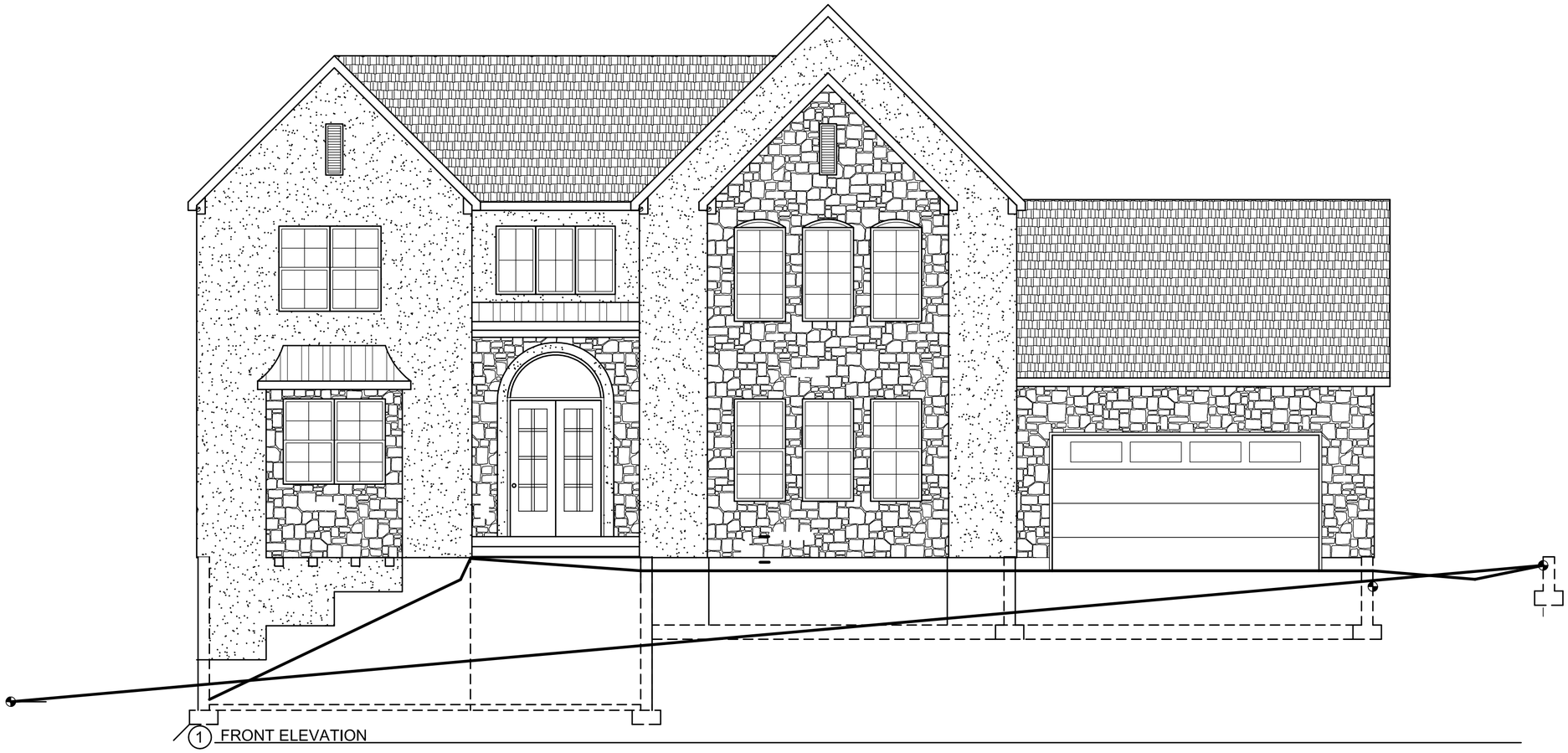

1 FRONT ELEVATION

SYMBOLS

- X / XX — DETAIL REF, SECTION REF. DRAWING NUMBER
- X / XX — ELEVATION, SECTION REF. DRAWING NUMBER
- X — KEY NOTE
- RB09 — HEADER
- A — HOLD DOWN LOCATION
- SW2 — SHEAR WALL
- DATUM POINT

CODE SUMMARY

APPLICABLE CODE:

PER CITY

ZONING CLASSIFICATION: R-110

DESIGN LOADS: SEE ENGINEERING

BUILDING AREAS:

MAIN FLOOR LIVEABLE	1785 SQ.FT.
UPPER FLOOR LIVEABLE	1605 SQ. FT.
BASEMENT AREA	1749 SQ.FT.
BASEMENT FINISHED	1454 SQ.FT.
TOTAL SQ. FT.	5139
FINISHED SQ. FT.	4844

OTHER AREAS:

GARAGE AREA	900 SQ.FT.
ENTRY PORCH	40 SQ.FT.
REAR PATIO	64 SQ. FT.

ALL WORK SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, COUNTRY, CITY AND UTILITY COMPANY CODES AND REGULATIONS.

PROJECT INFORMATION

OWNER: Josh and Katelyn Strobel Cockrell

GENERAL CONTRACTOR: Owner Builder

SITE LEGAL DESCRIPTON:

ASSESSOR'S TAX PARCEL NUMBER (A.P.N. 53: 516: 0204)

ZONING CLASSIFICATION: R-110

PROJECT STREET ADDRESS: 4875 N. Vialetto Way. Lehi, UT. 84043

THESE DRAWINGS ARE PART OF A SET OF CONSTRUCTION DOCUMENTS. THE CONSTRUCTION DOCUMENTS CONSIST OF ONE OR MORE OF THE FOLLOWING ELEMENTS:

- CONSTRUCTION DRAWINGS
- SPECIFICATIONS
- STRUCTURAL CALCULATIONS
- CONTRACT FORMS & CONDITIONS
- MODIFICATIONS & REVISIONS

CONTRACTORS, SUBCONTRACTORS, AND OTHERS WHO PROVIDE LABOR AND/OR MATERIALS REFERENCING THESE DRAWINGS ARE RESPONSIBLE FOR OBTAINING AND REVIEWING ALL CURRENT CONSTRUCTION DOCUMENTS.

CONTRACTORS, SUBCONTRACTORS, AND OTHERS ARE TO REPORT ANY DISCREPANCIES OR ERRORS TO THE CUSTOM HOME COMPANY, LLC. ANY CHANGES TO THE PROJECT WILL BE VERIFIED WITH THE OWNER AND/OR BUILDER AND REVISIONS MADE. CONTRACTORS ARE NOT TO MAKE ALTERATIONS OF ANY KIND WITHOUT PRIOR WRITTEN CONSENT. DISCREPANCIES NOT REPORTED IMMEDIATELY ARE RESPONSIBILITY OF CONTRACTOR.

CONTRACTORS SHALL NOT SCALE FROM DRAWINGS.

SHEET INDEX

Big Idea Designs
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707-901-SHED(7433)

PLAN NO. 4875 N. VIALETTO WAY.
LEHI, UT. LOT 204

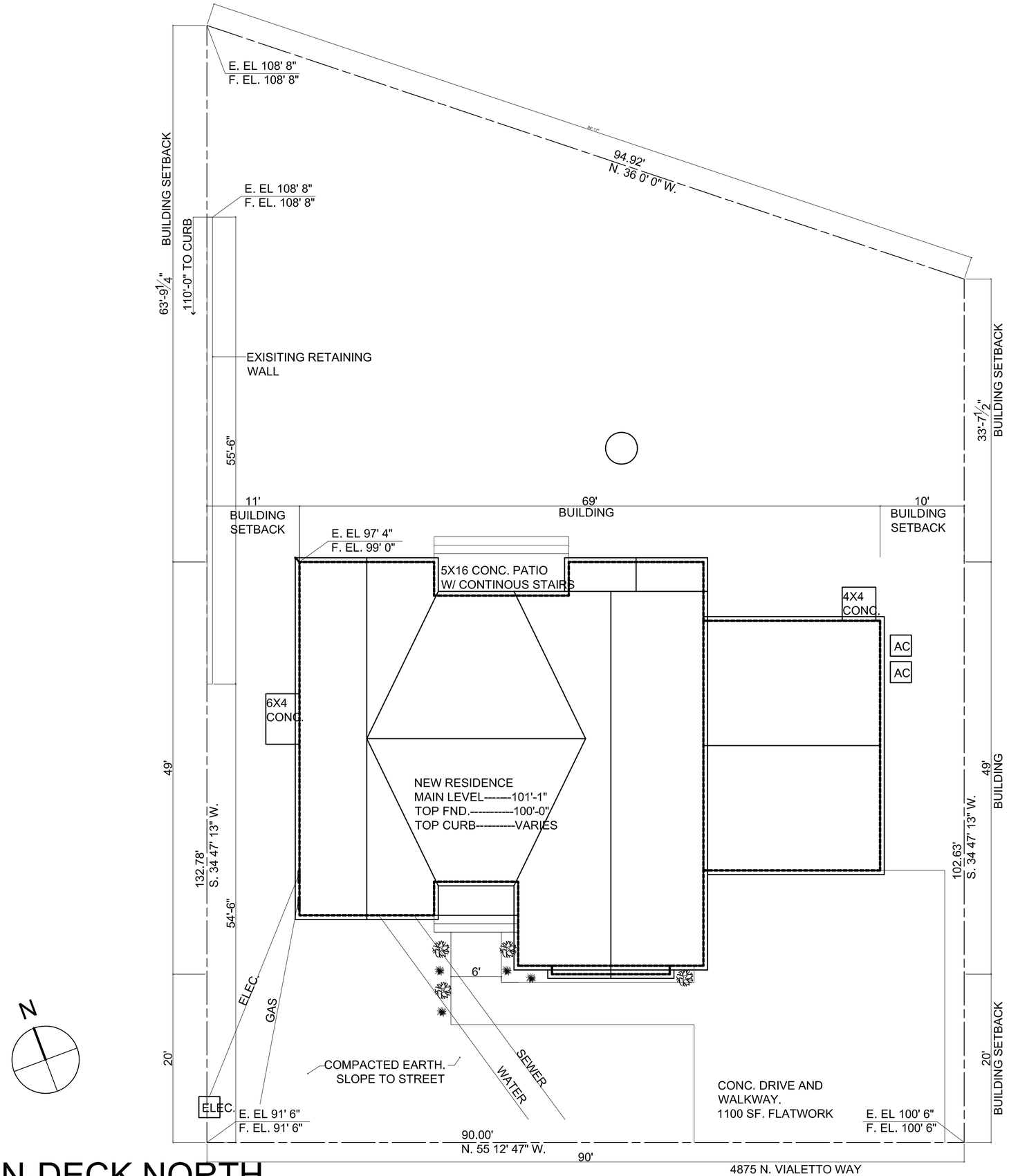
JOSH AND KATIE

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

DATE:
FEB 5, 2021

TITLE SHEET
MATERIALS
INDEX
PROJECT
INFO.

A0.1



SITE PLAN-DECK NORTH

4875 N. VIALETTO WAY. LEHI, UT.

1" = 10'-0"

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707-901-SHED(7433)

PLAN NO. 14x20-1C1D

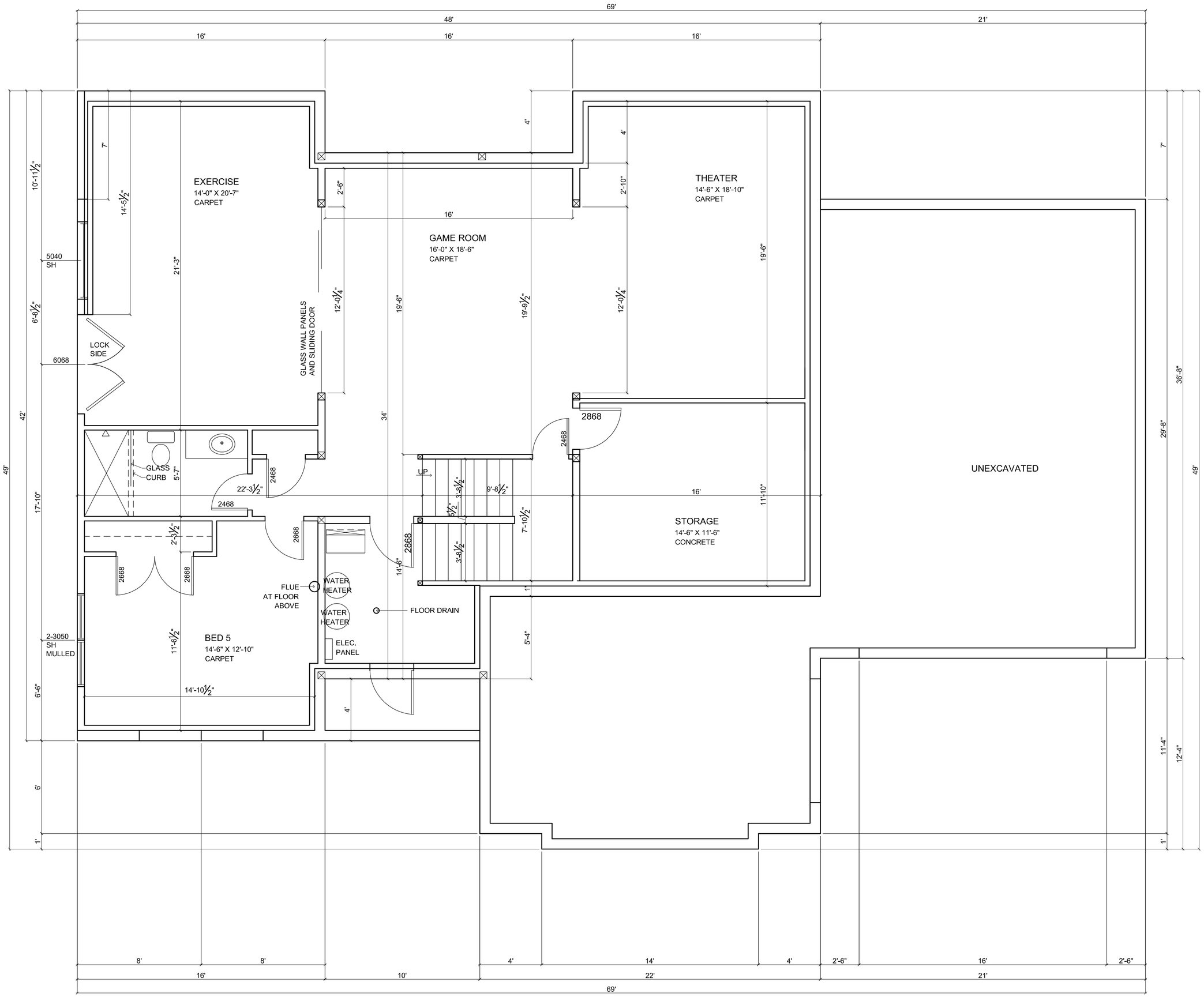
JOSH

SCALE: ¼" = 1'-0"

DATE:
FEB 5, 2021

SITE PLAN

A1.1



1 BASEMENT FLOOR PLAN

¼"= 1'-0" NOTE: SEE ROOF FRAMING PLAN FOR BEAM INFORMATION

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707-901-SHED(7433)

PLAN NO. 14x20-1C1D

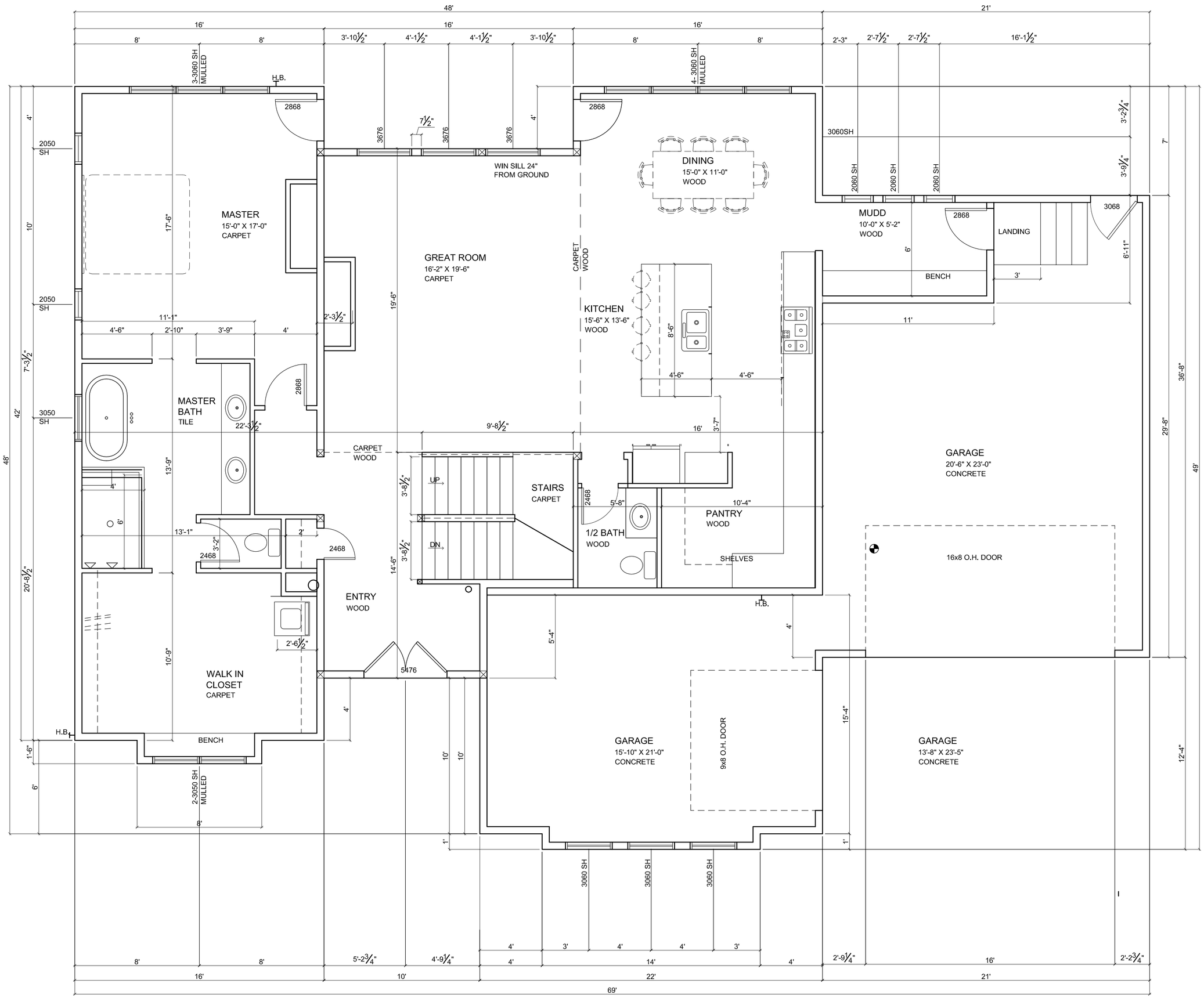
JOSH

SCALE: ¼" = 1'-0"

DATE:

BASEMENT FLOOR PLAN

A2.1



1 FLOOR PLAN

¼"= 1'-0" NOTE: SEE ROOF FRAMING PLAN FOR BEAM INFORMATION

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PLAN NO. 14x20-1C1D

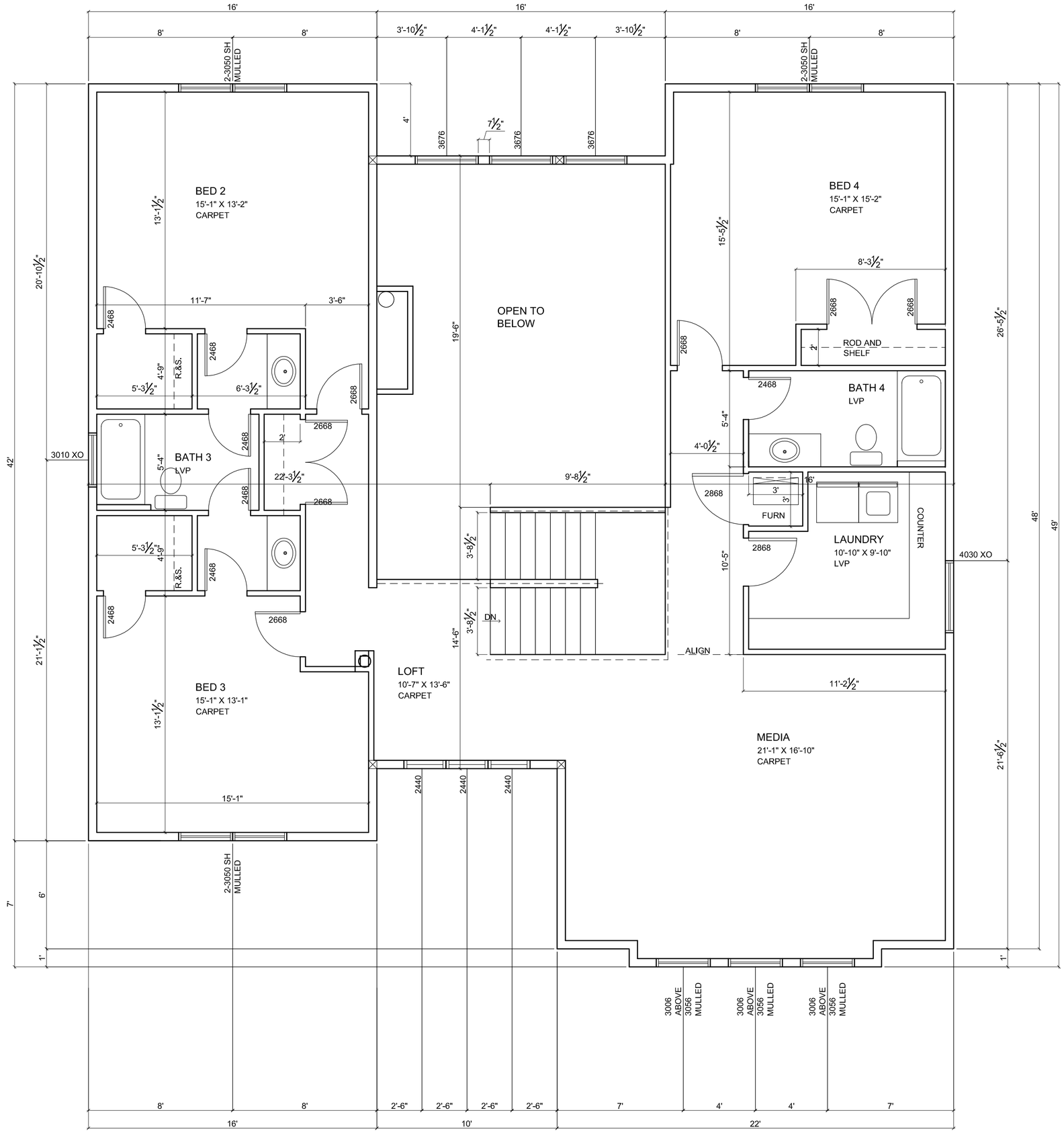
JOSH

SCALE: ¼" = 1'-0"

DATE:

MAIN FLOOR PLAN

A2.2



1 UPPER FLOOR PLAN

¼"= 1'-0" NOTE: SEE ROOF FRAMING PLAN FOR BEAM INFORMATION

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707-901-SHED(7433)

PLAN NO. 14x20-1C1D

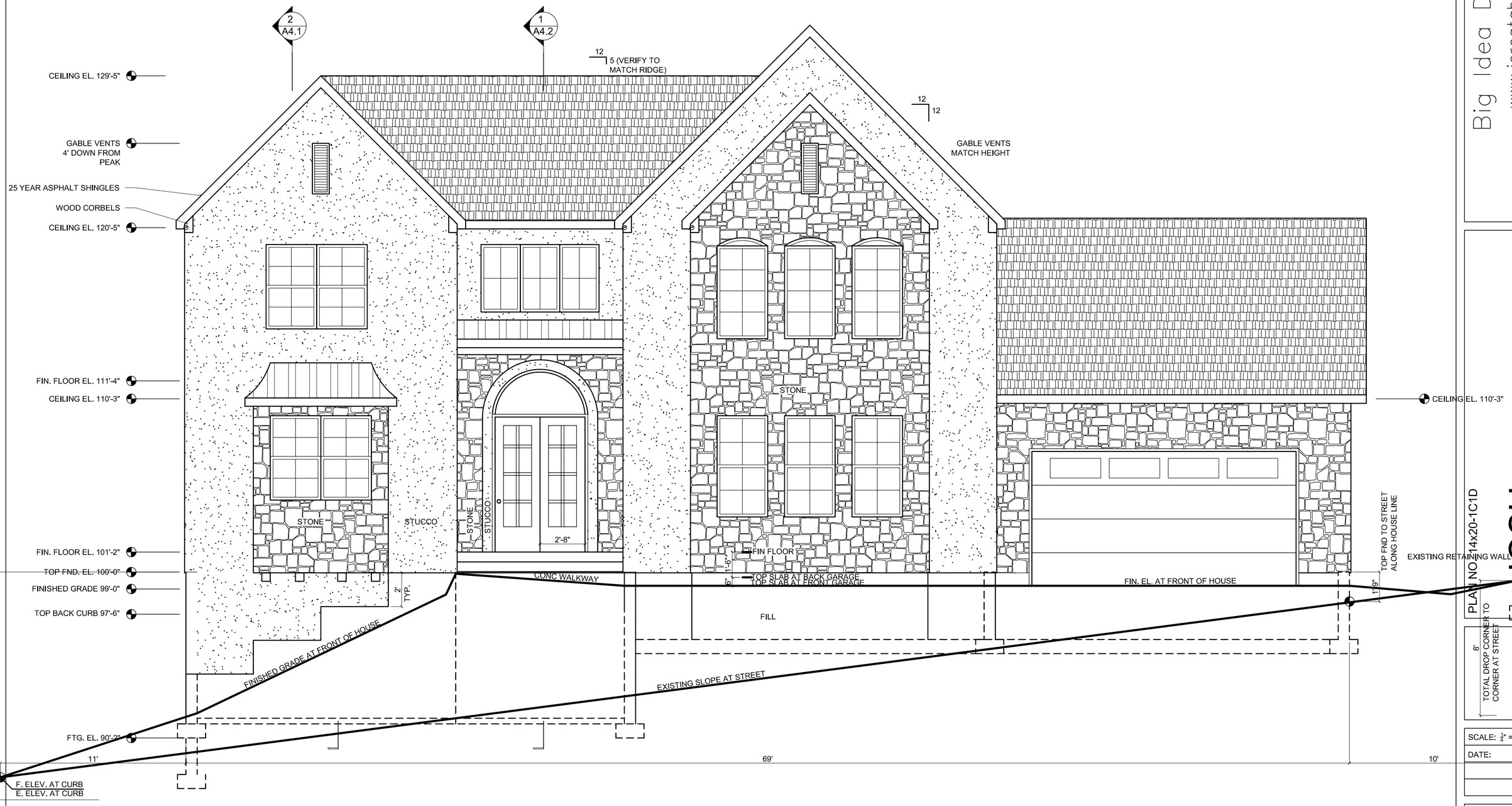
JOSH

SCALE: ¼" = 1'-0"

DATE:

UPPER
FLOOR PLAN

A2.3



1 FRONT ELEVATION

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PLAN NO. 14x20-1C1D

JOSH

8'
TOTAL DROP CORNER TO
CORNER AT STREET

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

DATE:

EXTERIOR
ELEVATIONS

A3.1

0,0

1 LEFT ELEVATION

Big Idea Designs
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707-901-SHED(7433)

PLAN NO. 14x20-1C1D

JOSH

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

DATE:

EXTERIOR ELEVATIONS

A3.2

0,0

1 REAR ELEVATION

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PLAN NO. 14x20-1C1D

JOSH

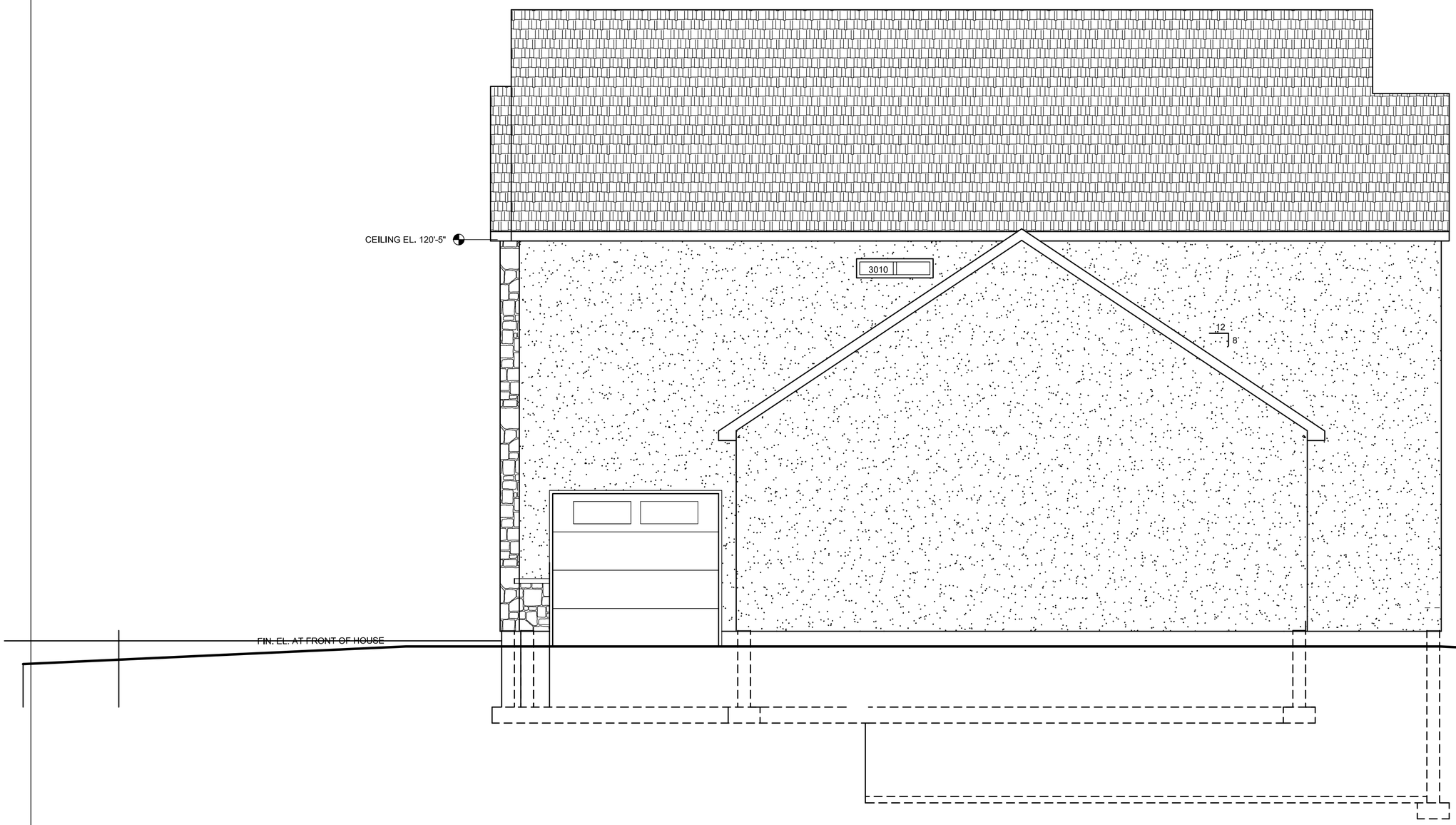
SCALE: 1/4" = 1'-0"

DATE:

EXTERIOR ELEVATIONS

A3.3

0,0



1 RIGHT ELEVATION

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PLAN NO. 14x20-1C1D

JOSH

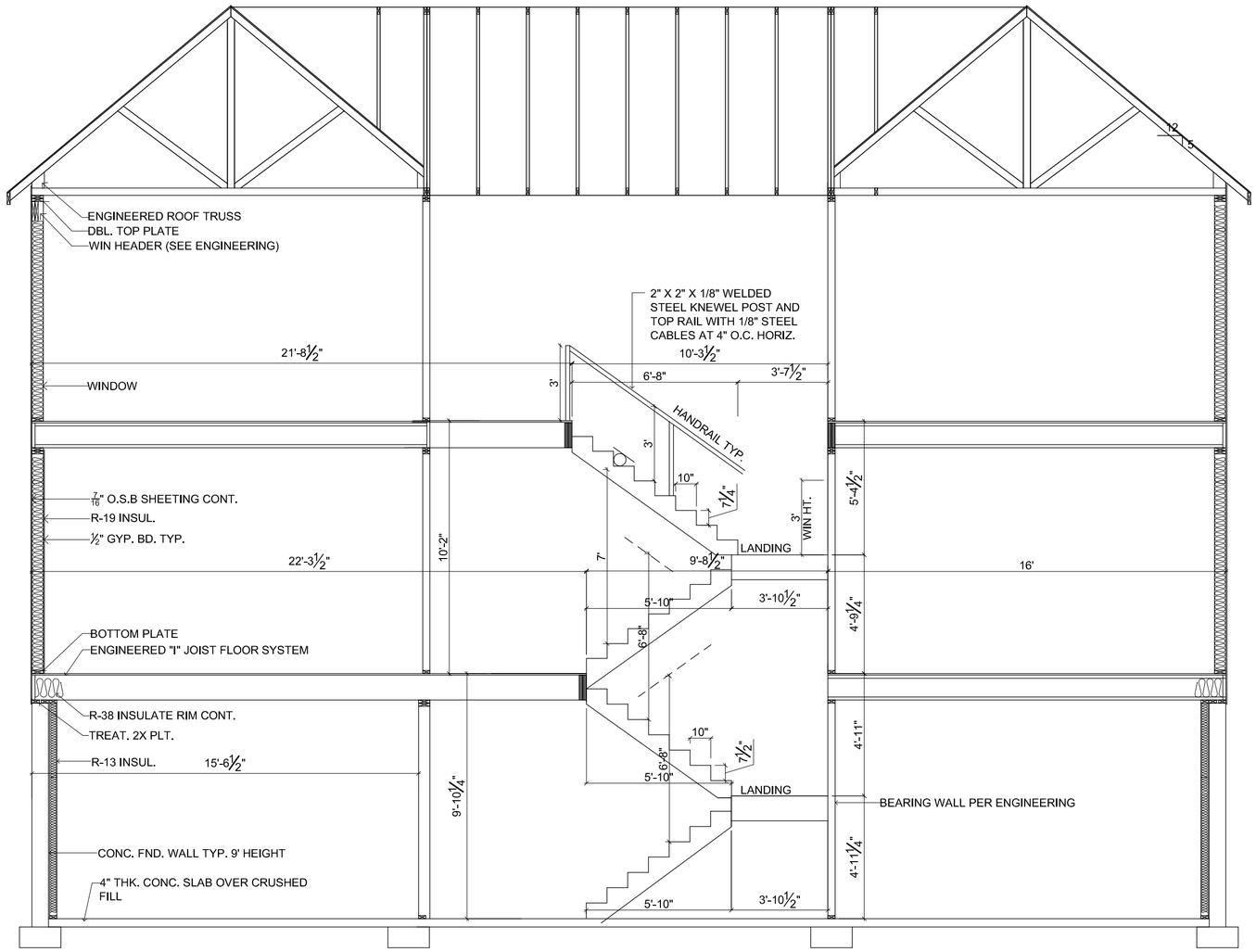
SCALE: 1/4" = 1'-0"

DATE:

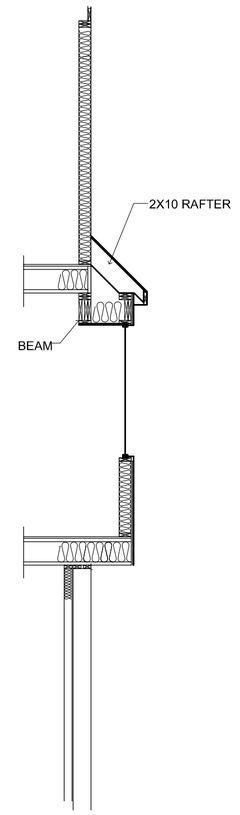
EXTERIOR ELEVATIONS

A3.4

0,0



1 SECTION



2 SECTION

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PLAN NO. 14x20-1C1D

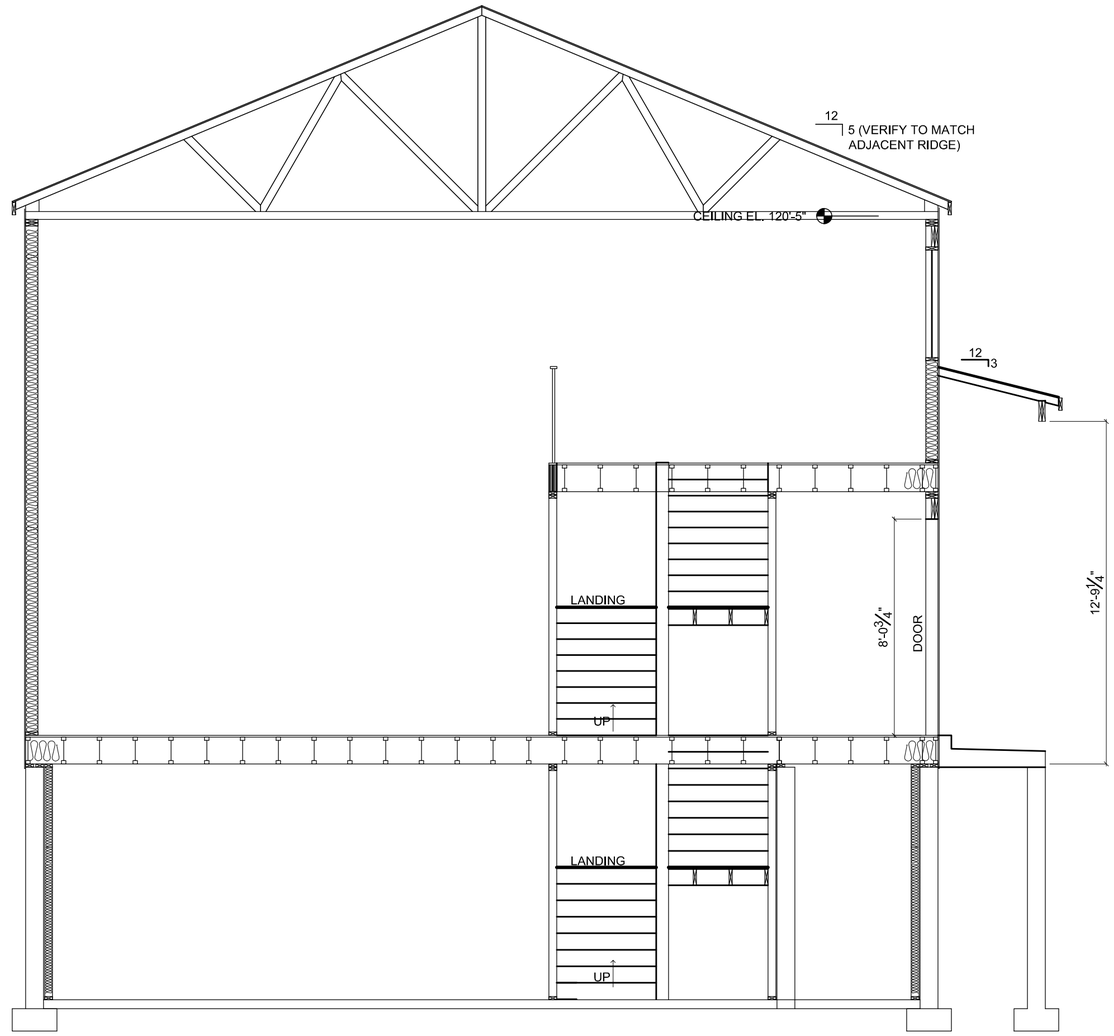
JOSH

SCALE: ¼" = 1'-0"

DATE:

BUILDING SECTION

A4.1



1 SECTION

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PLAN NO. 14x20-1C1D

JOSH

SCALE: ¼" = 1'-0"

DATE:

BUILDING SECTION

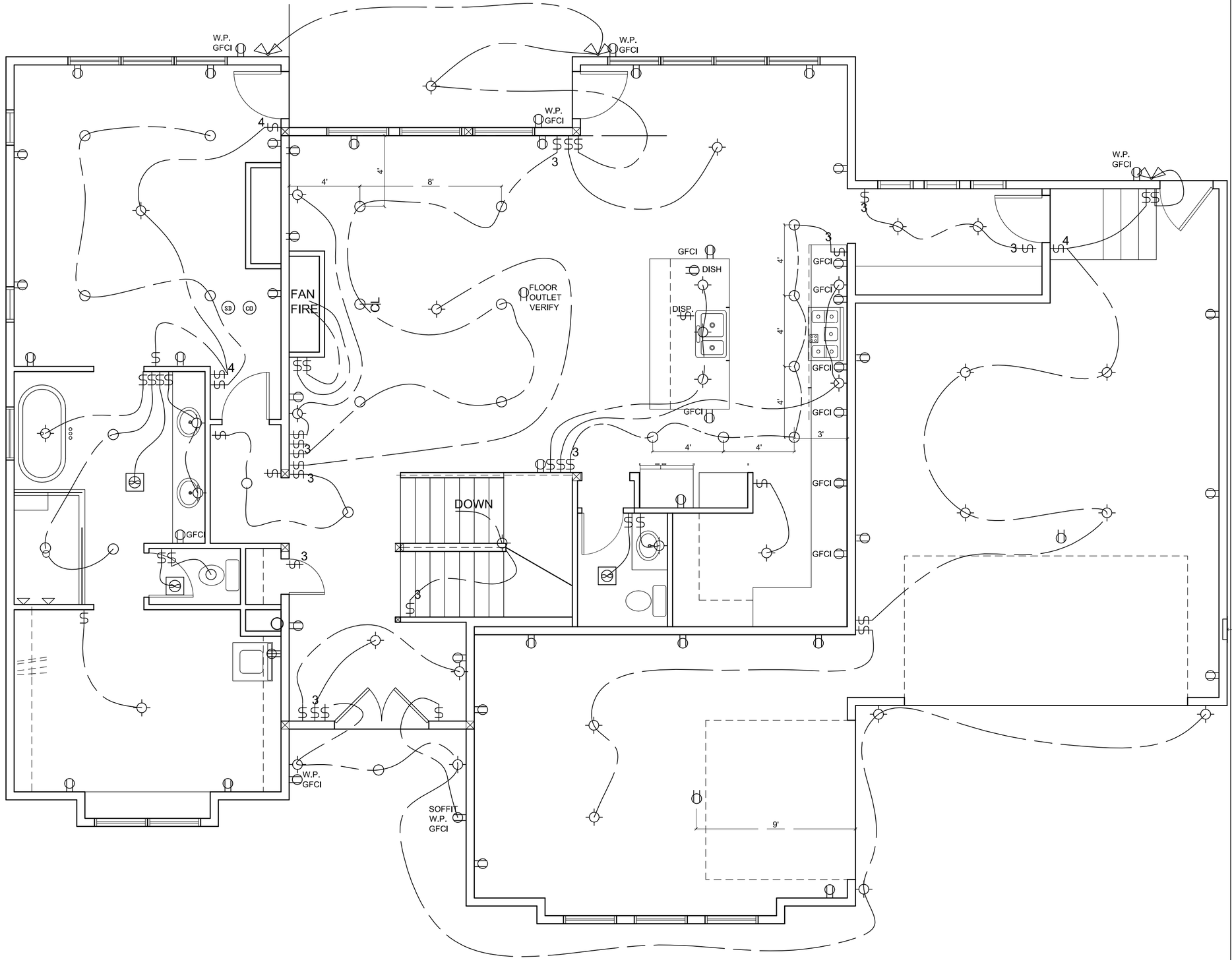
A4.2

0,0

SWITCH
3 WAY SWITCH
WP WP OUTLET
GFI GFCI
OUTLET
220 OUTLET
THERMOSTAT
CAT 5 TELEPHONE
TV TELEVISION CAT 6 W/ INDIV HOME RUNS
FLOOD LIGHT
ELECTRIC PANEL
SD SMOKE DETECTOR
CD CO DETECTOR
LIGHT
RECESSED CAN LIGHT
48" FLOURESCENT LIGHT
BATH FAN
CEILING FAN

ONE 4 PAIR CAT 5 AND ONE RG6 COAXIAL LINE TO BE RUN FROM THE COMMUNICATIONS HUB TO THE EXTERIOR PHONE SERVICE BOX

PROVIDE ARC VOLT CIRCUIT INTERUPTER IN BREAKER PANEL FOR ALL 115 120 OUTLET CIRCUITS IN BEDROOMS. EACH BEDROOM TO HAVE SEPERATE LINE.



MAIN FLOOR ELECTRICAL

N.T.S.

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707-901-SHED(7433)

PLAN NO. 14x20-1C1D

200 AMP METER BASE

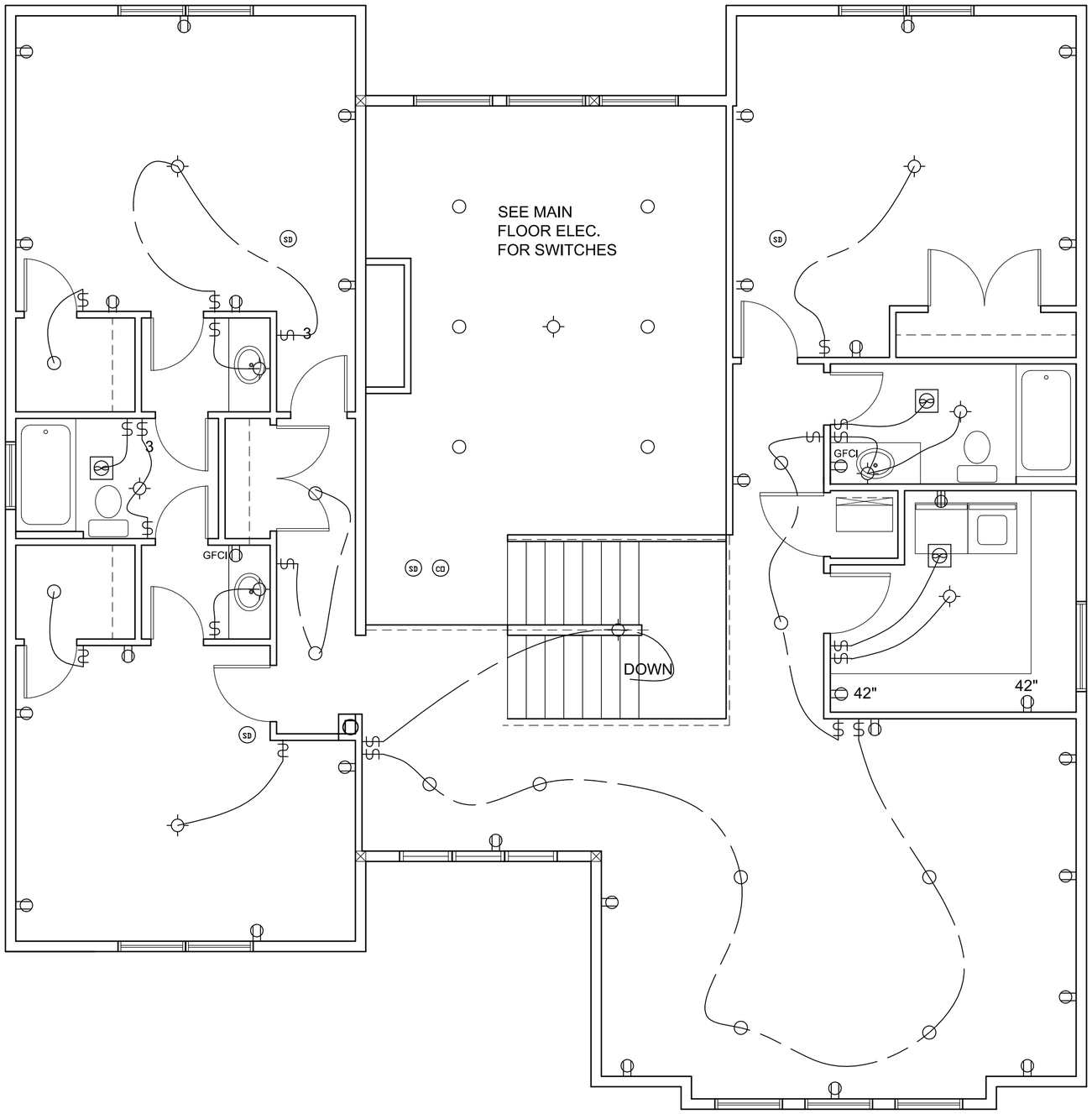
JOSH

SCALE: $\frac{1}{4}$" = 1'-0"

DATE:

MAIN FLR. ELECTRICAL

E1.1



UPPER FLOOR ELECTRICAL

N.T.S.

Big Idea Designs
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707-901-SHED(7433)

PLAN NO. 14x20-1C1D

JOSH

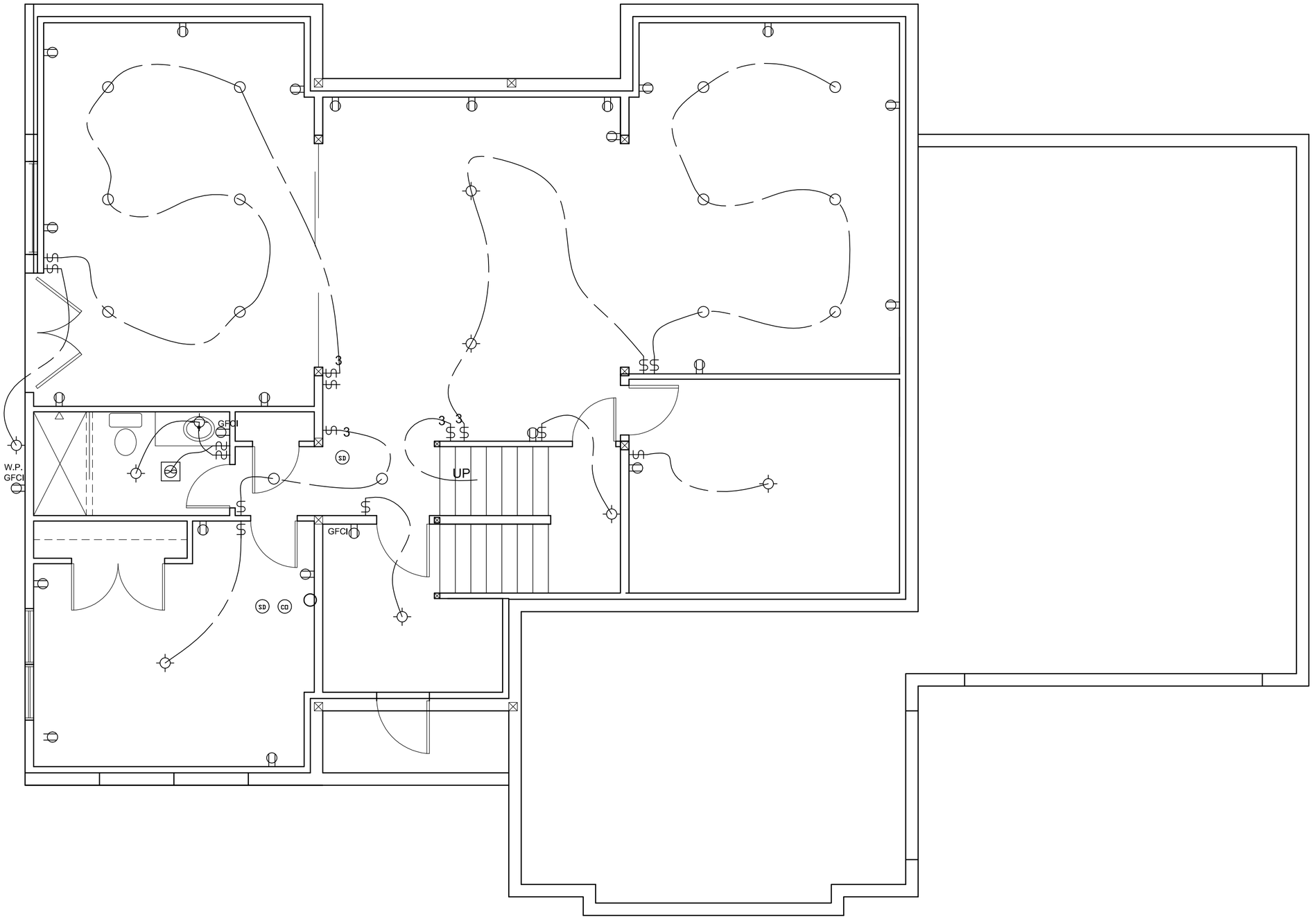
SCALE: 1/4" = 1'-0"

DATE:

UPPER FLR.
ELECTRICAL

E1.2

0,0



BASEMENT ELECTRICAL

N.T.S.

Big Idea Designs
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707-901-SHED(7433)

PLAN NO. 14x20-1C1D

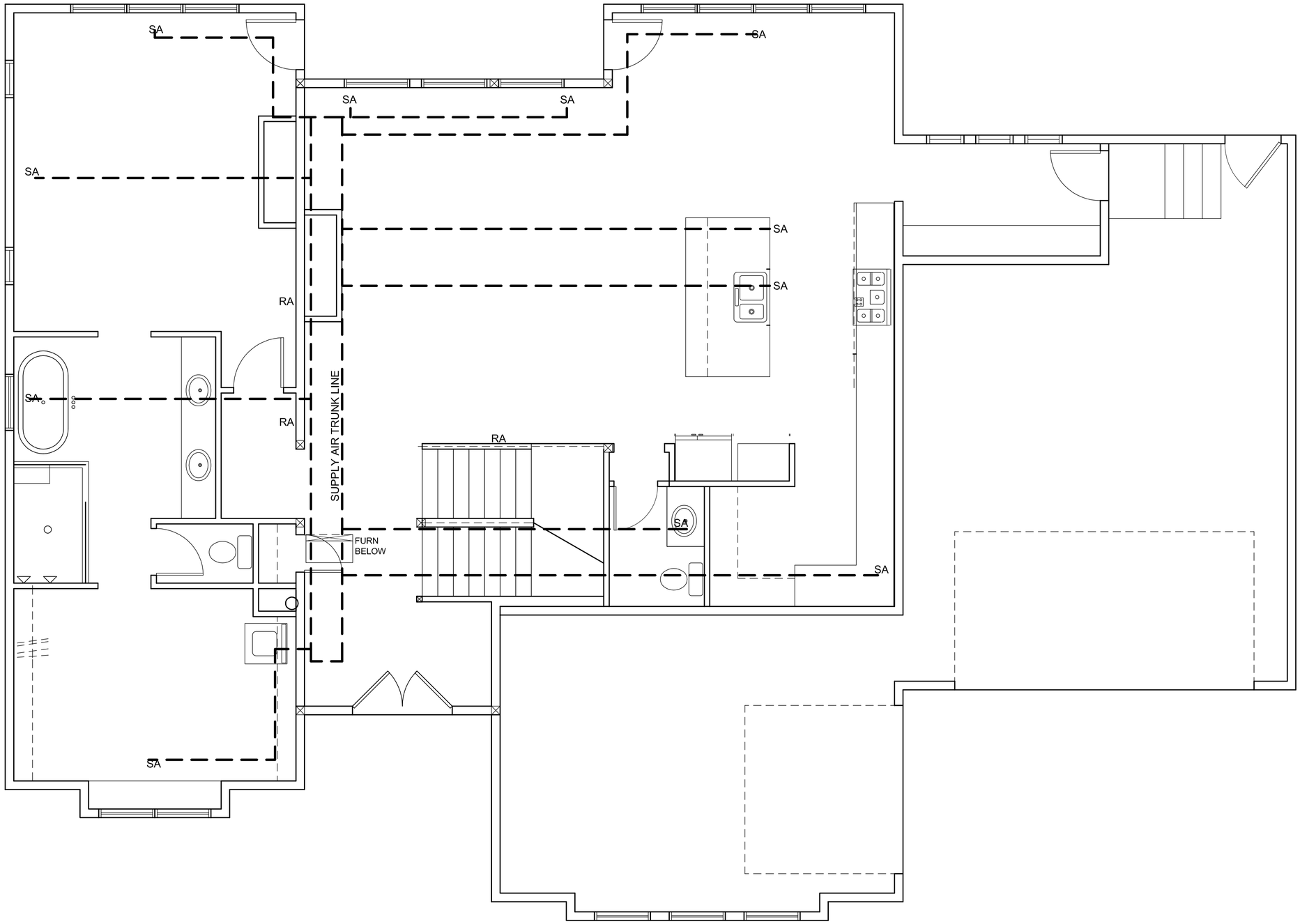
JOSH

SCALE: $\frac{1}{4}$" = 1'-0"

DATE:

UPPER FLR.
ELECTRICAL

E1.3



1 MAIN FLOOR HVAC PLAN
N.T.S.

Big Idea Designs
www.icreatables.com
707-901-SHED(7433)

PLAN NO. 14x20-1C1D

JOSH

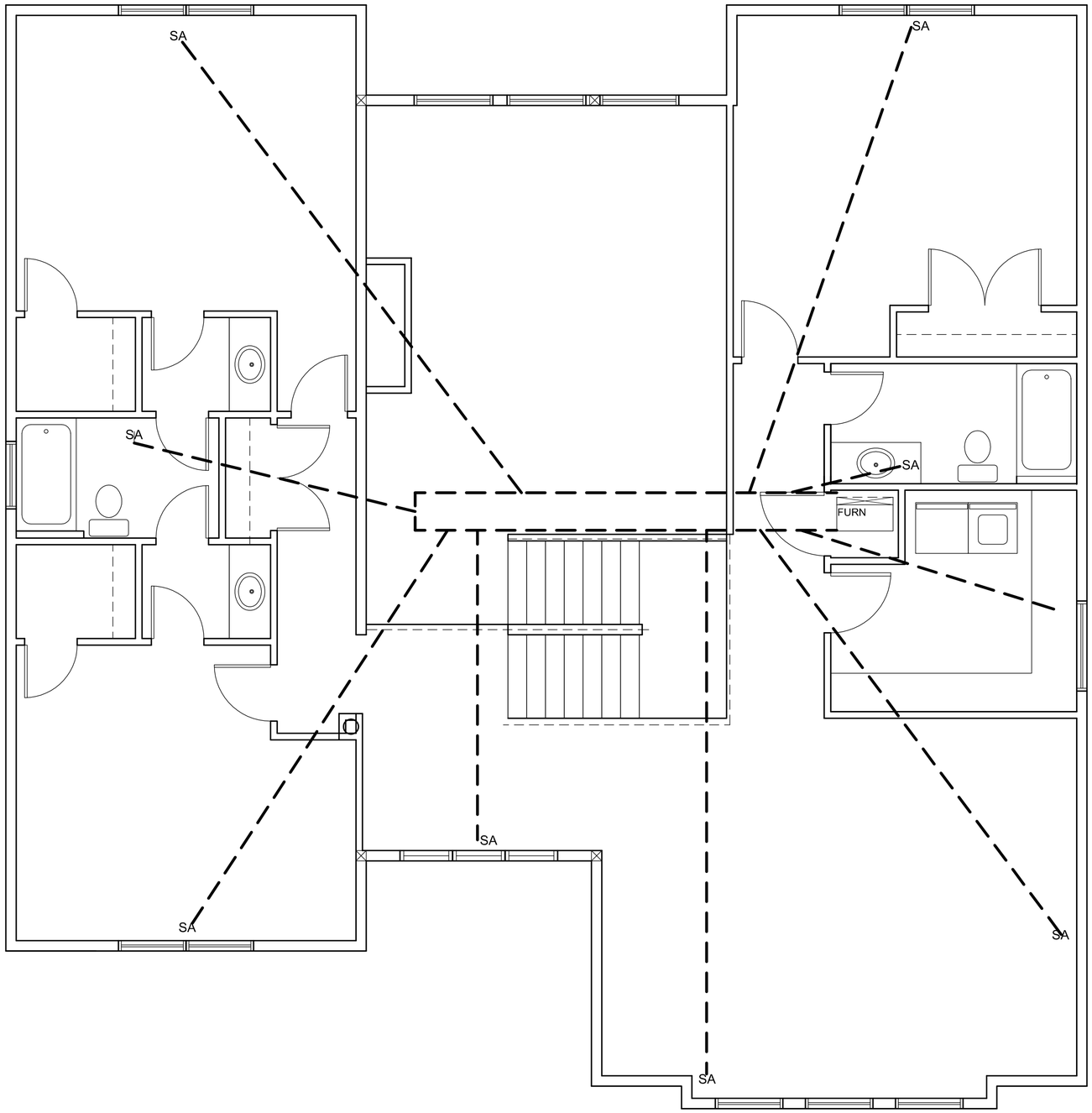
SCALE: $\frac{1}{4}$" = 1'-0"

DATE:

MAIN FLOOR HVAC

M1

0,0



1 UPPER FLOOR HVAC PLAN
N.T.S.

Big Idea Designs
www.icreatables.com
707-901-SHED(7433)

PLAN NO. 14x20-1C1D

JOSH

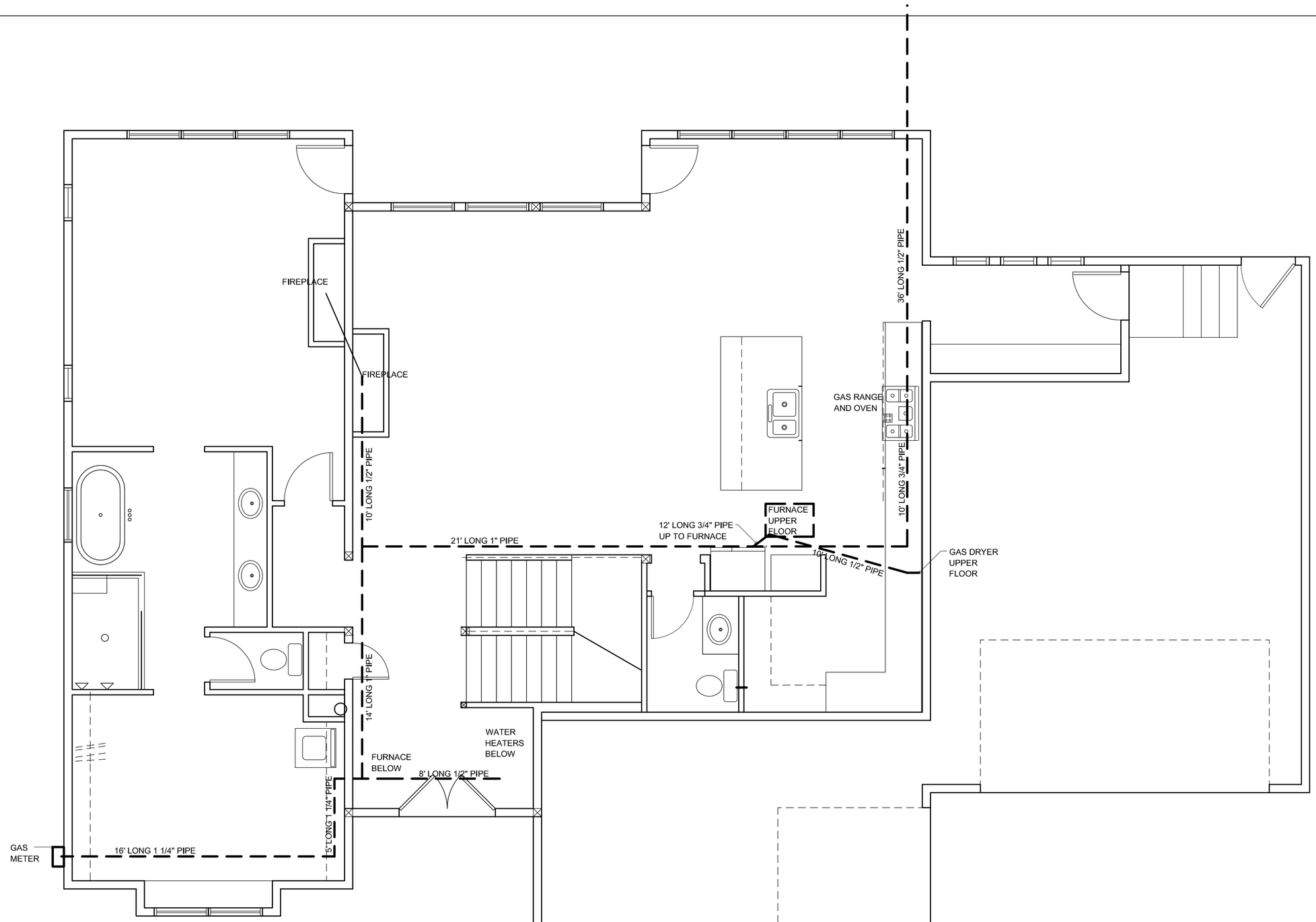
SCALE: $\frac{1}{4}$" = 1'-0"

DATE:

UPPER FLOOR HVAC

M2

0,0



FIXTURE BTU

100,000	STOVE / OVEN
22,000	DRYER
90,000	FURNACE
90,000	FURNACE
40,000	WATER HEATER
40,000	WATER HEATER
40,000	FIREPLACE
422,000	TOTAL B.T.U.

BLACK IRON GAS SUPPLY LINE

1 GAS PIPING DIAGRAM

N.T.S.

Big Idea Designs
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707-901-SHED(7433)

PLAN NO. 14x20-1C1D

JOSH

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

DATE:

GAS PIPING DIAGRAM

M3

0,0

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA Big Idea Designs Strobel Residence (Lehi) 6960121

1. Building code: Utah Code, Title 15A
   - 1.1 Model building code: 2015 IRC
   - 1.2 Use and occupancy classification: R (Residential - 1-unit dwelling)
   - 1.3 Risk Category: II (Not occupancy categories I, III, IV)
2. Dead loads
   - 2.1 Roof = 15 psf (10 psf top chord, 5 psf bottom chord)
   - 2.2 Floor = 12 psf
   - 2.3 Walls = 10 psf (interior walls), 12 psf (exterior walls)
3. Live loads
   - -- Roofs (ordinary construction) = 20 psf (or 300 lb point load)
   - -- Residential (1-2 unit dwelling) = 40 psf
   - -- Stairs and exits (residential 1-2 unit dwelling) = 40 psf (or 300 lb point load)
   - -- Decks = 60 psf
4. Rain load
   - 4.1 Median 15-minute duration rainfall intensity = (N/A) in/hr
   - 4.2 Median 60-minute duration rainfall intensity = (N/A) in/hr
5. Snow load
   - 5.1 Ground snow load, Pg = 52 psf (elevation 5433 ft)
   - 5.2 Exposure factor, Ce = 1
   - 5.3 Thermal factor, Ct = 1
   - 5.4 Snow importance factor, Is = 1
   - 5.5 Flat roof snow load, Pf = 36 psf
   - 5.6 Roof slope factor, Cs = 0.63
6. Earthquake design data
   - 6.1 Mapped acceleration parameters
     - 6.1.1 Latitude, Longitude: 40.448, -111.872
     - 6.1.2 MCE short period Ss = 1.32 SDS = 1.06
     - 6.1.3 MCE 1.0 sec. period S1 = 0.49 SD1 = 0.59
   - 6.2 Seismic design category: D2
   - 6.3 Seismic importance factor, Ie = 1
   - 6.4 Basic structural system: Bearing wall systems
   - 6.5 Seismic force-resisting system: Light-frame wood walls (wood sheathing)
     - 6.5.1 Response modification factor R = 6.5
     - 6.5.2 System overstrength factor Omega = 3
     - 6.5.3 Deflection amplification factor Cd = 4
   - 6.6 Equivalent Lateral Force Procedure
     - 6.6.1 Seismic response coefficient Cs = 0.16
     - 6.6.2 Seismic base shear (LRFD) V = 21497 lb
7. Wind design data
   - 7.1 Exposure category: C
   - 7.2 Basic design wind speed, V = 105 mph
   - 7.3 Components and cladding pressure = 28 psf (end), 24 psf (interior)
   - 7.4 Internal pressure coeff., Gcpi = 0.18
8. Geotechnical design basis:
   - Presumptive values, 2018 IBC Table 1806.2
   - 8.2 Site class = D-Default
   - 8.3 Soil notes: None
   - 8.4 Lateral earth pressure
     - 8.4.1 Active = 30 psf/ft
     - 8.4.2 At-rest = 60 psf/ft
   - 8.5 Allowable foundation parameters
     - 8.5.1 Allowable soil bearing, Qa = 1500 psf
     - 8.5.2 Allowable lateral bearing = 150 psf/ft
     - 8.5.3 Coefficient of friction = 0.25
   - 8.6 Minimum frost cover = 30 in.

DEFERRED SUBMITTALS

1. The following items are to submitted subsequent to the time of application (deferred submittals):
   - -- Prefabricated metal plate wood trusses - roof (truss manufacturer)
2. Deferred submittals shall have the prior approval of the building official (2018 IBC 107.3.4.1).
3. Deferred submittal documents shall be submitted to the registered design professional in responsible charge who shall review and forward them to the building official with a notation indicating that the documents have been reviewed and found to be in general conformance to the design of the building (2018 IBC 107.3.4.1).
4. Deferred submittal items shall not be installed until the design and submittal documents have been approved by the building official (2018 IBC 107.3.4.1).

GENERAL

1. Construction documents are valid for a single use at the project location and shall not be reused, copied, or reproduced without written approval of the registered design professional in responsible charge.
2. General notes and typical details are provided as a supplement to the construction documents and apply where specific notes and details are not available. Specific notes and structural details shall take precedence over general notes and typical details. Structural requirements shown in the framing plans and in structural details shall take precedence over structural notes indicated in architectural sections.
3. Printed dimensions shall take precedence over scales shown on construction documents. The registered design professional in responsible charge does not warrant the accuracy of scaled dimensions.
4. Approval by the inspector does not imply approval by the registered design professional in responsible charge. Structural specifications that are unclear or ambiguous shall be referred to the registered design professional in responsible charge for interpretation or clarification.
5. The registered design professional in responsible charge assumes no liability for the accuracy, completeness, or code compliance of architectural, electrical, mechanical, drainage, or other non-structural specifications.
6. Omissions in and conflicts between the various elements of the construction documents shall be brought to the immediate attention of the registered design professional in responsible charge and shall be resolved by the same before proceeding with any work involved.
7. Requests for substitutions shall be submitted in writing to the registered design professional in responsible charge and shall include the reasons for the request and any cost differentials. Substitutions are not allowed unless approved in writing by the registered design professional in responsible charge.
8. The contractor shall become familiar with all portions of the construction documents and shall ensure that all subcontractors are familiar with those portions pertaining to their area of work. The contractor shall verify all site conditions, dimensions, elevations, coordinate all doors, windows, non-bearing interior and exterior walls, elevations, slopes, stairs, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfer, kerfs, and so forth, and immediately notify the registered design professional in responsible charge regarding actual conditions which are not in agreement with the construction documents.
9. The contractor is responsible for the method, means, and sequence of all structural erection except when specifically noted otherwise in the construction documents. The contractor shall provide temporary shoring and bracing, providing adequate vertical and lateral support during erection. Shoring and bracing shall remain in place until all permanent members are placed and all final connections are completed.
10. The contractor is responsible for standard connections, unless noted otherwise. The contractor shall obtain additional assistance from the registered design professional in responsible charge for non-standard connections.

SOIL AND FOUNDATIONS

1. Geotechnical investigations shall conform to 2018 IBC 1803. Excavation, grading and fill shall conform to 2018 IBC 1804. Footings and foundations shall be constructed in accordance with 2018 IBC 1807 through 1810.
2. Where required, the owner shall submit a geotechnical investigation report to the building official in accordance with 2018 IBC 1803. The contractor shall inform the registered design professional in responsible charge if the soil conditions are not consistent with the investigation report and the foundation design data.
3. Excavations for any purpose shall not remove lateral support from any footing or foundation without first underpinning or protecting the footing or foundation against settlement or lateral translation (2018 IBC 1804.1).
4. Excavation outside the foundation shall be backfilled with soil that is free of organic material, construction debris, cobbles and boulders or with a controlled low-strength material (CLSM). The backfill shall be placed in lifts and compacted, in a manner that does not damage the foundation or the waterproofing or dampproofing material (2018 IBC 1804.3).
5. The ground immediately adjacent to the foundation shall have a 5-percent slope away from the building for a minimum distance of 10 feet measured perpendicular to the face of the foundation wall. If physical obstructions or lot lines prohibit 10 feet of horizontal distance, a 5-percent slope shall be provided to an approved alternative method of diverting water away from the foundation. Impervious surfaces within 10 feet of the building foundation shall have a minimum 2-percent slope (2018 IBC 1804.4).
6. Footings and foundations shall be built on undisturbed soil, compacted fill material or CLSM. Compacted fill material and CLSM shall conform to 2018 IBC 1804.6 and 2018 IBC 1804.7, respectively (2018 IBC 1809.2).
7. The top surface of the footings shall be level. The bottom surface of footings is permitted to have a maximum 10-percent slope. Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground has more than a 10-percent slope (2018 IBC 1809.3).
8. The minimum depth of footings below the undisturbed ground surface shall be 12 inches (2018 IBC 1809.4). Foundation walls, piers and other permanent supports shall be extended below the frost line, except where otherwise protected from frost (2018 IBC 1809.5).
9. The placement of footings on or adjacent to 33-percent slopes and steeper shall conform to 2018 IBC 1808.7.
10. Floors of basements shall be placed over base course not less than 4 inches in thickness and a drain shall be installed around the foundation perimeter that consists of gravel or crushed stone containing not more than 10-percent material that passes through a No. 4 sieve (2018 IBC 1805.4.1, 1805.4.2).
11. Backfill shall not be placed against a foundation wall until the wall has sufficient strength and is anchored to the floor above, or is sufficiently braced to prevent damage by the backfill, except bracing is not required for walls supporting less than 4 feet of unbalanced backfill (R404.1.7).

CONCRETE

1. Concrete materials, quality control, and construction shall comply with 2018 IBC Chapter 19 and ACI 318-14.
2. Compressive strength (minimum specified at 28 days)
   - 2.1. Footings: 3,000 psi (2018 IBC 1808.8.1) (2,500 psi used in design)
   - 2.2. Interior floor slabs on grade: 4,000 psi
   - 2.3. Exterior floor slabs on grade: 4,000 psi
   - 2.4. Suspended slabs: 4,000 psi
   - 2.5. Walls: 3,000 psi (2018 IBC 1904.1) for R-2, R-3 occupancies and appurtenances
     4,000 psi for other occupancies
3. Materials
   - 3.1. Cements (ASTM C 150). Concrete exposed to freezing and thawing or deicing chemicals shall conform to the maximum water-cementitious material ratios and minimum compressive strength requirements of ACI 318-14 table 19.3.1.1 & 19.3.2.1
   - 3.2. Aggregates (ASTM C 33): nominal maximum size of coarse aggregate shall not be larger than 1/5 the narrowest dimension between forms, nor 1/3 the depth of slabs, nor 3/4 the minimum clear spacing between reinforcing bars or wires, tendons, or ducts (ACI 318-14 26.4.2.1).
   - 3.3. Water used in mixing concrete shall be potable, clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials, or other substances deleterious to concrete or reinforcement (ACI 318-14 26.4.1.3.1.b).
   - 3.4. Admixtures shall be subject to prior approval by the registered design professional in responsible charge (ACI 318-14 26.4.1.4.1.b).
   - 3.5. Concrete exposed to freezing and thawing or deicing chemicals shall be air-entrained with air content indicated in ACI 318-14 Table 19.3.3.1. Tolerance on air content as delivered shall be plus/minus 1.5 percent (ACI 318-14 R26.4.2.1(a)(5)).
4. Steel Reinforcement
   - 4.1. Deformed bars: fy = 60 ksi (ASTM A615)
   - 4.2. Welded plain wire: fy = 60 ksi (ASTM A1064)
   - 4.3. Deformed Bar Anchors (DBA) (ASTM A1064)
   - 4.4. Headed Stud Anchors (HSA) (ASTM A108)
   - 4.5. At the time concrete is placed, reinforcement shall be free from ice, mud, oil, or other nonmetallic coatings that decrease bond (ACI 318-14 26.6.1.2).
   - 4.6. Reinforcement shall be accurately placed and adequately supported before concrete is placed, and shall be secured against displacement (ACI 318-14 26.6.2.2).
   - 4.7. Details of reinforcement shall conform to ACI 318-14 Chapter 25.
5. Minimum concrete cover (ACI 318-14 Table 20.6.1.3.1)
   - 5.1. Concrete cast against and exposed to earth: 3 inches
   - 5.2. Concrete exposed to earth or weather:
     - 5.2.1. No. 6 through No. 18 bars: 2 inches
     - 5.2.2. No. 5 bar, W31 wire, and smaller: 1.5 inches
   - 5.3. Concrete not exposed to earth or weather:
     - 5.3.1. Slabs, walls, joists No. 11 bar and smaller: 0.75 inches
     - 5.3.2. Beams, columns primary reinf., ties, stirrups: 1.5 inches
6. Formwork shall conform to ACI 318-14 Sections 26.11 and 26.12 and ACI 347. Forms shall be removed in a manner as not to impair safety and serviceability of the structure. Concrete exposed by form removal shall have sufficient strength not to be damaged by removal operation (ACI 318-14 26.11.2).
7. Conduits, pipes, and sleeves of any material not harmful to concrete and within the limitations of ACI 318-14 20.7 shall be approved by the registered design professional in responsible charge (ACI 318-14 20.7).
8. Construction joints shall be so made and located as not to impair the strength of the structure (ACI 318-14 18.10.9).
9. The thickness of concrete floor slabs on grade shall not be less than 3.5 inches. A 6-mil polyethylene vapor retarder with joints lapped not less than 6 inches (or an equivalent material) shall be placed between the base course or subgrade and the concrete floor slab, except a vapor retarder is not required in detached utility buildings or other unheated facilities (2018 IBC 1907).

MASONRY

1. Masonry materials, construction, and quality shall conform to 2018 IBC 2103-2105, TMS 402/602-16
   - 1.1. Compressive strength: f'c = 2,000 psi (TMS 602-16 1.4B.2 TABLE 2)
2. Concrete masonry units (CMU) (ASTM C 90)
   - 2.1. Grade N
   - 2.2. Compressive strength: f'm = 2,000 psi (TMS 602-16 1.4B.2 TABLE 2)
3. Mortar (ASTM C 270)
   - 3.1. Type S Portland cement (TMS 402-16 7.4.4.2.2)
   - 3.2. Compressive strength: f'c = 2,000 psi (TMS 602-16 1.4B.2 TABLE 2)
4. Grout (ASTM C 476)
   - 4.1. Type: fine or coarse (2018 IBC 2103.3)
   - 4.2. Compressive strength (minimum specified at 28 days): f'c = 2,000 psi (ASTM C 1019)
5. Steel reinforcement
   - 5.1. Deformed bars: fy = 60 ksi (ASTM A 615 Gr. 60)
   - 5.2. Deformed Bar Anchors (DBA) (ASTM A1064)
   - 5.3. Headed Stud Anchors (HSA) (ASTM A108)
6. Bed joint thickness shall be 5/8 inch maximum (TMS 602-16 1.4B.2)
7. Grout shall have an 8"-11" slump using a 3/8" maximum aggregate. Grout lifts shall not exceed 5 feet in height unless noted otherwise. Consolidate by mechanical vibration pours that exceed 12 inches in height.
8. The clear distance between parallel bars shall not be less than the nominal diameter of the bars, nor less than 1 inch (TMS 402-16 6.1.3). Joint reinforcement shall have cover not less than 5/8". (TMS 402-16 6.1.4.2)
9. The diameter of bend measured on the inside of reinforcing bars, other than for stirrups and ties, shall not be less than specified in table 6.1.8 (TMS 402-16 6.1.8.2)
10. All masonry below grade shall be solid grouted.
11. Control joint spacing not to exceed 30'-0". See Architectural for locations.

MASONRY AND STONE VENEER

1. Masonry veneer materials, construction, and quality shall conform to 2018 IBC 2103-2105 and TMS 402-16 Chap. 6.
2. Lintels
   - 2.1. Veneer shall not support any vertical load other than the dead load of the veneer above. Veneer above openings shall be supported on lintels of noncombustible materials. Lintels shall have 1 inch of bearing for each 1 foot of span, but not less than 4 inches of bearing.
3. Anchorage
   - 3.1. Veneer shall be anchored to the supporting wall framing with hot-dipped galvanized metal ties. (Strand wire or corrugated sheet metal)
   - 3.2. Engage all anchor ties with a No. 9 gage wire in the center of the veneer and embedded in the mortar joint. (R703.8.4.1)
   - 3.3. Each tie shall be spaced not more than 16 inches on center horizontally and vertically and shall support not more than 2 square feet of wall area. Additional metal ties shall be provided around all wall openings greater than 16 inches in either dimension. (R703.8.4.1)

WOOD

1. Wood materials, quality, and construction shall conform to 2018 IBC Chapter 23 and Table 2304.10.
2. Structural lumber (2018 IBC 2303.1.1-9, 2018 NDS)
   - 2.1. Bearing walls: Douglas-Fir Larch (DF) Stud (ASTM D 1990, DOC PS 20)
   - 2.2. Posts: Douglas-Fir Larch (DF) Stud (ASTM D 1990, DOC PS 20)
   - 2.3. Beams and headers: Douglas-Fir Larch (DF) No. 2 (ASTM D 1990, DOC PS 20)
   - 2.4. Heavy timber: Douglas-Fir Larch (DF) No. 1 (ASTM D 1990, DOC PS 20)
   - 2.5. Sill plates: Preservative-treated wood, redwood (AWPA U1 M4)
   - 2.6. Naturally durable or preservative-treated wood shall be used where structural lumber is 18 inches or closer to exposed ground; where structural lumber is in contact with exterior masonry or concrete walls below grade; where sleepers, sills, posts, and columns are on a concrete or masonry slab or footing that is in direct contact with earth; and where structural lumber is attached directly to exterior masonry or concrete walls, unless a 0.5 inch air space on top, sides, and end is provided (2018 IBC 2304.12).
3. Structural logs (ASTM D 3957) - ICC - 400 standard for the design and construction of log structures
4. Structural glued-laminated timber (2018 IBC 2303.1.3, 2018 NDS 5.1.1)
   - 4.1. Single span: 24F-1.8E (24F-V4) (ASTM D 3737, ANSI/AITC A190.1)
   - 4.2. Multiple span: 24F-1.8E Balanced layup (24F-V8) (ASTM D 3737, ANSI/AITC A190.1)
   - 4.3. Cantilever span: 24F-1.8E Balanced layup (24F-V8) (ASTM D 3737, ANSI/AITC A190.1)
5. Structural composite lumber and engineered wood (2018 IBC 2303.1.10, 2018 NDS 8.1.1)
   - 5.1. Laminated strand lumber (LSL)
     - 5.1.1. Ex = 1.3E (ASTM D 5456)
     - 5.1.2. Ex = 1.5E (ASTM D 5456)
     - 5.1.3. Ex = 1.55E (ASTM D 5456)
     - 5.1.4. 1.125 inch APA Performance-Rated (or equivalent) rim board - (2018 IBC 2303.1.13, ASTM 7672, ANSI/APA PRR410)
   - 5.2. Laminated veneer lumber (LVL)
     - 5.2.1. Ex = 2.0E (ASTM D 5456)
   - 5.3. Parallel strand lumber (PSL)
     - 5.3.1. Ex = 2.0E (beams) (ASTM D 5456)
     - 5.3.2. Ex = 1.8E (columns) (ASTM D 5456)
   - 5.4. Prefabricated wood I-joist (2018 IBC 2303.1.2, 2018 NDS 7.1.1) (ASTM D 5055)
6. Wood structural panels (2018 IBC 2304.8, 2018 NDS 9.1.3)
   - 6.1. Roof, floor, and wall sheathing: oriented strand board (OSB) (DOC PS 1,2).
   - 6.2. Sheathing shall be manufactured with exterior glue and not less than 4X8 feet, except at boundaries and at changes in framing (2018 IBC 2305.1, AWC SDPWS-2015).
   - 6.3. Wall sheathing
     - 6.3.1. Oriented strand board (OSB) (DOC PS 1,2)
     - 6.3.2. All panel joints in walls shall occur over studs or blocking using a minimum of 8d common nails spaced a maximum of 6 inches at panel edges and 12 inches at intermediate framing (2018 IBC 2306.3).
   - 6.4. Roof and floor sheathing shall be placed perpendicular to supporting framing. Stagger sheathing joints.
7. Fasteners
   - 7.1. Nails (2018 IBC 2303.6, 2018 NDS Table L4) (ASTM F 1667)

Pennyweight	Common	Box	Sinker
7.1.1. 8d =	0.131" X 2.5"	0.113" X 2.5"	0.113" X 2.375"
7.1.2. 10d =	0.148" X 3.0"	0.128" X 3.0"	0.120" X 2.875"
7.1.3. 16d =	0.162" X 3.5"	0.135" X 3.5"	0.148" X 3.250"
7.1.4. 20d =	0.192" X 4.0"	0.148" X 4.0"	0.177" X 3.750"
7.1.5. 30d =	0.207" X 4.5"	0.148" X 4.5"	0.192" X 4.250"

   - 7.2. Staples (2018 IBC 2303.6)
     - 7.2.1. 16 gage = 1.5X0.4375 inch crown (ASTM F 1667)
   - 7.3. Bolts (2018 NDS 12.1.3, Table L1)
     - 7.3.1. Connector bolts (A307)
     - 7.3.2. Anchor bolts (A307) with a 3X3X0.229 inch washer (2018 IBC 2308.3.1) and 7" min embedment.
     - 7.3.3. Bolt holes shall be drilled with a bit 1/32 inch to 1/16 inch larger than the nominal bolt diameter.
   - 7.4. Lag Screws (2018 NDS 12.1.4, Table L2) (A307)
     - 7.4.1. Lag screws shall be inserted in a drilled pilot hole that is 60%-75% of the shank diameter by turning with a wrench. Do not drive screws with a hammer. Lag screws shall be provided with an oversized washer .
   - 7.5. Fasteners in preservative-treated and fire-retardant-treated wood shall be of hot dipped zinc-coated galvanized steel, silicon bronze or copper (2018 IBC 2304.10.5).
   - 7.6. Sheathing fasteners shall be driven so the head or crown is flush with the sheathing surface (2018 IBC 2304.10.2).
8. Joist hangers and connectors (2018 IBC 2303.5)
   - 8.1. Hanger hardware and other wood connections shall be designed to carry the capacity of the supporting members.
9. Floor framing (2018 IBC 2308.4.2)
   - 9.1. Joists shall not have less than 1.5 inches of bearing on wood or metal, or less than 3 inches on masonry (2018 IBC 2308.4.2.2). Pre-fabricated wood I-joists shall have minimum bearing according to the manufacturer's recommendations and specifications.
   - 9.2. Joists shall be supported laterally at the ends and at each support by full-depth solid blocking, except where nailed to a header or band or rim joist. Solid blocking shall not be less than 2 inches thick (2018 IBC 2308.4.2.3).
   - 9.3. Where the nominal depth-to-thickness ratio of the framing member exceeds 6:1, there shall be one line of bridging for each 8 feet of span. Bridging shall consist of not less than 1X3 inch lumber, metal bracing, or full-depth solid blocking (2018 IBC 2308.4.6).
   - 9.4. Notches on the ends of joists shall not exceed one-fourth the joist depth. Holes bored in joists shall not be within 2 inches of the top or bottom of the joist. Notches in the top or bottom of joists shall not exceed one-sixth the depth and shall not be located in the middle third of the span (2018 IBC 2308.4.2.4).
   - 9.5. The diameter of holes bored or cut into structural floor members shall not exceed one-third the depth of the member. Holes shall not be closer than 2 inches to the top or bottom of the member, or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch (R502.8.1).
10. Wall construction (2018 IBC 2308.5)
    - 10.1. Studs shall be placed with their wide dimension perpendicular to the wall. Not less than three studs shall be installed at each corner of an exterior wall (2018 IBC 2308.5.2).
    - 10.2. Bearing and exterior wall studs shall be capped with 2-inch thick nominal double top plates, have a width at least equal to the width of the studs, and shall be installed to provide overlapping at corners and intersections with other partitions. End joints in partitions shall be offset at least 48 inches, and shall be nailed with not less than eight 16d common face nails on each side of the joint. (2018 IBC 2308.5.3.2).
    - 10.3. In nonbearing walls and partitions studs shall be capped with no less than a single top plate installed to provide overlapping at corners and at intersections with other walls and partitions. The plate shall be continuously tied at joints by solid blocking at least 16 inches in length and equal in size to the plate or metal ties with spliced sections fastened on each side of the joint (2018 IBC 2308.5.4).
    - 10.4. Studs shall have full bearing on a 2-inch thick nominal (or larger) bottom plate or sill having a width at least equal to the width of the stud (2018 IBC 2308.5.3.1).
    - 10.5. Bearing partitions parallel to joists shall be supported on beams, girders, doubled joists, walls or other bearing partitions. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls or partitions more than the joist depth unless noted otherwise (2018 IBC 2308.4.5).
    - 10.6. In exterior walls and bearing partitions, any wood stud is permitted to be cut or notched to a depth not exceeding 25 percent of its width. In nonbearing partitions, cutting or notching of studs to a depth of not greater than 40 percent of the width is permitted (2018 IBC 2308.5.9).
    - 10.7. A hole with a diameter not greater than 40 percent of the stud width is permitted to be bored in any wood stud. In no case shall the edge of the bored hole be nearer than 0.625 inches to the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch (2018 IBC 2308.5.10).
    - 10.8. Bearing walls without wood sheathing or gypsum wall board on either side shall have blocking between wall studs at mid-height.
    - 10.9. Studs shall be spaced at 16 inches on center for exterior walls, interior bearing walls, and shear walls, unless noted otherwise on the plans.
11. Posts and columns
    - 11.1. Columns shall be as wide as the member they support, laterally supported at all floor levels, and extend down through the structure to the foundation. Provide squash blocking at rim joist below all columns, trimmers, and posts.
    - 11.2. Wood columns and posts shall be framed to provide full end bearing (2018 IBC 2304.10.7).
    - 11.3. Posts and columns shall be supported by concrete piers or metal pedestals projecting above concrete or masonry floors or decks exposed to weather or water splash, or in basements, and which support permanent structures, unless naturally durable or preservative-treated wood is used. The pedestal shall project at least 6 inches above exposed earth and at least 1 inch above floors.
12. Roof and ceiling framing (2018 IBC 2308.7).
    - 12.1. Roof rafters and ceiling joists shall be supported laterally to prevent rotation and lateral displacement in accordance with 2018 IBC 2308.7.8.
    - 12.2. Rafters and joists over three feet long shall be supported using hanger hardware if not supported by bearing.

PREFABRICATED METAL PLATE WOOD TRUSSES

1. Prefabricated metal plate wood trusses shall be designed in accordance with 2018 IBC 2303.4 and shall conform to the structural specifications and design criteria.
2. The truss designer shall provide a truss package that includes the following items:
   - 2.1. Design drawings of each individual truss (2018 IBC 2303.4.3).
   - 2.2. Truss placement diagram for the project (2018 IBC 2303.4.2).
   - 2.3. Truss member permanent bracing specification (2018 IBC 2303.4.1.2).
3. Transfer of loads and anchorage of each truss to the supporting structure shall be approved by the registered design professional in responsible charge (2018 IBC 2303.4.4).
4. Truss members and components shall not be cut, notched, drilled, spliced or otherwise altered in any way without written concurrence and approval of the registered design professional in responsible charge. Alterations resulting in the addition of loads to any member (e.g. HVAC equipment) shall not be permitted without verification that the truss is capable of supporting such additional loading (2018 IBC 2303.4.5).

STEEL

1. Structural steel work shall conform to 2018 IBC 2205, AISC 341-16, AISC 358-16, and AISC 360-16.
2. Structural shapes
   - 2.1. W: fy = 50 ksi (ASTM A992)
   - 2.2. M,S,C,MC, and L: fy = 36 ksi (ASTM A36)
   - 2.3. HP: fy = 50 ksi (ASTM A572 Gr. 50)
   - 2.4. HSS Rectangular: fy = 46 ksi (ASTM A500 Gr.B)
   - 2.5. HSS Round: fy = 42 ksi (ASTM A500 Gr.B)
   - 2.6. Pipe: fy = 35 ksi (ASTM A53 Gr.B)
   - 2.7. All structural steel shall be properly primed and painted.
3. Plates and bars: fy = 36 ksi (ASTM A36)
4. Structural fasteners
   - 4.1. High-strength bolts: fu = 120-150 ksi (ASTM F3125)
   - 4.2. Common bolts: fu = 60 ksi (ASTM A307 Gr. A)
     - 4.2.1. Nuts (ASTM A563)
     - 4.2.2. Washers (ASTM F436)
     - 4.2.3. Steel to steel bolted connections shall be made with high strength-bolts, unless noted otherwise. Bolts shall carry the identifying mark of three radial lines. All other bolted connections shall be made with bolts and nuts conforming to ASTM A307 unless note otherwise. Bolted connections shall be tightened and shall have washers as required by AISC unless noted otherwise. Enlarging holes shall be accomplished by means of reaming. Do not use a torch on any bolt holes.
   - 4.3. Shear studs: fu = 65 ksi (ASTM A108)
   - 4.4. Threaded rods: fy = 36 ksi (ASTM A36)
   - 4.5. Anchor rods: fy = 36 ksi (ASTM F1554 Gr. 36)
5. Steel deck fu = 36 ksi (ASTM A1008)
6. Welding fu = 70 ksi.
   - 6.1. Welding work shall comply with the American Welding Society (AWS) "Structural Welding Code," excluding items conflicting with AISC requirements.

POST-INSTALLED ANCHORS

1. Epoxy adhesive anchoring systems:
   - 1.1. Concrete: Hilti HIT-RE 500 V3 (ICC ES ESR-3814) or Simpson SET-XP (ICC ES ESR-2508) or USP/Mitek CIA-GEL 7000-C (IAMPO ER-473)
   - 1.2. Masonry (grouted): Hilti HIT RE100 (ICC ES ESR-3829) or Simpson SET (ICC ES ESR-1772) or USP/Mitek CIA-GEL 7000 (ICC ES ESR-1702)
   - 1.3. The calculated strength of anchorage assumes the following conditions for installation: 21 day minimum age of concrete, maximum short term concrete temperature= 150° F, maximum long term concrete temperature= 110° F, dry concrete surface, and normal weight concrete. See adhesive manufacturer notes for minimum temperature requirements. If conditions are otherwise, contact engineer for anchor specifications.
   - 1.4. Steel reinforcement and rods shall be embedded 10 bar diameters unless noted otherwise in the structural drawings and details. Where 10 bar diameters exceeds the member thickness minus minimum cover, steel reinforcement shall be embedded the member thickness minus minimum cover with a standard hook.
   - 1.5. Embedded portions of steel reinforcement and rods shall be clean, straight, and free of mill scale, rust and other coatings that impair the bond with the adhesive. Reinforcement must not be bent after installation (ICC ES ESR-3829).
   - 1.6. Installation of adhesive anchors shall be performed by personnel trained to install adhesive anchors.
2. Mechanical expansion anchors:
   - 2.1. Concrete: Hilti KWIK BOLT TZ (ICC ES ESR-1917)
   - 2.2. Masonry: Hilti KWIK BOLT 3 (ICC ES ESR-1385)
   - 2.3. Expansion anchors shall not be used in tensile load applications (e.g. hold-downs, moment frames).
3. Post-installed anchoring systems shall be installed according to the Manufacturer's Printed Installation Instructions (MPII). Hole cleaning method shall be based on drilling method and borehole conditions and shall conform to the manufacturer's instructions.

STRUCTURAL OBSERVATIONS

1. Where required by the Provisions of Section 1704.6.1 or 1704.6.2, the owner shall employ a registered design professional to perform structural observations as defined in 2018 IBC 202. Prior to the commencement of observations, the structural observer shall submit to the building official a written statement identifying the frequency and extent of the structural observations. At the conclusion of the work, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies which have not been resolved (2018 IBC 1704.6).

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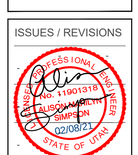
ORIGINAL PROJECT #
6960121
DRAWN BY:
RTM
CHECKED BY:
MCW
SCALE:
NTS
DATE:
08 FEB 2021

BIG IDEA DESIGNS STROBEL RESIDENCE (LEHI)

GENERAL STRUCTURAL NOTES

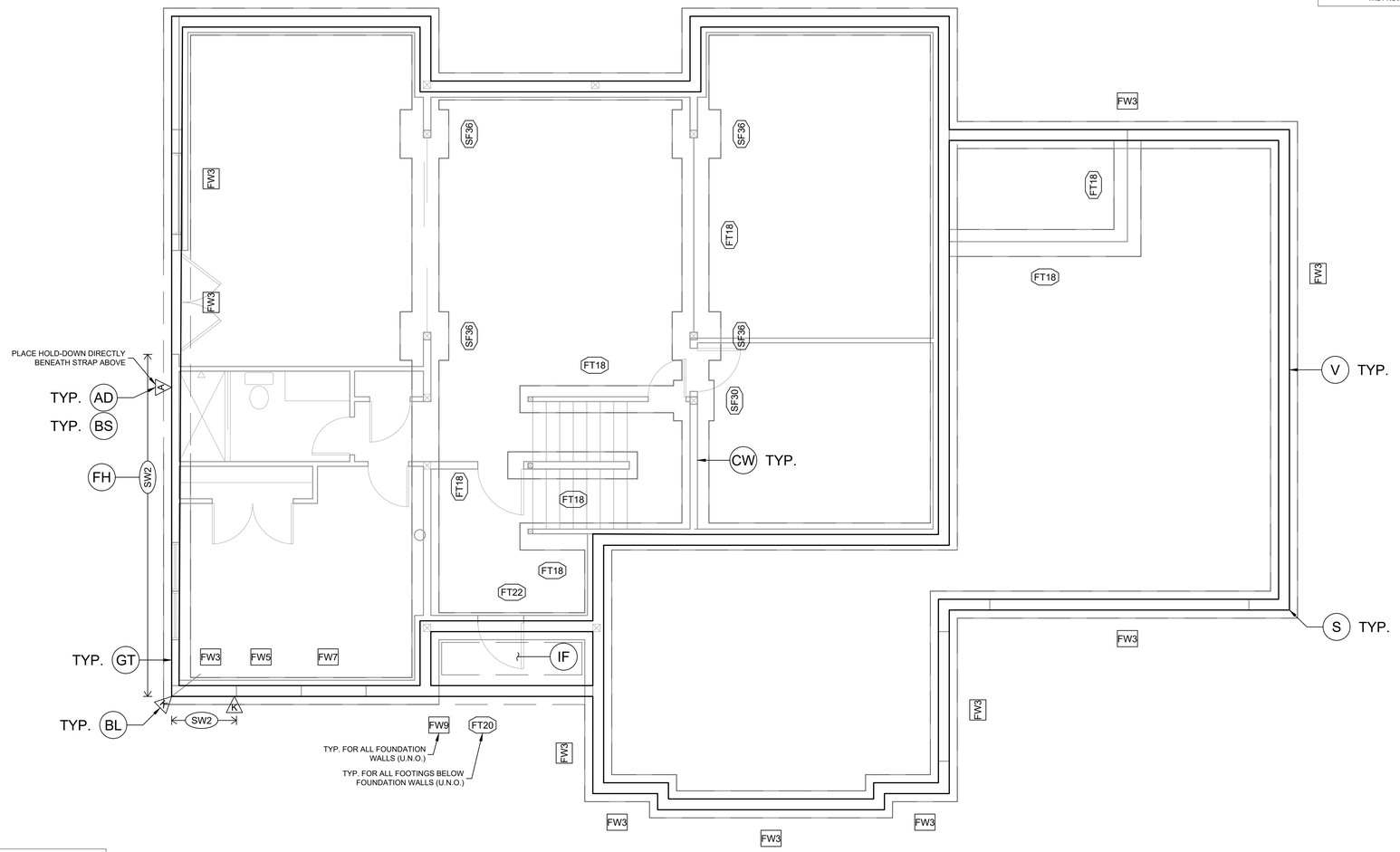
ISSUES / REVISIONS



SN1

FOUNDATION WALL SCHEDULE					
			REINFORCEMENT		
MARK	HEIGHT	WIDTH	VERTICAL	HORIZONTAL	PLACEMENT
FW3	3'	8"	#4 @ 24"	(3) #4	CENTER
FW5	5'	8"	#4 @ 24"	(5) #4	CENTER
FW7	7'	8"	#4 @ 24"	(6) #4	CENTER
FW9	9'	8"	#4 @ 16"	(7) #4	CENTER
1. DOWEL VERTICAL BARS INTO FOOTING.					
2. PLACE TOP AND BOTTOM BARS WITHIN 4" OF TOP AND BOTTOM OF WALL.					
3. PLACE REINFORCEMENT IN CENTER OF WALL OR NEAR EACH FACE, AS NOTED.					

FOOTING SCHEDULE					
				REINFORCEMENT	
MARK	WIDTH	LENGTH	THICKNESS	TRANSVERSE	LENGTHWISE
FT18	18 "	CONT.	10 "	-	(2) #4
FT20	20 "	CONT.	10 "	-	(2) #4
FT22	22 "	CONT.	10 "	-	(2) #4
SF30	30 "	30 "	10 "	(3) #4	(3) #4
SF36	36 "	36 "	12 "	(4) #4	(4) #4
1. CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS AND SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.					
2. FOOTINGS AND FOUNDATIONS, EXCAVATIONS, GRADING, AND FILL SHALL COMPLY WITH THE PROVISIONS OF THE GEOTECHNICAL REPORT (SEE GSN)					



HOLD-DOWN SCHEDULE				
MARK	HOLD-DOWN	MINIMUM FASTENERS	ANCHOR	POST
A	LSTHD8	10d X 2-1/2" (.148 X 2-1/2")	STRAP 8" EMBED.	(2) 2X POST
B	STHD10	10d X 2-1/2" (.148 X 2-1/2")	STRAP 10" EMBED.	(2) 2X POST
C	STHD14	10d X 2-1/2" (.148 X 2-1/2")	STRAP 14" EMBED.	(2) 2X POST
D	CS16 (11" END LENGTHS)	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
E	MST37	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
F	MST48	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
K	HDU4-SDS2.5	SDS1/4" X 2-1/2" (SDS25212)	SBS/8X24	(2) 2X POST
1. HOLD-DOWNS SHALL BE SIMPSON STRONG-TIE OR EQUIVALENT.				
2. SHEAR WALL EDGE NAILING SHALL BE TO HOLD-DOWN POST.				
3. STHD STRAPS SHALL BE "RJ" TYPE AT RIM JOIST LOCATIONS.				

SHEAR WALL SCHEDULE					
				ANCHORAGE	
MARK	SHEATHING	EDGE NAILING	ABUTTING PANEL EDGE FRAMING	SOLE PLATE	SILL PLATE
SW1	7/16"	8d @ 6"	2X	10d @ 6"	1/2" A.B. @ 32"
SW2	7/16"	8d @ 4"	2X	10d @ 6"	1/2" A.B. @ 32"
SW3	7/16"	8d @ 3"	3X or (2)2X	10d @ 12"	1/2" A.B. @ 32"
1. SHEATHING SHALL CONSIST OF WOOD STRUCTURAL PANELS (SEE GSN).					
2. UNLESS NOTED ON DRAWINGS, EXTERIOR STUDS SHALL BE SPACED AT 16" O.C.					
3. SHEATHING NAILS SHALL BE COMMON OR GALVANIZED BOX NAILS. - FIELD NAIL SPACING SHALL BE 12" FOR STUDS SPACED 16" O.C. OR LESS AND 6" O.C. FOR STUDS SPACED AT 24" O.C.					
4. FOR SW1 ONLY, EDGE NAILS MAY BE SUBSTITUTED WITH 1-1/2" 16 GAGE STAPLES SPACED AT 3" O.C. AND FIELD NAILS MAY BE SUBSTITUTED WITH 16 GAGE STAPLES AT 12" O.C.					
5. ANCHORAGE NAILS SHALL BE COMMON NAILS.					
6. ANCHOR BOLTS SHALL HAVE A 3X3X0.229" WASHER AND 7" MIN EMBEDMENT. THE WASHER SHALL EXTEND TO WITHIN 1/2" FROM THE SHEATHING.					
7. FOR SW3, SW4, SW7, AND SW8, (2) 2" NOMINAL FRAMING STITCH-NAILED TOGETHER WITH (2) 10d NAILS @ 6" MAY BE USED AT ABUTTING PANEL EDGES IN PLACE OF 3" NOMINAL FRAMING.					

FOOTING AND FOUNDATION PLAN

1/4" = 1'-0"

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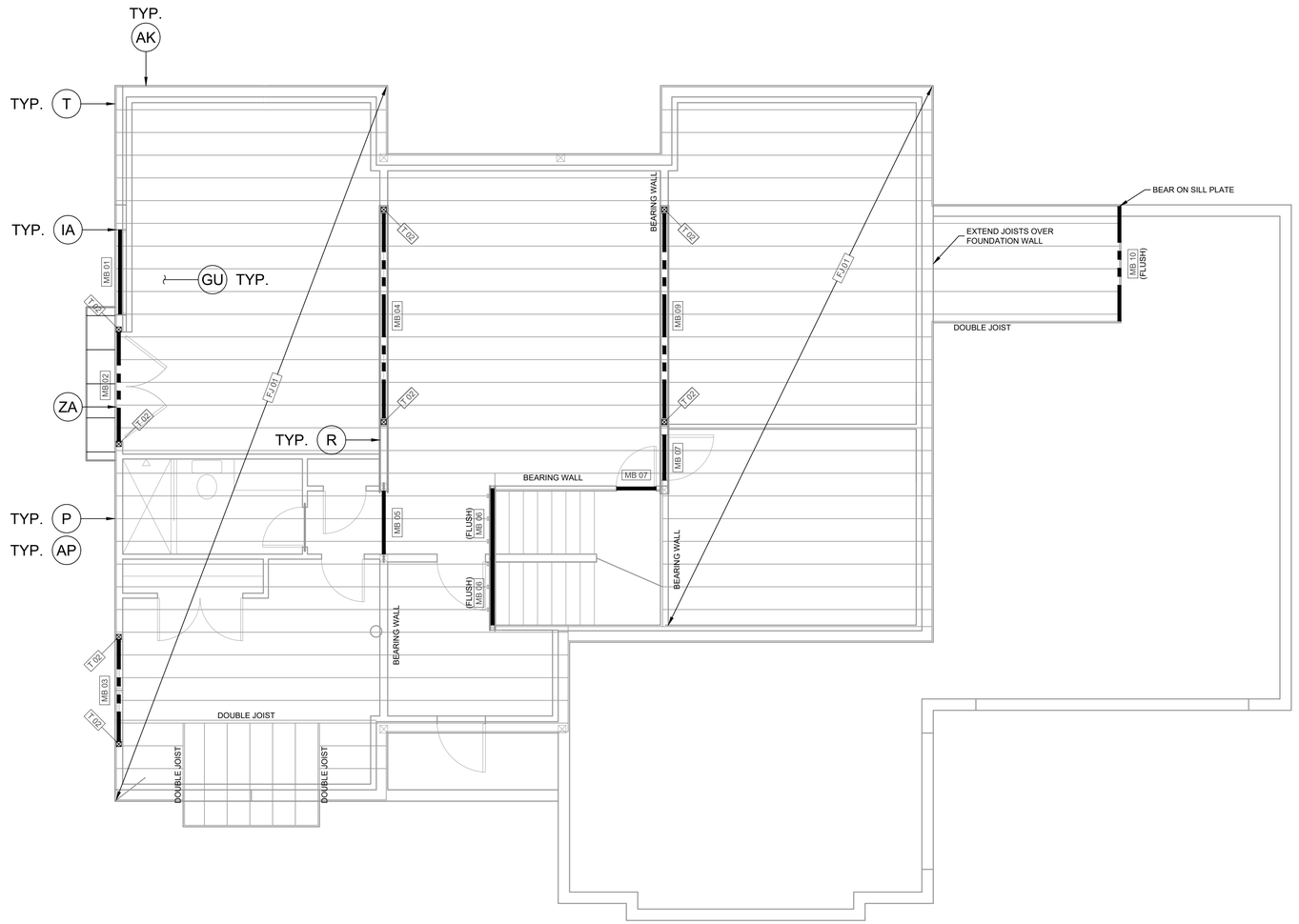
ORIGINAL PROJECT #
6960121
DRAWN BY:
RTM
CHECKED BY:
MCW
SCALE:
1/4" = 1'-0"
DATE:
08 FEB 2021

BIG IDEA DESIGNS STROBEL RESIDENCE (LEHI)

FOOTING AND FOUNDATION PLAN

ISSUES / REVISIONS

S0-0



BEAM SCHEDULE	
MARK	TYPE
MB 01	(3) 2 X 10
MB 02	(2) 1-3/4 X 9-1/2 LVL
MB 03	(2) 1-3/4 X 9-1/2 LVL
MB 04	(3) 1-3/4 X 11-7/8 LVL
MB 05	(3) 2 X 6
MB 06	1-3/4 X 11-7/8 LVL
MB 07	(2) 2 X 6
MB 09	(3) 1-3/4 X 11-7/8 LVL
MB 10	1-3/4 X 11-7/8 LVL
1. DIMENSIONAL LUMBER DF #2 U.N.O.	
2. LAMINATED VENEER LUMBER (LVL) 2.0E	
3. GLUED-LAMINATED TIMBER (GLB) 24F-1.8E	
4. STEEL W-SHAPES A992-50	
5. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED BEAM	
6. ALL HEADERS IN BEARING WALLS TO HAVE MIN. (1) TRIMMER & (1) KING STUD U.N.O. ALL OTHER BEAMS AND GIRDER TRUSSES TO HAVE MIN. (2) 2X SUPPORTS U.N.O.	

FLOOR JOIST SCHEDULE	
MARK	TYPE
FJ 01	11-7/8" TJI 210 @ 16" O.C.
FJ 02 A	11-7/8" TJI 210 @ 12" O.C.
FJ 02 B	11-7/8" TJI 360 @ 12" O.C.
1. DIMENSIONAL LUMBER DF #2 U.N.O.	
2. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED JOIST	

SHEATHING SCHEDULE	
TYPE	THICKNESS
FLOOR	3/4" OSB (48/24 SPAN RATING)
ROOF	7/16" OSB (24/16 SPAN RATING)
1. SHEATHING PERPENDICULAR TO SUPPORTS.	
2. FLOOR SHEATHING NAILED & GLUED TO SUPPORT	
3. 8d COMMON NAILS 6" O.C. (EDGES) 12" O.C. (FIELD)	
4. NAILING NO CLOSER THAN 3/8" FROM PANEL EDGE	

POST SCHEDULE	
MARK	TYPE
P 03	(3) 2X POST
P 12	5-1/4 X 7 PSL
T 02	(2) TRIM
T 15	(2) TRIM (3) KING
1. PARALLEL STRAND LUMBER (PSL) 1.8E	
2. STEEL PIPE (PIPE STD) A53	
3. STEEL HOLLOW SECTION (HSS) A500	
4. STEEL COLUMNS REQUIRE BEARING PLATES	
5. CONTINUE POSTS TO FDN / STRUCT MEMBER	

MAIN FLOOR FRAMING PLAN

1/4" = 1'-0"

ACUTE ENGINEERING, INC.
744 S 400 E
Orem, UT 84097
Phone 801.229.9020
Fax 801.224.0050
info@acuteengineering.com

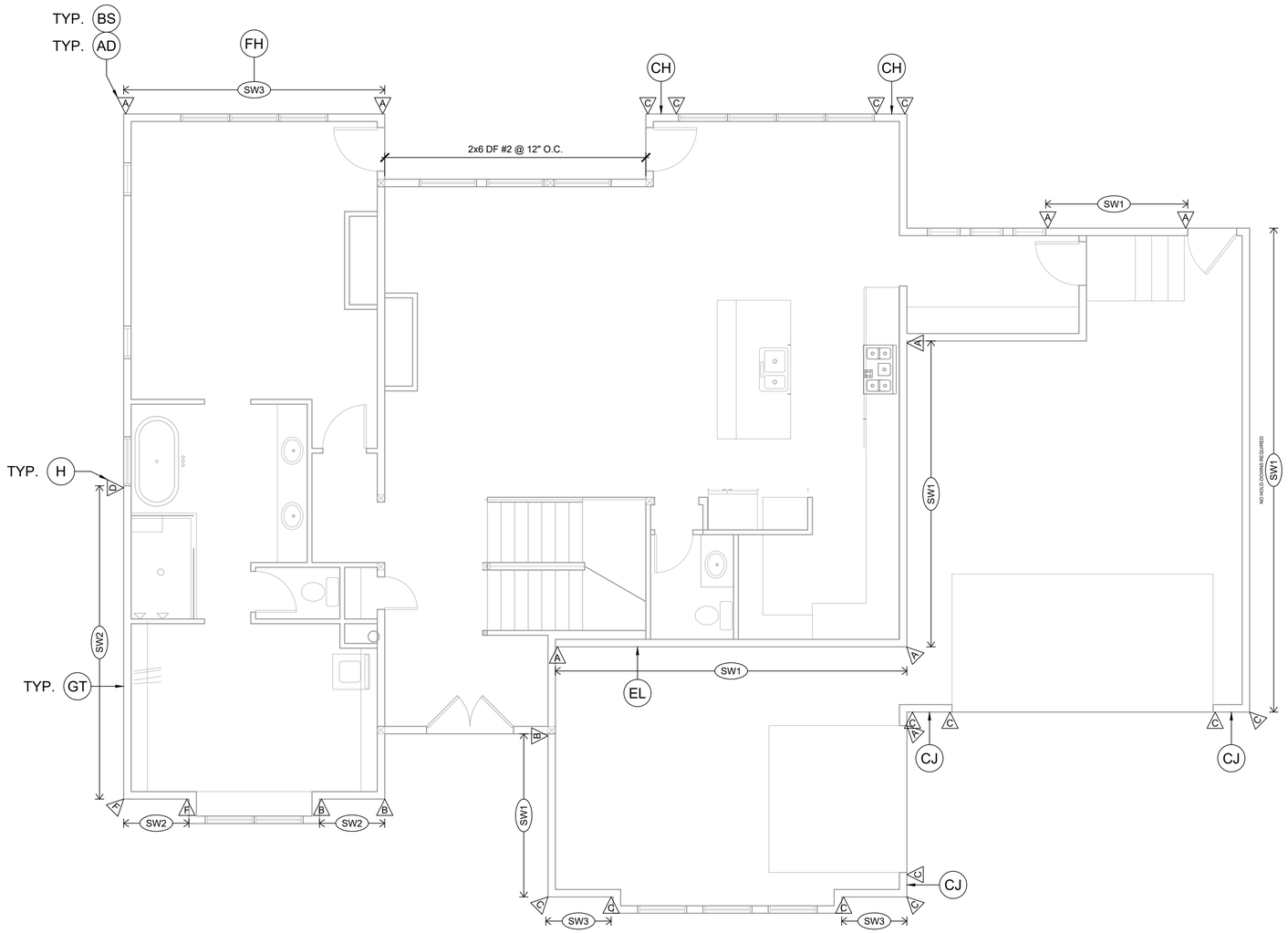
ORIGINAL PROJECT #
6960121
DRAWN BY:
RTM
CHECKED BY:
MCW
SCALE:
1/4" = 1'-0"
DATE:
08 FEB 2021

BIG IDEA DESIGNS STROBEL RESIDENCE (LEHI)

MAIN FLOOR FRAMING PLAN

ISSUES / REVISIONS

S1-0



HOLD-DOWN SCHEDULE

MARK	HOLD-DOWN	MINIMUM FASTENERS	ANCHOR	POST
A	LSTHD8	10d X 2-1/2" (.148 X 2-1/2")	STRAP 8" EMBED.	(2) 2X POST
B	STHD10	10d X 2-1/2" (.148 X 2-1/2")	STRAP 10" EMBED.	(2) 2X POST
C	STHD14	10d X 2-1/2" (.148 X 2-1/2")	STRAP 14" EMBED.	(2) 2X POST
D	CS16 (11" END LENGTHS)	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
E	MST37	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
F	MST48	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
K	HDU4-SDS2.5	SDS1/4" X 2-1/2" (SDS25212)	SB5/8X24	(2) 2X POST

1. HOLD-DOWNS SHALL BE SIMPSON STRONG-TIE OR EQUIVALENT.
2. SHEAR WALL EDGE NAILING SHALL BE TO HOLD-DOWN POST.
3. STHD STRAPS SHALL BE "RJ" TYPE AT RIM JOIST LOCATIONS.

SHEAR WALL SCHEDULE

MARK	SHEATHING	EDGE NAILING	ABUTTING PANEL EDGE FRAMING	ANCHORAGE	
				SOLE PLATE	SILL PLATE
SW1	7/16"	8d @ 6"	2X	10d @ 6"	1/2" A.B. @ 32"
SW2	7/16"	8d @ 4"	2X	10d @ 6"	1/2" A.B. @ 32"
SW3	7/16"	8d @ 3"	3X or (2)2X	10d @ 12"	1/2" A.B. @ 32"

1. SHEATHING SHALL CONSIST OF WOOD STRUCTURAL PANELS (SEE GSN).
2. UNLESS NOTED ON DRAWINGS, EXTERIOR STUDS SHALL BE SPACED AT 16" O.C.
3. SHEATHING NAILS SHALL BE COMMON OR GALVANIZED BOX NAILS. - FIELD NAIL SPACING SHALL BE 12" FOR STUDS SPACED 16" O.C. OR LESS AND 6" O.C. FOR STUDS SPACED AT 24" O.C.
4. FOR SW1 ONLY, EDGE NAILS MAY BE SUBSTITUTED WITH 1-1/2" 16 GAGE STAPLES SPACED AT 3" O.C. AND FIELD NAILS MAY BE SUBSTITUTED WITH 16 GAGE STAPLES AT 12" O.C.
5. ANCHORAGE NAILS SHALL BE COMMON NAILS.
6. ANCHOR BOLTS SHALL HAVE A 3X3X0.229" WASHER AND 7" MIN EMBEDMENT. THE WASHER SHALL EXTEND TO WITHIN 1/2" FROM THE SHEATHING.
7. FOR SW3, SW4, SW7, AND SW8, (2) 2" NOMINAL FRAMING STITCH-NAILED TOGETHER WITH (2) 10d NAILS @ 6" MAY BE USED AT ABUTTING PANEL EDGES IN PLACE OF 3" NOMINAL FRAMING.

MAIN FLOOR SHEAR WALL PLAN

1/4" = 1'-0"

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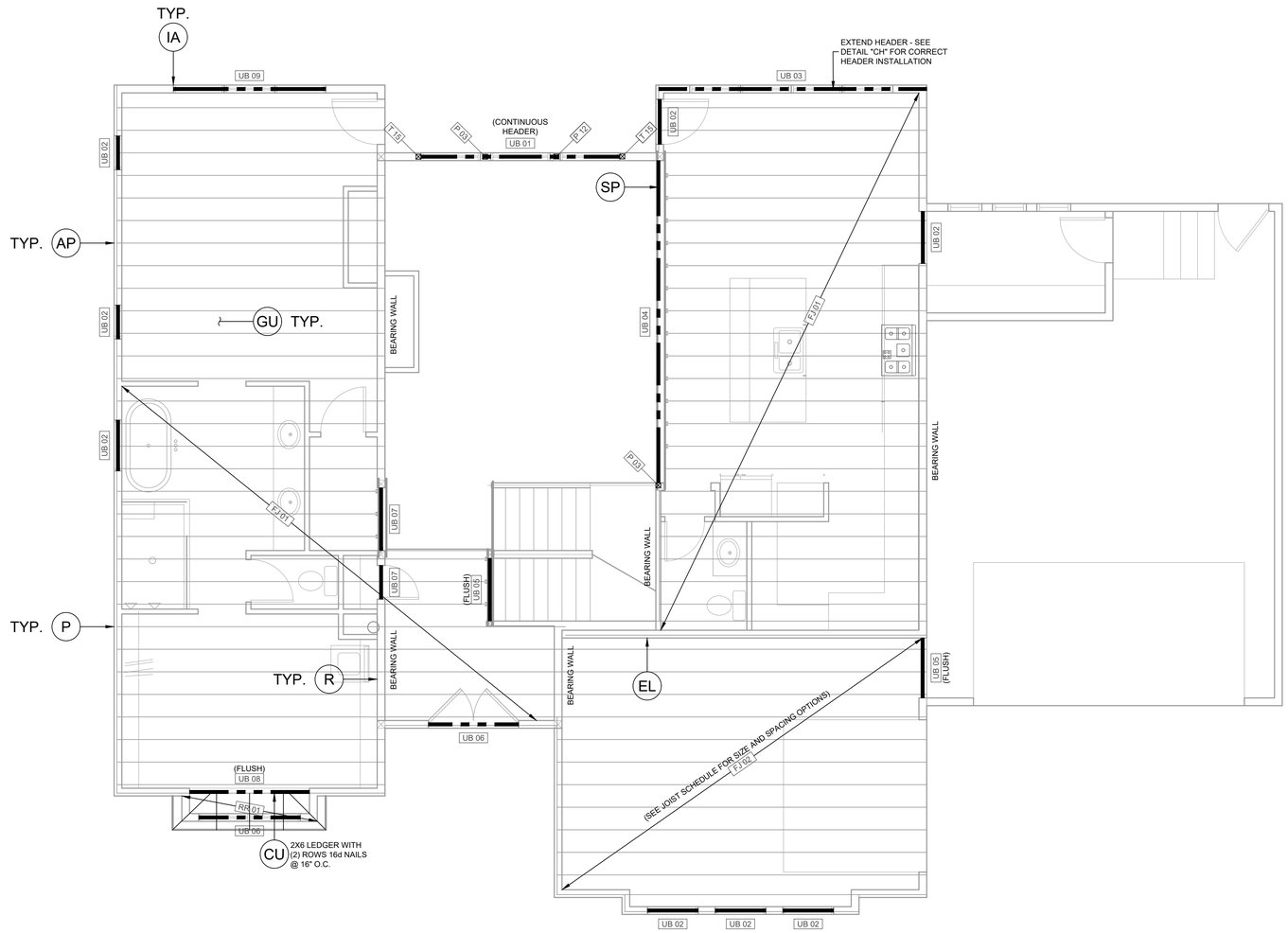
MAIN FLOOR SHEAR WALL PLAN

ISSUES / REVISIONS

- - -
- - -
- - -
- - -

S1-1



BEAM SCHEDULE	
MARK	TYPE
UB 01	(3) 2 X 6
UB 02	(2) 2 X 6
UB 03	(2) 1-3/4 X 11-7/8 LVL
UB 04	3-1/8 X 16-1/2 GLB
UB 05	(2) 1-3/4 X 11-7/8 LVL
UB 06	(2) 2 X 6
UB 07	(2) 2 X 6
UB 08	1-3/4 X 11-7/8 LVL
UB 09	(3) 2 X 6
1. DIMENSIONAL LUMBER DF #2 U.N.O.	
2. LAMINATED VENEER LUMBER (LVL) 2.0E	
3. GLUED-LAMINATED TIMBER (GLB) 24F-1.8E	
4. STEEL W-SHAPES A992-50	
5. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED BEAM	
6. ALL HEADERS IN BEARING WALLS TO HAVE MIN. (1) TRIMMER & (1) KING STUD U.N.O. ALL OTHER BEAMS AND GIRDER TRUSSES TO HAVE MIN. (2) 2X SUPPORTS U.N.O.	

FLOOR JOIST SCHEDULE	
MARK	TYPE
FJ 01	11-7/8" TJI 210 @ 16" O.C.
FJ 02 A	11-7/8" TJI 210 @ 12" O.C.
FJ 02 B	11-7/8" TJI 360 @ 12" O.C.
1. DIMENSIONAL LUMBER DF #2 U.N.O.	
2. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED JOIST	

SHEATHING SCHEDULE	
TYPE	THICKNESS
FLOOR	3/4" OSB (48/24 SPAN RATING)
ROOF	7/16" OSB (24/16 SPAN RATING)
1. SHEATHING PERPENDICULAR TO SUPPORTS.	
2. FLOOR SHEATHING NAILED & GLUED TO SUPPORT	
3. 8d COMMON NAILS 6" O.C. (EDGES) 12" O.C. (FIELD)	
4. NAILING NO CLOSER THAN 3/8" FROM PANEL EDGE	

POST SCHEDULE	
MARK	TYPE
P 03	(3) 2X POST
P 12	5-1/4 X 7 PSL
T 02	(2) TRIM
T 15	(2) TRIM (3) KING
1. PARALLEL STRAND LUMBER (PSL) 1.8E	
2. STEEL PIPE (PIPE STD) A53	
3. STEEL HOLLOW SECTION (HSS) A500	
4. STEEL COLUMNS REQUIRE BEARING PLATES	
5. CONTINUE POSTS TO FDN / STRUCT MEMBER	

UPPER FLOOR FRAMING PLAN

1/4" = 1'-0"

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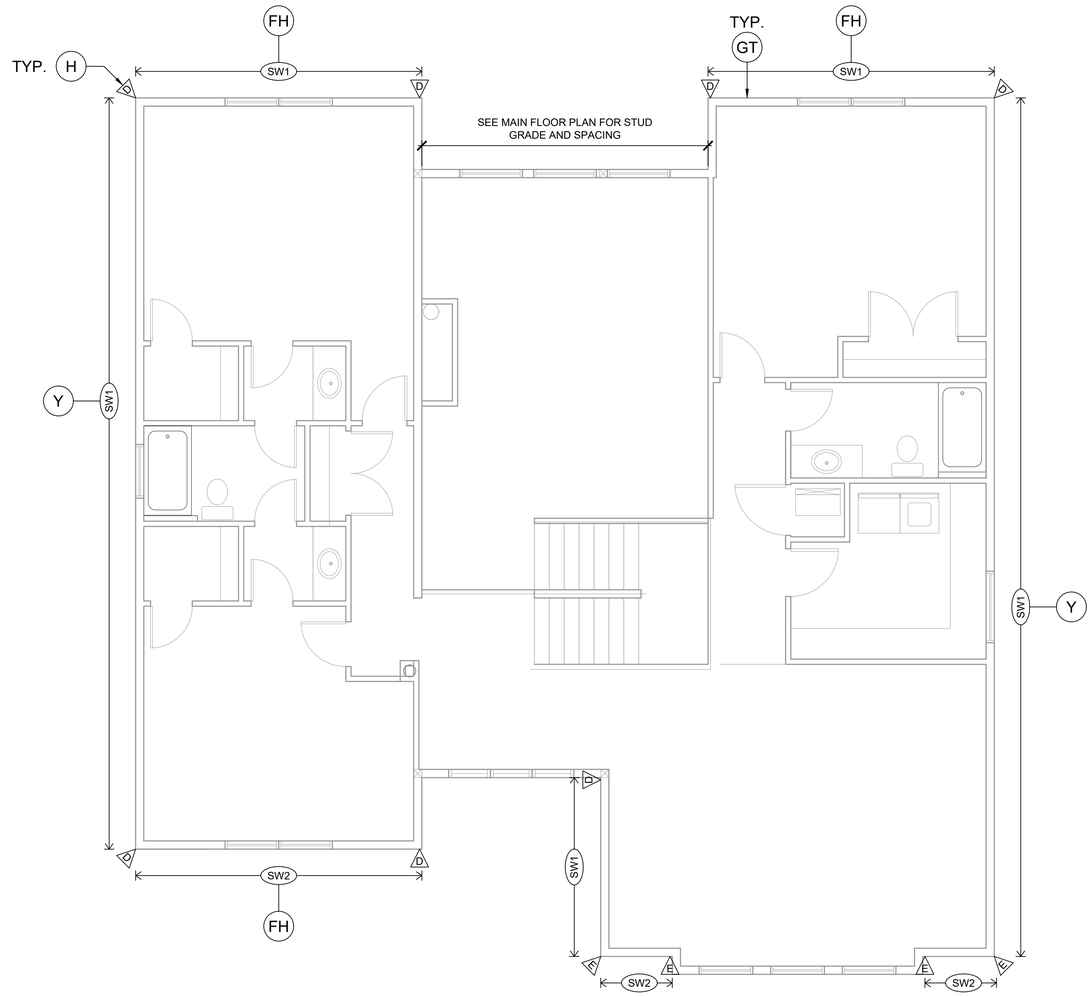
BIG IDEA DESIGNS STROBEL RESIDENCE (LEHI)

UPPER FLOOR FRAMING PLAN

ISSUES / REVISIONS

S2-0



HOLD-DOWN SCHEDULE

MARK	HOLD-DOWN	MINIMUM FASTENERS	ANCHOR	POST
A	LSTHD8	10d X 2-1/2" (.148 X 2-1/2")	STRAP 8" EMBED.	(2) 2X POST
B	STHD10	10d X 2-1/2" (.148 X 2-1/2")	STRAP 10" EMBED.	(2) 2X POST
C	STHD14	10d X 2-1/2" (.148 X 2-1/2")	STRAP 14" EMBED.	(2) 2X POST
D	CS16 (11" END LENGTHS)	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
E	MST37	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
F	MST48	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
K	HDU4-SDS2.5	SDS1/4" X 2-1/2" (SDS25212)	SBS/8X24	(2) 2X POST

1. HOLD-DOWNS SHALL BE SIMPSON STRONG-TIE OR EQUIVALENT.
2. SHEAR WALL EDGE NAILING SHALL BE TO HOLD-DOWN POST.
3. STHD STRAPS SHALL BE "RJ" TYPE AT RIM JOIST LOCATIONS.

SHEAR WALL SCHEDULE

MARK	SHEATHING	EDGE NAILING	ABUTTING PANEL EDGE FRAMING	ANCHORAGE	
				SOLE PLATE	SILL PLATE
SW1	7/16"	8d @ 6"	2X	10d @ 6"	1/2" A.B. @ 32"
SW2	7/16"	8d @ 4"	2X	10d @ 6"	1/2" A.B. @ 32"
SW3	7/16"	8d @ 3"	3X or (2)2X	10d @ 12"	1/2" A.B. @ 32"

1. SHEATHING SHALL CONSIST OF WOOD STRUCTURAL PANELS (SEE GSN).
2. UNLESS NOTED ON DRAWINGS, EXTERIOR STUDS SHALL BE SPACED AT 16" O.C.
3. SHEATHING NAILS SHALL BE COMMON OR GALVANIZED BOX NAILS. - FIELD NAIL SPACING SHALL BE 12" FOR STUDS SPACED 16" O.C. OR LESS AND 6" O.C. FOR STUDS SPACED AT 24" O.C.
4. FOR SW1 ONLY, EDGE NAILS MAY BE SUBSTITUTED WITH 1-1/2" 16 GAGE STAPLES SPACED AT 3" O.C. AND FIELD NAILS MAY BE SUBSTITUTED WITH 16 GAGE STAPLES AT 12" O.C.
5. ANCHORAGE NAILS SHALL BE COMMON NAILS.
6. ANCHOR BOLTS SHALL HAVE A 3X3X0.229" WASHER AND 7" MIN EMBEDMENT. THE WASHER SHALL EXTEND TO WITHIN 1/2" FROM THE SHEATHING.
7. FOR SW3, SW4, SW7, AND SW8, (2) 2" NOMINAL FRAMING STITCH-NAILED TOGETHER WITH (2) 10d NAILS @ 6" MAY BE USED AT ABUTTING PANEL EDGES IN PLACE OF 3" NOMINAL FRAMING.

UPPER FLOOR SHEAR WALL PLAN

1/4" = 1'-0"

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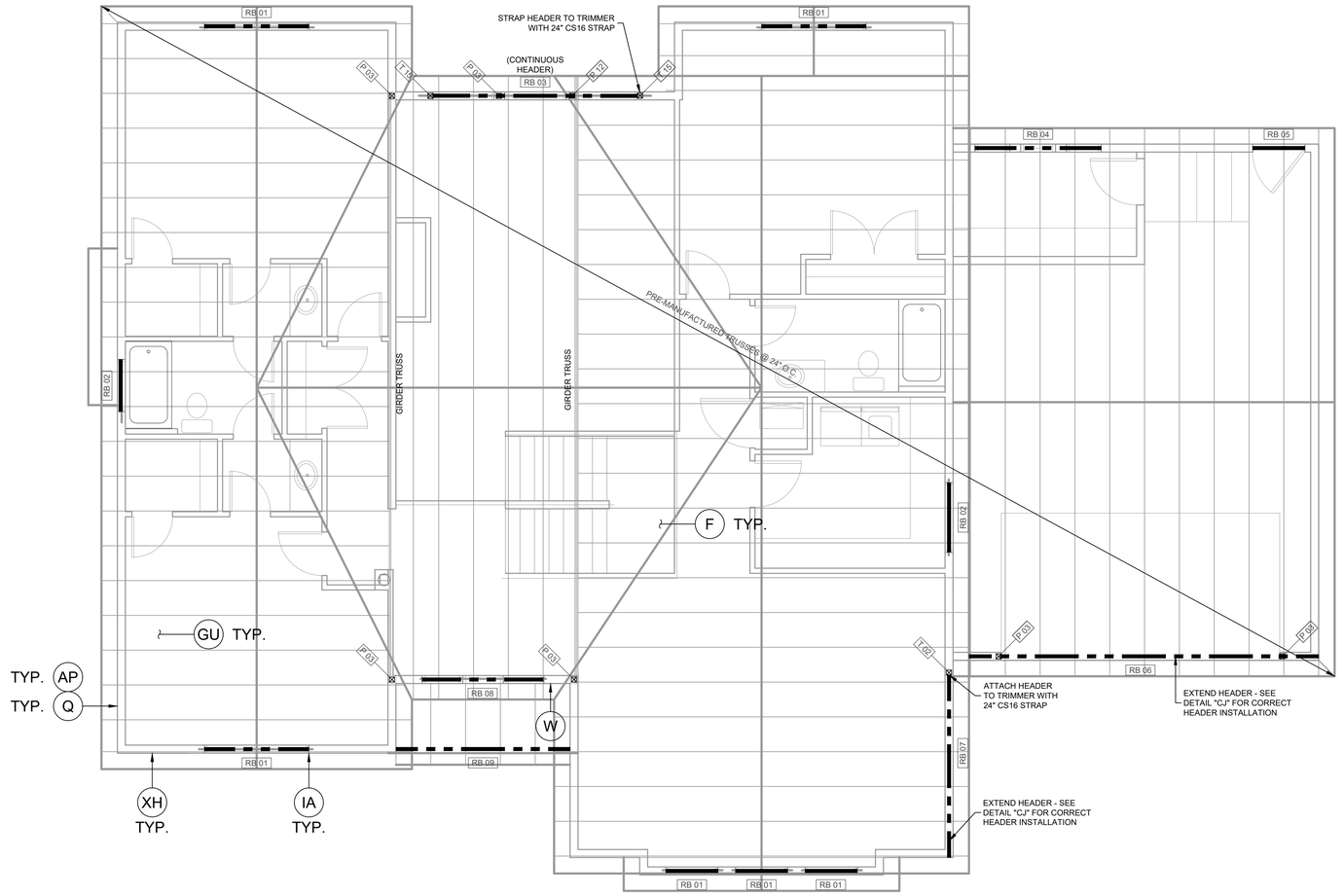
BIG IDEA DESIGNS STROBEL RESIDENCE (LEHI)

UPPER FLOOR SHEAR WALL PLAN

ISSUES / REVISIONS

S2-1



BEAM SCHEDULE

MARK	TYPE
RB 01	(2) 2 X 6
RB 02	(2) 2 X 6
RB 03	(3) 2 X 6
RB 04	(2) 1-3/4 X 9-1/2 LVL
RB 05	(2) 2 X 6
RB 06	(3) 1-3/4 X 14 LVL
RB 07	(2) 1-3/4 X 11-7/8 LVL
RB 08	(2) 1-3/4 X 9-1/2 LVL
RB 09	(2) 2 X 8

1. DIMENSIONAL LUMBER DF #2 U.N.O.
2. LAMINATED VENEER LUMBER (LVL) 2.0E
3. GLUED-LAMINATED TIMBER (GLB) 24F-1.8E
4. STEEL W-SHAPES A992-50
5. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED BEAM
6. ALL HEADERS IN BEARING WALLS TO HAVE MIN. (1) TRIMMER & (1) KING STUD U.N.O. ALL OTHER BEAMS AND GIRDER TRUSSES TO HAVE MIN. (2) 2X SUPPORTS U.N.O.

ROOF RAFTER SCHEDULE

MARK	TYPE
RR 01	2 X 6 @ 24" O.C.

1. DIMENSIONAL LUMBER DF #2 U.N.O.
2. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED RAFTER

SHEATHING SCHEDULE

TYPE	THICKNESS
FLOOR	3/4" OSB (48/24 SPAN RATING)
ROOF	7/16" OSB (24/16 SPAN RATING)

1. SHEATHING PERPENDICULAR TO SUPPORTS.
2. FLOOR SHEATHING NAILED & GLUED TO SUPPORT
3. 8d COMMON NAILS 6" O.C. (EDGES) 12" O.C. (FIELD)
4. NAILING NO CLOSER THAN 3/8" FROM PANEL EDGE

WOOD TRUSS LOADS

GROUND SNOW LOAD, Pg = 52 PSF
FLAT ROOF SNOW LOAD = 36 PSF
TOP CHORD DEAD LOAD = 10 PSF
BOTTOM CHORD DEAD LOAD = 5 PSF
1. DESIGN SNOW LOADS SHALL BE IN ACCORDANCE WITH ASCE 7-16 CHAP.7 (2018 IBC 1608.1)

POST SCHEDULE

MARK	TYPE
P 03	(3) 2X POST
P 12	5-1/4 X 7 PSL
T 02	(2) TRIM
T 15	(2) TRIM (3) KING
1. PARALLEL STRAND LUMBER (PSL) 1.8E	
2. STEEL PIPE (PIPE STD) A53	
3. STEEL HOLLOW SECTION (HSS) A500	
4. STEEL COLUMNS REQUIRE BEARING PLATES	
5. CONTINUE POSTS TO FDN / STRUCT MEMBER	

ROOF FRAMING PLAN

1/4" = 1'-0"

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ORIGINAL PROJECT #
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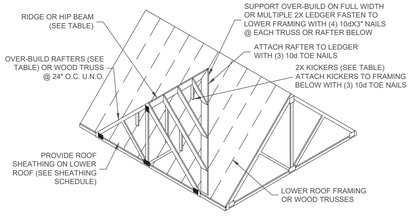
BIG IDEA DESIGNS STROBEL RESIDENCE (LEHI)

ROOF FRAMING PLAN

ISSUES / REVISIONS

REGISTERED PROFESSIONAL ENGINEER
No. 11901318
ALISON MARIE SIMPSON
02/08/21
STATE OF UTAH

S3-0

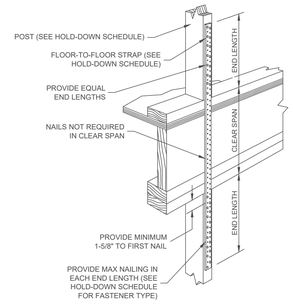


FLAT ROOF SNOW LOAD	KICKER SIZE	RAFTER SIZE	RIDGE BEAM SIZE
0-40 PSF	2X4	2X4	2X6
40-80 PSF	2X6	2X4	2X6
80-120 PSF*	(2) 2X4	2X6	2X8

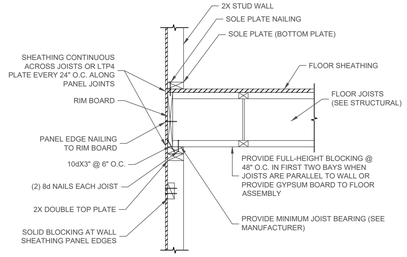
1.SUPPORT ALL RAFTERS AND RIDGE BEAMS WITH KICKERS SPACED AT 48" O.C. MAX. SUPPORT KICKERS ON FRAMING BELOW.

*2. FOR SNOW LOADS OF 80-120PSF, ATTACH EACH KICKER TO FRAMING BELOW WITH (1) A35 CLIP.

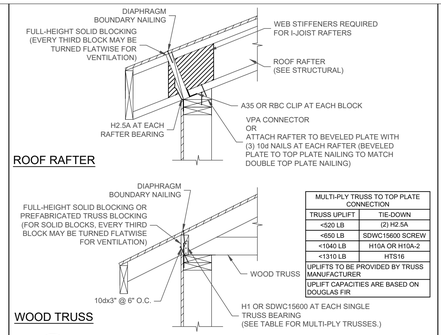
F ROOF FRAMING - OVER BUILD FRAMING
NO SCALE



H HOLD-DOWN - FLOOR STRAP
NO SCALE

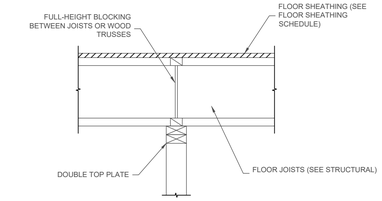


P BEARING WALL - EXTERIOR TO FLOOR(150 PLF UNIT SHEAR)
NO SCALE

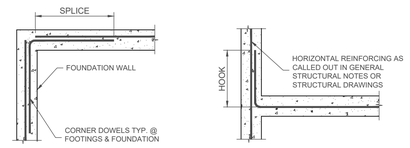


MULTI-PLY TRUSS TO TOP PLATE CONNECTION	
TRUSS UPLIFT	TIE-DOWN
<520 LB	(2) H2.5A
<650 LB	SDWC15600 SCREW
<1040 LB	H10A OR H10A-2
<1310 LB	HTS16
UPLIFTS TO BE PROVIDED BY TRUSS MANUFACTURER	
UPLIFT CAPACITIES ARE BASED ON DOUGLAS FIR	

Q ROOF FRAMING - BLOCKING (150 PLF UNIT SHEAR)
NO SCALE

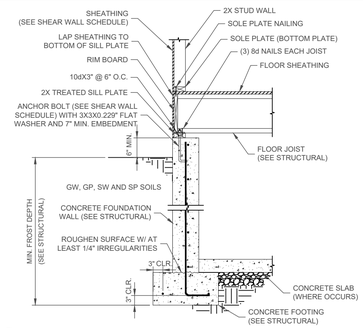


R BEARING WALL - INTERIOR TO FLOOR
NO SCALE

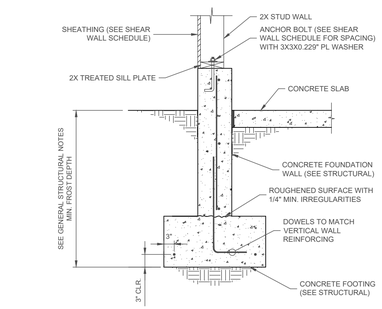


REQUIRED LAP LENGTH			
TYPE	CONCRETE	MASONRY	MIN.
SPLICE	40 BAR DIA.	48 BAR DIA.	24"
HOOK	12 BAR DIA.	20 BAR DIA.	12"

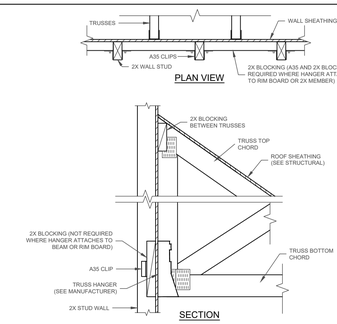
S FOUNDATION WALL - CORNER & INTERSECTION REINFORCING
NO SCALE



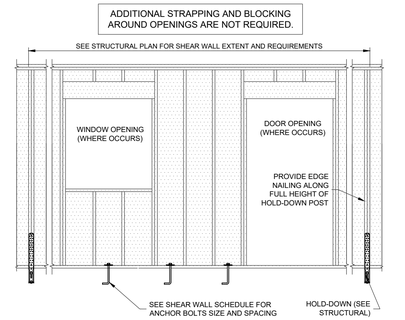
T FOUNDATION WALL - FLOOR JOIST (PERPENDICULAR)
NO SCALE



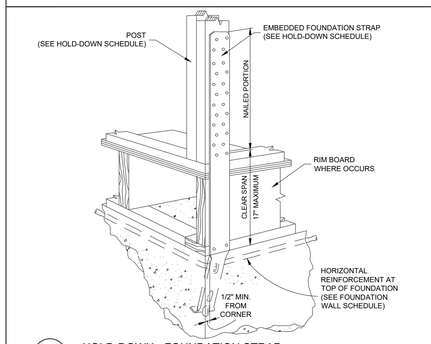
V FOUNDATION WALL - SLAB ON GRADE
NO SCALE



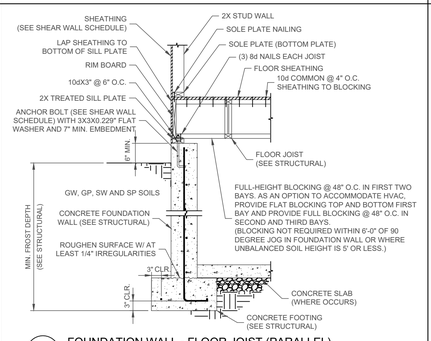
W WOOD TRUSS - WALL/BEAM
NO SCALE



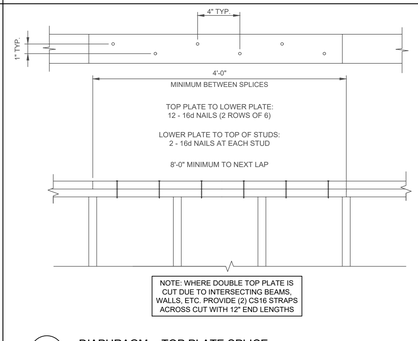
Y SHEAR WALL - PERFORATED
NO SCALE



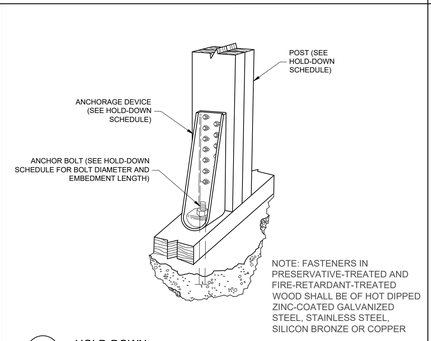
AD HOLD-DOWN - FOUNDATION STRAP
NO SCALE



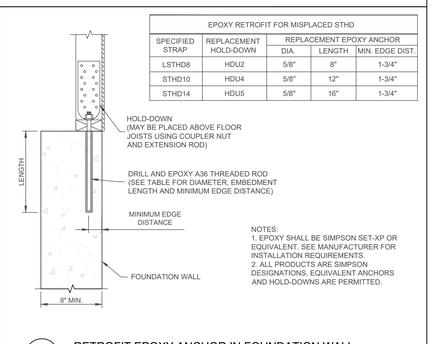
AK FOUNDATION WALL - FLOOR JOIST (PARALLEL)
NO SCALE



AP DIAPHRAGM - TOP PLATE SPLICE
NO SCALE

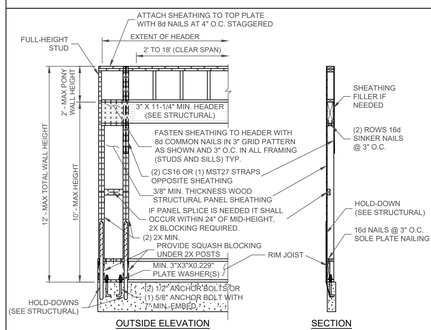


BL HOLD-DOWN
NO SCALE

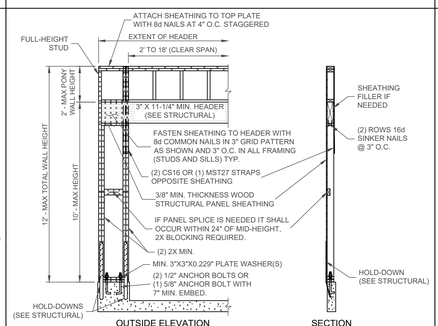


EPOXY RETROFIT FOR MISPLACED STHD				
SPECIFIED STRAP	REPLACEMENT HOLD-DOWN	REPLACEMENT EPOXY ANCHOR		
		DIA.	LENGTH	MIN. EDGE DIST.
LSTHD8	HDU2	5/8"	8"	1-3/4"
STHD10	HDU4	5/8"	12"	1-3/4"
STHD14	HDU5	5/8"	16"	1-3/4"

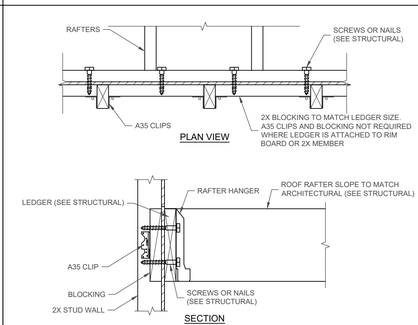
BS RETROFIT EPOXY ANCHOR IN FOUNDATION WALL
NO SCALE



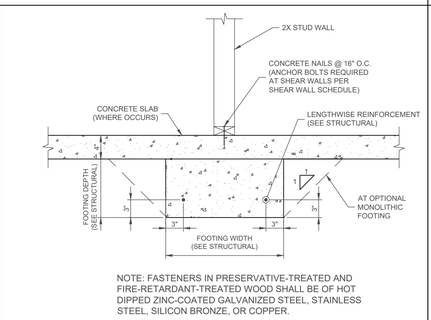
CH PORTAL FRAME - FLOOR ON CONCRETE FOUNDATION
NO SCALE



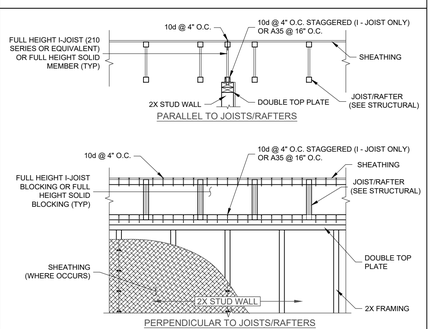
CJ APA PORTAL FRAME - CONCRETE FOUNDATION
NO SCALE



CU LEDGER - RAFTER TO FRAMED WALL
NO SCALE



CW BEARING WALL - INTERIOR FOOTING
NO SCALE



EL SHEAR TRANSFER - JOIST/RAFTERS DIAPHRAGM CONNECTION
NO SCALE

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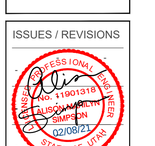
ORIGINAL PROJECT #
6960121
DRAWN BY:
RTM
CHECKED BY:
MCW
SCALE:
NTS
DATE:
08 FEB 2021

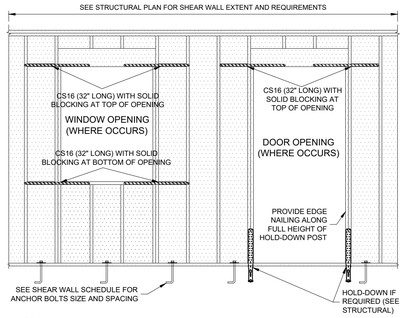
BIG IDEA DESIGNS STROBEL RESIDENCE (LEHI)

STRUCTURAL DETAILS

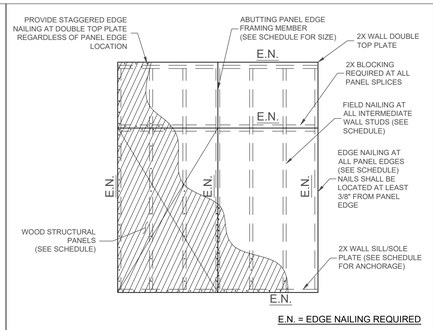
ISSUES / REVISIONS



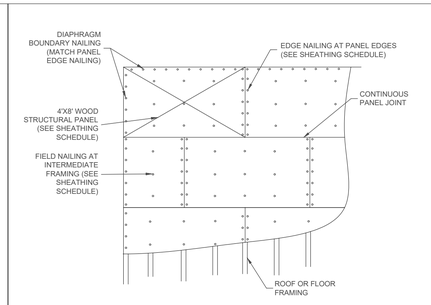
SD1



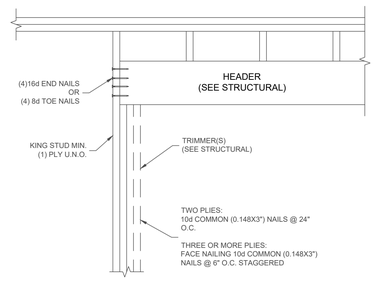
FH SHEAR WALL - FORCE TRANSFER AROUND OPENINGS
NO SCALE



GT SHEAR WALL - ROOF DIAPHRAGM CONNECTION
NO SCALE



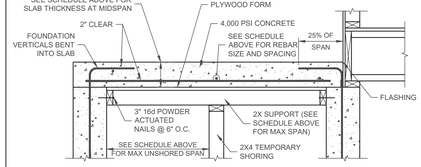
GU WOOD STRUCTURAL PANEL DIAPHRAGM - UNBLOCKED
NO SCALE



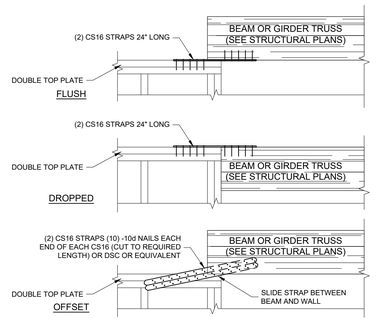
IA WOOD BEAM - WALL HEADER FRAMING
NO SCALE

SLAB THICKNESS AT MID-SPAN	MAX SLAB SPAN	REBAR SPACING	2X SUPPORT	MAX UNSHORED SPAN
6"	10'	#4 @ 18" O.C. EACH WAY	2X4 DF #2 @ 16" O.C.	4'-10"
			2X6 DF #2 @ 16" O.C.	7'-0"
8"	13'	#4 @ 12" O.C. EACH WAY	2X4 DF #2 @ 12" O.C.	4'-10"
			2X6 DF #2 @ 12" O.C.	7'-0"

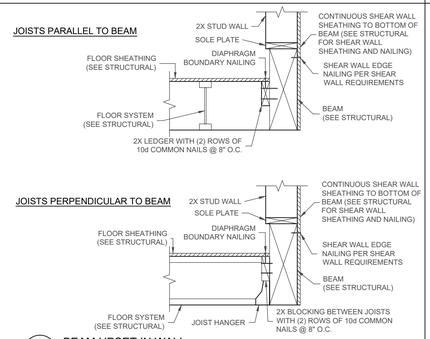
NOTE: CONCRETE SLABS CAN HAVE A MAXIMUM SLOPE OF 2" OVER THE ENTIRE SLAB



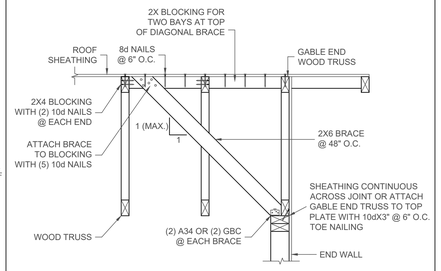
IF SUSPENDED SLAB
NO SCALE



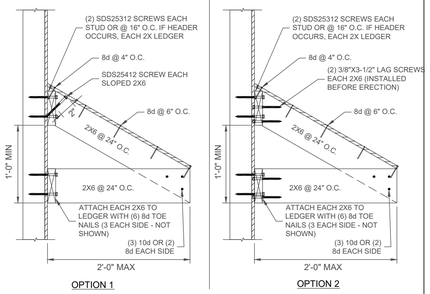
LF DIAPHRAGM - CHORD / COLLECTOR STRAP
NO SCALE



SP BEAM UPSET IN WALL
NO SCALE



XH WOOD TRUSS - WOOD WALL GABLE END BRACING
NO SCALE



ZA SHED ROOF (2'-0" MAX LENGTH)
NO SCALE

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