- The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or not, as called for on architectural, mechanical, or electrical drawings. Conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before
- 3. All design and construction work for this project shall conform to the requirements of the 2012 International Building Code, as amended by the City of Springfield, MO.
- 4. These drawings are for this specific project and no other use is

5. Concrete:

- A. All concrete for foundations (walls, grade beams, footings) shall develop minimum ultimate compressive design strength of 3500 psi in 28 days, but not less than 500 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 6 gallons of water per 100 pounds of cement and not over 4 inches
- B. All concrete for interior flat work shall develop minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 525 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5.75 gallons of water per 100 pounds of cement and not over 4 inches of slump. Concrete mix shop drawing shall contain testing data proving concrete design mix shrinkage is less than 0.034% at 28 days when tested according to ASTM CI57 (air drying method only).
- All concrete for exterior flatwork shall have a minimum design compressive strength of 4500 psi in 28 days, with not less than 560 pounds of cement per cubic yard of concrete, not over 5 gallons of
- water per 100 pounds of cement, with 6% +/-1% air entrainment, and a maximum of 4 inches of slump. D. The preceding minimum mix requirements may have water-reducing admixtures conforming to ASTM C494 added to the mix at
- manufacturer's dosage rates for improved workability. E. The preceding minimum mix requirements may have up to 15% maximum of the cement content replaced with an approved ASTM C618 Class C fly ash, provided the total minimum cementitious content is not
- F. Combined aggregate (coarse plus fine) for all concrete shall be well graded from coarsest to finest with no more than 18 percent and not less than 8 percent retained on an individual sieve, except that less than 8 percent may be retained on coarsest sieve and on No. 50 and finer sieves. Submit this gradation report with the concrete
- mix design shop drawings. G. All interior concrete slabs on grade shall be placed over 15 mil, Class A Vapor Barrier per ASTM E1745 with less than O.O.I perms, tested after mandatory conditioning. All joints shall be lapped and sealed per manufacturer's recommendations. All penetrations, as well as damaged vapor barrier material shall also be sealed per manufacturer's recommendation prior to concrete placement. Install barrier per manufacturer recommended details at all discontinuous edges (at interior columns, exterior edge of slab, etc.) to ensure terms of warranty are followed. The vapor barrier shall be placed over free-draining granular material as prescribed by the project
- soils report. H. All concrete is reinforced concrete unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas. Any details not shown shall be detailed per ACI 315 and meet requirements of ACI 318, current
- Control joints in dirt formed slab to be as shown on plans. Where not shown, limit controlled areas to not more than 144 square feet, or 12 feet on any side. Slab panel side ratio shall not exceed 1 1/2
- J. Contractor shall verify that all concrete inserts, reinforcing and embedded items are correctly located and rigidly secured prior to concrete placement.
- K. Construction joints in beams, slabs, and grade beams shall occur at midspan (middle third) unless noted otherwise. Provide 2 x 4 horizontal keys at construction joints for shear transfer.
- L. No aluminum items shall be embedded in any concrete.

6. Reinforcing Steel:

- A. All reinforcing steel shall conform to the requirements of ASTM A615 or A706 grade 60 steel. Welded plain wire fabric shall be supplied in sheets and conform to the requirements of ASTM A185. B. Clear minimum coverage of concrete over reinforcing steel shall be
 - Concrete placed against earth Formed concrete against earth Beams or Columns
- All coverage shall be nominal bar diameter minimum. C. All dowels shall be the same size and spacing as adjoining main bars (splice lap 48 bar diameters or 24" minimum unless noted otherwise). D. At corners of all walls, beams, and grade beams supply corner bars
- (minimum 2'-0" in each direction or 48 bar diameters) in outside face of wall, matching size and spacing of horizontal bars. Where there are no vertical bars in outside face of wall, supply 3 - #4 vertical support bars for corner bars. Bars marked continuous and all vertical steel shall be lapped 48
- bar diameters (2'-0" minimum) at splices and embedments, unless shown otherwise. Splice top bars near midspan and splice bottom bars over supports, unless noted otherwise. F. At all holes in concrete walls and slabs, add 2 - #5 bars (opening dimension plus 96 diameters long) at each of four sides and add 2 -#5 x 5'-0" diagonally at each of four corners of hole. Openings in
- G. Unless otherwise covered on architectural plans or specifications, vertical control joints in concrete wall shall be spaced at a maximum of 20'-0" on center and coordinated with the architect. Every other horizontal wall reinforcing bar shall be discontinuous at control joints except heavy top and bottom bars unless noted otherwise. Provide

8" thick walls are reinforced similar, but with 1 - *5 instead of 2 - *5,

- base seal waterstop style number 772 (by Greenstreak Inc. or approved equal) on dirt face side of wall at all walls below grade. Accessories shall be as specified in latest edition of the ACI Detailing Handbook and the concrete Reinforcing Steel Institute Design Handbook. Maximum accessory spacing shall be 4'-0" on center, and all accessories on exposed surfaces are to have
- All slabs and stairs not shown otherwise shall be 6" thick with #4 bars at 12" on center each way. All exterior porches and stoops not otherwise detailed may be constructed in any standard manner, solid or hollow, but must be reinforced with #4 bars at 12" on center each way minimum. Porches shall be doweled to adjacent walls or grade beams with #4 bars at 12" on center, hooked or embedded 48 diameters into both members. Slope porches 1/8" per foot for
- drainage unless noted otherwise. Allow 1/2 ton of reinforcing bars #4 or larger to be used as directed in the field for special conditions by the engineer of record (labor for placing same to be included).

Structural Steel:

-S\SW 14,201

Q:\Q Jan

plastic coated feet.

- A. All structural steel beams and columns shall be ASTM A992, grade 50 steel and all miscellaneous steel shall be ASTM A36 grade steel (except at moment connections where plates shall be ASTM A992, grade 50). Hollow Structural Sections (HSS) shall be ASTM A500, grade B. Fabrication and erection shall be in accordance with AISC 303-05 @Code of Standard Practice for Steel Buildings and Bridges^a in the 13th Edition of the AISC Steel Construction
- All welding shall conform to the recommendations of the AMS. C. All exterior steel and connections, and brick relief angles shall be
- hot-dip qalvanized. D. All bolts not otherwise specified shall be 3/4" diameter high strength (ASTM A325-N). All bolts shall be fully pretensioned. All beam connections shall be designed per the AISC Manual of Steel Construction "Framed Beam Connections" for the indicated reactions or at least 0.4 x beam total shear capacity, Vn/Omega, shown in the Beam Properties of the maximum total uniform load tables, whichever is greater; and, shall account for eccentricity when the bolt line is

- more than 2" from the center of the support. All connections must be two bolt minimum. Connection design and shop drawing preparation shall be completed under the direct supervision of a professional engineer licensed in the state the project is located and shop drawings and connection calculations shall bear his seal. E. All anchor bolts shall be 3/4" diameter, ASTM F1554, Grade 36
- unless noted otherwise. F. Allow I and I/2 tons of miscellaneous structural steel to be used as directed in the field for special conditions by the structural engineer of record. Cost for shop drawings, fabrication, delivery, detailing, and erection to be included.

Post-Installed Anchors:

- A. Post-installed anchors shall be used only where specified on the drawings unless approved in writing by the engineer of record. See drawings for anchor diameter, spacing and embedment. Performance values of the anchors shall be obtained for specified products using appropriate design procedures and/or standards as required by the governing building code. Anchors installed in concrete shall have an ICC-ES Evaluation Service Report. Special inspection is required for all post-installed anchors. The contractor shall coordinate an on-site meeting with the post-installed anchor manufacturer field representative to educate the construction team on the anchor installation quidelines and requirements.
- B. Mechanical anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ACI 355.2 and ICC-ES ACI93. All anchors shall be installed per the anchor manufacturer's written instructions. C. Adhesive anchors used in cracked and uncracked concrete shall
- have been tested and qualified for use in accordance with ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions. D. Mechanical anchors used in solid grouted masonry shall have been tested and qualified for use in accordance with ICC-ES ACOI. All
- E. Adhesive anchors used in solid grouted masonry shall have been tested and qualified for use in accordance with ICC-ES AC58. All anchors shall be installed per the anchor manufacturer's written

anchors shall be installed per the anchor manufacturer's written

F. Anchors used in hollow concrete masonry shall have been tested and qualified in accordance with ICC-ES ACIÓ6 or ICC-ES AC58 as appropriate. All anchors shall be installed per the anchor manufacturer's written instructions with appropriate screen tubes used for adhesives.

- A. The soil investigation was prepared by TSi Geotechnical, Inc. The report number is 20182062 and the telephone number is (816)
- B. Spread footings and grade beams are designed to bear on native soil or engineered fill (placed in accordance with the recommendations of the geotechnical report) capable of safely sustaining 1,500 psf. C. Contractor shall provide for dewatering at excavations from either
- surface water or seepage. D. All foundation excavations shall be inspected by a qualified soil
- engineer, approved by the architect and/or structural engineer, prior to placement of steel or concrete. This inspection shall be at the owner's expense.
- E. All concrete in the structural portion retaining the backfill shall have attained its design strength prior to being backfilled. F. Moisture content in soils beneath building locations should not be allowed to change after footing excavations and after grading for slabs on grade are completed. If subgrade materials become

desiccated or softened by water or other conditions, recompact

materials to the density and water content specified for engineered

fill. Do not place concrete on frozen ground. II. Timber and Wood Framing:

- A. Quality and construction of wood framing members and their fasteners for load supporting purposes not otherwise indicated on the drawings shall be in accordance with the 2012 International
- B. All studs and top and bottom plates shall be Douglas Fir No. 2 grade visually graded lumber, with an allowable fiber stress in bending of 900 psi minimum and an elastic modulus of 1,600,000 psi unless noted otherwise. All joist, truss members and headers to be No. 2 grade (min.) (unless noted otherwise).
- C. Bridging of stud bearing walls and shear walls shall be solid, matching sheathing joints.
- D. Joist blocking and bridging shall be solid wood or cross bridging of either wood or metal straps. Spacing, in any case, shall not exceed 8'-0".
- E. Wood members and sheathing shall be fastened with number and size of fasteners not less than that set forth in Table 2304.9.1 of the 2012 International Building Code. Floor sheathing shall be APA rated tonque and groove Sturd-I-Floor, exposure I, glued and nailed with 10d nails or # 10 screws at 6" on center to supports at edges and 12" on center field. Sheathing of shear walls or roof diaphragms shall be edge nailed with 8d common nails at 6" on center and nailed to intermediate framing and/or blocking members with 8d common nails at 12" on center unless otherwise noted on the
- F. Sill plates shall be bolted to concrete slabs with 1/3" diameter bolts at 32" on center (UNO, Re: shearwall sched). Provide plate washers at sill plate anchors for shearwalls per shearwall sched. Plates in direct contact with concrete or masonry shall be treated
- G. All hangers, ties and connections shown are based on Simpson Strong Tie as the basis of design. Provide Simpson Strong Tie or an approved equal. Joist hangers shall be equal to "LUS" for wood application and "LB" for steel weld-on application. Roof truss ties shall be equal to "H2.5A" and tie the roof truss to the top plate (provide (2) "H2.5A" Diagonally across from each other when uplift load shown in truss shop submittal exceeds 600lbs). Roof girder ties shall be equal to a "LGT2", "LGT3" or "LGT4" tie (dependent on number of plies) and tie the truss girder to the top plate. Provide "H4" at the top of each stud to top track when the top track has
- roof truss attached. H. Service condition - dry with moisture content at or below 19% in
- I. Laminated strand lumber (LSL) shall have an allowable flexural stress (Fb) of 1,700 psi (reduced by size factor) and an elastic modulus (E) of 1,300,000 psi. J. Laminated veneer lumber (LVL) shall have an allowable flexural
- stress (Fb) of 2,600 psi (reduced by size factor) and an elastic modulus (E) of 1,900,000 psi. K. Parallel Strand Lumber (PSL) shall have an allowable flexural stress (Fb) of 2,900 psi (reduced by size factor) and an elastic modulus (E) of 2,000,000 psi. ((E) = 2,200,000 psi for members > 18")
- L. Pre-engineered wood trusses shall be designed in accordance with the Truss Plate Institute's national design standard for metal-plate connected wood truss construction (ANSI/TPI-I latest edition). Trusses shall be designed and manufactured by an authorized member of the Wood Truss Council of America (WTCA). Truss design shall conform to specified codes, allowable stress increases, deflection limitations and other applicable criteria of the governing code.
- M. Shop drawings showing complete erection and fabrication details and calculations (including connections) shall be submitted to the project architect / engineer for review prior to fabrication and/or erection. Calculations shall bear the seal of a professional engineer, registered in the state of the project location. Shop drawings shall also be submitted to the local government controlling agency when requested by that
- N. All trusses shall be securely braced both during erection and permanently, as indicated on the approved truss design drawings and in accordance with TPI's commentary and recommendations for handling, installing and bracing metal-plate connected wood trusses (HIB-91, booklet) and the latest edition of
- O. The truss manufacturer shall supply all hardware and fasteners for joining truss members together and fastening truss members to their supports. Metal connector plates shall be manufactured by a member of the Wood Truss Council of America (WTCA) and shall be 20 gauge minimum. Connector plates shall meet or exceed ASTM A653, grade 33, with ASTM A924 galvanized coating designation 660.

- P. Shipment, handling, and erection of trusses shall be by experienced, qualified persons and shall be performed in a manner so as not to endanger life or property. Apparent truss damage
- shall be reported to the truss manufacturer for evaluation prior to erection. Cutting or alteration of trusses is not permitted. Q. Pre-engineered floor truss design load and deflection criteria are
- Top Chord Dead Load= 32 psf Top Chord Live Load= 40 psf (private)
- 100 psf (public) Bottom Chord Dead Load= 10psf Allowable Total Load Deflection= L/360
- Allowable Live Load Deflection= L/480; I/2" maximum R. Pre-engineered roof truss design load and deflection criteria are as follows: Top Chord Dead Load= 15 psf
- Top Chord Live Load (Typical) = 20 psf plus snow drift Top Chord Live Load (at Recessed Mechanical Wells) = 100 psf to account for mechanical equipment plus snow drift. Refer to roof framing plans. Bottom Chord Dead Load= 10 psf
- locations and sizes with MEP) Allowable Total Load Deflection= L/300 Allowable Live Load Deflection= L/360
- 5. Wood Shrinkage Considerations: (General Contractor to coordinate with all trades required): I.) All holes and notches for horizontal plumbing pipes
 - are to be oversized to compensate for shrinkage Swing joints and flexible connections, offsets and expansion/contraction joints are to be utilized in the fabrication of pipes to allow for shrinkage. Vents are to be installed with double flashing to

Include mechanical equipment loads as required (coordinate

- permit movement. Hangers for piping below upper floor are required to be adjusted several months after completion of
- Slip joints are required for all sheet metal vertical down-spouts, vents, etc. to compensate for
- Rigid electrical conduit installed vertically should be provided with flexible joints to permit movement. All roof drains are to be adjusted to the finished
- roof surface at the time of occupancy and also every year prior to rainy season. Vertical mechanical and sprinkler systems are to be
- installed to compensate for wood shrinkage. Plates should be fastened tight to precut studs to reduce compressive space between plate and stud to minimize any potential additional shortening of
- 10.) All wood structural panels on walls are required to have a 1/2" relief gap at each floor level to relieve possible bulging. At stucco construction install horizontal expansion
- joints, slip joint flashing, etc. At brick veneer construction provide slip joints for flashing. Refer to architect's plans for flashing and clearances required between brick and wood
- structure at horizontal locations to compensate for wood shrinkaae. Delay window and door installation to allow wood framing to reach equilibrium moisture content (EMC). Also, allow 1/2" gap at window sills and a gap around
- pre-hung doors. Refer to the "ESTIMATED WOOD SHRINKAGE" table on this sheet. The application of all finish materials and installation of non-structural systems shall account for shrinkage of the wood framing per the
- estimated values given. T. Construction bracing shall be provided by the contractor as
- required to keep the building and studs plumb. U. Structural members shall not be cut for pipes, etc., unless specifically detailed. Notching and boring of studs and top of plates shall conform to the provisions of section 2308.9.10 and 2308.9.11 of the IBC. Where top plates or sole plates are cut for pipes, a metal tension tie with minimum 0.058 inches thick and 1/2" inches wide shall be fastened to each plate across and to each side of the opening with not less than (6) 16d nails, in accordance section 2308.9.8 of
- V. All fasteners for wood to wood connections and wood connectors shall be as indicated in structural drawings or manufacturer literature to achieve full capacity of connector. Alternate fasteners may be submitted as a substitution request. Submittal must show that alternative fasteners will not reduce the capacity of the connection.

13. Shop Drawing Review:

- A. Bob D. Campbell and Company, Inc. will review the General Contractor's (GC) shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall structural system designed by Bob D. Campbell and Company,
- B. Prior to submittal of a shop drawing or any related material to Bob D. Campbell and Company, Inc., the GC shall:
- 1) Review each submission for conformance with the means, methods, techniques, sequences and operations of construction and safety precautions and programs incidental thereto, all of which are the sole responsibility of the GC. 2) Review and approve each submission.
- 3) Stamp each submission as approved. C. Bob D. Campbell and Company, Inc. shall assume that no submission comprises a variation unless the GC advises Bob D. Campbell and Company, Inc. with written documentation.
- D. Shop drawings and related material (if any) required are indicated below. Should Bob D. Campbell and Company, Inc. require more than ten (10) working days to perform the review, Bob D. Campbell and Company, Inc. shall so notify the GC. 1) Concrete mix designs and material certificates including admixtures and compounds applied to the concrete after
- 2) Reinforcing steel shop drawings including erection drawings and bending details. Bar list will not be reviewed for correct
- 3) Elevations of all reinforced concrete masonry walls at a scale no smaller than 3/8" = 1'-0" showing all required reinforcing. 4) Grout mix designs (for CMU).

5) Construction and control joint plans and/or elevations.

- 6) Structural steel shop drawings including erection drawings and piece details. Include miscellaneous framing specified on the structural drawings, but do not submit framing specified on non-structural drawings for Bob D. Campbell and Company, Inc. 7) Structural steel connection design calculations.
- 8) Miscellaneous anchors shown on the structural drawings. 9) Wood truss design calculations and detailed erection and fabrication drawings. Standard stick framing shop drawings need not be submitted. E. Bob D. Campbell and Company, Inc. shall review shop drawings and
- related materials with comments provided that each submission has met the above requirements. Bob D. Campbell and Company, Inc. shall return without comment unrequired material or submissions without GC approval stamp.

14. Structural Special Inspection:

- A. The structural design for this project is based on completion of special inspections during construction in accordance with section 1704 of the 2012 International Building Code. The owner shall employ one or more qualified special inspectors to provide the required special inspections.
- B. Special Inspections shall be required for the items indicated below. The General Contractor shall provide notification to the inspector when items requiring inspection are ready to be inspected and provide access for those inspections. Placement of Concrete
- 2) Testing of Concrete 3) Bolts in Concrete
- 5) Placement of Reinforcing Steel

6) Verification of Soil Bearing Capacities

- 7) High Strength Bolting 8) Post-Installed Anchors
- 9) Structural Melding
- 10) Steel Frame Inspection
- II) Structural Masonry 12) Shop Fabrication of Structural Steel
- 13) Wood shear walls and holdowns
- 14) Wood gravity framing and placement C. The special inspector shall furnish inspection reports to the building official, owner, architect and structural engineer, and any other
- desiqnated person. D. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design
- authority, building official and structural engineer The special inspector shall submit a final signed report stating that the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the

Copyright and Disclaimer:

building code.

- A. All drawings in the structural set (5-series drawings) are the copyrighted work of Bob D. Campbell and company, Inc. These drawings may not be photographed, traced, or copies in any manner without the written permission of Bob D. Campbell and Company, Inc. Exception: Original drawings may be printed for distribution to the owner, architect, and general contractor for coordination, bidding, and construction. Subcontractors may not reproduce these drawings for any purpose or in any manner.
- B. I, Christopher W. Boos, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of S-series drawings. I hereby disclaim responsibility for all other drawings in the construction document package, they being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.

STRUCTURAL DESIGN CRITERIA:

<u>DESIGN LIVE LOADS:</u> Roof • Floors (slab on grade) Private Rooms & Corridors Serving Them 40 psf

Public Rooms & Corridors Serving Them

- SNOW LOADING: Pg = 20 psf Pf = 14 psf Ground Snow Load Flat Roof Snow Load Snow Exposure Factor Ce = 1.0
- ls = 1.0 Snow Load Importance Factor Thermal Factor Ct = 1.0

Drift per ASCE/SEI 7-10 <u> WIND LOADING:</u>

Main Wind-force Resisting System (MWFRS): Ultimate Design Wind Speed Vult = 115 mph Nominal Design Wind Speed Vasd = 89 mph

lw = 1.0 Wind Load Importance Factor Wind Exposure Category Internal Pressure Coefficient (Enclosed) GCpi = +/-0.18

Risk Category

Components & Cladding: Design wind pressures to be used for the design of exterior component and cladding materials on the designated zones of wall and roof surfaces shall be per ASCE/SEI 7-10. Tabulated pressures shall be multiplied by effective area reduction factors, exposure adjustment factors, and topographic factors where applicable.

<u>SEISMIC DESIGN REQUIREMENTS:</u>

Seismic Design Category C

- Risk Category • Seismic Importance Factor Is = 1.0 Spectral Response Acceleration Parameters:
- 5ds = 0.20lq5dl = 0.167qSite Class D

GOVERNING CODE: 2012 International Building Code

20 psf 100 psf

EST 1935

ARCHITECTURAL CORPORATION MISSOURI CERTIFICATE

MEN

 \triangleleft

 \triangleleft

9

ARCHITECT - TIMOTHY O.K. WILSON



ISSUE DATE: 1.7.2019

REVISIONS:

STRUCTURAL

GENERAL NOTES

PROJECT NO.: 1817

SHEAR WALL SCHEDULE

3rd FLOOR

WALL SHEATHING

BASE HOLD

(EACH END)

CHORD STUDS | DOWN ANCHOR

(EACH END)

FLOOR-TO-FLOOR

TIE (EACH END)

SHEATHING & ATTACHMENT

WALL SHEATHING

SHEAR WALL

(PER PLAN)

MALL SHEATHING

	HEADER SCHEDULE			
TYPE	HEADER SIZE	BEARING STUDS BELOW EACH END OF HEADER	CONTINUOUS JAMB STUDS AT EACH END	REMARKS
Al	(3) 2×10's w/ (2) ½" PLYWOOD SPACERS	(I) 2×6	(2) 2×6	RE: SECTION 1/50.3
B	(3) 2×10'5 w/ (2) ½" PLYMOOD SPACERS	(1) 2×6	(2) 2×6	RE: SECTION 1/50.3
A2	(3) 2×10'5 w/ (2) ½" PLYMOOD SPACERS	(2) 2×6	(2) 2×6	RE: SECTION 1/50.3
B2	(3) 2×10'5 w/ (2) ½" PLYMOOD SPACERS	(2) 2×6	(2) 2×6	RE: SECTION 1/50.3
A3	(3) 2×10'5 w/ (2) ½" PLYMOOD SPACERS	(2) 2×6	(2) 2×6	RE: SECTION 1/50.3
B3	(3) 2x10's w/ (2) ½" PLYWOOD SPACERS	(2) 2×6	(2) 2×6	RE: SECTION 1/50.3

STUD BEARING WALL SCHEDULE			
LOCATION	STUD SIZE & SPACING		
Ist FLOOR EXTERIOR WALLS	(2) 2×6 @I6"oc		
Ist FLOOR INTERIOR WALLS	(2) 2×6 ⊚l6"oc		
2nd FLOOR EXTERIOR WALLS	2×6 @16"oc		
2nd FLOOR INTERIOR WALLS	2×6 @16"oc		
3rd FLOOR EXTERIOR WALLS	2×6 @16"oc		
3rd FLOOR INTERIOR WALLS	2×6 @16"oc		

NO.	<u>TES:</u>
I.	UNLESS NOTED OTHERWISE, PROVIDE STUD PACKS AT ALL
	GIRDER TRUSS BEARING LOCATIONS. QUANTITY OF STUDS
	SHALL BE 3 STUDS MINIMUM PLUS ONE ADDITIONAL STUD FOR
	EACH PLY OF GIRDER TRUSS. REFER TO SECTION 6/50.3.
	STUD PACKS SHALL BE ALIGNED & PROVIDED AT EACH
	LEVEL OF 3-STORY STRUCTURE TO TRANSFER LOAD TO THE
	FOUNDATION.
2.	PROVIDE SQUASH BLOCKS (ALIGNED WITH WALL STUDS ABOVE

TRANSFER STUD LOADS TO THE WALL BELOW, WHERE SUPPORT IS NOT OTHERWISE PROVIDED (TYPICAL). 3. WALL STUDS AT DOUBLE-HEIGHT SPACES THAT ARE NOT BRACED BY THE FLOOR OR BY A HORIZONTAL GIRT AT THE

& BELOW) WITHIN THE DEPTH OF THE FLOOR FRAMING TO

WALL S	MALL SHEATHING SCHEDULE		
LOCATION	SHEATHING	FASTENER SPACING	
LOCATION		PANEL EDGE	FIELD
EXTERIOR WALL (EXTERIOR SIDE) U.N.O. PER SHEAR WALL SCHEDULE	Ч ₆ " ОЭВ		8d COMMON NAILS @12"oc
EXTERIOR WALL (INTERIOR SIDE) U.N.O. PER SHEAR WALL SCHEDULE	%" GYPSUM BOARD	6d COOLER NAILS @4"oc	6d COOLER NAILS @7"oc
TYP. INTERIOR WALL U.N.O. PER SHEAR WALL SCHEDULE	%" GYPSUM BOARD	6d COOLER NAILS @4"oc	6d COOLER NAILS @7"oc

I. REFER TO SHEAR WALL SCHEDULE FOR SHEATHING OF SHEAR

2. ALL PANEL JOINTS ARE TO BE FULLY BLOCKED.

CONNECTION	ATTACHMENTS (REF N	OTE #3 and #4)
JOIST TO SILL OR GIRDER	3- 3" x 0.131" NAILS-TOENAIL	3-8d NAILS-TOENAIL
BRIDGING TO JOIST	2- 3" × 0.131" NAILS-TOENAIL EACH END	2-8d NAILS-TOENAIL EACH END
SOLE PLATE TO JOIST OR BLOCKING	3" × O.131" NAILS AT 8"o.cTYPICAL FACE NAIL 4-3" × O.131" NAILS AT 16"o.cBRACED	16d BOX NAILSZ AT 16"o.c. MAX. FACE NAILING 3-16d BOX NAILS AT 16"o.c.
	WALL PANELS	BRACED WALL PANEL
TOP PLATE TO STUD	3- 3" x 0.131" NAILS-END NAIL	2-16d NAILS-END NAIL
STUD TO SOLE PLATE	4- 3" × 0.131" NAILS-TOENAIL OR 3- 3" × 0.131" NAILS-END NAIL	4-8d NAILS-TOENAIL OR 2-16d NAILS-END NAIL
DOUBLE STUDS	3" x O.131" NAILS AT 8"o.cFACE NAIL	16d BOX NAILS AT 24"o.c. MAX. FACE NAIL
DOUBLED TOP PLATES	3" x O.131" NAILS AT 12"o.cFACE NAIL	16d BOX NAILS AT 16"o.c. MAX. FACE NAIL
DOUBLE TOP PLATE LAPS AND INTERSECTIONS	12-3" × 0.131" NAILS	8-16d NAILS
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3-3" x O.131" NAILS -TOENAIL	3-8d NAILS-TOENAIL
RIM JOIST TO TOP PLATE	3" x O.131" NAILS AT 6"0.cTOENAIL	8d NAILS AT 6"o.c. MAXTOENAIL
TOP PLATE LAPS AND INTERSECTIONS	3- 3" x O.131" NAILS-FACE NAIL	2-16d NAILS-FACE NAIL
CONTINUOUS HEADER, TWO PIECES	3" × O.131" NAILS AT 10"o.c. ALONG EACH EDGE	16d NAILS AT 16"O.C. MAX. ALONG EACH EDGE-TOENAIL
CEILING JOISTS TO PLATE	5- 3" x O.131" NAILS-TOENAIL	3-8d NAILS-TOENAIL
CONTINUOUS HEADER TO STUD	4- 3" x O.I3I" NAILS-TOENAIL	4-8d NAILS-TOENAIL
CEILING JOISTS, LAPS OVER PARTITIONS	4- 3" x O.I3I" NAILS-FACE NAIL	3-16d NAILS-FACE NAIL
CEILING JOISTS TO PARALLEL RAFTERS	4- 3" x O.I3I" NAILS-FACE NAIL	3-16d NAILS-FACE NAIL
RAFTER TO PLATE	3- 3" x O.131" NAILS-TOENAIL	3-8d NAILS-TOENAIL
I" BRACE TO EACH STUD AND PLATE	2- 3" x O.131" NAILS-FACE NAIL	2-8d NAILS-FACE NAIL
BUILT-UP CORNER AND MULTIPLE STUDS	3" x O.131" NAILS AT 16"0.c.	16d NAILS AT 24"o.c. MAX.
BUILT-UP GIRDER AND BEAMS	3" x O.131" NAILS AT 24"o.c. FACE NAILED TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES 3-3" x O.131" NAILS AT ENDS AND EACH	20d NAILS AT 32"0.C. MAX. TOP AND BOTTOM, STAGGERED ON OPPSITE SIDES. 2-20d NAILS AT ENDS AND EACH
BUILT-UP LAMINATED VENEER LUMBER BEAMS	SPLICE 3" × O.131" NAILS AT 6"o.c. TOP AND BOTTOM ALONG EDGE	SPLICE 16d NAILS AT 12"o.c. TOP AND BOTTOM ALONG EDGE
2" PLANKING	4- 3" x 0.131" NAILS AT EACH SUPPORT	16d NAILS AT EACH SUPPORT

I.) ALL NAILS SHALL BE AS NOTED UNLESS OTHERWISE SPECIFIED ON STRUCTURAL DRAWINGS OR

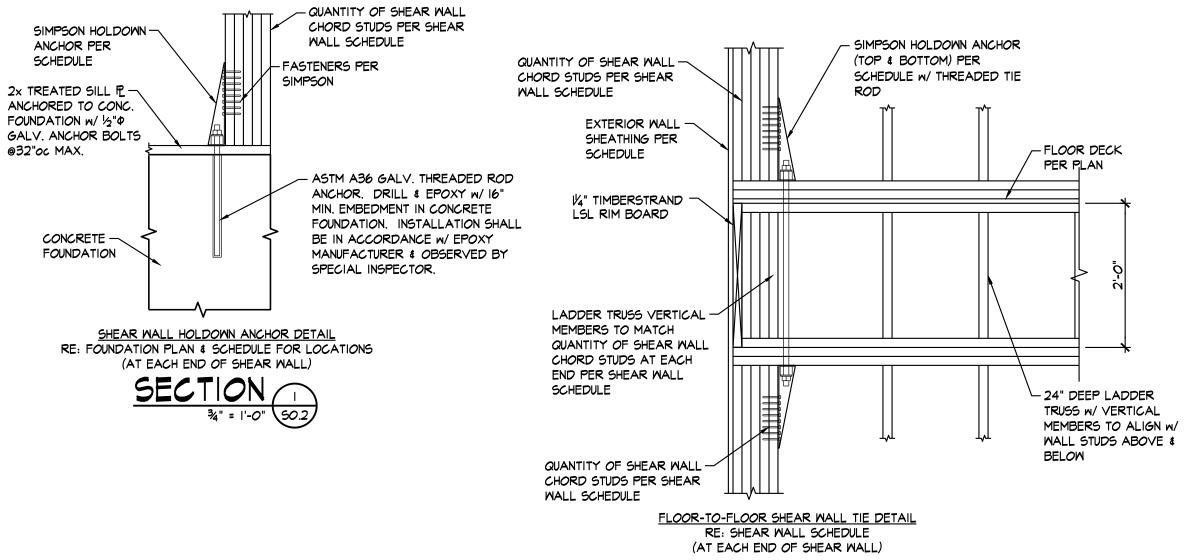
ALTERNATE PROVIDED BY ENGINEER IN WRITING. 2.) CONDITIONS NOT SPECIFIED SHALL BE IN ACCORDANCE WITH CURRENT INTERNATIONAL BUILDING CODE.

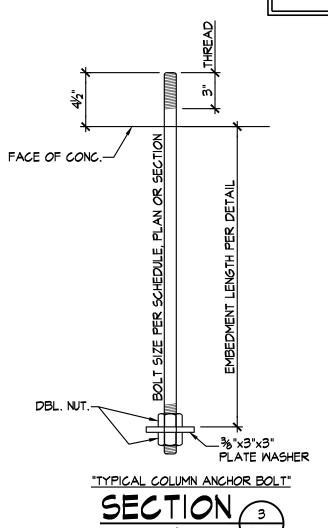
3.) NAILING DESIGNATION:

4 - 3" × O.131" NAILS
T DIAMETER IN INCHES ----- NAIL LENGTH ----- QUANITY

4.) ALL NAILS NOTED AS 8d, IOd, I6d, ETC. SHALL BE COMMON NAILS UNLESS NOTED BOX.

FLOOR	1 & ROOF I	DECK SCH	EDULE
LOCATION	FASTENER SPACING		RSPACING
LOCATION	DECKING	PANEL EDGE	FIELD
TYPICAL ROOF DECK	19/32" <i>0</i> 5B	IOd COMMON NAILS @6"00	IOd COMMON NAILS @12"oc
FLOOR DECK	¾" T&G PLYWOOD	IOd RING SHANK NAILS @6"0c (GLUED & NAILED)	IOd RING SHANK NAILS @12"oc (GLUED & NAILED)





FOOTING SCHEDULE			
FOOTING TYPE	FOOTING SIZE (FT.) × THICKNESS (IN.)	REINFORCING (EACH WAY)	
3.0	3'-0"x3'-0"x18" Dp	#4@6"oc BOTTOM	
4.0	4'-0"x4'-0"x32" Dp	#4@6"oc (TOP & BOT)	
4.00	4'-0"x4'-0"x32" Dp	#4@6"oc (TOP & BOT)	
5.0	5'-0"x5'-0"x24" Dp	#4@6"oc BOTTOM	
5.00	5'-0"x5'-0"x36" Dp	#5@6"oc (TOP & BOT)	
6.00	6'-0"x6'-0"x36" Dp	#5@6"oc (TOP & BOT)	
\$.00	8'-0"x8'-0"x32" Dp	#5@6"oc (TOP & BOT)	

I. SPREAD FOOTINGS SHALL BE POURED MONOLITHIC W/ GRADE BEAMS & CONTINUOUS WALL FOOTINGS. REINFORCING FOR GRADE BEAMS & CONTINUOUS WALL FOOTINGS SHALL BE CONTINUOUS THROUGH SPREAD FOOTINGS.

EST 1935

ARCHITECTURAL CORPORATION MISSOURI CERTIFICATE OF AUTHORITY NO. 000073

> PARTMENTS ESTNUT UNTY, MISSOUR GARDENS 1255 E. (1255 E. GREENE (1255 E. (1255 E

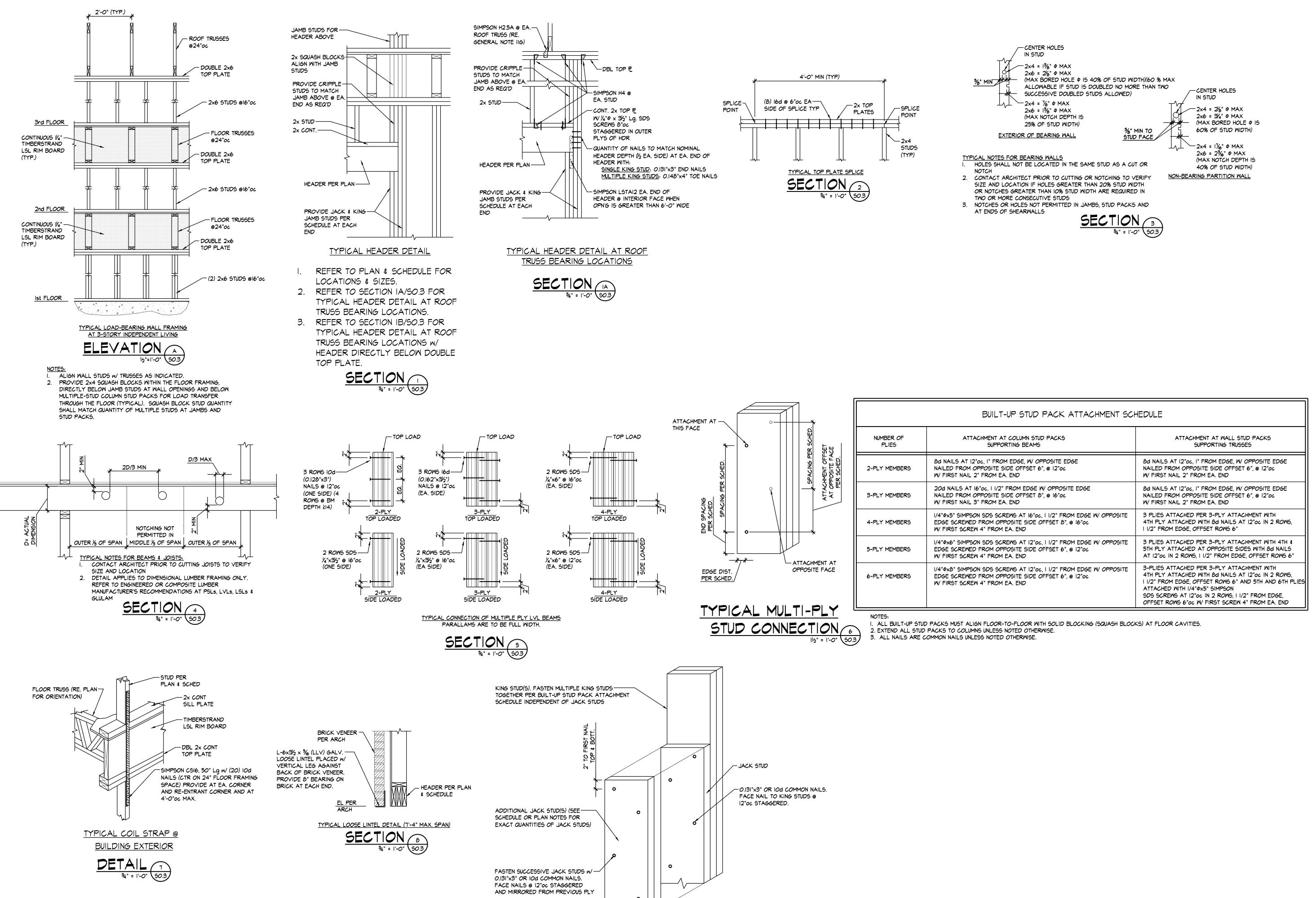
ARCHITECT - TIMOTHY O.K. WILSON MO. LICENSE NO. A-6972



SCHEDULES

ISSUE DATE: 1.7.2019 **REVISIONS:**

PROJECT NO.: 1817



TYPICAL JACK STUD ATTACHMENT

SVVD

EST 1935

ARCHITECTURAL CORPORATION
MISSOURI CERTIFICATE

MISSOURI CERTIFICATE
OF AUTHORITY NO. 000073

302

GARDENS APARTMENTS
1255 E. CHESTNUT
ELD, GREENE COUNTY, MISSOURI 6580.

SEAL

ARCHITECT - TIMOTHY O.K. WILSON

MO. LICENSE NO. A-6972



TYPICAL SECTIONS

1.7.2019

REVISIONS:

PROJECT NO.: 1817

SO.3

FIRST FLOOR / FOUNDATION PLAN

NOTES:

I. REFER TO GENERAL NOTES & TYPICAL DETAILS ON SHEET SO.I & SO.3.

2. VERIFY ALL DIMENSIONS & ELEVATIONS W/ ARCHITECTURAL DRAWINGS.

3. REFER TO SCHEDULES ON SHEET SO.2.

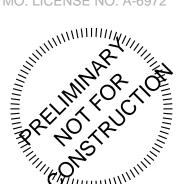
3 52.1



ARCHITECTURAL CORPORATION

MISSOURI CERTIFICATE OF AUTHORITY NO. 000073

SEAL ARCHITECT - TIMOTHY O.K. WILSON MO. LICENSE NO. A-6972



FIRST FLOOR FOUNDATION PLAN

> ISSUE DATE: 1.7.2019

REVISIONS:

PROJECT NO.: 1817



EST 1935

ARCHITECTURAL CORPORATION MISSOURI CERTIFICATE OF AUTHORITY NO. 000073

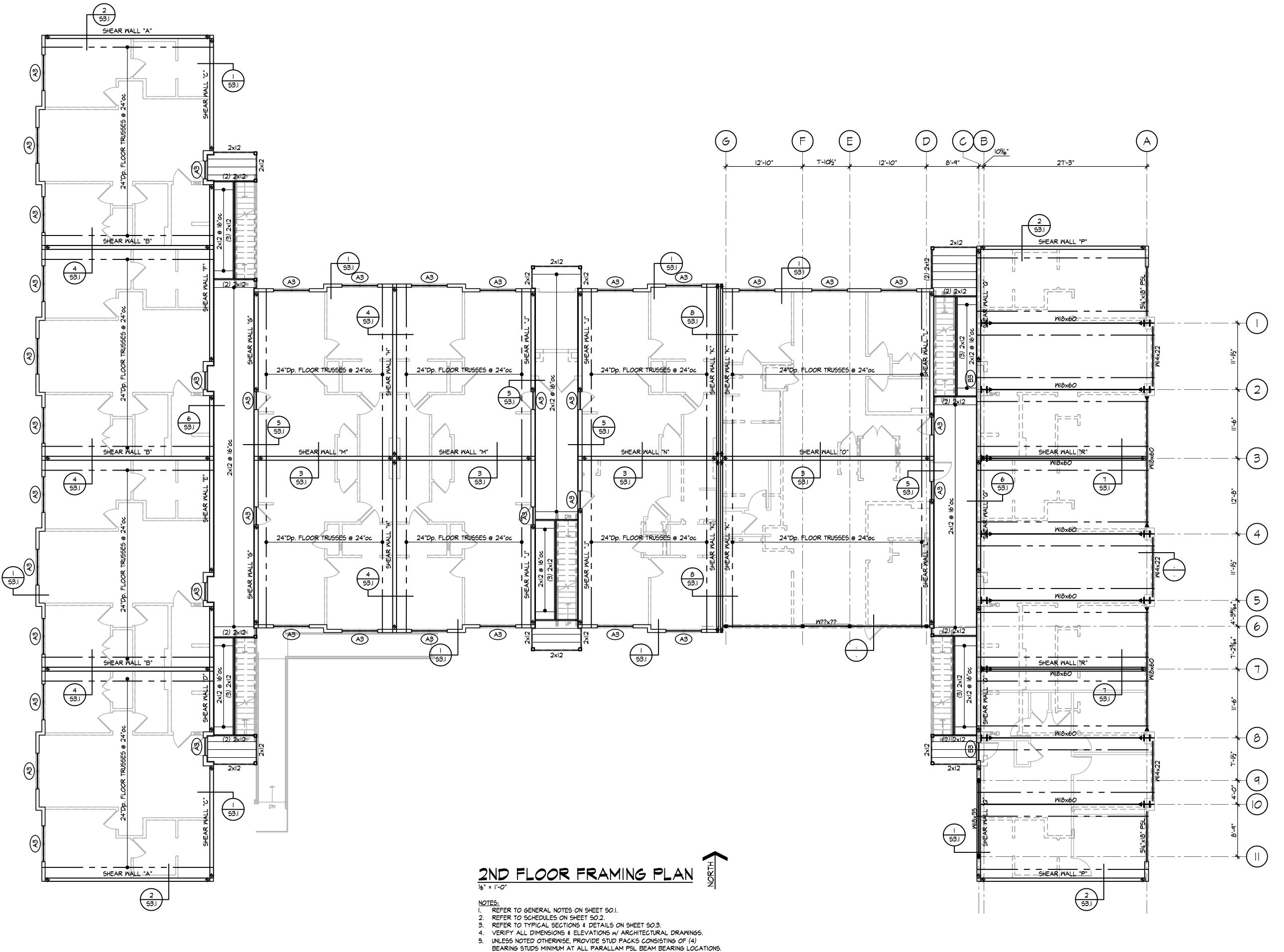
> SECOND FLOOR FRAMING PLAN

ISSUE DATE: 1.7.2019

REVISIONS:

PROJECT NO.: 1817

COPYRIGHT © 2018 SWD ARCHITECTS INC.



STUD PACKS SHALL BE CONTINUOUS FROM BEARING ELEVATION DOWN TO FOUNDATION W/ MATCHING SQUASH BLOCKS AT FLOOR LEVELS. REFER TO

SECTION 9/50.3 FOR FASTENING OF STUD PACKS.

3RD FLOOR FRAMING PLAN

4. VERIFY ALL DIMENSIONS & ELEVATIONS W/ ARCHITECTURAL DRAWINGS. 5. UNLESS NOTED OTHERWISE, PROVIDE STUD PACKS CONSISTING OF (4)

BEARING STUDS MINIMUM AT ALL PARALLAM PSL BEAM BEARING LOCATIONS. STUD PACKS SHALL BE CONTINUOUS FROM BEARING ELEVATION DOWN TO FOUNDATION W/ MATCHING SQUASH BLOCKS AT FLOOR LEVELS. REFER TO

NOTES:

I. REFER TO GENERAL NOTES ON SHEET SO.I.

2. REFER TO SCHEDULES ON SHEET SO.2.

3. REFER TO TYPICAL SECTIONS & DETAILS ON SHEET SO.3.

SECTION 9/50.3 FOR FASTENING OF STUD PACKS.

SHEAR WALL "A"

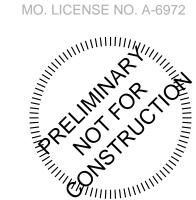
SHEAR WALL "A"



ARCHITECTURAL CORPORATION MISSOURI CERTIFICATE

OF AUTHORITY NO. 000073

ARCHITECT - TIMOTHY O.K. WILSON



THIRD FLOOR FRAMING PLAN

ISSUE DATE: 1.7.2019

REVISIONS:

SHEAR WALL "P"

PROJECT NO.: 1817

ROOF FRAMING PLAN

NOTES:

I. REFER TO GENERAL NOTES ON SHEET SO.I.

2. REFER TO SCHEDULES ON SHEET SO.2.

3. REFER TO TYPICAL SECTIONS & DETAILS ON SHEET SO.3.

SECTION 9/50.3 FOR FASTENING OF STUD PACKS.

4. VERIFY ALL DIMENSIONS & ELEVATIONS W/ ARCHITECTURAL DRAWINGS. 5. UNLESS NOTED OTHERWISE, PROVIDE STUD PACKS CONSISTING OF (4)

BEARING STUDS MINIMUM AT ALL PARALLAM PSL BEAM BEARING LOCATIONS. STUD PACKS SHALL BE CONTINUOUS FROM BEARING ELEVATION DOWN TO FOUNDATION W/ MATCHING SQUASH BLOCKS AT FLOOR LEVELS. REFER TO

| I | 53.I

SHEAR WALL "P"

SHEAR WALL "A"

SHEAR WALL "A"



ARCHITECTURAL CORPORATION MISSOURI CERTIFICATE

OF AUTHORITY NO. 000073

ARCHITECT - TIMOTHY O.K. WILSON

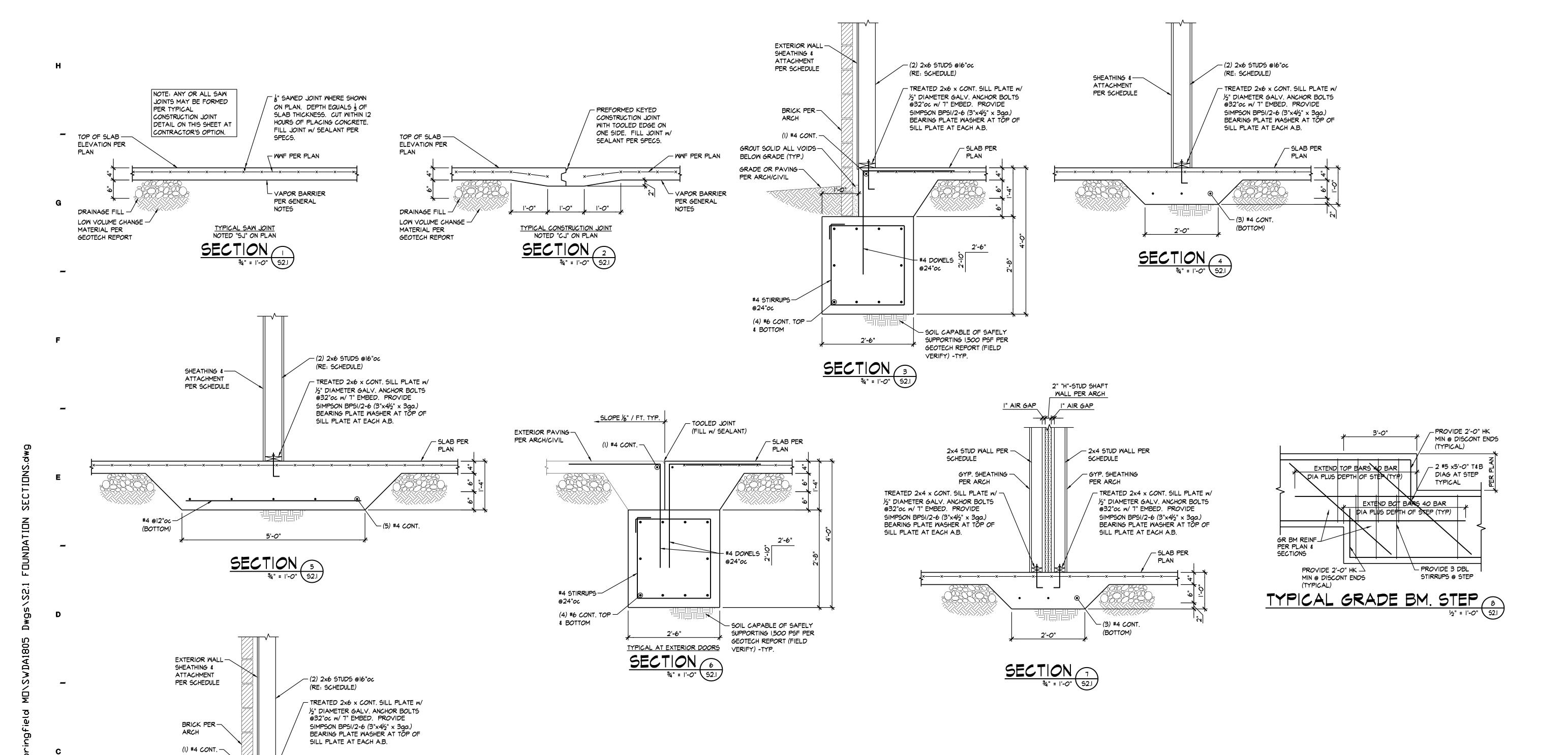


ROOF FRAMING PLAN

ISSUE DATE: 1.7.2019

REVISIONS:

PROJECT NO.: 1817



— SLAB PER PLAN

- #4@12"oc HORIZ

#4 DOWELS @12"0c EACH FACE

SECTION (9) (92.1)

EACH FACE

#4 DOWELS -

GROUT SOLID ALL VOIDS

BELOW GRADE (TYP.)

GRADE OR PAVING-PER ARCH/CIVIL

#4 STIRRUPS — @24"oc

& BOTTOM

Q:\Q-S\SWDA Jan 14,2019 2

(4) #6 CONT. TOP



ARCHITECTURAL CORPORATION MISSOURI CERTIFICATE

OF AUTHORITY NO. 000073 6580

SSOURI 'MENT

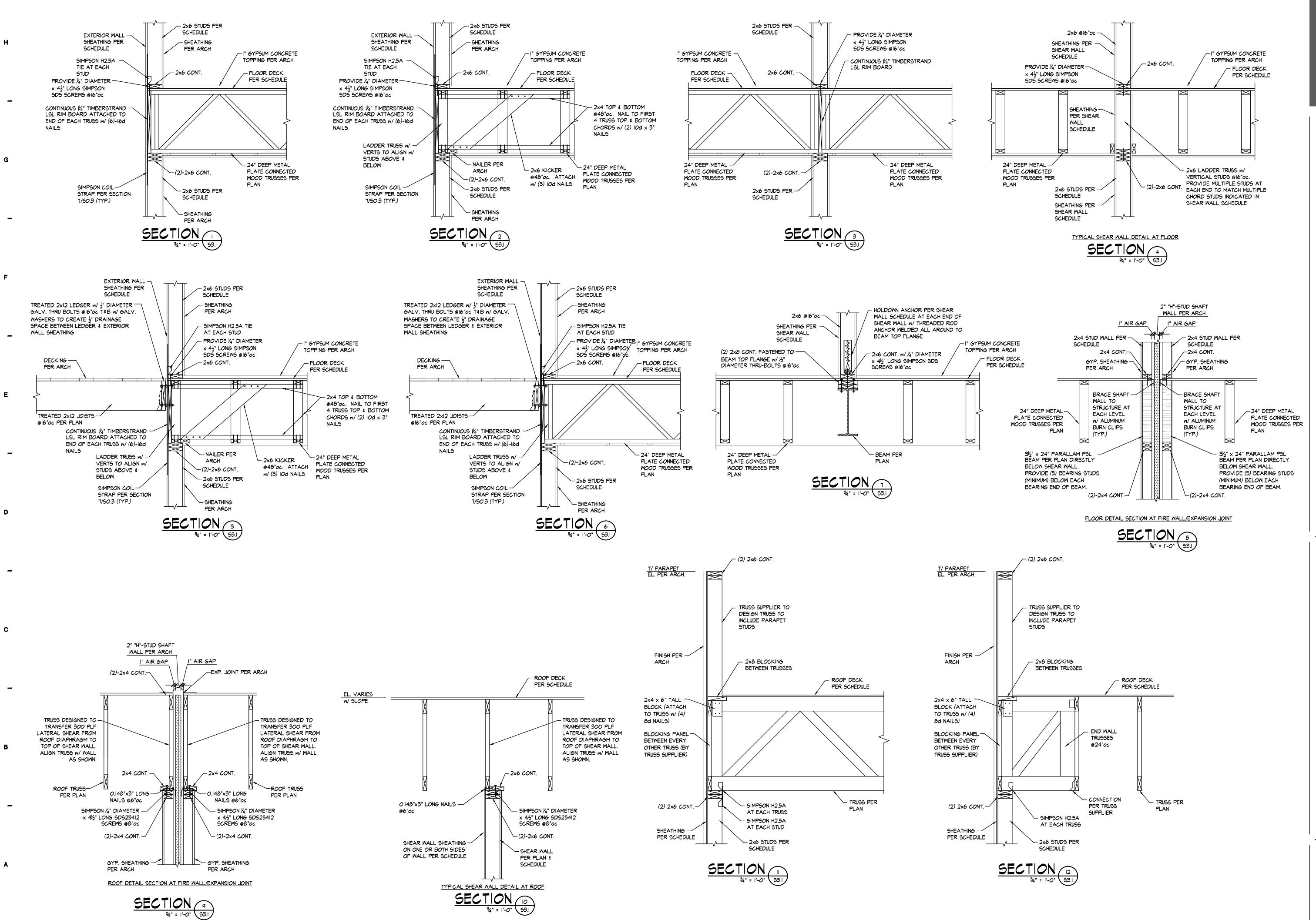




ISSUE DATE: 1.7.2019

REVISIONS:

PROJECT NO.: 1817





ARCHITECTURAL CORPORATION MISSOURI CERTIFICATE

OF AUTHORITY NO. 000073

6580 \bigcirc SIM

MEN . 八别 SPR

SEAL ARCHITECT - TIMOTHY O.K. WILSON MO. LICENSE NO. A-6972

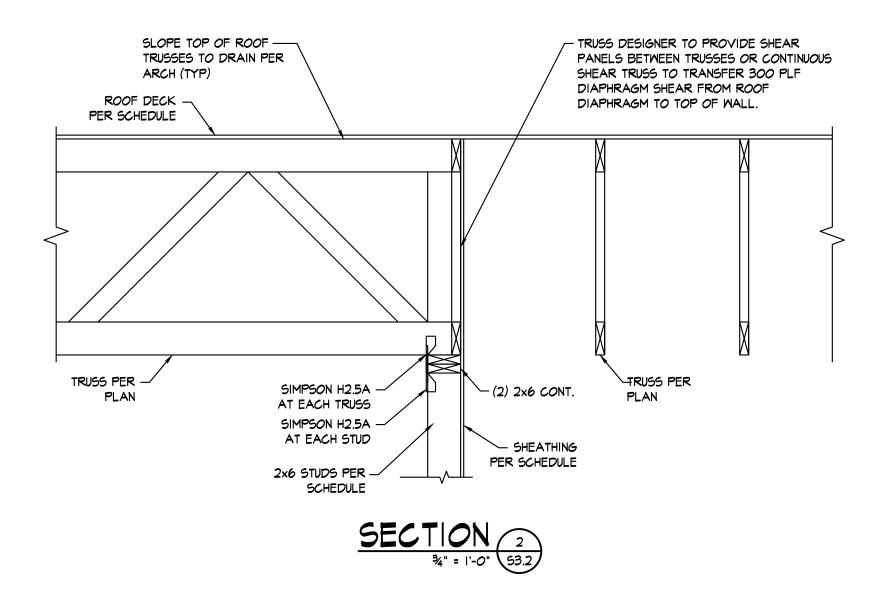


SECTIONS

ISSUE DATE: 1.7.2019

REVISIONS:

PROJECT NO.: 1817



EST 1935

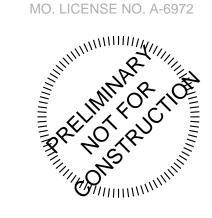
ARCHITECTURAL CORPORATION MISSOURI CERTIFICATE

OF AUTHORITY NO. 000073

n Missouri 65802 PARTMENTS SARDENS 1255 E. (C) GREENE (

9

SEAL ARCHITECT - TIMOTHY O.K. WILSON MO. LICENSE NO. A-6972



SECTIONS

ISSUE DATE: 1.7.2019 REVISIONS:

PROJECT NO.: 1817