INDEX OF DRAWINGS

ARCHITECTURAL

STRUCTURAL

SCOPE OF WORK

THE SCOPE OF WORK TO INCLUDE CONSTRUCTION OF A NEW 2671 SQUARE FOOT SINGLE FAMILY HOME PER THESE DRAWINGS. BASEMENT TO REMAIN UN-FINISHED.

GENERAL NOTES

ALL CONSTRICTION SHALL BE IN ACCORDANCE WITH:

2015 IGC RESIDENTIAL CODE (IRC) W/ AMENDMENTS
2014 NEC NATIONAL ELECTRICAL CODE
2015 IGC INTERNATIONAL PLUMBING CODE (IPC) WITH AMENDMENTS
2015 IGC INTERNATIONAL MECHANICAL CODE (AS REFERRED BY THE IBC 2015)

1. CONTRACTOR SHALL OBTAIN A BUILDING PERMIT FOR THE CONSTRUCTION OF THE SPACE, SUB-CONTRACTORS SHALL OBTAIN REQUIRED TRADE PERMITS PRIOR TO COMMENCING WORK AT THE SITE AND PROVIDE COPIES OF ALL PERMITS TO THE GENERAL CONTRACTOR

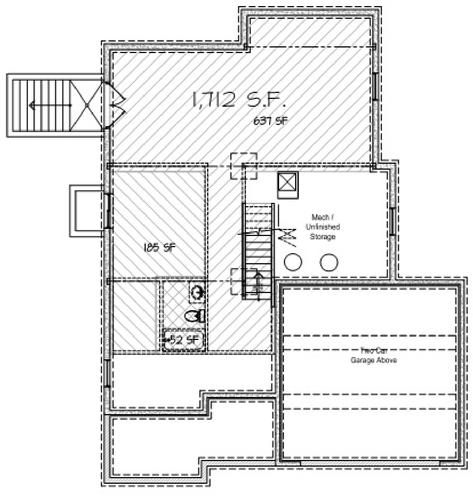
2. CONTRACTOR AND SUB-CONTRACTOR SHALL VISIT THE SITE PRIOR TO COMMENCING CONSTRUCTION AND FIELD VERIFY CONDITIONS. SHOULD DISCREPANCIES EXIST BETWEEN FIELD CONDITIONS AND REPRESENTATIONS SHOWN ON DRAWINGS, CONTRACTOR SHALL RESOLVE ISSUES AND REPORT AND NECESSARY CHANGES TO THE ARCHITECT PRIOR TO BIDDING AND CONSTRUCTION

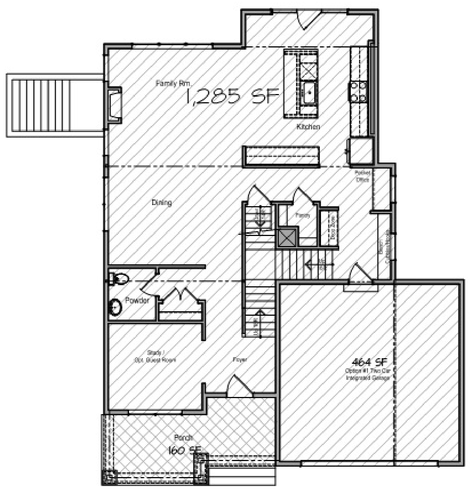
3. CONTRACTOR SOLELY RESPONSIBLE FOR JOB SAFETY ON THE JOB SITE DURING CONSTRUCTION, CONTRACTOR TO ABIDE BY ALL INDUSTRY REGULATIONS INCLUDING MOSHA AND OSHA REQUIREMENTS

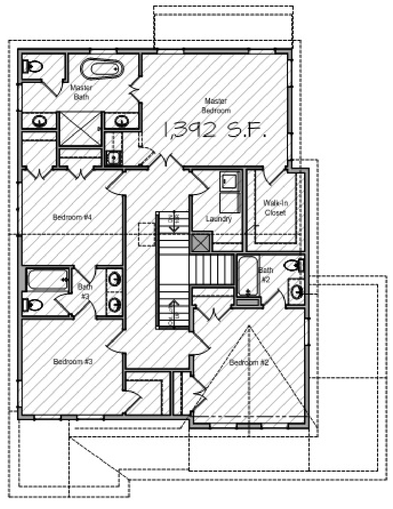
4. DIMENSIONS ARE FROM FINISH FACE OF EXISTING WALL TO FACE OF STUD OF NEW CONSTRUCTION

BUILDING REQUIREMENTS:

1. FIRE-STOPPING TO BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS BOTH VERTICALLY AND HORIZONTALLY. FIRE-STOPPING TO CONSIST OF NOMINAL 2X LUMBER, OR 2 LAYERS OF PLYWOOD OR 1X MATERIAL. INTEGRITY OF ALL FIRE-STOPS TO BE MAINTAINED.
2. DRAFT-STOPPING TO BE PROVIDED IN ALL FLOOR/CEILING ASSEMBLIES WHEN CEILING IS SUSPENDED OR FLOOR IS OPEN STYLE TRUSSES. DRAFT-STOPPING TO CONSIST OF 1/2" GYP. BOARD OR 3/8" PLYWOOD.
3. PROVIDE CONT. RIDGE VENT AND SOFFIT VENTS FOR ALL ROOF AREAS INSTALLED PER MFGRS RECOMMENDATIONS AND SPECIFICATIONS.
4. COMBINATION CO/SMOKE DETECTORS SHALL BE HARD-WIRED AND INTERCONNECTED AND INSTALLED INSIDE EACH SLEEPING AREA AND HALLWAY BETWEEN SLEEPING AREAS AND ON EACH ADDITIONAL STORY OF HABITABLE SPACE. PRIMARY POWER FROM THE BUILDING WIRING WITH BATTERY BACK-UP PER NFPA 72. SEE IRC 2015 FOR FURTHER DETAILS
5. WATER RESISTANT GYPSUM BOARD TO BE PROVIDED IN ALL BATHROOMS. NO VAPOR BARRIER IS PERMITTED. USE 1/2" CEMENTITIOUS BACKER BOARD AT ALL WET SHOWER AND TUB LOCATIONS WHERE TILE IS APPLIED WITH APPROVED WATERPROOFING MEMBRANE.
6. PROVIDE ARTIFICIAL LIGHT AND VENTILATION IN ALL BATHS WHEN WINDOWS ARE OMITTED. PROVIDE EXHAUST FAN DIRECTLY TO THE EXTERIOR. VENTILATION REQUIRED IS 5 AC/HR. ARTIFICIAL LIGHT REQUIRED IS 6 FOOT CANDLES AT 30" ABOVE FINISHED FLOOR.
7. PROVIDE TEMPERED GLASS AT ALL HAZARDOUS LOCATIONS. PER IRC 2015 308.4.
8. SKYLIGHTS TO BE LAMINATED GLASS OR TEMPERED WITH RETAINING SCREENS PER I.R.C. SECTION 308.6.3 WHEN SKYLIGHT IN 12' ABOVE FINISH FLOOR.
9. GARAGE TO BE SEPARATED FROM DWELLING WITH A MIN. OF 1/2" GYP. BD. ON THE GARAGE SIDE OF ALL WALLS AND 5/8" TYPE X GYP. BD. ON ALL GARAGE CEILINGS BELOW HABITABLE SPACE.
10. DOOR FROM GARAGE TO HOUSE TO BE 1 3/8" MIN. INSULATED METAL DOOR WITH SELF-CLOSING HINGE.
11. PROVIDE LANDINGS AT EXTERIOR DOORS PER IRC R311.4.3
12. STAIR RISERS TO BE 7 3/4" MAX. AND TREADS TO BE 10" MIN.
13. PROVIDE 1/2" GYPSUM BOARD UNDER STAIRS WHERE SPACE IS FINISHED, ENCLOSED, AND ACCESSIBLE.
14. PROVIDE HANDRAILS FOR ALL STAIRS. RAILINGS ON OPEN SIDE OF STAIRS MUST BE 34" HIGH MEASURED FROM THE TIP OF THE NOSING WITH INTERMEDIATE RAILS WHICH WILL NOT ALLOW THE PASSAGE OF A 4" SPHERE TO BE CONSIDERED HANDRAILS/GUARDRAILS. HANDRAILS TO BE GRASPABLE PER R311.5.6.3
15. PROVIDE 36" HIGH GUARDRAILS FOR ALL RAISED SURFACES LOCATED MORE THAN 30" ABOVE THE FINISHED FLOOR OR GRADE BELOW. RAILS TO HAVE INTERMEDIATE RAILS WHICH WILL NOT ALLOW THE PASSAGE OF A 4" SPHERE. GUARDRAILS SHALL BE ABLE TO RESIST A 200# LOAD APPLIED AT ANY POINT ALONG RAIL PER TABLE R301.5
16. STAIR, LANDING AND CORRIDOR MUST HAVE MINIMUM 3'-0" WIDTH.
17. PROVIDE ILLUMINATION AT ALL INTERIOR STAIRS WITH SWITCHES AT EACH LEVEL ACCESSED BY STAIRS. PROVIDE ILLUMINATION AT EXTERIOR STAIRS PER IRC R303.6
18. PROVIDE EGRESS WINDOWS FROM ALL BEDROOMS WITH A NET CLEAR OPENING OF 5.7 SQ.FT. EXCEPT GRADE FLOOR WINDOWS MAY HAVE A CLEAR OPENING OF 5.0 SQ.FT.. SILL HEIGHT= MAX. 44", WINDOW CLEAR WIDTH = 20" MIN. , WINDOW CLEAR HEIGHT=24" MIN.
19. ALL WINDOW OPENINGS MORE THAN 6' ABOVE GRADE OR SURFACE BELOW SHALL BE A MIN. OF 24" ABOVE FINISHED FLOOR INSIDE.
20. EXPOSED INSULATION BATTS SHALL HAVE A FLAME SPREAD INDEX NOT TO EXCEED 25 AND SMOKE DEVELOPMENT INDEX NOT TO EXCEED 450. CELLULOSE LOOSE FILL INSULATION SHALL HAVE A SMOKE DEVELOPMENT INDEX OF NOT MORE THAN 450. ATTIC INSULATION TO HAVE A CRITICAL RADIANT FLUX OF AT LEAST 12 WATT PER SQUARE CENTIMETER.
21. PROVIDE 22" X 30" MIN. ATTIC ACCESS HOLE FOR ALL TRUSSED SPACES WITH MORE THAN 30" CLEAR HEIGHT. CUT ACCESS HOLES FROM EXISTING ATTIC SPACES INTO NEW ATTIC SPACE.
22. HVAC DESIGN AND SPECIFICATIONS TO BE IN ACCORDANCE WITH 2015 INTERNATIONAL MECHANICAL CODE AND 2015 INTERNATIONAL ENERGY CONSERVATION CODE. ALL HVAC TO BE HIGH EFFICIENCY CARRIER EQUIPMENT OR APPROVED EQUAL.
23. PLUMBING TO BE DONE UNDER A SEPARATE PERMIT BY A PLUMBER REGISTERED IN THE STATE OF MARYLAND. ALL PLUMBING TO BE IN ACCORDANCE WITH COMAR SECTION 9.20 , 2015 INTERNATIONAL PLUMBING CODE AND THE LOCAL W.S.S.C. AMENDMENTS.
24. ELECTRIC TO BE DONE UNDER A SEPARATE PERMIT. ALL ELECTRICAL WORK TO BE IN ACCORDANCE WITH THE2014 NEC NATIONAL ELECTRICAL CODE AND LOCAL AMMENDMENTS
25. PROVIDE GROUNDING ROD FOR ELECTRIC SERVICE PER REQUIREMENTS OF PEPCO.
26. ALL WHIRLPOOLS INSTALLED TO HAVE SUCTION RELEASE PER IRC SECTION AG108
27. PROVIDE CHEMICAL TERMITICIDE SOIL TREATMENT PER MANUFACTURER'S INSTRUCTIONS
28. ALL WORK TO BE DONE IN ACCORDANCE WITH MFGRS RECOMMENDATIONS AND SPECIFICATIONS.
29. FLOORS & WALLS TO BE FINISHED PER OWNER SELECTIONS - ALL MATERIALS INSTALLED PER MFGRS'. SPECIFICATIONS. NON-ABSORBTIVE SURFACES PROVIDED IN BATHROOM.
30. PROVIDE METAL FLASHING AT ALL WINDOWS, DOOR, AND ROOF INTERSECTIONS PER MANUFACTURERS SPECIFICATIONS & RECOMMENDATIONS.
31. PROVIDE RADON PROTECTION CONSISTENT W/ I.R.C. APPENDIX F AND LOCAL AMENDMENTS.
32. SLOPE FINISH GRADE AWAY FROM HOUSE MIN. 6" IN THE FIRST 10'. GRADE SHALL BE A MIN. OF 6" BELOW TO OF CONCRETE / MASONRY WALLS.
33. FACTORY BUILT FIREPLACES AND CHIMNEYS TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. ALL FACTORY BUILT APPLIANCES MUST COMPLY WITH I.R.C. SECTION R1004 & R1005.
34. PROVIDE FIRE SPRINKLERS THROUGHOUT HOUSE IN ACCORDANCE WITH N.F.P.A. 13R. SUB-CONTRACTOR TO PROVIDE SHOP DRAWINGS TO LOCAL FIRE MARSHAL FOR APPROVAL PRIOR TO INSTALLATION.







New Home

[redacted]

New Home

[redacted]

DESIGNED:	-
DRAWN:	-
CHECKED:	-
APPROVED:	-
JOB #:	-

REVISIONS:	DATE:
ISSUED FOR CONSTR.	3/27/17

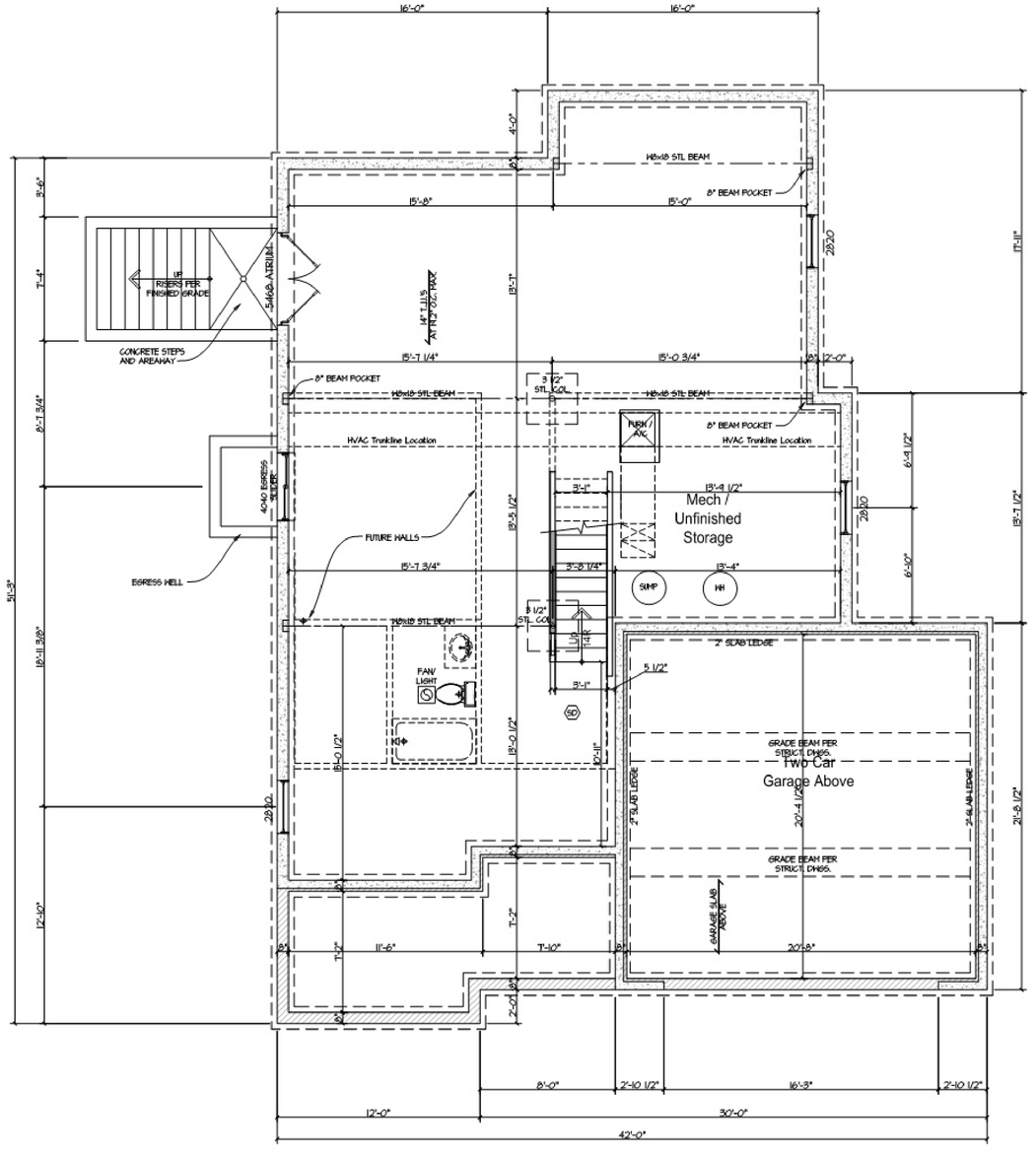
DATE: 3 - 27 - 2017

SCALE: AS SHOWN

PAGE DESCRIPTION:

COVER SHEET

SHEET: CS-1



BASEMENT PLAN

SCALE: 1/4"=1'-0"

New Home

DESIGNED: -
DRAWN: -
CHECKED: -
APPROVED: -

JOB #: -

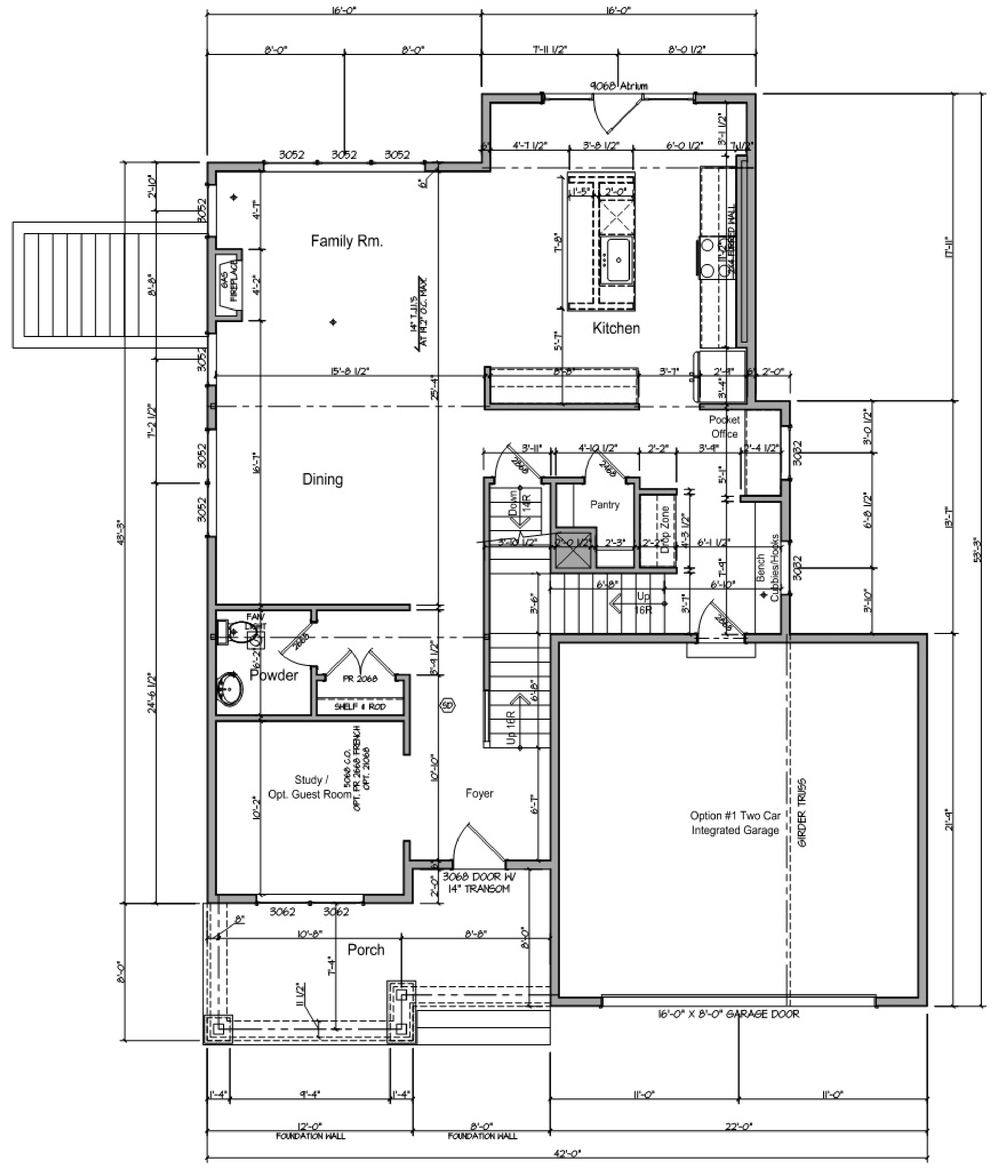
REVISIONS:	DATE:
ISSUED FOR CONSTR.	3/27/17

DATE: 3 - 27 - 2017

SCALE: AS SHOWN

PAGE DESCRIPTION: FIRST FLOOR PLANS

SHEET: A-2.1



FIRST FLOOR PLAN

SCALE: 1/4"=1'-0"

New Home

DESIGNED:	-
DRAWN:	-
CHECKED:	-
APPROVED:	-
JOB #:	-

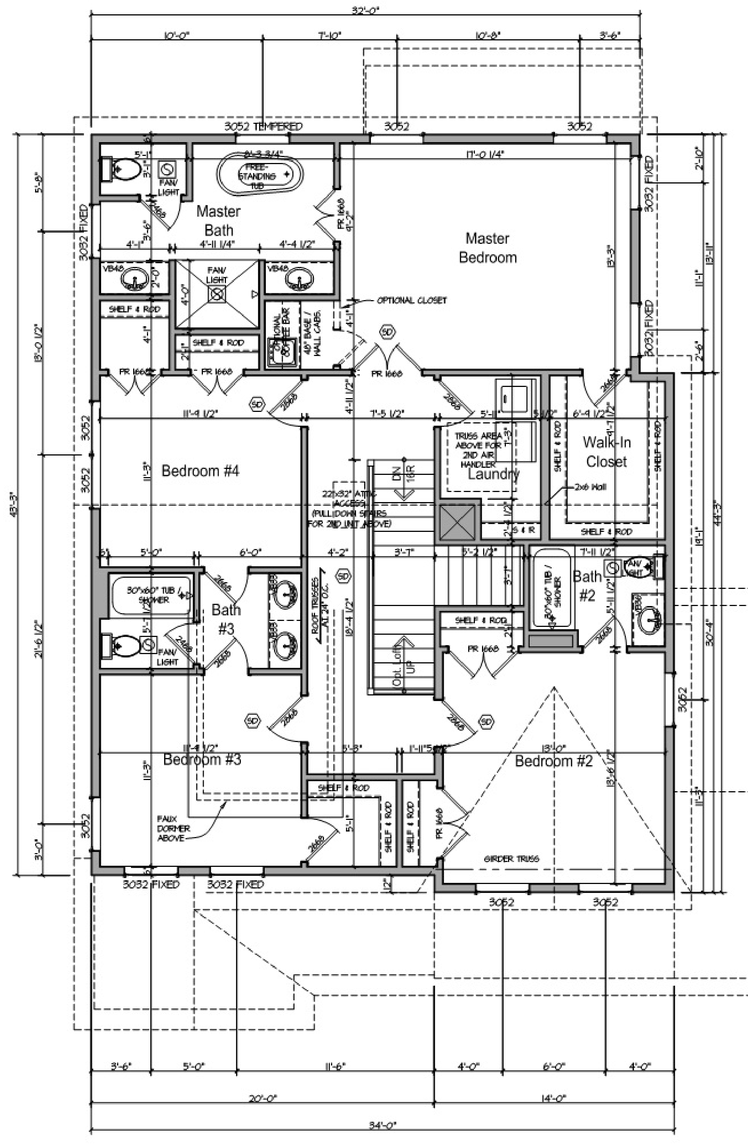
REVISIONS:	DATE:
ISSUED FOR CONSTR.	3/27/17

DATE: 3 - 27 - 2017

SCALE: AS SHOWN

PAGE DESCRIPTION: FIRST FLOOR PLANS

SHEET: A-2.1



SECOND FLOOR PLAN

SCALE: 1/4"=1'-0"

New Home

DESIGNED:	-
DRAWN:	-
CHECKED:	-
APPROVED:	-
JOB #:	-

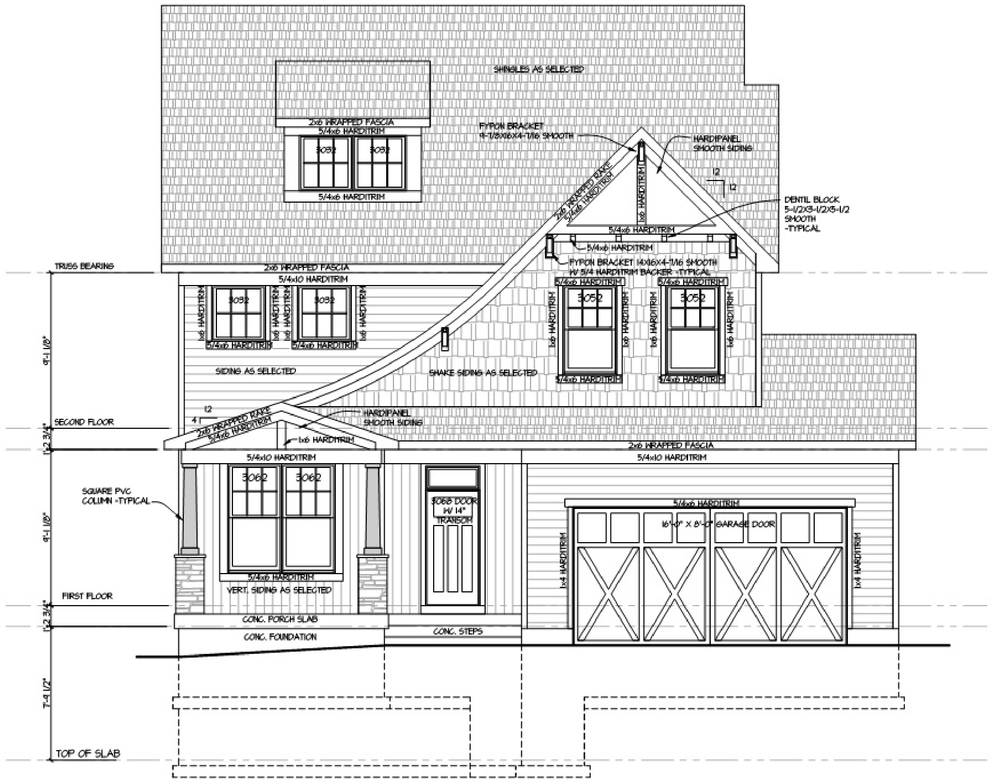
REVISIONS:	DATE:
ISSUED FOR CONSTR.	3/27/17

DATE: 3 - 27 - 2017

SCALE: AS SHOWN

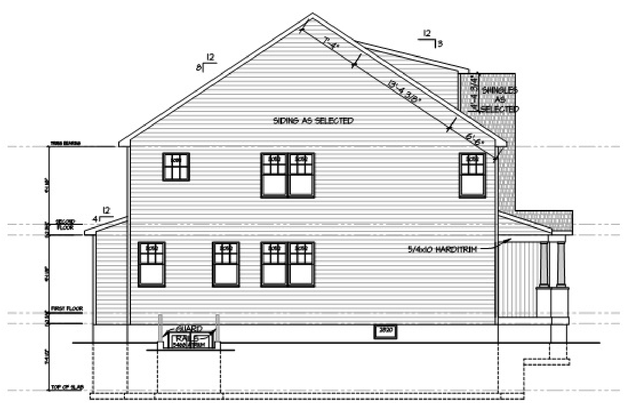
PAGE DESCRIPTION: SECOND FLOOR PLANS

SHEET: A-3.1



FRONT ELEVATION

SCALE: 1/4"=1'-0"

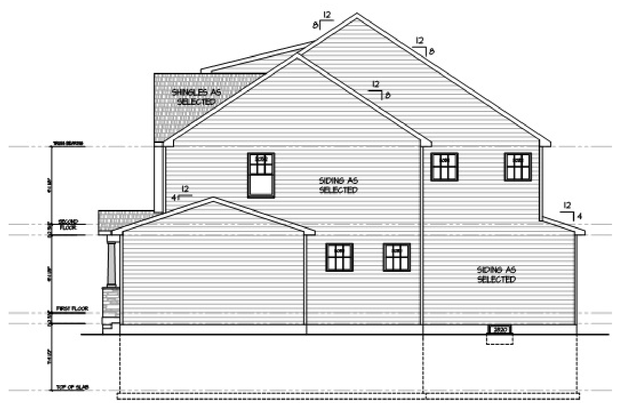


LEFT SIDE ELEVATION

SCALE: 1/8"=1'-0"

REAR ELEVATION

SCALE: 1/8"=1'-0"



RIGHT SIDE ELEVATION

SCALE: 1/8"=1'-0"

New Home

DESIGNED:	-
DRAWN:	-
CHECKED:	-
APPROVED:	-

JOB #: -

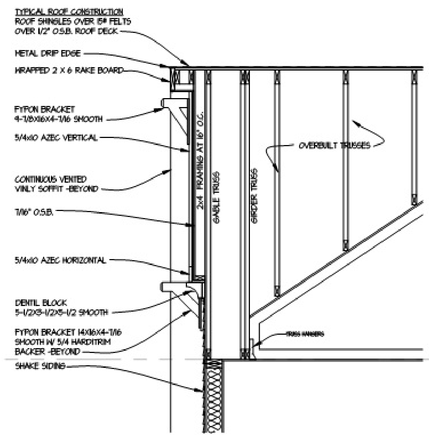
REVISIONS:	DATE:
ISSUED FOR CONSTR.	3/27/17

DATE: 3 - 27 - 2017

SCALE: AS SHOWN

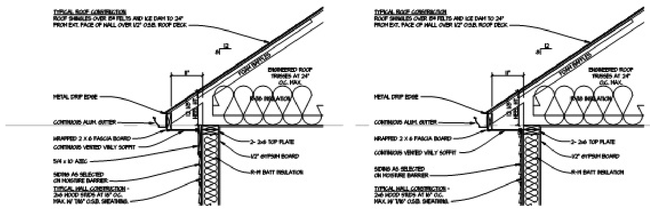
PAGE DESCRIPTION: ELEVATIONS

SHEET: A-4.1



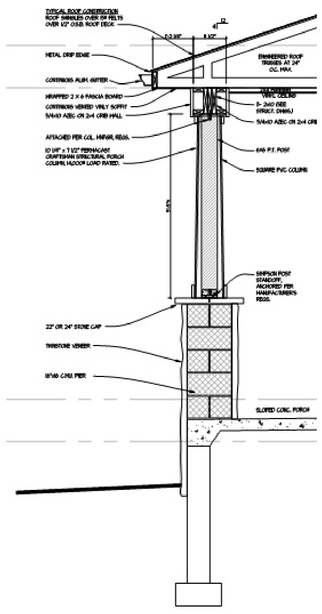
GABLE DETAIL

SCALE: 1/2"=1'-0"



TYPICAL EAVE DETAILS

SCALE: 1/2"=1'-0"



SECTION THRU
FRONT PORCH

SCALE: 1/2"=1'-0"

BUILDING SECTION

SCALE: 1/4"=1'-0"

New Home

DESIGNED: -
DRAWN: -
CHECKED: -
APPROVED: -

JOB #: -

REVISIONS:	DATE:
ISSUED FOR CONSTR.	3/27/17

DATE: 3 - 27 - 2017

SCALE: AS SHOWN

PAGE DESCRIPTION: BUILDING SECTIONS AND DETAILS

SHEET: A-5.1

WOOD FRAMING

NAIL IN ACCORDANCE WITH RECOMMENDED WOOD FASTENING SCHEDULE IN APPLICABLE BUILDING CODES (LATEST EDITION/HIGH WIND REGION). PROVIDE BLOCKING, BRIDGING AND BRACING PER SAME CODE. AT A MIN., PROVIDE BRIDGING AT EACH END OF THE JOIST, AND ONE ROW OF SOLID BRIDGING BELOW ALL INTERIOR BEARING PARTITIONS.

FASTENERS: JOIST HANGERS, HURRICANE ANCHORS, POST BASES AND OTHER FRAMING ANCHORS ARE TO BE AS MANUFACTURED BY SIMPSON STONG-TIE, U.S.P., OR EQUAL, AND ARE TO BE USED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS. ALL FASTENERS TO BE 16 GA. MIN. UNLESS NOTED OTHERWISE. PROVIDE GALV. FINISH UNLESS NOTED OTHERWISE. JOIST HANGERS SHALL BE MIN. 16 GA. WITH SIZE AND PROFILE TO SUIT APPLICATION (U.N.O.). PROVIDE JOIST HANGERS FOR ALL FLUSH FRAMED JOISTS. ALL FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE Z-MAX OR TRIPLE ZINC COATED, U.N.O.

THE NUMBER OF WALL STUDS AT BEARING POINTS OF 2X MEMBER BEAMS SHALL EXCEED THE NUMBER OF MEMBERS IN THE BEAM BY ONE. THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS. (UNLESS NOTED OTHERWISE ON PLAN) ALL MICRO-LAM BEAMS SHALL HAVE 3 STUDS (MIN. & EXCEED WIDTH OF BEAM). CONTINUE THESE STUDS TO THE FOUNDATION WITH INTERMEDIATE SUPPORTS THROUGH FLOOR, BETWEEN LOWER WALL TOP PLATE & UPPER WALL BOTTOM PLATE.

ALL EXTERIOR POSTS TO BE TREATED 6X6 (U.N.O.). NOTCH TOP OF POST FOR BEAM BRG. (3" MAX.) AND THRU BOLT BEAM TO POST WITH (2) 1/2" DIA. GALV. BOLTS. ALTERNATE: PROVIDE COLUMN CAP CONNECTION WITH #AC SERIES BY SIMPSON STONG-TIE OR EQ. PROVIDE SOLID BLOCKING BELOW ALL COLUMNS, TO TRANSFER LOAD DIRECTLY TO FRAMING/FOUNDATION BELOW.

PROVIDE DOUBLE JOIST UNDER ALL PARTITIONS PARALLEL TO JOIST SPAN AND AROUND ALL FLOOR AND ROOF OPENINGS. SPACE & BLOCK IF PARTITIONS ABOVE IS A PLUMBING WALL. PROVIDE SOLID BLOCKING AT 12"oc BETWEEN JOISTS UNDER PARTITIONS ABOVE) WHICH ARE PARALLEL TO THE JOISTS BUT NOT DIRECTLY OVER THE JOISTS. BLOCKING SHALL BE NOT LESS THAN 2" IN. THICKNESS & SHALL MATCH THE DEPTH OF THE JOISTS. TRUSSES MAY USE TRUSS BLOCKS.

ALL MULTI-PLY BEAMS SHALL BE NAILED WITH 3 ROWS OF 10d NAILS AT 8"oc STAGGERED OR BOLTED WITH 1/2" DIA. BOLTS AT 16"oc STAGGERED (U.N.O.).

PROVIDE COLLAR TIES OF 1X6 BOARDS AT UPPER 1/3 DOWN FROM RIDGE BEAMS SPACED 48"oc MAXIMUM. (FOR CONVENTIONAL FRAMING)

BALLOON FRAME ALL END WALLS WITH CATHEDRAL CEILING (U.N.O.):
2x4 @ 16"oc UP TO 9'-0", 2x6 @ 16"oc UP TO 14'-0" & 2x8 @ 16"oc UP TO 18'-0"

FASTEN GABLE-END WALL STUDS TO CEILING DIAPHRAGM BY FASTENING NAILER TO EACH STUD AND BY FASTENING CEILING TO NAILER WITH 8d NAILS AT 6"oc

WHERE DECKS FASTEN TO HOUSE FRAMING, PROVIDE CONTINUOUS TREATED LEDGER THRU-BOLTED TO FLOOR STRUCTURE WITH (2) 1/2" DIA. BOLTS AT 16"oc PROVIDE HOT-DIPPED GALV. JST. HANGER TO LEDGER.

ALL EXTERIOR WALLS SHALL BE STUDS AT 16"oc AS SPECIFIED ON PLANS WITH 7/16" OSB EXTERIOR SHEATHING. BLOCKING OF HORIZONTAL PANEL EDGES IS NOT REQUIRED. NAIL ALL REQUIRED PANEL EDGES WITH 8d NAILS AT 6"oc AND INTERMEDIATE STUDS WITH 8d NAILS AT 12"oc

ROOF AND FLOOR FRAMING LAYOUTS ARE PROVIDED TO ILLUSTRATE CONDITIONS OF CONSTRUCTION AND DO NOT NECESSARILY INDICATE SPECIFIC QUANTITIES OF MATERIALS OR COMPONENTS REQUIRED FOR CONSTRUCTION.

CONSTRUCTION BRACING SHALL BE PROVIDED BY THE CONTRACTOR TO MAINTAIN THE BUILDING PLUMB AND TRUE. THIS BRACING SHALL REMAIN UNTIL THE SPECIFIED SHEARWALLS ARE TOTALLY INSTALLED.

PRESCRIPTIVE BRACED WALL SEGMENTS SHALL HAVE STUDS AT 16"oc (MAX.) WITH 7/8" OSB EXTERIOR SHEATHING. BLOCKING OF HORIZONTAL PANEL EDGES IS NOT REQUIRED. NAIL ALL SHEATHING PANEL EDGES WITH 8d NAILS AT 6"oc AND INTERMEDIATE STUDS WITH 8d NAILS AT 12"oc

SHEARWALLS SHALL HAVE STUDS @ 16"oc (MAX.) WITH 7/8" OSB EXTERIOR SHEATHING (U.N.O., SEE PLAN). BLOCKING OF HORIZONTAL PANEL EDGES IS REQUIRED. NAIL ALL SHEATHING PANEL EDGES WITH 8d NAILS AT 6"oc (U.N.O., SEE PLAN) AND INTERMEDIATE STUDS WITH 8d NAILS AT 12"oc (U.N.O., SEE PLAN)

SHEAR WALL HOLD-DOWNS: ALL SHEAR WALLS SHOWN ON PLANS TO HAVE HOLD-DOWNS AT THE BASE AT EACH WALL END SHALL BE AS FOLLOWS:
- AT UPPER FLOORS USE (2) SIMPSON HD8A'S OR (1) SIMPSON FTA7 AT EACH END OF SHEAR WALL SEGMENT AND EACH EXTERIOR CORNER OF BUILDING.(U.N.O., SEE PLAN)
- AT CONCRETE FOUNDATIONS USE (1) SIMPSON HD2A AT EACH END OF SHEAR WALL SEGMENT AND AT EACH EXTERIOR CORNER OF BUILDING.(U.N.O., SEE PLAN)
- AT PILE/GIRDER SUPPORTED FLOOR, USE (2) SIMPSON HD8A'S OR (1) SIMPSON FTA7 AT EACH END OF SHEAR WALL SEGMENT AND AT EACH EXTERIOR CORNER OF BUILDING.(U.N.O., SEE PLAN)
- PROVIDE 3 STUDS MIN. AT EACH HOLD-DOWN.(U.N.O., SEE PLAN)
- PROVIDE TRIPLE JOISTS BELOW SHEAR WALLS THAT RUN PARALLEL TO FLOOR FRAMING.(U.N.O., SEE PLAN)

ALL INTERIOR SHEAR WALLS SHOWN ON THE PLANS SHALL HAVE STRUCTURAL SHEATHING THAT EXTENDS TO THE UNDERSIDE OF THE FLOOR SHEATHING ABOVE. WHERE JOISTS RUN PARALLEL TO THE SHEAR WALL, PROVIDE A DBL.-JOIST ABOVE THE SHEAR WALL. WHERE JOISTS RUN PERPENDICULAR, PROVIDE 2X BRIDGING ABOVE SHEAR WALL AND "TOOTH" PLYWOOD AROUND JOISTS. NAIL THROUGH FLOOR SHEATHING ABOVE INTO WALL WITH (2) 10d NAILS AT 4"oc

ALTERNATE POWER NAILS (FOR FRAMING MEMBERS ONLY,- 0.113ϕ x 2⅜" FOR 8d NAILS & 0.131ϕ x 3" FOR 16d NAILS
PROVIDE DEFORMED SHANK NAILS AS REQD. BY U.L. RATINGS.

STEEL

FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

PROVIDE WELDED CONNECTIONS TYPICALLY UNLESS OTHERWISE NOTED.

WELDS SHALL BE MADE ONLY BY WELDERS WHO HAVE BEEN PREQUALIFIED BY TESTS OF THE AMERICAN WELDING SOCIETY, PRESCRIBED IN THE STRUCTURAL WELDING CODE," AWS D1.1 (LATEST EDITION).

ANY CONNECTION NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED AND DETAILED BY THE STRUCTURAL STEEL FABRICATOR. SEE THE TYPICAL BEAM CONNECTION DETAILS ON THE DRAWINGS.

MILL BOTTOM OF ALL COLUMNS AND FINISH TOP OF ALL BASE PLATES IN ACCORDANCE WITH A.I.S.C.
SPECIFICATIONS. BASE PLATES SHALL BE WELDED TO BOTTOM OF COLUMNS.

CONNECTIONS SHALL BE AISC STANDARD.

PROVIDE BASE PLATE FOR ALL STRUCTURAL STEEL BEAMS BEARING ON CONCRETE OR MASONRY. GROUT FOR SETTING BEARING SURFACES SHALL BE NON-SHRINK, NOT-STAINING, EQUAL TO "MASTERFLOW 713" BY THE MASTER BUILDERS CORPORATION.

SPECIFIED GROUT THICKNESS INCLUDES 1/4 INCH THICK LEVELING PLATES WHICH SHALL BE USED UNDER ALL BEAMS AND COLUMNS RESTING ON CONCRETE.

PRE-ENGINEERED WOOD TRUSSES

TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THESE SPECIFICATIONS AND WHERE ANY APPLICABLE DESIGN FEATURE IS NOT SPECIFIED HEREIN, DESIGN SHALL BE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF LATEST EDITION OF NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS) AMERICAN FOREST AND PAPER ASSOCIATION (AFPA), AND DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES (ANSI/TPI 1), TRUSS PLATE INSTITUTE (TPI), AND CODES OF JURISDICTION. FABRICATE, SUPPLY AND ERECT WOOD TRUSSES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED. WORK SHALL INCLUDE ALL ANCHORAGE, BLOCKING, CURBING, MISCELLANEOUS FRAMING AND BRACING.

LUMBER USED FOR TRUSS MEMBERS SHALL BE IDENTIFIED BY GRADE MARK OF A LUMBER INSPECTION AGENCY, AND SHALL BE AS SHOWN ON DESIGN DRAWINGS. TRUSSES SHALL BE HANDLED DURING FABRICATION, DELIVERY AND AT JOBSITE SO AS NOT TO BE SUBJECTED TO EXCESSIVE BENDING. TRUSSES SHALL BE UNLOADED ON SMOOTH GROUND TO AVOID LATERAL STRAIN. TRUSSES SHALL BE PROTECTED FROM DAMAGE THAT MIGHT RESULT FROM ON-SITE ACTIVITIES AND ENVIRONMENTAL CONDITIONS. PREVENT TOPPLING WHEN BANDING IS REMOVED.

HANDLE DURING INSTALLATION IN ACCORDANCE WITH HANDLING, INSTALLING AND BRACING WOOD TRUSSES (HIB-91), TPI, AND ANSI/TPI 1-1995. INSTALLATION SHALL BE CONSISTENT WITH GOOD WORKMANSHIP AND GOOD BUILDING PRACTICES. TRUSSES SHALL BE SET AND SECURED LEVEL AND PLUMB, AND IN CORRECT LOCATION. TRUSSES SHALL BE HELD IN CORRECT ALIGNMENT UNTIL SPECIFIED PERMANENT BRACING IS INSTALLED. CUTTING AND ALTERING OF TRUSSES IS NOT PERMITTED. CONCENTRATED LOADS (FULL BUNDLES OF DECKING) SHALL NOT BE PLACED ATOP TRUSSES UNTIL ALL SPECIFIED BRACING HAS BEEN INSTALLED AND DECKING IS PERMANENTLY NAILED IN PLACE. ERECTION BRACING IS ALWAYS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FURNISHING THE MATERIALS USED FOR INSTALLATION AND PERMANENT BRACING.

STRUCTURAL ENGINEER OF RECORD SHALL APPROVE SHOP DRAWINGS PRIOR TO SUBMITTAL TO BUILDING OFFICIAL. BUILDING OFFICIAL SHALL APPROVE SHOP DRAWING PRIOR TO INSTALLATION. TRUSSES SHALL BE FABRICATED FROM APPROVED SHOP DRAWINGS.

MANUFACTURER SHALL SUBMIT 3 COPIES OF TRUSS DESIGN DRAWINGS BEARING SEAL OF PROFESSIONAL ENGINEER FOR APPROVAL PRIOR TO ERECTION AND ENGINEERING FRAMING PLANS FOR ALL FLAT CHORD TRUSSES. ALL TRUSS SHOP DRAWINGS MUST BE REVIEWED AND APPROVED IN WRITING, BY GENERAL CONTRACTOR, PRIOR TO SUBMITTAL OF SHOP DRAWINGS TO STRUCTURAL ENGINEER AND MUST INCLUDE THE FOLLOWING:
1. STAMP AND SIGNATURE OF ENGINEER, WHO IS REGISTERED IN THE STATE WHERE THE JOB IS TO BE CONSTRUCTED, RESPONSIBLE FOR PREPARATION OF ALL TRUSS DESIGN AND LAYOUT DRAWING.
2. ALLOWABLE LOADS IN LBS/EFFECTIVE NAIL OR PSI FOR LUMBER & PLATES USED AS ALLOWED BY ICBO, CURRENT ICBO REPORT NUMBER & BY SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL.
3. STRESS REDUCTION FACTORS USED FOR PLATES.
4. TOP AND BOTTOM CHORD DESIGN LOADS IN PLF.
5. SIZE, GAUGE, AND EXACT LOCATION BY DIMENSION OF PLATES.
6. LUMBER SPECIES AND GRADES USED.
7. NAME & TRADEMARK OF PLATE MANUFACTURER, TRUSS FABRICATOR & PROJECT NAME/LOCATION
8. CONCENTRATED LOAD REQUIREMENTS HAVE BEEN DESIGNED FOR AND SHOWN ON DOCUMENTS.
9. TRUSS CONNECTION HARDWARE REQUIREMENTS.

ALL TRUSSES MUST BE DESIGNED FOR UPLIFT LOADS. UPLIFT VALUES @ EACH TRUSS BEARING POINT MUST BE SHOWN ON TRUSS ENGINEERING SHEET.

ALL ROOF TRUSSES SHALL BE ATTACHED TO PERPENDICULAR NON-LOAD BEARING WALLS WITH TRUSS CLIPS. CEILING GWB SHALL BE ATTACHED TO BLOCKING ON THE WALL AND NOT TO THE TRUSS FOR A DISTANCE OF 18" FROM THE WALL.

ALL FLOOR TRUSSES ON THE LOWEST FLOOR W/ TRUSSES SHALL BE ATTACHED TO PERPENDICULAR NON-LOAD BEARING WALLS WITH TRUSS CLIPS. CEILING GWB SHALL BE ATTACHED TO BLOCKING ON THE WALL AND NOT TO THE TRUSS FOR A DISTANCE OF 18" FROM THE WALL.

LIVE LOAD DEFLECTION SHALL NOT EXCEED ½" OR L/480 FOR FLOOR TRUSSES AND ½" OR L/360 FOR ROOF TRUSSES.

THE MANUFACTURER SHALL SUPPLY ALL REQUIRED HANGERS, HOLD-DOWN CLIPS, AND OTHER SPECIAL HARDWARE.

MASONRY

ALL MASONRY WORK SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF BIA AND NCMA SPECIFICATION FOR CONCRETE MASONRY CONSTRUCTION (ACI 513.1-76) AND "SPECIFICATIONS FOR MASONRY STRUCTURE (ACI 530.1-02)" PUBLISHED BY THE AMERICAN CONCRETE INSTITUTE.

PROVIDE CONTINUOUS MASONRY BOND BEAM SPANNING ALL EXPANSION JOINTS & WALL INTERSECTIONS.

PROVIDE (2) #5 BENT BARS WITH 3-FOOT LEGS AT EVERY CORNER OR WALL INTERSECTION.

CONTINUOUS TIE OR BOND BEAMS SHALL BE REINFORCED WITH NOT LESS THAN 2 #5 CONTINUOUS BARS. LINTELS SHALL BE THE SIZES SHOWN AND REINFORCED AS INDICATED ON THE DRAWINGS.

REINFORCED MASONRY WALLS SHALL HAVE ALL REINFORCED CELLS FILLED WITH CONCRETE. CONCRETE MAY BE PLACED IN MAXIMUM VERTICAL LIFTS NOT TO EXCEED 4-FEET. ROUGHEN ALL SURFACES OF CONCRETE FILL WHICH ARE TO RECEIVE ADDITIONAL LIFTS ABOVE.

MASONRY WALLS SHALL HAVE "DUR-O-WALL" (OR APPROVED EQUAL) TRUSS TYPE HORIZONTAL REINFORCEMENT AT 16"oc VERTICALLY ABOVE GRADE AND 8"oc VERTICALLY BELOW GRADE. COORDINATE BRICK TIE BACK REQUIREMENTS WITH ARCHITECTURAL DRAWINGS. UNLESS NOTED OTHERWISE, STOP ALL HORIZONTAL JOINT REINFORCING AT CONTROL JOINTS.

BRICK VENEER WALLS TO HAVE NON-CORROSIVE METAL TIES AT 16"oc VERTICALLY AND HORIZONTALLY AND COMPLY WITH ASTM A82 WITH A153, CLASS B-2 COATING. MINIMUM WIRE DIAMETER SHALL BE 0.1875 INCHES. PROVIDE WEEP HOLES AT 24"oc AT BASE FLASHING.

PROVIDE MIN. 2 COURSES 8"x 16" SOLID BEARING AT BEAM & HEADER BEARING POINTS IN CMU WALLS.

A36 STEEL LINTEL SIZES FOR OPENINGS PER 4" THICKNESS OF MASONRY WALL AS FOLLOWS:
4'-0" SPAN OR LESS L3"x 3" 1/2"x 5/16" 7'-6" SPAN OR LESS L5"x 3 1/2"x 5/16"
5'-6" SPAN OR LESS L4"x 3 1/2"x 5/16" 9'-0" SPAN OR LESS L6"x 3 1/2"x 5/16"
PROVIDE MIN. 6" BEARING, EACH END & BRICK TIES, 16"oc @ 1st COURSE ABOVE LINTEL.

FILL SOLIDLY w/2,500psi ASTM C-476 GROUT, ALL BOND BEAMS, CELLS THAT ARE REINFORCED, WILL SECURE EXPANSION BOLTS, SILL PLATE ANCHOR BOLTS OR OTHER MECHANICAL ATTACHMENTS AND ALL CELLS BELOW GRADE.

REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A-615, GRADE 60. SHOP FABRICATES REINFORCING BARS, WHICH ARE SHOWN TO BE HOOKED, OR BENT. PROVIDE A MINIMUM LAP OF 48 BAR DIAMETERS AT ALL SPLICES, UNLESS INDICATED OTHERWISE.

UNLESS OTHERWISE NOTED, ALL WALLS SHALL BE LAID IN RUNNING BOND. BOND CORNERS AND INTERSECTIONS OF LOAD-BEARING WALLS.

PROVIDE VERTICAL REINFORCING BARS OF THE GIVEN SIZE AND SPACING AS INDICATED. PROVIDE BARS AT ALL WALL CORNERS, INTERSECTIONS AND OPENINGS EDGES.

PROVIDE REBAR DOWELS FROM FOUNDATIONS TO MATCH VERTICAL REINFORCING SIZE AND SPACING. DOWELS SHALL HAVE STANDARD 90-DEGREE HOOKS AND LAP WITH THE FIRST LIFT OF REINFORCING.

PROVIDE BOND BEAM LINTELS AND BRICK SHELF ANGLES ABOVE ALL WALL OPENINGS.

PROVIDE JOIST & BEAM BEARING PLATES w/OTHER ACCESSORIES AS INDICATED, WITH 3 COURSES OF SOLIDLY GROUTED CMU BELOW ALL BEAM BEARINGS OVER A WIDTH OF 2'-8" CENTERED ON THE BEAM.

PROVIDE CMU CONTROL JOINTS AS INDICATED, w/ADDITIONAL JOINTS SUCH THAT THE SPACING BETWEEN JOINTS DOES NOT EXCEED A SPACING OF 3x WALL HEIGHT, 35' MAXIMUM. WHERE BEAMS OR LINTELS BEAR AT CMU CONTROL JOINTS, OFFSET & LAP THE VERTICAL REINFORCING AS INDICATED.

MASONRY CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY BRACING DURING CONSTRUCTION.

SCHEDULE OF CONSTRUCTION MATERIALS

CONCRETE

LOCATION	COMP. STRENGTH	SLUMP
BASEMENT WALLS & FDN NOT EXPOSED TO WEATHER	3000 PSI (2)	4" +/- 1"
BASEMENT SLABS AND INTERIOR SLABS ON GRADE	3000 PSI	4" +/- 1"
BASEMENT WALLS, FDNS, EXTERIOR WALLS & OTHER CONCRETE EXPOSED TO WEATHER	3000 PSI (3)	4" +/- 1"
DRIVEWAYS, CURBS, WALKS, PATIOS, STEPS AND UNHEATED GARAGE FLOORS EXPOSED TO WEATHER	3500 PSI (3)	4" +/- 1"

NOTES
1) THE COMPRESSIVE STRENGTH IS BASED 28-DAY COMPRESSIVE STRENGTH.
2) CONCRETE SUBJECTED TO FREEZE AND THAW CONDITIONS DURING CONSTRUCTION SHALL BE AIR-ENTRAINED (6% +/- 1%).
3) CONCRETE SHALL BE AIR-ENTRAINED (6% +/- 1%).

MASONRY

MATERIAL	SPECIFICATION
HOLLOW CMU	NORMAL WEIGHT: ASTM C90, GRADE N, Fm= 1500 PSI
FACE BRICK	ASTM C216, SEVERE WEATHER BRICK, TYPE FBX, Fm=2000 PSI
STONE VENEER	OWNER APPROVED
CONCRETE BRICK	ASTM C95 TYPE I, GRADE 8
SOLID CMU	NORMAL WEIGHT: ASTM C145, GRADE N
MORTAR: SINGLE WYTHE ABOVE GRADE	ASTM C270 PROJECTION SPECIFICATION MORTARS SHALL CONSIST OF TYPE I PORTLAND CEMENT, TYPE S HYDRATED LIME AND APPROVED AGGREGATE, WITH 1800 psi MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 2-INCH CUBES AT 28-DAYS.
MORTAR: SINGLE WYTHE BELOW GRADE	ASTM C270 PROJECTION SPECIFICATION MORTARS SHALL CONSIST OF TYPE I PORTLAND CEMENT, TYPE M HYDRATED LIME AND APPROVED AGGREGATE, WITH 2500 psi MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 2-INCH CUBES AT 28-DAYS.
MORTAR: VENEER	ASTM C270 PROJECTION SPECIFICATION MORTARS SHALL CONSIST OF TYPE I PORTLAND CEMENT, TYPE N HYDRATED LIME AND APPROVED AGGREGATE, WITH 750 psi MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 2-INCH CUBES AT 28-DAYS.

REINFORCING STEEL

SPECIFICATION

MATERIAL	SPECIFICATION
REBAR	HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60 (60,000 PSI) - DEFORMED
WELDED WIRE FABRIC	ASTM A-185

PROTECTION

LOCATION	CLEAR COVER (IN)
FOOTINGS AND OTHER CONCRETE POURED AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH	2"
FORMED CONCRETE NOT EXPOSED TO WEATHER OR EARTH	1½"
SLABS ON GROUND, UNLESS OTHERWISE NOTED	MID-DEPTH OF SLAB
REINFORCED MASONRY WALLS	MID-DEPTH OF WALL

STRUCTURAL STEEL

SHAPE	SPECIFICATION
I-BEAMS	STRUCTURAL STEEL I BEAMS SHALL CONFORM TO ASTM A572 GRADE 50 (50 KSI).
TUBE	STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B, UNLESS OTHER SIDE NOTED IN THE PROJECT SPECIFICATIONS
PIPE	STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A36 (36KSI), UNLESS OTHER SIDE NOTED IN THE PROJECT SPECIFICATIONS
ALL OTHER SHAPES	ALL OTHER STRUCTURAL STEEL, INCLUDING PLATES AND MISCELLANEOUS SHAPES SHALL CONFORM TO ASTM A36 (36KSI).
CONNECTION	SPECIFICATION
BOLTS	BOLTS FOR CONNECTING STRUCTURAL STEEL SHAPES SHALL BE ASTM A325-N, ¾-INCH DIAMETER, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE PROJECT SPECIFICATION
ANCHOR BOLTS	ANCHOR BOLTS SHALL CONFORM TO ASTM A307.
WELDS	WELDING ELECTRODES SHALL BE E70 SERIES.

WOOD

DIMENSION AND STRUCTURAL COMPOSITE LUMBER

MATERIAL		DESIGN VALUES (1) Fb	Ft	Fv	Fc⊥	Fc ǁ	E x 10^6
UNTREATED FRAMING (2)	2X, 3X, OR 4X	875	450	135	425	1150	1.4
	5X5 AND LARGER(B)	600	300	125	425	425	1.0
	5X5 AND LARGER(P)	500	325	125	425	500	1.0
TREATED FRAMING (3)	2X4	1500	825	175	565	1650	1.6
	2X6	1250	725	175	565	1600	1.6
	2X8	1200	650	175	565	1550	1.6
	2X10	1050	575	175	565	1500	1.6
	2X12	975	550	175	565	1450	1.6
	5X5 AND LARGER	850	550	165	375	525	1.2
LVL	COLUMNS AND BEAMS	2650	1650	285	750	3000	1.7
LVL (2.0E)	BEAMS	3100	2150	285	750	3000	2.0

STRUCTURAL GLUED LAMINATED TIMBER (GLULAM)

MATERIAL		DESIGN VALUES (1) Fb COMP ZONE	Fb TENSION ZONE	Fv	Fc⊥	Fcx	E x 10^6
UNTREATED FRAMING	BEAMS 24F-1.8E	2400	1850	240	650	1600	1.8
		Fw	Fw	Fv	Fc⊥	Fcx	E x 10^6
	COLUMNS #2 DF	1700	1800	180	560	1950	1.6

ENGINEERED WOOD PRODUCTS

MATERIAL	SPECIFICATION
PREFABRICATED WOOD I-JOISTS	PREFABRICATED WOOD I-JOISTS SHALL BE MANUFACTURED BY BOISE CASCADE, LLC. OR APPROVED SUBSTITUTE. THE MANUFACTURER SHALL SUPPLY ALL REQUIRED HANGERS, WEB STIFFENERS, SQUASH BLOCKS, BEVELED BEARING PLATES, AND OTHER SPECIAL HARDWARE. THE MANUFACTURER SHALL SUBMIT ERECTION DRAWINGS TO THE ENGINEER PRIOR TO FABRICATION. ALL PREFABRICATED WOOD I-JOISTS SHALL BE INSTALLED AND. BRACED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
PLYWOOD/OSB	DOC PS1, DOC PS2, CSA0437 OR CSA0325 ADVARYTECH, STRUCTURE WOOD NOT ALLOWED.

NOTES
1) DESIGN VALUES ARE FOR NORMAL LOAD DURATION AND DRY SERVICE CONDITIONS. SEE NDS OR MANUFACTURES SPECIFICATION FOR A COMPREHENSIVE DESCRIPTION OF DESIGN VALUE ADJUSTMENT FACTORS.
2) FRAMING DESIGN VALUES ARE BASED ON SPF No.2.
3) FRAMING DESIGN VALUES ARE BASED ON SYP No.2.

GOVERNING BUILDING CODES AND STANDARDS

THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT. USE THE LATEST EDITIONS UNLESS NOTED OTHERWISE.
- INTERNATIONAL RESIDENTIAL CODE (IRC), INTERNATIONAL CODE COUNCIL, INC., 2015
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ANSI/ASCE 07-10), AMERICAN SOCIETY OF CIVIL ENGINEERS.
- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318-11, AMERICAN CONCRETE INSTITUTE.
- ACI MANUAL OF CONCRETE PRACTICE - PARTS 1 THROUGH 5 - 2011
- MANUAL OF STANDARD PRACTICE, CONCRETE REINFORCING STEEL INSTITUTE.
- MANUAL OF STEEL CONSTRUCTION - 13TH EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (INCLUDING SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, AND AISC CODE OF STANDARD PRACTICE WITH EXCEPTION, IF ANY, AS INDICATED IN THE SPECIFICATIONS).
- MANUAL OF STEEL CONSTRUCTION, VOLUME II CONNECTIONS, ASD 13TH EDITION/LRFD 1ST EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- DETAILING FOR STEEL CONSTRUCTION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- STRUCTURAL WELDING CODE ANSI/AWS D 1.1-92, AMERICAN WELDING SOCIETY.
- DESIGN MANUAL FOR FLOOR DECKS AND ROOF DECKS, STEEL DECK INSTITUTE.
- SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS AMERICAN IRON AND STEEL INSTITUTE, AISI S100-2007.
- BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-10/ASCE 5-05/TMS 402-05) & SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-05/ASCE 6-05/TMS 602-05).
- NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION/ 2012, AMERICAN FOREST & PAPER ASSOCIATION.

DESIGN LOADS

	LIVE LOADS	DEAD LOADS	TOTAL
ROOF TRUSSES	30 PSF	10 PSF (TOP & BOTTOM)	50 PSF
RAFTERS	30 PSF	12 PSF	42 PSF
ATTIC FLOORS (TYP)	30 PSF	12 PSF	42 PSF
LTD STORAGE	20 PSF	12 PSF	32 PSF
NO STORAGE	10 PSF	5 PSF	15 PSF
SLEEPING ROOMS	30 PSF	12 PSF	42 PSF
OTHER FLOORS	40 PSF	12 PSF	52 PSF
GARAGE FLOORS	50 PSF	50 PSF	100 PSF
DECKS	40 PSF	10 PSF	50 PSF
BALCONY	60 PSF	10 PSF	70 PSF
STAIRS	40 PSF	20 PSF	60 PSF

ROOF LIVE LOAD DESIGN 30 PSF
MINIMUM 16 PSF

WIND LOAD
- BASIC WIND SPEED (3 SEC GUST) 90 MPH
- WIND PRESSURE (ROOF AVG.) 10.0 PSF
- WIND PRESSURE (WALL AVG.) 27.9 PSF
- WIND LOAD IMPORTANCE 1.0
- WIND EXPOSURE CATEGORY EXPOSURE B

SNOW LOAD
- GROUND SNOW LOAD (Pg) 30 PSF
- THERMAL FACTOR 1.1
- SNOW EXPOSURE FACTOR (Ce) 1.0
- SNOW LOAD IMPORTANCE FACTOR 1.00
- SNOW LOAD (ROOF) 18 PSF
- MINIMUM SNOW LOAD 20 PSF
- RAIN-ON-SNOW 23.0 PSF

ADDITIONAL DRIFT AND SLIDING SNOW LOADS HAVE BEEN CONSIDERED WHERE APPLICABLE.

SEISMIC
- PEAK VELOCITY-RELATED ACCELERATION(A) 0.07
- PEAK ACCELERATION (A) 0.05
- SEISMIC HAZARD EXPOSURE GROUP I
- SEISMIC DESIGN CATEGORY C
- SOIL PROFILE TYPE 2 (UNKNOWN)
- BASIC STRUCTURAL SYSTEM AND SEISMIC RESISTING SYSTEM: LOAD BEARING WALL SYSTEM LIGHT FRAMED WALLS w/SHEAR PANELS
- RESPONSE MODIFICATION FACTOR (R 6½
- DEFLECTION AMPLIFICATION FACTOR (C) 4
- ANALYSIS PROCEDURE (ELEP OR MAP) ELEP

SOIL BEARING CAPACITY 2000 PSF

IF IT IS DETERMINED THAT THE SOIL CAPACITY AT THE SITE IS LESS THAN 2000 PSF, THE FOUNDATION MUST BE RE-EVALUATED.

BACK FILL 60 PCF EQUIVALENT FLUID WEIGHT, UNLESS OTHERWISE NOTED

MECHANICAL UNITS & OTHER EQUIPMENT SUPPORTED BY THE STRUCTURE WITH WEIGHTS IN EXCESS OF 200# SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2769

NEW HOME AT
[redacted]

ARCHITECT
ARCHITECT:

CONTRACTOR
CONTRACTOR:

CIVIL:

MEP:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24518
EXPIRATION DATE: 09-21-2017

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JMU

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

REVISION:

1		
2		
3		
4		
5		
6		
7		
8		

GENERAL STRUCTURAL NOTES & SCHEDULES

SN1

CONCRETE

ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH DESIGN MIXES WHICH ARE TO BE APPROVED BY THE ARCHITECT OR ENGINEER PRIOR TO CASTING ANY CONCRETE. MIXES SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTION ACI 318. ALL PLAIN CONCRETE TO CONFORM TO ACI 318.1 AND ACI 332 GUIDE TO RESIDENTIAL CAST IN PLACE CONCRETE CONSTRUCTION. MIXES SHALL HAVE A MINIMUM CEMENT CONTENT OF 520 LB. PER CUBIC YD., MAXIMUM WATER/CEMENT RATIO OF 0.53 FOR INTERIOR CONCRETE PROTECTED FROM FREEZING AND 0.45 FOR ALL EXTERIOR EXPOSED CONCRETE.

CONCRETE MATERIALS SHALL CONFORM TO ASTM C150, TYPE I FOR PORTLAND CEMENT AND ASTM C33 FOR AGGREGATES. WATER-REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494, TYPE A (FREE OF CALCIUM CHLORIDES), AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260, AND HIGH-RANGE WATER REDUCERS (SUPER-PLASTICIZERS) SHALL CONFORM TO ASTM C494, TYPE F. FLY ASH SHALL COMPLY WITH ASTM C619 FOR CLASS F AND SHALL NOT BE PROPORTIONED IN MIXES WITH MORE THAN 20% CEMENT BY WEIGHT. LIQUID-MEMBRANE CURING COMPOUNDS SHALL BE HIGH-SOLIDS, WATER AND ACRYLIC-BASED, COMPLYING WITH ASTM C309 AS TESTED UNDER ASTM C156. SLUMP OF THE CONCRETE SHALL BE A MINIMUM OF 4-INCHES AND A MAXIMUM OF 6-INCHES. SEE THE PROJECT SPECIFICATIONS. THE COMPRESSIVE STRENGTH IS BASED 28-DAY COMPRESSIVE STRENGTH.

SLAB ISOLATION JOINTS: PROVIDE PRE-MOLDED JOINT FILLER AROUND ALL PIPING, PIERS & FOUNDATION WALLS.

ALL CONCRETE TO BE PLACED IN THE CELLS OF CONCRETE MASONRY UNITS (CMU BLOCK FILL), OR IN THE VOIDS OF BRICK MASONRY CONSTRUCTION, SHALL CONTAIN PEA GRAVEL (3/8"Ø STONE) IN LIEU OF COARSE AGGREGATE. THE CONCRETE MIX SHALL CONTAIN A HIGH-RANGE WATER REDUCER (SUPERPLASTICIZER). SLUMP OF THE CONCRETE SHALL BE A MINIMUM OF 6" AND A MAXIMUM OF 9". SEE THE PROJECT SPECIFICATIONS.

ALL EXTERIOR CONCRETE AND CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED, 6% +/-1%. USE OF ADDITIVES SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED. DO NOT USE HIGH-RANGE WATER REDUCING ADMIXTURES IN AIR-ENTRAINED CONCRETE. CONFORM TO ASTM C260.

ADDITION OF WATER TO THE CONCRETE AT THE JOB SITE FOR THE PURPOSE OF INCREASING THE SLUMP OR FOR RETEMPERING THE CONCRETE WHICH HAS BEGUN TO SET IS STRICTLY PROHIBITED. SEE THE PROJECT SPECIFICATIONS FOR REQUIREMENTS OF WATER ADDITION TO CONCRETE AT THE JOBSITE.

SLABS ON GRADE SHALL BE 4" THICK CONCRETE AND REINFORCED w/6x6 W1.4xW1.4 WWF. WELDED WIRE FABRIC SHALL BE SUPPORTED ON HIGH CHAIRS SO THAT THE FABRIC IS POSITIONED AT MID-DEPTH OF THE SLAB THICKNESS. LAP ONE FULL MESH PLUS 2" AT SPLICES IN EACH DIRECTION. PLACE CONCRETE OVER 6 MIL. POLYETHYLENE VAPOR BARRIER AND 4" MINIMUM COURSE AGGREGATE OR AS RECOMMENDED BY SOILS ENGINEER. THE AGGREGATE LAYER SHALL BE PLACED OVER FIRM NATURAL SUBGRADE OR ON COMPACTED AND CONTROLLED FILL. FILL UNDER SLABS SHALL BE COMPACTED IN 8 INCH LAYERS TO 95% MAX. DENSITY. USE AIR-ENTRAINED AT ALL EXTERIOR SLABS.

CONCRETE FOR SLABS-ON-GRADE SHALL BE PLACED IN A SEQUENCE AND MANNER THAT IS CONSISTENT WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE. LOCATE CONSTRUCTION AND CONTROL JOINTS IN SUCH A WAY TO MINIMIZE THE EFFECTS OF SHRINKAGE OF THE CONCRETE SLAB SECTIONS. SUBMIT TO THE ARCHITECT/ENGINEER THE SEQUENCE AND METHOD OF CASTING CONCRETE SLABS-ON-GRADE PRIOR TO PLACING THESE ELEMENTS. POUR SLABS IN ALTERNATE PANELS WITH A MAXIMUM OF 600 SF AND PROVIDE CONTROL AND CONSTRUCTION JOINTS AT 15'-0" MAXIMUM OR AS REQUIRED TO PREVENT UNCONTROLLED CRACKING.

SLAB CONTROL JOINTS: SAW CUT OR FORM TO 1/3 SLAB DEPTH. SPACE NO MORE THAN 15 FEET APART. DISCONTINUE WELDED WIRE FABRIC AT CONTROL JOINTS. PROVIDE JOINTS ON GROUND SUPPORTED SLABS IN RECTANGULAR CONFIGURATION, WITH THE LONGER SIDE NO MORE THAN ONE-AND-ONE-HALF TIMES THE LENGTH OF THE SHORTER SIDE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANCHOR BOLTS, CLIPS, INSERTS, CONNECTION PLATES, SLEEVES, SLOTS AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS, AND IN COOPERATION WITH OTHER TRADES PRIOR TO PLACING CONCRETE.

ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH ACI'S MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES, (ACI-315). DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI 318, ACI 315, AND CRSI STANDARDS.

ALL REINFORCING STEEL (INCLUDING WELDED WIRE FABRIC) SHALL BE SECURELY TIED AND ANCHORED IN PLACE TO PREVENT DISLOCATION DURING THE PLACING OPERATION.

REINFORCING STEEL SHALL BE CLEAN OF MUD, DEBRIS, LOOSE RUST, CEMENT, GROUT, OR ANY OTHER MATERIAL WHICH MAY INHIBIT THE BOND BETWEEN THE STEEL AND CONCRETE.

PROVIDE 8' X 8' CORNER BARS TO MATCH ALL HORIZONTAL REINFORCING IN WALLS AND FOOTINGS. ALL LAPS SHALL BE A MINIMUM OF 36 BAR DIAMETERS. PROVIDE DOWELS BETWEEN ALL FOOTINGS, WALLS AND PIERS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.

DRY PACK SHALL CONSIST OF SIKA GROUT 212 OR APPROVED SUBSTITUTE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

WOOD

FLITCH BEAMS SHALL BE SIZED AS INDICATED ON THE DRAWINGS, USING #2 SPF MINIMUM AND A-36 STEEL PLATE. USE TWO ROWS OF 1/2" DIAMETER THROUGH BOLTS 2" FROM TOP AND BOTTOM, SPACED 16"oc AT TOP AND 32"oc AT THE BOTTOM. BEGIN BOLTING ROWS 6" FROM ENDS. STEEL FLITCH PLATES MUST BE EITHER FULL LENGTH OR FULL MOMENT BUTT SPLICE.

WOOD EXPOSED TO THE ELEMENTS, WOOD IN CONTACT WITH CONCRETE OR MASONRY, AND WOOD DESIGNATED "TREATED" SHALL BE #2 GRADE SOUTHERN PINE OR BETTER & PRESSURE IMPREGNATED WITH ALKALINE COPPER QUATERNARY (ACQ) IN ACCORDANCE WITH AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARD C2, WITH A MIN. RETENTION OF 0.40 LBS. PER CUBIC FOOT OF WOOD. MIN. DEPTH OF PENETRATION SHALL BE 2.5" OR 85% OF THE SAPWOOD.

ALL STUDS SHALL BE INSTALLED IN ACCORDANCE WITH WFCPA. MEMBERS ARE NOT TO BE DRILLED IN EXCESS OF NDS OR LOCAL CODE REQUIREMENTS, WHICHEVER IS MORE STRINGENT. ALL POSTS AND MULTIPLE STUDS SHALL BE RUN CONTINUOUSLY TO SOLID BEARING ON FOUNDATION WALL OR BEAMS, PROVIDE SOLID BLOCKING AT FLOORS. COLUMNS SHALL BE ADEQUATELY ANCHORED TO PREVENT INTERNAL DISPLACEMENT.

FRAME CHIMNEYS: FRAME CHIMNEYS SHALL BE CONSTRUCTED OF MINIMUM #2 SPF STUDS, MAXIMUM 16"oc USE 2 X 4 IF CHIMNEY EXTENDS LESS THAN 8' ABOVE ROOF, OTHERWISE USE 2 X 6. SHEATH WITH 1/2" APA OR APPROVED SUBSTITUTE RATED SHEATHING CONTINUOUS ACROSS PLATES AND JOISTS, GLUE, AND NAIL WITH 8D NAILS @ 6"oc SECURE TO ROOF. STUDS MUST BE CONTINUOUS ACROSS ROOF INTERSECTION.

NO STRUCTURAL MEMBER SHALL BE OMITTED, NOTCHED, CUT, BLOCKED OUT OR RELOCATED WITHOUT PRIOR APPROVAL BY THE DESIGNER OR STRUCTURAL ENGINEER. DO NOT ALTER SIZES OF MEMBERS NOTED WITHOUT APPROVAL OF BOTH.

CUTTING OF WOOD BEAMS, JOISTS AND RAFTERS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-SIXTH THE MEMBER DEPTH AND SHALL NOT BE LOCATED WITHIN THE MIDDLE THIRD OF THE SPAN. NOTCHES LOCATED CLOSER TO SUPPORTS THAN THREE TIMES THE MEMBER DEPTH SHALL NOT EXCEED ONE-FIFTH THE DEPTH. HOLES BORED OR CUT INTO JOISTS SHALL BE MIN. 2" CLEAR FROM THE TOP OR BOTTOM OF THE JOIST AND THE HOLE DIAMETER SHALL NOT EXCEED ONE-THIRD OF THE JOIST DEPTH.

THERE SHALL NOT BE LESS THAN ONE LINE OF BRIDGING IN EVERY EIGHT FEET OF SPAN IN FLOOR, ATTIC AND ROOF FRAMING. THE BRIDGING SHALL CONSIST OF NOT LESS THAN ONE BY THREE INCH LUMBER DOUBLE NAILED AT EACH END OR OF EQUIVALENT METAL BRACING OF EQUAL RIGIDITY. MIDSPAN BRIDGING IS NOT REQUIRED FOR FLOOR, ATTIC OR ROOF FRAMING WHERE JOIST DEPTH DOES NOT EXCEED TWELVE INCHES NOMINAL. BLOCK ALL STUD WALLS AT MAXIMUM INTERVALS OF EIGHT FEET WITH A MINIMUM OF TWO-BY SOLID MATERIAL WITH TIGHT JOINTS. PROVIDE TWO-BY FIRE STOPS AT MID-POINT OF STUD WALLS.

UNLESS NOTED OTHERWISE, BRACE EXTERIOR CORNERS OF BUILDING WITH 1 X 4 DIAGONALS, LET INTO STUDS, OR 4 X 8 PLYWOOD SHEET OF THICKNESS TO MATCH THAT OF SHEATHING, OR WITH METAL STRAPS. LAP PLATES AT ALL CORNERS.

MISCELLANEOUS

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT AND FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS.

THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURE. SUCH LOADS SHALL NOT EXCEED THE CAPACITY OF THE STRUCTURE AT ANY TIME.

THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION, AND ANY TEMPORARY BRACING OR SUPPORT REQUIRED TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR IS TO VERIFY ALL OPENING SIZES AND LOCATIONS WITH THE REQUIREMENTS OF OTHER TRADES PRIOR TO FABRICATION AND ERECTION.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE WORK OF ALL TRADES IS COORDINATED WITH STRUCTURAL WORK.

EARTH RETAINING WALLS, OTHER THAN CANTILEVERED TYPE WALLS, SHALL BE ADEQUATELY BRACED UNTIL CONCRETE FOR SUPPORTING SLABS HAS BEEN PLACED AND ALL CONCRETE HAS CURED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, FURNISHING, ERECTING AND REMOVING ANY TEMPORARY SHORING AND BRACING DURING CONSTRUCTION

THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED AT THE PROPER TIME WHEN ALL ITEMS ARE READY FOR OBSERVATION. SUFFICIENT NOTICE SHALL BE GIVEN BY THE CONTRACTOR TO ALLOW FOR SCHEDULING OF OBSERVATIONS.

SAFETY REGULATIONS SHALL BE STRICTLY FOLLOWED BY THE CONTRACTOR OR SUBCONTRACTOR DURING ALL TIMES OF WORK ON THIS PROJECT. THE ARCHITECT OR ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR ACTS OF OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

ALL SPECIALTY BOLTS, INCLUDING EXPANSION TYPE AND EPOXY TYPE ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

THE CONTRACTOR SHALL PROTECT FROM DAMAGES EXISTING BUILDING(S), OWNER EQUIPMENT, ROADS, WALKS AND UTILITIES. THE CONTRACTOR SHALL MAINTAIN THESE DURING THE COURSE OF THE WORK, AND SHALL REPAIR ALL DAMAGES AT NO ADDITIONAL EXPENSE TO THE OWNER.

IN AREAS WHERE THE DRAWINGS DO NOT ADDRESS METHODOLOGY, THE CONTRACTOR SHALL BE BOUND TO PERFORM IN STRICT COMPLIANCE WITH MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATIONS.

ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE.

THE GENERAL NOTES AND TYPICAL DETAILS APPLY THROUGHOUT THE JOB UNLESS OTHERWISE NOTED OR SHOWN.

THE CONTRACTOR SHALL COMPARE AND COORDINATE ALL DRAWINGS. IF A DISCREPANCY EXISTS, HE SHALL PROMPTLY REPORT IT FOR PROPER ADJUSTMENT BEFORE PROCEEDING WITH THE WORK.

IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SIMILAR CONDITIONS THAT ARE SHOWN OR NOTED.

THESE PLANS ARE SUBJECT TO MODIFICATIONS AS NECESSARY TO MEET CODE REQUIREMENTS OR TO FACILITATE MECHANICAL, PLUMBING INSTALLATIONS OR TO INCORPORATE DESIGN IMPROVEMENTS.

DO NOT BUILD OVER GAS LINES OR ENCLOSE THE METER. CONSULT THE LOCAL GAS COMPANY PRIOR TO CONSTRUCTION.

CHIMNEY SHALL EXTEND AT LEAST 2 FEET HIGHER THAN ANY PORTION OF THE BUILDING WITHIN 10 FEET, BUT SHALL NOT BE LESS THAN 3 FEET ABOVE THE POINT WHERE IT PASSES THROUGH THE ROOF.

DECKS ARE NOT APPROVED FOR FUTURE HOT TUB INSTALLATION.

NO OPENING NOR ANY CHANGES IN SIZE, DIMENSION OR LOCATION SHALL BE MADE IN ANY STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

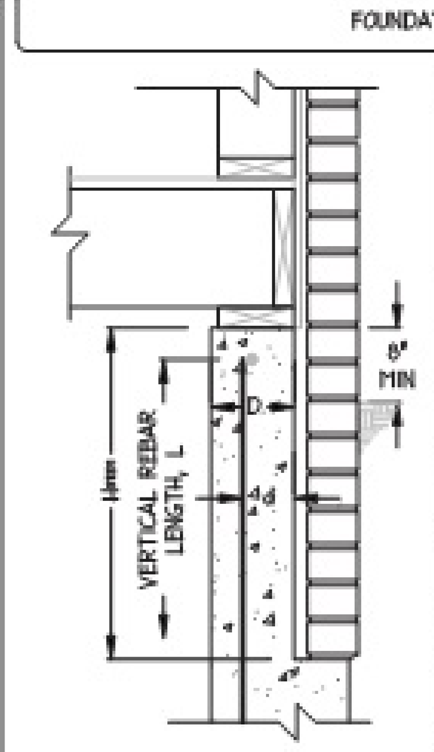
CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH NEW WORK IN AREAS AFFECTED BY EXISTING CONDITIONS. STRUCTURAL ENGINEER SHALL BE INFORMED IN WRITING OF CONFLICTS BETWEEN EXISTING AND PROPOSED NEW CONSTRUCTION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS. INCONSISTENCIES ON THE STRUCTURAL DRAWINGS OR BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER CONTRACT, SHOP, FABRICATION, OR OTHER DRAWINGS OR INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH AFFECTED WORK.

THE STRUCTURAL INTEGRITY OF THE BUILDING IS DEPENDANT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION. THE METHOD OF CONSTRUCTION AND SEQUENCE OF OPERATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUPPLY ANY NECESSARY SHORING, BRACING, GUYS, ETC., TO PROPERLY BRACE THE STRUCTURE AGAINST WIND, DEAD AND LIVE LOADS UNTIL THE BUILDING IS COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS.

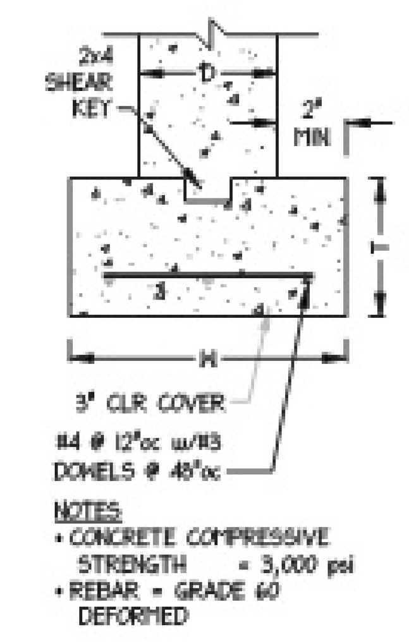
CONTRACTOR SHALL NOT PLACE BACK FILL AGAINST BASEMENT WALLS UNTIL THE FLOOR SYSTEM IS COMPLETELY INSTALLED OR CONTRACTOR HAS PROVIDED ADEQUATE SHORING AND BRACING. ANY QUESTIONS REGARDING TEMPORARY SHORING REQUIREMENTS SHOULD BE FORWARDED TO THE STRUCTURAL ENGINEER FOR REVIEW.

FOUNDATION STEM WALL REINFORCEMENT SCHEDULE

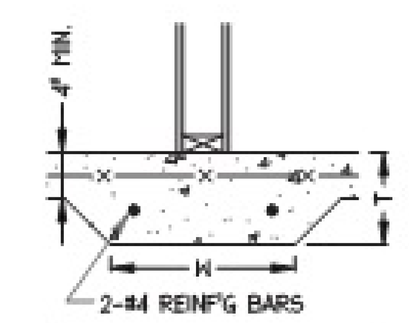


6" CONCRETE STEM WALL (D) VERT. REINFORCEMENT		SOIL CLASSIFICATIONS (EQUIVALANT FLUID PRESSURE)		
STEM WALL HEIGHT (Hmax)	LENGTH (L)	GW, GP, SW & SP (30pcf)	GM, GC, SM, SM-SC AND ML (45 pcf)	SC, MH, ML-CL, INORGANIC CL (60 pcf)
8' WALL HEIGHT (H)				
16"	36"	N/A		
24"	44"			#4 @ 16"oc
32"	52"		#4 @ 18"oc	#4 @ 16"oc
40"	60"		#4 @ 16"oc	#4 @ 12"oc
48"	68"		#4 @ 16"oc	#4 @ 12"oc
9' WALL HEIGHT (H)				
16"	36"	N/A		
24"	44"		#4 @ 18"oc	#4 @ 16"oc
32"	52"		#4 @ 16"oc	#4 @ 12"oc
40"	60"	#4 @ 18"oc	#4 @ 12"oc	#4 @ 8"oc
48"	68"	#4 @ 16"oc	#4 @ 12"oc	#4 @ 8"oc
d = 3.5"(MIN), CONCRETE COMPRESSIVE STRENGTH = 3,000 psi				

FOUNDATION WALL STRIP FOOTING SCHEDULE



NOTES:
- CONCRETE COMPRESSIVE STRENGTH = 3,000 psi
- REBAR = GRADE 60 DEFORMED



THICKENED SLABS	
MARK	EQUIVALENT WALL FOOTING
TS16	W8C
TS18	W8D
TS20	W8E
TS22	W8F
TS24	W8G

8" CONCRETE WALL (D) FOOTING SIZES

	SOIL CLASSIFICATIONS / PRESUMPTIVE BEARING CAPACITIES			
	CL, ML, MH & CH (1500 psf)	SW, SP, SM, SC, GM & GC (2000 psf)	(2500 psf)	GW, GP (3000 psf)
MARK	SIZE (TxW)	SIZE (TxW)	SIZE (TxW)	SIZE (TxW)
W8A	8" x 16"	8" x 16"	8" x 16"	8" x 16"
W8B	8" x 18"			
W8C	8" x 20"	8" x 18"		
W8D	8" x 22"			
W8E	8" x 24"			
W8F	10" x 26"	8" x 20"		
W8G	10" x 28"	8" x 22"		
W8H	12" x 30"	8" x 24"	8" x 18"	
W8I	12" x 32"		8" x 20"	
W8J	12" x 34"	10" x 26"	8" x 22"	8" x 18"
W8K	14" x 36"	10" x 28"		

10" CONCRETE WALL (D) FOOTING SIZES

	SOIL CLASSIFICATIONS / PRESUMPTIVE BEARING CAPACITIES			
	CL, ML, MH & CH (1500 psf)	SW, SP, SM, SC, GM & GC (2000 psf)	(2500 psf)	GW, GP (3000 psf)
MARK	SIZE (TxW)	SIZE (TxW)	SIZE (TxW)	SIZE (TxW)
W10B	8" x 18"	8" x 18"	8" x 18"	8" x 18"
W10C	8" x 20"			
W10D	8" x 22"			
W10E	8" x 24"			
W10F	8" x 26"	8" x 20"		
W10G	10" x 28"	8" x 22"		
W10H	10" x 30"	8" x 24"		
W10I	12" x 32"		8" x 20"	
W10J	12" x 34"	8" x 26"	8" x 22"	
W10K	14" x 36"	10" x 28"		

12" CONCRETE WALL (D) FOOTING SIZES

	SOIL CLASSIFICATIONS / PRESUMPTIVE BEARING CAPACITIES			
	CL, ML, MH & CH (1500 psf)	SW, SP, SM, SC, GM & GC (2000 psf)	(2500 psf)	GW, GP (3000 psf)
MARK	SIZE (TxW)	SIZE (TxW)	SIZE (TxW)	SIZE (TxW)
W12C	8" x 20"	8" x 20"	8" x 20"	8" x 20"
W12D	8" x 22"			
W12E	8" x 24"			
W12F	8" x 26"			
W12G	8" x 28"	8" x 22"		
W12H	10" x 30"	8" x 24"		
W12I	12" x 32"			
W12J	12" x 34"	8" x 26"	8" x 22"	
W12K	14" x 36"	10" x 28"		

ISOLATED FOOTING SCHEDULE

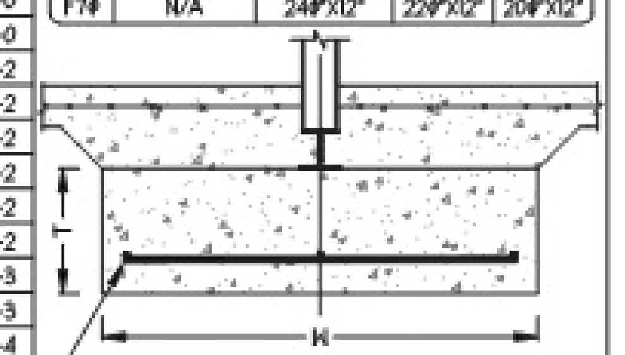
SQUARE, ISOLATED FOOTING SPECIFICATIONS

	SOIL CLASSIFICATIONS/PRESUMPTIVE BEARING CAPACITIES	EQUIVALENT FOOTINGS		
MARK (F##)	CL, ML, MH & CH (1500psf) SIZE WxT-N	SW, SP, SM, SC, GM & GC (2000psf) SIZE WxT-N	(2500psf) SIZE WxT-N	GW, GP (3000psf) SIZE WxT-N
FA	30"X12" -0	24"X12" -0	24"X12" -0	24"X12" -0
FB	32"X12" -0	26"X12" -0	24"X12" -0	24"X12" -0
FC	34"X12" -0	28"X12" -0	24"X12" -0	24"X12" -0
FD	36"X12" -0	30"X12" -0	26"X12" -0	26"X12" -0
FE	38"X12" -0	32"X12" -0	30"X12" -0	28"X12" -0
FF	40"X12" -0	34"X12" -0	32"X12" -0	28"X12" -0
FG	44"X12" -3	36"X12" -0	32"X12" -0	30"X12" -0
FH	46"X12" -3	38"X12" -2	34"X12" -2	32"X12" -2
FI	48"X12" -3	40"X12" -2	36"X12" -2	34"X12" -2
FJ	50"X12" -3	42"X12" -3	38"X12" -2	34"X12" -2
FK	52"X12" -3	44"X12" -3	40"X12" -2	36"X12" -2
FL	54"X12" -3	46"X12" -3	42"X12" -3	38"X12" -2
FM	58"X12" -4	48"X12" -3	44"X12" -3	40"X12" -2
FN	60"X12" -5	50"X12" -4	46"X12" -4	42"X12" -3
FO	62"X12" -5	52"X12" -4	48"X12" -4	42"X12" -3
FP	64"X12" -6	54"X12" -4	48"X12" -4	44"X12" -4
FQ	66"X12" -6	56"X12" -5	50"X12" -5	46"X12" -4
FR	68"X12" -7	58"X12" -6	52"X12" -5	48"X12" -5
FS	72"X12" -8	60"X12" -6	54"X12" -6	50"X12" -5
FT	74"X12" -9	62"X12" -7	56"X12" -6	50"X12" -5
FU	76"X12" -10	64"X12" -8	58"X12" -7	52"X12" -6
FV	78"X14" -10	66"X12" -8	60"X14" -8	54"X12" -7
FW	80"X14" -11	68"X14" -9	62"X14" -8	56"X14" -7
FX	82"X14" -11	70"X14" -9	62"X14" -8	58"X14" -8
FY	86"X14" -12	72"X14" -10	64"X14" -9	58"X14" -8
FZ	88"X14" -13	74"X14" -11	66"X14" -9	60"X14" -8

N = NUMBER OF #4 BOTTOM BARS, EACH WAY

ROUND FOOTING SCHEDULE

	SOIL CLASSIFICATIONS & PRESUMPTIVE BEARING CAPACITIES	EQUIVALENT FOOTINGS		
MARK F#Ø	CL, ML, MH & CH (1500psf) FOOTING SIZE (DIA x T)	SW, SP, SM, SC, GM & GC (2000psf)	(2500psf)	GW, GP (3000psf)
F1Ø	14"ØX12"	12"ØX12"	12"ØX12"	12"ØX12"
F2Ø	18"ØX12"	14"ØX12"	14"ØX12"	12"ØX12"
F3Ø	20"ØX12"	16"ØX12"	14"ØX12"	14"ØX12"
F4Ø	22"ØX12"	18"ØX12"	16"ØX12"	16"ØX12"
F5Ø	24"ØX12"	20"ØX12"	18"ØX12"	18"ØX12"
F6Ø	N/A	22"ØX12"	20"ØX12"	18"ØX12"
F7Ø	N/A	24"ØX12"	22"ØX12"	20"ØX12"



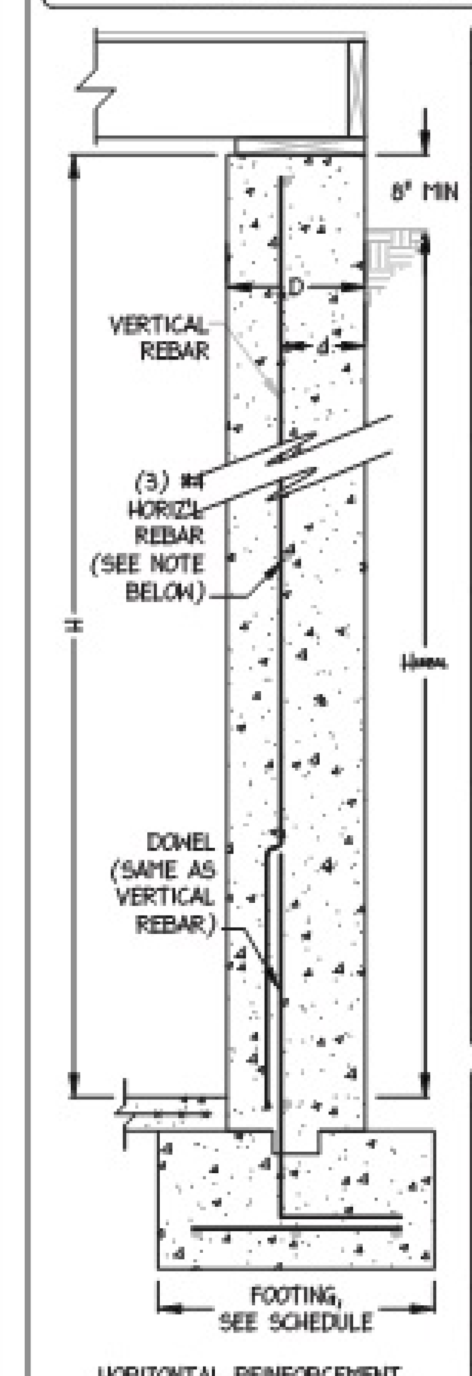
FLEXURE REINFORCEMENT, BOTH DIRECTIONS PER FOOTING SCHEDULE, MIN. 2" & 3" CLEAR FROM FOOTING SIDE & BOTTOM, RESPECTIVELY.

SQUARE FOOTING, TYPICAL SECTION

REINFORCEMENT EQUIVALENTS

NUMBER #4 BARS SPEC'D	NUMBER #5 BARS REQ'D
2	2
3-4	3
5-6	4
7	5
8-9	6
10	7
11-12	8
13	9
14-15	10

FOUNDATION WALL REINFORCEMENT SCHEDULE



HORIZONTAL REINFORCEMENT
(3) #4 REBAR (≤ 8' WALL)
(4) #4 REBAR (> 8' WALL)

8" CONCRETE WALL (D) VERTICAL REINFORCEMENT

		SOIL CLASSIFICATIONS (EQUIVALENT FLUID PRESSURE)		
MAXIMUM WALL HEIGHT (H)	MAXIMUM UNBALANCED HEIGHT (Hmax)	GW, GP, SW & SP (30pcf)	GM, GC, SM, SM-SC AND ML (45 pcf)	SC, MH, ML-CL, INORGANIC CL (60 pcf)
5'	4,4'-4"	N/A	N/A	N/A
6'	4,5,5'-4"	N/A	N/A	N/A
7'	4,5	N/A	N/A	N/A
	6	N/A	N/A	#4 @ 36"oc
	6'-4"	N/A	#4 @ 24"oc	#4 @ 18"oc
8'	4,5	N/A	N/A	N/A
	6	N/A	N/A	#4 @ 24"oc
	7	N/A	#4 @ 24"oc	#4 @ 18"oc
	7'-4"	#4 @ 30"oc	#4 @ 18"oc	#4 @ 12"oc
9'	4,5	N/A	N/A	N/A
	6	N/A	N/A	#4 @ 24"oc
	7	N/A	#4 @ 18"oc	#4 @ 16"oc
	8	#4 @ 24"oc	#4 @ 16"oc	#4 @ 12"oc
	8'-4"	#4 @ 20"oc	#4 @ 12"oc	#4 @ 8"oc
10'	4,5	N/A	N/A	N/A
	6	N/A	N/A	#4 @ 20"oc
	7	N/A	#4 @ 18"oc	#4 @ 12"oc
	8	#4 @ 24"oc	#4 @ 12"oc	#4 @ 8"oc
	9	#4 @ 18"oc	#4 @ 12"oc	#4 @ 8"oc
	9'-4"	#4 @ 12"oc	#4 @ 8"oc	#4 @ 8"oc
d = 5"(MIN), CONCRETE COMPRESSIVE STRENGTH = 3,000 psi				

10" CONCRETE WALL (D) VERTICAL REINFORCEMENT

		SOIL CLASSIFICATIONS (EQUIVALENT FLUID PRESSURE)		
MAXIMUM WALL HEIGHT (H)	MAXIMUM UNBALANCED HEIGHT (Hmax)	GW, GP, SW & SP (30pcf)	GM, GC, SM, SM-SC AND ML (45 pcf)	SC, MH, ML-CL, INORGANIC CL (60 pcf)
5'	4,4'-4"	N/A	N/A	N/A
6'	4,5,5'-4"	N/A	N/A	N/A
7'	4,5,6,6'-4"	N/A	N/A	N/A
8'	4,5,6,7	N/A	N/A	N/A
	7'-4"	N/A	N/A	#4 @ 20"oc
9'	4,5,6	N/A	N/A	N/A
	7	N/A	N/A	#4 @ 20"oc
	8	N/A	#4 @ 20"oc	#4 @ 16"oc
	8'-4"	N/A	#4 @ 18"oc	#4 @ 12"oc
10'	4,5,6	N/A	N/A	N/A
	7	N/A	N/A	#4 @ 18"oc
	8	N/A	#4 @ 18"oc	#4 @ 16"oc
	9	#4 @ 48"oc	#4 @ 16"oc	#4 @ 12"oc
	9'-4"	#4 @ 18"oc	#4 @ 12"oc	#4 @ 8"oc
d = 6½"(MIN), CONCRETE COMPRESSIVE STRENGTH = 3,000 psi				

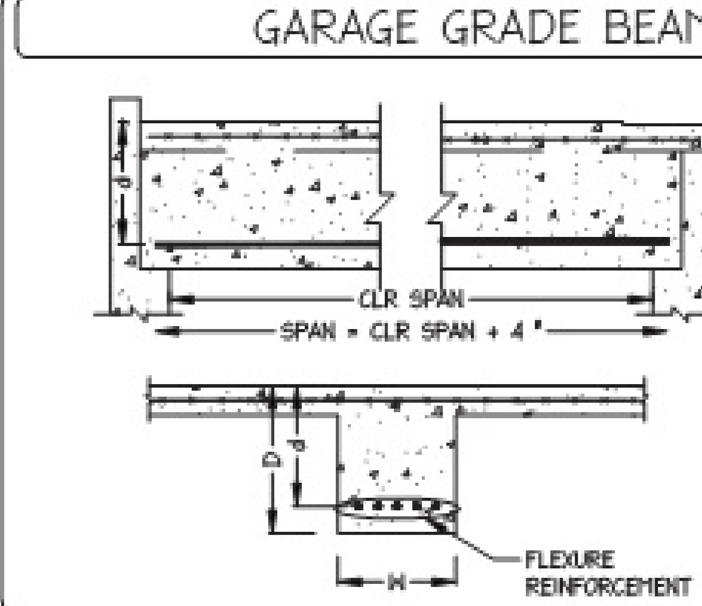
12" CONCRETE WALL (D) VERTICAL REINFORCEMENT

		SOIL CLASSIFICATIONS (EQUIVALENT FLUID PRESSURE)		
MAXIMUM WALL HEIGHT (H)	MAXIMUM UNBALANCED HEIGHT (Hmax)	GW, GP, SW & SP (30pcf)	GM, GC, SM, SM-SC AND ML (45 pcf)	SC, MH, ML-CL, INORGANIC CL (60 pcf)
5'	4,4'-4"	N/A	N/A	N/A
6'	4,5,5'-4"	N/A	N/A	N/A
7'	4,5,6,6'-4"	N/A	N/A	N/A
8'	4,5,6,7,7'-4"	N/A	N/A	N/A
9'	4,5,6,7	N/A	N/A	N/A
	8	N/A	N/A	#4 @ 48"oc
	8'-4"	N/A	N/A	#4 @ 16"oc
10'	4,5,6,7	N/A	N/A	N/A
	8	N/A	N/A	#4 @ 18"oc
	9	N/A	#4 @ 48"oc	#4 @ 12"oc
	9'-4"	N/A	#4 @ 16"oc	#4 @ 12"oc
d = 8½"(MIN), CONCRETE COMPRESSIVE STRENGTH = 3,000 psi				

REBAR CONVERSION CHART

ORIGINAL	#5 EQUAL
#4 @ 6"oc	#5 @ 9"oc
#4 @ 8"oc	#5 @ 12"oc
#4 @ 12"oc	#5 @ 18"oc
#4 @ 16"oc	#5 @ 24"oc
#4 @ 18"oc	#5 @ 24"oc
#4 @ 24"oc	#5 @ 36"oc

GARAGE GRADE BEAM SCHEDULE



SPAN (FT)	BEAM SIZE (WxD)	FLEXURE REINFORCEMENT
14	12" x 18"	(3) #4
16	12" x 20"	(4) #4
18	12" x 22"	(4) #4
20	12" x 24"	(5) #4
21	14" x 22"	(5) #4
22	14" x 24"	(5) #4
23	16" x 24"	(6) #4
24	16" x 24"	(6) #4
25	18" x 24"	(7) #4
26	18" x 24"	(7) #4
28	18" x 26"	(8) #4
30	18" x 30"	(9) #4

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2769

NEW HOME AT
[illegible]

ARCHITECT
ARCHITECT:

CONTRACTOR
CONTRACTOR:

CIVIL:

MEP:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24518
EXPIRATION DATE: 04-21-2017

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JMU

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

REVISION:

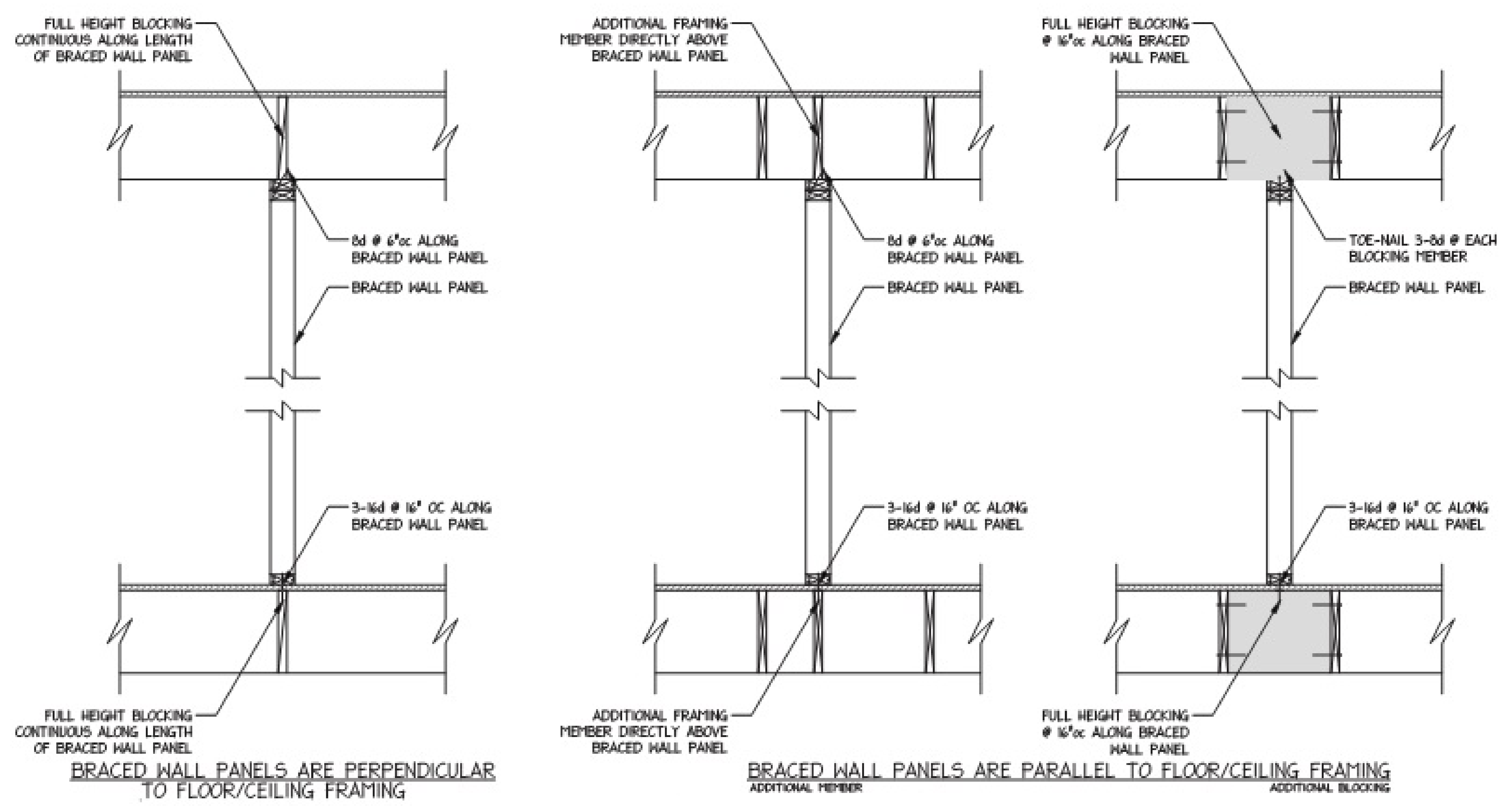
1		
2		
3		
4		
5		
6		
7		
8		

GENERAL STRUCTURAL NOTES & SCHEDULES

SN2

5/11/2017 --- 10:50:24 AM

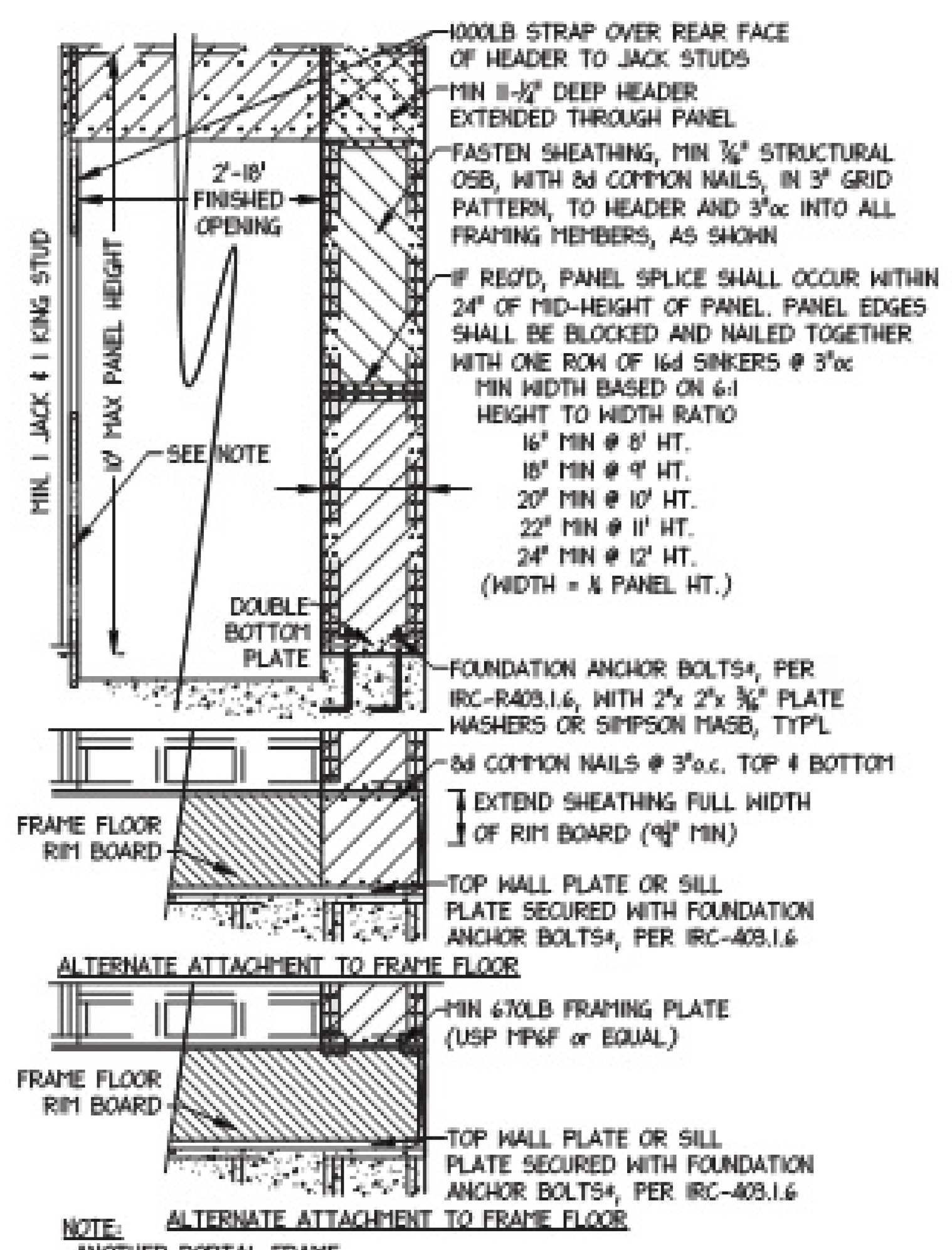
e:\documents_seu - cluod\public_clients\2017\manifest 3d\acl-2 build 5\2017-05-11 boone ave.dwg



BRACED WALL PANELS ARE PERPENDICULAR TO FLOOR/CEILING FRAMING

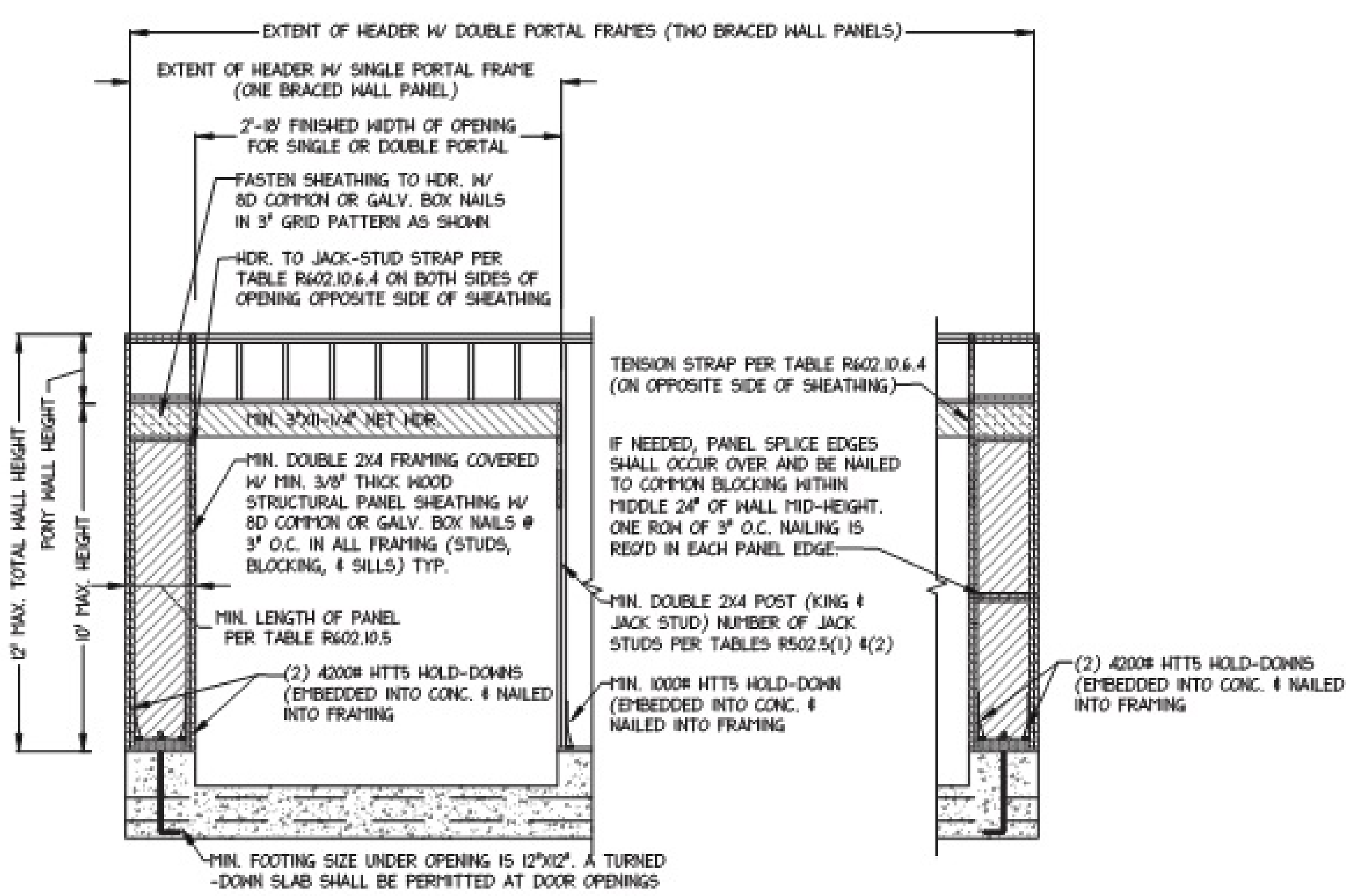
BRACED WALL PANELS ARE PARALLEL TO FLOOR/CEILING FRAMING
ADDITIONAL MEMBER ADDITIONAL BLOCKING

TYPICAL INTERIOR BRACED WALL CONNECTION DETAILS
3/4" PER FOOT

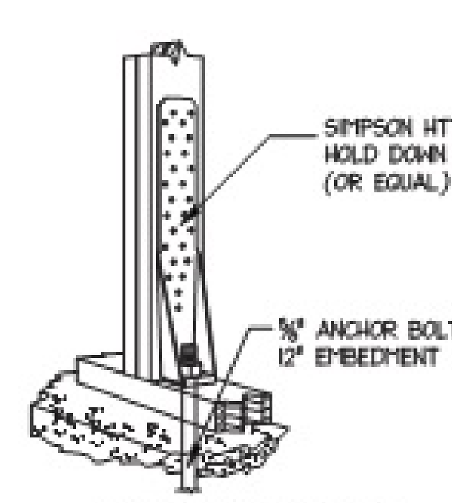


NOTE:
- ANOTHER PORTAL FRAME
- BRACE WALL SEGMENT
- 1000LB STRAP/HOLDDOWN (NO PONY WALL)
- 3900LB STRAP/HOLDDOWN (w/ PONY WALL)

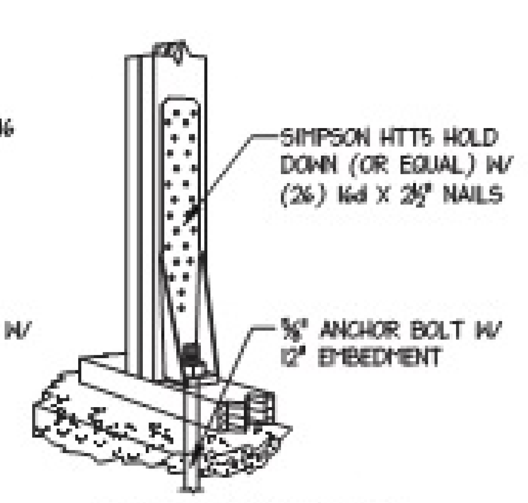
CS-PF # CONTINUOUS PORTAL FRAME BRACED WALL PANEL
NTS (SPECIFIED w/ACTUAL WIDTH, IN INCHES)



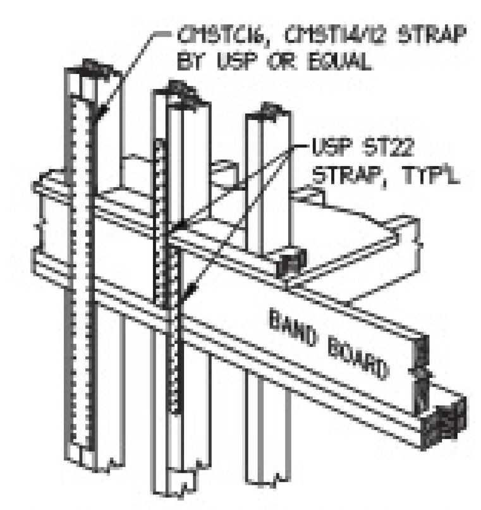
PFH # PORTAL FRAME W/ HOLD-DOWNS
NTS (SPECIFIED w/ACTUAL WIDTH, IN INCHES)



HTT5 INSTALLATION
800# HOLD-DOWN

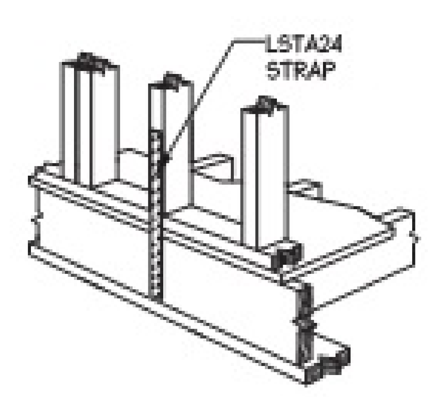


HTT5 INSTALLATION
4200# HOLD-DOWN



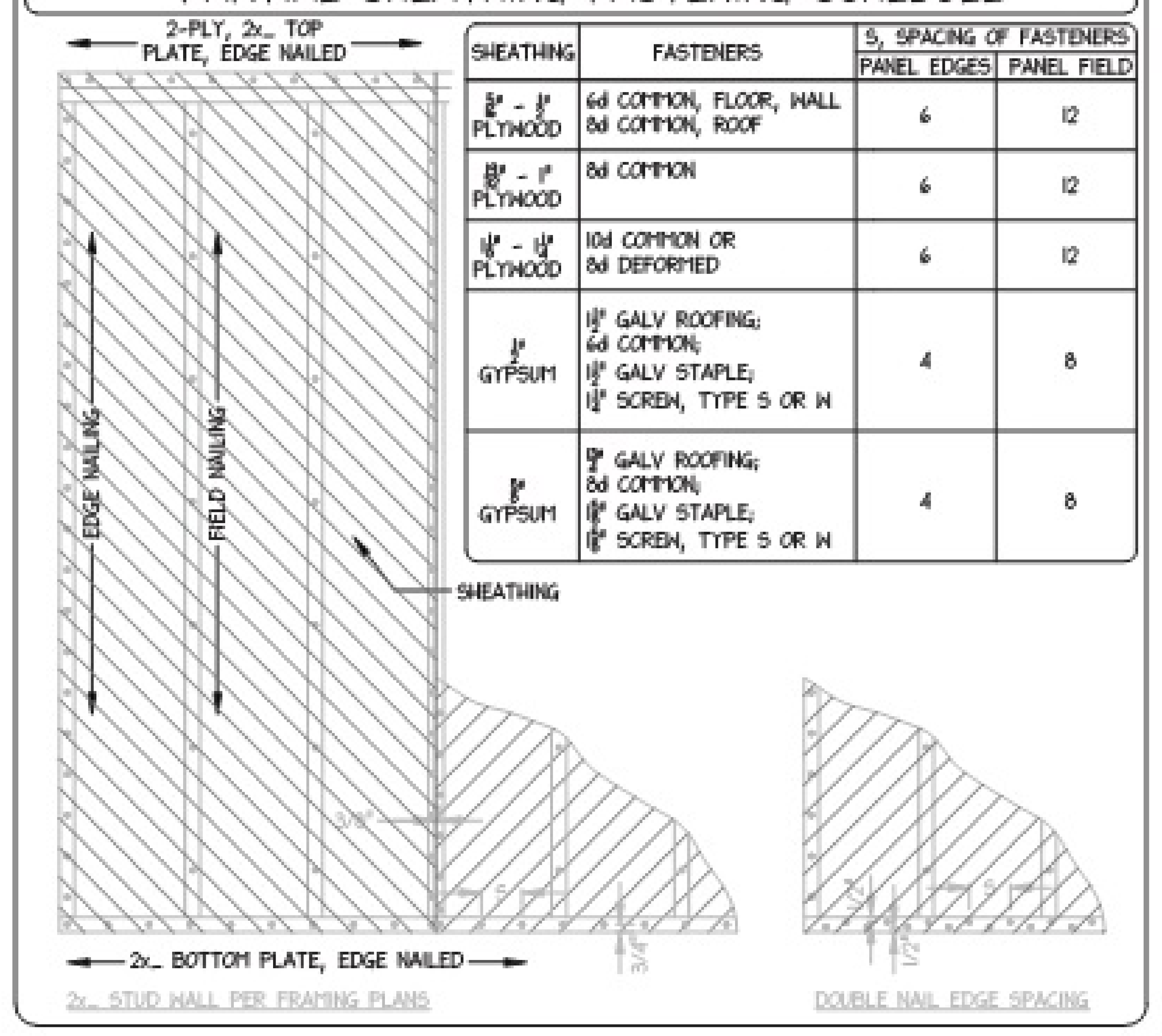
NOTE: ALL STRAPS TO BE NAILED TO POST BELOW OR NAILED TO FACE, UNDERSIDE & BACKSIDE OF HEADER BELOW TO DEVELOP MANUFACTURER'S END LENGTH & NAILING REQUIREMENTS, TYP'L

CMST ST22, CMSTC16, CMST14 & CMST12 INSTALLATIONS
NTS RS200 SIMILAR



LSTA24 INSTALLATION
800# HOLD-DOWN

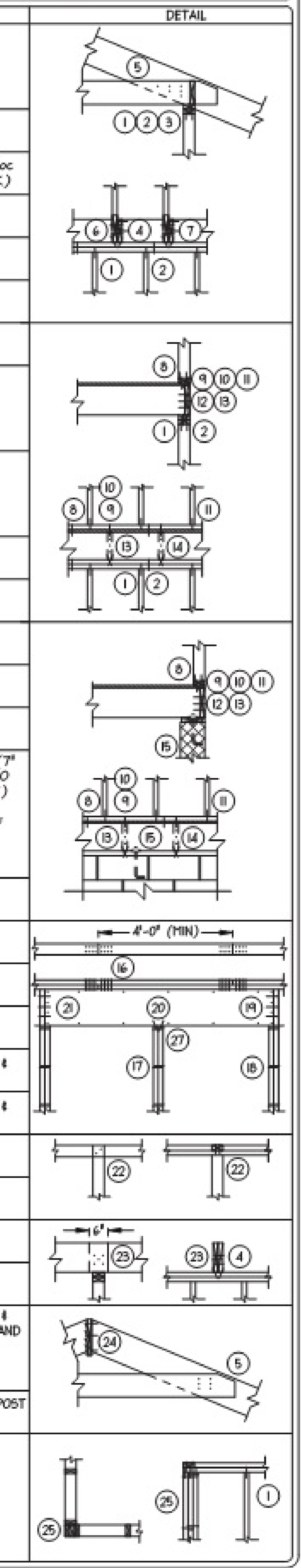
PARTIAL SHEATHING FASTENING SCHEDULE

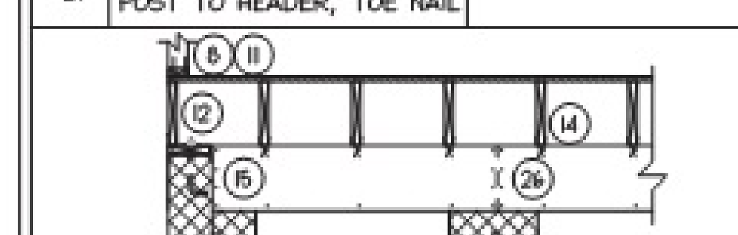


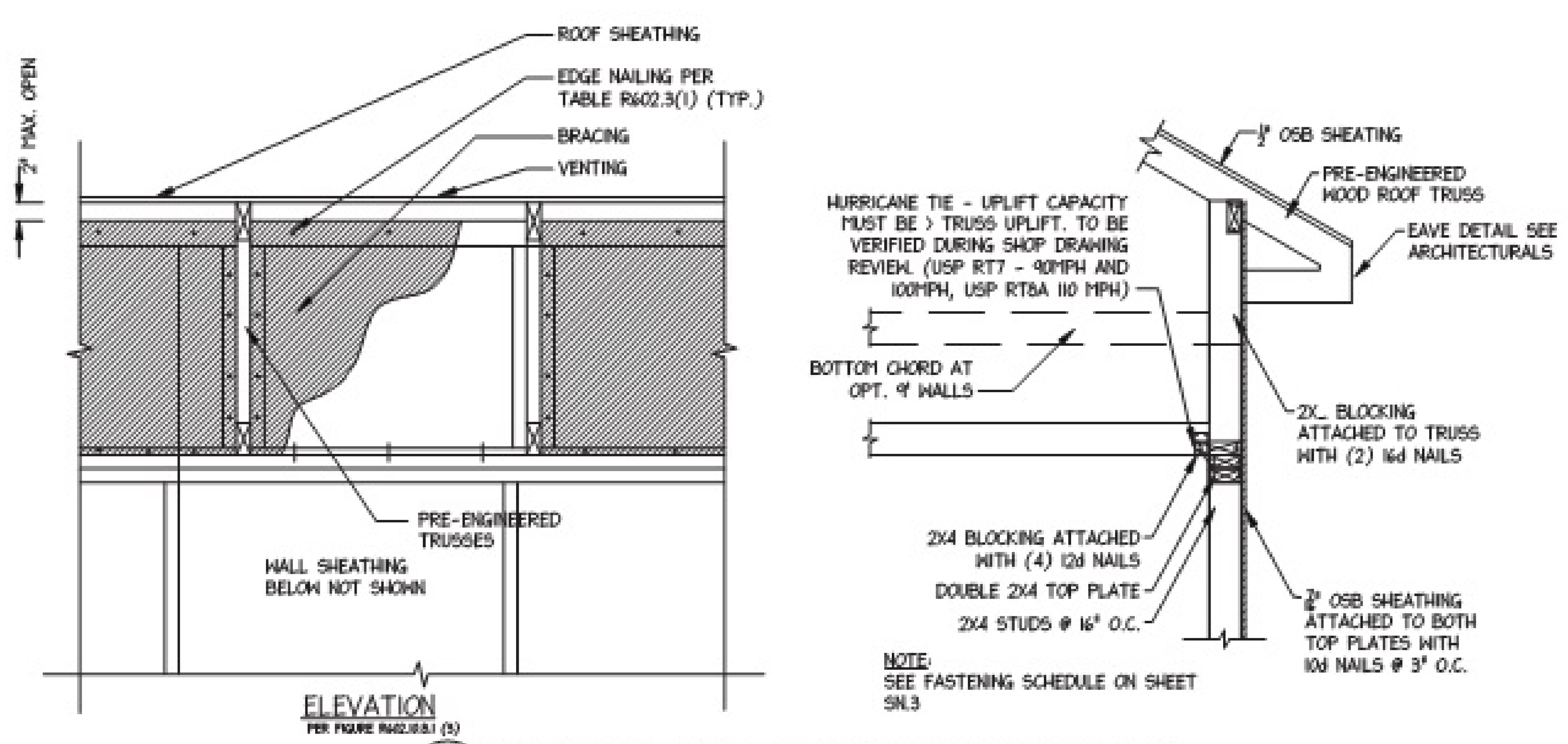
SHEATHING	FASTENERS	S, SPACING OF FASTENERS	
		PANEL EDGES	PANEL FIELD
5/16" - 1/2" PLYWOOD	6d COMMON, FLOOR, WALL 8d COMMON, ROOF	6	12
19/32" - 1" PLYWOOD	8d COMMON	6	12
1 1/8" - 1 1/4" PLYWOOD	10d COMMON OR 8d DEFORMED	6	12
1/2" GYPSUM	1 1/2" GALV ROOFING; 6d COMMON; 1 1/2" GALV STAPLE; 1 1/4" SCREW, TYPE S OR W	4	8
5/8" GYPSUM	1 3/4" GALV ROOFING; 8d COMMON; 1 5/8" GALV STAPLE; 1 5/8" SCREW, TYPE S OR W	4	8

PARTIAL FASTENING SCHEDULE

MARK	CONNECTION	FASTENING	DETAIL
1	TOP PLATE TO STUD, END NAIL	2X4 2-16d 2X6 3-16d 2X8 4-16d 2X10 5-16d 2X12 6-16d	
2	DOUBLE TOP PLATE, FACE NAIL	10d @ 24"oc	
3	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	16d TOENAILS @ 6"oc (MIN 2 PER BLOCK)	
4	CEILING JOISTS TO PLATE, TOE NAIL	(2) 16d	
5	CEILING JOIST/COLLAR TIE TO RAFTER, FACE NAIL	(6) 16d (MIN)	
6	RAFTER / TRUSS TO PLATE, TOE NAIL	(3) 16d	
7	BLOCKING TO JOIST OR RAFTER, EACH END	(2) 16d, TOE NAIL OR (2) 16d, END NAIL	
8	STUD TO SOLE PLATE, END NAIL	2X4 (2) - 16d 2X6 (3) - 16d 2X8 (4) - 16d 2X10 (5) - 16d 2X12 (6) - 16d	
9	SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL SEGMENTS, FACE NAIL	3-16d @ 16"oc 4-16d @ 19.2"oc OR 5-16d @ 24"oc	
10	SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	2-16d @ EACH JOIST OR BLOCKING	
11	SOLE PLATE TO RIM BOARD, FACE NAIL	16d @ 16"oc	
12	RIM BOARD TO TOP/ SILL PLATE, TOE NAIL	10d @ 6"oc	
13	JOIST TO RIM BOARD, END NAIL	(3) 16d	
14	JOIST TO TOP / SILL PLATE OR GIRDER, TOE NAIL	(2) 16d	
15	SILL PLATE TO FOUNDATION WALL	1/2"Ø ANCHOR BOLTS (7" MIN EMBEDMENT INTO WALL) @ 48"oc (MAX) (MIN 2 PER PLATE, WITH 1 WITHIN 12" OF END OF PLATE)	
16	TOP PLATE LAPS SPLICE, FACE NAIL (4'-0"MINUMUM)	(8) 16d	
17	DOUBLE STUDS, FACE NAIL (STAGGER)	10d @ 12"oc EACH FACE	
18	JACK STUD TO KING STUD, FACE NAIL (STAGGER)	10d @ 12"oc EACH FACE	
19	KING STUD TO HEADER, FACE NAIL - EACH PLY	(3) 16d	
20	CONTINUED HEADER, TWO PIECES	16d @ 16"oc ALL EDGES & 4-16d NAILS AT ENDS	
21	BUILT UP HEADER, TWO PLIES WITH 1/2" SPACER	16d @ 16"oc ALL EDGES & 4-16d NAILS AT ENDS	
22	TOP PLATE LAP AT WALL INTERSECTION, FACE NAIL	(2) 10d	
23	CEILING JOIST TO JOIST, LAP OVER PARTITION	(5) 10d FACE NAILS	
24	RAFTER TO RIDGE, VALLEY OR HIP RAFTER	(3) 16d FACE NAILS, (4) 16d TOE NAILS	
25	BUILT-UP CORNER STUDS (THREE STUDS MINIMUM)	16d @ 16" OC	
26	BUILT-UP BEAM AND GIRDERS, 2-INCH LUMBER LAYERS, NAILING PER LAYER	16d @ 16"oc ALL EDGES & 4-16d NAILS AT ENDS AND SPLICES	
27	INTERMEDIATE SUPPORT POST TO HEADER, TOE NAIL	(2) 16d EACH PLY OF POST	







ELEVATION
PER FIGURE R602.10.8.1 (3)

NOTE:
SEE FASTENING SCHEDULE ON SHEET SN.3

1 / SN3 BRACED WALL PANEL CONNECTION TO PERP. TRUSSES
PER FIGURE R602.10.8.1 (3) 3/4" PER FOOT

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2769

NEW HOME AT

ARCHITECT
ARCHITECT:

CONTRACTOR
CONTRACTOR:

CIVIL:

MEP:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24518
EXPIRATION DATE: 09-21-2017

STATE OF MARYLAND JUAN JOSE MORALES-OTRERA No. 24518 PROFESSIONAL ENGINEER
5/11/2017

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JMJ

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

REVISION:
1
2
3
4
5
6
7
8

GENERAL STRUCTURAL NOTES & SCHEDULES

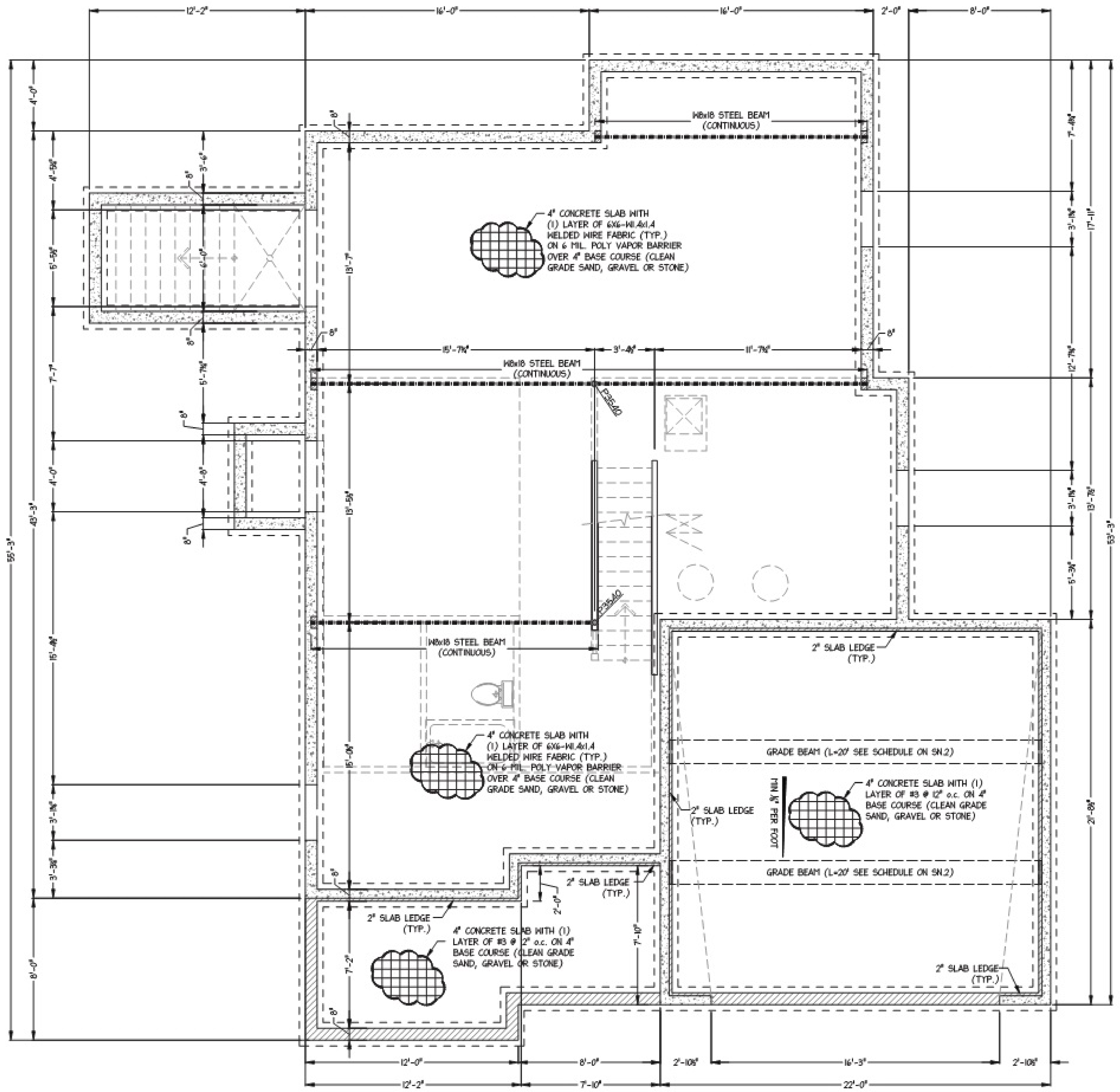
SN3

5/11/2017 --- 10:30:21 AM

e:\documents_seu - cloud\public_clients\2017\manifest 3d\acl-2 build 5\2017-05-11 boone ave.dwg

LEGEND

(hatched)	INTERIOR LOAD BEARING WALL
▯	SQUASH BLOCKS
BP	BLOCKING PANELS
⌖	PLUMBING DROP



1 FOUNDATION PLAN

SCALE: 1/4"=1'-0"

FOOTING SCHEDULE

2000 PSF SOIL BEARING CAPACITIES

CONTACT ENGINEER IF OTHER SOIL CONDITIONS ARE ENCOUNTERED

WALL FOOTINGS		T x W
W8A	TS16	8"x 16"
W10B	TS18	8"x 18"
W12C,	TS20	8"x 20"
W8/10E,		8"x 18"
W8/10/12F,		8"x 20"
W8/10/12G,		8"x 22"
W8/10/12H	TS24	8"x 24"
W8/10/12J		10"x 26"
W8/10/12K		10"x 28"

PIER FOOTINGS	
MARK	= DIA. x T
F12Φ	= 12"Φ x 12"
F14Φ	= 14"Φ x 12"
F16Φ	= 16"Φ x 12"
F18Φ	= 18"Φ x 12"
F20Φ	= 20"Φ x 12"
F22Φ	= 22"Φ x 12"
F24Φ	= 24"Φ x 12"

STEEL COLUMNS	
P311	3"Φ 11ga ADJ STL COL
P3511	3½"Φ 11ga ADJ STL COL
P411	4"Φ 11ga ADJ STL COL
P340	3"Φ SCHED 40 PIPE COL
P3540	3½"Φ SCHED 40 PIPE COL
P440	4"Φ SCHED 40 PIPE COL
P540	5"Φ SCHED 40 PIPE COL
P640	6"Φ SCHED 40 PIPE COL

SQUARE FOOTINGS			
F##	= W x	T	N
FA	= 24"x	12"	0
FB	= 26"x	12"	0
FC	= 28"x	12"	0
FD	= 30"x	12"	0
FE	= 32"x	12"	0
FF	= 34"x	12"	0
FG	= 36"x	12"	0
FH	= 38"x	12"	2
FI	= 40"x	12"	2
FJ	= 42"x	12"	3
FK	= 44"x	12"	3
FL	= 46"x	12"	3
FM	= 48"x	12"	3
FN	= 50"x	12"	4
FO	= 52"x	12"	4
FP	= 54"x	12"	4
FQ	= 56"x	12"	5
FR	= 58"x	12"	6
FS	= 60"x	12"	6
FT	= 62"x	12"	7
FU	= 64"x	12"	8
FV	= 66"x	12"	8
FW	= 68"x	12"	9
FX	= 70"x	14"	9
FY	= 72"x	14"	10
FZ	= 74"x	14"	11
F1Φ	= 12"Φ X 12"		
F2Φ	= 14"Φ X 12"		
F3Φ	= 16"Φ X 12"		
F4Φ	= 18"Φ X 12"		
F5Φ	= 20"Φ X 12"		
F6Φ	= 22"Φ X 12"		
F7Φ	= 24"Φ X 12"		

N = NUMBER #4 BOTTOM BARS, EACH WAY

FOUNDATION NOTES:

1. (hatched) DENOTES BEARING WALL w/MIN 2x4 STUDS @ 16"oc.
2. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
3. MIN. TREATED 2x6 SILL PLATE SHALL BE SECURED TO FOUND'N w/MIN 1/2"Φ ANCHOR BOLTS @ 6'-0"oc PER IRC 2015 R403.1.6.

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2764

NEW HOME AT

ARCHITECT

ARCHITECT

CONTRACTOR

CONTRACTOR:

CIVIL:

MEP:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24518
EXPIRATION DATE: 04-21-2017

SCALE: AS NOTED

DRAWN BY: SL CHECKED BY: JMU

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

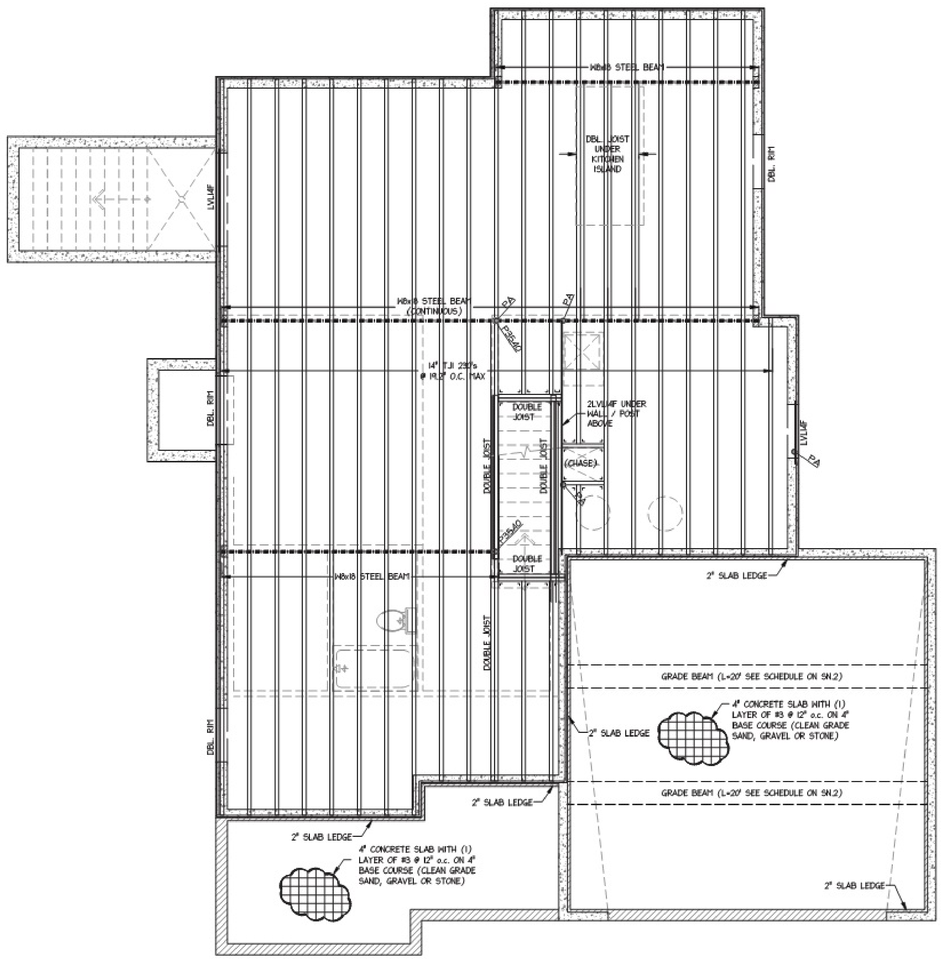
REVISION:
1
2
3
4
5
6
7
8

FOUNDATION PLAN & NOTES

S-100

5/11/2017 --- 10:50:34 AM

e:\documents_seu - cluod\public_clients\2017\manifest 5\laci-2 build 5\2017-05-11 boone ave.dwg



1 FIRST FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0"

LEGEND

- INTERIOR LOAD BEARING WALL
- SQUASH BLOCKS
- BP BLOCKING PANELS
- PLUMBING DROP

BEAM & POST SCHEDULE

BEAM MARKS ARE PRECEDED BY # OF PLIES - 1, 2, 3 OR 4 AND END WITH 'F', FLUSH CONDITION INDICATOR, IF APPLICABLE.
EXAMPLE: 3SYP28F INDICATES A 3-PLY, SYP#2, 2x8, FLUSH

MARK	SIZE	LUMBER
SOLID SAWN LUMBER		
SPF26	2x6	SPF#2
SPF28	2x8	SPF#2
SPF210	2x10	SPF#2
SPF212	2x12	SPF#2
SYP26	2x6	SYP#2
SYP28	2x8	SYP#2
SYP210	2x10	SYP#2
SYP212	2x12	SYP#2
LAMINATED VENEER LUMBER		
LVL5	5¼" x 9½"	1.9E LVL
LVL7	5¼" x 11⅞"	1.9E LVL
LVL9	5¼" x 14"	1.9E LVL
LVL9f2	5¼" x 14"	1.9E LVL
LVL11	5¼" x 16"	1.9E LVL
LVL11f8	5¼" x 16"	1.9E LVL
LVL14	5¼" x 18"	1.9E LVL
LVL16	5¼" x 20"	1.9E LVL
LVL18	5¼" x 22"	1.9E LVL
LVL20	5¼" x 24"	1.9E LVL
LVL24	5¼" x 24"	1.9E LVL
PARALLEL STRAND LUMBER		
PSL9	3½" x 9¼"	2.0E PSL
PSL9f2	3½" x 9¼"	2.0E PSL
PSL11	3½" x 11⅞"	2.0E PSL
PSL11f8	3½" x 11⅞"	2.0E PSL
PSL14	3½" x 14"	2.0E PSL
PSL16	3½" x 16"	2.0E PSL
PSL18	3½" x 18"	2.0E PSL
PSL5x9	5¼" x 9¼"	2.0E PSL
PSL5x9f2	5¼" x 9¼"	2.0E PSL
PSL5x11	5¼" x 11⅞"	2.0E PSL
PSL5x11f8	5¼" x 11⅞"	2.0E PSL
PSL5x14	5¼" x 14"	2.0E PSL
PSL5x16	5¼" x 16"	2.0E PSL
PSL5x18	5¼" x 18"	2.0E PSL
PSL7x9	7" x 9¼"	2.0E PSL
PSL7x9f2	7" x 9¼"	2.0E PSL
PSL7x11	7" x 11⅞"	2.0E PSL
PSL7x11f8	7" x 11⅞"	2.0E PSL
PSL7x14	7" x 14"	2.0E PSL
PSL7x16	7" x 16"	2.0E PSL
PSL7x18	7" x 18"	2.0E PSL

MARK	SIZE	LUMBER
LAMINATED STRAND LUMBER		
L5L4	3½" x 4⅝"	1.3E LSL
L5L5	3½" x 5¼"	1.3E LSL
L5L7	3½" x 7¼"	1.3E LSL
L5L8	3½" x 8⅝"	1.3E LSL
L5L9	3½" x 9¼"	1.55 LSL
L5L9f2	3½" x 9¼"	1.55 LSL
L5L11	3½" x 11⅞"	1.55 LSL
L5L11f8	3½" x 11⅞"	1.55 LSL
L5L14	3½" x 14"	1.55 LSL
L5L16	3½" x 16"	1.55 LSL
L5L18	3½" x 18"	1.55 LSL

POST SCHEDULE

PI	1-2x4 POST
	(DEFAULT, IF NOT SPECIFIED)
P2	2-2x4 BUILT-UP POST
P3	3-2x4 BUILT-UP POST
P4	4-2x4 BUILT-UP POST
P5	5-2x4 BUILT-UP POST

•BUILT-UP POSTS SHALL MATCH WALL/ BEAM DIMENSION.
EXAMPLE: P5=3-2x6 IN 6" WALL

P5 OR UNDER 5½" BEAM.	
P35	3½" x 5½" 1.8E PSL POST
P37	3½" x 7" 1.8E PSL POST
P39	3½" x 9¼" 2.0E PSL POST
P39f8	3½" x 11⅞" 2.0E PSL POST
P65	5½" x 5½" 1.8E PSL POST
P67	5½" x 7" 1.8E PSL POST
P77	7" x 7" 1.8E PSL POST
P44	3½" x 3½" PT-SYP POST
P66	5½" x 5½" PT-SYP POST
P3II	3"ø liga ADJ STL COL
P35II	3½"ø liga ADJ STL COL
P4II	4"ø liga ADJ STL COL
P340	3"ø SCHED 40 PIPE COL
P3540	3½"ø SCHED 40 PIPE COL
P440	4"ø SCHED 40 PIPE COL
P540	5"ø SCHED 40 PIPE COL
P640	6"ø SCHED 40 PIPE COL

KING POSTS ARE REQ'D @ ALL DROPPED BEARINGS: ONE KING POST w/P1-3 & TWO KING POSTS MIN w/ ALL OTHER POSTS.
EXAMPLE: K2•2-2r, K7"•7x7 1.8E PSL KING POST

ROOF & FLOOR FRAMING NOTES:

1. ▨▨▨▨▨▨ DENOTES BEARING WALL w/MIN 2x4 STUDS @ 16"oc.
2. FLOOR LAYOUT IS SCHEMATIC, SEE MANUFACTURER'S PLAN FOR EXACT LAYOUT, CONSTRUCTION AND MECHANICAL CONNECTIONS. FLOOR MEMBERS ARE SINGLE JOISTS, U.N.O.
3. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
4. SECURE BRACED WALL SEGMENT SOLE PLATES TO FLOOR JOIST OR BLOCKS w/3-16d NAILS @ 16"oc, PER IRC 2015 TABLE 602.3(1).
5. ALL RAFTERS & TRUSSES SHALL BE SECURED w/MIN USP RT7 HURRICANE ANCHOR, OR EQUAL. USE 2 ANCHORS FOR 2-PLY MEMBERS AND 2 USP RT20 OR EQUAL FOR 3-PLY MEMBERS.
6. SECURE ROOF SHEATHING, TO FRAMING, w/8d NAILS @ 6"oc ALONG PANEL EDGES & 12"oc IN THE FIELD.

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2769

NEW HOME AT [redacted]

ARCHITECT
ARCHITECT

CONTRACTOR
CONTRACTOR:

CIVIL

MEP:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24518
EXPIRATION DATE: 04-21-2017

STATE OF MARYLAND · JOSE MORALES-JUSTINIANO · PROFESSIONAL ENGINEER
5/11/2017

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JMJ

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

REVISION:

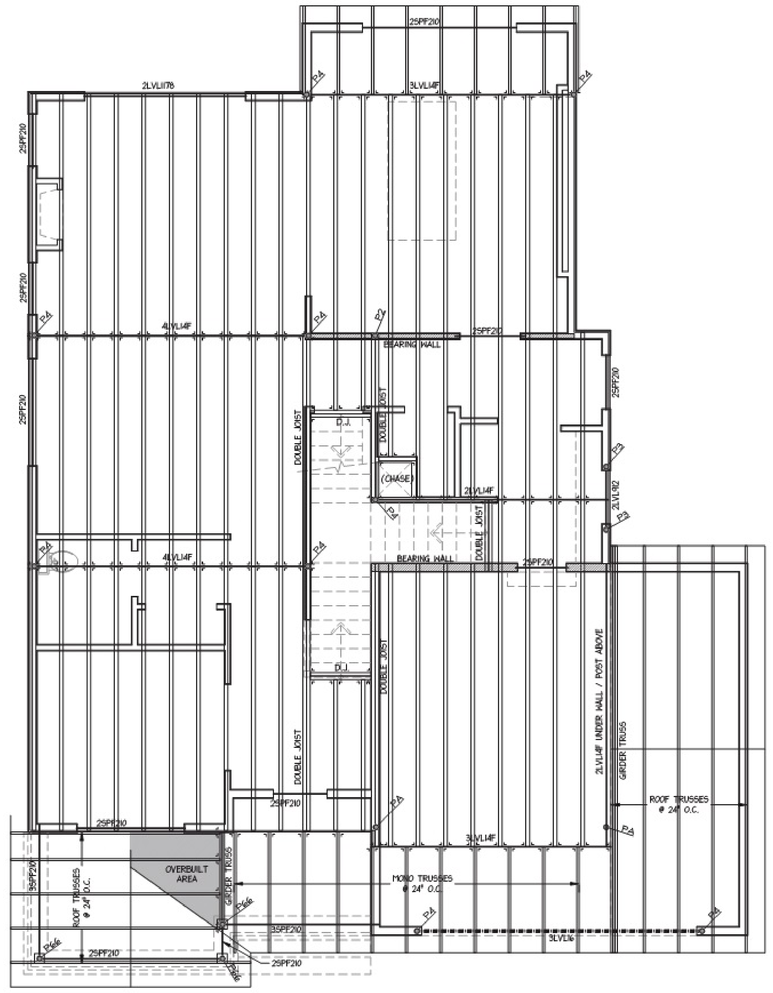
1	
2	
3	
4	
5	
6	
7	
8	

FIRST FLOOR FRAMING PLAN & NOTES

S-200

5/11/2017 — 10:50:52 AM

e:\documents_seu - cloud\public_clients\2017\manifest 3\dacl-2 build 5\2017-05-11 boone ave.dwg



1 SECOND FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0"

LEGEND

- INTERIOR LOAD BEARING WALL
- SQUASH BLOCKS
- BP BLOCKING PANELS
- PLUMBING DROP

BEAM & POST SCHEDULE

BEAM MARKS ARE PRECEDED BY # OF PLIES - 1, 2, 3 OR 4 AND END WITH 'F', FLUSH CONDITION INDICATOR, IF APPLICABLE. EXAMPLE: 3SYP28F INDICATES A 3-PLY, SYP#2, 2x8, FLUSH

MARK	SIZE	LUMBER
SOLID SAWN LUMBER		
SPF26	2x6	SPF#2
SPF28	2x8	SPF#2
SPF210	2x10	SPF#2
SPF212	2x12	SPF#2
SYP26	2x6	SYP#2
SYP28	2x8	SYP#2
SYP210	2x10	SYP#2
SYP212	2x12	SYP#2
LAMINATED VENEER LUMBER		
LVL5	1¾"x 5½"	1.9E LVL
LVL7	1¾"x 7¼"	1.9E LVL
LVL9	1¾"x 9¼"	1.9E LVL
LVL9f2	1¾"x 9½"	1.9E LVL
LVL11	1¾"x 11⅞"	1.9E LVL
LVL11f8	1¾"x 11⅞"	1.9E LVL
LVL14	1¾"x 14"	1.9E LVL
LVL16	1¾"x 16"	1.9E LVL
LVL18	1¾"x 18"	1.9E LVL
LVL20	1¾"x 20"	1.9E LVL
LVL24	1¾"x 24"	1.9E LVL
PARALLEL STRAND LUMBER		
PSL9	3½"x 9¼"	2.0E PSL
PSL9f2	3½"x 9½"	2.0E PSL
PSL11	3½"x 11⅞"	2.0E PSL
PSL11f8	3½"x 11⅞"	2.0E PSL
PSL14	3½"x 14"	2.0E PSL
PSL16	3½"x 16"	2.0E PSL
PSL18	3½"x 18"	2.0E PSL
PSL5x9	5¼"x 9¼"	2.0E PSL
PSL5x9f2	5¼"x 9½"	2.0E PSL
PSL5x11	5¼"x 11⅞"	2.0E PSL
PSL5x11f8	5¼"x 11⅞"	2.0E PSL
PSL5x14	5¼"x 14"	2.0E PSL
PSL5x16	5¼"x 16"	2.0E PSL
PSL5x18	5¼"x 18"	2.0E PSL
PSL7x9	7"x 9¼"	2.0E PSL
PSL7x9f2	7"x 9½"	2.0E PSL
PSL7x11	7"x 11⅞"	2.0E PSL
PSL7x11f8	7"x 11⅞"	2.0E PSL
PSL7x14	7"x 14"	2.0E PSL
PSL7x16	7"x 16"	2.0E PSL
PSL7x18	7"x 18"	2.0E PSL

KING POSTS ARE REQ'D @ ALL DROPPED BEARINGS: ONE KING POST w/PI-3 & TWO KING POSTS MIN w/ ALL OTHER POSTS. EXAMPLE: K2x2-2x, K7T=7x7 1.8E PSL KING POST

MARK	SIZE	LUMBER
LAMINATED STRAND LUMBER		
L5L4	3½"x 4⅝"	1.3E LSL
L5L5	3½"x 5⅛"	1.3E LSL
L5L7	3½"x 7¼"	1.3E LSL
L5L8	3½"x 8⅝"	1.3E LSL
L5L9	3½"x 9¼"	1.3E LSL
L5L9f2	3½"x 9½"	1.55 LSL
L5L11	3½"x 11¼"	1.55 LSL
L5L11f8	3½"x 11⅞"	1.55 LSL
L5L14	3½"x 14"	1.55 LSL
L5L16	3½"x 16"	1.55 LSL
L5L18	3½"x 18"	1.55 LSL
POST SCHEDULE		
PI	I-2x4® POST	
	(DEFAULT, IF NOT SPECIFIED)	
P2	2-2x4® BUILT-UP POST	
P3	3-2x4® BUILT-UP POST	
P4	4-2x4® BUILT-UP POST	
P5	5-2x4® BUILT-UP POST	

®BUILT-UP POSTS SHALL MATCH WALL/ BEAM DIMENSION. EXAMPLE: P5=3-2x6 IN 6" WALL

MARK	SIZE	LUMBER
OR UNDER 5½" BEAM.		
P33	3½"x 3½"	1.8E PSL POST
P35	3½"x 5½"	1.8E PSL POST
P37	3½"x 7"	1.8E PSL POST
P39	3½"x 9¼"	2.0E PSL POST
P39f8	3½"x 11⅞"	2.0E PSL POST
P55	5¼"x 5½"	1.8E PSL POST
P57	5¼"x 7"	1.8E PSL POST
P77	7"x 7"	1.8E PSL POST
P44	3½"x 3½"	PT-SYP POST
P66	5½"x 5½"	PT-SYP POST
P3II	3®@	(qty) ADJ STL COL
P35II	3½®@	(qty) ADJ STL COL
P4II	4®@	(qty) ADJ STL COL
P340	3®@	SCHED 40 PIPE COL
P3540	3½®@	SCHED 40 PIPE COL
P440	4®@	SCHED 40 PIPE COL
P540	5®@	SCHED 40 PIPE COL
P640	6®@	SCHED 40 PIPE COL

ROOF & FLOOR FRAMING NOTES:

1. ▨▨▨▨▨▨▨▨ DENOTES BEARING WALL w/MIN 2x4 STUDS @ 16"oc.
2. FLOOR LAYOUT IS SCHEMATIC, SEE MANUFACTURER'S PLAN FOR EXACT LAYOUT, CONSTRUCTION AND MECHANICAL CONNECTIONS. FLOOR MEMBERS ARE SINGLE JOISTS, U.N.O.
3. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
4. SECURE BRACED WALL SEGMENT SOLE PLATES TO FLOOR JOIST OR BLOCKS w/3-16d NAILS @ 16"oc, PER IRC 2015 TABLE 602.3(1).
5. ALL RAFTERS & TRUSSES SHALL BE SECURED w/MIN USP RT7 HURRICANE ANCHOR, OR EQUAL. USE 2 ANCHORS FOR 2-PLY MEMBERS AND 2 USP RT20 OR EQUAL FOR 3-PLY MEMBERS
6. SECURE ROOF SHEATHING, TO FRAMING, w/8d NAILS @ 6"oc ALONG PANEL EDGES & 12"oc IN THE FIELD.

STRUCTURAL ENGINEERING UNLIMITED, LLC

5280 URBANA PIKE - SUITE 101
LIJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2764

NEW HOME AT

[redacted]

ARCHITECT

ARCHITECT

CONTRACTOR

CONTRACTOR:

CIVIL

MEP

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24518
EXPIRATION DATE: 09-21-2017

STATE OF MARYLAND — JAMES MORALIS JOSEPH — PROFESSIONAL ENGINEER

5/11/2017

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JMJ

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

REVISION:	
1	
2	
3	
4	
5	
6	
7	
8	

SECOND FLOOR FRAMING PLAN & NOTES

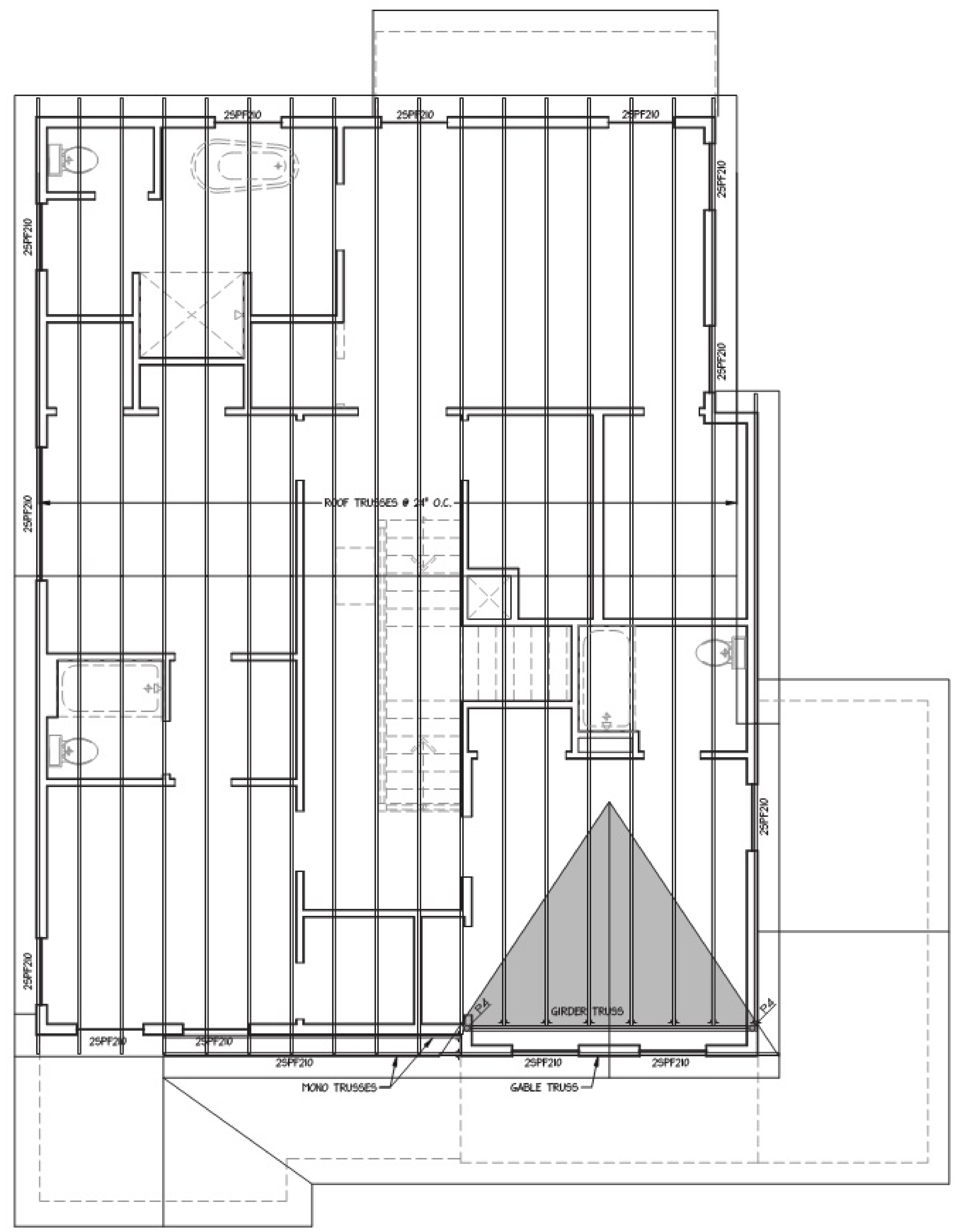
S-300

e:\documents_seu - cloud\public_clients\2017\manifest 3\dacl-2 build 3\2017-05-11 boone ave.dwg

5/11/2017 --- 10:50:54 AM

LEGEND

(shaded box)	INTERIOR LOAD BEARING WALL
▯	SQUASH BLOCKS
BP	BLOCKING PANELS
⊕	PLUMBING DROP
(shaded box)	OVERBUILT AREA



JUAN, PLEASE CHECK SNOOPY ROOF FRAMING

1 ROOF FRAMING PLAN

SCALE: 1/4"=1'-0"

BEAM & POST SCHEDULE

BEAM MARKS ARE PRECEDED BY # OF PLIES - 1, 2, 3 OR 4 AND END WITH 'F', FLUSH CONDITION INDICATOR, IF APPLICABLE.
EXAMPLE: 3SYP28F INDICATES A 3-PLY, SYP#2, 2x8, FLUSH

MARK	SIZE	LUMBER	MARK	SIZE	LUMBER
SOLID SAWN LUMBER			LAMINATED STRAND LUMBER		
SPF26	2x6	SPF#2	LSL4	3½"x 4⅜"	1.3E LSL
SPF28	2x8	SPF#2	LSL5	3½"x 5½"	1.3E LSL
SPF210	2x10	SPF#2	LSL7	3½"x 7¼"	1.3E LSL
SPF212	2x12	SPF#2	LSL8	3½"x 8⅝"	1.3E LSL
SYP26	2x6	SYP#2	LSL9	3½"x 9¼"	1.55 LSL
SYP28	2x8	SYP#2	LSL912	3½"x 9½"	1.55 LSL
SYP210	2x10	SYP#2	LSL11	3½"x 11¼"	1.55 LSL
SYP212	2x12	SYP#2	LSL1178	3½"x 11⅞"	1.55 LSL
LAMINATED VENEER LUMBER			LSL14	3½"x 14"	1.55 LSL
LVL5	1¾"x 5½"	1.9E LVL	LSL16	3½"x 16"	1.55 LSL
LVL7	1¾"x 7¼"	1.9E LVL	LSL18	3½"x 18"	1.55 LSL
LVL9	1¾"x 9¼"	1.9E LVL	POST SCHEDULE		
LVL912	1¾"x 9½"	1.9E LVL	P1	1-2x4*	POST
LVL11	1¾"x 11¼"	1.9E LVL	(DEFAULT, IF NOT SPECIFIED)		
LVL1178	1¾"x 11⅞"	1.9E LVL	P2	2-2x4*	BUILT-UP POST
LVL14	1¾"x 14"	1.9E LVL	P3	3-2x4*	BUILT-UP POST
LVL16	1¾"x 16"	1.9E LVL	P4	4-2x4*	BUILT-UP POST
LVL18	1¾"x 18"	1.9E LVL	P5	5-2x4*	BUILT-UP POST
LVL20	1¾"x 20"	1.9E LVL	*BUILT-UP POSTS SHALL MATCH		
LVL24	1¾"x 24"	1.9E LVL	WALL/ BEAM DIMENSION.		
PARALLEL STRAND LUMBER			EXAMPLE: P3=3-2x6 IN 6" WALL		
PSL9	3½"x 9¼"	2.0E PSL	OR UNDER 5¼" BEAM.		
PSL912	3½"x 9½"	2.0E PSL	P33	3½"x 3½"	1.8E PSL POST
PSL11	3½"x 11¼"	2.0E PSL	P35	3½"x 5¼"	1.8E PSL POST
PSL1178	3½"x 11⅞"	2.0E PSL	P37	3½"x 7"	1.8E PSL POST
PSL14	3½"x 14"	2.0E PSL	P39	3½"x 9½"	2.0E PSL POST
PSL16	3½"x 16"	2.0E PSL	P31178	3½"x 11⅞"	2.0E PSL POST
PSL18	3½"x 18"	2.0E PSL	P55	5¼"x 5¼"	1.8E PSL POST
PSL5x9	5¼"x 9¼"	2.0E PSL	P57	5¼"x 7"	1.8E PSL POST
PSL5x912	5¼"x 9½"	2.0E PSL	P77	7"x 7"	1.8E PSL POST
PSL5x11	5¼"x 11¼"	2.0E PSL	P44	3½"x 3½"	PT-SYP POST
PSL5x1178	5¼"x 11⅞"	2.0E PSL	P66	5½"x 5½"	PT-SYP POST
PSL5x14	5¼"x 14"	2.0E PSL	P311	3"ϕ	11ga ADJ STL COL
PSL5x16	5¼"x 16"	2.0E PSL	P3511	3½"ϕ	11ga ADJ STL COL
PSL5x18	5¼"x 18"	2.0E PSL	P411	4"ϕ	11ga ADJ STL COL
PSL7x9	7"x 9¼"	2.0E PSL	P340	3"ϕ	SCHED 40 PIPE COL
PSL7x912	7"x 9½"	2.0E PSL	P3540	3½"ϕ	SCHED 40 PIPE COL
PSL7x11	7"x 11¼"	2.0E PSL	P440	4"ϕ	SCHED 40 PIPE COL
PSL7x1178	7"x 11⅞"	2.0E PSL	P540	5"ϕ	SCHED 40 PIPE COL
PSL7x14	7"x 14"	2.0E PSL	P640	6"ϕ	SCHED 40 PIPE COL
PSL7x16	7"x 16"	2.0E PSL			
PSL7x18	7"x 18"	2.0E PS			

KING POSTS ARE REQ'D @ ALL DROPPED BEARINGS: ONE KING POST w/P1-3 & TWO KING POSTS MIN w/ ALL OTHER POSTS.
EXAMPLE: K2=2-2x, K77=7x7 1.8E PSL KING POST

ROOF & FLOOR FRAMING NOTES:

1. (hatched box) DENOTES BEARING WALL w/MIN 2x4 STUDS @ 16"oc.
2. FLOOR LAYOUT IS SCHEMATIC, SEE MANUFACTURER'S PLAN FOR EXACT LAYOUT, CONSTRUCTION AND MECHANICAL CONNECTIONS. FLOOR MEMBERS ARE SINGLE JOISTS, U.N.O.
3. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
4. SECURE BRACED WALL SEGMENT SOLE PLATES TO FLOOR JOIST OR BLOCKS w/3-16d NAILS @ 16"oc, PER IRC 2015 TABLE 602.3(1).
5. ALL RAFTERS & TRUSSES SHALL BE SECURED w/MIN USP RT7 HURRICANE ANCHOR, OR EQUAL. USE 2 ANCHORS FOR 2-PLY MEMBERS AND 2 USP RT20 OR EQUAL FOR 3-PLY MEMBERS
6. SECURE ROOF SHEATHING, TO FRAMING, w/8d NAILS @ 6"oc ALONG PANEL EDGES & 12"oc IN THE FIELD.

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2764

NEW HOME AT

ARCHITECT
ARCHITECT:

CONTRACTOR
CONTRACTOR:

CIVIL:

MEP:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24518
EXPIRATION DATE: 04-21-2017

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JHU

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

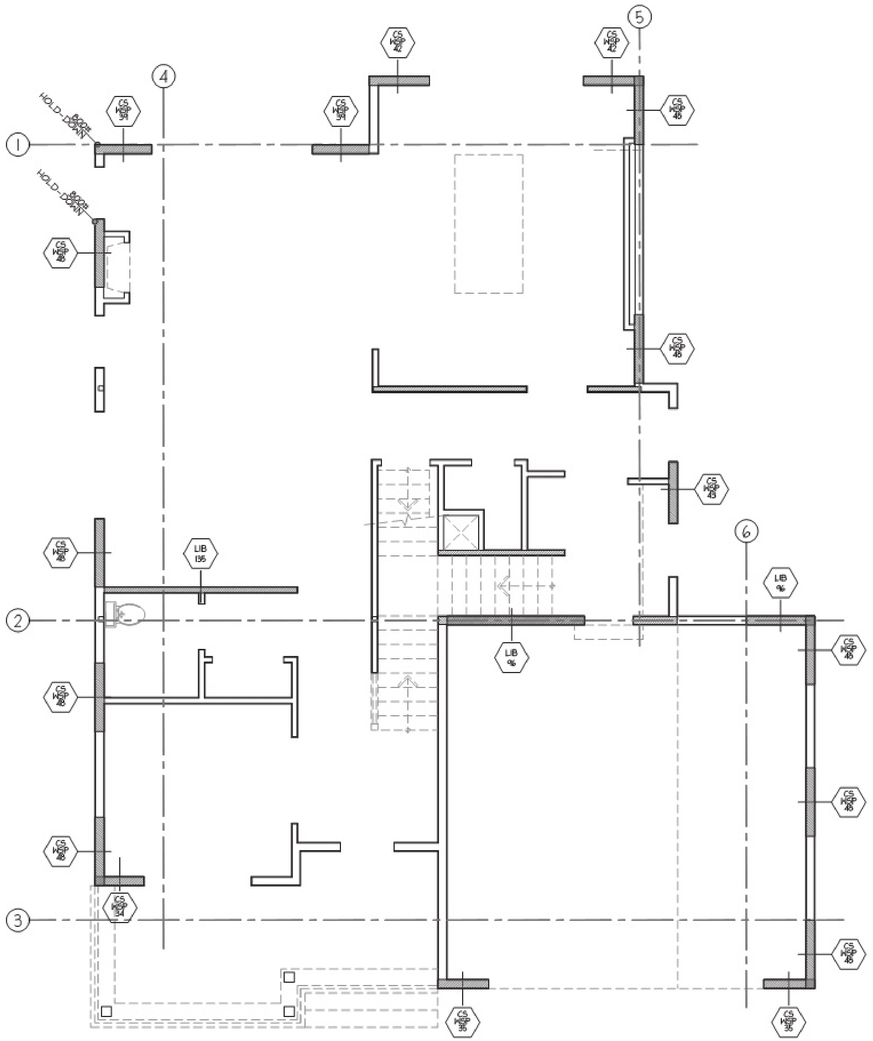
REVISION:
1
2
3
4
5
6
7
8

ROOF FRAMING PLAN & NOTES

S-400

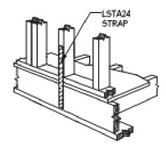
e:\documents_seu - cluod\public_clients\2017\manifest 5d\acl-2 build 5\2017-05-11 boone ave.dwg

5/11/2017 --- 10:50:36 AM



1 FIRST FLOOR WALL BRACING PLAN

SCALE: 1/4"=1'-0"



LSTA24 INSTALLATION
800# HOLD-DOWN

WALL ASSEMBLY SCHEDULE

TYPE	DESCRIPTION*
GB #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10. ½" GYPSUM BOARD NAILED w/11 ga NAILS OR SCREWS @ 7"oc ALONG EDGES NAILED @ 8"oc IN THE FIELD,SCREWD @ 12"oc IN THE FIELD. GB2 DESIGNATES SHEATHING BOTH SIDES.
CS-WSP #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10, ⅜" OSB OR PLYWOOD SHEATHING, w/8d COMMON EDGE NAILS @ 6"oc, 12"oc IN FIELD, OR 16ga, 2" CROWN, ⅞" LEG EDGE STAPLES @ 3"oc, 6"oc IN FIELD
WSP #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10, ⅜" OSB OR PLYWOOD SHEATHING, w/8d COMMON EDGE NAILS @ 6"oc, 12"oc IN FIELD, OR 16ga, 2" CROWN, ⅞" LEG EDGE STAPLES @ 3"oc, 6"oc IN FIELD
CS-PF #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10 ⅜" OSB OR PLYWOOD SHEATHING, NAILED & STRAPPED,PER IRC CS-PF METHOD DENOTES= ACTUAL PANEL WIDTHS, IN INCHES.
LIB #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10.4 DIAGONAL METAL BRACING WB (SIMPSON STRONG-TIE) OR EQUAL. NAILED W/ (2) 16D NAILS INTO PLATES AND (1) NAIL INTO STUDS 45° TO 60° MAX. STUD SPACING 16" O.C.

*NOTE: ALL ASSEMBLIES REQ MIN. 2x4 STUDS @ 16"oc AND ALL EXTERIOR WALLS SHALL BE CONTINUOUSLY SHEATHED PER IRC 2015, SECTION R602.10, WSP METHOD, PER WSP ABOVE, U.N.O. BRACED WALL SEGMENTS SHALL BE SPACED MAXIMUM 20'-0", END TO END, AND SHALL START WITHIN 10'-0" OF EACH END OF BRACED WALL LINES.

ROOF & FLOOR FRAMING NOTES:
1. ΣΣΣΣΣΣΣΣ DENOTES BEARING WALL w/MIN 2x4 STUDS @ 16"oc.
2. FLOOR LAYOUT IS SCHEMATIC, SEE MANUFACTURER'S PLAN FOR EXACT LAYOUT, CONSTRUCTION AND MECHANICAL CONNECTIONS. FLOOR MEMBERS ARE SINGLE JOISTS, U.N.O.
3. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
4. SECURE BRACED WALL SEGMENT SOLE PLATES TO FLOOR JOIST OR BLOCKS w/3-16d NAILS @ 16"oc, PER IRC 2015 TABLE 602.3(1).
5. ALL RAFTERS & TRUSSES SHALL BE SECURED w/MIN USP RT7 HURRICANE ANCHOR, OR EQUAL. USE 2 ANCHORS FOR 2-PLY MEMBERS AND 2 USP RT20 OR EQUAL FOR 3-PLY MEMBERS
6. SECURE ROOF SHEATHING, TO FRAMING, w/8d NAILS @ 6"oc ALONG PANEL EDGES & 12"oc IN THE FIELD.

WALL BRACING - CALCULATIONS - WIND SPEED 115 MPH - EXPOSURE B

BWL	METHOD	LEV'L	ADJUSTMENT FACTORS: EAVE-RIDGE HT.		WALL HEIGHT		# BWL'S		OMIT INT. GB.		ADD HOLD-DOWNS		GB FASTEN @ 4" O.C.		REQ'D LENGTH	ACTUAL LENGTH
1	CS-WSP	1ST	15.50'	1.13	9.00'	0.95	3	1.30	NO	1.00	NO	1.00	NO	1.00	11.79'	13.50'
2	CS-WSP	1ST	15.50'	1.13	9.00'	0.95	3	1.30	NO	1.00	NO	1.00	NO	1.00	18.16'	23.25'
3	CS-WSP	1ST	15.50'	1.13	9.00'	0.95	3	1.30	NO	1.00	NO	1.00	NO	1.00	8.03'	8.67'
4	CS-WSP	1ST	15.50'	1.13	9.00'	0.95	3	1.30	NO	1.00	NO	1.00	NO	1.00	13.17'	16.00'
5	CS-WSP	1ST	15.50'	1.13	9.00'	0.95	3	1.30	NO	1.00	NO	1.00	NO	1.00	7.82'	11.58'
6	CS-WSP	1ST	15.50'	1.13	9.00'	0.95	3	1.30	NO	1.00	NO	1.00	NO	1.00	9.12'	12.00'

INFORMATION BASED ON DATA FROM TABLE R602.10.1.2(1), BRACED REQ. BASED ON WIND SPEED. IRC 2015

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
LIJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2769

NEW HOME AT
[redacted]

ARCHITECT
ARCHITECT

CONTRACTOR
CONTRACTOR:

CIVIL

MEP

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24518
EXPIRATION DATE: 09-21-2017

STATE OF MARYLAND — JAMES MORALIS JOSEPH — PROFESSIONAL ENGINEER
5/11/2017

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JMJ

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

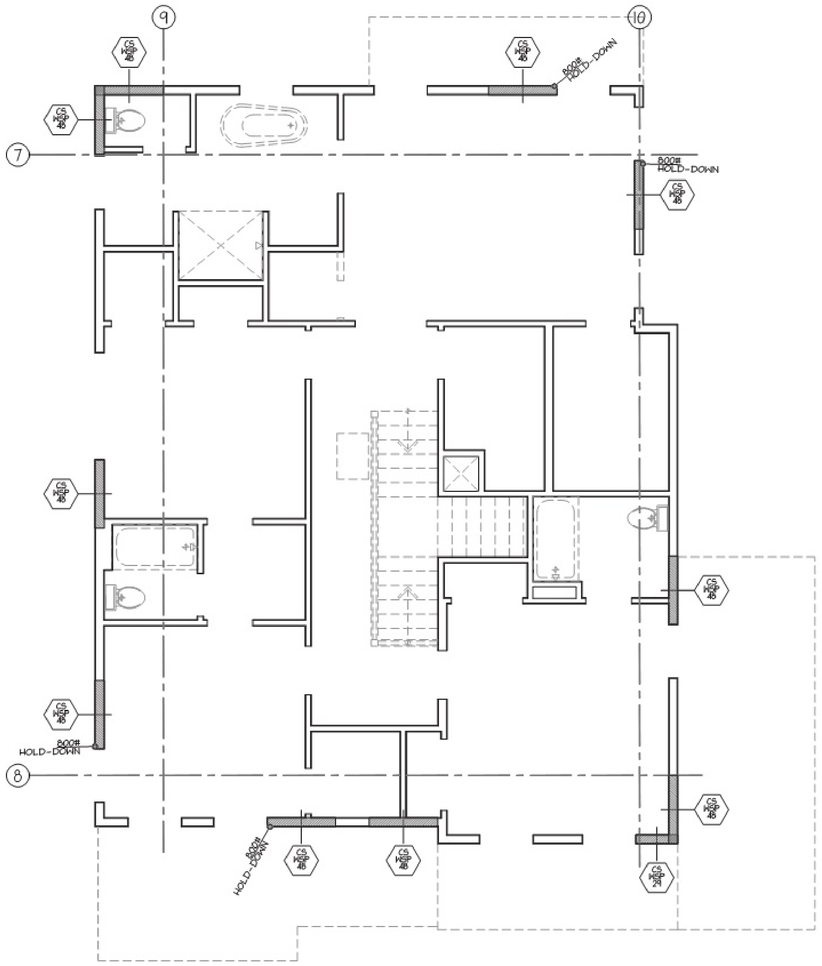
REVISION:	
1	
2	
3	
4	
5	
6	
7	
8	

FIRST FLOOR WALL BRACING PLAN & NOTES

WB1

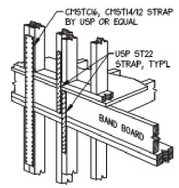
5/11/2017 --- 10:50:55 AM

e:\documents_seu - cloud\public_clients\2017\manifest 3\dwg\1-2 build 3\2017-05-11 boone ave.dwg



1 SECOND FLOOR WALL BRACING PLAN

SCALE: 1/4"=1'-0"



NOTE: ALL STRAPS TO BE NAILED TO POST BELOW OR NAILED TO FACE, UNDERSIDE & BACKSIDE OF HEADER BELOW TO DEVELOP MANUFACTURER'S END LENGTH & NAILING REQUIREMENTS, TYP'L

ST22, CMSTC16, CMST14 & CMST12 INSTALLATIONS

NTS RS200 SIMILAR

WALL ASSEMBLY SCHEDULE

TYPE	DESCRIPTION*
GB #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10. 5/8" GYPSUM BOARD NAILED w/11 ga NAILS OR SCREWS @ 7"oc ALONG EDGES NAILED @ 8"oc IN THE FIELD,SCREWD @ 12"oc IN THE FIELD. GB2 DESIGNATES SHEATHING BOTH SIDES.
CS-WSP #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10. 3/8" OSB OR PLYWOOD SHEATHING, w/8d COMMON EDGE NAILS @ 6"oc, 12"oc IN FIELD, OR 16ga, 2" CROWN, 1/2" LEG EDGE STAPLES @ 3"oc, 6"oc IN FIELD
WSP #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10. 3/8" OSB OR PLYWOOD SHEATHING, w/8d COMMON EDGE NAILS @ 6"oc, 12"oc IN FIELD, OR 16ga, 2" CROWN, 1/2" LEG EDGE STAPLES @ 3"oc, 6"oc IN FIELD
CS-PF #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10.3 3/8" OSB OR PLYWOOD SHEATHING, NAILED & STRAPPED,PER IRC CS-PF METHOD DENOTES: ACTUAL PANEL WIDTHS, IN INCHES.
LIB #	DENOTES BRACED WALL SEGMENT MIN. WIDTH, IN INCHES, PER IRC 2015, SECTION 602.10.4 DIAGONAL METAL BRACING WB (SIMPSON STRONG-TIE) OR EQUAL. NAILED W/ (2) 16D NAILS INTO PLATES AND (1) NAIL INTO STUDS 48" TO 60" MAX. STUD SPACING 16" O.C.

*NOTE: ALL ASSEMBLIES REQ MIN. 2x4 STUDS @ 16"oc AND ALL EXTERIOR WALLS SHALL BE CONTINUOUSLY SHEATHED PER IRC 2015, SECTION R602.10, WSP METHOD, PER WSP ABOVE, U.N.O. BRACED WALL SEGMENTS SHALL BE SPACED MAXIMUM 20'-0", END TO END, AND SHALL START WITHIN 10'-0" OF EACH END OF BRACED WALL LINES.

ROOF & FLOOR FRAMING NOTES:

1. 22222222 DENOTES BEARING WALL w/MIN 2x4 STUDS @ 16"oc.
2. FLOOR LAYOUT IS SCHEMATIC, SEE MANUFACTURER'S PLAN FOR EXACT LAYOUT, CONSTRUCTION AND MECHANICAL CONNECTIONS. FLOOR MEMBERS ARE SINGLE JOISTS, U.N.O.
3. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
4. SECURE BRACED WALL SEGMENT SOLE PLATES TO FLOOR JOIST OR BLOCKS w/3-16d NAILS @ 16"oc, PER IRC 2015 TABLE 602.3(1).
5. ALL RAFTERS & TRUSSES SHALL BE SECURED w/MIN USP RT7 HURRICANE ANCHOR, OR EQUAL. USE 2 ANCHORS FOR 2-PLY MEMBERS AND 2 USP RT2D OR EQUAL FOR 3-PLY MEMBERS
6. SECURE ROOF SHEATHING, TO FRAMING, w/8d NAILS @ 6"oc ALONG PANEL EDGES & 12"oc IN THE FIELD.

WALL BRACING - CALCULATIONS - WIND SPEED 115 MPH - EXPOSURE B

BWL	METHOD	LEV'L	ADJUSTMENT FACTORS												REQ'D LENGTH	ACTUAL LENGTH
			EAVE-RIDGE HT.		WALL HEIGHT		# BWL'S		OMIT INT. GB.		ADD HOLD-DOWNS		GB FASTEN @ 4" O.C.			
7	CS-WSP	2ND	15.50'	1.26	9.00'	0.95	2	1.00	NO	1.00	NO	1.00	NO	1.00	6.75'	8.00'
8	CS-WSP	2ND	15.50'	1.26	9.00'	0.95	2	1.00	NO	1.00	NO	1.00	NO	1.00	6.75'	10.42'
9	CS-WSP	2ND	15.50'	1.26	9.00'	0.95	2	1.00	NO	1.00	NO	1.00	NO	1.00	5.59'	12.00'
10	CS-WSP	2ND	15.50'	1.26	9.00'	0.95	2	1.00	NO	1.00	NO	1.00	NO	1.00	5.59'	12.00'

INFORMATION BASED ON DATA FROM TABLE R602.10.1.2(1), BRACED REQ. BASED ON WIND SPEED. IRC 2015

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2769

NEW HOME AT

[redacted]

ARCHITECT

ARCHITECT:

CONTRACTOR

CONTRACTOR:

CIVIL

MEP:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24818
EXPIRATION DATE: 04-21-2017

STATE OF MARYLAND — JOSE MORALES-HERNANDEZ — PROFESSIONAL ENGINEER
5/11/2017

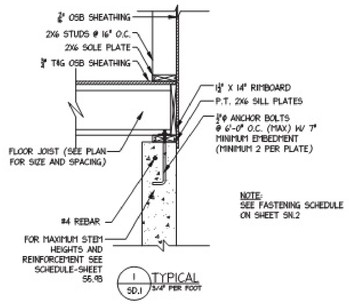
SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JH

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

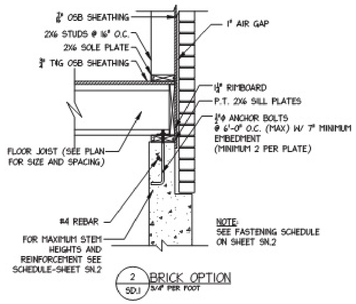
REVISION:	
1	
2	
3	
4	
5	
6	
7	
8	

SECOND FLOOR WALL BRACING PLAN & NOTES

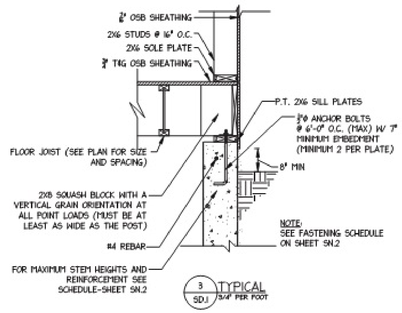
WB2



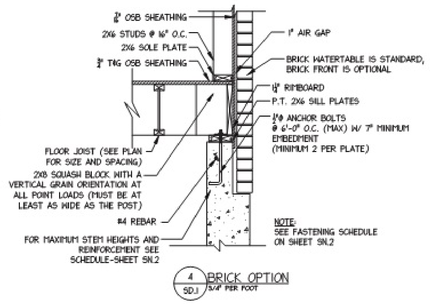
1 SD.1 TYPICAL 3/4" PER FOOT



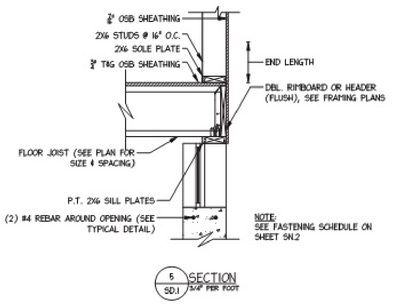
2 SD.1 BRICK OPTION 3/4" PER FOOT



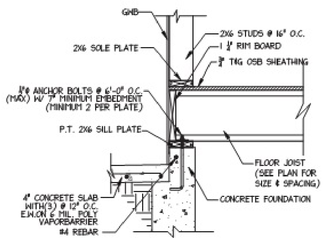
3 SD.1 TYPICAL 3/4" PER FOOT



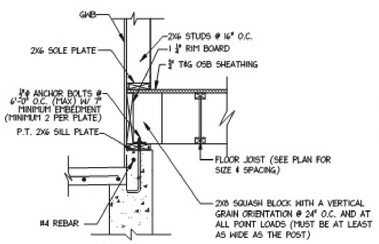
4 SD.1 BRICK OPTION 3/4" PER FOOT



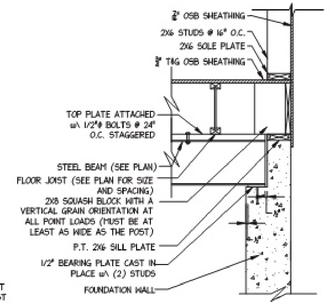
5 SD.1 SECTION 3/4" PER FOOT



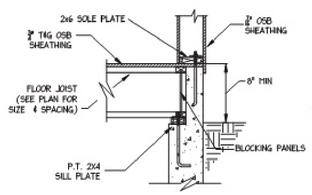
6 SD.1 SECTION - GARAGE 3/4" PER FOOT



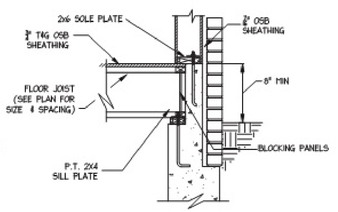
7 SD.1 SECTION - GARAGE 3/4" PER FOOT



8 SD.1 SECTION - BEAM POCKET 3/4" PER FOOT



9 SD.1 SECTION @ REVERSED LEDGE 3/4" PER FOOT



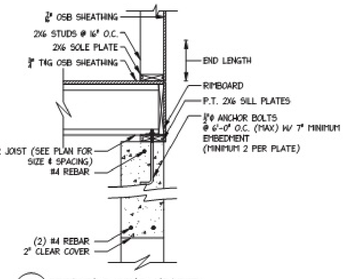
10 SD.1 SECTION @ REVERED LEDGE W/ BRICK 3/4" PER FOOT

DOUBLE JOIST DETAIL (TYP)
3/4" PER FOOT

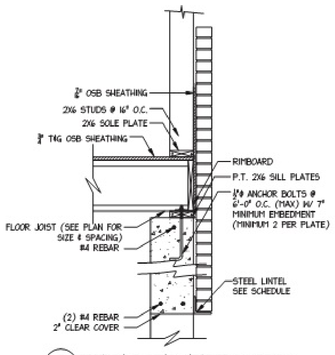
FILLER AND BACKER BLOCK SCHEDULE								
BOISE	5000s		6000s AND 6500s		60s		90s	
DEPTH	9-¼" OR 11-¼"	14"	9-¼" OR 11-¼"	14" OR 16"	11-¼"	14" OR 16"	11-¼"	14" OR 16"
FILLER BLOCK*	2X6	2X8	2X6 + ½" SHEATHING	2X8 + ½" SHEATHING	2X6 + ½" SHEATHING	2X8 + ½" SHEATHING	TWO 2X6	TWO 2X8

* IF NECESSARY, INCREASE FILLER AND BACKER BLOCK HEIGHT FOR FACE MOUNT HANGERS AND MAINTAIN ½" GAP AT TOP OF JOIST.

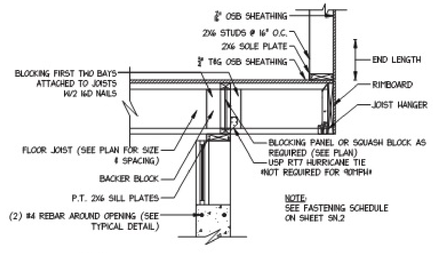
RIM/FLOOR JOIST CONNECTION SCHEDULE			
DECK JOIST SPACE	FLOOR SPACING		
	16"	19.2"	24"
≤ 8'-0"	MP34	MP34	MPAI
10'-0"	MP34	MPAI	(2)MP34
12'-0"	MPAI	MPAI	(2)MP34
14'-0"	MPAI	(2)MP34	(2)MPAI
16'-0"	(2)MP34	(2)MP34	(2)MPAI
18'-0"	(2)MP34	(2)MPAI	(2)MPAI
20'-0"	(2)MPAI	(2)MPAI	(2)MPAI



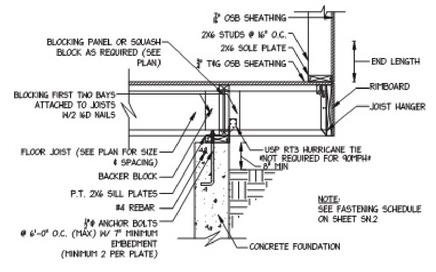
11 SD.1 SECTION @ CONC. HEADER 3/4" PER FOOT



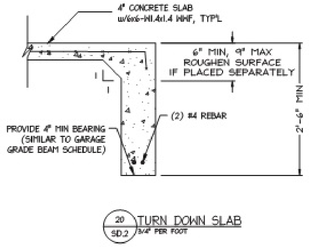
12 SD.1 SECTION @ CONC. HEADER W/ BRICK 3/4" PER FOOT



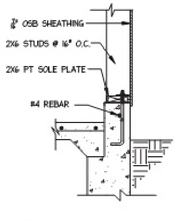
13 SD.1 SECTION @ CANT. JOIST OVER WINDOW 3/4" PER FOOT



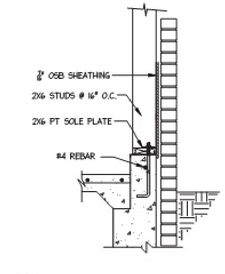
14 SD.1 SECTION @ CANT. JOIST W/ SUPPORTING RIM BOARD 3/4" PER FOOT



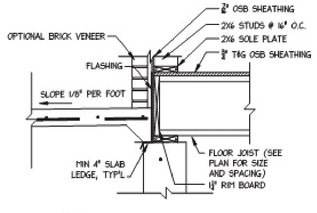
20 SD.2 TURN DOWN SLAB 3/4" PER FOOT



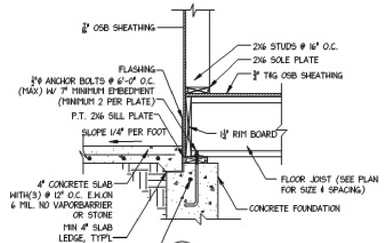
15 SD.1 SECTION @ GARAGE EXTERIOR 3/4" PER FOOT



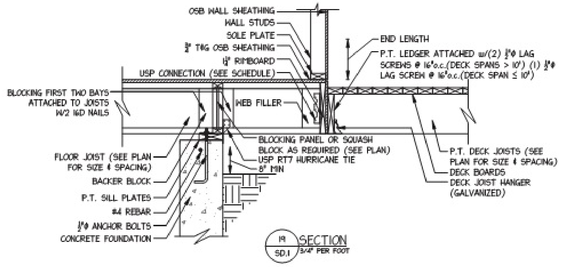
16 SD.1 SECTION @ GARAGE EXTERIOR W/ BRICK 3/4" PER FOOT



17 SD.1 PORCH SLAB DETAIL W/ BRICK 3/4" PER FOOT



18 SD.1 PORCH SLAB DETAIL 3/4" PER FOOT



19 SD.1 SECTION 3/4" PER FOOT

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2769

NEW HOME AT
[redacted]

ARCHITECT
ARCHITECT

CONTRACTOR
CONTRACTOR

CIVIL

MEP

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 24518
EXPIRATION DATE: 09-21-2017

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JM

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

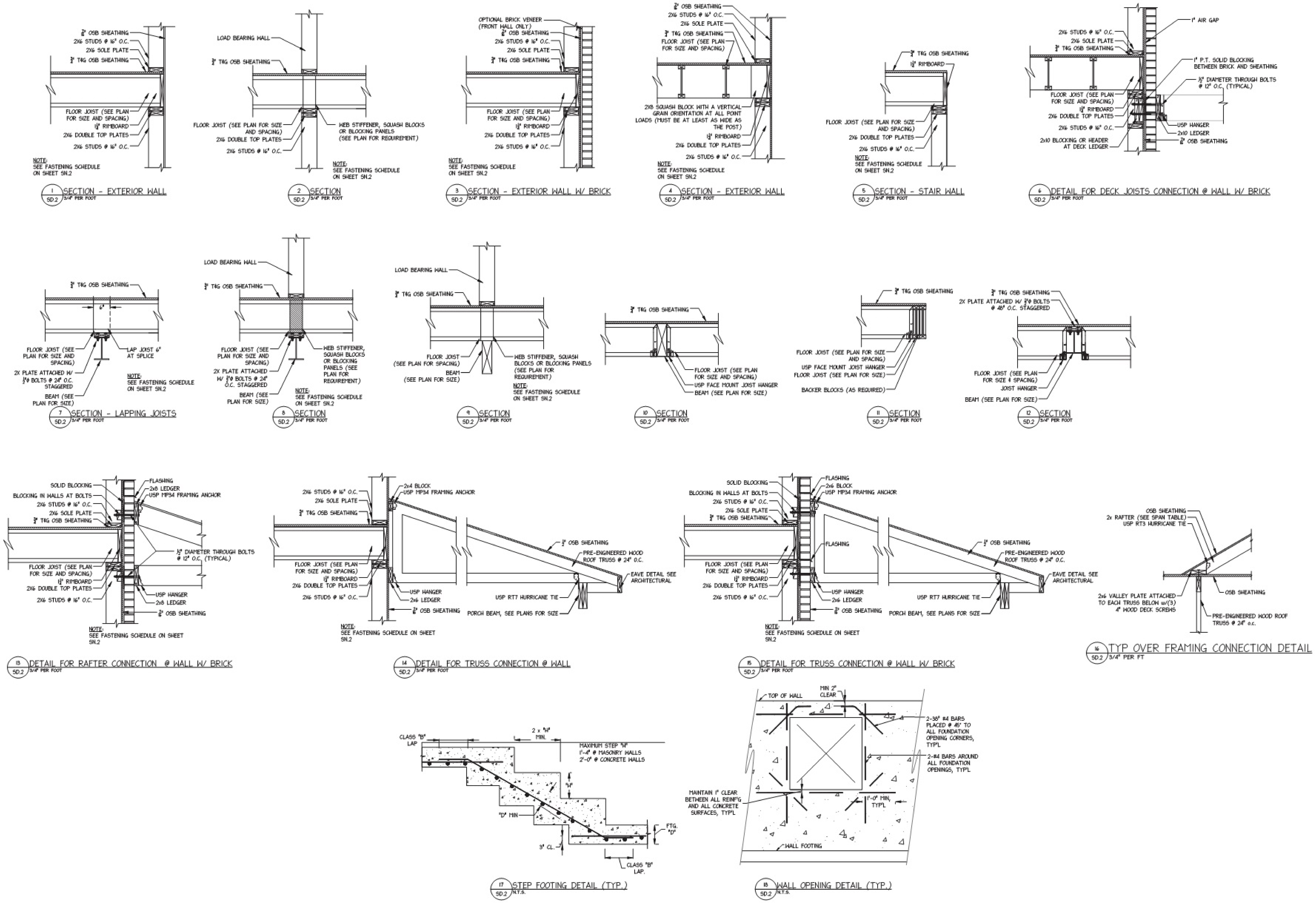
REVISION:
1
2
3
4
5
6
7
8

STRUCTURAL DETAILS & NOTES

SD.1

5/11/2017 — 10:50:45 AM

e:\documents_seu - cloud\public_clients\2017\manifest 3d\acl-2 build 5\2017-05-11 boone ave.dwg



STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2764

NEW HOME AT

ARCHITECT

CONTRACTOR

CIVIL

MEP

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE No.: 24518 EXPIRATION DATE: 04-21-2017

STATE OF MARYLAND PROFESSIONAL ENGINEER

5/11/2017

SCALE: AS NOTED	
DRAWN BY: SL	CHECKED BY: JH

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

REVISION:

1	
2	
3	
4	
5	
6	
7	
8	

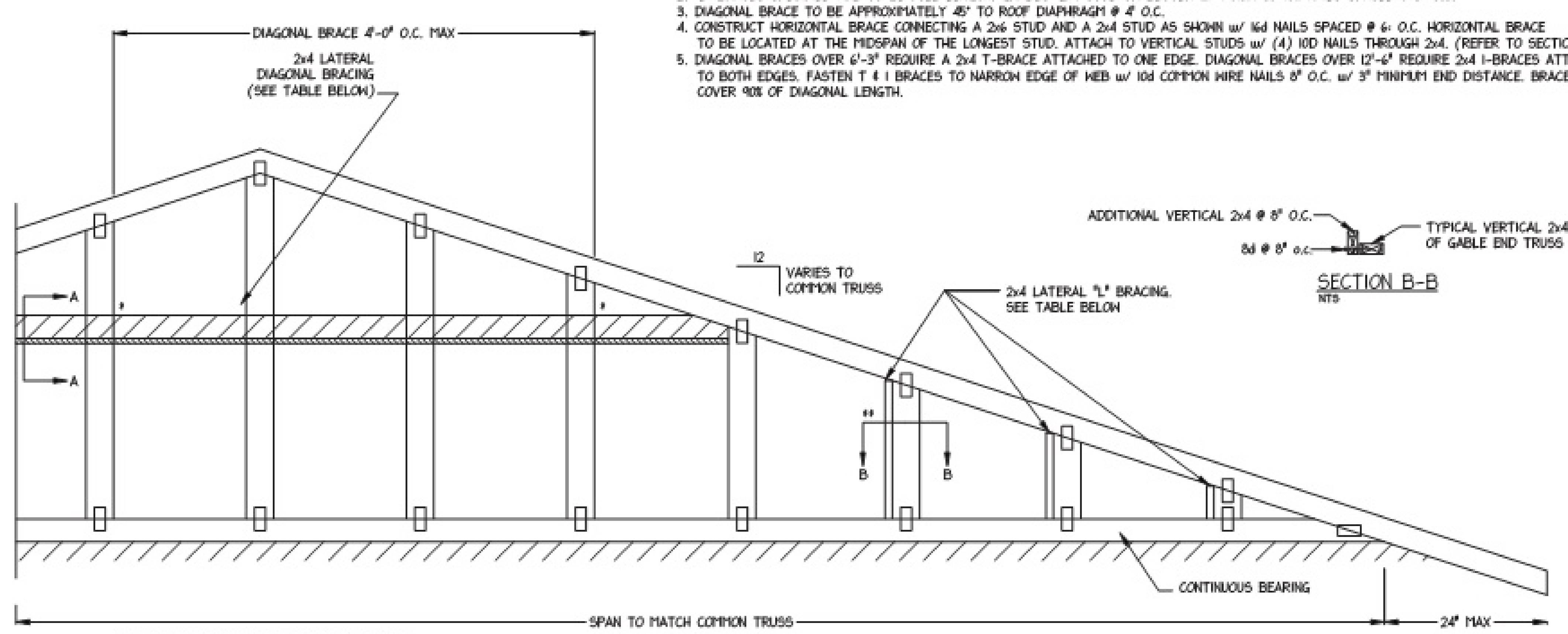
STRUCTURAL DETAILS & NOTES

SD.2

5/11/2017 --- 10:50:46 AM

e:\documents_seu - cluod\public_clients\2017\manifest 5d\acl-2 build 5\2017-05-11 boone ave.dwg

NOTE:
1. FURNISH A COPY OF THIS DETAIL TO THE SUB-CONTRACTOR BRACING INSTALLATION
2. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 2x4 STUD OR BETTER w/ 1 ROW OF 10d NAILS SPACED @ 6" O.C.
3. DIAGONAL BRACE TO BE APPROXIMATELY 45° TO ROOF DIAPHRAGM @ 4' O.C.
4. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN w/ 16d NAILS SPACED @ 6: O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS w/ (4) 10D NAILS THROUGH 2x4. (REFER TO SECTION A-A)
5. DIAGONAL BRACES OVER 6'-3" REQUIRE A 2x4 T-BRACE ATTACHED TO ONE EDGE. DIAGONAL BRACES OVER 12'-6" REQUIRE 2x4 I-BRACES ATTACHED TO BOTH EDGES. FASTEN T & I BRACES TO NARROW EDGE OF WEB w/ 10d COMMON WIRE NAILS 8" O.C. w/ 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF DIAGONAL LENGTH.

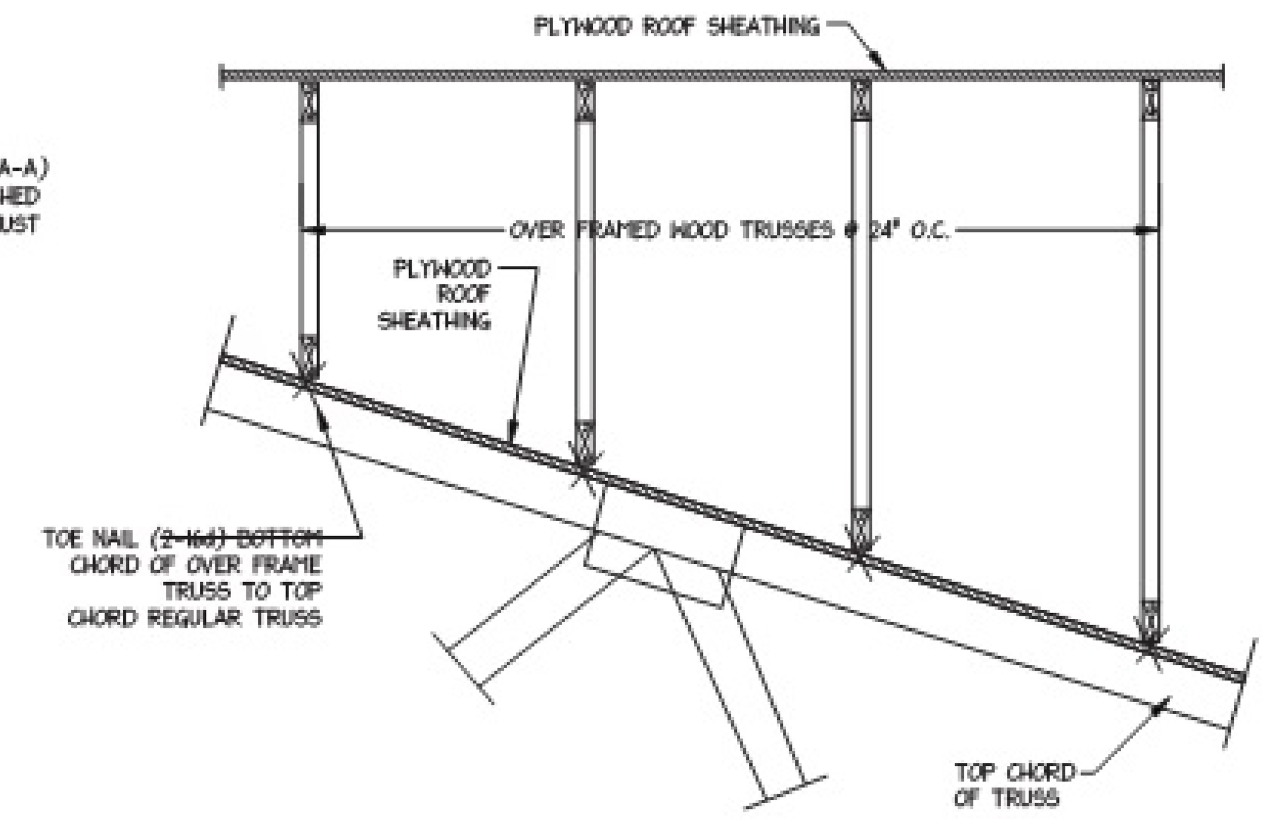


*-DIAGONAL BRACING. REFER TO SECTION A-A

**-"L" BRACING. REFER TO SECTION B-B

SECTION B-B

NTS



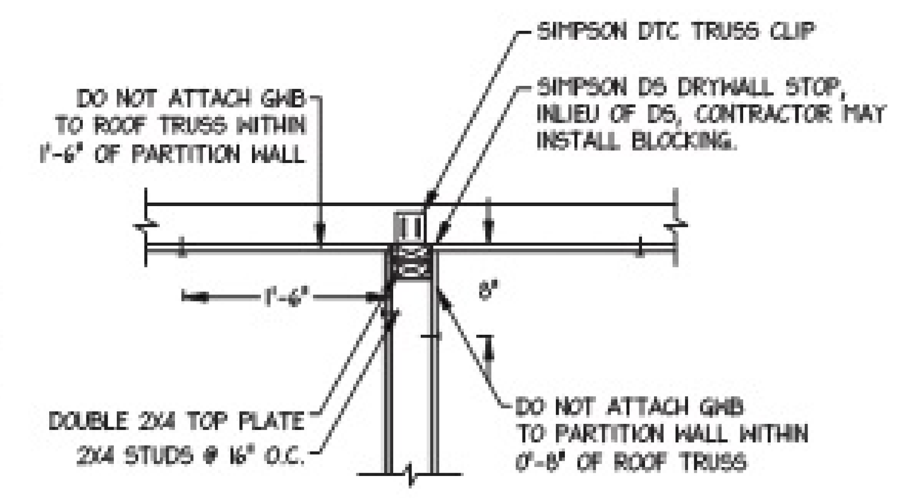
OVERFRAMING (TRUSSES) DETAIL

NTS

LATERAL BRACING NAILING SCHEDULE	
VERTICAL HEIGHT	NUMBER OF NAILS
UP-TO 6'-11"	2-16d
7'-0" & 8'-5"	3-16d
8'-6" & OVER	4-16d

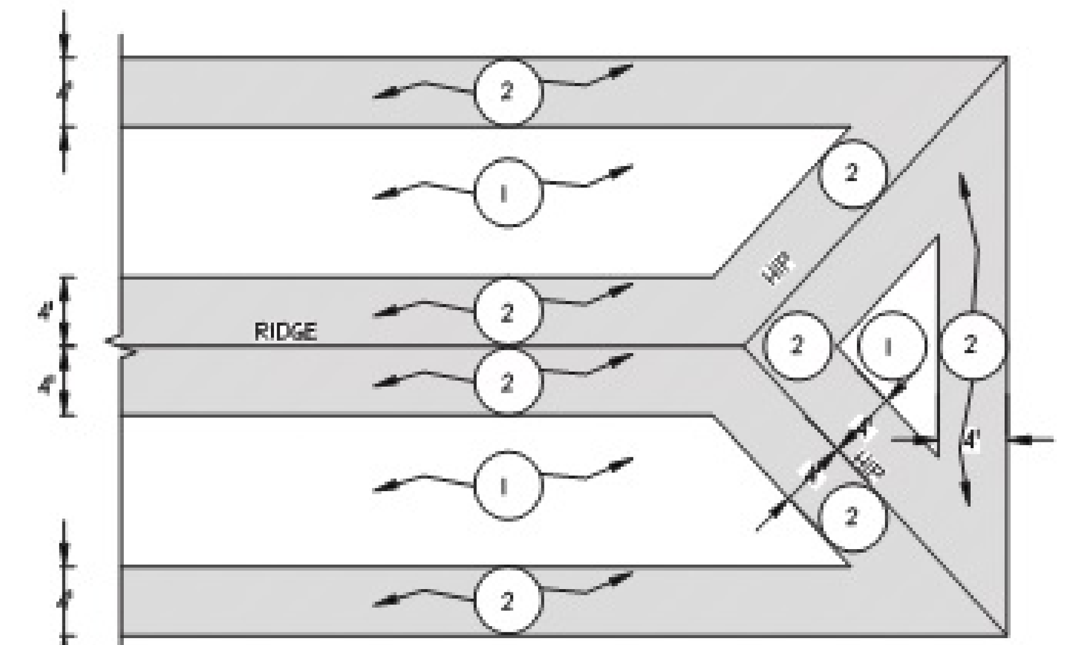
MAXIMUM VERTICAL STUD HEIGHT				
SPACING OF VERTICALS	W/O LATERAL BRACE	WITH "L" BRACE	WITH DIAGONAL BRACE	WITH 2 DIAGONAL BRACES AT ⅓ POINTS
12" o.c.	4'-9-3/4"	7'-10"	9'-7-1/2"	14'-5-1/4"
16" o.c.	4'-4-1/2"	6'-9-3/4"	8'-8-3/4"	13'-1-1/4"
24" o.c.	3'-9-1/2"	5'-6-1/2"	7'-7-1/4"	11'-4-3/4"

THIS TABLE CANNOT BE USED WITH BRICK VENEER



PERPENDICULAR PARTITION DETAIL (TYP)

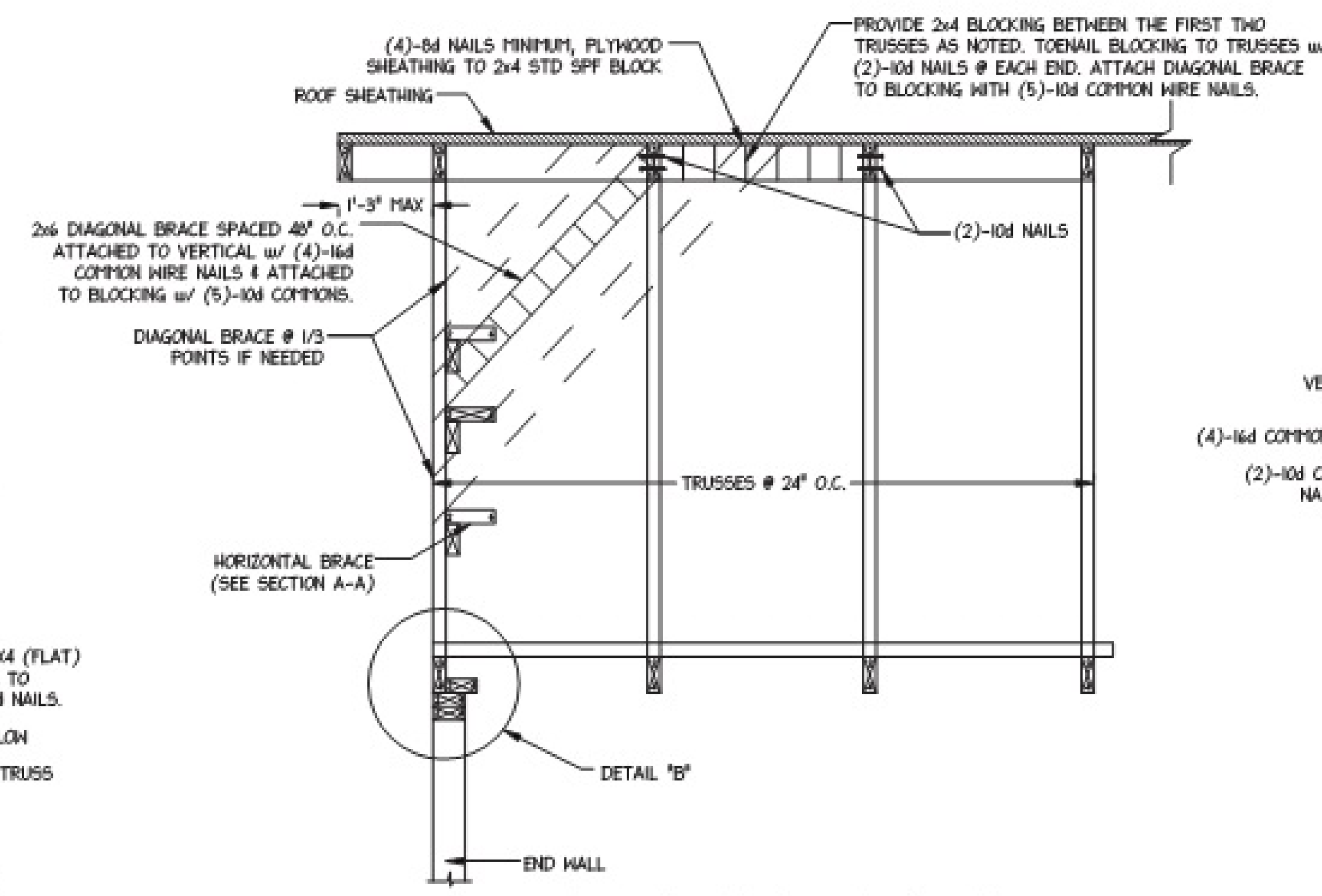
NTS



NAIL SPACING SCHEDULE				
ZONE	1		2	
	<110 MPH (3SEC GUST)	≥110 MPH (3SEC GUST)	<110 MPH (3SEC GUST)	≥110 MPH (3SEC GUST)
PANEL EDGE	6" O.C.	4" O.C.	6" O.C.	6" O.C.
PANEL INTERIOR	12" O.C.	6" O.C.	12" O.C.	6" O.C.

NOTE: USE 8d RING SHANK NAILS

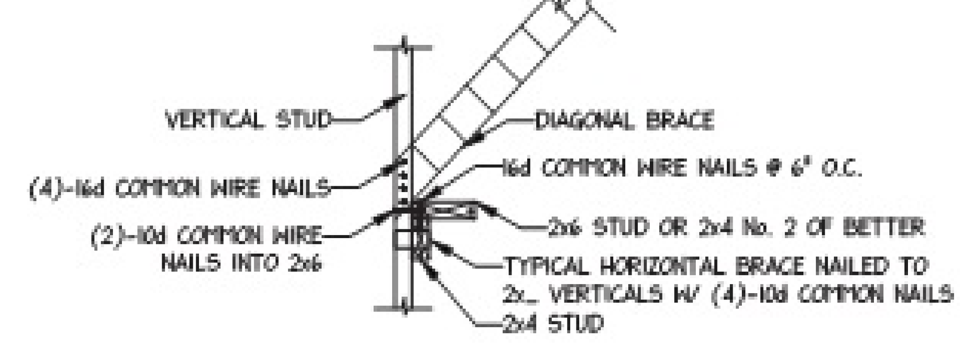
PARTIAL ROOF (PLAN VIEW) SHOWING SHEATHING/FASTENING DETAIL



GABLE END LATERAL BRACING DETAIL

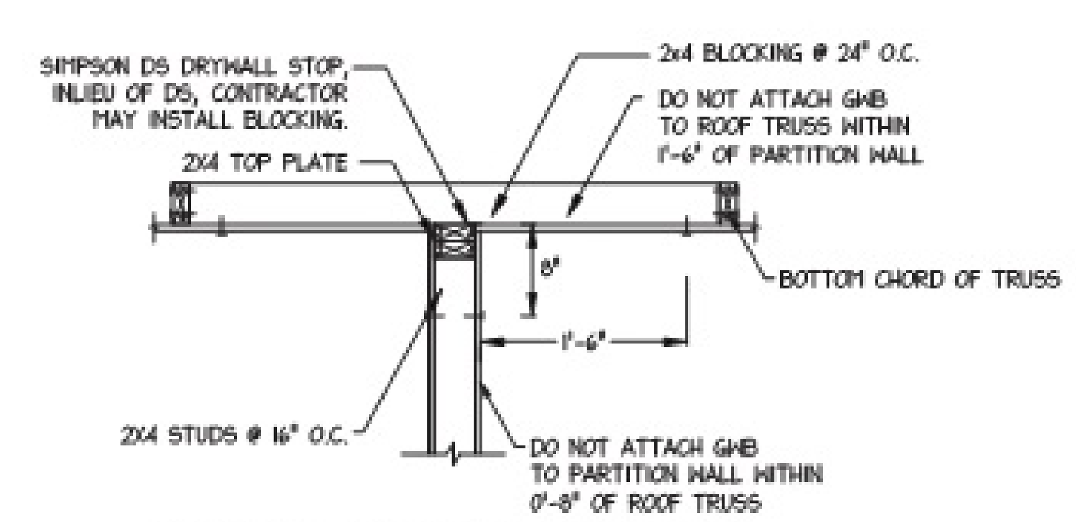
NTS

MAXIMUM WIND SPEED = 100 MPH
MAX MEAN ROOF HEIGHT = 30'-0"
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-98
DURATION OF LOAD INCREASE: 1.60



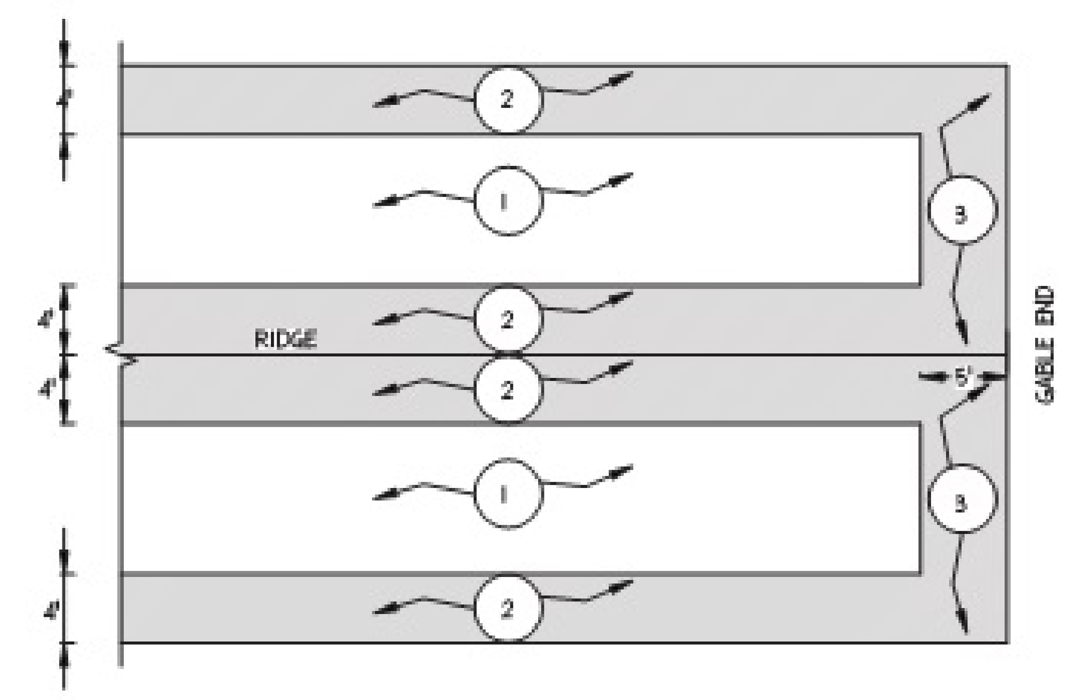
SECTION A-A

NTS



PARALLEL PARTITION DETAIL (TYP)

NTS

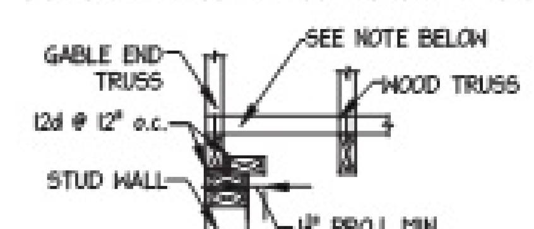


NAIL SPACING SCHEDULE						
ZONE	1		2		3	
	<110 MPH (3SEC GUST)	≥110 MPH (3SEC GUST)	<110 MPH (3SEC GUST)	≥110 MPH (3SEC GUST)	<110 MPH (3SEC GUST)	≥110 MPH (3SEC GUST)
PANEL EDGE	6" O.C.	4" O.C.	6" O.C.	6" O.C.	6" O.C.	4" O.C.
PANEL INTERIOR	12" O.C.	6" O.C.	12" O.C.	6" O.C.	6" O.C.	6" O.C.

NOTE: USE 8d RING SHANK NAILS

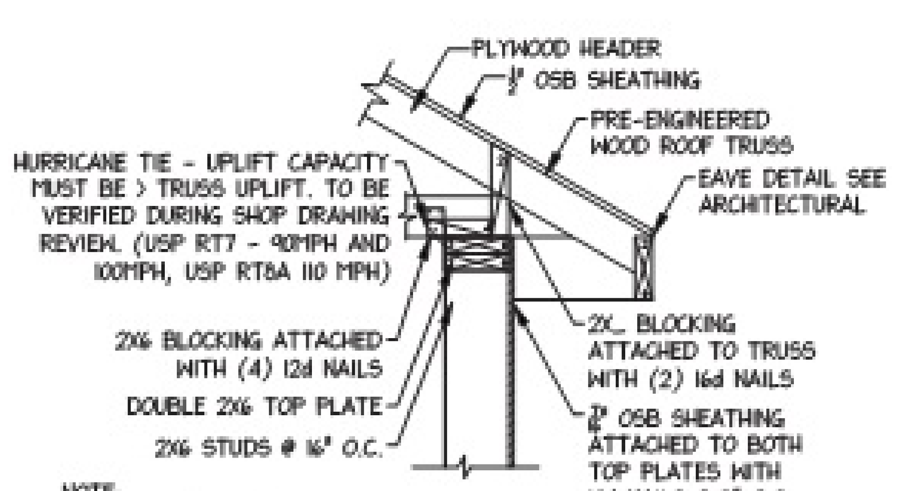
PARTIAL ROOF (PLAN VIEW) SHOWING SHEATHING/FASTENING DETAIL

NOTE:
BOTTOM CHORD HORIZONTAL BRACING, 2X4 (FLAT) ATTACHED TO 4 TRUSS @ 3'-0" o.c. NAIL TO TOP OF EACH BOTTOM CHORD WITH 2-16d NAILS.



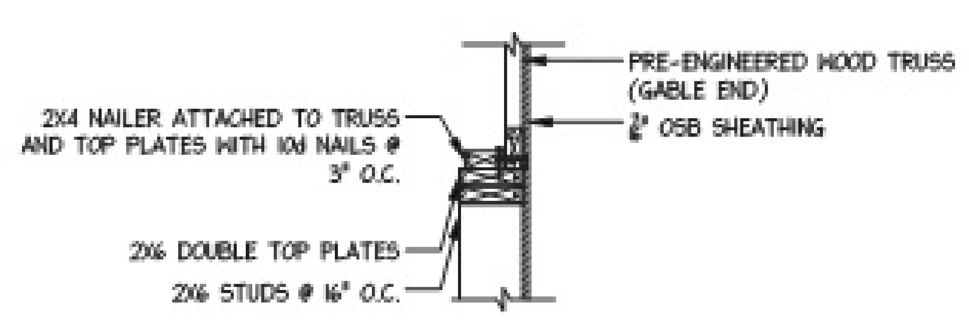
DETAIL "B"

NTS



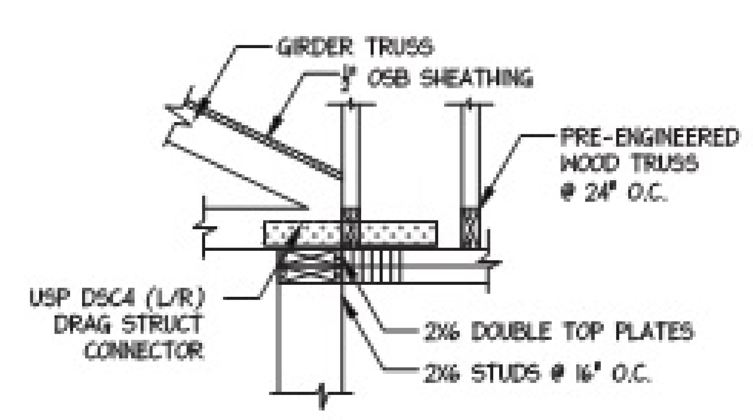
NOTE:
SEE FASTENING SCHEDULE ON SHEET SN.2

1 SECTION SD.3 3/4" PER FOOT

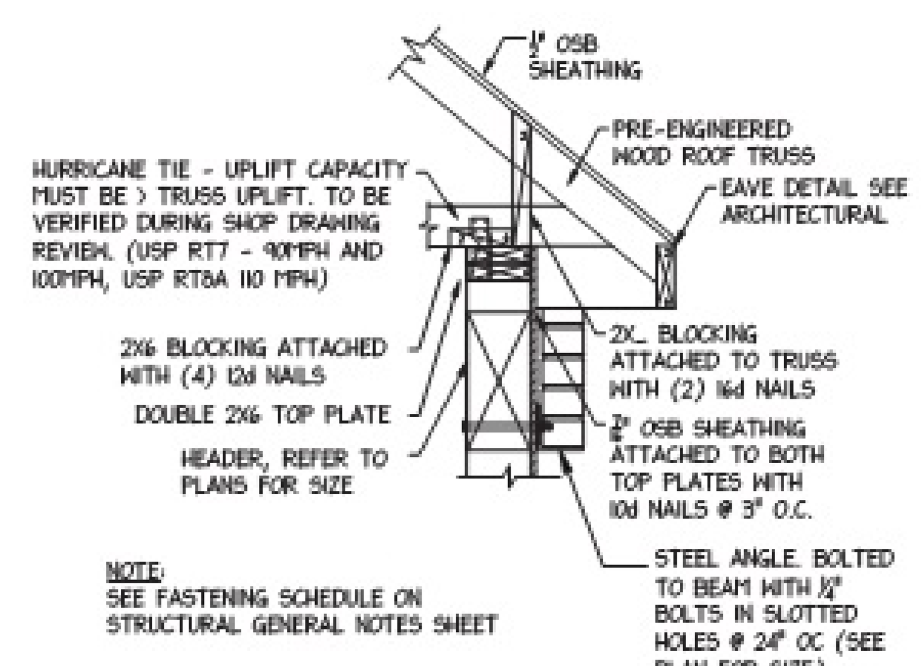


NOTE:
SEE FASTENING SCHEDULE ON SHEET SN.2

2 SECTION SD.3 3/4" PER FOOT



3 SECTION SD.3 3/4" PER FOOT



NOTE:
SEE FASTENING SCHEDULE ON STRUCTURAL GENERAL NOTES SHEET

4 SECTION SD.3 3/4" PER FOOT

STRUCTURAL ENGINEERING UNLIMITED, LLC
5280 URBANA PIKE - SUITE 101
IJAMSVILLE, MARYLAND 21754
410-442-4400
301-748-2769

NEW HOME AT

ARCHITECT

ARCHITECT:

CONTRACTOR

CONTRACTOR:

CIVIL:

MEP:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO.: 24518 EXPIRATION DATE: 04-21-2017

STATE OF MARYLAND JUAN JOSE MORALES-UTRERA PROFESSIONAL ENGINEER

5/11/2017

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JMU

ISSUE:	DATE:
ISSUED FOR PERMITS	03-11-2017

REVISION:
1
2
3
4
5
6
7
8

STRUCTURAL DETAILS & NOTES

SD.3

5/11/2017 --- 10:30:45 AM

e:\documents_seu - cluod\public_clients\2017\manifest 3d\acl-2 build 5\2017-03-11 boone ave.dwg