Roscoe Residence

jackson, wyoming

FARMERPAYNE | ARCHITECTS

Roscoe Residence

6165 W Burcher Road
Wilson, WY

PROJECT DIRECTORY

Architect: **Farmer Payne Architects**
Jamie Farmer. Principal. AIA. LEED

260 W Broadway, Suite A
Jackson, WY 83001
t: 307.264.0080
e: jamie@farmerpaynearchitects.com

Contractor: **Wil Roscoe**
Owner/Contractor
PO Box 836
Wilson, WY 83014
t: 310.876.2330
e: wroscoe@gmail.com

Structural Engineer: **Tectonic Design LLC**
Jeff Hobson, Owner/Engineer
PO Box 3945
Jackson, Wy 83001
t: 307.413.5519
e: j.hobson@tectonicdesign22.com

Mechanical Engineer: **JTEC**
Justin Tatosian, PE, LEED AP BD+C
t: 307.699.1110
e: jtatosian@jtecinc.com

Civil Engineer: **SCG**
Randy Schrauder, PE & PHIUS Builder
t: 307.413.4399
e: randy@scgengineering.com

PROJECT ADDRESS

6165 W Burcher Rd
Wilson, WY 83014

VICINITY MAP

CODE ANALYSIS

2021 International Residential Code

Occupancy	Residential
Construction Type	Type VB
Number of Stories	3
Building Height Max Allowed	34'-2" 37'-6"
Zoning:	R-3

***Fire Sprinklers Required. System Design as defered submittal by Mountain Fire Protection**

SQUARE FOOTAGE TABULATIONS

Main Level Habitable	1,521 sf
Upper Level Habitable	1,329 sf
Lower Level Habitable	840 sf
TOTAL HABITABLE	**3,690 sf**
Mechanical	297 sf
Garage	835 sf
Storage	439 sf
TOTAL NON-HABITABLE	**1,571 sf**
Total Habitable	3,690 sf
Total Non-habitable	1,571 sf
TOTAL GROSS SQ FT	**5,261 sf**
Proposed New Footprint	2,640 sf
Paved and Unpaved Driveways	1,250 sf
Decks, Porches, Patios, Terraces	410 sf
Other non Veg	0 sf
TOTAL SITE DEVELOPMENT	**4300 sf**

DRAWING INDEX

GENERAL NOTES

01. The structural, mechanical and electrical drawings are supplementary to the architectural drawings. It shall be the responsibility of the contractor to check with the architectural drawings before the installation of structural, mechanical, electrical, and plumbing work. Any discrepancy between the architectural drawings and the consulting engineers drawings, shall be brought to the architects attention for clarification prior to installation of said work. Any work installed in conflict with the architectural drawings shall be corrected by the contractor at his expense and at no additional expense to the owner of architect.

02. Contractor shall verify all conditions and dimensions at job site prior to bidding and start of construction. If discrepancies are found, the architect shall be noted for clarification before commencing work.

03. All symbols and abbreviations used on the drawings are considered to be construction standards. If the contractor has questions regarding some, or their exact meaning, the architect shall be notified for clarification.

04. All work shall conform to the requirements of the most current edition of the International Residential Code. The most current adopted version NFPA 101 Life Safety Code, National Electric Code, The Uniform Plumbing Code, The Uniform Mechanical Code, and all other governing authorities having jurisdiction.

05. Contractor shall submit shop drawings for windows, doors, millwork, cabinetry, structural steel, trusses, etc. Contractor shall submit samples for all finishes. All submittals shall be approved be architect before installed.

06. All dimensions are to face of concrete, face of column or center line, face of concrete block walls and face of studs unless otherwise noted.

07. Offset studs where required so that finish wall surface will be flush.

08. All walls are 2x6 unless otherwise noted or dimensioned.

09. Ceiling height dimensions are to structural or framing surfaces. Coordinate finishes with interior finish schedule.

10. Gypsum boards shall extend 6" above ceiling at all column cores and walls, unless noted otherwise.

11. Install metal corner beads at all exposed wallboard edges. Install casing beads wherever wallboard, plaster, etc. abuts a dissimilar finish material and provide sealant as required.

12. Extend perimeter walls of core to structure above insulate.

13. Plenum spaces shall be airtight and sealed.

14. Contractors shall verify size and locations of all mechanical equipment pads and bases as well as power and water or drain installations with equipment manufacturer's before proceeding with the work. Changes to accommodate filed conditions or susdstitutions shall be made without additional charge to owner.

15. Ducts penetrating stud walls or shaft walls be provided with necessary frames, bracing and sealant around the opening.

16. Contractor shall provide and install all stiffeners, bracing, back-up plates and supporting brackets required for the installation of all wall mounted or suspended mechanical, electrical or miscellaneous equipment.

17. Contact between dissimilar metal shall be protected

18. Contractor responsible for structural foundation, mechanical, electrical, and plumbing. Architects mechanical, electrical, and plumbing drawings are schematic and only meant for design intent.

19. Roofing system shall bear U.L. listing as a class "A" system. All manufactured materials used shall bear the appropriate U.L. label.

20. Contractor shall verify all concrete and masonry openings in the field prior to the fabrication of doors and frames.

21. Air leakage at exterior doors shall be limited by the following:
a. All doors shall be provided with a seal or astragal
b. Doors mounted on either the inside or outside of an exterior wall shall have a minimum of one-inch lap at each jamb.
c. Doors requiring vertical track or guides shall use a continuous mounting angle, sealed in accordance with "G" listed here.
d. Doors mounted between the jambs shall have a continuous seal or baffle at each jamb.
e. Meeting rails or sections doors and meeting stiles or rails of biparting doors shall be provided with a seal, astragal or baffle.
f. Swinging and revolving doors shall be weather-stripped at the head, sill and jamb.
g. Open exterior joints around window and door frames , between wall and foundations, between wall and roof, between wall panels, at penetrations of utility services through walls, floors and roofs and all other openings in the exterior envelope shall be sealed, caulked, gasketed, or weather-stripped to limit air leakage.

22. All door sizes shown on door schedule are opening sizes. Allowance for thresholds etc. shall be taken off door. All doors and frames shall be reinforced where required for closers, stops and hardware.

SITE CONDITIONS

01. The general contractor shall coordinate with the architect and civil engineer for the final building location, and driveway layout.

02. The general contractor shall dispose of all excess excavated material

03. The general contractor shall maintain the site throughout the course of the project by:
Repairing all earth related scarring such as ruts caused by equipment, spills, etc..;
Repairing or replacing all scarred, broken, or tress damaged by equipment movement.;
Exercise routine weekly removal of all refuse or other discarded material.

04. The general contractor responsible for the coordination and installation of all necessary site utilities including but not limited to power, telephone, water, sewer, gas, cable, etc. The general contractor shall fill in and compact all trenches cut to install utilities on the site. The general contractor shall verify the location of all meters, cans, tanks, lines, etc., with the architect.

05. The general contractor shall retain any removed topsoil for the finish grading, of which 6" shall be topsoil. All disturbed soil shall be finish graded and machine raked to achieve a uniform surface. This finish grade shall be free of rock and debris greater than 3/4" diameter, twigs, sticks, and other non-soil material and shall taper away from building.

CONDITIONS

01. It is the intent of these plans and specifications to describe a complete and finished project other than items marked "N.I.C." (not in contract).

02. The general contractor and subcontractor(s) shall verify all dimensions and job conditions at the job site sufficiently in advance of work to be performed to assure the orderly progress of the work.

03. The general contractor shall be responsible for the performance of all construction personnel on the site.

04. Code: All codes having jurisdiction shall be observed strictly in the construction or the project, including all applicable state, city and county building, zoning, electrical, mechanical, plumbing and fire codes. The general contractor shall verify all code requirements before commencement of construction and bring any discrepancies between code requirements and the construction documents to the attention of the architect.

05. Cleanup: The general contractor shall maintain the premises clean and free of all trash, debris and shall protect all adjacent work from damage, soiling, paint over-spray, etc. All fixtures, equipment, glazing, floors, etc. shall be left clean and ready for occupancy upon completion of the project.

06. The general contractor shall obtain all required building permits and agency approvals. The general contractor shall provide the owner with copies of permits, licenses, certifications, inspection reports, receipts for payment, and all similar documents.

07. The presence of the architect on the job site does not imply approval of any work. The general contractor must call specific items to the attention of the architect if he wishes to obtain the architects approval.

08. The general contractor shall submit all proposed substitutions in writing to the architect for approval with samples, cost analysis, and sufficient information for evaluation. If a revision or substitution is made without the architect's written approval that does not conform to the contract documents, it will relieve the architect of any liability from the resulting aesthetic effect, subsequent failure, property damage, or personal injury.

09. The general contractor shall perform a high quality, professional work. The work of each trade shall meet or exceed all quality

FARMERPAYNE
ARCHITECTS

Jackson Hole
260 West Broadway, Suite A
Jackson, WY 83001
T.307.264.0080

Sun Valley
351 N Leadville Ave, Suite 204
Ketchum, ID 83340
T.208.214.5155

Louisiana
910 Pierremont Rd. Suite 410
Shreveport, LA 71106
T.318.383.3100

ARCHITECT STAMP

LICENSED ARCHITECT
JAMES J. FARMER
B-6262
3.9.23
STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE
6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW

ISSUE:

Building Permit Set	3.9.23

A101
General Notes & Drawing Index

V5

GRID NORTH

ON SIGHT LAND SURVEYORS

On Sight Land Surveyors, Inc.
Teton County Control Network
2001

GRAPHIC SCALE

0 10 20 30

1 INCH = 10 FEET
1' CONTOUR INTERVAL
VERTICAL DATUM: NAVD88

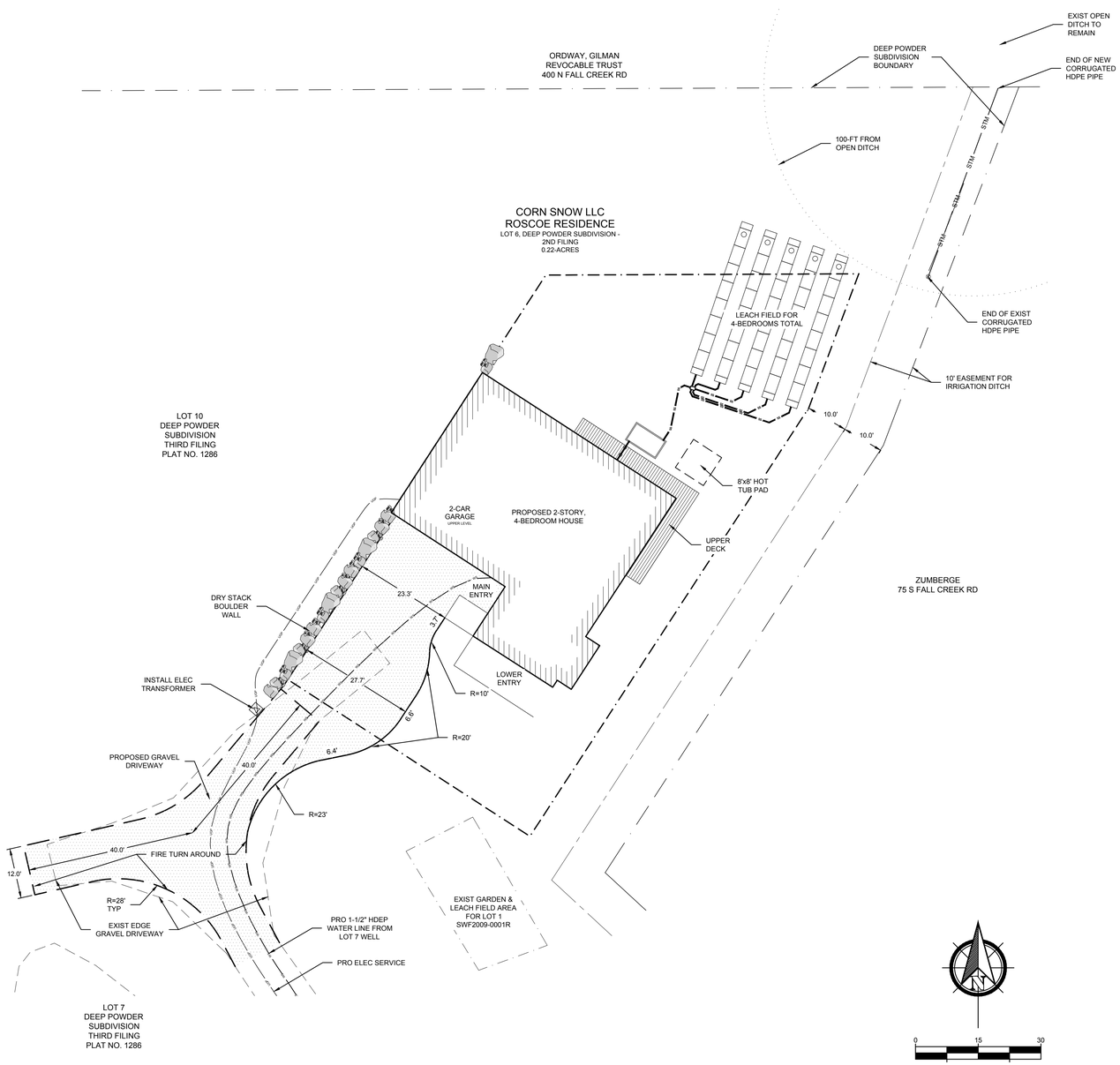
LEGEND

- ● INDICATES A 5/8 INCH DIAMETER STEEL REBAR WITH AN ALUMINUM CAP INSCRIBED "PLS 4270" FOUND THIS SURVEY
- △ INDICATES A STEEL SPIKE SET THIS SURVEY FOR ORIENTATION AND MAPPING PURPOSES
- \+ INDICATES A RECORD POINT; NOTHING FOUND THIS SURVEY
- SUBJECT LOT LINE
- ADJACENT PROPERTY LINE
- EASEMENT
- SETBACK LINE PER PLAT NO. 1212
- EDGE OF GRAVEL
- EDGE OF PATH
- EDGE OF GARDEN AREA
- FLOWLINE OF DITCH
- SLOPES IN EXCESS OF 30 PERCENT
- × STAKE
- +6250.6 TYPICAL SPOT ELEVATION

TOPOGRAPHIC MAP
PREPARED FOR
CORN SNOW, LLC
SHOWING
LOT 6 DEEP POWDER SUBDIVISION
SECOND FILING
PLAT NO. 1212
TETON COUNTY, WYOMING

On Sight LAND SURVEYORS, INC.
155 West Gill Ave.
P.O. Box 12290
Jackson, WY 83002
(307) 734-6131

Project No. 22-1212-6 22-1212-6_exp2.dwg 01/24/2022



GENERAL PROJECT INFORMATION

OWNER
CORN SNOW, LLC C/O ROSCOE RESIDENCE
PO BOX 836
WILSON, WY 83014

LOCATION
LOT 6, DEEP POWDER SUBDIVISION, 2ND FILING
PLAT NO. 1212
6165 W BURCHER ROAD
TETON COUNTY, WY
PIDN: 22-41-17-33-1-09-001

SITE DATA
GROSS SITE AREA = 0.22 AC
PRIVATE SANITARY SEWER SYSTEM
PRIVATE WATER SERVICE FROM LOT 7 WELL

SETBACKS:
N/A PER PLAT AND SUBDIVISION CC&Rs
'

ZONING
RURAL-3 (R3)
LOT IS NOT WITHIN OVERLAY DISTRICTS
NOT IN FEMA FLOOD ZONE
NOT WITHIN LANDSLIDE ZONE PER TC GIS

SITE CONDITIONS
VACANT SINGLE-FAMILY
RESIDENTIAL LOT

PROJECT SCOPE
SITE EXCAVATION WORK - CLEARING,
BULK EXCAVATION, CONSTRUCTION OF HOUSE
& GARAGE NEW INSTALL SEPTIC SYSTEM & OTHER
UTILITIES LANDSCAPING AND REVEGETATION

PROJECT TIMELINE
START EXCAVATION: SUMMER 2023
CONSTRUCT HOUSE: SUMMER 2023 - FALL 2024
LANDSCAPING & REVEG: FALL 2024

ARCHITECT
FARMER PAYNE ARCHITECTS
C/O RYAN WALTERS, AIA
260 WEST BROADWAY, SUITE A
JACKSON, WY 83001
307.264.0080

SURVEYOR
ON SIGHT LAND SURVEYORS (ORIGINAL ECS) 1/24/22

GENERAL PROJECT NOTES:

1. THE PROJECT WORK SHALL CONFORM TO THE SPECIFICATIONS DEFINED WITHIN THESE DRAWINGS ALONG WITH WYOMING PUBLIC WORKS STANDARD SPECIFICATIONS (WPWSS) AND FEDERAL REGULATIONS.
2. CONTRACTOR WILL COMPLY WITH ALL STATE AND FEDERAL REGULATIONS, INCLUDING BUT NOT LIMITED TO THE OCCUPATIONAL SAFETY AND HEALTH ACT REQUIREMENTS.
3. CONTRACTOR IS TO KEEP CURRENT STAMPED PLANS AND TETON COUNTY GRADING & EROSION CONTROL PERMIT ON JOBSITE AT ALL TIMES.
4. ALL WORK PERFORMED IS SUBJECT TO INSPECTION BY ENGINEER TO ENSURE COMPLIANCE WITH THE PROJECT SPECIFICATIONS AND THESE CONSTRUCTION DRAWINGS.
5. SUMMIT CONSULTING GROUP IS NOT RESPONSIBLE FOR WORK COMPLETED WITHOUT THE SUPERVISION OF THE PROJECT ENGINEER OR AUTHORIZED AGENT.
6. SUMMIT CONSULTING GROUP IS NOT RESPONSIBLE FOR WORK NOT SPECIFIED IN THESE CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ANY EXISTING PUBLIC AND PRIVATE UTILITIES. EXISTING UTILITIES HAVE BEEN LOCATED ON THE PLANS USING THE BEST AVAILABLE INFORMATION AND THROUGH FIELD SURVEY. CALL 811 FOR LOCATES.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE CONFINEMENT OF THE WORK TO THE LIMITS SHOWN ON THE DRAWINGS. ANY ADJACENT AREAS THAT ARE DISTURBED WILL BE RESTORED TO THE ORIGINAL CONDITION AS DIRECTED BY THE ENGINEER OR GOVERNING BODY.
9. THE CONTRACTOR IS RESPONSIBLE FOR RESETTING ALL LAND MONUMENTS DISRUPTED BY CONSTRUCTION ACTIVITIES OR BY NEGLIGENCE ON THE PART OF CONTRACTOR.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS DISCOVERED WITHIN THE DRAWINGS AND SPECIFICATIONS PRIOR TO COMMENCEMENT OF THE WORK SHOWN. REVISIONS OR CORRECTIONS TO THE DRAWINGS MUST BE ACCEPTED AND APPROVED BY THE ENGINEER IN WRITING BEFORE THE AFFECTED WORK IS STARTED. FIELD CHANGES MADE WITHOUT WRITTEN CONSENT FROM THE ENGINEER WILL BE SUBJECT TO REJECTION AND REPLACEMENT IN ACCORDANCE TO THESE GENERAL SPECIFICATIONS.
11. CERTIFICATE OF PLACEMENT REQUIRED FOR ALL STRUCTURES.
12. PER PLAT 1212:
    - 12.1. THE SUBDIVISION IS SUBJECT TO THAT COMMON WELL AGREEMENT AS RECORDED IN BOOK 609, PAGES 1 063-1066.
    - 12.2. THE OPEN SPACE (LOT 10) IS SUBJECT TO AN EASEMENT FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF SEWAGE DISPOSAL SYSTEMS FOR THE EXCLUSIVE USE OF THE OWNERS, GUESTS, HEIRS AND ASSIGNS.
    - 12.3. THE OWNERS RESERVE THEMSELVES THE RIGHT TO USE THE COMMON OPEN SPACE (LOT 10) FOR TEMPORARY ACCESS FOR THE PURPOSES OF CONSTRUCTION AND MAINTENANCE TO AND ON THE VARIOUS LOTS AND LIMITED COMMON ELEMENTS THAT MAY EXIST UPON AND IN SAID COMMON OPEN SPACE.
13. SITE DEVELOPMENT (IMPERVIOUS SURFACES):
    - 13.0.1. ALLOWABLE SITE DEVELOPMENT: = 6,673-SQFT
    - 13.0.2. PROPOSED SITE DEVELOPMENT: ~ 4,300-SQFT

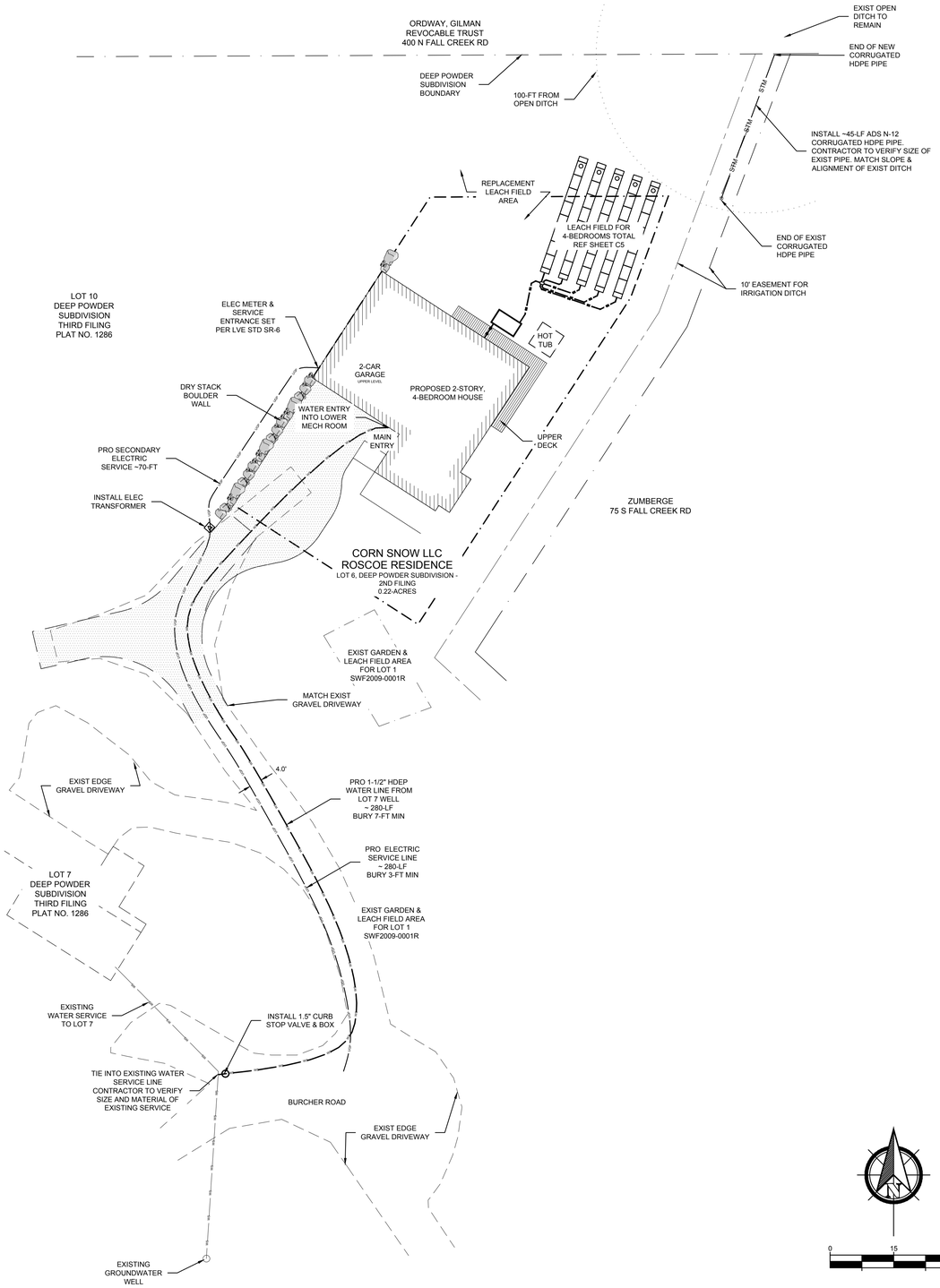
Summit Consulting Group
SCG
Civil + Geotechnical Engineering,
Geology, Groundwater,
and Construction Administration
P.O. Box 6482 • 2100 Wilson Road
Jackson, WY. 83002 • Jackson, WY 83001
www.scgengineering.com • 307.413.4399

PROJECT TITLE:
CORN SNOW LLC
ROSCOE RESIDENCE
6165 W BURCHER ROAD
TETON COUNTY, WY

DRAWING TITLE:
PROPOSED CONDITIONS
SITE PLAN

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PERMIT	RS	2/27/23

CHECKED BY: RS
PROJECT NO. 220-22-1
SCALE: 1"=15'
(24"x36" SHEET)
SHEET NO.
C1



UTILITY NOTES:

1. ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT TOWN OF JACKSON UTILITY STANDARDS ALONG WITH THE LATEST EDITION TO THE WYOMING PUBLIC WORKS STANDARD SPECIFICATIONS (WPWSS).
2. **REFER TO SHEET C3 FOR STANDARD UTILITY DETAILS**
3. **WATER SERVICE:**
   - 3.1. REFER TO MECHANICAL PLANS FOR THE PLUMBING SYSTEM
   - 3.2. REFER TO SHEET C3 FOR WATER ENTRY AND BACKFLOW SYSTEM LOCATED WITHIN THE BUILDING MECHANICAL ROOM.
   - 3.3. THE WATER SERVICE MUST BE PRESSURE TESTED FROM BACKFLOW SYSTEM TO WELL CONNECTION PRIOR TO USE.
   - 3.4. PIPE & FITTINGS SHALL BE 1.5-INCH DIAMETER 250 PSI(MIN) POLY PIPE, COPPER PIPE SIZE.
   - 3.5. ALL WORK AND MATERIALS SHALL CONFORM TO APPLICABLE TOJ SPECIFICATIONS AND STANDARD DETAILS SUCH AS W-100 & W-116 (UNDER DRIVEWAY).
   - 3.6. CURB STOP VALVE SHALL BE MUELLER MINNEAPOLIS H-10287 OR APPROVED EQUAL
   - 3.7. CURB STOP VALVE BOX SHALL CONSIST OF 1.5" GALV STEEL PIPE LOWER SECTION AND A 2" GALV PIPE TELESCOPING UPPER SECTION. SUPPLY A MUELLER CAP STAMPED WATER.
4. **SANITARY SEWER SYSTEM:**
   - 4.1. REFER TO SHEET C5
5. **FOUNDATION DRAIN PIPE:**
   - 5.1. PERIMETER DRAIN COLLECTION PIPE TO BE 4-INCH ADS SINGLE-WALL PERFORATED PIPE WITH SOCK PLACED IN WASHED ROCK BEDDING.
   - 5.2. ONCE BEYOND 3-FEET FROM FOUNDATION WALL, TRANSITION PERFORATED DRAIN PIPE TO SOLID 4-INCH ADS SINGLE-WALL PIPE TO A DAYLIGHT DISCHARGE POINT SOUTH SIDE OF BUILDING.PIPING NOT SHOWN FOR CLARITY
6. **LOWER VALLEY ENERGY (LVE):**
   - 6.1. REFER TO LVE STANDARD DETAILS ON SHEET C3

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PROJECT TITLE:
CORN SNOW LLC
ROSCOE RESIDENCE
6165 W BURCHER ROAD
TETON COUNTY, WY

DRAWING TITLE:
PROPOSED UTILITY SITE PLAN

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PERMIT	RS	2/27/23

CHECKED BY: RS
PROJECT NO. 220-22-1
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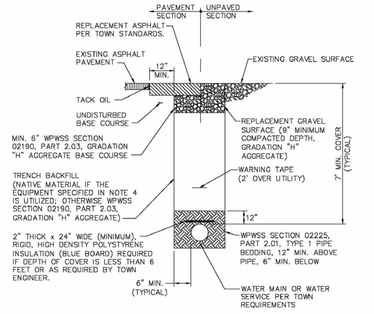
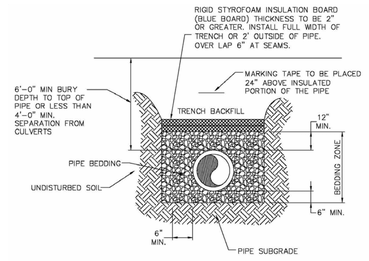
SHEET NO. C2



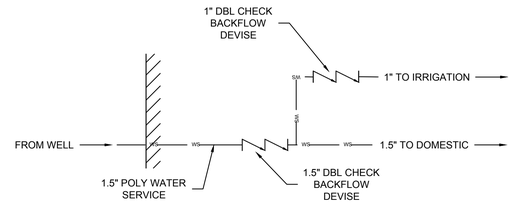
NOTES:
1. TRENCH BACKFILL BELOW THE SURFACE SHALL MEET THE FOLLOWING CRITERIA:
   - 95% MODIFIED PROCTOR DENSITY WITHIN STREET AND ALLEY RIGHTS-OF-WAY.
   - 90% MODIFIED PROCTOR DENSITY OUTSIDE STREET AND ALLEY RIGHTS-OF-WAY.
2. COMPACTION OF NATIVE TRENCH BACKFILL, WITH ALL ROCK LARGER THAN 6" REMOVED, SHALL BE CARRIED OUT IN 2' LIFTS WITH A HOE-PACK OR A VIBRATORY SHEEPS FOOT ROLLER (COMPACTION METHOD AND EQUIPMENT SHALL BE REVIEWED AND APPROVED BY TOWN ENGINEER PRIOR TO BACKFILLING).
3. PIPE BEDDING SHALL BE PLACED IN 6" LIFTS AND THOROUGHLY COMPACTED WITH A JUMPING JACK TO PROVIDE UNIFORM PIPE SUPPORT.
4. UNLESS OTHERWISE DIRECTED, ALL BASE COURSE AND GRAVEL SURFACE REPLACEMENT SHALL BE INSTALLED PER WPWSS SECTION 02231, PART 3.03.
5. ALL TRENCH EXCAVATION SHALL CONFORM TO WYOMING OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (WYOSHA) REGULATIONS.

TOJ W-100 WATER MAIN & SERVICE TRENCH DETAIL
SCALE: NONE

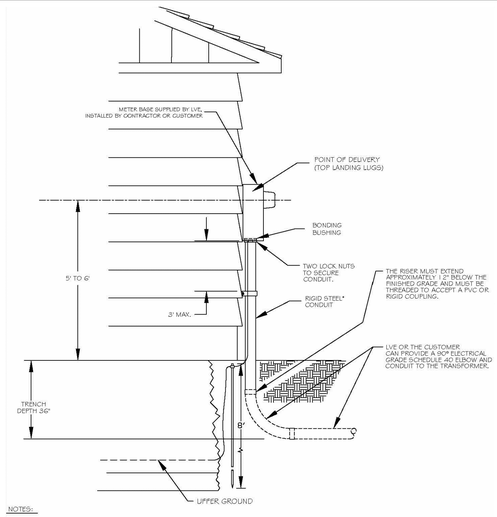


NOTES:
1. A CONDITION OF LESS THAN MINIMUM BURY DEPTH IS ALLOWED ONLY WITH WRITTEN APPROVAL FROM THE TOWN ENGINEER PRIOR TO CONSTRUCTION. INSULATION SHALL BE INSTALLED ON ALL PIPE THAT DO NOT MEET MINIMUM BURY REQUIREMENTS.
2. INSULATION SHALL BE INSTALLED ON ALL PIPE THAT IS WITHIN FOUR FEET OF ANY DRAINAGE CULVERT. THIS APPLIES TO ANY SIDE OF THE PIPE WHICH IS NEAR THE CULVERT.

TOJ W-116 WATER PIPE INSULATION DETAIL
SCALE: NONE



WATER ENTRY DETAIL
SCALE: NONE



NOTES:

THIS SKETCH IS INTENDED TO SHOW THE BASIC ITEMS USED IN A 200-AMPERE SERVICE ENTRANCE, AND IS NOT TO BE CONSTRUED AS AN APPROVED DESIGN FOR ALL SERVICES. FOR EXAMPLE, THIS DOES NOT ILLUSTRATE THE INSTALLATION OF A MAIN DISCONNECT SWITCH OR ANY OTHER EQUIPMENT.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR CUSTOMER TO INSTALL THE METER BASE, RISER, LOCK NUTS, BONDING BUSHINGS AND THE PROPER GROUNDING. LVE WILL INSTALL AND PROVIDE THE SERVICE WIRES TO THE SOURCE SIDE OF THE METER TERMINALS. (POINT OF DELIVERY)

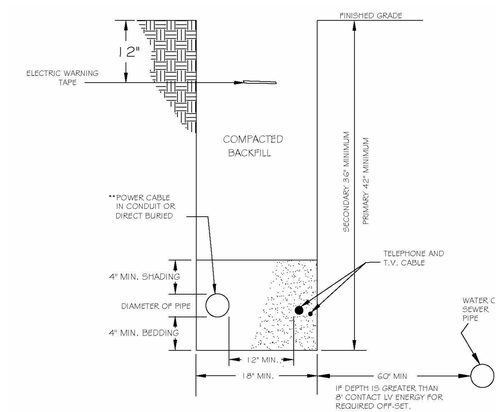
IN ALL CASES, THE METER LOCATION SHALL BE APPROVED BY LVE BEFORE INSTALLATION BY THE CONTRACTOR OR CUSTOMER.

GROUNDING AND CONNECTIONS TO THE CUSTOMERS PANEL SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE, LOCAL AND STATE CODES LVE REQUIRES AT LEAST TWO DRIVEN OR ONE UFER AND ONE DRIVEN GROUND ROD TO PROVIDE A VISIBLE GROUND. (5' GROUND RODS)

*CONDUIT SHALL BE OF 2 1/2" RIGID STEEL FOR SERVICES UP TO 200-AMPERES. SERVICES LARGER THAN 200-AMPERES WILL REQUIRE LARGER CONDUIT AS SPECIFIED BY LVE.

THE REQUIRED ELECTRIC PERMIT STICKER NEEDS TO BE ATTACHED TO THE METER BASE BEFORE LVE CAN ENERGIZE THE SERVICE.

LVE SR-6 UNDERGROUND SERVICE ENTRANCE DETAIL
SCALE: NONE



NOTES:

WHEN ELECTRICAL CONDUCTORS CROSS OVER OR UNDER WATER AND/OR GAS PIPES THERE SHALL BE A MINIMUM OF 12" VERTICAL SEPARATION. IN ADDITION, THE ELECTRICAL CONDUCTORS SHALL BE PROTECTED WITH NOT LESS THAN 48" LENGTH OF SUITABLE PVC OR RIGID STEEL CONDUIT WITH NO LESS THAN 24" ON EITHER SIDE OF THE CROSSING.

CUSTOMER INSTALLED CONDUIT MUST BE INSPECTED BY LVE PRIOR TO BACKFILLING. IF NOT INSPECTED, TRENCH MAY BE REJECTED.

ALL TRENCHES ARE TO BE INSPECTED PRIOR TO BACKFILLING.

BEDDING AND SHADING MATERIAL MUST BE SMOOTH, FREE OF ROCKS, AND MUST BE ABLE TO SIFT THROUGH A 1/4" SCREEN (SAND RECOMMENDED).

LVE SR-13 ELECTRIC TRENCH DETAIL
SCALE: NONE

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Jackson, WY, 83002 • Jackson, WY 83001
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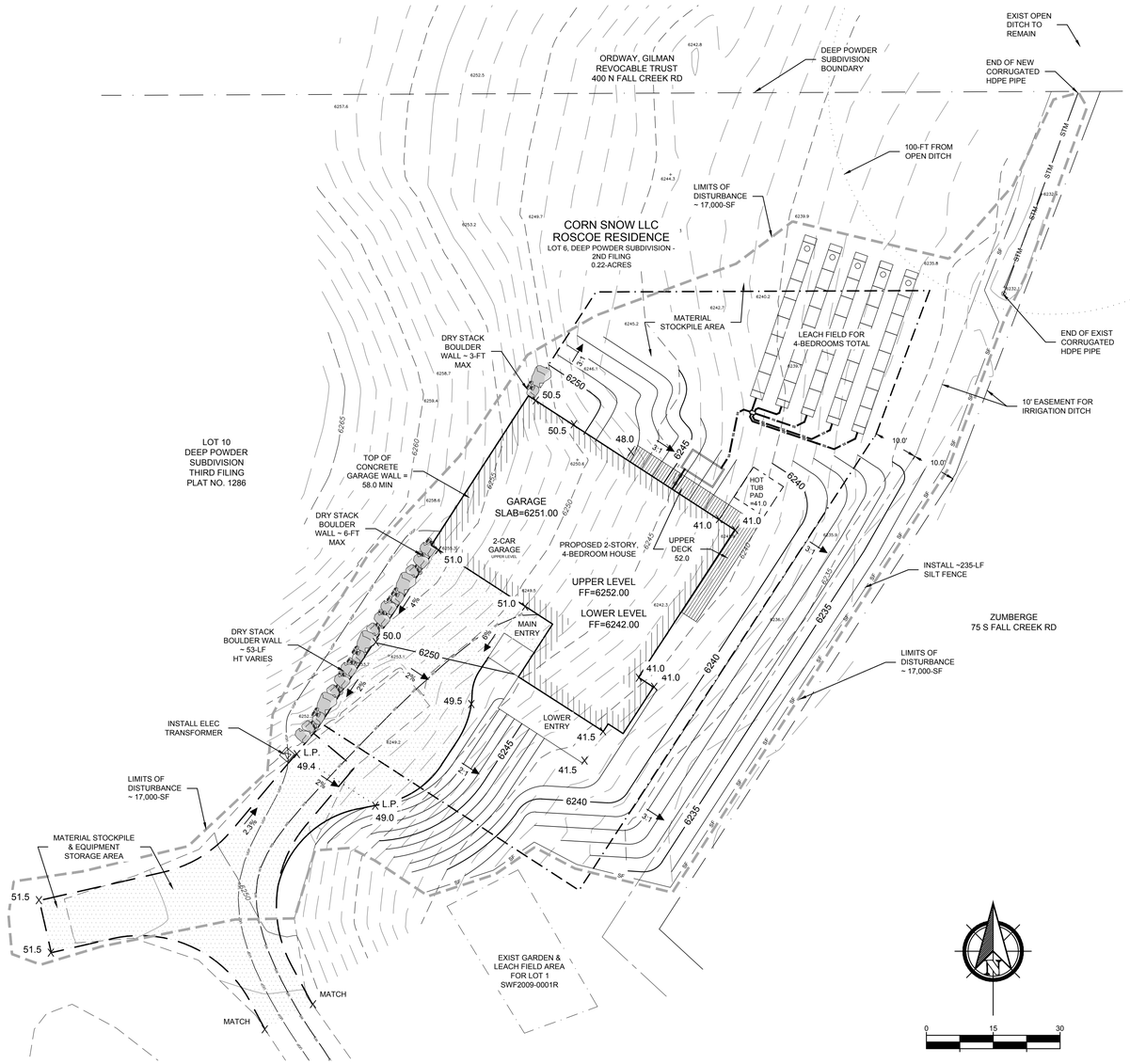
PROJECT TITLE:
CORN SNOW LLC
ROSCOE RESIDENCE
6165 W BURCHER ROAD
TETON COUNTY, WY

DRAWING TITLE:
PROPOSED UTILITY DETAILS

REV.	DESCRIPTION:	BY:	DATE:
A	FOR PERMIT	RS	2/27/23

CHECKED BY: RS
PROJECT NO. 220-22-1
SCALE: NONE (24"x36" SHEET)
SHEET NO. C3



EROSION CONTROL NOTES

1. SITE GRADING AND EROSION CONTROL SYSTEMS SHALL BE ESTABLISHED AND AT ALL TIMES MAINTAINED IN ACCORDANCE WITH THE APPROVED GRADING AND EROSION CONTROL PERMIT AS WELL AS APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
2. CONSTRUCTION EQUIPMENT PARKING AREAS AND TEMPORARY TOPSOIL/DIRT STOCKPILE AREAS MAY VARY WITHIN THE LIMITS OF DISTURBANCE BASED UPON THE CONSTRUCTION SEQUENCING. IN ALL CASES. LOCATION WILL BE WITHIN THE PROPERTY BOUNDARY,SILT FENCE & LIMITS OF DISTURBANCE.
3. ALL PUBLIC WAYS SHALL BE KEPT FREE AND CLEAR OF CONSTRUCTION MATERIALS AND DEBRIS. A STABILIZED CONSTRUCTION ENTRANCE (TOJ PUBLIC WORKS DETAIL ST-119) MAY BE REQUIRED IF ADVERSE WEATHER AND SITE CONDITIONS EXIST.
4. THE CONSTRUCTION SITE CONTRACTOR(S) SHALL COMPLY WITH THE STATE OF WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY (WYPDES) REQUIREMENTS FOR STORMWATER FOR SMALL CONSTRUCTION ACTIVITIES.
5. THE CONTRACTOR SHALL CONDUCT INSPECTIONS AND DOCUMENT SELF MONITORING AS DESCRIBED IN THE GEC PERMIT. CONTRACTOR MAY REVISE EROSION CONTROL MEASURES, TYPE, AND LOCATIONS AS NECESSARY TO MINIMIZE SITE EROSION.
6. INSTALL EROSION CONTROL SYSTEMS DOWNSTREAM OF ANTICIPATED FLOW LINES AS INDICATED ON THE DRAWINGS TO PREVENT TRANSPORT OF SEDIMENT FROM WITHIN THE LIMITS OF DISTURBANCE BY SURFACE WATER RUNOFF. INSTALLATION OF EROSION CONTROL SYSTEMS SHALL BE SUPERVISED BY THE PROJECT ENGINEER.
7. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL SYSTEMS AT LEAST ONCE PER WEEK AND AFTER EACH RAINFALL EVENT. RECORDS OF ALL INSPECTIONS SHALL BE MAINTAINED AT THE JOB SITE.
8. DISCHARGES WHICH INCLUDE MATERIAL OTHER THAN STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES MUST BE IN COMPLIANCE WITH AN NPDES PERMIT FOR THE DISCHARGE.
9. CONCRETE WASH SHALL BE DISCHARGED WITHIN DRIVEWAY OR FOUNDATION FOOTPRINTS AND NOT INTO WATERS OF THE STATE OR TO THE ANY STORM SEWER SYSTEMS.

RECLAMATION SPECIFICATIONS:

1. THE FINAL LANDSCAPE PLAN SHALL CONFORM WITH DIVISION 5.5 OF THE TETON COUNTY LAND DEVELOPMENT REGULATIONS FOR A SINGLE-FAMILY LOT LOCATED IN THE R2 ZONE DISTRICT.
2. **SEED SPECIFICATIONS**:
   - 2.1. THE SEED USED IN THE RECLAMATION MIX SHALL BE FRESH PURE LIVE SEED (PLS) OF THE MOST RECENT CROP AND MIXED IN THE FOLLOWING QUANTITIES:

2.1.1.	WESTERN WHEATGRASS	5.0
2.1.2.	BLUEBUNCH WHEATGRASS	12.0
2.1.3.	THICKSPIKE WHEATGRASS	12.0
2.1.4.	SLENDER WHEATGRASS	7.0
2.1.5.	HARD SHEEP FESCUE (NON-NATIVE)	3.0
2.1.6.	CANBY BLUEGRASS	1.0
2.1.7.	WESTERN SAGE	0.5

TOTAL PURE LIVE SEED APPLICATION RATE = 40.0 # / ACRE

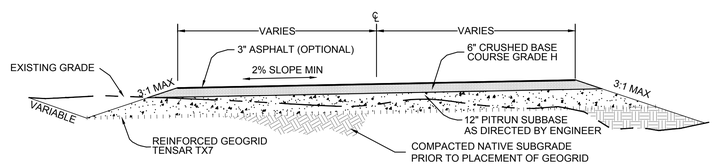
3. **WEED & PEST MANAGEMENT STRATEGIES**
   - 3.1. CONTRACTOR TO COMPLY WITH THESE LAND DEVELOPMENT REGULATIONS:
     - 3.1.1. WYOMING SEED LAW
     - 3.1.2. WYOMING NURSERY STOCK LAW
     - 3.1.3. INVASIVE SPECIES MANAGEMENT
   - 3.2. PRE-CONSTRUCTION PLAN (BY CONTRACTOR):
     - 3.2.1. CONTACT TETON COUNTY WEED & PEST TO PREPARE AN INVASIVE SPECIES MANAGEMENT PLAN.
     - 3.2.2. IF CONSTRUCTION BEGINS PRIOR TO THE GROWING SEASON, KNOWN INFESTATIONS WILL BE ADDRESSED UNDER THE ACTIVE CONSTRUCTION PHASE.
     - 3.2.3. IF CONSTRUCTION BEGINS DURING THE GROWING SEASON, TREAT ALL KNOWN INFESTATIONS AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION.
   - 3.3. ACTIVE CONSTRUCTION:
     - 3.3.1. CLEAN ALL CONSTRUCTION EQUIPMENT PRIOR TO ENTERING THE SITE TO PREVENT INTRODUCING INVASIVE SPECIES.
     - 3.3.2. KEEP ALL AREAS OUTSIDE OF THE CONSTRUCTION ZONE UNDER ACTIVE MANAGEMENT.
     - 3.3.3. ROUTINELY CHECK AND TREAT SOIL STOCKPILES FOR INVASIVE SPECIES.
     - 3.3.4. MINIMIZE DISTURBANCE OF AREAS INFESTED WITH INVASIVE SPECIES AS POSSIBLE.
   - 3.4. POST-CONSTRUCTION:
     - 3.4.1. CONDUCT REVEGETATION IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE TO PREVENT INVASIVE SPECIES FROM ESTABLISHING IN DISTURBED AREAS.
     - 3.4.2. USE DEALERS LICENSED BY THE WYOMING DEPARTMENT OF AGRICULTURE AND CERTIFIED WEED FREE SEEDS AND PLANTING MATERIALS.
     - 3.4.3. CERTIFIED WEED FREE STRAW, GRAVEL, AND SOIL ARE RECOMMENDED.
     - 3.4.4. SCHEDULE A POST-CONSTRUCTION INVASIVE SPECIES INVENTORY WITH TCWP

GENERAL GRADING NOTES:

1. SPOT ELEVATIONS SHOWN APPROXIMATE AND MAY REQUIRE ADJUSTMENT AT TIME OF CONSTRUCTION.
2. LIMITS OF DISTURBANCE ~ 17,000-SQFT. LIKELY TO VARY BASED ON FIELD CONDITIONS
3. REFER TO STRUCTURAL PLANS FOR CONCRETE FOUNDATION WALL ELEVATIONS.
4. REFER TO SHEET C5 FOR SEPTIC SYSTEM PLANS AND DETAILS
5. REFER TO GEOTECHNICAL ENGINEERING REPORT BY SCG, DATED 7/5/2022, FOR SITE PREPARATION, EXCAVATION AND OTHER EARTHWORK RELATED RECOMMENDATIONS.

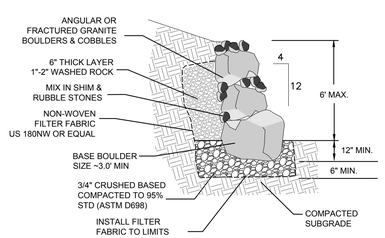
ELEVATION NOTES:

1.	GARAGE SLAB	= 99'-0"	6251.00'
2.	LOWER LEVEL FLOOR SLAB	= 90'-0"	6242.00'
3.	UPPER LEVEL FINISHED FLOOR	= 100'-0"	6254.00'

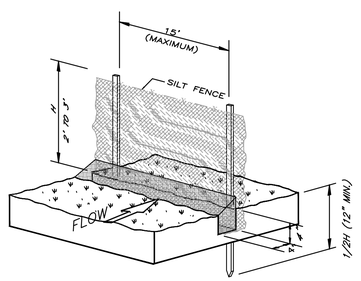


TYPICAL DRIVEWAY & PARKING SECTION

SCALE: NONE



BOULDER WALL DETAIL



SILT FENCE DETAIL

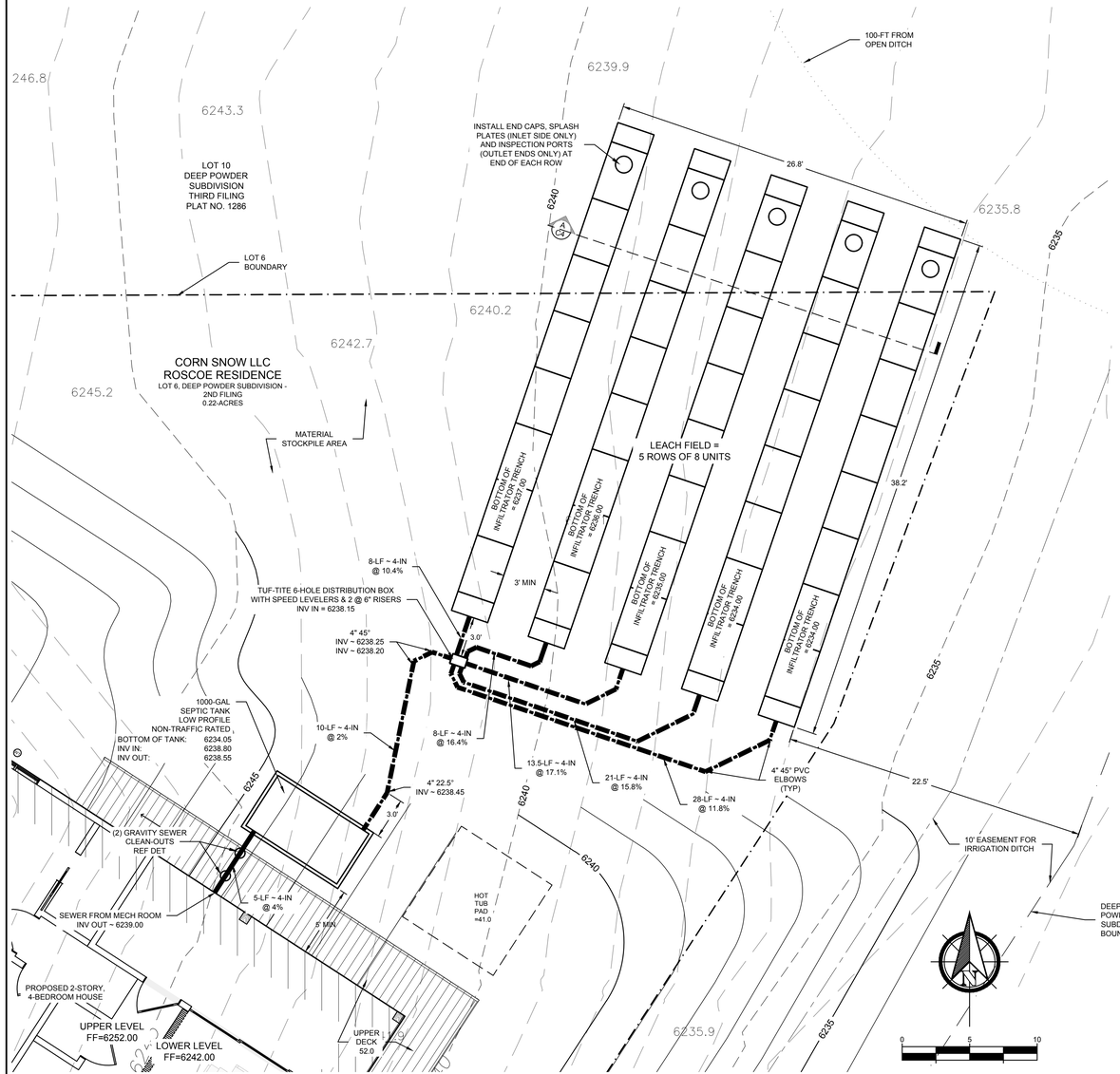
Summit Consulting Group
SCG
Civil + Geotechnical Engineering, Geology, Groundwater, and Construction Administration
P.O. Box 6482 • 2100 Wilson Road
Jackson, WY. 83002 • Jackson, WY 83001
www.scgengineering.com • 307.413.4399

PROJECT TITLE:
CORN SNOW LLC
ROSCOE RESIDENCE
6165 W BURCHER ROAD
TETON COUNTY, WY

DRAWING TITLE:
PROPOSED GRADING & EROSION CNTL PLAN

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PERMIT	RS	2/27/23

CHECKED BY: RS
PROJECT NO. 220-22-1
SCALE: 1"=15' (24"x36" SHEET)
SHEET NO. C4

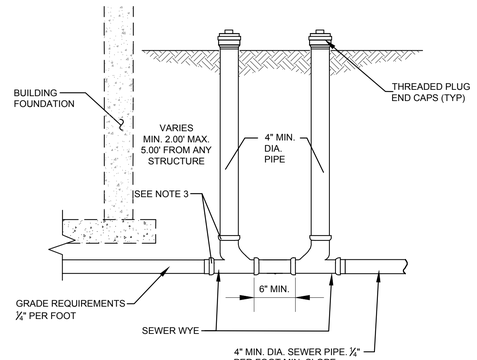


SEPTIC SYSTEM DESIGN SUMMARY

1. FLOW QUANTITY:
   - 1.1. MAIN HOUSE = 4 BEDROOMS
     - 1.1.1. FOUR (4) BEDROOMS = 470 GPD (PER TITLE 9, SMALL WASTEWATER FACILITY RESOLUTION, JAN 2022, REGS)
2. SEPTIC TANK SYSTEM DESIGN:
   - 2.1. PER SECTION 9-3-7; SELECT 1,000 GALLON SEPTIC TANK
   - 2.2. SEPTIC TANK = OLD CASTLE 1,000 GALLON, LOW PROFILE, NON-TRAFFIC RATED, TWO COMPARTMENT TANK
3. LEACH FIELD SIZING:
   - 3.1. SOIL PERCOLATION RATE = 15 MINUTES / INCH (PER SWF2008-0065 & SWF2009-0001R)
   - 3.2. LOAD RATE @ 15 MINUTE = 0.52 GAL/SQ FT / DAY
   - 3.3. TOTAL INFILTRATOR SURFACE AREA OF ABSORPTION SYSTEM: 470 GPD / 0.52 GAL/SQ FT / DAY = 904 SQ FT MINIMUM
   - 3.4. SELECT A TRENCH LEACH FIELD CONFIGURATION WITH INFILTRATOR WATER TECHNOLOGIES QUICK4 PLUS STANDARD CHAMBER ARRANGED IN 5 ROWS OF 8 UNITS, 40 UNITS TOTAL.
   - 3.5. REPLACEMENT LEACH FIELD TO BE EQUAL.
   - 3.6. SYSTEM DESIGN DOES NOT INCLUDE A GUEST HOUSE.

GENERAL NOTES:

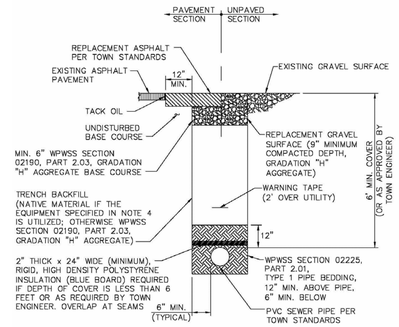
1. ***CONTACT ENGINEER IMMEDIATELY IF SANITARY SEWER INVERT OUT OF BUILDING WILL BE DIFFERENT THAN INVERT SPECIFIED ON THIS SHEET.***
2. SEPTIC SYSTEM CONSTRUCTION AND MATERIALS MUST COMPLY WITH THE TETON COUNTY SMALL WASTEWATER FACILITY RESOLUTION AND WDEQ WATER QUALITY RULES AND REGULATIONS.
3. CLEAR ALL VEGETATION, ROOTS AND TOPSOIL FROM LEACH FIELD AREA. CONTACT ENGINEER FOR INSPECTION PRIOR TO CONSTRUCTION OF LEACH FIELD IF FIELD CONDITIONS DIFFER FROM ASSUMPTIONS USED ON THESE PLANS
4. TRENCHING:
   - 4.1. THE BOTTOM OF THE ABSORPTION SYSTEM (INFILTRATORS) SHALL BE GRADED TO ENSURE A LEVEL BEDDING SURFACE
5. SANITARY SEWER SERVICE:
   - 3.1. ALL SEWER PIPE AND FITTINGS TO BE SCHEDULE 40 PVC. ALL PVC FITTINGS SHALL MEET ASTM D1785 SPECIFICATIONS WITH SOLVENT-WELDED JOINTS.
   - 3.2. ALL WORK AND MATERIALS SHALL CONFORM TO TOJ SPECIFICATIONS AND STANDARD DETAILS SS-100 & SS-114 WITH MODIFICATIONS PROVIDED WITHIN THIS PLAN SET.
   - 3.3. DISTRIBUTOR BOX SHALL BE SET ON A LEVEL AND COMPACTED SUBGRADE.
   - 3.4. INSTALL POLYLOK PL-250 EFFLUENT FILTER - 3014-250 (PL-250 FILTER CARTRIDGE & HOUSING) TO SEPTIC TANK OUTLET PIPE INSIDE OF THE TANK.



NOTES:
1. PRIOR TO BACKFILL THE ENGINEER MUST INSPECT ALL PIPE, FITTINGS, COUPLINGS GRADE AND COMPLETE WATER TESTING.
2. INSTALL AND COMPACT ALL BACKFILL MATERIAL PER STANDARD SPECIFICATIONS AS SHOWN WITHIN THE UTILITY TRENCH DETAIL.
3. ALL PVC FITTINGS SHALL MEET ASTM D3034 SPECIFICATIONS, AND SHALL ALSO MEET ASTM D312 SPECIFICATIONS FOR RUBBER GASKETED BELL AND SPIGOT TYPE WITH INTEGRAL BELL.

CLEANOUT DETAIL

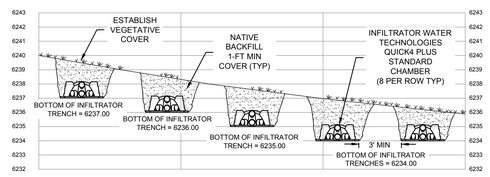
SCALE: NONE



NOTES:
1. TRENCH BACKFILL BELOW THE SURFACE SHALL MEET THE FOLLOWING CRITERIA:
   - 95% MODIFIED PROCTOR DENSITY WITHIN STREET AND ALLEY RIGHTS-OF-WAY.
   - 90% MODIFIED PROCTOR DENSITY OUTSIDE STREET AND ALLEY RIGHTS-OF-WAY.
2. COMPACTION OF NATIVE TRENCH BACKFILL, WITH ALL ROCK LARGER THAN 6" REMOVED, SHALL BE CARRIED OUT IN 2' LIFTS WITH A HOE-PACK OR A MIBRATORY SHEEPS FOOT ROLLER (COMPACTION METHOD AND EQUIPMENT SHALL BE REVIEWED AND APPROVED BY TOWN ENGINEER PRIOR TO BACKFILLING).
3. PIPE BEDDING SHALL BE PLACED IN 6" LIFTS AND THOROUGHLY COMPACTED WITH A JUMPING JACK TO PROVIDE UNIFORM PIPE SUPPORT.
4. UNLESS OTHERWISE DIRECTED, ALL BASE COURSE AND GRAVEL SURFACE REPLACEMENT SHALL BE INSTALLED PER WPWSS SECTION 02231, PART 3.03.
5. ALL TRENCH EXCAVATION SHALL CONFORM TO WYOMING OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (WOSHA) REGULATIONS.

TOJ SS-100 SEWER MAIN & SERVICE TRENCH DETAIL

SCALE: NONE



LEACH FIELD SECTION A-A

SCALE: 1"=5'

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DRAWING TITLE:
PROPOSED GRADING & EROSION CNTL PLAN

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PERMIT	RS	2/27/23

CHECKED BY: RS
PROJECT NO.: 220-22-1

SCALE:
NOTED
(24"x36" SHEET)

SHEET NO.
C5

1 Lower Level - Noted
SCALE: 1/4" = 1'-0"

GENERAL PLAN NOTES

01. Do not scale drawings. Contact Architect for any undocumented dimensions or clarification of any dimensional discrepancies. Large scale drawings take precedence over smaller scale drawings.

02. All dimensions are from gridline to centerline of structural columns, to centerline of windows and doors, or to face of stud walls.

03. All interior partitions are framed with 2x6 wood studs unless noted/dimensioned otherwise.

04. The Contractor shall coordinate the spacing of all ceiling and floor joists with lighting fixtures, mechanical openings, and any other potential conflict. (See Structrual, Mechanical, Lighting, and Reflected Ceiling Plans)

05. Dimensions for windows and doors are shown to center of unit. Coordinate with schedules to determine rough opening dimensions.

06. Where shown, furniture is for reference only and not in contract.

WALL LEGEND

W1	2X6 Wood Studs @ 16" O.C. w/ Rigid insulation continous, sheathing, Closed Cell Polyurethane Spray Foam in cavity, 5/8" Gypsum Board, ref assembly notes.
W2	2X6 Wood Studs @ 16" O.C. Interiors w/ Sound Batt Insulation, 5/8" Gypsum Board, ref assembly notes.
W3	Reinforced Concrete, 1/2" gap, 2x4 framed furr wall, Closed Cell Polyurethane Spray Foam in cavity, ref assembly notes.
W4	Reinforced Concrete
W5	Glass Shower Wall

N

FARMERPAYNE ARCHITECTS

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Louisiana
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Shreveport, LA 71106
T.318.383.3100

ARCHITECT STAMP

LICENSED ARCHITECT
JAMES J. FARMER
B-0262
3.9.23
STATE OF WYOMING

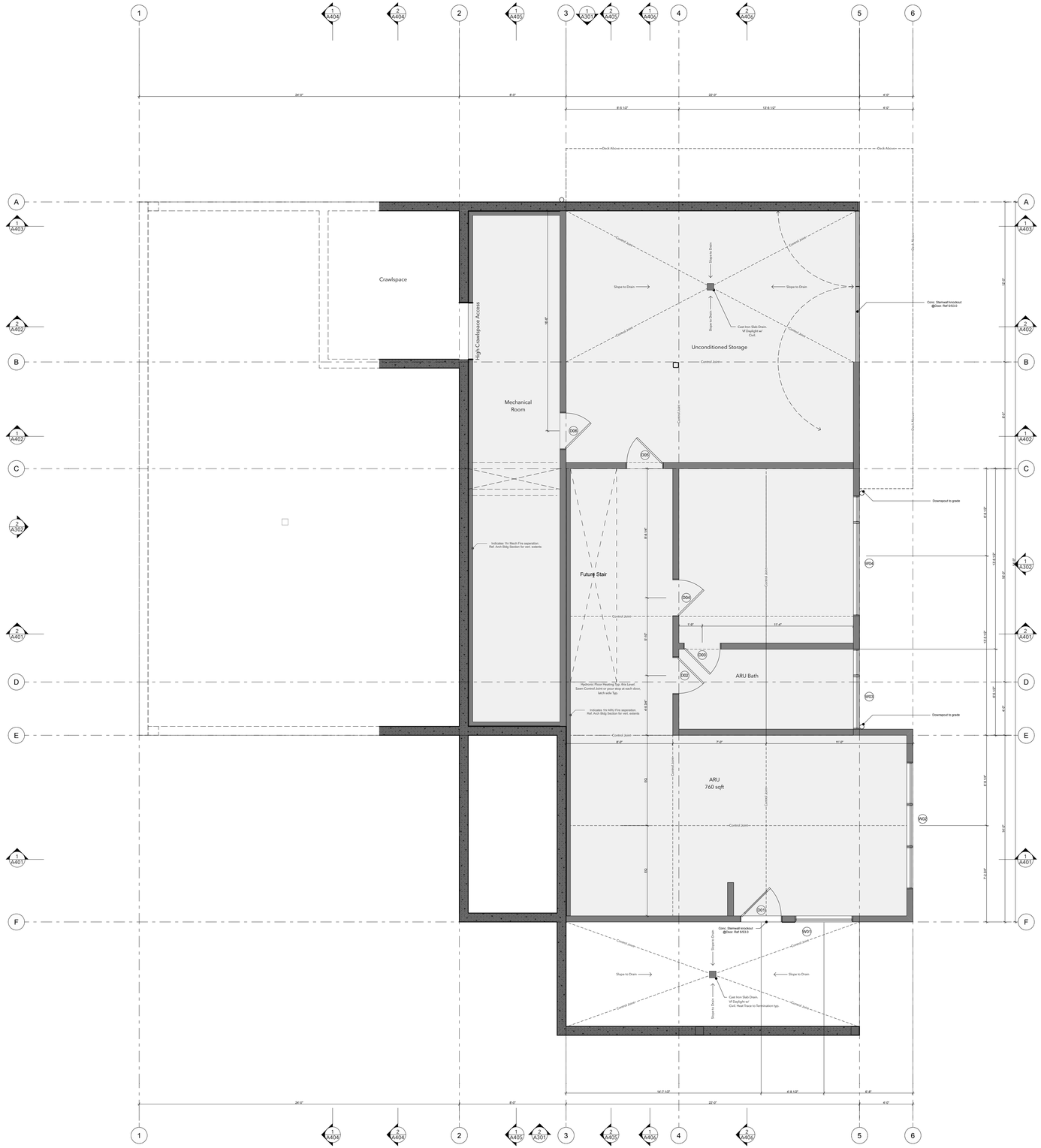
FOR CONSTRUCTION
BUILDING PERMIT

R O S C O E
R E S I D E N C E
6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW
ISSUE:	
Building Permit Set	3.9.23

A201
Lower Level - Noted

V5



1 Lower Level - Dimension
SCALE: 1/4" = 1'-0"

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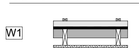
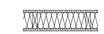
WALL LEGEND

W1		2X6 Wood Studs @ 16" O.C. w/ Rigid insulation continous, sheathing, Closed Cell Polyurethane Spray Foam in cavity, 5/8" Gypsum Board, ref assembly notes.
W2		2X6 Wood Studs @ 16" O.C. Interiors w/ Sound Batt Insulation, 5/8" Gypsum Board, ref assembly notes.
W3		Reinforced Concrete, 1/2" gap, 2x4 framed furr wall, Closed Cell Polyurethane Spray Foam in cavity, ref assembly notes.
W4		Reinforced Concrete
W5		Glass Shower Wall

N

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STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE

6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW

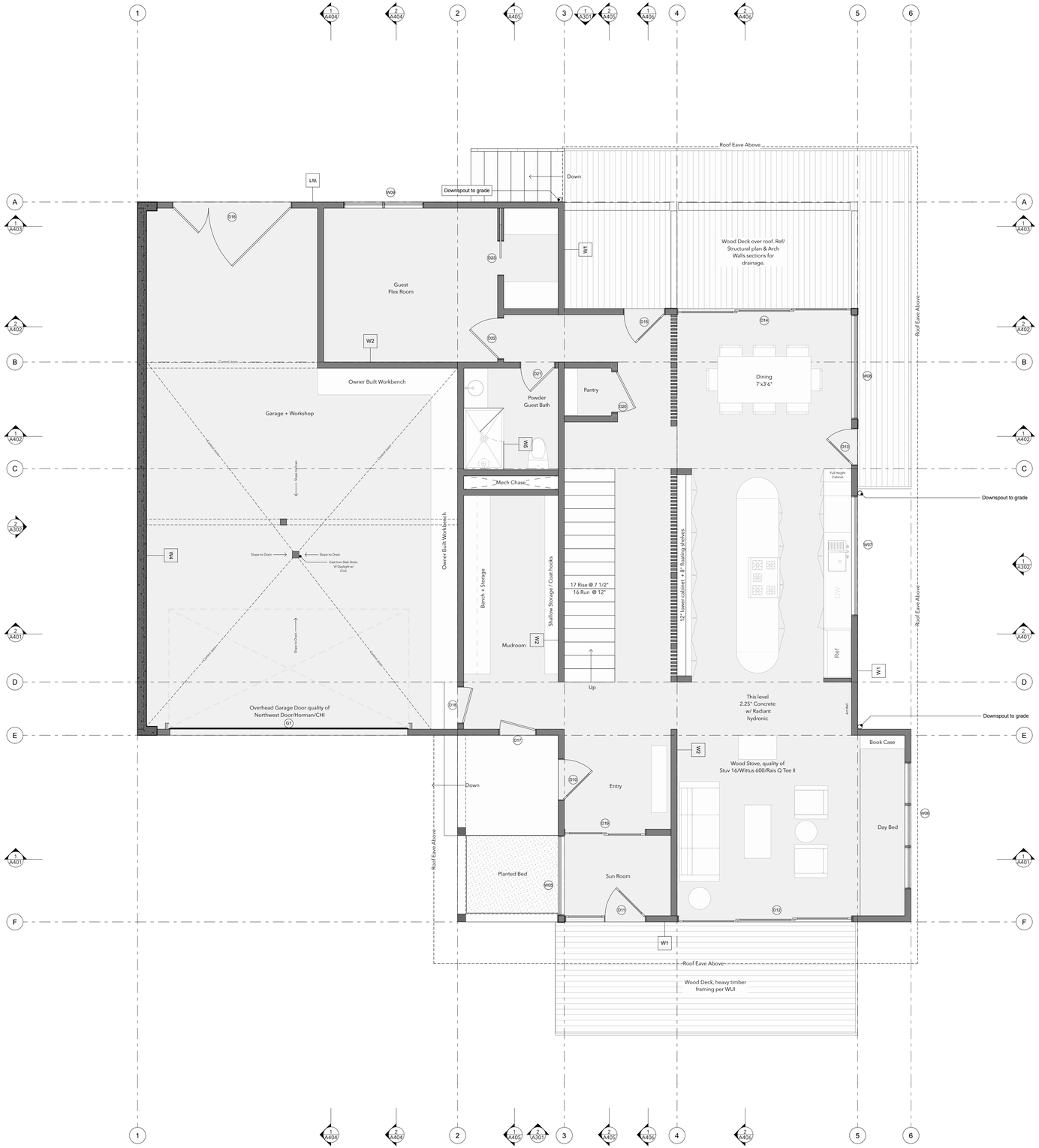
ISSUE:

Building Permit Set	3.9.23

A202

Lower Level - Dimensioned

V5



1 Main Level - Noted
SCALE: 1/4" = 1'-0"

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BUILDING PERMIT

ROSCOE RESIDENCE

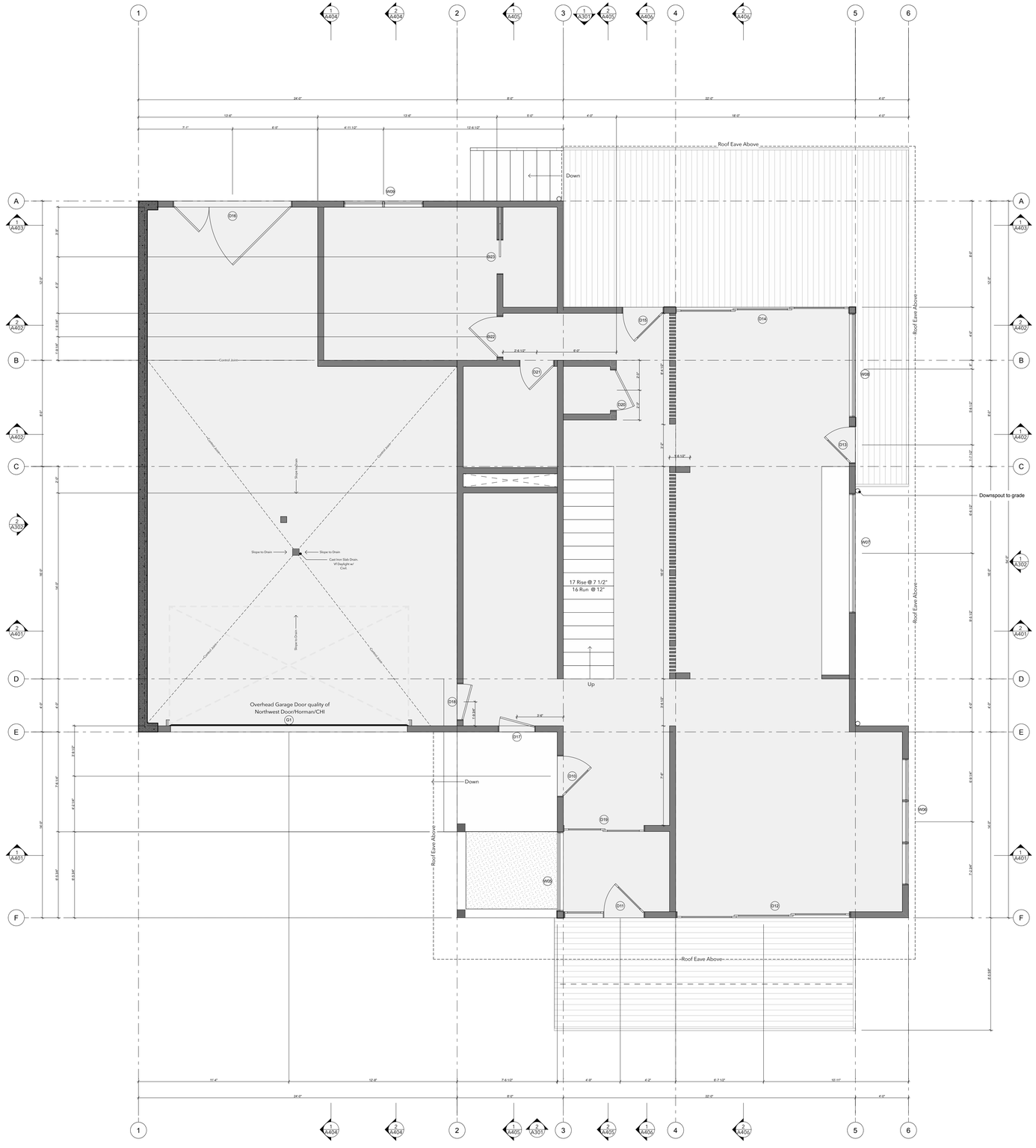
6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW
ISSUE:	
Building Permit Set	3.9.23

A203

Main Level - Noted

V5



1 Main Level - Dimension
SCALE: 1/4" = 1'-0"

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ARCHITECT STAMP

LICENSED ARCHITECT
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B-0262
3.9.23
STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE

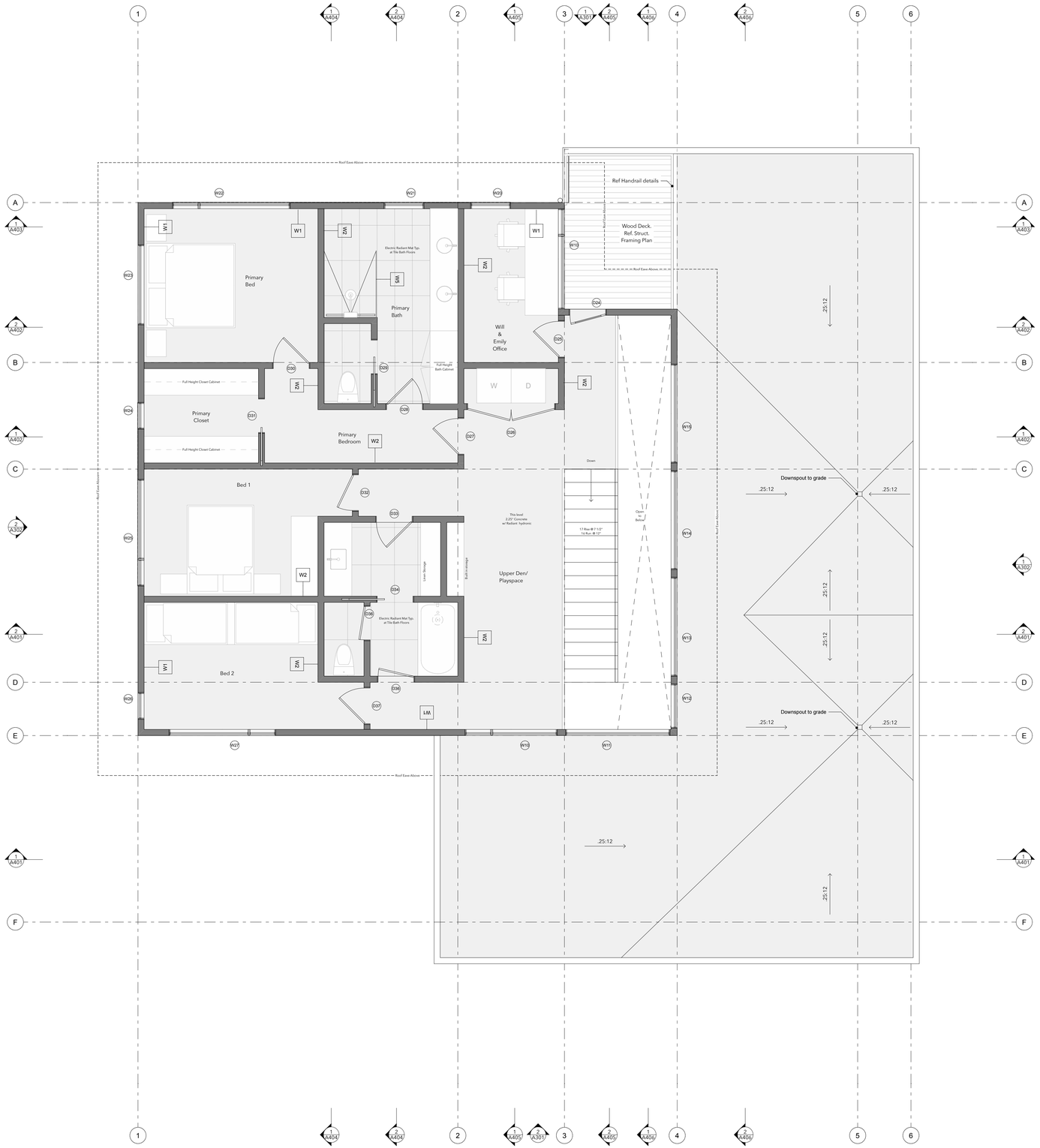
6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW
ISSUE:	
Building Permit Set	3.9.23

A204

Main Level - Dimension

v5



1 Upper Level - Noted
SCALE: 1/4" = 1'-0"

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06. Where shown, furniture is for reference only and not in contract.

WALL LEGEND

W1		2X6 Wood Studs @ 16" O.C. w/ Rigid insulation continous, sheathing, Closed Cell Polyurethane Spray Foam in cavity, 5/8" Gypsum Board, ref assembly notes.
W2		2X6 Wood Studs @ 16" O.C. Interiors w/ Sound Batt Insulation, 5/8" Gypsum Board, ref assembly notes.
W3		Reinforced Concrete, 1/2" gap, 2x4 framed furr wall, Closed Cell Polyurethane Spray Foam in cavity, ref assembly notes.
W4		Reinforced Concrete
W5		Glass Shower Wall

N

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ARCHITECT STAMP

LICENSED ARCHITECT
JAMES J. FARMER
B-0262
3.9.23
STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE

6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW

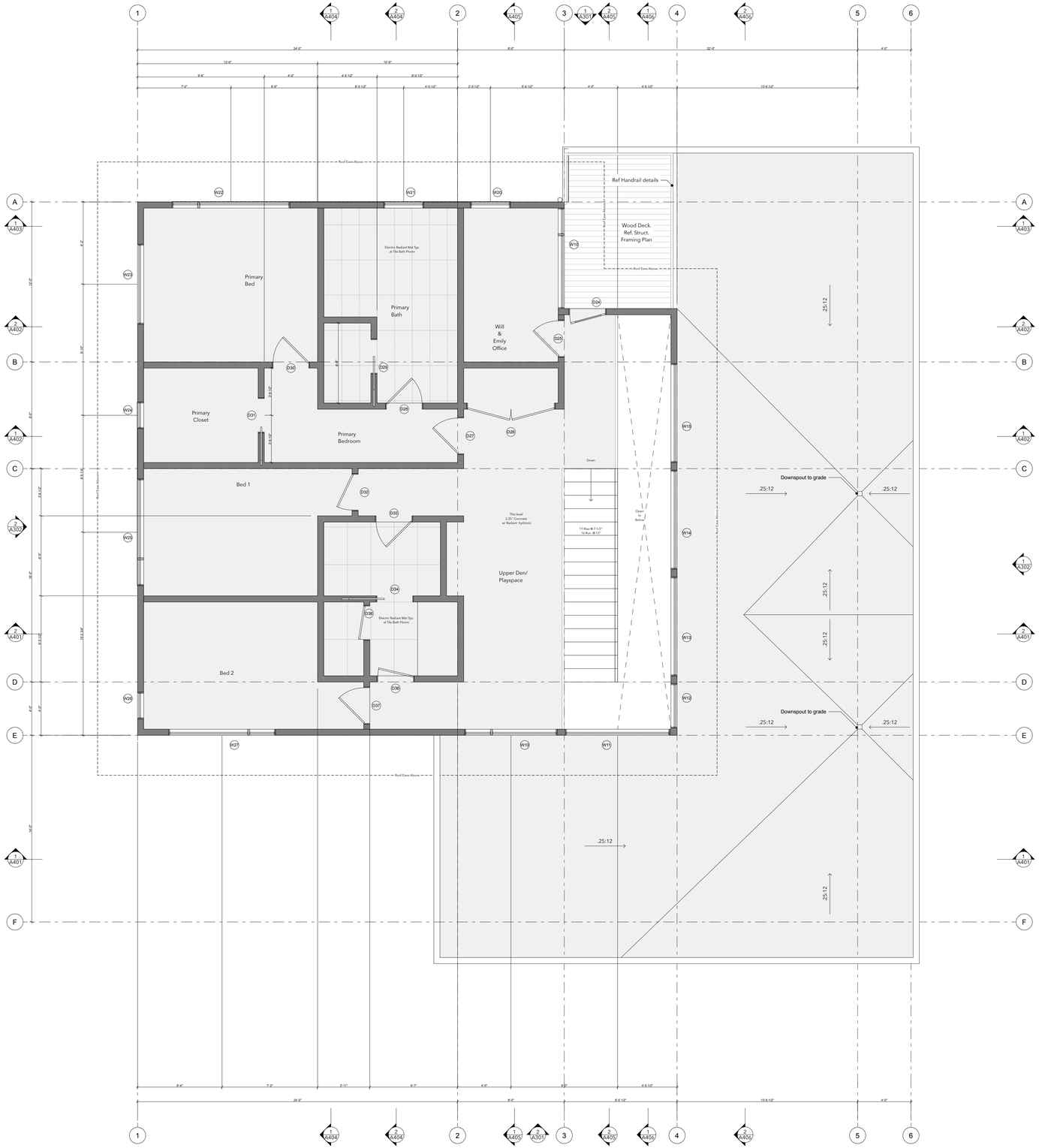
ISSUE:

Building Permit Set	3.9.23

A205

Upper Level - Noted

V5



1 Upper Level - Dimension
SCALE: 1/4" = 1'-0"

GENERAL PLAN NOTES

01. Do not scale drawings. Contact Architect for any undocumented dimensions or clarification of any dimensional discrepancies. Large scale drawings take precedence over smaller scale drawings.

02. All dimensions are from gridline to centerline of structural columns, to centerline of windows and doors, or to face of stud walls.

03. All interior partitions are framed with 2x6 wood studs unless noted/dimensioned otherwise.

04. The Contractor shall coordinate the spacing of all ceiling and floor joists with lighting fixtures, mechanical openings, and any other potential conflict. (See Structrual, Mechanical, Lighting, and Reflected Ceiling Plans)

05. Dimensions for windows and doors are shown to center of unit. Coordinate with schedules to determine rough opening dimensions.

06. Where shown, furniture is for reference only and not in contract.

WALL LEGEND

W1		2X6 Wood Studs @ 16" O.C. w/ Rigid insulation continous, sheathing, Closed Cell Polyurethane Spray Foam in cavity, 5/8" Gypsum Board, ref assembly notes.
W2		2X6 Wood Studs @ 16" O.C. Interiors w/ Sound Batt Insulation, 5/8" Gypsum Board, ref assembly notes.
W3		Reinforced Concrete, 1/2" gap, 2x4 framed furr wall, Closed Cell Polyurethane Spray Foam in cavity, ref assembly notes.
W4		Reinforced Concrete
W5		Glass Shower Wall

N

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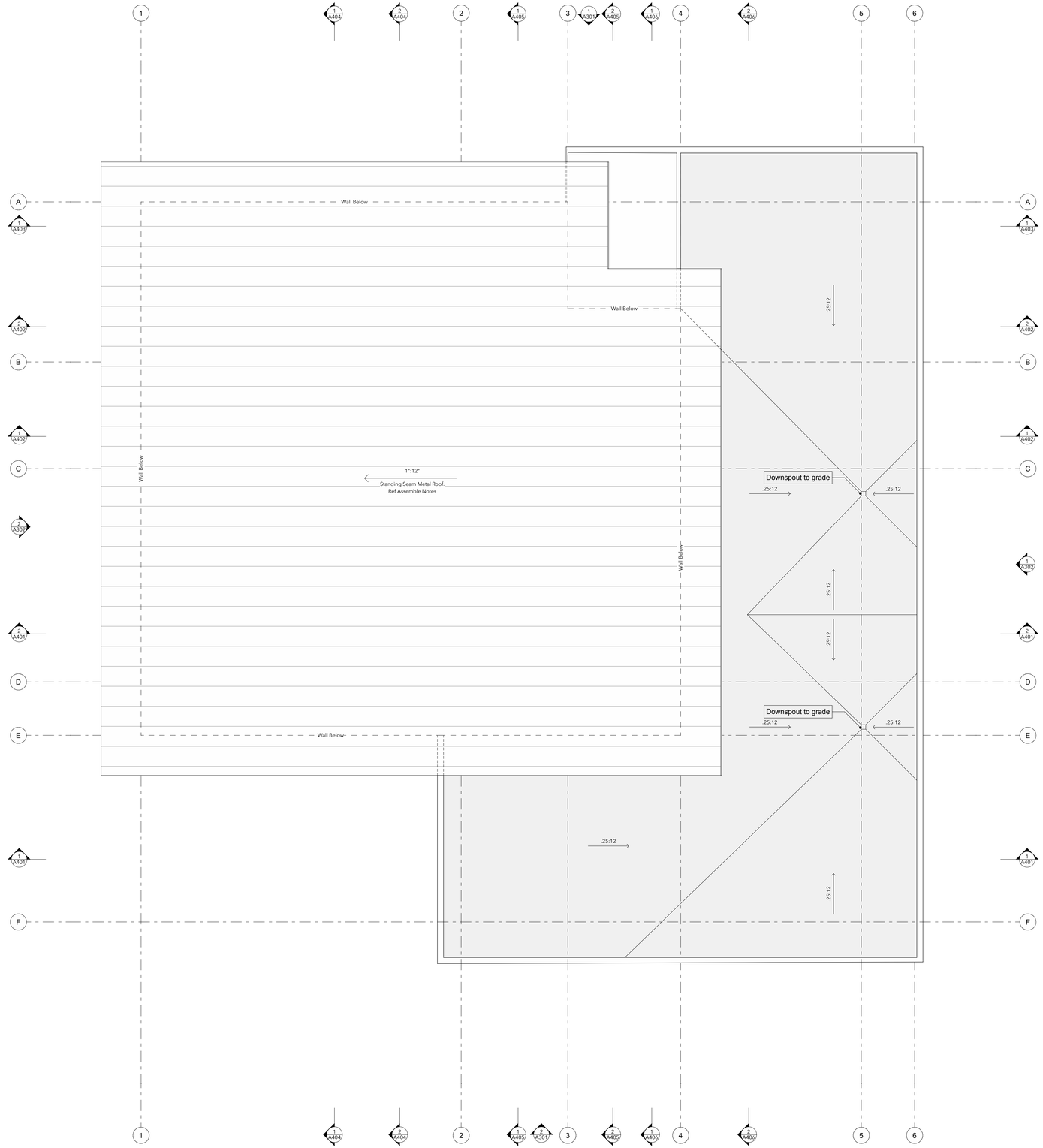
Building Permit Set	3.9.23

A206

Upper Level - Dimension

V5



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

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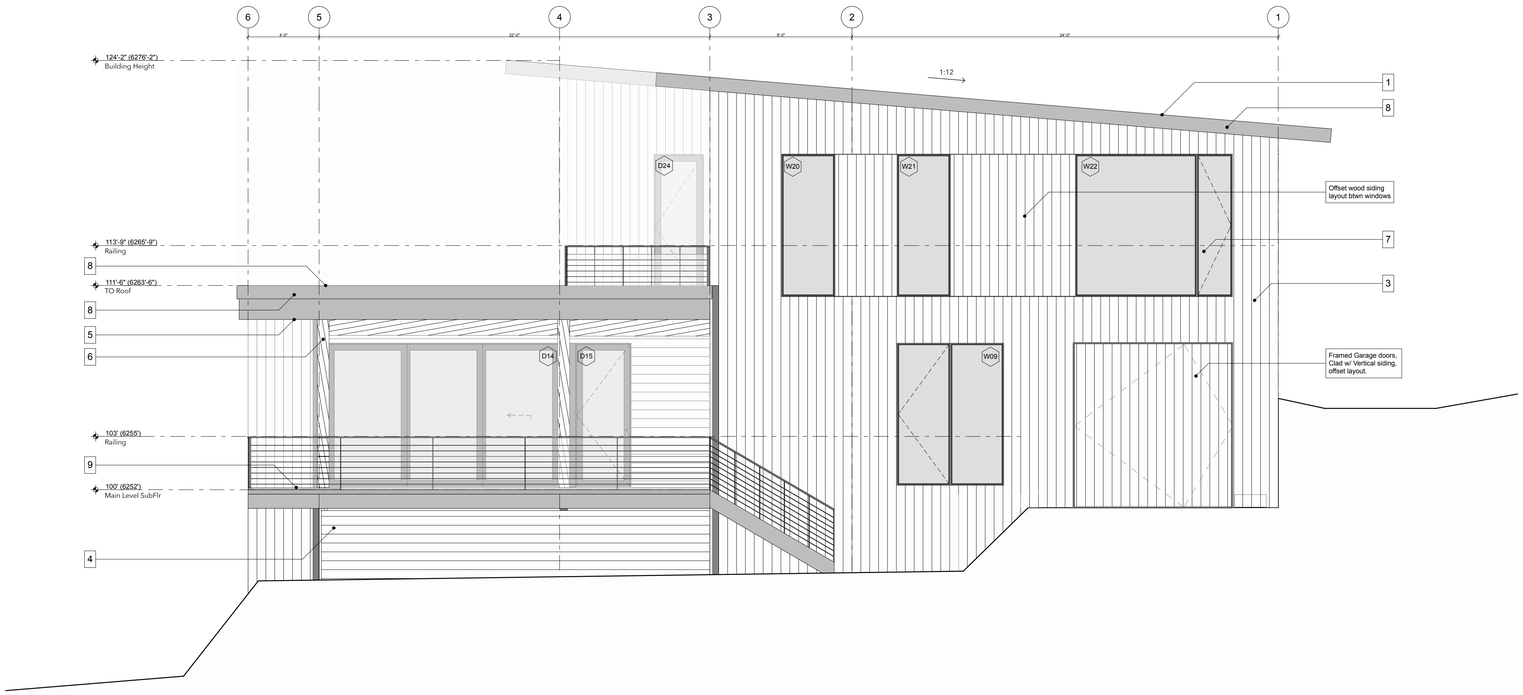
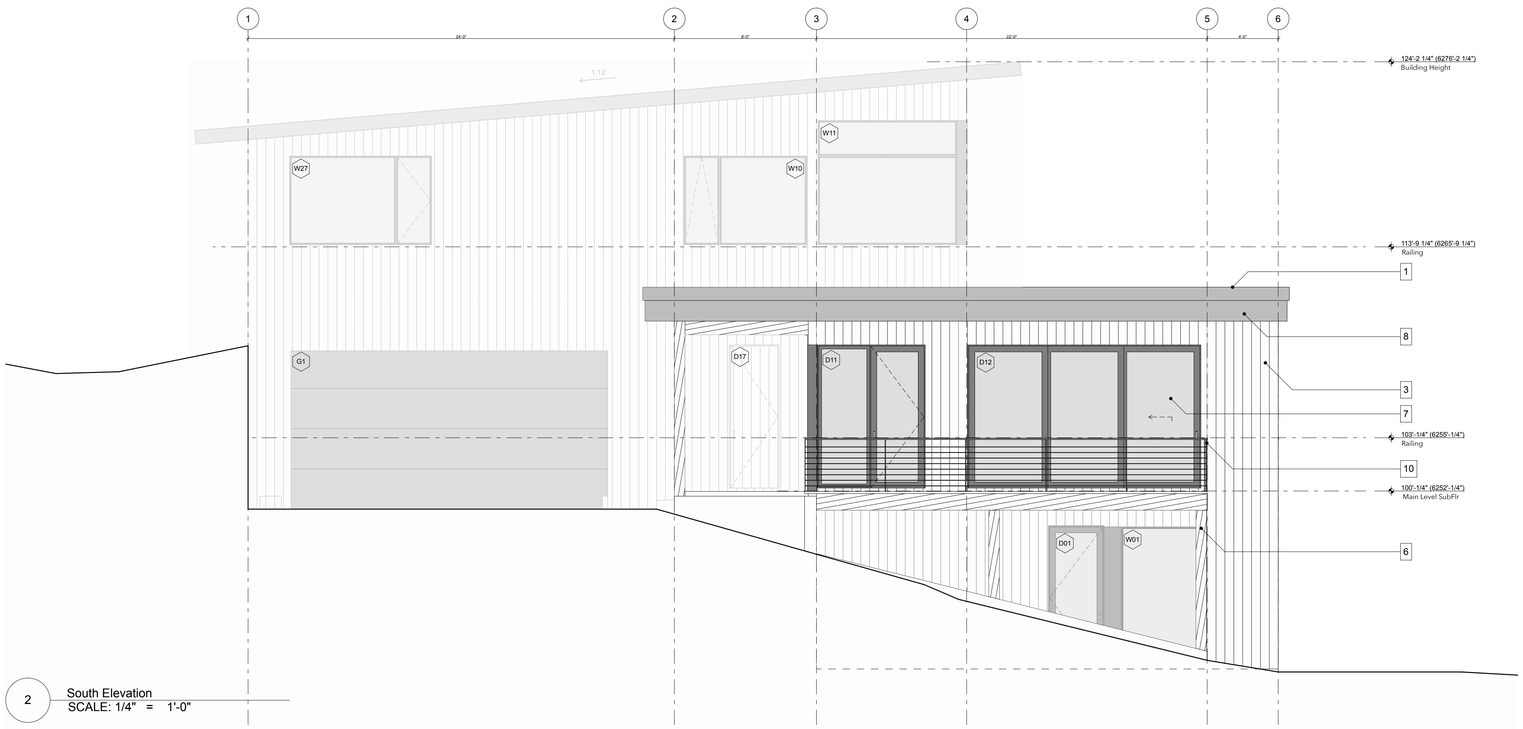
A207

Roof Plan

v5



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

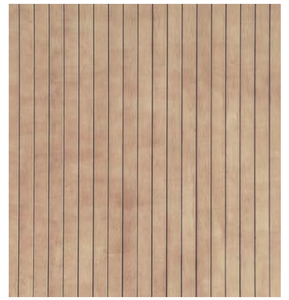


2 South Elevation
SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

1	Standing Seam Metal Roof
2	Membrane Roof. TPO over Tapered Foam
3	T&G Vertical Wood Siding
4	T&G Horizontal Wood Siding
5	T&G Wood Soffit
6	Sawn Timber Column/Beam per Struct
7	Aluminum Clad Wood Window / Door
8	Light Gauge Metal Fascia.
9	AYC Wood Decking
10	Steel Guardrail. Powder Coat Finish

NOTE: ALL FINISHES TO BE APPROVED BY ARCHITECT THRU SUBMITTALS / SAMPLES, G.C. TO VERIFY WITH ARCHITECT BEFORE INSTALL, TYP.
NOTE: CHIMNEY AND MECHANICAL EXHAUST MUST BE FITTED W/ SPARK ARRESTOR



Natural Cedar Siding

Grey Cedar Siding

Hot Rolled Steel

Light Gauge Steel

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Wilson WY 83014

DATE:	3/9/23
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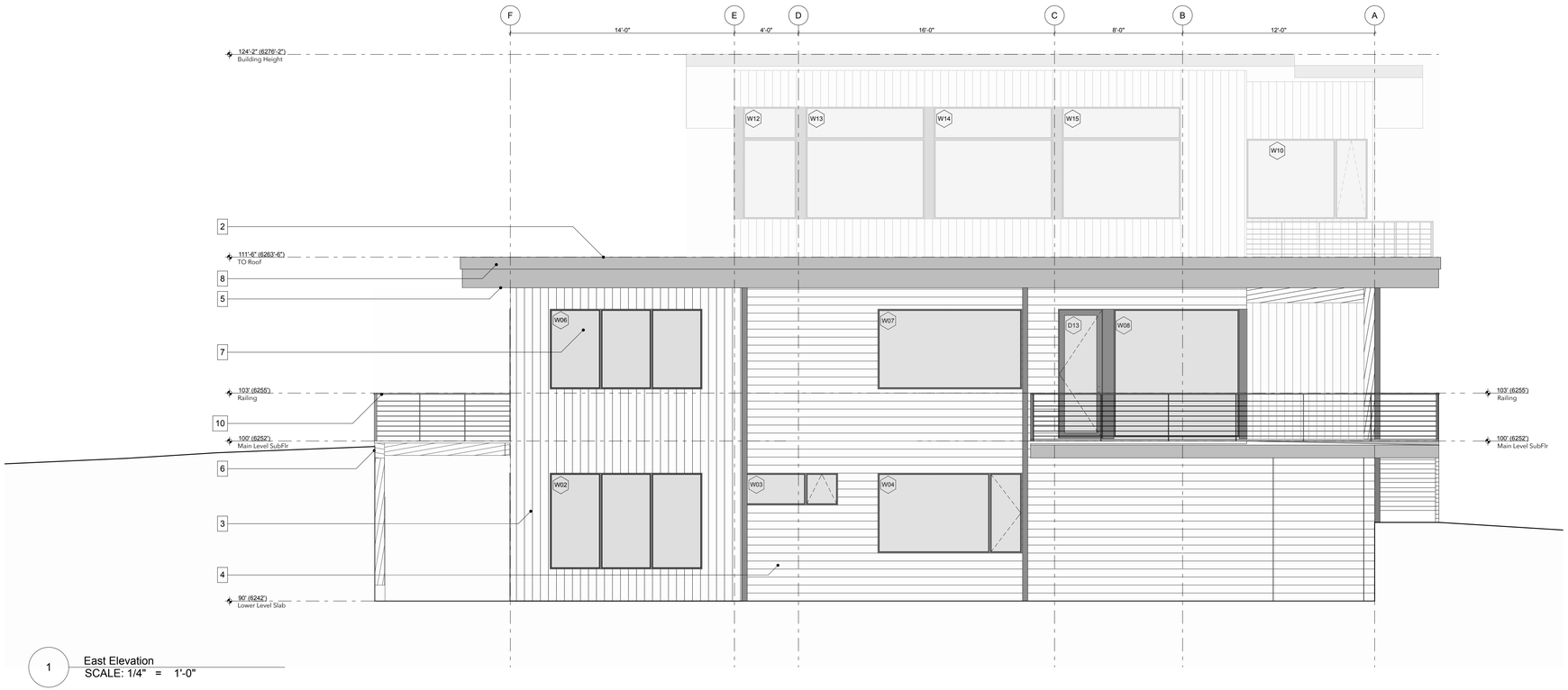
ISSUE:

Building Permit Set	3.9.23

A301

North & South Elevations

v5



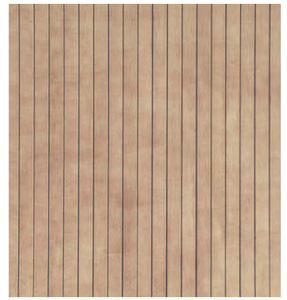
1 East Elevation
SCALE: 1/4" = 1'-0"

2 West Elevation
SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

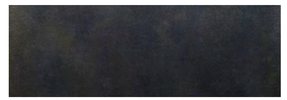
1. Standing Seam Metal Roof
2. Membrane Roof. TPO over Tapered Foam
3. T&G Vertical Wood Siding
4. T&G Horizontal Wood Siding
5. T&G Wood Soffit
6. Sawn Timber Column/Beam per Struct
7. Aluminum Clad Wood Window / Door
8. Light Gauge Metal Fascia.
9. AYC Wood Decking
10. Steel Guardrail. Powder Coat Finish

NOTE: ALL FINISHES TO BE APPROVED BY ARCHITECT THRU SUBMITTALS / SAMPLES, G.C. TO VERIFY WITH ARCHITECT BEFORE INSTALL, TYP.
NOTE: CHIMNEY AND MECHANICAL EXHAUST MUST BE FITTED W/ SPARK ARRESTOR



Natural Cedar Siding

Grey Cedar Siding



Hot Rolled Steel

Light Gauge Steel

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FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE

6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
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ISSUE:

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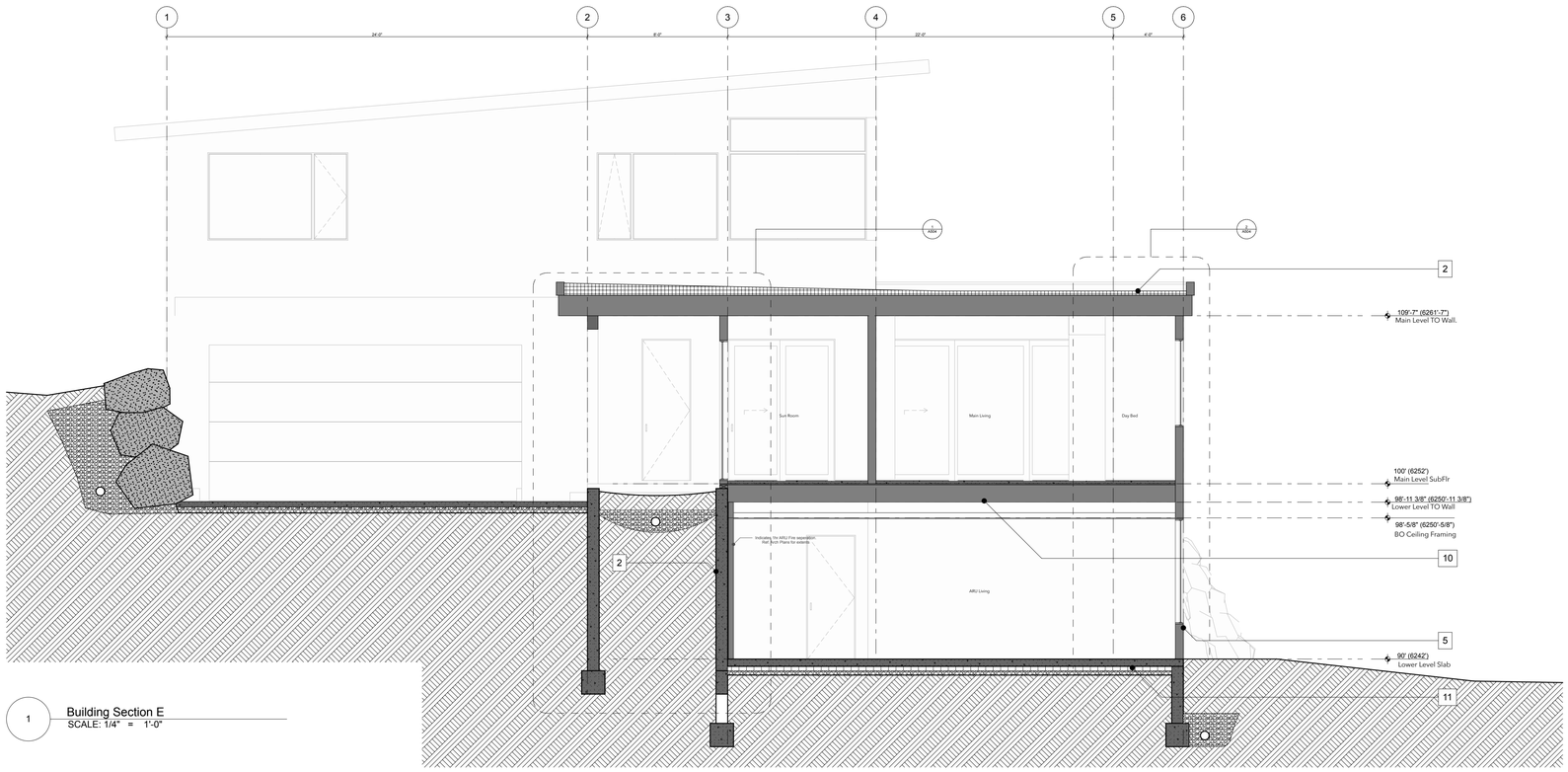
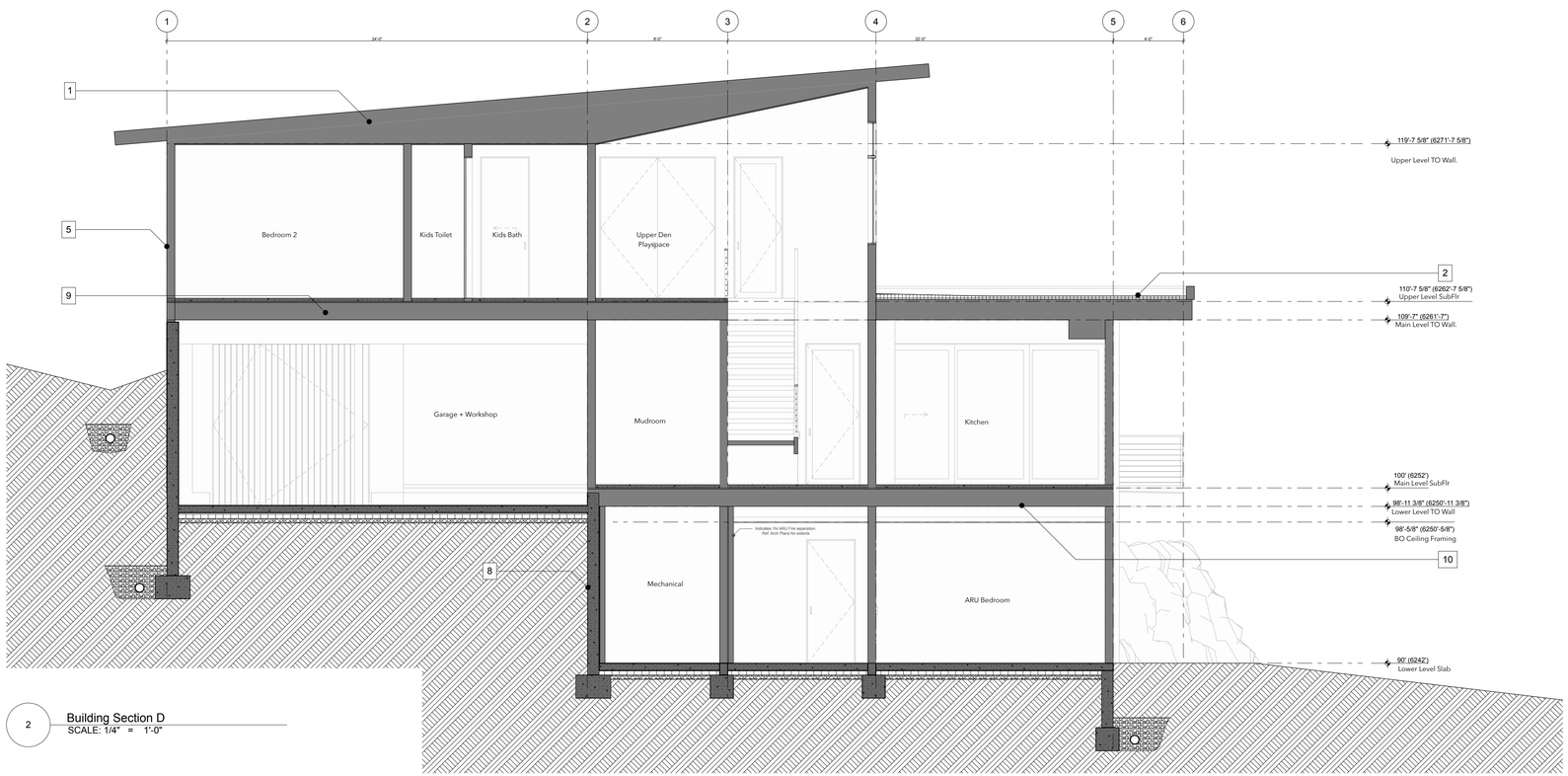
A302

East & West Elevations

V5



1 Building Section E
SCALE: 1/4" = 1'-0"



2 Building Section D
SCALE: 1/4" = 1'-0"

ASSEMBLY NOTES

1 **Shed Roof @ 1:12 Roof Pitch:**
Class A Rated Standing seam metal roofing, on High Temperature rated Ice & Water Shield Underlayment, on Plywood Sheathing, on pre-manufactured wood trusses (Re: Struct) w/ closed cell polyurethane spray foam insulation (R-50 Min) Ceiling Finish: Smooth Level 3 drywall finish, painted. Provide snow retention system to be coordinated with Architect, General Contractor, and Roofing Sub Contractor. Provide heat cable at gutters, downspouts, and drainage paths.
Assembly must meet WUI IR-1 requirements

2 **Flat Roof @ Parapet Roof:**
Class A Rated EPDM/TPO membrane roofing, on tapered rigid insulation (1/2" min.) w/ 0.25:12 slope, on plywood roof sheathing, on I joist framing, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 min) Ceiling Finish: Smooth Level 3 drywall finish, painted. See roof plan for roof slope and drain/downspout locations. Provide heat cable at all downspouts and scuppers.
Assembly must meet WUI IR-1 requirements

3 **Flat Roof @ Decks:**
2x decking, on reverse tapered 2x joists, on Class A Rated EPDM membrane roofing, on plywood roof sheathing, on tapered tapered LVL joist framing w/ 0.25:12 slope, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 Min.) Provide perimeter gutter per plan & provide heat cable at gutter, downspout, and drainage paths.
Assembly must meet WUI IR-1 requirements

4 **Exterior Decks :**
2x6 Alaskan Yellow Cedar, on Heavy timber framing. Re: Struct for layout & Sizing, Re: Arch Details for railings.

5 **Exterior Wall Framing @ Steel Siding:**
16ga Metal Siding, (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation (R-5), on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

6 **Exterior Wall Framing @ Horizontal Wood Siding:**
2x8 Horizontal wood siding (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation, on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

7 **Interior Wall Framing:**
2x stud wall, Re: Struct., w/ Smooth Level 3 drywall finish, painted. Fire tape @ Garage, Mechanical space, and Apartment Units.

8 **Foundation Wall, Typ:**
2" Extruded polystyrene insulation (R-10), on Fluid Applied waterproofing, on Foundation/ Retaining Wall, RE: Struct.

Above grade: Provide Metal flashing over drainage/protection/insulation board.

@ Garage/Basement: Provide 2x4 fur wall, w/ closed cell polyurethane spray foam insulation (R-20 min.). Wall Finish: Smooth Level 3 drywall finish, painted.

9 **Upper Floor Assembly:**
Flooring (See Finish Schedule) on plywood sheathing, on Engineering joists floor framing, RE: Struct., with sound batt insulation.
Ceiling Finish: Smooth Level 3 drywall finish, painted.
Fire tape @ Garage, Mechanical space, and Apartment Units.

10 **Main Floor Assembly / 1HR Fire Assembly:**
2 1/4" Concrete slab, (Vf Finish w/ owner), integrated radiant hydronic tubing, control joints per Plan, Vf decorative additional joints w/ owner, on plywood sheathing, on engineering floor joist, with 5/8" Type X gypsum board, 12" dropped ceiling framed w/ 2x4, 5/8" Type X gypsum board.
RE: Struct., with sound batt insulation.

11 **Basement Floor Assembly:**
Finish Floor Material (See Finish Schedule), on 5" Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing,(See Mech.), sawn control joints per plan, on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

12 **Garage Floor Assembly:**
Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing, sawn control joints per plan on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

13 **Deck (Typ.):**
2x6 alaskan yellow cedar decking, on Wood Joists RE: Struct., with corrugated steel soffit.
Assembly must meet WUI IR-1 requirements

14 **Exterior Slab on Grade:**
4" Concrete, Over 6 Mil Vapor Barrier (Taped & Sealed), Over Washed Rock, Over Compacted Base

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ARCHITECT STAMP

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3.9.23
STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE
6165 Burcher Rd
Wilson WY 83014

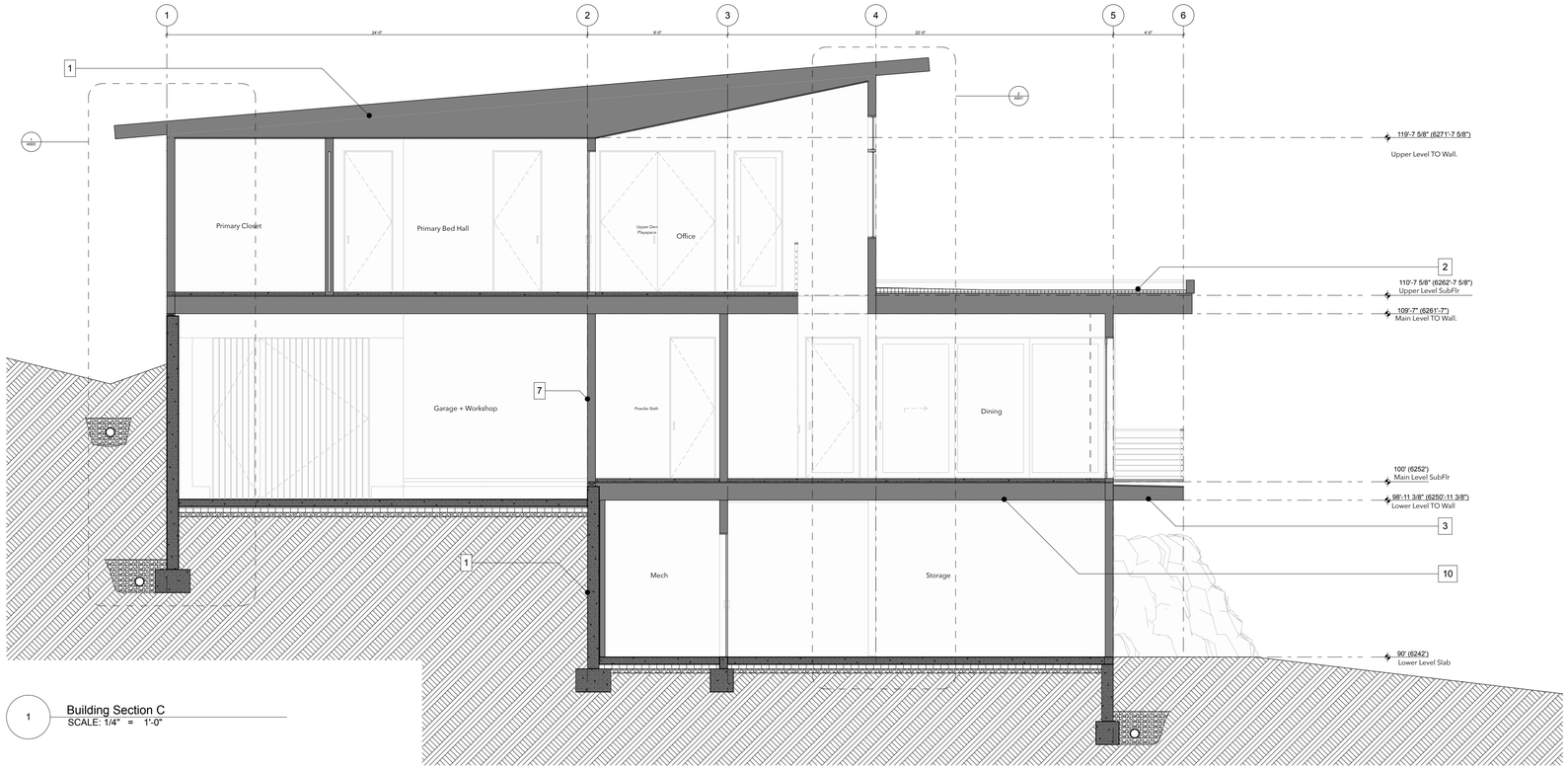
DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW

ISSUE:

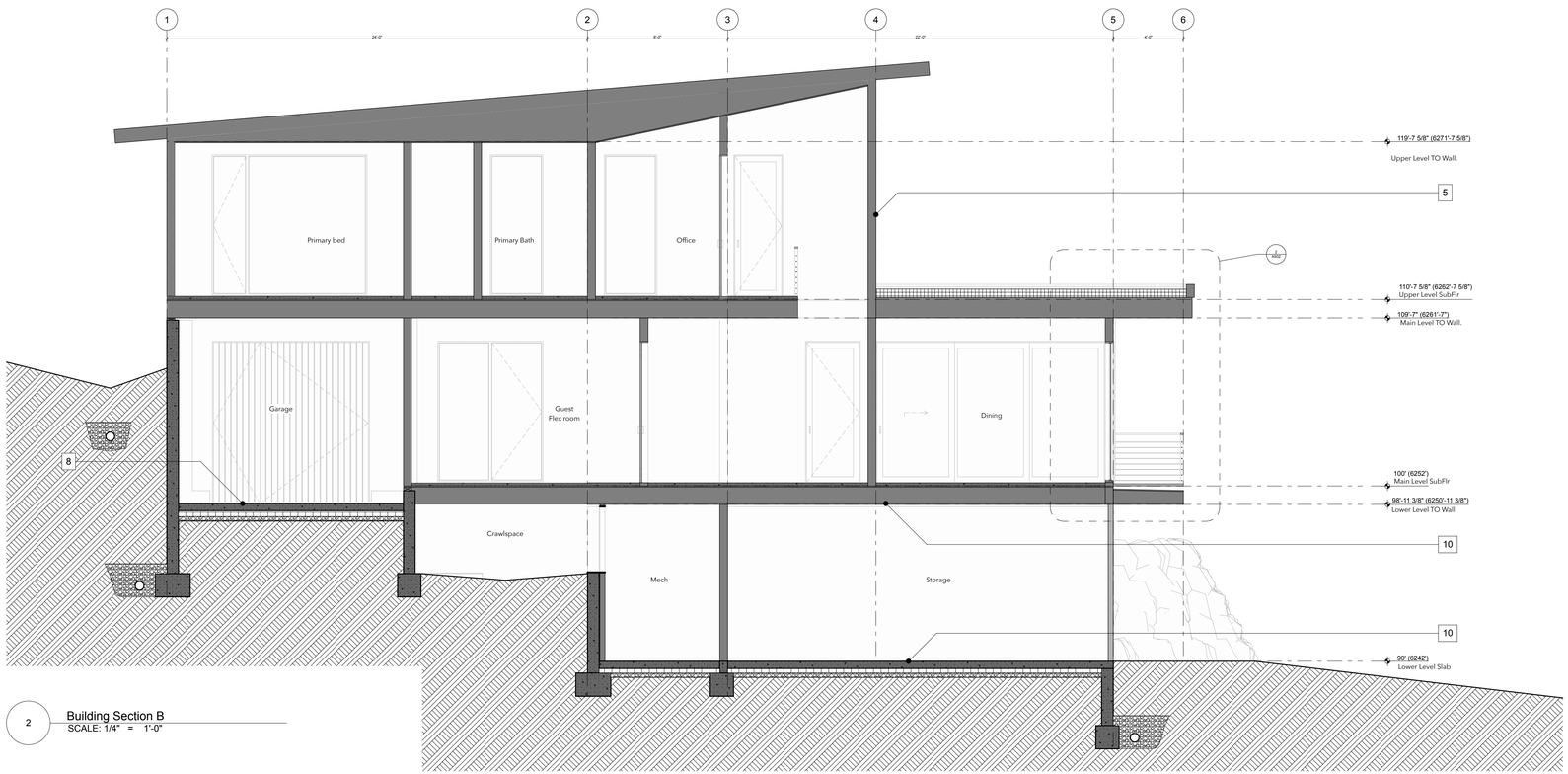
Building Permit Set	3.9.23

A401
Building Sections

V5



1 Building Section C
SCALE: 1/4" = 1'-0"



2 Building Section B
SCALE: 1/4" = 1'-0"

ASSEMBLY NOTES

1 **Shed Roof @ 1:12 Roof Pitch:**
Class A Rated Standing seam metal roofing, on High Temperature rated Ice & Water Shield Underlayment, on Plywood Sheathing, on pre-manufactured wood trusses (Re: Struct) w/ closed cell polyurethane spray foam insulation (R-50 Min) Ceiling Finish: Smooth Level 3 drywall finish, painted. Provide snow retention system to be coordinated with Architect, General Contractor, and Roofing Sub Contractor. Provide heat cable at gutters, downspouts, and drainage paths.
Assembly must meet WUI IR-1 requirements

2 **Flat Roof @ Parapet Roof:**
Class A Rated EPDM/TPO membrane roofing, on tapered rigid insulation (1/2" min.) w/ 0.25:12 slope, on plywood roof sheathing, on I joist framing, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 min) Ceiling Finish: Smooth Level 3 drywall finish, painted. See roof plan for roof slope and drain/downspout locations. Provide heat cable at all downspouts and scuppers.
Assembly must meet WUI IR-1 requirements

3 **Flat Roof @ Decks:**
2x decking, on reverse tapered 2x joists, on Class A Rated EPDM membrane roofing, on plywood roof sheathing, on tapered tapered LVL joist framing w/ 0.25:12 slope, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 Min.) Provide perimeter gutter per plan & provide heat cable at gutter, downspout, and drainage paths.
Assembly must meet WUI IR-1 requirements

4 **Exterior Decks :**
2x6 Alaskan Yellow Cedar, on Heavy timber framing. Re: Struct for layout & Sizing, Re: Arch Details for railings.

5 **Exterior Wall Framing @ Steel Siding:**
16ga Metal Siding, (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation (R-5), on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

6 **Exterior Wall Framing @ Horizontal Wood Siding:**
2x8 Horizontal wood siding (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation, on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

7 **Interior Wall Framing:**
2x stud wall, Re: Struct., w/ Smooth Level 3 drywall finish, painted. Fire tape @ Garage, Mechanical space, and Apartment Units.

8 **Foundation Wall, Typ:**
2" Extruded polystyrene insulation (R-10), on Fluid Applied waterproofing, on Foundation/ Retaining Wall, RE: Struct.

Above grade: Provide Metal flashing over drainage/protection/insulation board.

@ Garage/Basement: Provide 2x4 fur wall, w/ closed cell polyurethane spray foam insulation (R-20 min.). Wall Finish: Smooth Level 3 drywall finish, painted.

9 **Upper Floor Assembly:**
Flooring (See Finish Schedule) on plywood sheathing, on Engineering joists floor framing, RE: Struct., with sound batt insulation.
Ceiling Finish: Smooth Level 3 drywall finish, painted.
Fire tape @ Garage, Mechanical space, and Apartment Units.

10 **Main Floor Assembly / 1HR Fire Assembly:**
2 1/4" Concrete slab, (Vf Finish w/ owner), integrated radiant hydronic tubing, control joints per Plan, Vf decorative additional joints w/ owner, on plywood sheathing, on engineering floor joist, with 5/8" Type X gypsum board, 12" dropped ceiling framed w/ 2x4, 5/8" Type X gypsum board.
RE: Struct., with sound batt insulation.

11 **Basement Floor Assembly:**
Finish Floor Material (See Finish Schedule), on 5" Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing,(See Mech.), sawn control joints per plan, on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

12 **Garage Floor Assembly:**
Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing, sawn control joints per plan on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

13 **Deck (Typ.):**
2x6 alaskan yellow cedar decking, on Wood Joists RE: Struct., with corrugated steel soffit.
Assembly must meet WUI IR-1 requirements

14 **Exterior Slab on Grade:**
4" Concrete, Over 6 Mil Vapor Barrier (Taped & Sealed), Over Washed Rock, Over Compacted Base

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STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE
6165 Burcher Rd
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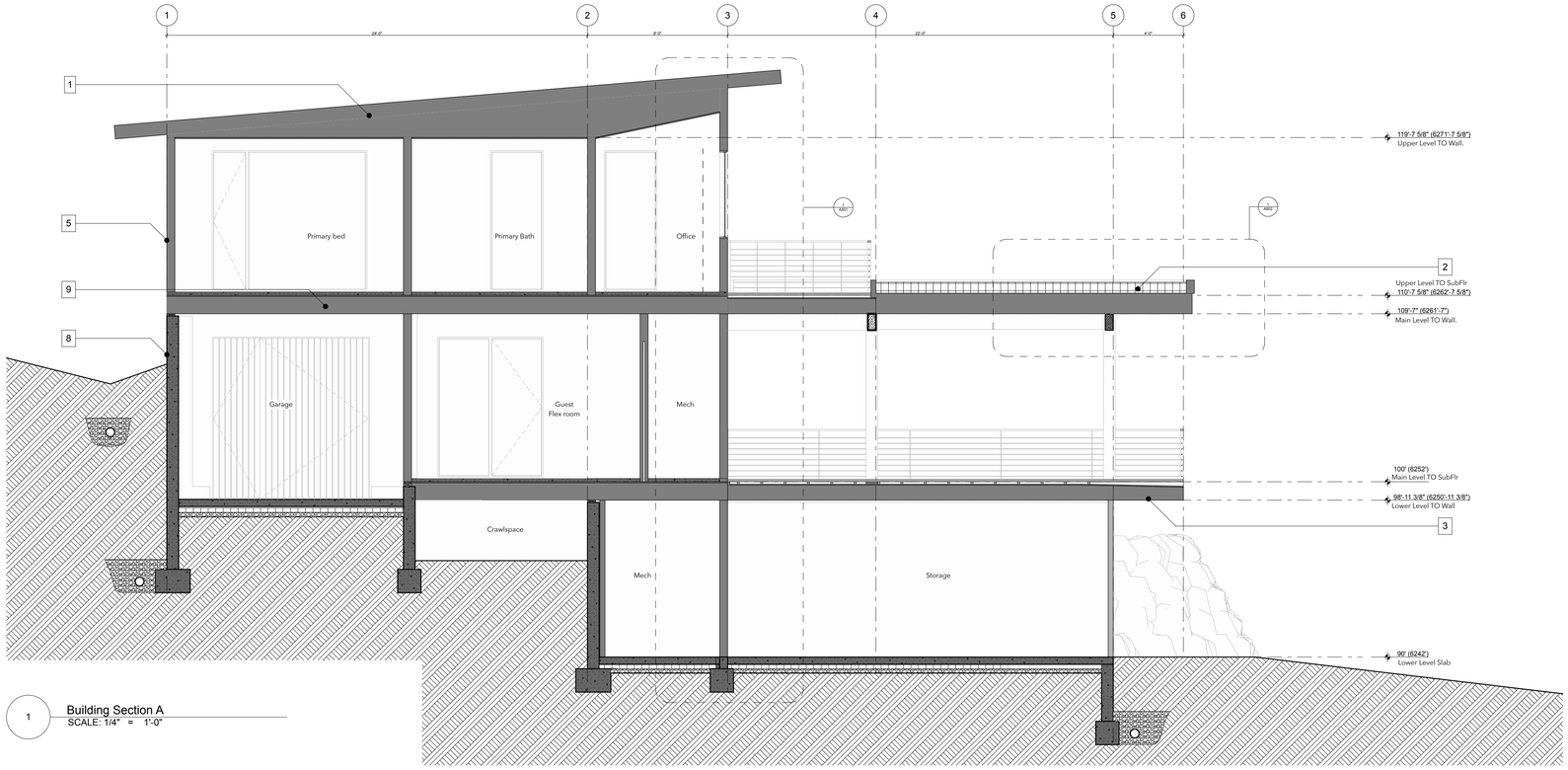
DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW

ISSUE:

Building Permit Set	3.9.23

A402
Building Sections

V5



1 Building Section A
SCALE: 1/4" = 1'-0"

ASSEMBLY NOTES

1 **Shed Roof @ 1:12 Roof Pitch:**
Class A Rated Standing seam metal roofing, on High Temperature rated Ice & Water Shield Underlayment, on Plywood Sheathing, on pre-manufactured wood trusses (Re: Struct) w/ closed cell polyurethane spray foam insulation (R-50 Min) Ceiling Finish: Smooth Level 3 drywall finish, painted. Provide snow retention system to be coordinated with Architect, General Contractor, and Roofing Sub Contractor. Provide heat cable at gutters, downspouts, and drainage paths.
Assembly must meet WUI IR-1 requirements

2 **Flat Roof @ Parapet Roof:**
Class A Rated EPDM/TPO membrane roofing, on tapered rigid insulation (1/2" min.) w/ 0.25:12 slope, on plywood roof sheathing, on I joist framing, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 min) Ceiling Finish: Smooth Level 3 drywall finish, painted. See roof plan for roof slope and drain/downspout locations. Provide heat cable at all downspouts and scuppers.
Assembly must meet WUI IR-1 requirements

3 **Flat Roof @ Decks:**
2x decking, on reverse tapered 2x joists, on Class A Rated EPDM membrane roofing, on plywood roof sheathing, on tapered tapered LVL joist framing w/ 0.25:12 slope, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 Min.) Provide perimeter gutter per plan & provide heat cable at gutter, downspout, and drainage paths.
Assembly must meet WUI IR-1 requirements

4 **Exterior Decks :**
2x6 Alaskan Yellow Cedar, on Heavy timber framing. Re: Struct for layout & Sizing, Re: Arch Details for railings.

5 **Exterior Wall Framing @ Steel Siding:**
16ga Metal Siding, (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation (R-5), on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

6 **Exterior Wall Framing @ Horizontal Wood Siding:**
2x8 Horizontal wood siding (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation, on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

7 **Interior Wall Framing:**
2x stud wall, Re: Struct., w/ Smooth Level 3 drywall finish, painted. Fire tape @ Garage, Mechanical space, and Apartment Units.

8 **Foundation Wall, Typ:**
2" Extruded polystyrene insulation (R-10), on Fluid Applied waterproofing, on Foundation/ Retaining Wall, RE: Struct.

Above grade: Provide Metal flashing over drainage/protection/insulation board.

@ Garage/Basement: Provide 2x4 fur wall, w/ closed cell polyurethane spray foam insulation (R-20 min.). Wall Finish: Smooth Level 3 drywall finish, painted.

9 **Upper Floor Assembly:**
Flooring (See Finish Schedule) on plywood sheathing, on Engineering joists floor framing, RE: Struct., with sound batt insulation.
Ceiling Finish: Smooth Level 3 drywall finish, painted.
Fire tape @ Garage, Mechanical space, and Apartment Units.

10 **Main Floor Assembly / 1HR Fire Assembly:**
2 1/4" Concrete slab, (Vf Finish w/ owner), integrated radiant hydronic tubing, control joints per Plan, Vf decorative additional joints w/ owner, on plywood sheathing, on engineering floor joist, with 5/8" Type X gypsum board, 12" dropped ceiling framed w/ 2x4, 5/8" Type X gypsum board.
RE: Struct., with sound batt insulation.

11 **Basement Floor Assembly:**
Finish Floor Material (See Finish Schedule), on 5" Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing,(See Mech.), sawn control joints per plan, on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

12 **Garage Floor Assembly:**
Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing, sawn control joints per plan on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

13 **Deck (Typ.):**
2x6 alaskan yellow cedar decking, on Wood Joists RE: Struct., with corrugated steel soffit.
Assembly must meet WUI IR-1 requirements

14 **Exterior Slab on Grade:**
4" Concrete, Over 6 Mil Vapor Barrier (Taped & Sealed), Over Washed Rock, Over Compacted Base

2 Assembly Key Notes
SCALE: 1/4" = 1'-0"

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FOR CONSTRUCTION
BUILDING PERMIT

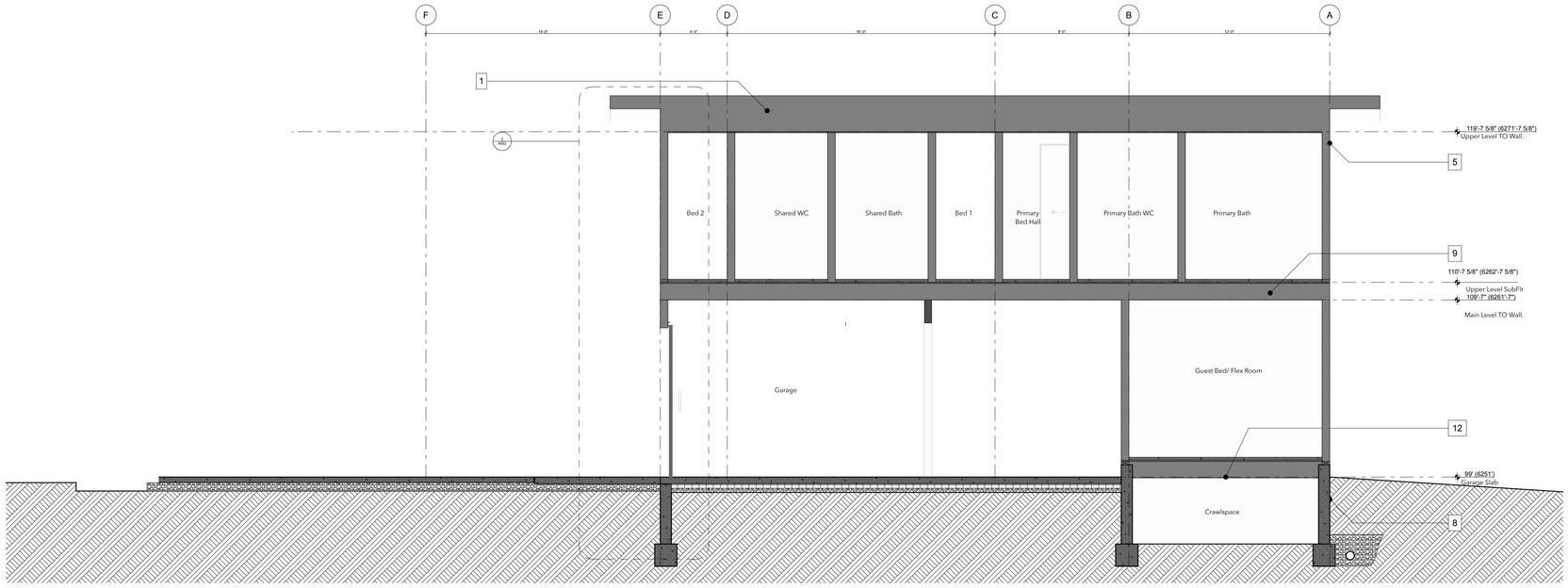
ROSCOE RESIDENCE
6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW

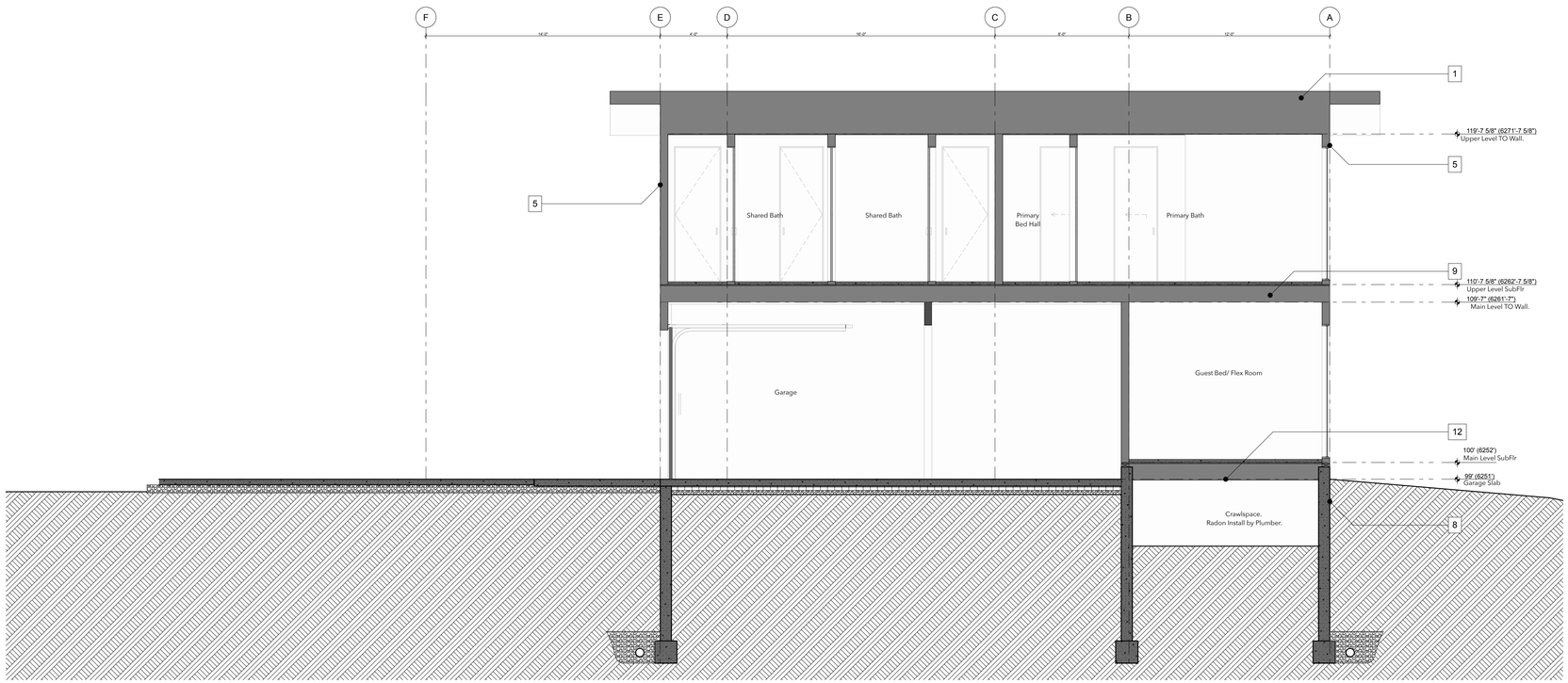
ISSUE:

Building Permit Set	3.9.23

A403
Building Sections



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



2 Building Section 2
SCALE: 1/4" = 1'-0"

ASSEMBLY NOTES

1 **Shed Roof @ 1:12 Roof Pitch:**
Class A Rated Standing seam metal roofing, on High Temperature rated Ice & Water Shield Underlayment, on Plywood Sheathing, on pre-manufactured wood trusses (Re: Struct) w/ closed cell polyurethane spray foam insulation (R-50 Min) Ceiling Finish: Smooth Level 3 drywall finish, painted. Provide snow retention system to be coordinated with Architect, General Contractor, and Roofing Sub Contractor. Provide heat cable at gutters, downspouts, and drainage paths.
Assembly must meet WUI IR-1 requirements

2 **Flat Roof @ Parapet Roof:**
Class A Rated EPDM/TPO membrane roofing, on tapered rigid insulation (1/2" min.) w/ 0.25:12 slope, on plywood roof sheathing, on I joist framing, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 min) Ceiling Finish: Smooth Level 3 drywall finish, painted. See roof plan for roof slope and drain/downspout locations. Provide heat cable at all downspouts and scuppers.
Assembly must meet WUI IR-1 requirements

3 **Flat Roof @ Decks:**
2x decking, on reverse tapered 2x joists, on Class A Rated EPDM membrane roofing, on plywood roof sheathing, on tapered tapered LVL joist framing w/ 0.25:12 slope, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 Min.) Provide perimeter gutter per plan & provide heat cable at gutter, downspout, and drainage paths.
Assembly must meet WUI IR-1 requirements

4 **Exterior Decks :**
2x6 Alaskan Yellow Cedar, on Heavy timber framing. Re: Struct for layout & Sizing, Re: Arch Details for railings.

5 **Exterior Wall Framing @ Steel Siding:**
16ga Metal Siding, (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation (R-5), on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

6 **Exterior Wall Framing @ Horizontal Wood Siding:**
2x8 Horizontal wood siding (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation, on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

7 **Interior Wall Framing:**
2x stud wall, Re: Struct., w/ Smooth Level 3 drywall finish, painted. Fire tape @ Garage, Mechanical space, and Apartment Units.

8 **Foundation Wall, Typ:**
2" Extruded polystyrene insulation (R-10), on Fluid Applied waterproofing, on Foundation/ Retaining Wall, RE: Struct.

Above grade: Provide Metal flashing over drainage/protection/insulation board.

@ Garage/Basement: Provide 2x4 fur wall, w/ closed cell polyurethane spray foam insulation (R-20 min.). Wall Finish: Smooth Level 3 drywall finish, painted.

9 **Upper Floor Assembly:**
Flooring (See Finish Schedule) on plywood sheathing, on Engineering joists floor framing, RE: Struct., with sound batt insulation.
Ceiling Finish: Smooth Level 3 drywall finish, painted.
Fire tape @ Garage, Mechanical space, and Apartment Units.

10 **Main Floor Assembly / 1HR Fire Assembly:**
2 1/4" Concrete slab, (Vf Finish w/ owner), integrated radiant hydronic tubing, control joints per Plan, Vf decorative additional joints w/ owner, on plywood sheathing, on engineering floor joist, with 5/8" Type X gypsum board, 12" dropped ceiling framed w/ 2x4, 5/8" Type X gypsum board.
RE: Struct., with sound batt insulation.

11 **Basement Floor Assembly:**
Finish Floor Material (See Finish Schedule), on 5" Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing,(See Mech.), sawn control joints per plan, on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

12 **Garage Floor Assembly:**
Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing, sawn control joints per plan on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

13 **Deck (Typ.):**
2x6 alaskan yellow cedar decking, on Wood Joists RE: Struct., with corrugated steel soffit.
Assembly must meet WUI IR-1 requirements

14 **Exterior Slab on Grade:**
4" Concrete, Over 6 Mil Vapor Barrier (Taped & Sealed), Over Washed Rock, Over Compacted Base

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ROSCOE RESIDENCE
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DATE:	3/9/23
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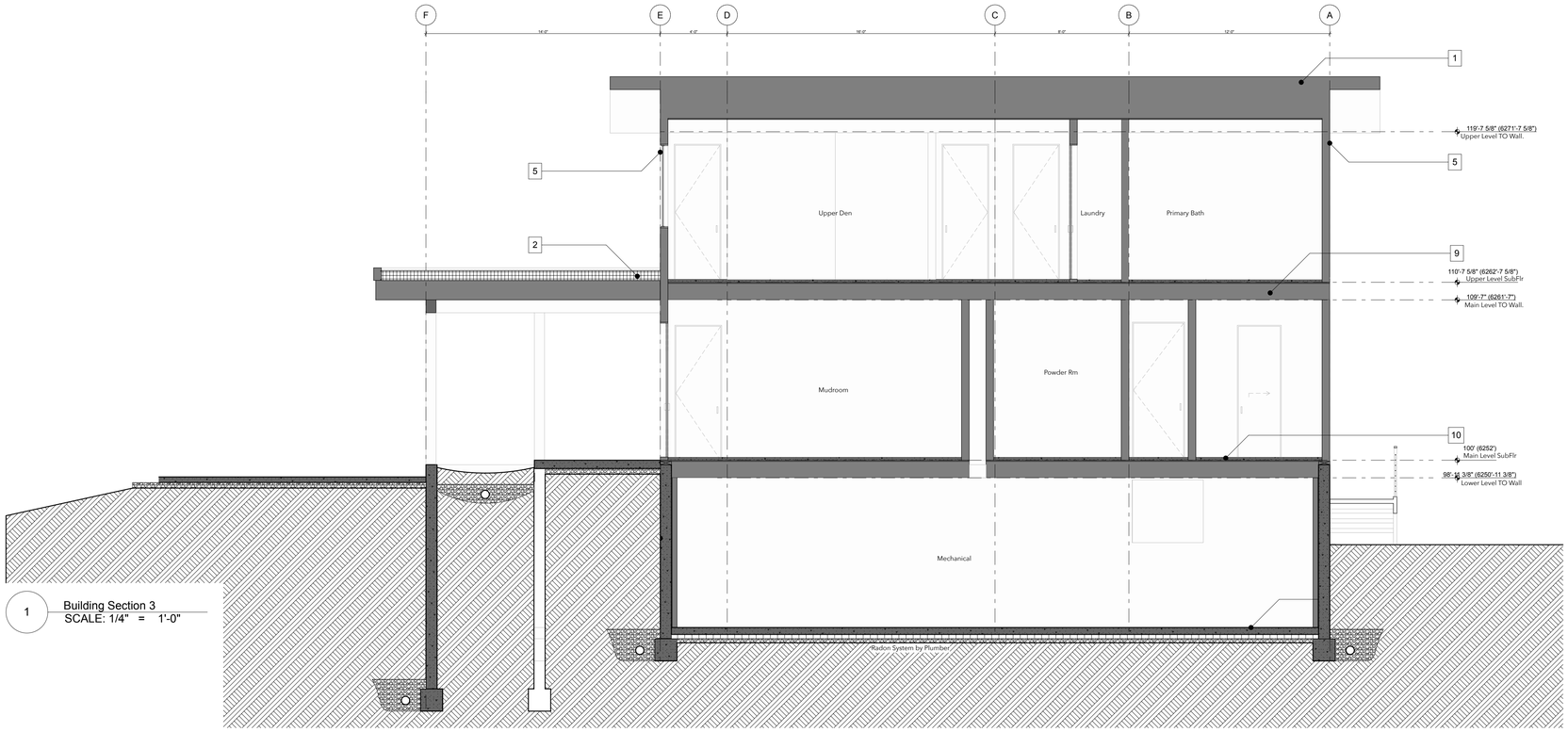
DRAWN:	RHW

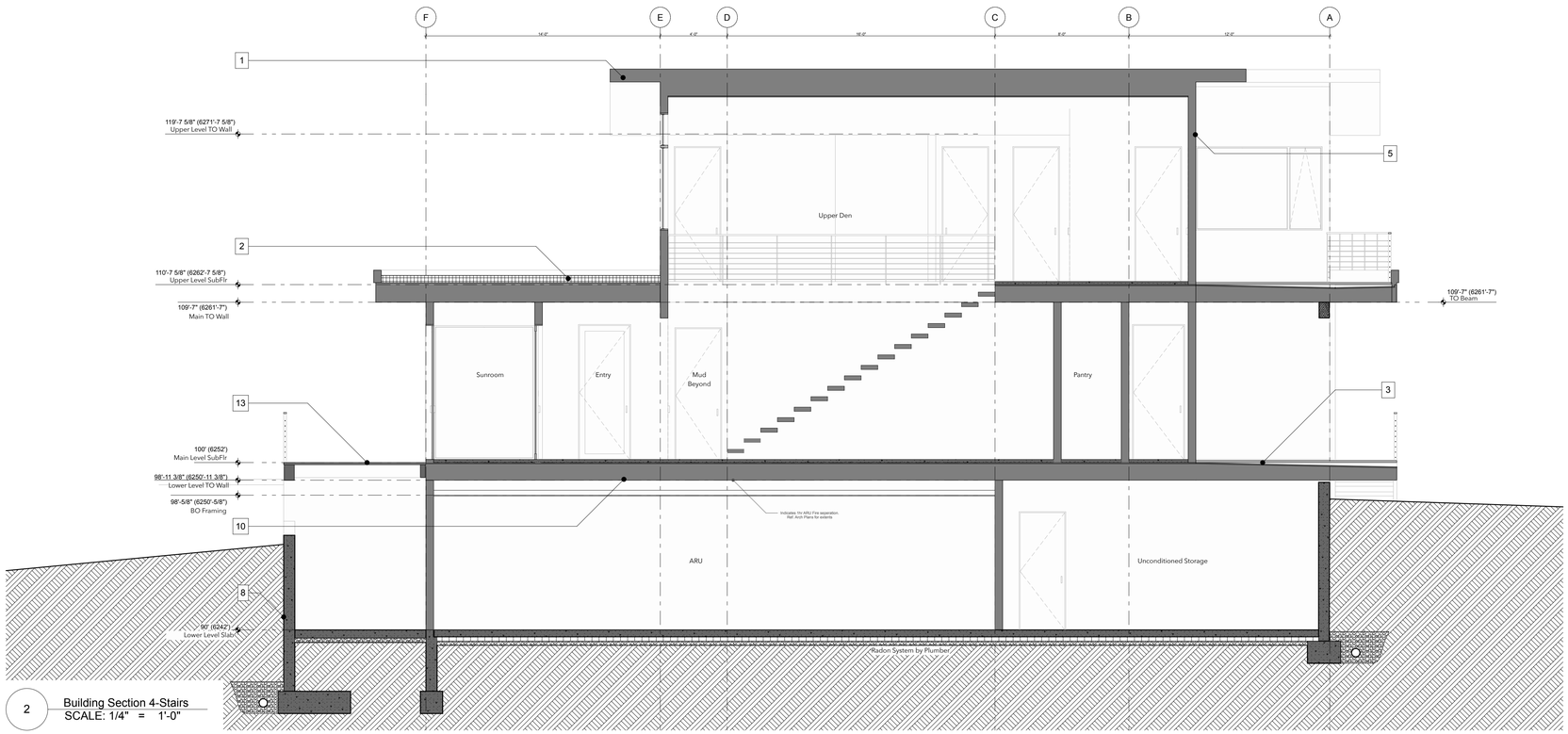
ISSUE:

Building Permit Set	3.9.23

A404
Building Sections



1 Building Section 3
SCALE: 1/4" = 1'-0"



2 Building Section 4-Stairs
SCALE: 1/4" = 1'-0"

ASSEMBLY NOTES

1 **Shed Roof @ 1:12 Roof Pitch:**
Class A Rated Standing seam metal roofing, on High Temperature rated Ice & Water Shield Underlayment, on Plywood Sheathing, on pre-manufactured wood trusses (Re: Struct) w/ closed cell polyurethane spray foam insulation (R-50 Min) Ceiling Finish: Smooth Level 3 drywall finish, painted. Provide snow retention system to be coordinated with Architect, General Contractor, and Roofing Sub Contractor. Provide heat cable at gutters, downspouts, and drainage paths.
Assembly must meet WUI IR-1 requirements

2 **Flat Roof @ Parapet Roof:**
Class A Rated EPDM/TPO membrane roofing, on tapered rigid insulation (1/2" min.) w/ 0.25:12 slope, on plywood roof sheathing, on I joist framing, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 min) Ceiling Finish: Smooth Level 3 drywall finish, painted. See roof plan for roof slope and drain/downspout locations. Provide heat cable at all downspouts and scuppers.
Assembly must meet WUI IR-1 requirements

3 **Flat Roof @ Decks:**
2x decking, on reverse tapered 2x joists, on Class A Rated EPDM membrane roofing, on plywood roof sheathing, on tapered tapered LVL joist framing w/ 0.25:12 slope, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 Min.) Provide perimeter gutter per plan & provide heat cable at gutter, downspout, and drainage paths.
Assembly must meet WUI IR-1 requirements

4 **Exterior Decks :**
2x6 Alaskan Yellow Cedar, on Heavy timber framing. Re: Struct for layout & Sizing, Re: Arch Details for railings.

5 **Exterior Wall Framing @ Steel Siding:**
16ga Metal Siding, (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation (R-5), on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

6 **Exterior Wall Framing @ Horizontal Wood Siding:**
2x8 Horizontal wood siding (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation, on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

7 **Interior Wall Framing:**
2x stud wall, Re: Struct., w/ Smooth Level 3 drywall finish, painted. Fire tape @ Garage, Mechanical space, and Apartment Units.

8 **Foundation Wall, Typ:**
2" Extruded polystyrene insulation (R-10), on Fluid Applied waterproofing, on Foundation/ Retaining Wall, RE: Struct.

Above grade: Provide Metal flashing over drainage/protection/insulation board.

@ Garage/Basement: Provide 2x4 fur wall, w/ closed cell polyurethane spray foam insulation (R-20 min.). Wall Finish: Smooth Level 3 drywall finish, painted.

9 **Upper Floor Assembly:**
Flooring (See Finish Schedule) on plywood sheathing, on Engineering joists floor framing, RE: Struct., with sound batt insulation.
Ceiling Finish: Smooth Level 3 drywall finish, painted.
Fire tape @ Garage, Mechanical space, and Apartment Units.

10 **Main Floor Assembly / 1HR Fire Assembly:**
2 1/4" Concrete slab, (Vf Finish w/ owner), integrated radiant hydronic tubing, control joints per Plan, Vf decorative additional joints w/ owner, on plywood sheathing, on engineering floor joist, with 5/8" Type X gypsum board, 12" dropped ceiling framed w/ 2x4, 5/8" Type X gypsum board.
RE: Struct., with sound batt insulation.

11 **Basement Floor Assembly:**
Finish Floor Material (See Finish Schedule), on 5" Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing,(See Mech.), sawn control joints per plan, on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

12 **Garage Floor Assembly:**
Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing, sawn control joints per plan on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

13 **Deck (Typ.):**
2x6 alaskan yellow cedar decking, on Wood Joists RE: Struct., with corrugated steel soffit.
Assembly must meet WUI IR-1 requirements

14 **Exterior Slab on Grade:**
4" Concrete, Over 6 Mil Vapor Barrier (Taped & Sealed), Over Washed Rock, Over Compacted Base

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3.9.23
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FOR CONSTRUCTION
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ROSCOE RESIDENCE
6165 Burcher Rd
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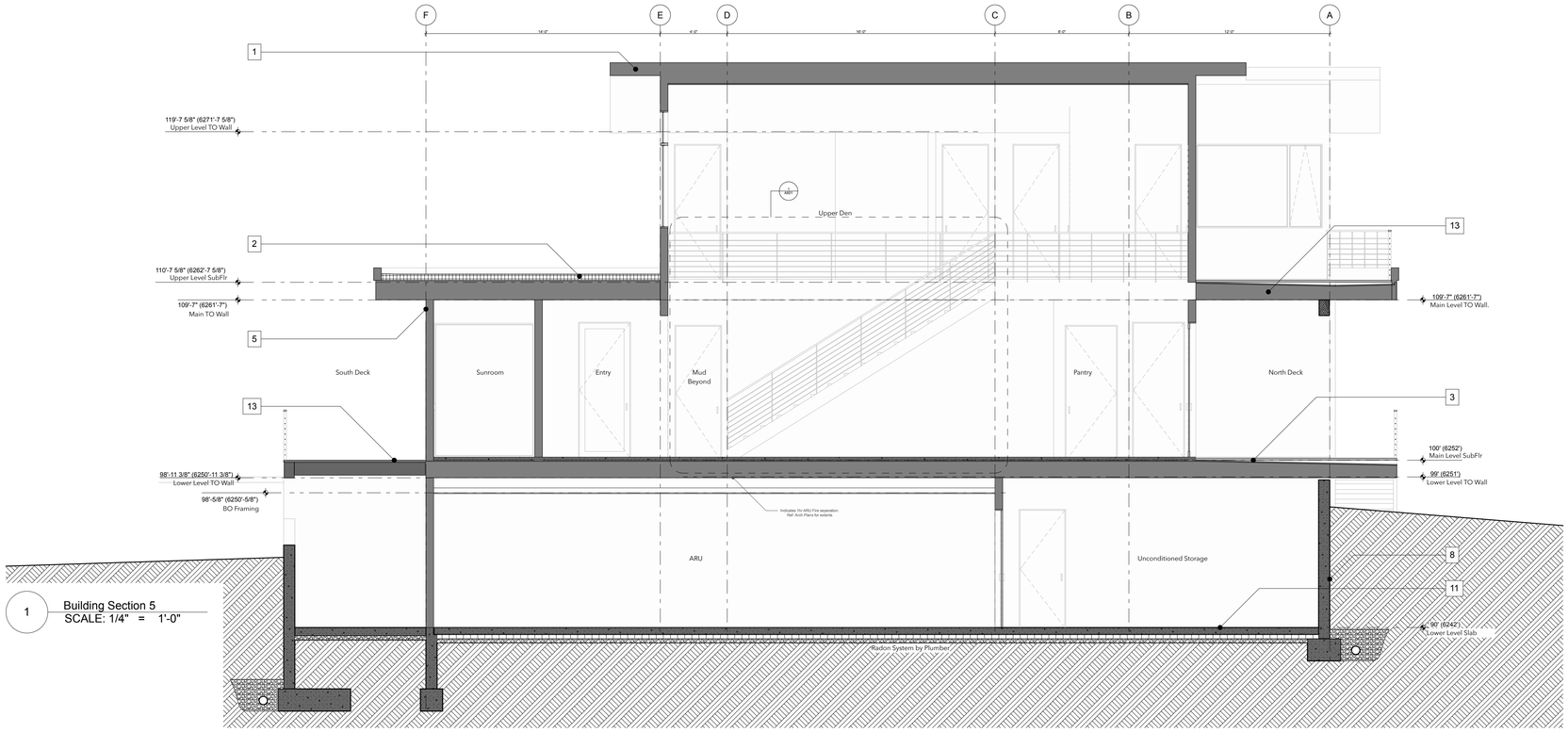
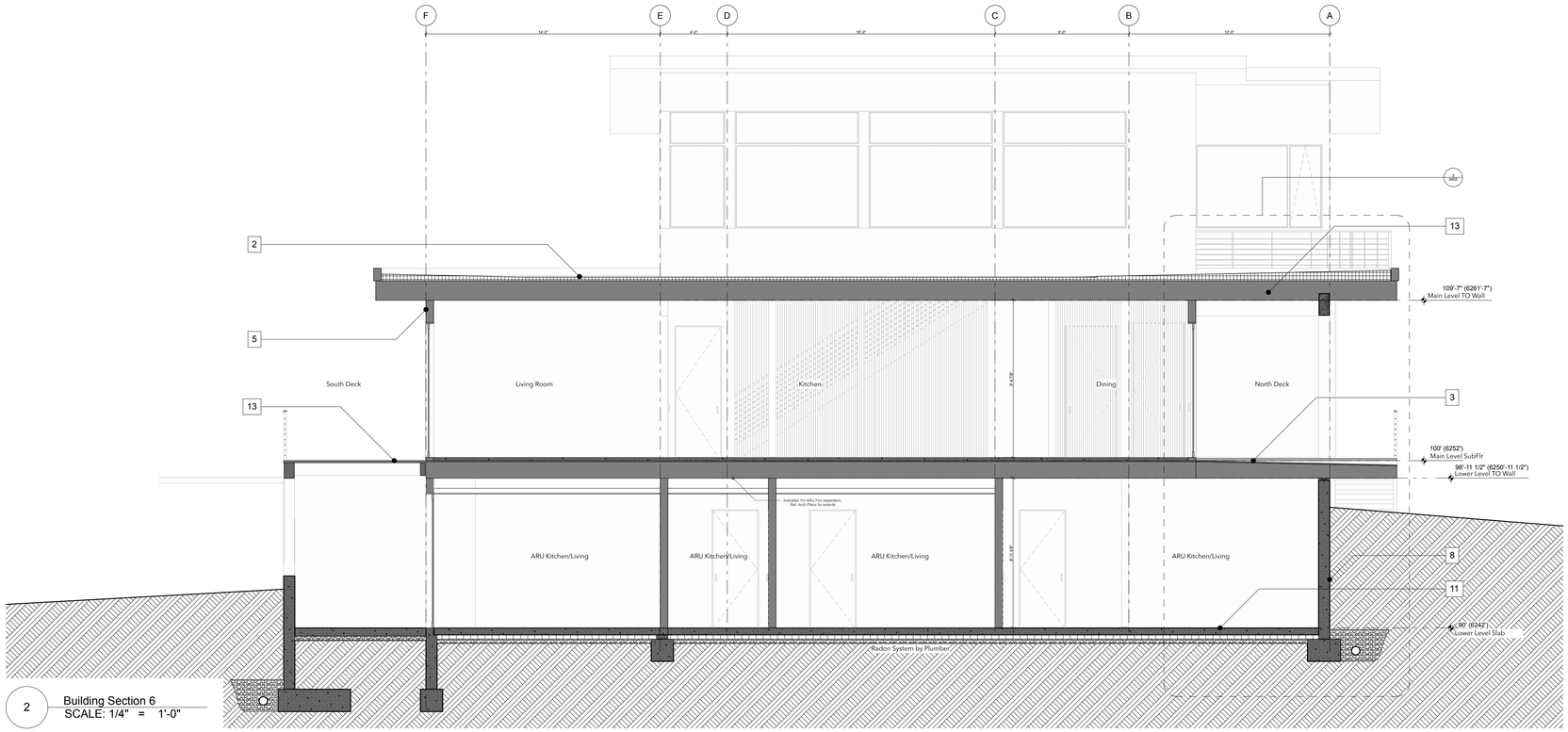
DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW
ISSUE:	
Building Permit Set	3.9.23

A405
Building Sections

V5



1 Building Section 5
SCALE: 1/4" = 1'-0"



2 Building Section 6
SCALE: 1/4" = 1'-0"

ASSEMBLY NOTES

1 **Shed Roof @ 1:12 Roof Pitch:**
Class A Rated Standing seam metal roofing, on High Temperature rated Ice & Water Shield Underlayment, on Plywood Sheathing, on pre-manufactured wood trusses (Re: Struct) w/ closed cell polyurethane spray foam insulation (R-50 Min) Ceiling Finish: Smooth Level 3 drywall finish, painted. Provide snow retention system to be coordinated with Architect, General Contractor, and Roofing Sub Contractor. Provide heat cable at gutters, downspouts, and drainage paths.
Assembly must meet WUI IR-1 requirements

2 **Flat Roof @ Parapet Roof:**
Class A Rated EPDM/TPO membrane roofing, on tapered rigid insulation (1/2" min.) w/ 0.25:12 slope, on plywood roof sheathing, on I joist framing, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 min) Ceiling Finish: Smooth Level 3 drywall finish, painted. See roof plan for roof slope and drain/downspout locations. Provide heat cable at all downspouts and scuppers.
Assembly must meet WUI IR-1 requirements

3 **Flat Roof @ Decks:**
2x decking, on reverse tapered 2x joists, on Class A Rated EPDM membrane roofing, on plywood roof sheathing, on tapered tapered LVL joist framing w/ 0.25:12 slope, Re: Struct., w/ closed cell polyurethane spray foam insulation (R-50 Min.) Provide perimeter gutter per plan & provide heat cable at gutter, downspout, and drainage paths.
Assembly must meet WUI IR-1 requirements

4 **Exterior Decks :**
2x6 Alaskan Yellow Cedar, on Heavy timber framing. Re: Struct for layout & Sizing, Re: Arch Details for railings.

5 **Exterior Wall Framing @ Steel Siding:**
16ga Metal Siding, (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation (R-5), on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

6 **Exterior Wall Framing @ Horizontal Wood Siding:**
2x8 Horizontal wood siding (Vf. extents w/ owner), over Furring Strips, UV Batten or similar, with 2" Rigid Foam insulation, on drain wrap/weather barrier, on exterior sheathing, on wood stud wall framing, Re: Struct. w/ 3" closed cell polyurethane spray foam insulation (R-20 min). Wall Finish: Smooth Level 3 drywall finish, painted.
Assembly must meet WUI IR-1 requirements

7 **Interior Wall Framing:**
2x stud wall, Re: Struct., w/ Smooth Level 3 drywall finish, painted. Fire tape @ Garage, Mechanical space, and Apartment Units.

8 **Foundation Wall, Typ:**
2" Extruded polystyrene insulation (R-10), on Fluid Applied waterproofing, on Foundation/ Retaining Wall, RE: Struct.

Above grade: Provide Metal flashing over drainage/protection/insulation board.

@ Garage/Basement: Provide 2x4 fur wall, w/ closed cell polyurethane spray foam insulation (R-20 min.). Wall Finish: Smooth Level 3 drywall finish, painted.

9 **Upper Floor Assembly:**
Flooring (See Finish Schedule) on plywood sheathing, on Engineering joists floor framing, RE: Struct., with sound batt insulation.
Ceiling Finish: Smooth Level 3 drywall finish, painted.
Fire tape @ Garage, Mechanical space, and Apartment Units.

10 **Main Floor Assembly / 1HR Fire Assembly:**
2 1/4" Concrete slab, (Vf Finish w/ owner), integrated radiant hydronic tubing, control joints per Plan, Vf decorative additional joints w/ owner, on plywood sheathing, on engineering floor joist, with 5/8" Type X gypsum board, 12" dropped ceiling framed w/ 2x4, 5/8" Type X gypsum board.
RE: Struct., with sound batt insulation.

11 **Basement Floor Assembly:**
Finish Floor Material (See Finish Schedule), on 5" Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing,(See Mech.), sawn control joints per plan, on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

12 **Garage Floor Assembly:**
Reinforced Concrete Slab (See Struct.) w/ integrated radiant hydronic tubing, sawn control joints per plan on Vapor Barrier, on 3" Rigid Insulation (R-15), on 6" Gravel Fill (No Fines).

13 **Deck (Typ.):**
2x6 alaskan yellow cedar decking, on Wood Joists RE: Struct., with corrugated steel soffit.
Assembly must meet WUI IR-1 requirements

14 **Exterior Slab on Grade:**
4" Concrete, Over 6 Mil Vapor Barrier (Taped & Sealed), Over Washed Rock, Over Compacted Base

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FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE

6165 Burcher Rd
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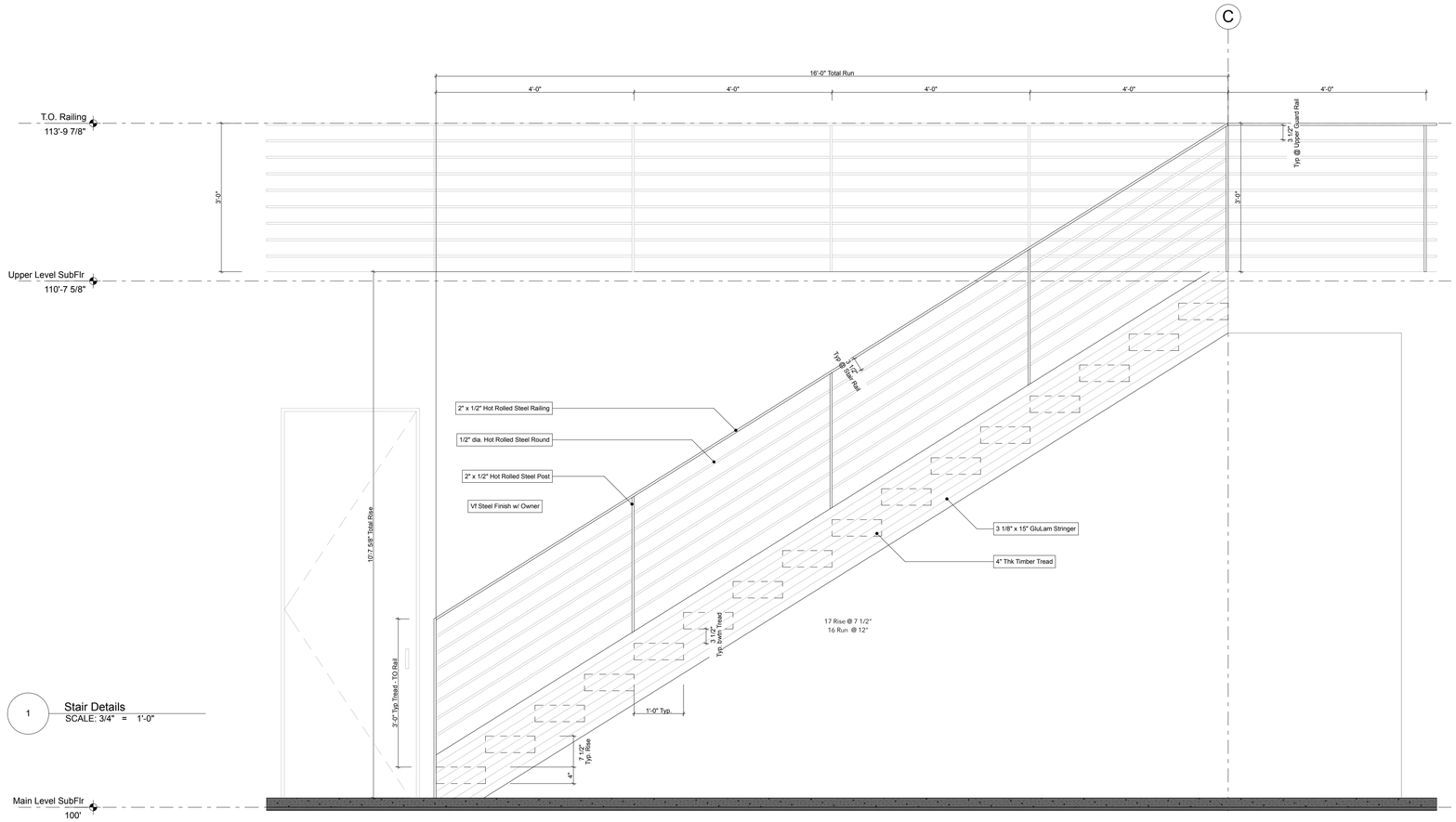
DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW
ISSUE:	
Building Permit Set	3.9.23

A406
Building Sections

V5



1 **Stair Details**
SCALE: 3/4" = 1'-0"

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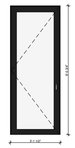
DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW

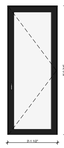
ISSUE:

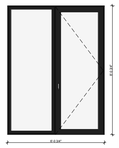
Building Permit Set	3.9.23

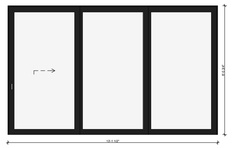
A601
Details

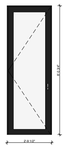
V5

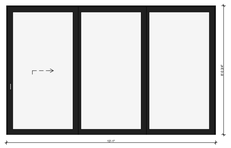


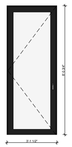


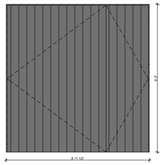


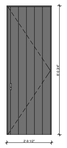


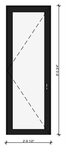


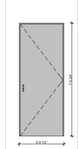


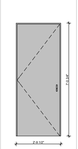


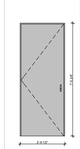


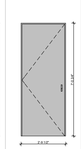


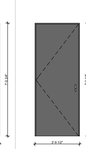


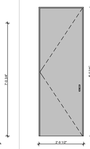


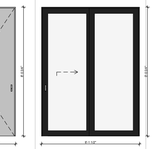


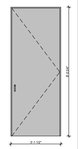


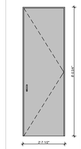


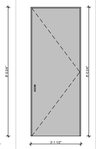


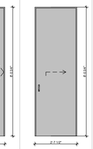


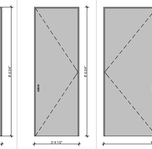


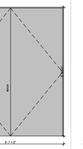


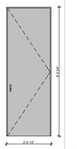


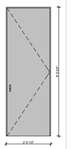


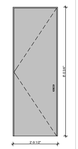












Exterior Door Elevations

ID	D01	D10	D11	D12	D13	D14	D15	D16	D17	D24
View from Exterior										
2D Plan Preview										
Operation Type	Inswing Door	Inswing Door	Inswing Door	Sliding Door	Inswing Door	Sliding Door	Inswing Door	Inswing Double Door	Inswing Door	Inswing Door
Nominal W x H Size	3'-0"×8'-0"	3'-0"×8'-0"	3'-0"×8'-0"	13'-0"×8'-0"	2'-8"×8'-0"	12'-11 1/2"×8'-0"	3'-0"×8'-0"	8'-10"×9'-2 1/4"	2'-8"×8'-0"	2'-8"×8'-0"
Location	ARU Entry	Main Level Entry	Sun Room	Main Living room	Dining/Kitchen	Dining	North Deck	Garage	Mudroom	Upper Deck

Interior Door Elevations

View from Opening Side																							
2D Plan Preview																							
Operation Type	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Sliding Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door	Inswing Double Door
ID	D02	D03	D04	D05	D06	D18	D19	D20	D21	D22	D23	D25	D26	D27	D28	D29	D30	D31	D32	D33	D34	D36	D36	D37
Nominal W x H Size	2'-8"×7'-0"	2'-8"×7'-0"	2'-8"×7'-0"	2'-8"×7'-0"	2'-8"×7'-0"	2'-8"×8'-0"	6'-0"×8'-0"	3'-0"×8'-0"	2'-6"×8'-0"	3'-0"×8'-0"	2'-6"×8'-0"	2'-8"×8'-0"	6'-6"×8'-0"	2'-8"×8'-0"	2'-8"×8'-0"	2'-6"×8'-0"	2'-8"×8'-0"	2'-6"×8'-0"	2'-8"×8'-0"	2'-8"×8'-0"	2'-8"×8'-0"	2'-6"×8'-0"	2'-8"×8'-0"	2'-8"×8'-0"

Window Elevations

ID	W01	W02	W03	W04	W05	W06	W07	W08	W09	W10	W10	W11
View from Exterior												
2D Plan Preview												
Operation Type	Fixed	Fixed	Awning	Awning	Fixed	Fixed	Fixed	Fixed	Casement	Fixed	Fixed	Fixed
Nominal W x H Size	4'-4"×8'-0"	9'-6"×6'-0"	6'-0"×2'-0"	9'-0"×5'-0"	6'-0"×8'-0"	9'-6"×5'-0"	9'-0"×5'-0"	7'-10"×8'-0"	6'-0"×8'-0"	7'-6 1/2"×5'-0"	6'-11"×5'-0"	7'-10"×7'-0"
Location	ARU Living	ARU Living	ARU Bath	ARU Bed	Sun Room	Main Living	Kitchen	Dining	Guest/Flex Room	Office	Upper Den	Upper Den

W12	W13	W14	W15	W20	W21	W22	W23	W24	W25	W26	W27
Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Casement	Fixed	Fixed	Casement	Fixed	Casement
3'-4"×7'-0"	7'-5"×7'-0"	7'-5"×7'-0"	7'-5"×7'-0"	3'-0"×8'-0"	3'-0"×8'-0"	8'-10"×8'-0"	6'-0"×2'-0"	2'-0"×5'-0"	8'-0"×5'-0"	2'-0"×8'-0"	8'-0"×5'-0"
Upper Den	Upper Den	Upper Den	Upper Den	Office	Office	Primary Bed	Primary Bed	Primary Closet	Bed 1	Bed 2	BEd 2

FARMERPAYNE
ARCHITECTS

Jackson Hole
260 West Broadway, Suite A
Jackson, WY 83001
T.307.264.0080

Sun Valley
351 N Leadville Ave, Suite 204
Ketchum, ID 83340
T.208.214.5155

Louisiana
910 Pierremont Rd. Suite 410
Shreveport, LA 71106
T.318.383.3100

ARCHITECT STAMP

LICENSED ARCHITECT
JAMES J. FARMER
B-0262
3.9.23
STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

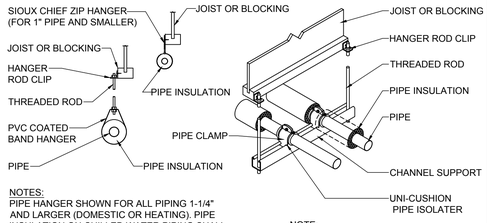
ROSCOE
RESIDENCE
6165 Burcher Rd
Wilson WY 83014

DATE: 3/9/23
PROJECT #: JH2203
DRAWN: RHW

ISSUE:
Building Permit Set 3.9.23

A701
Door & Window
Schedules_Elevations

V5



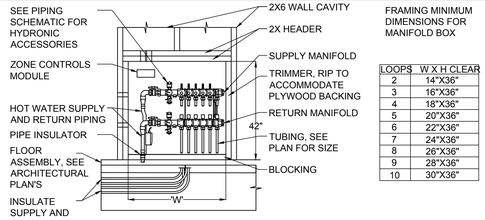
NOTES:
PIPE HANGER SHOWN FOR ALL PIPING 1-1/4" AND LARGER (DOMESTIC OR HEATING). PIPE INSULATION ON CHILLED WATER PIPING SHALL BE CONTINUOUS THROUGH CHANNEL SUPPORT AND PIPE CLAMP. INSTALL HIGH DENSITY INSULATION WITH PIPE SHIELD.

INDIVIDUAL PIPE HANGERS

NOTE:
PIPE HANGER SHOWN IS FOR GROUPS OF PIPES 1-1/4" AND LARGER (DOMESTIC OR HEATING).

MULTIPLE PIPE HANGER

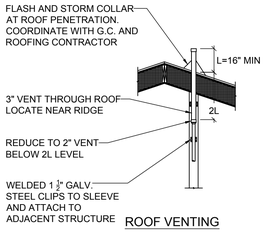
PIPE HANGER DETAIL
N.T.S.



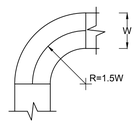
FRAMING MINIMUM DIMENSIONS FOR MANIFOLD BOX

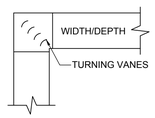
LOOPS	W X H CLEAR
2	14"X36"
3	16"X36"
4	18"X36"
5	20"X36"
6	22"X36"
7	24"X36"
8	26"X36"
9	28"X36"
10	30"X36"

SINGLE ZONE MANIFOLD INSTALLATION
N.T.S.



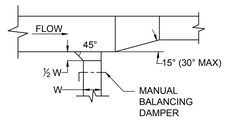
VENT DETAIL
N.T.S.

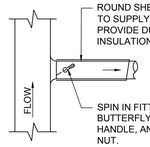




NOTES:
- DUCT SIZES ARE OUTSIDE SHEET METAL DIMENSIONS.
- ALL RECTANGULAR DUCT WORK SHALL HAVE 1" DUCT LINER UNLESS OTHERWISE NOTED.
- ALL ROUND DUCT SHALL HAVE DUCT INSULATION WRAP, SEE SPECIFICATIONS 15800.
- ALL MITERED ELBOWS SHALL HAVE TURNING VANES.

DUCT ELBOW DETAIL
N.T.S.

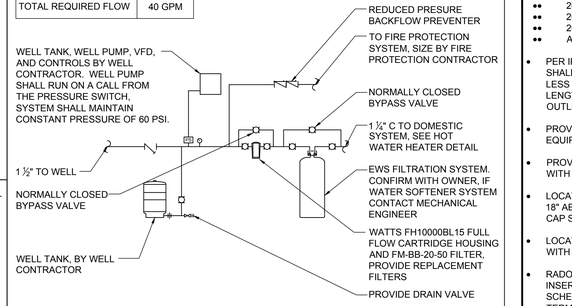




NOTES:
- DUCT SIZES ARE OUTSIDE SHEET METAL DIMENSIONS.
- ALL RECTANGULAR DUCT WORK SHALL HAVE 1" DUCT LINER UNLESS OTHERWISE NOTED.
- ALL ROUND DUCT SHALL HAVE DUCT INSULATION WRAP, SEE SPECIFICATIONS 15800

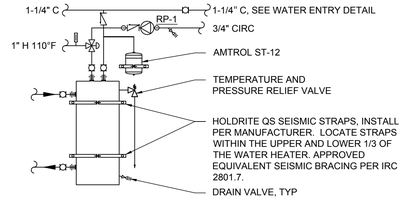
MAIN BRANCH AND ROUND DUCT TAKE OFF DETAIL
N.T.S.

CALCULATED WELL FLOW RATES	
FIRE FLOW	40 GPM
DOMESTIC PEAK FLOW	22 GPM
TOTAL REQUIRED FLOW	40 GPM



WATER ENTRY DETAIL
N.T.S.

NOTES:
- WATER ENTRY SIZE BASED ON EITHER FIRE OR DOMESTIC + IRRIGATION



INDIRECT WATER HEATER DETAIL
N.T.S.

Roscoe Sheet Index

Sheet Number	Sheet Name
M0.1	Cover Sheet
M1.1	Lower Level Mechanical Plan
M1.2	Main Level Mechanical Plan
M1.3	Upper Level Mechanical Plan
M2.1	Lower Level Hydronic Plan
M2.2	Main Level Hydronic Plan
M2.3	Upper Level Hydronic Plan
M3.0	Underslab Plumbing Plan
M3.1	Lower Level Plumbing Plan
M3.2	Main Level Plumbing Plan
M3.3	Upper Level Plumbing Plan
M4.0	Equipment Schedules and Piping Schematic
M4.1	Mechanical, Fire Protection, and Plumbing Specifications
M4.2	Mechanical, Fire Protection, and Plumbing Specifications

GENERAL NOTES

- BUILDING CODE SUMMARY:
  - 2021 INTERNATIONAL RESIDENTIAL CODE (2021 IRC)
  - 2012 INTERNATIONAL ENERGY CONSERVATION CODE (2012 IECC)
  - 2021 INTERNATIONAL PLUMBING CODE (2021 IPC)
  - 2021 INTERNATIONAL MECHANICAL CODE (2021 IMC)
  - 2021 INTERNATIONAL FUEL GAS CODE (2021 IFGC)
  - 2021 INTERNATIONAL FIRE CODE (2021 IFC)
  - 2018 INTERNATIONAL WILDLAND-URBAN INTERFACE CODE (2018 IWUIC)
  - ALL TETON COUNTY BUILDING CODE RESOLUTIONS
- PER IRC M1305.1.3, UNDER FLOOR AND ATTIC SPACES CONTAINING EQUIPMENT REQUIRING SERVICE SHALL HAVE AN UNOBSTRUCTED PATH WAY LARGE ENOUGH TO REMOVE THE EQUIPMENT, BUT NOT LESS THAN 30 INCHES TALL BY 22 INCHES WIDE. THE PATHWAY SHALL BE LESS THAN 20 FEET IN LENGTH. PROVIDE LUMINARIES CONTROLLED BY A SWITCH AT THE OPENING AND RECEPTACLE OUTLET AT OR NEAR ALL APPLIANCES.
- PROVIDE 30 INCH DEEP BY 30 INCH WIDE BY 30 INCH HIGH LEVEL CLEAR SPACE IN FRONT OF EQUIPMENT FOR SERVICING
- PROVIDE FLOOR DRAINS IN ALL LAUNDRY AND MECHANICAL ROOMS WITH SURE SEAL TRAP SEALER WITH BACKWATER PROTECTION.
- LOCATE ALL E/A TERMINATION NOT LESS THAN 3' FROM OPENINGS INTO BUILDING AND MINIMUM OF 18" ABOVE GRADE. PROVIDE WALL CAP WITH BACKDRAFT DAMPERS AND SCREENS. VERIFY WALL CAP STYLE AND COLOR WITH ARCHITECT.
- LOCATE ALL O/A TERMINATION NOT LESS THAN 10' FROM E/A TERMINATIONS. PROVIDE WALL CAP WITH BACKDRAFT DAMPERS AND SCREENS.
- RADON MITIGATION SHALL BE INSTALLED PER IRC APPENDIX F. A PLUMBING TEE SHALL BE INSERTED BENEATH THE [CRAWLSPACE SHEETING] [BASEMENT SLAB] AND CONNECT TO A 4"Ø SCHEDULE 20 PVC VENT PIPE. THE VENT PIPE SHALL EXTEND UP THROUGH THE BUILDING AND TERMINATE NOT LESS THAN 12 INCHES ABOVE THE ROOF IN A LOCATION AT LEAST 10 FEET FROM WINDOWS OR ANY OTHER OPENINGS INTO THE BUILDING OR ANY ADJACENT BUILDING. PROVIDE A POWER SOURCE IN THE ATTIC FOR FUTURE INSTALL OF FAN. IN THE EVENT RADON LEVELS ARE TESTED ABOVE ACCEPTABLE LEVELS, THE FAN SHALL BE SIZED FOR 90 TO 150 CFM AT 0" STATIC PRESSURE. PROVIDE RAIN CAP FOR THE TERMINATION.
- DOMESTIC HOT WATER CIRC LINE TO END WITHIN 5 FEET OF ALL HOT WATER PLUMBING FIXTURES. PROVIDE BALANCING VALVES ON ALL BRANCH LINES.
- SEE ARCH FOR HOSE BIBB LOCATIONS.
- MOUNT COVE HEATERS PER MANUFACTURERS INSTALLATION INSTRUCTIONS; MINIMUM OF 6' ABOVE FINISHED FLOOR, 1" ABOVE BLINDS, AND 4" BELOW CEILING. COVE HEATERS WILL BE PROVIDED BY THE ELECTRICAL. CONTRACTOR.

LEGEND

- FLEX CONNECTION
- DIFFERENTIAL PRESSURE REGULATOR
- PIPE BREAK
- POINT OF CONNECTION
- UNION
- DRAIN VALVE
- CIRCUIT SETTER
- BALL VALVE
- CHECK VALVE
- CONTROL VALVE
- 3 WAY CONTROL VALVE
- ISOLATION VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- ACTUATOR
- AIR VENT
- CAP
- FLOW SWITCH
- PRESSURE GAUGE
- PRESSURE SWITCH
- STRAINER
- P AND T PLUG
- TEMPERATURE GAUGE
- HOSE BIB
- AIR SEPERATOR
- PRESSURE RELIEF VALVE
- DIFFUSER TAG (TAG / SIZE / FLOW / LOCALE)
- THERMOSTAT
- HUMIDISTAT STAT
- VENTILATION CONTROLLER
- PUSH BUTTON/SWITCH
- REMOTE SENSOR
- SECTION THRU O/A OR S/A DUCT
- SECTION THRU R/A OR E/A DUCT
- OPPOSED BLADE MANUAL DAMPER
- MOTORIZED DAMPER
- BACKDRAFT DAMPER

ABBREVIATIONS

—C—	-	DOMESTIC COLD WATER	AFF	- ABOVE FINISHED FLOOR
—H—	-	DOMESTIC HOT WATER	AFG	- ABOVE FINISHED GRADE
–CIRC–	-	RECIRCULATED HOT WATER	BDD	- BACK DRAFT DAMPER
—GS—	-	GEOTHERMAL SUPPLY WATER	CFM	- CUBIC FEET PER MINUTE
—GR—	-	GEOTHERMAL RETURN WATER	CLG	- CEILING
– RAD HWS–		RADIANT FLOOR HOT WATER SUPPLY	CONN	- CONNECT
– RAD HWR–		RADIANT FLOOR HOT WATER RETURN	CO	- CLEANOUT
– SM HWS —		SNOW MELT HOT WATER SUPPLY	COTG	- CLEANOUT TO GRADE
– SM HWR —		SNOW MELT HOT WATER RETURN	DN	- DOWN
–HWS–	-	HOT WATER SUPPLY	(E)	- EXISTING
–HWR–	-	HOT WATER RETURN	EAT	- ENTERING AIR TEMPERATURE
–SWS–	-	SOURCE WATER SUPPLY	E/A	- EXHAUST AIR
–SWR–	-	SOURCE WATER RETURN	EWT	- ENTERING WATER TEMPERATURE
—G—	-	LOW PRESSURE NATURAL GAS (11" W.C.)	FA	- FREE AREA
– MG –	-	MEDIUM PRESSURE GAS (2 PSI)	FCO	- FLOOR CLEANOUT
—GW—	-	GREASE WASTE PIPE	GPM	- GALLONS PER MINUTE
—RWL—	-	RAIN WATER LEADER	LAT	- LEAVING AIR TEMPERATURE
–ORWL–	-	OVERFLOW RAIN WATER LEADER	LWT	- LEAVING WATER TEMPERATURE
—W—	-	WASTE PIPE	(N)	- NEW
—DT—	-	DRAIN TILE PIPE	OBD	- OPPOSED BLADE VOLUME DAMPER
–DTD–	-	DRAIN TILE DISCHARGE PIPE	OC	- ON CENTER
—V—	-	PLUMBING VENT PIPE	O/A	- OUTSIDE AIR
			R/A	- RETURN AIR
			S/A	- SUPPLY AIR
			TYP	- TYPICAL
			UNO	- UNLESS NOTED OTHERWISE
			VRT	- VENT THROUGH ROOF
			W/	- WITH
			WCO	- WALL CLEANOUT
			SF	- SQUARE FEET

JTEC
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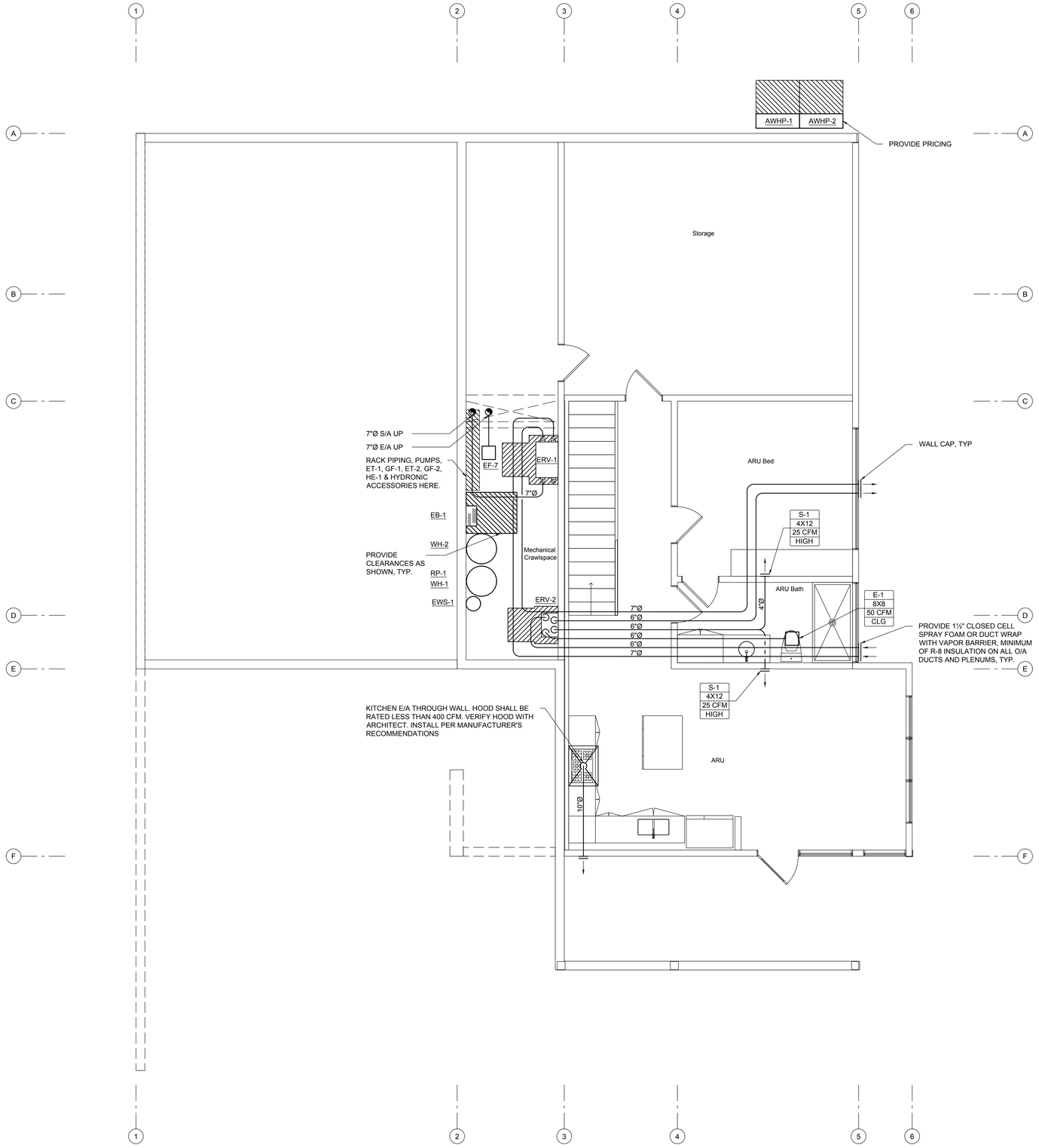
JACKSON, WY 83001
307-699-1110

PROJECT INFO:
ROSCOE RESIDENCE
6165 BURCHER ROAD
WILSON, WY 83014

PROJECT NO.:	2227
DRAFTED BY:	IS
REVIEWED BY:	JGT
PLAN VERSION	DATE
PERMIT SET	3.9.23

M0.1



N

LOWER LEVEL MECHANICAL PLAN

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

JTEC
PO BOX 4594
JACKSON, WY 83001
307-699-1110

PROJECT INFO:

ROSCOE RESIDENCE
6165 BURCHER ROAD
WILSON, WY 83014

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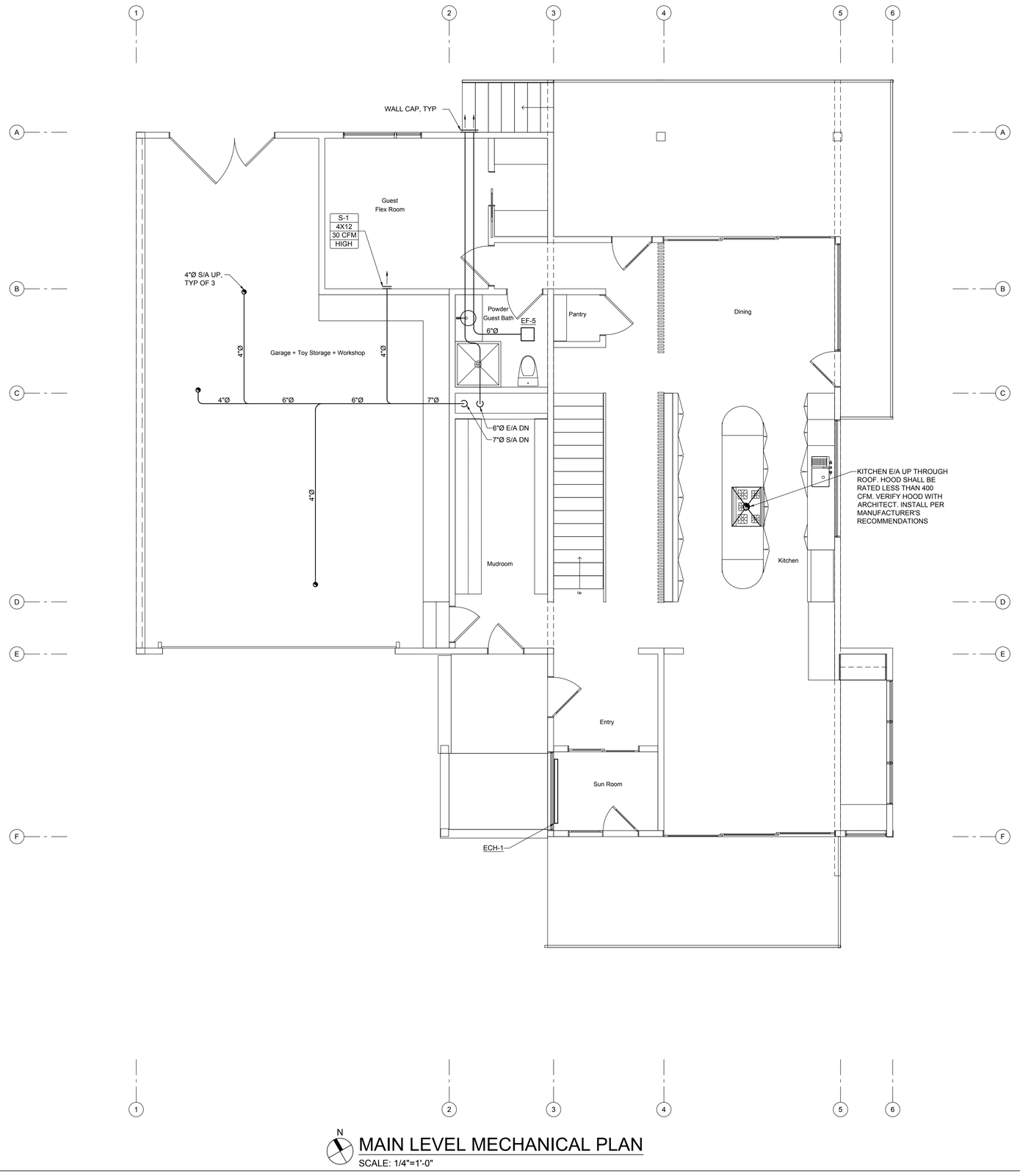
M1.1



N

MAIN LEVEL MECHANICAL PLAN

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

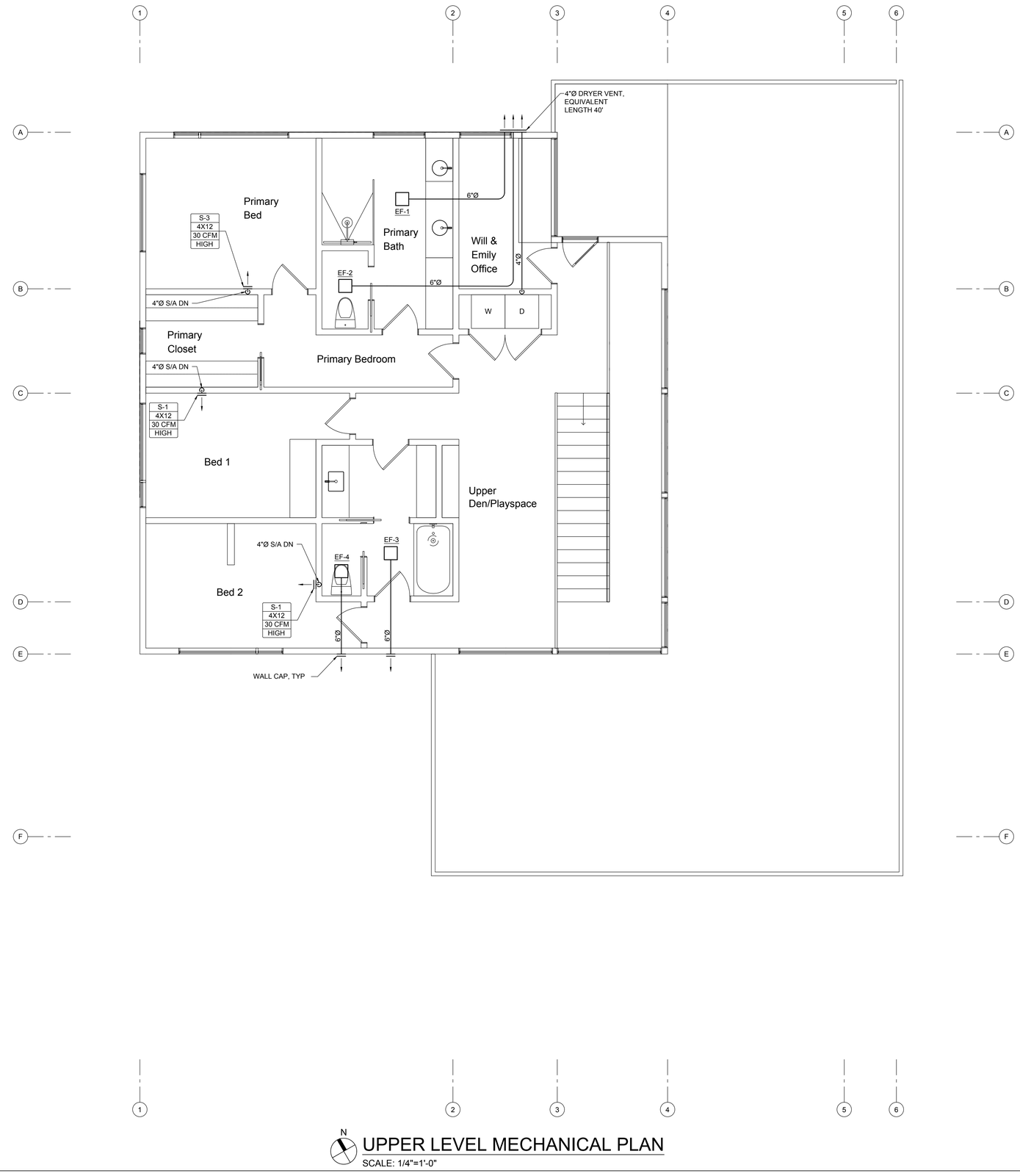
JTEC
PO BOX 4594
JACKSON, WY 83001
307-699-1110

PROJECT INFO:

ROSCOE RESIDENCE
6165 BURCHER ROAD
WILSON, WY 83014

PROJECT NO.:	2227
DRAFTED BY:	IS
REVIEWED BY:	JGT
PLAN VERSION	DATE
PERMIT SET	3.9.23

M1.2



N

UPPER LEVEL MECHANICAL PLAN

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

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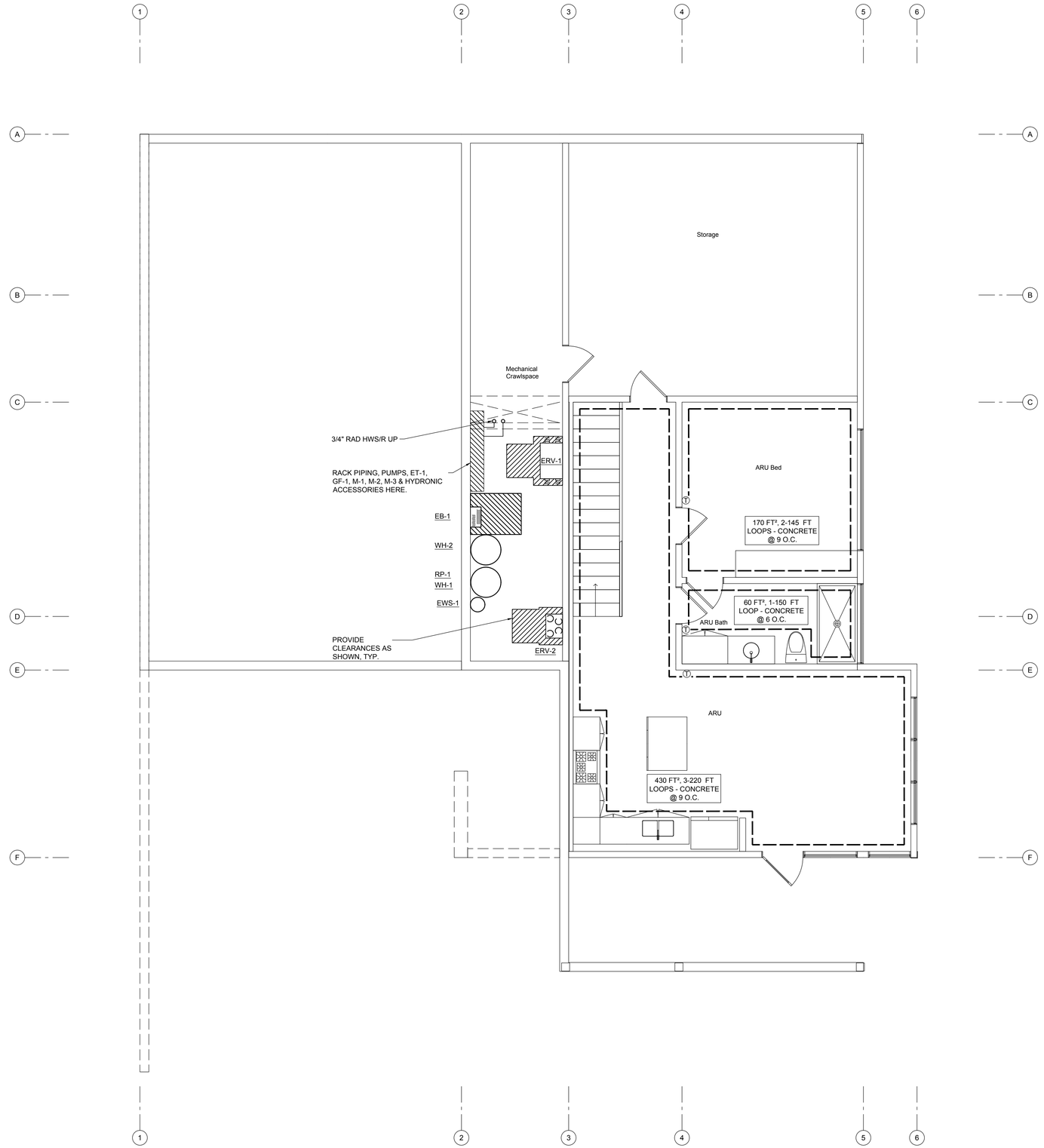
PO BOX 4594
JACKSON, WY 83001
307-699-1110

PROJECT INFO:

ROSCOE RESIDENCE
6165 BURCHER ROAD
WILSON, WY 83014

PROJECT NO.:	2227
DRAFTED BY:	IS
REVIEWED BY:	JGT
PLAN VERSION	DATE
PERMIT SET	3.9.23

M1.3



N

LOWER LEVEL HYDRONIC PLAN

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

JTEC
PO BOX 4594
JACKSON, WY 83001
307-699-1110

PROJECT INFO:

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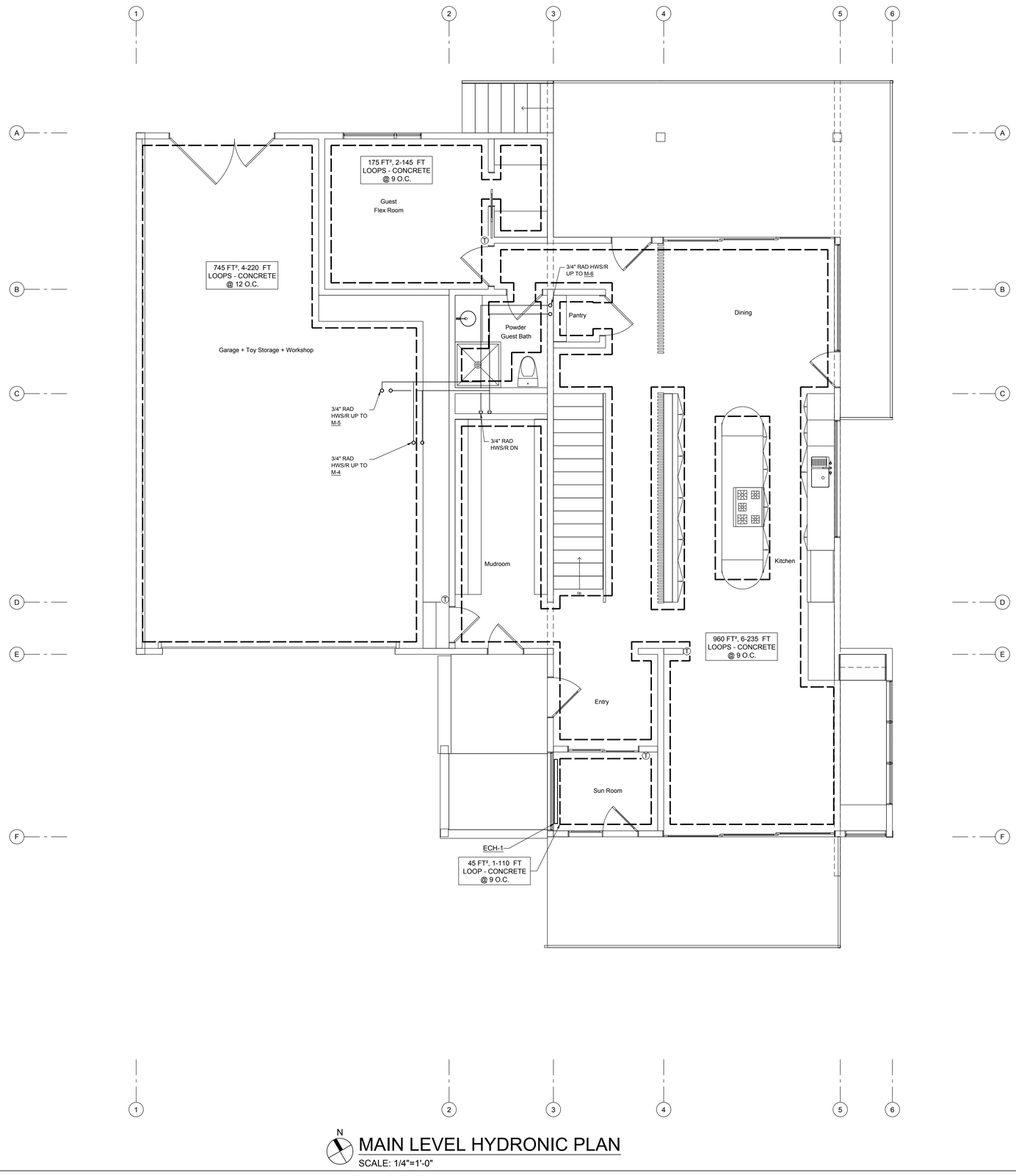
M2.1



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MAIN LEVEL HYDRONIC PLAN

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

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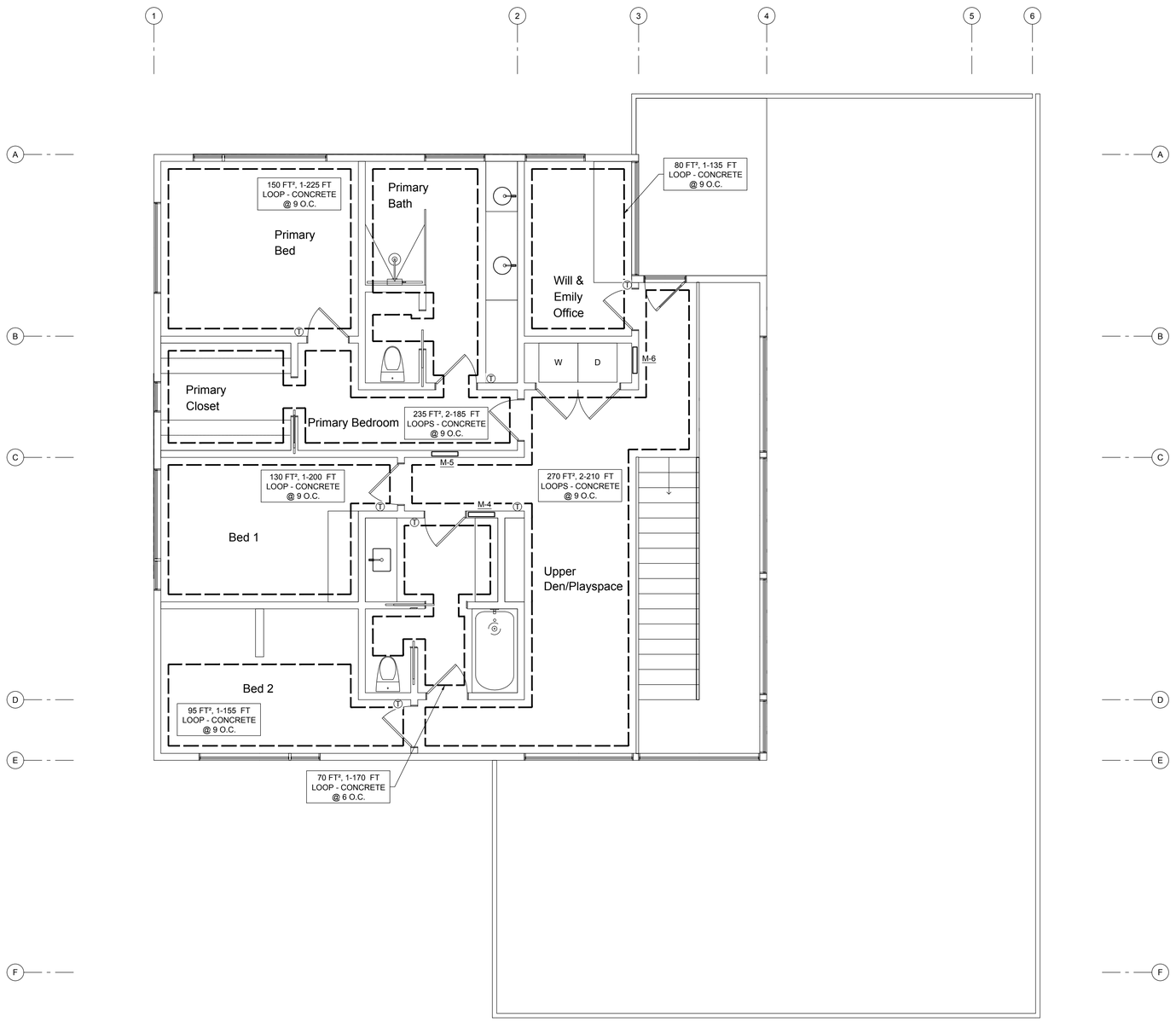
M2.2



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UPPER LEVEL HYDRONIC PLAN

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

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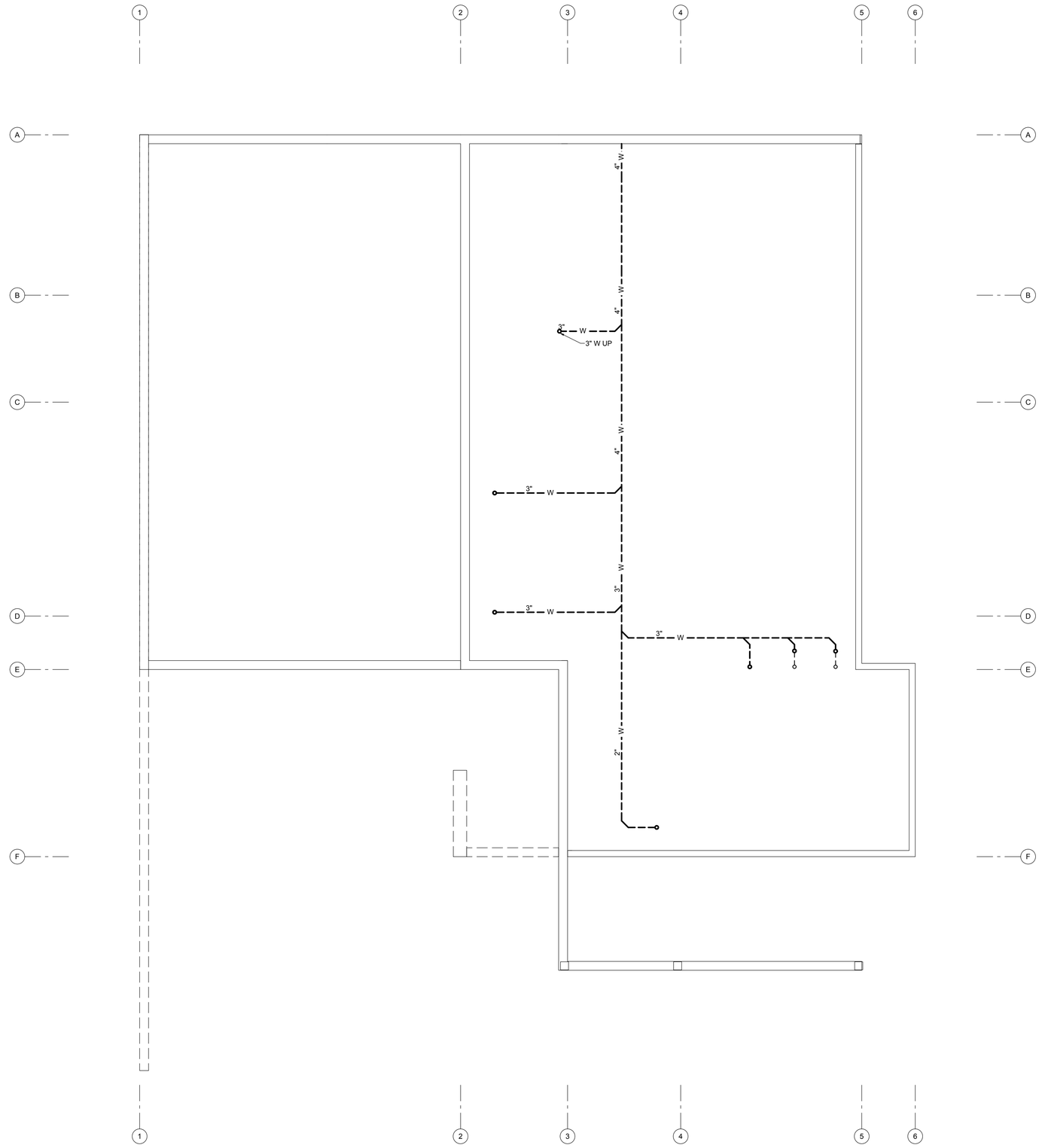
M2.3



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UNDERSLAB PLUMBING PLAN

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

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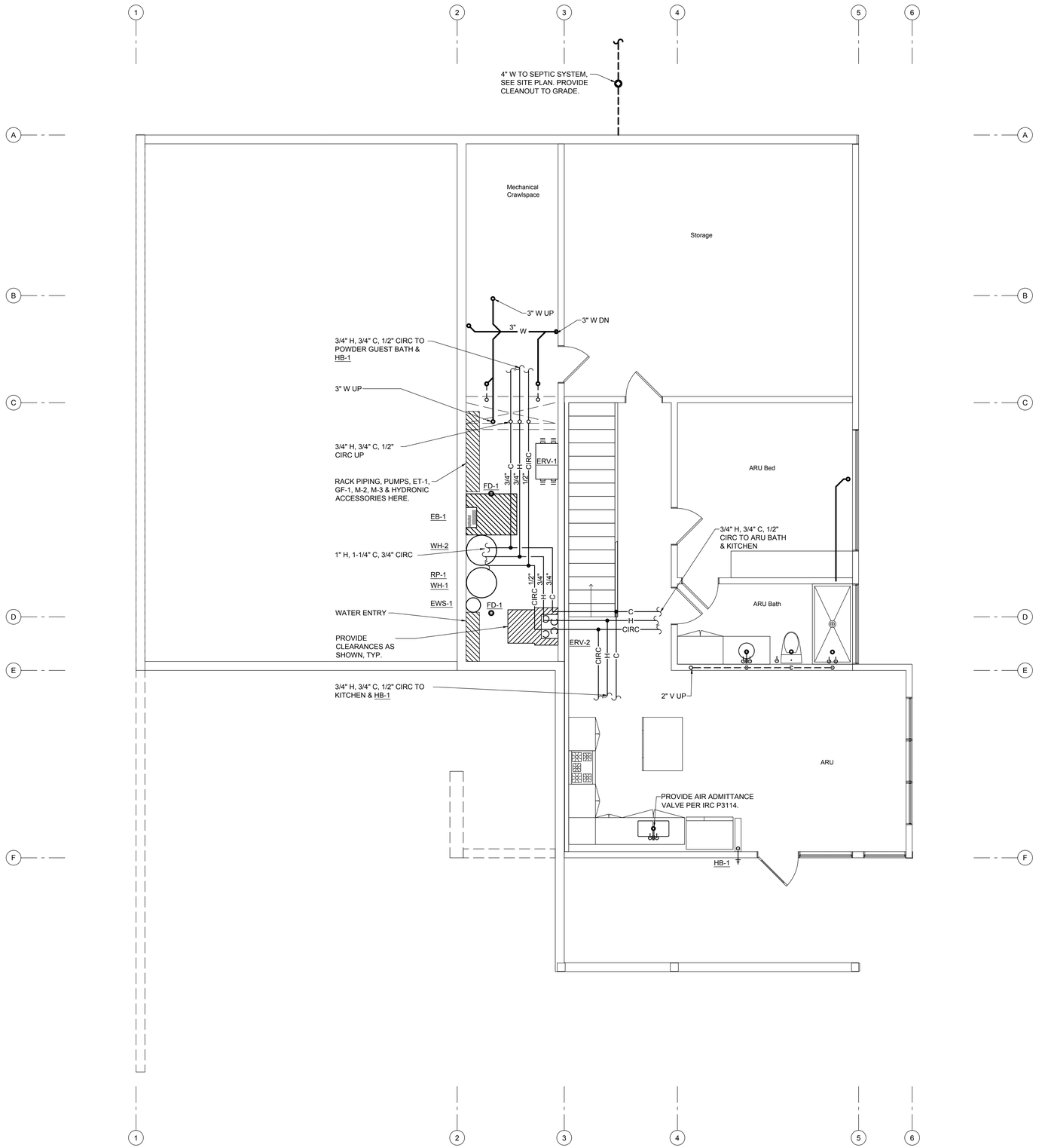
M3.0



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LOWER LEVEL PLUMBING PLAN

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

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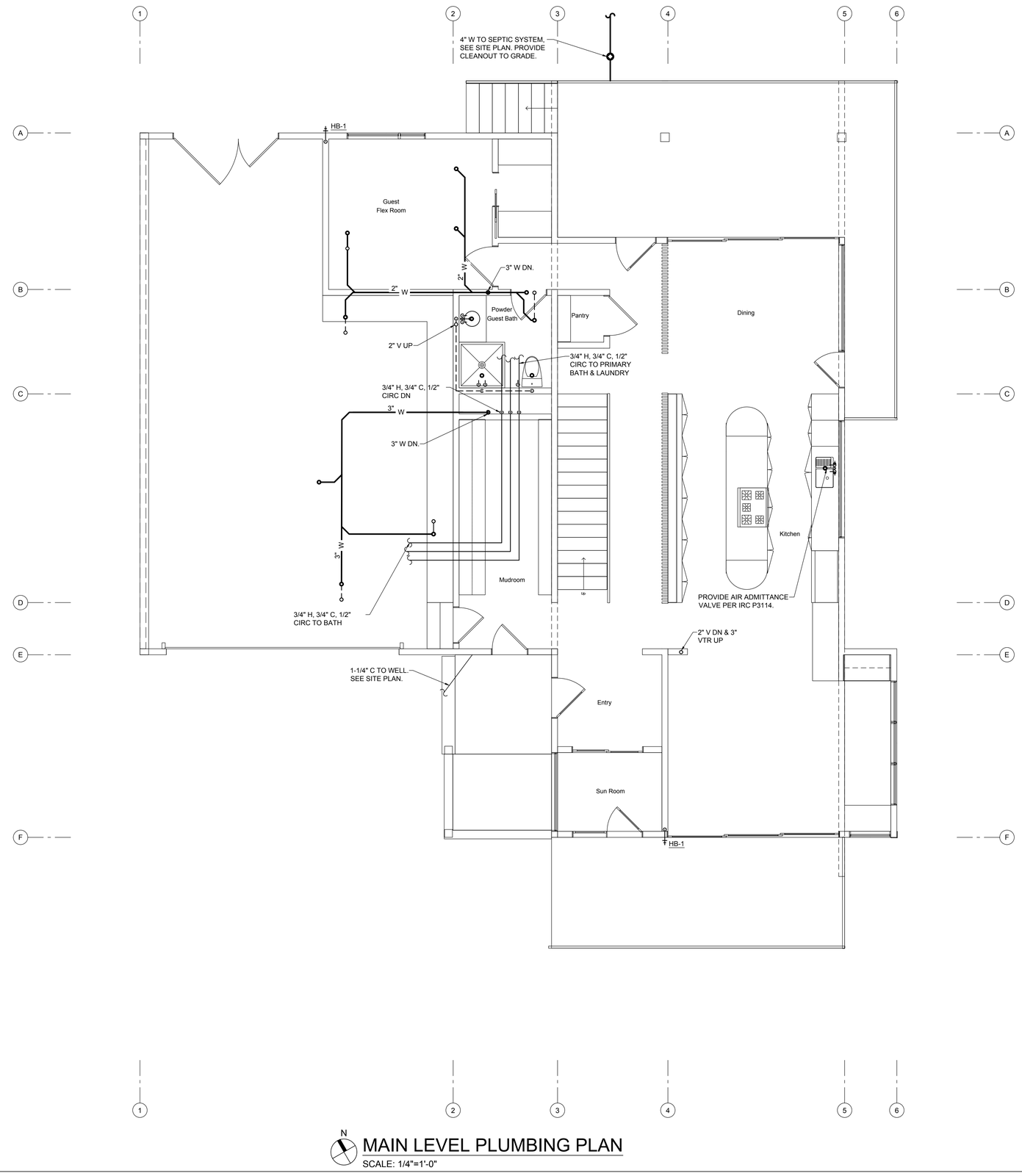
M3.1



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MAIN LEVEL PLUMBING PLAN

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

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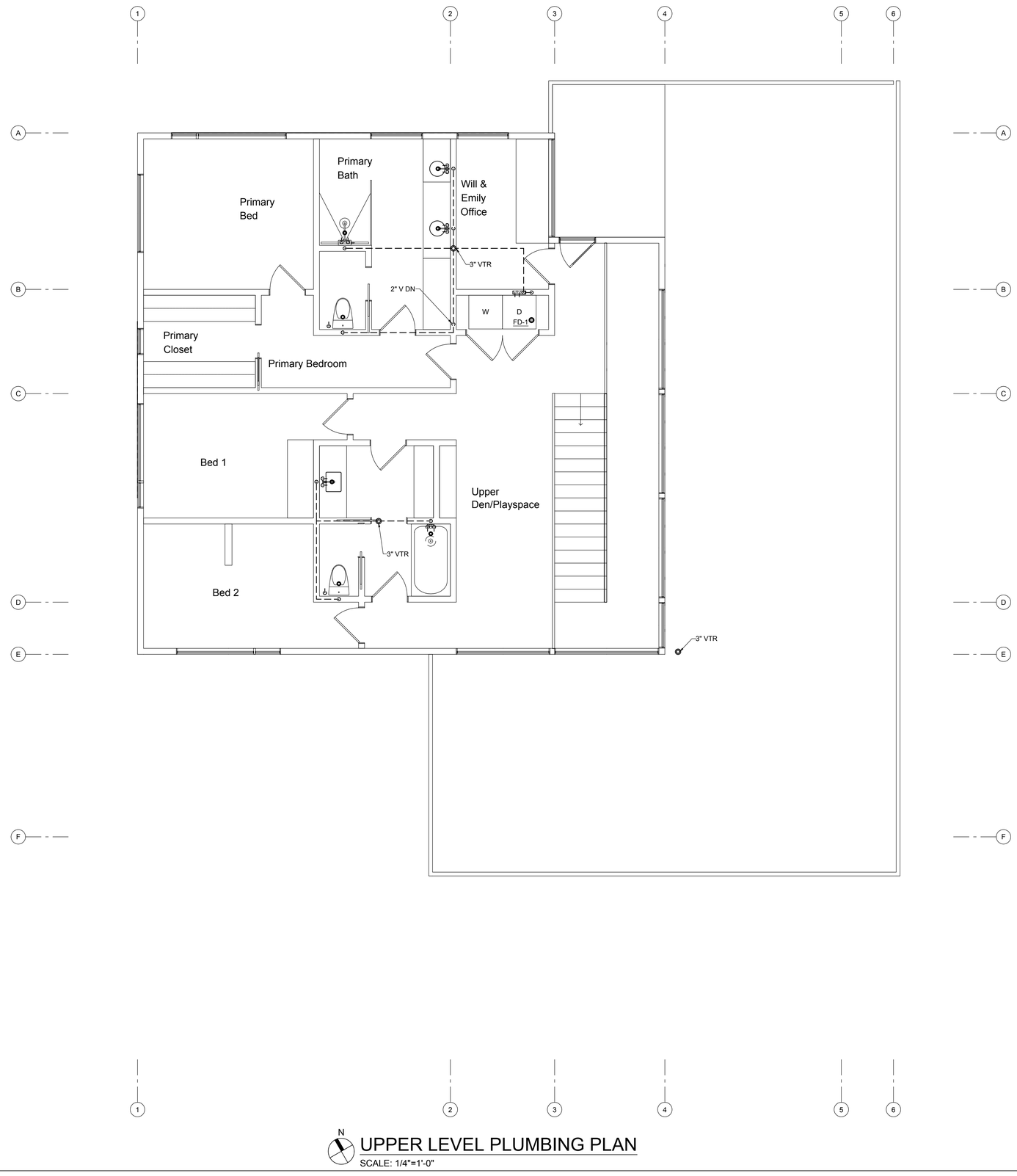

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UPPER LEVEL PLUMBING PLAN

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

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M3.3

FLOOR DRAIN SCHEDULE

EQ. TAG	SERVING	MANUFACTURER & MODEL #
FD-1	FLOOR DRAIN	ZURN Z415

NOTES:
- PROVIDE SURE SEAL TRAP SEAL.
- DRAIN SAME SIZE AS PIPE.

RECIRCULATION PUMP SCHEDULE

EQ. TAG	SERVING	FLOW	FEET OF HEAD	ELECTRICAL DATA		MANUFACTURER & MODEL #
				W	VOLTS/ PH	
RP-1	HOUSE	2.2	3.9	8.5	120/1	GRUNDFOS UP10-16 PM A BU/LC

NOTES:
- PROVIDE TIMER, AQUASTAT, CHECK VALVE, AND ISOLATION VALVES.

WASHING MACHINE BOX (WB)

NO.	MANUFACTURER & MODEL
WB-1	GUY GRAY MODEL NO. FB-200

NOTES:
- PROVIDE CLOTHES WASHER ROUGH-IN BOX FOR HOT AND COLD WATER LINES AND WASTE LINE.
- ROUGH-IN BOX SHALL HAVE HOT AND COLD WATER SHUT-OFF AND SHALL BE EQUIPPED WITH AN OVERFLOW GUARD.
- FABRICATED OF 16 GAUGE STEEL WITH EPOXY FINISH.
- 2" WASTE CONNECTION, 1/2" COLD AND HOT WITH BRASS SWEAT CONNECTION.

WATER FILTRATION SCHEDULE

EQ. TAG	SERVING	PEAK FLOW RATE	FILTRATION MEDIA	SIZE H/D	ELECTRICAL DATA	MANUFACTURER & MODEL #
EWS-1	HOUSE	- GPM	82.5 LBS/2.5 CU FT	67"/13"	120V/1PH	EWS-SPECTRUM

NOTES:
- PROVIDE WATER SAMPLE OR WATER SAMPLE TEST RESULTS TO MANUFACTURER AND VERIFY SIZE

PIPE HANGER SPACING INTERVALS

PIPE TYPE	PIPE SIZE	HORIZONTAL SPACING	VERTICAL SPACING
STEEL PIPE	½" THROUGH 1 ¼"	8'-0"	15'-0"
	1½" AND 2"	10'-0"	15'-0"
	2½" AND 3"	12'-0"	15'-0"
STEEL PIPE, GAS	½"	6'-0"	6'-0"
	¾ " AND 1"	8'-0"	8'-0"
	1 ¼" AND ABOVE	10'-0"	EVERY FLOOR
COPPER PIPE	½" THROUGH 1 ¼"	6'-0"	10'-0"
	2" AND ABOVE	10'-0"	10'-0"
PEX	½" THROUGH 1"	2'-8"	10'-0"
PEX-AL-PEX	½" THROUGH 1"	2'-8"	4'-0"
CAST IRON	2" THROUGH 4"	5'-0" OR 1 EACH JOINT	15'-0"
ABS & PVC	1 ½" AND ABOVE	4'-0"	10'-0"

NOTES:
- SPACING SHOWN ARE MAXIMUM. USE CLOSER SPACING IF REQUIRED BY THE MANUFACTURER.

PLUMBING FIXTURE CONNECTION SCHEDULE

FIXTURE	H	C	W	V	FIXTURE	H	C	W	V
WATER CLOSET RESIDENTIAL	-	½"	3"	2"	KITCHEN SINK	½"	½"	2"	1 ½"
WATER CLOSET FLUSH TANK	-	½"	4"	2"	BAR SINK	½"	½"	1 ½"	1 ½"
WATER CLOSET FLUSH VALVE	-	1"	4"	2"	DISH WASHER	½"	-	2"	1 ½"
URINAL	-	1"	2"	1 ½"	MOP SINK	½"	½"	3"	2"
LAVATORY	½"	½"	2"	1 ½"	LAUNDRY SINK	½"	½"	2"	1 ½"
SHOWER	¾"	¾"	2"	1 ½"	CLOTH WASHER	½"	½"	2"	1 ½"
BATH TUB	¾"	¾"	2"	1 ½"	FLOOR SINKS			3"	2"
HOSE BIB	-	¾"	-	-					

NOTES:
- SIZES SHOWN ARE MINIMUM CONNECTIONS TO INDIVIDUAL FIXTURES. USE LARGER PIPE SIZES WHEN RECOMMENDED BY THE MANUFACTURER.
- PROVIDE MINIMUM 3/4" PIPE TO 2 OR MORE FIXTURES. REDUCE SIZE AT FIXTURE AS REQUIRED.
- FOR BATHTUBS AND SHOWER CONTROL VALVES PROVIDE TEMPERATURE LIMITING DEVICES THAT CONFORMS TO ASSE 1070/ASMEA112.1070/CSA B125.70, ASSE1016/ASMEA112.1016/CSA B125.70

HOSE BIBB SCHEDULE

EQ. TAG	SERVING	MANUFACTURER & MODEL #
HB-1	HOSE BIBB	WOODFORD MODEL 25 FREEZELESS FAUCET

NOTES:
- FREEZELESS WALL FAUCET WITH ¾" HOSE THREAD AND VACUUM BREAK

AIR TO AIR HEAT EXCHANGER SCHEDULE

EQ. TAG	SERVING	CFM	ESP (IN.)	ELECTRICAL DATA		MANUFACTURER & MODEL #
				DUCT HEATER	FAN	
HRV-1 & DH-1	HOUSE	120	0.25	240V, 2KW, 8.3A	120V, 168W, 1.4A	FANTECH ATMO150E THERMO-AIR TER 6-2-240
HRV-2 & DH-2	ARU	50	0.30	240V, 1KW, 4.17A	120V, 172W, 1.6A	FANTECH VH704 THERMO-AIR TER 5-1-240

NOTES:
- UNITS SHALL RUN CONTINUOUSLY ON NORMAL SPEED FOR WHOLE HOUSE VENTILATION. BALANCE SYSTEM ON NORMAL SPEED TO NOTED CFM SHOWN ON PLAN. DUCT HEATER, DH-1 SHALL BE LOCATED ON THE OUTSIDE AIR DUCT AND MODULATE TO MAINTAIN 32°F LAT. DH-1 SHALL COME FACTORY STOCK WITH DUCT TEMPERATURE SENSOR, AUTOMATIC RESET CUTOUT, AND AIR FLOW SWITCH.
- PROVIDE DRAIN AND CONDENSATE PUMP, LITTLE GIANT VCMA-15ULS, IF NECESSARY. PLUMBER SHALL MAKE ALL CONNECTIONS TO SEWER.
- CONTROLLERS
  - •• ECO TOUCH FOR WHOLE HOUSE
  - •• RTS2 PUSH BUTTON FOR POWDER ROOMS
- VENTILATION REQUIREMENTS (PER 2021IRC)
  - •• BATHROOMS - 20/50 CFM CONTINUOUS/INTERMITTENT EXHAUST
  - •• WHOLE HOUSE - 90 CFM
  - •• ARU - 25 CFM

EXHAUST FAN SCHEDULE

EQ. TAG	SERVING	CFM	ESP (IN.)	SONES	ELECTRICAL DATA		MANUFACTURER & MODEL #
					W	VOLTS	
EF-1	MASTER BATH	110	0.25	0.9	16.4W	120	PANASONIC FV-0511VQC1
EF-2	MASTER BATH WC	110	0.25	0.9	16.4W	120	PANASONIC FV-0511VQC1
EF-3	BATH 2	110	0.25	0.9	16.4W	120	PANASONIC FV-0511VQC1
EF-4	BATH 2 WC	110	0.25	0.9	16.4W	120	PANASONIC FV-0511VQC1
EF-5	POWDER GUEST BATH	110	0.25	0.9	16.4W	120	PANASONIC FV-0511VQC1
EF-6	ARU BATH	110	0.25	0.9	16.4W	120	PANASONIC FV-0511VQC1
EF-7	MECHANICAL	110	0.25	0.9	16.4W	120	PANASONIC FV-0511VQC1

NOTES:
- FAN WITH INTEGRAL BACKDRAFT DAMPER.
- FACE GRILLE SHALL BE PROVIDED WITH UNIT.
- PROVIDE MOTION SENSOR OR TIMER SWITCH WITH 20 MINUTE TIME DELAY.
- FOR EF-7 PROVIDE THERMOSTAT

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE

EQ. TAG	TYPE	MANUFACTURER & MODEL #
S-1	WALL SUPPLY REGISTER	HART & COOLEY 92HVV
E-1	EXHAUST GRILLE	HART & COOLEY PFG
L-1	INTAKE/ EXHAUST LOUVER	AMERICAN WARMING LE-49

NOTES:
- PROVIDE OPPOSED BLADE DAMPERS FOR ALL SUPPLY.
- ANODIZED FINISH ON ALUMINUM GRILLES AND REGISTERS.
- PRIME FINISH ON STEEL GRILLES AND REGISTERS.
- PAINT THE DUCT BEHIND GRILLES AND REGISTERS FLAT BLACK.
- PROVIDE BACKDRAFT DAMPERS FOR ALL EXHAUST LOUVERS.
- VERIFY COLOR WITH ARCHITECT/ OWNER.

ELECTRIC HEATER SCHEDULE

EQ. TAG	SERVING	CAPACITY BTU	LENGTH INCHES	ELECTRICAL DATA	MANUFACTURER & MODEL #
ECH-1	SUN ROOM	2560	59	240V, 750W, 3.1A	QMARK RCC7524C

NOTES:
- THERMOSTAT: HONEYWELL LINEVOLT PRO 8000 PROGRAMMABLE.
- PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

ELECTRIC BOILER SCHEDULE

EQ. TAG	SERVING	CAPACITY	ELECTRICAL DATA	MANUFACTURER & MODEL #
EB-1	HOUSE	102,360 BTU	240V, 1PH, 30KW, 125 A, 3X60A	THERMOLEC B-30U-FFB

NOTES:
- PROVIDE 30 PSI T&P RELIEF VALVE, WATER TEMPERATURE LIMIT SWITCH, AND LOW WATER CUTOFF.
- PROVIDE ELECTRICAL DISCONNECT.
- PROVIDE DUAL TEMPERATURE BOARD
- •• FFB : PART # 17-02-10959

HYBRID ELECTRIC WATER HEATER SCHEDULE

EQ. TAG	SERVING	CAPACITY	ELECTRICAL DATA	MANUFACTURER & MODEL #
WH-1	BUILDING	80 GAL	240V, 30A MOCP	A.O.SMITH VOLTEX HPTU-80N
WH-2	BUILDING	80 GAL	240V, 30A MOCP	A.O.SMITH VOLTEX HPTU-80N

NOTES:
- ENERGY FACTOR: 3.24

PUMP SCHEDULE

EQ. TAG	SERVING	FLOW	FEET OF HEAD	ELECTRICAL DATA		MANUFACTURER & MODEL #
				W OR HP	VOLTS/ PH	
P-1	BOILER	11	6.75	1/6	120/1	GRUNDFOS UPS 26-99 FC
P-2	RAD FLOOR	9.25	14.25	1/6	120/1	GRUNDFOS UPS 26-99 FC
P-3	AWHP 1, 2	26	42	651	120/1	GRUNDFOS MAGNA3 50-150

NOTES:
- PROVIDE ISOLATION FLANGES OR UNIONS AND BALL VALVES. INCLUDE ALL NECESSARY NUTS, GASKETS, ETC.

GLYCOL FEEDER SCHEDULE

EQ. TAG	SERVING	CAPACITY	ELECTRICAL DATA (1PH)		MANUFACTURER & MODEL #
			W	VOLTS	
GF-1	SYSTEM	6 GAL	50W	120	AXIOM MF200 RIA 10-1-SSA

NOTES:
- PROVIDE LOW LEVEL ALARM
- OR ENGINEER APPROVED

EXPANSION TANK SCHEDULE

EQ. TAG	SERVING	TOTAL VOLUME	ACCEPTANCE VOLUME	SIZE H/D	MANUFACTURER & MODEL #
ET-1	HEATING	14 GAL	11.3 GAL	24 ¾"/15 ⅜"	EXTROL SX-30V

NOTES:
- EQUIVALENT OR ENGINEER APPROVED.
- WELDED STEEL CONSTRUCTION WITH BLADDER COMPATIBLE WITH PROPYLENE AND ETHYLENE GLYCOL.
- MAX WORKING PRESSURE OF 60 PSI AND MAX WORKING TEMP OF 200°F.

PROVIDE PRICING

AIR TO WATER HEAT PUMP SCHEDULE

EQ. TAG	SERVING	CAPACITY		FLOW RATE/ PRESSURE DROP	ELECTRICAL DATA	MANUFACTURER & MODEL #
		HEATING	COOLING			
AWHP-1	HOUSE	49,099 BTU	58,021 BTUH	13 GPM/ 23.1'	230V, 1PH, 31 MCA	SPACEPAK SOLSTICE SIM-060
AWHP-2	HOUSE	49,099 BTU	58,021 BTUH	13 GPM/ 23.1'	230V, 1PH, 31 MCA	SPACEPAK SOLSTICE SIM-060

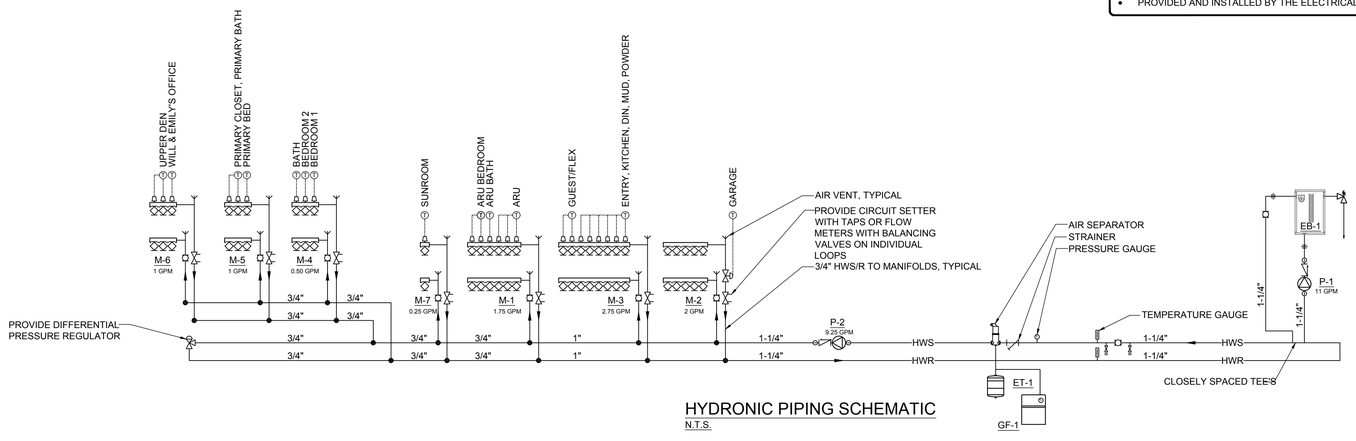
NOTES:
- PROVIDE 30 PSI T&P RELIEF VALVE, WATER TEMPERATURE LIMIT SWITCH, AND LOW WATER CUTOFF.
- LISTED HEATING C.O.P. OF 2.47 AT 86F EWT & 19F AMBIENT TEMP.
- LISTED COOLING E.E.R. OF 12.97 AT 59F EWT & 95F AMBIENT TEMP
- PROVIDE FIELD INSTALLED SOFT START KIT.
- PROVIDE 406 CONTROLLER

PROVIDE PRICING

BUFFER TANK SCHEDULE

EQ. TAG	SERVING	VOLUME	SIZE H/D	MANUFACTURER & MODEL #
BT-1	WWHP-1	18 GAL	46"/14 ¼"	BOILER BUDDY BB-18

NOTES:
- MAX PRESSURE: 75 PSI



HYDRONIC PIPING SCHEMATIC
N.T.S.

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M4.0

SECTION 15010
BASIC MECHANICAL AND PLUMBING REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY OF WORK:
A. Work Included: The work under this division of the specifications consists of furnishing all labor, equipment and materials necessary for and reasonably incidental to the complete installation of the Mechanical Systems as herein described and indicated on the drawings, including such minor details not specifically mentioned or shown as may be necessary to complete the system ready for successful operation, and subject to the terms and conditions of the contract. All work under this section shall be done in accordance with the best modern practice using first grade equipment and material new and previously unused.

B. Work Not Included (Specified elsewhere): Certain labor and materials may be furnished and/or installed under other divisions of these specifications. Coordinate with other trades and arrange the work to make the parts fit together.

C. Existing Utilities:
1. Prior to the start of excavation, utility companies shall be contacted and advised of proposed work where sewer, telephone, water, fuel, electric lines, etc. may be encountered; and be advised of where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined and when it is uncovered, proper supports shall be provided for the existing installation.

2. If active utilities are encountered that are not indicated on the drawings, ask for instructions from the Architect. Any relocation or remodeling required will then be directed by the Architect.

3. Assume all responsibility for protection of all utilities, shown or not, and repair any damage caused by this construction at no extra charge to the Owner.

4. Investigate with proper authorities for all existing water taps, etc. and make arrangements to pay for all removal charges in original bid.

D. Definitions:
1. Provide: Contractor shall furnish and install item or items specified. Contractor shall perform all labor and furnish all materials and equipment necessary so that specified item or system will be complete and operational.

2. Furnish: Contractor shall deliver to the site item(s) specified, as well as additional specialized materials and/or accessories necessary for the use and operation of item or items specified.

3. Install: Contractor shall set in place, connect and adjust for use. Contractor shall furnish miscellaneous specialty items such as hangers, valves, unions, piping, sheet metal, etc. as necessary for a complete and operating installation.

4. Exposed: Accessible in mechanical rooms, unfinished areas, above T-grid ceilings, accessible tunnels, etc.

5. Concealed: In such spaces as chases, trenches, above drywall ceilings, in walls and buried where materials are inaccessible when building is completed

1.02 COORDINATION:
A. General: Coordinate and order the progress of mechanical work to conform to the schedule and the progress of the work of the other trades.

B. Drawings and Specifications:
1. Contract drawings for mechanical and plumbing work are in part diagrammatic, intended to convey the scope of work and indicate general arrangement of equipment, ducts, piping, approximate sizes and location of equipment and outlets. Drawings do not necessarily indicate every required offset, fitting, etc. Take all dimensions from the structure itself before fabricating any work. Verify all space requirements, coordinating with other trades and install the systems in the space provided.

2. The drawings are not intended to be scaled for roughing in measurements nor to serve as shop drawings.

3. Should there be a conflict within the Specifications or within Drawings of the same scale, the more stringent or higher quality requirements shall apply.

4. In the Drawings, the precedence shall be drawings of larger scale over those of smaller scale.

5. Should a conflict arise between the Drawings and the Specifications for products indicated on the Drawings, the Specifications shall have precedence.

6. Should there be a conflict in dimensions or locations between Mechanical Drawings and Architectural Drawings, the Architectural Drawings shall have precedence.

1.03 QUALITY ASSURANCE:
A. Workmanship: Perform work in accordance with good trade practice. The good appearance of the finished work shall be of equal importance with its mechanical efficiency. The Architect and/or Engineer may reject work if workmanship and appearance are not satisfactory.

B. Supervision: Be responsible for and coordinate the work of all subcontractors working under Division 15.

C. Installation Procedures:
1. Confer and cooperate with other trades and coordinate the work in proper relation with theirs.

2. Install all work to permit removal (without damage to other parts) of coils, furnaces, boilers, fan shafts and wheels, filters, and all other parts which might require periodic replacement or maintenance. Arrange pipes, ducts and equipment to permit ready access to valves, traps, motors and control components.

3. Offsets, transitions and changes in direction in pipes and ducts shall be made as required. Maintain proper headroom and pitch of sloping pipes whether or not indicated on the drawings. Furnish and install all ductwork fittings, traps, air vents, sanitary vents, etc. as required to affect these offsets, transitions and changes in direction.

4. Under floor spaces and attic spaces containing equipment requiring access for service shall be provided with an unobstructed passageway large enough to remove the equipment, but not less than 30 inches high and 22 inches wide. The passage way shall not be longer than 20 feet in length when measured along the centerline of the passageway from the opening to the equipment.

5. Install equipment and materials in accordance with manufacturers' recommendations unless specifically indicated otherwise, or where local codes or regulations take precedence. Contact engineer of record for clarification if there is a discrepancy between plans, specifications, local regulations, and or manufacturers' recommendations.

6. Conceal all piping in finished areas of the building.

D. Protection: Close ends of pipe and ductwork during construction with caps or plugs to prevent entry of foreign material. Protect insulation against damage before, during and after installation. Protect fixtures and equipment against damage during mechanical work.

1.04 REGULATORY AND CODE REQUIREMENTS:
A. Obtain all permits and licenses required for work performed under Division 15 and pay for all fees and inspections in connection with same.

B. All work shall be executed in accordance with the local, state and other attending rules and regulations applicable to the trade affected and be subject to the inspection of these departments.

C. Where work required by the Drawings and Specifications is above the standard required by local regulations, it shall be done as shown and/or specified.

1.05 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS:
A. Use of the permanent heating system will not be allowed without approval from the Owner/Architect/Engineer. In case where the permanent heating system is approved for use as temporary heat, the General Contractor shall pay all costs until acceptance by the Owner.

B. If the permanent heating system is authorized for use, the building must be totally enclosed with final building materials in place without temporary barriers. All dust producing finish work must be complete and the source of heat supply is permanently installed. System must be sufficiently complete, including controls, to permit its safe operation as acceptable to the Mechanical Contractor. Mechanical Contractor is solely responsible for the safe operation of the system.

C. When any air handling equipment is used for temporary heat, install and maintain temporary filters. Before building acceptance by Owner, install new filters. Clean furnace and duct liner, if necessary, as determined by the Engineer/ Architect.

D. Systems used for temporary heat are the Contractor's responsibility to maintain and should be put into first class working order before acceptance by the Owner.

E. Equipment warranties that start with the use of equipment for temporary heat shall be extended by the Contractor so that the Owner will have the full one year warranty from the date of acceptance of the building.

1.06 DELIVERY, STORAGE AND HANDLING:
Provide for proper storage of all materials and equipment and assume responsibility for losses due to any cause. Cover and store all equipment and materials out of the elements and off of the ground; any rusted or weather damaged item will not be permitted to be used.

1.07 PRODUCT OPTIONS AND SUBSTITUTIONS:
A. Prior to Bidding:
1. Materials or products specified by name or manufacturer, brand or trade name shall be furnished under the Contract unless changed by an Addendum or a contract modification. Where two or more materials are named, the choice of these shall be optional with the Contractor.

2. Action for substitutions specified herein will be given only after the receipt of complete data showing performance, physical dimensions and material construction. One copy of all descriptive data shall be submitted to the Mechanical Engineer's office.

3. Material and equipment specified is used as a basis of standard, and while not specifically mentioned, material gauges, weights, appearance and space requirements must be met by any substitutions.

1.08 CLEANING:
A. Clear away all debris, surplus materials, etc. resulting from Mechanical Contractor's work or operations, leaving the job and equipment in a clean condition. This includes attic and crawlspace.

B. All surfaces of all coils, fans, air units, air filters, etc. shall be wiped clean or washed if required. All plumbing fixtures shall be thoroughly cleaned of all foreign matter including stickers. Clean all items furnished such as floor drains, pumps, motors, traps, etc. leaving the entire installation in a first-class condition.

1.09 PROJECT RECORD DRAWING:
A. File at the job site one copy of Drawings, Specifications, Addenda, change orders, field orders, testing and balancing report, and other modifications to Contract Documents.

B. Do not use Project Record Documents for construction purposes.

C. Legibly mark with red pencil or on PDF field changes, referenced to permanent and accessible features of the site or building as applicable. Do not conceal any work until required information is recorded.

1.10 OPERATION AND MAINTENANCE DATA:
A. Prepare 1 typed and hard bound copy of Operating and Maintenance Manual or Portable Document Format (PDF) to Architect for approval prior to scheduling any system demonstration for the Owner. Book shall be arranged in sequence to match the equipment schedules included in the specifications.

B. The documents shall contain, but not be limited to, the following general items; each item shall be provided with a separate index tab:
1. Product data on each piece of equipment installed identified by drawing code numbers as they appear on the drawing and in the specifications. Data shall include the following: installation instruction sheets, spare parts lists, operating manuals and complete wiring diagrams.

2. All warranties provided by the manufacturer on their equipment that run longer than the one year warranty by the Contractor.

1.11 FINAL OBSERVATION:
A. When the Contractor notifies the Architect that the project is ready for a final observation, the Architect will visit the job site and will prepare a final punch list of all the items on the project that shall be finished or corrected before the project can be accepted.

B. When the Contractor notifies the Architect that all items on the above punch list have been completed and corrected, the Architect will visit the project to ascertain that all the items on the punch list have been corrected and can be accepted.

1.12 WARRANTIES:
A. All materials and equipment shall be new unless otherwise specified.

B. Provide warranty to the Owner covering the entire mechanical work to be free from defective materials, equipment and workmanship for a period of one year after Date of Acceptance. During this period, provide labor and materials as required to repair or replace defects at no additional cost to the Owner. Provide certificates in O & M Manuals for such materials or equipment which have warranties in excess of one year.

C. This warranty will be superseded by warranty modifications resulting from use of equipment for construction heat or ventilation.

1.13 OPERATING INSTRUCTIONS:
A. The Mechanical Contractor shall provide personnel for initial startup and operation of the mechanical equipment and for a trial run of the equipment to demonstrate that the equipment and associated systems are properly installed and operating as intended.

B. The Mechanical Contractor shall instruct the Owner in the proper startup, operation, observation and maintenance of all mechanical equipment installed under this contract.

1.14 BALANCING
A. At the completion of the installation, the forced air system and hydronic system shall be adjusted, balanced, and documented by a 3rd party NEBB accredited testing and balancing contractor. Provide report to engineer. All air balancing shall be done at dampers in branch ducts and spin fittings first, then at the supply registers. Provide air quantities as shown on the drawings.

B. Air and water testing and balancing shall not begin until the system has been completed and is in full working order.

C. Adjust all air and water systems within +5% to -5% of design flow rates.

D. Mark final settings of volume dampers with permanent marking when balancing is complete.

PART 2 - PRODUCTS
Not Applicable

PART 3 - EXECUTION
Not Applicable

END OF SECTION 15010

SECTION 15050
BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.01 WORK INCLUDED:
Pipe Supports
Valves
Pipe Installation

PART 2 - PRODUCTS

2.01 EQUIPMENT MANUFACTURERS:
Equipment such as motors, pumps, gauges, valves, etc. shall be of one manufacturer or available through one manufacturer to facilitate ease of maintenance for the Owner.

2.2. ACCESS DOORS:
Furnish access doors at locations where required for access to concealed valves, dampers, cleanouts, control devices and equipment.

2.03 PIPE SUPPORTS AND HANGERS:
A. General: Use adjustable pipe hangers on suspended pipe. Provide hangers to support the systems without sagging, including hangers at each offset or change in direction, at ends of branches over five feet in length and at the following maximum spacing:

B. PIPE SUPPORT SPACING: See Schedule on Drawings.

C. Individual Hangers:
1. Individual hangers for copper piping, 1-1/4" and larger shall be copper plated or plastic coated steel.

2. Individual hangers for steel piping 1-1/4" and larger shall be zinc plated, adjustable swivel ring hangers.

3. Individual hangers for piping up to 1" shall be same as above or may be Sioux Strap plastic tube hangers or approved equivalent.

D. Trapeze Hangers:
1. Parallel runs of piping may be supported on trapeze hangers. Hangers shall be spaced for smallest pipe in group.

2. All steel pipe shall have standard pipe straps at each support.

3. All copper pipe shall rest on neoprene sleeves and have standard pipe straps at each support.

E. Vertical Supports:
Provide friction riser clamps, supported and braced. Clamps for copper piping shall be plastic coated steel. Support cast iron soil pipe at not less than every story height and at its base. Support copper tubing at six foot on center.

2.04 VALVES:
A. Pressure Ratings: Unless otherwise indicated, use valves suitable for minimum 125 psig at 450 deg. F and 200 psig at 250 deg. F.

B. Valve Connections: Provide valves suitable to connect to adjoining piping as specified for pipe joints. Solder or screw to solder adapters for copper tubing.

PART 3 - EXECUTION

3.01 PREPARATION:
Base final installation of materials and equipment on job site dimensions and conditions. Job site dimensions shall take precedence over Drawing dimensions. Field measure critical dimensions and do not fabricate or cut materials to length until such measurements are made. Be responsible for accurate location of rough-ins as required for equipment being serviced.

3.02 EXCAVATION AND BACKFILL:
A. The Contractor shall do all trench and pit excavations and backfilling required for work under this section of the specifications, inside and outside the building including repairing of finished surfaces, all required shoring, bracing, pumping and all protection for safety of persons and property. Local or state safety codes shall be strictly observed.

B. Extreme caution shall be exercised to prevent damage to installation; when soft materials such as copper tubing are being buried.

3.03 VIBRATION ISOLATION:
Provide vibration isolation for each air handling unit by Mason Industries or equivalent neoprene vibration isolators.

3.04 CUTTING AND PATCHING:
Be responsible for the cost of cutting and patching for work under Division 15.

3.05 PIPE AND DUCTWORK PENETRATIONS:
A. Where horizontal ducts and pipe pass through walls, and vertical ducts and pipes pass through floors or roofs, seal off void between opening and duct or pipe and sleeve. All penetrations of exterior wall below grade shall be sealed watertight. All penetrations of exterior walls above grade shall be sealed weather tight.

B. Wherever any pipe or other material penetrates through fire-resistant wall, ceiling or floor, completely seal voids in construction with cement grout, plaster or other fire resistant material as approved by authority having jurisdiction. Embed sealing material full thickness of material being penetrated. Sealants to be installed in accordance with manufacturer's instructions and shall have been tested and classified by Underwriters Laboratories.

3.06 FLASHINGS:
All flashings will be done under roofing division except as noted or detailed elsewhere in these specifications.

3.07 PIPE INSTALLATION:
A. Install piping without springing or forcing, and to clear windows, doors and other openings. Cutting or other weakening of the building structure to facilitate piping installation is not permitted. Install vertical risers plumb and straight, horizontal lines parallel with walls and partitions. Conceal piping above ceilings and within furring and walls unless otherwise indicated.

B. Route piping in general locations indicated in an orderly manner and to maintain required grades. Coordinate with other piping, ducts and equipment making necessary offsets to accommodate the same. Install piping to conserve headroom and interfere as little as possible with use of available space. Group piping wherever possible at common elevations. Install concealed pipes close to the building structure to keep furring to a minimum.

3.08 INSTALLATION OF PIPE HANGERS:
Adequately support piping from the building structure with adjustable hangers to maintain uniform grading where required and to prevent sagging and pocketing. Provide supports between piping and building structure where necessary to prevent swaying.

3.09 VALVES:
A. Install valves with stems upright or horizontal, not inverted.

B. Provide drain valves at main shut off valves, low points of piping and equipment.

3.10 ACCESS DOORS:
Furnish access doors in all non-removable ceilings and in partitions and walls where necessary to maintain access to plumbing cleanouts, fire dampers, manual dampers, valves and other mechanical devices requiring access. Size these as required to provide adequate access for service or replacement of components.

3.11 PIPE TESTING:
A. Test piping systems prior to concealment. Ensure that the test pressure which might damage fixtures or equipment does not reach such units by valving them off or otherwise isolating them during the test. All tests must be done to the satisfaction of the local authorities having jurisdiction before coverings. Furnish all instruments required for testing. All hydrostatic tests to be held for a minimum of six hours without loss of pressure. Air Tests to be held for a minimum of two hours without loss of pressure. Contractor shall be responsible for furnishing all plugs, piping, valves, hoses and pumps necessary for the required tests and for proper disposal of the water upon completion of the tests.

B. Test all drain, waste and roof drain lines with standing water test of twelve feet of head.

C. Test all heating water and domestic water piping before connecting to units at 100 psig air pressure.

D. Test all radiant floor tubing under 100 psig hydrostatic pressure for a minimum of six hours and long enough to visually inspect each joints.

E. Test all refrigeration piping under 150 psig pressure using oil pumped, dry nitrogen and tapping of joints.

F. Insure that all piping is protected from freezing conditions where hydrostatic tests are required. Coordinate with the Engineer if hydrostatic tests cannot be conducted.

3.12 FLUSHING, CLEANING AND STERILIZING:
A. Before final connections are made in the piping systems, all piping except as individually noted below, shall be blown out with air and then completely washed out with cleaning compounds compatible with final fluid to avoid contamination. The systems shall then be flushed for the complete removal of all foreign materials. Furnish all temporary connections, valves, etc. required for this purpose.

B. After flushing, sterilize the domestic water system with approved chlorinating agent to provide a dosage of not less than 50 ppm. After minimum contact period of eight hours, flush the system with clean water.

END OF SECTION 15050

SECTION 15250
PIPE AND DUCT INSULATION

PART 1 GENERAL

1.01 WORK INCLUDED
A. This section of the Specification contains items applicable only to pipe and duct insulation work. All insulation work shall be performed in strict accordance with applicable codes and ordinances.

B. The work covered by this specification consists of furnishing all labor, equipment, materials and accessories, and of performing all operations necessary for the installation of this insulation for the plumbing and heating piping and ductwork. All insulation shall be installed in a workmanlike manner by skilled workmen regularly engaged in this type of work.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS AND PRODUCTS:
Owens Corning, Manville, Armstrong, Keene and Knauf insulation will be considered equivalent.
OR
Imcoa or approved equivalent for piping.

PART 3 EXECUTION

3.01 GENERAL INSTALLATION REQUIREMENTS:
A. Do Not apply insulation before testing and cleaning of surfaces to be covered is completed.

B. Apply insulation tightly over clean dry surfaces with sections or edges firmly butted together.

C. Ductwork insulation shall meet the requirements of NFPA 90A I a test edition.

3.02 PIPING AND EQUIPMENT

A. Domestic Hot and Cold Water Piping: Insulate all domestic hot and cold water supply lines and circulating water lines throughout the building with 1" thick (or R-3) closed cell polyolefin foam insulation such as Imcoa Imcolock or equivalent. Insulation shall have upper temperature limit of at least 210 deg. F, flame spread by E84 of 25, and smoke density by E84 of 50. Thermal conductivity "K" shall be at least 0.25 at 75 deg. F. Seal off ends of pipe insulation at all valves, fittings, etc.

B. Heating Water Piping: Insulate all hot water supply and return lines throughout the building with 1" thick (or R-3) closed cell polyolefin foam insulation such as Imcoa Imcolock or equivalent. Insulation shall have upper temperature limit of at least 210 deg. F, flame spread by E84 of 25, and smoke density by E84 of 50. Thermal conductivity "K" shall be 0.25 at 75 deg or less. F. Seal off ends of pipe insulation at all valves, fittings, etc.

C. Refrigeration Piping: All insulation methods and procedures to be the same as for domestic cold water. Insulate only the suction line inside the building and any buried piping.

D. Pipe Exposed to Weather: Insulate all pipe "outdoors" or exposed to weather that this specification requires to be insulated to the same thickness as called for using metal jacketed pipe insulation to provide a weather proof system. Metal jacket shall be .010 thick aluminum or stainless steel. Insulation shall be installed according to manufacturers recommendations.

3.03 DUCT INSULATION:
Insulate the outside of all ducts when called for in Section 15800 with 1-1/2" thick one lb./cubic foot, UL rated, glass fiber insulation with Foil-Scrim-Kraft facing. Apply to provide a continuous vapor barrier. Seal all joints with 3" wide pressure sensitive aluminum foil tape. All cuts and tears shall be sealed with strips of aluminum foil tape. Minumim R-6.

END OF SECTION 15250

SECTION 15300
AUTOMATIC FIRE SPRINKLER SYSTEM

PART 1 GENERAL

1.01 REQUIREMENTS:
The requirements of the "General Conditions" and the "Supplementary Conditions" of these specifications shall form a part of these specifications.

1.02 QUALITY ASSURANCE
A. Manufacturer: Firms engaged in the manufacture of fire protection equipment of the types and sizes required to complete the project.

B. Installer: The Contractor for the system shall be duly licensed by the State of Wyoming and Jurisdiction in which the project is being constructed. The Contractor must be engaged in the installation of automatic fire protection systems and be fully familiar with all local conditions, codes, and requirements.

C. Contractor: The Contractor for the system shall be a Certified Engineering Technician in Fire Protection (NICET III or IV). The Certification shall be active during the entire contract period. The Contractor shall be responsible for overseeing the preparation of the design drawings, hydraulic calculations, and system installation.

D. Designer: The Designer shall certify that the drawings and installation are in accordance with the intent of the plans and specifications. The Designer shall make a complete and final inspection of the installation, including operating all alarms, control valves, checking all piping, seismic bracing, hangers, etc. After checking all components of the system, he shall provide a letter stating that the installation is complete, operational and in accordance with the approved plans and specifications. If changes have been made in the installation since the plans were approved, the Designer shall correct the shop drawings and provide as-built drawings to the Owner with the letter.

E. Authorities Having Jurisdiction: Submit plans, calculations, and material data sheets to the Teton County Fire Marshall and the Engineer for review and acceptance.

1.03 SCOPE OF WORK
A. The work covered by this section consists of furnishing all plant, labor, supervision, materials, equipment, supplies, and incidentals necessary and required to perform all operations, including responsibility for design of the sprinkler system to the extent described in these specifications for the Installation of the Automatic Fire Sprinkler System.

B. Install UL listed or FM approved fire stopping material in each pipe opening in the building masonry walls. The fire stopping material shall have a rating of one hour or more.

1.04 DEFINITIONS AND/OR APPLICABLE PUBLICATIONS
Unless noted otherwise, the latest applicable publication of each of the following currently in effect shall apply:
NFPA 13D, 1996

PART 2 MATERIALS AND EQUIPMENT

2.01 PIPING
Piping 3/4" through 1-1/2" shall be copper, Type K, ASTM B75 in exposed areas and CPVC (UL listed) ASTM F442, as allowed by its listing, in concealed spaces.

2.02 FITTINGS
Fittings shall be 175 lb. (Cold water)
1. Copper
a. Wrought copper and copper alloy ANSI B16.22

b. Cast copper alloy, solder joint, pressure fittings, ANSI B16.18

2. UL listed for fire sprinkler system installation, CPVC, Schedule 40, socket-type, ASTM F438 or Schedule 80, threaded, ASTM F437.

2.03 UNIONS (NOT NORMALLY USED)
Bronze in 2" or smaller only.

2.04 INDICATION CONTROL GATE VALVES
Control valves two inches and smaller shall be 175 lb., butterfly, UL approved, Crane 459, Jenkins No. 275U, Walworth No. 873, Milwaukee, Victaulic, or Owner approved equal, equipped with valve tamper switch.

2.05 SPRINKLER HEADS
The Sprinkler heads shall be closed, fusible link, spry-pattern type, upright, pendant, or horizontal discharge as required and approved for the proposed design. The sprinkler heads shall be placed to afford the best protection for the areas involved in accordance with NFPA 13D and shall be coordinated with the structural, mechanical, and electrical equipment. Fusible links shall be ordinary degree temperature (140 deg - 165 deg F). Furnish twelve extra sprinkler heads, mounted together with a head wrench, in a suitable sheet metal cabinet. Include spares of all temperature ratings installed in the system. Sprinkler heads shall be:
1. Central, Model GBR, upright or pendant (concealed) (200 deg F in attic spaces) and model GPR, horizontal recessed sidewall for wall installations.

2. Engineer approved equal.

2.06 ALARM CHECK VALVE
Central, check valve, gauges, main drain, etc.

2.07 WATERFLOW ALARM
The water flow detector shall be designed for wet pipe sprinkler systems, listed by UL and approved by Factory Mutual. Detector shall be pressure type for actuation of two SPDT switches rated for 125 Vac at water flows of 10 GPM or greater. Switch shall incorporate adjustable delay retard device which delays actuation of the switch caused by transient flow surges. Switch shall be a potter Model WFPS, or Engineer approved equal.

Note: Device is furnished and installed by fire sprinkler contractor and wired by fire alarm contractor.

2.08 SUPERVISORY DEVICES
The valve tamper switch shall be a SPDT electrical switch rated for 125 Vac for monitoring the position of control valves, UL listed, and FM approved. Switch shall be Potter Electric Signal, Model OSYSU-A or PIVSU-A, or Engineer approved equal.

Note: Device is furnished and installed by fire sprinkler contractor and wired by fire alarm contractor.

2.10 CONCRETE SPLASH BLOCKS
Concrete splash blocks shall be pre-fabricated, 2-1/2" thick, Amcor or Engineer approved equal.

2.11 DOUBLE CHECK VALVE ASSEMBLY
Double check valve assembly shall be provided as shown and in the location shown on the drawings. It shall be an Ames Model 2000 SS or Engineer approved equal.

PART 3 INSTALLATION

3.01 GENERAL
A. All work pertinent to the fire protection sprinkler system shall be done by a licensed, qualified, competent fire protection system Contractor with an established reputation in the industry and who can furnish a verified list of satisfactory installations of this type for a period of five years or more.

B. The pipe shall be sized and the system shall be installed in accordance with the requirements of the National Fire Protection Association (NFPA 13D) for wet pipe systems for Residential Occupancies and all other applicable codes.

C. The overhead sprinkler piping shall be installed as high as possible to maintain maximum overhead clearances. The contractor will be responsible for making any offsets required to maintain clearance satisfactory to the Engineer.

D. Guiding and supporting of piping shall take into consideration that the construction is in a seismic Zone 3.

3.02 CUTTING AND PATCHING
A. Cutting of structural members for the passage of sprinkler piping or for pipe hanger fastening shall not be permitted unless approved by Architect in advance.

B. Holes through interior walls, floor, and ceilings shall be large enough to accommodate pipe expansion.

3.03 EXPANSION AND CONTRACTION
Long runs of pipe shall be provided with suitable means to permit free movement.

3.04 PROTECTION OF MATERIALS AND EQUIPMENT
Pipe openings shall be closed with caps or plugs during installation. Components of the system shall be tightly covered and protected against dirt and chemical or mechanical injury.

JTEC
PO BOX 4594
JACKSON, WY 83001
307-699-1110

PROJECT INFO:
ROSCOE RESIDENCE
6165 BURCHER ROAD
WILSON, WY 83014

PROJECT NO.:	2227
DRAFTED BY:	IS
REVIEWED BY:	JGT
PLAN VERSION DATE	
PERMIT SET	3.9.23

M4.1

3.05 TESTS
All portions of the sprinkler system shall be tested in accordance with the NFPA 13, in the presence of the authorized Engineer's representative. The standard NFPA 13 forms for acceptance testing of a sprinkler system shall be completed and submitted to the Engineer for record.

3.06 SUBMITTALS
A. The contractor shall submit the following items of information to the Engineer for approval and/or record file in accordance with "General Conditions".
1. Design: The contractor shall submit design information as described in NFPA 13 for approval by the Engineer. Review and acceptance by the Engineer of the design shall not relieve the Contractor of responsibility to meet the design requirements or for the proper operation of the system.

2. Shop Drawings and Hydraulic Data Sheets: Shop Drawings shall show the sprinkler system in complete detail, and shall be accompanied by erection or installation diagrams, and other applicable information, as outlined in NFPA 13, Sections 1-9 and 7-3.3, necessary for the Engineer to evaluate the Contractor's submittal. The Contractor shall be responsible for all errors in fabrication and for the correct fitting and installation or erection in the field. Data sheets: Furnish complete hydraulic design data sheets in a similar format to that shown in NFPA 13, Fig. A7-3.3 and A7-4.3.

3. Operating and Maintenance Manuals, Spare Parts List, and Special Tools:
a. The Contractor shall furnish, for each item of installed equipment, four copies of brochures consisting of operating and maintenance instruction, recommended spare parts list for a period of one year, and a list of any special tools required to maintain the equipment.

b. Where special tools are required, the Contractor shall furnish two such tools to the Owner as required at no additional contract cost.

c. A copy of NFPA 25-1995 and the shop drawings are required to be attached to the sprinkler riser.

4. Certified Test Results: The Contractor shall submit certified test results in accordance with this specification.

END OF SECTION 15300

SECTION 15400
PLUMBING

PART 1 GENERAL

1.01 WORK INCLUDED:
A. Furnish, install and test all equipment, piping and piping specialties as specified in this Section and/or as indicated on the drawings pertaining to this Division.

B. The work covered in this Section shall include, but not be limited to, furnishing and installing the following materials and equipment:

Sanitary Sewer System
Water Distribution System
Plumbing Fixtures, Rough-in, Setting and Connection
Floor Drains, Hydrants, Etc.

PART 2 PRODUCTS

2.01 WATER PIPING MATERIALS:
A. Piping Outside Building: All pipe outside the building shall be Type "K", soft drawn copper using silver solder (15% silver composition and Bc-5 classification), ASTM B260-62T. An acceptable alternate is polyethylene service pipe conforming to the requirements of AWWA Specification C-901, "Polyethylene (PE) Pressure Pipe, Tubing and Fittings, 1/2 inch through 3 inch for water." Tubing shall be class 200 with SDR of 7.3.

B. Piping Inside Building: All domestic cold water and hot water piping within the building above grade shall be Type "L" hard drawn copper pipe with wrought copper fittings with 95-5 (tin/antimony) or Canfield 100% Watersafe solder. An acceptable alternate is non-barrier cross linked polyethylene. Tubing and fittings shall meet ASTM F876 and ASTM F877. All domestic cold water and hot water piping buried below slab on grade shall be Type "K" copper with no joints and be wrapped with foamed plastic insulation.

C. Valves and Specialty Schedule:
1. Gate Valves: Bronze, Class 125, 200 psi W.O.G. screwed or solder.

2. Ball Valves: Bronze, Class 125, chromium plated, brass ball with reinforced teflon seats and adjustable stem packing and stainless steel handle.

3. Check Valves: Bronze, Class 125, 200 psi W.O.G. screwed or solder, horizontal swing renewable disc.

4. Pressure Gauges: Dial gauges shall be 4-1/2" dial size with gauge line valves and pigtail. Danton 101 or approved equivalent.

5. Thermometers: Adjustable angle industrial thermometer with brass case, red-reading mercury and separable socket. Thermometers shall be graduated from plus 20 deg. F to 200 deg. F. U.S. Gauge MN-9 or approved equivalent.

6. Dielectric Unions and Flanges: Unions rated for 250 psi with galvanized or plated steel threaded end, copper solder end and impervious isolation gasket approved for use on gas, oil, air and water lines. Flanges to be complete with insulated bolt sheaves, washers and gaskets.

7. Strainers: 250 lb. bronze or cast iron "Y" type screwed with stainless steel screen.

8. Governor: Shall comply with ANSI Z21.80/ CSA 6.22 and suitable for use with natural gas and LPG.

2.02 SOIL WASTE AND VENT MATERIALS INSIDE BUILDING:
A. Schedule 40 ABS DWV plastic pipe and fittings (ASTM D2661) or Schedule 40 PVC DWV plastic pipe and fittings (ASTM D2665). All pipe and fittings shall bear NFS-DWV mark and shall be joined with solvent weld joints as recommended by the manufacturer.

B. Service weight hubless cast iron with gasket and clamp fittings.

C. Cleanouts: Bronze plug cleanout with nickel bronze frame in floors. Provide carpet cleanout marker in areas with carpet. Wall cleanouts shall have stainless steel cover in finished areas. Josam or approved equivalent.

2.03 BUILDING SANITARY MATERIALS OUTSIDE THE BUILDING:
PVC gravity sewer pipe complying with ASTM D-3034.

2.04 FIXTURES AND EQUIPMENT:
See Schedule On Architectural Drawings.

PART 3 EXECUTION

3.01 WATER PIPING:
A. Water Service:
1. Provide new water service as indicated on the plans. Provide shutoff valves and valve box where shown.

2. Provide piping outside the building with not less than seven feet of cover from finished grade. Surround pipe with 4" of clean sand. Provide 2" thick by 2' wide insulating blue board over full length of water service outside of building.

B. Inside Building:
1. All piping shall be pitched 1" in 40 feet insofar as possible and shall be provided with drains at all low points for complete drain down. Drains shall be located in accessible locations. Run piping as direct as possible to required connections.

2. Provide plastic pipe isolators at framing penetrations in walls and floors.

C. Valves and Fittings:
1. Gate valves, plug valves or ball valves may be used for shut-off service. Valves utilizing lever handles shall be installed to allow complete open to close valve operation without interference of structure, insulation, etc.

2. Ball valves shall be used for balancing service.

3. Install unions at all equipment connections when union trim is not furnished as a standard part of the equipment trim or where items cannot be removed from line without unions.

4. Isolate connections between ferrous piping and nonferrous piping with dielectric unions or fittings.

5. Provide unions at connections to fixtures and equipment including valves when union trim is not furnished as a standard part of the equipment trim or where items cannot be removed from line without unions.

6. Dielectric unions shall be used at all connections of ferrous material to non-ferrous material.

7. Couplings can be used wherever unions are not required.

8. Pressure gauges and thermometers are to be used wherever shown on drawings and shall be located in an accessible position.

3.02 SOIL, WASTE & VENT PIPING INSIDE BUILDING:
A. Slope: Main lines within the building: provide a uniform fall of not less than 1" in 8 feet. Branches: provide a uniform fall of not less than 1" in 4 feet for 3" and smaller and 1" in 8 feet for sizes 4" and larger.

B. Fixtures: Vent in accordance with sound plumbing practice and applicable codes. Do not install vents within two feet of roof edge. Coordinate exact location with Architect.

C. Cleanouts: Provide cleanouts in sanitary and storm systems where required by code or as indicated at all bends, angles and not over 50 feet apart for 4" and smaller piping and not over100 feet apart for larger piping. Cleanouts to have chrome plated cover plates for walls, scoriated brass cover for floor.

D. All horizontal and vertical waste mains and storm drain mains from upper floors to lower level slab or crawlspace shall be hubless cast iron. Horizontal mains shall include all piping serving more than one plumbing fixture, all toilets and all storm drain lines.

3.03 BUILDING SANITARY SEWER PIPING OUTSIDE BUILDING:
A. Cleanouts: Provide cleanouts at 100 foot intervals.

B. Flushing and Cleaning: Flush and clean sewer lines and remove debris before final connection into the existing sewer or septic system is made.

3.04 FIXTURES AND EQUIPMENT:
A. Fixtures:
1. Install all fixtures and/or rough in according to the fixture schedule. Some plumbing fixtures may require larger pipe sizes than shown on the fixture connection schedule on the drawings. Coordinate with the fixture manufacturer.

2. All fixtures shall be secured to walls and floor or counter tops in accordance with manufacturer's roughing in and setting requirements to form a rigid installation.

3. All pipe at the fixtures which may be exposed to view shall be brass chrome finish, finished with chrome escutcheons where they project from walls and floors.

4. Stop valves shall be furnished and installed at all fixtures, for all equipment and at rough in locations.

5. Integral vacuum breakers shall be provided at all outlets with hose connections.

6. Install water, waste and vent lines to refrigerator and ice machines as required by the manufacturer.

B. Water Heater: Make connections between water heater and domestic water piping system with dielectric unions when dissimilar materials are jointed. Furnish and install copper drain piping from temperature and pressure relief valve for water heater. Drain piping to be same size as relief valve outlet.

3.05 FLASHINGS:
A. Provide flashing as recommended by roofing manufacturer for each vent or stack and for each roof drain. Clamp flashing into roof drain.

B. Flash all drains (i.e. roof, floor, etc.) not installed in slab on grade with 36" square, 4 lb/sq.ft. sheet lead, or chlorinated polyethylene factory laminated to 15 lb. felt. Clamp flashing into drain.

3.06 ADJUSTING AND CLEANING:
A. Clean strainers, traps, aerators and valves of debris, sand and dirt.

B. At completion, thoroughly clean plumbing fixtures and equipment.

C. Adjust faucets, showers and toilets for proper flow after cleaning and flushing operations are accomplished.

D. Upon completion of water heater installation, verify satisfactory control operation under maximum demand operation as recommended by manufacturer. Adjust discharge water temperature.

E. Adjust balancing valves in domestic hot water recirculation lines to insure quick delivery of hot water to fixtures. Set memory stops.

3.07 PROTECTION:
Protect fixtures and related components from damage before, during and after installation to date of final acceptance or Owner move-in. Provide protective coverings or other protection as required.

END OF SECTION 15400

SECTION 15600
HEAT GENERATION, REFRIGERATION AND LIQUID HEAT TRANSFER

PART 1 GENERAL

1.01 WORK INCLUDED:
A. Furnish, install and test all equipment and piping as specified in this Section and/or as indicated on the drawings pertaining to this Division.

B. The work covered in this Section shall include, but not be limited to, furnishing and installing the following materials and equipment:

Radiant Floor System
Fan Coils
Pumps, Piping, Valves, Etc.

PART 2 PRODUCTS

2.01 PIPING MATERIALS:
A. Low Temperature (250 F and less): Copper piping shall be used as outlined below.
1. Hot water heating piping: Type "L" copper with wrought copper fittings and 95-5 (tin/antimony), 96-4 (tin/silver) or Canfield 100% Water safe (silver-tin-copper) solder. Where copper pipe is jointed to brass use silver solder (45% silver composition and BAg-1 classification), ASTM B260-62T.

2. Drain pan piping: Type "M" copper with wrought copper fittings and 95-5 (tin/antimony) solder on all lines not buried.

3. Refrigeration piping: ACR grade copper, cleaned, dehydrated and capped at the factory. Use wrought copper fittings and silver solder (45% silver composition and BAg-1 classification), ASTM B260-62T. Valves and specialties shall be standard brass or bronze valves for refrigeration service.

B. Valve and Specialty Schedule Copper, Low Pressure (124 psi and less) Low Temperature (249 F and less)
1. Gate Valves: Class 125, 200 lb. W.O.G. bronze, screwed or solder ends.

2. Ball Valves: Bronze, full port, chrome plated bronze ball with reinforced teflon seats and packing, 400 psi W.O.G. screwed or solder.

3. Check Valves: Class 125, 200 lb. W.O.G. bronze, screwed or solder ends.

4. Unions: Cast brass type.

5. Strainers: 250 lb. cast brass "Y" type, screwed with stainless steel screen.

6. Pressure Gauges: 42" dial, bronze bourdon tube. Pressure ranges as required. Brass lever handled cock and pigtail. U.S. Gauge figure 5801, Trerice 600, Danton 101 or equivalent.

7. Press.-Temp. Taps: Peterson Equipment Company #710, Sisco or Hydro-Temp BNO-500, 1/2" NPT, nordel core or equivalent.

8. Thermometers: Multi-angle with separable socket, red reading mercury. U.S. Gauge MN-9, Trerice B x 9, Duro 9 EZ, Weiss 9 US or equivalent.

9. Dielectric Unions: Unions rated for 250 psi with copper solder end and impervious isolation gasket.

10.Glycol: 30% propylene glycol based heat transfer fluid with corrosion inhibitors shall be used in the heating system. Dowfrost or approved equivalent. Use aluminum safe glycol approved by the boiler manufacturer on aluminum heat exchangers.

C. Radiant Floor System:
1. Furnish, design and install in accordance with the recommendations of Uponor, Stadler Radiant Heating System, Roth or Rahau.

2. Radiant floor tubing shall be nominal 1/2" inside diameter crossliked polyethylene (Uponor HE-PEX or approved equivalent). Tubing installed in warmboard shall be 1/2" pex-al-pex, Uponor mlc or warmboard approved. Tubing shall be rated at 180 F/100 psi and shall have an integrated oxygen diffusion barrier. Tubing shall carry a ten year warranty. If tubing is not the diameter noted above, contact engineer to verify pump size.

3. Manifolds shall be cast brass construction and shall have integral circuit balancing valves. Manifolds shall be provided with support brackets for wall mounting and pipe bending supports to allow tight bends from slab to manifold. Provide bronze angle valves to connect manifold to supply and return piping. Valves shall be suitable for isolation and balancing. Individual circuit control valves shall be provided on manifold circuit. Each manifold should be provided with end caps with air vents and hose adaptor.

D. Miscellaneous Items:
1. Backflow Preventor: All bronze construction with stainless steel internal parts. Built-in strainer. Reduced pressure principle, Watts Model 909 or approved equivalent.

2. Pressure Reducing Valve: 1/2" bronze body pressure reducing valve with integral strainer and built-in check valve. Maximum working pressure of 75 psi and operating temperature of 200 F. Amtrol Model 10F or approved equivalent.

3. Air Purger: Purger shall be same size as line in which purger is installed. Maximum working pressure of 90 psi. Spirovent or approved equivalent.

4. Air Vents: Float-type vent with built-in check valve for manual or automatic venting. Maximum water pressure 50 psi. Amtrol Model 700 or approved equivalent.

5. Differential Pressure Regulator: Brass valve body with thermoplastic and stainless steel parts. Diaphragm of EPDM. Maximum temperature 230 F, maximum working pressure 85 psi, regulating pressure range 0 to 17 psi. Used to eliminate excessive pump head pressure due to reduced zone demand. Honeywell Model D146M1032-3/4", D146M1040-1 1/4".

E. Equipment Schedule
See Schedules On Drawings

PART 3 EXECUTION

3.01 PIPEWORK:
A. Piping:
1. Grade and valve all water piping systems with 3/4" hose and end valves to permit complete drainage of the system. All high points in equipment rooms shall be vented with automatic air vents piped to convenient drain. All high points in system outside of equipment rooms to be vented with combination automatic/manual air vents to relieve air in the system.

1. Pressure Testing: See Section 15050.

B. Valves and Specialties:
1. Ball valves may be used in lieu of gate valves on all water services for shut off service wherever the pressure and temperature ratings are satisfactory. Valves utilizing lever handles shall be installed to allow complete open to close valve operation.

2. Balancing shut-off, ball valves shall be used for balancing service on lines 2" and smaller. Balancing shut-off shall be used for balancing service on lines 2" and larger. Provide adjustable memory stops on all valves used for balancing service. Plug valve symbols are used on drawings.

3. Unions or flanges are to be used wherever necessary and in piping at all equipment so that piping may be conveniently broken and moved to facilitate equipment maintenance.

4. Dielectric unions are to be used at all connections where ferrous material is connected to non-ferrous material and where ferrous material is connected to domestic water piping. Couplings can be used wherever unions are not required.

5. Pressure Gauges, Thermometers and Press.-Temp. Taps are to be used wherever shown on drawings. Gauges and taps shall be installed in pipe immediately before and after equipment with no valve or fitting between gauge or tap and equipment. Taps shall be located in an accessible position.

3.02 RADIANT FLOOR SYSTEM:
A. Furnish, design and install in accordance with the recommendations of Uponor, Stadler Radiant Heating System, Roth or Rahau. Snowmelt tubing must be installed in a reverse return pattern.

B. Space "tails" evenly to provide even heat distribution.

C. Secure piping to subfloor at sufficient intervals to minimize movement prior to concrete pour by approved fasteners.

D. All tubing joints and fittings should be accessible and above the slab.

E. Protect tubing passing through doorways with metal plates in areas that will be carpeted.

F. Cover ends of tubing with caps or tape to keep out foreign materials during construction.

G. Protect piping from damage prior to and during final pour.

H. Maintain continuous 60 psi hydrostatic test during all concrete pours to detect ruptures.

I. The General Contractor shall do all framing required for manifolds. This Contractor is responsible for correct and timely layout for all framing required for this work. No structural members shall be cut.

J. All radiant floor zones shall be adjusted and balanced to meet the specified flows. Balancing shall be continued until the results are approved by the Architect.

K. The Contractor shall place all equipment in operation and shall operate it for sufficient time to demonstrate that it functions in accordance with the design requirements.

L. Tubing in wood floor applications shall be installed a minimum of 1" away from the wood sleepers.

END OF SECTION 15600

SECTION 15800
AIR DISTRIBUTION, HEATING VENTILATING AND AIR CONDITIONING

PART 1 GENERAL

1.01 WORK INCLUDED:
Provide all labor, material, equipment, accessories and tests necessary to completely execute all work which shall include, but not be limited to, the following:

Air Handling Unit
Exhaust Fans
Louvers
Air Filters
Registers, Grilles and Diffusers
Ductwork and Accessories

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT:
A. General:
1. Steel ductwork shall be constructed of galvanized sheet steel. Duct systems gauges shall be in accordance with SMACNA HVAC Duct Construction Standards Manual.

2. Aluminum duct shall be constructed of commercial designation 3003 temper h14, sheet aluminum.

3. Poly-vinyl coated ducts shall be the same as galvanized steel with a 4 mil thickness of PVC on the exterior surface and 1 mil thickness on the interior surface. All joints shall be taped with PVS tape. Apply PVS coating on all interior and exterior scratched surfaces after installation.

4. Fiberglass reinforced plastic ducts shall be ICBO approved and approved by the local authority for the application. Peabody Spunstrand or approved equivalent.

B. Duct Pressure Classes (SMACNA):
1. Supply systems: From the supply diffuser or register to the supply fan inlet, ductwork pressure class shall be not less than 1/2" total static pressure.

2. Return Air Ductwork: -1/2" w.g. pressure class.

3. Spiral Seam Ducts: Round and oval spiral seam ducts and fittings. United Sheet Metal Company, Sheet Metal Products Company, or Semco.

4. Low Velocity Flexible Ducts: Duct shall conform to requirements for Class 1 connectors tested in accordance with UL 181-1974 and NFPA 90A. Materials installed shall have maximum flame spread rating of 25 and maximum smoke developed rating of 50. Ducts shall have a galvanized spring steel wire helix bonded to a liner of continuous air-tight material. Insulation shall be 1" thick fiberglass, maximum "K" factor of 0.25, maximum vapor transmission rate of 0.20 perms. Duct must be approved by code authority for the specific application.

5. Spin-in Fittings: Factory fabricated conical galv. for insulated ducts. Integral butterfly damper with quadrant operator and lock nut on all applications .

6. Flexible Connections: Connectors shall be UL approved 32 oz. per yard, fire-retardant, neoprene coated fiberglass.

7. Turning Vanes: Formed double wall blades constructed of minimum 20-gauge galvanized steel. For metal ductwork other than steel, use same type of material as duct. Vanes on 3-1/4" centers.

8. Opposed Blade Dampers: Opposed blade type, steel or aluminum construction with worm drive operator. Screwdriver slotted shaft, factory assembled. External handle and quadrant type looking device on sizes above 36x12.

9. Volume Extractors: Steel or aluminum construction with vanes on 2" centers, gang operated. Manual operator attached to branch duct or in the case of sidewall registers operation through face of register.

10.Duct Liner: Liner shall be 1" thick, resin bonded glass fiber, black coating on air stream surface, rated by manufacturer for at least 4000 FPM. Fire resistance shall meet requirements of NFPA 90A. Minimum flame spread rating of 25. Fuel contribution and smoke development not to exceed 50. Noise reduction coefficient (NRC) of not less than .70 when tested in accordance with ASTM type E-25 mounting. K value not more than 0.26 Btuh per square foot per deg. F at 75 deg. F, maximum absolute roughness factor per foot of .004 ft.

11.Duct Wrap: Wrap shall be 1-1/2" or 2" thick. Fire resistance shall meet requirements of NFPA 90A. Minimum flame spread rating of 25. Fuel contribution and smoke development not to exceed 50, K value not more than 0.27 Btuh per square foot per deg. F at 75 deg. F.

12.Duct Sealant: Sealant shall be non-toxic, water based, solvent free, and compile with SCAQMD Rule 1168 for VOC limitations. Sealant shall be non-hardening, water resistant, mildew and mold resistant, liquid or mastic or with tape as recommended by manufacturer. Sealant shall have approved fire rating for plenum application as required by code authority.

Hardcast duct seal 321 or similar

13.Louver: 0.081" thick extruded aluminum, 4" blades set in aluminum frame. 1/2" aluminum mesh interior of louver. Color to be selected by Architect.

American Warming LE-49 or equivalent.

C. EQUIPMENT SCHEDULE:
See Schedules on Drawings.

PART 3 EXECUTION

3.01 DUCTWORK:
A. General: Duct sizes shown on the drawings are outside (sheet metal) duct dimensions. As a minimum, ductwork shall be furnished and installed in accordance with SMACNA HVAC Duct Construction Standards Manual, also comply with more rigid requirements specified herein.

B. Duct Sealing: All ducts shall be sealed by using duct sealant as recommended by manufacturer. This includes the sealing of all transverse joint and fitting connections and snaplock seams.

C. Ductwork Application:
1. All supply and return ductwork to be galvanized steel.

2. All dryer exhaust ducts to outside of building to be aluminum. Flexible ducts will not be allowed.

3. All round and oval ducts exposed to view shall be spiral seam. Concealed round and oval ducts may be fabricated with lock type longitudinal seams. All elbows to be pressed steel elbows or five piece welded elbows.

4. Panned supply and return ducts using floor joists or wall cavity space is NOT allowed unless reviewed with the engineer prior to installation.

D. Takeoffs: Do not install takeoffs on elbows or other points of the system where air velocity is not uniform.

E. Ductwork Hangers, Connections and Construction:
1. Suspend ducts from structure with proper hangers at intervals recommended by SMACNA.

2. Make all duct connections to motor driven equipment with flexible connections, unless specifically indicated otherwise.

3. Make all radius elbows with radius of 1-1/2 times the diameter or width of duct and an inside throat radius of one times the diameter or width. All 90 deg. square elbows are to have turning vanes, this includes supply and return ducts.

4. Install manual splitter dampers and/or opposed blade dampers in all low velocity duct divisions and splits where shown. Splitter dampers shall have push rod and external locking device.

5. All diffusers and registers to be equipped with opposed blade dampers. Where noted as grille on plans, opposed blade dampers not required. Damper to be adjustable thru face of diffuser or register.

6. Provide 45 deg. takeoffs at all rectangular duct takeoffs except as indicated on drawings.

7. Make all duct offsets with 15 deg. transitions. Sharper transitions can be made only when space does not allow 15 deg. offsets, 30 deg. offsets maximum.

F. Inside Duct Liner:
1. Rectangular ducts are insulated on the inside of the duct to provide an insulation barrier and to help attenuate fan noise. Duct mains with duct wrap are not an approved substitute. Insulate as described below.
a. Insulate all rectangular supply and return ducts unless otherwise noted on drawings.

b. The liner shall be applied to the inside of the duct, with the spray face to the air stream, with non-flammable, sprayable, duct liner adhesive completely coating the clean sheetmetal. The liner shall further be fastened with stud weld or glue on type pins and clips starting within 3" of upstream transverse edges of the liner and spaced at a maximum of 15" on center and 15" from longitudinal joints. The upstream transverse edges and clips shall be sealed with vapor barrier adhesive.

c. All joints in the liner shall be tightly butted AND SEALED WITH ADHESIVE.

d. Leading edges of insulation at fan discharge shall be provided with sheet metal edge cover.

G. Duct Wrap:
1. Round supply and return ducts, exhaust ducts and outside air ducts shall be insulated on the outside. See Section 15250, Insulation.

2. Insulate the outside of all exhaust fan ducts.

H. Flexible Ducts:
1. Attach all flexible ducts inner liner to duct connectors, diffusers necks or ductwork as recommended by the manufacturer. Tape outer vapor barrier securely over clamp with vapor barrier tape.

2. Maximum length of any section of flexible duct to be seven feet. Provide rigid round duct on takeoffs as required to maintain maximum length. All elbows shall be made with sheetmetal.

3. Flexible ducts may only be used where shown on the drawings. See details on drawings.

END OF SECTION 15800

SECTION 15900
TEMPERATURE CONTROLS

1.01 WORK INCLUDED:
A. The temperature control system, electric and electronic, shall be comprised of a complete system, furnished and installed by the Temperature Control Contractor.

B. The Temperature Control Contractor shall be responsible for all control work and for it's proper operation of all work performed in Section 15600 and 15800. It is the responsibility of this contractor to coordinate with these trades and be responsible for the proper operation of the system.

C. Either one of the sub-contractors in Division 15600 or 15800 may act as the Temperature Control Contractor. It is the responsibility of these contractors to coordinate their responsibilities prior to bidding the project.

D. The Temperature Control Contractor shall comply with the National Electric Code and meet all local code requirements.

E. Thermostats shall be mounted in locations where heat gain from refrigerators, lighting dimmers, etc will not effect their operation.

1.02 ACCEPTABLE EQUIPMENT:
A. This specification is based on Tekmar, Honeywell and Uponor equipment. Others must be approved by the Consulting Mechanical Engineer before bidding. It is recognized that packaged equipment comes with other names on controls and that some functions are accomplished with other named components. This specification does not intend to prohibit this practice.

B. The Temperature Control Contractor shall provide all control relays, transformers, etc. as necessary to provide complete working system.

C. Submit shop drawings of equipment, control panels and complete wiring diagrams to the Consulting Mechanical Engineer for review. A copy of the as-built drawings shall be included in the Owner's Manual.

1.03 SEQUENCE OF CONTROL:

A. Boilers: The electric boilers shall be controlled by its integral dual temperature boiler controller including outdoor temperature sensor and outdoor reset controls. Boilers and circulator pump shall be on anytime there is a demand for heat from the radiant floor or domestic hot water. Controls shall provide for different patterns of staging of the boilers. Anytime the boilers receive a signal to turn on; their respective pump shall stay on while the boilers cycle to maintain their setting. The system pump, radiant pump, and boiler shall be off when the outdoor air temperature is above the warm weather shutdown temperature setpoint and there is no call for domestic hot water. Provide all necessary relays and field controls.

B. Radiant Floor: The radiant floor thermostats shall control the circuits in their respective zones. On a call for heat, the zone valves shall open and the radiant pump shall turn on. The boiler shall modulate to regulate the supply water temperature as a function of the outdoor air temperature.

Room Thermostats: Tekmar 561
Maximum supply water temperature shall be 120 F

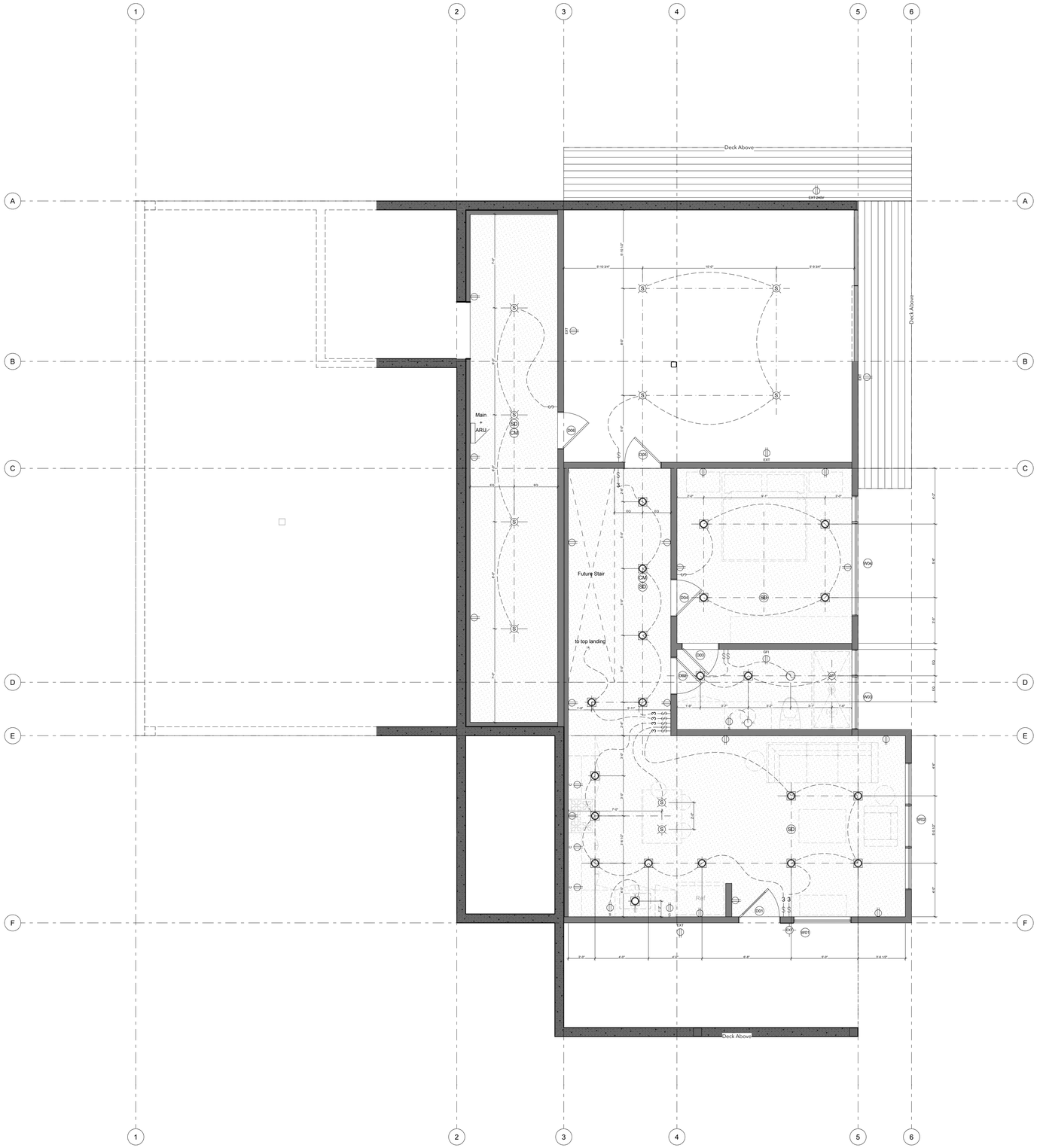
END OF SECTION 15900

JTEC
PO BOX 4594
JACKSON, WY 83001
307-699-1110

PROJECT INFO:
ROSCOE RESIDENCE
6165 BURCHER ROAD
WILSON, WY 83014

PROJECT NO.:	2227
DRAFTED BY:	IS
REVIEWED BY:	JGT
PLAN VERSION	DATE
PERMIT SET	3.9.23

M4.2



1 Lower Level - RCP
SCALE: 1/4" = 1'-0"

ELECTRICAL/MECHANICAL NOTES

01. All exterior wall sconces to be fully shielded exterior downlight sconce mounted with the top of fixture @ 8'-0" above walking surface in accordance with Teton County LDR Sec. 5.3.1. and Town of Jackson Standards.

02. Provide carbon monoxide detectors as shown on the plans and provide interconnectivity in accordance with IRC 2021 Sec. R315.

03. Provide smoke detectors as shown on the plans and provide interconnectivity in accordance with IRC 2021 Sec. R314.

04. Switching/lighting controls to be confirmed on site with Owner, Contractor and Architect.

05. Outlets @ 12" AFF, Switches @ 42" AFF, Vf w/ Owner.

ELECTRICAL LEGEND

- Fully Shielded Ext. Wall Mount Downlight Sconce
- Wall Mount Sconce
- Wall Mount Sconce : Activated on Door Switch
- Surface Mounted Fixture
- Surface Mounted Waterproof Fixture
- Recessed Can Fixture
- Under-Cabinet Strip Lighting
- Track Lighting
- Smoke Detector
- Carbon Monoxide Detector
- Exhaust Fan w/ Light
- Thermostat
- Standard Duplex Outlet
- Standard Duplex Outlet - Counter Height
- Standard Duplex Outlet w/ Switch - Counter Height
- Standard Quad Outlet
- 240 V Outlet
- Ground Fault Interrupt Duplex Outlet
- Exterior Rated Duplex Outlet
- Floor Outlet
- Single Pole Switch
- Three Pole Switch
- Four Pole Switch
- Ceiling Fan

N

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ARCHITECT STAMP

LICENSED ARCHITECT
JAMES J. FARMER
B-0262
3.9.23
STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE

6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW

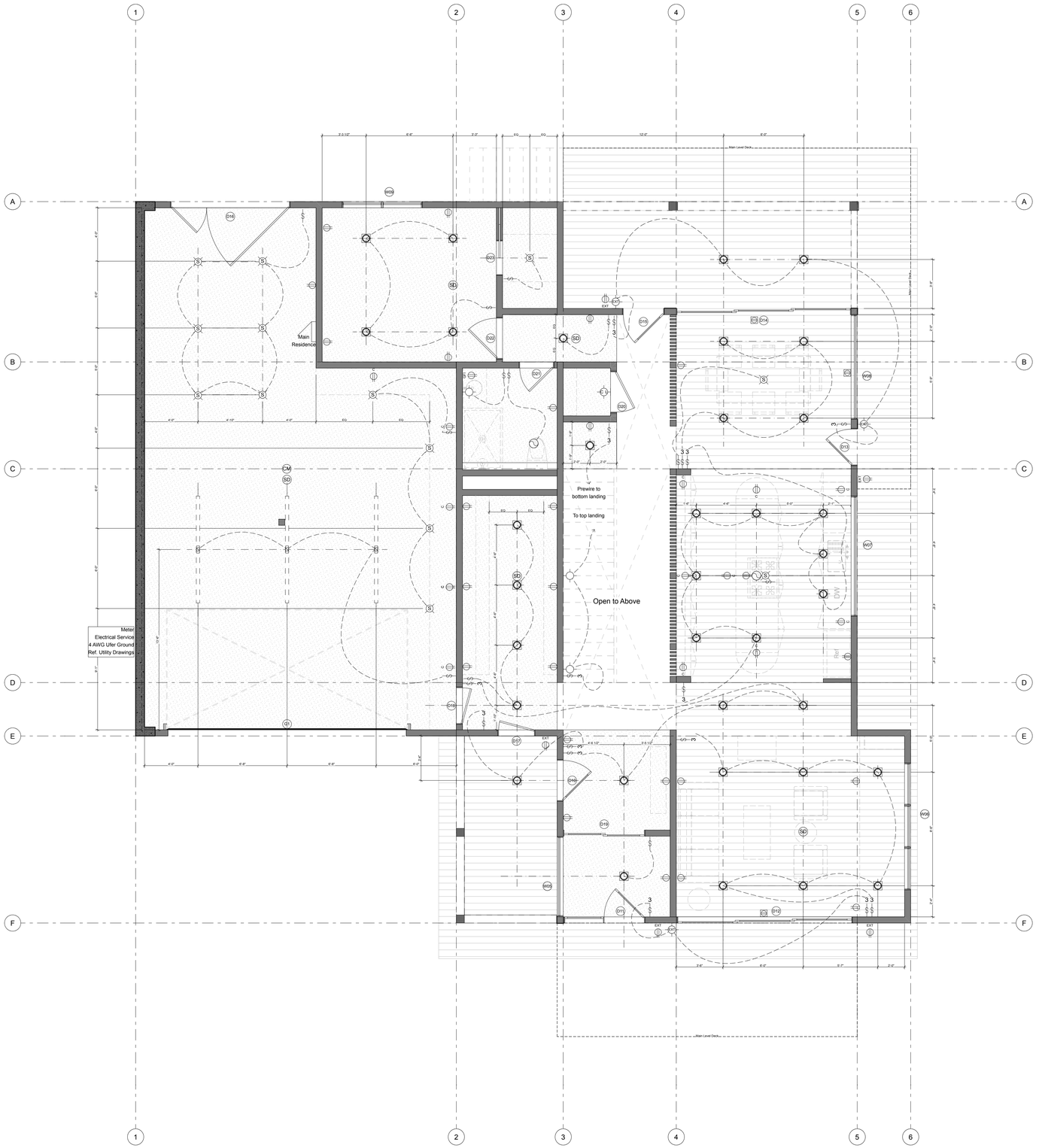
ISSUE:

Building Permit Set	3.9.23

E100

Lower Level - RCP

V5



1 Main Level - RCP
SCALE: 1/4" = 1'-0"

ELECTRICAL/MECHANICAL NOTES

01. All exterior wall sconces to be fully shielded exterior downlight sconce mounted with the top of fixture @ 8'-0" above walking surface in accordance with Teton County LDR Sec. 5.3.1. and Town of Jackson Standards.

02. Provide carbon monoxide detectors as shown on the plans and provide interconnectivity in accordance with IRC 2021 Sec. R315.

03. Provide smoke detectors as shown on the plans and provide interconnectivity in accordance with IRC 2021 Sec. R314.

04. Switching/lighting controls to be confirmed on site with Owner, Contractor and Architect.

05. Outlets @ 12" AFF, Switches @ 42" AFF, Vf w/ Owner.

ELECTRICAL LEGEND

- Fully Shielded Ext. Wall Mount Downlight Sconce
- Wall Mount Sconce
- Wall Mount Sconce : Activated on Door Switch
- Surface Mounted Fixture
- Surface Mounted Waterproof Fixture
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- Standard Duplex Outlet - Counter Height
- Standard Duplex Outlet w/ Switch - Counter Height
- Standard Quad Outlet
- 240 V Outlet
- Ground Fault Interrupt Duplex Outlet
- Exterior Rated Duplex Outlet
- Floor Outlet
- Single Pole Switch
- Three Pole Switch
- Four Pole Switch
- Ceiling Fan

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3.9.23
STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE
6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW

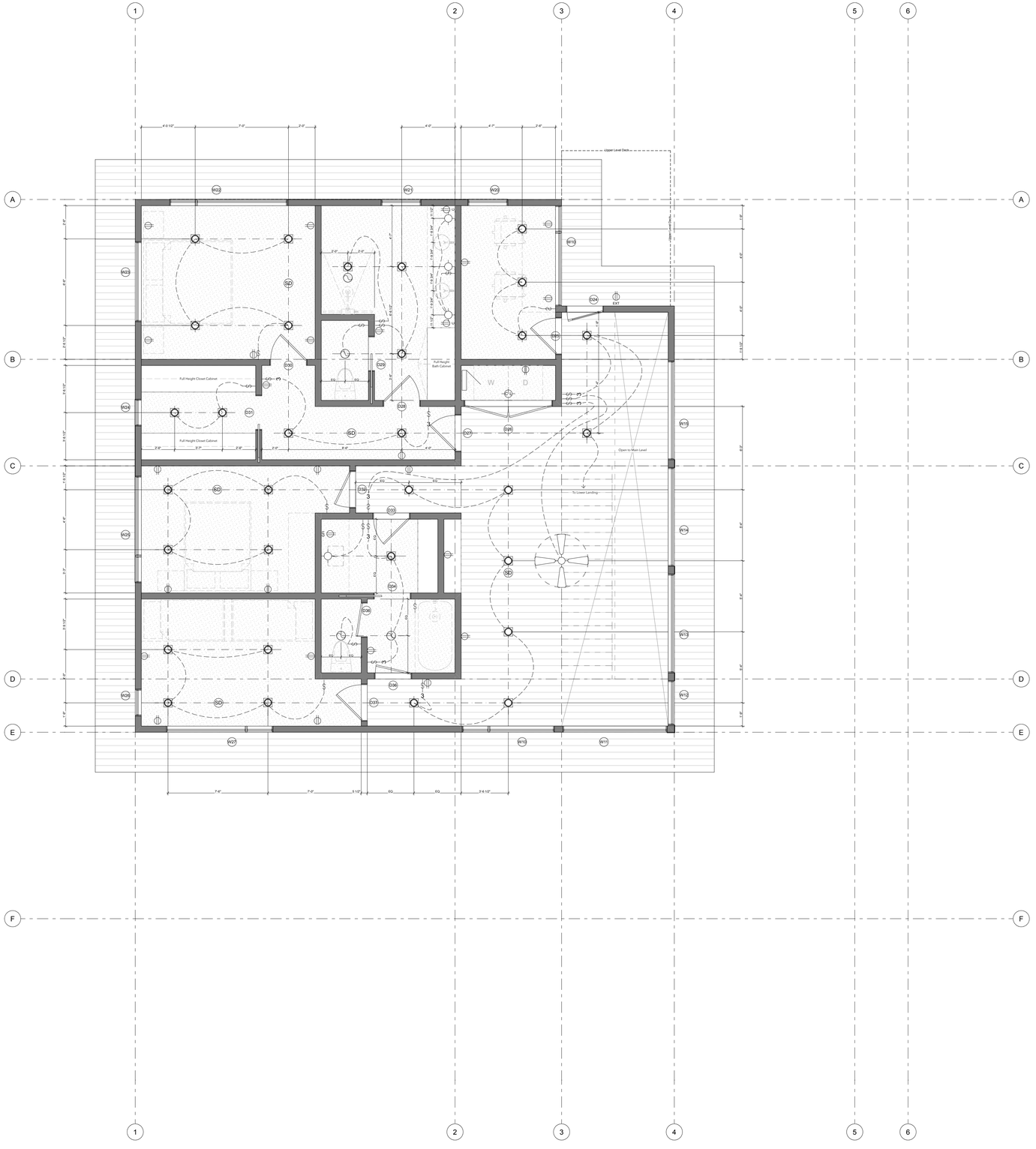
ISSUE:

Building Permit Set	3.9.23

N

E101
Main Level - RCP

V5



1 Upper Level - RCP
SCALE: 1/4" = 1'-0"

ELECTRICAL/MECHANICALNOTES

01. All exterior wall sconces to be fully shielded exterior downlight sconce mounted with the top of fixture @ 8'-0" above walking surface in accordance with Teton County LDR Sec. 5.3.1. and Town of Jackson Standards.

02. Provide carbon monoxide detectors as shown on the plans and provide interconnectivity in accordance with IRC 2021 Sec. R315.

03. Provide smoke detectors as shown on the plans and provide interconnectivity in accordance with IRC 2021 Sec. R314.

04. Switching/lighting controls to be confirmed on site with Owner, Contractor and Architect.

05. Outlets @ 12" AFF, Switches @ 42" AFF, Vf w/ Owner.

ELECTRICAL LEGEND

- Fully Shielded Ext. Wall Mount Downlight Sconce
- Wall Mount Sconce
- Wall Mount Sconce : Activated on Door Switch
- Surface Mounted Fixture
- Surface Mounted Waterproof Fixture
- Recessed Can Fixture
- Under-Cabinet Strip Lighting
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- Exhaust Fan w/ Light
- Thermostat
- Standard Duplex Outlet
- Standard Duplex Outlet - Counter Height
- Standard Duplex Outlet w/ Switch - Counter Height
- Standard Quad Outlet
- 240 V Outlet
- Ground Fault Interrupt Duplex Outlet
- Exterior Rated Duplex Outlet
- Floor Outlet
- Single Pole Switch
- Three Pole Switch
- Four Pole Switch
- Ceiling Fan

N

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STATE OF WYOMING

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ROSCOE RESIDENCE

6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW
ISSUE:	
Building Permit Set	3.9.23

E102

Upper Level - RCP

v5

Outdoor QB LED Up and Down Wall Sconce

By Bruck Lighting

LUMENS

Call Us (877) 445-4486

Outdoor QB LED Up and Down Wall Sconce
By Bruck Lighting

Product Options

Finish: Anthracite

Details

Up and downlight
Includes onboard driver
Overload protection
Overheat protection
Short Circuit protection
Mount to 3.5" - 4" octagonal recessed J-Box
Can be installed horizontally or vertically
Material: Extruded Aluminum
UL Listed Wet
Warranty. 5 Year Limited Fixture Warranty
Made In China

Dimensions

Fixture: Width 5.13", Height 5.13", Extension 5.13"

Lighting

Lamp Type	LED Built-in
Total Lumens	220
Total Watts	9.60
Volts	120 /277 Volt
Color Temp	3000 (Soft White)
Average Lifespan (Hours)	39,000
CRI	80
Equivalent Halogen, CFL or LED Bulb Can Be Used	No

235

Notes:

Prepared by:

Prepared for:
Project:
Room:
Placement:
Approval:

Additional Details

Product URL:
https://www.lumens.com/outdoor-qb-led-up-and-down-wall-sconce-by-bruck-lighting-BLS637052.html
Rating: UL Listed Wet

ITEM#: BLS637052

Exterior Lighting

Max lumens allowed onsite = .5 lumens per sqft of site development

Total Site Development = 4300sqft
Total lumens allowed on Site = 2150 lumens

Exterior Wall Sconce	4 @ 220 = 880
Exterior Recessed Fixture	3 @ 400 = 1200

LED ULTRA SLIM RECESSED LIGHTS

RSL SERIES

SUPERIOR LIGHTING

FEATURES:

- Multi CCT, selectable switch on the back of the driver
- Available in 3", 4", 6", 8", 10", 12" smooth recessed trims
- Isolated driver for improved thermal management
- Spun aluminum white powder coat finish

LIGHTING:

- Dimming: TRIAC dimming - Dimmable using standard LED dimmers. (Except 8 inch units are 0-10v dimmers only)
- Lens: 0.125" White translucent acrylic
- Can rotate after installation to align
- LED: Seoul DOB (Driver On Board) technology
- Optics: White translucent acrylic
- Color temperature: 2700K/3000K/3500K/4000K/5000K
- Multi CCT (Selectable switch on the back of the driver)
- Color rendering index: CRI >80
- Beam Angle: 100°-110°
- Photometrics available upon request

APPLICATION:

- LED recessed trims have been designed to be a felxible lighting solution for new construction applications, ideal for closets, storage areas, attics, corridors, or general lighting for residential or commercial applications.

WARRANTY & LISTINGS:

- 5-year warranty
- UL Listed
- Damp Rated
- Dimmable
- 50,000 hour rated life

ELECTRICAL:

- Voltage: 120V AC
- Output voltage: 36VDC
- Power factor: >0.90
- Total harmonic distortion: ≤15%

MECHANICAL:

- ½" Thick
- Die-Cast Aluminum with white powder coat finish
- Recessed light housing is not required even for insulated ceiling
- Junction box 1 ¼ thick included with fixture
- Typel crated: Approved for direct contact with insulation
- Maximum ambient temperature: 0 to 104°F

SPECIFICATION: RSL SERIES

Size	Wattage	Lumens	Color Temperature	Voltage	LPW
3 INCH	6W	400LM	2700K 3000K 3500K 4000K 5000K	120V AC	66
4 INCH	9W	630LM		120V AC	70
6 INCH	12W	935LM		120V AC	70
6 INCH	15W	1125LM		120V AC	75
8 INCH	18W	1350LM		120V AC	75
10 INCH	20W	1500LM		120V AC	75
12 INCH	28W	2100LM		120V AC	70

Electrical Load Calculations

6165 Burcher Rd

LIGHTS

Unit	Load Desc	Model	Qty	Watts Each	Watts Total	Amps	Volts
ADU	Lower Level Lights		1	1625	1,625		120
Main	Mid Level Lights		1	2925	2,925		120
Main	Upper Level Lights		1	1950	1,950		120
TOTAL					**6,500**		

BRANCH OUTLET CIRCUITS

Unit	Load Desc	Model	Qty	Watts Each	Watts Total	Amps	Volts
Main	Upper Branch Circuits		2	1800	3,600		
Main	Mid Brach Cricuits		4	1800	7,200		
AUD	Lower Branch Circuits		3	1800	5,400		
Main	Exhaust Fan Master Bath		1	17	17	0.14	120
Main	Exhaust Fan Master WC		1	17	17	0.14	120
Main	Exhaust Fan Guest Bath		1	17	17	0.14	120
Main	Exhaust Fan Guest WC		1	17	17	0.14	120
Main	Exhaust Fan Powder Bath		1	17	17	0.14	120
ADU	Exhaust Fan Bath		1	17	17	0.14	120
TOTAL					**16,302**		

APPLIANCES

Unit	Load Desc	Model	Qty	Watts Each	Watts Total	Amps	Volts
Main	Inductive Range	Inductive Range	1	9600	9,600	40.00	240
ADU	Inductive Range	Inductive Range	1	9600	9,600	40.00	240
Main	Dishwasher		1	1800	1,800		
ADU	Dishwasher		1	1800	1,800		
Main	Garbage Disposal		1	700	700		
ADU	Garbage Disposal		1	700	700		
MAIN	Clothes Dryer		1	5000	5,000		
ADU	Clothes Dryer		1	4000	4,000		
TOTAL					33,200		

ELECTRIC VEHICLE CHARGERS

Unit	Load Desc	Model	Qty	Watts Each	Watts Total	Amps	Volts
MAIN	Electric Car Charger		2	7200	14,400		
TOTAL					**14,400**		

HEATING APPLIANCES

Unit	Load Desc	Model	Qty	Watts Each	Watts Total	Amps	Volts
Main	Air to Air Heat Exchanger	FanTech ATMO150E	1	168	168	1.40	120
Main	Duct Heater	THERMO-AIR TER-(	1	2000	2,000	8.30	240
ADU	Air to Air Heat Exchanger	FanTech VH704	1	168	168	1.40	120
ADU	Duct Heater	THERMO-AIR TER-(	1	1000	1,000	4.17	240
Main	Boiler	Thermolec B-30U-FI	1	30000	30,000	125.00	240
Main	Boiler Pump	Grundfos UPS 26-9(	1	125	125	1.04	120
Main	Water Heater Pump	GrundFos UPS 15-5	1	30	30	0.25	120
Main	Radiant Floor Pump	Grundfos UPS 26-9(	1	125	125	1.04	120
Main	Glycol Feeder	Axiom MF200 RIA 1(	1	50	50	0.42	120
TOTAL					**33,666**		

SUPPLIMENTARY HEATING EQUIPMENT

These loads are only used to offset energy used by primary heating system.

Unit	Load Desc	Model	Qty	Watts Each	Watts Total	Amps	Volts
	Bitcoin Mine	Antminer s19 Pro	3	3250	9,750	13.54	240
TOTAL					**9,750**		

SUMMARY LOAD CALCS

Lighting	6,500
Branch Circuits	16,302
Appliances	33,200
Total	56,002
Total - 10k	46,002
(Total - 10k) * 40%	18,401
Heating	33,666
EV	14,400
Calculated Wattage	(Total - 10k) * 40% + Heating + EV 66,467
Min Service Size (Amps)	Calculated Wattage / 240 277

FARMERPAYNE ARCHITECTS

Jackson Hole
260 West Broadway, Suite A
Jackson, WY 83001
T.307.264.0080

Sun Valley
351 N Leadville Ave, Suite 204
Ketchum, ID 83340
T.208.214.5155

Louisiana
910 Piermemont Rd. Suite 410
Shreveport, LA 71106
T.318.383.3100

ARCHITECT STAMP

LICENSED ARCHITECT
JAMES J. FARMER
B-0262
3.9.23
STATE OF WYOMING

FOR CONSTRUCTION
BUILDING PERMIT

ROSCOE RESIDENCE
6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/23
PROJECT #:	JH2203
DRAWN:	RHW
ISSUE:	
Building Permit Set	3.9.23

E103
Electrical Calcs & Lighting Specifications

V5

Structural Abbreviations

AB	Anchor Bolt	MC	Miscellaneous Channel
ABV	Above	MECH	Mechanical
AC	Air Conditioning	MFR	Manufacturer
ADJ	Adjacent	MIN	Minimum
ALT	Alternate	MISC	Miscellaneous
BLDG	Building	MIW	Malleable Iron Washer
BLK	Block	MFG	Manufactured
BLKG	Blocking	MTL	Metal
BLW	Below	(N)	New
BM	Beam	NIC	Not In Contract
BTM	Bottom	No	Number
BRG	Bearing	NS	Near Side
BTWN	Between	NTS	Not to Scale
CONST	Construction	oc	On Center
C	Steel Channel	OD	Outside Diameter
CB	Carriage Bolt	OPNG	Opening
CL	Center Line	OPP	Opposite
CJ	Control Joint	OW	Otherwise
CLG	Ceiling	PL	Plate
CLR	Clear	PLY	Plywood
COL	Column	plf	Pounds per Linear Foot
CONC	Concrete	PNL	Panel
CONT	Continuous	PP	Partial Penetration
CP	Complete Penetration	psf	Poinds per Square Foot
CMU	Concrete Masonry Unit	psi	Pounds per Square Inch
CSK	Countersink	PTB	Panel Tie Bar
COMP	Composite	PTDF	Pressure Treated Doug Fir Larch
DBL	Double	PT	Point
DF	Douglas Fir	R	Radius
DIAG	Diagonal	RFTR	Rafter
DL	Dead Load	REF	Reference
DWG	Drawing	REINF	Reinforcement
EN	Edge Nail	REQ'D	Required
EA	Each	REV	Revision
EE	Each End	SAD	See Architectural Drawings
ELEC	Electrical	SCHED	Schedule
ELEV	Elevator/Elevation	SED	See Electrical Drawings
EMBED	Embedment	SIM	Similar
EQ	Equal	SMD	See Mechanical Drawings
EQUIP	Equipment	SPCG	Spacing
ES	Each Side	SPEC	Specifications
EQ	Each Way	SQ	Square
(E)	Existing	SS	Select Structural (Wood)
EXP	Expansion		or Stainless (Steel)
FO	Face of	STD	Standard
FOC	Face of Concrete	STIFF	Stiffener
FP	Full Penetration	SN	Shear Nail
FJ	Floor Joist	SHTG	Sheathing
FTG	Footing	STRUCT	Structural
FDN	Foundation	SW	Shear Wall
FIN	Finish	SYM	Symetrical
FG	Finish Grade	T&B	Top & Bottom
FLI	Ferrule Loop Insert	T&G	Tongue & Groove
FN	Face Nail (Lumber) or	THK	Thick
	Field Nail (Sheathing)	THRD	Thread(ed)
FOM	Face of Masonry	THRU	Through
FOS	Face of Stud	TL	Total Load
FRMG	Framing	TN	Toe Nail
FTG	Footing	TOC	Top of Concrete
GALV	Galvanized	TOF	Top of Framing
GLB	Glue Laminated Beam	TOM	Top of Masonry
HGR	Hanger	TOP	Top of Plate
HORIZ	Horizontal	TOS	Top of Steel/Slab
HS	High Strength	TOT	Total
HSB	High Strength Bolt	TOW	Top of Wall
HSFB	High Strength Friction Bolt	TYP	Typical
HSG	High Strength Grout	UNO	Unless Noted Otherwise
HSH	Horizontal Slotted Hole	VERT	Vertical
HT	Height	VSH	Vertical Slotted Hole
HDR	Header	W	Wide Flanged Steel Beam
ID	Inside Diameter	WP	Work Point
I-JST	I Shaped Wood	WT	Weight
	Built-up Truss	WWF	Welded Wire Fabric
JST	Joist	EXT	Exterior
L	Steel Angle	INT	Interior
lb or #	Pound(s)	S	American Standard Beam
LGMF	Light Gage Metal Frame(ing)	CGL	Certified Glued Lumber
LL	Live Load	LSL	Laminated Strand Lumber
LLH	Long Leg Horizontal	LVL	Laminated Veneer Lumber
LLV	Long Lev Vertical	PSL	Parallel Strand Lumber
MAX	Maximum	WHS	Welded Hooked or
MB	Machine Bolt		Headed Stud
MBM	Metal Building Manufacturer	WTS	Welded Threaded Stud

J Manufactured Roof Truss Notes - Continued

10. Bracing shall be provided to brace the top chord of trusses where "piggy back" trusses are used.
11. Bottom chord truss members having a gyp board ceiling attached shall provide a level surface with a maximum variation of 1/4" in 10' in any direction.
12. Scissor or vaulted trusses, shall be designed for a maximum 1/2" total horizontal deflection under dead plus live loads. Truss manufacturer shall include deflection calculations with shop drawing submittal.

K Stone Veneer

1. Where stone veneer occurs:
   - 1.1 A 2"x2"x1/16" zinc coated or non-metallic coated wire mesh with two laters of water-resistive barrier in accordance with IBC section 1404.2 shall be applied directly to wood studs spaced a maximum of 16"oc.
   - 1.2 On studs, the mesh shall be attached with 2" long corrosion-resistants steel wire furring nails at 4"oc providing a minimum 1-1/8" penetration into each stud and with 8d annular threaded nails at 8"oc into top & bottom plates or with equivalent wire ties.
   - 1.3 There shall not be less than a 0.1055" zinc-coated or non-metallix coated wire, orapproved equal, attached to the stud with a minimum of ed annular threaded nail for every 2ft^2 of stone veneer.
   - 1.4 This tie shall be a loop having legs not less than 15" in length, so bent that it will lie in the stone veneer mortar joint.
   - 1.5 The lost 2" of each wire leg shall have a right-angle bend. 1-inch minimum thickness of cement grout shall be placed between the blocking and the stone veneer.

G Wood Framing (Carpentry) Specifications - Continued

8. Glue-Laminated Beams
   All glulam beams shall be Douglas Fir Combination 24F-V4 for simple spans; combination 24F-V8 for continuous beams and cantilevers unless noted otherwise. Where not exposed, appearance to be industrial; where exposed, appearance to be architectural; manufactured with exterior glue conforming to the 2018 IBC, 2303. Provide AITC certificate of inspection or equivalent to Architect and Building Department prior to erection.
9. Parallel Strand Lumber (PSL)
   All parallel strand lumber used for headers or beams shall conform to the following minimum properties:

Beams & Headers		Columns & Posts	
E = 2.2x10^6 psi		E = 1.8x10^6 psi	
F_b=2,900 psi	$F_{c\perp}$=2,900 psi Parallel	F_b=2,400 psi	$F_{c\perp}$=2,500 psi Parallel
F_v=2,025 psi	F_c= 290 psi	F_v=1,755 psi	F_c= 190 psi
$F_{c\perp}$= 750 psi (Perpendicular)		$F_{c\perp}$= 425 psi (Perpendicular)	

10. Laminated Veneer Lumber (LVL)
    All laminated veneer lumber used for beams, joists, headers, rim or blocking shall conform to the following minimum properties:
    E = 1,550,000 psi
    F_b=2,600 psi $F_{c\perp}$=2,900 psi Parallel
    F_v= 285 psi F_c= 750 psi (Perpendicular)
11. Laminated Strand Lumber
    All laminated strand lumber used for beams, joists, rims or blocking shall conform to the following minimum properties:
    E = 1,550,000 psi
    F_b=2,325 psi $F_{c\perp}$=2,900 psi Parallel
    F_v= 310 psi F_c= 800 psi (Perpendicular)

H I-Joist Notes & Bridging

1. I-Joist = Built-up I shaped joist of wood or micro-lam flanges and plywood or OSB web.
2. I-Joists shall be installed per manufacturer's instructions & specifications.
3. WEb stiffeners shall be installed per I-joist and joist hanger's manufacturer's instructions and requirements.
4. See manufacturer's details for full depth blocking details & requirements not specified herin.
5. Rim joists to be of same depth as joists & 1 ¼" or 1¾" minimum thickness.
6. Substitute framing systems or joists may be submitted for review. The contractor shall pay the cost for investigating & evaluating the substitution, and for any revisions to our drawings or specifications due to the substitution.
7. Provide bridging at 8'-0"oc maximum for spans greater than 17'-0" above.
8. All I-Joist hangers are per Simpson Strong-Tie Catalog.
9. Bearing wall locations are as noted on the plans. See architectural drawings for dimensions.

I Structural Steel Specifications

1. Steel Grades

Plates	ASTM A-36
Anchor Bolts	ASTM F1554
Wide Flange	ASTM A-992,
Wide Flange (weathering)	ASTM A-588
Hollow Steel Sections (HSS)	ASTM A-500, Grade B
Machine Bolts	ASTM A-307 (MB)
High Strength Bolts	ASTM A-A325 (HSB)

2. Workmanship and details shall conform to AISC Specifications and the IBC unless noted otherwise.
3. Bolt holes shall be 1/16" larger in diameter than the bolt.
4. Welding electrodes shall meet AWS requirements and electroods shal be E70CC for shielded metal arc, F7CC-EXXX for submerged arc (shop welds only), ER70S-X for gas metal arc and E7XT-CC for flux core unless noted otherwise.
5. Grout under column bases to be high strength, non-shrink grout equaling or exceeding the concrete strength.
6. Shop Cleaning & Painting
   - 6.1 Clean steel in accordance with Steel Structures Painting Council (SSPC):
     - a. SP-2 "Hand Tool Cleaning"
     - b. SP-3 "Power Tool Cleaning"
     - c. SP-6 "Commercial Blast Cleaning"
   - 6.2 See architectural drawings & specifications for all shop painting of structural steel. Primer paint shall be compatible with architecrual finish paint. Clean structural steel scheduled to receive architecrual finish paint in accordance with SP-6.
   - 6.3 Shop prime all structural steel with primer standard with the fabricator, except as follows:
     - a. Structural steel surfaces to be welded or high-strength bolted with slip-critical connections.
     - b. Structural steel members scheduled to receive sprayed fireproofing.
     - c. Structural steel members or those members or portions of members to be embedded in concrete or mortar. Paint embedded steel which is partiall exposed on the exposed portion and the initial 2 inches of embedded areas only.
     - d. Contact milled bearing surfaces.
     - e. Do not paint surfaces that are to be galvanized.
     - f. Surface Preparation - Unpainted Steel: All structural steel that is not specified to receive a shop coat of primer paint shall be cleaned of oil and grease in accordance with SP2 or SP3 (contractors option.)
   - 6.4 Apply two (2) coats of paint to surfaces which are inaccessible after assembly or erection.
   - 6.5 Member sthat are exposed to earth or weeather in the finished structure shall be hot-dipped galvanized unless noted optherwise. Galvanizeing shall not contaminate or otherwise impede the welding process.
   - 6.6 Clean structural steel scheduled to receive standard prime paint. Remove loose rust, loose mill scale, spatter and slag or flux deposits ;in accordance with SP2 or SP3 (contractors option.)
7. Field correction of fabrication errors in the structural framing will be permitted only when approved by the Structural Engineer. When field correction is permitted finish gas-cut sections in accordance with the requirements of AWS D1.1. The fabricator shall be responsible for errors in fabrication and for correct fit in the field.
8. See Special Inspection requirements at S1.3 for all structural steel.
9. Shop Drawings:
   - 9.1 Submit Shop Drawings including complete details and schedules for fabrication and shop assembly of memers, and details, schedules, procedures and diagrams showing the sequence of erection.
     - a. Include details of cuts, connections, camber, holes and other pertinent data. Indicate weld by standard AWS symbols, show size, length, and type of eache weld.
     - b. Provide setting drawings, templates and drections nfor the installation of anchor bolts and other anchorages to be installed under other Sections of work.
     - c. Do not use reproducible copies of Contract documents as erection drawings.
     - d. Dimensions shown shall be similar to Construction documents. i.e. bolt elevations shall be dimensioned from top of steel, not the bottom bolt. This is to expidite the review process.
     - e. The structural engineer reserves the right to reject the shop drawings if they are incomplete or if general specifications have not been met.
     - f. The contractor shall review and/or approve the structural steel shop drawings prior to submission to the engineer/architect.

J Manufactured Roof Truss Notes

1. Manufactured roof trusses are @ 24"oc maximum unless noted otherwise.
2. Manufacturer shall submit the following:
   Calculations prepared and signed by a licensed Civil or Structural Engineer (State of Wyoming.) The calculations must include a design profile and hanger for each truss and a "key" plan indicating the location of each truss type within the structure. Shop drawings including a lout out plan shall show all truss types, locations, profiles, and hangers as called for in the calculations. Calculations shall be based upon loads, bearing points and conditions specified herin. No bearing points shall be assumed based upon loads, bearing points and conditions specified herin. Major revisions in layout or truss configuration will be considered a substitution. The contractor shall be responsible for cost of investigating and reviewing the adequacy of substitutions. General Contractor shall review and approve dimensions and details shown on the shop drawings prior to submittal. Submit calculations & shop drawings to the owner's representative and Tectonic Design, LLC for review prior to fabrication. Reviewed shop drawings & calculations shall be submitted to the Building Department for approval prior to fabrication.
3. Truss manufacturer shall provide hangers and connectors adequate for loads for all truss to truss, truss to beam, and beam to truss connections.
4. Refer to structural plans & details for overhang dimension requirements.
5. Truss manufacturer to provide vertical web member at truss supports, bridging, and blocking as required. Truss manufacturer to provide vertical member at 24"oc at all truss with shear wall (denoted on roof or attic framing plans.)
6. Refer to architectural drawings for slope, drainage, etc..
7. Manufactured roof truss design loads (not including self-weight):
   - 7.1 Top Chord: Dead Load = 15 psf, Snow Load = 92.3 psf not including unbalanced loads, sliding loads, or drifting loads. Unbalanced, sliding and drifting loads shall be in accordance with ASCE 07-16 or specified herin.
   - 7.2 Bottom Chord: Dead Load = 5 psf; Live Load = 10 psf (Bottom Chord Live Load does not act simultaneously with other imposed live loads.
   - 7.3 Special loads and concentrated loads are as noted on the drawings. Contractor to verify all MEP unit location and weights prior to fabrication. Any MEP equipment not indicated on the structural drawings shall be brought to the attention of the stuctural engineer immediately.
8. The positions, weights, and methods of attachment of all mechanical units, electrical fixtures, duct openings, plumbing, fire sprinklers, etc. shall be included in the design of the trusses by the truss manufacturer and shall be verified by the general contractor. Additional trusses or special designed trusses may be required.
9. Superimposed loads from the jack trusses or secondary framing (i.e. roof overbuild, furred ceilings, etc.) shall be included in the design of supporting trusses.

D Cast-in-Place Concrete Construction - Continued

1. Concrete shall be hard rock concrete and meet the following minimum ultimate compressive strength at 28 days.
   - 1.1 Aggregate: 1" x #4, ASTM C33
   - 1.2 Concrete shall be Type IIA and conform to ASTM C 94. Minimum cement content shall be 6 bags /yd^3.
2. Concrete mix design and testing shall meet the requirements of 1903, 1905, and 1704 of the 2018 IBC, and these specifications.
3. Concrete mix designs shall conform to ACI 301-16 and shall be provided a minimum of 72 hours prior to placement. Admixtures not noted within these specifications shall not be used without approval.
   - 3.1 Air Entraining Admixture: ASTM C260. ACI 301 for all concrete used for vehicular traffic or exposed to weather per Table above.
   - 3.2 Water Rducing admixture: ASTM C494, Type A (water reducing-normal set), or Type D (water reducing and retarding admixture) containing no chloride ions added during manufacturing.
   - 3.3 High Range Water Reducing Admixture (Super Plasticizer): ASTM C494 Type F or G (Super Plasticizer): ASTM C494, Type F or G (Super Plasticizer with retarder), containing not more than 0.1% chloride ions.
   - 3.4 Nonchloride Accelerator Admixture: ASTM C494, Type C (Accelerating only(or E (Water and accelerating admixture) containing not more than 0.1% chloride ions.
4. Reinforcing steel shall conform to ASTM A-615, Grade 60 for No. 4 bars and larger and Grade 40 for No. 3 bars. Steel shall be kept clan and free of rust. Submit shop drawings for review prior to installation. Welding of reinforcing is prohibited.
5. Welded wire fabric shall conform with ASTM A-185, and shall be lapped 12" minimum.
6. Slabs, beams, walls and other concrete shall be kept continuously wet for 48 hours after placement and shall be kept damp for 7 days after placement. Slabs shall have cure/sealer applied immediately after finishing of other finishes are not affected. When cure sealer cannot be applied, slab shall be kept continuously wet or covered with curing paper. Cure shall be of a type that will not be detrimental to sealers to be applied later.
7. Cold weather concreting practice per ACI 306 R-2 shall be used when cold weather occurs per 7.1.
   - 7.1 A period when for more than (3) successive days the averagge daily outdoor temperature drops below 40° F. Note that when temperatures above 50° F occurs during more than half of any 24 hour duration, the period shall no longer be regarded as cold weather.
   - 7.2 Average daily temperature is defined as the average of the highest and lowest temperature from midnight to midnight.
   - 7.3 During potential colder periods, all materials and equipment required for protection shall be available at the project site prior to placing concrete.
   - 7.4 Remove all snow, ice, and frost from surfaces, including reinforcement, against which the concrete is to be placed. Frozen materials or materials using ice shall not be used. Before beginning concrete placement, the subgrade shall be thawed. Do not place concrete around massive embedment unless such embedments are at a temperature above freezing.
8. Hot weather placement practice per ACI 305 shall be used when placing concrete in hot weather. The temperature of concrete at time of placement shall not exceed 90° F. Protect to prevent rapid drying. Start finishing and curing as soon as possible.

E Wood Framing Notes

1. See F/S1.0 for exterior wall ply and shear wall information.
2. Standard wall framing, top plates, headers, beams, post, and etc. are per #/# unless noted otherwise specified.
3. All beams and joists shall be seat cut for full uniform bearing at supports, beam seats and column caps.
4. The contractor shall measure glulam beam sizes and cambers as delivered to jobs site and shall report the findings to the Engineer prior to erection. No camber shown means no camber to be provided. # indicates camber or standard (STD) camber, unless noted otherwise STD=3500' radius.
5. Sheathing
   - 5.1 Floor Sheathing
     3/4" T&G (48/24) Weyerhauser OSB with 10d at 6"oc edge nail and 12"oc field unless noted otherwise on plans.
   - 5.2 Roof Sheathing
     5/8" Plywood (32/16) Exposure 1 or OSB with 8d @ 6"oc edge nail and 12"oc field unless noted otherwise on plans. Provide ply clips where boundary members do not occur.
   - 5.3 Exposed overhangs shall have type ACX plywood. No panels less than 24" shall be used.
6. All framing and plywood nails to be common wire or galvanized box with full round heads. When nails to be used for rough framing specified, cement coated sinker nails may be substituted for 16d common nails, unless noted otherwise. Nails used in exterior applications or into pressure treated lumber shall be hot-dipped galvanized. Nail length to be sufficient to meet IBC penetration requirements. Nail Table 23-11-B-1 or detail #/S1.#. Pre-drill nail holes where wood tends to split.
7. For roof drainage, top of framing between noted points is a straight line.
8. All mechanical supply and return openings to be between framing unless otherwise noted.
9. ▢ Denotes HSS column. HSS columns are to be trimmed with 2x stud attached to column with 5/8"Ø threaded-welded studs @ 32"oc and 8" from ends. Use 3x minimum studs at edges of openings to allow 1" countersink of threaded-welded stud, nut & washer. Where HSS occurs at end of shear wall provide threaded-welded stud at 12" oc max in lieu of 32"oc. Where HSS occurs at end of shear wall No. 3 or greater, provide 3x nailer to allow for Plywood Nailing Detail at #/S1..
10. Where post occurs, provide blocking in floors to match size of post above for full bearing.
11. Joists and rafters are per plan. Hanger size to match full size of joist (i.e. U210 for 2x10 joist,) unless noted otherwise.
12. Provide blocking at all perpendicular walls and for surface mounted features indicated on architectural drawings.
13. Round holes in steel plates to be 1/16" oversized. Slotted holes in steel plates shall be 1/16" wider than the bolt diameter and have a length of 2x the bolt diameter. The direction of the slotted length is indicated on the details (VSH or HSH.) Install bolt at the center of line of the hole. Bolt holes in wood shall be round and 1/32" oversized. Cut off threaded bolt end flush with nut when required by finishes and 1" maximum for nuth otherwise.
14. All bolted or nailed strap connections shall have an equal number of bolts or nails on each side of splice joint. The first bolt or nail from each side of splice or strapped member shall be equidistant from the splice. Straps using 16d nails on 2x material are to be installed on the 1½" edge of the member.
15. The contractor shall verify that the moisture content of all framing lumber and plywood meet the requirements of the specifications at the time of installation and at close-in. The contractor shall provide allowance for differential shrinkage between floors, etc.
16. Exterior stud wall size is 2x6 at 16 "oc unless noted otherwise. Interior stud wall size is 2x4 @ 16"oc maximum unless noted otherwise. Refer to architectural drawings for specific wall assemblies and wall sizes.
17. Pre-drill lead holes for lag screws as follows:
    - 17.1 The clearance hole for the shank shall have the same diameter as the shank and the same depth of penetrattions as the length of unthreaded shank.
    - 17.2 The lead hole for the threaded poriton shall have a diamter equal to 70% of the shank diameter.
    - 17.3 The threaded portion of the lag screw shall be inserted in its lead hole by turning with a wrentch, not by driving with a hammer.
    - 17.4 Soap or other lubricant shall be used on the lag screws or in the lead holes to facilitate insertion oand prevent damage to the lag screws.
18. The contractor is expected to employ competent journeymen who are knowledgable with respect to "Conventional Construction Practices."

F Wall Sheathing & Shear Wall Notes

1. EN = Plywood eddge nailing. Block all unsupported edges with 2x material unless noted otherwise. At panel joints where nailing is 4"oc or less, 3x blocking and 3x studs shall be used. See #/S1.# for Plywood Nailing Detail.
2. All exterior walls not designated as a shear wall are to be sheathed with 15/32" OSB and nailed with 8d at 6"oc edges & 12"oc field. 15/32" OSB may be substituted with 7/16" OSB when (a) studs are spaced at 16" maximum and (b) panels are applied with long dimension across studs. Both exceptions must be fulfilled; nailing to remain the same.
3. 15/32" OSB may be substituted with 15/32" plywood with 4 or 5 ply minimum, STRUCT-I plywood, or ZIP sheathing that meets the requirements of PS-2 Structural-I plywood.
4. Use 8dx2-1/8" nails for shearwalls at manufactured roof trusses.
5. Stagger plywood joint and sill plate nailing as required. Shear walls more than one vertical panel in height shall have either vertical or horizontal staggered spliced joints.
6. Portions of interior wall surfaces adjacent to specified shear walls shall be sheathed with ply or gypsum board for the full uninterrupted length of the wall to provide an even wall surface for finish materials.
7. Shear wall lengths, where noted, are minimum. DO NOT LOCATE HOLDOWNS FROM THESE DIMENSIONS. See architectural drawings for actual wall lengths. Noted shear wall lengths have been rounded down to the nearest 1/4" and lengths may need adjustment to allow for rough openings, etc..
8. ▯ Refers to an HDU or Holdown strap per Simpson Strong Tie respectively. Install per manufacturer and S/S1.1, 6/S1.1, 7/S1.1, & 8/S1.1 as applies.
9. Where panels are applied on both faces of a wall panel, joints shall be offset to fall on different framing members, framing members shall be 3x or thicker and nails on each side shall be staggered.
10. "SDS" screws are Strong Drive screws ¼"Ø x length specified by Simpson Strong Tie.

G Wood Framing (Carpentry) Specifications

1. Minimum Grades of sawn lumber (unless noted otherwise)
   Posts and beams 4x & larger: DF #1 (free of heart center (FOHC))
   Joists, Rafters, Plates and 2x6 studs: DF #2
   2x4 studs: Construction grade.
2. It shall be the responsibility of the contractor to assure that the maximum moisture content of wood at the time of installation shall not be more than 19% or less 1" from all surfaces utilizing computer-controlled low pressure steam system or microwave, at close-in shall be not more than 15%.
3. Metal framing clips, hangers, etc. are by Simpson Strong Tie, PO Box 1568, San Leandro, CA, Catalag C-2019-2020. Installation shall be in accordance with the manufacturer. Where "minimum" and "maximum" nail patterns are available, the "maximum" shall be utlized unless noted otherwise.
4. Bolts shall be unfinished machine bolts per ASTM-307. Length of bolts shall be such that the bolt projection is not less that 1/16" nor more than 1/2" past end of nut. Bolt holes in wood shall be 1/32" larger than bolt sizes unless noted otherwise. Provide washers under head and nut where bolt heads would bear on wood. Nuts shall be tightened when placed and re-tightened before close-in of walls or other construction. DO NOT CRUSH WOOD WHEN TIGHTENING.
5. Wood against CMU or concrete shall be pressure treated douglas fir (PTDF).
6. See architectural drawings for decking material. If not otherwise noted decking material shall be pressure treated doug-fir, cedar, redwood or other naturally decay resistant species.
7. Plywood Sheathing
   Structural plywood shall conform to PSI-95, stamped and graded by APA, with exterior glue. Plywood sheets shall abut along centerline of framing member sith nailing spaced not 3/8" from edge of sheets. Gun nailing and nails to be approved by the engineer prior to use. Plywood nails of common wire with full round heads are required.

A General Notes

Code: 2021 IRC/IBC w/ Town of Jackson/Teton County Amendments

Risk Category = II

Importance Factors:
Wind Factor (I_W) = 1.0
Snow Factor (I_S) = 1.0
Seismic Factor (I_E) = 1.0

Design Loads

Component	DL	LL
Interior Floor, TYP	39	40
Enclosed Deck	24	40
Exterior Wall, TYP	16	N/A
Interior Wall, TYP	8	N/A
Roof Mfr. Truss	16	N/A
Flat Roof	18	N/A

Snow Loads

Ground Snow Load (p_g)= 175 psf

Component	Thermal Factor (C_t)	Exposure Factor (C_e)	Flat Roof Snow Load (P_f)	Sloped Roof Snow Load (P_s)	Unbalanced Roof Snow Load
Typical Roof (Manufactured Truss)	1.1	0.9	121.3	121.3	N/A
Flat Roof	1.1	1.0	134.8	134.8	N/A
Unheated Balcony	1.2	1.0	147	147	N/A
Entry Roof	1.2	1.0	147	147	N/A
	##	N/A	##	##	##
	##	N/A	##	##	##
	##	N/A	##	##	##

Notes: Refer to calculations for drift loads

Wind Load Design Data

Basic design wind speed (V) = 115 mph
K_d= 1.0
K_e= 0.85 (MWFRS & C&C) G= 0.85
K_z=0.80 NSEW: Enclosed
K_z=0.9 (GC_p)=+/-0.18

$p=20.72\,[(GC_p)\text{- }(+/-0.18)]_{\text{(psf)}}$

Wind Load - Components & Cladding

ASCE 7-16: Chapter 30
Refer to Figure 30.3-1 for loading diagram
a = 6'-0"
$p=20.72\,[(GC_p)\text{- }(+/-0.18)]_{\text{(psf)}}$

(GC_P)	Effective Wind Area, ft^2						
WALL	10	20	50	100	200	500	1000
④	-1.4	-1.3	-1.15	-1.05	-0.95	-0.8	-0.8
⑤	-1.1	-1.05	-0.98	-0.95	-0.88	-0.8	-0.8
④ & ⑤	1.0	0.95	0.87	0.81	0.78	0.7	0.7

Earthquake Design Data

S_S = 0.999 S_{DS} = 0.733
S_1 = 0.331 S_{D1} =N/A
Site Class = D SDC = D
Analysis Procedure: Equivalent Lateral Force Procedure

Level	FORCE RESISTING SYSTEM		R		C_S		V (lbf)	
	Longituduninal (L)	Transverse (T)	(L)	(T)	(L)	(T)	(L)	(T)
Upper Roof	Wood Framed Shear Wall		6.5	6.5	.1127	.1127	23,689	21,582
Upper Floor	Conc Wall/Wood Wall	Wood Framed Shearwall	5.0	6.5	.1466	.1127	32,297	29,400
Main Level	Special Conc Wall	Special Conc Wall	5.0	5.0	.1466	.1466	12,773	10,666

B Construction Notes

1. Building dimensions shown are for general reference only. See architectural drawings for actual dimensions. Any discrepancies shall be brought to the attention of the architect/engineer so clarification can be made prior to commencing work.
   - 1.1 Elevations on plans and details are to heights above ground floor's subfloor elevation reference, 100'-0"
   - 1.2 Drawings shall not be scaled. All dimensions and fit shall be determined and verified by the contractor prior to commencing work.
   - 1.3 All dimensions and existing conditions as drawn shall be verified by the contractor. Any discovered discrepancies shall be brought to the attention of the architect/engineer prior to commencement of work for appropriate revisions.
2. Refer to architectural drawings and/or specifications for tolerances not defined herin.
3. Details not fully or specifically shown shall be the same nature as other similar conditions.
4. Shoring and bracing design, materials, and installation shall be provided by the General Contractor and shall be adequate for all loads. Shoring/bracing shall be left in place as long as may be required for safety and until final structural construction is completed. All OSHA standards & specifications shall be followed.
5. All general joist/truss layouts specified as "TYP" or "MAX" are general location unless specifically defined & dimensioned. It is the responsibility of the General Contractor to coordinate MEP penetrations not identified within.

C Foundation

Geotechnical Report: Summit Consulting Group
PO Box 6482
Jackson Wyoming
307.264.0080
Job No. 220221

1. This foundation design was completed utilizing the Helical Pier recommendations set forth in the geotechnical report. Summit Consulting Group shall be contacted by the contractor to observe the soil conditions and processes prior to forming foundations for design verification.
2. All soils work shall be done in accordance with the specifications, the requirements of the Geotechnical report noted above and Chapter 18 of the 2018 IBC.
3. All foundations shall bear on firm, undisturbed, native soils or engineered fill at or exceeding the depths shown on the drawings. Over-excavations in depth shall be filled with concrete and in width may be filled with lean concrete or compacted approved backfill. All loose soils shall be removed from excavations prior to placement of reinforcing or concrete.
4. Provide 5/8"Ø x12" (18" at curbs) anchor bolts at 48"oc for sill plate anchorage unless otherwise noted on the shear wall schedule at S0.3. Anchor bolts are to be tied in place prior to placement of concrete. ¼"x3" square galvanized plate washers shall be used. At existing foundation walls, new anchor bolts may be drilled and epoxied with 8" minimum embedment. Epoxy shall be Simpson 'SET-XP' or other approved alternative.
5. Concrete Slab
   - 5.1 Interior Slab: 4" concrete reinforced with 6xW1.4/W1.4 (6x6-10/10) welded wire fabric at mid-depth on subgrade per geotechnical report.
   - 5.2 Exterior Slab: 4" concrete reinforced with 6xW1.4/W1.4 (6x6-10/10) welded wire fabric at mid-depth on subgrade per geotechnical report.
   - 5.3 Garage Slab: 5" concrete reinforced with No. 4 bar at 16"oc each wat at mid-depth over 6" road mix gravel on compact subgrade.
6. Vapor Barrier / Vapor Retarder
7. Control joints shall be provided at 15'oc max unless noted otherwise by architect. Control joints shall be constructed per 9/S1.0.
8. Construction joints shall be provided where multiple pours are required. Construction joints shall be constructed per 9/S1.0 between alternate strips. Allow 24 hours minimum between pour of alternate and closing strips. Where possible, joints shall be placed at the face of wall. Joint layout plans shall be submitted for review prior to placement.

D Cast-in-Place Concrete Construction

Component	Min Strength 28 day	Slump (inches)	W / C Ratio	Exposure	Entrained Air
Footings	3500 psi	3½" (+/- ½")	0.50 Max	Moderate	5%
Foundation Walls	4000 psi	3½" (+/- ½")	0.50 Max	Severe	6%
Interior Slab-On-Grade	3500 psi	3½" (+/- ½")	0.55 Max	Mild	3½%
Exterior Slab-On-Grade	3500 psi	3½" (+/- ½")	0.55 Max	Mild	6%

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Structural Engineering
307.413.5519
j.hobson@tectonicdesign22.com
PO Box 3945 Jackson, WY 83001
www.tectonicdesign22.com

STAMP

Professional Engineer
JEFFREY A. HOBSON
14641
Date 3/9/2023
WYOMING

PERMIT SET

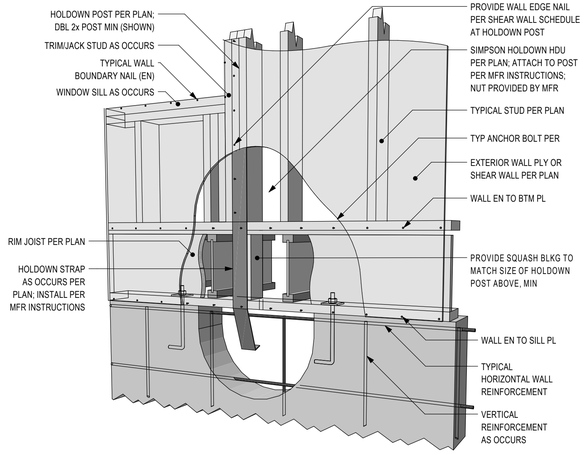
ROSCOE RESIDENCE
6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/2023
PROJECT #:	22-011
DRAWN:	JAH

ISSUE:

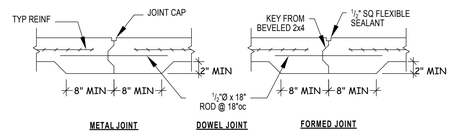
Building Permit Set	3.9.23

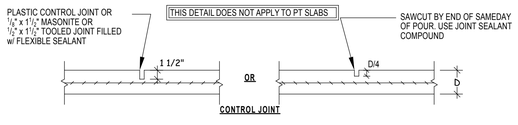
S0.0
General Notes & Specifications



8 Typical Holdown Strap Thru Floor

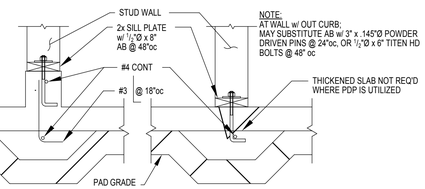
NOT TO SCALE





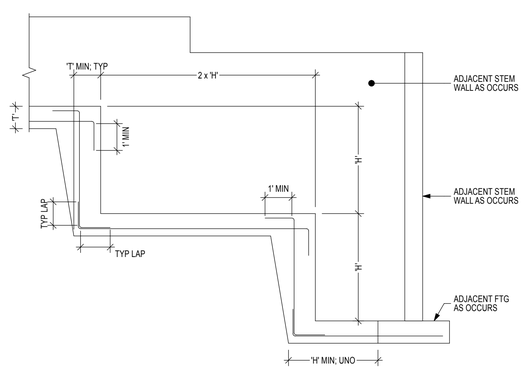
9 Construction & Control Joint (SOG Only)

NOT TO SCALE



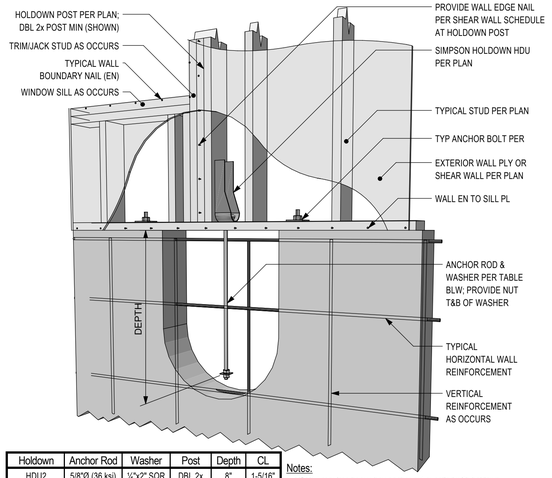
10 Non-Bearing Stud Wall at Slab

NOT TO SCALE



11 Stepped Footing

NOT TO SCALE

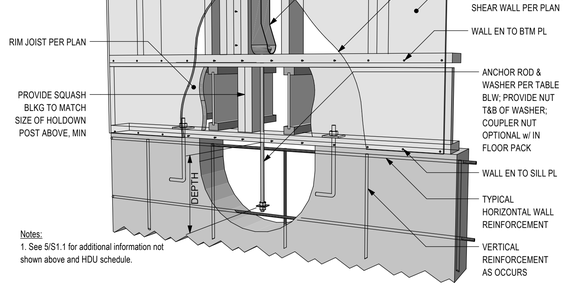


Holdown	Anchor Rod	Washer	Post	Depth	CL
HDU2	5/8"Ø (36 ksi)	¼"x2" SQR	DBL 2x	8"	1-5/16"
HDU4	5/8"Ø (36 ksi)	¼"x2" SQR	DBL 2x	1'-0"	1-5/16"
HDU5	5/8"Ø (36 ksi)	½"x2¾" SQR	DBL 2x	1'-0"	1-5/16"
HDU8	7/8"Ø (36 ksi)	½"x2¾" SQR	DBL 2x	1'-2"	1-3/8"
			4x	1'-4"	
			TRIP 2x	1'-6"	
HDU11	1"Ø (36 ksi)	5/8"x3" SQR	x6	1'-6"	1-3/8"
			x8	1'-8"	
HDU14	1"Ø (36 ksi)	5/8"x3" SQR	*4x6	2'-0"	1-9/16"
			x8	2'-0"	
			6x6	2'-4"	

Notes:
1. HDU14 requires heavy-hex anchor nut supplied with holdown.
2. Holdown post shall match width of wall (x4 min.)
3. Install holdown per manufacturer's instructions.
4. 'CL' Indicates dimension from CL of anchor rod to face of post.

5 Typical HDU Holdown

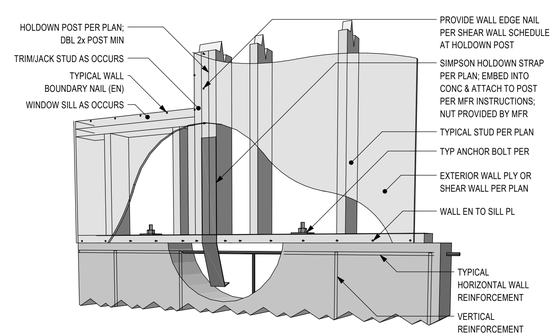
NOT TO SCALE



Notes:
1. See 5/S1.1 for additional information not shown above and HDU schedule.

6 Typical HDU Holdown Thru Floor

NOT TO SCALE



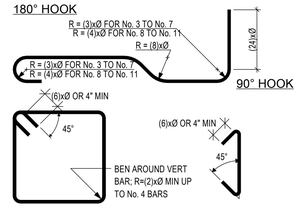
7 Typical Holdown Strap

NOT TO SCALE

Minimum Bar Laps & Reinforcing Steel

Reinforcement Size / Grade (ksi)	Lap Splice Length		
	f'_c = 3000 psi or <	f'_c = 4000 psi	f'_c = 5000 psi or >
No. 3 / 40	21"	21"	21"
No. 4 / 60	18"	18"	18"
No. 5 / 60	36"	36"	36"
No. 6 / 60	42"	42"	42"
No. 7 / 60	60"	60"	60"
No. 8 / 60	76"	76"	76"
No. 9 / 60	94"	94"	94"
No. 10 / 60	112"	112"	112"
No. 11 / 60	132"	132"	132"

STANDARD HOOKS & BENDS

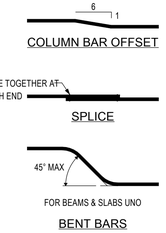


STIRRUPS & TIES

Concrete Cover for Steel Reinforcement ('CLR')

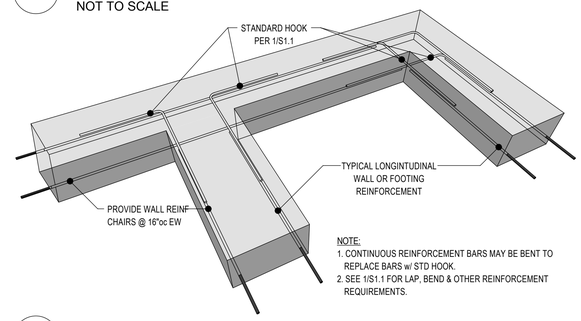
CAST AGAINST EARTH OR GRADE	3"
EXPOSED TO EARTH OR WEATHER	
No. 5 & Smaller	1½"
No. 6 & Larger	2"
NOT EXPOSED TO EARTH OR WEATHER	
No. 5 & Smaller	1"
No. 6 & Larger	1½"
SLABS - from top of concrete	2"

Notes:
1. Splices shall be staggered.
2. Reinforcing bars shall have a minimum spacing of 1" clear.
3. All reinforcing bars shall extend as far as possible and end in a standard 90° or 180° hook unless detailed otherwise detailed.



1 Typical Reinforcing Detail

NOT TO SCALE

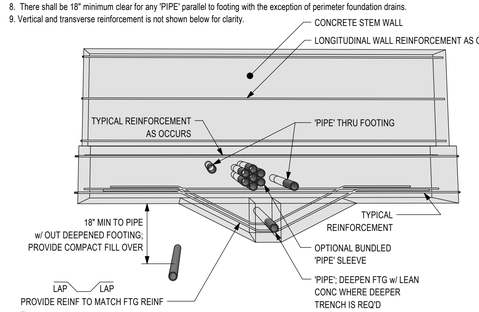


NOTE:
1. CONTINUOUS REINFORCEMENT BARS MAY BE BENT TO REPLACE BARS w/ STD HOOK.
2. SEE 1/S1.1 FOR LAP, BEND & OTHER REINFORCEMENT REQUIREMENTS.

2 Concrete Reinforcement

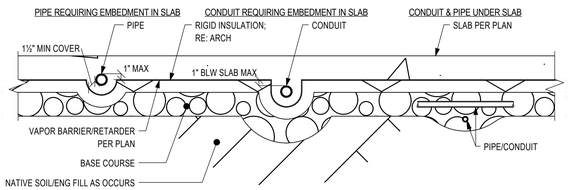
NOT TO SCALE

Notes:
1. 'PIPE' is defined as any penetration through or embedded in foundation structure. 'PIPE' embedded into concrete shall be provided with flexible couplings at entry/exit points.
2. 'PIPE' through concrete stem wall has similar requirements indicated below for 'PIPE' through footing.
3. Sleeves shall be PVC. Inside diameter (ID) to be 2" larger than 'PIPE' outside diameter (OD).
4. No 'PIPE' to run parallel in footings, stem or curb.
5. PVC conduit ('PIPE') embedded in curb/stem may be wire tied to horizontal reinforcement.
6. Wrapped 'PIPES' shall have 1½" clear from wrapping to reinforcing. Sleeved pipes shall have 1½" minimum clear ('CLR') to reinforcing. Wrap with a minimum of (3) layers minimum of 1/8" foam sheet. Minimum concrete cover to be 1".
7. Clearance between 'PIPES' to be 3" minimum. Groups of pipes may be bundled as shown.
8. There shall be 18" minimum clear for any 'PIPE' parallel to footing with the exception of perimeter foundation drains.
9. Vertical and transverse reinforcement is not shown below for clarity.



3 Pipe Through Footing

NOT TO SCALE



4 Conduit & Pipe at Slab

NOT TO SCALE

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STAMP

PERMIT SET

ROSCOE RESIDENCE

6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/2023
PROJECT #:	22-011
DRAWN:	JAH
ISSUE:	
Building Permit Set	3.9.23

S0.1

Standard Concrete Details

Connection	Fastening	Location
Jst to Sill or Girder	(3) 8d common (2 1/2" x 0.131") (3) 3"x0.131" nails	Toenail
Bridging to Jst	(3) 8d common (2 1/2" x 0.131") (3) 3"x0.131" nails	Toenail Each End
Rftr to Plate	(3) 8d common (2 1/2" x 0.131") (3) 3"x0.131" nails	Toenail
Rim Jst to Top Plate	8d (2 1/2"x0.131") @ 6"oc 3"x0.131" nail @ 8"oc	Toenail
Sole Plate to Joist or Blkg	16d (3 1/2"x0.135") @ 16"oc 3"x0.131" nails @ 8"oc	Typical Face Nail
Sole Plate to Joist or Blkg at Braced Wall Panel	(3) 16d (3 1/2"x0.135") @ 16"oc (4) 3"x0.131" nails @ 16"oc	Braced Wall Panels
Top Plate to Stud	(2) 16d common (3 1/2"x0.162") (3) 3"x0.131" nails	End Nail
Stud to Sole Plate	(4) 8d common (2 1/2"x0.131") (4) 3"x0.131" nails	Toenail
	(2) 16d Common (3 1/2"x0.162") (12) 3"x0.131" nails	End Nail
Double Studs	16d (3 1/2"x0.135") @ 24"oc 3"x0.131" nails @ 8"oc	Face Nail
Double Top Plates	16d (3 1/2"x0.135") @ 16"oc 3"x0.131" nails @ 8"oc	Typical Face Nail
	(8) 16d common (3 1/2"x0.162") (12) 3"x0.131" nails	Lap Splice
Blocking btwn Jsts or Rftrs to Top Plate	(3) 8d common (2 1/2" x 0.131") (3) 3"x0.131" nails	Toenail
Top Plates, Laps & Intersections	(2) 16d Common (3 1/2"x0.162") (3) 3"x0.131" nails	Face Nail
Cont. Header, Two Pieces	16d common (3 1/2"x0.135")	16" oc along edge
Cont. Header to Stud	(4) 8d common (2 1/2"x0.131")	Toenail
Clg Jsts, Laps Over Partitions	(3) 16d common (3 1/2"x0.162") min (4) 3"x0.131" nails	Facenail
Clg Jsts to Parallel Rftrs	(3) 16d common (3 1/2"x0.162") min (4) 3"x0.131" nails	Facenail
Built-up Corner Studs	16d common (3 1/2"0.162") 3"x0.131"nails	24"oc; 16"oc
2" Planks	16d common (3 1/2"x0.162")	@ Each Bearing

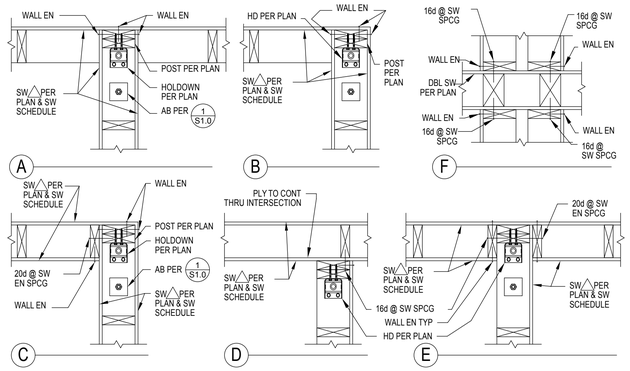
12 Minimum Nailing Schedule

NOT TO SCALE

BOLT SIZE	PLATE WASHER	MALLEABLE WASHER	STD CUT WASHER
3/8"Ø	1 1/2" x 1 1/2" x 3/16"	2 1/2"Ø x 1/4"	1"Ø x 3/32"
1/2"Ø	2" x 2" x 1/4"	2 1/2"Ø x 1/4"	1 3/8"Ø x 7/64"
5/8"Ø	2 1/4" x 2 1/4" x 1/4"	2 3/4"Ø x 5/16"	1 3/4"Ø x 1/8"
3/4"Ø	2 1/2" x 2 1/2" x 5/16"	3"Ø x 7/16"	2"Ø x 5/32"
7/8"Ø	3" x 3" x 5/16"	3 1/8"Ø x 7/16"	2 1/4"Ø x 11/64"
1"Ø	3 1/2" x 3 1/2" x 3/8"	4"Ø x 1/2"	2 1/2"Ø x 11/64"
1 1/8"Ø	3 1/2" x 3 1/2" x 1/2"	4 1/2"Ø x 1/2"	2 3/4"Ø x 11/64"

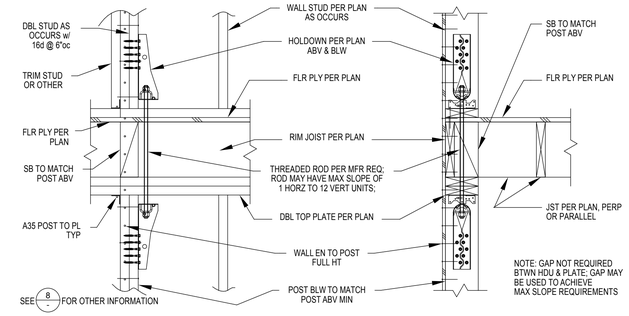
13 Washer Schedule

NOT TO SCALE



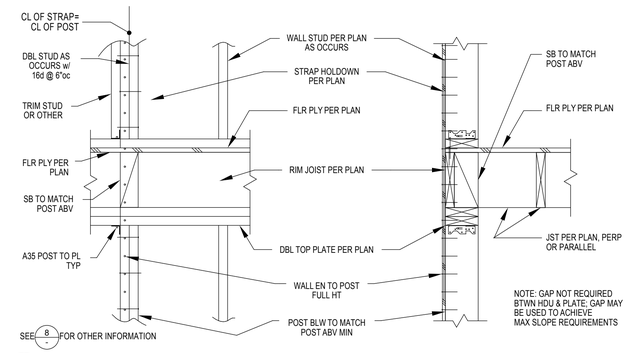
8 Typical Plan View Details of Holdown in Stud Wall

NOT TO SCALE



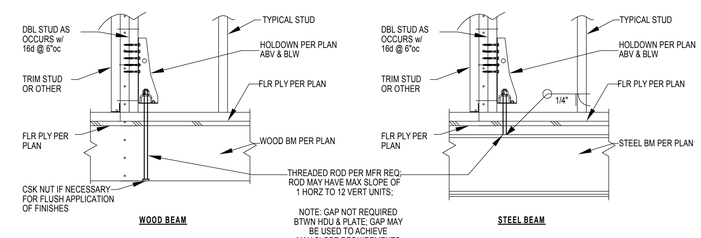
9 Typical HDU Thru Floor

NOT TO SCALE



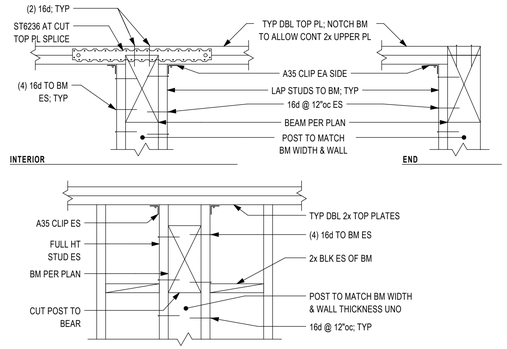
10 Typical Strap Thru Floor

NOT TO SCALE



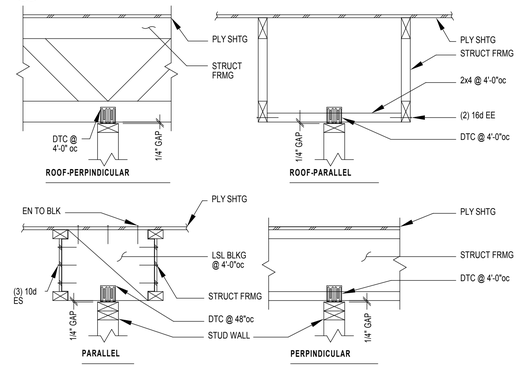
11 Typical HDU Thru Wood / To Steel Beams

NOT TO SCALE



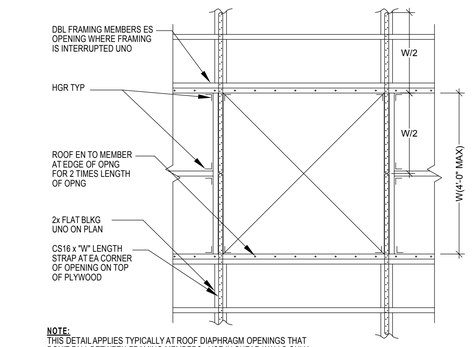
4 Typical Beam In & Thru Stud Wall

NOT TO SCALE



5 Non-Bearing Stud Wall Connection

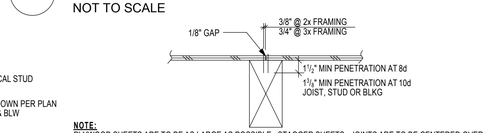
NOT TO SCALE



NOTE:
THIS DETAIL APPLIES TYPICALLY AT ROOF DIAPHRAGM OPENINGS THAT DON'T FALL BETWEEN FRAMING MEMBERS. USE IN SHEAR WALLS ONLY WHERE NOTED ON PLANS.

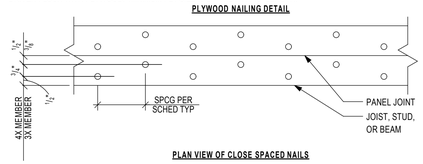
6 Hole In Diaphragm

NOT TO SCALE



NOTE:
PLYWOOD SHEETS ARE TO BE AS LARGE AS POSSIBLE. STAGGER SHEETS. JOINTS ARE TO BE CENTERED OVER BEARING. EDGE NAIL PER PLAN. FIELD NAIL @ 12"oc AT ROOF & WALL, 12"oc AT FLOOR. NAIL HEADS SHALL BE DRIVEN FLUSH WITH PLYWOOD. MINIMUM PLY SIZE IS 24" WIDTH X 48" LENGTH.

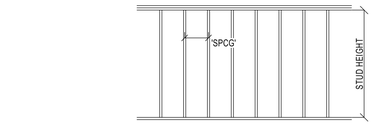
PLYWOOD NAILING DETAIL



PLAN VIEW OF CLOSE SPACED NAILS

7 Sheathing Nailing Detail

NOT TO SCALE



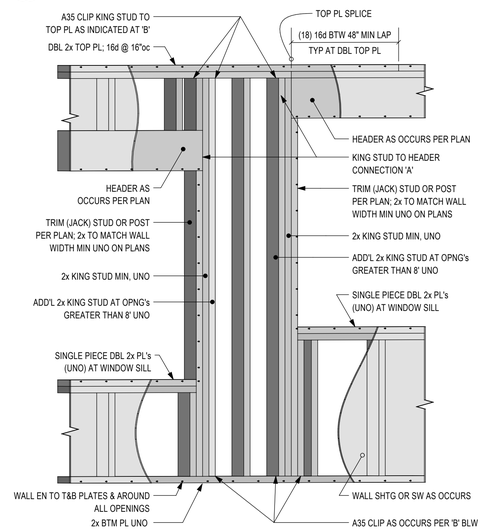
STUD HEIGHT	WALL STUD		
	DF No. 1	LSL 1.3E	LVL 2.0E
7'-0"	2x6 @ 24"oc*		
8'-0"	2x6 @ 24"oc		
9'-0"	2x6 @ 16"oc		
10'-0"	2x6 @ 16"oc		
11'-0"	(2) 2x6 @ 16"oc	1 1/4x5 1/2 @ 16"oc	
12'-0"	(2) 2x6 @ 16"oc	1 1/4x5 1/2 @ 16"oc	
13'-0"	(2) 2x6 @ 16"oc	1 1/4x5 1/2 @ 16"oc	
14'-0"	(2) 2x6 @ 16"oc	(2) 1 1/4x5 1/2 @ 16"oc	1 1/4x5 1/4 @ 16"oc
15'-0"	(2) 2x6 @ 16"oc	(2) 1 1/4x5 1/2 @ 16"oc	1 1/4x5 1/4 @ 16"oc

Blank space indicates insufficient strength and not applicable.
Match laminate and spacing to the left.

Notes:
(*) Refer also to stud spacing requirements for exterior wall sheathing or shearwall requirements at
1. See plan notations for any walls exceeding stud heights listed above.
2. Plan notations conflicting with the table above superceed this detail.

1 Wall Framing Schedule

NOT TO SCALE



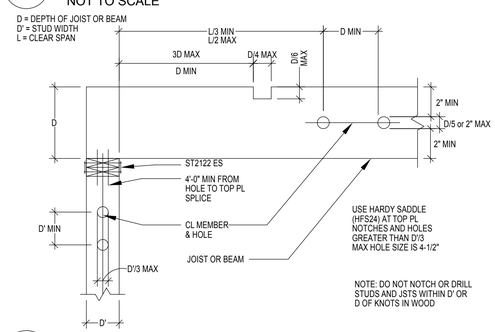
WALL HT		OPENING WIDTH							
		4'	5'	6'	7'	8'	9'	10'	12'
7'	'A'			(4) 16d				(6) 16d	(8) 16d
	'B'			X	X	X	X	X	X
8'	'A'		(4) 16d			(6) 16d		(8) 16d	(10) 16d
	'B'		X	X	X	X	X	X	X
9'	'A'	(4) 16d		(6) 16d		(8) 16d		(10) 16d	
	'B'		X	X	X	X	X	XX	
10'	'A'	(4) 16d		(6) 16d		(8) 16d		(10) 16d	(6) SDS
	'B'	X	X	X	X	X	X	X	XX
11'	'A'		(6) 16d		(8) 16d		(10) 16d		(6) SDS
	'B'	X	X	X	X	X	X	XX	XX
12'	'A'		(6) 16d		(8) 16d		(10) 16d		(6) SDS
	'B'	X	X	X	X	X	XX	XX	XX

: Look to nearest value requirements to the right.
X : Provide A35 as occurs at 'B' above.
XX : Provide A35 as occurs at 'B' above. Install w/ SD9x1½ screws per mfr instructions

SDS Screws are by Simpson Strong-Tie. SDS screw shall be provided fastening the 'king stud' to the end-grain of the header. The SDS screw may be driven from the outermost king stud where more than one is required. The SDS screw shall have a minimum of 3" embedment into the header. i.e. SDS ¼"x4½" SDS screw shall be used for a single 2x king stud, SDS ¼"x6" for (2) 2x king stud.

2 Typical Stud Wall

NOT TO SCALE



3 Holes & Notches in Wood Studs, Jsts, Bm's & Plates

NOT TO SCALE

TECTONIC
Structural Engineering
307.413.5519
J.hobson@tectonicdesign22.com
PO Box 3945 Jackson, WY 83001
www.tectonicdesign22.com

STAMP

PERMIT SET

ROSCOE RESIDENCE

6165 Burcher Rd
Wilson WY 83014

DATE:	3/9/2023
PROJECT #:	22-011
DRAWN:	JAH
ISSUE:	
Building Permit Set	3.9.23

S0.2

Standard Wood Framing Details

V5

SHEARWALL SCHEDULE- 2015 WOOD NDS

Drawing Mark	Sheathing	Nailing (P.E.N.)	Anchorage		Rim Joist	Remarks	Capacity #/ft
			@ Foundation	@ Framing			
5	15/32" 32/16 STR 1	10d @ 6"oc	5/8" Ø @ 48"oc	A35 @ 20"oc	1 1/4" LSL w/ 16d @ 6"oc		340
4	15/32" 32/16 STR 1	10d @ 4"oc	5/8" Ø @ 24"oc	A35 @ 16"oc	1 1/4" LSL w/ 16d @ 6"oc		510
3	15/32" 32/16 STR 1	10d @ 3"oc	5/8" Ø @ 36"oc	A35 @ 12"oc	1 1/4" LSL w/ 16d @ 4"oc	3x studs and blkg @ ply edges 3x min. sill plate	665
2	15/32" 32/16 STR 1	10d @ 2"oc	5/8" Ø @ 24"oc	A35 @ 8"oc	1 1/4" LSL w/ 16d @ 4"oc	3x studs and blkg @ ply edges 3x min. sill plate	870
4 4	15/32" 32/16 STR 1 Both Sides	10d @ 4"oc	5/8" Ø @ 24"oc	A35 @ 8"oc	1 1/4" LSL w/ 16d @ 3"oc	3x studs and blkg @ ply edges 3x min. sill plate	1020
3 3	15/32" 32/16 STR 1 Both Sides	10d @ 3"oc	5/8" Ø @ 16"oc	A35 @ 6"oc	1 3/4" LVL w/ (2) rows 16d @ 3"oc (staggered)	3x studs and blkg @ ply edges 3x min. sill plate	1330

6 HELICAL PILE LOAD TESTS

6.1 Pre-Production Tests (Recommended)

Load tests shall be performed to verify the suitability and capacity of the proposed Helical Pile, and the proposed installation procedures prior to installation of production helical piles. Sacrificial test helical piles shall be constructed immediately prior to the start of work on the production piles. The Owner shall determine the number of pre-production tests, their location, acceptable load and movement criteria, and the type(s) of load direction (i.e., tension, compression, or both). Additional purpose of pre-production tests is to empirically verify the ultimate capacity to the average installing torque of the Helical Pile for the project site.

Pre-production Helical Pile installation methods, procedures, equipment, and overall length shall be identical to the production Helical Piles to the extent practical except where approved otherwise by the Owner.

The Contractor shall submit for review and acceptance the proposed Helical Pile load testing procedure. The pre-production test proposal shall be in general conformance with ASTM D1143 and/or D-3689, and

shall provide the minimum following information:

¨ Type and accuracy of load equipment

¨ Type and accuracy of load measuring equipment

¨ Type and accuracy of pile-head deflection equipment

¨ General description of load reaction system, including description of reaction anchors

¨ Calibration report for complete load equipment, including hydraulic jack, pump, pressure gauge, hoses, and fittings.

The following test procedure shall be considered to meet the minimum requirements. It is not intended to preclude local building codes, which may mandate other requirements, such as full 24-hour load tests.

If the pre-production test fails to meet the design requirements, the Contractor shall modify the Helical Pile design and/or installation methods and retest the modified anchor, as directed by the Owner. For

prescriptive specifications, the Engineer will define the appropriate modifications.

6.2 Load Test Equipment

6.2.1 The load test equipment shall be capable of increasing or decreasing the applied load incrementally. The incremental control shall allow for small adjustments, which may be necessary to maintain the applied load for a sustained, hold period.

6.2.2 The reaction system shall be designed so as to have sufficient strength and capacity to distribute the test loads to the ground. It should also be designed to minimize its movement under load and to prevent applying an eccentric load to the pile head. Test loads are normally higher than the design loads on the structure. The direction of the applied load shall be collinear with the Helical Pile at all times.

6.2.3 Dial gauge(s) shall be used to measure Helical Pile movement. The dial gauge shall have an accuracy of at least +/-0.001-in. and a minimum travel sufficient to measure all Helical Pile movements without requiring resetting the gauge. The dial gauge shall be positioned so its stem is parallel with the axis of the Helical Pile. The stem may rest on a smooth plate located at the pile head. Said plate shall be positioned perpendicular to the axis of the Helical Pile. The dial gauge shall be supported by a reference apparatus to provide an independent fixed reference point. Said reference apparatus shall be independent of the reaction system and shall not be affected by any movement of the reaction system.

6.2.4 The load test equipment shall be re-calibrated, if in the opinion of the Owner and/or Contractor reasonable doubt exists as to the accuracy of the load or deflection measurements.

6.3 Testing Program

6.3.1 The hydraulic jack shall be positioned at the beginning of the test such that the unloading and repositioning of the jack during the test shall not be required. The jack shall also be positioned co-axial with respect to the pile-head so as to minimize eccentric loading. The hydraulic jack shall be capable of applying a load not less than two times the proposed design load (DL). The pressure gauge shall be graduated in 100 psi increments or less. The stroke of the jack shall not be less than the theoretical elastic shortening of the total Helical Pile length at the maximum test load.

6.3.2 An alignment load (AL) shall be applied to the Helical Pile prior to setting the deflection measuring equipment to zero or a reference position. The AL shall be no more than 10% of the design load (i.e., 0.1 DL).

After AL is applied, the test set-up shall be inspected carefully to ensure it is safe to proceed.

6.3.3 Axial compression or tension load tests shall be conducted by loading the Helical Pile in step-wise fashion as shown in Table-3 to the extent practical. Pile-head deflection shall be recorded at the beginning of each step and after the end of the hold time. The beginning of the hold time shall be defined as the moment when the load equipment achieves the required load step.

6.3.4 Test loads shall be applied until continuous jacking is required to maintain the load step or until the test load increment equals 200% of the design load (DL) (i.e., 2.0 DL), whichever occurs first. The observation period for this last load increment shall be 10 minutes. Displacement readings shall be recorded at 1, 2, 3, 4, 5 and 10 minutes (load increment maxima only).

6.3.5 The applied test load shall be removed in four approximately equal decrements per the schedule in Table-3. The hold time for these load decrements shall be 1 minute, except for the last decrement, which shall be held for 5 minutes. This cyclic loading method will permit the analyses of the total, elastic, and net movements, since they can be separated and studied. For special test piles not to be used later in service, further load cycles may be conducted to provide an estimation of the ultimate capacity.

Table-3. Steps for Pre-Production Load Testing

LOAD STEPHOLD TIME

(MINUTES)AL1.0 Min. 0.20 DL2.5 Min.0.40 DL2.5 Min.0.60 DL2.5 Min.0.80 DL2.5 Min.1.0DL2.5 Min.0.75 DL1.0 Min.0.50 DL1.0 Min.0.25 DL1.0 Min.AL1.0 Min.0.5 DL1.0 Min.1.0 DL1.0 Min.1.2 DL2.5 Min.1.4 DL2.5 Min.1.6 DL2.5 Min.1.8 DL2.5 Min.2.0 DL10.0 Min.1.5 DL1.0 Min.1.0 DL1.0 Min.0.5 DL1.0 Min.AL5.0 Min.AL = Alignment Load; DL = Design Load

6.4 Acceptance Criteria for HELICAL PILE Verification Load Tests

Both of the following criteria must be met for approval:

1. The Helical Pile shall sustain the compression and tension design capacities (1.0 DL) with no more than 1 in. (mm) total vertical movement of the pile-head as measured relative to the top of the Helical Pile prior to the start of testing.

2. Failure does not occur at the 2.0 DL maximum compression and tension test loads. The failure load shall be defined by one of the following definitions - whichever results in the lesser load:

· The point at which the movement of the Helical Pile tip exceeds the elastic compression/tension of the pile shaft by 0.08 B, where B is defined as the diameter of the largest helix. (Note that tension loads are limited to the minimum ultimate tensile strength of the coupling joint(s) of the central steel shaft. It is recommended to use the minimum ultimate tensile strengths as published by pier manufacturer.

· The point at which the slope of the load versus deflection (at end of increment) curve exceeds 0.05 inches/kip.

The Contractor shall provide the Owner copies of field test reports confirming Helical Pile configuration and construction details within 24 hours after completion of the load tests. Formal copies shall be submitted as per Section 3.3. This written documentation will either confirm the load capacity as required on the working drawings or propose changes based upon the results of the pre-production tests.

When a Helical Pile fails to meet the acceptance criteria, modifications shall be made to the design, the construction procedures, or both. These modifications include, but are not limited to, de-rating the Helical Pile load capacity, modifying the installation methods and equipment, increasing the minimum effective installation torque, changing the helix configuration, or changing the Helical Pile material (i.e., central steel shaft).

Modifications that require changes to the structure shall have prior review and acceptance of the Owner and Tectonic Design. The cause for any modifications of design or construction procedures shall be decided in order to determine any additional cost implications.

6.5 Production Helical Pile Testing (This may be the only type of load test conducted, depending on project conditions.)

The Contractor shall perform proof tests on a minimum of 10% of the total production Helical Piles. The Helical Piles to be tested will be selected by the Owner. At the Contractor's suggestion, but with the Owner's permission, tension tests may be performed in lieu of compression tests up to 1.00 DL for Helical Piles with sufficient structural tension capacity. The requirements of Table-4 may be regarded as a minimum, however, it is not recommended to test production Helical Piles to values of up to 2.0 DL unless the Helical Pile's failure load is significantly higher than 2.0 DL. The maximum production Helical Pile test load shall be determined by the Owner. For example, ASTM D1143 stipulates testing to 2.0 DL.

The test sequence shall be as shown in Table-4 to the extent practical.

Table-4. Steps for Production Load Testing

LOAD STEPHOLD TIME

(MINUTES)AL0 Min. 0.20 DL2.5 Min.0.40 DL2.5 Min.0.60 DL2.5 Min.0.80 DL2.5 Min.1.00 DL5 Min.0.60 DL1 Min.0.40 DL1 Min.0.20 DL1 Min.AL5 Min.AL = Alignment Load; DL = Design Load

The acceptance criteria for production Helical Piles shall be per Section 6.4 Item 1.

If a production Helical Pile that is tested fails to meet the acceptance criteria, the Contractor shall be directed to proof test another Helical Pile in the vicinity. For failed Helical Piles and further construction of other foundations, the Contractor shall modify the design, the construction procedure, or both. These modifications include, but are not limited to, installing replacement Helical Piles, modifying the installation methods and equipment, increasing the minimum effective installation torque, changing the helix configuration, or changing the Helical Pile material (i.e., central steel shaft). Modifications that require changes to the structure shall have prior review and acceptance of the Owner. Any modifications of design will be considered additional services.

2.1.11 ASTM A536 Standard Specifications for Ductile Iron Castings

2.1.12 ASTM A572 HSLA Columbium-Vanadium Steels of Structural Quality.

2.1.13 ASTM A618 Hot-Formed Welded and Seamless High-Strength Low-Alloy Structural Tubing.

2.1.14 ASTM A656 Hot-Rolled Structural Steel, High-Strength Low-Alloy Plate with Improved Formability.

2.1.15 ASTM A958 Standard Specification for Steel Castings, Carbon, and Alloy, with Tensile Requirements, Chemical Requirements Similar to Wrought Grades.

2.1.16 ASTM A1018 Steel, Sheet and Strip, Heavy Thickness Coils, Hot Rolled, Carbon, Structural, High-Strength Low-Alloy, Columbium or Vanadium, and High-Strength Low-Alloy with Improved Formability.

2.1.17 ASTM D1143 Method of Testing Piles Under Static Axial Compressive Load.

2.1.18 ASTM D3689 Method of Testing Individual Piles Under Static Axial Tensile Load.

2.2 American Welding Society (AWS):

2.2.1 AWS D1.1 Structural Welding Code - Steel.

2.2.2 AWS D1.2 Structural Welding Code - Reinforcing Steel.

2.3 American Society of Civil Engineers (ASCE):

2.3.1 ASCE 20-96 Standard Guidelines for the Design and Installation of Pile Foundations.

2.4 Society of Automotive Engineers (SAE):

2.4.1 SAE J429 Mechanical and Material Requirements for Externally Threaded Fasteners.

3 SUBMITTALS

3.1 Construction Submittals

3.1.1 The Contractor or Engineer shall prepare and submit to the Owner, for review and approval, working drawings and design calculations for the Helical Piles intended for use. All submittals shall be signed and sealed by a Registered Professional Engineer currently licensed in the State of Wyoming.

3.1.2 The Contractor shall submit a detailed description of the construction procedures proposed for use to the Owner for review. This shall include a list of major equipment to be used.

3.1.3 The Working Drawings shall include the following:

3.1.3.a Helical Pile number, location and pattern by assigned identification number

3.1.3.b Helical Pile design load

3.1.3.c Type and size of central steel shaft

3.1.3.d Helix configuration (number and diameter of helix plates)

3.1.3.e Minimum effective installation torque

3.1.3.f Minimum overall length

3.1.3.g Inclination of Helical Pile

3.1.3.h Cut-off elevation

3.1.3.i Helical Pile attachment to structure relative to grade beam, column pad, pile cap, etc.

If the number of helix plates per Helical Pile required for the project is not shown on the Working Drawings, the Contractor shall have the option of performing subsurface tests using methods subject to the review and acceptance of the Owner. The data collected along with other information pertinent to the project site shall be used to determine the required helix configuration.

3.1.4 The Contractor shall submit shop drawings for all Helical Pile components, including corrosion protection and pile top attachment to the Owner for review and approval. This includes Helical Pile lead/starter and extension section identification (manufacturer's catalog numbers).

3.1.5 The Contractor shall submit certified mill test reports for the central steel shaft, as the material is delivered, to the Owner for record purposes. The ultimate strength, yield strength, % elongation, and chemistry composition shall be provided.

3.1.6 The Contractor shall submit plans for pre-production and production testing for the Helical Piles to the Owner for review and acceptance prior to beginning load tests. The purpose of the test is to determine the load versus displacement response of the Helical Pile and provide an estimation of ultimate capacity.

3.1.7 The Contractor shall submit to the Owner copies of calibration reports for each torque indicator or torque motor, and all load test equipment to be used on the project. The calibration tests shall have been performed within forty five (45) working days of the date submitted. Helical Pile installation and testing shall not proceed until the Owner has received the calibration reports. These calibration reports shall include, but are not limited to, the following information:

3.1.7.a Name of project and Contractor

3.1.7.b Name of testing agency

3.1.7.c Identification (serial number) of device calibrated

3.1.7.d Description of calibrated testing equipment

3.1.7.e Date of calibration

3.1.7.f Calibration data

Load test equipment includes load cylinders, pressure gauges, and load transducers. A. B. Chance Mechanical Dial Torque Indicator (SKU C303-1340) is calibrated prior to final assembly. Its torsion bar design eliminates the need for annual re-calibration.

3.1.8 Work shall not begin until all the submittals have been received and approved by the Owner. The Contractor shall allow Tectonic Design (5) business days for review, comment, and return the submittal package after a complete set has been received. All costs associated with incomplete or unacceptable submittals shall be the responsibility of the Contractor.

3.2 Installation Records

The Contractor shall provide the Owner copies of Helical Pile installation records within 24 hours after each installation is completed. These installation records shall include, but are not limited to, the following information.

3.2.1 Name of project and Contractor

3.2.2 Name of Contractor's supervisor during installation

3.2.3 Date and time of installation

3.2.4 Name and model of installation equipment

3.2.5 Type of torque indicator used

3.2.6 Location of Helical Pile by assigned identification number

3.2.7 Actual Helical Pile type and configuration - including lead section (number and size of helix plates), number and type of extension sections (manufacturer's SKU numbers)

3.2.8 Helical Pile installation duration and observations

3.2.9 Total length of installed Helical Pile

3.2.10 Cut-off elevation

3.2.11 Inclination of Helical Pile

3.2.12 Installation torque at one-foot intervals for the final 10 feet

3.2.13 Comments pertaining to interruptions, obstructions, or other relevant information

3.2.14 Rated load capacities

3.3 Test Reports

The Contractor shall provide the Owner copies of field test reports within 24 hours after completion of the load tests. Formal copies shall be submitted within a reasonable amount of time following test completion. These test reports shall include, but are not limited to, the following information (note Section 6 - Helical Pile Load Tests).

3.3.1 Name of project and Contractor

3.3.2 Name of Contractor's supervisor during installation

3.3.3 Name of third party test agency, if required

3.3.4 Date, time, and duration of test

3.3.5 Location of Helical Pile by assigned identification number

3.3.6 Type of test (i.e. tension or compression)

3.3.7 Description of calibrated testing equipment and test set-up

3.3.8 Actual Helical Pile type and configuration - including lead section, number and type of extension sections (manufacturer's SKU numbers)

3.3.9 Steps and duration of each load increment

3.3.10 Cumulative pile-head movement at each load step

3.3.11 Comments pertaining to test procedure, equipment adjustments, or other relevant information

3.3.12 Signed by third party test agency rep., registered professional engineer, or as required by local jurisdiction

3.4 Closeout Submittals

3.4.1 Warranty: Warranty documents specified herein

3.4.1.a Project Warranty: Refer to Conditions of the Contract for project warranty provisions

Coordinate the warranty period stated herein with the project warranty as stated in the Contract documents.

Warranty Period: (Specify Term) years commencing on date of Substantial Completion

3.4.1.b Manufacturer's Warranty: Submit, for Owner's Acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights the Owner may have under Contract Document.

4 PRODUCTS AND MATERIALS

additional Helical Pile location shall be subject to the review and acceptance of the Owner.

5.5.5 If the Helical Pile is refused or deflected by a subsurface obstruction, the installation shall be terminated and the pile removed. The obstruction shall be removed, if feasible, and the Helical Pile re-installed. If the obstruction can't be removed, the Helical Pile shall be installed at an adjacent location, subject to review of Tectonic Design.

5.5.6 If the torsional strength rating of the central steel shaft and/or installation equipment has been reached prior to proper positioning of the last plain extension section relative to the final elevation, the Contractor may remove the last plain extension and replace it with a shorter length extension. If it is not feasible to remove the last plain extension, the Contractor may cut said extension shaft to the correct elevation. The Contractor shall not reverse (back-out) the Helical Pile to facilitate extension removal.

5.5.7 The average torque for the last three feet of penetration shall be used as the basis of comparison with the minimum installation torque as shown on the working drawings. The average torque shall be defined as the average of the last three readings recorded at one-foot intervals.

The average torque can be empirically related to the Helical Pile's ultimate capacity in end-bearing. This well-known attribute of helical piles can be used as a production control method to indicate the Helical Pile's end-bearing capacity.

Helical Pile Specifications

1. GENERAL

1.1 Purpose of Specification

The purpose of this specification is to detail the furnishing of all designs, materials, tools, equipment, labor and supervision, and installation techniques necessary to install Helical Piles as detailed on the drawings, including connection details. This shall include provisions for load testing that may be part of the scope of work

1.2 Scope of Work

This work consists of furnishing all necessary engineering and design services (if required), supervision, labor, tools, materials, and equipment to perform all work necessary to install the Helical Piles, at 355 Meadowlark Dr., Teton County, Wyoming for Boardwalk Real Estate, LLC. per the specifications described herein, and as shown on the drawings. The Contractor shall install a Helical Pile that will develop the load capacities as detailed on the drawings.

1.3 Qualifications of the Helical Pile Contractor

The Helical Pile Contractor shall be experienced in performing design and construction of Helical Piles and shall furnish all materials, labor, and supervision to perform the work. The Contractor shall be trained and certified by the Helical Pier manufacturer in the proper methods of design and installation of Helical Piles. The Contractor shall provide names of on-site personnel materially involved with the work, including those who carry documented certification. At a minimum, these personnel shall include foreman, machine operator, and project engineer/manager.

The Helical Pile Contractor shall not sublet the whole or any part of the contract without the express written permission of the Owner.

1.4 Definitions

A partial list follows.

Contractor: The person/firm responsible for performing the Helical Pile work.

Helical Pile: A bearing type foundation element consisting of a lead or starter section, helical extension (if so required by site conditions), plain extension section(s), and a pile cap. A.k.a. helical screw pile, screw pile, helical screw foundation.

Installation Torque(T): The resistance generated by a Helical Pile when installed into soil. The installation resistance is a function of the soil type, and size and shape of the various components of the Helical Pile.

Pile Cap: Connection means by which structural loads are transferred to the Helical Pile. The type of connection varies depending upon the requirements of the project and type of Helical Pile material used.

Safety Factor: The ratio of the ultimate capacity to the working or design load used for the design of any structural element.

Torque Strength Rating: The maximum torque energy that can be applied to the helical pile foundation during installation in soil, a.k.a. allowable, or safe torque.

1.5 Allowable Tolerances

The tolerances quoted in this section are suggested maximums. The actual values established for a particular project will depend on the structural application.

1.5.1Centerline of Helical Piles shall not be more than 3 inches from indicated plan location.

1.5.2Helical Pile plumbness shall be within 2 of design alignment.

1.5.3Top elevation of Helical Pile shall be within +1 inch to -2 inches of the design vertical elevation.

1.6 Quality Assurance

1.6.1Helical Piles shall be installed by a certified Contractor. These Contractors shall have satisfied the certification requirements relative to the technical aspects of the product and installation procedures as therein specified. Certification documents shall be provided upon request to the Owner or their representative.

1.6.2The Contractor shall employ an adequate number of skilled workers who are experienced in the necessary crafts and who are familiar with the specified requirements and methods needed for proper performance of the work of this specification.

1.6.3All Helical Piles shall be installed in the presence of a designated representative of the Owner unless said representative informs the Contractor otherwise. The designated representative shall have the right of access to any and all field installation records and test reports.

1.6.4Helical Pile components as specified therein shall be manufactured by a facility whose quality systems comply with ISO (International Organization of Standards) 9001 requirements. Certificates of Registration denoting ISO Standards Number shall be presented upon request to the Owner or their representative.

1.6.6Design of Helical Piles shall be performed by an entity as required in accordance with existing local code requirements or established local practices. This design work may be performed by a licensed professional engineer in the State of Wyoming.

1.7 Design Criteria

1.7.1Helical Piles shall be designed to meet the specified loads and acceptance criteria as shown on the drawings. The calculations and drawings required from the Contractor or Engineer shall be submitted to the Owner for review and acceptance.

1.7.2The allowable working load on the Helical Piles shall not exceed the following values:

1.7.2.1 For compression loads:

Pallowc = 0.4 * fyshaft * Ashaft

Where: Pallowc= allowable working load in compression (kip)

fyshaft = minimum yield strength of central steel shaft (ksi)

Ashaft = area of central steel shaft (with corrosion allowance if required) (in.2)

These allowable working loads may be reduced by the allowable load capacity per helix plate(s). It is recommended to use the allowable helix capacities per helical pile type as published by pier manufacturer.

1.7.2.2 For tension loads:

Pallowt = Sut / FS

Where: Pallowt = allowable working load in tension (kip)

Sut = Min. ultimate tensile strength of central steel shaft segment (at coupling joint) (kip)

FS = factor of safety suitable for application, i.e. temporary or permanent structures

For permanent applications, it is recommended to use a factor of safety of two (2). For temporary applications, factor of safety typically ranges between 1.25 and 1.5.

It is recommended to use the minimum ultimate tensile strengths as published by pier manufacturer. The ultimate tensile strength may be reduced by the ultimate capacity per helix plate(s) -depending on the number of helix plates specified and type of shaft family used. The ultimate tensile strength may also be reduced by the torque limited ultimate capacity - depending on the type of shaft family used.

1.7.3The ultimate structural capacity shall be determined as:

1.7.3.1 For compression loads:

Pultc = fyshaft * Ashaft

Where: Pultc= ultimate structural capacity in compression (kip)

fyshaft = minimum yield strength of central steel shaft (ksi)

Ashaft = area of central steel shaft (with corrosion allowance if required) (in.2)

The ultimate structural capacity may be reduced by the ultimate load capacity per helix plate(s). It is recommended to use the ultimate helix capacities per helical pile type as published by pier manufacturer.

1.7.3.2 For tension loads:

Pultt = Sut

Where: Pultt = Ultimate structural capacity in tension (kip)

Sut = Minimum ultimate tensile strength of central steel shaft (kip)

It is recommended to use the minimum ultimate tensile strengths as published by pier manufacturer. The ultimate tensile strength may be reduced by the ultimate capacity per helix plate(s) -depending

on the number of helix plates specified and type of shaft family used. The ultimate tensile strength may also be reduced by the torque limited ultimate capacity - depending on the type of shaft family used.

1.7.4The overall length and installed torque of a Helical Pile shall be specified such that the required in-soil capacity is developed by end-bearing on the helix plate(s) in an appropriate strata(s).

Helical Piles are not suited for solid, competent rock, but the helix plates can penetrate into dense bearing soils. It is recommended that HELICAL PILES be installed to a specified minimum torque and depth to ensure the helical plates are terminated in bearing soils. Appropriate and repeatable installation techniques and Helical Pile termination criteria must be identified and verified in the field.

1.7.5Down-Drag/Negative Skin Friction: Helical Piles are slender shaft foundation elements and are not practically affected by down-drag/negative skin friction. If Helical Piles with central steel shafts >4" in diameter are used in areas where compressible or decomposing soils overlie bearing stratum, or where expansive or frozen soils can cause pile jacking, Helical Pile shafts should be provided with a no-bond zone along a specified length to prevent load transfer that may adversely affect pile capacity. Alternately, Helical Piles can be provided with sufficient axial load capacity to resist down drag/negative skin friction forces.

1.7.6The Helical Pile attachment (pile cap) shall distribute the design load (DL) to the concrete foundation such that the concrete bearing stress does not exceed those in the ACI Building Code and the stresses in the steel plates/welds does not exceed AISC allowable stresses for steel members.

2 REFERENCED CODES AND STANDARDS

Standards listed by reference, including revisions by issuing authority, form a part of this specification section to the extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation. In case of conflict, the particular requirements of this specification shall prevail. The latest publication as of the issue of this specification shall govern, unless indicated otherwise.

2.1 American Society for Testing and Materials (ASTM):

2.1.1ASTM A29/A29M Steel Bars, Carbon and Alloy, Hot-Wrought and Cold Finished.

2.1.2ASTM A36/A36M Structural Steel.

2.1.3ASTM A53 Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.

2.1.4ASTM A153 Zinc Coating (Hot Dip) on Iron and Steel Hardware.

2.1.5ASTM A252 Welded and Seamless Steel Pipe Piles.

2.1.6ASTM A193/A193M Alloy-Steel and Stainless Steel Bolting Materials for High Temperature Service.

2.1.7ASTM A320/A320M Alloy-Steel Bolting Materials for Low Temperature Service.

2.1.8ASTM A325 Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.

2.1.9ASTM A500 Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

2.1.10 ASTM A513 Standard Specification for Electric Resistance Welded Carbon and Alloy Steel Mechanical Tubing.

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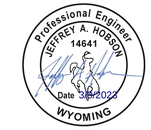

PERMIT SET

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6165 Burcher Rd
Wilson WY 83014

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PROJECT #:	22-011
DRAWN:	JAH

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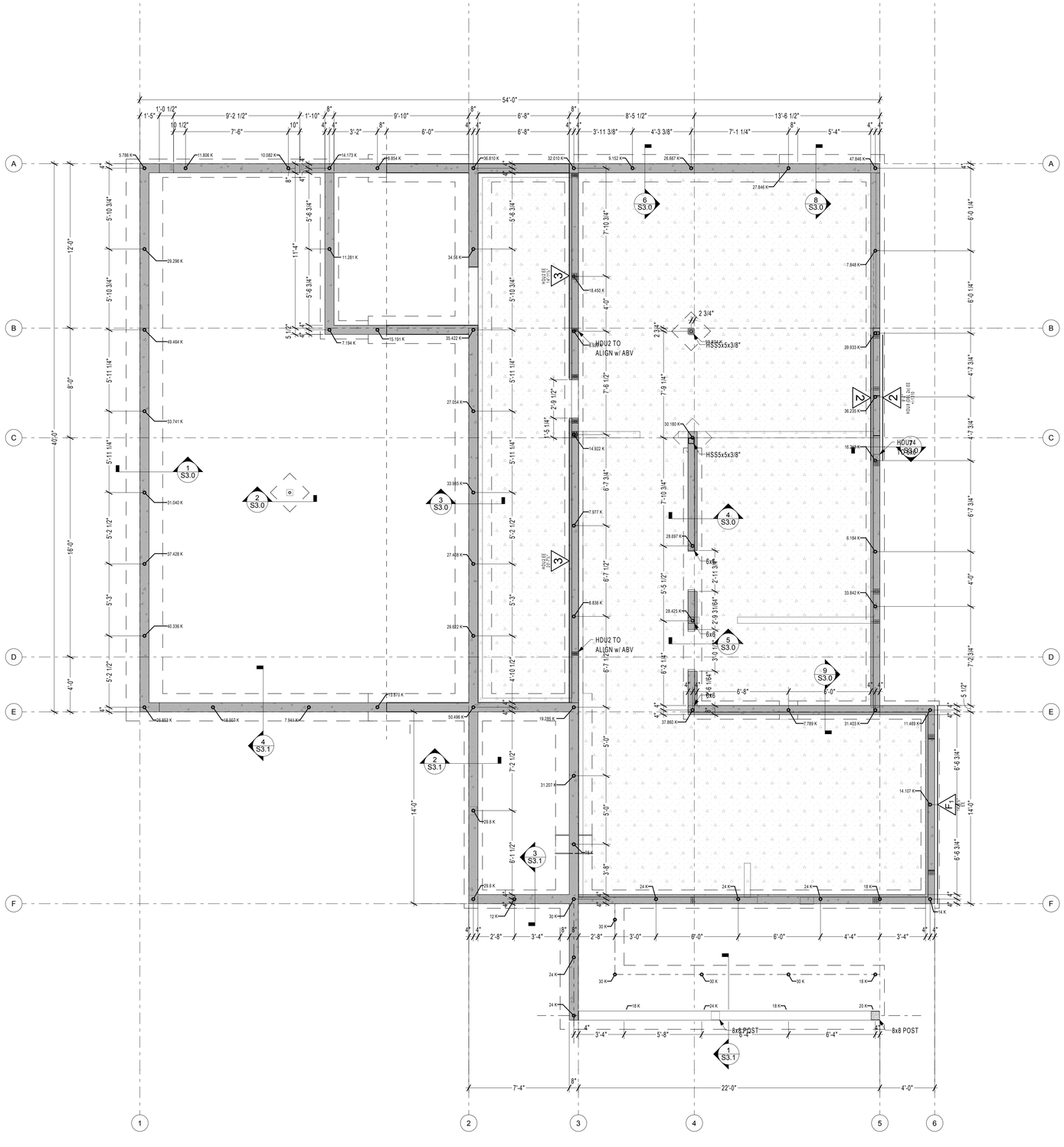
S0.3

Shear Wall Schedule & Special Inspection

V5



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

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Wilson WY 83014

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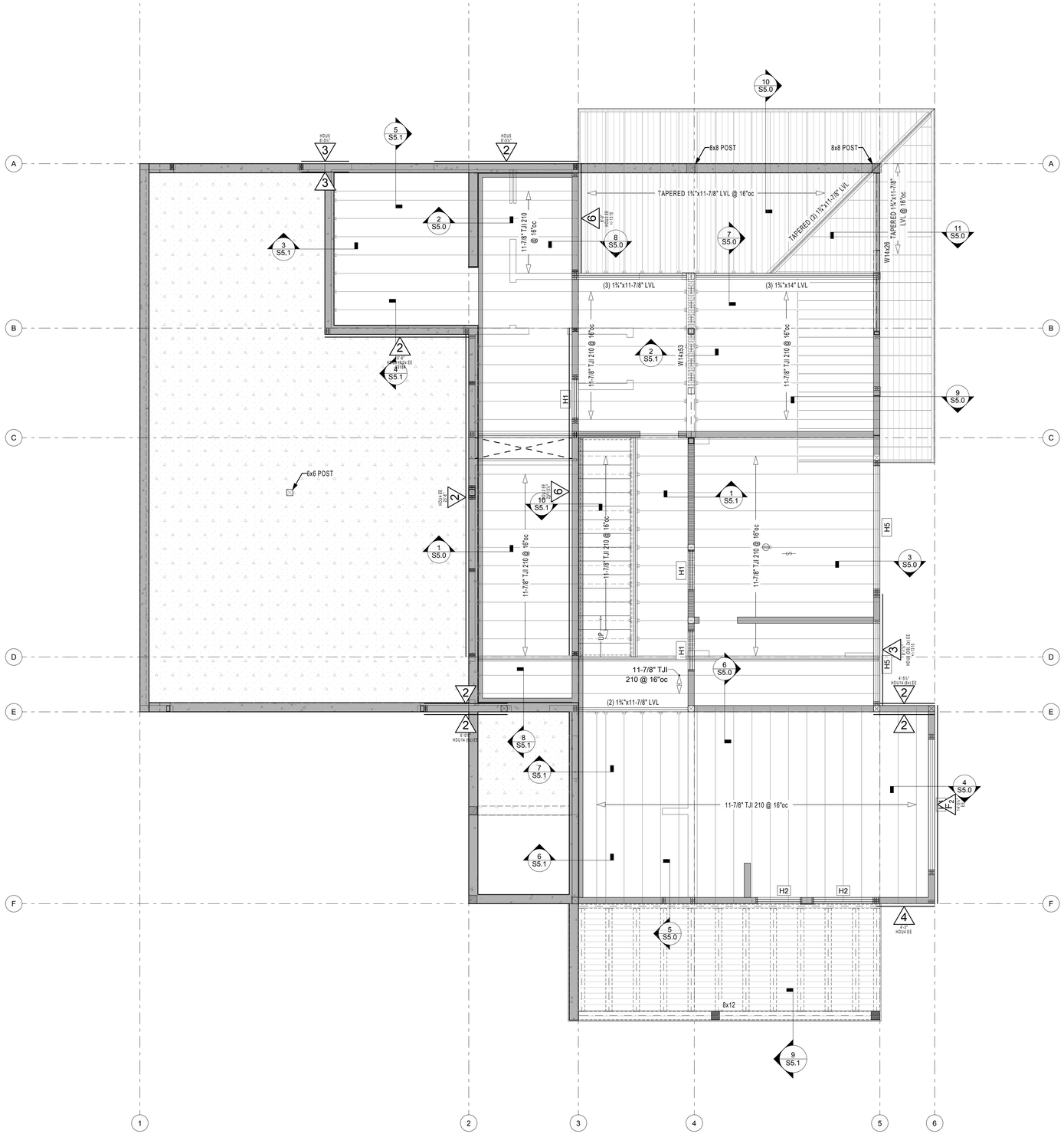
S1.0
Basement/Foundation

V5



1 Main Level Framing
SCALE: 1/4" = 1'-0"

HEADER SCHEDULE	
LABEL	HEADER
H1	(3) 2x6
H2	(3) 2x8
H3	(3) 2x10
H4	(3) 1¾"x7¼" LVL
H5	(3) 1¾x9½" LVL
H6	(3) 1¾x11-7/8" LVL
H7	(3) 1¾x14" LVL
H8	(3) 1¾x16" LVL
H9	(2) 1¾x11-7/8" LVL

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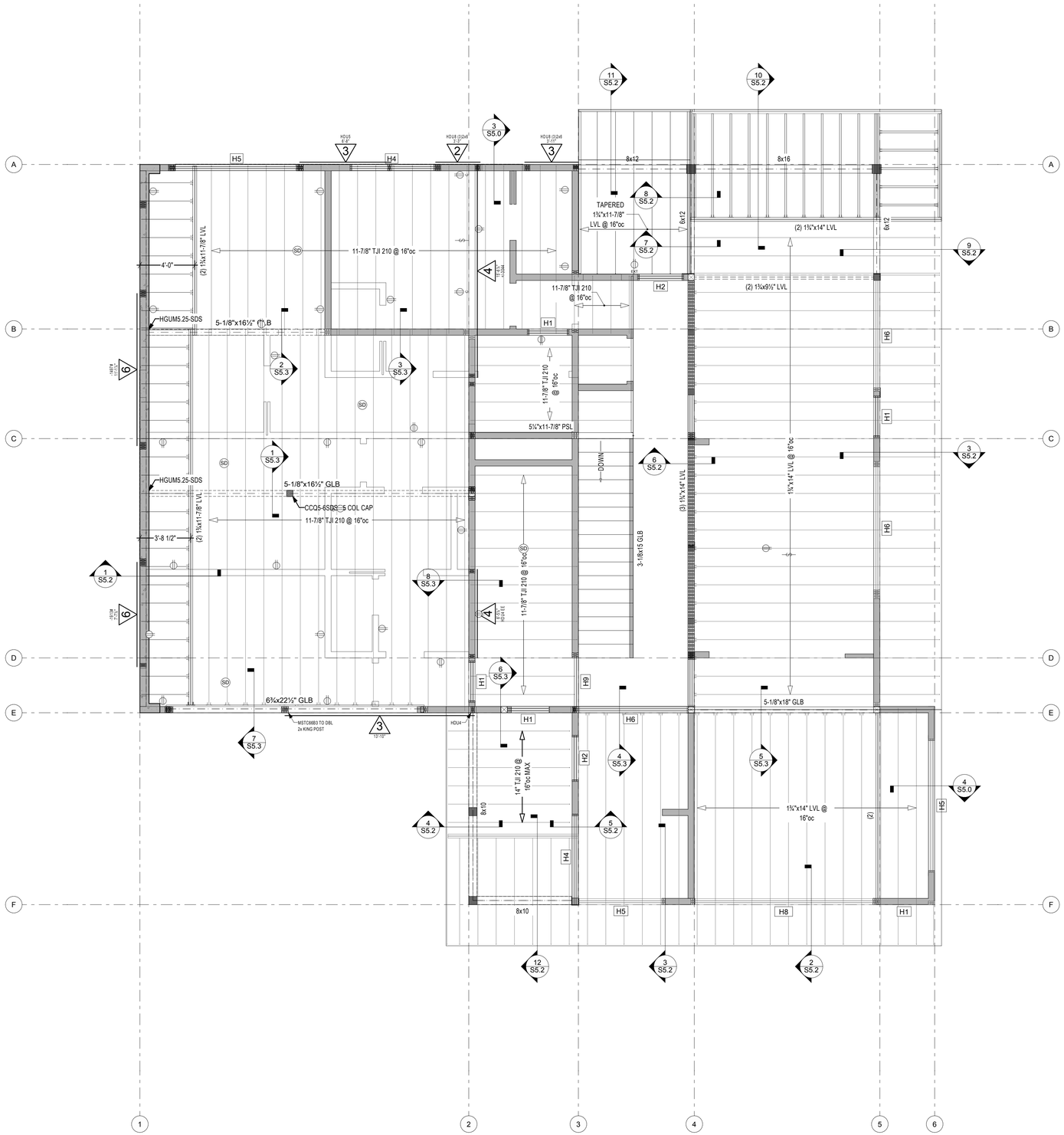
S1.1
Main Level Framing Plan

V5



1 Upper Level Framing
SCALE: 1/4" = 1'-0"

HEADER SCHEDULE	
LABEL	HEADER
H1	(3) 2x6
H2	(3) 2x8
H3	(3) 2x10
H4	(3) 1¾"x7¼" LVL
H5	(3) 1¾x9½" LVL
H6	(3) 1¾x11-7/8" LVL
H7	(3) 1¾x14" LVL
H8	(3) 1¾x16" LVL
H9	(2) 1¾x11-7/8" LVL

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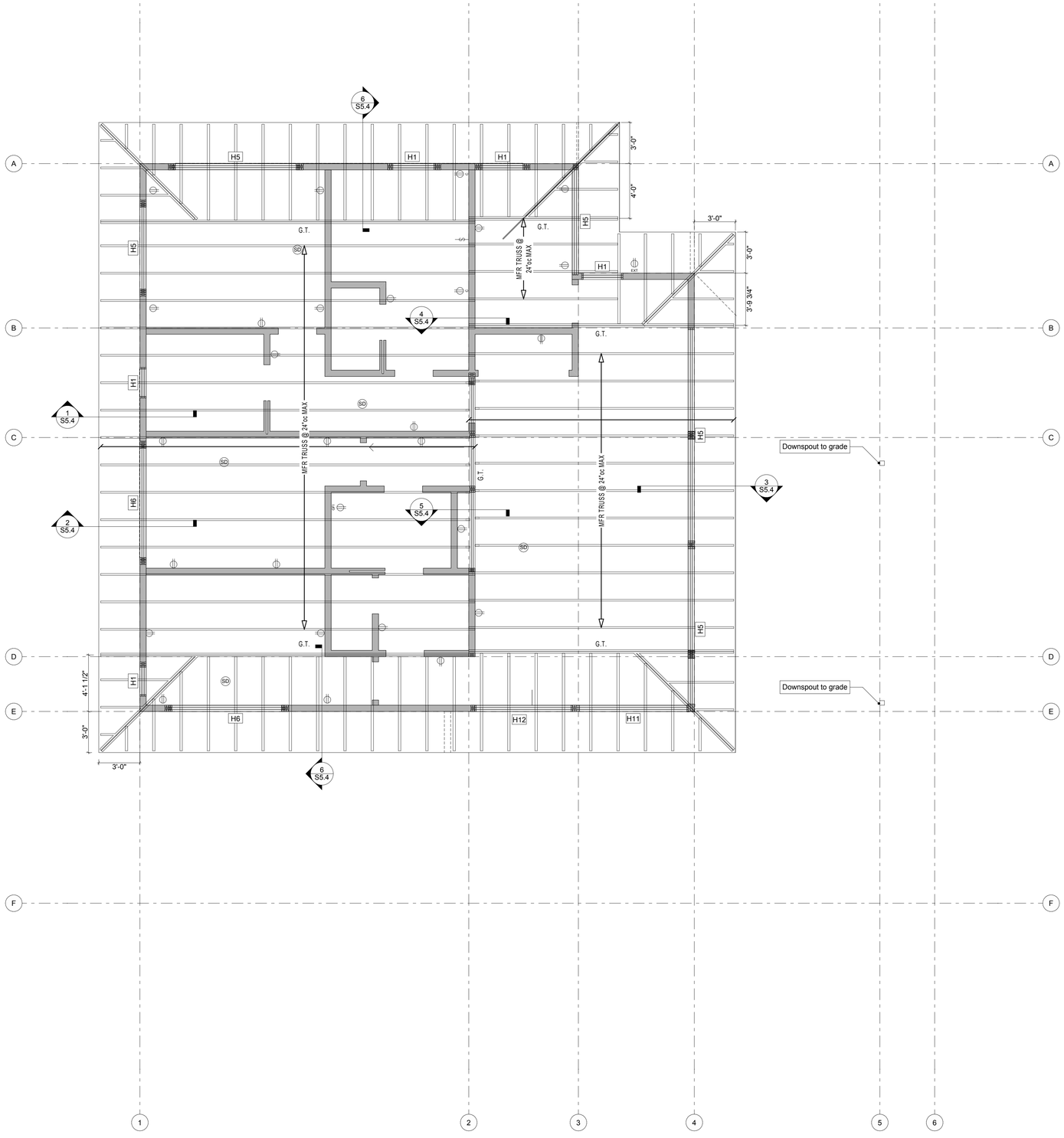
S1.2

Upper Level Framing Plan

V5



1 Upper Roof Framing
SCALE: 1/4" = 1'-0"

HEADER SCHEDULE	
LABEL	HEADER
H1	(3) 2x6
H2	(3) 2x8
H3	(3) 2x10
H4	(3) 1¾"x7¼" LVL
H5	(3) 1¾x9½" LVL
H6	(3) 1¾x11-7/8" LVL
H7	(3) 1¾x14" LVL
H8	(3) 1¾x16" LVL
H9	(2) 1¾x11-7/8" LVL

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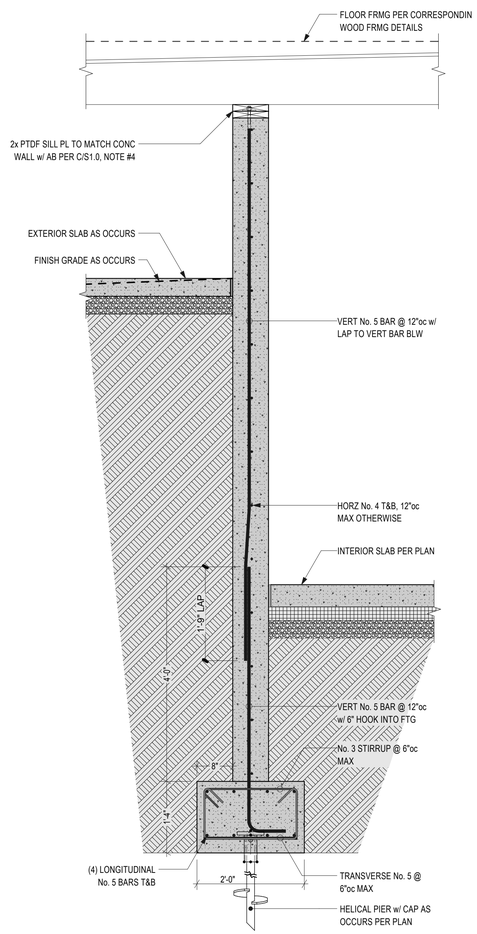
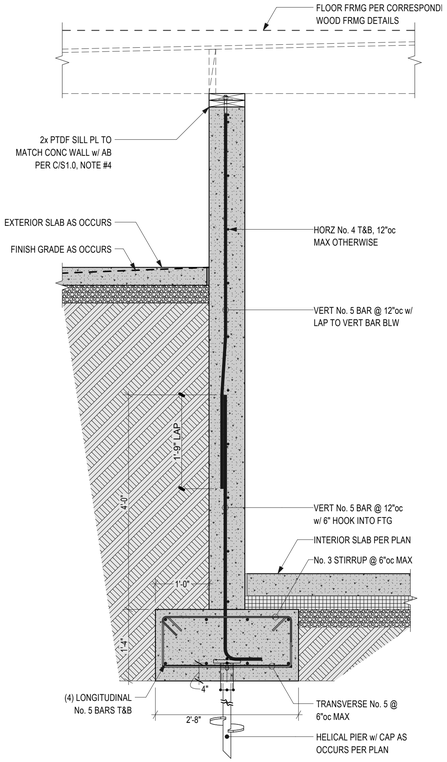
S1.3

Upper Roof Framing Plan

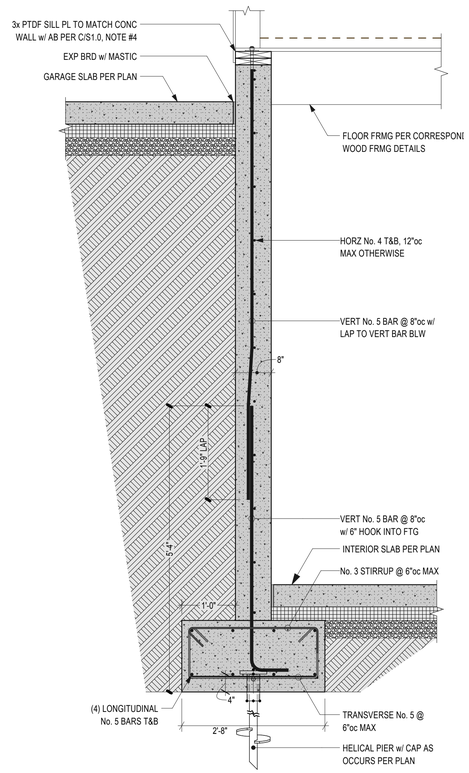
V5



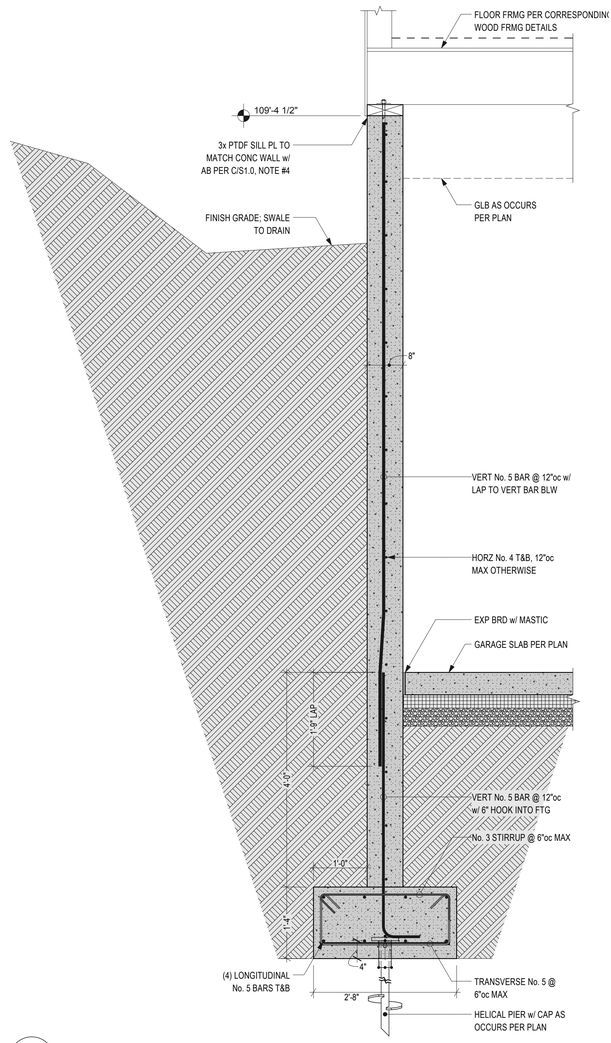
8 S-004 Concrete Detail
SCALE: 3/4" = 1'-0"



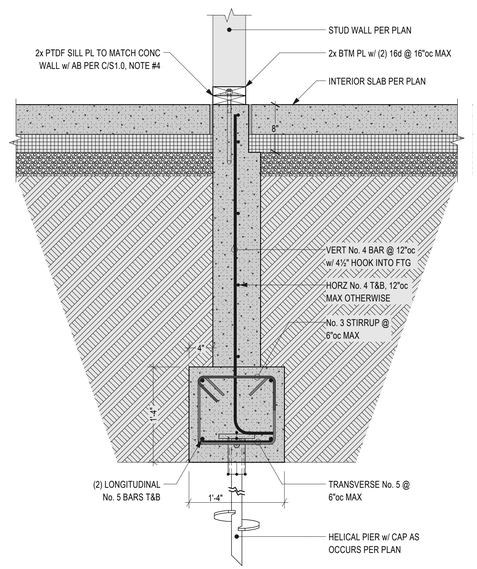
6 S-003 Concrete Detail
SCALE: 3/4" = 1'-0"



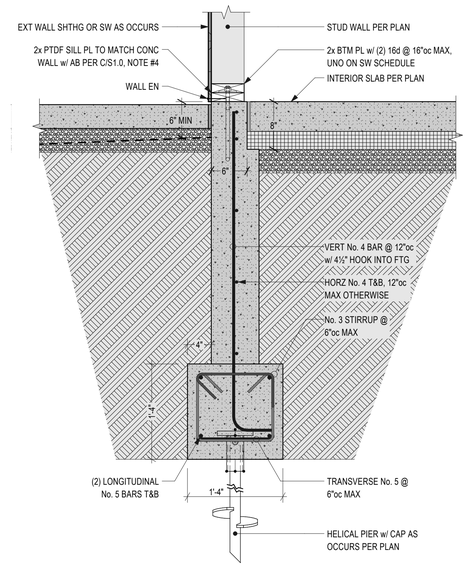
3 S-002 Concrete Detail
SCALE: 3/4" = 1'-0"



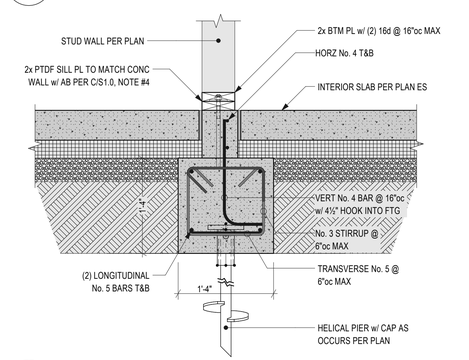
1 S-001 Concrete Detail
SCALE: 3/4" = 1'-0"



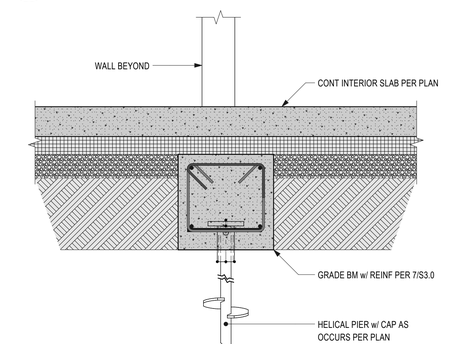
9 S-006 Concrete Detail
SCALE: 1" = 1'-0"



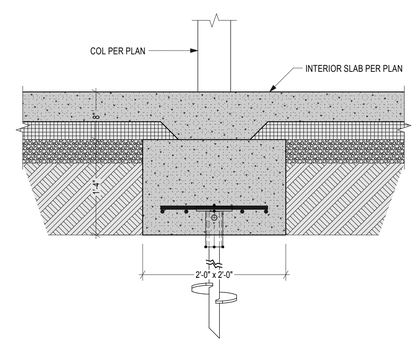
7 S-005 Concrete Detail
SCALE: 1" = 1'-0"



4 S-007 Concrete Detail
SCALE: 1" = 1'-0"



5 S-008 Concrete Detail
SCALE: 1" = 1'-0"



2 S-009 Concrete Detail
SCALE: 1" = 1'-0"

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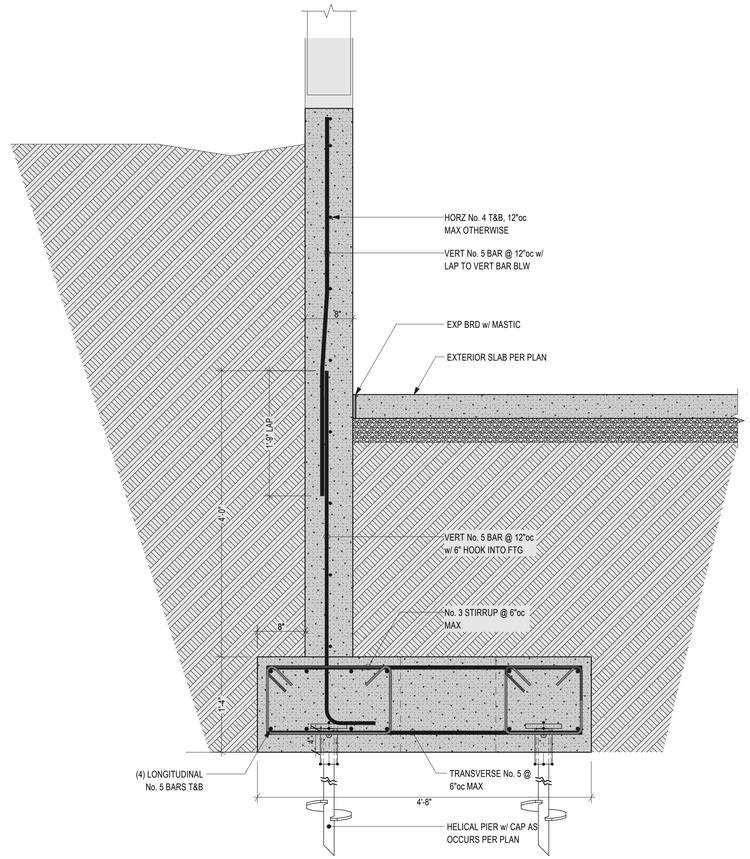
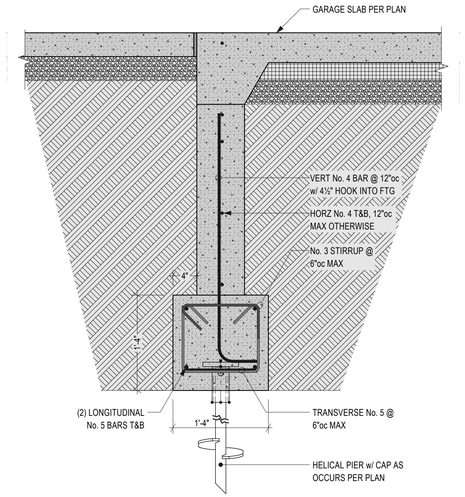
S3.0
Concrete Details

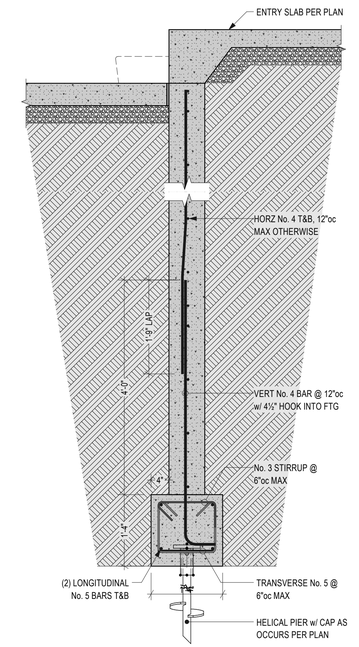
V5



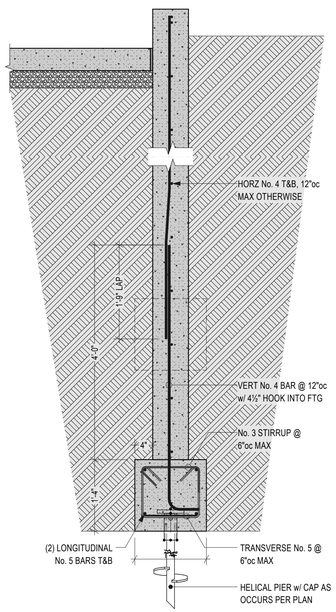
1 S-010 Concrete Detail
SCALE: 1" = 1'-0"



4 S-013 Concrete Detail
SCALE: 1" = 1'-0"



2 S-011 Concrete Detail
SCALE: 3/4" = 1'-0"



3 S-012 Concrete Detail
SCALE: 3/4" = 1'-0"

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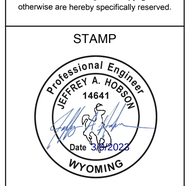

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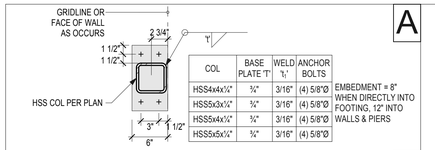
S3.1
Concrete Details

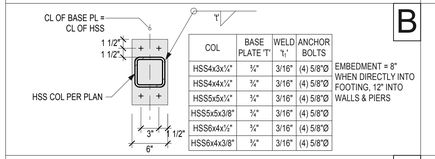
V5



A

COL	BASE PLATE 'T'	WELD 't1'	ANCHOR BOLTS
HSS4x4x¼"	¾"	3/16"	(4) 5/8"Ø
HSS5x3x¼"	¾"	3/16"	(4) 5/8"Ø
HSS5x4x¼"	¾"	3/16"	(4) 5/8"Ø
HSS5x5x¼"	¾"	3/16"	(4) 5/8"Ø

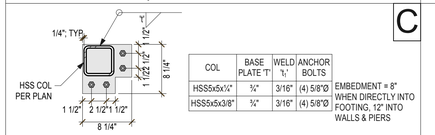
EMBEDMENT = 8" WHEN DIRECTLY INTO FOOTING, 12" INTO WALLS & PIERS



B

COL	BASE PLATE 'T'	WELD 't1'	ANCHOR BOLTS
HSS4x3x¼"	¾"	3/16"	(4) 5/8"Ø
HSS4x4x¼"	¾"	3/16"	(4) 5/8"Ø
HSS5x5x¼"	¾"	3/16"	(4) 5/8"Ø
HSS5x5x3/8"	¾"	3/16"	(4) 5/8"Ø
HSS6x4x½"	¾"	3/16"	(4) 5/8"Ø
HSS6x4x3/8"	¾"	3/16"	(4) 5/8"Ø

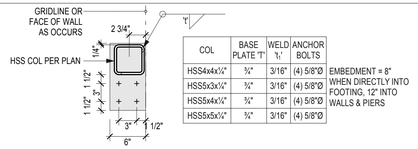
EMBEDMENT = 8" WHEN DIRECTLY INTO FOOTING, 12" INTO WALLS & PIERS



C

COL	BASE PLATE 'T'	WELD 't1'	ANCHOR BOLTS
HSS5x5x¼"	¾"	3/16"	(4) 5/8"Ø
HSS5x5x3/8"	¾"	3/16"	(4) 5/8"Ø

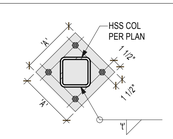
EMBEDMENT = 8" WHEN DIRECTLY INTO FOOTING, 12" INTO WALLS & PIERS



E

COL	BASE PLATE 'T'	WELD 't1'	ANCHOR BOLTS
HSS4x4x¼"	¾"	3/16"	(4) 5/8"Ø
HSS5x3x¼"	¾"	3/16"	(4) 5/8"Ø
HSS5x4x¼"	¾"	3/16"	(4) 5/8"Ø
HSS5x5x¼"	¾"	3/16"	(4) 5/8"Ø

EMBEDMENT = 8" WHEN DIRECTLY INTO FOOTING, 12" INTO WALLS & PIERS

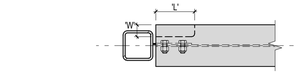


D

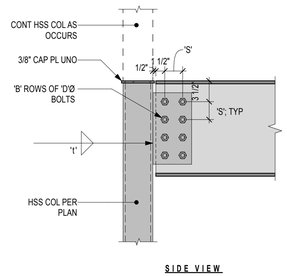
COL	BASE PLATE 'T'	WELD 't1'	ANCHOR BOLTS
HSS5x5x¼"	¾"	3/16"	(4) 5/8"Ø

EMBEDMENT = 8" WHEN DIRECTLY INTO FOOTING, 12" INTO WALLS & PIERS

1 Steel Base Plates
SCALE: 1" = 1'-0"



PLAN VIEW



SIDE VIEW

W-Flange Beam	Shear Tab 'T'	Fillet Weld 't'	'A'	'B' Rows	No. Bolts per Row	'D' Ø Bolts	'S' Spacing	COPE (LxW)
W12x50	¼"	3/16"	1¾"	(1)	(3)	¾" Ø	2½"	
W14x26	¼"	3/16"	2"	(1)	(3)	¾" Ø	3"	
W14x22	¼"	3/16"	2"	(1)	(3)	¾" Ø	3"	
W14x30	¼"	3/16"	2"	(1)	(3)	¾" Ø	3"	
W14x38	¼"	3/16"	2"	(1)	(3)	¾" Ø	3"	
W14x48	¼"	3/16"	2"	(1)	(3)	¾" Ø	3"	
W16x26	¼"	3/16"	2"	(1)	(4)	¾" Ø	3"	

2 W-Flange to HSS Column
SCALE: 1" = 1'-0"

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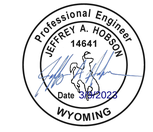

PERMIT SET

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6165 Burcher Rd
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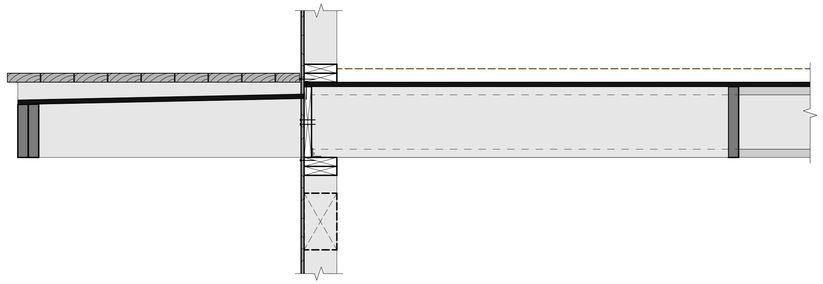
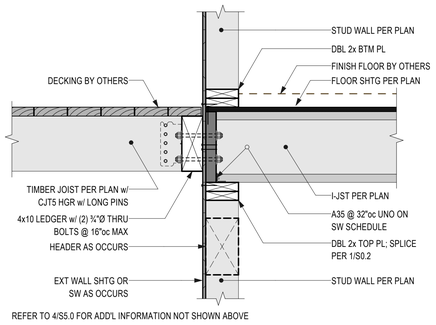
S4.0
Steel Framing Details

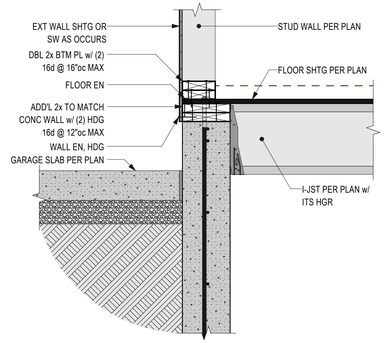
V5



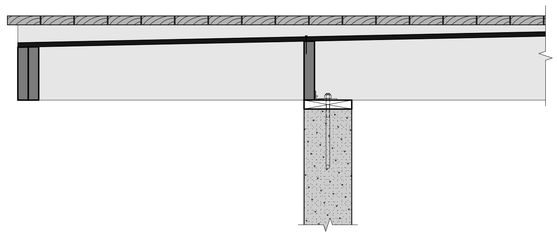
9 S-108 Framing Detail
SCALE: 1" = 1'-0"



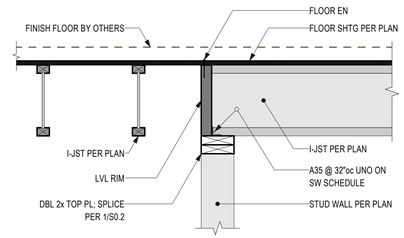
5 S-106 Framing Detail
SCALE: 1" = 1'-0"



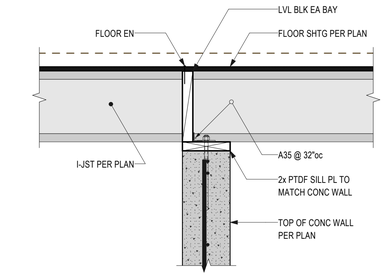
1 S-101 Framing Detail
SCALE: 1" = 1'-0"



10 S-110 Framing Detail
SCALE: 1" = 1'-0"

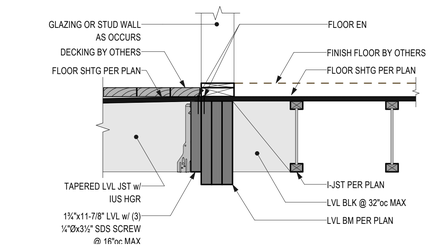


6 S-107 Framing Detail
SCALE: 1" = 1'-0"

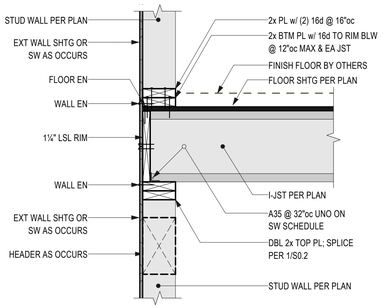


2 S-102 Framing Detail
SCALE: 1" = 1'-0"

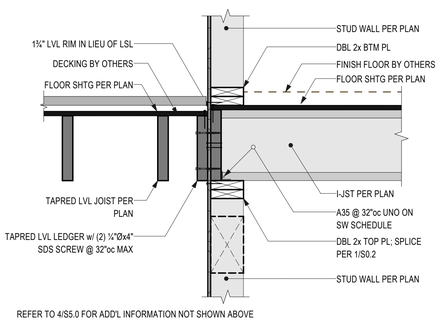
11 S-109 Framing Detail
SCALE: 1" = 1'-0"



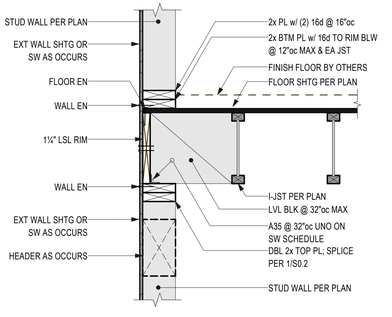
7 S-111 Framing Detail
SCALE: 1" = 1'-0"



3 S-103 Framing Detail
SCALE: 1" = 1'-0"



8 S-112 Framing Detail
SCALE: 1" = 1'-0"



4 S-104 Framing Detail
SCALE: 1" = 1'-0"

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JEFFREY A. HOBSON
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Date 3/9/2023
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PERMIT SET

ROSCOE RESIDENCE

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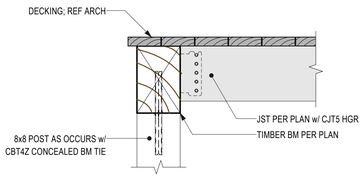
DATE:	3/9/2023
PROJECT #:	22-011
DRAWN:	JAH

ISSUE:

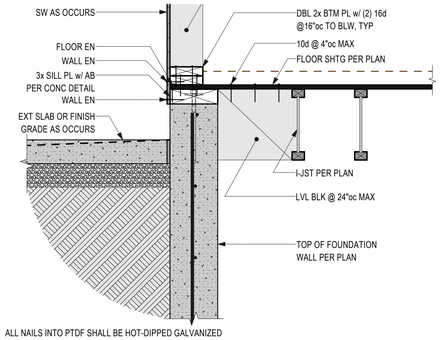
Building Permit Set	3.9.23

S5.0
Wood Framing Details

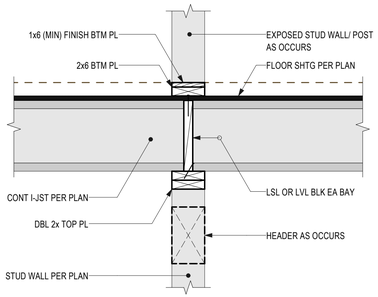
V5



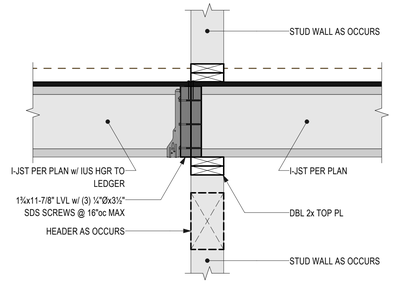
9 S-121 Framing Detail
SCALE: 1" = 1'-0"



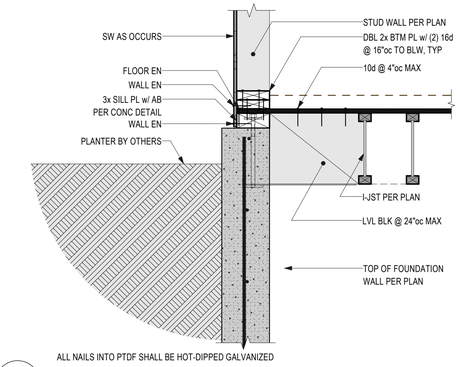
5 S-117 Framing Detail
SCALE: 1" = 1'-0"



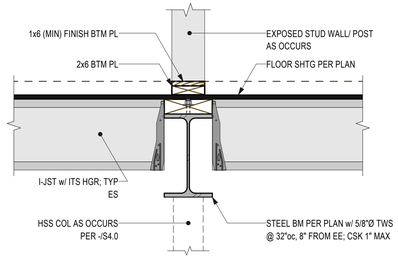
1 S-113 Framing Detail
SCALE: 1" = 1'-0"



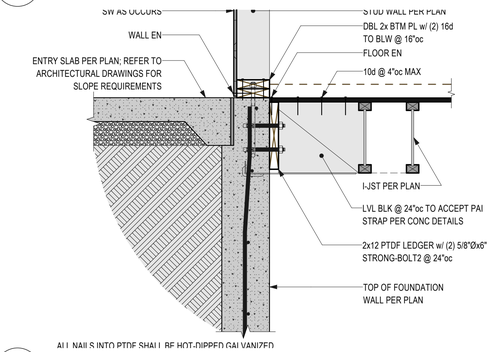
10 S-122 Framing Detail
SCALE: 1" = 1'-0"



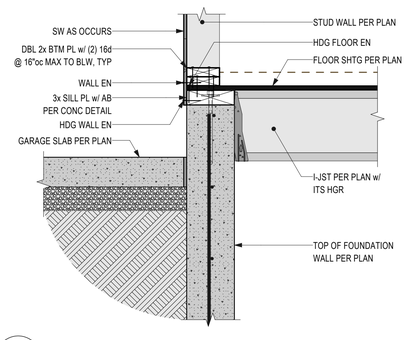
6 S-118 Framing Detail
SCALE: 1" = 1'-0"



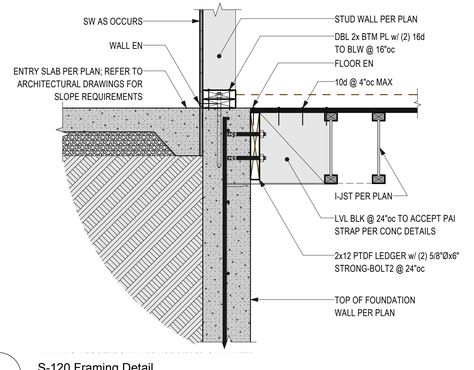
2 S-114 Framing Detail
SCALE: 1" = 1'-0"



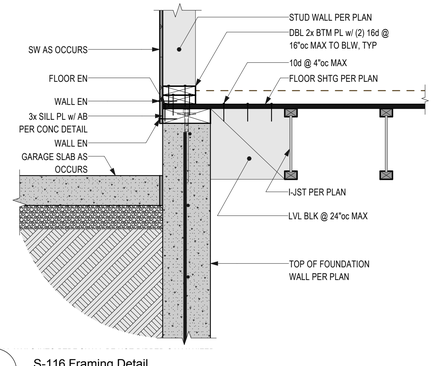
7 S-119 Framing Detail
SCALE: 1" = 1'-0"



3 S-115 Framing Detail
SCALE: 1" = 1'-0"



8 S-120 Framing Detail
SCALE: 1" = 1'-0"



4 S-116 Framing Detail
SCALE: 1" = 1'-0"

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PERMIT SET

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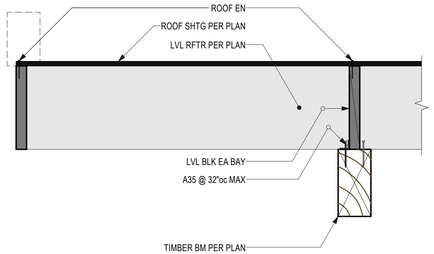
ISSUE:

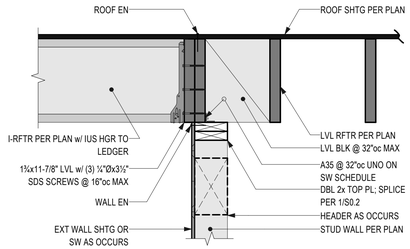
Building Permit Set	3.9.23

S5.1
Wood Framing Details

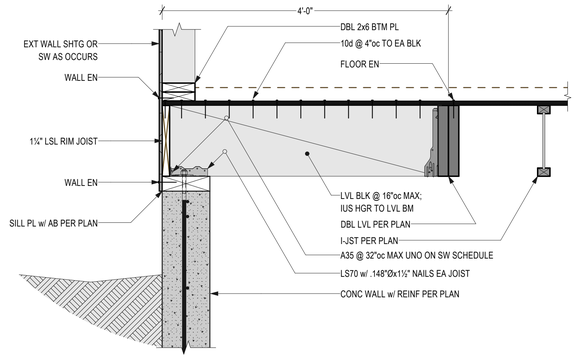
V5



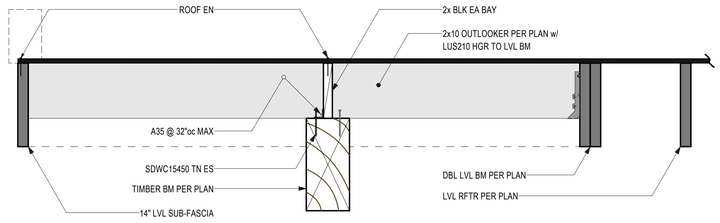
9 S-211 Framing Detail
SCALE: 1" = 1'-0"



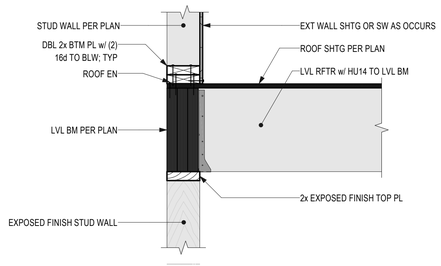
5 S-207 Framing Detail
SCALE: 1" = 1'-0"



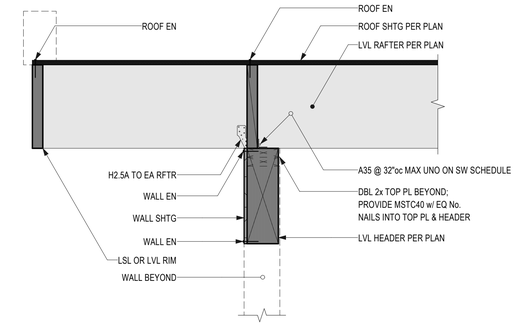
1 S-201 Framing Detail
SCALE: 1" = 1'-0"



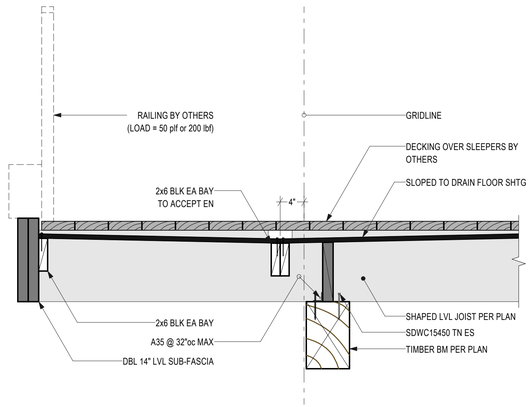
10 S-212 Framing Detail
SCALE: 1" = 1'-0"



6 S-210 Framing Detail
SCALE: 1" = 1'-0"



2 S-204 Framing Detail
SCALE: 1" = 1'-0"



11 S-213 Framing Detail
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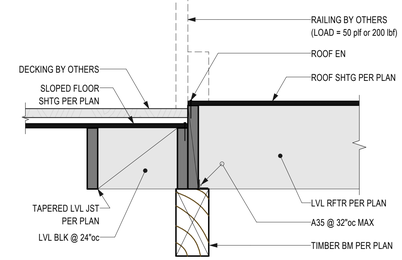
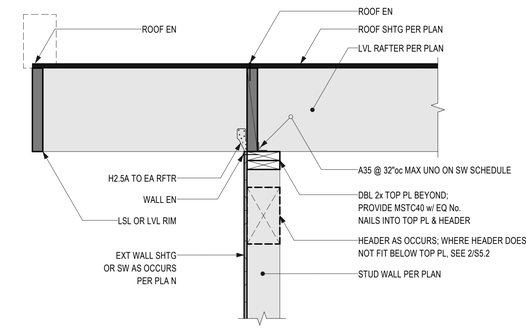
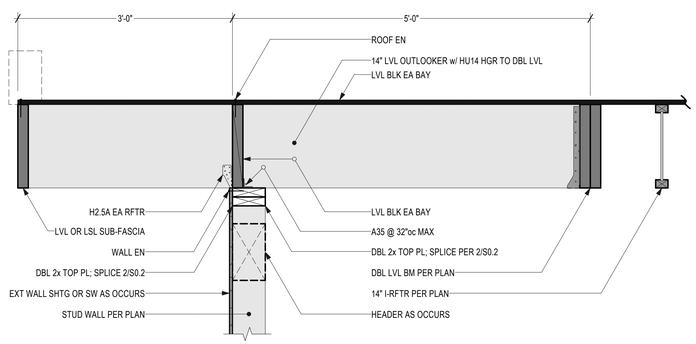


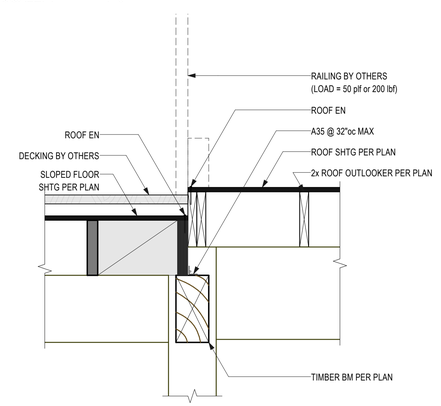
7 S-214 Framing Detail
SCALE: 1" = 1'-0"



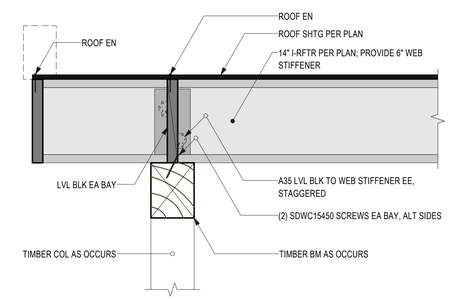
3 S-205 Framing Detail
SCALE: 1" = 1'-0"



12 S-222 Framing Detail
SCALE: 1" = 1'-0"



8 S-223 Framing Detail
SCALE: 1" = 1'-0"



4 S-206 Framing Detail
SCALE: 1" = 1'-0"

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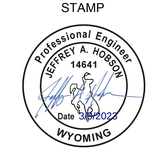

PERMIT SET

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ISSUE:	
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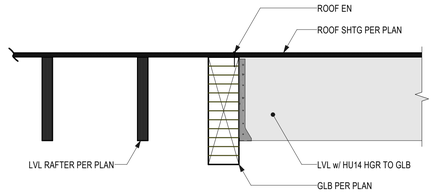
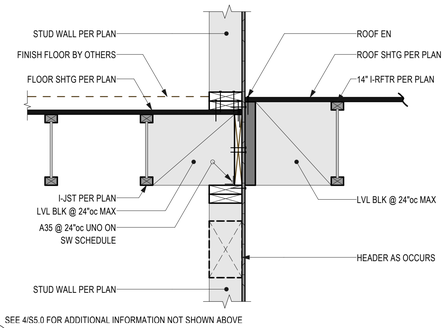
S5.2
Wood Framing Details

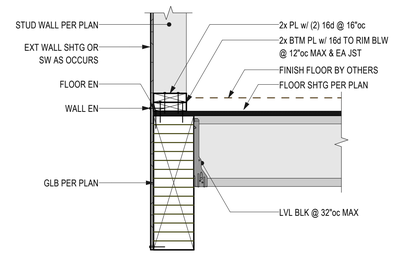
V5



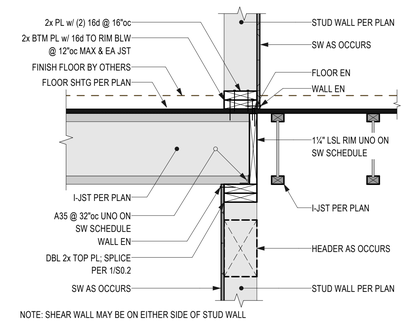
5 S-219 Framing Detail
SCALE: 1" = 1'-0"



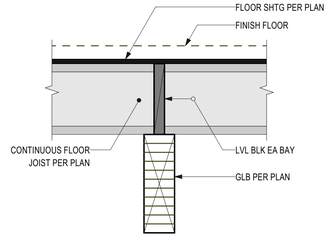
6 S-220 Framing Detail
SCALE: 1" = 1'-0"



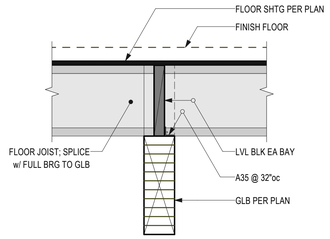
7 S-221 Framing Detail
SCALE: 1" = 1'-0"



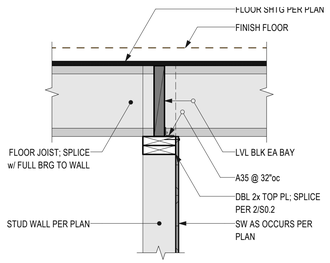
8 S-224 Framing Detail
SCALE: 1" = 1'-0"



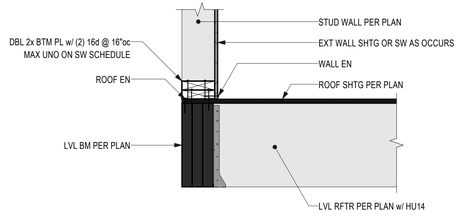
1 S-215 Framing Detail
SCALE: 1" = 1'-0"



2 S-216 Framing Detail
SCALE: 1" = 1'-0"



3 S-217 Framing Detail
SCALE: 1" = 1'-0"



4 S-218 Framing Detail
SCALE: 1" = 1'-0"

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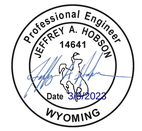

PERMIT SET

ROSCOE RESIDENCE

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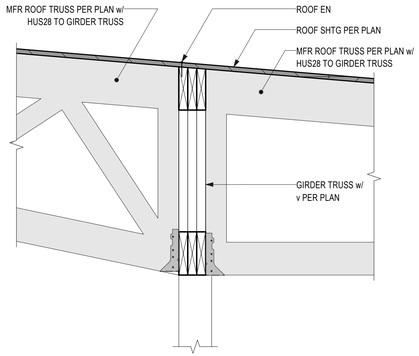
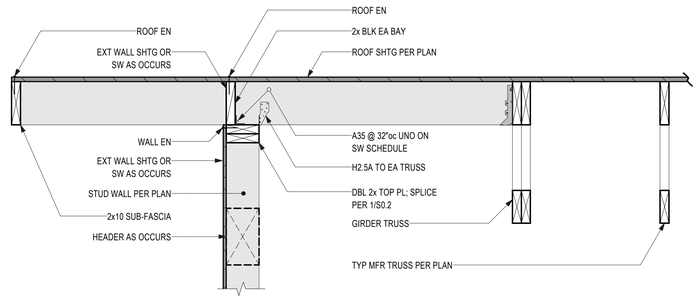
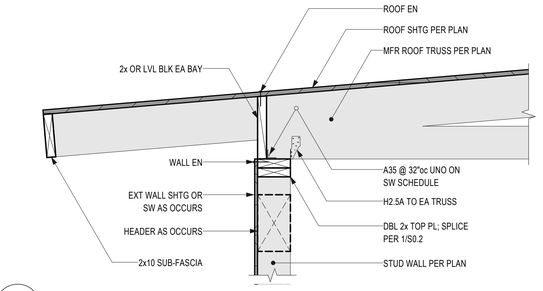
S5.3
Framing Details



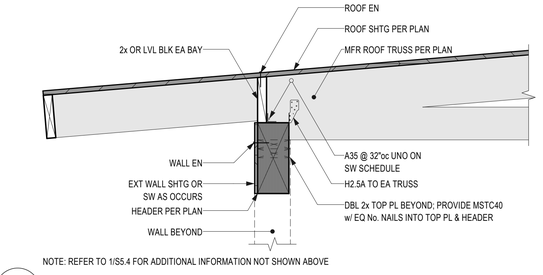
5 S-305 Framing Detail
SCALE: 1" = 1'-0"



6 S-306 Framing Detail
SCALE: 1" = 1'-0"

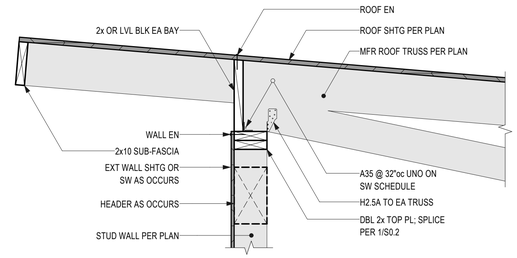


1 S-301 Framing Detail
SCALE: 1" = 1'-0"

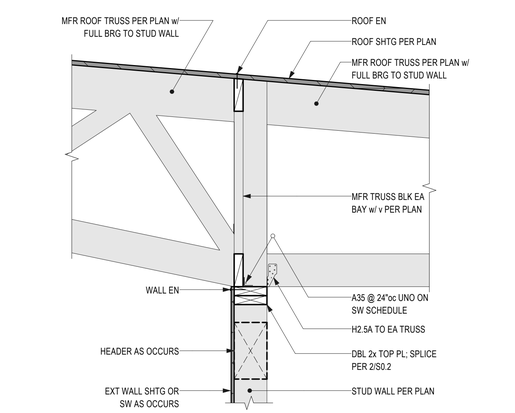


NOTE: REFER TO 1/S5.4 FOR ADDITIONAL INFORMATION NOT SHOWN ABOVE

2 S-302 Framing Detail
SCALE: 1" = 1'-0"



3 S-303 Framing Detail
SCALE: 1" = 1'-0"



4 S-304 Framing Detail
SCALE: 1" = 1'-0"

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S5.4
Framing Details

V5