

GDI ENGINEERING



Avon Gates Apartments

Multifamily

Tallahassee - Florida

GENERAL NOTES

- STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE PROVISIONS OF THE 2023 FLORIDA BUILDING CODE, EIGHTH EDITION.
- THE BUILDING STRUCTURE HAS BEEN DESIGNED TO RESIST THE FOLLOWING CODE
- ALL DIMENSIONS AND CONDITIONS OF EXISTING CONSTRUCTION SHALL BE VERIFIED AT THE JOB SITE PRIOR TO THE PREPARATION OF SHOP DRAWINGS. DIFFERENCES BETWEEN EXISTING CONSTRUCTION AND THAT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE REFERRED TO THE ARCHITECT. DIFFERENCES SHALL ALSO BE CLOUDED ON THE SHOP DRAWINGS. CUTTING OR CORING OF ANY STRUCTURAL CONCRETE OR STEEL ELEMENTS SHALL BE COORDINATED WITH THE ENGINEER.
- ITS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE LATERAL-LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND THE STRUCTURE IS COMPLETELY TIED TOGETHER

DESIGN CODES/STANDARDS

- GOVERNING BUILDING CODE: 2023 FLORIDA BUILDING CODE, EIGHTH EDITION
- DESIGN LOADS: MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-22.
- CONCRETE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AMERICAN CONCRETE INSTITUTE, ACI 318-19.
- WOOD: NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH 2015 NDS SUPPLEMENT, AMERICAN WOOD COUNCIL, NDS-2018

LOADS AND DESIGN CRITERIA

- DEAD LOADS
 - ROOF 20 PSF
 - ACCESSIBLE ATTIC 10 PSF
- LIVE LOADS
 - ROOF 30 PSF
 - ATTIC 10 PSF W/ UN-INHABITABLE ATTICS WITHOUT STORAGE (NON-CONCURRENT)
- WIND LOADS
 - RISK CATEGORY II
 - BASIC WIND SPEED 120 MPH
 - EXPOSURE CATEGORY B

- THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKMEN AND OTHER PERSONS DURING CONSTRUCTION.

- THE STRUCTURAL DRAWINGS SHALL NOT BE SCALED FOR DETERMINATION OF QUANTITY, LENGTH OR FT. OF MATERIALS.

- CONTRACTOR SHALL COMPARE STRUCTURAL AND ARCHITECTURAL DRAWINGS, AND REPORT ANY DISCREPANCY TO THE ARCHITECT PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS.

- CONTRACTOR SHALL ENSURE THAT CONSTRUCTION MATERIALS WHOSE WEIGHT EXCEEDS THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS ARE NOT STORED ON STRUCTURALLY SUPPORTED FLOOR OR ROOF FRAMING.

- REPRODUCTION OF THE STRUCTURAL DRAWINGS, EITHER IN PART OR IN WHOLE, FOR SUBMITTALS OR SHOP DRAWINGS SIGNIFIES ACCEPTANCE OF INFORMATION SHOWN AS CORRECT AND OBLIGES THE USER TO ANY EXPENSE, REAL OR IMPLIED, ARISING FROM THEIR USE.

GEOTECHNICAL NOTES

- STRUCTURAL FILL MATERIAL SHOULD MEET THE GRADATION AND PLASTICITY REQUIREMENTS SET FORTH IN TXDOT STANDARD SPECIFICATIONS 2014, ITEM 247, TYPE A, GRADE 3 OR BETTER.
- PRIOR TO PLACING FILL MATERIAL, REMOVE ALL ORGANIC AND OTHER DELETERIOUS MATERIAL FROM THE EXISTING SUBGRADE FOR A DISTANCE OF 3' 0" BEYOND BUILDING LINE. REMOVE EXISTING MATERIAL IN ORDER TO OBTAIN A MINIMUM OF 6" OF STRUCTURAL FILL BELOW THE SLAB.

SOIL AND SUBSURFACE CINDITIONS

- FOUNDATION DESIGN IS BASED ON IBC TABLE 1806.2 PRESUMPTIVE LOAD-BEARING VALUES, MATERIAL CLASS 5.

REINFORCING STEEL NOTES

- ALL DETAILING OF STEEL REINFORCEMENT AND ACCESSORIES SHALL CONFORM TO ACI COMMITTEE 315 PUBLICATION SP-66, "ACI DETAILING MANUAL."
- DEFORMED BAR REINFORCEMENT SHALL BE DOMESTIC NEW BILLET STEEL IN CONFORMANCE WITH ASTM A615, GRADE 60.
- WELDING OF REINFORCING STEEL WILL NOT BE PERMITTED UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS.
- REINFORCING STEEL CLEAR COVER SHALL BE AS FOLLOWS:
 - EARTH-FORMED GRADE BEAMS 2" TOP, 2" SIDES, 2" BOTTOM
 - SLAB-ON-GRADE AS INDICATED

FOUNDATION

- FOUNDATION TYPE: STRIP CONSTRUCTION, SLAB ON GRACE AND CUP.
- DESIGN ALLOWABLES:
 - SOIL BEARING: 3.00KSF (DL+LL), 4.00KSF (DL+LL+WIND/EQ)
 - LATERAL BEARING: 0.25PSF/FT.
 - COEFFICIENT OF FRICTION: 0.35.
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301 AND ACI 318. ALL CONCRETE SHALL BE LABORATORY DESIGNED AND CONTROLLED.
- CONCRETE PROTECTION FOR STEEL REINFORCEMENT SHALL BE AS FOLLOWS (SEE ACI 318, SECTION 7.7 FOR CONDITIONS NOT INDICATED): ALL CONCRETE PLACED AGAINST SOIL - SLAB 2" BOTTOM, 2" SIDES, 2" TOP
- ALL CONCRETE SURFACES EXPOSED TO THE GROUND MUST BE WATERPROOFED.
- THE SOILS ENGINEER SHALL VERIFY CONDITION AND/OR ADEQUACY OF ALL EXCAVATIONS, SUB GRADES, FILLS AND BACK FILLS. NO REINFORCEMENT OR CONCRETE SHALL BE PLACED IN ANY EXCAVATION OR ON ANY SUBGRADE OR FILL UNTIL THAT WORK HAS BEEN REVIEWED AND APPROVED IN WRITING BY THE SOILS ENGINEER.
- ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED SOIL. THE TOP OF FOOTING ELEVATIONS ARE SHOWN ON THE PLANS. WHERE SOFT OR LOOSE MATERIAL IS FOUND AT BOTTOM OF FOOTING ELEVATIONS, THE SOFT OR LOOSE MATERIAL SHALL BE REMOVED AND REPLACED WITH LEAN OR STRUCTURAL CONCRETE AS DIRECTED BY THE SOILS ENGINEER.

- CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATION FOR EITHER SURFACE WATER, GROUND WATER OR SEEPAGE IF REQUIRED.

- BACK FILL OVER EXCAVATED FOOTINGS WITH STRUCTURAL CONCRETE OF SAME DESIGN STRENGTH AS FOOTING CONCRETE OR LEAN CONCRETE WITH A MINIMUM STRENGTH OF 200 PSI OR AS DIRECTED OTHERWISE BY THE SOILS ENGINEER.

- SLOPING OF FOOTINGS IS PROHIBITED.

- SLABS ON GRADE SHALL BE SUPPORTED ON NATURAL GRADE OR COMPACTED STRUCTURAL FILL ACCORDING TO THE RECOMMENDATIONS OF THE SOILS REPORT.

- DURING BACKFILLING OPERATIONS, FOUNDATION WALL BACKFILL SHALL NOT BE UNBALANCED BY MORE THAN TWO FEET ON EITHER SIDE AT ANY TIME.

- THE CONTRACTOR SHALL PROVIDE FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEETING AND SHORING ETC. REQUIRED FOR CONSTRUCTION OF THE PROJECT AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES.

STRUCTURAL WOOD NOTES

- ALL WOOD FRAMING SHALL BE KILN-DRIED WITH A MAXIMUM MOISTURE CONTENT AT TIME OF INSTALLATION OF NINETEEN (19) PERCENT AND SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:

| MEMBER | MATERIAL | DESIGN PROPERTIES |
|--|-------------------------------|---|
| 2x BEAMS, HEADERS, JOISTS, SILL PLATES | #2 GRADE SOUTHERN PINE | Fb = 750 PSI Fv = 175 PSI E = 1,400,000 PSI |
| LAMINATED VENEER LUMBER BEAMS (LVL) | TRUS JOIST 2.0E MICROLLAM LVL | Fb = 2,600 PSI Fv = 285 PSI Fc = 2,510 PSI E = 2,000,000 PSI |
| BEARING PLATES, LEDGERS | #3 GRADE SPRUCE-PINE-FIR | Fb = 500 PSI Ft = 250 PSI Fv = 70 PSI Fc perp = 425 PSI E = 1,200,000 PSI |
| WALL STUDS/POST COLUMNS, U.N.O. | STUD GRADE DOUGLAS FIR-LARCH | Fb = 675 PSI Fc = 825 PSI |

- ALLOWABLE STRESSES ARE UNFACTORED AND ARE BASED ON THE 2018 NATIONAL DESIGN SPECIFICATION, PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.

- SILL PLATES AND OTHER MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED FOR MOISTURE RESISTANCE.

- THE FLOOR OF THE FIRST LEVEL IS ARRANGED ON THE GROUND.

WOOD FLOOR NOTES

- HOLES AND NOTCHES IN BEAMS AND HEADERS ARE NOT PERMITTED UNLESS VERIFIED IN WRITING BY THE ENGINEER OF RECORD.
- BEAMS COMPRISED OF TWO (2) MEMBERS OR MORE MEMBERS SHALL BE GLUED AND NAILED TOGETHER WITH A MINIMUM OF TWO (2) ROWS OF 16d NAILS AT TWELVE (12) INCHES ON CENTER. BEAMS COMPRISED OF THREE (3) OR MORE MEMBERS SUPPORTING LOAD THROUGH SIDE HANGERS SHALL HAVE ADDITIONAL 1/2 INCH DIAMETER THRU BOLTS AT EIGHTEEN (18) INCHES ON CENTER, STAGGERED TOP AND BOTTOM. USE 1/2 INCH PLYWOOD OR MEMBERS OF SAME DEPTH AS REQUIRED TO FLUSH OUT WALL.
- SPLICING OF MEMBERS SHALL NOT BE PERMITTED UNLESS SHOWN ON THE PLANS, OR VERIFIED IN WRITING BY THE ENGINEER.
- INSTALL MEMBERS TRUE, PLUMB AND LEVEL AND PROVIDE ADEQUATE TEMPORARY BRACING AND SHORING UNTIL FINAL CONNECTIONS ARE MADE.

WOOD CONNECTOR NOTES

- NAILS, SPIKES, STAPLES, BOLTS, NUTS, WASHERS, ETC. SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 FOR EXTERIOR AND/OR TREATED WOOD LOCATIONS. PROVIDE PLAIN FINISH FASTENERS FOR INTERIOR LOCATIONS.
- FRAMING CONNECTORS SHALL BE SIMPSON "STRONG-TIE" OR APPROVED SUBSTITUTE AND SHALL BE BUILDING CODE APPROVED FOR THE TYPE OF INSTALLATION INDICATED. FRAMING CONNECTORS THAT ARE EXPOSED TO EXTERIOR CONDITIONS AND/OR ARE IN CONTACT WITH TREATED WOOD SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 OR FABRICATED WITH A MINIMUM G185 GALVANIZED COATING IN ACCORDANCE WITH ASTM A653. ALL OTHER FRAMING CONNECTORS SHALL FOR SHALL BE FABRICATED WITH A MINIMUM G90 GALVANIZED COATING IN ACCORDANCE WITH ASTM A653.
- UNLESS NOTED OTHERWISE, SILL PLATES AT THE BUILDING EXTERIOR SHALL BE FASTENED TO THE FOUNDATION WITH GALVANIZED 1/2 INCH DIAMETER, ASTM A307 ANCHOR BOLTS AT FOUR (4) FEET ON CENTER (MINIMUM OF TWO (2) BOLTS PER PLATE). AN ANCHOR BOLT SHALL BE LOCATED NO MORE THAN TWELVE (12) INCHES AND NO LESS THAN FOUR (4) INCHES FROM THE END OF EACH SILL PLATE. ANCHOR BOLTS SHALL BE PLACED WITH HEXAGONAL NUTS AND WASHERS WITH A MINIMUM OUTSIDE DIAMETER OF 1.38 INCHES. ANCHOR BOLTS SHALL BE PLACED WITH A MINIMUM OF SIX (6) INCHES OF EMBEDMENT INTO FOUNDATION CONCRETE.

WOOD TRUSS NOTES

- DESIGN TRUSSES IN ACCORDANCE WITH THE "TRUSS PLATE INSTITUTE DESIGN SPECIFICATIONS FOR CONNECTOR PLATES." ALL TRUSSES SHALL BE GRADE STAMPED PER W.C.I.B. RULES.
- THE CONTRACTOR SHALL COMPLY WITH "HANDLING, INSTALLING AND BRACING METAL PLATE CONNECTED WOOD TRUSSES" (HIB-91) BY THE TRUSS PLATE INSTITUTE DURING THE INSTALLATION OF FLOOR AND ROOF TRUSSES.
- ROOF TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER TO SUPPORT A TOTAL LOAD OF FORTY (40) PSF, COMPOSED OF TWENTY (20) PSF DEAD LOAD (TEN (10) PSF ON THE TOP CHORD AND TEN (10) PSF ON THE BOTTOM CHORD) AND TWENTY (20) PSF LIVE LOAD FOR ALL SPAN CONDITIONS INDICATED ON THE DRAWINGS, UNLESS NOTED OTHERWISE. IN ADDITION, ROOF TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER TO SUPPORT ALL SNOWDRIFT LOADS REQUIRED BY THE BUILDING CODE NOTED ABOVE. AT RTU CONDENSOR AREAS, ROOF TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER TO SUPPORT AN ADDITIONAL TOP CHORD LIVE LOAD OF TWENTY (20) PSF. ROOF TRUSS DEFLECTIONS SHALL BE LIMITED TO L/180 FOR TOTAL LOAD AND L/240 FOR LIVE LOAD ONLY.
- ROOF TRUSSES AND END ANCHORAGES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER FOR A NET UPLIFT OF FIFTEEN (15) PSF.
- THE CONTRACTOR SHALL SUBMIT COMPLETE TRUSS SHOP DRAWINGS AND DESIGN CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. SHOP DRAWINGS SHALL INCLUDE FRAMING PLANS SHOWING ALL PREFABRICATED MEMBERS WITH MARK NUMBERS FOR EACH MEMBER TYPE.
- PROVIDE ANCHORAGE, ERECTION BRACING, AND PERMANENT BRIDGING AS RECOMMENDED BY THE TRUSS MANUFACTURER.

- AT ROOF TRUSS GIRDERS, PROVIDE ONE (1) STUD BELOW EACH GIRDER SUPPORT FOR EVERY TEN (10) FEET OF TRUSS GIRDER SPAN LENGTH. AS A MINIMUM, PROVIDE TWO (2) STUDS AT EACH SUPPORT. BUILT-UP STUD COLUMNS SHALL BE PROVIDED AT EACH LEVEL AND WITHIN THE FLOOR SYSTEM TO PROVIDE A CONTINUOUS LOAD PATH TO THE FOUNDATION. BUILT-UP STUD COLUMNS SHALL BE NAILED TOGETHER WITH 16d NAILS AT TWENTY (20) INCHES ON CENTER FOR THE FULL STUD HEIGHT.

WOOD FRAME NOTES

- CONSTRUCTION SHALL BE IN CONFORMANCE WITH IRC & IBC.
- FOR LOAD-BEARING WALLS WITH A THICKNESS OF 5 1/2 INCHES, AS WELL AS FOR ROOF SHEATHING, WE USE 7/16-INCH PLYWOOD.
- ALL DIMENSIONS & MATERIAL ARE PROVIDED AS A MINIMUM REQUIREMENTS FOR SEISMIC & WIND ANALYSIS; CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DRAWINGS.
- IF FLOOR HEIGHT IS NOT EVEN WITH THE PANEL WIDTH (IF PANELS APPLIED HORIZONTALLY) PROVIDE ADDITIONAL BLOCKING AT PANEL EDGES TO ACHIEVE REQUIRED FASTENER SPACINGS.
- ALL SHEAR WALLS TO BE ANCHORED TO THE FOUNDATION WALL/BASEMENT WALL /FOOTING.
- PANEL SHEATHING JOINTS IN SHEAR WALLS SHALL OCCUR OVER STUDS OR BLOCKING. ADJACENT PANEL SHEATHING JOINTS SHALL OCCUR OVER AND BE NAILED TO COMMON FRAMING MEMBER.
- END JOINTS OF ADJACENT COURSES OF PANEL SHEATHING SHALL NOT OCCUR OVER THE SAME STUD (PROVIDE BRICK PATTERN).

WOOD FRAME CONNECTOR NOTES

- ALL SHEAR WALLS TO BE TIED WITH ANCHOR BOLTS TO THE FOUNDATION WALL/BASEMENT WALL/FOOTING. SEE FLOOR PLAN FOR LOCATION OF SHEAR WALLS.
- DRIVE ONE STUD NAIL AT AN ANGLE THROUGH THE STUD INTO THE PLATE.
- PROVIDE SP2 CONNECTORS ON A SAME STUD WHICH HAS CS16 CONNECTORS TO CREATE CONTINUOUS LOAD PATH.
- NAILS ARE NOT REQUIRED IN CLEAR SPAN AS PER MANUFACTURER 'S SPECIFICATIONS. G.C./SUB CAN PROVIDE ADDITIONAL NAILS IF DESIRED.

SLAB-ON-GRADE RECOMMENDATIONS

- A MONOLITHIC SLAB-ON-GRADE FOUNDATION MAY BE USED TO SUPPORT THE PROPOSED RESIDENCE PLANNED FOR CONSTRUCTION AT THE SITE. ALL GRADE BEAMS AND FOOTINGS SHOULD HAVE A MINIMUM DEPTH OF 2-FEET BELOW THE FINISHED FLOOR SLAB ELEVATION. PERIMETER GRADE BEAMS AND FOOTINGS SHOULD ALSO HAVE AN EMBEDMENT DEPTH OF 1 1/2-FEET BELOW THE FINAL EXTERIOR GRADES.

- GRADE BEAMS AND FOOTINGS BEARING IN PROPERLY COMPACTED SELECT FILL, NATIVE SOILS AND/OR WEATHERED LIMESTONE MAY BE DESIGNED FOR AN ALLOWABLE UNIT SOIL BEARING PRESSURE OF 2,500 PSF. THIS VALUE INCORPORATES A DESIGN SAFETY FACTOR OF AT LEAST 3.0.

- SLIGHT DIFFERENTIAL MOVEMENTS OF SLAB-ON-GRADE FOUNDATIONS CAN CAUSE DISTRESS TO INTERIOR WALL PARTITIONS, BRITTLE FLOOR COVERINGS AND RIGID EXTERIOR FACADES RESULTING IN COSMETIC DAMAGE. THE MAGNITUDE OF MOVEMENT CAN BE REDUCED WITH GOOD CONSTRUCTION PRACTICES INCLUDING PERFORMING THE RECOMMENDED SITE PREPARATION, COMPACTION OF THE SELECT FILL MATERIALS AND MAINTAINING THE INTEGRITY OF THE BEAM AND FOOTING EXCAVATIONS PRIOR TO CONCRETE PLACEMENT.

- THE FOUNDATION EXCAVATIONS SHOULD BE OBSERVED PRIOR TO STEEL OR CONCRETE PLACEMENT TO ASSESS THAT THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE DESIGN LOADS AND TO IDENTIFY THE ACCEPTABILITY OF THE BEARING MATERIALS UNDER THE BEAMS AND FOOTINGS.

- SOFT OR LOOSE ZONES ENCOUNTERED AT THE BOTTOM OF THE BEAM EXCAVATIONS SHOULD BE REMOVED TO THE LEVEL OF COMPETENT MATERIALS AS DIRECTED BY THE GEOTECHNICAL ENGINEER. CAVITIES FORMED AS A RESULT OF EXCAVATION OF SOFT OR LOOSE ZONES SHOULD BE BACKFILLED WITH PROPERLY COMPACTED SELECT FILL.

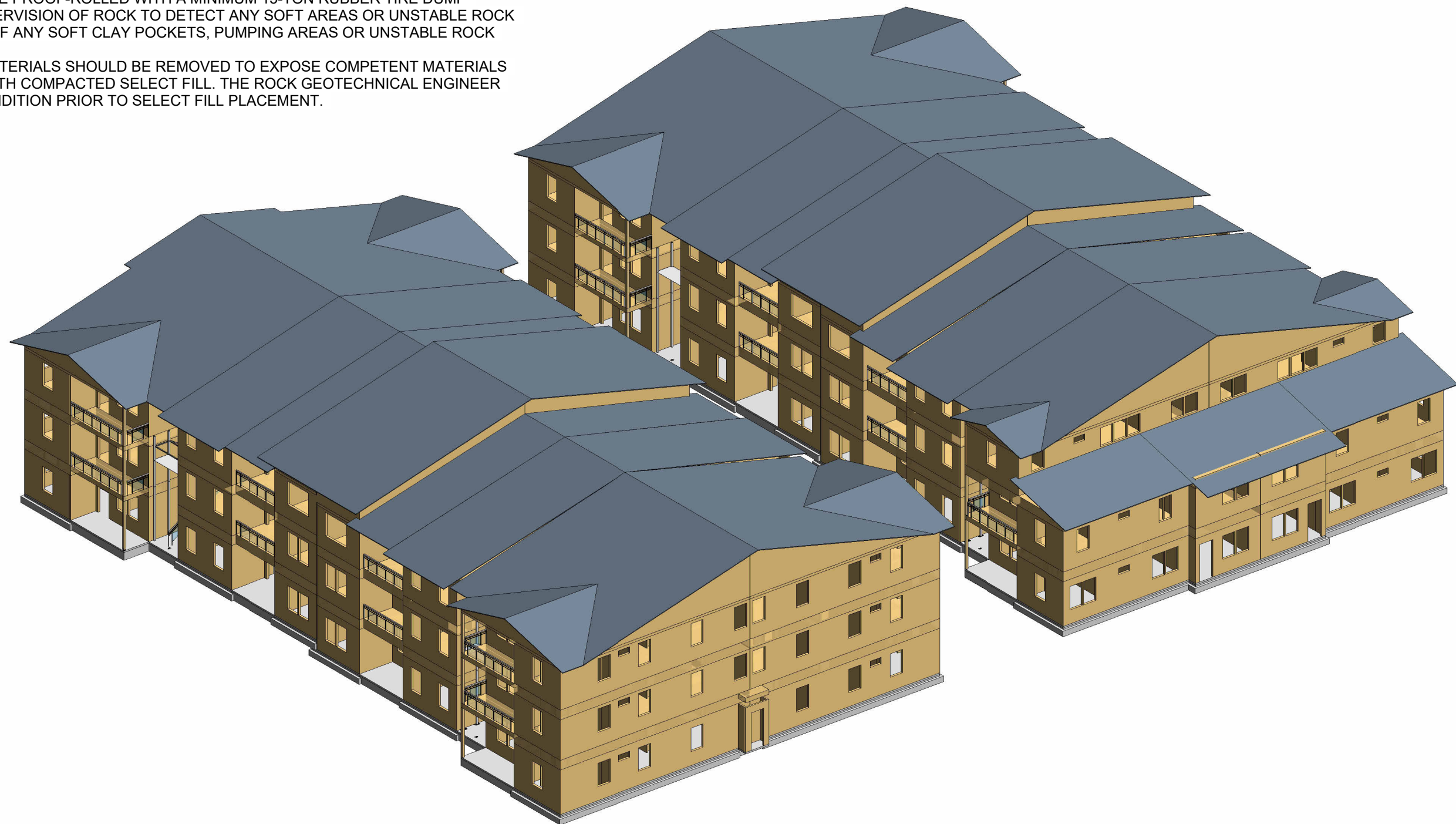
- AFTER OPENING, BEAM AND FOOTING EXCAVATIONS SHOULD BE OBSERVED, AND CONCRETE PLACED AS QUICKLY AS POSSIBLE TO AVOID EXPOSURE OF THE BEAM BOTTOMS TO WETTING AND DRYING. SURFACE RUN-OFF WATER SHOULD BE DRAINED AWAY FROM THE EXCAVATIONS AND NOT BE ALLOWED TO POND. IF IT IS REQUIRED THAT BEAM EXCAVATIONS BE LEFT OPEN AN EXTENDED PERIOD, THEY SHOULD BE PROTECTED TO REDUCE EVAPORATION OR ENTRY OF MOISTURE.

SITE PREPARATION

- IN THE FOUNDATION FOOTPRINT AREAS (STRUCTURE AND ANY APPURTENANCES INCLUDING PORCHES, PATIOS AND STOOPS), VEGETATION, ROOTS, OBJECTIONABLE MATERIALS AND ANY SOFT OR LOOSE BROWN CLAYEY TOPSOIL MATERIALS SHOULD BE STRIPPED FROM THE SURFACE. ROCK RECOMMENDS A MINIMUM STRIPPING DEPTH OF 6-INCHES.
- AFTER STRIPPING THE SITE, ADDITIONAL EXCAVATION SHOULD BE PERFORMED WITHIN THE FOUNDATION FOOTPRINT AREA AS REQUIRED TO ALLOW THE PLACEMENT OF A MINIMUM OF 12-INCHES OF SELECT FILL BELOW THE FLOOR SLAB. THE STRIPPING AND RECOMMENDED EXCAVATION SHOULD EXTEND APPROXIMATELY 3-FEET BEYOND THE PERIMETER OF THE FOUNDATION.

- IN AREAS WITHIN THE FOOTPRINT OF THE BUILDING STRUCTURE WHERE TREES WERE PREVIOUSLY LOCATED, THE ENTIRE TREE ROOT BALL SHOULD ALSO BE EXCAVATED, AND THE REMAINING SUBGRADE SOILS EXPOSED AS PART OF THE ROOT-BALL REMOVAL SHOULD BE PROPERLY COMPACTED AND THE EXCAVATION REPLACED WITH PROPERLY COMPACTED SELECT FILL.

- THE EXPOSED SUBGRADE SHOULD BE PROOF-ROLLED WITH A MINIMUM 15-TON RUBBER TIRE DUMP TRUCK OR LOADER UNDER THE SUPERVISION OF ROCK TO DETECT ANY SOFT AREAS OR UNSTABLE ROCK PRIOR TO SELECT FILL PLACEMENT. IF ANY SOFT CLAY POCKETS, PUMPING AREAS OR UNSTABLE ROCK ARE IDENTIFIED, THE OBJECTIONABLE MATERIALS SHOULD BE REMOVED TO EXPOSE COMPETENT MATERIALS AND THE EXCAVATION REPLACED WITH COMPACTED SELECT FILL. THE ROCK GEOTECHNICAL ENGINEER MUST APPROVE THE SUBGRADE CONDITION PRIOR TO SELECT FILL PLACEMENT.



SELECT FILL

- IMPORTED SELECT FILL MATERIAL USED AT THIS SITE SHOULD BE CRUSHED LIMESTONE BASE MATERIAL. THE MATERIAL SHOULD MEET THE GRADATION AND PLASTICITY REQUIREMENTS SET FORTH IN THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) 2014 STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES; ITEM 247, TYPE A, GRADE 1-2. THE MATERIAL SHOULD BE PLACED IN MAXIMUM 8-INCH THICK LOOSE AND HORIZONTAL LIFTS AND COMPACTED TO A MINIMUM DENSITY OF 95-PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557). THE MOISTURE CONTENT OF THE SELECT FILL SHALL BE MAINTAINED WITHIN 2-PERCENT OF THE OPTIMUM MOISTURE CONTENT.

EARTHWORK AND FOUNDATION ACCEPTANCE

- EXPOSURE TO THE ENVIRONMENT MAY WEAKEN THE SOILS AT THE FOUNDATION BEARING LEVELS IF EXCAVATIONS REMAIN OPEN FOR LONG PERIODS OF TIME. THEREFORE, IT IS RECOMMENDED THAT THE FOUNDATION EXCAVATIONS BE EXTENDED TO FINAL GRADE AND THE FOUNDATIONS BE CONSTRUCTED AS SOON AS POSSIBLE TO MINIMIZE POTENTIAL DAMAGE TO THE BEARING SOILS. THE FOUNDATION BEARING LEVEL IN THE BEAM TRENCHES SHOULD BE FREE OF LOOSE OR SOFT SOIL, PONDED WATER OR DEBRIS.

- THE FOLLOWING CRITERIA GIVEN WERE DEVELOPED ASSUMING FINAL GRADES FOR SLAB-ON-GRADE FOUNDATIONS ARE ESTABLISHED WITHIN 4 FT OF EXISTING GRADES USING ON-SITE OR SIMILAR IMPORTED FILL MATERIAL. IT IS ANTICIPATED REQUIRED FILL SOILS WILL BE OBTAINED FROM ON-SITE AND THE FILL WILL HAVE A PLASTICITY INDEX (PI) OF 40 OR LESS. SELECT FILL (NON-EXPANSIVE FILL MATERIAL) SHOULD HAVE A LIQUID LIMIT LESS THAN 35, A PLASTICITY INDEX (PI) NOT LESS THAN 4 NOR GREATER THAN 15 AND SHOULD NOT CONTAIN DELETERIOUS MATERIAL AND DEBRIS. NON-EXPANSIVE FILL MATERIAL SHOULD BE COMPACTED TO A DRY DENSITY OF AT LEAST 95 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698) AND WITHIN THE RANGE OF -1 TO +3 PERCENTAGE POINTS OF THE MATERIAL'S OPTIMUM MOISTURE CONTENT. CONSIDERING THE SUBSURFACE CONDITIONS ENCOUNTERED AT THIS SITE AND ASSUMING FINAL GRADES ARE WITHIN 4 FT OF EXISTING GRADE, PAVEMENT, AND SLAB-ON-GRADE FOUNDATION SYSTEMS COULD EXPERIENCE SOIL-RELATED MOVEMENTS (POTENTIAL VERTICAL RISE, PVR) OF ABOUT 2 TO 4 INCHES. IN VIEW OF THIS PVR, SUBGRADE IMPROVEMENT METHOD WILL BE REQUIRED TO REDUCE THE PVR TO 1 INCH BY PLACING NON-EXPANSIVE MATERIAL AND A DISTANCE OF 5 FEET OUTSIDE THE CONSTRUCTION AREA AND AT LEAST 4 FT BETWEEN THE BOTTOM OF THE SLAB AND THE TOP SURFACE OF MOISTURE- CONDITIONED ON-SITE CLAY SOILS.

CONCRETE

- ALL CONCRETE SHALL BE MIXED AND PLACED IN ACCORDANCE WITH ACI 318. USE MIXES WITH AMAXIMUM AGGREGATE SIZE APPROPRIATE FOR FORM AND REBAR CLEARANCES TO BE ENCOUNTERED IN ACCORDANCE WITH ACI RECOMMENDATIONS.
- THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNERS TESTING LABORATORY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH CBC SECTION 1903 AND 1904. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
- PORTLAND CEMENT SHALL CONFORM TO ASTM C 150 TYPE I OR II (TYPE V (REGIONS WITH HIGH SULFIDES)).
- AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C 33 AND PROJECT SPECIFICATIONS.
- CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED (1/4" AMPLITUDE) BY SAND BLASTING OR MECHANICAL MEANS. CLEAN BEFORE POUR. LOCATION TO BE APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATION PLAN OR ALL PROPOSED JOINTS NOT INDICATED ON DRAWINGS FOR APPROVAL PRIOR TO BEGINNING WORK.
- CONCRETE SHALL HAVE THE FOLLOWING 28 DAY STRENGTHS, F'c: (ALL CONCRETE SHALL BE NORMAL WEIGHT, EXCEPT AS NOTED)
 - SLABS ON GRADE: 3000 PSI (W/C=0.45)
 - STRIP FOUNDATION: 3000 PSI
 - FOR COLUMN FOUNDATIONS: 3000 PSI
- ALL CONCRETE TO BE REINFORCED, UNLESS SPECIFICALLY NOTED "NOT REINFORCED".

- PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL ENSURE THAT ALL REINFORCING AND EMBEDMENTS, INCLUDING COLUMN ANCHOR BOLTS, ARE PROPERLY LOCATED AND SECURELY TIED IN PLACE.

- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING CURING CONCRETE FROM FREEZING AND HOT WEATHER PER ACI 306.1 AND ACI 305 RESPECTIVELY.

- NO LOADS SHALL BE PLACED ON STRUCTURAL CONCRETE SLABS WITHIN 7 DAYS AFTER CONCRETE IS PLACED. AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS, UNLESS THE WORK IS SHORED.

- CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE THAT PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.



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Avon Gates Apartments

1240 BLOUNTSTOWN STREET,
TALLAHASSEE, FLORIDA

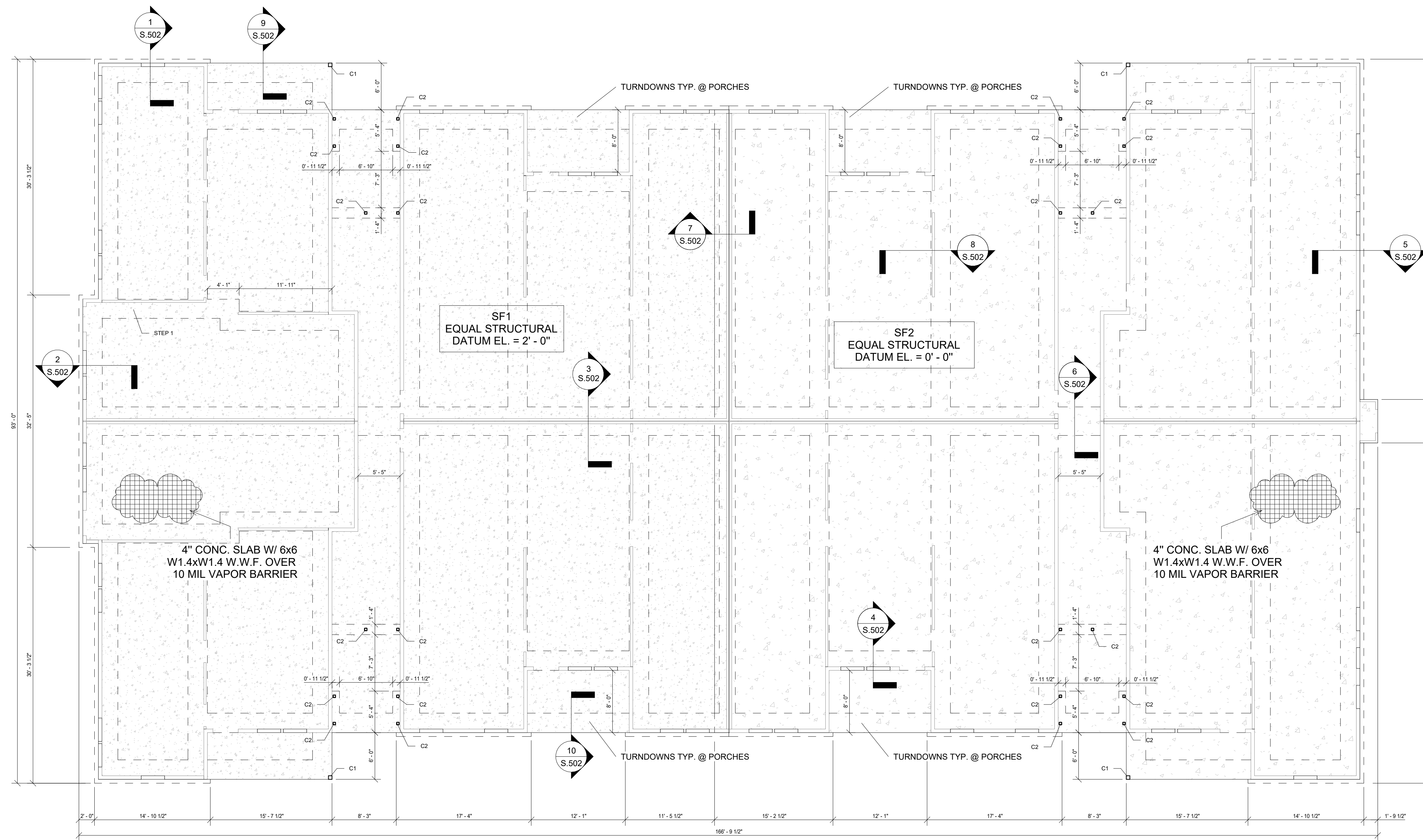
GENERAL NOTES

Author
Date: 24.07.17

S.000

SHEET №

| SLAB REINFORCING BUILDING 1 | | |
|-----------------------------|---------|----------|
| MARKS | OFFSET | Comments |
| SF1 | 2' - 0" | |
| SF2 | 0' - 0" | |



① FOUNDATION PLAN (BUILDING 1)
1/8" = 1'-0"

Avon Gates Apartments

1240 BLOUNTSTOWN STREET,
TALLAHASSEE, FLORIDA

FOUNDATION
PLAN

Author: _____
Date: 24.07.17

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SHEET No

Avon Gates Apartments

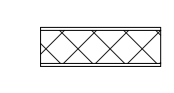
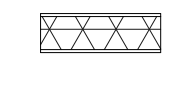
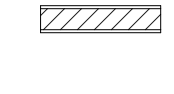
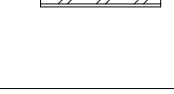




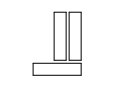

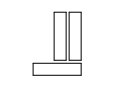

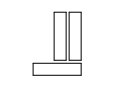

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TALLAHASSEE, FLORIDA

1ST FLOOR WALL PLAN

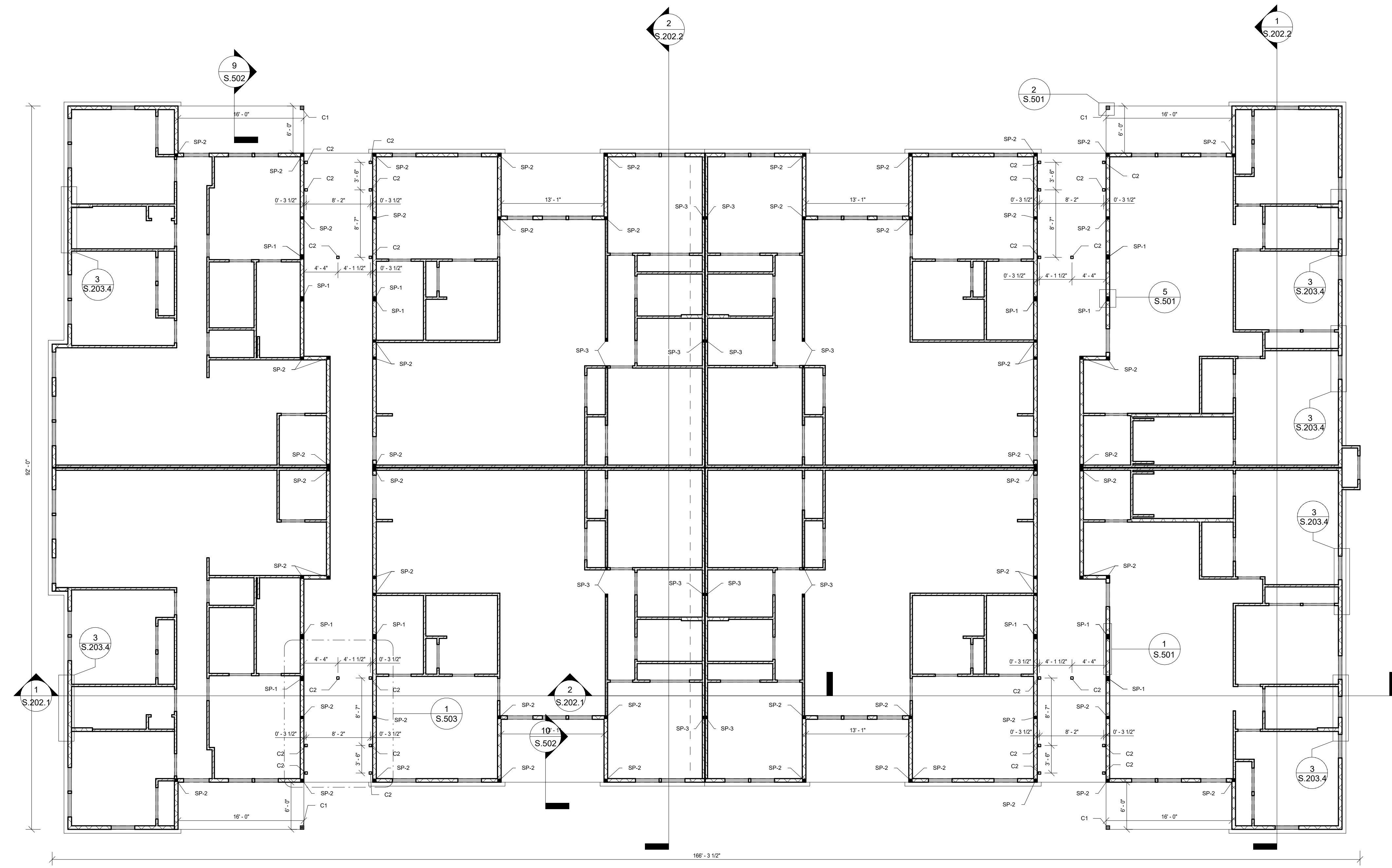
Author: _____
Date: 24.07.17

S.102.1

SHEET №

| MARKS | DRAWING LEGEND | | | | |
|---|--|---|-------------------------------|---|-------------------------------|
|  | W1 2X6 EXTERIOR SHEAR WALL: - 2X6 WOOD STUDS @ 16" O.C. W/ R-19 BATT INSULATION WITH WITH 1-LAYER 1/2" GWB AND WITH 1-LAYER 5/8" PLYWOOD SHEET EXT SIDE | | | | |
|  | W2 2X6 INTERIOR: - 2X6 WOOD STUDS AT 16" O.C. WITH 1-LAYER 1/2" GWB EA. SIDE | | | | |
|  | W3 2X4 INTERIOR: - 2X4 WOOD STUDS AT 16" O.C. WITH 1-LAYER 1/2" GWB EA. SIDE | | | | |
|  | W4 2X4 EXTERIOR SHEAR FIRE WALL: - 2X4 WOOD STUDS @ 16" O.C. W/ R-19 BATT INSULATION W/ 1-LAYER 5/8" TYPE 'X' GWB EXT SIDE AND 1-LAYER 5/8" PLYWOOD SHEET INS SIDE | | | | |
|  | W5 2X4 INTERIOR SHEAR WALL: - 2X4 WOOD STUDS AT 16" O.C. WITH 1-LAYER 1/2" GWB ONE SIDE AND WITH 1-LAYER 5/8" PLYWOOD SHEET OTHER SIDE | | | | |
|  | COLUMN TIMBER - C1 (P.T. 6" X 6" WOOD POST.) | | | | |
|  | COLUMN HSS - C2 (4"X4"X1/2") | | | | |
|  | DOUBLE HEADER FOR DOOR / WINDOW <table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding-right: 10px;"></td> <td>2x4" wood header for 4" walls</td> </tr> <tr> <td></td> <td>2x6" wood header for 6" walls</td> </tr> </table> |  | 2x4" wood header for 4" walls |  | 2x6" wood header for 6" walls |
|  | 2x4" wood header for 4" walls | | | | |
|  | 2x6" wood header for 6" walls | | | | |
| SP-1 | FLUSH PACK OF STUDS FOR STAIRS STRUCTURE - 2"x6" (5) | | | | |
| SP-2 | FLUSH PACK OF STUDS - 2"x6" (3) | | | | |
| SP-3 | FLUSH PACK OF STUDS - 2"x4" (3) | | | | |
| SP-4 | FLUSH PACK OF STUDS - 2"x6" (5) with plywood intercalation | | | | |
| SP-5 | FLUSH PACK OF STUDS - 2"x4" (5) with plywood intercalation | | | | |

| STRUCTURAL COLUMN SCHEDULE LEVEL 1 BUILDING 1 | | |
|--|------------|----------|
| MARKS | PROFILE | QUANTITY |
| C1 | 6" X 6" | 4 |
| C2 | HSS4X4X1/4 | 24 |



1 1ST FLOOR WALL PLAN (BUILDING 1)
1/8" = 1'-0"



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2ND FLOOR FRAMING PLAN

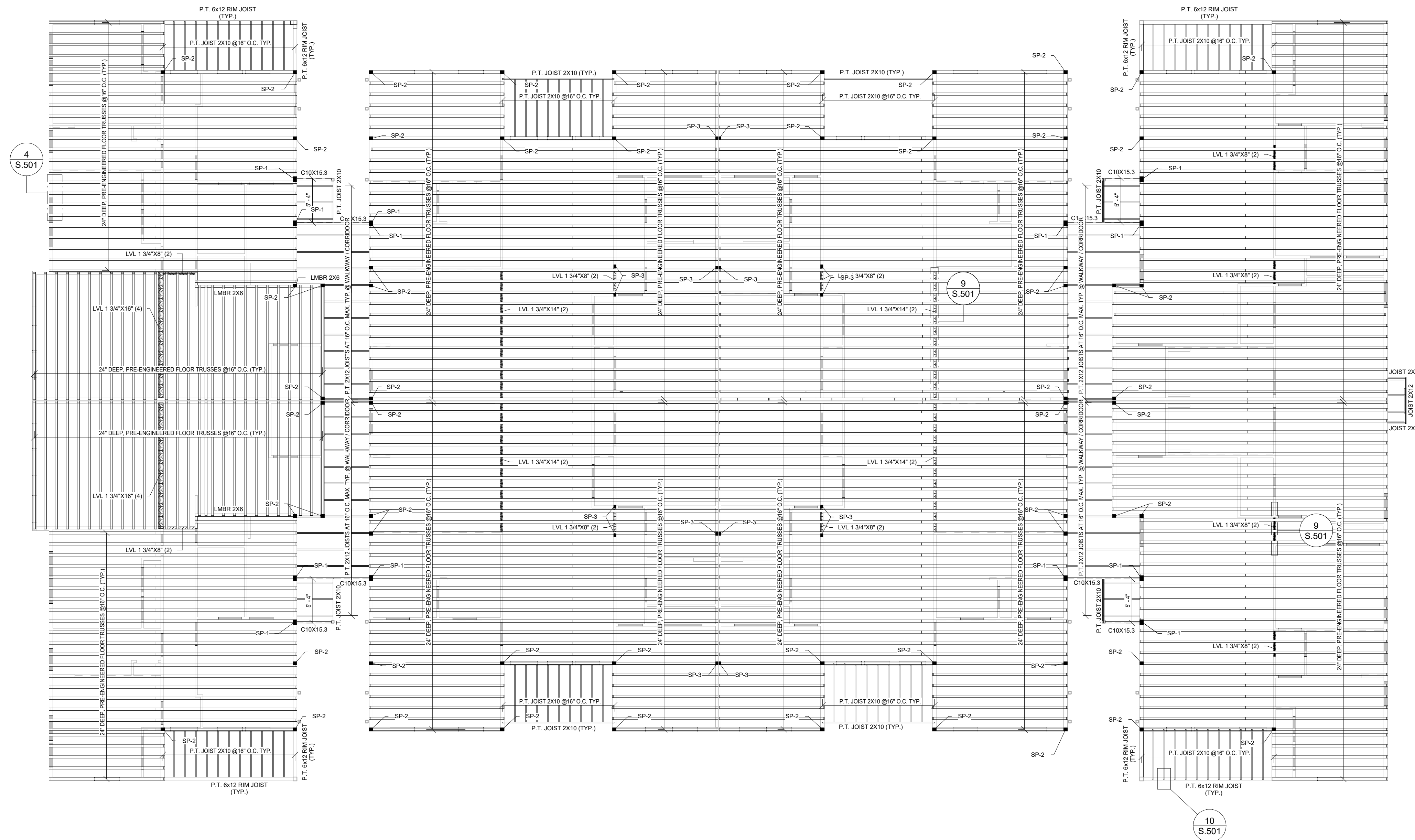
Author: _____
Date: 24.07.17

S.103.1

SHEET №

| MARKS | DRAWING LEGEND | |
|-------|---|-------------------------------|
| | | 2x4" wood header for 4" walls |
| | | 2x6" wood header for 6" walls |
| SP-1 | FLUSH PACK OF STUDS FOR STAIRS STRUCTURE - 2"x6" (5) | |
| SP-2 | FLUSH PACK OF STUDS - 2"x6" (3) | |
| SP-3 | FLUSH PACK OF STUDS - 2"x4" (3) | |
| SP-4 | FLUSH PACK OF STUDS - 2"x6" (5) with plywood intercalation | |
| SP-5 | FLUSH PACK OF STUDS - 2"x4" (5) with plywood intercalation | |

FLOOR TRUSSES SHOULD BE FASTENED USING 2"x4" @10' O.C.



2ND FLOOR FRAMING PLAN (BUILDING
1)
1/8" = 1'-0"



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3RD FLOOR
WALL PLAN

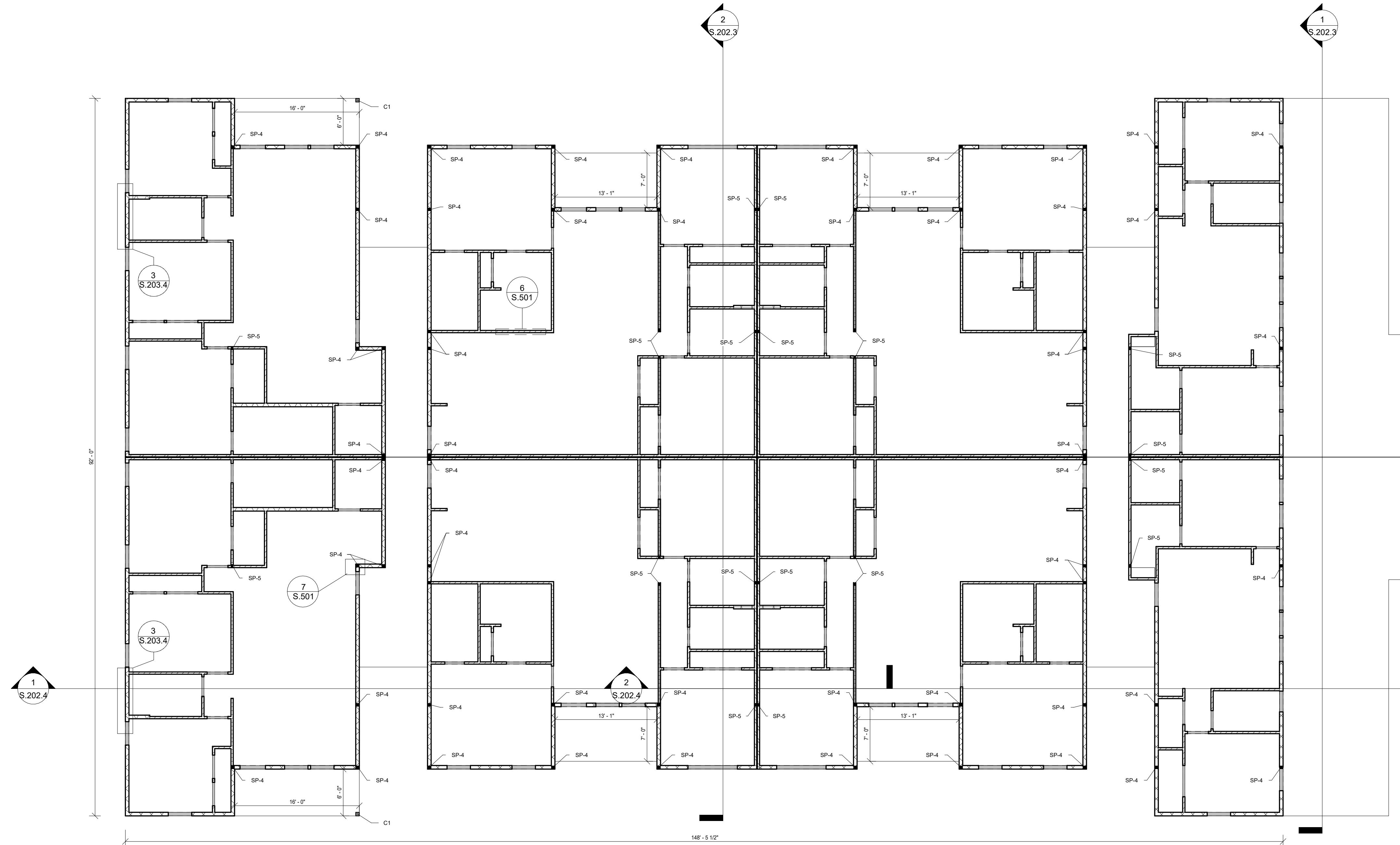
Author: _____
Date: 24.07.17

S.106.2

SHEET №

| MARKS | DRAWING LEGEND | |
|-------|---|-------------------------------|
| | W1 2X6 EXTERIOR SHEAR WALL: - 2X6 WOOD STUDS @ 16" O.C. W/ R-19 BATT INSULATION WITH WITH 1-LAYER 1/2" GWB AND WITH 1-LAYER 5/8" PLYWOOD SHEET EXT SIDE | |
| | W2 2X6 INTERIOR: - 2X6 WOOD STUDS AT 16" O.C. WITH 1-LAYER 1/2" GWB EA. SIDE | |
| | W3 2X4 INTERIOR: - 2X4 WOOD STUDS AT 16" O.C. WITH 1-LAYER 1/2" GWB EA. SIDE | |
| | W4 2X4 EXTERIOR SHEAR FIRE WALL: - 2X4 WOOD STUDS @ 16" O.C. W/ R-19 BATT INSULATION W/ 1-LAYER 5/8" TYPE 'X' GWB EXT SIDE AND 1-LAYER 5/8" PLYWOOD SHEET INS SIDE | |
| | W5 2X4 INTERIOR SHEAR WALL: - 2X4 WOOD STUDS AT 16" O.C. WITH 1-LAYER 1/2" GWB ONE SIDE AND WITH 1-LAYER 5/8" PLYWOOD SHEET OTHER SIDE | |
| | COLUMN TIMBER - C1 (P.T. 6" X 6" WOOD POST.) | |
| | COLUMN HSS - C2 (4"X4"X1/2") | |
| | | 2x4" wood header for 4" walls |
| | | 2x6" wood header for 6" walls |
| SP-1 | FLUSH PACK OF STUDS FOR STAIRS STRUCTURE - 2"x6" (5) | |
| SP-2 | FLUSH PACK OF STUDS - 2"x6" (3) | |
| SP-3 | FLUSH PACK OF STUDS - 2"x4" (3) | |
| SP-4 | FLUSH PACK OF STUDS - 2"x6" (5) with plywood intercalation | |
| SP-5 | FLUSH PACK OF STUDS - 2"x4" (5) with plywood intercalation | |

| STRUCTURAL COLUMN SCHEDULE LEVEL 3 BUILDING 2 | | |
|--|---------|----------|
| MARKS | PROFILE | QUANTITY |
| C1 | 6" X 6" | 2 |



① 3RD FLOOR WALL PLAN (BUILDING 2)
1/8" = 1'-0"



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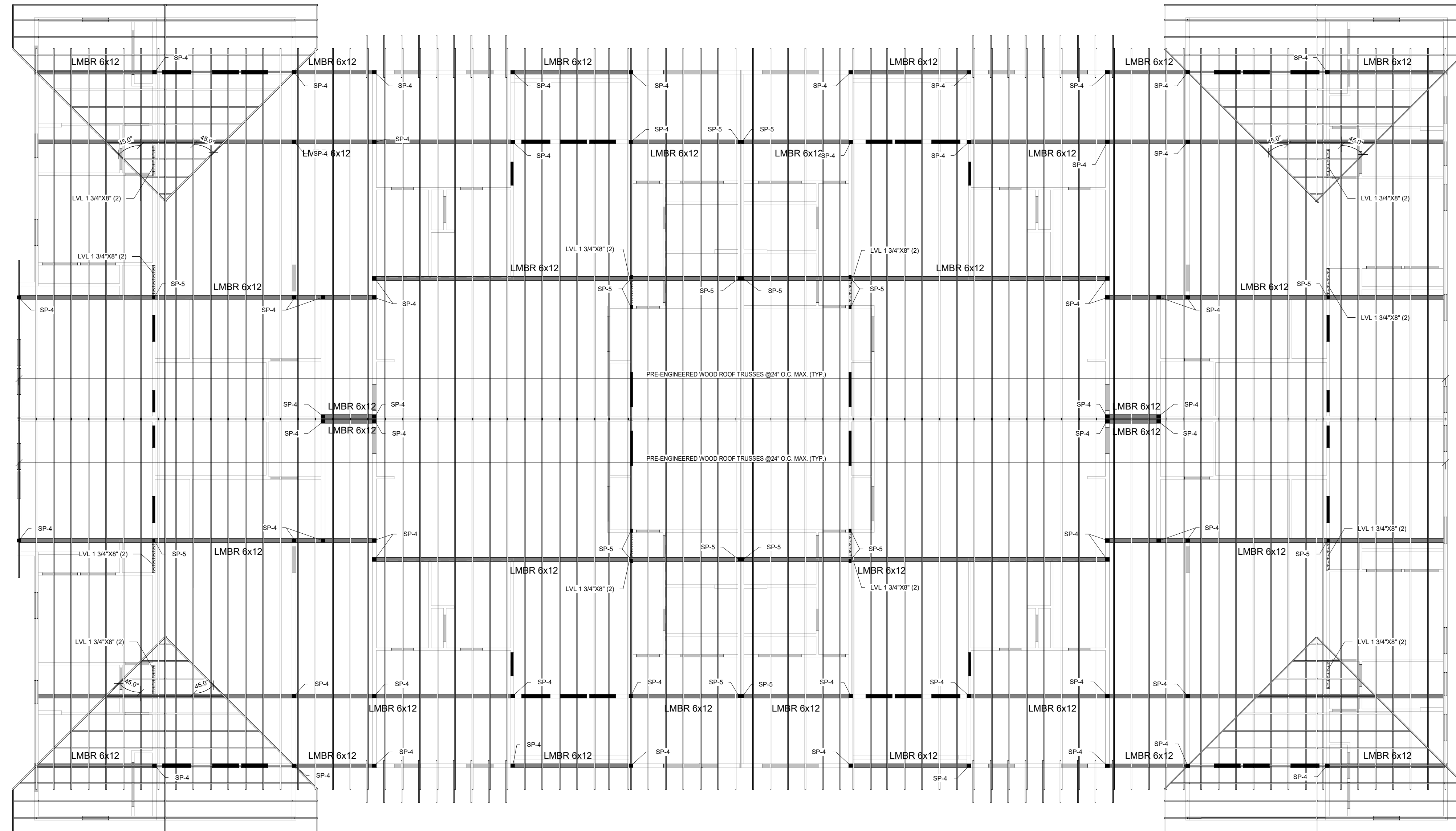
ROOF FRAMING
PLAN

Author: _____
Date: 24.07.17

S.107.1

SHEET №

| MARKS | DRAWING LEGEND | |
|---|---|-------------------------------|
|  |  | 2x4" wood header for 4" walls |
| |  | 2x6" wood header for 6" walls |
| SP-1 | FLUSH PACK OF STUDS FOR STAIRS STRUCTURE - 2"x6" (5) | |
| SP-2 | FLUSH PACK OF STUDS - 2"x6" (3) | |
| SP-3 | FLUSH PACK OF STUDS - 2"x4" (3) | |
| SP-4 | FLUSH PACK OF STUDS - 2"x6" (5) with plywood intercalation | |
| SP-5 | FLUSH PACK OF STUDS - 2"x4" (5) with plywood intercalation | |



1 ROOF FRAMING PLAN (BUILDING 1)
1/8" = 1'-0"



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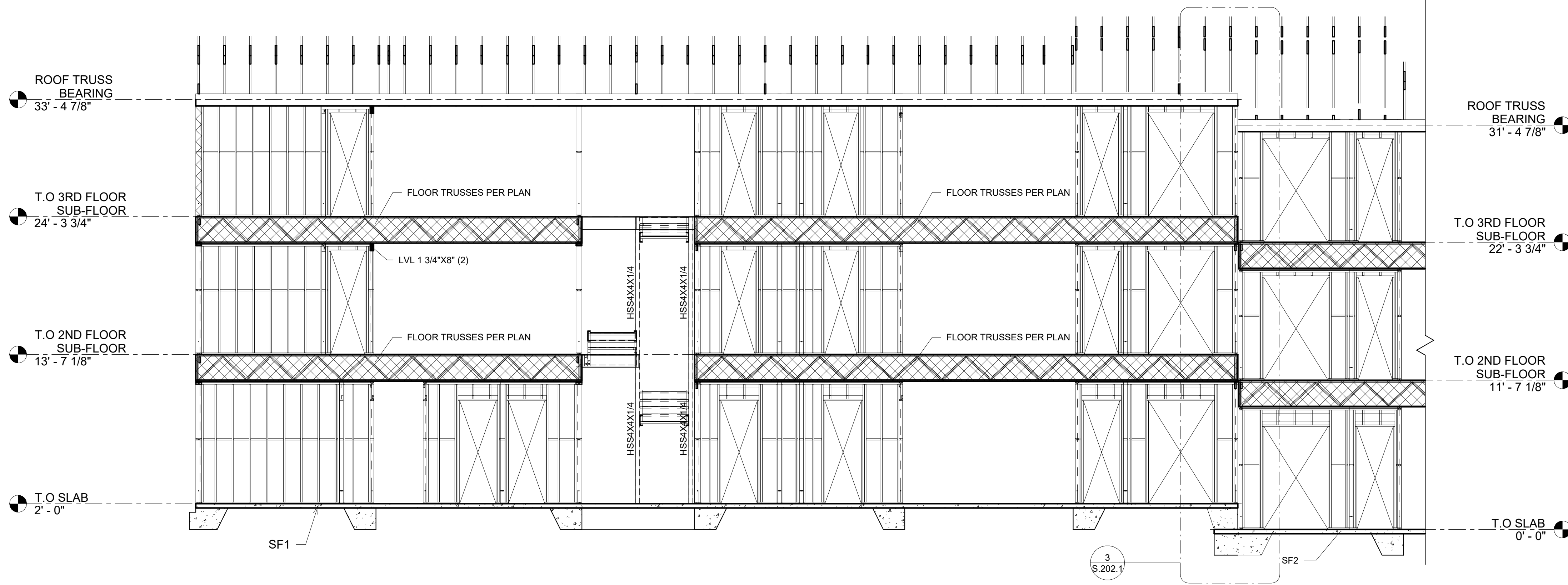
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TALLAHASSEE, FLORIDA

INTERIOR
FRAMING
ELEVATIONS

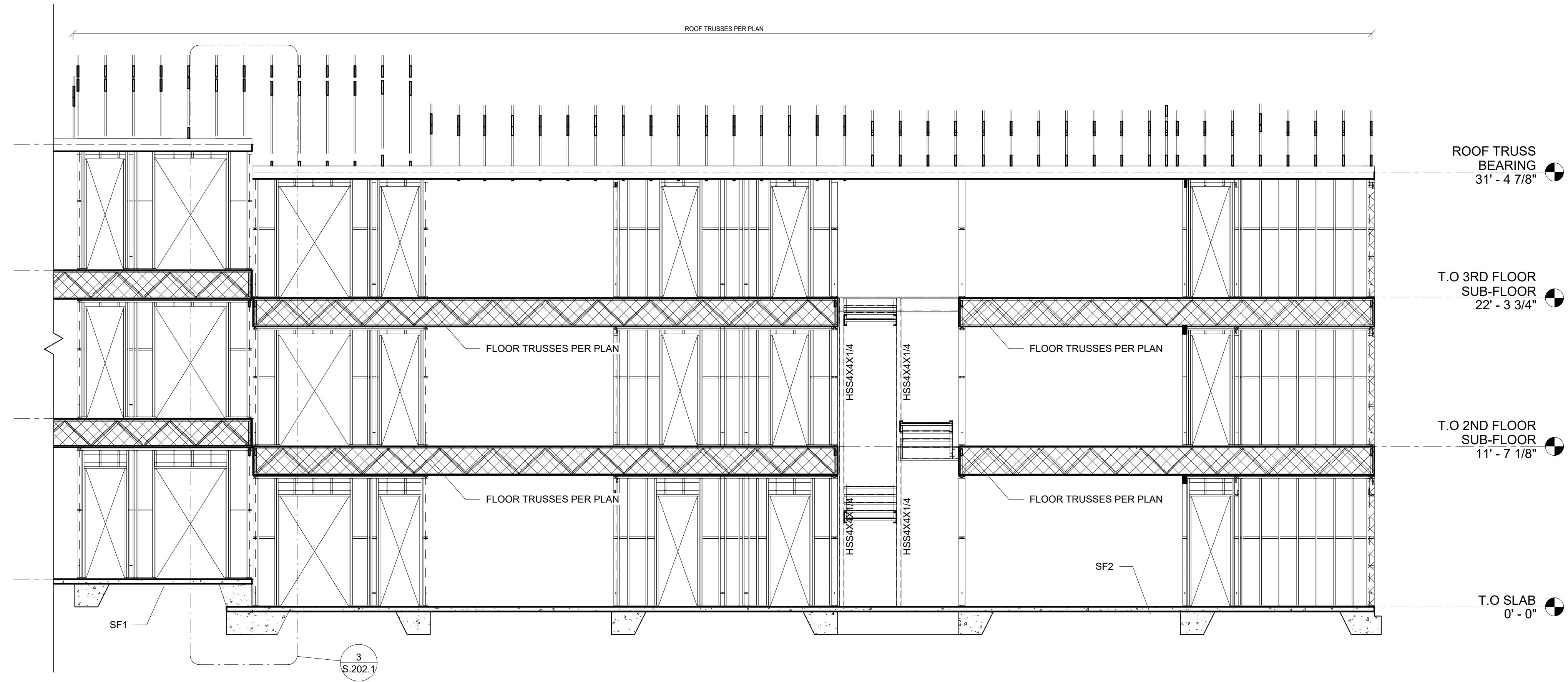
Author: _____
Date: 24.07.17

S.202.1

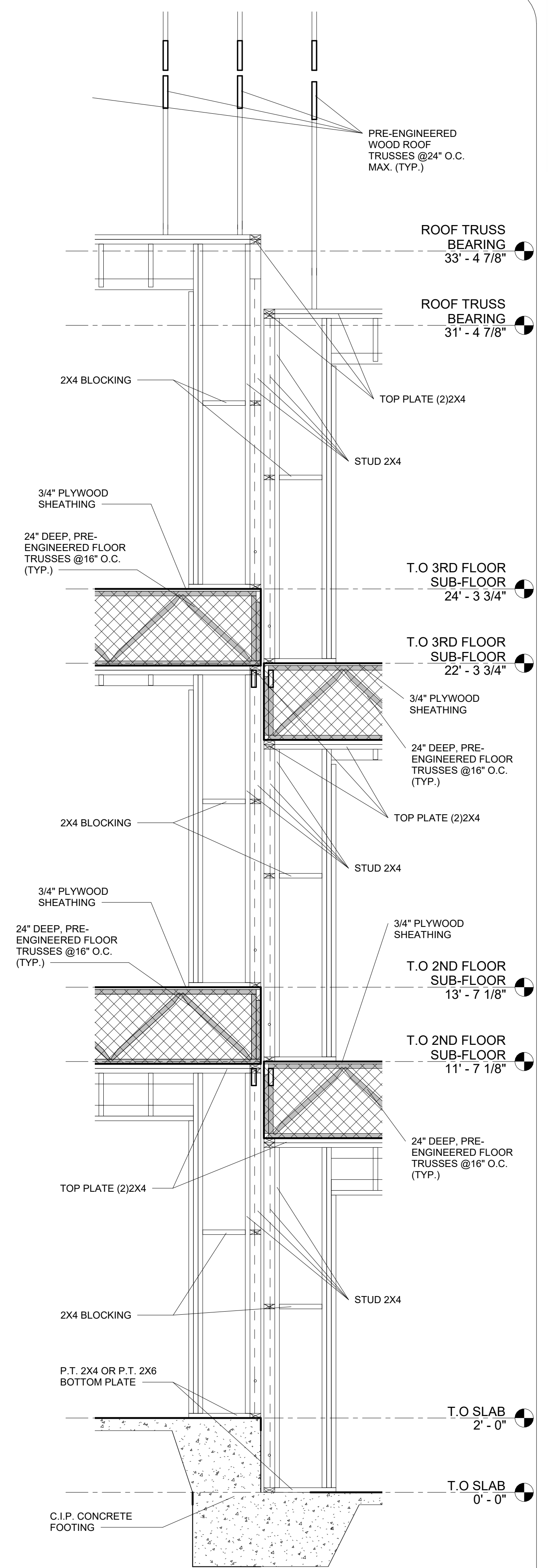
SHEET No



1 INTERIOR FRAMING ELEVATION 1
(BUILDING 1)
3/16" = 1'-0"



2 INTERIOR FRAMING ELEVATION 1.1
(BUILDING 1)
3/16" = 1'-0"



3 WALL SECTION
1/2" = 1'-0"



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EXTERIOR
FRAMING
ELEVATIONS

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S.203.1

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① NORTH (BUILDING 1)
1/8" = 1'-0"



② SOUTH (BUILDING 1)
1/8" = 1'-0"



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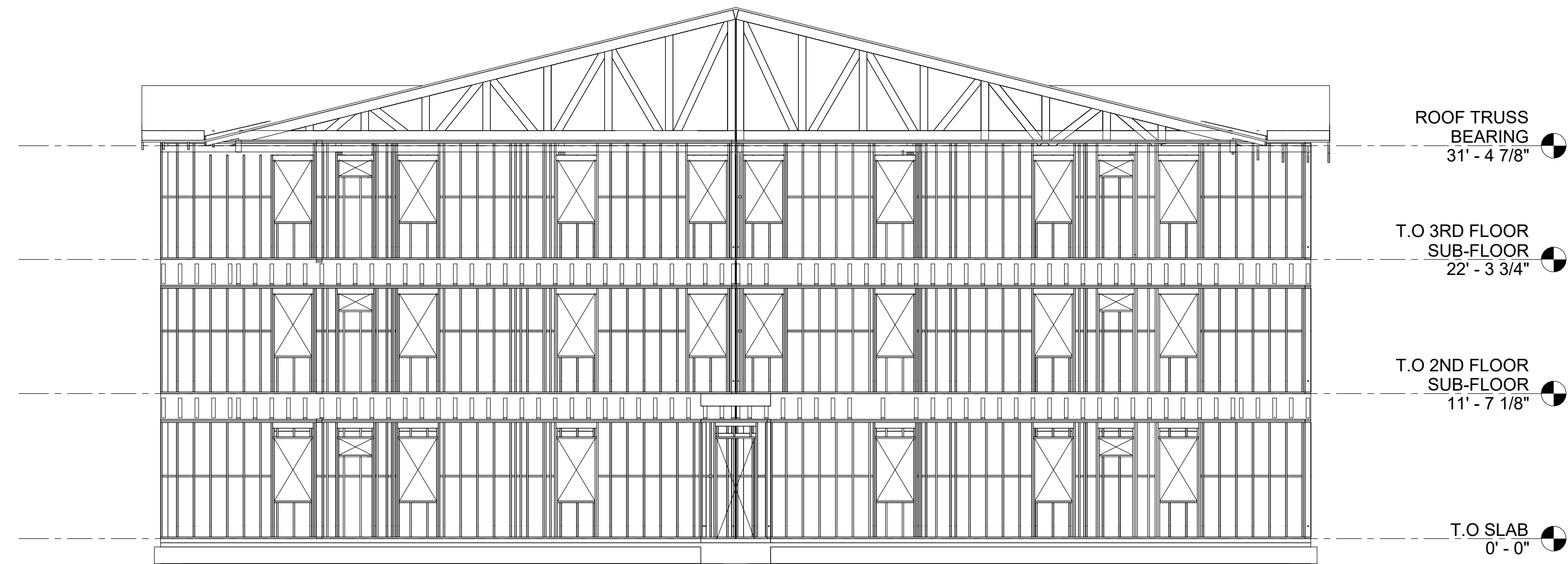
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EXTERIOR
FRAMING
ELEVATIONS

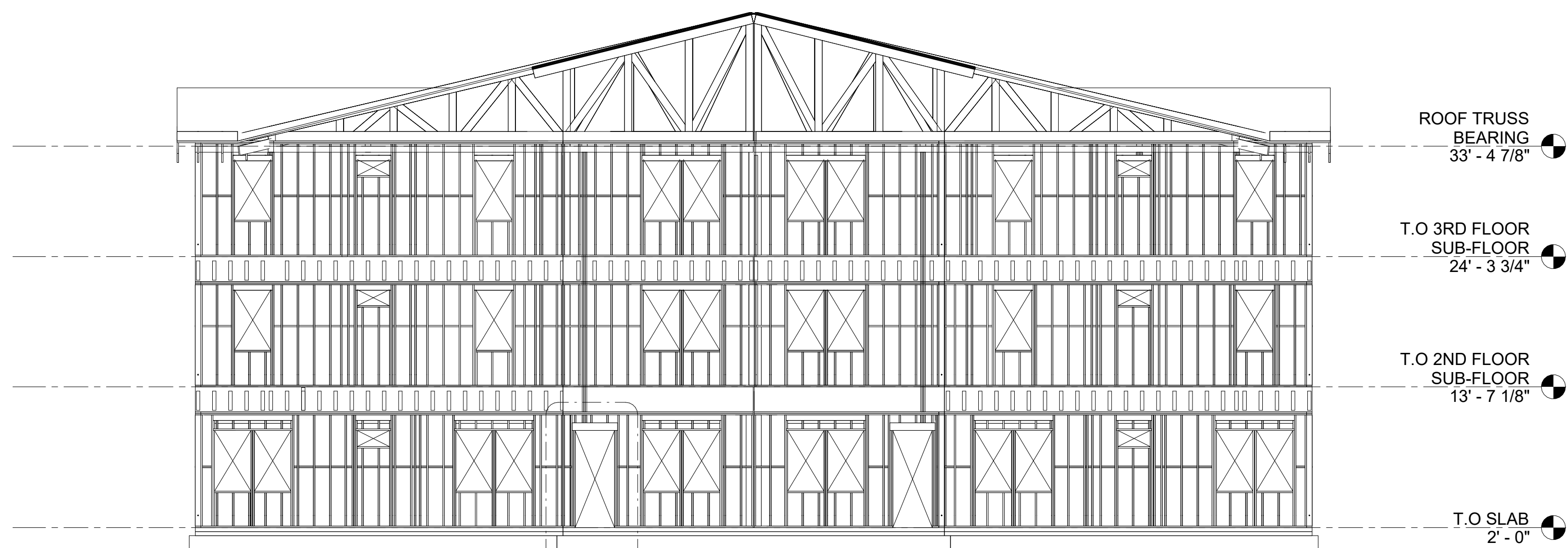
Author: _____
Date: 24.07.17

S.203.2

SHEET №

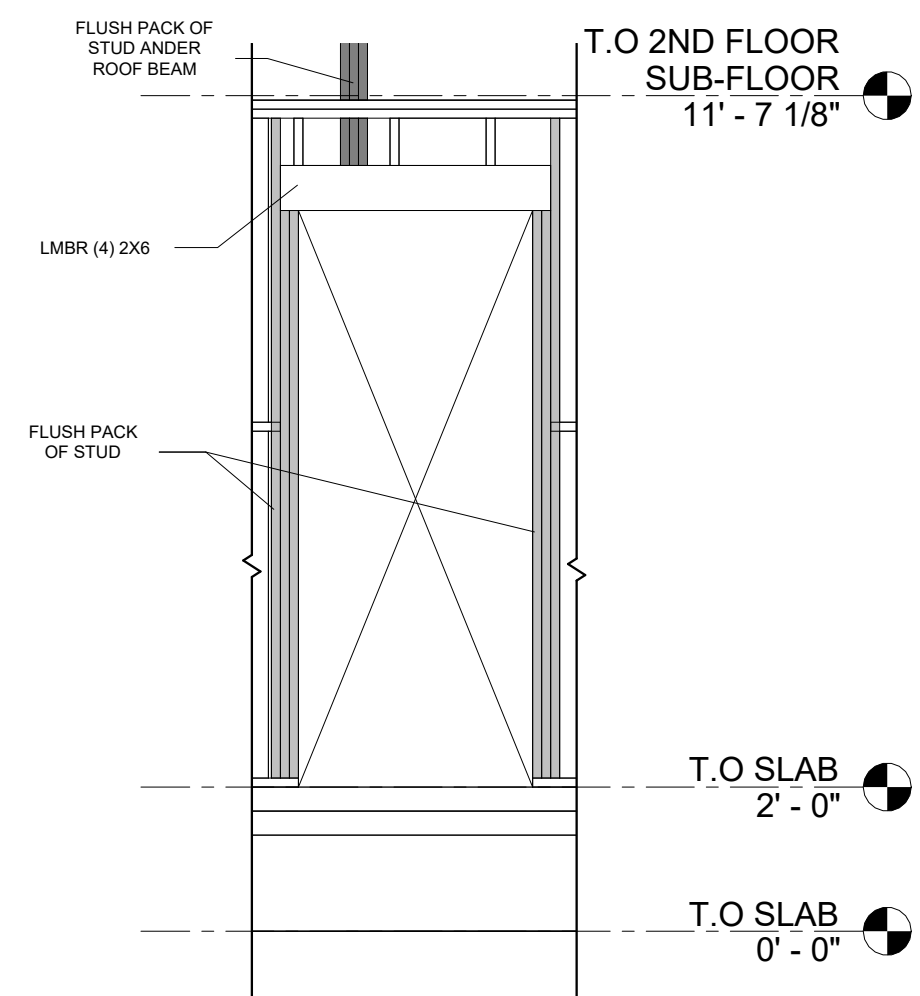


① EAST (BUILDING 1)
1/8" = 1'-0"



② WEST (BUILDING 1)
1/8" = 1'-0"

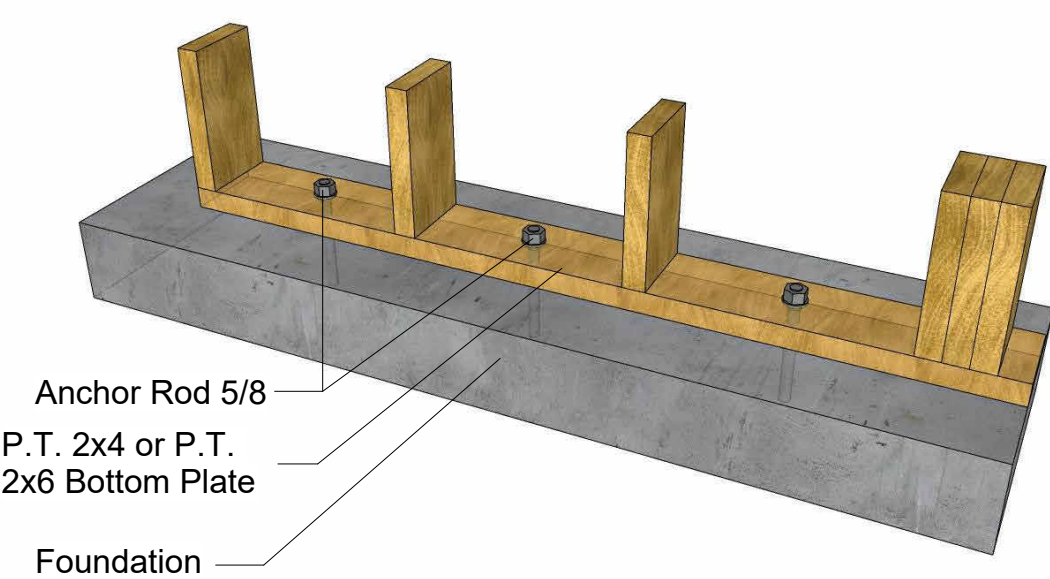
3
S.203.2



LOAD BEARING FRAME FOR ROOF
BEAM 1
③ 3/8" = 1'-0"

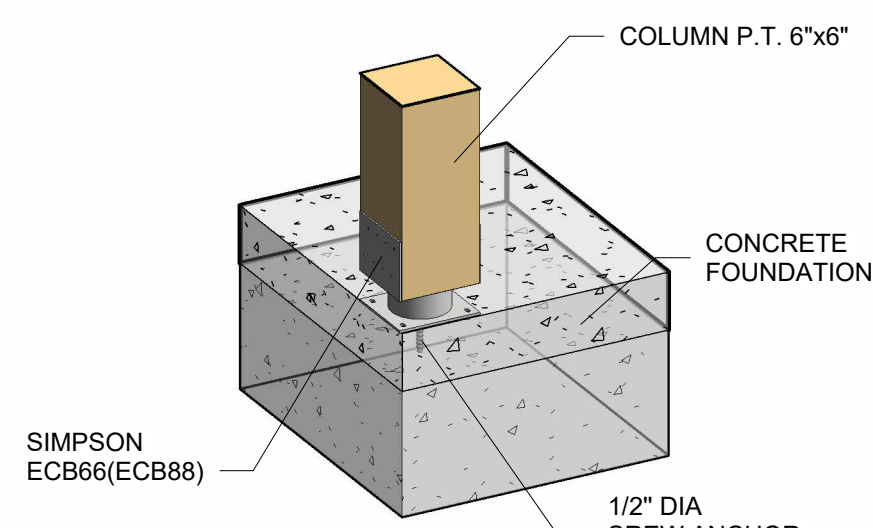
1

Connection of the Bottom Plate to Foundation



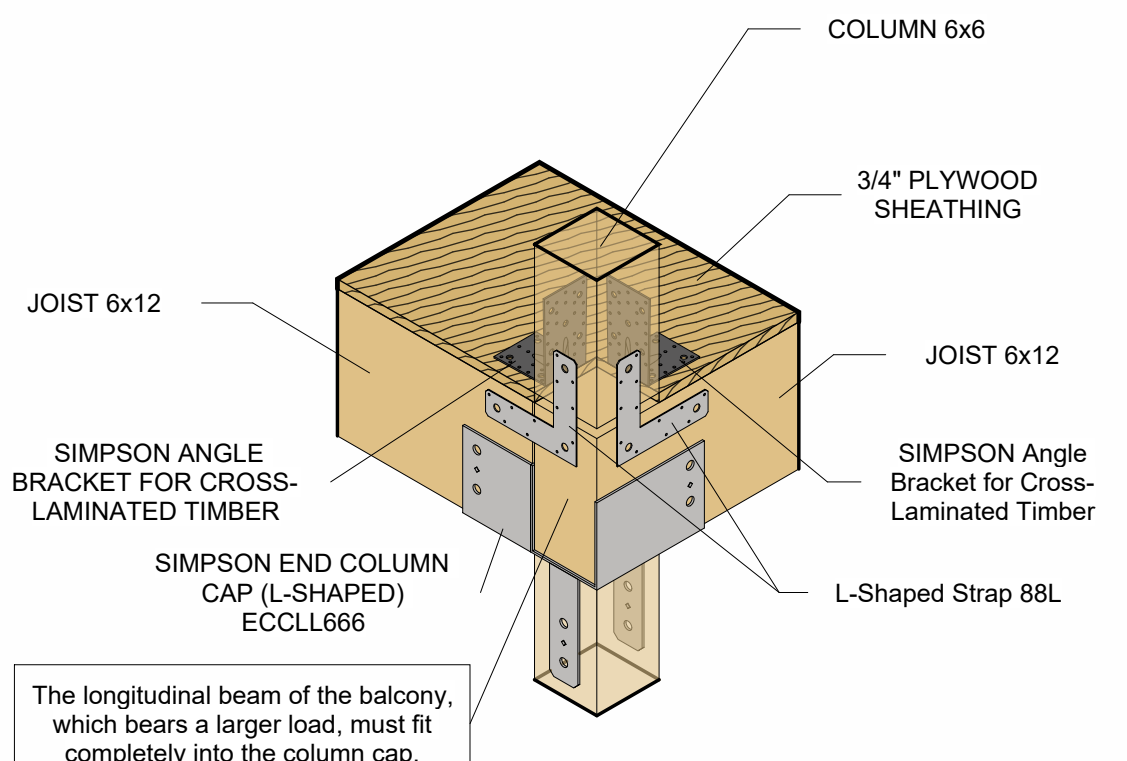
Anchor Rod 5/8
P.T. 2x4 or P.T.
2x6 Bottom Plate
Foundation

2



COLUMN P.T. 6"x6"
CONCRETE FOUNDATION
1/2" DIA
SREW ANCHOR
WINUTS
SIMPSON
ECB66(ECB88)

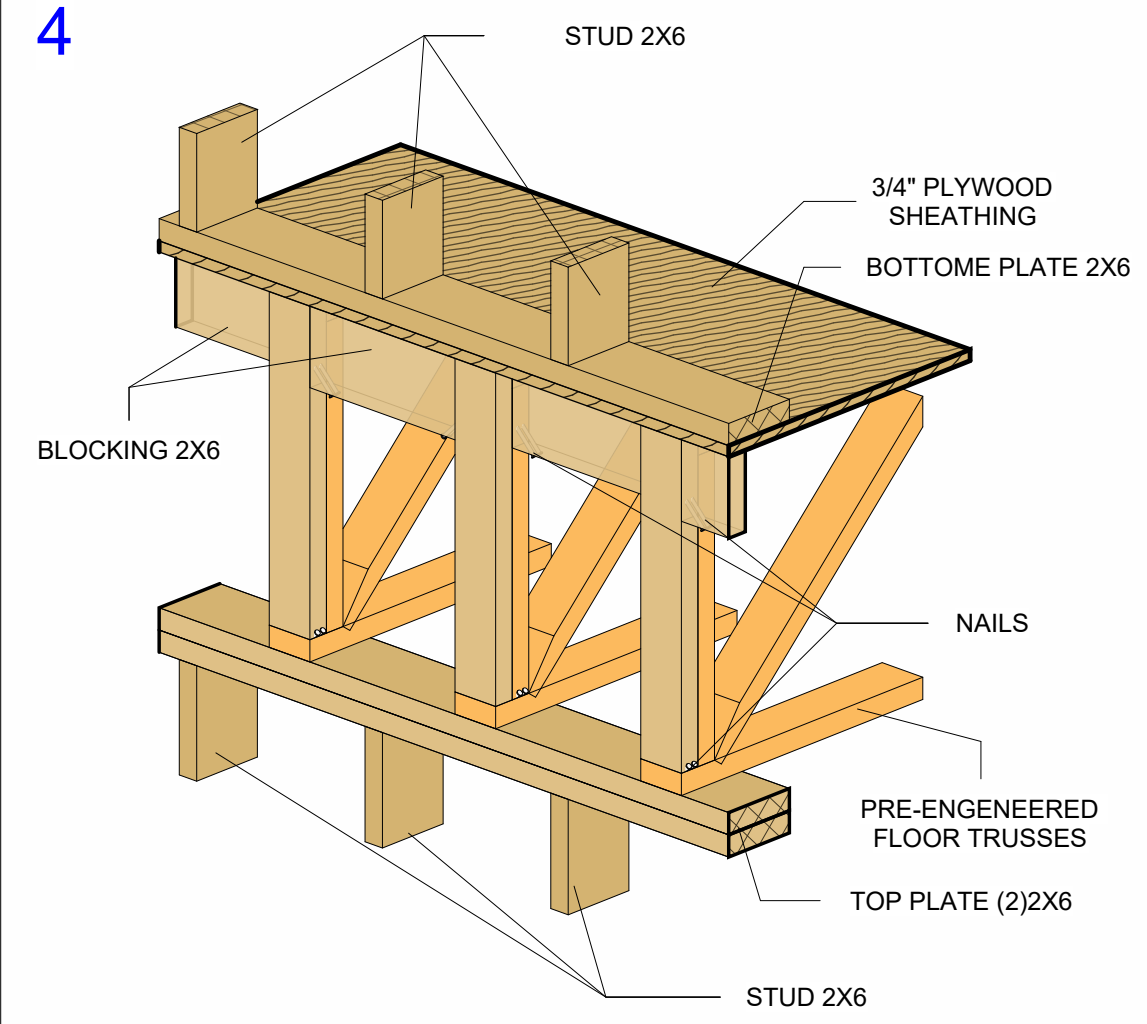
3



COLUMN 6x6
3/4" PLYWOOD
SHEATHING
JOIST 6x12
SIMPSON Angle
Bracket for Cross-
Laminated Timber
L-Shaped Strap 88L
SIMPSON END COLUMN
CAP (L-SHAPED)
ECCL666
JOIST 6x12
SIMPSON ANGLE
BRACKET FOR CROSS-
LAMINATED TIMBER

The longitudinal beam of the balcony,
which bears a larger load, must fit
completely into the column cap.
Fasteners: 10d nails 0.148in. x 3in.

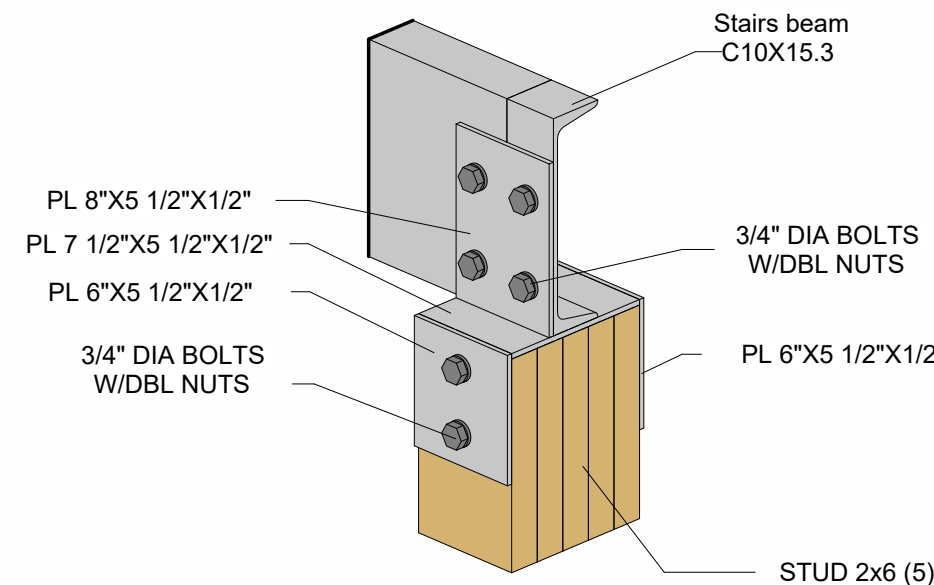
4



STUD 2X6
3/4" PLYWOOD
SHEATHING
BOTTOM PLATE 2X6
BLOCKING 2X6
NAILS
PRE-ENGINEERED
FLOOR TRUSSES
TOP PLATE (2)2X6
STUD 2X6

Fasteners: 10d nails 0.148in. x 3in.

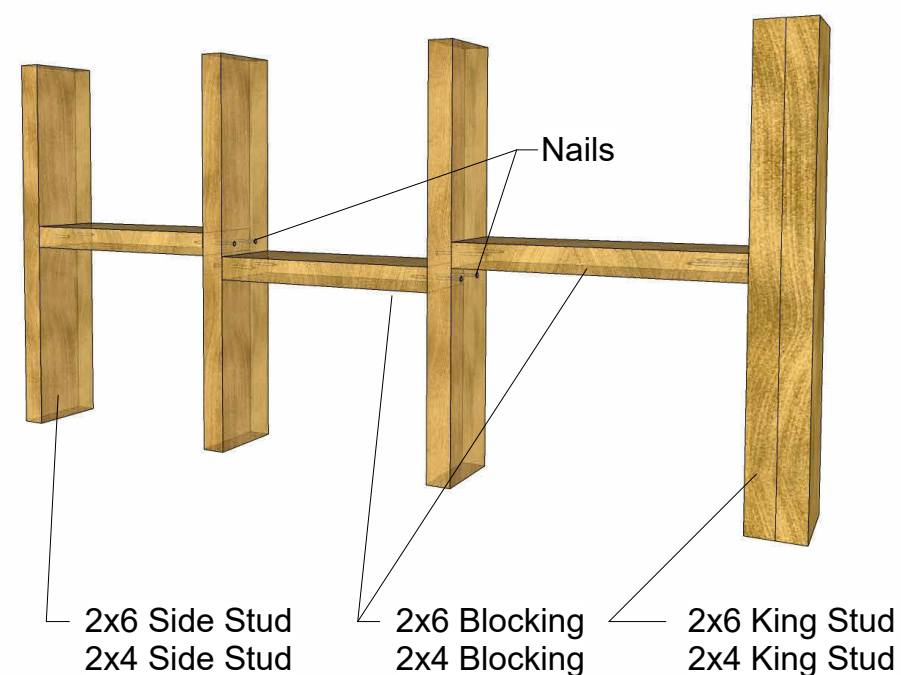
5



Stairs beam
C10X15.3
PL 8"x5 1/2"x1/2"
PL 7 1/2"x5 1/2"x1/2"
PL 6"x5 1/2"x1/2"
3/4" DIA BOLTS
W/DBL NUTS
PL 6"x5 1/2"x1/2"
3/4" DIA BOLTS
W/DBL NUTS
STUD 2x6 (5)

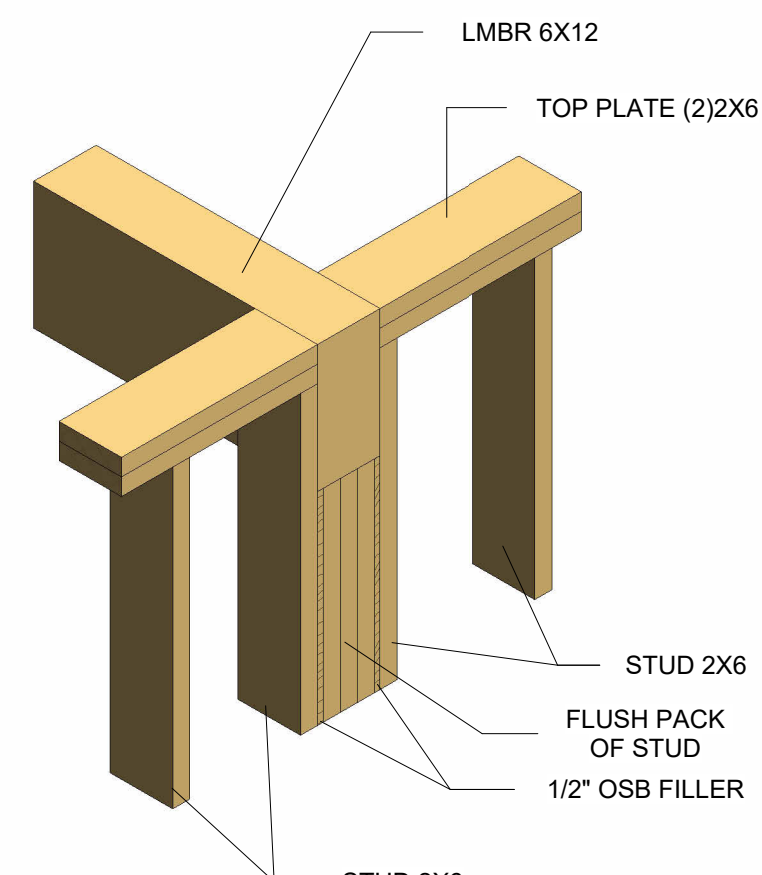
6

Connection of the blockings to studs



Fasteners: 10d nails 0.148in. x 3in.

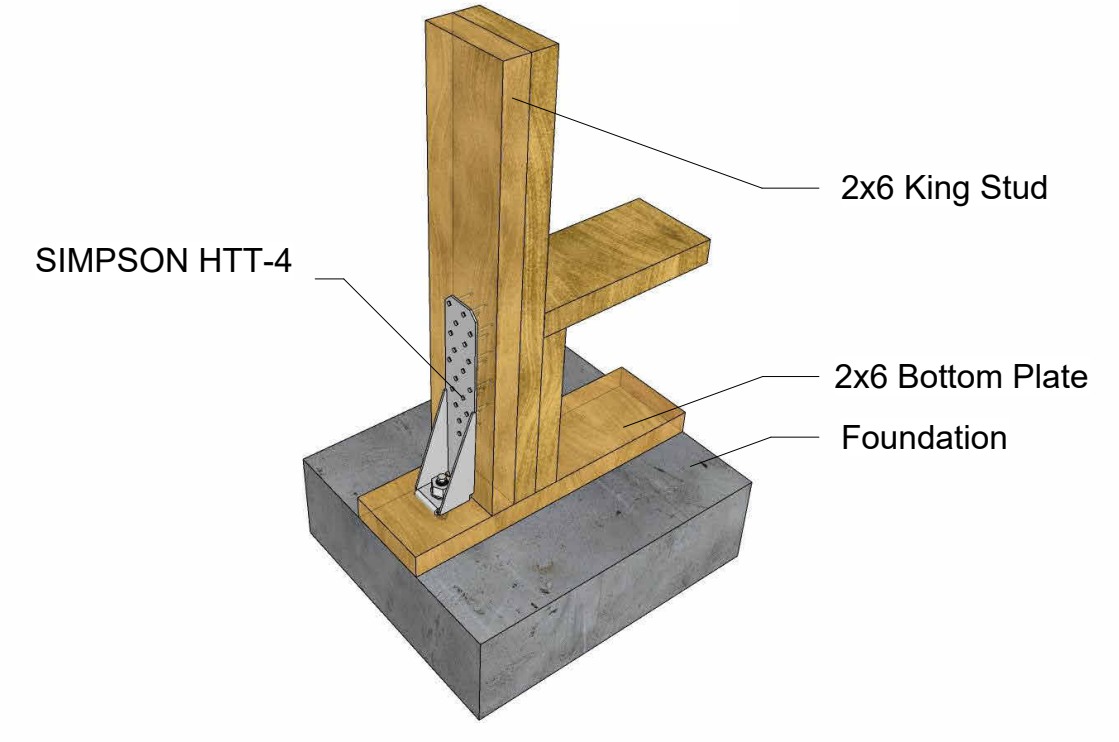
7



LMBR 6X12
TOP PLATE (2)2X6
STUD 2X6
FLUSH PACK
OF STUD
1/2" OSB FILLER
STUD 2X6

8

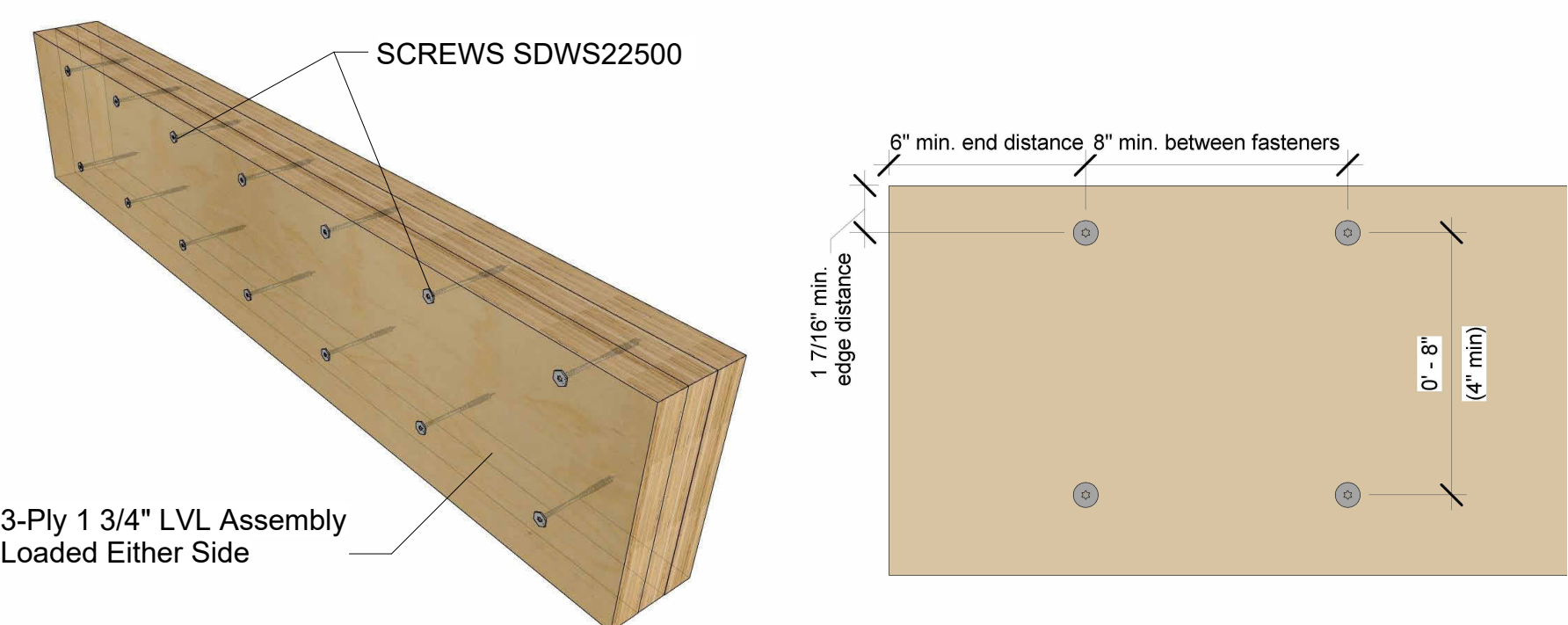
Hold-down connection between Bottom Plate and King Stud



Fasteners: (18) 0.148 x 1 1/2 Nails and Anchor Rod 5/8 or see manufacturer's catalog

9

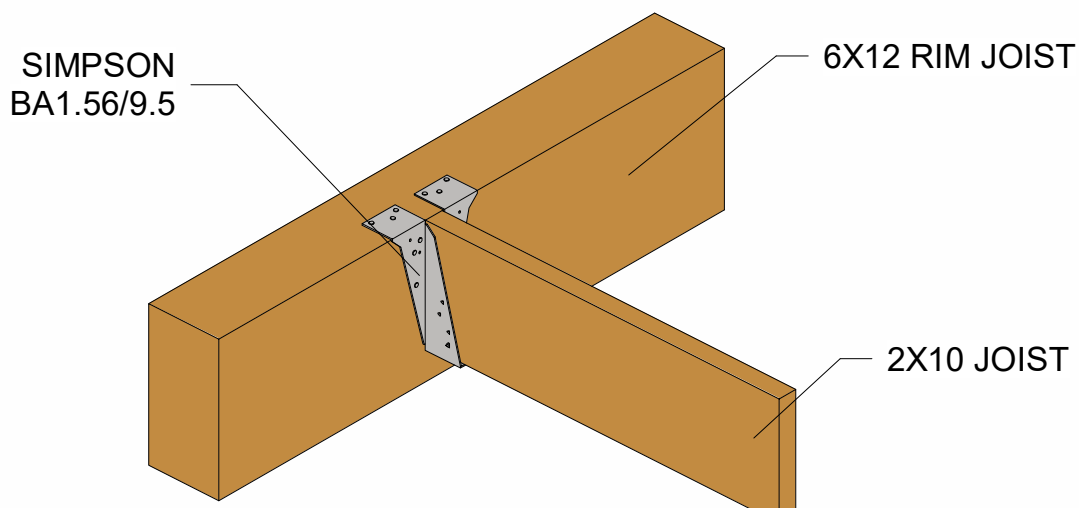
Fixing of multilayer elements (from 2 to 4 elements)



3-Ply 1 3/4" LVL Assembly
Loaded Either Side

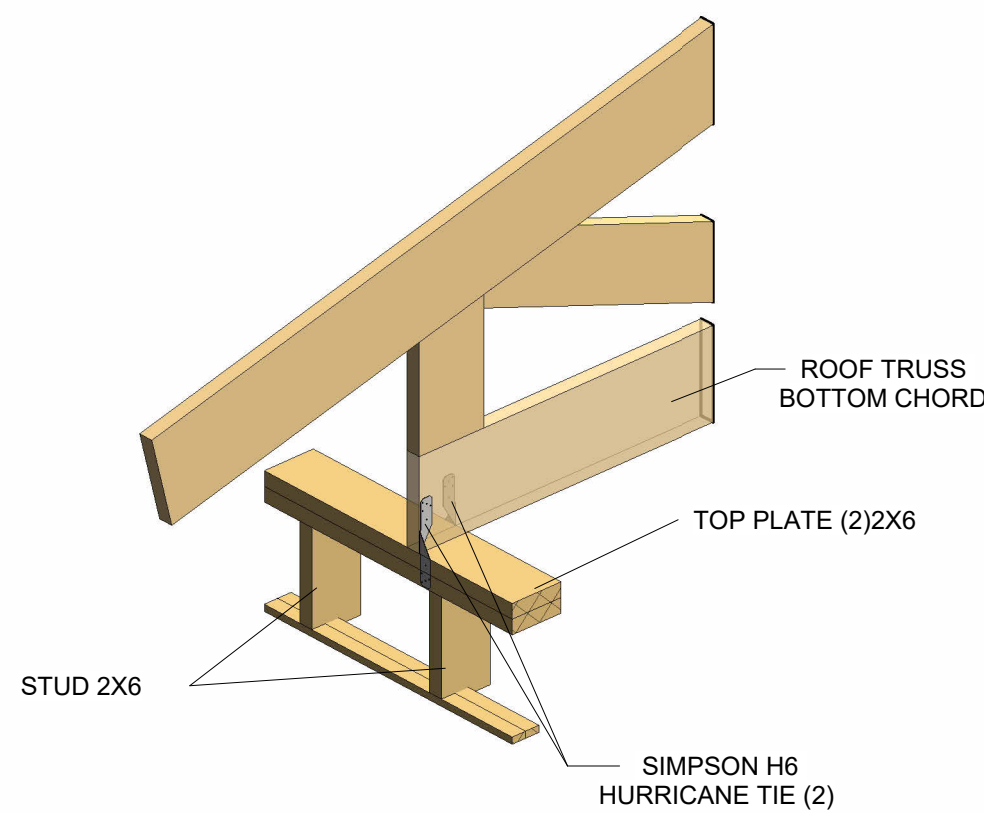
NOTES:
1. For 2-Ply 1 3/4" LVL use SDW22338 crews, For 4-Ply 1 3/4" LVL use SDW22634 screws.
2. Plies must be held together with clamping or other methods before screw installation to reduce gaps.
3. Maximum spacing between screws in a row is 24

10



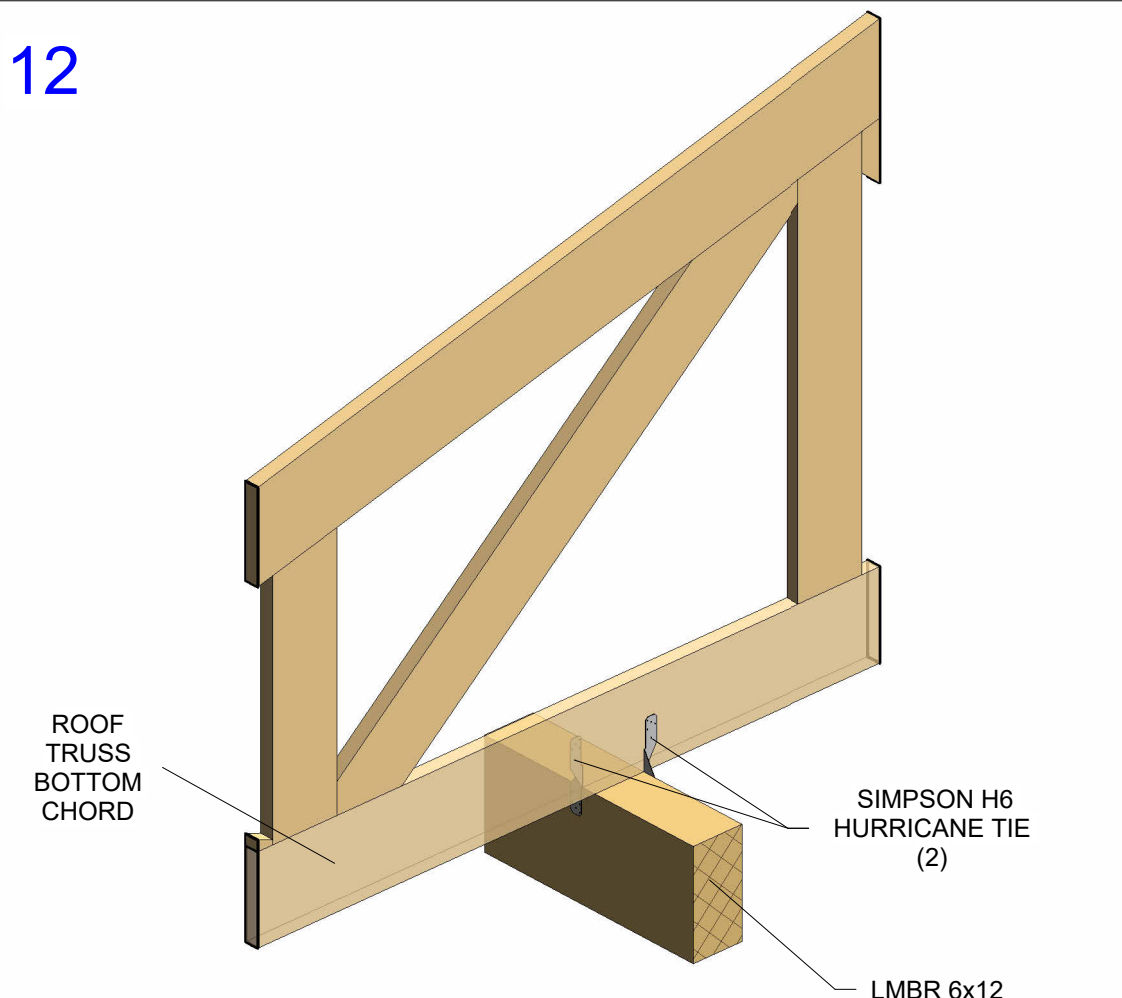
Fasteners: 10d nails 0.148in. x 3in.

11



Fasteners: 10d nails 0.148in. x 2.5in.

12



Fasteners: 10d nails 0.148in. x 2.5in.



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TYPICAL
CONSTRUCTION
DETAILS

Author
Date: 24.07.17

S.501

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