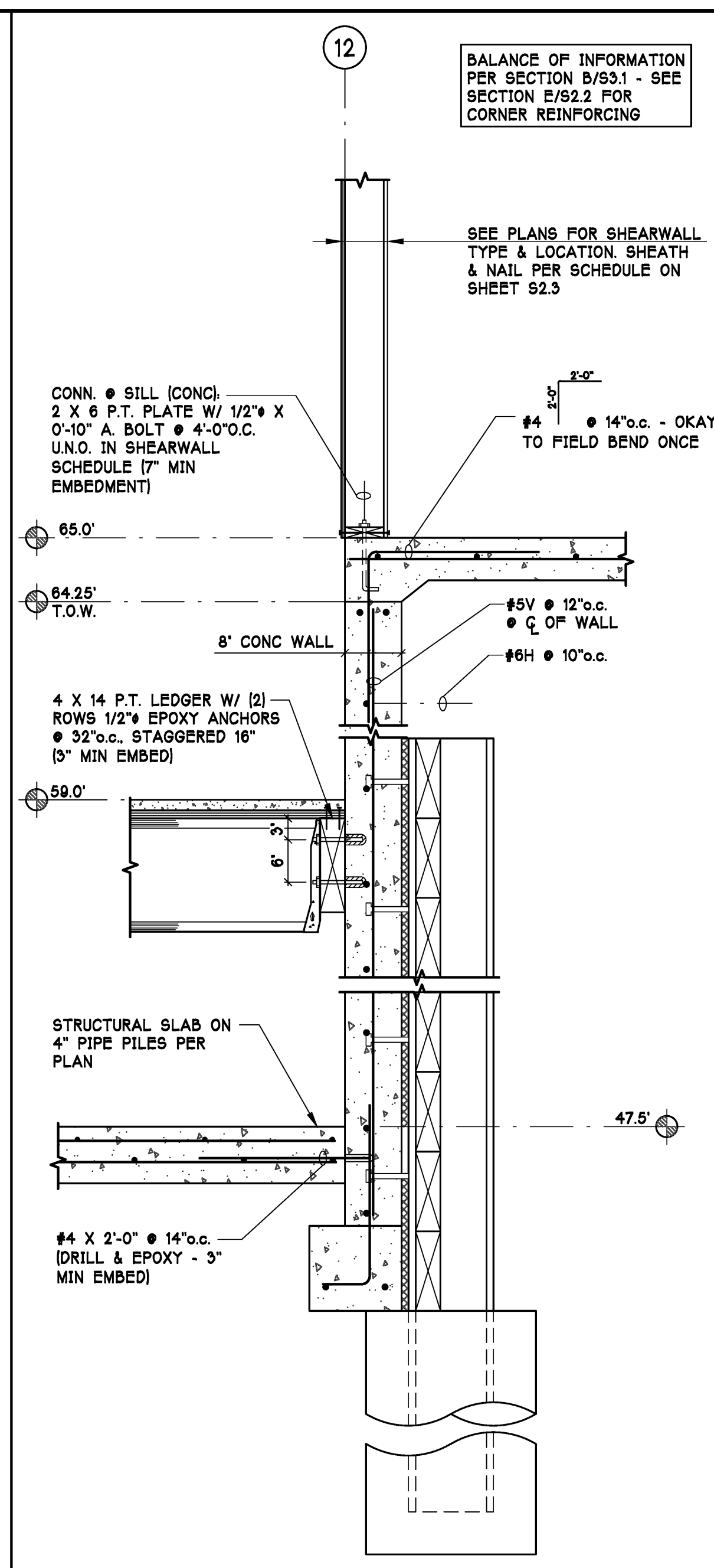
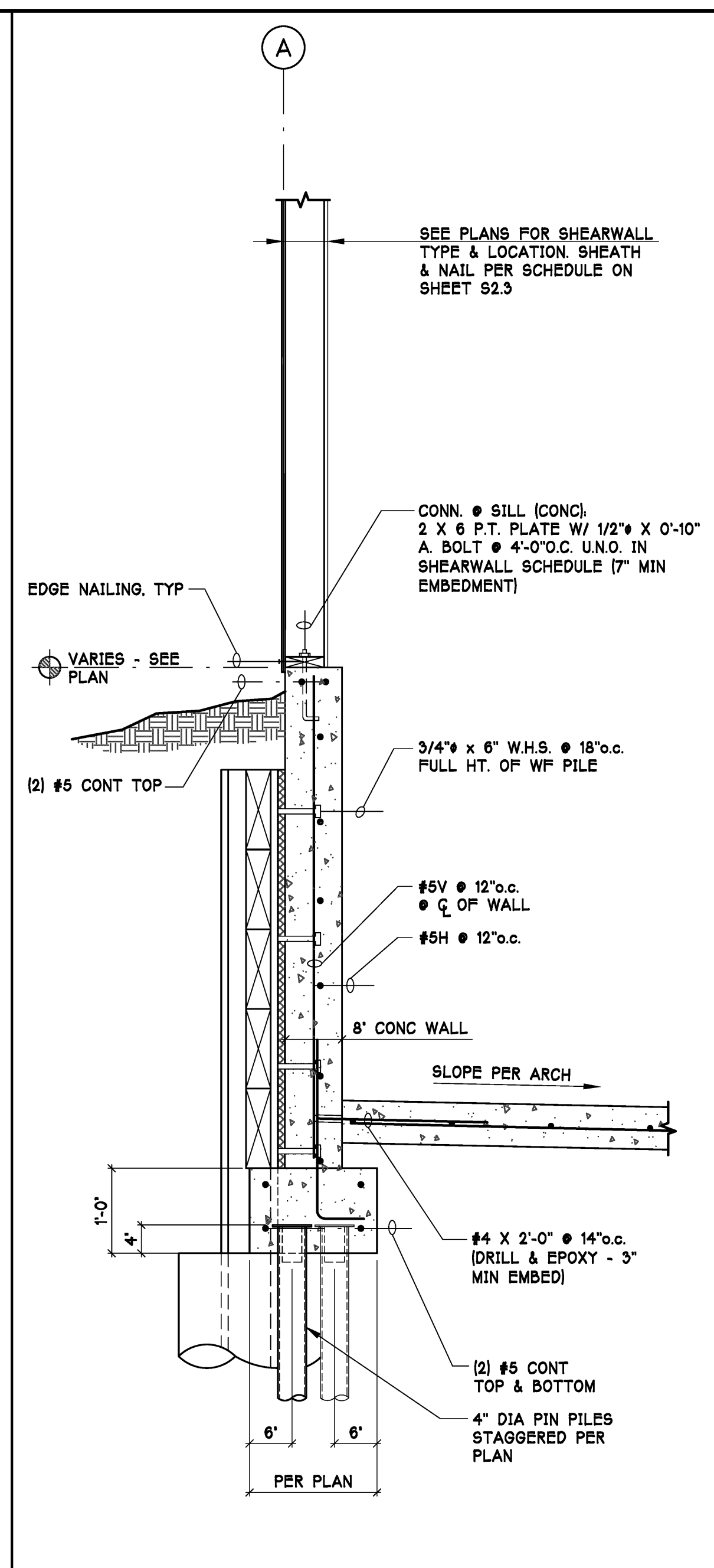
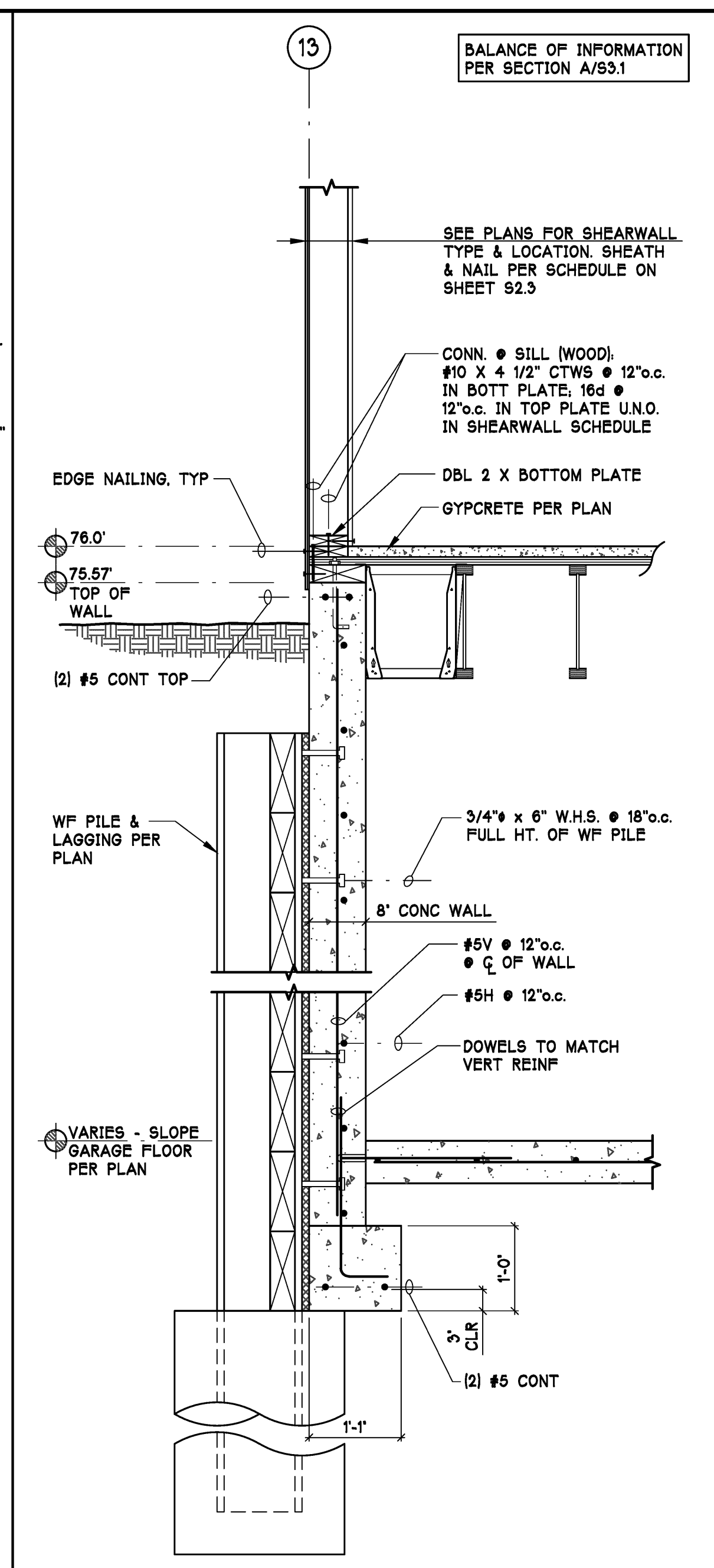
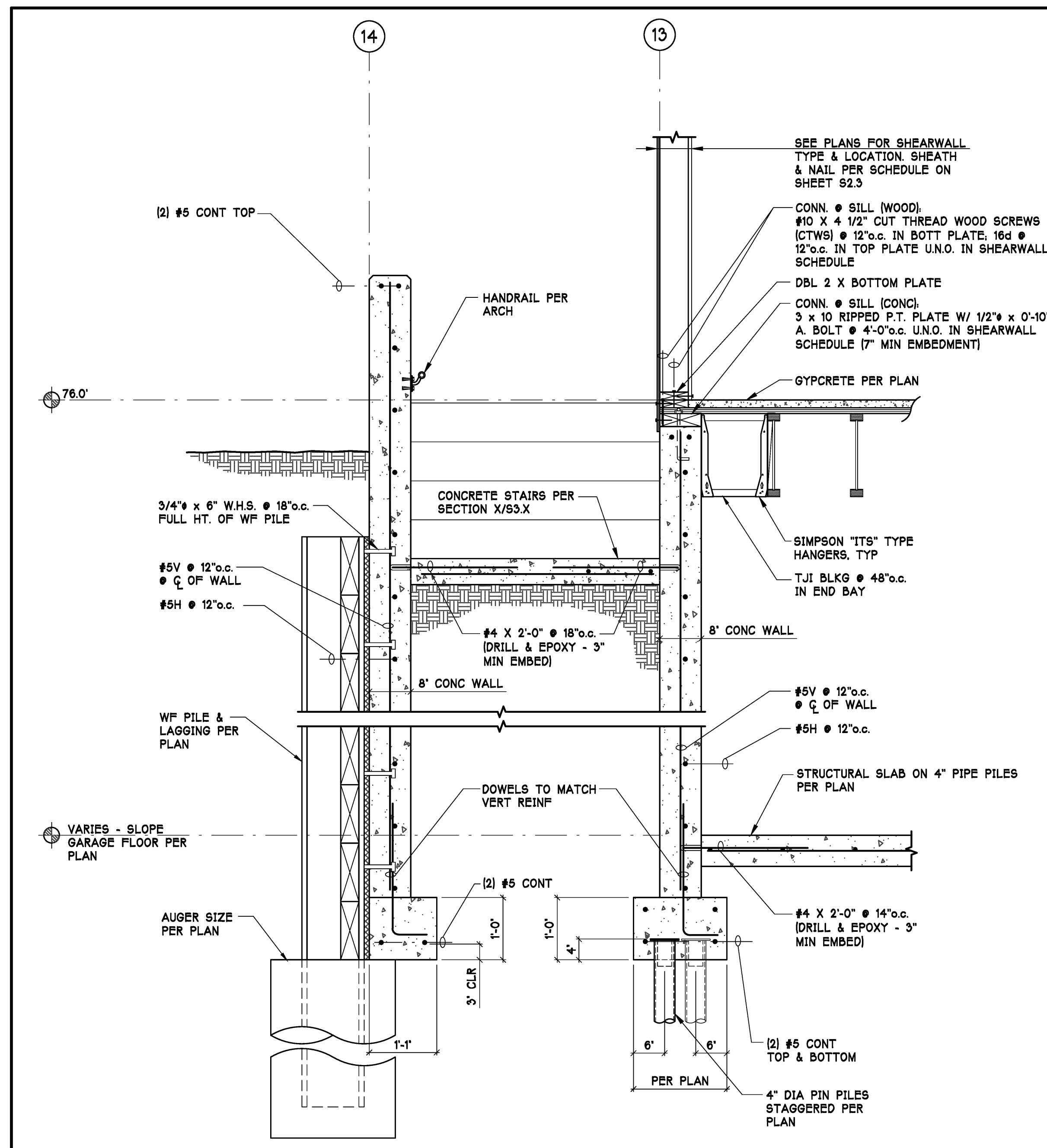
PROJECT TITLE

SHEARWALL SCHEDULE  
AND DETAILS

SHEET TITLE

PROJECT	18156
DATE	03/29/21
DRAWN	NH
CHKD.	TB
SHEET	

**S2.3**



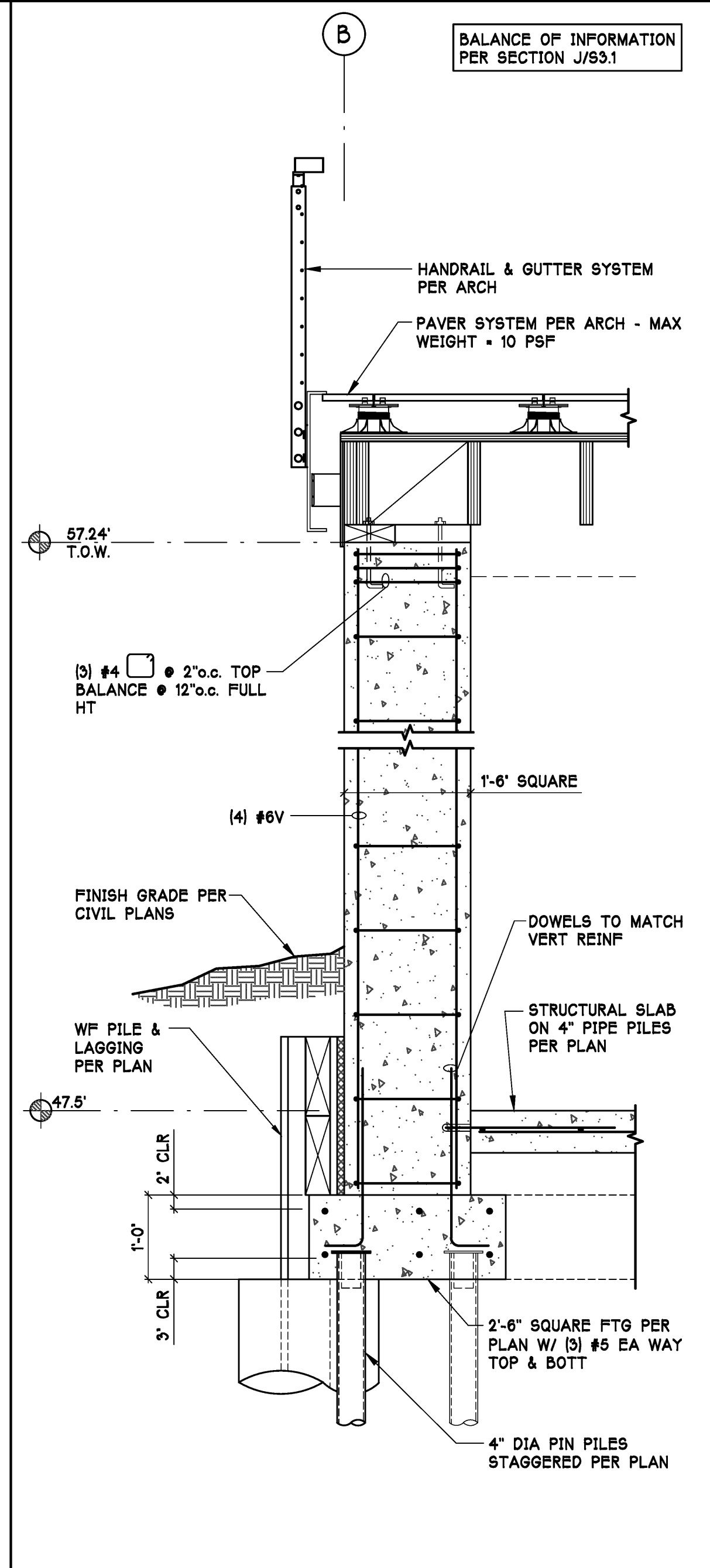
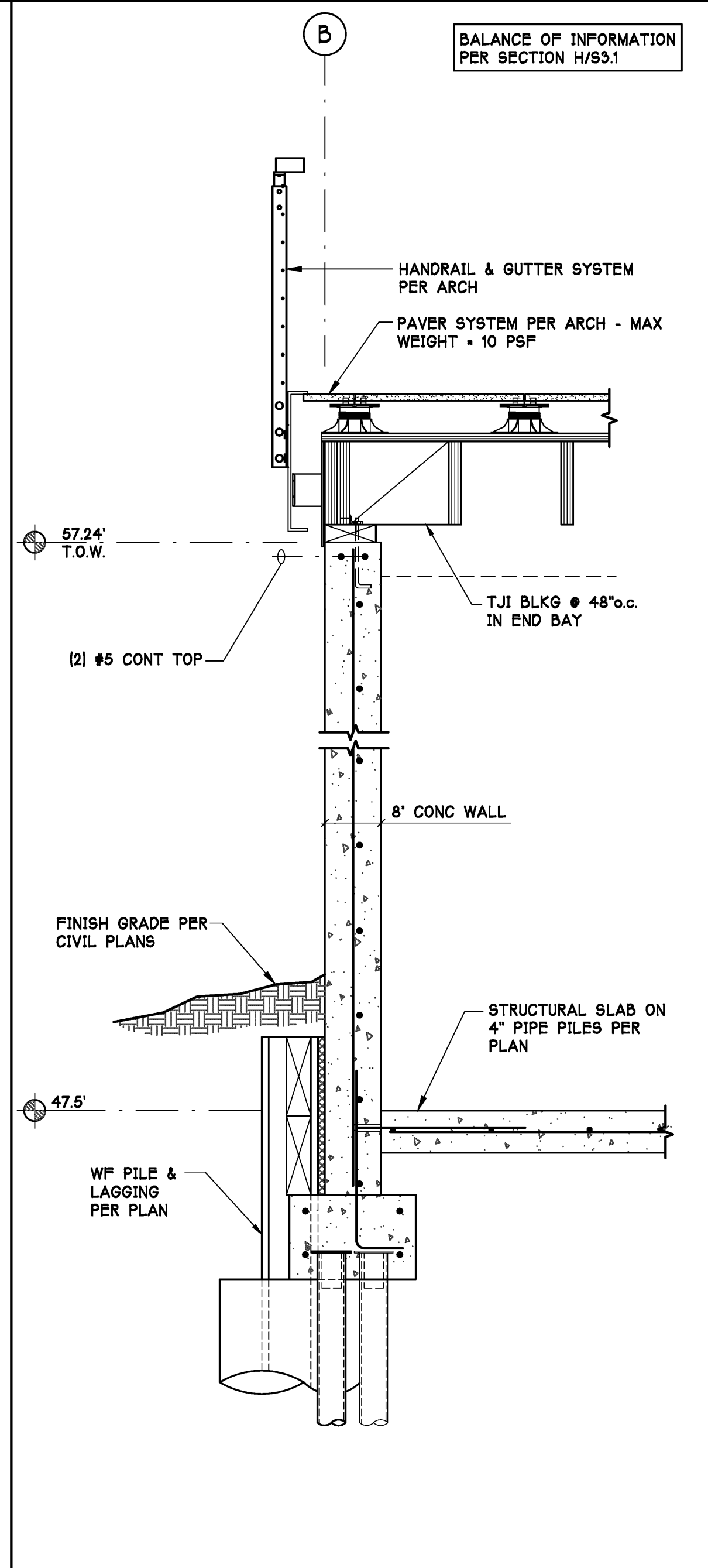
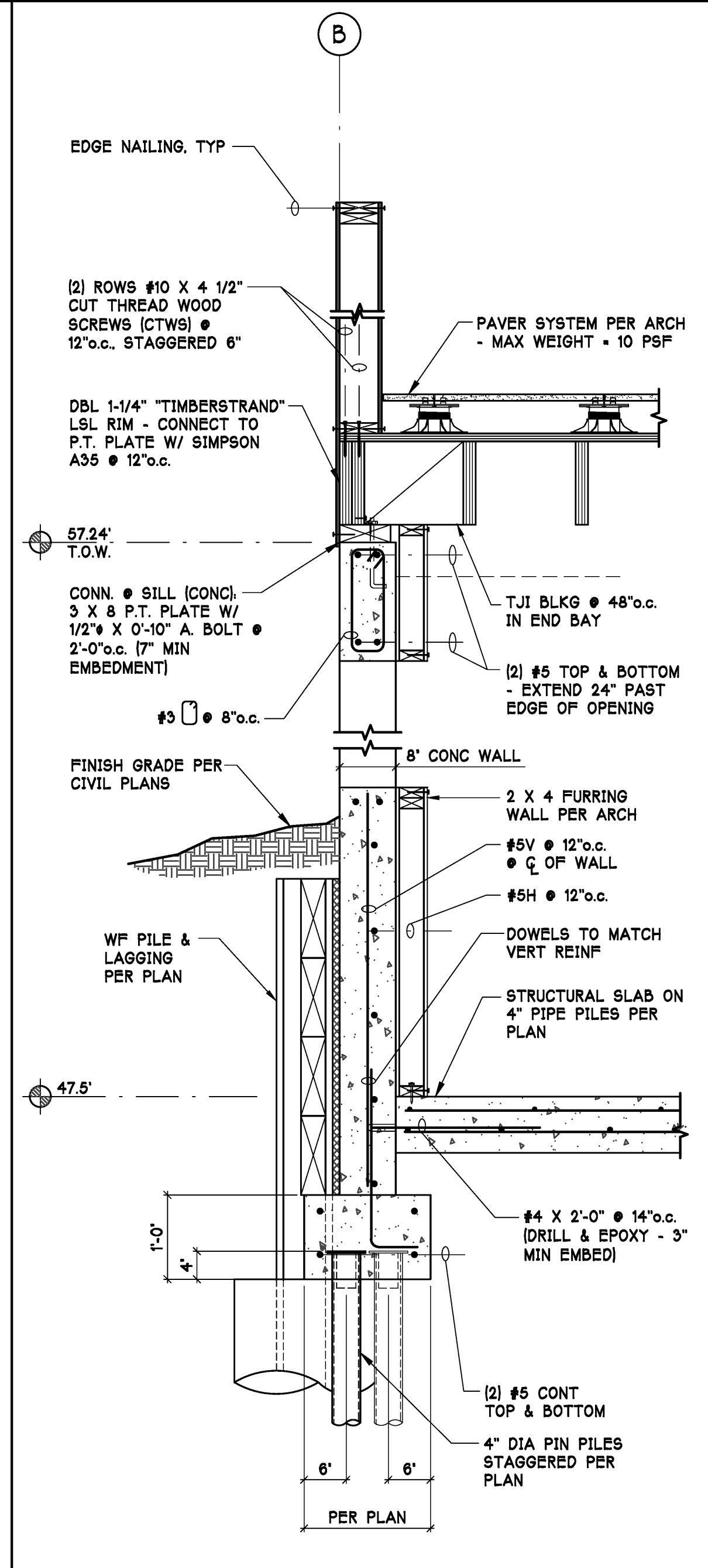
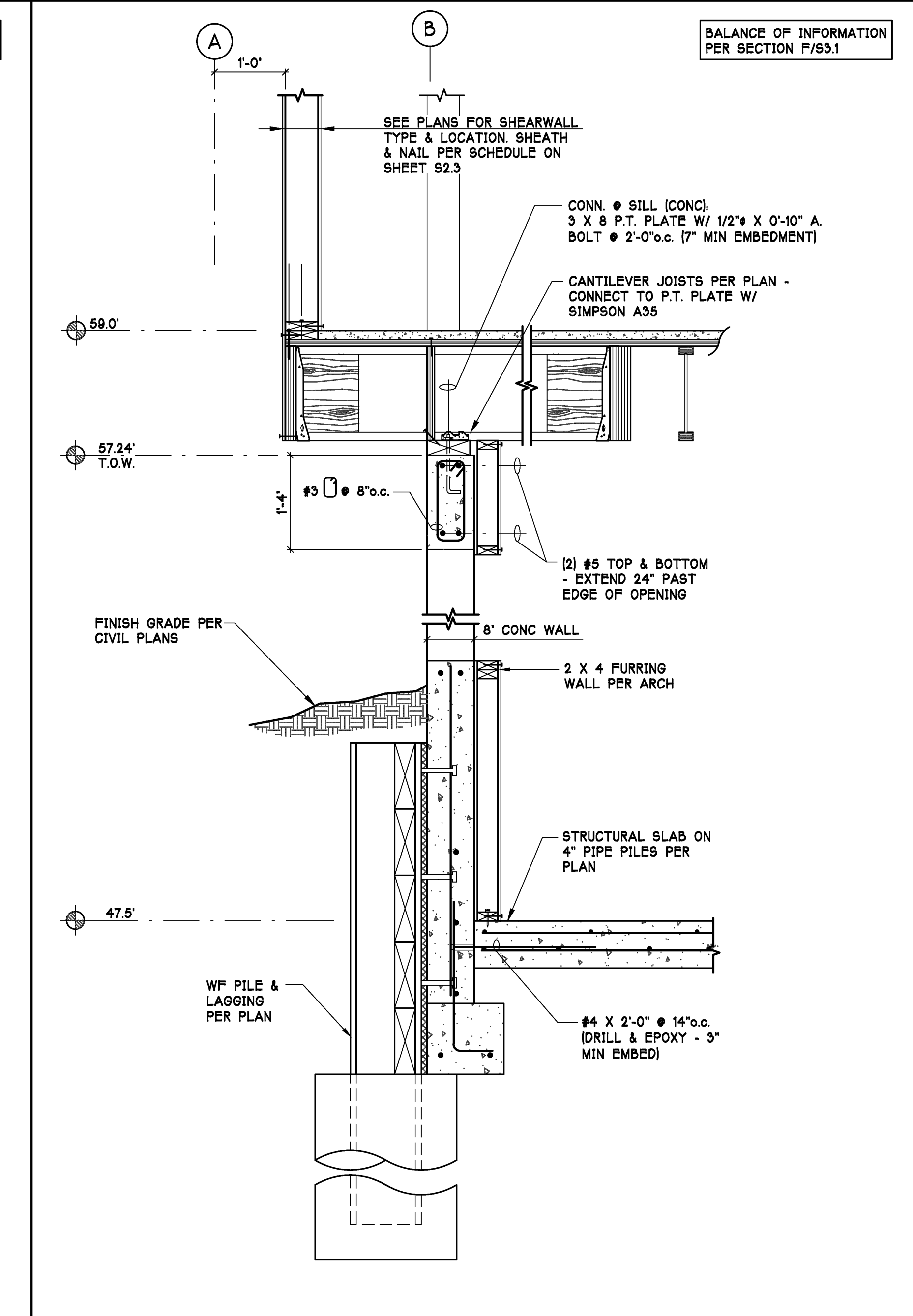
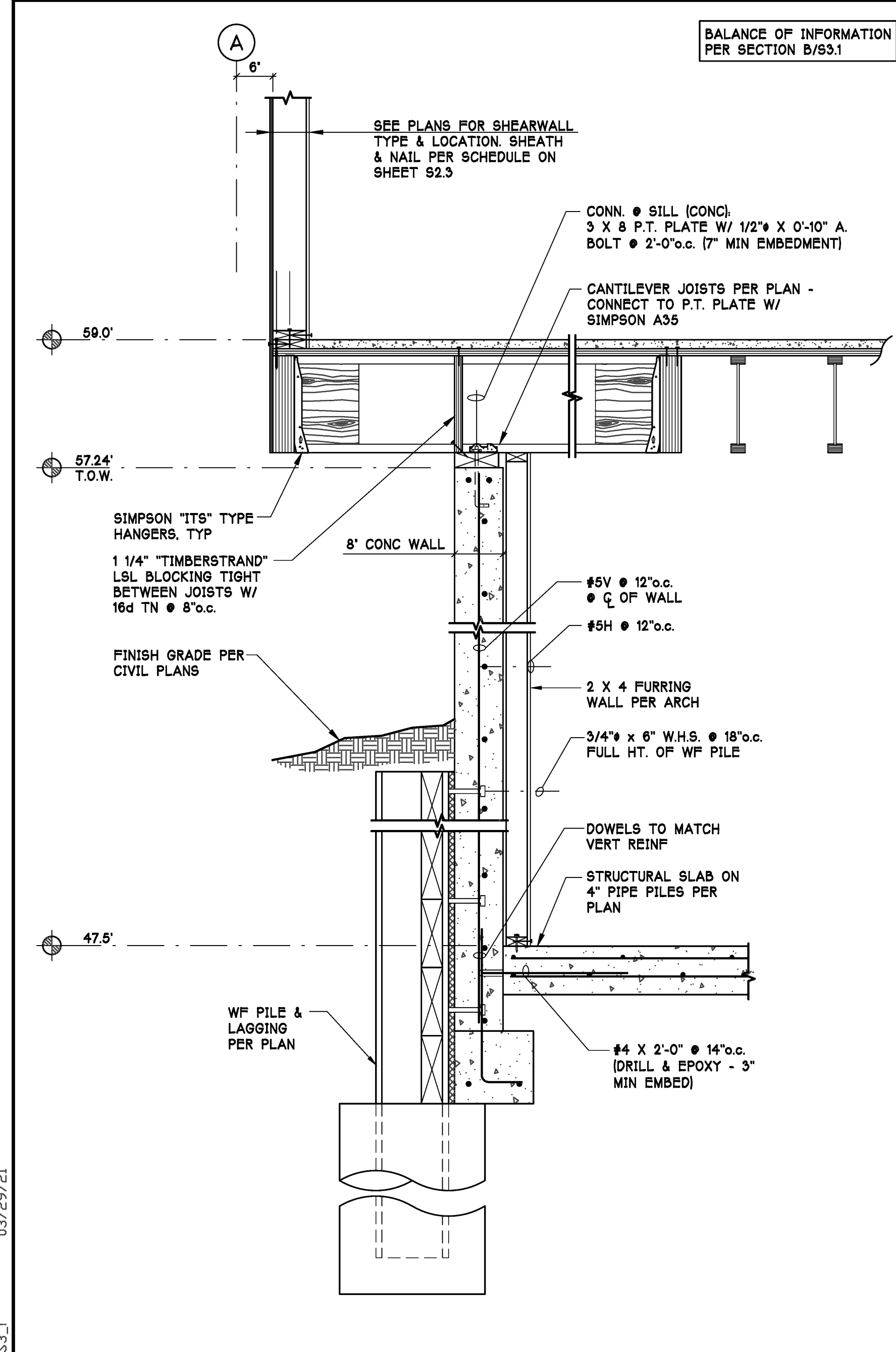
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3/4" x 1'-0"

**SECTION 13**  
3/4" x 1'-0"

**SECTION A**  
3/4" x 1'-0"

**SECTION 12**  
3/4" x 1'-0"

**SECTION B**  
3/4" x 1'-0"



**SECTION A**  
3/4" x 1'-0"

**SECTION B**  
3/4" x 1'-0"

**SECTION B**  
3/4" x 1'-0"

**SECTION B**  
3/4" x 1'-0"

**SECTION B**  
3/4" x 1'-0"

REVISIONS	DATE	DESCRIPTION

B&T ENGINEERING & DESIGN  
 250 E. SUNSET WAY  
 SEASIDE, WA 98138  
 (253) 550-0760 (FAX)

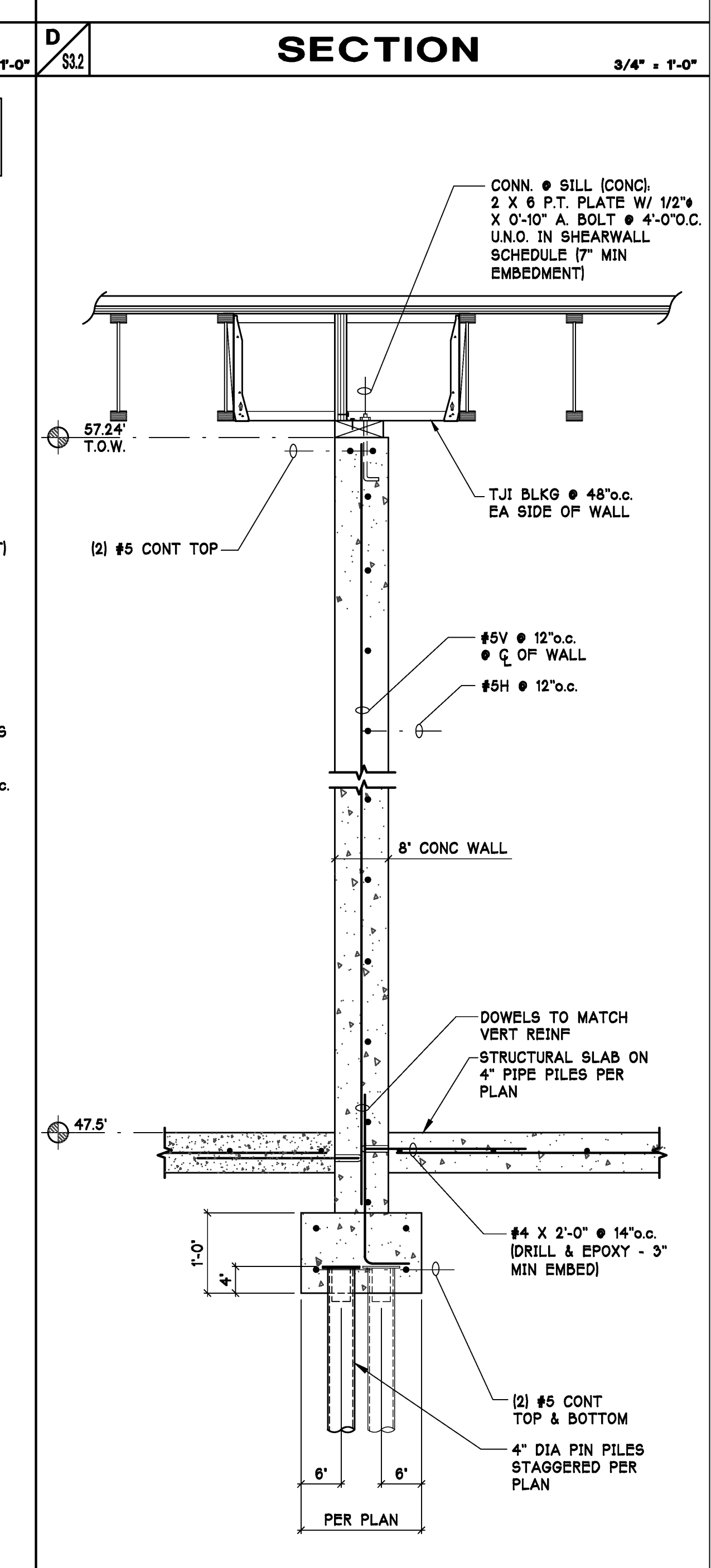
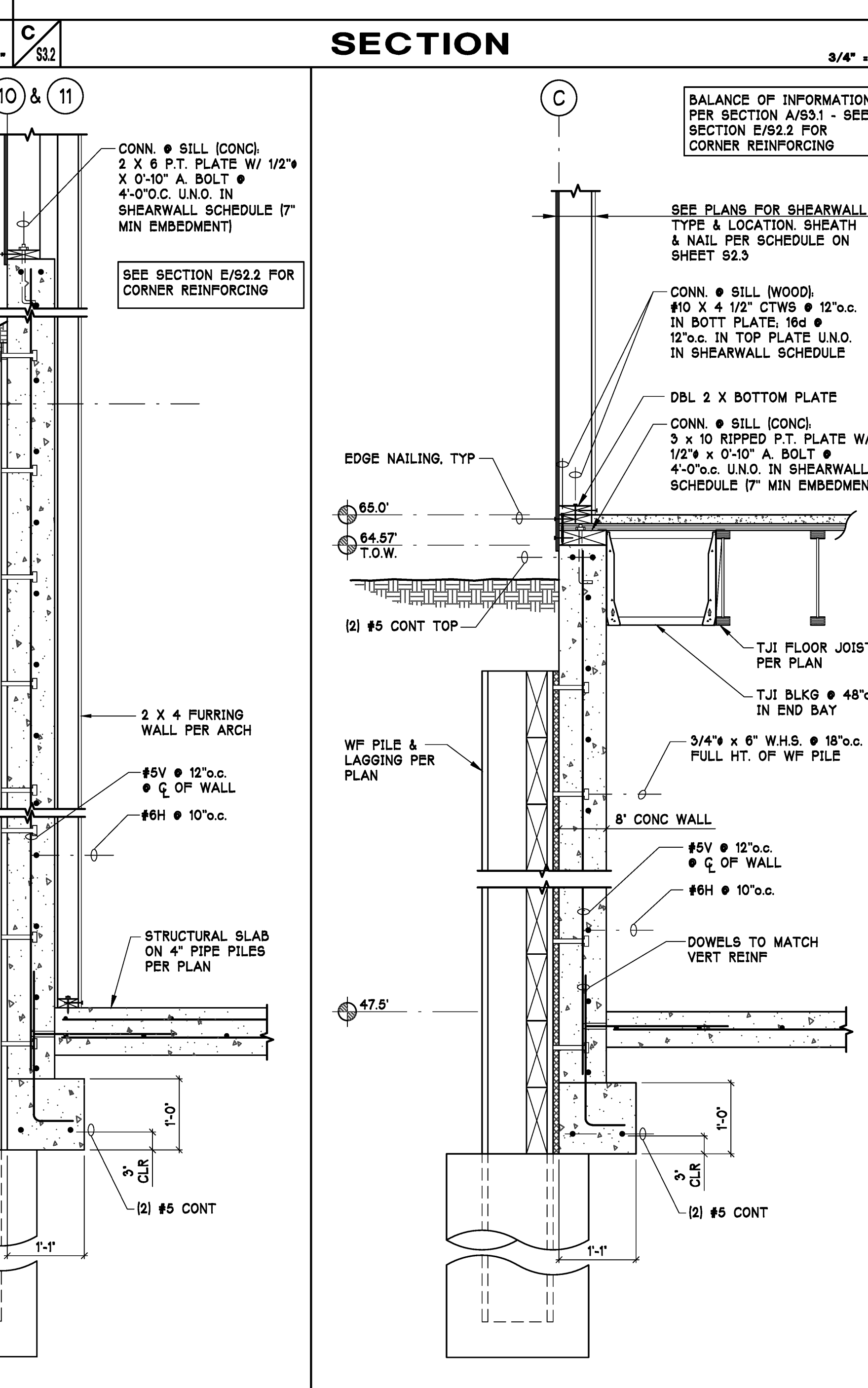
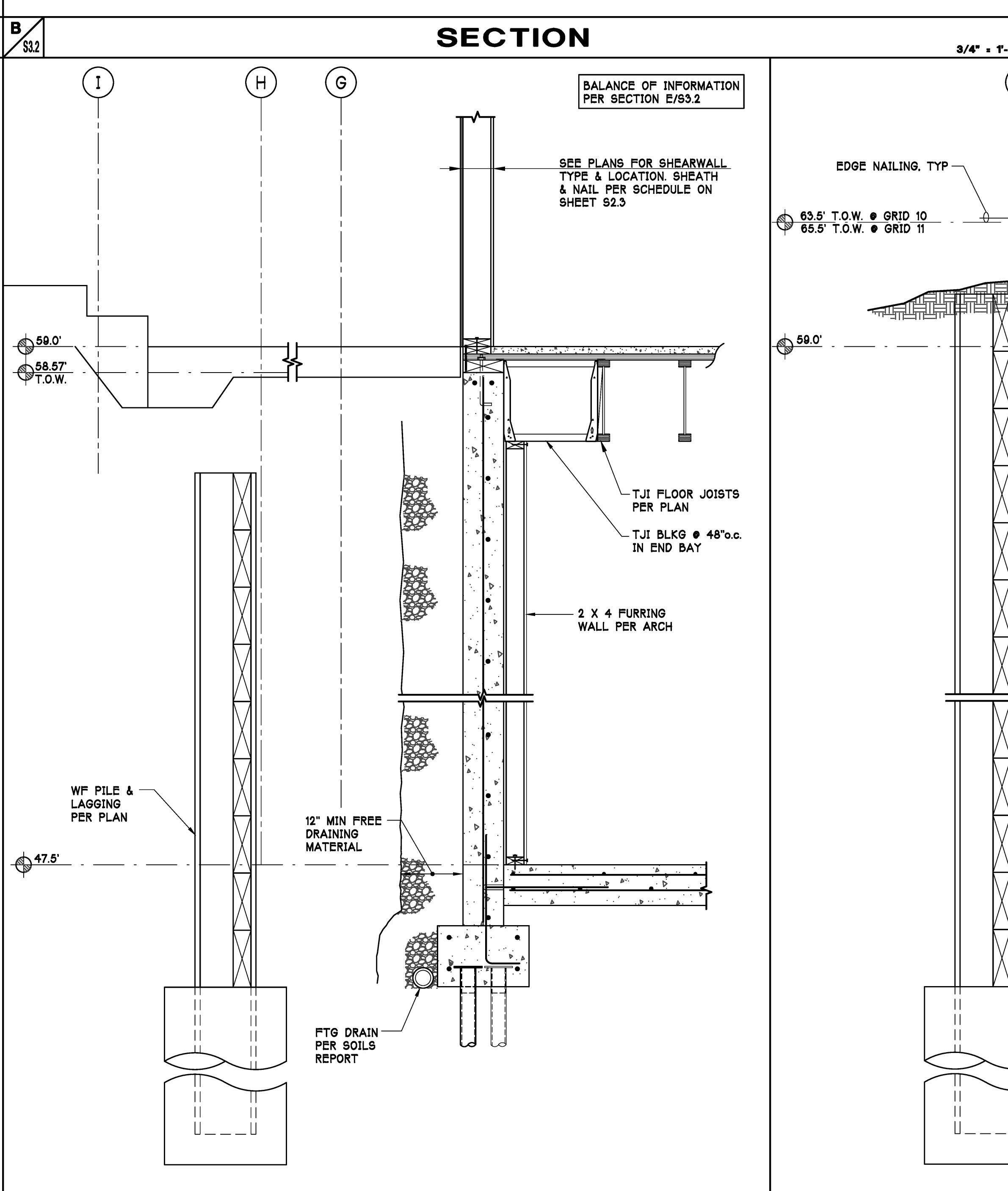
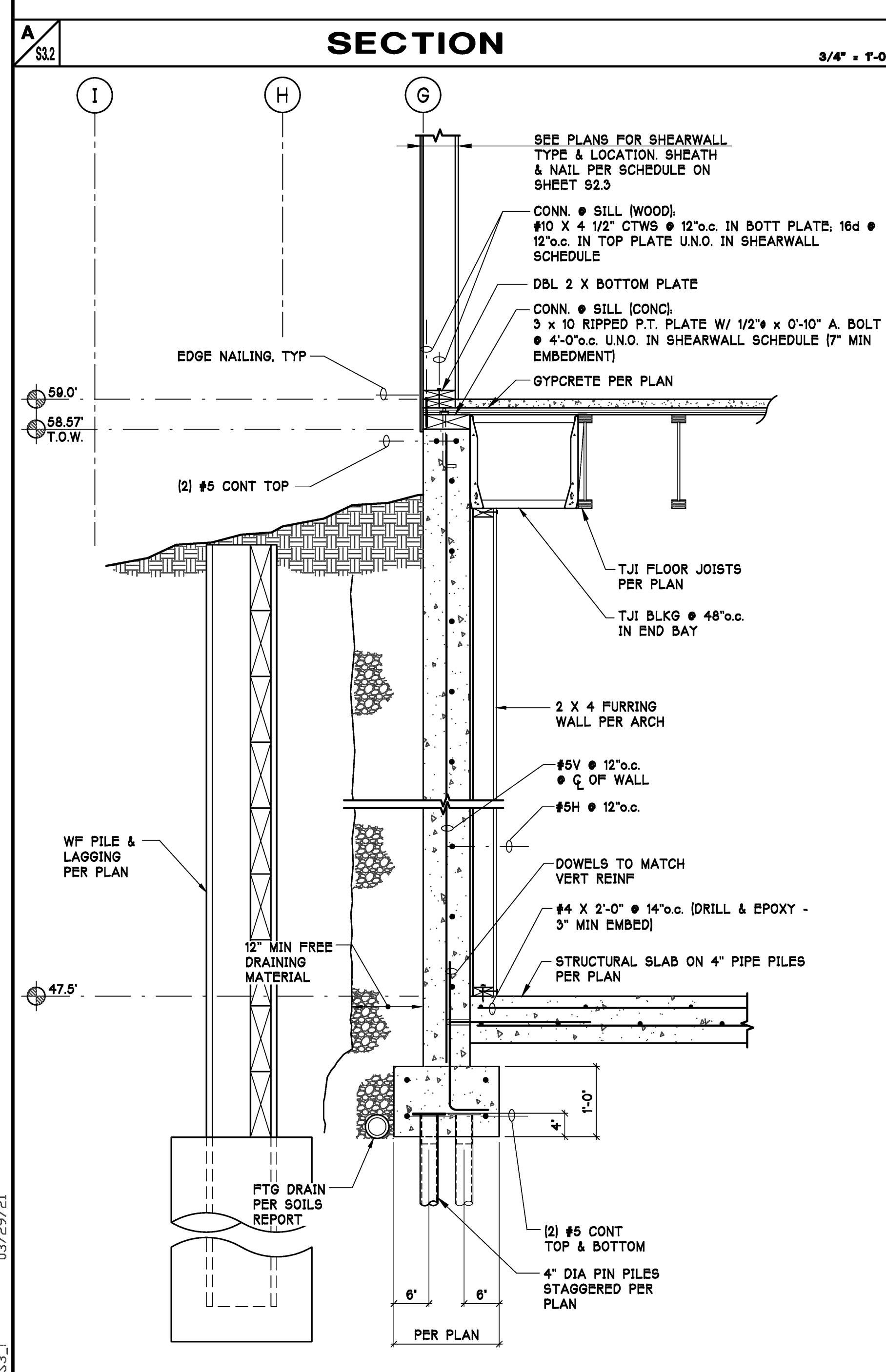
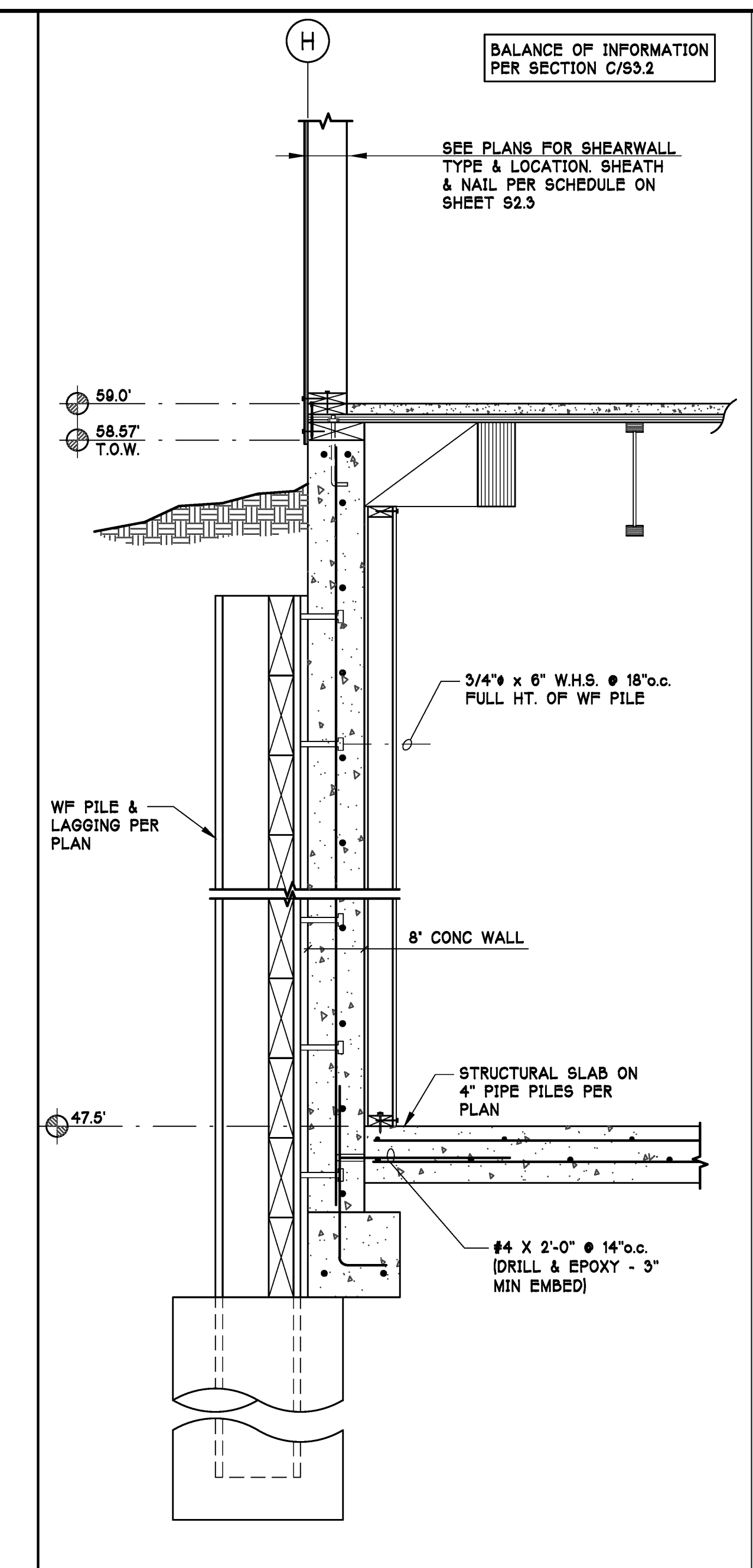
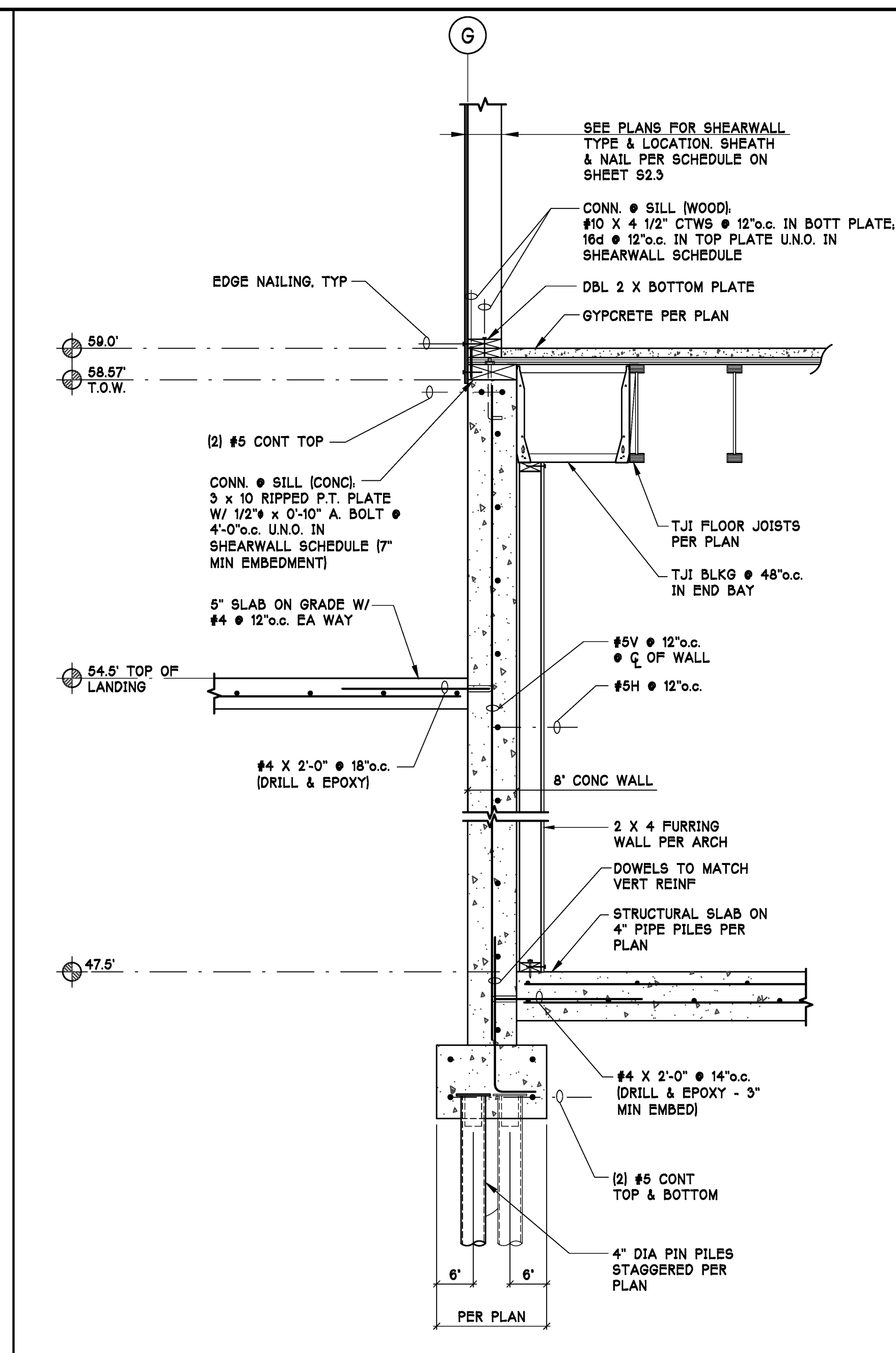
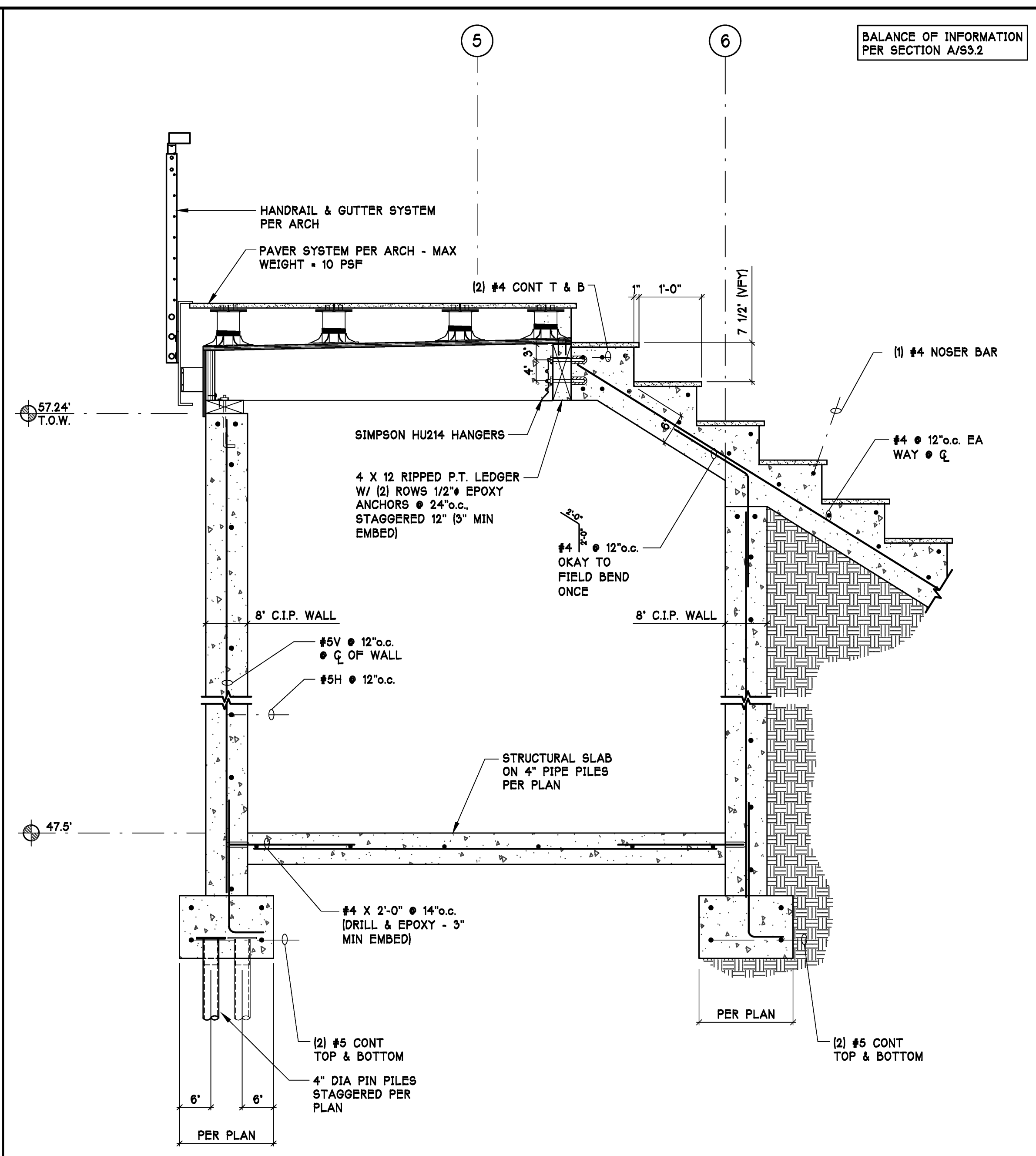
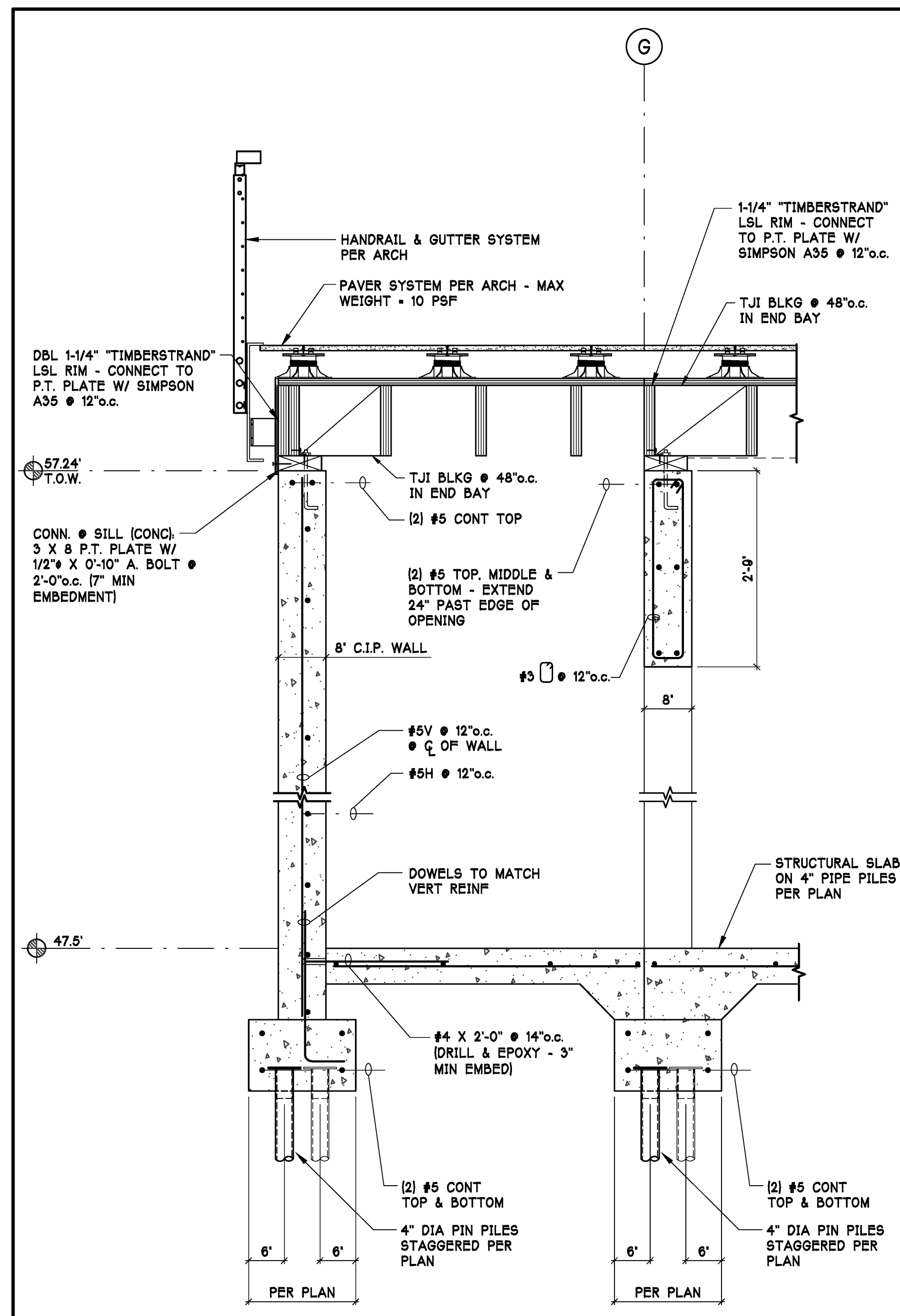
**FOUNDATION DETAILS**  
 SHEET TITLE

PROJECT	18156
DATE	03/29/21
DRAWN	NH
CHKD.	TB
SHEET	

S3.1

OF

18156-S3.1 03/29/21



REVISIONS	DATE	DESCRIPTION

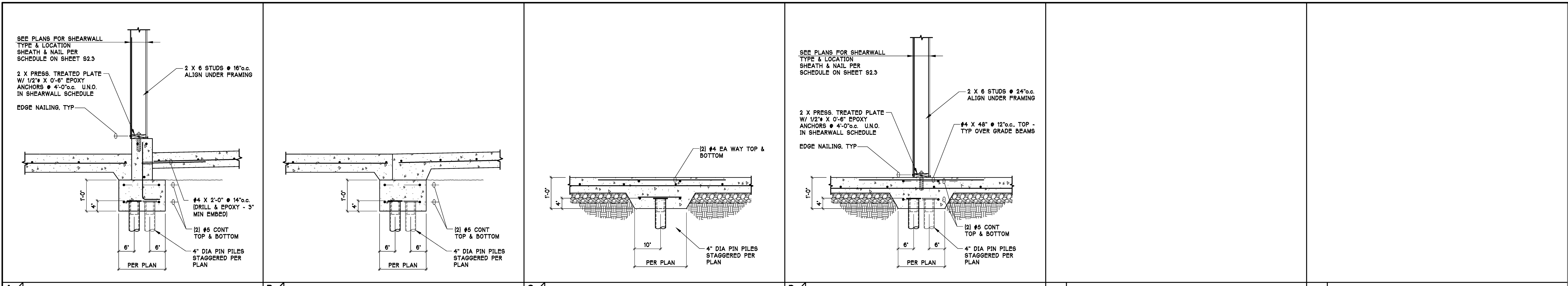


**MURRAY RESIDENCE**  
**4603 FOREST AVE SE**  
**MERCER ISLAND, WA 98040**

**FOUNDATION DETAILS**

PROJECT: 18156  
 DATE: 03/29/21  
 DRAWN: NH  
 CHKD: TB

**S3.2**



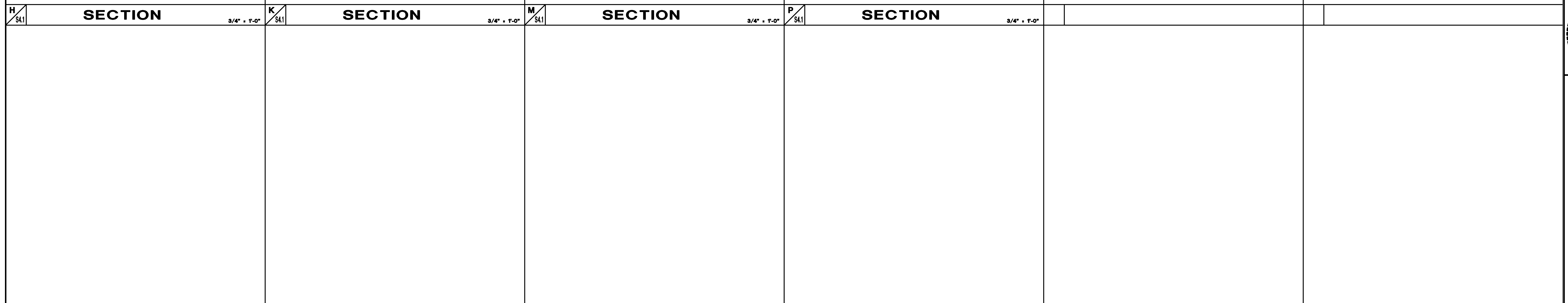
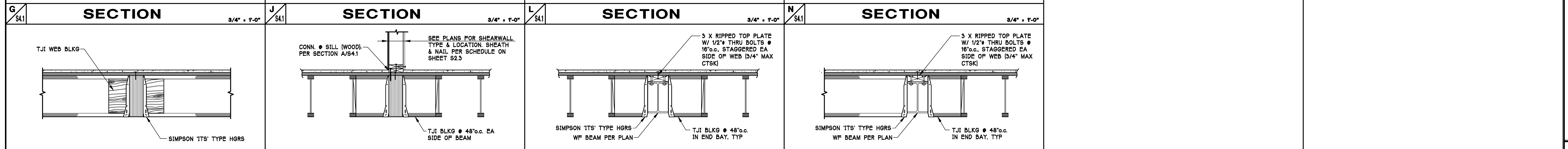
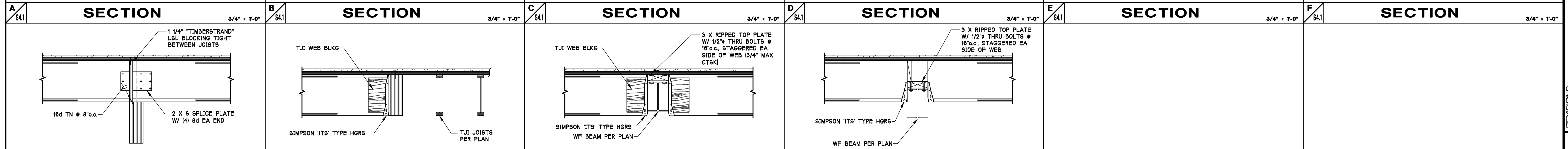
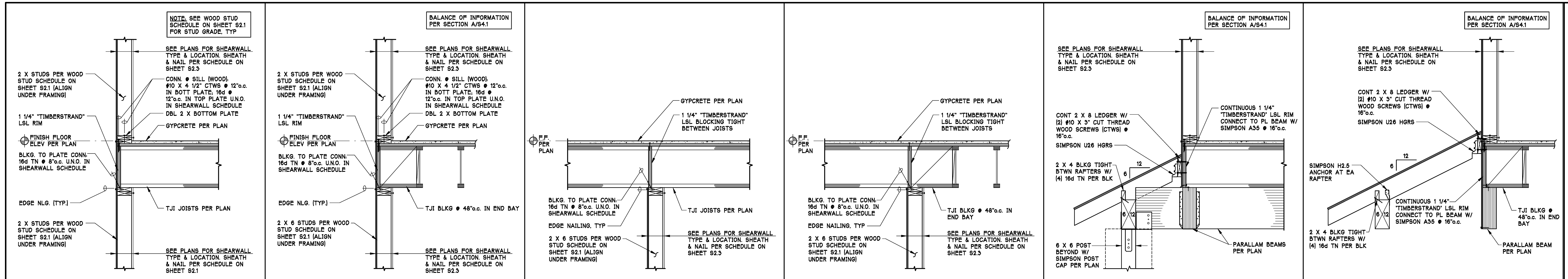
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REVISIONS	DATE	DESCRIPTION



<p><b>B&amp;T DESIGN &amp; ENGINEERING</b></p> <p>250 E. SUNSET WAY          4253 54TH AVENUE, SUITE 200          MERCEY ISLAND, WA 98040          (253) 535-0760 FAX</p>	
<p><b>MURRAY RESIDENCE</b>          4603 FOREST AVE SE          MERCER ISLAND, WA 98040</p>	
<p><b>FOUNDATION DETAILS</b></p>	
PROJECT	18156
DATE	03/29/21
DRAWN	NH
CHKD.	TB
SHEET :	
<b>S3.3</b>	
OF	

18156-S3-1 03/29/21



REVISIONS	DATE	DESCRIPTION

**B&T DESIGN & ENGINEERING, INC.**  
 250 E. SUNSET WAY  
 SUITE 100  
 SEASIDE, WA 98138  
 (253) 550-0760 (FAX)

**MURRAY RESIDENCE**  
 4603 FOREST AVE SE  
 MERCER ISLAND, WA 98040

**PROJECT TITLE**

**FLOOR FRAMING DETAILS**

**SHEET TITLE**

PROJECT: 18156  
 DATE: 03/29/21  
 DRAWN: NH  
 CHKD: TB  
 SHEET: **S4.1**

OF

18156-S4\_1 03/29/21

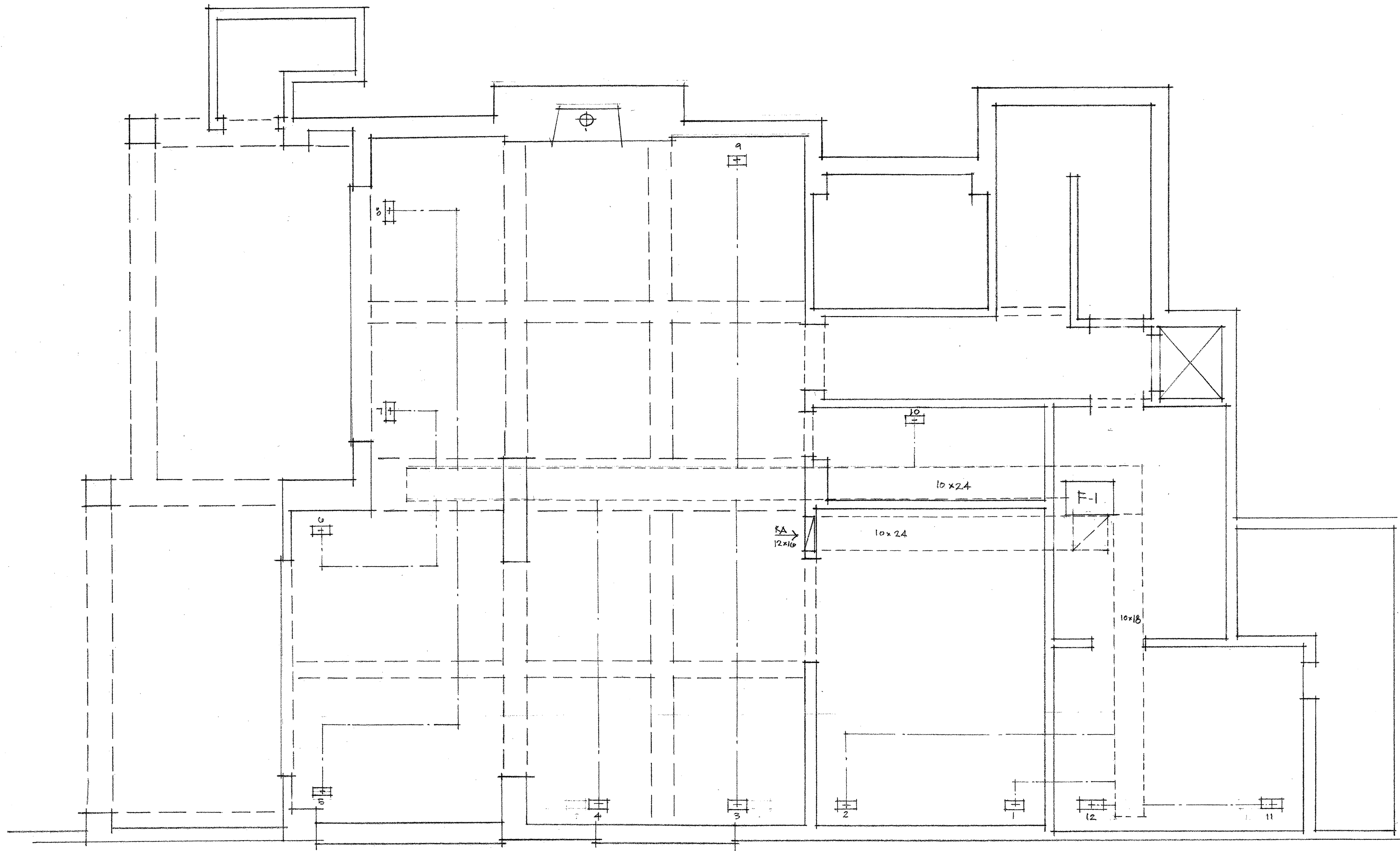






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STATE OF WASHINGTON

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BASEMENT - MECHANICAL

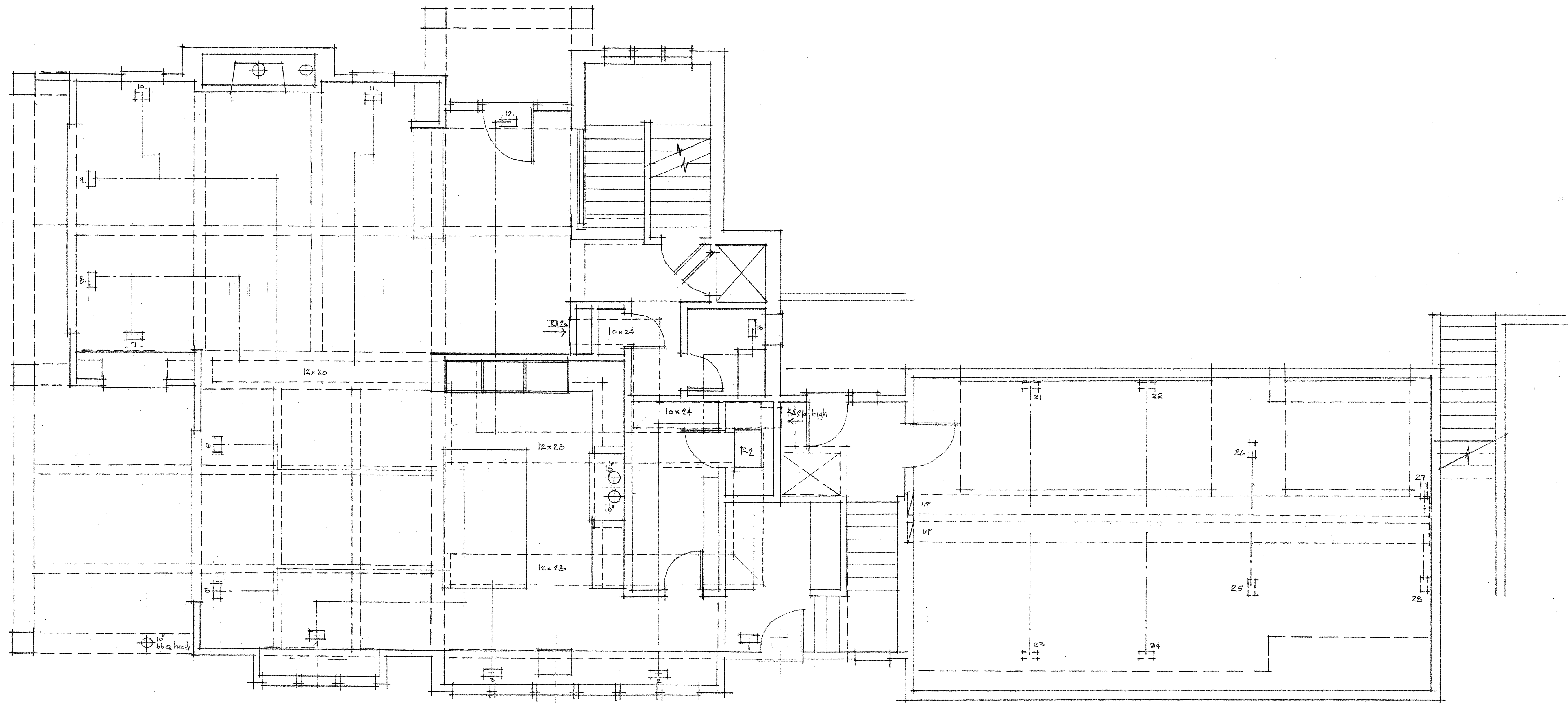
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NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

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CHECKED: RUF  
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MAIN FLR - MECHANICAL

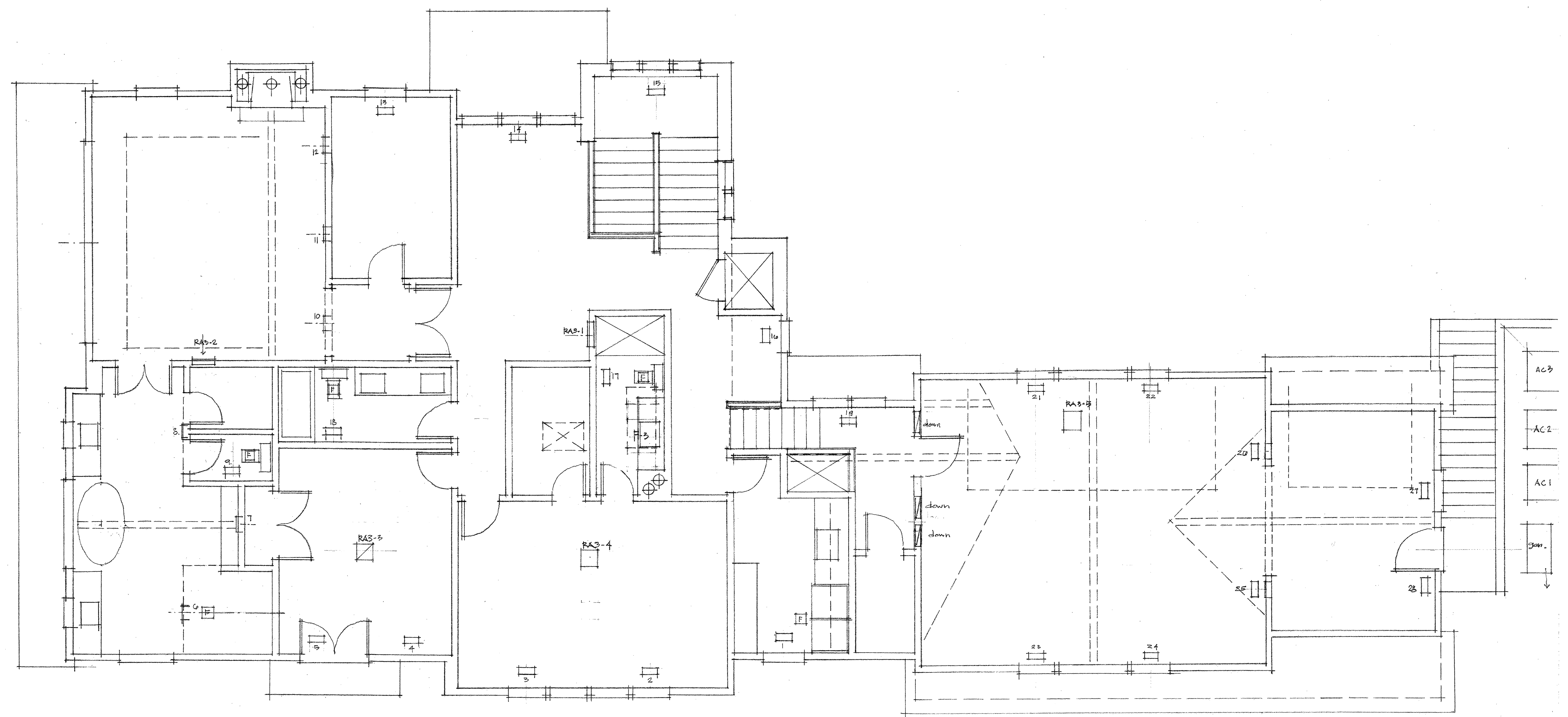
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NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

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DRAWN: RWF  
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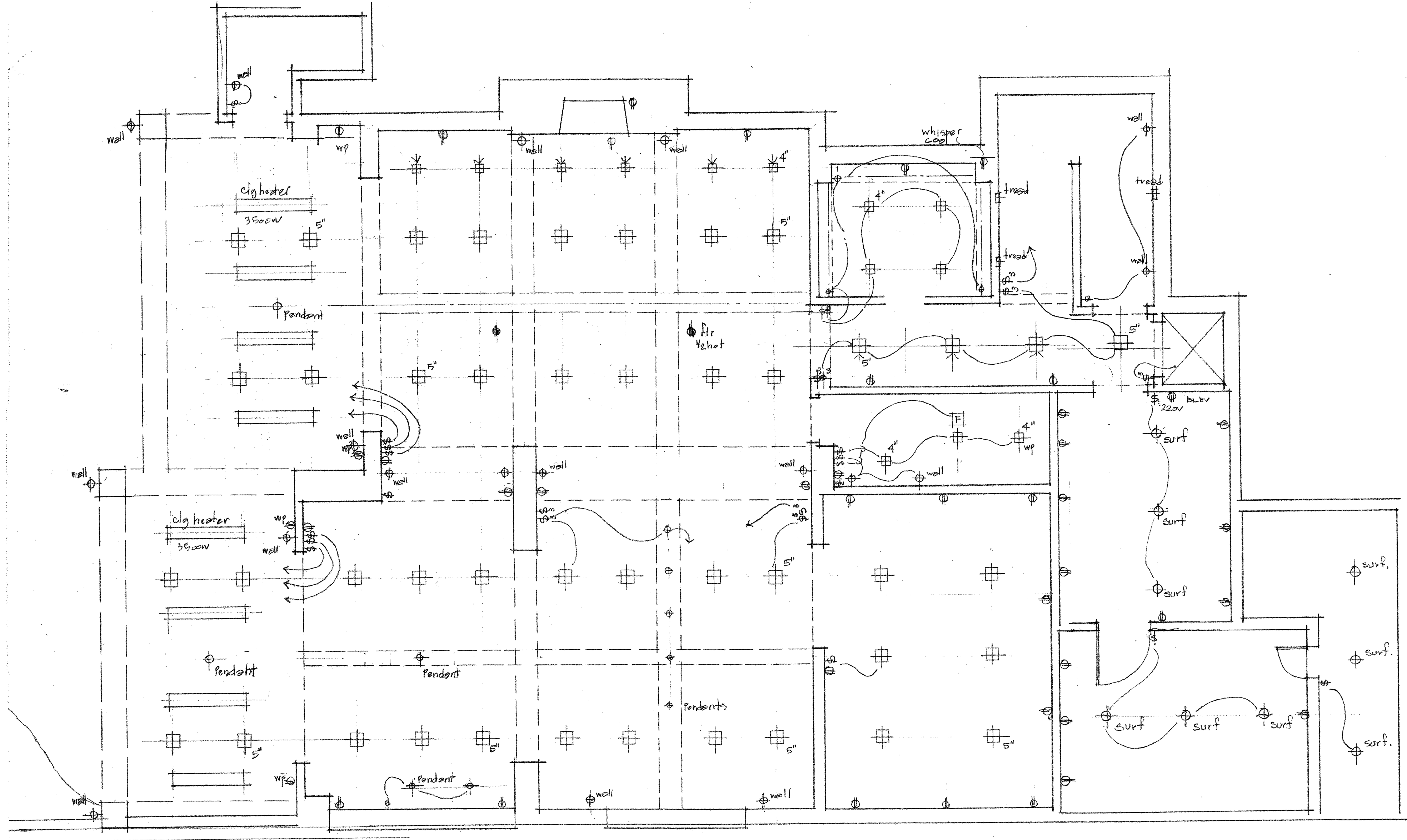
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UPPER FLR - MECHANICAL



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 MERCER ISLAND, WA 98040

DESIGN: RLF
   
 DRAWN: RLF
   
 CHECKED: RLF
   
 REVISIONS:

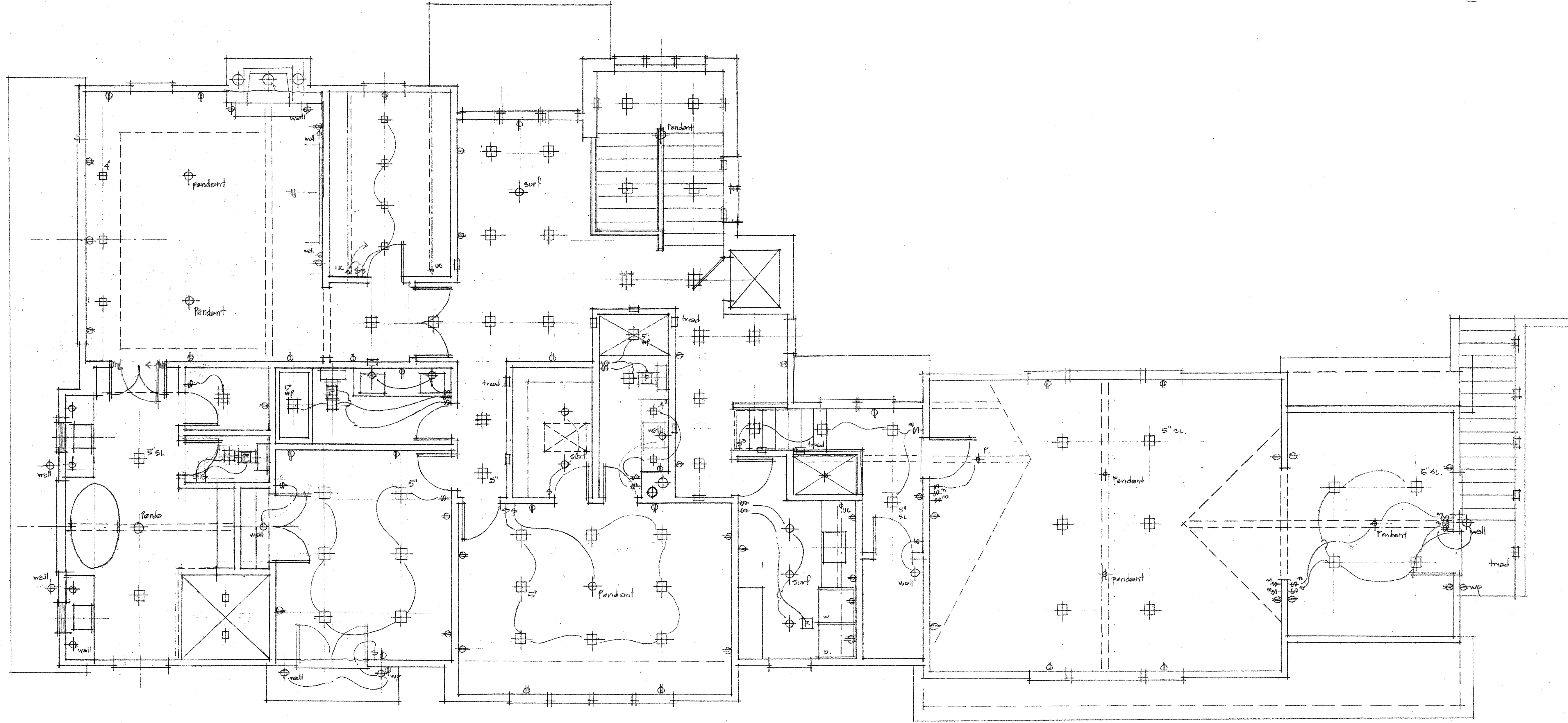
BASEMENT - LIGHTING + ELEC





6080 REGISTERED ARCHITECT  
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STATE OF WASHINGTON

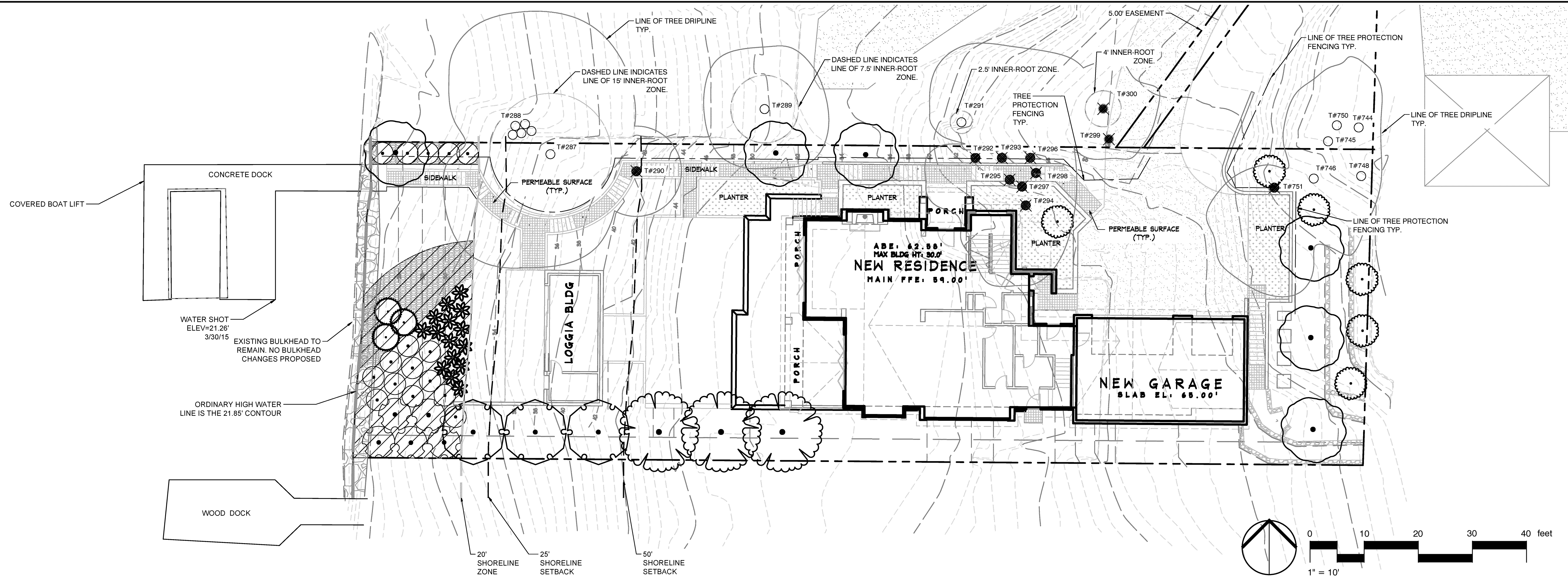
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NEW SINGLE FAMILY RESIDENCE  
4803 FOREST AVE SE  
MERCER ISLAND, WA 98040

DESIGN: RWF  
DRAWN: RWF  
CHECKED: RWF  
REVISIONS:



BY: RR  
DATE: 5-10-2021

REVISIONS: PERMIT SUBMITTAL  
1

SCJ STUDIO  
LANDSCAPE ARCHITECTURE

1148 NW LEARY WAY, SEATTLE, WA 98107  
P: 206-708-1862  
SCJSTUDIO.LA.COM

SHORELINE PLANTING & TREE REPLACEMENT PLAN

Murray Residence  
4803 Forest Ave SE  
Mercer Island, WA

DESIGNER: JM  
DRAWN BY: RR  
APPROVED BY: JM

DATE: May, 10 2021  
JOB No: 3476.01  
DRAWING FILE No:  
DRAWING No: LA-1.0  
SHEET No: 01 OF 01

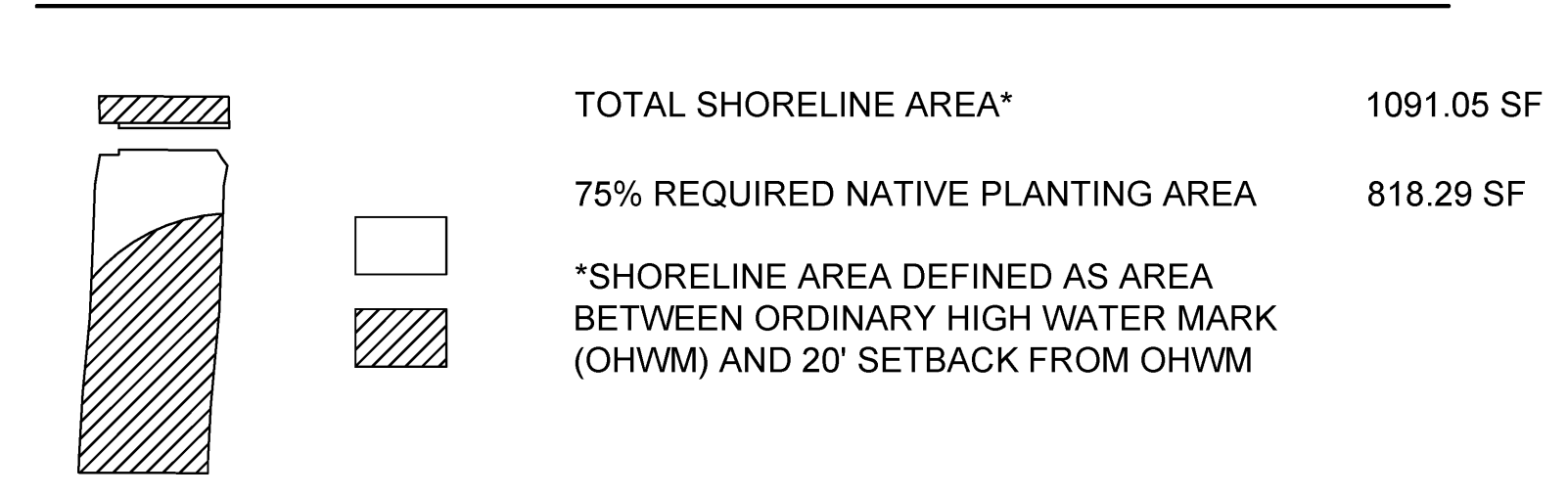
PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CAL	
	AC	6	ACER CIRCINATUM VINE MAPLE	1.5" CAL.	
	SM	3	CORNUS KOUSA WHITE KOUSA DOGWOOD	2.5" CAL.	
	PE	3	PRUNUS EMARGINATA BITTER CHERRY	1.5" CAL.	
	RP	6	RHAMNUS PURSHIANA CASCARA	1.5" CAL.	
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	
	CR	16	CORNUS SERICEA RED TWIG DOGWOOD	2 GAL	
	HD	5	HOLODISCUS DISCOLOR OCEAN-SPRAY	5 GAL	
	PM	15	POLYSTICHUM MUNITUM WESTERN SWORD FERN	1 GAL	
	SA	3	SYMPHORICARPOS ALBUS COMMON WHITE SNOWBERRY	2 GAL	
GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	AU	99	ARCTOSTAPHYLOS UVA-URSI KINNICKINICK	4"POT	18" o.c.

**LANDSCAPE NOTES:**  
REMAINDER OF SITE WILL BE LANDSCAPED PER MICC 19.02.020.F.3.  
TREE DRIPLINES MUST BE PROTECTED DURING CONSTRUCTION.

- TREES TO BE REMOVED - SEE ARBORIST REPORT & TOPOGRAPHIC BOUNDARY & SURVEY
- TREES TO REMAIN

SHORELINE NATIVE PLANTING DIAGRAM



**CITY OF MERCER ISLAND WEED REMOVAL NOTE:**  
Development proposals for a new single-family home shall remove Japanese knotweed (*Polygonum cuspidatum*) and Regulated Class A, Regulated Class B, and Regulated Class C weeds identified on the King County Noxious Weed list, as amended, from regulated landscaping areas established pursuant to subsection (F)(3)(a) of this section. New landscaping associated with new single-family home shall not incorporate any weeds identified on the King County Noxious Weed list, as amended. Provided, that removal shall not be required if the removal will result in increased slope instability or risk of landslide or erosion.

**TREE REPLACEMENT NOTE:**  
REGULATED TREES TO BE REMOVED WILL BE REPLACED PER CITY REQUIREMENTS. SEE CITY OF MERCER ISLAND TREE INVENTORY AND REPLACEMENT SUBMITTAL FORM FOR COMPLETE TREE REPLACEMENT CALCULATIONS.

Excerpt from MICC 19.10.070(B)(1):

**B. Replacement Trees.**

- Location. Replacement trees shall be located in the following order of priority from most important to least important:
  - On-site replacement adjacent to or within critical tree areas as defined in Chapter 19.16 MICC;
  - On-site replacement outside of critical tree areas adjacent to other retained trees making up a grove or stand of trees;
  - On-site replacement outside of critical tree areas; and
  - Off-site in adjacent public right-of-way where explicitly authorized by the city.

Name: Murray project 4803 Forest Ave SE  
Assessment date: June 2019  
Revised: December 15, 2020  
Thomas QuigleyName: Murray project ISA certified arborist  
PN0655A4803 Forest Ave SE

Species	DBH"	Drpln rad'	Cndtn	Remarks	Designation	Rm	RTN	Mitigation	
<b>On-site Trees</b>									
287	Acer macrophyllum, Big leaf maple	34"	24' south	Good	Tree root collar is located 4-5' below existing/proposed grade	Exceptional	X		
290	Calocedrus decurrens. Incense cedar	16"	10' radius	Excellent	To be removed	Large	X	2	
292	Acer macrophyllum, Big leaf maple	11"	12' south	Fair	Located 5' from BUM stump with Kretzmaria fungus. Leans 5% south.	Large	X	2	
293	Acer macrophyllum, Big leaf maple	7"	5' south, 0' north	Good	4", 2", 5" equilas 6.7" DBH. Shared canopy. Leans 5% south	Non-reg		Non-reg	
294	Acer macrophyllum, Big leaf maple	13"	18' south	Fair	Tree leans south so canopy is unusually heavy to the south.	Large	X	2	
295	Acer macrophyllum, Big leaf maple	17"	0' south	Good	Shared canopy with other more dominant trees.	Large	X	2	
296	Acer macrophyllum, Big leaf maple	15"	8' south	Fair	Dead stem and limbs, low vigor	Large	X	2	
297	Acer macrophyllum, Big leaf maple	9"	18' south	Good	To be removed	Non-reg		Non-reg	
298	Acer macrophyllum, Big leaf maple	12.5"	18' south	Good	no canopy coverage to the north, to be removed	Large	X	2	
744	Acer macrophyllum, Big leaf maple	19"	15'	Excellent	Out of proposed construction area, tree protection from nearby, off-site construction	Large	X		
745	Thuja plicata, Western red cedar	19", 11"	15' south	Fair	Out of proposed construction area.	Large	X		
746	Acer macrophyllum, Big leaf maple	36"+	18' SW	Fair	Decay column. Out of proposed construction area.	Exceptional	X		
748	Acer macrophyllum, Big leaf maple	22"	0' north 20' south	Fair	Out of proposed construction area.	Large	X		
750	Prunus, plum?	7"	6'	Fair	under canopy of nearby Tree 744	Non-reg		Non-reg	
751	Acer macrophyllum, Big leaf maple	36"+	'south 15' w	Fair	Canopy slightly overhangs construction area below. Decay, deadwood.	Exceptional	X	6	
<b>Total tree onsite = 15, 3 Non-regulated. 30% of 12 is 3.6 or 4 trees. 5 trees retained.</b>							<b>Total Replant</b>		<b>18</b>
<b>Off-site Trees</b>									

Name: Murray project 4803 Forest Ave SE  
Assessment date: June 2019  
Revised: December 15, 2020  
Thomas QuigleyName: Murray project ISA certified arborist  
PN0655A4803 Forest Ave SE

Species	DBH"	Drpln rad'	Cndtn	Remarks	Designation	Rm	RTN	Mitigation
288	Acer macrophyllum, Big leaf maple	est 48" +	6' south	Good	Off-site tree with canopy dominated by Tree #287	Exceptional		
289	Acer macrophyllum, Big leaf maple	est 30"	15' radius	Good	Off-site tree with hornet nest in ground at root collar.	Exceptional	X	
291	Acer macrophyllum, Big leaf maple	2 x 18"	5' south	Fair	Was 3-stem, center stem cut at 10', deadwood, narrow.	Exceptional	X	
299	Acer macrophyllum, Big leaf maple	21"	3' south	Fair	Off-site tree, large decay column, good response growth.	Large	X	
300	Acer macrophyllum, Big leaf maple	15", 20.5"	8' south	Fair	Off-site, located just 8' from power pole with transformer.	Large	X	X

May 10, 2021 1:51:53pm - User: rebeccah.ronzo  
N:\PROJECTS\3476\ROSS MURRAY\3476.DWG MURRAY RESIDENCE\PHASE 01 - SCHEMATIC PLANS\3476-01-LA-01.DWG