GENERAL STRUCTURAL NOTES:

1. THE GOVERNING BUILDING CODE IS THE MINNESOTA BUILDING CODE 2015 EDITION AS APPROVED AND AMENDED BY THE CITY OF ST. MICHAEL, MN.
2. CONTRACT DOCUMENTS INCLUDE THE STRUCTURAL DRAWINGS AND SPECIFICATIONS, BUT DO NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR OTHER SUBMITTALS BY THE CONTRACTOR.
3. CONTRACTOR SHALL CROSS VERIFY ALL CONTRACT DOCUMENTS, ELEVATIONS, DIMENSIONS, AND EXISTING CONDITIONS PRIOR TO STARTING WORK. DISCREPANCIES OR CONFLICTS SHALL BE NOTED TO THE EOR IMMEDIATELY FOR REMEDIATION. SPECIFIC NOTES AND DETAILS SHALL PRESIDE OVER GENERAL NOTES AND SPECIFICATIONS.
4. THE DIMENSIONS, LOCATIONS, AND DETAILS SHOWN ON THE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF THE DRAWINGS BEING ISSUED. DEVIATIONS WHICH ARE NECESSARY OR WHICH CONFLICT SHALL BE REPORTED TO THE EOR. CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR DEVIATIONS NOT APPROVED BY THE EOR.
5. COSTS OF ADDITIONAL DESIGN WORK DUE TO THE SELECTION OF AN OPTION OR DUE TO ERRORS OR OMISSION IN CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION. THE STRUCTURAL DRAWINGS REFLECT THE COMPLETED STRUCTURE. BRACING, SHORING, AND PROTECTION DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR. THE STRUCTURE SHALL NOT BE LOADED WITH CONSTRUCTION MATERIALS AND EQUIPMENT THAT EXCEEDS THE DESIGN LOADS.
7. PENETRATIONS NOT SHOWN ON THE DRAWINGS MUST BE APPROVED BY THE EOR BEFORE PLACING THROUGH STRUCTURAL ELEMENTS. CONTRACTOR SHALL PROVIDE A CAST-IN SLEEVE FOR ALL HORIZONTAL ELEMENTS THAT EXTEND THROUGH FOOTING AND FOUNDATION WALL, SUCH AS DRAIN TILE, CONDUIT, PIPING, ETC. COORDINATE SLEEVES WITH EOR. SEE MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS FOR ALL PENETRATIONS AND EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
8. CONTRACTOR TO VERIFY ALL WEIGHTS, LOCATIONS & DIMENSIONS OF MECH. EQUIPMENT SHOWN AND NOTIFY THE EOR OF ANY DISCREPANCIES. COORDINATE THIS INFORMATION W/ ALL NECESSARY INDIVIDUALS.
9. PERIODIC SITE OBSERVATION BY REPRESENTATIVES OF SANDMAN STRUCTURAL ENGINEERS IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DRAWINGS. A LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR. ALL MATERIALS AND WORKMANSHIP ARE SUBJECT TO THE REVIEW OF THE EOR.

DESIGN CRITERIA/DESIGN LOADS: ENGR. EDIT

SNOW LOAD DESIGN CRITERIA			
GROUND SNOW LOAD	Pg	50 PSF	
SNOW IMPORTANCE FACTOR	Is	1.0	–
EXPOSURE FACTOR	Ce	1.0	–
THERMAL FACTOR	Ct	1.1	TYPICAL
SLOPED ROOF FACTOR	Cs	1.0	TYPICAL

WND LOAD DESIGN CRITERIA			
ULT. DESIGN WND SPEED	V–ult	115 MPH	–
NOMINAL DESIGN WND SPEED	V–asd	90 MPH	–
RISK CATEGORY	–	II	–
EXPOSURE CATEGORY	–	C	–
INTERNAL PRESSURE COEFFICIENT	GCpi	+/– 0.18	–
C & C BASE PRESSURE	qh–ult	30.1 PSF	–

ROOF DESIGN LOADS			
LOAD TYPE	NOTATION	LOAD	NOTES
SNOW LOAD	S	38.5 PSF	TYPICAL (Ps)
LIVE LOAD	Lr	20 PSF	–
DEAD LOAD	D	20 PSF	D TC = 12 PSF / D BC = 8 PSF
NOTES: ALL ROOF COMPONENTS SHALL BE DESIGNED FOR DRIFT LOADS AND BALANCED & UNBALANCED SNOW LOADING PER ASCE 7. SEE PLAN FOR SNOW DRIFT LOADS			

FLOOR DESIGN LOADS				
FLOOR	DESCRIPTION	DEAD LOAD (D)	LIVE LOAD (L)	NOTES
1ST	TYP RESIDENTIAL	85 / 120 PSF*	40 PSF**	–
1ST	CORRIDORS	85 / 120 PSF*	100 PSF	–
1ST	STAIRS/LANDINGS	23 PSF	100 PSF	D TC = 15 PSF / D BC = 8 PSF
1ST	BALCONIES	10 PSF	60 PSF**	–
2ND/3RD	TYP RESIDENTIAL	23 PSF	40 PSF**	D TC = 15 PSF / D BC = 8 PSF
2ND/3RD	CORRIDORS	23 PSF	40 PSF**	D TC = 15 PSF / D BC = 8 PSF
2ND/3RD	STAIRS/LANDINGS	23 PSF	100	D TC = 15 PSF / D BC = 8 PSF
2ND/3RD	BALCONIES	10 PSF	60 PSF**	TOP LEVEL BALCONIES: DESIGN FOR S = 114 PSF
* D BREAKDOWN (6" H.C.) = 60 PSF H.C. + 12.5 PSF TOPPING + 12.5 PSF S.I.				
* D BREAKDOWN (12" H.C.) = 96 PSF H.C. + 12.5 PSF TOPPING + 11.5 PSF S.I.				
** DENOTES LIVE LOAD IS REDUCIBLE PER ASCE 7				

EQUIVALENT LATERAL EARTH PRESSURES USED:			
SOIL	TYPE	PRESSURE	NOTES
–	AT REST	?? PCF	USED FOR BASEMENT WALL DESIGN
–	ACTIVE	?? PCF	USED FOR CANTILEVER STEM RETAINING WALL DESIGN
REFER TO GEOTECHNICAL REPORT FOR BACKFILLING REQUIREMENTS. SOIL RETAINING/BASEMENT WALLS ON PROJECT HAVE NOT BEEN DESIGNED TO WITHSTAND HYDROSTATIC PRESSURE.			

FOUNDATION NOTES: ENGR. EDIT

1. FOOTINGS ARE DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF ???? psf FOR STRIP FOOTINGS AND ???? psf FOR PAD FOOTINGS. THESE VALUES ARE PER THE GEOTECHNICAL REPORT BY ?????? ISSUED ON ????? ?, 201?, REPORT #??.
1. FOOTINGS ARE DESIGNED FOR AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 1500 psf FOR STRIP FOOTINGS AND ???? psf FOR PAD FOOTINGS. THE ASSUMED ALLOWABLE SOIL BEARING PRESSURE SHALL BE VERIFIED AT TIME OF CONSTRUCTION.
2. PROTECT FOOTING EXCAVATIONS FROM WATER, MOISTURE, OR FROST INFILTRATION. PRIOR TO PLACEMENT OF FOOTING CONCRETE, CLEAN FOOTING EXCAVATIONS OF SNOW, WATER, MUD, DIRT, AND DEBRIS. DO NOT PLACE FOOTINGS OR BACKFILL ON FROZEN SUB GRADE.
3. FROST COVER FOR FOOTINGS SHALL BE PER RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. SEE PLAN FOR TOP OF FOOTING ELEVATIONS AND DETAILS FOR FOOTING STEP REQUIREMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE EOR IMMEDIATELY OF ANY SPECIAL SOIL OR WATER CONDITIONS THAT EXIST ON SITE.
5. BACKFILL & COMPACTION SHALL BE INSPECTED AND TESTED BY A LICENSED GEOTECHNICAL ENGINEER OR QUALIFIED FIELD TECH. THE SUBMITTAL OF TESTING REPORTS SHALL BE PER SPECIAL INSPECTION REQUIREMENTS.
6. BACKFILL SHALL BE COMPACTED BY MECHANICAL MEANS. WATER INFILTRATION SHALL NOT BE ALLOWED. BACKFILL SHALL BE PLACED IN ALTERNATIVE LIFTS ON EA SIDE OF THE FDN WALLS FOR STABILITY.
7. UNLESS SPECIFICALLY PRESCRIBED IN A GEOTECHNICAL REPORT, BACKFILL SHALL BE PLACED AND COMPACTED IN LOOSE LIFT THICKNESSES OF 6" OR LESS. MOISTURE CONTENT AT THE TIME OF COMPACTION SHOULD BE +/– 3% OF OPTIMUM MOISTURE AND IT IS RECOMMENDED ALL ENGINEERED FILL BELOW FOOTINGS BE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR MAX DENSITY (ASTM D698–00a).
8. ALL WALL FOOTINGS ARE TO BE CENTERED ON WALLS U.N.O. ALL PAD FOOTINGS ARE TO BE CENTERED ON COLUMNS U.N.O.

CONCRETE AND STEEL REINFORCEMENT NOTES:

1. CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO AMERICAN CONCRETE INSTITUTION (ACI) CODES AND SPECIFICATIONS, LATEST EDITION.

   ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE"
   ACI 315 "DETAILS & DETAILING OF CONCRETE REINFORCEMENT"
   ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
   ACI 306R "COLD WEATHER CONCRETING"

2. CAST–IN–PLACE CONCRETE STRENGTHS (f'c) REQUIRED (28 DAY):

FOOTINGS	3000 PSI	PIERS	3000 PSI
EXTERIOR WALLS	3000 PSI	INTERIOR SLABS	3000 PSI
INTERIOR WALLS	3000 PSI	EXTERIOR SLABS	4500 PSI
PRECAST TOPPING	3000 PSI	(AIR ENTRAINED)	

3. SUBMIT CONCRETE MIX DESIGN & STRENGTH DATA TO E.O.R. FOR APPROVAL. ALL ADMIXTURES ARE THE RESPONSIBILITY OF THE CONCRETE SUPPLIER'S ENGINEER.
4. CAST–IN–PLACE CONCRETE SHALL BE SUBJECT TO TESTING BY AN INDEPENDENT TESTING LABORATORY, SEE SPECS AND SPECIAL INSPECTION REQUIREMENTS..
5. ALL CONCRETE SHALL BE PLACED PER ACI & THOROUGHLY CONSOLIDATED BY MEANS OF A VIBRATOR, ESPECIALLY AROUND REINFORCEMENT STEEL AND CORNERS OF FORM WORK.
6. REINFORCING STEEL SHALL BE GRADE 60 DEFORMED, BILLET–STEEL, ASTM A615, U.N.O. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A82 AND A185.
7. WELDED REINFORCING STEEL SHALL BE GRADE 60, LOW CARBON, ASTM A706, WHICH IS SPECIALLY MANUFACTURED TO BE WELDABLE.
8. WELDED WIRE FABRIC SHALL BE PLACED IN THE CENTER OF THE SLAB, U.O.N. LAP JOINTS A MINIMUM OF 6". EXTEND FABRIC TO BE WITHIN 1" OF SLAB EDGES.
9. PROVIDE ADEQUATE BOLSTERS, HIGH CHAIRS, SUPPORT BARS, ETC TO MAINTAIN THE SPECIFIED CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCING STEEL AND WELDED WIRE FABRIC.
10. PROVIDE EXTRA REINFORCEMENT AROUND ALL OPENINGS GREATER THAN 8" SQUARE OR ROUND. PROVIDE (2) #5 BARS @ 3" O.C. FOR EACH MAT OF BARS, AT EACH SIDE AND CORNER OF OPENING EXTENDING MINIMUM 18" PAST CORNER OF THE OPENING. PLACE 2" CLEAR FROM OPENING.
11. SEE DETAILS FOR REINFORCING LAP SPLICE SCHEDULE, UNLESS OTHERWISE NOTED ON PLAN OR DETAILS.
12. CAST DOWELS, WITH STD 90 DEG HOOK, IN FOOTINGS FOR CONCRETE PIERS AND WALLS ABOVE. DOWELS SHALL BE THE SAME SIZE AND QTY AS THE VERTICAL REINFORCING (U.N.O.)
13. SUPPLY 100 FEET EXTRA OF #5 REBAR FOR MISC. PLACEMENT AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL INCLUDE LABOR ALLOWANCE FOR PLACEMENT.
14. EXTERIOR SLABS SHALL DRAIN FREELY AWAY FROM THE BUILDING. SEE CIVIL AND ARCH. DRAWINGS FOR ELEVATIONS.
15. CONTROL SAWCUT JOINTS ARE TO BE EXECUTED AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT AGGREGATE FROM DISLODGING BY SAW AND PRIOR TO TO SHRINKAGE STRESS CRACKING. CONTROL JOINTS TO BE SPACED A MAXIMUM OF 10 FOOT SQUARES U.O.N. ON PLAN. A JOINT SHALL BE CUT TO EVERY CORNER OF COLUMN ISOLATION JOINTS.
16. SYNTHETIC FIBER REINFORCEMENT, WHERE SPECIFIED ON PLAN FOR SLABS–ON–GRADE, TOPPINGS, AND/OR SLABS ON DECK, SHOULD BE MACROSYNTHETIC AND SHALL CONFORM TO ASTM C 1116/C (TYPE III) AND ACI 544 DOCUMENTS. DOSAGE RATE TO BE SPECIFIED BY THE CONCRETE MIX DESIGNER TO COMPLY WITH THE FOLLOWING REQUIREMENTS: FIBER DOSAGE TO BE EQUIVALENT TO THE DISTRIBUTED STEEL REINFORCEMENT OF ACI 318 FOR MINIMUM SHRINKAGE AND TEMPERATURE REINFORCEMENT RATIO OF 0.0018 (U.N.O). RESIDUAL STRENGTH AFTER FIRST CRACK SHALL BE BETWEEN 20% AND 25%. DOSAGE OF FIBER FOR SLABS ON COMPOSITE STEEL DECKING SHALL NOT BE LESS THAN 4 LB/CUBIC YARD, AS RECOMMENDED IN ANSI/SDI C – 2011. MIX DESIGN SUBMITTAL TO INCLUDE DOSAGE RATES, ENGINEERING DATA, AND HISTORICAL PERFORMANCE DATA FROM THE FIBER MANUFACTURER/SUPPLIER.
17. SEE ARCH DRAWINGS FOR DIMENSIONS OF STOOPS, FOUNDATION WALL HOLDOUTS, SLAB RECESSES. SLOPED SLABS & FOUNDATION WALL INSULATION.
18. SEE DETAIL 1/S301 FOR SLAB CONSTRUCTION JOINTS (CCJ) AND FOR SLAB CONTROL JOINTS (CJ). CONTRACTOR SHALL SUBMIT A PROPOSED JOINT LAYOUT TO ARCH/ENG FOR APPROVAL PRIOR TO SLAB PLACEMENT. CONTROL JOINTS SHALL BE ON COLUMN LINES AND @ RE–ENTRANT CORNERS TO THE GREATEST EXTEND POSSIBLE W/ SPACING LESS THAN 12'–0" O.C. BETWEEN. CONSTRUCTION JOINTS SHALL BE LOCATED SO AS NOT TO ALLOW A SINGLE SLAB POUR TO EXCEED 4000sf UNLESS ALTERNATE MEASURES ARE TAKEN TO CONTROL SLAB CURLING & SHRINKAGE. PROVIDE CJ OR CCJ JOINTS SO AS NOT TO EXCEED A SLAB UNIT ASPECT RATIO OF 1.5:1.

POST INSTALLED ANCHORS:

1. POST INSTALLED ANCHORS NOTED ON PLAN AND/OR DETAILS NOTED SHALL BE AS FOLLOWS (U.O.N.). IF ALTERNATIVE ANCHORS ARE DESIRED, CONTRACTOR MUST SUBMIT PRODUCT DATA FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO ORDERING OF MATERIALS. ANCHORS USED TO TRANSFER STRUCTURAL LOADS MUST HAVE BEEN APPROVED BY METHODS OF ACI 318 APPENDIX D FOR MECHANICAL ANCHORS AND ICC–ES AC308 FOR ADHESIVE AND TORQUE–CONTROLLED ANCHORS. ADHESIVES USED IN COLD WEATHER MUST MEET ALL WEATHER REQUIREMENTS AND CODE REQUIREMENTS STATED ABOVE.

   INJECTION ADHESIVE ANCHORS: SIMPSON SET–XP ADHESIVE. THREADED RODS TO BE A193 GRADE B7 WITH EMBEDDED END CUT @ 45° ANGLE.

   EXPANSION ANCHORS: SIMPSON STRONG BOLT 2

   SCREW ANCHORS: SIMPSON TITEN HD

   POWDER ACTUATED FASTENERS (P.A.F.): 0.157"ø STEEL–TO–STEEL, THRU BASE METAL, ½" MIN. EDGE DISTANCE. 0.157"ø x1¼" STEEL TO CONCRETE & MASONRY. 3" MIN. CONCRETE EDGE DISTANCE (U.N.O.).

2. POST INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER PRIOR TO USING POST INSTALLED ANCHORS FOR MISSING OR MISPLACED C.I.P. ANCHORS. CARE SHALL BE TAKEN TO AVOID CONFLICTS WITH EXISTING REINFORCING BARS. HOLES SHALL BE DRILLED AND CLEANED PER ANCHOR MANUFACTURER'S SPECIFICATIONS. ANCHORS AND ADHESIVE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

MASONRY NOTES:

1. MASONRY CONSTRUCTION SHALL CONFORM TO AMERICAN CONCRETE INSTITUTION (ACI) CODES AND SPECIFICATIONS, LATEST EDITION.

   ACI 530: "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"
   ACI 530.1: "SPECIFICATION FOR MASONRY STRUCTURES"

2. PROVIDE CONCRETE MASONRY UNITS (CMU) OF NORMAL WEIGHT, GRADE N, TYPE I OR II, CONFORMING TO ASTM C90 AND TESTED IN ACCORDANCE WITH ASTM C140. MASONRY ASSEMBLIES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF, f'm=1500 PSI. TESTED IN ACCORDANCE WITH THE PRISM METHOD (ASTM C1314) OR UNIT STRENGTH METHOD PER ACI 530.
3. MORTAR SHALL CONFORM TO ASTM C270 AND TESTED IN ACCORDANCE WITH ASTM C780. USE TYPE "M" BELOW GRADE AND TYPE "S" ABOVE GRADE.
4. MASONRY GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS, TESTED IN ACCORDANCE WITH ASTM C1019.
5. ALL BOND BEAMS SHALL HAVE (2) #5 BARS CONT. W/ CORNER BARS. PLACE BOND BEAMS WHERE SHOWN ON DETAILS AND AT TOP OF WALL. CONTINUE BOND BEAMS THROUGH CONTROL JOINTS.
6. PROVIDE FULL MORTAR BED AT FACE SHELLS AND CROSS WEBS ADJACENT TO GROUTED CORE LOCATIONS. PROVIDE FULL MORTAR BED AT BASE OR BOTTOM WALL COURSE AND UNDER ALL SOLID UNITS.
7. ALIGN VERTICAL CELLS TO BE FILLED WITH GROUT TO PROVIDE CONT. UNOBSTRUCTED VERTICAL CELLS. REMOVE OVERHANGING MORTAR OR OTHER OBSTRUCTION AND DEBRIS.
8. ALL CMU SHALL BE LAID IN A RUNNING BOND, U.N.O.
9. PROVIDE VERTICAL CONTROL JOINTS MEETING THE FOLLOWING CRITERIA (SEE ARCH DRAWINGS FOR CONTROL LOCATIONS). DEVIATION REQUIRES APPROVAL FROM ENGINEER AND ARCHITECT.

   MAX SPACING NOT TO EXCEED 25'–0"
   MAX OF 8'–0" FROM BUILDING CORNERS
   NO CLOSER THAN 2'–0" TO OPENING EDGES
   NO CLOSER THAN 1'–4" TO BEAM OR JOIST BEARING LOCATION

10. VERTICAL REBAR SHALL BE LATERALLY SUPPORTED IN PROPER POSITION AT TOP AND BOTTOM OF BAR DURING GROUTING OF CELLS WITH WIRE POSITIONERS PRIOR TO GROUT PLACEMENT. "WET STICKING" OF REINFORCEMENT AND EMBEDS IS NOT ACCEPTABLE. SEE ACI SPECIFICATIONS FOR PLACEMENT TOLERANCES.
11. ALL VERTICAL REINFORCEMENT, INCLUDING JAMB REINFORCEMENT, SHALL BE DOWELED INTO FOUNDATION WALLS OR FOOTINGS.
12. IT IS THE CONTRACTORS RESPONSIBILITY TO BRACE WALLS UNTIL FLOOR OR ROOF CONNECTIONS ARE COMPLETED.
13. HORIZONTAL JOINT REINFORCING SHALL BE GALVANIZED 9 GA. WITH MAX SPACING OF 16" O.C. VERTICALLY, LAP 8" MIN. ALL CORNERS AND WALL INTERSECTIONS TO BE PREFABRICATED PIECES. JOINT REINFORCEMENT SHALL BE FULLY EMBEDDED IN MORTAR. TERMINATE JOINT REINFORCEMENT AT CONTROL JOINTS, U.O.N.
14. UNLESS NOTED OTHERWISE, TYPICAL CMU WALLS SHALL HAVE VERTICAL REINFORCING CONSISTING OF #5 BARS @ 4'–0" O.C. IN MASONRY GROUT.
15. PROVIDE (1) #5 EA SIDE OF CONTROL JOINT, AT END OF WALL SEGMENTS, AND AT WALL CORNERS.
16. SHOP DRAWING SUBMITTAL FOR WALL REINF. SHALL SHOW ALL WALL ELEVATIONS W/ REINF, CONTROL JOINTS, AND ALL WALL REINF. RELATED DETAILS.
17. MAX GROUT LIFT IS 5'–0"; UNLESS ALT. ACI METHOD IS APPROVED BY ENGINEER. GROUT SHALL BE CONSOLIDATED BY MECHANICAL MEANS. PLACE 2" COLD JOINT GROUT DEPRESSION AT TOP OF EACH INTERMEDIATE GROUT LIFT.
18. DO NOT PLACE ANY PIPES OR OTHER PENETRATIONS THROUGH MASONRY WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

SHOP DRAWING & DEFERRED DESIGN SUBMITTAL NOTES:

1. CONTRACTOR TO FURNISH COMPLETE AND DETAILED SHOP DRAWING & SUBMITTALS FOR REVIEW AND APPROVAL BY THE EOR. THE FOLLOWING ARE REQUIRED FOR THIS PROJECT.

SHOP DRAWING OR SUBMITTAL	NOTES/COMMENTS
CONCRETE MIX DESIGN	–
CONCRETE REINFORCEMENT SHOP DRAWINGS	–
STRUCTURAL STEEL SHOP DRAWINGS	–
CMU, MORTAR, & GROUT MATERIAL SPECS	–
CMU REINFORCEMENT SHOP DRAWINGS	–
PRECAST CONCRETE SHOP DRAWINGS	DEFERRED SUBMITTAL: SEE NOTE #4
LUMBER MATERIAL GRADE SUBMITTAL	–
WOOD TRUSS SHOP DRAWINGS	DEFERRED SUBMITTAL: SEE NOTE #4
DECK HANGER BRACKETS SHOP DRAWINGS	–
ELEVATOR SHOP DRAWINGS	PROVIDE LOADS @ STRUCTURAL SYSTEM
SIMPSON STRONG–TIE ANCHOR TIEDOWN SYSTEM	–

2. CONTRACT DRAWINGS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS. ALL SHOP DRAWINGS MUST BEAR THE REVIEW STAMP OF THE CONTRACTOR BEFORE THEY ARE REVIEWED BY THE EOR.
3. SHOP DRAWINGS SHALL SHOW ALL FIELD DETAILS AND ADDITIONAL INFORMATION NEEDED FOR THE CONTRACTOR TO CONSTRUCT THE BUILDING PER THE CONTRACT DOCUMENTS.
4. SHOP DRAWINGS COMPONENTS DESIGNATED AS A DEFERRED SUBMITTAL "DESIGNED BY OTHERS" OR "PRE–ENGINEERED" SHALL INCLUDE A CALCULATION PACKAGE THAT IS TO BE STAMPED AND SIGNED BY A LICENSED PROFESSIONAL ENGINEER PRIOR TO SUBMITTAL FOR APPROVAL TO THE E.O.R.
5. SHOP DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE DURING TIMES OF INSPECTION AND SHALL BE CLEARLY INDICATED THEY HAVE BEEN REVIEWED AND APPROVED BY THE EOR.
6. REVIEW OF SUBMITTALS AND SHOP DRAWINGS BY THE EOR DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK ALL SUBMITTALS AND SHOP DRAWINGS BEFORE SUBMITTING TO THE STRUCTURAL ENGINEER. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR THE ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.

PRECAST / PRESTRESSED CONCRETE NOTES:

1. PRECAST CONCRETE UNITS SHALL BE DESIGNED TO SUPPORT THE LOADS DESCRIBED ON THE CONTRACT DOCUMENTS. MEMBER DESIGN SHALL BE PERFORMED ACCORDING TO THE ACI 318 AND PCI LATEST EDITIONS AND UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT.
2. ALL PRECAST TO PRECAST CONNECTIONS ARE THE RESPONSIBILITY OF PRECAST SUPPLIER. SHOW FIELD WELDS AND CONNECTION MATERIAL REQUIREMENTS ON SHOP DRAWINGS SUBMITTALS.
3. PRECAST MEMBERS HAVE BEEN INDICATED ON THE DRAWINGS BY GENERAL SIZE AND DEPTH. THE STRUCTURAL DESIGN OF THESE MEMBERS AND THEIR LIFTING ACCESSORIES SHALL BE BY A REGISTERED ENGINEER IN THE STATE OF THE PROJECT BY THE PRECAST MANUFACTURER.
   A. DESIGN DEVIATIONS WILL BE PERMITTED AFTER THE ENGINEERS APPROVAL OF THE MANUFACTURER'S PROPOSED DESIGN SUPPORTED BY CALCULATIONS AND DRAWINGS.
   B. DESIGN DEVIATIONS MUST PRODUCE AN INSTALLATION EQUIVALENT TO THE BASIC INTENT WITHOUT INCURRING ADDED COSTS.
5. ALL SUBMITTAL DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
6. HEADERS AT OPENINGS THROUGH PRECAST PLANK SHALL BE SUPPLIED BY THE PRECAST SUPPLIER. ADJACENT PRECAST UNITS SHALL BE DESIGNED FOR THE LOADS AT THE HANGER BEARING LOCATION.
7. PRECAST SUPPLIER SHALL BE RESPONSIBLE FOR OPENINGS 8" AND LARGER IN SIZE THROUGH PRECAST MEMBERS. HOLES LESS THAT 8" SHALL BE CUT BY THE TRADE WITH PRIOR APPROVAL OF THE PRECAST SUPPLIER.
8. PRECAST MEMBERS SHALL BE ERECTED SIMULTANEOUSLY ON EACH SIDE OF THE SUPPORTING WALLS AND BEAMS TO MAINTAIN STABILITY.
9. VERIFY WITH ALL TRADES IF ADDITIONAL EMBEDS ARE REQUIRED FOR TRADE COORDINATION AND INSTALLATION.
10. CONTRACTOR RESPONSIBLE TO CONTACT PRECAST SUPPLIER IF COMPONENTS ARE ATTACHED TO PRECAST EMBEDS INCORRECTLY OR MISALIGNED. CONTRACTOR TO WORK WITH PRECAST ENGINEER TO DEVELOP APPROPRIATE FIELD FIX, IF NECESSARY. ALL CORRESPONDENCES TO BE COPIED TO STRUCTURAL ENGINEER OF RECORD.

METAL PLATE CONNECTED WOOD TRUSS NOTES:

1. METAL PLATE CONNECTED WOOD TRUSSES SHALL BE ENGINEERED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT. A SEALED COVER SHEET SHALL BE SUBMITTED WITH THE SHOP DRAWINGS AT THE TIME OF SUBMITTAL. SHOP DRAWING DESIGN SUBMITTAL TO COMPLY WITH IBC SECTION 2303.4.
2. WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", AFPA, AND "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION."
3. TRUSSES TO BE DESIGNED TO SATISFY THE FOLLOWING DEFLECTION REQUIREMENTS. TRUSS SUPPLIER TO PROVIDE CAMBER AS NECESSARY TO COUNTER DL DEFLECTIONS.
   ROOF TL = L/240 * FLOOR TL = L/240 *
   ROOF SL = L/360 FLOOR LL = L/360
   * NET TL DEFLECTION MINUS CAMBER, NOT TO EXCEED ¾". PARTITION WALLS BELOW TRUSSES TO BE FRAMED TO ALLOW FOR THIS EXPECTED DEFLECTION.
4. TRUSS SUPPLIER TO MAKE EVERY EFFORT TO FOLLOW FRAMING SCHEME AS THE LOADS HAVE BEEN DISTRIBUTED TO THE FOUNDATION ACCORDINGLY. IF REVISED FRAMING DIRECTIONS ARE DESIRED BY SUPPLIER, PLAN MUST BE SUBMITTED FOR APPROVAL PRIOR TO FOUNDATION CONSTRUCTION.
5. UNLESS OTHERWISE NOTED ON DRAWINGS, EOR HAS NOT PROVIDED STRUCTURAL SHEATHING BENEATH THE BOTTOM CHORD OF ROOF OR FLOOR TRUSSES FOR BRACING.
6. ALL HARDWARE (BOLTS, HANGERS, STRAPS, ETC) REQUIRED FOR CONNECTIONS BETWEEN TRUSSES SHALL BE DESIGNED AND SUPPLIED BY THE TRUSS ENGINEER AND SUPPLIER.
7. UNLESS NOTED OTHERWISE, ROOF TRUSSES SHALL BE ATTACHED TO THE TOP PLATE AT ALL BEARING CONDITIONS W/ SIMPSON H2.5T CLIPS INSTALLED PER MANUFACTURER'S INSTRUCTIONS. GIRDERS AND ROOF BEAMS SHOULD BE ATTACHED TO BEARING SUPPORTS WITH (2) H2.5T CLIPS.
8. DO NOT CUT OR REMOVE TRUSS MEMBERS OR MAKE FIELD ALTERATIONS TO THE TRUSSES.
9. LAYOUT AND SPACING GUIDELINES ON PLAN ARE FOR REFERENCE ONLY UNLESS SPECIFICALLY DIMENSIONED OR DETAILED.
10. GIRDER TRUSSES SHALL BE SUPPORTED BY SAME NUMBER OF STUDS AS TRUSS PLIES (MIN OF 2 STUDS) WITH CONTINUOUS SOLID BEARING TO THE FOUNDATION. AVOID BEARING GIRDER TRUSSES OVER WALL OPENINGS, UNLESS OTHERWISE DIMENSIONED ON PLAN.
11. THE GUIDELINES SET FORTH BY THE TRUSS PLATE INSTITUTE (TPI) & SCBA PUBLICATION BSCI "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" SHALL BE FOLLOWED BY THE TRUSS INSTALLER.
12. THE METAL PLATE CONNECTED WOOD TRUSS SUPPLIER SHALL SUPPLY THE CURRENT BCSI B–SERIES SUMMARY SHEETS WITH THE TRUSS ERECTION DRAWINGS OUTLINING THE PROPER HANDLING, ERECTING, AND BRACING OF TRUSSES.
13. ERECTION BRACING OF WOOD TRUSSES IS THE RESPONSIBILITY OF THE TRUSS INSTALLER. THE TRUSS INSTALLER SHALL PROVIDE TEMPORARY DIAGONAL, LATERAL, & CROSS BRACING (PER BSCI GUIDE) UNTIL ROOF SHEATHING, CEILING & PERMANENT BRACING CAN BE APPLIED & SHEAR WALLS COMPLETED.
14. PERMANENT BRACING OF WOOD TRUSSES SHALL BE INSTALLED BY THE TRUSS INSTALLER, WHERE INDICATED BY THE TRUSS ERECTION DRAWINGS. MINIMUM BRACING REQUIREMENTS FOR TOP CHORD, BOTTOM CHORD, & WEB MEMBER PLANES SHALL BE IN ACCORDANCE W/ BSCI GUIDE UNLESS REQUIREMENTS NOTED ON THE PLAN ARE MORE STRICT.
15. SEE METAL PLATE CONNECTED WOOD TRUSS SHOP DRAWINGS FOR PERMANENT WEB AND CHORD BRACING LOCATIONS AND REQUIREMENTS.

WOOD STRUCTURAL PANEL WALL SHEATHING (WOOD FRAMING):

1. ALL PANELS SHALL HAVE A GRADE STAMP BY AN AMERICAN PLYWOOD ASSOCIATION (APA APPROVED AGENCY MEETING THE PROJECT REQUIREMENTS. ALL PANELS SHALL BE EXPOSURE 1, MINIMUM.
2. TYPICAL EXTERIOR WALL SHEATHING, U.N.O. : NOMINAL THICKNESS = 7/16", SPAN RATING 24/16.
3. PANEL JOINTS SHALL BE AT STUD CENTERLINE AND SHALL BE OFFSET FROM ADJACENT PANELS. EDGES TO BE BUTT TIGHT @ JOINTS. PANELS LESS THAN 12" WIDE SHALL NOT BE USED.
4. FASTENERS SHALL BE SPACED @ 6" O.C. ALONG ALL PANEL EDGES & @ 12" O.C. IN THE FIELD OF THE PANELS. FASTENERS TO BE LOCATED NOT LESS THA

SPECIAL INSPECTIONS AND TESTING:

THIS PROJECT REQUIRES SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE, 2012 EDITION. THESE NOTES AND THE STATEMENT OF SPECIAL INSPECTIONS PREPARED FOR THE PROJECT OWNER ARE INTENDED TO INFORM THE CONTRACTOR OF THE QUALITY ASSURANCE PROGRAM AND THE EXTENT OF THE CONTRACTOR'S RESPONSIBILITIES. CONTRACTOR SHALL REFERENCE PROJECT MANUAL FOR ADDITIONAL INFORMATION. THE TESTING AND INSPECTION SERVICES SECTION WILL CLARIFY WHO SHALL EMPLOY AND PAY FOR SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM ALL INSPECTIONS, SPECIAL INSPECTIONS, AND TESTING FOR PROJECT.

GENERAL NOTES:

1. THE SPECIAL INSPECTION AND TESTING PROGRAM IS A QUALITY ASSURANCE PROGRAM INTENDED TO ENSURE THAT THE WORK IS PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

2. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITY TO COMPLY WITH THE OFFICIAL CONTRACT DOCUMENTS. THE CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE OFFICIAL CONTRACT DRAWINGS. THE SPECIAL INSPECTOR DOES NOT REPLACE THE DUTIES OF THE BUILDING OFFICIAL NOR THE QUALITY CONTROL RESPONSIBILITIES AND PERSONNEL OF THE CONTRACTOR. JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

3. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS SPECIFIED IN THE IBC SECTION 110 AND SPECIFIC STRUCTURAL OBSERVATION AS MAY BE REQUIRED BY THE CODE.

4. THOUGH NOT REQUIRED BY CODE, SPECIAL INSPECTORS AND/OR INSPECTION AGENCIES CAN DOCUMENT ACCEPTANCE OF THEIR RESPONSIBILITIES AND SCOPE OF WORK FOR A PROJECT BY SIGNING AN AGREEMENT THAT INCLUDES A DETAILED SCHEDULE OF SERVICES, COMMONLY KNOWN AS THE SPECIAL INSPECTION AND TESTING AGREEMENT AND THE SPECIAL INSPECTION AND TESTING SCHEDULE. THIS DOCUMENT MAY REFERENCE THIS SHEET AS THE "STATEMENT OF SPECIAL INSPECTIONS," (SSI).

5. THE STRUCTURAL DESIGN METHODS AND/OR ASSUMPTIONS UTILIZED ARE BASED UPON THE SPECIAL INSPECTIONS REQUIRED WITHIN THE CONTRACT DOCUMENTS.

CONTRACTOR RESPONSIBILITIES AND DUTIES:

1. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND PROVIDING ADEQUATE NOTICE TO THE SPECIAL INSPECTORS FOR ALL INSPECTIONS. THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE REQUIRED ITEMS PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF WORK.

2. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR ACCESS TO THE APPROVED CONTRACT DOCUMENTS. THESE DOCUMENTS INCLUDE SEALED DRAWINGS AND SPECIFICATIONS, ADDENDA, CHANGE ORDERS, APPROVED SHOP DRAWINGS, ISSUED SKETCHES AND REVISION DRAWINGS, AND ALL DIRECTIVES ISSUED BY THE ARCHITECT/ENGINEER. THIS CURRENT SET OF DOCUMENTS SHALL BE AVAILABLE AT THE JOB SITE.

3. THE CONTRACTOR IS TO CORRECT DISCREPANCIES AND DEVIATIONS AS DETERMINED BY SPECIAL INSPECTOR. ALL DISCREPANCIES AND DEVIATIONS OBSERVED SHALL BE RE-INSPECTED UNTIL THE SPECIAL INSPECTOR DEEMS CONSTRUCTION TO BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

4. THE CONTRACTOR IS TO RETAIN SPECIAL INSPECTION RECORDS COMPLETED BY THE SPECIAL INSPECTORS AT THE JOB SITE.

SPECIAL INSPECTOR QUALIFICATIONS AND RESPONSIBILITIES:

1. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

2. SPECIAL INSPECTORS SHALL NOTIFY CONTRACTOR PERSONNEL OF THEIR PRESENCE AND RESPONSIBILITIES AT THE JOBSITE.

3. THE SPECIAL INSPECTOR/TESTING AGENCY SHALL BE INDEPENDENT OF THE CONTRACTOR TO AVOID CONFLICT OF INTEREST.

4. THE SPECIAL INSPECTOR IS OBLIGATED TO BOTH THE OWNER AND THE BUILDING OFFICIAL FOR OBSERVING THAT THE WORK IS EXECUTED IN ACCORDANCE WITH THE OFFICIAL CONTRACT DOCUMENTS. THESE DOCUMENTS INCLUDE SEALED DRAWINGS AND SPECIFICATIONS, ADDENDA, CHANGE ORDERS, APPROVED SHOP DRAWINGS, ISSUED SKETCHES AND REVISION DRAWINGS, AND ALL DIRECTIVES ISSUED BY THE ARCHITECT/ENGINEER.

5. SPECIAL INSPECTORS SHALL KEEP ORGANIZED RECORDS OF INSPECTIONS AND SUBMIT INSPECTION REPORTS WITH A MINIMUM WEEKLY FREQUENCY TO THE CONTRACTOR, BUILDING OFFICIAL, ENGINEERS, AND ARCHITECTS INDIVIDUALLY. REPORTS SHOULD INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION TO THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THEY SHOULD BE REPORTED TO THE BUILDING OFFICIAL AND TO THE ENGINEER OF RECORD.

6. A FINAL SIGNED REPORT IS TO BE SUBMITTED AT THE END OF THE PROJECT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES. THIS REPORT SHOULD STATE THAT ALL ITEMS REQUIRING SPECIAL INSPECTION AND TESTING WERE FULFILLED AND REPORTED TO THE BEST OF THEIR KNOWLEDGE IN CONFORMANCE WITH THE APPROVED PLANS, SPECIFICATIONS, AND THE APPLICABLE PROVISIONS OF THE IBC. ITEMS NOT IN CONFORMANCE, UNRESOLVED ITEMS, OR ANY DISCREPANCIES IN INSPECTION COVERAGE SHOULD BE SPECIFICALLY ITEMIZED.

7. THE FOLLOWING ARE THE QUALIFICATIONS FOR FOR INDIVIDUALS PERFORMING SPECIFIC INSPECTIONS OR TESTS INCLUDING IN THIS PROJECT'S SSI.

   A. AMERICAN CONCRETE INSTITUTE (ACI):
      - CONCRETE FIELD TESTING TECHNICIAN – GRADE 1 (ACI-CFTT)
      - CONCRETE CONSTRUCTION INSPECTOR (ACI-CCI)
      - LABORATORY TESTING TECHNICIAN – GRADE 1 OR 2 (ACI-LTT)
      - STRENGTH TESTING TECHNICIAN (ACI-STT)

   B. AMERICAN WELDING SOCIETY (AWS):
      - CERTIFIED WELDING INSPECTOR (AWS-CWI)
      - CERTIFIED STRUCTURAL STEEL INSPECTION (AWS/AISC-SSI)

   C. AMERICAN SOCIETY OF NON-DESTRUCTIVE TESTING (ASNT)
      - NON-DESTRUCTIVE TESTING TECHNICIAN – LEVEL II OR III (ASNT)

   D. INTERNATIONAL CODE COUNCIL (ICC):
      - STRUCTURAL MASONRY SPECIAL INSPECTOR (ICC-SMSI)
      - STRUCTURAL STEEL AND BOLTING SPECIAL INSPECTOR (ICC-SSSI)
      - STRUCTURAL WELDING SPECIAL INSPECTOR (ICC-SWI)
      - PRESTRESSED CONCRETE SPECIAL INSPECTOR (ICC-PCSI)
      - REINFORCED CONCRETE SPECIAL INSPECTOR (ICC-RCSI)
      - SOILS SPECIAL INSPECTOR (ICC-SSI)

   E. PROFESSIONAL STATE LICENSING:
      - PROFESSIONAL ENGINEER (PE)

STATEMENT OF SPECIAL INSPECTIONS (SSI):

1. THE FOLLOWNG TABLES INDICATE THE MINIMUM SPECIFIC SPECIAL INSPECTION AND TESTING TO BE PERFORMED ON THIS PROJECT AND THE QUALIFICATIONS OF THE INDIVIDUAL INSPECTORS AND TESTING TECHNICIANS.

DEFINITIONS:

1. CONTINUOUS SPECIAL INSPECTION: THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. 100% OF THE WORK MUST BE INSPECTED AND IT MUST BE INSPECTED AS THE WORK IS BEING PERFORMED.

2. PERIODIC SPECIAL INSPECTION: THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN, OR IS BEING, PERFORMED AND AT THE COMPLETION OF WORK.

3. YES: THIS INSPECTION AND/OR TESTING IS REQUIRED BY THE BUILDING CODE AND MUST BE PERFORMED.

4. NO: THIS INSPECTION AND/OR TESTING IS NOT APPLICABLE TO THE PROJECT, AND NEED NOT BE PERFORMED.

5. SUGGESTED: THIS INSPECTION AND/OR TESTING IS NOT REQUIRED BY THE BUILDING CODE. HOWEVER, THE ENGINEER OF RECORD RECOMMENDS IMPLEMENTING THEM FOR QUALITY ASSURANCE. A POTENTIAL EXISTS FOR THESE MEASURES TO BE A VALUE ADDED SERVICE FOR THE OWNER TO ENSURE PROPER PROJECT COMPLETION.

SPECIAL INSPECTIONS – SOILS AND FOUNDATION

VERIFICATION AND INSPECTION	AGENCY QUALIFICATION	SCOPE	REFERENCED STANDARD	FREQUENCY OF INSPECTION	REQUIRED ON PROJECT
1. Shallow Foundations	ICC-SSI PE-GEOTECH.	Inspect Soils below footings for adequate bearing capacity and consistency with geotechnical report	N/A	Periodic testing to verify compliance with project specifications & geotechnical report	YES
2. Controlled Structural Fill	ICC-SSI PE-GEOTECH.	Perform applicable sieve tests and modified Proctor tests of each source of fill. Inspect placement, lift thickness, and compaction. Test density of each lift. Verify extent and slope of fill placement.	Applicable ASTM Specs	Periodic testing to verify compliance with project specifications & geotechnical report	YES
3. Deep Foundation: Driven Piles	PE-GEOTECH.	Inspect and log pile driving operations. Record pile driving resistance and verify compliance with driving criteria. Inspect piles for damage from driving and plumbness. Verify pile size, length and accessories.		Continuous	NO
4. Deep Foundation: Drilled Pier Foundations	PE-GEOTECH.	Inspect installation and maintain complete records for each pier. Verify pier diameter, bell diameter, lengths, embedment into bedrock and suitability of end bearing strata		Continuous	NO

SPECIAL INSPECTIONS – CAST-IN-PLACE CONCRETE

VERIFICATION AND INSPECTION	AGENCY QUALIFICATION	SCOPE	REFERENCED STANDARD	FREQUENCY OF INSPECTION	REQUIRED ON PROJECT
1. Mix Design	ACI-CCI ICC-RCSI	Review concrete batch tickets and verify compliance with approved mix design. Verify that water added on site does not exceed that allowed by the mix design.	ACI 318	Prior to start of concrete construction on project, Periodic	YES
2. Material Certification	STRUCTURAL ENGINEER OF RECORD	Verify that concrete supplier's concrete components meet requirements set forth by applicable ASTM standards.	Applicable ASTM & ACI Specs	Prior to start of concrete construction on project	YES
3. Reinforcement Installation	ACI-CCI ICC-RCSI	Inspect size, spacing, cover, positioning and grade of reinforcing steel. Verify that bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters	Applicable ACI Specs	Prior to each casting	SUGGESTED
4. Welding of Reinforcing	AWS-CWI	Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required	Applicable ASTM & AWS Specs	Continuous	SUGGESTED
5. Anchor Rods	ACI-CCI ICC-RCSI	Inspect size, positioning and embedment of anchor rods. Inspect concrete placement and consolidation around anchors	Applicable AISC & ACI Specs	Prior to each casting	SUGGESTED
6. Concrete Placement	ACI-CCI ICC-RCSI	Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.	Applicable ACI Specs	Periodic	SUGGESTED
7. Sampling and Testing of Concrete	ACI-CFTT ACI-LTT ACI-STT	Test Concrete compressive strength, slump, air content and temperature	Applicable ACI and ASTM Specs	Not less than once a day, nor less than once for every 150 cubic yard, nor less than once for every 5000 SF of surface area for slabs or walls	YES
8. Curing and Protection	ACI-CCI ICC-RCSI	Inspect curing, cold weather protection and hot weather protection procedures	Applicable ACI Specs	Monitor on site after each casting	SUGGESTED
9. Post-Installed Anchors	ACI-CCI ICC-RCSI	Inspect installation for type of anchor, embedment, edge distances & adhesive required	ACI & Supplier's Specs	Continuous	YES
Exceptions per IBC 1705.3: Special Inspections are not required for the following unless otherwise required by the Building Official or Structural Engineer of the Record.					
1. Nonstructural concrete slabs supported directly on the ground.					
2. Concrete patios, driveways and sidewalks, on grade.					

SPECIAL INSPECTIONS – MASONRY LEVEL 1 INSPECTION

VERIFICATION AND INSPECTION	AGENCY QUALIFICATION	SCOPE/NOTES	REFERENCED STANDARD	FREQUENCY OF INSPECTION	REQUIRED ON PROJECT
1. Material Certification	STRUCTURAL ENGINEER OF RECORD	All CMU, mortar mixes & grout mixes to be submitted to Structural Engineer for approval prior to construction	ACI 530	Prior to Construction	YES
2. As masonry construction begins, these items to be verified to ensure compliance:					
2a. Proportions of site-prepared mortar	ICC-SMSI	–	ACI 530	Periodic	YES
2b. Construction of mortar joints	ICC-SMSI	–	ACI 530	Periodic	YES
2c. Location of reinforcement, connectors and anchorages.	ICC-SMSI	–	ACI 530	Periodic	YES
3. The inspection program shall verify:					
3a. Size and location of structural elements	ICC-SMSI	–	ACI 530	Periodic	YES
3b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction	ICC-SMSI	–	ACI 530	Periodic	YES
3c. Specified size, grade and type of reinforcement	ICC-SMSI	–	ACI 530	Periodic	YES
3d. Welding of reinforcement bars	ICC-SMSI	–	ACI 530	Continuous	YES
3e. Protection of masonry during cold weather and hot weather conditions	ICC-SMSI	–	ACI 530	Periodic	YES
4. Prior to grouting, the following shall be verified to ensure compliance:					
4a. Grout space is clean	ICC-SMSI	–	ACI 530	Periodic	YES
4b. Placement of reinforcement, connectors and anchorages	ICC-SMSI	–	ACI 530	Periodic	YES
4c. Proportions of site-prepared grout	ICC-SMSI	–	ACI 530	Periodic	YES
4d. Construction of mortar joints	ICC-SMSI	–	ACI 530	Periodic	YES
5. Grout placement shall be verified to ensure compliance with code and construction documents	ICC-SMSI	–	ACI 530	Continuous	YES
6. Preparation of any required grout specimens and/or prisms shall be observed	ICC-SMSI	–	ACI 530	Continuous	YES
7. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified	–	–	–	Periodic	YES
8. Evaluation of Masonry Strength	ICC-SMSI	Test compressive strength of mortar and grout cube samples. Test compressive strength of masonry prisms	ACI 530 and applicable ASTM Standards	Periodic	YES

SPECIAL INSPECTIONS – PRECAST CONCRETE

VERIFICATION AND INSPECTION	AGENCY QUALIFICATION	SCOPE	REFERENCED STANDARD	FREQUENCY OF INSPECTION	REQUIRED ON PROJECT
1. Supplier's Plant Certification/Quality Control Procedures	Per PCI requirements	Precast supplier to perform all work per PCI requirements. Maintain plant records and quality control program during production of precast components. All components of precast production to be tested per PCI requirements. Make records available upon request	Applicable PCI & ACI Specs	Per PCI requirements	YES
2. Erection of Precast Elements	ICC-SSSI	Inspect erection of precast concrete including member configuration, connections, welding and grouting	Applicable PCI & ACI Specs	Periodic	YES

SPECIAL INSPECTIONS – WOOD CONSTRUCTION

VERIFICATION AND INSPECTION	AGENCY QUALIFICATION	SCOPE	REFERENCED STANDARD	FREQUENCY OF INSPECTION	REQUIRED ON PROJECT
1. Fabricator Certification/Quality Control Procedures	–	Fabricated to be enrolled in a nationally accepted inspection program acceptable to the Structural drawings and specifications. The approved fabricator to submit a certification of compliance to the building official.		N/A	YES
2. Material Grading		Review sheathing, framing members, wall studs, plates for proper species and grade	Applicable APA & AITC Specs	Prior to Construction & Periodic during construction	SUGGESTED
3. Connections		Inspect connection of framing members. Including nail and bolts for size and spacing. Verify metal hardware connectors for type and proper installation	ANSI/AF&PA & Supplier's Specs	Periodic	SUGGESTED
4. Framing and Details		Inspect framing for plumbness, spacing, bearing length, and size. Verify bracing is installed as required.	ANSI/AF&PA	Periodic	SUGGESTED
5. Diaphragms and Shearwalls		Inspect size, configuration, blocking and fastening of shearwalls and diaphragms. Verify panel grade and thickness. Verify size and installation of hold-downs and straps.	ANSI/AF&PA & Supplier's Specs	Periodic	SUGGESTED
6. Prefabricated Wood Trusses & I-Joists		See Item #1. Inspect installation for location, spacing, bearing length, connectors, and permanent bracing.	ANSI/AF&PA & Supplier's Specs	Periodic	SUGGESTED

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Drawn by: JH
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#	DATE	COMMENTS

Progress Set
4/23/18

BUILDING #1 FOR
THE VILLIAGE AT
TOWN CENTER
ST. MICHAEL, MN.

SHEET CONTENTS:
SPECIAL INSPECTIONS

SHEET NO.
S002

Proj. #18124-3

FOUNDATION PLAN NOTES:

1. SEE DETAIL 1/S301 FOR GENERAL FOUNDATION DETAILS. SEE SHEET S001 FOR GENERAL CONCRETE AND FOUNDATION NOTES.
2. SEE DETAIL 14/S301 FOR STANDARD CMU DETAILS. SEE SHEET S001 FOR GENERAL MASONRY NOTES.
3. TYPICAL INTERIOR SLAB ON GRADE, U.N.O.
   THICKNESS = 4"
   REINFORCEMENT = FIBERMESH
   BASE = MIN OF 6" COMPACTED GRANULAR FILL
   VAPOR RETARDER/BARRIER = 10 MIL POLY
   T.O. SLAB ELEVATION = 88'-11"
4. TYPICAL SLAB ON GRADE CONTROL JOINTS TO BE CUT INTO SQUARES SPACE @ 15'-0" O.C. MAX. WITH AN ASPECT RATIO OF 1:1.5 MAX U.N.O. ON PLAN.
5. (S)— DENOTES FOOTING STEP. S.D. 1/S301.

CONTINUOUS FOOTING SCHEDULE

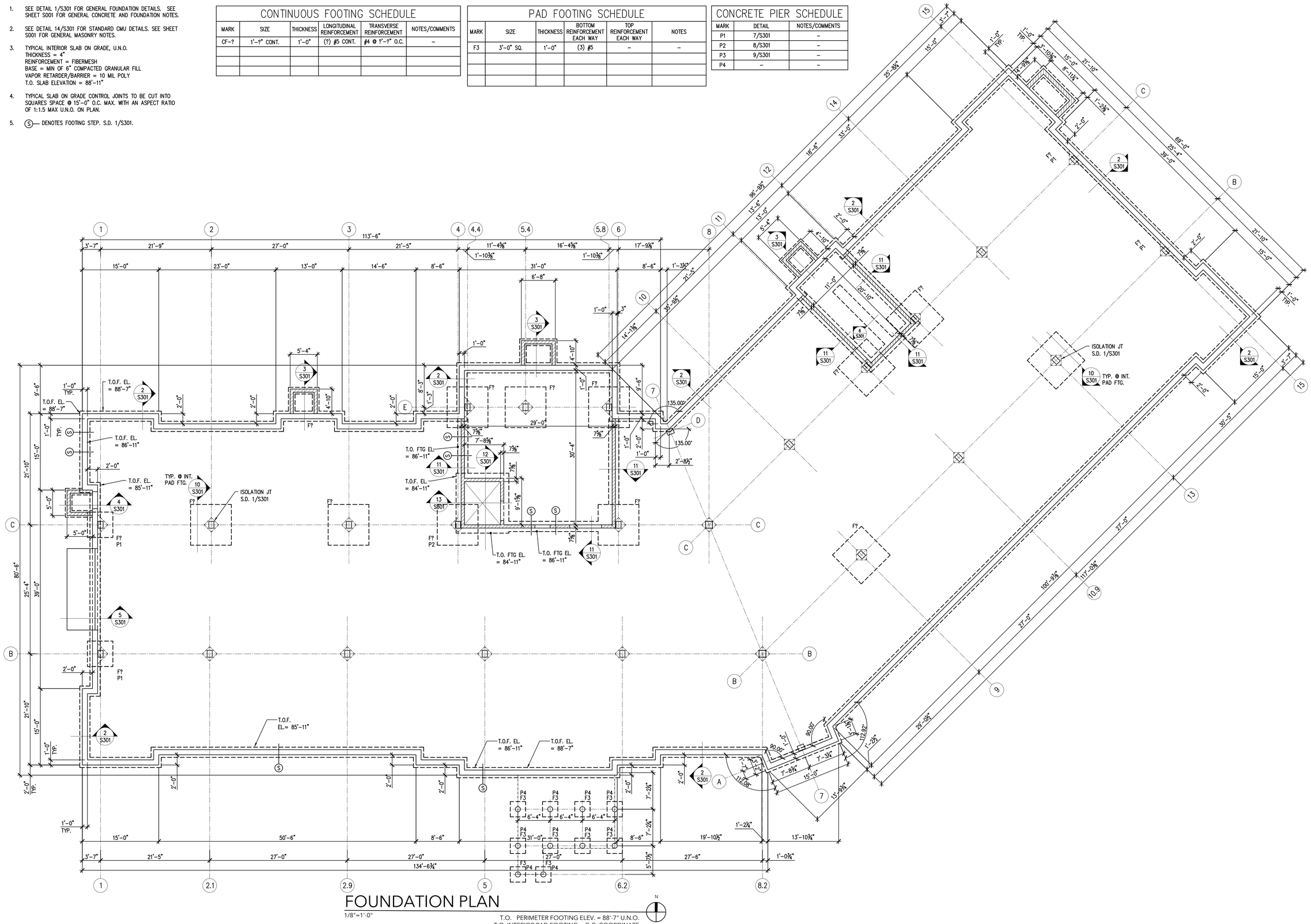
MARK	SIZE	THICKNESS	LONGITUDINAL REINFORCEMENT	TRANSVERSE REINFORCEMENT	NOTES/COMMENTS
CF-?	1'-?" CONT.	1'-0"	(?) #5 CONT.	#4 @ ?'-?" O.C.	–

PAD FOOTING SCHEDULE

MARK	SIZE	THICKNESS	BOTTOM REINFORCEMENT EACH WAY	TOP REINFORCEMENT EACH WAY	NOTES
F3	3'-0" SQ.	1'-0"	(3) #5	–	–

CONCRETE PIER SCHEDULE

MARK	DETAIL	NOTES/COMMENTS
P1	7/S301	–
P2	8/S301	–
P3	9/S301	–
P4	–	–



FOUNDATION PLAN

1/8"=1'-0"

T.O. PERIMETER FOOTING ELEV. = 88'-7" U.N.O.
T.O. INTERIOR PAD FOOTING = G.C. COORDINATE

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SHEET CONTENTS:
FOUNDATION PLAN

SHEET NO.
S101

Proj. #18124-3

FIRST FLOOR FRAMING PLAN NOTES:

1. INTERIOR BRG. & SHEAR WALLS SHALL BE 8" CMU WALLS. REINF. W/#5 VERTS @ 2'-8" O.C. U.N.O.
2. PERIMETER PRECAST WALLS TO BE 7"/3"/2" INSULATED PANELS W/ EXTERIOR FINISH PER ARCH.
3. PRECAST TOPPING TO BE 1" CONCRETE. TOPPING TO BE NON-COMPOSITE FOR PRECAST DESIGN.
4. XX/XX KIP_ DENOTES SHEARWALL LOAD DUE TO WIND AND LATERAL EARTH PRESSURES (EARTH/WIND(ult)), LOADS INDICATED ARE FOR FACTORED.
5. "L1" DENOTES (2) L4x3½x5/16 (LLV) CMU LINTEL. S.D. 14/S401 (8" BRG EACH END)
6. INSULATED AND ARCHITECTURAL SECTION OF PRECAST WALL PANELS MUST BE HELD OUT AT SLAB ON GRADE PATIOS AND BALCONIES. G.C. COORDINATE.
7. SEE SHEET S205 FOR SHEARWALL COMPONENTS EMBEDED IN P/C FOUNDATION WALLS.

KEYNOTES:

1. WALL OPENING - PRECAST SUPPLIER TO COORDINATE SIZE & LOCATION WITH MECH/ARCH.
2. 12" PRECAST BEAM @ OVERHEAD DOOR.
3. 16" LANDING TRUSSES @ 2'-0" TYPICAL - LANDING TO BE FRAMED WITH 2x10 JOISTS @ 1'-4" O.C. AT LOW STAIR LANDING IN BASEMENT. SEE ARCH. FOR 2x BRG. WALLS.
4. PRECAST SUPPLIER TO PROVIDE FRAMED OPENING FOR REFUSE CHUTE
5. S.D. 1/S202 FOR STAIR FRAMING
6. SIMPSON HUC410-3Z FACE MOUNT HANGER. ATTACH DIRECTLY TO GROUTED CMU/H.C.
7. SUSPENDED WOOD BALCONIES. SEE PLAN FOR TYPICAL FRAMING.
8. 2x10 (TREATED) DECK JOISTS @ 1'-4" O.C.
9. 2x10 JOISTS @ 1'-4" O.C.
10. 2x4 STUDS @ 1'-4" O.C.
11. 2x8 (TREATED) JOISTS @ 16" O.C. (TYP)

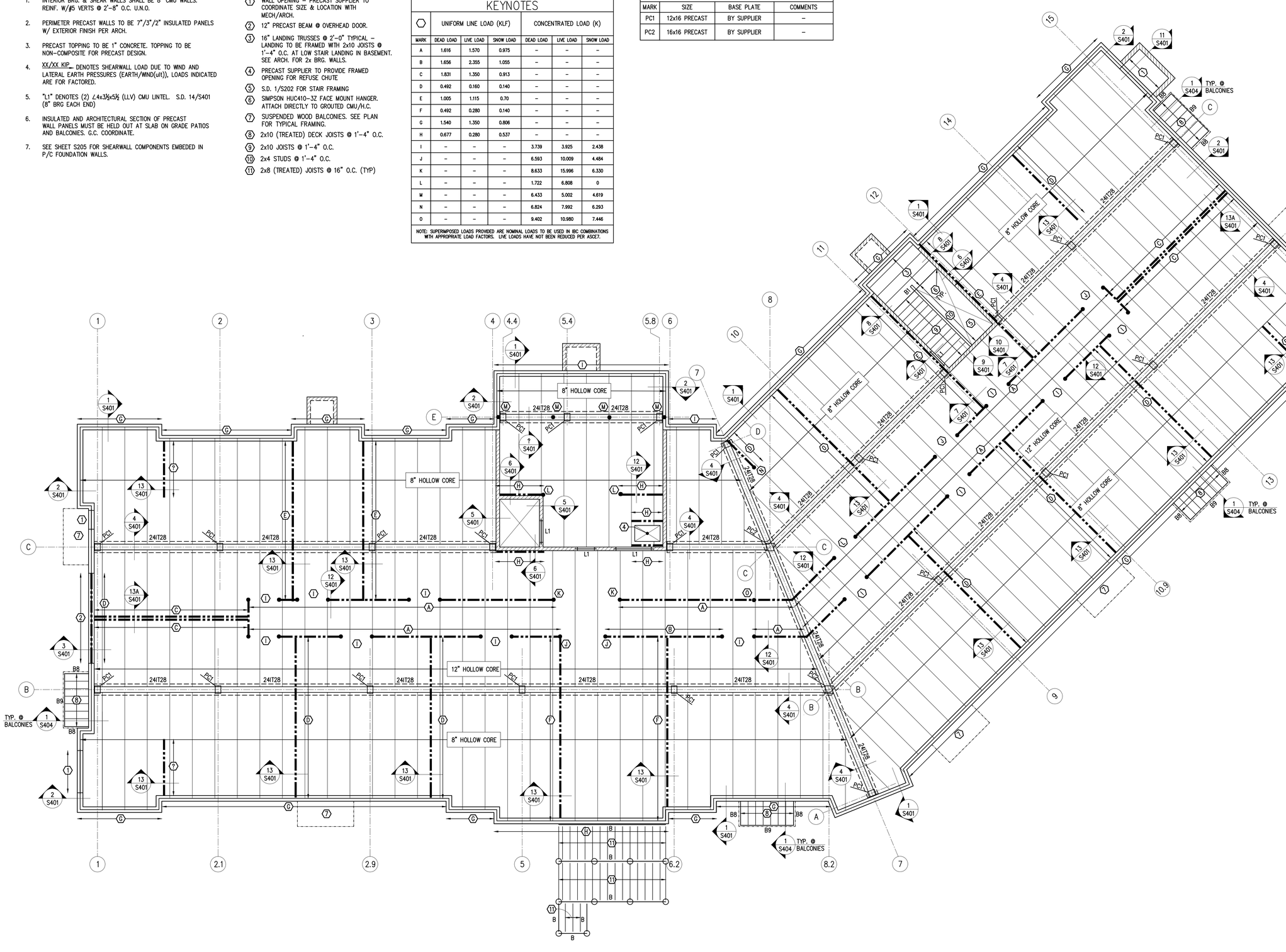
SUPERIMPOSED PRECAST LOADING KEYNOTES

⬡	UNIFORM LINE LOAD (KLF)			CONCENTRATED LOAD (K)		
MARK	DEAD LOAD	LIVE LOAD	SNOW LOAD	DEAD LOAD	LIVE LOAD	SNOW LOAD
A	1.616	1.570	0.975	–	–	–
B	1.656	2.355	1.055	–	–	–
C	1.831	1.350	0.913	–	–	–
D	0.492	0.160	0.140	–	–	–
E	1.005	1.115	0.70	–	–	–
F	0.492	0.280	0.140	–	–	–
G	1.540	1.350	0.806	–	–	–
H	0.677	0.280	0.537	–	–	–
I	–	–	–	3.739	3.925	2.438
J	–	–	–	6.593	10.009	4.484
K	–	–	–	8.633	15.996	6.330
L	–	–	–	1.722	6.808	0
M	–	–	–	6.433	5.002	4.619
N	–	–	–	6.824	7.992	6.293
O	–	–	–	9.402	10.980	7.446

NOTE: SUPERIMPOSED LOADS PROVIDED ARE NOMINAL LOADS TO BE USED IN IBC COMBINATIONS WITH APPROPRIATE LOAD FACTORS. LIVE LOADS HAVE NOT BEEN REDUCED PER ASCE7.

PRECAST COLUMN SCHEDULE

MARK	SIZE	BASE PLATE	COMMENTS
PC1	12x16 PRECAST	BY SUPPLIER	–
PC2	16x16 PRECAST	BY SUPPLIER	–



FIRST FLOOR FRAMING PLAN

1/8"=1'-0"

T.O. TOPPING ELEV. = 100'-0" U.N.O.

N

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SHEET CONTENTS:
FIRST FLOOR FRAMING PLAN

SHEET NO.
S201

Proj. #18124-3

SECOND FLOOR FRAMING PLAN NOTES:

1. SEE SHEET S205 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.
2. S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.

KEYNOTES:

1. 24" FLOOR TRUSSES @ 24" O.C.
2. 24" FLOOR TRUSSES @ 19.2" O.C.
3. 2x10 JOISTS @ 2'-0" O.C.
4. SEE DETAIL 1/S202 FOR STAIR FRAMING
5. SUSPENDED WOOD BALCONIES. SEE PLAN FOR TYPICAL FRAMING.
6. REFUSE CHASE
7. ROOF TRUSSES @ 2'-0" O.C. W/ SL=??? PSF (INCLUDES DRIFT.)
8. 2x10 (TREATED) JOISTS @ 1'-4" O.C.
9. SIMPSON TJC57 CONNECTOR @ SKEWED JOISTS
10. (2) 2x4 STUDS @ 1'-4" O.C., SPF #2 GRADE

WOOD HEADER SCHEDULE

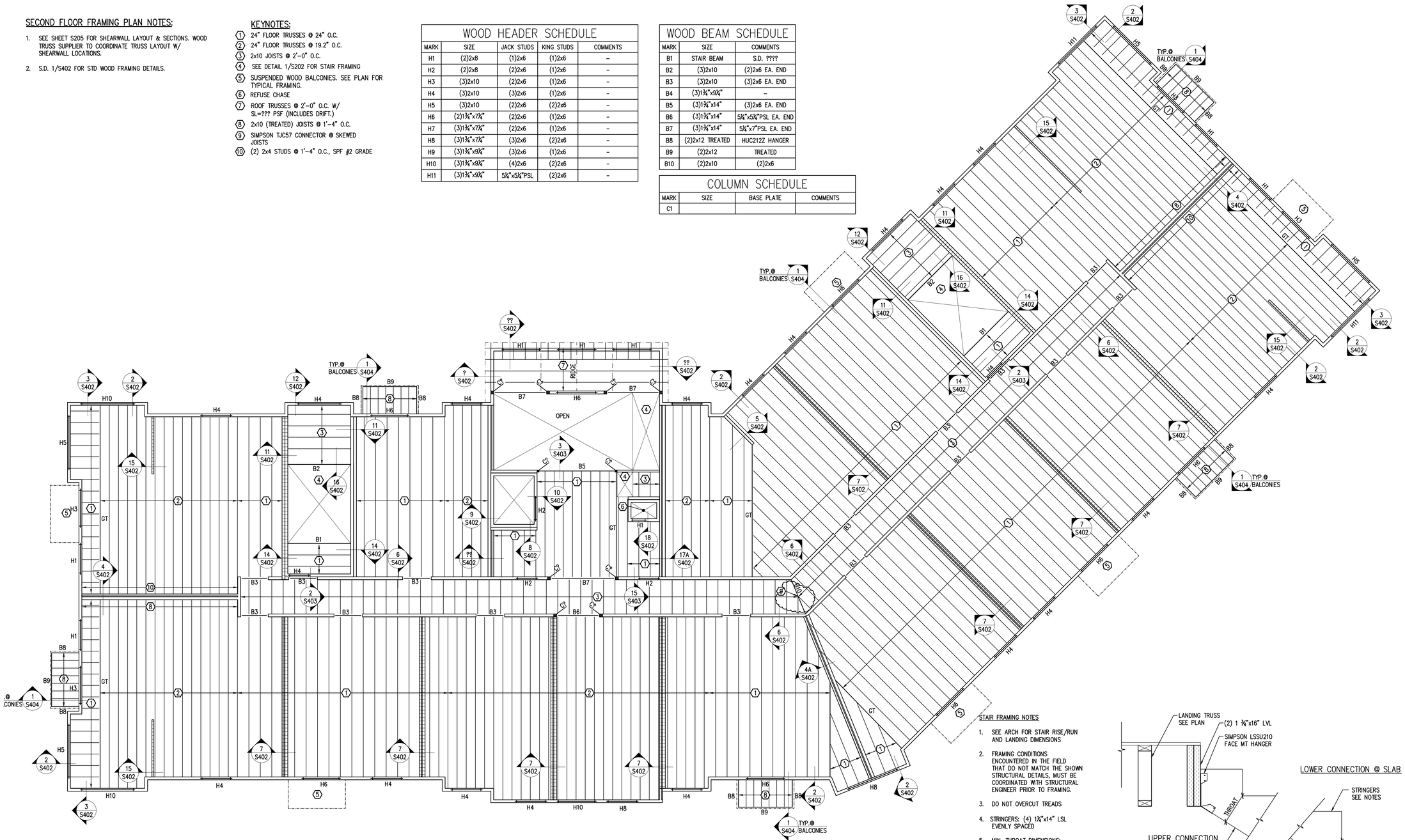
MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	–
H2	(2)2x8	(2)2x6	(1)2x6	–
H3	(3)2x10	(2)2x6	(1)2x6	–
H4	(3)2x10	(3)2x6	(1)2x6	–
H5	(3)2x10	(2)2x6	(2)2x6	–
H6	(2)1¾"x7¼"	(2)2x6	(1)2x6	–
H7	(3)1¾"x7¼"	(2)2x6	(1)2x6	–
H8	(3)1¾"x7¼"	(3)2x6	(2)2x6	–
H9	(3)1¾"x9¼"	(3)2x6	(1)2x6	–
H10	(3)1¾"x9¼"	(4)2x6	(2)2x6	–
H11	(3)1¾"x9¼"	5¼"x5¼"PSL	(2)2x6	–

WOOD BEAM SCHEDULE

MARK	SIZE	COMMENTS
B1	STAIR BEAM	S.D. ????
B2	(3)2x10	(2)2x6 EA. END
B3	(3)2x10	(3)2x6 EA. END
B4	(3)1¾"x9¼"	–
B5	(3)1¾"x14"	(3)2x6 EA. END
B6	(3)1¾"x14"	5¼"x5¼"PSL EA. END
B7	(3)1¾"x14"	5¼"x7"PSL EA. END
B8	(2)2x12 TREATED	HUC212Z HANGER
B9	(2)2x12	TREATED
B10	(2)2x10	(2)2x6

COLUMN SCHEDULE

MARK	SIZE	BASE PLATE	COMMENTS
C1			



SECOND FLOOR FRAMING PLAN

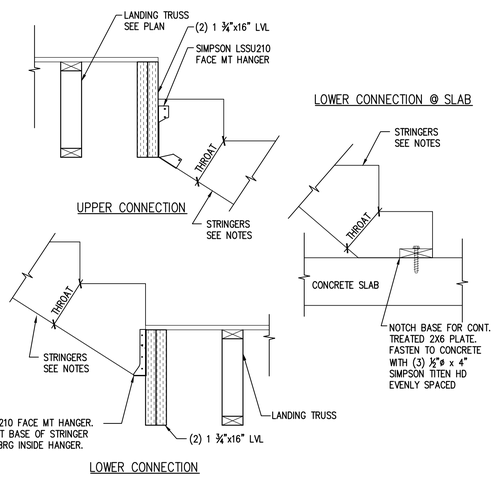
1/8"=1'-0"

FLOOR TRUSS BRG. ELEV. = 109'-1 1/8"

N

STAIR FRAMING NOTES

1. SEE ARCH FOR STAIR RISE/RUN AND LANDING DIMENSIONS
2. FRAMING CONDITIONS ENCOUNTERED IN THE FIELD THAT DO NOT MATCH THE SHOWN STRUCTURAL DETAILS, MUST BE COORDINATED WITH STRUCTURAL ENGINEER PRIOR TO FRAMING.
3. DO NOT OVERCUT TREADS
4. STRINGERS: (4) 1¾"x14" LSL EVENLY SPACED
5. MIN. THROAT DIMENSIONS:
   14" MEMBER = 8"
   16" MEMBER = 10"
   18" MEMBER = 12"
6. PROVIDE 2x4 BRG. WALL W/ BEVELED TOP PLATE @ MID-SPAN OF 1ST LEVEL STRAIGHT RUN STAIRS.
7. CONNECT HEADER BEAM TO SHAFT WALL WITH USP FWH SERIES OR SIMPSON DGH SERIES. PROVIDE (3) 2x STUD PACK COLUMN IN WALL @ BEAM BEARING. HEADER TO BE SUPPORTED MID-SPAN WITH (3) 2x STUD PACK IN DIVIDER WALL



STAIR FRAMING DETAILS

1"=1'-0"

1 / S202

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Drawn by: JH
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BUILDING #1 FOR
THE VILLIAGE AT TOWN CENTER
ST. MICHAEL, MN.

SHEET CONTENTS:
SECOND FLOOR FRAMING PLAN

SHEET NO.
S202

Proj. #18124-3

THIRD FLOOR FRAMING PLAN NOTES:

1. SEE SHEET S205 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.
2. S.D. 1/S402 FOR STD WOOD FRAMING DETAILS

KEYNOTES:

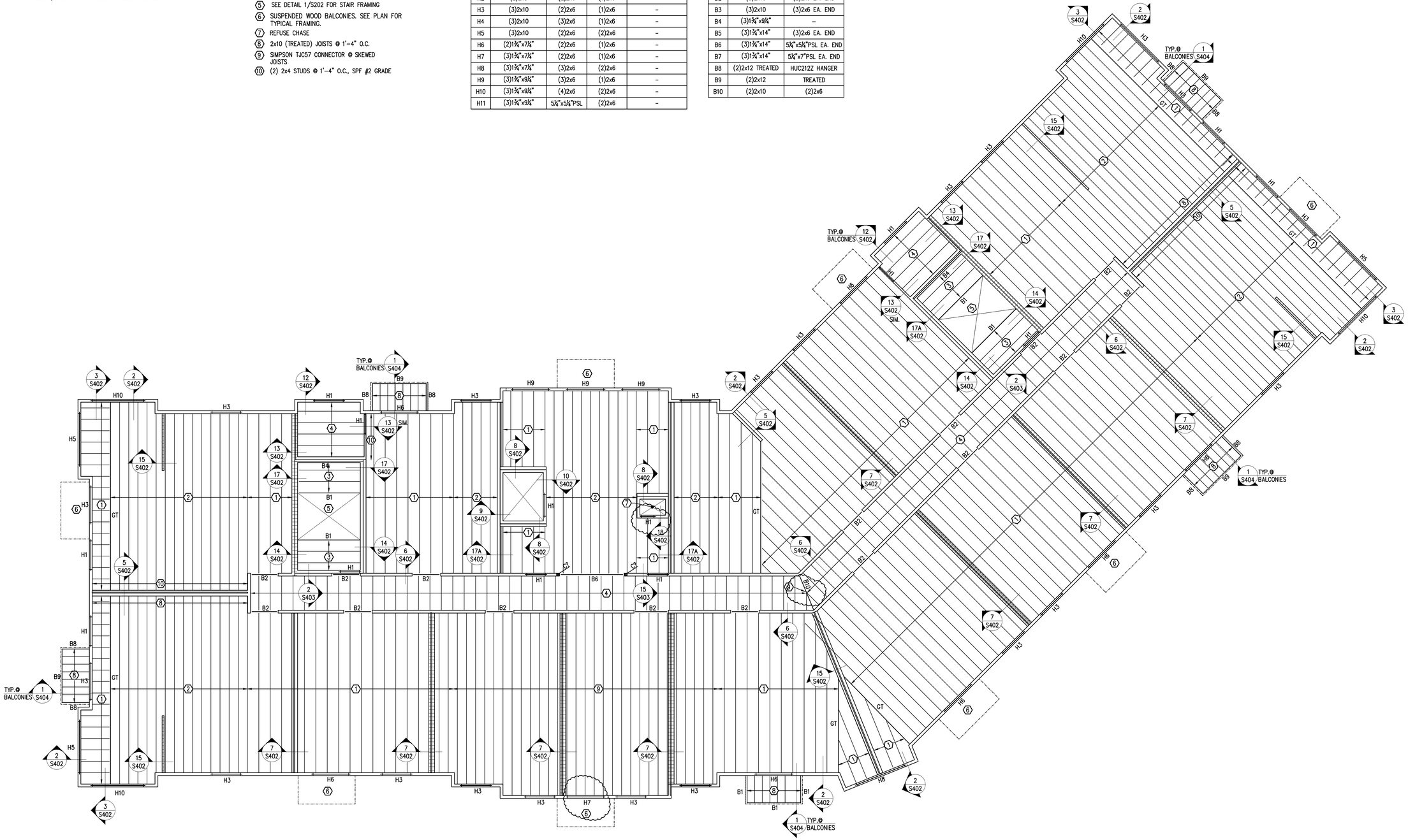
1. 24" FLOOR TRUSSES @ 24" O.C.
2. 24" FLOOR TRUSSES @ 19.2" O.C.
3. 24" LANDING TRUSSES @ 2'-0" O.C.
4. 2x10 JOISTS @ 24" O.C.
5. SEE DETAIL 1/S202 FOR STAIR FRAMING
6. SUSPENDED WOOD BALCONIES. SEE PLAN FOR TYPICAL FRAMING.
7. REFUSE CHASE
8. 2x10 (TREATED) JOISTS @ 1'-4" O.C.
9. SIMPSON TJC57 CONNECTOR @ SKEWED JOISTS
10. (2) 2x4 STUDS @ 1'-4" O.C., SPF #2 GRADE

WOOD HEADER SCHEDULE

MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	–
H2	(2)2x8	(2)2x6	(1)2x6	–
H3	(3)2x10	(2)2x6	(1)2x6	–
H4	(3)2x10	(3)2x6	(1)2x6	–
H5	(3)2x10	(2)2x6	(2)2x6	–
H6	(2)1¾"x7¼"	(2)2x6	(1)2x6	–
H7	(3)1¾"x7¼"	(2)2x6	(1)2x6	–
H8	(3)1¾"x7¼"	(3)2x6	(2)2x6	–
H9	(3)1¾"x9¼"	(3)2x6	(1)2x6	–
H10	(3)1¾"x9¼"	(4)2x6	(2)2x6	–
H11	(3)1¾"x9¼"	5¼"x5¼"PSL	(2)2x6	–

WOOD BEAM SCHEDULE

MARK	SIZE	COMMENTS
B1	STAIR BEAM	S.D. ????
B2	(3)2x10	(2)2x6 EA. END
B3	(3)2x10	(3)2x6 EA. END
B4	(3)1¾"x9¼"	–
B5	(3)1¾"x14"	(3)2x6 EA. END
B6	(3)1¾"x14"	5¼"x5¼"PSL EA. END
B7	(3)1¾"x14"	5¼"x7"PSL EA. END
B8	(2)2x12 TREATED	HUC212Z HANGER
B9	(2)2x12	TREATED
B10	(2)2x10	(2)2x6



THIRD FLOOR FRAMING PLAN

1/8"=1'-0"

FLOOR TRUSS BRG. ELEV. = 120'-3"

N

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BUILDING #1 FOR
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SHEET CONTENTS:
SECOND FLOOR FRAMING PLAN

SHEET NO.
S203

Proj. #18124-3

ROOF FRAMING PLAN NOTES:

1. SEE SHEET S205 FOR SHEARWALL LAYOUT & SECTIONS. WOOD TRUSS SUPPLIER TO COORDINATE TRUSS LAYOUT W/ SHEARWALL LOCATIONS.
2. S.D. 1/S402 FOR STD WOOD FRAMING DETAILS.

KEYNOTES:

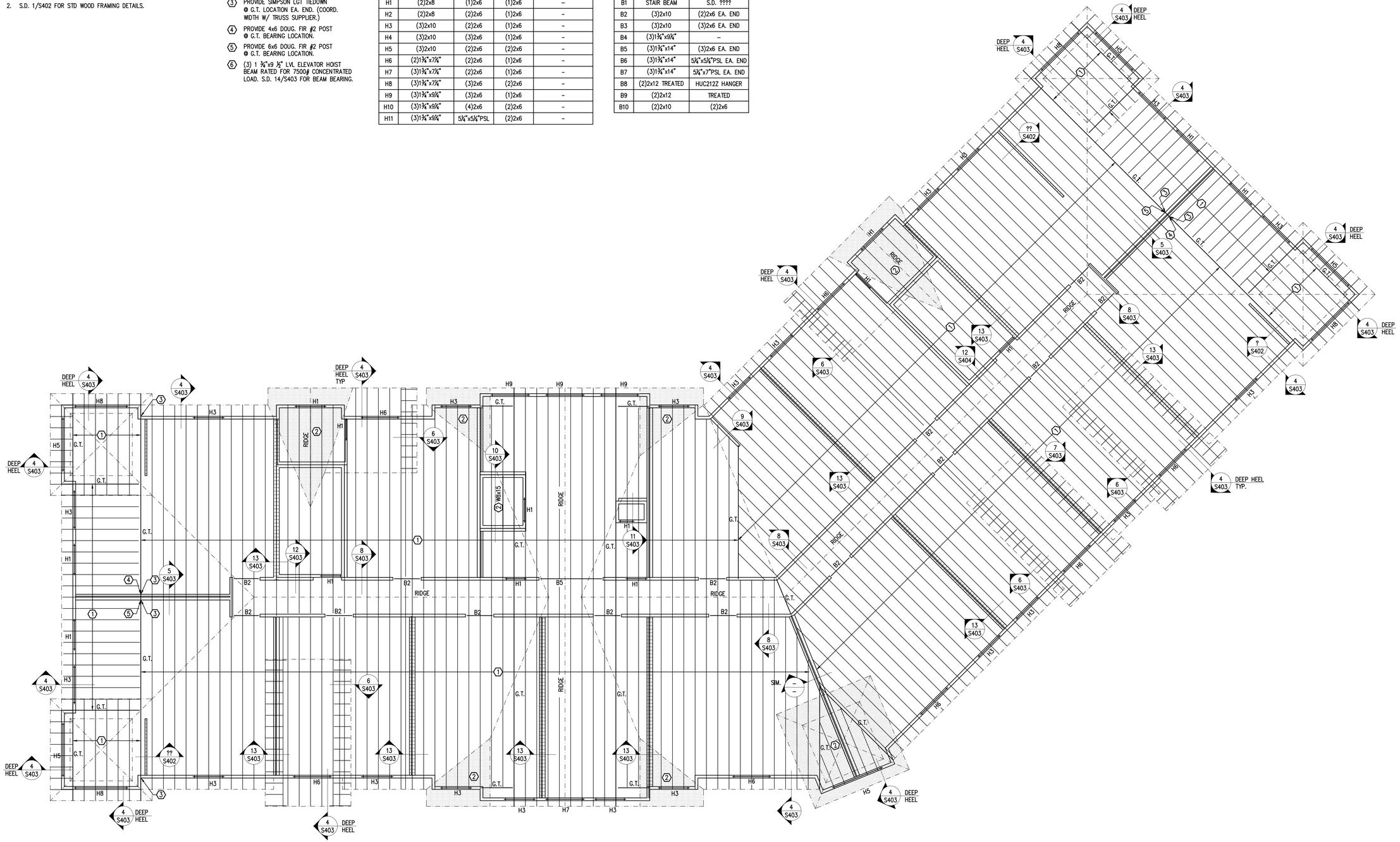
1. ROOF TRUSSES @ 24" O.C.
2. OVERBUILD TRUSSES @ 24" O.C.
3. PROVIDE SIMPSON LGT TIEDOWN @ G.T. LOCATION EA. END. (COORD. WIDTH W/ TRUSS SUPPLIER.)
4. PROVIDE 4x6 DOUG. FIR #2 POST @ G.T. BEARING LOCATION.
5. PROVIDE 6x6 DOUG. FIR #2 POST @ G.T. BEARING LOCATION.
6. (3) 1 ¾"x9 ½" LVL ELEVATOR HOIST BEAM RATED FOR 7500# CONCENTRATED LOAD. S.D. 14/S403 FOR BEAM BEARING.

WOOD HEADER SCHEDULE

MARK	SIZE	JACK STUDS	KING STUDS	COMMENTS
H1	(2)2x8	(1)2x6	(1)2x6	–
H2	(2)2x8	(2)2x6	(1)2x6	–
H3	(3)2x10	(2)2x6	(1)2x6	–
H4	(3)2x10	(3)2x6	(1)2x6	–
H5	(3)2x10	(2)2x6	(2)2x6	–
H6	(2)1¾"x7¼"	(2)2x6	(1)2x6	–
H7	(3)1¾"x7¼"	(2)2x6	(1)2x6	–
H8	(3)1¾"x7¼"	(3)2x6	(2)2x6	–
H9	(3)1¾"x9¼"	(3)2x6	(1)2x6	–
H10	(3)1¾"x9¼"	(4)2x6	(2)2x6	–
H11	(3)1¾"x9¼"	5¼"x5¼"PSL	(2)2x6	–

WOOD BEAM SCHEDULE

MARK	SIZE	COMMENTS
B1	STAIR BEAM	S.D. ????
B2	(3)2x10	(2)2x6 EA. END
B3	(3)2x10	(3)2x6 EA. END
B4	(3)1¾"x9¼"	–
B5	(3)1¾"x14"	(3)2x6 EA. END
B6	(3)1¾"x14"	5¼"x5¼"PSL EA. END
B7	(3)1¾"x14"	5¼"x7"PSL EA. END
B8	(2)2x12 TREATED	HUC212Z HANGER
B9	(2)2x12	TREATED
B10	(2)2x10	(2)2x6



ROOF FRAMING PLAN

1/8"=1'-0"

TRUSS BRG. ELEV. = 130'-4 7/8"

N

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BUILDING #1 FOR
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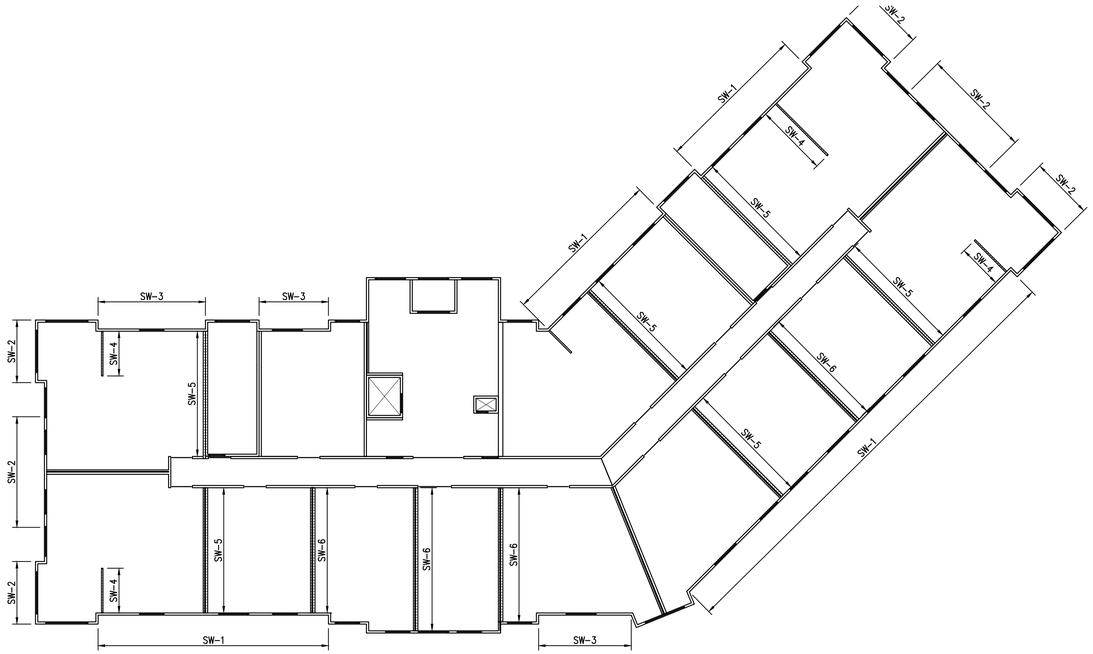
SHEET CONTENTS:
ROOF
FRAMING PLAN

SHEET NO.

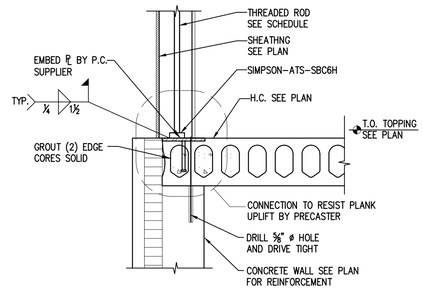
S204

Proj. #18124-3



SHEARWALL PLAN

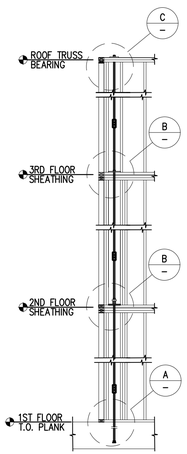
NOT TO SCALE



FRAMING DETAIL

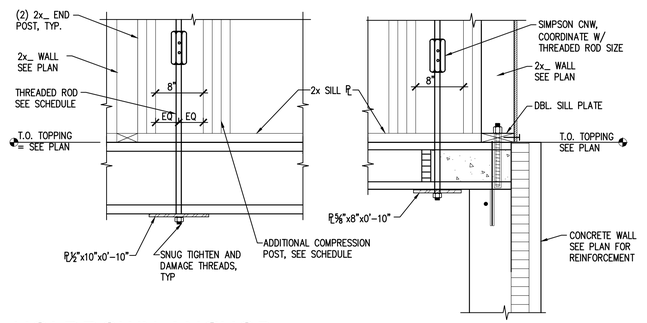
1" = 1'-0"

2 S205



STRONG- ROD ATS

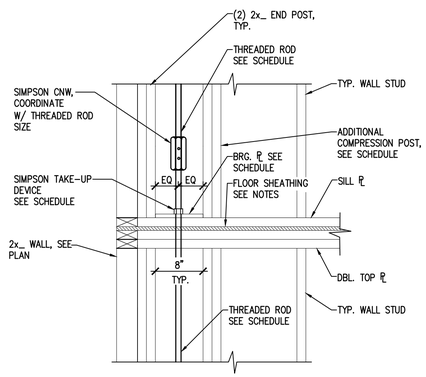
1/4"=1'-0"



HOLDDOWN ANCHOR

NO SCALE

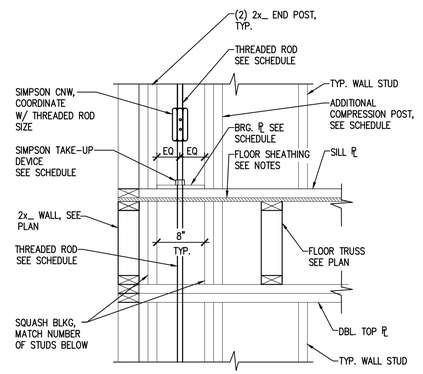
A –

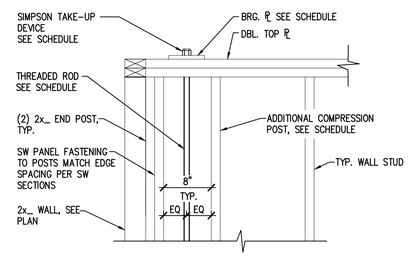


TIE DOWN @ FLOOR LEVEL

1" = 1'-0"

B –





TIE DOWN @ ROOF LEVEL

1" = 1'-0"

C –

1 S205

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BUILDING #1 FOR
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TOWN CENTER
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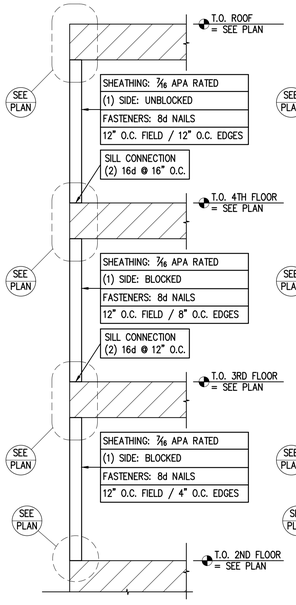
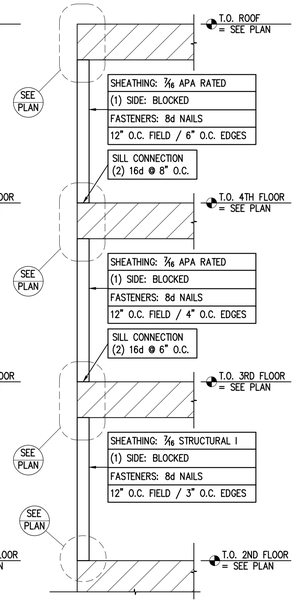
SHEET CONTENTS:
SHEARWALL PLAN

SHEET NO.
S205

Proj. #18124-3



SW SECTION (SW-1) 1 S206
NO SCALE



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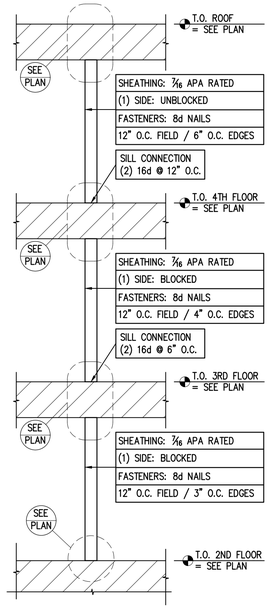
NO SCALE



SW SECTION (SW-3) 3 S206
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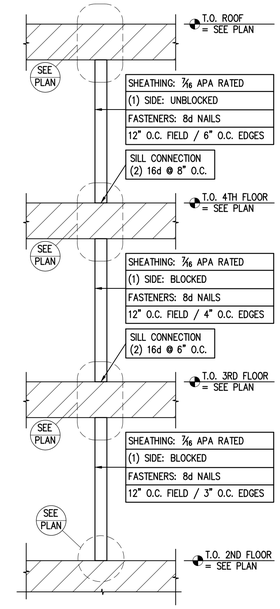
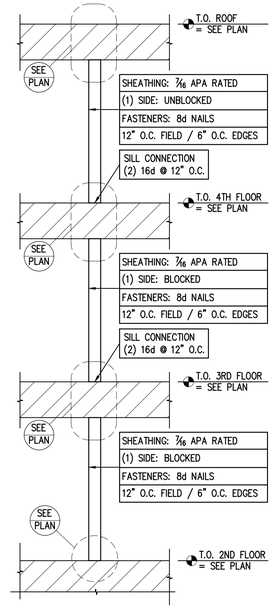
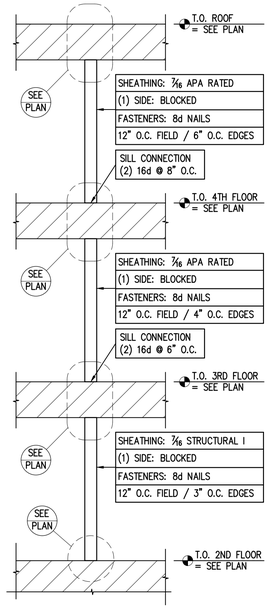


SW SECTION (SW-4) 4 S206
NO SCALE



SW SECTION (SW-5) 5 S206
NO SCALE



SW SECTION (SW-6) 6 S206
NO SCALE

SHEAR WALL SCHEDULE

	3RD LEVEL				2ND LEVEL				1ST LEVEL						ULTIMATE WIND LOAD TO PODIUM		RESISTING DL
LABEL	TENSION ROD	T.O. WALL TAKE-UP DEVICE	T.O. WALL BEARING PLATE	END POST/ COMP POST	TENSION ROD	T.O. WALL TAKE-UP DEVICE	T.O. WALL BEARING PLATE	END POST/ COMP POST	TENSION ROD	T.O. WALL TAKE-UP DEVICE	T.O. WALL BEARING PLATE	END POST/ COMP POST	BASE TENSION ROD ANCHOR	SILL ₵ FASTENING @ BASE LEVEL	BASE LEVEL SHEAR TO PODIUM	SW END VERTICAL FORCE.	SW END VERTICAL FORCE
SW-1	N/A	N/A	N/A	(2)2x6	N/A	N/A	N/A	(2)2x6	N/A	N/A	N/A	(2)2x6	N/A	½"ø x5" SIMPSON TITEN HD ANCHORS @ 2'-8" O.C.	+/- 24.3 KIP	N/A	+/-14.1 KIP
SW-2	½"ø THREADED ROD	SIMPSON RTUD4	SIMPSON BPRTUD3-4	(2) 2x6/ (1) 2x6	⅝"ø THREADED ROD	SIMPSON RTUD5	SIMPSON BPRTUD5-6A	(2) 2x6/ (1) 2x6	¾"ø THREADED ROD H.S.	SIMPSON RTUD6	SIMPSON BPRTUD5-6C	(2) 2x6/ (2) 2x6	?"ø THREADED ROD, S.D. 2/S205	½"ø x5" SIMPSON TITEN HD ANCHORS @ 1'-6" O.C.	+/- 16.5 KIP	+/- 24.4 KIP	+/- 0.9 KIP
SW-3	½"ø THREADED ROD	SIMPSON RTUD4	SIMPSON BPRTUD3-4	(2) 2x6/ (1) 2x6	½"ø THREADED ROD	SIMPSON RTUD4	SIMPSON BPRTUD3-4	(2) 2x6/ (1) 2x6	¾"ø THREADED ROD	SIMPSON RTUD6	SIMPSON BPRTUD5-6A	(2) 2x6/ (2) 2x6	?"ø THREADED ROD, S.D. 2/S205	½"ø x5" SIMPSON TITEN HD ANCHORS @ 1'-8" O.C.	+/- 14.0 KIP	+/- 20.4 KIP	+/- 6.6 KIP
SW-4	½"ø THREADED ROD	SIMPSON RTUD4	SIMPSON BPRTUD3-4	(2) 2x4/ (1) 2x4	⅝"ø THREADED ROD	SIMPSON RTUD5	SIMPSON BPRTUD5-6A	(2) 2x4/ (2) 2x4	⅞"ø THREADED ROD H.S.	SIMPSON RTUD5	SIMPSON BPRTUD5-6B	(2) 2x4/ (2) 2x4	?"ø THREADED ROD, S.D. 1/S205	½"ø x5" SIMPSON TITEN HD ANCHORS @ 1'-8" O.C.	+/- 9.1 KIP	+/- 21.3 KIP	+/- 2.2 KIP
SW-5	N/A	N/A	N/A	(2)2x6	½"ø THREADED ROD	SIMPSON RTUD4	SIMPSON BPRTUD3-4	(2) 2x6/ (1) 2x6	2"ø THREADED ROD	SIMPSON RTUD4	SIMPSON BPRTUD3-4	(2) 2x6/ (1) 2x6	?"ø THREADED ROD, S.D. 1/S205	½"ø x5" SIMPSON TITEN HD ANCHORS @ 3'-4" O.C.	+/- 14.8 KIP	+/- 11.7 KIP	+/- 6.0 KIP
SW-6	½"ø THREADED ROD	SIMPSON RTUD4	SIMPSON BPRTUD3-4	(2) 2x6/ (1) 2x6	⅝"ø THREADED ROD	SIMPSON RTUD5	SIMPSON BPRTUD5-6A	(2) 2x6/ (1) 2x6	⅞"ø THREADED ROD H.S.	SIMPSON RTUD5	SIMPSON BPRTUD5-6B	(2) 2x6/ (2) 2x6	?"ø THREADED ROD, S.D. 1/S205	½"ø x5" SIMPSON TITEN HD ANCHORS @ 1'-8" O.C.	+/- 27.0 KIP	+/- 22.3 KIP	+/- 6.0 KIP

SHEARWALL NOTES:

1. SEE GENERAL NOTES FOR TYPICAL SHEATHING REQUIREMENTS. NOT SHOWN ON WALL SECTIONS.
2. SEE S001 GENERAL NOTES FOR ADHESIVE REQUIREMENTS.
3. INTERIOR CORRIDOR BEARING WALL SILL PLATE FASTENING TO BE ½"ø x5" SIMPSON TITEN HD ANCHORS @ 4'-0" O.C. U.N.O. IN SHEAR WALL SCHEDULE.
4. EXTERIOR BEARING WALL SILL PLATE FASTENING TO BE ½"ø x5" SIMPSON TITEN HD ANCHORS @ 4'-0" O.C. U.N.O. IN SHEAR WALL SCHEDULE.
5. PROVIDE SIMPSON BPS½-3HDG SILL ANCHOR WASHERS AT ALL SHEAR WALLS.
6. MAXIMUM WALL STUD SPACING TO BE 16" O.C FOR ALL SHEAR WALLS, U.N.O.
7. SHEAR WALL TENSION RODS TO HAVE Fu=58 KSI, U.N.O.
8. TENSION RODS TO BE HIGH STRENGTH MATERIAL, Fu = 120 KSI MIN. WHEN DENOTED "H.S."
9. OVERSIZE TENSION ROD HOLES IN WOOD PLATES TO COMPLY WITH SIMPSON SPECIFICATIONS
10. NOMINAL LOADS PROVIDED IN SHEARWALL SCHEDULE ARE TO BE USED IN IBC 2015 LOADS COMBINATIONS WITH APPROPRIATE LOAD FACTORS

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BUILDING #1 FOR
THE VILLIAGE AT TOWN CENTER
ST. MICHAEL, MN.

SHEET CONTENTS:
SHEARWALL DETAILS

SHEET NO.
S206

Proj. #18124-3

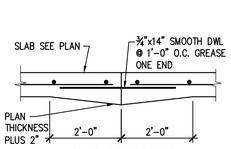
REINFORCING STEEL SPLICE LENGTHS FOR STANDARD NON-COATED BARS							
CONCRETE STRENGTH F'c	TYPE #1 SPLICE CLASS A SPLICE		TYPE #2 SPLICE CLASS B SPLICE		TYPE #3 SPLICE CLASS B SPLICE		TYPE #4 SPLICE COMPRESSION SPLICE
	#6 AND SMALLER	#7 AND LARGER	#6 AND SMALLER	#7 AND LARGER	#6 AND SMALLER	#7 AND LARGER	#4 AND LARGER
3000 psi	44 Bd	55 Bd	57 Bd	71 Bd	85 Bd	107 Bd	30 Bd
4000 psi	38 Bd	47 Bd	49 Bd	62 BD	74 Bd	92 Bd	30 Bd

Bd = BAR DIAMETER

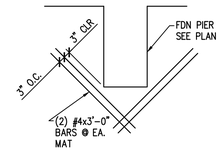
REBAR CLEAR COVER SCHEDULE	
CONCRETE REINFORCEMENT CLEAR COVER, U.N.O. (NON-PRESTRESSED)	
CONDITION & DESIGNATION	CLEAR COVER
CONCRETE CAST AGAINST & PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER: #6 THRU #18	2"
CONCRETE EXPOSED TO EARTH OR WEATHER: #5 OR SMALLER	1½"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH	
SLABS, WALLS, JOISTS: #14 & #18	1½"
SLABS, WALLS, JOISTS: #11 & SMALLER	¾"
BEAMS, COLUMNS (PRIMARY REINF, TIES, STIRRUPS, SPIRALS)	1½"

NOTES:

1. MIN. LAP: 18" FOR TYPE #1 THRU TYPE #3 & 12" FOR TYPE #4 SPLICES.
2. REQ'D. SPLICE LENGTH = LISTED SPLICE LENGTH X ADJUSTMENT FACTORS
   ADJUSTMENT FACTORS = 1.0 IF NONE BELOW APPLY
   A. FOR HORIZ. REINFORCING W/ MORE THAN 12" OF FRESH CONCRETE PLACED BELOW BAR – ADJUSTMENT FACTOR = 1.3
   B. FOR Fy OTHER THAN 60 KSI – ADJUSTMENT FACTOR = Fy (USED)/ 60
   C. FOR LIGHT WEIGHT CONCRETE – ADJUSTMENT FACTOR = 1.3
   D. TYPICAL EPOXY COATED REINFORCING – ADJUSTMENT FACTOR = 1.2
   E. EPOXY COATED REINFORCING W/ COVER LESS THAN Bd OR CLEAR SPACING LESS THAN 6 Bd – ADJUSTMENT FACTOR = 1.5
3. ALL ADJUSTMENT FACTORS THAT APPLY SHALL BE USED TO CALCULATE REQ'D SPLICE LENGTH.
4. UNLESS OTHERWISE NOTED ON PLAN OR DETAILS, LAP THE FOLLOWING BARS AS DEFINED IN LAP SPLICE TABLE ABOVE.
   A. VERTICAL HOOKED OR STRAIGHT BARS EXTENDING FROM FOOTINGS: TYPE #4 SPLICE
   B. HORIZONTAL BARS IN GRADE BEAMS, FOOTINGS, & FOUNDATION WALLS: TYPE #2 SPLICE
   C. VERTICAL BARS IN COLUMNS & PIERS: TYPE #4 SPLICE
   D. VERTICAL BARS IN BASEMENT & RETAINING WALLS: TYPE #3 SPLICE
   E. U.N.O ON PLAN OR DETAILS, LAP THE SLAB BARS WITH A LAP LENGTH OF 48 Bd.

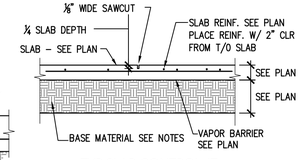


SLAB CONSTR. JT.

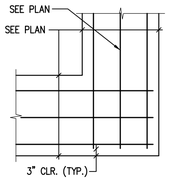


ALT SUPPLIMENTAL REINF

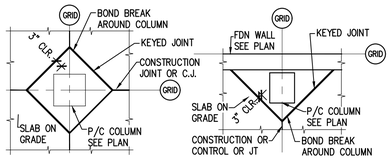
NOTES:
1. SAWCUT JT SHALL BE EXECUTED AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT AGGREGATE FROM DISLODGING BY SAW AND PRIOR TO SHRINKAGE STRESS CRACKING



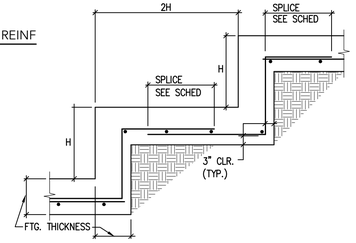
TYP SLAB CONTROL JT



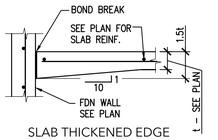
FOOTING CORNER



COLUMN ISOLATION JOINT



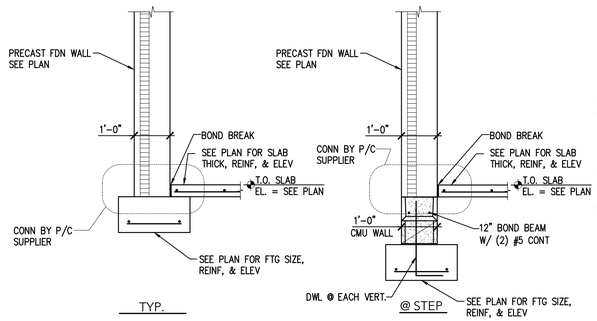
FOOTING STEP



SLAB THICKENED EDGE

STANDARD FOUNDATION DETAILS

1 S301

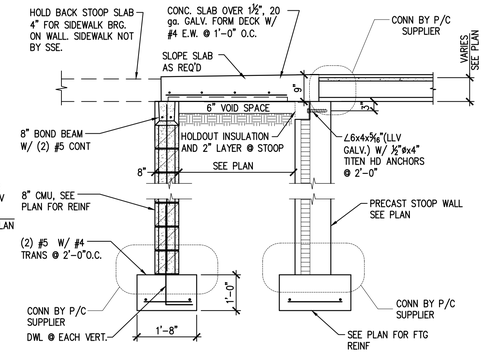


TYP.

FOUNDATION DETAIL

½" = 1'-0"

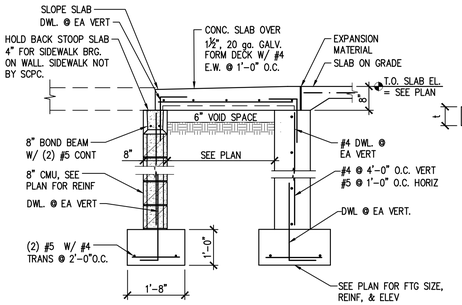
2 S301



FOUNDATION DETAIL

½" = 1'-0"

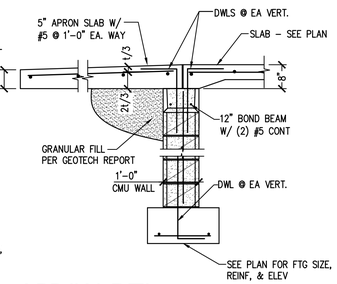
3 S301



FOUNDATION DETAIL

½" = 1'-0"

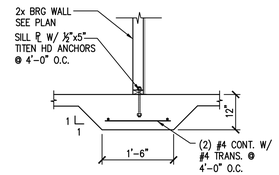
4 S301



APRON DTL.

½" = 1'-0"

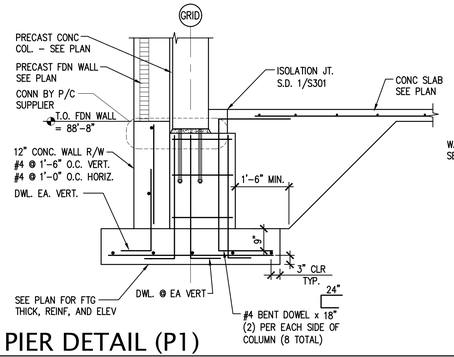
5 S301



THICKENED SLAB

1/2" = 1'-0"

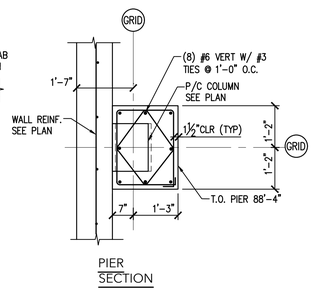
6 S301



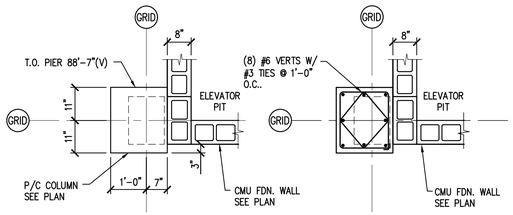
PIER DETAIL (P1)

½" = 1'-0"

7 S301



PIER SECTION

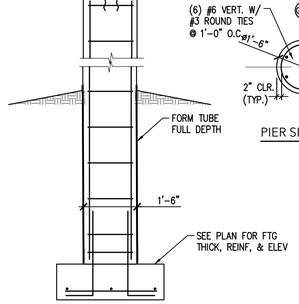


PIER DETAIL PIER SECTION

PIER DETAIL (P2)

½" = 1'-0"

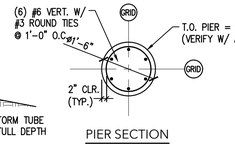
8 S301



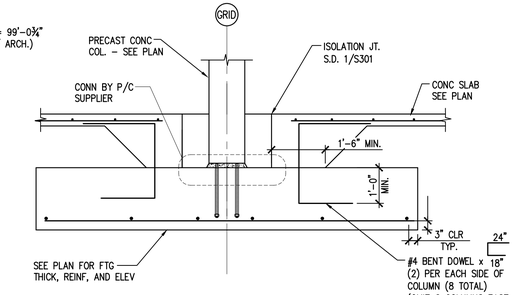
PIER DETAIL (P3)

½" = 1'-0"

9 S301



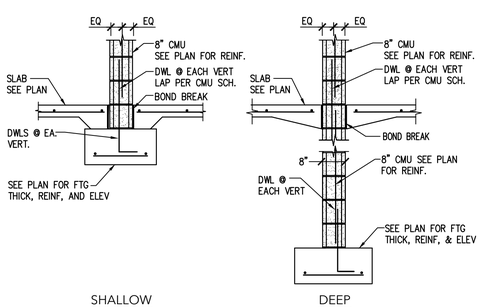
PIER SECTION



INTERIOR PAD FOOTING DETAIL

½" = 1'-0"

10 S301

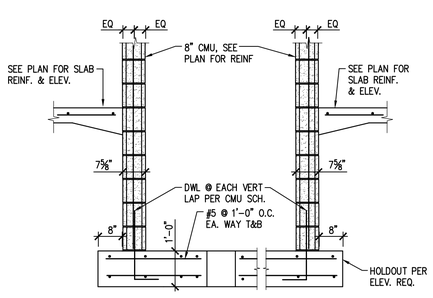


SHALLOW DEEP

FDN DETAIL

1/2"=1'-0"

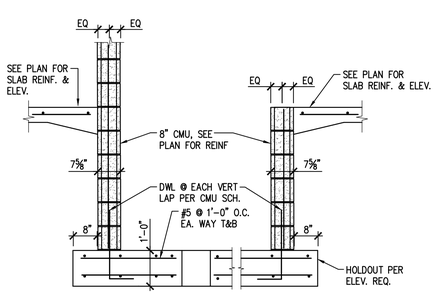
11 S301



ELEVATOR PIT

1/2"=1'-0"

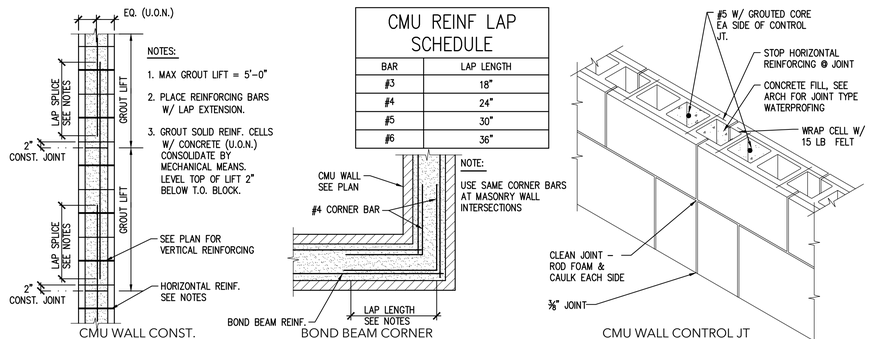
12 S301



ELEVATOR PIT

1/2"=1'-0"

13 S301



CMU REINF LAP SCHEDULE	
BAR	LAP LENGTH
#3	18"
#4	24"
#5	30"
#6	36"

NOTE: USE SAME CORNER BARS AT MASONRY WALL INTERSECTIONS

STANDARD CMU DETAILS

1/2"=1'-0"

14 S301

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Proj. Engineer:	NB
Drawn by:	JH
Date Issued:	X-18

Revisions: #	DATE	COMMENTS

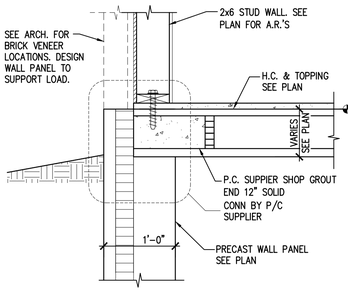
Progress Set 4/23/18

BUILDING #1 FOR
THE VILLIAGE AT TOWN CENTER
ST. MICHAEL, MN.

SHEET CONTENTS:
FOUNDATION DETAILS

SHEET NO.
S301

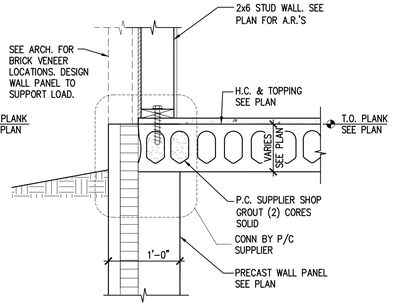
Proj. #18124-3



HOLLOW CORE BEARING

1" = 1'-0"

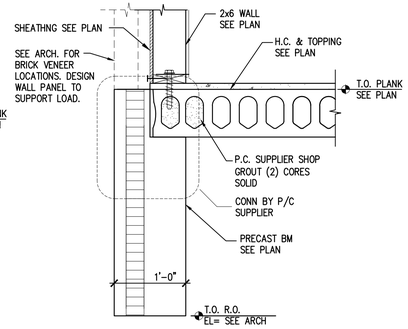
1 S401



HOLLOW CORE BEARING

1" = 1'-0"

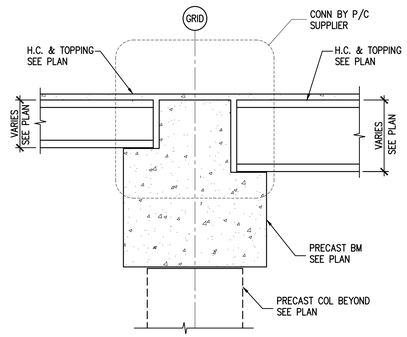
2 S401



HOLLOW CORE BEARING

1" = 1'-0"

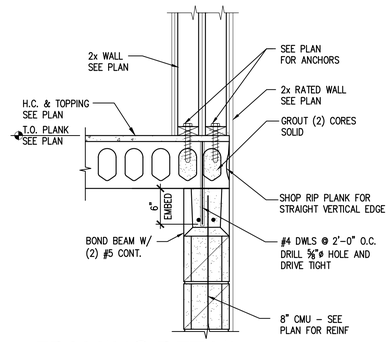
3 S401



HOLLOW CORE BEARING

1" = 1'-0"

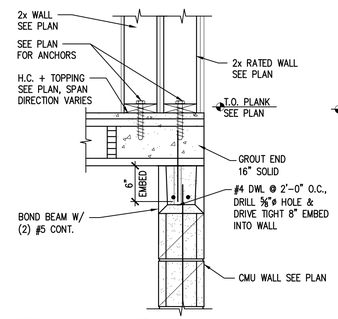
4 S401



FRAMING DETAIL

1" = 1'-0"

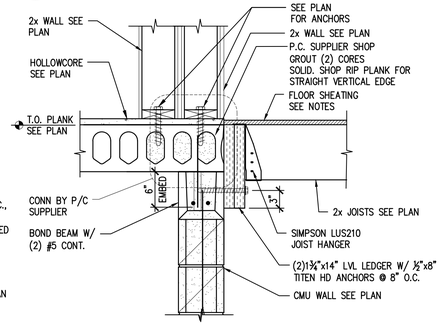
5 S401



FRAMING DETAIL

1" = 1'-0"

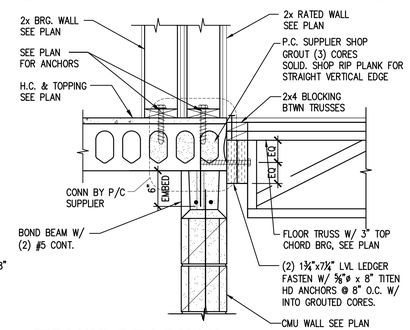
6 S401



JOIST BEARING

1" = 1'-0"

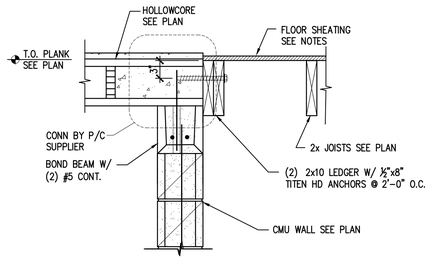
7 S401



TRUSS BEARING

1" = 1'-0"

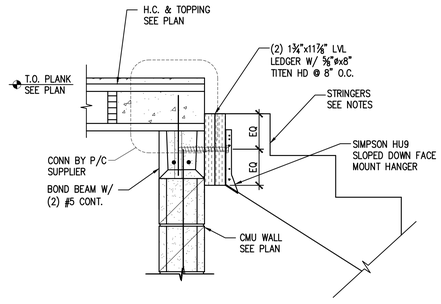
8 S401



H.C. BEARING

1" = 1'-0"

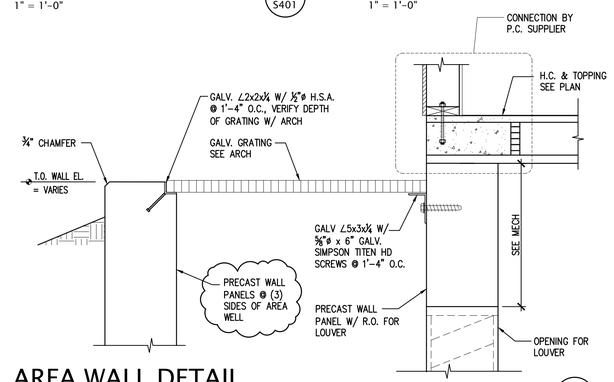
9 S401



STAIR CONN

1" = 1'-0"

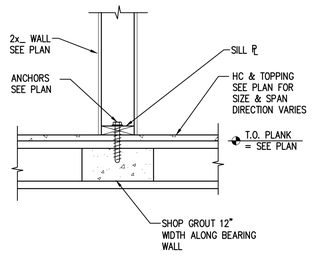
10 S401



AREA WALL DETAIL

1" = 1'-0"

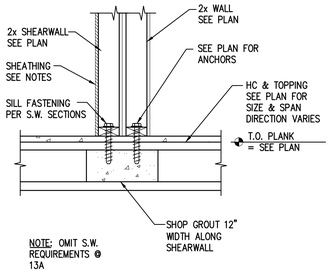
11 S401



BEARING WALL CONN

1" = 1'-0"

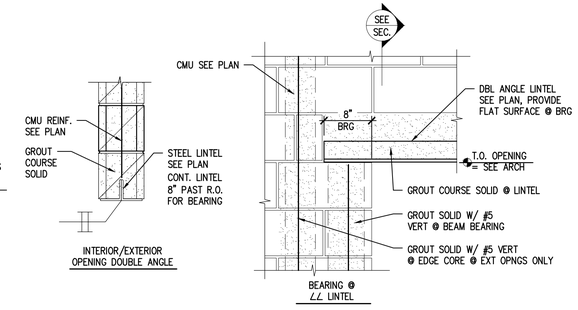
12 S401



WALL BASE

1" = 1'-0"

13 S401 13A S401



CMU LINTEL DETAILS

1"=1'-0"

14 S401

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Proj. Engineer: NB
Drawn by: JH
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Revisions: #	DATE	COMMENTS

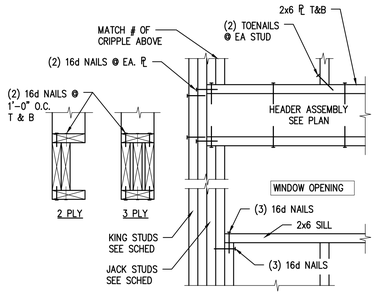
Progress Set 4/23/18

BUILDING #1 FOR
THE VILLIAGE AT TOWN CENTER
ST. MICHAEL, MN.

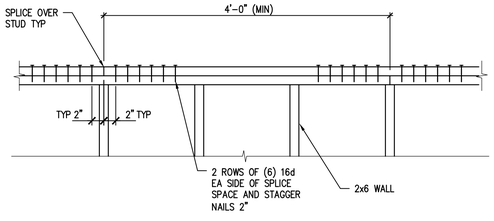
SHEET CONTENTS:
FRAMING DETAILS

SHEET NO.
S401

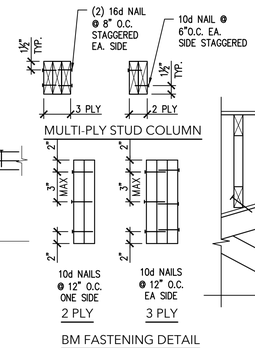
Proj. #18124-3



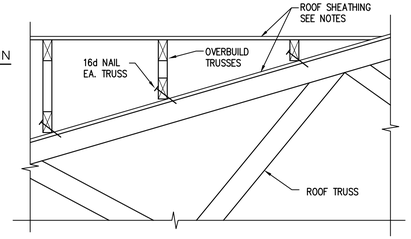
HEADER ASSEMBLY



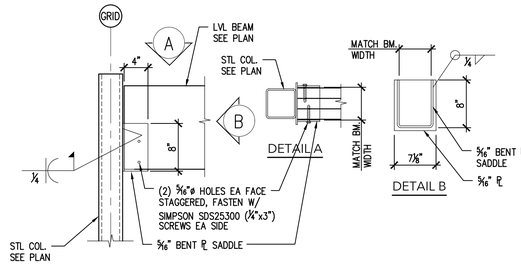
STD. DBL TOP PLATE SPLICE



BM FASTENING DETAIL



STD. ROOF TRUSS OVERBUILD

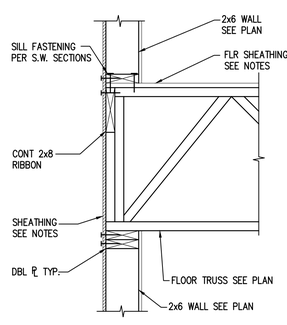


BEAM SADDLE DETAIL

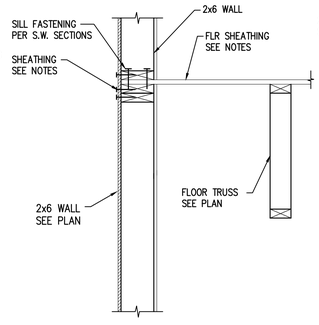
STANDARD WOOD FRAMING DETAILS

NO SCALE

1 S402



FRAMING DETAIL 2 S402
1"=1'-0"



FRAMING DETAIL 3 S402
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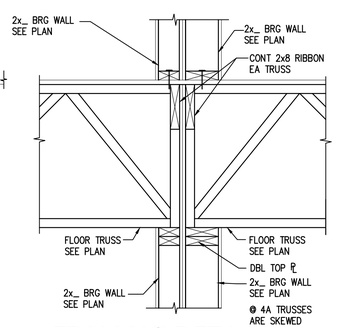

FRAMING DETAIL 4 4A S402 S402
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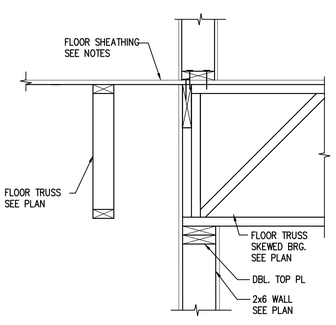

FRAMING DETAIL 5 S402
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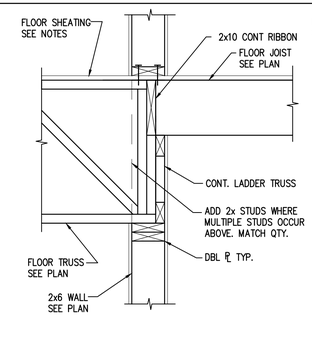

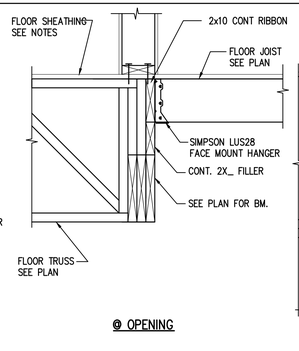

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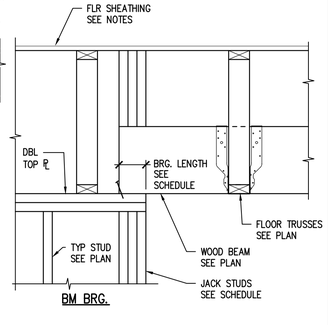

BM BRG.

FRAMING DETAIL 6 S402
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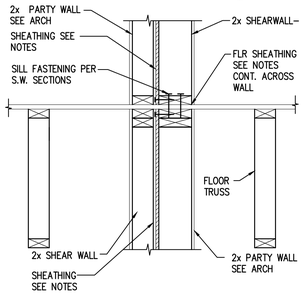

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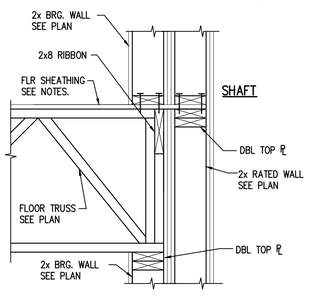

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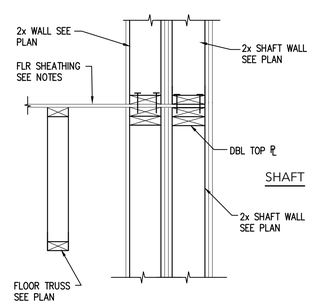

FRAMING DETAIL 9 S402
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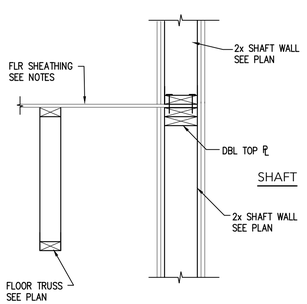

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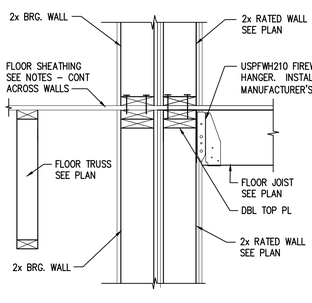

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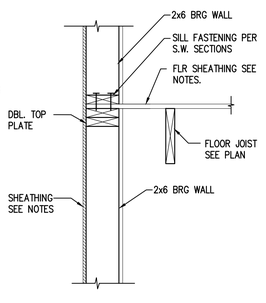

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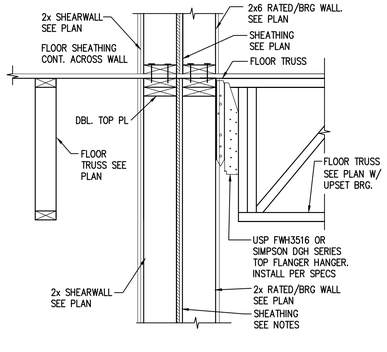

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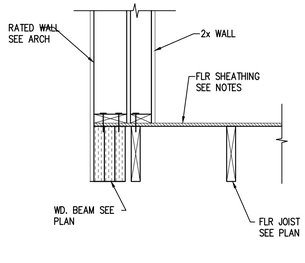

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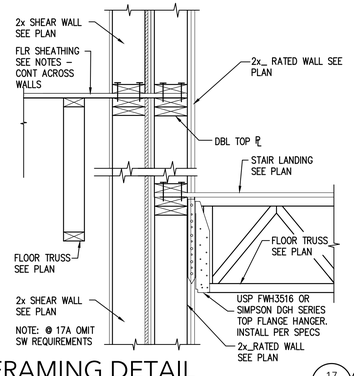
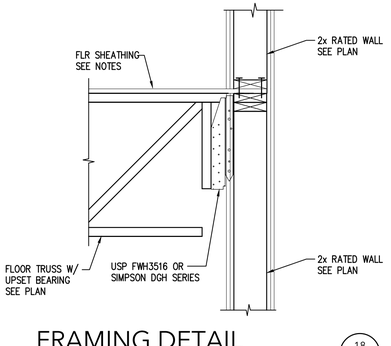


FRAMING DETAIL 17 17A S402 S401
1"=1'-0"



FRAMING DETAIL 18 S402
1"=1'-0"

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Drawn by: JH
Date Issued: X-18

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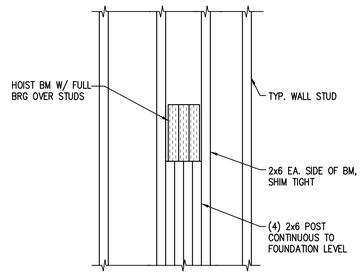
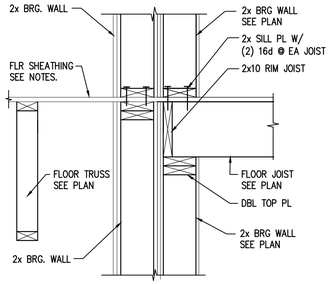
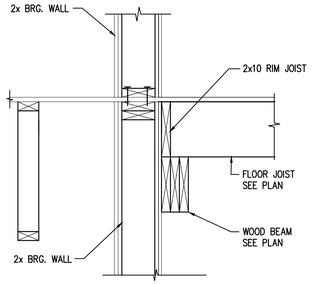


FRAMING DETAIL
1"=1'-0" — 1 S403

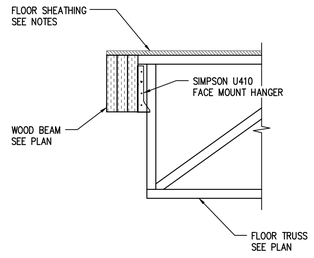


@ WALL

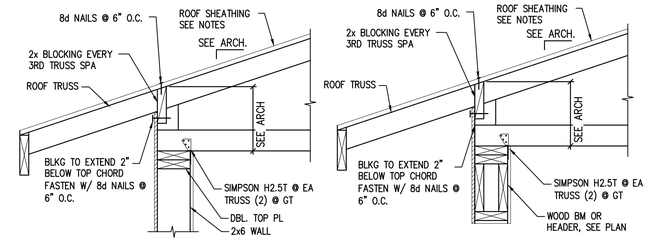


@ BEAM

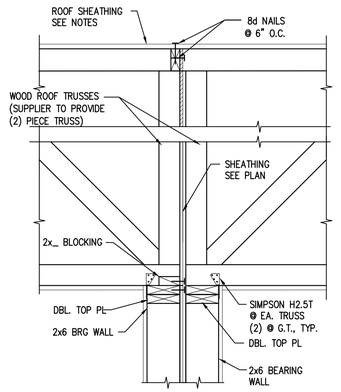
FRAMING DETAIL
1"=1'-0" — 2 S403



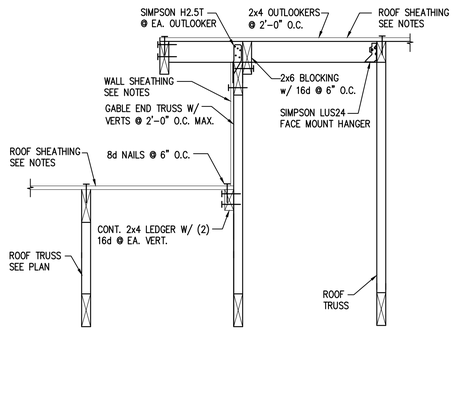
FRAMING DETAIL
1" = 1'-0" — 3 S403



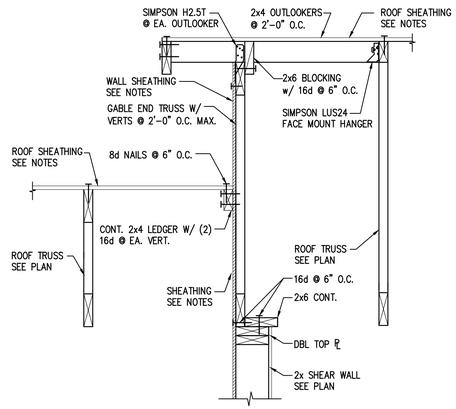
FRAMING DETAIL
1"=1'-0" — 4 S403



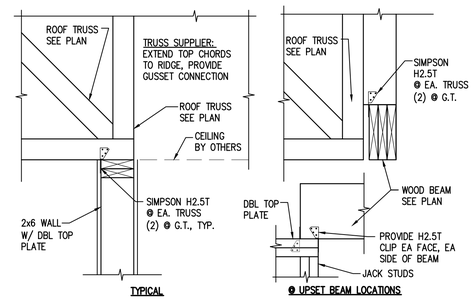
ROOF TRUSS BRG.
1" = 1'-0" — 5 S403



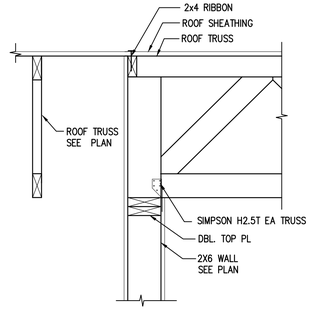
ROOF STEP DETAIL
1" = 1'-0" — 6 S403



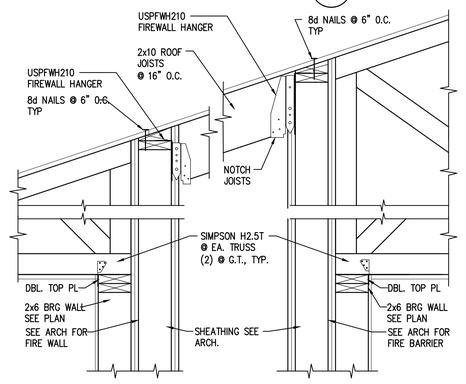
ROOF STEP DETAIL
1" = 1'-0" — 7 S403



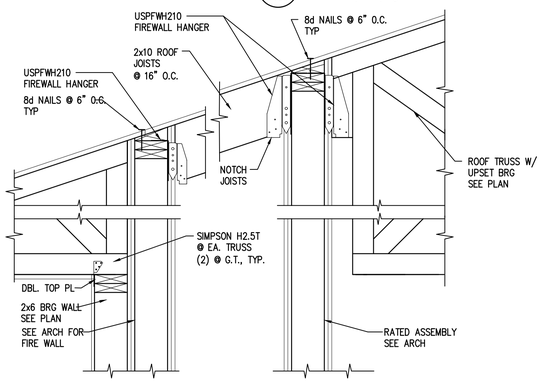
FRAMING DETAIL
1"=1'-0" — 8 S403



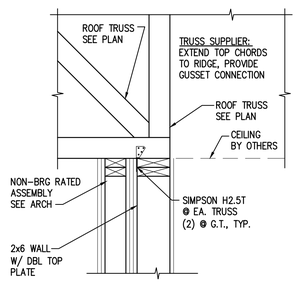
FRAMING DETAIL
1"=1'-0" — 9 S403



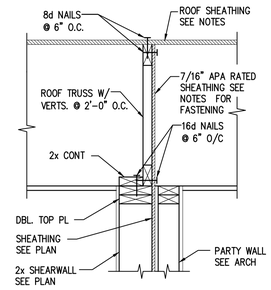
FRAMING DETAIL
1"=1'-0" — 10 S403



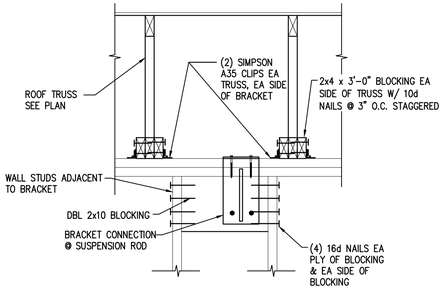
FRAMING DETAIL
1"=1'-0" — 11 S403



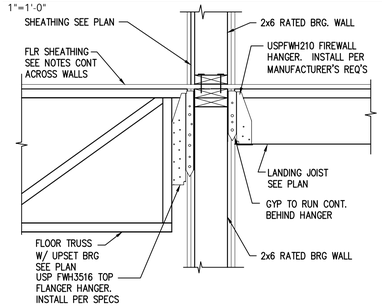
FRAMING DETAIL
1"=1'-0" — 12 S403



SHEAR WALL
1" = 1'-0" — 13 S403



ROOF CONNECTION
1" = 1'-0" — 14 S403



FRAMING DETAIL
1"=1'-0" — 15 S403

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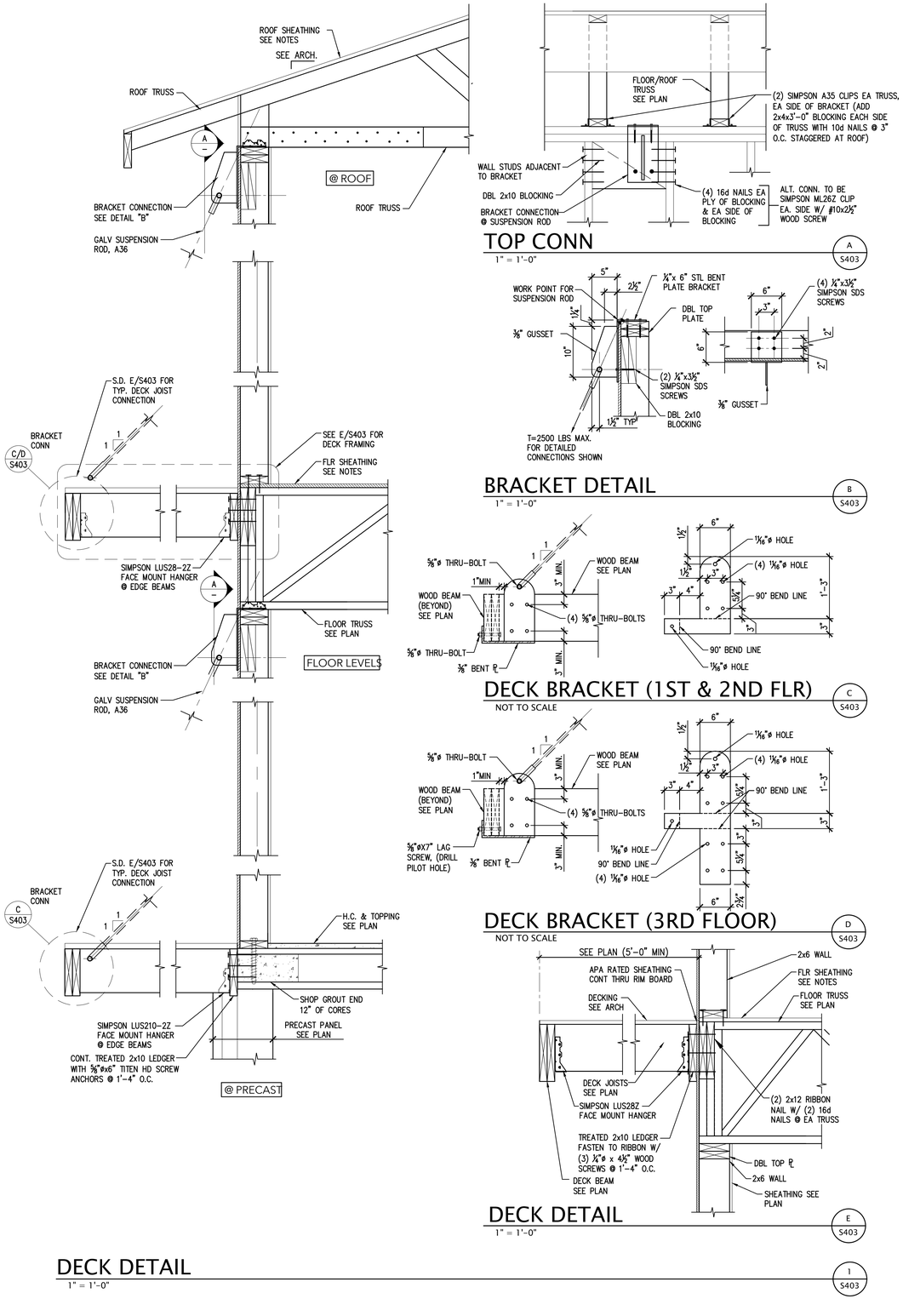

DECK DETAIL
1" = 1'-0"
1
S403

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