- AS USED IN THESE GENERAL NOTES: "DRAWINGS" MEANS THE LATEST STRUCTURAL DESIGN DRAWINGS, UON "CONTRACT DOCUMENTS" IS DEFINED AS THE DESIGN DRAWINGS AND ALL GENERAL NOTES. "SER" IS DEFINED AS THE STRUCTURAL ENGINEER OF RECORD FOR THE STRUCTURE IN ITS FINAL CONDITION. "DESIGN PROFESSIONALS" IS DEFINED AS THE OWNER'S ARCHITECT AND SER. "MEP" INCLUDES, BUT IS NOT LIMITED TO MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION. "CONTRACTOR" IS DEFINED TO INCLUDE ANY OF THE FOLLOWING: GENERAL CONTRACTOR AND THEIR SUBCONTRACTORS, CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS.
- THESE NOTES APPLY TO THE ENTIRE PROJECT UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, CIVIL, MEP CONTRACT DOCUMENTS, AS WELL AS ANY OTHER APPLICABLE TRADES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF

THE STRUCTURE REACHES ITS FINAL CONDITION.

FEMPORARY BRACING AND CONSTRUCTION SUPPORTS.

- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES, AS NECESSARY TO COMPLETE THE PROJECT. NO PORTION OF THE PROJECT WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTOR'S TEMPORARY SUPPORTS AND BRACES. CONTRACTOR SHALL RETAIN A STRUCTURAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED TO DESIGN
- CONSTRUCTION MATERIALS SHALL NOT BE STACKED ON FLOORS OR ROOFS IN EXCESS OF THE DESIGN LIVE LOADS WHICH ARE INDICATED IN THE GENERAL NOTES. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE SUBCONTRACTORS ARE INFORMED AND DO NOT VIOLATE THIS IMPORTANT REQUIREMENT. IMPACT SHALL BE AVOIDED WHEN PLACING MATERIALS ON FLOORS OR ROOFS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND COORDINATE WITH THE STRUCTURAL DRAWINGS, ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER CONSULTANTS, PROJECT SHOP DRAWINGS AND FIELD CONDITIONS.
- IN CASES OF CONFLICT BETWEEN DRAWINGS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONALS AND OBTAIN CLARIFICATION PRIOR TO BIDDING
- APPLY DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE OR NOTE.
- ONLY USE DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS.
- 11. ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS, IF NOT INDICATED ON DRAWINGS.
- 12. CENTERLINES OF FRAMING MEMBERS COINCIDE WITH COLUMN CENTERLINES, UON.
- THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.
- THE CONTRACTOR SHALL COORDINATE THE BOTTOM OF BASE PLATE ELEVATIONS WITH THE AS-BUILT TOP OF
- EQUIPMENT ANCHOR BOLT SIZES, TYPES, AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATED TO INSURE ACCURACY OF PLACEMENT
- THE CONTRACTOR SHALL VERIFY ALL OPENING SIZES AND LOCATIONS WITH OTHER DISCIPLINES. THE DRAWINGS DO NOT SHOW ALL OPENINGS REQUIRED. ADDITIONAL OPENINGS, BLOCKOUTS AND SLEEVES MAY BE REQUIRED BY OTHER DISCIPLINES AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR THE CRITERIA INDICATED ON THE DRAWINGS. OPENINGS REQUIRED BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS MUST BE APPROVED BY THE STRUCTURAL ENGINEER.
- DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
- ELEVATIONS INDICATED ON STRUCTURAL DRAWINGS ARE BASED ON A PROJECT DATUM INDICATED ON THE ARCHITECTURAL DRAWINGS.

- THE CONTRACTOR SHALL EMPLOY OR RETAIN A LICENSED STRUCTURAL ENGINEER IN THE STATE IN WHICH THIS PROJECT IS LOCATED TO DESIGN AND DETAIL PERFORMANCE ITEMS AS PART OF THE BASE BUILDING STRUCTURE INDICATED IN THE CONTRACT DOCUMENTS.
- THE ENGINEER DOES 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 THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.

<u>SUBMITTALS</u>

- 10 WORKING DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER'S REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE STRUCTURAL ENGINEER. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE STRUCTURAL ENGINEER WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN WORKING DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING.
- THE CONTRACTOR SHALL REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO ARCHITECT AND STRUCTURAL ENGINEER AND SHALL STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:
 - THE SHOP DRAWING IS REQUESTED.
 - THE SHOP DRAWING IS BASED ON THE LATEST DESIGN. THE ARCHITECT'S AND STRUCTURAL ENGINEER'S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
- THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCLING OR CLOUDS.
- SUBMITTAL IS COMPLETE SUBMITTAL DOES NOT INCLUDE SUBSTITUTION REQUEST.
- SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, SPECIFICATION SECTION NUMBER.
- THE STRUCTURAL ENGINEER SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS. THE STRUCTURAL ENGINEER'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. NO WORK SHALL BE STARTED WITHOUT SUCH
- FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE CONTRACTOR, PROVIDE A NOTE ON EACH SHOP DRAWING. WRITTEN AND SIGNED BY THE SUPPLIER'S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH
- THE CALCULATIONS OF THE CONTRACTOR'S 4. THE FOLLOWING ITEMS REQUIRE SUBMITTALS FOR STRUCTURAL REVIEW AS OUTLINED IN THE SPECIFICATIONS:
 - CONCRETE REINFORCING LAYOUT CONCRETE MIX DESIGNS CONCRETE CONSTRUCTION JOINT LAYOUT CMU BLOCK TYPE AND ACCESSORIES

MORTAR AND GROUT MIX DESIGN S = SHOP DRAWINGS REQUIRED

- CALC = SUPPORTING CALCULATIONS REQUIRED, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
- SUBMITTAL FOR SPECIAL STRUCTURAL, LOAD-CARRYING ITEMS THAT ARE REQUIRED BY CODES OR STANDARDS TO RESIST FORCES MUST BE PREPARED BY, OR UNDER THE DIRECT SUPERVISION OF, A DELEGATED ENGINEER. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO, STRUCTURAL LIGHT GAGE STEEL FRAMING, EXTERIOR ENCLOSURE SYSTEMS, STEEL STAIRS, PRECAST CONCRETE PILES.
- A DELEGATED ENGINEER IS DEFINED AS A FLORIDA LICENSED ENGINEER WHO SPECIALIZES IN AND UNDERTAKES THE DESIGN OF STRUCTURAL COMPONENTS OR STRUCTURAL SYSTEMS INCLUDED IN A SPECIFIC SUBMITTAL PREPARED FOR THIS PROJECT AND IS AN EMPLOYEE OR OFFICER OF, OR CONSULTANT TO, THE CONTRACTOR OR FABRICATOR RESPONSIBLE FOR THE SUBMITTAL. THE DELEGATED ENGINEER SHALL SIGN, SEAL, AND DATE THE SUBMITTAL, INCLUDING CALCULATIONS AND DRAWINGS.

CODES AND DESIGN CRITERIA

- PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, UON:
- AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7-2016: "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER 2020 FLORIDA BUILDING CODE WITH AMENDMENTS

- STRUCTURAL CONCRETE:
 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" THE AMERICAN CONCRETE INSTITUTE (ACI 318-14 AND ACI 350-06)
- BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES" THE AMERICAN CONCRETE INSTITUTE (ACI 530-13)

<u>LIVE LOADS</u>:

- TYPICAL ROOF 20 PSF 30 PSF ATTIC W/ STORAGE
- SUPERIMPOSED DEAD LOADS:
- ROOF/CEILING
- IN CASES WHERE THE CONTRACTOR DETERMINES THAT SUSPENDED OR FLOOR MOUNTED MEP EQUIPMENT LOADS EXIST WHICH EXCEED DESIGN LOADS INDICATED ON CONTRACT DOCUMENTS, CONTRACTOR SHALL SUBMIT LOAD DATA TO DESIGN PROFESSIONALS FOR REVIEW PRIOR TO PROCEEDING WITH WORK
- DISTRIBUTE THE MAXIMUM LOAD HUNG FROM ANY STRUCTURAL MEMBER FOR MEP DUCTWORK, PIPING ETC OVER THE MEMBER'S TRIBUTARY AREA IN A WAY THAT THE DESIGN SUPERIMPOSED DEAD LOADS LISTED IN CONTRACT DOCUMENTS ARE NOT EXCEEDED. THE CONTRACTOR SHALL COORDINATE THE LOADS OF ALL TRADES AND PROVIDE ADDITIONAL SUPPORT OR DISTRIBUTION FRAMING AS REQUIRED TO ACHIEVE THE ALLOWABLE LOAD
- STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATING EQUIPMENT. MOUNT VIBRATING EQUIPMENT ON
- CONNECTIONS OF SYSTEMS DESIGNED BY CONTRACTOR'S ENGINEER SUCH AS, BUT NOT LIMITED TO, CLADDING, STAIRS, ELEVATORS, AND MEP LOADS ARE ASSUMED TO IMPOSE VERTICAL AND/OR HORIZONTAL LOADS ON THE BASE BUILDING STRUCTURAL MEMBERS WITHOUT GENERATING TORSION IN THE SUPPORTING STRUCTURAL MEMBERS. CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL SUPPLEMENTARY BRACING MEMBERS AS REQUIRED TO PREVENT TORSION ON THE BASE BUILDING STRUCTURE.

- ALLOWABLE SOIL BEARING PRESSURE IS ASSUMED TO BE 1,500 PSF BASED ON THE GEOTECHNICAL INVESTIGATION CONDUCTED BY GSE ENGINEERING AND CONSULTING.
- EMBED FOUNDATIONS A MINIMUM OF 18" BELOW THE LOWEST ADJACENT GRADE. INTERIOR FOUNDATIONS OR THICKENED
- IF FOUNDATIONS ARE EMBEDDED GREATER THAN 18", SELECTIVE UNDERCUTTING AND REPLACEMENT OF DISTRUBED
- STRIP THE CONSTRUCTION LIMITS AND 10 FT BEYOND THE PERIMETER OF ALL GRASS, ROOTS, TOPSOIL, AND OTHER
- ALWAYS GRADE THE SITE TO PROMOTE RUN OFF AND LIMIT THE AMOUNT OF PONDING
- REMOVE FREE WATER FROM EXCAVATIONS BEFORE PLACING CONCRETE.

SECTIONS SHOULD BE EMBEDDED A MINIMUM OF 12".

- CONCRETE SLAB AND FOUNDATION SHOULD BE POURED AS SOON AS POSSIBLE AFTER EXCAVATION TO AVOID LOSS OF NATURAL MOISTURE CONTENT AND TO AVOID WATER INFILTRATION.
- CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY PROTECT ALL EXCAVATION. WHERE NECESSARY, SHEET AND SHORE THE EXCAVATION WITH ALL REQUIRED TIEBACKS AND BRACING AS DETERMINED BY CONTRACTOR'S STRUCTURAL
- THE SUBGRADE SHALL BE PROOF ROLLED WITH HEAVY RUBBER-TIRED EQUIPMENT TO IDENTIFY ANY LOOSE ZONES OR SOFT SPOTS NOT FOUND BY THE SOIL BORINGS. ALL PROOF-ROLLING IS TO BE MONITORED BY A GEOTECHNICAL
- COMPACT THE SUBGRADE TO A DENSITY OF AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557). THE SPECIFIED COMPACTION SHOULD BE OBTAINED TO A DEPTH OF 1.5 FT BELOW THE FOUNDATION BOTTOM AND THE EXISTING GRADE PRIOR TO PLACING FILL
- 11. VIBRATORY ROLLER EQUIPMENT SHOULD NOT BE USED WITHIN APPROXIMATELY 100 FT OF EXISTING STRUCTURES.
- SHOULD CLAYEY SAND BE ENCOUNTERED AT THE BEARING SURFACE, THIS MATERIAL SHOULD BE PROBED AND VISUALLY CONFIRMED TO BE UNYIELDING IN THE UPPER 12" IN LIEU OF DENSITY TESTING.
- 13. IF THE FOUNDATION EXCAVATIONS PENETRATE THE THE CLAYEY SAND, THE EXCAVATION SHOULD BE PERFORMED IN A MANNER THAT REDUCES SOIL DISTURBANCE.
- CLAYEY SAND SOILS THAT ARE REMOVED AND REPLACED OR APPRECIABLY DISTURBED NEED TO BE RE-COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698)
- IMPORTED FILL PLACED TO RAISE THE SITE GRADES SHOULD CONSIST OF CLEAN SAND HAVING LESS THAN 10% PASSING
- FILL SHOULD BE PLACED IN MAXIMUM 12" LOOSE LIFTS THAT ARE COMPACTED TO AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557)

CAST-IN-PLACE CONCRETE

- CONCRETE STRENGTH SHALL MEET THE FOLLOWING 28-DAY COMPRESSIVE STRENGTHS (f c), UON:
- CLASS A 3000 PSI ALL FOUNDATIONS / SLAB-ON-GRADE
- PROVIDE NORMAL WEIGHT CONCRETE WITH CURED DENSITY OF 145 +/- 5 PCF, AND AGGREGATE CONFORMING TO ASTM
- THE USE OF CALCIUM CHLORIDE AND OTHER CHLORIDE CONTAINING AGENTS IS PROHIBITED. THE USE OF RECYCLED CONCRETE IS PROHIBITED. PLACEMENT WITHIN AND CONTACT BETWEEN ALUMINUM ITEMS, INCLUDING ALUMINUM CONDUIT, AND CONCRETE IS PROHIBITED.
- ALL CAST-IN-PLACE CONCRETE WILL EXPERIENCE DIFFERING VARIATIONS OF CRACKING. ANY ELEMENT EXPOSED TO DIRECT WEATHER AND/OR TEMPERATURE VARIATIONS DURING CONSTRUCTION OR IN THE FINAL CONDITION IS TO BE FREATED AND REGULARLY MAINTAINED TO PREVENT PROPAGATION OF CRACKS AND WATER PENETRATION. THE CONTRACTOR SHALL DEVELOP A REGULAR MAINTENANCE PROGRAM AND SUBMIT IT TO THE OWNER.
- CONCRETE MIX DESIGN SUBMITTALS.
 - EACH MIX DESIGN SHALL BE LABELED TO INDICATE THE AREA IN WHICH THE CONCRETE IS TO BE PLACED (I.E. FOUNDATIONS, SLAB-ON-GRADE, COLUMNS, ETC). FAILURE TO DO SO WILL CAUSE DELAY AND/OR REJECTION OF SUBMITTALS
 - PROPOSED MIX DESIGN SHALL BE IN ACCORDANCE WITH METHOD 1 OR METHOD 2 OF ACI 301. PROVIDE SUPPORTING DATA IN TUBULAR FORM FOR EACH SEPARATE PROPOSED MIX. SUBMIT CONCRETE MIX DESIGN FOR EACH PROPOSED CLASS OF CONCRETE
- MAXIMUM W/C RATIO OF 0.50 FOR FOOTINGS AND 0.45 FOR OTHER CONCRETE. CMU GROUT SHALL HAVE W/C RATIO OF 0 60 OR HIGHER
- ALL FORMWORK SHALL BE DESIGNED, ERECTED, SUPPORTED, BRACED, AND MAINTAINED ACCORDING TO ACI 347, RECOMMENDED STANDARD PRACTICE FOR CONCRETE FORMWORK. RESPONSIBILITY: THE DESIGN, CONSTRUCTION, AND SAFETY OF ALL FORMWORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED UNLESS OTHERWISE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.
- THE CONTRACTOR SHALL EMPLOY A TESTING LABORATORY TO PREPARE TEST CYLINDERS REPRESENTING CONCRETE POURED EVERY DAY, ONE SET PER DAY OR ONE SET MINIMUM FOR EACH 50 CUBIC YARDS POURED. THE TESTING LABORATORY TECHNICIAN SHALL BE PRESENT AT THE BEGINNING OF EACH POUR. LABORATORY REPORT SHALL BE FURNISHED TO THE STRUCTURALENGINEER SHOWING STRENGTH OF CONCRETE AT 7 AND 28 DAYS.
- ALL SLABS SHALL HAVE AN APPROVED CURING COMPOUND APPLIED IMMEDIATELY AFTER FINISHING. USE KUREZ DR VOX, BY EUCLID, OR APPROVED EQUAL

WELDED WIRE REINFORCEMENT:

- ALL CONCRETE SHALL INCLUDE REINFORCEMENT. IF REINFORCEMENT IS NOT SPECIFICALLY INDICATED ON THE DRAWINGS VERIFY WITH THE STRUCTURAL ENGINEER.
- REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:

ASTM A185

- **DEFORMED BARS** ASTM A615, GRADE 60
- DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS, ACI-318 AND ACI-315, UON.
- WHERE A 90-DEG, 135-DEG OR 180-DEG HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOKS UON.
- DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT UON.
- EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DOCUMENTS, SHALL BE PROVIDED FOR PRIOR TO PLACING CONCRETE.
- WHERE DRILLED EPOXY DOWELS ARE PLACED INTO HARDENED CONCRETE, ADJUST THE DOWEL LOCATIONS AS NEEDED TO AVOID DRILLING THROUGH ANY REINFORCING BARS. IF THE DOWEL LOCATION NEEDS TO BE MODIFIED, CONTACT THE ENGINEER PRIOR TO DRILLING.
- DOWELS, ANCHOR BOLTS, PIPES, AND OTHER EMBEDDED ITEMS SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS PLACED.
- CONDUITS AND PIPES EMBEDDED IN OR PENETRATING THROUGH CONCRETE SHALL BE SPACED ON CENTER NOT LESS THAN 3 TIMES THEIR OUTSIDE DIMENSION, BUT NOT LESS THAN 2 1/2 INCHES CLEAR. OUTSIDE DIMENSION OF EMBEDDED ITEMS SHALL NOT EXCEED 1/3 OF THE CONCRETE MEMBER THICKNESS. CLEAR SPACING REQUIREMENTS SHALL APPLY FOR EMBEDDED CONDUITS OR PIPES CROSSING AT AN ANGLE LESS THAN 60 DEGREES. EMBEDDED CONDUITS AND PIPES SHALL BE LOCATED BETWEEN THE LAYERS OF REINFORCEMENT AND A MINIMUM OF 2 1/2 INCHES CLEAR FROM APPROXIMATELY PARALLEL REINFORCING BARS. REQUIREMENTS FOR EMBEDDED ELEMENTS CROSSING REINFORCING BARS SHALL BE AS REQUIRED FOR CROSSING EMBEDDED ELEMENTS.
- REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY METAL PIPE, PIPE IN FLANGE, METAL CONDUIT, OR OTHER METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM CLEARANCE OF 2 INCHES SHALL BE PROVIDED.
- WALL FOOTING CORNER AND INTERSECTION REINFORCEMENT BARS SHALL BE EXTENDED INTO CONNECTING FOOTINGS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING FOOTING. OUTSIDE FACE WALL FOOTING REINFORCEMENT SHALL BE LAPPED WITH CORNER BARS. ALL WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMN OR PILASTER FOOTINGS.
- REINFORCING STEEL FOR FOOTINGS AND SLABS ON GRADE SHALL BE ADEQUATELY SUPPORTED ON BAR SUPPORTS WITH SPACERS TO KEEP REINFORCING ABOVE THE PREPARED GRADE. LIFTING REINFORCING OFF GRADE DURING CONCRETE PLACEMENT IS NOT PERMITTED.
- LAP REINFORCEMENT 40 BAR DIAMETERS UON.
- 14. UNLESS OTHERWISE NOTED ALL LAP SPLICES ARE TO BE TENSION LAP SPLICES PER LAP SPLICE AND EMBEDMENT SCHEDULE.
- LAP WELDED WIRE REINFORCEMENT TWO PANEL SPACINGS, UON.
- 16. REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE PROTECTION (CLEAR COVER), UON

CES NOT FORMED:	3"
D SURFACES IN CONTACT WITH SOIL OR WATER, OR EXPOSED TO WEATHER:	2"
, GIRDER, AND COLUMNS:	2"
FED SLABS AND JOISTS:	1 1 /2"

SURFAC

FORME

BEAMS.

ELEVATI

- CONCRETE MASONRY WORK SHALL CONFORM TO ACI 530-05, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND ACI 530.1, SPECIFICATION FOR MASONRY STRUCTURES.
- CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO THE FOLLOWING MATERIAL STANDARDS:

CONCRETE BLOCK: ASTM C90, LIGHTWEIGHT (105 PCF) (MINIMUM 28 DAY COMPRESSIVE STRENGTH 2800 PSI FOR S OR M OR 3050 PSI FOR N) MORTAR: ASTM C270, TYPE S, M OR N PORTLAND CEMENT / LIME ONLY BY PROPORTION MORTAR USAGE (UON ON DRAWINGS): USE TYPE S OR M MORTAR WHEN MASONRY IS IN DIRECT CONTACT WITH SOIL; USE TYPE S MORTAR FOR ALL EXTERIOR AND INTERIOR LOAD-BEARING WALLS; USE TYPE N MORTAR FOR ALL EXTERIOR AND INTERIOR NON-LOAD-BEARING WALLS

ASTM C476 BY PROPORTION (MINIMUM 28 DAY COMPRESSIVE STRENGTH 2000 PSI) REINFORCEMENT: ASTM A615, GRADE 60 JOINT REINFORCEMENT ASTM A82, TRUSS OR LADDER TYPE SPACED AT 16" O.C. EXTERIOR JT REINF: GALVANIZE PER ASTM A153

HIT-HY 70 BY HILTI, TULSA, OK ADHESIVE ANCHORS: MATERIAL SHALL CONFORM TO THE FOLLOWING, EXCEPT AS NOTED: PLATE AND BENT BAR ANCHORS: ASTM A572, GRADE 50. SHEET METAL ANCHORS AND TIES: ASTM A366/A366M ASTM A 185 OR ASTM A 497. WIRE MESH TIES:

ANCHOR BOLTS: HAND MIXING MORTAR IS NOT ALLOWED.

WIRE TIES AND ANCHORS

- PIGMENTS WILL NOT BE ALLOWED IN MORTAR MIX UNLESS OTHERWISE SPECIFIED.
- PROVIDE HORIZONTAL JOINT REINFORCEMENT WITH NO. 9 GAGE LONGITUDINAL WIRES AT 16" VERTICALLY, UNLESS NOTED OTHERWISE. PROVIDE SPECIAL ACCESSORIES FOR CORNERS, INTERSECTIONS, ETC. WHERE REQUIRED, REINFORCE JOINTS WITH LADDER-TYPE REINFORCEMENT CONFORMING TO ASTM A951 AT 16" O.C. MEASURED VERTICALLY. LAP ALL JOINT REINFORCEMENT 6" MIN.

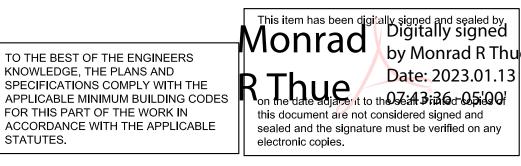
ASTM A 82, AND ASTM A167, TYPE 304

- THE MINIMUM COMPRESSIVE STRENGTH OF THE MASONRY (fm) SHALL BE 2,000 PSI UON, VERIFIED BY THE UNIT STRENGTH METHOD IN ACCORDANCE WITH THE ABOVE REFERENCED SPECIFICATIONS.
- CALCIUM CHLORIDE SHALL NOT BE USED IN MORTAR OR GROUT.
- PROVIDE FULL FACE SHELL MORTAR COVERAGE ON MASONRY UNIT HORIZONTAL AND VERTICAL (BED AND HEAD) FACE SHELL JOINTS.
- PROVIDE FULL MORTAR COVERAGE ON WEBS AROUND ALL GROUTED CELLS.
- LAY MASONRY UNITS IN RUNNING BOND UON WITH UNITS DESIGNED TO ALIGN WITH WEBS IN EACH COURSE.
- REFER TO PLANS AND DETAILS FOR BONDED JOINT REQUIREMENTS AT WALL CORNERS AND INTERSECTIONS. WHERE INDICATED ON DRAWINGS, INTERLOCK WALLS WITH METAL TIES, ANCHORS OR PREFABRICATED JOINT REINFORCEMENT UON ON DRAWINGS.
- 13. PLACE GROUT BY THE LOW-LIFT METHOD. MAXIMUM GROUT POUR SHALL BE 4 FEET.
- PROVIDE CONTRACTION (CONTROL) JOINTS IN ALL CONCRETE MASONRY WALLS AT LOCATIONS APPROVED BY THE ARCHITECT AT A MAXIMUM
- SPACING OF 2.0 TIMES THE WALL HEIGHT OR 25'-0", WHICHEVER IS LESS. JOINTS SHALL ALSO BE PLACED AT A MINIMUM OF 2'-8" FROM OPENINGS 15. PROVIDE DOVETAIL ANCHORS AT 16" C/C, UNLESS NOTED OTHERWISE, WHERE MASONRY WALLS ABUT CONCRETE SURFACES.
- SUBMIT WRITTEN CONSTRUCTION PROCEDURES PRIOR TO THE START OF MASONRY CONSTRUCTION.
- MINIMUM VERTICAL WALL REINFORCEMENT SHALL BE AS NOTED ON THE PLANS AND DETAILS.
- USE CORED HOLES WITH STEEL SLEEVES WHEN OPENINGS ARE REQUIRED FOR DRAIN PIPES. AVOID REINFORING.
- 19. IF TEMPERATURE FALLS BELOW 40 DEG F. OR EXCEEDS 100 DEG. F SPECIAL CONSTRUCTION MEASURES SHALL BE TAKEN AS PER FBC 2104.3 AND
- GROUT PLACEMENT STOPPED FOR ONE HOUR OR MORE SHALL BE STOPPED 1 1/2" BELOW THE TOP OF THE MASONRY UNIT TO PROVIDE A SHEAR
- KEY FOR SUBSEQUENT GROUTING. EXTEND ALL VERTICAL WALL REINFORCEMENT TO WITHIN 2" OF TOP OF WALL OR BEAM UON.
- UNLESS NOTED OTHERWISE, BOND BEAMS SHALL BE PLACED PER ROOF PLANS AND WALL SCHEDULES.
- ALL MASONRY WALLS SHOWN ON THE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES IN THE FINAL CONSTRUCTED CONFIGURATION ONLY. IT IS THE RESPONSIBLY OF THE CONTRACTOR TO ADEQUATELY BRACE THE WALLS FOR VERTICAL AND LATERAL LOADS THAT COULD POSSIBLY BE APPLIED PRIOR TO COMPLETION OF LATERAL SUPPORT BY CONNECTIONS AT

KNOWLEDGE, THE PLANS AND

STATUTES.

24. TYPICAL VERTICAL REINFORCING SIZE AND SPACING SHALL BE ABOVE AND BELOW ALL WALL OPENINGS.



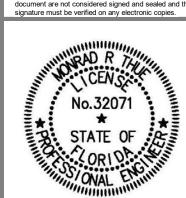


5590 SW 64th Street, Suite B Gainesville, FL 32608 Telephone: (352)377-3233 Fax: (352)377-0335 Certificate of Authorization No. 27430

> C \odot 0 .<u>S</u>

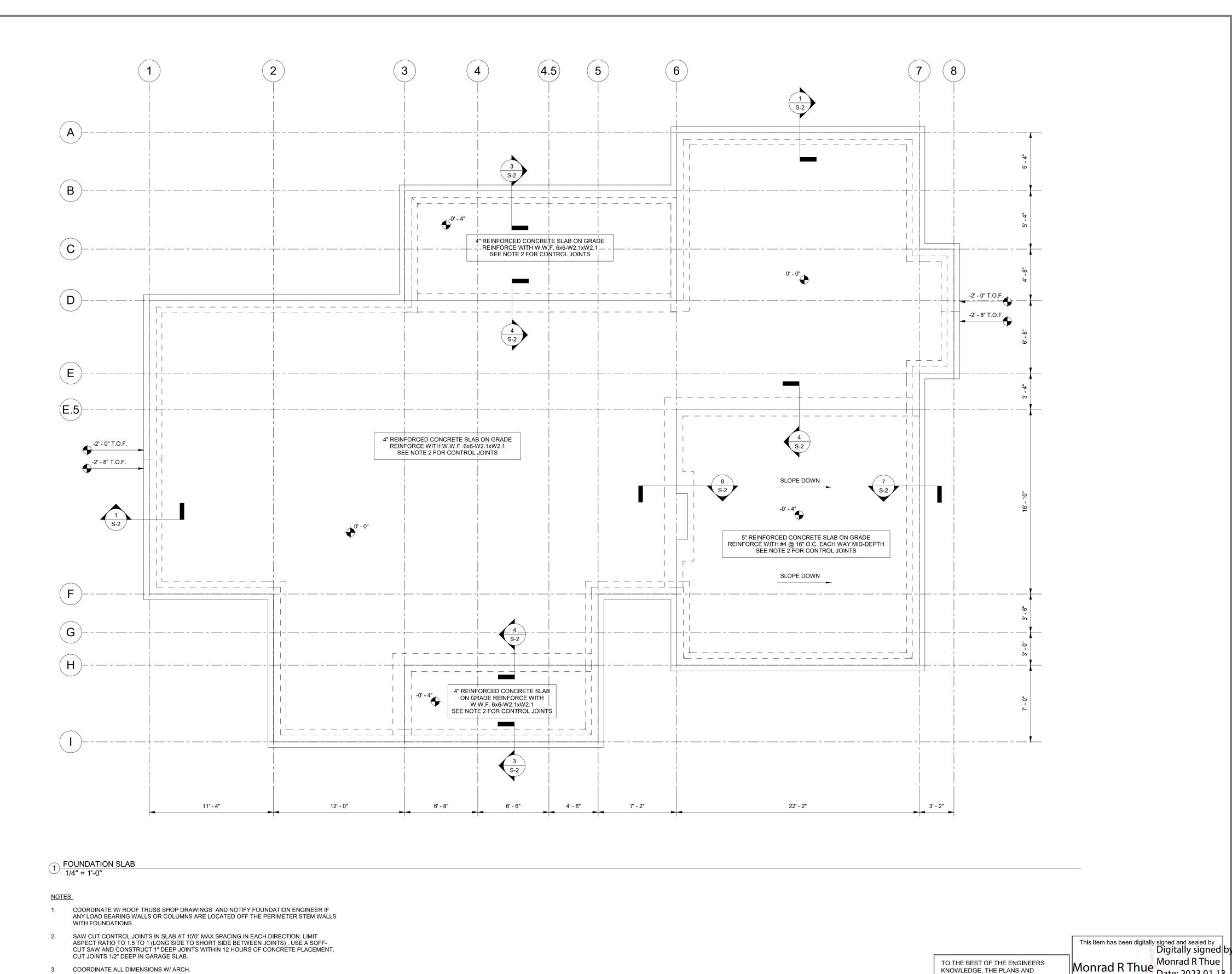
MONRAD R. THUE P.E. #320 This item has been digitally signed and sealed

on the date adjacent to the seal. Printed copies of this



PROJECT NUMBER: 15754A DESIGNED BY: DAH CHECKED BY: MRT DRAWN BY: DAH

General Notes



4. EXTEND WALL FOOTINGS 1'-0" PAST THE END OF THE STEM WALLS UON.

GSE

Engineering & Consulting, 1

5590 SW 64th Street, Suite B
Gainesville, FL 32608
Telephone: (352)377-3233
Fax: (352)377-0335
Certificate of Authorization No. 27430

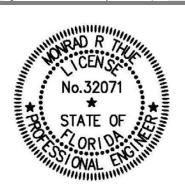
Residence

TBD NW 266th Stre High Springs, FL 320

MONRAD R. THUE P.E. #32071

This item has been digitally signed and sealed by

on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



PROJECT NUMBER: 15754A

DESIGNED BY: DAH

CHECKED BY: MRT

DRAWN BY: DAH

S-1

on the date adjacent to the seal:44108co05:00' this document are not considered signed and

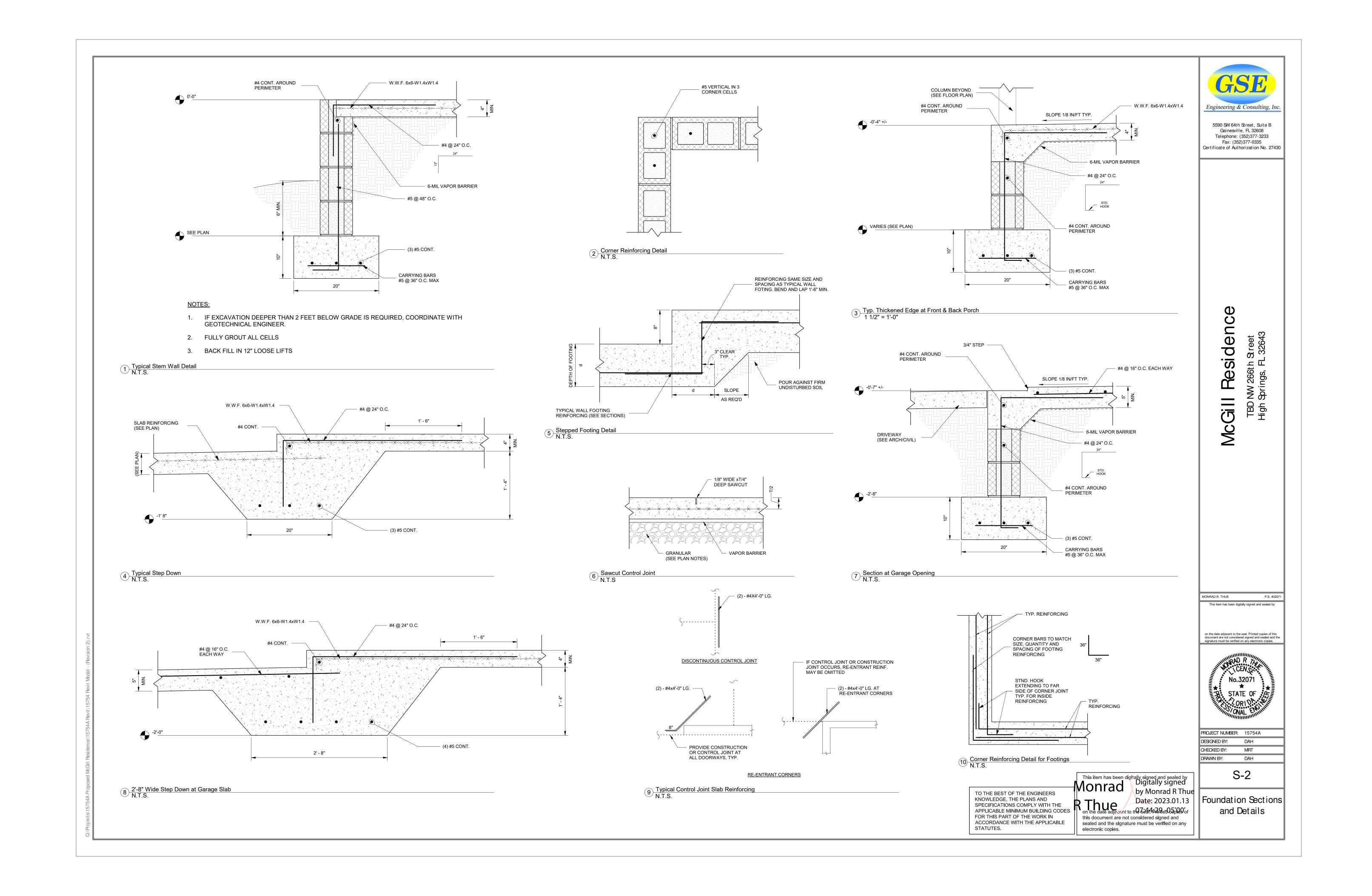
sealed and the signature must be verified on any

electronic copies.

SPECIFICATIONS COMPLY WITH THE

STATUTES.

APPLICABLE MINIMUM BUILDING CODES FOR THIS PART OF THE WORK IN ACCORDANCE WITH THE APPLICABLE Floor Plan



Wind Load Analysis and Certification

McGill Residence by Hartley Brothers, Inc.

2020 Florida Building Code section 1609 according to ASCE 7-16 Ultimate Design Wind Speed (Vult) = 130 MPH (3 second gust)

Nominal Design Wind Speed (Vasd)) = 101 MPH

Risk Category = II

Exposure Category = B, Enclosed Building

Applicable Internal Pressure Coefficient = .18

Design Wind Pressure for use of External Components (Components and Cladding)= +32.1psf, -43.3psf Overhead Garage Door: +15.2psf, -16.9psf

Roof Decking

7/16" or 5/8" OSB or ½", 5/8" or 3/4" CDX Decking; 48"x96" Sheets, Perpendicular to Roof Framing Members

8d common (.131" dia) or 8d ring-shank (.113' dia.) nails at 4" O.C. on Ends, 8" O.C. in Interior

Trusses or Rafters at 2' O.C. (horizontal distance), No Intermediate Blocking Required

Rafters: 2x6 SYP #2 up to 10' horizontal span, 2x8 SYP #2 up to 14' horizontal span

Shear Wall Segments

7/16" OSB or ½" CDX plywood, 48" Wide Sheets - Sheathing Continuous from Top Plate down to Pressure Treated Sole Plate Bearing on Foundation.

8d common (.131" dia) nails at 3" O.C. on Edges and Ends, 8" O.C. in Interior

Transverse Shearwall = 46', Longitudinal Shearwall = 53'

2x4 SPF (No. 1&2) Studs at 16" O.C., up to 12"

or: 2x6 SPF (No. 1&2) Studs at 16" O.C., up to 17'

See attached detail for stud and jack requirements for wall openings

Nail Together Double Top Plate 6" O.C. w/12-d Common Nails (SYP top plates)

Other Wall Segments - Same as Shear Walls

Gabled End Wall Framing

Balloon Frame (see details) or see attached alternate details. This includes porch walls parallel to trusses. T-Block (with 2x4's) bottom chord of porch gable trusses at 4' O.C to 6' from gable end-truss

Special Notes: All headers and beams to be double 2x12 SP#2 except as shown on attached plans. All LVL plies to be 1-3/4" wide 2800Fb-1.9E or better. **This structural and windload analysis is based on the attached truss layout.** Any deviation from the attached layout invalidates this structural and windload analysis.

Footings and Foundations (Based on Truss Engineering)

20" deep x 14" wide monolithic with 2-#5's, Continuous, 3000 psi Concrete

Garage Mono: depth of garage mono footer shall be a min of 18" below the garage slab and any curb shall be a min of 6" wide and a maximum of 6" deep or 8" wide and 8" deep. Any curb deeper than this requires special engineering design. or: 20" Wide x 10" Deep 3000 psi Concrete Strip Footing with 2-#5's, Continuous

8"x8"x16" Concrete Masonry Stemwall, Minimum 2 Courses, Maximum 4 Courses, Fully Grouted, except sections over 3 courses need only cells with rebar to be grouted. 1-#5 Vertical Dowel at Corners and 6'-0" O.C. (10" hook top and bottom) (min 25" lap all #5 rebar) Max distance between top of garage floor and top of stemwall = 18" (1) #5 continuous top course.

All 4" slabs requires 6x6 WWM

Interior footers: 16" wide by 10" deep (including 4" slab) with 2-#5's, Continuous,

Note: It is the contractors responsibility to install all necessary interior footers per truss manufacturers requirements based on the attached truss layouts and any interior shearwalls.

Porch Footers: 16" deep x 14" wide monolithic with 2-#5's, Continuous or see above or: 8" wide by 8" deep bell footing with 1-#5, Continuous with minimum of 30"x30" x 15" pad under each post (w/ 3- #5 each way)

Note: footer design based on continuous bearing of 2000 psf. Footers for any concentrated loads greater than 10,000 lbs must be reviewed with windload engineer. Movement – The information presented in this document is not calculated or intended for the use or purpose of mitigating or addressing unsuitable soils or subsurface conditions in any way or manner, whatsoever.

Hurricane-Resistance Hardware (Based on Truss Engineering)

Truss Clips/Headers/Girders/Posts/Beams /Top and Bottom of Wall Unit - See Table Anchor Bolts-1/2"Dia. x 10" J Bolts (with min 8" embedment) at 48"O.C. (First bolt at 9" from Corner, then 48" O.C.) and at each end of Each Opening (2" round or square washers).

I hereby certify that the accompanying Wind Load Analysis for the McGill Residence, demonstrates compliance with the 2020 FBC section 1609 according to ASCE 7-16, to the best of my knowledge.

> Frank J. Sapienza Jr. License Professional Engineer Florida License Number 48566

This item has been digitally signed and sealed by FRANK J SAPIENZA JR PE using Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

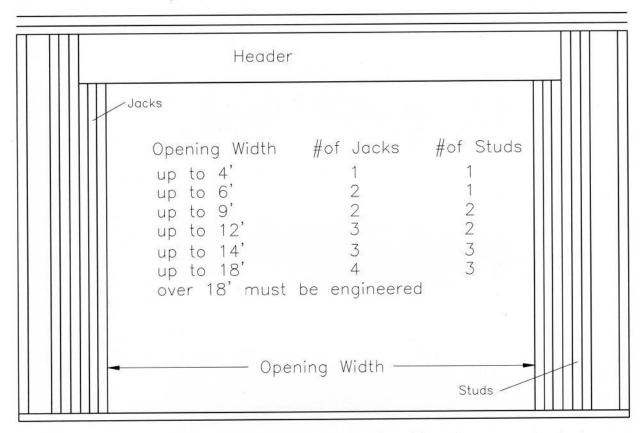
Frank J by Frank J Sapienza Jr Date: 2023.03.27

Digitally signed

12:44:17 -04'00'

Nood Se	ctions	Uplit	ft				
**************************************	CHOHS	Forc		Top Connector	Rating	Bottom Connector	Rating
		Lbs		Simpson **	Lbs	Simpson **	Lbs
	HEADERS	LDS	1	Sillipsoli	LDS	Giripson	LDS
	TILADLING	up to 455	5 lhe	LSTA9	775	H3	455
		up to 910			970	2-H3	910
		up to 1235			1235	LTT19	1350
		up to 1750			1940	LTT20	1750
		up to 2470			2470	HD2A-2.5	2565
		up to 2775			3705	HD2A-3.5	2775
		up to 3705			3705	HD5A-3	3705
o dotormi	no unlift force					resting on the header ar	
	uniform load)						
assumes	uniiomi ioau)	Note. III	iust	use proper bolt ar	icriois sui	ficient to support require	eu ioau
rucco c/G	irdore Unlif	4					
russes/G	irders - Uplif		nc c	pooial device res	uirod at ha	ttom	
		s - use H2.5A top,					
						required at bottom	
		s use TS22 or equ					
		s use 2-TS22 or e	_				
		s use 2-TS22 or e					
	up to 3645 in	s use 3-TS22 or e	equiva				
				Must Use proper			
		ors responsibility			uous loa	d path	
	\						
		beam to founda					
Strap rafte	ers to truss or	at each end with	min	uplift resistance c		each end	
Strap rafte	ers to truss or		min	uplift resistance c		each end	
Strap rafte Strap ridge	ers to truss or e beam at ea	at each end with ch end with min up	min plift r	uplift resistance of 1800) lbs		
Strap rafte Strap ridge Note: Four	ers to truss or beam at ea (4) 12d comm	at each end with ch end with min up toenails (2 on eac	min plift r	uplift resistance of esistance of 1800 le) required per tro	lbs uss/rafter	per bearing point into p	
trap rafte trap ridge lote: Four to resist	ers to truss or be beam at ea (4) 12d comm t both lateral le	at each end with ch end with min up toenails (2 on eac	min plift r h sid	uplift resistance of esistance of 1800 le) required per tru I transverse loads	lbs uss/rafter (max pla	per bearing point into p	ding gable)
trap rafte trap ridge lote: Four to resist	ers to truss or be beam at each (4) 12d comm t both lateral le	at each end with ch end with min up toenails (2 on eac oads (wall to truss (from truss loads	min plift r h sid	uplift resistance of esistance of 1800 le) required per true transverse loads lote: these device	uss/rafter (max places are ir	per bearing point into p te height =12', not includ a addition to required	ding gable) toe-nails
Strap rafte Strap ridge Iote: Four to resist	es to truss or be beam at each (4) 12d comm t both lateral le I Resistance up to 110 lbs	at each end with ch end with min up toenails (2 on eac oads (wall to truss) (from truss loads - use H2.5A	min plift r h sid	uplift resistance of esistance of 1800 le) required per true transverse loads lote: these device	uss/rafter (max places are ir	per bearing point into p	ding gable) toe-nails
trap rafte trap ridge lote: Four to resist	ers to truss or be beam at each (4) 12d comm t both lateral le	at each end with ch end with min up toenails (2 on eac oads (wall to truss) (from truss loads - use H2.5A	min plift r h sid	uplift resistance of esistance of 1800 le) required per truit transverse loads lote: these devices	uss/rafter (max pla ces are ir Note: hard	per bearing point into p te height =12', not includ a addition to required	toe-nails
Strap rafte Strap ridge lote: Four to resist	e beam at each (4) 12d comm to both lateral le la le la le la le la le la le la	at each end with ch end with min up toenails (2 on eac oads (wall to truss) (from truss loads - use H2.5A	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per tru I transverse loads lote: these device	uss/rafter (max places are in Note: hard	per bearing point into plate height =12', not include a addition to required ware to be used must sa	toe-nails
Strap rafte Strap ridge Note: Four to resist	e beam at each (4) 12d comm to both lateral le la le la le la le la le la le la	at each end with ch end with min up toenails (2 on eac bads (wall to truss) (from truss loads - use H2.5A s use H10	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per tru I transverse loads lote: these device	uss/rafter (max places are in Note: hard	per bearing point into plute height =12', not include a addition to required ware to be used must satisfication.	toe-nails
Strap rafte Strap ridge Note: Four to resist	e beam at each (4) 12d comm to both lateral le la le la le la le la le la le la	at each end with ch end with min up toenails (2 on eac bads (wall to truss) (from truss loads - use H2.5A s use H10	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per tru I transverse loads lote: these device	uss/rafter (max places are in Note: hard	per bearing point into plute height =12', not include a addition to required ware to be used must satisfication.	toe-nails
Strap rafte Strap ridge Iote: Four to resist	e beam at each (4) 12d comm to both lateral le la le la le la le la le la le la	at each end with ch end with min up toenails (2 on eac bads (wall to truss) (from truss loads - use H2.5A s use H10	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per tru I transverse loads lote: these devices	uss/rafter (max places are in Note: hard	per bearing point into plute height =12', not include a addition to required ware to be used must satisfication.	toe-nails
Strap rafte Strap ridge Note: Four to resist	e beam at each (4) 12d comm to both lateral le la le la le la le la le la le la	at each end with ch end with min up toenails (2 on eac bads (wall to truss) (from truss loads - use H2.5A s use H10	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per tru I transverse loads lote: these devices	uss/rafter (max places are in Note: hard	per bearing point into plute height =12', not include a addition to required ware to be used must satisfication.	toe-nails
Strap rafte Strap ridge Note: Four to resist Horizonta	(4) 12d comm t both lateral le Il Resistance up to 110 lbs up to 525 lbs up to 1090 lb	at each end with ch end with min up toenails (2 on eac bads (wall to truss) (from truss loads - use H2.5A s use H10	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per tru I transverse loads lote: these device	uss/rafter (max places are in Note: hard	per bearing point into plate height =12', not include a addition to required ware to be used must satisficated acceptable	toe-nails
Strap rafte Strap ridge Note: Four to resist Horizonta	(4) 12d comm t both lateral le Il Resistance up to 110 lbs up to 525 lbs up to 1090 lb	at each end with ch end with min up toenails (2 on eac bads (wall to truss) (from truss loads - use H2.5A s use H10	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per true transverse loads lote: these devices top	uss/rafter (max pla ces are ir Note: hard uplift and h	per bearing point into pite height =12', not include a addition to required ware to be used must sa norizontal resistance, cor is acceptable	ting gable) toe-nails tisfy both nbination
Strap rafte Strap ridge Note: Four to resist Horizonta	(4) 12d comm t both lateral le Il Resistance up to 110 lbs up to 525 lbs up to 1090 lb	at each end with ch end with min up toenails (2 on each pads (wall to truss) (from truss loads - use H2.5A suse H10 plus A2	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per tru I transverse loads Note: these device top LSTA18*	uss/rafter (max pla ces are in Note: hard uplift and h of devices	per bearing point into pite height =12', not include a addition to required ware to be used must satisficated acceptable bottom LTT19*	ting gable) toe-nails tisfy both nbination 1350 2200
Strap rafte Strap ridge Iote: Four to resist Iorizonta	(4) 12d comm t both lateral le Il Resistance up to 110 lbs up to 525 lbs up to 1090 lb	at each end with ch end with min up toenails (2 on each pads (wall to truss) (from truss loads - use H2.5A suse H10 plus A2	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per tru I transverse loads lote: these device top LSTA18* 2-LSTA18	uss/rafter (max pla ces are in Note: hard uplift and h of devices	per bearing point into pite height =12', not include a addition to required ware to be used must satisficated acceptable bottom LTT19* ABU44 or ABU66	ting gable) toe-nails tisfy both nbination 1350 2200
trap rafte trap ridge ote: Four to resist orizonta EEAM SE	ers to truss or e beam at each (4) 12d comm to both lateral left (1) Resistance up to 110 lbs up to 525 lbs up to 1090 lb	at each end with ch end with min up toenails (2 on each pads (wall to truss) (from truss loads - use H2.5A suse H10 plus A2 or per * or per	min plift r h sid) and s) - N	uplift resistance of esistance of 1800 le) required per tru I transverse loads lote: these device top LSTA18* 2-LSTA18 ss engineering	uss/rafter (max pla ces are ir Note: hard uplift and h of devices	per bearing point into plus te height =12', not include a addition to required ware to be used must satisficated acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt	ting gable) toe-nails tisfy both nbination 1350 2200
strap rafte strap ridge strap rafte strap rafte strap rafte strap rafte strap rafte strap rafte	rs to truss or be beam at each (4) 12d comm to both lateral left (1) Resistance up to 110 lbs up to 525 lbs up to 1090 lb (1) ATS	at each end with ch end with min up toenails (2 on each coads (wall to truss) (from truss loads) - use H2.5A suse H10 plus A2 as use H10 plus A2 a	min plift r h sid) and s) - N 23	uplift resistance of esistance of 1800 le) required per tru I transverse loads lote: these device top LSTA18* 2-LSTA18 ss engineering	uss/rafter (max pla ces are ir Note: hard uplift and h of devices	per bearing point into plate height =12', not include a addition to required ware to be used must satisfication acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt must cover sill plate	ting gable) toe-nails tisfy both nbination 1350 2200 anchors
Strap rafte Strap ridge Strap ridge Strap ridge Strap ridge Store to resist Strap strap Strap rafte	(4) 12d comm t both lateral le I Resistance up to 110 lbs up to 525 lbs up to 1090 lb ATS hing Nailing A	at each end with ch end with min up toenails (2 on each back (wall to truss) (from truss loads - use H2.5A s use H10 bs use H10 * or per dequate Exterior W dequate Exterior W	min plift r h sid) and s) - N 23	top LSTA18* 2-LSTA18 2-cottom (8d nails at 3"	uss/rafter (max pla ces are ir Note: hard uplift and h of devices 1235 2400 t 3" O.C.), O.C.), as lo	per bearing point into plus te height =12', not include a addition to required ware to be used must satisficated acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt	ting gable) toe-nails tisfy both nbination 1350 2200 anchors
Strap rafte Strap ridge Strap ridge Strap ridge Strap ridge Store: Four to resist Horizonta SEAM SEA POSTS STUDS Vall Sheat plate, ot	(4) 12d comm t both lateral le I Resistance up to 110 lbs up to 525 lbs up to 1090 lb ATS hing Nailing A herwise use S	at each end with ch end with min up toenails (2 on each coads (wall to truss) (from truss loads - use H2.5A suse H10 plus A2 as use H10 plus A2 as	min plift r h sid) and s) - N 23	top LSTA18* 2-LSTA18 2-LSTA18 2-LSTA18 2-LSTA18 2-LSTA18 2-LSTA18 3-2-LSTA18	uss/rafter (max pla ces are ir Note: hard uplift and h of devices 1235 2400 t 3" O.C.), O.C.), as lonailing,	per bearing point into pite height =12', not include a addition to required ware to be used must satisfication acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt must cover sill plate ong as sheathing covers	ting gable) toe-nails tisfy both hibination 1350 2200 anchors
Strap rafte Strap ridge Note: Four to resist Horizonta BEAM SE POSTS STUDS Wall Sheat Wall Sheat plate, ot Jse SP2 to	(4) 12d comm t both lateral le I Resistance up to 110 lbs up to 525 lbs up to 1090 lb ATS hing Nailing A herwise use S p and SP1 both	at each end with ch end with min up toenails (2 on each coads (wall to truss) (from truss loads) are use H2.5A as use H10 plus A2 as use H10 plus A2 are true with the coads a	min plift r h sid) and s) - N 23 r true 'alls! 'alls' addi	top LSTA18* 2-LSTA18 ss engineering cottom (8d nails at 3" tion to sheathing	uss/rafter (max pla ces are ir Note: hard uplift and r of devices 1235 2400 t 3" O.C.), O.C.), as le nailing, for all inter	per bearing point into pite height =12', not include a addition to required ware to be used must satisfication acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt must cover sill plate ong as sheathing covers	ting gable) toe-nails tisfy both hibination 1350 2200 anchors
Strap rafte Strap ridge Note: Four to resist Horizonta BEAM SE POSTS STUDS Wall Sheatt Wall Sheatt plate, ot Jse SP2 to have uplift.	(4) 12d comm t both lateral le I Resistance up to 110 lbs up to 525 lbs up to 1090 lb ATS hing Nailing A herwise use S p and SP1 bot. I beam at each	at each end with ch end with min up toenails (2 on each coads (wall to truss) (from truss loads) are use H2.5A are use H10 plus A2 are with a suse wit	min plift r th sid () and s) - N 223 23 (/alls I //alls i addi ando x 8"	top LSTA18* 2-LSTA18 ss engineering cottom (8d nails at 3" tion to sheathing bolts @ 32" O.C. (A307 or 1/2" x 6")	uss/rafter (max places are ir Note: hard uplift and hof devices 1235 2400 tt 3" O.C.), as lenalling, for all inter ' wedge a	per bearing point into pite height =12', not include a addition to required ware to be used must satisfication acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt must cover sill plate ong as sheathing covers ior load bearing walls that inchor with 2" washers	ting gable) toe-nails tisfy both hibination 1350 2200 anchors
Strap rafte Strap ridge Note: Four to resist Horizonta BEAM SE POSTS STUDS Wall Sheat plate, ot Use SP2 to nave uplift. Please	(4) 12d comm t both lateral le I Resistance up to 110 lbs up to 525 lbs up to 1090 lb up to Mailing A hing Nailing A herwise use S p and SP1 bot Interior anch	at each end with ch end with min up toenails (2 on each coads (wall to truss) (from truss loads) are use H2.5A as use H10 plus A2 as use H10 plus A2 are true with the coads a	min plift r h sid) and s) - N 23 23 23 24 28 28 28 28 28 28 28 28 28 28 28 28 28	top LSTA18* 2-LSTA18 ss engineering cottom (8d nails at 3" tion to sheathing bolts @ 32" O.C. 1 A307 or 1/2" x 6' strapped to double	uss/rafter (max places are ir Note: hard uplift and hof devices 1235 2400 ct.3" O.C.), as lonailing, for all inter 'wedge a top plate	per bearing point into plate height =12', not include a addition to required ware to be used must satisfication acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt must cover sill plate ong as sheathing covers ior load bearing walls the anchor with 2" washers (if applicable)	ting gable) toe-nails tisfy both hibination 1350 2200 anchors
Strap rafte Strap ridge Note: Four to resist Horizonta BEAM SE POSTS STUDS Wall Sheat plate, ot Jse SP2 to nave uplift. Please An equivale	to truss or beam at each (4) 12d comm to the lateral left left left left left left left lef	at each end with ch end with min up toenails (2 on each coads (wall to truss) (from truss loads) at use H2.5A to use H10 plus Additional at the coads at the coads (wall to truss) at the coads (wall to truss) (from truss loads) at use H10 plus Additional at the coads (wall to truss) (from truss loads) at the coads (wall to truss) at the coads (wall to truss) (from truss) at the coads (wall to truss) at the coads (wall t	min plift r h sid) and s) - N 23 r trus /alls /alls /ald or : factu	top LSTA18* 2-LSTA18 ss engineering bottom (8d nails at 3" tion to sheathing bottos (32" O.C. 1 A307 or 1/2" x 6" strapped to double	uss/rafter (max places are ir Note: hard uplift and hof devices 1235 2400 tt 3" O.C.), as lonailing, for all inter wedge are top plate uted for an	per bearing point into pite height =12', not include addition to required ware to be used must satisfication acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt must cover sill plate ong as sheathing covers ior load bearing walls the anchor with 2" washers (if applicable) y of the	ting gable) toe-nails tisfy both hibination 1350 2200 anchors
Strap rafte Strap ridge Note: Four to resist Horizonta BEAM SE POSTS STUDS Wall Sheat plate, ot Jse SP2 to nave uplift. Please An equivale	to truss or beam at each (4) 12d comm to the lateral left left left left left left left lef	at each end with ch end with min up toenails (2 on each coads (wall to truss) (from truss loads) are use H2.5A as use H10 plus A2 as use H10 plus A2 are true with the coads a	min plift r h sid) and s) - N 23 r trus /alls /alls /ald or : factu	top LSTA18* 2-LSTA18 ss engineering bottom (8d nails at 3" tion to sheathing bottos (32" O.C. 1 A307 or 1/2" x 6" strapped to double	uss/rafter (max places are ir Note: hard uplift and hof devices 1235 2400 tt 3" O.C.), as lonailing, for all inter wedge are top plate uted for an	per bearing point into pite height =12', not include addition to required ware to be used must satisfication acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt must cover sill plate ong as sheathing covers ior load bearing walls the anchor with 2" washers (if applicable) y of the	ting gable) toe-nails tisfy both hibination 1350 2200 anchors
Strap rafte Strap ridge Note: Four to resist Horizonta BEAM SE POSTS STUDS Vall Sheat plate, ot Jse SP2 to lave uplift. Please An equivale levices spe	to truss or beam at each (4) 12d comm to both lateral left (1) Resistance up to 110 lbs up to 525 lbs up to 1090 lb up to for 1090 lb up t	at each end with ch end with min up toenails (2 on each coads (wall to truss) (from truss loads) at use H2.5A to use H10 plus Additional at the coads at the coads (wall to truss) at the coads (wall to truss) (from truss loads) at use H10 plus Additional at the coads (wall to truss) (from truss loads) at the coads (wall to truss) at the coads (wall to truss) (from truss) at the coads (wall to truss) at the coads (wall t	min plift r h sid) and s) - N 23 23 23 24 24 24 25 25 26 27 27 28 28 28 28 28 28 28 28	top LSTA18* 2-LSTA18 se engineering bottom (8d nails at 3" tion to sheathing bottos @ 32" O.C. to strapped to double res can be substitus the required loads	uss/rafter (max places are ir Note: hard uplift and hof devices 1235 2400 tt 3" O.C.), as lonailing, for all inter wedge are top plate uted for an	per bearing point into pite height =12', not include addition to required ware to be used must satisfication acceptable bottom LTT19* ABU44 or ABU66 Must Use proper bolt must cover sill plate ong as sheathing covers ior load bearing walls the anchor with 2" washers (if applicable) y of the	ting gable) toe-nails tisfy both hibination 1350 2200 anchors

Number of Jack and Stud Requirements per Opening Width 2x4 or 2x6 SPF #1&2 Construction — max Wall Height=12' (based on 16" O.C. Stud Spacing)



Note — Based on uniform loads. Heavy concentrated loads require engineering review

Acceptable Framing Method for Balloon Framed Gable End—Wall with trusses

Balloon Frame with 2x4 SPF No.1&2 © 16" O.C. with the Following Conditions: Up to 12' — Block at 8'

Over 12' but Under 14' — 2x4 SYP #2 at 16" O.C. and Block at 4',8'&12'

Over 14' but Under 17' — Double 2x4 SYP #2 at 16" O.C. and block at 4',8',12'&16'

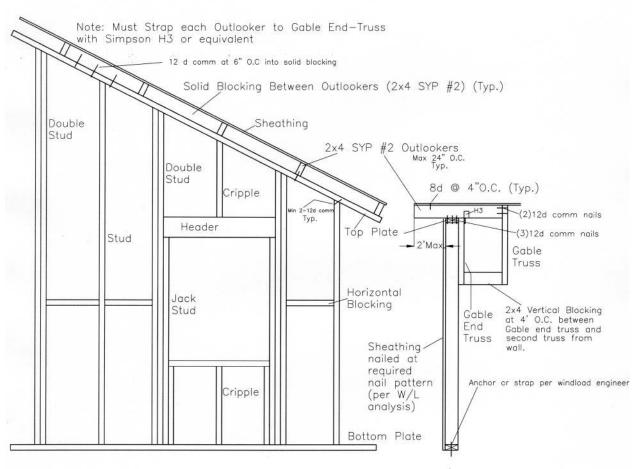
Over 17' but Under 20' — Triple 2x4 SYP #2 at 16" O.C. and block at 4',8',12'&16'

Over 20' but Under 23' — Quadruple 2x4 SYP #2 at 16" O.C.and block at 4',8',12',16'&20'

Over 23' — Must be Engineered

In all cases a minimum of a double full length stud is required at each side of openings such as doors and windows

Blocking must be parallel to top and bottom plates with a minimum of 2-12d comm nails



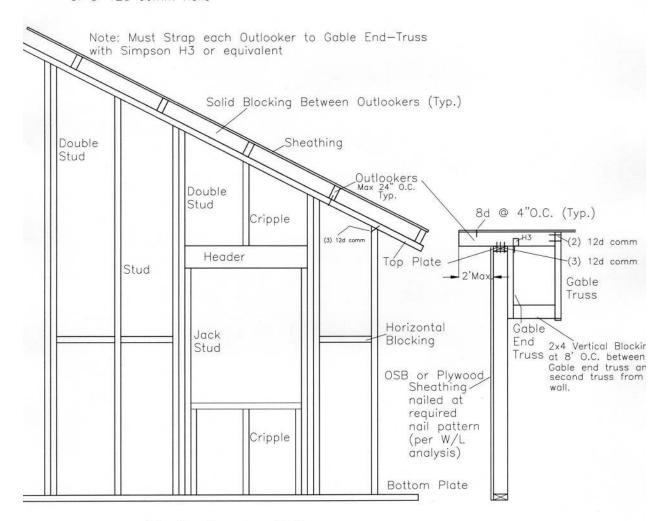
F. Sapienza, P.E.

Acceptable Framing Method for Balloon Framed Gable End-Wall

Balloon Frame with 2x6 SYP No.2 @ 16" O.C. with the Following Conditions: Up to 18' — Block at 8' and 16'
Over 18' but Under 21' — Double stud and block at 8' & 16'
Over 21' but Under 24' — Triple SYP #2 and block at 4',8',12' & 16'
Over 24' — Must be Engineered

In all cases a minimum of a double full length stud is required at each side of openings such as doors and windows

Blocking must be parallel to top and bottom plates with a minimum of 3-12d comm nails



F. Sapienza, P.E.

Gable Endwall Framing with Gable End-Truss

