### STRUCTURAL FRAMING CHECKLIST

The following items list some of the "THINGS TO WATCH OUT FOR". The framing foreman should take note of each item, as this list is comprised from field experience relating to building from our plans and typical detail sheets. This list is provided to help ease the construction process and to help answer typical questions commonly asked from the field personnel.

- Review all lumber grades and note that the use of a nail identification system is <u>HIGHLY RECOMMENDED</u>. See DETAIL 215 for all nailing requirements and acceptable nail identification systems. Also, note that both Simpson and cusp hardware are listed as acceptable.
- DETAIL'S 120 124 list all hold down and anchor bolt repair details.
- Anchor bolts (except holddown SSTB bolts) may only be overdrilled 1/16" max.
- All mudsills must have a minimum of (2) anchor bolts per piece, be spaced a min. 7" and max. 12" from each end, and be spaced no more than 6'-0"o.c. At exterior non-shear walls.
- DETAIL 206 This detail shows typical shear wall and window framing. It also defines staggered nailing at top plates and allowable holes and penetrations in shear walls. Please review this detail for general framing
- DETAIL 210 Requires special attention! note that the full height shear panel must either be cut back or furring added next to the window because the sections of shear above and below the opening "MUST" edge nail to the king post or king stud that the full height shear panel edge nails to.
- DETAIL'S 207 and 208 Requires all straps be installed while beams are being set and not later.
- DETAIL 213 Note 2x end stud and 2 rows of edge nailing at end and edge nailing noted across bottom of header to help reduce height to width ratio.
- DETAIL 203 Review to help reduce header stock.
- DETAIL 204 Note requirements for CS14. Also, determine whether the framer or plumber are installing the straps at plumbing pipes.
- DETAIL 215 highly recommends "EZ CODE" or "TRUE SPEC" nails for all structural connections including the following but not limited to: Floor and Roof sheathing and Shear Wall installations including hold downs and Sole Plate Nailing and all Top Plate splices.
- DETAIL 212 must be adhered to. Earring over is only a plumb and line issue. Minimizing cuts will minimize the amount of special strapping and nailing required. Note that it is only required at all exterior walls and interior shear walls. Also note that all special nailing and strapping noted on the plans and detail must be done just after "plumb and line" to ensure that they are properly installed.
- DETAIL 301 Note that RBC's nail w/ 10d x 1-1/2" nails. A35's are not acceptable for angled freeze blocking due to gap between block and top plate. Use LTP4's or H1's if vertical blocking is used. Also, at high heel condition, all truss bays must have full height truss panel blocks the entire length of the wall.
- DETAIL 302 Use LTP4's mostly except near the center of the truss where there may be a gap, then use the RBC's or LTP5's, and make sure that all nails are into the upper top plate and not the framing plate.
- DETAIL 303 Note for offset condition w/ 2x flat member, 3"o.c. nailing may be used to nail both the offset truss and to nail the member to the shear wall top plate in lieu of framing anchors for shear wall types 6 and 4
- DETAIL'S 304 and 305 do not forget the 4" wide plywood strip between truss panel blocks.
- DETAIL 306 note that this detail is for an aligned drag truss condition all drag trusses should be aligned with the wall that they are strapped to unless noted otherwise on plans.
- DETAIL 308 note that at a high heel girder truss connection, a taller 2x block must be used that will still nail at 12"o.c. To the girder truss bottom chord. Use MFR truss block or blocking panel per DTL 201 if height is greater than 12".
- DETAIL 309 not used very often and is often missed.
- DETAIL 313 note popout wall on top of low roof sheathing to transfer the shear force. Also, H2.5A must nail to the top of the low roof ledger and not the bottom of the ledger. Also, the "Back Edge Nailing" of the shear panel into the low roof ledger is commonly missed. Also, note that 2x blocking is not required unless for fire stopping.

### ADDITIONAL ITEMS TO NOTE:

- At HARDY panels, it is not structurally required to fill the holes at the side of the panels.
- At HTT22 hold downs, it is structurally acceptable to scab at 2x stud to the hold down post to facilitate flush and correct installation of the hold down. The HTT22 shall be mounted flush to the sill plate.
- Where sill plates are broken for plumbing penetrations, no strapping is required to tie the sill plates together.

### SHOP DRAWINGS

- The shop drawing submittals from the various trades will be reviewed by the engineer of record and/or architect only after such drawings have been
- A. Initially reviewed and accepted as conforming with the structural construction drawings by the responsible supervisor and drawings checker with their signatures.
- B. Approved and accepted with a stamp from the general contractor as conforming to the construction documents.

### **GENERAL NOTES**

- All construction and workmanship shall conform to the 2012 INTERNATIONAL Building Code (IBC) and Southern Nevada Amendments to the 2012 IBC. Note all references on plans to sections and tables refer to the IBC and Southern Nevada Amendments.
- These notes shall be used in conjunction with the plans and any discrepancies shall be brought to the attention of the architect and the engineer.
- Contractor must check dimensions, framing conditions, and site conditions before starting work. Architect and the engineer shall be notified immediately of any discrepancies or possible deficiencies.
- Conditions not specifically detailed shall be constructed as specified in typical details for the respective
- These drawings and specifications represent the finished structure. All bracing, temporary supports, shoring, etc. Is the sole responsibility of the contractor. The contractor is solely responsible for all construction methods and for safety conditions at the worksite. Observation visits to the job site by the architect and the engineer do not include inspection of construction procedures. These visits shall not be construed as
- Design materials, equipment, and products other than those described in this drawing set may be considered for use, provided prior approval is obtained from the owner, architect, the engineer, and the applicable governing code authority.

### MANUFACTURED WOOD TRUSSES

continuous and detailed inspections.

- Manufacturer shall supply to the engineer and the building department calculations and shop drawings for approval prior to fabrication. All calculations and shop drawings shall be signed by a nevada registered professional engineer. It shall be the responsibility of the manufacturer to obtain building department approval of calculations and shop drawings.
- Trusses shall be designed in accordance with the latest local adopted building code for all loads imposed, including lateral loads and mechanical equipment loads.
- All connectors shall be ICC approved and of adequate strength to resist stresses due to the loading involved.
- Dead load deflections shall be limited to L/240.
- brace all trusses. Contractor shall have building department approved truss plan on job site prior to foundation inspection and

Cross bridging and/or bracing shall be provided and detailed by the truss manufacturer as required to adequately

- throughout construction phase. These truss plans shall conform to the framing plans prepared by the engineer of record. Truss plans shall bear wet signature of truss design engineer and shall have been reviewed by engineer
- Approved final truss drawings shall become part of construction documents.
- Each truss shall be legibly branded, marked or otherwise have permanently affixed thereto the following information located within 2 feet of the center of the span on the face of the bottom chord per IBC 2303.4:
- A. Identity of the company manufacturing the truss.
- B. The design load. C. The spacing of the trusses.
- Truss manufacturer to design trusses per framing plans with the following requirements: A. Align all tops of truss chords
- B. At attic access provide 30" truss bay spacing with ladder blocking at 24"o.c. Refer to DETAIL 201 for span
- C. Provide additional support at mechanical units, where occurs, D. Provide conventional furring at interior coffered ceiling areas U.N.O.
- E. Truss hangers to be designed by truss manufacturer. F. Provide solid bearing at multiple girder truss(es)
- . Where Truss MFR requires a Hardware Connection at the Top Plate to resist uplift exceding 250#. The following hardware connection shall be used:

# STANDARD TRUSSES PERPENDICULAR TO SUPPORT

l	REACTIONS TO THE BEARING WALL OR BEAM BELOW:			
	UPLIFT VALUE X # (lbs.)	HARDWARE REQUIRED	NAILING REQUIRED	
	X ≤ 250#	NONE REQUIRED	Uplift is resisted by existing nailed connection of Truss to Plate	
	250# < x ≤ 400#	H1	(6) 8d x 1 1/2" into Truss (4) 8d x 1 1/2" into Plate	
	400# < x ≤ 1015#	H10A	(9) 10d x 1 1/2" into Truss (9) 10d x 1 1/2" into Plate	
	1015# < x ≤ 1265#	H16 or H16-2	(2) 10d x 1 1/2" into Truss (10) 10d x 1 1/2" into Plate	
	1265# < x ≤ 2490#	CS14 *	(15) 8d x 1 1/2" into Truss Top Chord (15) 8d x 1 1/2" into Aligned Stud or Beam below	
	2490# < x ≤ 4980#	(2) CS14 *	(15) 8d x 1 1/2" into Truss Top Chord (EA Strap) (15) 8d x 1 1/2" into Aligned Stud or Beam below (EA Strap)	

# GABLE END WALL TRUSSES PARALLEL TO SUPPORT

REACTIONS TO THE BEARING WALL OR BEAM BELOW:				
UPLIFT VALUE X # (lbs.)	HARDWARE REQUIRED	NAILING REQUIRED		
X ≤ 250#	NONE REQUIRED	Uplift is resisted by existing nailed connection of Truss to Plate		
250# < x ≤ 575# LTP4		(6) 8d x 1 1/2" into Truss (4) 8d x 1 1/2" into Plate		
575# < x ≤ 2490#	CS14 *	(15) 8d x 1 1/2" into Truss, Wrap as required (15) 8d x 1 1/2" into Aligned Stud or Beam below		
2490# < x ≤ 4980#	2490# < x ≤ 4980# (2) CS14 *	(15) 8d x 1 1/2" into Truss, Wrap as required (EA Strap) (15) 8d x 1 1/2" into Aligned Stud or Beam below (EA Strap)		
X > 4980#	SPECIAL DESIGN REQUIRED	Notify Engineer of specific location of Uplift on Truss		
* CS14 Strap	s shall extend 16" onto truss	and 16" onto aligned Stud or Beam below, and may be		

# GLUED LAMINATED LUMBER (GLB)

glued laminated Douglas fir (Coast region) lumber by the West Coast Lumbermen's Association and the current

All fabrication and workmanship shall conform to the current edition of the standard specifications for structural

Bent and Wrapped around Truss as needed to achieve required length.

- All simply supported glued-laminated members shall be Douglas fir, combination 24F-V4 with waterproof Resorcinal or Phenol Resorcinal glue conforming to the federal specifications MIL-A-397-B. Use 24F-V8 for all continuous and cantilevered beams.
- Finish of the members shall be industrial appearance grade in conformance with the standard appearance grades of the A.I.T.C., U.N.O.
- A certificate of inspection for each GLU-LAM beam from an approved testing agency shall be submitted to and approved by the local building department and by the engineer prior to erection. All GLU-LAM beams shall be properly identified to the satisfaction of the building department per section 2303.1.3 of the IBC, as follows:
- GLU-LAM beam shall be marked ANSI/AITC standard A1901.1: 4.1 provide field inspector with approved "Certification of Inspection"
- 4.2 specify stress, exterior grade if exposed. 4.3 provide camber.
- All GLU-LAM beams shall have a standard camber based on a radius of 3500 ft., U.N.O.

# NAILS

- To assist in verification of proper nail usage for the project, our office HIGHLY RECOMMENDS the use of a na identification system. Please refer to DETAIL 215.
- All Floor sheathing, Roof sheathing and Shear panels constructed using wood-based structural-use panels shall be fastened with common nails. Hardware shall be nailed per manufacturer's requirements, otherwise short nails may be used. Nailing shall be per Chapter 23 and table 2304.9.1 of the IBC and DETAIL 215 U.N.O. on the plans or details.
- Nail guns must be equipped with a flush nailer attachment for nailing of plywood shear walls, floor sheathing and roof sheathing.
- All nails into pressure treated lumber shall be hot dipped galvanized or other approved coating to resist corrosion unless pressure treated plate is treated with Borate

# WOOD FRAMING

All structural lumber shall be <u>DOUGLAS FIR - LARCH</u> with 19% maximum moisture content of the following grades, conforming to standard grading rules for West Coast Lumber No. 17, unless noted otherwise. The lumber grades as specified below meet minimum requirements:

PLATES, BLOCKING		STD OR BTR
STUDS TO 10'-0" IN HEIGHT		STUD GRADE
STUDS OVER 10'-0" IN HEIGHT	/	No. 2
2x RAFTER, JOISTS		No. 2
4x6 THROUGH 4x12 BEAMS, HEADERS AND POSTS	l (	No. 2
4x14 BEAMS, HEADERS AND POSTS	\	No. 1
4x4 POSTS, HEADERS	l (	STD OR BTR
POSTS AND TIMBERS (6x AND LARGER)	>	No. 1
BEAMS AND STRINGERS (6x AND LARGER)		No. 1
	_	

Utility grade lumber is unacceptable for any purpose.

nailed/ strapped per DETAIL 204.

- 2x4 flat headers are acceptable for use in interior non-bearing walls only. Refer to Non-Bearing header schedule on DETAIL 203
- Where possible all lumber grade stamps shall remain on lumber after installation.
- All wood bearing on concrete or masonry shall be Pressure Treated Fir. All nails to plates treated w/ borate
- may be standard nails, for all other pressure treated plates, use hot dip galvanized nails. Each wood-based structural-use panel used for horizontal diaphragm and/or shear wall construction shall be
- indentified by a registered stamp or brand of an ICC -approved compliance assurance agency. Wood-based structural-use panels shall meet the requirements of the latest edition of the voluntary product standard PS-2 "Performance standard for wood-based structural-use panels". All panels shall be glued with exterior type glue meeting APA specification AFG-01.
- All metal connectors shall be those manufactured by U.S.P. Lumber connectors, "ACS" Advanced Connector Systems or Simpson Strong-Tie. The nails for these connectors shall be as specified by the manufacturers for capacity of the hardware. All callouts refer to Simpson product codes and names. Refer to cross reference tables provided by ACS and U.S.P. in their product catalogs.
- Provide fire stops at all intersections of stud walls at floor, ceiling and roof. Fire stops shall be 2x nominal thickness of wood and shall be the full width of the enclosed space. Place fire stops at a maximum spacing of 10'-0" in the vertical direction. Provide 2x fire stops in all furred spaces, vertical and horizontal, and at a
- maximum spacing of 10'-0" in each direction and at the same lines as fire stops in adjacent stud walls. Top plates of all stud walls shall be 2 pieces the same width as studs. Splices to lap 4'-0" minimum and be
- Bolt holes in wood shall be 1/32" to 1/16" larger than the nominal bolt diameter. All bolts shall have a standard cut washer under head and nut unless noted otherwise.
- 2. All nuts and bolts shall be re-tightened prior to the application of sheathing, plaster, etc.
- 3. Structural members shall not be cut for pipes, etc. Unless specifically detailed. Notching of horizontal structural members shall conform to the provisions of IBC section 2308.10.4.2 and DETAIL 212 studs and top plates shall conform to the provisions of IBC section 2308.9.10 and 2308.9.11

# 4. Blocking

FLOOR TYPE	BLOCKING REQUIREMENTS
Conventional 2x system	Provide 2x BLKG between conventional joists and rafters at all bearing supports and above all shear walls.
I-Joist system	Provide solid BLKG above all shearwalls and when I-joists are non-continuous over bearing support. For I-Joist continuous over bearing support, provide (1) 16d sinker per joist to top plate and omit BLKG at bearing support.
MFR truss system	Provide BLKG panels above all shearwalls per DETAIL 201, match panel sheathing and nailing requirements of shear wall below, U.N.O. Provide type 6 BLKG panel at every other bay when trusses are non-continuous over bearing support. For trusses continuous over bearing support provide (2) 16d sinkers per truss to top plate and omit BLKG panel at bearing support.

- 5. Cross bridging or solid blocking shall be provided at 8'-0"o.c. Maximum for all conventional joists more than 12" deep unless both edges are held in line for their entire length.
- 6. At Non-BRG walls, provide 1/4" to 3/4" gap between top plates and truss or joist bottom chord. Use Simpson DTC at perpendicular walls.
- 7. No let-in bracing allowed.
- 18. A35, LTP4 or RBC's framing anchors may be substituted for each other for all connections as necessary.
- 19. All beams to be supported with full bearing unless noted otherwise.
- 20. All isolated posts and beams to have Simpson PB's, PC's and/or BC's minimum, U.N.O. 1. Provide solid beam or floor girder truss per plans under parallel shearwalls on floor above.
- 22. All foundation hold downs to be fastened to 4x4 post, minimum, U.N.O..
- 23. All conventional framed portions of the structure are to be constructed per section 2308
- 24. If foundation sill plate splits, provide a "BP" bearing plate at all anchor bolts in split sill plate.
- 25. It is structurally acceptable to use structural glued (Finger-Jointed) lumber. All finger-jointed lumber must be "CER EXT JNTS" and conform with the WWPA's glued products procedures and quality control. Finger-jointed lumber is to be stamped with "CER EXT JNTS" and may be used interchangeable with any Solid-Sawn lumber product of the same species and grades. Please refer to lumber specification in the structural general notes

# TYPICAL HANGERS, U.N.O. PER PLAN

1) At USP "THF" hanger: no nails required at bottom

I II IOAL IIAN	<u> </u>			
FRAMING	CONDITION	SIMPSON	USP	ALLOWABLE LOAD
MFR ROOF TRUSSES	TO GIRDER TO BEAM TO 2x LEDGER	Per MFR LUS26 LUS26	Per MFR JUS26 JUS26	Per MFR 1115 1115
CONV. JOIST	TO BEAM TO 2x LEDGER	LUS* LUS*	JUS* JUS*	VARIES VARIES
I-JOIST	TO BEAM TO 2x LEDGER	IUS* IUS*	THF* THF*	VARIES VARIES
MFR FLOOR TRUSSES	TO FLR GIRDER TO BEAM TO 2x LEDGER	Per MFR THA413 LUS46	Per MFR MSH418 JUS46	Per MFR 1000 1000

\* HANGER DEPTH TO MATCH SUPPORTED MEMBER DEPTH

# STRUCTURAL STEEL

- All fabrication and erection shall conform to the latest edition of the AISC manual of steel construction.
- Structural steel shall conform to the following ASTM specifications:

	•
STEEL	ASTM#
W - SHAPES	A992
M, S, HP-SHAPES	A36 OR A572 GRADE 50
CHANNELS	A36 OR A572 GRADE 50
ANGLES	A36
STEEL PIPE	A53 GRADE B
ROUND HSS	A500 GRADE B OR C
SQUARE AND RECT. HSS	A500 GRADE B OR C
MACHINE BOLTS	A307 OR A490
PLATES & BAR	A36

- All steel exposed to weather shall be hot-dip galvanized after fabrication.
- All field welding shall be continuously inspected by a deputy inspector. Qualified in welding. All shop welding shall be done in a shop certified by building & safety.
- All full penetration groove welds shall be Ultrasonically Tested (UT) for the extent required per the current edition of the international building code and/or local amendments.
- Anchor bolts and unfinished bolts shall conform to ASTM A307
- All welding electrodes shall conform to AWS E70XX.

## MASONRY

- Concrete masonry units shall conform to ASTM C-90, grade N. All C.M.U. Shall be medium-weight with maximum linear shrinkage of 0.06%, with an allowable compressive strength of 2000 psi and F'm = 1500 psi.
- All vertical reinforcing in masonry walls not retaining earth shall be l0cated in the center of the wall, U.N.O.
- Aggregate shall conform to ASTM C-144 (mortar) and ASTM C-404 (grout).
- Portland cement shall be as specified for concrete.
- Mortar shall be type "S" with a MIN. Compressive strength of 1800 psi.
- Grout shall attain a minimum compressive strength of 2000 psi.

Masonry veneer shall be as per chapter 14 of the applicable IBC.

- Provide 2-1/2" minimum grout space and 1/2" minimum grout between reinforcing bars and masonry.
- Set bolts, anchors, reglets, sleeves, inserts, or other items necessary for the attachment of subsequent work.
- ). Refer to architectural drawings for type of units, laying pattern and joint details. Unless specifically noted otherwise, all concrete block and brick shall be laid in running bond.
- . All cells with steel and/or cells below grade are to be solid grouted. Retaining walls are to be solid grouted.
- 12. It is structurally acceptable to cut CMU's when constructing intermediate height walls.
- 13. Vertical lap splices in masonry rebar shall be staggered 24 bar DIA.
- 4. Horizontal CMU wall reinforcing may be replaced w/ DUR-O-WALL truss and ladur systems of equal steel area.

### REINFORCING STEEL

- Reinforcing steel shall conform to ASTMA615, grade 40 for sizes #3 and #4 and grade 60 for sizes #5 and larger.
- Welded wire fabric (mesh) shall conform to the latest revised ASTM A185, lap 1-1/2 spaces, 9" minimum. Smooth wire fabric shall conform to ASTM A85, yield strength 60 ksi.
- Welding of reinforcing steel shall conform to AWS D12-1 using proper low hydrogen electrodes. All bars to be welding shall conform to ASTM A706.
- 4. All bars in masonry shall be lapped a minimum of 40 bar diameters (2'-0" min.) at all splices unless noted otherwise.
- 5. All bars in concrete shall be lapped per DETAIL 115.
- Splices of horizontal rebar in walls and footings shall be staggered 4'-0" minimum.
- Dowels for walls and columns shall be the same size and spacing as the wall/column reinforcing unless
- 8. All bending of reinforcing steel shall conform to Section 1907 of the International Building Code. 9. All reinforcing bars shall be accurately and securely placed before pouring concrete, or grouting
- 10. Vertical lap splices in masonry rebar shall be staggered 24 bar diameters.

# **CONCRETE**

- All concrete shall attain a minimum compressive strength as noted in the project design criteria.
- Cement shall be Portland cement conforming to ASTM C-150, as required to satisfy site soil conditions as determined by the project soils engineer. See project design criteria for requirements.
- Aggregates shall be natural sand and rock conforming to ASTM C33.
- The following minimum clear distances between reinforcing steel and face of concrete shall be maintained unless noted otherwise:

CONCRETE CONDITION	MINIMUM COVER, (IN.)	CONCRETE MINIMUM COVER, (IN.)				
SLAB ON GRADE	2"	CONCRETE EXPOSED TO				
CONCRETE AGAINST & PERMANENTLY EXPOSED TO EARTH (EXCEPT SLABS)	3"	#3 - #5 BARS 1-1/2" #6 - 18 BARS 2"				
Per IRC 1907 7 / ACI 318 section 7 7 1						

- Pipes may pass through structural concrete in sleeves, but shall not be embedded therein. Pipes or ducts exceeding one-third the slab or wall thickness shall not be placed in the structural concrete unless specifically
- Provide 3/4" chamfers at all exposed corners.

unless specifically noted otherwise on the foundation plans.

- Refer to architectural drawings for reveals, areas of textured concrete or special finishes, items required to be cast into the concrete, curbs and slab depressions
- Drypack shall be composed of one part Portland cement to not more than three parts sand. . All conventional foundations are designed for soils with "VERY LOW" to "LOW" expansive" potential (Ei  $\leq$  50)
- Refer to ACI 318 section 4.3 for requirements when concrete is exposed to sulfate containing solutions. See table below for reference

# CONCRETE SPECIFICATIONS

v/ SOIL SULFATE CONDITION ACI 318 TABLE 4.2							
		WATER-SOLUBLE SULFATE			NORMAL - WEIGHT AGGREGATE		
SULFATE EXPOSURE	CLASS	4(SO ) IN SOIL PERCENTAGE	OIL SULFATE (SO <sub>4</sub> )	'''	MAXIMUM WATER - CEMENTITIOUS MATERIALS RATIO, BY WEIGHT, NORMAL - WEIGHT	F'c, NORMAL-WEIGHT & LIGHTWEIGHT AGGREGATE CONCRETE, PSI <sup>1</sup>	
		BY WEIGHT	PPM		AGGREGATE CONCRETE	x0.00689 FOR MPa	
NEGLIGIBLE	S0	0.00-0.10	0-150				
MODERATE <sup>2</sup>	S1	0.10-0.20	150-1500	II, IP(MS), IS(MS)	0.50	4000	
SEVERE	S2	0.20-2.00	1500-10000	V	0.45	4500	
/ERY SEVERE	53	OVER 2.00	OVER 10000	V PLUS POZZOLAN <sup>3</sup>	0.45	4500	

/ERY SEVERE S3 OVER 2.00 OVER 10000 V PLUS POZZOLAN 0.45 4500 When both Table 4.2 and Table 4.3 are considered, the lowest applicable maximum water-cementitious material ratio and highest applicable minimum F'c shall be used.

Pozzolan has been determined by test or service record to improve sulfate resistance when used in concrete containing Type V cement.

SPECIAL INSPECTION PROGRAM ADDRESS OR LEGAL DESCRIPTION: 51 E. Texas Avenue (APN #179-18-710-070 PLAN CHECK NUMBER: OWNER'S NAME: I, as the owner, or agent of the owner (contractors MAY NOT employ the special inspector), certify that I, will be responsible for employing the special inspector(s) as required by International Building Code (IBC) SECTION 1701.1 for the construction project

I, as the engineer of record, certify that i have prepared the following special inspection program as required by IBC SECTION 1701.1 for the construction project located at the site listed above.

located at the site listed above.

SIGNED: . LIST OF WORK REQUIRING SPECIAL INSPECTION:

HIGH STRENGTH BOLTING

PRESTRESSED/ POSTENSION CONCRETE EXPANSION/EPOXY ANCHORS SPRAYED-ON FIREPROOFING STRUCTURAL MASONRY ☐ DESIGNER SPECIFIED OTHER NAME(S) OF INDIVIDUAL(S) RESPONSIBLE FOR THE SPECIAL INSPECTIONS LISTED ABOVE:

SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION

STRUCTURAL CONCRETE OVER 2500 PSI

 DUTIES OF THE SPECIAL INSPECTORS FOR THE WORK LISTED ABOVE: Special inpsection required for soils should not be less than 4A as specified in the Southern Nevada Amendments to the 2012 IBC, table 1705.6, per the latest soils update letter. 3. Rebar / Bolt / Threaded rod / Anchors in epoxy grout or expansion anchors shall be reviewed based on the requirements of the products' ICC-ES ESR report and applicable manufacturer's specifications.

SPECIAL INSPECTORS SHALL CHECK IN WITH THE CITY OR COUNTY AND PRESENT THEIR CREDENTIALS FOR APPROVAL PRIOR TO BEGINNING WORK ON THE JOB.

SHEET DESCRIPTION STRUCTURAL GENERAL NOTES I E. TEXAS AVENUE OUNDATION PLAN • • FLOOR FRAMING PLAN ROOF FRAMING PLAN STRUCTURAL DETAILS FOUNDATION DETAILS OUNDATION DETAIL: GENERAL FRAMING DETAILS ROOF FRAMING DETAILS ROOF FRAMING DETAILS FLOOR FRAMING DETAILS FLOOR FRAMING DETAILS TOTAL DRAWINGS IN SET: I I SHEETS

STRUCTURAL SHEET INDEX

### DEFERRED SUBMITTALS

The following items are deferred until the various sub-contractors/vendors have been selected. Shop drawings with calculations are to be signed by a licensed Nevada Engineer (where applicable). Architect and/or Engineer of Record shall review and approve of the deferred item drawing/calculation package prior to submittal to the City of Henderson Building Department for review and approval prior to installation.

- Steel Stair Shop Drawings, including exterior spiral stair (to be reviewed by the Engineer of Record)
- B. Guardrails as specified on the Architectural Plans

Manufactured Wood Trusses (to be reviewed by the Engineer of Record)

There maybe other deferred items specified by the Architect of Record. Refer to Architectural plans for list of deferred architectural items.

### STEEL CONSTRUCTION

ALL STRUCTURAL STEEL FABRICATION AND INSTALLATION SHALL BE PERFORMED BY AN APPROVED CLARK COUNTY STEEL FABRICATOR. SPECIAL INSPECTION IS NOT REQUIRED UNLESS FIELD WELDING IS PERFORMED.



### STRUCTURAL ABBREVIATIONS FULL HEIGHT FLOOR JOIST POUNDS PER SQUARE FOOT BOTTOM EACH WAY POUNDS PER SQUARE INCH PARALLEL STRAND LUMBER POST TENSION BLOCKING BOUNDARY NAILING ROOF RAFTER BOTTOM OF BEAM SIMII AR BOTTOM OF WALL SOLE PLATE NAILING CALIFORNIA BUILDING CODE INTERNATIONAL BUILDING C SHEAR WALL INFORMATION TOP OF WALL LAMINATED VENEER LUMBER TOP PLATE TRIANGULAR STRAND LUMBER MILES PER HOUR UNIFORM BUILDING CODE EMBEDMENT WELDED WIRE MESH EDGE NAILING ON CENTER WITHOUT EACH WAY PLASTICITY INDEX

# PROJECT DESIGN CRITERIA

### GOVERNING BUILDING CODE 2012 INTERNATIONAL BUILDING CODE (IBC) AND

SOUTHERN NEVADA AMENDMENTS TO THE 2012 IBC. GEOTECHNICAL REPORT W/ UPDATE LETTER (IF APPLICABLE) ORIGINAL REPORT REVISED BY ... NOVA Geotechnical & Inspection Svc NAME: ..... None Required NAMF: ..... PROJECT NO.: G-18-101 PROJECT NO.: DATE: ..... June 15, 2018 DATE: ·····

	FOUNDATION DESIGN PA	CONCRETE CR	ITERIA			
ALLOWABLE SOIL BEARING =		=	2000 psf	MINIMUM COMPRESSIVE	0500 DO	
	PASSIVE EARTH PRESSURE	=	250 psf/ft	STRENGTH (AT 28 DAYS)	= 2500 PS	
	EXPANSION INDEX (EI) / CATEGORY	=	Low	(Design based on 2500 psi compress	sive strength)	
	CORROSIVITY	=	High	CEMENT TYPE REQUIRED	=TYPE V	
	SULFATE EXPOSURE	=	Negligible			
	LIQUEFACTION POTENTIAL	=	Negligible	MAXIMUM WATER/ CEMENTITIOUS	= 0.55	
	TOTAL EXPECTED SOIL SETTLEMENT	=	1" in 40' MAX	MATERIAL RATIO	= 0.33	

### **SEISMIC DESIGN PARAMETERS** SEISMIC IMPORTANCE FACTOR (I) = 1.0 RISK CATEGORY = SEISMIC DESIGN CATEGORY: C SITE CLASS: C SPECTRAL RESPONSE ACCELERATIONS: **SPECTRAL RESPONSE COEFFICIENTS:** Ss = 0.498 S1 = 0.162 Sds = 0.399 Sd1 = 0.177

BASIC SEISMIC FORCE RESISTING SYSTEM: LIGHT FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR

RESISTANCE OR STEEL SHEETS. SEISMIC RESPONSE COEFFICIENT(S) Cs RESPONSE MODIFICATION FACTOR(S) R DESIGN BASE SHEAR = 2.85 PSF ANALYSIS PROCEDURE USED .... = EQUIV. LATERAL FORCE ANALYSIS

WIND DESIGN PARAMETERS = 115 MPH (Vasd = 89.1 MPH - IBC Equation 16-33) BASIC WIND SPEED (3 SEC. GUST) WIND IMPORTANCE FACTOR (I) ------ = 1.0 RISK CATEGORY WIND EXPOSURE = EXPOSURE ..... = C

INTERNAL PRESSURE COEFFICIENT = ±1.3 PSF

WALL (INTERIOR) ···

WALL (EXTERIOR)

COMPONENTS & CLADDING PRESSURE ... = 24.4 PSF **GRAVITY LOAD PARAMETERS** <u>DEAD</u> TOTAL LOAD ROOF .. = 20 PSF + 20 PSF = 40 PSF FLOOR .. = 40 PSF + 20 PSF = 60 PSF

CANTILEVER EXTERIOR DECK ----- = 60 PSF + 15 PSF = 75 PSF

= - - + 10 PSF = 10 PSF

= - - + 14 PSF = 14 PSF

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FAX: (877) 509-1775

Drawn By: DS

11-29-2018 REV per Planscheck Date: Revision: SUBMITTAL OCTOBER 22, 2018

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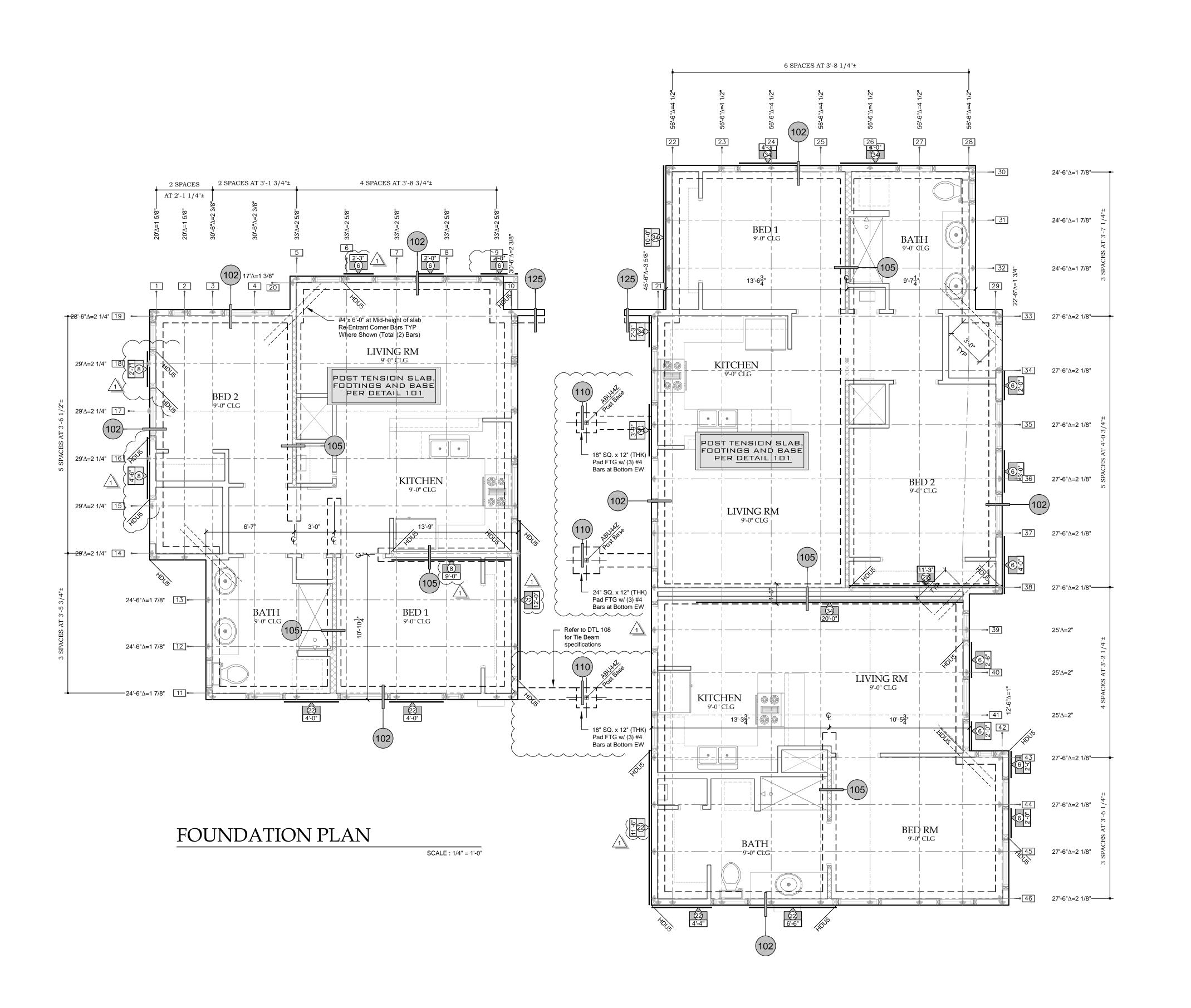
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File Name: 1SN Job No: 052-002 SHEET NUMBER

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### PLACING OF STRANDS AND TENDONS

- 1. Do not erect inside form or doubled-up forms until strands are in place.
- 3. Place anchor, pocket former into bulkhead and nail anchors tight to bulkhead.
- 4. Lay all the strands in one direction, begining at the dead end, if there is one. Then in the other
- 5. Where dead-ends occur, nail or tie approximately 3/4" from the bulkhead. Centerline of the anchorages are minimum 3 1/2" below top of slab.
- 6. Spacing of strands may deviate as necessary to avoid plumbing, hardware, etc. Strand locations and dimensions shown on plans are for placing convenience and may vary ± 12". 3" min. CLR. Req'd. from plumbing, holdowns, pipes, and inserts.
- At stressing ends, remove sheath approximately 6" inside the bulkhead. Slide end of strand through the hole in the anchor and through the bulkhead.
- 8. Straighten strands, curving them smoothly around holes or obstructions. place supports at cable intersections and tie strands together. 9. Dead end and stressing end may be reversed end to end. For anchorage of dead ends and general strand layout, see <u>DETAIL 118.</u>

# 10. Check strands for tears in plastic sheath and rewrap if tear is larger than 12" in length.

**CONCRETE** (Refer to Concrete Specifications w/ Soil Sulfate Condition-ACI 318 tables 4.2 & 4.3 shown on SN1 for sulfate exposure requirements)

- 1. Minimum concrete strength shall be per sheet SN1. See final soils report and I.B.C.. for type, psi, water cement ratio, etc., if more restrictive. 5" maximum slump. Design based on psi and consist of portland cement ASTM C-150. Water to be clean and potable. Corrosive additives (i.e. calcium chloride) are not to
- 2. Deputy inspection is required at pouring of concrete.
- 3. Placement shall be in one continuous operation unless otherwise specified. Slab surface shall be cured with Hunts Compound or equal approved ASTM 309 specifications product.
- 4. Concrete shall be uniformly placed and consolidated around anchorages. NO rock pockets.

### 5. A minimum of three (3) cylinders per slab shall be taken to determine concrete strength.

PREPARATION FOR STRESSING 1. Check inside each pocket hole, making sure that the exposed portion of the anchorage is clear. If a film of cement paste has intruded, remove it completely

2. Mark on the strand at a constant dimension from the edge of slab.

STRESSING PROCEDURE - SEE DETAIL 118 The stressing operation shall not commence until concrete test cylinders, cured under jobsite conditions, have been tested and indicate that the concrete has attained 2000 psi minimum.

- 2. The stressing operation shall be conducted by an installer experienced in this type of work. he/she must exercise close checking and rigid control of all working operations.
- 3. All prestressing shall be by means of hydraulic jacks or equal, equipped with accurate reading and calibrated hydraulic pressure gauges.
- 4. The deputy inspector shall record all jacking forces and elongations and submit reports to the engineer for
- 5. Strands that are stressed from both ends need not be stressed simultaneously. Elongation from both ends must total the elongation shown on plans.
- 6. Take safety precautions necessary. Do not permit workmen to stand behind over, or in line with ram and

### **SEALING STRESSING HOLES** 1. After stressing and approval, sawcut or burn excess strand.

the structural engineers approval.

- 2. When excess is burned coat or paint exposed anchorage, grippers and stub of strand with rust-o-leum' primer or equal. If sawcut place plastic cap at end of strand-no painting required.
- 3. After anchors have been coated or capped, the concrete contractor shall dry pack pocket holes within ten (10) days. A non-metallic, non-shrink grout mix shall be used for this purpose.

Deformed mill reinforcing	Grade 40 (#3 and #4)
Steel shall conform to ASTM A-615	Grade 60 (#5 and up)
Strands shall conform to ASTM A-416	
Properties of 7-wire strand	1/2"Ø (dia)
P (Ultimate)	270 ksi
Area (sq in)	0.153
F (Ultimate in pounds)	41,300 lbs
E (psi)	29,000,000 ±
Max force (0.8 fsu) to overcome friction	33,000 lbs
Max anchor force (0.7 fsu)	28,400 lbs
Unit elongation per foot	0.079"
(P A lbs) (12")	
AREA E	

# GENERAL NOTES 1. Standard sill anchorage per DETAIL 107 and DETAIL 102 at shearwall locations. Thicken slab as required for proper concrete coverage at anchor bolts as required per I.B.C., where they occur.

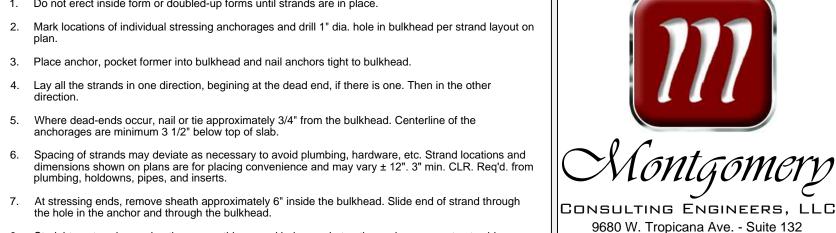
- 2. All interior bearing and shear walls are to be secured with anchor bolts (or alternate as above) spaced per foundation plan and structural engineers calculations.
- All interior non-shear/ and non-bearing walls are to be secured with shot pins installed per manufacturers recommendations, per <u>DETAIL 113</u>. Structural engineers calculations govern in all cases.
- 4. Install holdown anchor bolts per <u>DETAIL 111</u>. Provide and install all U.S.P. lumber connectors (or equal) foundation hardware per manufacturers recommendations. Deepen footing where necessary to provide
- anchor embedment at holdown locations.
- 5. Holdown hardware must be in place prior to foundation inspection. For holdowns and embedded straps to
- foundation see DETAIL 111 6. Verify dimensions and location of holdowns with the Architectural drawings. A ll interior shear walls are to be
- secured with anchor bolts (or alternate as above) spaced per foundation plan and structural engineers
- 7. Use 3"x3"x0.229" slotted plate washers at shear wall and bearing wall anchor bolts only. 8. Refer to detail package for typical conditions not specifically noted on plans.
- 9. Unless noted otherwise, stoops, porches, or other attachments shall be cast independent of the post tensioning slab.
- 10. Drainage: All surface water must drain away from slab and no ponding shall be allowed next to foundation.
- 11. The soil under perimeter beams and slab shall be near optimum moisture content or presaturated per the soils report recommendations, which ever is more restrictive, prior to concrete placement.
- 12. The contractor shall dampen the sand over the membrane just prior to the concrete placement to ensure
- Foundation dimensions are extracted from architectural drawings. Montgomery Consulting Enginneers, LLC
  has not assumed any liability with respect to these dimensions. Contractor shall verify all foundation dimensions with the architectural drawings and with field conditions. Contractor shall verify the location and sizes of all anchor bolts, holdowns, embedded straps and framing materials. contractor shall verify configuration and location of all architectural features, such as but not limited to depressions, slopes, shelves, patios, porches, and stoops.
- 14. Obtain approval of minimum foundation dimensions from soils engineer prior to construction.
- An underlayment or slip surface shall be applied on the post-tensioned slab on areas where hard surface flooring materials are to be used.
- 16. Zip strip or hand tool joint per contractor.
- 17. For conventional reinforcing bar bends, stirrup and tie bends, see <u>DETAIL 115.</u>
- 18. Strands and conventional reinforcement shalled be chaired and tied in place prior to placement of concrete.

### 19. Hardy Panels to be installed directly on concrete. SOIL INFORMATION

Soils report per sheet SN1

2. Owner/developer and subcontractors are to review the soils report prior to commencing construction. It is the responsibility of the owner, developer and subcontractor to verify that the

SYMBOL LEGEND:			OTL No.		_
Indicates tendon length	<b>#</b>			Sheet # - Description: SD1's - Foundation DT	
Indicates tendon elongation	101) Post Te			and Slab Information	LS
$XX'\Delta=XX''$ Indicates tendon spacing		Post Tension S		Holdown Anchor	
SPACING AT X'-X";	<b>—(102)</b>	Exterior FTG		Bolts & Straps	
Indicates Post Tension		Exterior FTG w/ Stem	$\rightarrow$ (	Post Tension Pad FTG	
tendon identification number		Step in Slab FTG	- ( <b>11:3</b> )	terior Non-BRG/ on-Shear Wall Anchora	age
# Indicates Anchor bolt spacing x'-x" in "Inches on center" at mudsil	<b>—(105</b> )	nterior BRG or Shear Wall	()	Stemwall Blocko (Plan View)	ut
Indicates Length of anchor	<b>—(106</b> )	Slab FTG at Garage Door		Reinforcing Bar detail	
Indicates Baltad tune	107	Anchor bolt specifications	(	116 FTG intersection	
holdown connectors  Indicates Boiled type holdown connectors  HOLDOWN  HOLDOWN	<b>108</b>	Box Column F w/ Tie Beams	TG (	117 Trench detail	
holdown connectors — — —		Box Column Foolated Pad F	-	Dead end & stressing end	
Change in drawing	<b>— 110</b> )	Post Pedestal Connection	(	119 Typical corners	



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No:	Revision:	Date:



DESIGN

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Sheet Description: **FOUNDATION** 

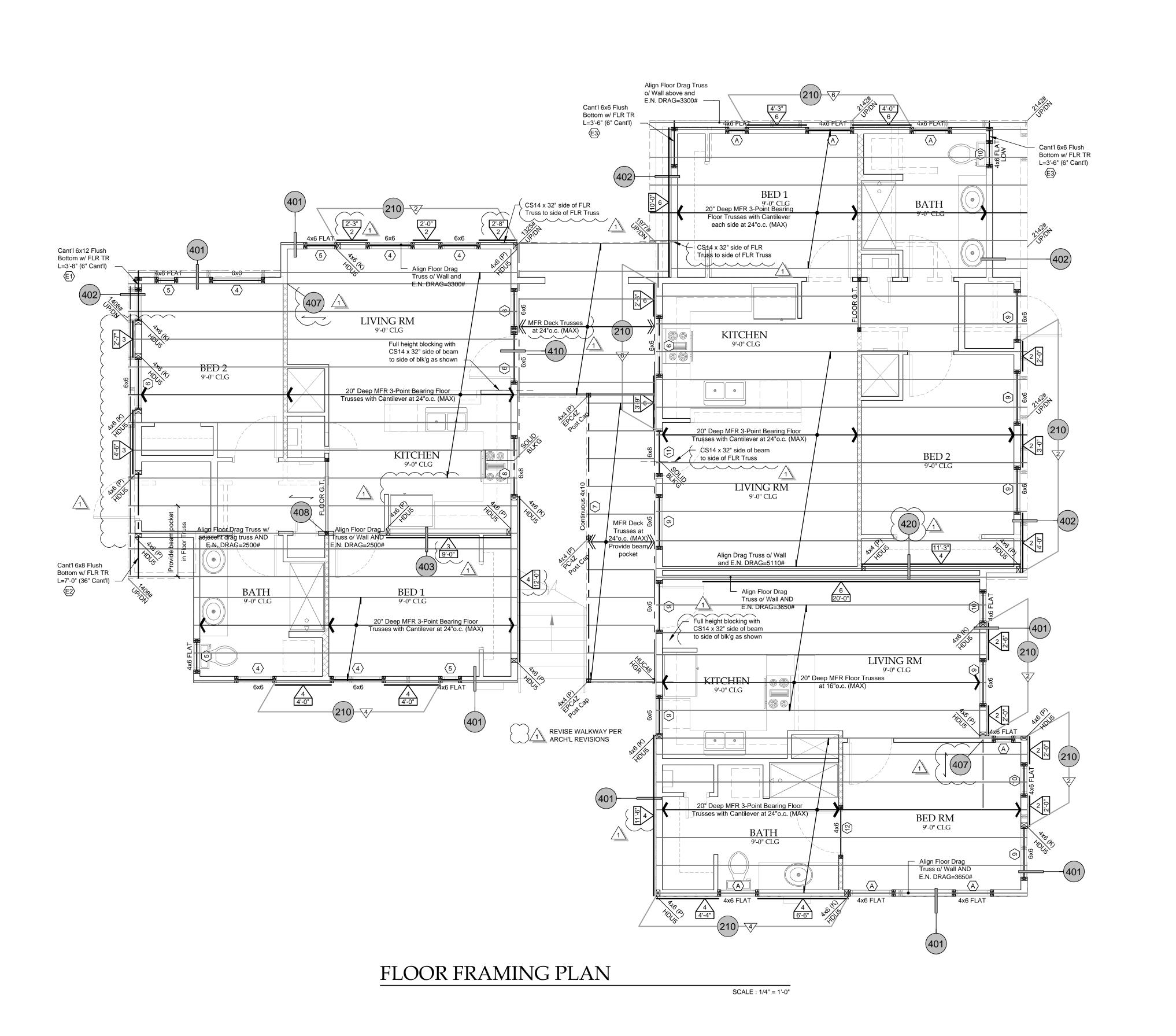
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Job No: 052-002 SHEET NUMBER

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4			AMIN es span and d	G LEGE		SYM der Truss or				
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\	/	Ceiling			DTL N	lo.				
(:	<del>4</del> )		and/or Bean Trimmer (TF		Selles		- Descriptio Foundation			
W /	<del>7)</del> <b>W</b>	King St UNO or	ud (KS) <u>per l</u>	NOTE 13.			General Fra Roof Framir		3	Cons
(1	<del>*</del> /		i pians. ition referenc	e number.	400's	= SD4's -	Floor Framin	ng Details		968
L=			Wall length (N	MINIMUM)	500's	= SD5's -	Miscellaneo	us Details		
#/	7		Nall type. Detail 201		***************************************	Indicates	over framing			
<b>V</b>						per <u>Detail</u>				Drainet
		Indicate	es wall above		<b>*</b>	Change in				Project
	*		es post to alignd/ or Strap(s		$\sim$ $-$	since last	submittal.			email
		1 001 011	. ,	FRAMIN	CNOT	FÇ.				phone
1.	Refer	to structu		ote sheet SN1 a			ge for typical	conditions r	not	
	specif	ically call	ed out or not	ed on the plans.						Drawn
2.				xterior walls and . Refer to <u>Deta</u>					ice at	
3.		•		nort nails, 3 1/4":						
J.	sched	ule for S.	P.N. at interi	or shear walls. A	ll exterior 2nd flo	oor shear w	alls should h			
				. Refer to <u>Detail</u>						
4.	Refer	to <u>Detail</u>	201 for shea	r wall, floor, and	roof sheathing s	specification	is.			
5.	Refer	to <u>Detail</u>	203 for non-	bearing header s	chedule.					
6.	See D	etail 406	for support of	of non-bearing, n	on-shear walls f	rom floor ab	oove.			
7.	Provid	e single	joist below w	all greater than 1	0'-0" in length a	t parallel, 2	nd floor, non	-bearing wa	lls.	
8.			212 for requi	rements at top p	late and stud no	tching				
	and dr	•								
9.				al stair framing.						1 RE
10.				p plates for AC o saddle at dual lin		provide HA	RDY HS24 s	saddle at sir	ngle	No:
11	line set, and HARDY HS36 saddle at dual line set.  11. Refer to Detail 206 for "SOLID STUD" specifications.							SUB		
						to in wall be	alou w/ all tri	mm and/ar		Stamp:
12.	Align SOLID BLKG in floor space and solid studs and/or posts in wall below w/ all trimm and/or posts on floor(s) above. Match number of studs or size of posts. Not applicable where studs/post from above are supported by Beam or Header.						Starrip.			
13.	Provide a minimum of (1) 2x trimmer at ea end of all headers, UNO. (Match wall thickness) see table for King Stud requirements.									
				KING S	TUD TABLE					
	Studs	/ Post	MAX. Allowa	able Opening 10'-1" Plate	Studs/ Post	MAX 9'-1" Plate	X. Allowable Ope	ening 12'-1"		
		2x4 (4/4x4	n/a 5'-0"	n/a 3'-0"	(1) 2x6 (2) 2x6/4x6	8'-0" 17'-0"	6'-0" 14'-0"	3'-0" 9'-0"		8
	(3) 2>	(4/6x4	8'-0"	6'-0"	(3) 2x6/6x6	19'-0"	19'-0"	18'-0"		
ı	. ,	(4/6x4 (4/8x4	12'-0" 15'-0"	8'-0" 10'-0"	(4) 2x6/6x6 (5) 2x6	25'-0" n/a	25'-0" n/a	19'-0" 25'-0"		
14.	At locations where multiple 2x4 posts are shown as an acceptable alternate to 4x or 6x posts at ends of shear walls, one row of edge nailing is required at each stud. (I.e. 2 rows at (2) 2x post, 3 rows at (3) 2x post, etc.) (4x Post may be replace with multiple 2x posts with 16d Sinkers at 6" o.c. along length of post at HDU5 Holdowns without review.)									
15.	All exterior walls less than or equal to 9'-0" in height shall be framed with 2x DFL #2 studs at 16"o.c.,unless noted otherwise. All full height studs (less than or equal to 20'-0" in height shall be (2) 2x6 DFL-#2 at 16" o.c. All interior bearing walls less than or equal to 9'-0" in height shall be framed with 2x DFL #2 studs at 12"o.c. UNO. All interior non-bearing, non-shear stud walls may be framed with 2x studs at 24"o.c. See below for wall type indicators.						>			
				. BRG wall w/ 2x						1
			ONADO	SITE W	OOD DE	ODII	CTC			

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COMPOSITE WOOD PRODUCTS: "EWB" - Engineered wood beam - WIDTH Greater than 3.5" \* Beam Width > 3.5" BCI Versa-Lam 3100 - LVL
TJI Parallam - PSL
2.0E LP Gang-Lam - LVL
2.0E Roseburg Rigidlam - LVL
Anthony Power Beam - LSL 2.0E Weldwood - LVL 3000 285 2.0
Calvert GL 3000 IJC GLU-LAM 2900 300 2.0
GP LAM - LVL 2900 285 2.0
"EWB" - ENGINEERED WOOD BEAM - WIDTH LESS THAN OR EQUAL TO 3.5" \* "EWB" DESIGN VALUES Fb (psi) Fv (psi) E (x10<sup>6</sup>psi) Beam width up to 3.5"
BCI Versa-Lam 2800 - LVL
BCI Versa-Lam 2000 - LVL BCI Versa-Lam 3100 - LVL
BCI Versa-Lam 2650 - LVL
BCI Versa-Lam 2600 - LVL
1.9E LP Gang-Lam - LVL
2.0E LP Gang-Lam - LVL
TJI Parallam - PSL
TJI Timberstrand - LSL
1.8E Roseburg Rigidlam - LVL
2.0E Roseburg Rigidlam - LVL
Anthony Power Beam - LSL
2.0E Weldwood - LVL
1.8E Weldwood - LVL
Calvert GL 3000 IJC GLU-LAM
GP LAM - LVL
All beams shall be actual width no

All beams shall be actual width noted on plans. multi-ply beams are not aceptable. ALT. LSL HDR 3 1/2x4 3/8, UNO HDR PER PLAN ALT. GLB HDR 3 1/2x8 5/8 3 1/8x9 3 1/2x11 1/4 3 1/2x11 7/8" EWB 5 1/8x10 1/2

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TEXA

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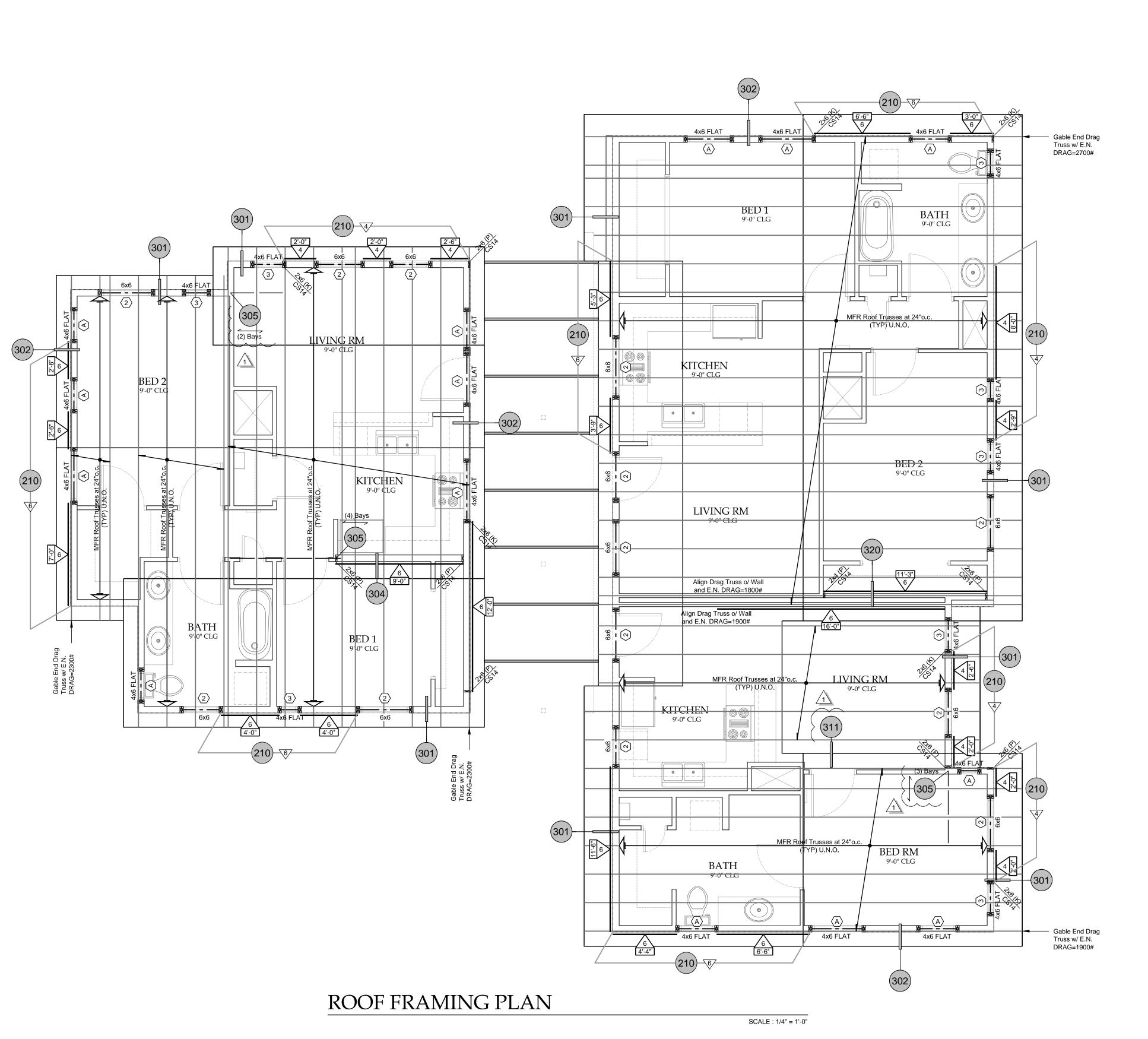
FLOOR FRAMING PLAN

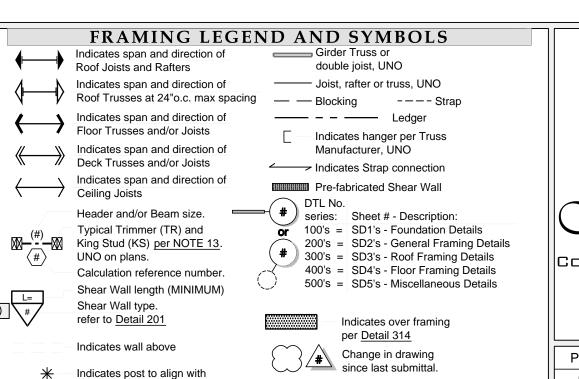
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### FRAMING NOTES:

- Refer to structural general note sheet SN1 and Structural Detail package for typical conditions not specifically called out or noted on the plans.
- Provide top plate splice at exterior walls and interior shear walls per <u>Detail 204</u>. Provide rim splice at exterior walls per <u>Detail 204</u>. Refer to <u>Detail 204</u> for requirements at top plate and rim breaks.
- 3. Nails for S.P.N. to be 16d short nails, 3 1/4" x 0.131" dia. (BLACK) or larger. Refer to shear wall schedule for S.P.N. at interior shear walls. All exterior 2nd floor shear walls should have shear
- 4. Refer to Detail 201 for shear wall, floor, and roof sheathing specifications.

nailed to rim in lieu of S.P.N. Refer to Detail 401 if shear is not run to rim.

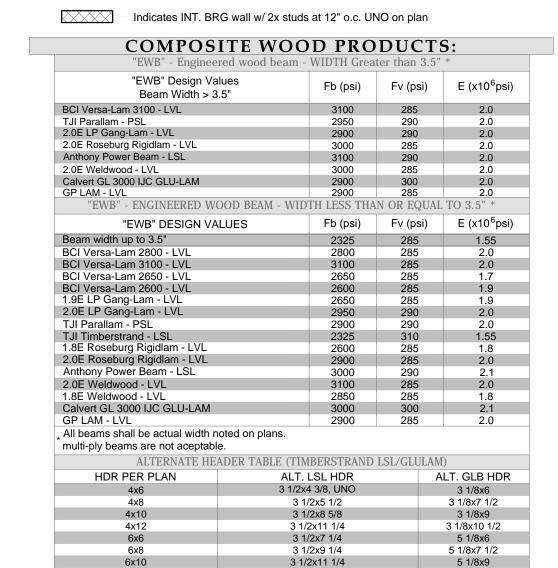
5. Refer to <u>Detail 203</u> for non-bearing header schedule.

Post and/ or Strap(s) above

- 6. See <u>Detail 406</u> for support of non-bearing, non-shear walls from floor above.
- 7. Provide single joist below wall greater than 10'-0" in length at parallel, 2nd floor, non-bearing walls.
- 8. Refer to <u>Detail 212</u> for requirements at top plate and stud notching
- and drilling.9. Refer to <u>Detail 409</u> for typical stair framing.
- At completely notched 2x top plates for AC condensor lines, provide HARDY HS24 saddle at single line set, and HARDY HS36 saddle at dual line set.
- 11. Refer to Detail 206 for "SOLID STUD" specifications.
- 12. Align SOLID BLKG in floor space and solid studs and/or posts in wall below w/ all trimm and/or posts on floor(s) above. Match number of studs or size of posts. Not applicable where studs/post from above are supported by Beam or Header.
- Provide a minimum of (1) 2x trimmer at ea end of all headers, UNO. (Match wall thickness) see table for King Stud requirements.

KING STUD TABLE								
Studs/ Post	MAX. Allowable Opening			0, 1/5	MAX. Allowable Opening			
	9'-1" Plate	10'-1" Plate		Studs/ Post	9'-1" Plate	10'-1" Plate	12'-1"	
(1) 2x4	n/a	n/a		(1) 2x6	8'-0"	6'-0"	3'-0"	
(2) 2x4/4x4	5'-0"	3'-0"		(2) 2x6/4x6	17'-0"	14'-0"	9'-0"	
(3) 2x4/6x4	8'-0"	6'-0"		(3) 2x6/6x6	19'-0"	19'-0"	18'-0"	
(4) 2x4/6x4	12'-0"	8'-0"		(4) 2x6/6x6	25'-0"	25'-0"	19'-0"	
(5) 2x4/8x4	15'-0"	10'-0"		(5) 2x6	n/a	n/a	25'-0"	

- 14. At locations where multiple 2x4 posts are shown as an acceptable alternate to 4x or 6x posts at ends of shear walls, one row of edge nailing is required at each stud. (I.e. 2 rows at (2) 2x post, 3 rows at (3) 2x post, etc.) (4x Post may be replace with multiple 2x posts with 16d Sinkers at 6" o.c. along length of post at HDU5 Holdowns without review.)
- 15. All exterior walls less than or equal to 9'-0" in height shall be framed with 2x DFL #2 studs at 16"o.c.,unless noted otherwise. All full height studs (less than or equal to 20'-0" in height shall be (2) 2x6 DFL-#2 at 16" o.c. All interior bearing walls less than or equal to 9'-0" in height shall be framed with 2x DFL #2 studs at 12"o.c. UNO. All interior non-bearing, non-shear stud walls may be framed with 2x studs at 24"o.c. See below for wall type indicators.



3 1/2x11 7/8" EWB

5 1/8x10 1/2



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Drawn By: DS								
1	REV per Planscheck	11-29-2018						
No:	Revision:	Date:						

SUBMITTAL OCTOBER 22, 2018

Elicia Kentes-Montomery 7 17863 11-29-2018

VENUE 6-PLEX

Architect:
OPA DESIGN STUDIO, INC.

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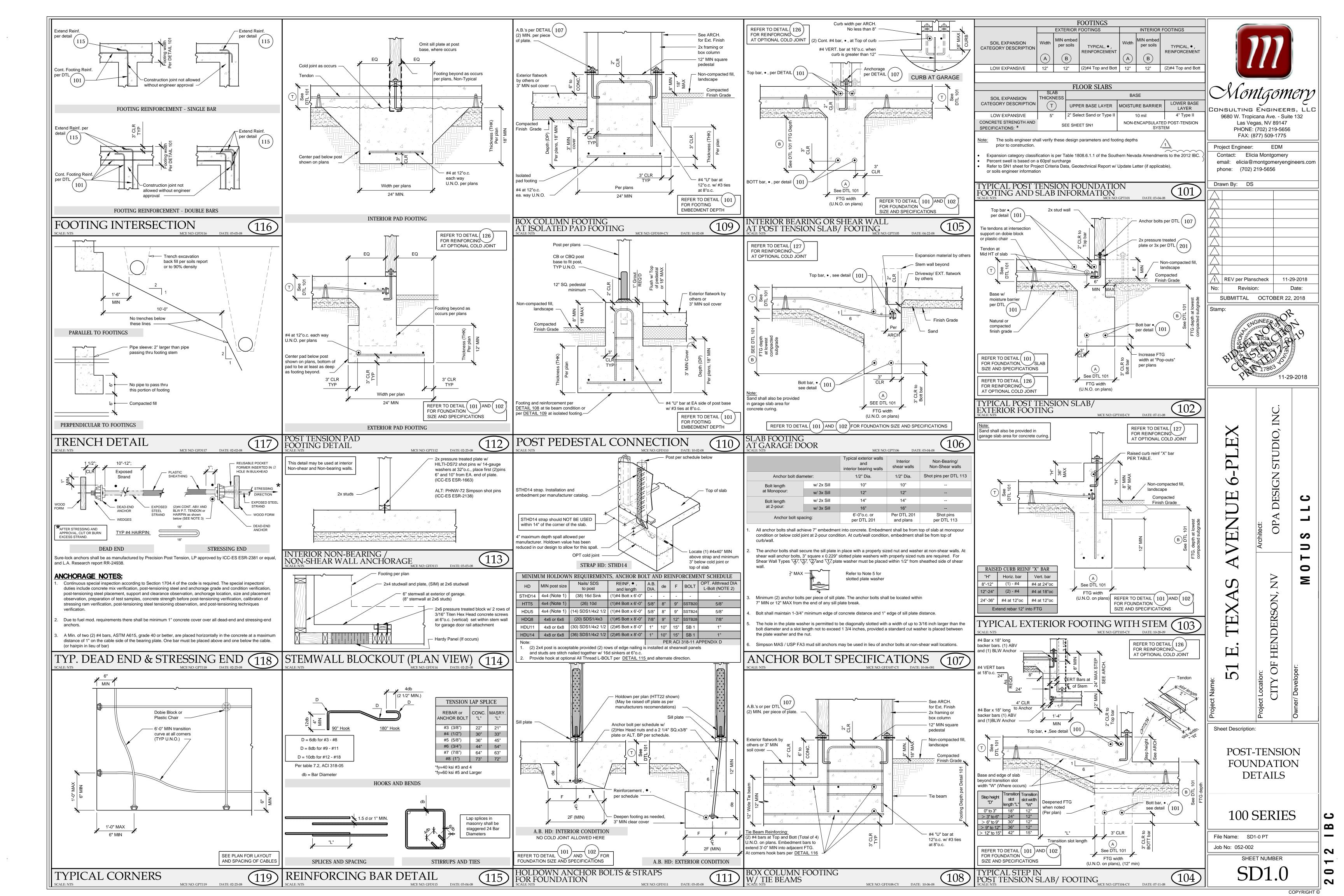
ROOF FRAMING PLAN

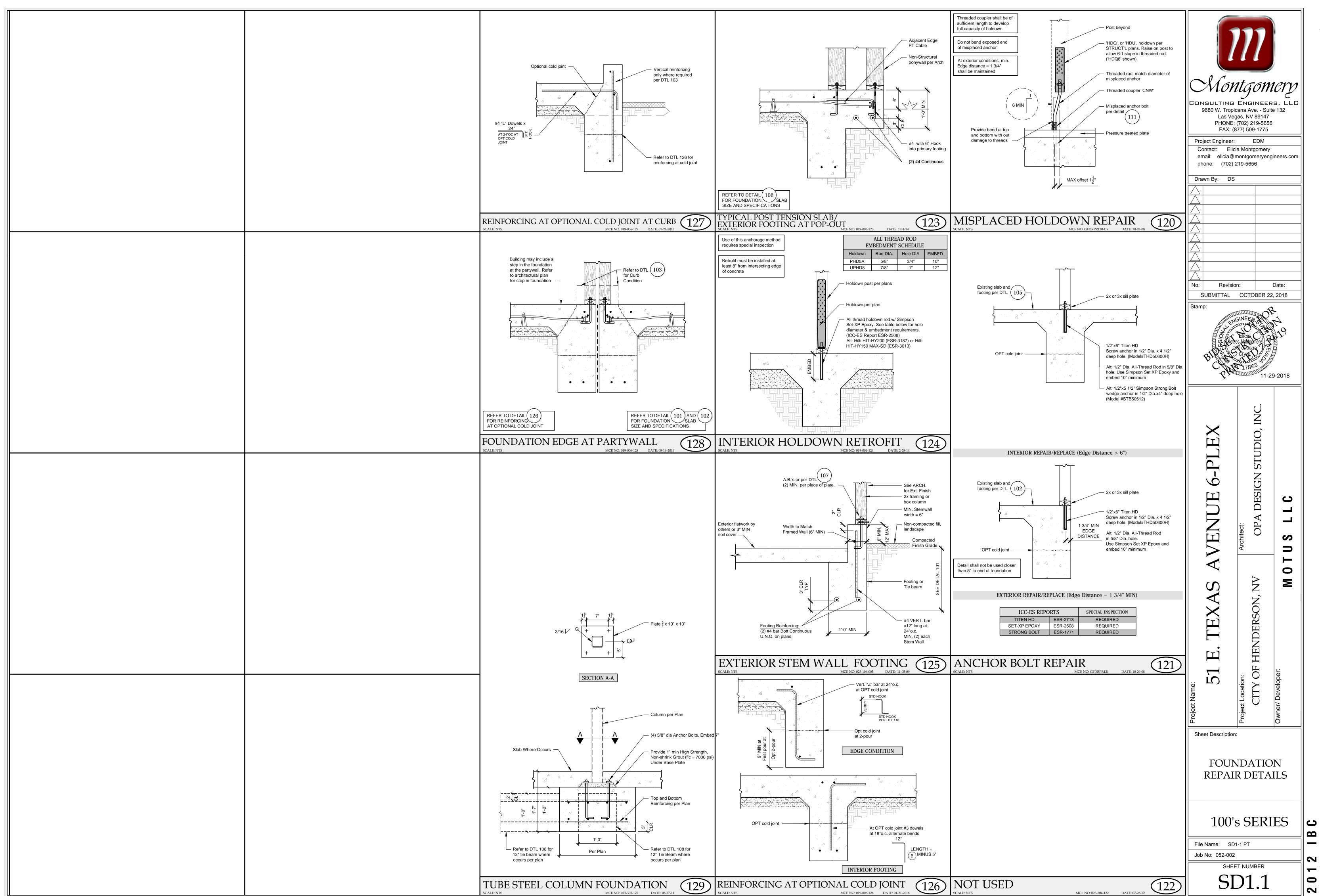
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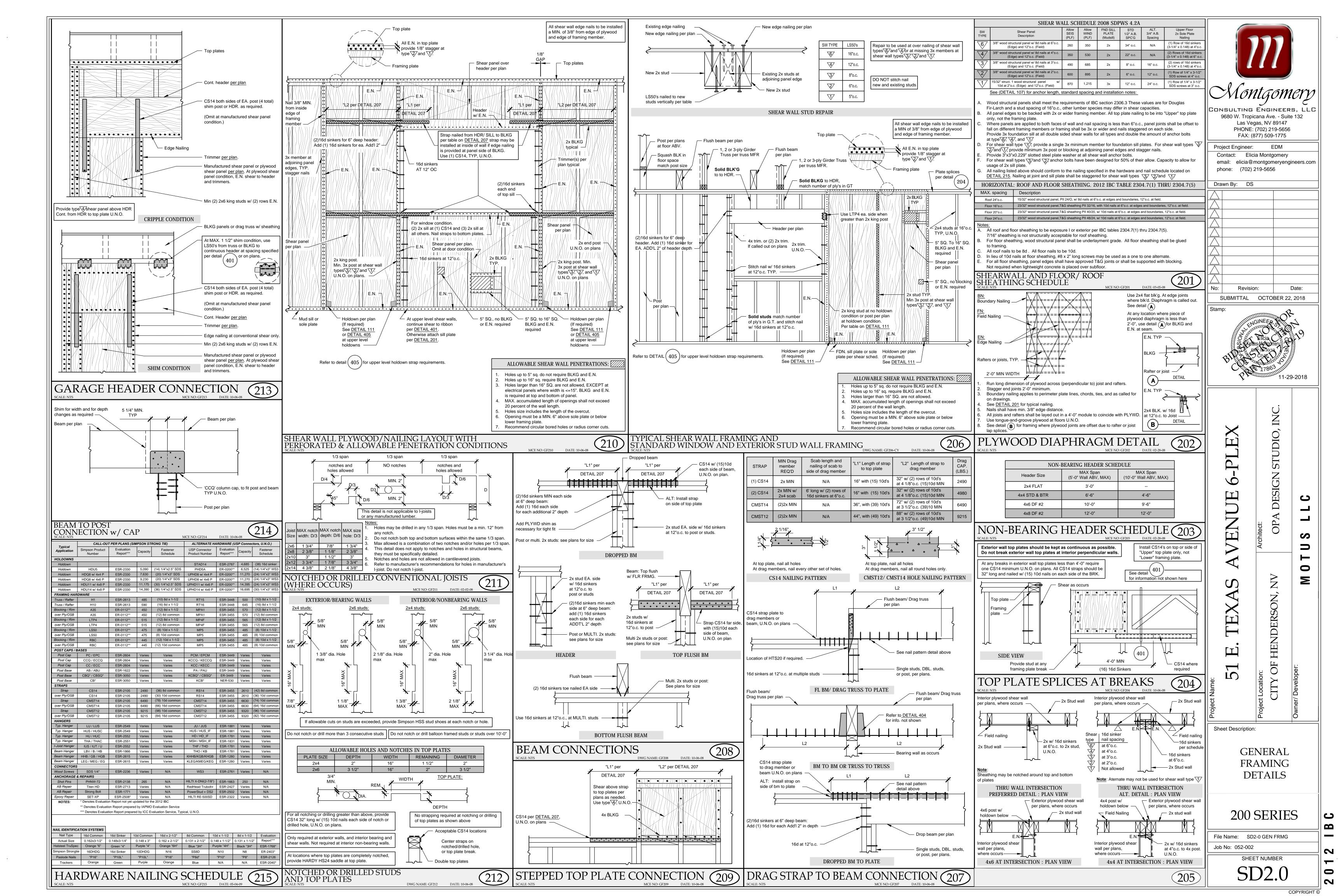
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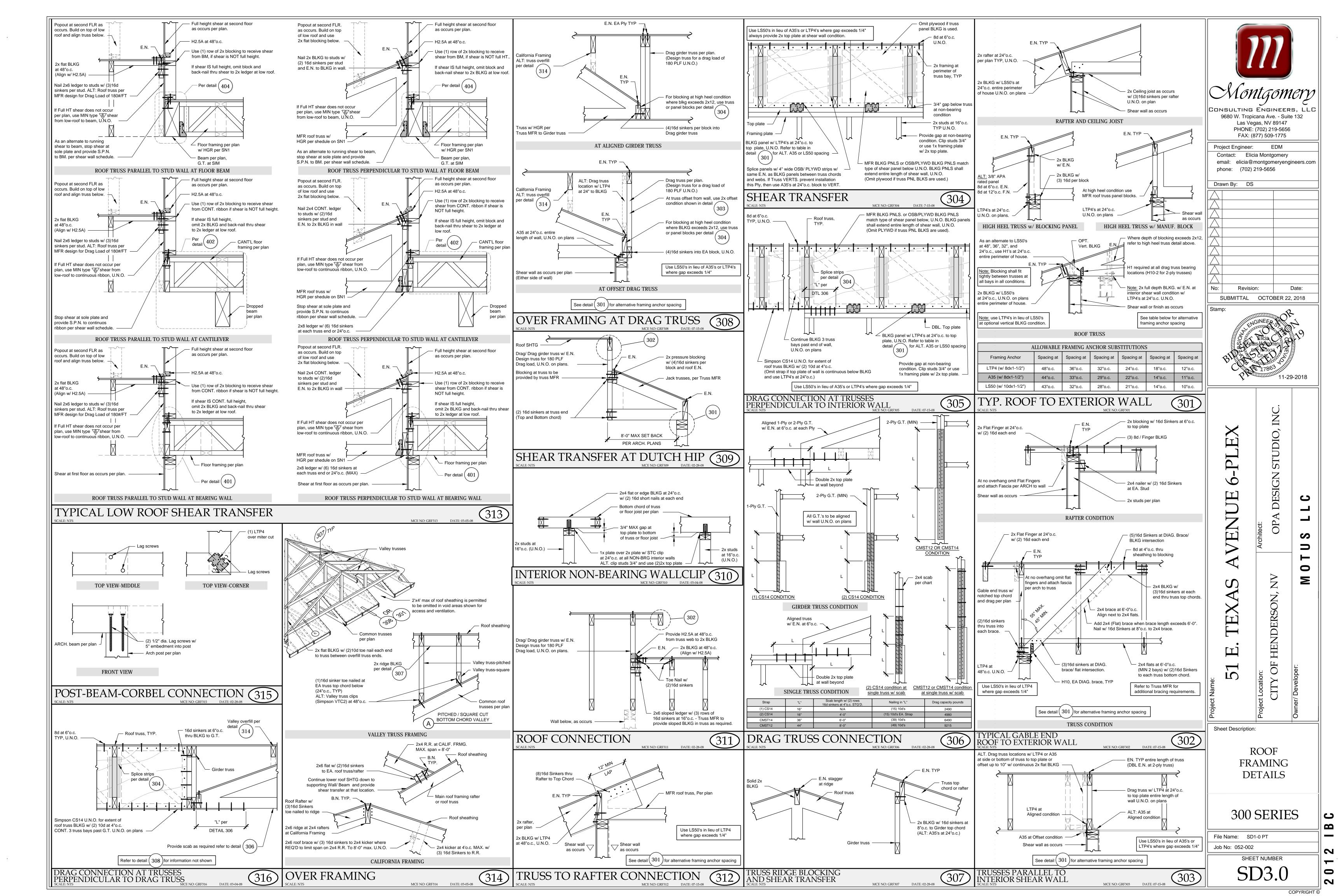
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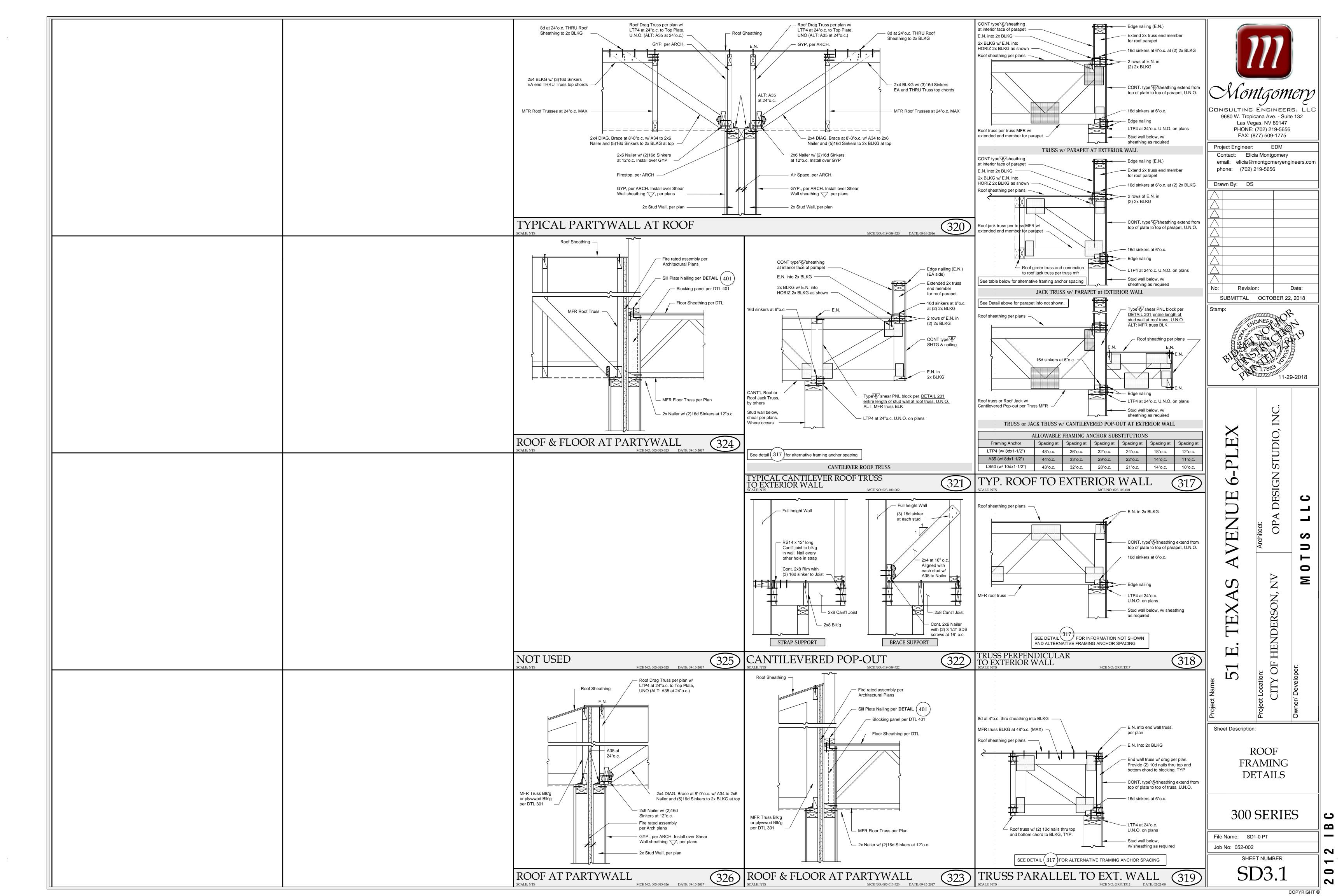


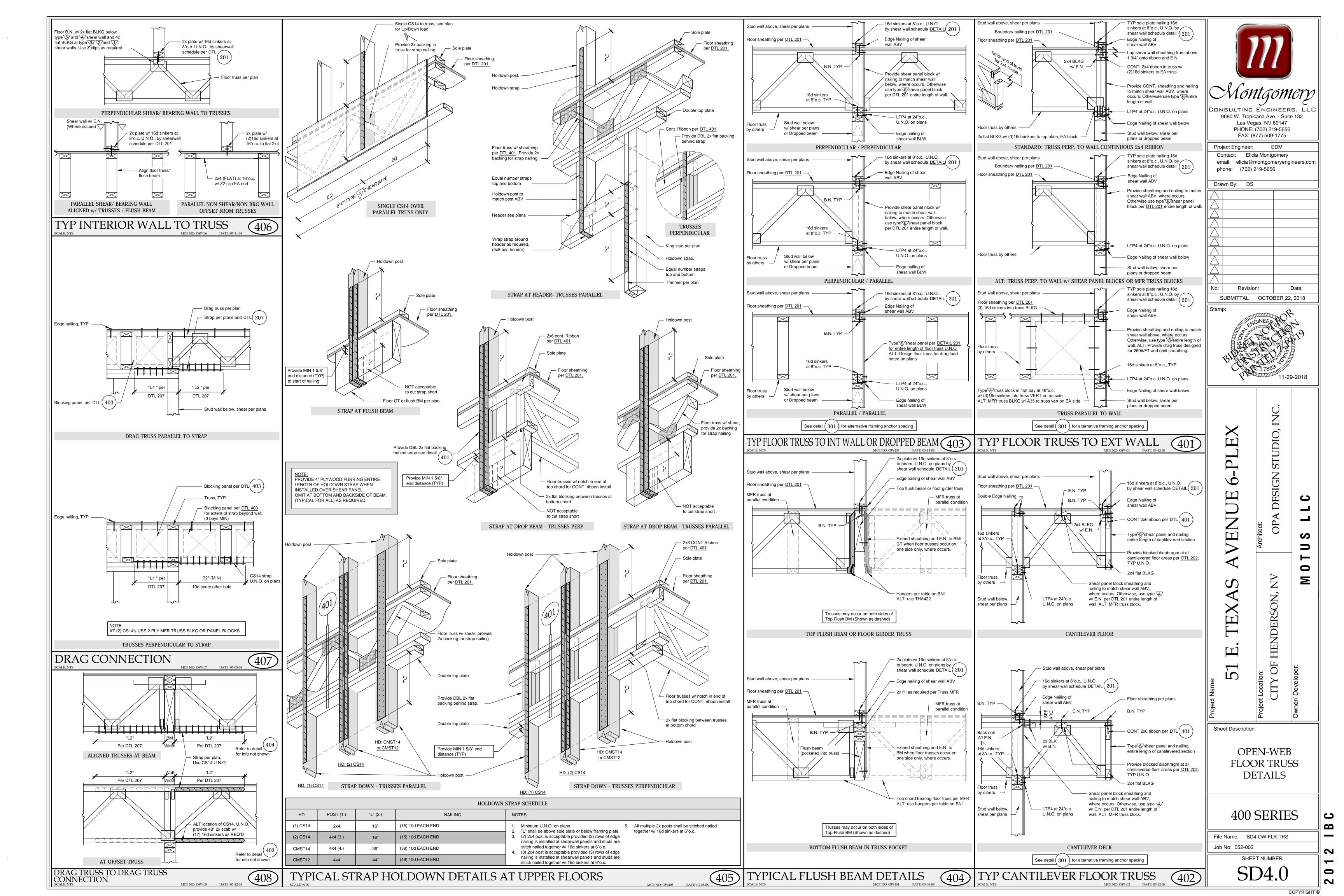


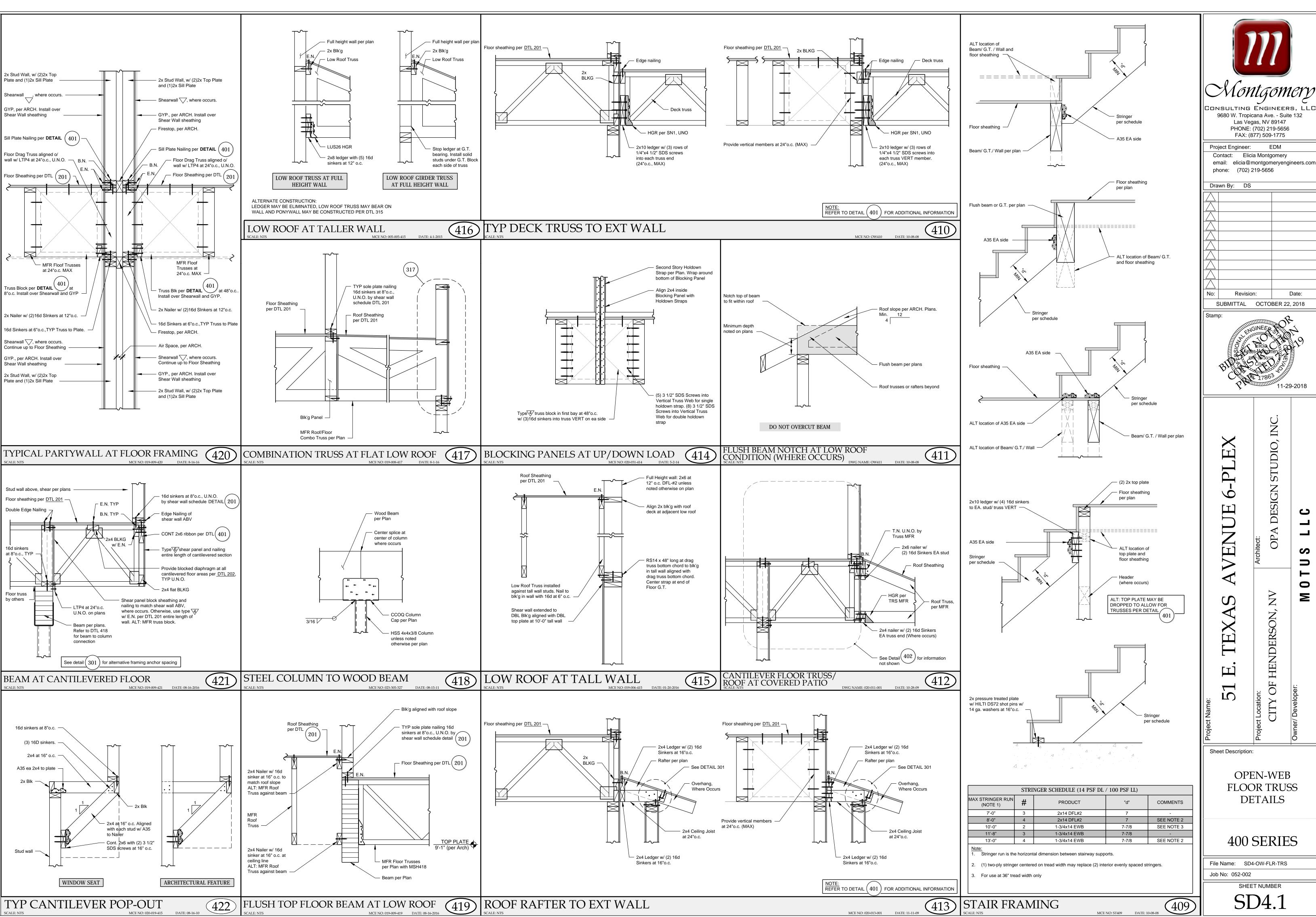
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Date:

11-29-2018

DESIGN

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