Addendum No. 01

TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

Six New Full Service Cabins
Johnson's Shut-Ins State Park
Middle Brooke, MO
Project No: X2206-01

Bid Opening Date: 1:30 PM, Thursday, June 29, 2023 **(Changed)**

Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:

SPECIFICATION CHANGES:

1. Section 004322 – Unit Prices Form

   USE THE UNIT PRICES FORM INCLUDED WITH THIS ADDENDUM AND FOUND WITH THE BID DOCUMENTS ON MOBUYS FOR SUBMITTING THE BID. Do not use the previous version of UNIT PRICES FORM. Be sure to use the UNIT PRICES FORM labeled Addendum 01 in the header.

2. Section 012200 – Unit Prices

   a. ADD Unit Price No. 3. Section 3.1 - List of Unit Prices
      A. Description: Breaking and removal of bedrock and rock fragments larger than 1 cubic yard in trenches through material conforming to the definition of common excavation.

      B. Unit of Measurement: Cubic Yards.

      C. Base Bid Quantity: 75 Cubic Yards.

3. Section 061600 – Sheathing

   a. REMOVE and REPLACE Section 2.3A as follows:
      A. Plywood Sheathing: Exterior Sheathing, Exposure 1.

4. Section 085141 – Fiberglass Clad Wood Double Hung Windows

   a. REMOVE Paragraph 1.3A-5

   b. REMOVE Paragraph 1.3A-6

   c. REMOVE and REPLACE Paragraph 2.7C-1 as follows
      1. Color: Black or Dark Bronze

   d. REMOVE and REPLACE Paragraph 2.7D-1 as follows:
      1. Color: Black or Dark Bronze

DRAWING CHANGES:

1. Sheet A3.2 – See Attached Revised Sheet A3.2
    a. REVISE detail 1 to correct and add dimensioning.
2. Sheet S0.0 – See Attached Revised Sheet S1.0
    a. REVISE Wood – Rough Carpentry Note D.4. as follows:

        ROOF SHEATHING MAY BE EXPOSURE 1
3. Sheet S1.0 – See Attached Revised Sheet S1.0
    a. REVISE General Concrete Foundation Note 12 as follows:

        ALL FOOTINGS TO EXTEND TO A MINIMUM OF 4.5 FEET BELOW GRADE, UNLESS NOTED OTHERWISE.
4. Sheet S2.0 – See Attached Revised Sheet S2.0
    a. REVISE General Concrete Foundation Note 12 as follows:

        ALL FOOTINGS TO EXTEND TO A MINIMUM OF 4.5 FEET BELOW GRADE, UNLESS NOTED OTHERWISE.
5. Sheet S3.0 – See Attached Revised Sheet S3.0
    a. REVISE Detail 11 to indicate floor sheathing extending below sill plate.
6. Sheet S3.1 – See Attached Revised Sheet S3.1
    a. REVISE Detail 2 to indicate floor sheathing extending below sill plate.
    b. REVISE Detail 2 to indicate 2 – 2” x 4” Top Plate.

GENERAL:

1. Pre-Bid Meeting was held on May 31, 2023. The attendance sheet is included in the attachment.
2. **For questions regarding bidding requirements or MBE/WBE/SDVE goals contact Mandy Roberson, Contract Specialist at 573-522-0074 or** Mandy.Roberson@oa.mo.gov
3. **As of July 1, 2020,** all MBE, WBE, and MBE/WBE contractors, subcontractors, and suppliers

must be certified by the State of Missouri, Office of Equal Opportunity. No other certifications from other Missouri certifying agencies will be accepted.

4. **The following questions were received:**
    a. Question: Will directional boring work on the West side of Highway MM be restricted to the 6-foot-wide utility corridor?
    Answer: While the 2-inch sanitary force main must be installed within the 6-foot-wide utility corridor, the contractor will be able to utilize the full right-of-way beyond the edge of pavement to accomplish the work.

    b. Question: Can concrete form-release agent be applied to forms at the cabins site and along the roadway?
    Answer: SDS sheets for the form release agent proposed will need to be included in concrete submittals for review.

    c. Question: Do Cabin footings need to be belled from 18-inches to 24-inches?
    Answer: Footings can either be belled as indicated on the drawings or enlarged to 24-inches to match the bottom of footing diameter.

    d. Question: The Geotech report calls for 2' over excavation and 2' beyond edges. Structural drawings do not indicate that.
    Answer: Per the Geotechnical Report – Addendum 1 letter of June 22, 2022, the piers shall "be extended to a depth of at least 4.5 feet below the adjacent ground surface." Note 12 under General Concrete Foundation Notes on sheet S1.0 has been updated to reflect. Detail 4/S3.0 accurately reflects this.

    e. Question: Specification Section 061600, 2.3 A calls for exterior sheathing. Exterior "type" sheathing is typically only used for signs and concrete forms. 2.4 B also covers sheathing and calls for Exposure 1. That would be a more typical specification for this application.
    Answer: Exterior grade shall be used in accordance with the specification. We will update to denote Exposure 1 for the roof sheathing.

    f. Question: Section 061753 talks about treated lumber for trusses. 1.2 mentions an allowance in 021200 and 1.5 calls for treated submittals on the trusses. Plans do not call for treated trusses and 012100 does not have an allowance.
    Answer: Refer to 1/A3.0 for note stating that treated wood members are required at porch location.

    g. Question: Sheet S36.1 detail 2 calls for diagonal bracing 24" oc. Is this along the length of the truss? Is this in addition to the truss manufacturers bracing recommendations?
    Answer: Yes.

    h. Question: Details on S3.1 appear to show the subfloor sheathing running into the exterior plate, not under it. A detail shows it under the plates.
    Answer: Floor sheathing shall extend under the wall bottom plate.

    i. Question: Exterior dimensions are confusing. For example: Sheet A1.0 detail 1 appears to show a dimension of 31'6" to the inside of the walls. A3.2 detail 1 gives a wall thickness of 5 ⅜". That makes the building 32' 4 ¾". The other side of the same of the same drawing shows (4) 8' dimensions (32') outside to outside. Detail 2 on S1.0 shows 4 piers 8' on center. That would be 32' from center to center of the outside piers and the 6 x 12 beam. The beam appears to line up with the outside of the stud so the overall dimension would be 32' 6".
    Answer: The 1 ½" insulated exterior panel dimension is not correct and will be revised from 1 ½" to 2 ⅛" in ADDENDUM 1. This will make the exterior wall 6 ¼" thick from inside face of drywall to the outside face of the R-6 insulated zip panel noted on keyed note F13 and keyed to the wall sections on sheet A3.0. The overall dimension should be 32' 6" as noted above.

1. ATTACHMENTS:

A. Pre-bid Sign-in Sheet (3 pages)
B. Section 004322 – Unit Prices Form (1 Page)
C. A3.2 Addendum 01 Revision (1 Page)
D. S0.0 Addendum 01 Revision (1 Page)
E. S1.0 Addendum 01 Revision (1 Page)
F. S2.0 Addendum 01 Revision (1 Page)
G. S3.0 Addendum 01 Revision (1 Page)
H. S3.1 Addendum 01 Revision (1 Page)

END OF ADDENDUM 01

Pre-Bid Meeting Attendance Sheet
Six New Full Service Cabins
Johnson Shut-Ins Sate Park, Reynolds County
Middle Brooke, Missouri

Project No. X2206-01
5/31/23 & 11 A.M.

Name & Title	Company Name & Type of Contracting	MBE/WBE/ SDVE Status	Phone	E-Mail Address of Attendee & E-Mail Address of Individual filling out Bid Documents
Ryan Abbott	OA - FMDC	—	(573) 298-1967	ryan.abbott@oa.mo.gov
Tyler Keim Asst. Superintendent	MSP		573 546 2450	tyler.keim@dnr.mo.gov
JEFF BARBER MSP - ARCHITECT	DNR - MISSOURI STATE PARKS	—	417-343-5682 CELL	JEFF.BARBER@DNR.MO.GOV
Chad Hou's MSP	DNR - DSP		573-429-4310	Chad.houis@dnr.mo.gov.
Greg Combs	MSP Eastern Region		636-931-5202	greg.combs@dnr.mo.gov
BILL BERTHOLD	FRONTENAC ENGR.	—	314-644-2200	billb@fe-stl.com

Pre-Bid Meeting Attendance Sheet
Six New Full Service Cabins
Johnson Shut-Ins Sate Park, Reynolds County
Middle Brooke, Missouri

Project No. X2206-01
5/31/23 & 11 A.M.

Name & Title	Company Name Type of Contracting	MBE/WBE/ SDVE Status	Phone	E-Mail Address of Attendee and E-Mail Address of Individual filling out Bid Documents
Randy Persons - Pres.	R.L. Persons Const. Inc		573-686-1323	randypersons@rlpersons.com
Joe Carson	DJM Ecological Services		314 220 1635	jcarson@djmecological.com
Jeff Braun	DJM Ecological Services		314-402-3565	jeff.braun@rns Tower.com
Caleb Kretzinger	Cahills Construction, Inc	WBE	573-426-5305	[redacted]@bids@cahillsconstruction.com
Alex Stacy	Brockmiller Construction		573-315-6512	Bidda@Brockmillerconstruction.com
Mike Martin	Martin General Contractors		573-485-2107	MMartin@martin-GC.com

Pre-Bid Meeting Attendance Sheet
Six New Full Service Cabins
Johnson Shut-Ins Sate Park, Reynolds County
Middle Brooke, Missouri

Project No. X2206-01
5/31/23 & 11 A.M.

Name & Title	Company Name Type of Contracting	MBE/WBE/ SDVE Status	Phone	E-Mail Address of Attendee and E-Mail Address of Individual filling out Bid Documents
Colt McNew	McNew Electric		573-364-1836 cell 573-453-5102 (O)	ColtM@McNewelectric.com
BOB BUCKMAN	KWK ARCHITECTS		314.489.8851	bobb@kwkarchitects.com
KEVIN HULTBERG	OA/SMDC		636-524-9402	KEVIN.HULTBERG@OA.MO.GOV

Per Addendum 01

SECTION 004322 - UNIT PRICES FORM PROJECT NUMBER: X2206-01

1.0 Description

A. For changing specified quantities of work from those indicated by the contract drawings and specifications, upon written instructions of Owner, the following unit prices shall prevail. The unit prices include all labor, overhead and profit, materials, equipment, appliances, bailing, shoring, shoring removal, etc., to cover the finished work of the several kinds of work called for. Only a single unit price shall be given and it shall apply for either MORE or LESS work than that shown on the drawings and called for in the specifications or included in the Base Bid. In the event of more or less units than so indicated or included during construction the total contract price shall be decreased as appropriate or increased by contract change in accordance with General Conditions Article 4.1.

2.0 Unit Prices

A. Unit Price No. 1 – Trench excavation and backfill for 4" water, 3" electric, and 2" sanitary force main in lieu of directional boring if necessary:

1. Description: Excavation for utility trenches according to Division 31 Section 312000.
2. Unit of Measurement: Linear Feet
3. Base Bid Quantity: 0 Linear Feet

$ _____ per linear foot

B. Unit Price No. 2 – Removal and replacement of unsuitable subgrade material beneath pavements with compacted crushed rock:

1. Description: Sub-base and Base courses under pavements and walks according to Division 31 Section 312000.
2. Unit of Measurement: Cubic Yards
3. Base Bid Quantity: 150 Cubic Yards

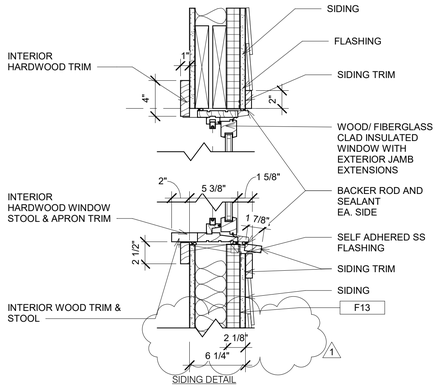
$ _____ per cubic yard

C. Unit Price No. 3 – Removal of bedrock and rock fragments:

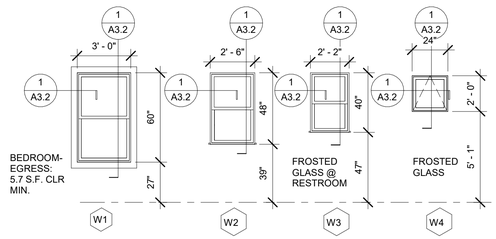
4. Description: Breaking and removal of bedrock and rock fragments larger than 1 cubic yard in trenches through material conforming to the definition of common excavation
5. Unit of Measurement: Cubic Yards
6. Base Bid Quantity: 75 Cubic Yards

$ _____ per cubic yard

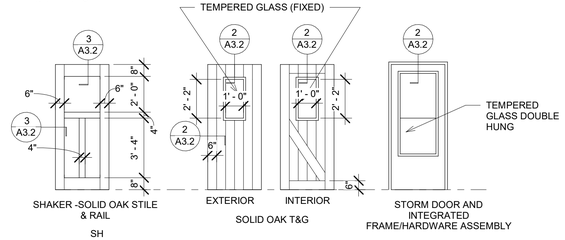
KEYED NOTES	
F13	R-6 INSULATED ZIP PANEL SYSTEM + R-13 MINERAL WOOL BOARD OR BLANKET INSULATION, AND 10 MIL VAPOR BARRIER . (R-21 TOTAL).



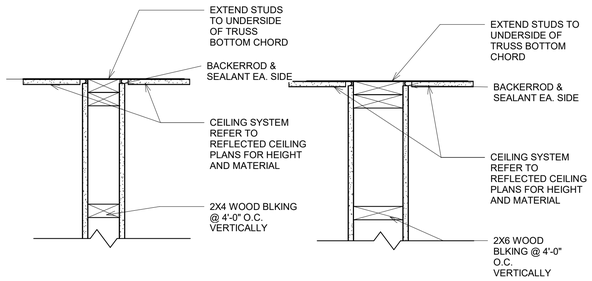
1 A3.2 WINDOW DETAIL
SCALE: 1 1/2" = 1'-0"

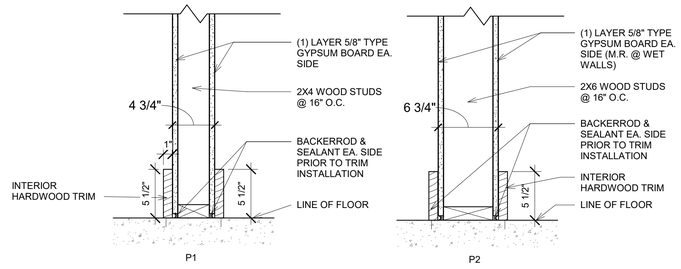


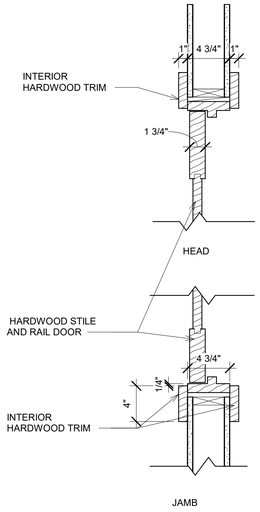
WINDOW TYPES
1/4" = 1'-0"



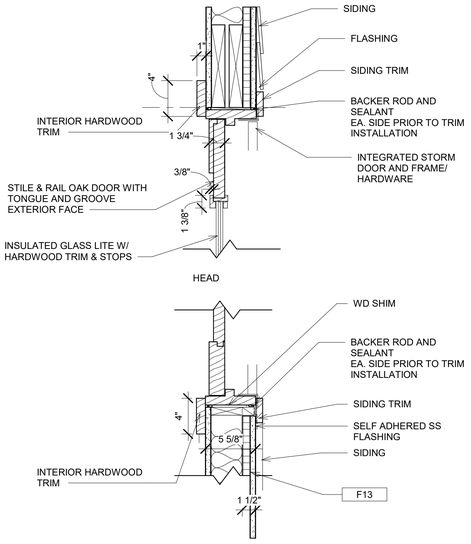
DOOR TYPES
1/4" = 1'-0"







3 A3.2 INTERIOR DOOR/FRAME DETAIL
SCALE: 1 1/2" = 1'-0"



2 A3.2 EXTERIOR DOOR /FRAME DETAIL
SCALE: 1 1/2" = 1'-0"

PARTITION TYPES
1 1/2" = 1'-0"

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

CONSTRUCTION DOCUMENTS

STATE OF MISSOURI · ERIC ROBERT NEWNUM · NUMBER A-007608 · ARCHITECT · 6/14/2023

The Professional Architect's seal affixed to this sheet applies only to the material and items shown on this sheet. All drawings, instruments or other documents not exhibiting this seal shall not be considered prepared by this architect, and this architect expressly disclaims any and all responsibility for such plan, drawings or documents not exhibiting this seal.

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MO CERTIFICATE OF AUTHORITY:
CIVIL / STRUCTURAL ENGINEERING: 001025
LAND SURVEYING: 000282

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103 West Lockwood Ave Ste 218
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303rd Engineering Group, LLC
10420 BAUR BLVD. ST. LOUIS, MISSOURI 63132 314-669-9383
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ELECTRICAL, MECHANICAL/ PLUMBING ENGINEERING: 2007023885

CODE Engineering Services, LLC
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FIRE PROTECTION ENGINEERING: 2007008508

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

MISSOURI DEPARTMENT OF NATURAL RESOURCES

JOHNSON'S SHUT-INS STATE PARK

148 TAUM SAUK TRAIL, MIDDLE BROOK, MO 63656

PROJECT # X2206-01
SITE # 5213
FACILITY # 7815213016, 7815213017, 7815213018, 7815213019, 7815213020, 7815213021

REVISIONS		
NO.	DATE	DESCRIPTION
1	06.14.23	ADD #1

DATE: 04.11.2023
KWK PROJECT #: 22030
CHECK: RMB

SHEET TITLE:
P-TYPES, DR & WIN TYPES & DTLS.

55 OF 75 SHEETS

SHEET NUMBER
A3.2

GENERAL REQUIREMENTS

CONSTRUCTION MEANS AND METHODS:

A. Contractor agrees that Contractor shall assume sole and complete responsibility for job site conditions during the course of the work, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that Contractor shall defend, indemnify, and hold Owner and Structural Engineer harmless from any and all liability, real or alleged, in connection with the performance of the Work on this Project, excepting for liability arising from the sole negligence of Owner or Structural Engineer.
B. The Contract Documents represent the finished structure. They do not include the method of construction. Contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to: bracing, shoring for loads due to construction equipment, temporary structures, and partially completed work. Observation visits to the site by Structural Engineer shall not include inspection of the above items.
C. Frontenac Engineering Group shall not have control over, or charge of, and shall not be responsible in any way for construction means, methods, techniques, sequences, or procedures, or for safety or safety precautions and programs in connection with any construction activities, since these are solely Contractor's responsibility under the Contract.
D. Frontenac Engineering Group shall not be responsible for contractor's schedule or failures to carry out any construction activities in accordance with the Contract Documents. Frontenac Engineering Group shall not have control over or charge of actions of Contractor, Subcontractor, or any of their Agents, or employees, or any other persons performing portions of any construction activities.
E. The structure is stable only in its completed form. Temporary supports required for stability of the structure during all intermediate stages of construction shall be designed and provided by Contractor.

SUBMITTALS:

A. Submittals prepared by Subcontractors shall be reviewed by Contractor prior to submitting to Architect.
B. Reproduction of the Contract Documents for Shop Drawings is not permitted. Electronic drawing files will not be provided to Contractor.
C. Contractor shall verify the structurally supported equipment weights,opening sizes, and locations indicated on the Structural Drawings with Documents from other disciplines and notify Architect of any discrepancies.
D. Contractor shall submit Shop Drawings showing size, method of anchorage,weight, openings, and locations of equipment not indicated on the Structural Drawings prior to ordering for review by Structural Engineer to determine adequacy of the structure.
E. All submittals reviewed by Structural Engineer are reviewed for general conformance with design concept only and does not relieve the fabricator/vendor of responsibility for conformance with design drawings and Specifications, all of which have priority over submittals.
F. Submittals shall be reviewed within 10 working days after being received by Structural Engineer.

QUALITY REQUIREMENTS:

A. Reference to standard specifications or codes of any technical society,organization, or association or to codes of local or state authorities,shall mean the standards in effect as of date of the Contract Documents,unless otherwise noted.
B. Contract Documents shall govern in the event of a conflict with standard specifications or codes of any technical society, organization,or association.
C. No provision of any referenced standard specification or code, whether or not specifically incorporated by reference in the Contract Documents, shall be effective to change the duties and responsibilities of Owner, Architect, Structural Engineer, Contractor, or any of their Consultants, Agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Structural Engineer or any of Structural Engineer's Consultants, Agents, or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibilities contrary to the provisions of the Contract Documents.
D. If Structural Documents are being released prior to Documents of other disciplines, Contractor shall coordinate Structural Documents with other portions of the Contract Documents as they are released. Report any discrepancy or omission to Architect.
E. All omissions and conflicts within the Contract Documents shall be brought to the attention of Architect prior to proceeding with the Work.
F. Contractor shall verify dimensions and conditions at the job site. Any discrepancies between the conditions found and those indicated in the Contract Documents shall be brought to the attention of Architect prior to proceeding with the Work.
G. See Documents by other disciplines for floor, wall, and roof openings,trenches, pits, pipe sleeves, equipment pads, metal pan stairs, miscellaneous iron, etc.
H. No pipes, ducts, chases, etc. shall be placed in structural beam and column members nor shall any structural member be cut for pipes, ducts, etc., unless noted otherwise. Notify Structural Engineer when Documents by other disciplines show openings, pockets, etc.not indicated in the Structural Drawings, but are located in structural members. Contractor shall obtain prior approval from Structural Engineer for installation of such pipes, ducts, chases, etc.
I. Details labeled "Typical" on the Structural Drawings apply to all situations occurring on Project that are the same or similar to those locations specifically indicated. Where a detail is not indicated, the detail shall be the same as for other similar conditions.
J. Contractor designed elements shall be designed by licensed Professional Engineers registered in the State where Project is located. Contractor shall submit Shop Drawings, design load data, support reactions, and certification that elements were designed for loads specified in the Contract Documents or in the Building Code. All documents noted shall be sealed by the licensed Engineer. If criteria indicated are not sufficient, submit a written request for additional information to Architect. The following elements and their connections shall be Contractor designed:
   1. Structural steel connections, if alternate design shown on the Structural Drawings
   2. Stairs
   3. Window and curtain wall systems
   4. Skylights

DEFERRED SUBMITTALS:

A. Contractor designed elements shall be designed by licensed Professional Engineers registered in the State where Project is located. Contractor shall submit Shop Drawings, design load data, support reactions, and certification that elements were designed for loads specified in the Contract Documents or in the Building Code. All documents noted shall be sealed by the licensed Engineer. If criteria indicated are not sufficient, submit a written request for additional information to Architect/Engineer. The following elements and their connections shall be "Contractor designed":
   1. Temporary bracing and shoring.
   2. Structural steel connections if alternate to the design shown on the Structural Drawings.
   3. Steel Braced Frames
   4. Steel Moment Frames
   5. Stairs, landings, and handrails
   6. Window and curtain wall systems
   7. Cold-formed steel framing
   8. Prestressed concrete (hollow-core, double tee, etc.)

SPECIAL INSPECTIONS:

A. Special inspections shall be in accordance with the 2018 International Building Code, Ch.17.
B. Special inspection reports shall be furnished to Building Official, Owner, Architect, Structural Engineer, and Contractor. Discrepancies shall be brought to the attention of Contractor, and if not corrected, shall be reported to Building Official, Owner, Architect, and Structural Engineer.
C. The Special Inspector shall submit a final report stating that the structural work was, to the best of the Special Inspector's knowledge, performed in accordance with the Contract Documents.
D. The following types of work require Special Inspections: (Refer to the Building Code and Specifications for detailed inspection requirements.)
   1. Prepared Soil Fill
   2. Concrete Construction
   3. Steel Construction
   4. Masonry Construction

DESIGN CRITERIA:

A. The structure is designed in accordance with the International Building Code, 2018 Edition.
B. No Provisions have been made for future building horizontal or vertical expansion.
C. Gravity Loads:
   1. Uniform Roof Live Loads:
      a. Live Load: 20 psf
      b. Snow Load:
         - Ground Snow Load: 20 psf
         - Flat Roof Snow Load: 20 psf
         - Snow Exposure Factor: 1.0
         - Snow Importance Factor: 1.0
         - Snow Thermal Factor: 1.0
   2. Uniform Floor Live Loads (reduced as allowed by the Building Code,unless noted otherwise):
      a. Residential Occupancy: 40 psf
      b. Decks: 60 psf
   3. Concentrated Floor Live Loads:
      a. Loads are distributed over an area of 2 ½ sq ft, unless noted otherwise
         - All areas: 2000 lb
         - Stairs: 300 lb (over 4 sq in)
   4. Concentrated Lateral Live Loads:
      a. Handrails assemblies:
         - Top Rail: 200 lb or 50 lb/ft applied non-concurrently in any direction
         - Infill: 50 lb applied over 1 sq ft applied non-concurrently with the top rail load
      b. Vehicle Barrier Systems: 6,000 lb applied over an area of 1 sq ft at 18" above the floor
D. Lateral Loads:
   1. Wind Load:
      a. Basic Wind Speed: 106 MPH
      b. Wind Importance Factor: 1.0
      c. Wind Exposure: Type B
      d. Simplified Wind Pressure: 13.7 psf
   2. Seismic Load:
      a. Basic Structural System: Concrete Load Bearing Piers and Wood Frame
      b. Seismic Resisting System: Ordinary Steel Moment Frames
      c. Response Modification Coeffcient, R: 3.5
      d. Deflection Amplification Factor, C_d: 3
      e. Analysis Procedure: Equivalent lateral force procedure
      f. Zip Code: 63656
      g. Occupancy Category II
      h. Site Class D
      i. MCE short periods spectral response acceleration, S_S: 0.551
      j. MCE 1.0 second period spectral response acceleration, S_1: 0.21
      k. 0.3 seconds acceleration-based site coefficient, F_a: 1.359
      l. 1.0 seconds velocity-based site coefficient, F_v: 1.98
      m. Short periods spectral response acceleration for site class effects,S_{ms}: 0.749
      n. 1.0 second period spectral response acceleration,S_{m1}: 0.416
      o. Short periods spectral response acceleration,S_{DS}: 0.499
      p. 1.0 second period spectral response acceleration for site class effects,S_{D1}: 0.277
      q. Occupancy Importance Factor, I: 1.00
      r. Seismic Design Category D
      s. Allowable Story Drift, 0.015h
      t. Seismic Design Coefficient,C_S : 0.186
      u. Design is Wind Governed

FOUNDATION

GENERAL:

A. Soils Engineer: Allen G. Minks, P.E.
   Jacobi Geotechnical Engineering
   798 Hoff Road
   O'Fallon, Missouri 63366
   Phone: 636-978-7112
   www.jacobiengineer.com

   Foundation design is based on soils report dated: (June 1, 2022)Soils Engineer/Owner's Geotechnical Representative is sole judge of suitability of underlying material to support foundations and shall approve bearing material before foundation installation. Structural Engineer is not responsible for subsurface conditions encountered in the field that are different from those assumed in design.
B. Prepare site and place fill in accordance with the recommendations in the soils report noted above. Observe construction recommendations noted in the soils report. All fill material shall be in accordance with the soils report recommendations.
C. Construct non-basement floor slabs on the granular fill layer required by the plan notes. Granular fill shall be placed on an 18 inch layer of non-expansive soil which has been placed in accordance with the soils report.
D. Backfill basements and retaining walls with ASTM 448 No. 57 stone or equivalent approved by the Soils Engineer. Extend stone from the base of the walls outward at a 45 degree angle to the vertical and provide toe drain wrapped in filter fabric.
E. Remove and replace soils within 2 feet of the foundation subgrades. the over-excavation should extend 2 feet beyond the edges of foundations if non-expansive soil is used as the replacement material. the over-excavation should be backfilled with properly compacted, non-expansive fill materials such as low plastic soil, lime stabilized clay or 1-inch minus gradation crushed limestone. the excavation for the concrete can be the same width as the planned foundation.
F. Backfilling:
   1. Do not Backfill basement wall and grade beams until bracing floors are in place and adequate temporary bracing is installed.
   2. Backfill in even lifts alternating from side to side with 2 foot maximum difference in lifts.
   3. Backfill under foundations with concrete or as approved by Soils Engineer.
   4. Earth Trenches may be used for forming footings only, in accordance with the above referenced soils report.

FOOTINGS:

A. Total load soil bearing pressure used in design: 2500 psf
B. Slab on grade Subgrade Reaction Modulus: 100 pci
C. Coefficient of horizontal friction between concrete and soil = 0.30
D. Minimum depth from exterior ground surface to bottom of foundations = 54 inches

CONCRETE

GENERAL:

A. SUBMITTALS:
   1. Submit a copy of each concrete mixture, including data and submittals to comply with the requirements in ACI 301.
B. QUALITY ASSURANCES:
   1. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C requirements for production facilities and equipment.
   2. Source Limitations: Obtain each type of cement of the same brand from the same manufacturer's plant, obtain aggregates from one source, and obtain admixtures through one source from a single manufacturer.
   3. Comply with the current version of ACI 301, "Specifications for Structural Concrete."
   4. Comply with the current version of ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
   5. Minimum concrete coverage, unless otherwise noted:
      a. Unformed surfaces in contact with the ground — 3 in.
      b. Formed surfaces exposed to ground or weather — 2 in.
      c. Formed surfaces not exposed to ground or weather
         - Walls and slabs — 1 in.
         - Beams, girders, and columns (to ties and stirrups) — 1½ in.
   6. Locate Construction Joints as shown or noted and to least impair strength of structure.Construction Joints not shown on the Structural Drawings are Subject to approval by the Structural Engineer.
      i. Horizontal Joints:
         - Locate in Walls and Columns at the underside of the lowest Slab, Beam, Joist or Girder intersecting each Wall or Column.
         - Unless noted otherwise, roughen entire Joint Surface to 1/2" amplitude using a hand rake before Concrete sets or, if sets, mechanically roughen to expose course aggregate and to achieve 1/4" amplitude roughness.
         - At Bentonite waterstops leave a smooth troweled path between roughened areas to the width of the waterstop. Horizontal Joints not permitted within the height of: Footings, Caps,Tie Beams, Grade Beams,Stem Walls, Beams, Girders,Joists, Slabs, or in Columns and Walls between levels.
      b. Vertical Joints:
         - Locate at midspan of Slab, Joists, Beams, and Girders.
         - Make Joints perpendicular to main reinforcing.
         - If Members intersect at midspan, Offset Joint by twice the width of the wider member.
         - In Joists, Beams, and Girders use 3 1/2" high horizontal keys across the width of the member spaced 8" vertical leave gap in keys at water stops.
         - At Metal Deck Slabs, Generally layout Joints midway between Beams and 5 feet before Girders.Submit proposed layout for approval by owner.
C. POST-INSTALLED ANCHORS
   1. All post-installed anchors shall meet the requirements of the code-cited edition of ACI 318, Appendix D, and shall be acceptable for both cracked and uncracked concrete.
   2. Post installed anchors shall be installed per the manufacturer's recommendations.
   3. Equivalent anchors may be submitted for the engineer's approval. Substitution requests shall be submitted by the contractor to the engineer-of-record along with calculations that are prepared & sealed by a registered professional engineer. The calculations shall demonstrate that the substituted product is capable of achieving the pertinent equivalent performance values (minimum) of the specified product using the appropriate design procedure and/or standard(s) as required by the building.
   4. Post-installed anchors shall only be used where specified on the drawings. The contractor shall obtain approval from the engineer prior to using post-installed anchors for missing or misplaced cast-in-place anchors. Care shall be taken to avoid conflicts with existing reinforcing bars.

WOOD

ROUGH CARPENTRY

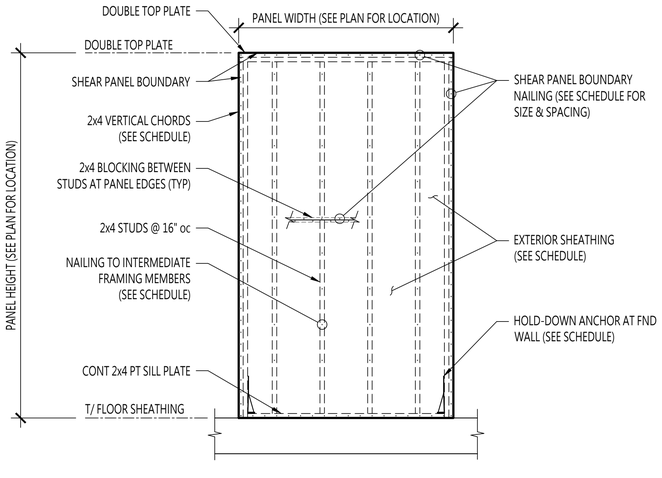
A. Wood construction materials and methods to conform to the National Forest Products Association "National Specifications for Wood Construction."
B. Contractor is responsible to adequately shore and brace all floor and roof framing and walls during construction.
C. Materials:
   1. Framing Lumber
      a. Timber beams: #1 Dense Douglas Fir-Larch or Douglas Fir-Larch (North)
      b. Joists, rafters, headers, 2x and larger shall be No. 1 Southern Pine
      c. Studs and bearing walls. See plan for size
         - 2x4 or 2x6 lengths up to 8 feet — SPF Stud Grade
         - 2x4 or 2x6 lengths 8 feet and up — SPF No. 2 Grade
      c. Species and grades shown are the minimum acceptable. Better grades may be substituted.
      d. Lumber exposed to the weather to be pressure treated to resist decay.
   2. Laminated Veneer Lumber (LVL):
      a. Allowable flexural stress, Fb = 2600psi for headers and beams.
      b. Modulus of elasticity, E = 2,000,000psi.
      c. Must have valid evaluation report from approved 3rd party evaluation agency, such as ICC-ES.
D. Sheathing
   1. Roof Sheathing: ½" (Nominal) rated
   2. Floor Sheathing : ¾" (Nominal) rated for maximum joist spacing. Tongue-and-groove glued to supports. Acceptable for use with lightweight concrete fill.
   3. Wall Sheathing: Zip Systems R-Sheathing as manufactured by Huber Engineer Woods; air infiltration barrier is build into the wall panel. Proprietary accessories to complete installation.
      a. R-6 Insulated panel, 1½", 4' x 8', 9', or 10'
      b. Zip System flashing tape, Zip System stretch tape, and Zip System liquid flash
      c. Application: Provide at all exterior wood stud walls unless otherwise indicated on drawings.
   4. All plywood to be APA Rated and Exterior Grade. Roof sheathing may be Exposure 1. (1)
E. Hardware:
   1. Bolts and Threaded Rods: ASTM A307
   2. Prefabricated Connections: "Simpson Strong-Tie" or equivalent
   3. Nails: Common Wire Nails
      a. Use galvanized hardware for exterior framing.
      b. Bearing walls are to have 2x horizontal bridging at mid-height in those walls that do not have sheathing or drywall on both sides.
      c. Nailing shall be per fastening schedule of the 2018 IRC (International Residential Code) or the 2018 IBC (International Building Code), whichever code governs.
      d. All post and jambs are to be blocked solid with the same size and number of plies as the post or jamb within the floor space. Blocking is to align with posts or jambs.

WOOD TRUSSES

A. Trusses to be designed and erected in conformance with Truss Plate Institute specifications and recommendations and in accordance with local building codes.
B. Connector Plates - TPI 1, fabricated from hot-dip galvanized steel sheet complying with ASTM A653, G90 coating.
C. Trusses to be braced during erection. Refer to Truss Plate Institute "Commentary and Recommendations for Bracing Wood Trusses" BWT-76.
D. Truss manufacturer is to submit layout plans and calculations for all trusses. The calculations are to bear a Missouri professional engineer's seal. Calculations are to show loadings, spacing, stresses, configuration, connections, grade of lumber, camber, and deflections.
E. The truss supplier shall design the trusses for the following loading:
   1. Dead Load: 10 psf top chord and 10 psf bottom chord
   2. Live Load: 20 psf top chord
   3. Snow Load:20 psf top chord plus snow drift per ASCE 7-16
   4. Wind Load:Per ASCE 7-16
   5. Roof Top Equipment: Actual weight of equipment on roof. Contractor shall provide final sizes, weights and locations of roof top equipment to truss fabricator and Structural Engineer of record prior to truss fabrication to ensure proper truss design criteria
F. Roof truss top chords shall be 2x6 minimum.

MISCELLANEOUS

A. GENERAL:
   1. Become thoroughly familiar with the contract documents during the bid period. resolve apparent deficiencies, omissions, contradictions, inconsistencies and ambiguities in contract documents with architect/engineer during the bid period. if any such condition cannot be resolved during the bid period, submit bid using the interpretation resulting in the greatest cost and resolve such items prior to beginning the work.
   2. Prior to starting construction, excavation, shop drawings, and prior to ordering materials:
      i. Check dimensions and elevations shown on structural drawings against architectural drawings. secure direction concerning missing or or conflicting information from owner's authorized representative.
      j. Survey and report floor and roof elevations of the existing building(s) with connections to this building.
      k. Field verify dimensions and elevations relating to existing conditions. adjustments to plan dimensions and elevations of less than 6" to accommodate existing conditions shall be included in the contractor's bid and will not be considered a change in the work.
   3. Use structural drawings with other contract documents, including those issued before and after the structural documents, and combine requirements into shop drawings and work.
   4. Typical details, typical notes and general notes are applicable to all occurrences of the conditions depicted in the details or described in the notes unless other details or notes are provided for the condition.
   5. No repair, correction, modification, or alteration, shall be made without prior review and acceptance of the structural engineer. Submit details and calculations prepared by a professional engineer registered in the state where the project is located and employed by contractor. A/E review is contractor's expense.
   6. The structure is designed to function as a unit upon the completion of construction for the entire project and then only to support the design loads indicated. Contractor is responsible for determining loadings occurring during construction, and for coordinating loadings with other contractors, and for determining and not exceeding the capacity of the structure at any time prior to completion of the entire project. Contractor is responsible for procedures, means, methods and sequences of construction. Design and provide all temporary bracing shoring, and/or support(s).
   7. Review by owner's authorized representative of redundant submittals from backup, second source or replacement suppliers/contractors is contractor's expense.
   8. A/E services related to substitutions or changes proposed by the contractor are the contractor's expense. Do not rely on acceptance in preparing bids. The A/E may reject these without cause.
B. SUPPORT AND BRACING OF WORK NOT SHOWN ON STRUCTURAL DRAWINGS:
   1. Do not induce loads on or hang loads from deck, unless shown on drawings, including but not limited to these items: ceilings, pipes, ducts, equipment, etc. Contractor or sub-contractor installing such items shall provide sub-framing to transfer load to the structure supporting deck.
   2. Do not suspend point loads from slabs totaling more than 500 lbs within any 50 square feet of continuous floor slab area. Engineer and provide sub-framing and bracing to transfer such loads to joists, beams, or girders at the expense of trade contractor suspending loads.
   3. Supports, bracing, sub-framing, light gage framing, miscellaneous steel, bracket connectors and attachments not shown on the structural drawings are the contractor's responsibility and shall be engineered and provided by the trade contractor with items being supported or braced at the trade contractor's expense.
   4. If structural drawings are referenced by other drawings for items not fully defined on Structural Drawings (and associated specifications) then engineer and provide such items on a performance basis in compliance with the governing building code. all costs shall be born by the trade contractor attaching to or bearing upon such items.
   5. Support and bracing systems shall not transmit lateral loads to columns between floors or to the bottoms or sides of steel beams or joists. If other contract drawings indicate bracing or attachment details which would result in lateral loads being transmitted to the sides of columns between floors or to the bottoms or sides of beams or joists then the trade contractor responsible for the items transmitting such lateral loads shall include the cost in the bid for engineering and providing bracing from the point of attachment to the top of the next adjacent beam or joist.
   6. Facade and wall system attachments to the structure:(Excluding stone panel systems and sculptures where indicated):
      a. Shall not assume the structure provides moment resistance at the point of attachment.
      b. Shall be to the edge of the floor slab or roof deck only unless noted on the Structural Drawings.
      c. Shall not restrict independent vertical or lateral movement of the building levels.
   7. Where dimensions or weights of equipment or systems are variable from manufacturer to manufacturer, verify dimensions and weights shown on drawings with selected manufacturer prior to ordering materials. Notify structural engineer of discrepancies.
   8. Do not place equipment when shipping or operating weight exceeds weight indicated on Structural Drawings.
   9. Contractor is responsible for all costs associated with adapting structure to accommodate selected elevator manufacturer's equipment, loadings and other requirements. Submit details and calculations prepared by a professional engineer registered in the state where the project is to be constructed and employed by contractor. The contractor is responsible for the means and methods of hoisting elevator equipment into place including hoist beams, whether or not shown or noted on any contract document.
   10. Where engineering is required, the service shall be provided by an Engineer, registered in the state where the project is to be constructed.



SHEAR WALL SCHEDULE

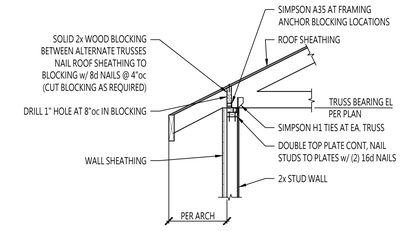
SHEATHING	BOUNDARY NAILING	INTERMEDIATE NAILING	VERTICAL CHORDS	HOLD-DOWN ANCHORS
ZIP SYSTEM R-6	0.131"x3" SHANK NAILS @ 4" oc	0.131"x3" SHANK NAILS @ 12" oc	(2) 2x4 NO. 2 SO PINE	SIMPSON "H6"

NOTES:

1. ALL NAILS TO BE COMMON OR GALVANIZED BOX 10d (.128"ø (MIN) x 3") PNEUMATIC DRIVEN NAILS CAN USED IN LIEU OF 10d GALVANIZED BOX
2. AIR INFILTRATION BARRIER NOT TO BE INSTALLED UNTIL BUILDING OFFICIAL HAS VERIFIED PROPER NAILING OF SHEAR-WALL SHEATHING

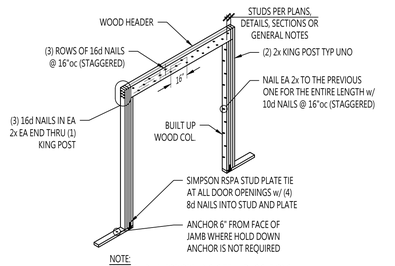
WOOD FRAME SHEARWALL

SCALE: NTS



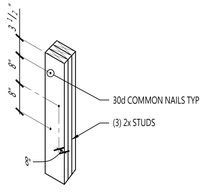
TYPICAL WOOD TRUSS BEARING ON WOOD STUD WALL DETAIL

SCALE: NTS



TYPICAL BUILT-UP HEADER AT WINDOW AND DOOR JAMBS

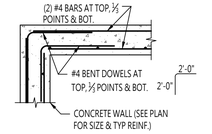
SCALE: NTS



NOTE:
STAGGER NAILS WHEN ADDING ADDITIONAL PLYS TO AVOID SPITTING STUDS

TYPICAL BUILT-UP POST DETAIL

SCALE: NTS

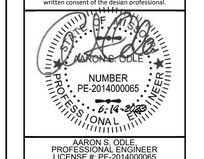


REINFORCING AT CORNERS OF 6" THICK CONC. WALLS

SCALE: N.T.S.

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

CONSTRUCTION DOCUMENTS



AARON S. GOLE
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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

MISSOURI DEPARTMENT OF NATURAL RESOURCES

SIX NEW FULL SERVICE CABINS - JOHNSON'S SHUT-INS STATE PARK

PROJECT # X2206-01
SITE # 5213
FACILITY # 7815213016, 7815213017, 7815213018, 7815213019, 7815213020, 7815213021

REVISIONS		
NO.	DATE	DESCRIPTION
1	06/14/23	ADDENDUM 1

DATE: 04.11.2023
FE PROJECT #: 220058
CHECK: ASO

SHEET TITLE:

GENERAL NOTES/ TYPICAL DETAIL

57 OF 75 SHEETS

SHEET NUMBER

S0.0

GENERAL NOTES

1. Contractor shall field verify dimensions and conditions at the job site. Any discrepancies between the conditions found and those indicated in the Contract Documents shall be brought to the attention of Architect & Engineer prior to proceeding with Work.
2. No repair, correction, modification, or alteration, shall be made without prior review and acceptance of the structural engineer. Engineer review at contractor's expense.
3. The Contract Documents, represent the finished structure. The structure is designed to function as a unit upon completion of construction for the entire project and then only to support the design loads indicated. Contractor is responsible for determining loadings occurring during construction, and for coordinating loadings with other contractors, and for determining and not exceeding the capacity of the structure at any time prior to completion of the entire project prior to the completion of the project.
4. Frontenac Engineering Group shall not have control over, or charge of, and shall not be responsible in any way for construction means, methods, techniques, sequences, or procedures, or for safety or safety precautions and programs in connection with any construction activities, since these are solely Contractor's responsibility under the Contract.
5. The Structure is stable only in its completed form. Contractor shall provide temporary supports required for the stability of the Structure and take all measures necessary to project the structure during all intermediate stages of construction. Such measures shall include, but not be limited to: bracing, shoring for loads due to construction equipment, temporary structures, and partially completed work. Observation visits on site by Structural Engineer shall not include inspection of the above items.
6. Elements that are not dimensioned may not be represented accurately on the plan. Do not use the plan for measurements other than those specified.
7. Provide construction or control joints in slab-on-grade as indicated in the Structural Drawings. If joint pattern is not indicated, provide joints at a maximum spacing of 15'-0" in both direction and located to conform to bay spacing wherever possible (at column centerlines, half bays, third bays, etc.)

GENERAL CONCRETE FOUNDATION NOTES

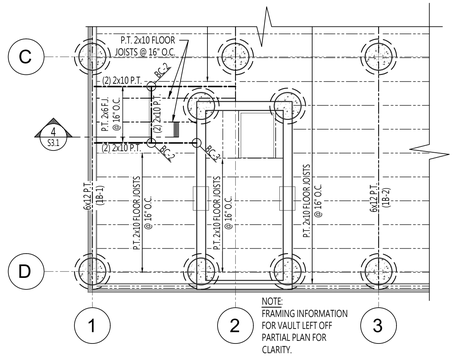
1. Reinforced concrete shall have the following minimum 28-day compressive strengths:
   a. 3000psi - foundation and basement walls, footing and piers.
   b. 3500psi - porches, walks, patios, steps, garage slabs, and driveways.
2. Reinforcing steel to be ASTM A615, grade 60. Welding of ASTM A615, grade 60 reinforcing is not allowed.
3. Welded wire fabric to be ASTM A185. Lap fabric 6" min.
4. Reinforcing shall be continuous wherever possible. Splices and laps shall conform to ACI 318 requirements.
5. Provide the following additional reinforcing unless otherwise called for on structural plans.
   a. 2 - #4 Bars each side of openings 1'-0" or larger in slabs or walls.
   b. 2'-0" x 2'-0" Corner bars in outer face of all walls to match size and spacing of horizontal reinforcing bars in walls.
7. All abutting concrete members shall be doweled together unless poured monolithically. Dowels shall be equal in size and spacing to the bars in the adjacent walls.
8. Minimum concrete cover, unless noted otherwise:
   a. Unformed concrete surface in contact w/ earth: 3"
   b. Formed surfaces exposed to ground or weather: 2"
   c. Formed surfaces not exposed to ground or weather:
      Walls, slab: ¾"
      Beams, columns: 1½"
9. Refer to drawings by others for waterproofing and drainage at foundation.
10. Unless otherwise shown in the architectural drawings, provide ¾" chamfers at all edges that are exposed to view in the finished surface.
11. Cast-in-place anchors shall be carefully placed per contractor measurements. They must be installed correctly, as there is no option, or alternative.
12. All footings to extend a minimum of 4.5 ft. below grade, unless noted otherwise. (1)

1st FLOOR FRAMING NOTES

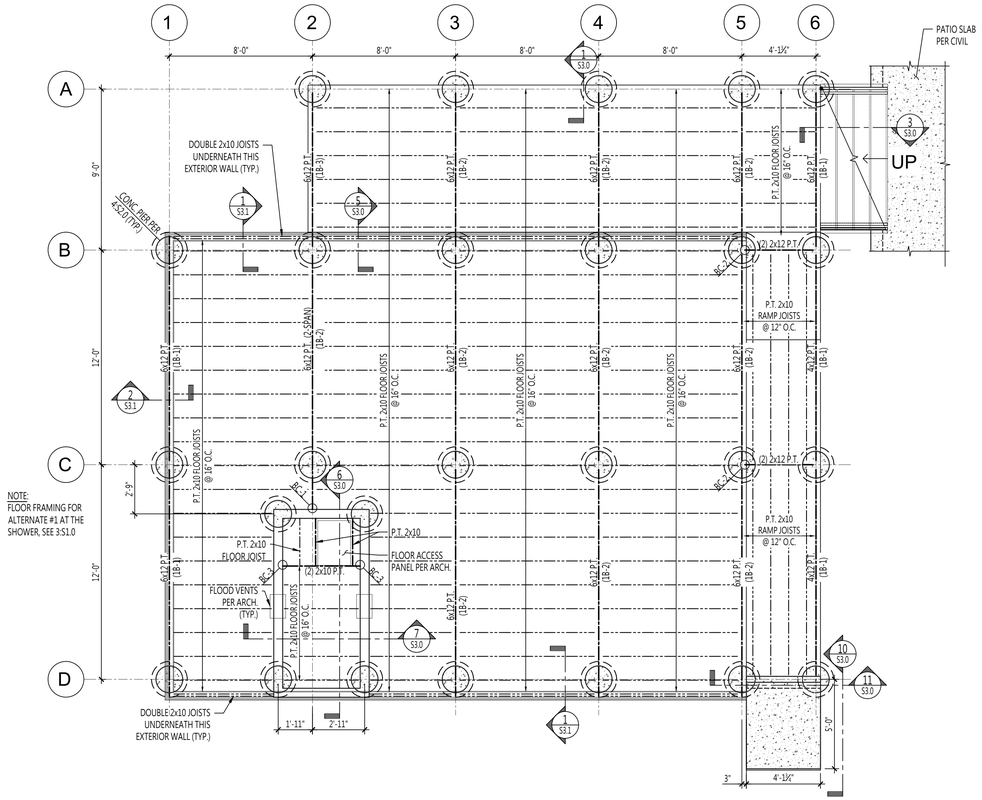
1. Beams & Headers: 2-2x10s unless noted otherwise.
2. Wood species:
   #1 Southern Pine: 2x6, 2x8, 2x10, 2x12 framing members
   #2 Spruce Pine Fir: 2x4, 2x6 Studs
   #1 Douglas Fir-Larch: Timber Beams and 6x6 OR 8x8 Posts
3. Laminated Veneer Lumber (LVL):
   a. Allowable flexural stress, Fb = 2600psi for headers and beams.
   b. Modulus of elasticity, E = 2,000,000psi.
   c. Must have valid evaluation report from approved 3rd party evaluation agency, such as ICC-ES.
4. Posts:
   a. 2-2x4 or 2-2x6 unless noted otherwise.
   b. 3-2x to be interpreted as 2-2x "cripples", glued and nailed, plus a minimum (1) full height unbroken stud. All posts to be blocked solid to top of structure below.
5. Use Simpson or similar metal framing anchors and connectors as noted and as required for wood-to-wood, wood-to-concrete, and wood-to-masonry connections. Connectors shall be hot-dip galvanized steel of structural capacity. Install per manufacturers specifications.
6. Exterior stud wall construction: 7/16" plywood or OSB sheathing fastened to 2x4 or 2x6 studs @ 16" O.C. w/ 8d nails at 6" O.C. at panel edges and 12" O.C. at intermediate supports unless noted otherwise.
7. Interior walls to be framed with a minimum 2x4 or 2x6 studs at 16" O.C. unless noted otherwise.
8. Floor construction: ¾" T.&G. plywood glued and fastened to 2x floor joists w/ 8d nails at 6" O.C. at panel edges and 12" O.C. at intermediate supports.
9. All floor framing to be spaced at 16" O.C. maximum, unless noted otherwise.
10. All exterior lumber to be pressure treated.
11. Double floor joists around stair openings, fireplace hearths, at corners of cantilevered bays and under load bearing parallel partitions. (Typical at all openings, unless noted otherwise) Bearing partitions and post shall be unbroken (run continuous) from bearing to structure below.
12. Under non-load-bearing parallel partitions, provide double joists separated by solid blocking at 16 inches on center equal to depth of studs above.
13. Provide solid wood blocking through floor at all posts above.
14. Steel designations: A36: Plates, Structural angles
    A500 Gr. B: HSS Structural tubes
    A992: W-Shapes
15. All steel elements permanently exposed to weather shall be hot-dipped galvanized.
16. Adhesive anchor shall be Hilti HIT-HY or Simpson SET-3G adhesive anchors or approved equal.

BEAM CONNECTION SCHEDULE		
MARK	SUPPLIER	CONNECTOR
BC-1	SIMPSON	MBHUS.50/11.88KT w/ (2) SIMPSON "THD75400H" FASTENERS
BC-2	SIMPSON	HU210-2
BC-3	SIMPSON	HUS212-2TF

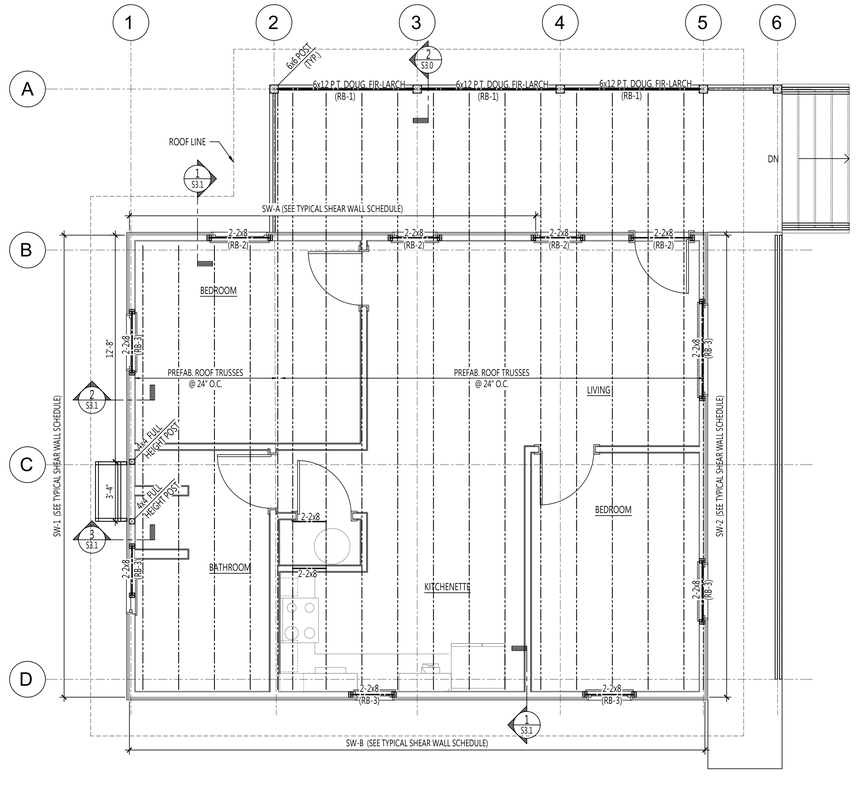
NOTE:
CONNECTOR DESIGNATIONS PROVIDED IN SCHEDULE ARE FOR SIMPSON MANUFACTURED PRODUCTS. SIMILAR METAL FRAMING ANCHORS AND CONNECTORS BY OTHER MANUFACTURERS ARE PERMITTED.



3 S1.0 ALTERNATE #1 PARTIAL FLOOR FRAMING PLAN
SCALE: ¼"=1'-0"



1 S1.0 FOUNDATION AND FIRST FLOOR FRAMING PLAN
SCALE: ¼"=1'-0"



2 S1.0 ROOF FRAMING PLAN
SCALE: ¼"=1'-0"

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR

CONSTRUCTION DOCUMENTS

STATE OF MISSOURI
AARONE. ODLE
NUMBER PE-2014000065
PROFESSIONAL ENGINEER
6-14-2023

AARON S. ODLE
PROFESSIONAL ENGINEER
LICENSE #: PE-2014000065

The design professional seal affixed to this sheet applies only to the material and items shown on this sheet. All drawings, instruments or other documents not exhibiting this seal shall not be considered prepared by this design professional, and this design professional expressly disclaims any and all responsibility for such plan, drawings or documents not exhibiting this seal.

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LAND SURVEYING: 000282

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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

MISSOURI DEPARTMENT OF NATURAL RESOURCES

SIX NEW FULL SERVICE CABINS - JOHNSON'S SHUT-INS STATE PARK

PROJECT # X2206-01
SITE # 5213
FACILITY # 7815213017, 7815213018, 7815213019, 7815213021

REVISIONS		
NO.	DATE	DESCRIPTION
1	06/14/23	ADDENDUM 1

DATE: 04.11.2023
FE PROJECT #: 220058
CHECK: ASO

SHEET TITLE:

2 BEROOM CABIN FOUNDATION & FRAMING PLAN

58 OF 75 SHEETS

SHEET NUMBER
S1.0

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6. Elements that are not dimensioned may not be represented accurately on the plan. Do not use the plan for measurements other than those specified.
7. Provide construction or control joints in slab-on-grade as indicated in the Structural Drawings. If joint pattern is not indicated, provide joints at a maximum spacing of 15'-0" in both direction and located to conform to bay spacing wherever possible (at column centerlines, half bays, third bays, etc.)

GENERAL CONCRETE FOUNDATION NOTES

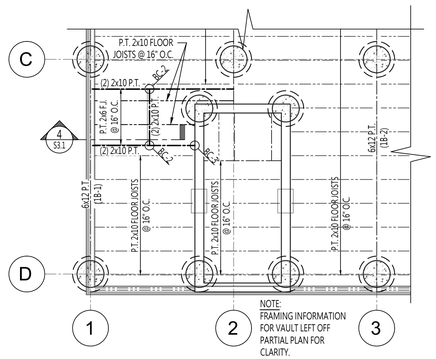
1. Reinforced concrete shall have the following minimum 28-day compressive strengths:
   a. 3000psi - foundation and basement walls, footing and piers.
   b. 3500psi - porches, walks, patios, steps, garage slabs, and driveways.
2. Reinforcing steel to be ASTM A615, grade 60. Welding of ASTM A615, grade 60 reinforcing is not allowed.
3. Welded wire fabric to be ASTM A185. Lap fabric 6" min.
4. Reinforcing shall be continuous wherever possible. Splices and laps shall conform to ACI 318 requirements.
5. Provide the following additional reinforcing unless otherwise called for on structural plans.
   a. 2 - #4 Bars each side of openings 1'-0" or larger in slabs or walls.
   b. 2'-0" x 2'-0" Corner bars in outer face of all walls to match size and spacing of horizontal reinforcing bars in walls.
7. All abutting concrete members shall be doweled together unless poured monolithically. Dowels shall be equal in size and spacing to the bars in the adjacent walls.
8. Minimum concrete cover, unless noted otherwise:
   a. Unformed concrete surface in contact w/ earth: 3"
   b. Formed surfaces exposed to ground or weather: 2"
   c. Formed surfaces not exposed to ground or weather:
      Walls, slab: ¾"
      Beams, columns: 1½"
9. Refer to drawings by others for waterproofing and drainage at foundation.
10. Unless otherwise shown in the architectural drawings, provide ¾" chamfers at all edges that are exposed to view in the finished surface.
11. Cast-in-place anchors shall be carefully placed per contractor measurements. They must be installed correctly, as there is no epoxy set alternative.
12. All footings to extend a minimum of 4.5 ft. below grade, unless noted otherwise. (1)

1st FLOOR FRAMING NOTES

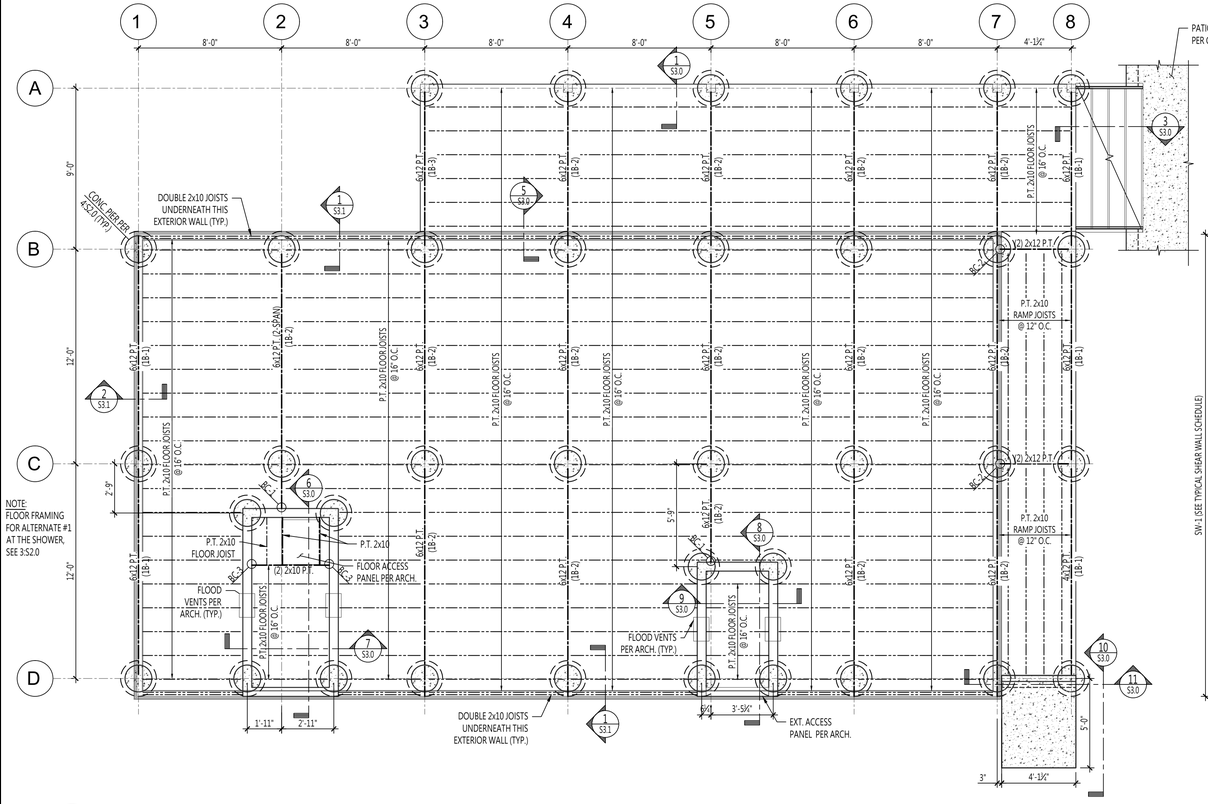
1. Beams & Headers: 2-2x10s unless noted otherwise.
2. Wood species:
   #1 Southern Pine: 2x6, 2x8, 2x10, 2x12 framing members
   #2 Spruce Pine Fir: 2x4, 2x6 Studs
   #1 Douglas Fir-Larch: Timber Beams and 6x6 OR 8x8 Posts
3. Laminated Veneer Lumber (LVL):
   a. Allowable flexural stress, Fb = 2600psi for headers and beams.
   b. Modulus of elasticity, E = 2,000,000psi.
   c. Must have valid evaluation report from approved 3rd party evaluation agency, such as ICC-ES.
4. Posts:
   a. 2-2x4 or 2-2x6 unless noted otherwise.
   b. 3-2x to be interpreted as 2-2x "cripples", glued and nailed, plus a minimum (1) full height unbroken stud. All posts to be blocked solid to top of structure below.
5. Use Simpson or similar metal framing anchors and connectors as noted and as required for wood-to-wood, wood-to-concrete, and wood-to-masonry connections. Connectors shall be hot-dip galvanized steel of structural capacity. Install per manufacturers specifications.
6. Exterior stud wall construction: 7/16" plywood or OSB sheathing fastened to 2x4 or 2x6 studs @ 16" O.C. w/ 8d nails at 6" O.C. at panel edges and 12" O.C. at intermediate supports unless noted otherwise.
7. Interior walls to be framed with a minimum 2x4 or 2x6 studs at 16" O.C. unless noted otherwise.
8. Floor construction: ¾" T.&G. plywood glued and fastened to 2x floor joists w/ 8d nails at 6" O.C. at panel edges and 12" O.C. at intermediate supports.
9. All floor framing to be spaced at 16" O.C. maximum, unless noted otherwise.
10. All exterior lumber to be pressure treated.
11. Double floor joists around stair openings, fireplace hearths, at corners of cantilevered bays and under load bearing parallel partitions. (Typical at all openings, unless noted otherwise) Bearing partitions and post shall be unbroken (run continuous) from bearing to structure below.
12. Under non-load-bearing parallel partitions, provide double joists separated by solid blocking at 16 inches on center equal to depth of studs above.
13. Provide solid wood blocking through floor at all posts above.
14. Steel designations: A36: Plates, Structural angles
    A500 Gr. B: HSS Structural tubes
    A992: W-Shapes
15. All steel elements permanently exposed to weather shall be hot-dipped galvanized.
16. Adhesive anchor shall be Hilti HIT-HY or Simpson SET-3G adhesive anchors or approved equal.

BEAM CONNECTION SCHEDULE		
MARK	SUPPLIER	CONNECTOR
BC-1	SIMPSON	MBHUS.50/11.88KT w/ (2) SIMPSON "THD75400H" FASTENERS
BC-2	SIMPSON	HU210-2
BC-3	SIMPSON	HUS212-2TF

NOTE:
CONNECTOR DESIGNATIONS PROVIDED IN SCHEDULE ARE FOR SIMPSON MANUFACTURED PRODUCTS. SIMILAR METAL FRAMING ANCHORS AND CONNECTORS BY OTHER MANUFACTURERS ARE PERMITTED.



3 S2.0 ALTERNATE #1 PARTIAL FLOOR FRAMING PLAN
SCALE: ¼"=1'-0"



1 S2.0 FOUNDATION AND FIRST FLOOR FRAMING PLAN
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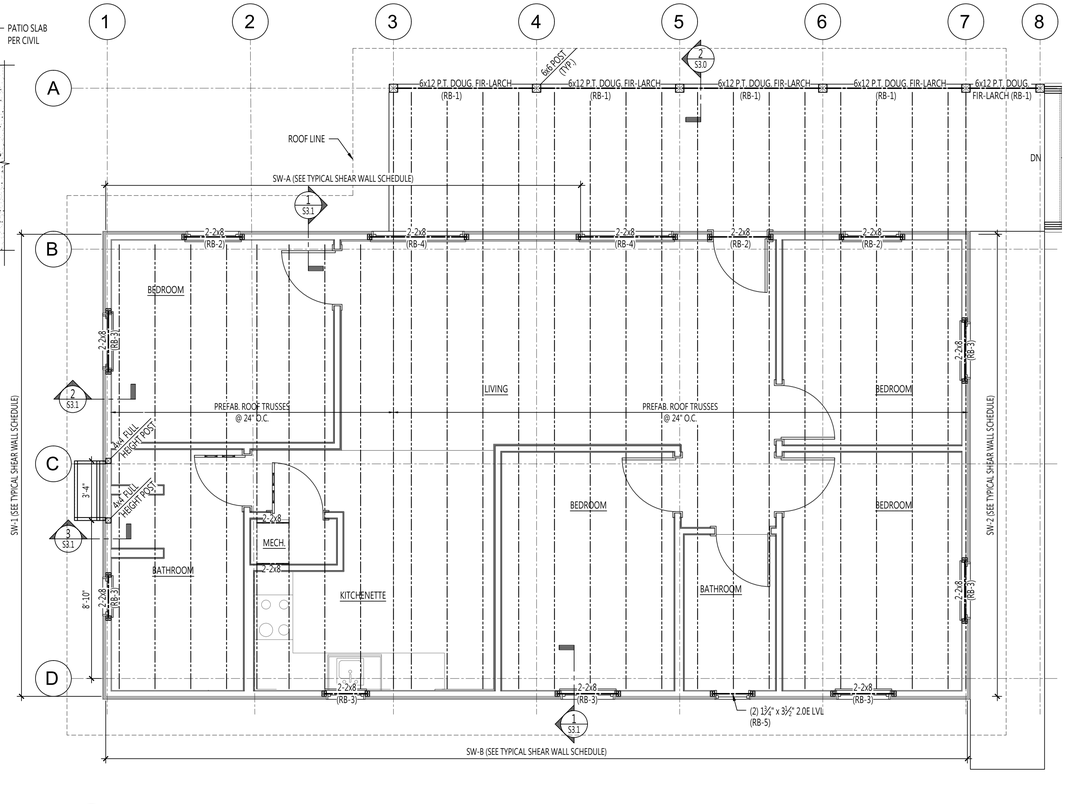

2 S2.0 LOWER ROOF FRAMING PLAN
SCALE: ¼"=1'-0"

STATE OF MISSOURI
MICHAEL L. PARSON,
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DESIGN AND CONSTRUCTION

MISSOURI DEPARTMENT OF NATURAL RESOURCES

SIX NEW FULL SERVICE CABINS - JOHNSON'S SHUT-INS STATE PARK

PROJECT # X2206-01
SITE # 5213
FACILITY # 7815213016, 7815213020

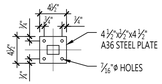
REVISIONS		
NO.	DATE	DESCRIPTION
1	06/14/23	ADDENDUM 1

DATE: 04.11.2023
FE PROJECT #: 220058
CHECK: ASO

SHEET TITLE:

4 BEROOM CABIN FOUNDATION & FRAMING PLAN

59 OF 75 SHEETS
SHEET NUMBER
S2.0



BASE PLATE DETAIL

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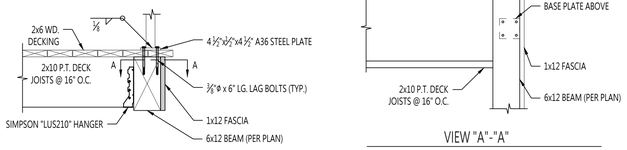

VIEW "A"-"A"

1 S3.0 RAILING ATTACHMENT DETAIL

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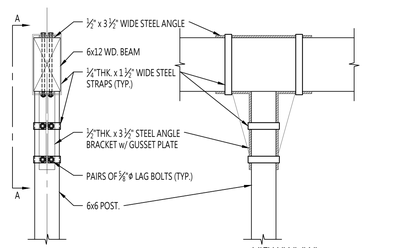
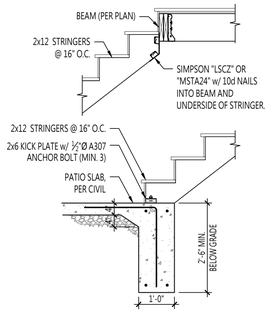


VIEW "A"-"A"

NOTE:
ALL STEEL COMPONENTS SHALL BE HOT-DIPPED GALVANIZED.

2 3.0 WOOD BEAM TO WOOD COLUMN ATTACHMENT DETAIL

SCALE: ¾"=1'-0"



3 S3.0 TYPICAL STAIR FRAMING DETAILS

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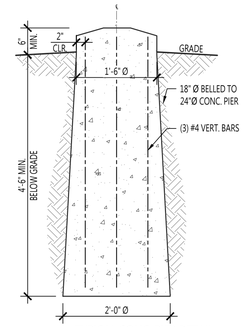

4 S3.0 TYPICAL CONC. PIER DETAIL

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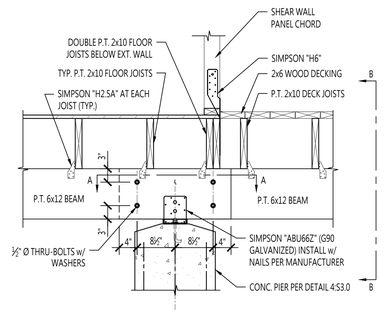

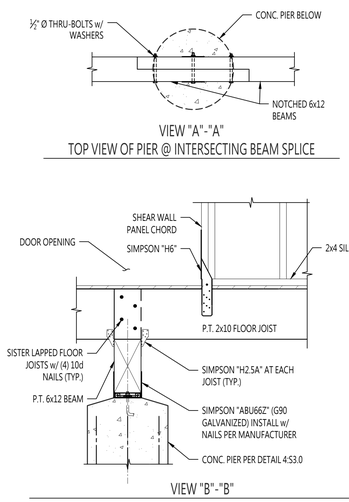

VIEW "A"-"A"
TOP VIEW OF PIER @ INTERSECTING BEAM SPLICE

VIEW "B"-"B"

5 S3.0 LOAD PATH CONNECTION DETAIL

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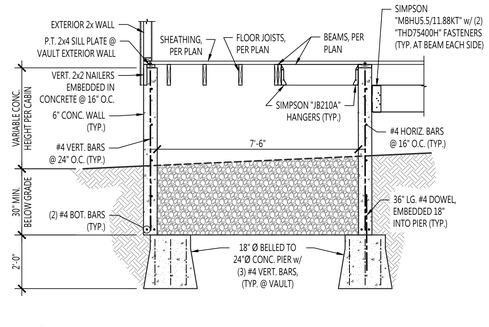

6 3.0 SECTION AT CONC. VAULT

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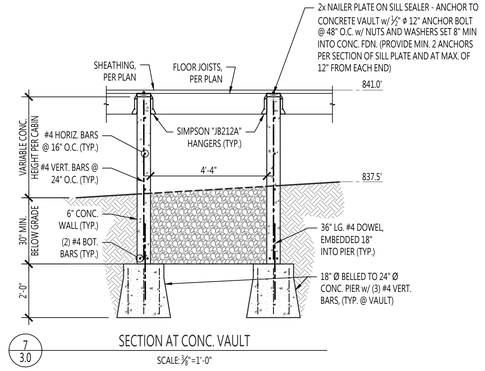

7 3.0 SECTION AT CONC. VAULT

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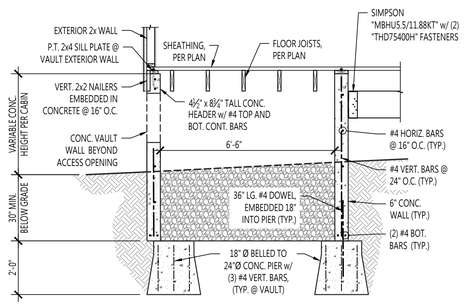

8 3.0 SECTION AT CONC. VAULT

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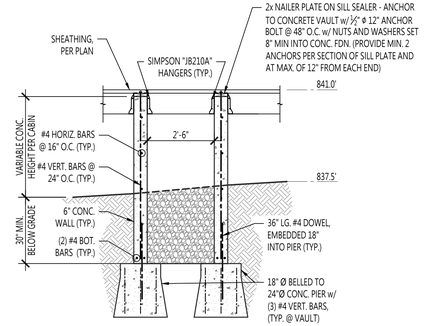

9 3.0 SECTION AT CONC. VAULT

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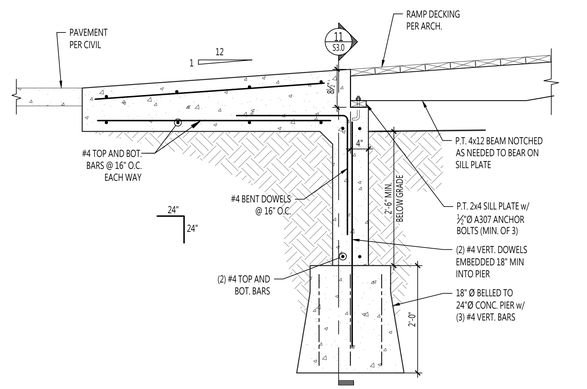

10 S3.0 SECTION AT RAMP

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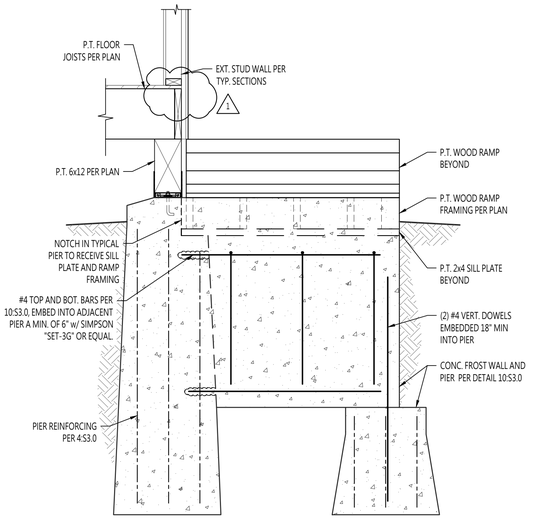

11 S3.0 SECTION AT RAMP

SCALE: ¾"=1'-0"

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

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PROJECT # X2206-01
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FACILITY # 7815213016, 7815213017, 7815213018, 7815213019, 7815213020, 7815213021

REVISIONS		
NO.	DATE	DESCRIPTION
1	06/14/23	ADDENDUM 1

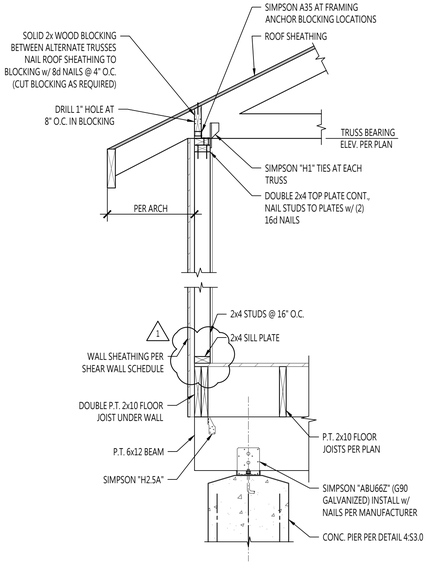
DATE: 04.11.2023
FE PROJECT #: 220058
CHECK: ASO

SHEET TITLE:

STRUCTURAL SECTIONS & DETAILS

60 OF 75 SHEETS

SHEET NUMBER
S3.0



1 S3.1 TYPICAL EXTERIOR WALL SECTION

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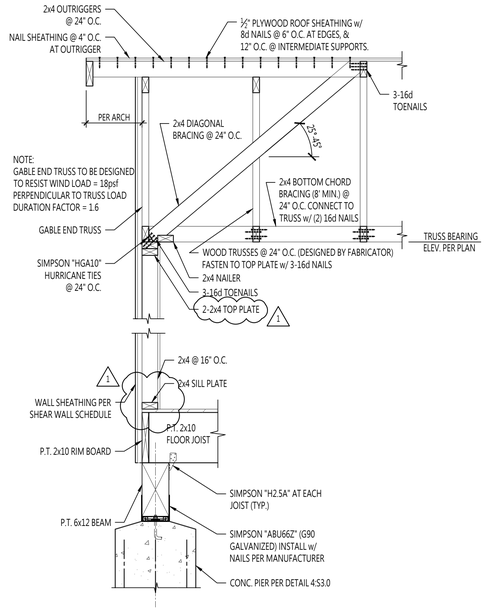

2 S3.1 TYPICAL EXTERIOR WALL SECTION

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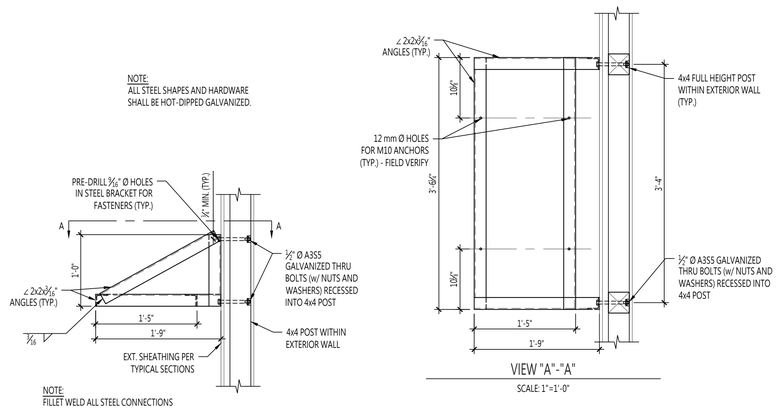

3 S3.1 SECTION AT HVAC SUPPORT

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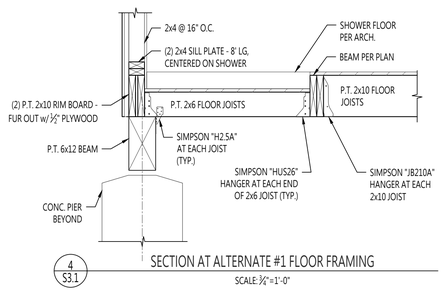
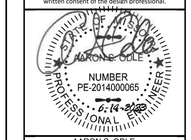


4 S3.1 SECTION AT ALTERNATE #1 FLOOR FRAMING

SCALE: ¾"=1'-0"

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

CONSTRUCTION DOCUMENTS



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61 OF 75 SHEETS

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