

General Notes

GN. GENERAL

GN.1 THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE A PORTION OF THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR AND SUBCONTRACTORS SHALL REFERENCE AND COORDINATE WITH ALL OTHER DISCIPLINES' DRAWINGS. ANY DISCREPANCIES OR OMISSIONS SHALL BE REPORTED TO THE STRUCTURAL ENGINEER AND ARCHITECT.

GN.2 DESIGN CRITERIA:

A. CODES AND SPECIFICATIONS:

- 1. GENERAL BUILDING CODE: INTERNATIONAL BUILDING CODE, 2015.
2. DESIGN LOAD CRITERIA: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7
3. CONCRETE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AMERICAN CONCRETE INSTITUTE, ACI 318.
4. STRUCTURAL STEEL: SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AISC 360.
5. STEEL JOISTS: STANDARD SPECIFICATIONS, LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS, STEEL JOIST INSTITUTE, SJI.
6. STEEL DECK: STEEL DECK INSTITUTE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS AND CELLULAR METAL FLOOR DECK WITH ELECTRICAL DISTRIBUTION.
7. COLD-FORMED METAL FRAMING: NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, AMERICAN IRON AND STEEL INSTITUTE.
8. MASONRY: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, TMS 402/ACI 530/ASCE 5, SPECIFICATION FOR MASONRY STRUCTURES, TMS 602/ACI 530.1/ASCE 6.
9. TORNADO STORM SHELTER SAFE SPACE: ICC/NSSA STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS, ICC 500-2014.

B. DESIGN LOADS (PSF):

- 1. DEAD LOADS: ANY CHANGES IN CONSTRUCTION MATERIALS FROM THOSE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS SHALL BE REPORTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF LOAD-CARRYING CAPACITY OF THE STRUCTURE.
2. LIVE LOADS: ROOF (REDUCIBLE)-----20
LIVE LOAD REDUCTIONS HAVE BEEN APPLIED IN ACCORDANCE WITH THE BUILDING CODE, UNLESS NOTED.
3. RAIN LOADS: 100 YEAR, 1-HOUR RAINFALL-----4"
4. SNOW LOAD: GROUND SNOW LOAD (Pg)-----5.0
5. WIND LOADS: ULTIMATE DESIGN WIND SPEED, Vult-----120 MPH (3 - SECOND GUST)
NOMINAL DESIGN WIND SPEED, Vasd-----94 MPH (3 - SECOND GUST)
RISK CATEGORY-----III
WIND EXPOSURE CATEGORY-----B
INTERNAL PRESSURE COEFFICIENT-----±0.18
WALL COMPONENT AND CLADDING WIND PRESSURE-SEE DRAWINGS

6. SEISMIC LOADS: SEISMIC IMPORTANCE FACTOR (Ie)-----1.25

MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss-----0.137 S1-----0.076
SITE CLASS-----D
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS: Sds-----0.46 Sd1-----0.11

SEISMIC DESIGN CATEGORY-----B BASIC SEISMIC-FORCE-RESISTING SYSTEM: ORDINARY STEEL CONCENTRICALLY BRACED FRAMES

SEISMIC RESPONSE COEFFICIENT (Cs)-----0.091 RESPONSE MODIFICATION FACTOR(R)-----2

ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE METHOD REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR SEISMIC SUPPORT AND ATTACHMENT REQUIREMENTS FOR UTILITIES.

C. TORNADO STORM COMMUNITY SHELTER SAFE SPACE DESIGN LOADS: (SEE DRAWINGS FOR EXTENT OF SIZE)

- 1. SHELTER ROOF LIVE LOAD (TYPICAL):-----135 PSF SHELTER ROOF RAIN LOAD (TYPICAL):-----10", 52 PSF BASIC WIND SPEED (3 - SECOND GUST):-----200 MPH WIND IMPORTANCE FACTOR (Iw)-----1.0 WIND EXPOSURE CATEGORY-----C INTERNAL PRESSURE COEFFICIENT-----±0.65 Kzt-----1.0 Kd-----1.0 MISSILE CRITERIA FOR SHELTER: 90 MPH FOR 151b SAWN LUMBER 2X4 (VERTICAL SURFACES) 60 MPH FOR 151b SAWN LUMBER 2X4 (HORIZONTAL SURFACES)

- 2. THE BUILDING IS NOT LOCATED IN AN AREA SUSCEPTIBLE TO FLOODING.
3. ROOF/FLOOR UPLIFT AT TORNADO SHELTER - SEE COMPONENTS AND CLADDING WIND PRESSURES.
4. FOR TESTING, INSPECTIONS, OBSERVATIONS AND REPORTS REQUIRED FOR THE STORM SHELTERS LATERAL SYSTEM, REFER TO THE "STORM SHELTER QUALITY ASSURANCE PLAN".

GN.3 CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO FABRICATION/CONSTRUCTION. NOTIFY STRUCTURAL ENGINEER AND ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION/CONSTRUCTION.

GN.4 SPECIAL INSPECTIONS/STRUCTURAL ENGINEER'S SITE VISITS:

- A. SPECIAL INSPECTIONS ARE REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE. REFER TO DRAWINGS.
B. SITE VISITS BY STRUCTURAL ENGINEER:

1. STRUCTURAL OBSERVATION IS VISUAL OBSERVATION OF THE IN-PLACE STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT THE TIME OF THE OBSERVATION.

2. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER AND ARCHITECT, PER THE SCHEDULE STATED BELOW, WHEN SUCH ITEMS HAVE PROGRESSED TO THE POINT WHERE THEY WILL BE IN PLACE AND READY FOR REVIEW. FAILURE TO NOTIFY MAY REQUIRE REMOVAL OF COMPLETED CONSTRUCTION.

Table with 2 columns: NOTIFY PRIOR TO THE FOLLOWING SCHEDULED TASKS, REQUIRED DAYS NOTIFICATION

FIRST FOUNDATION POUR-----2 DAYS
GROUTING MASONRY WALL CONSTRUCTION-----2 DAYS
CONCRETE ROOF POUR AT STORM SHELTERS-----2 DAYS
COVERING METAL ROOF DECK-----2 DAYS

C. SITE VISITS BY THE STRUCTURAL ENGINEER'S OFFICE DO NOT REPLACE INSPECTIONS AND TESTING BY THE TESTING AGENCY OR SPECIAL INSPECTOR.

GN.5 SUBMITTALS:

A. REVIEW OF SHOP DRAWINGS AND OTHER SUBMITTALS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTING TO THE STRUCTURAL ENGINEER. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. ALL SHOP DRAWINGS MUST BE REVIEWED AND "APPROVED" BY THE CONTRACTOR PRIOR TO SUBMITTAL.

B. ELECTRONIC SHOP DRAWING SUBMITTALS: SUBMIT ALL ELECTRONIC SHOP DRAWINGS IN .PDF FORMAT. REVIEWED SHOP DRAWINGS WILL BE RETURNED IN .PDF FORMAT. ALL PRINTS REQUIRED BY THE CONTRACTOR ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE AFTER APPROVED SHOP DRAWINGS ARE RETURNED.

C. RESUBMITTED SHOP DRAWINGS: RESUBMITTED SHOP DRAWINGS SHALL HAVE ALL CHANGES SINCE THE PREVIOUS SUBMISSION IDENTIFIED BY CLOUDING OR OTHER CLEAR COMMUNICATION. RE-REVIEWED SHOP DRAWINGS WILL ONLY BE REVIEWED FOR IDENTIFIED CHANGES.

D. SHOP DRAWINGS: THE CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS. ITEMS MARKED (\*) SHALL HAVE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. ITEM MARKED (#) SHALL BE SUBMITTED FOR STRUCTURAL ENGINEER'S RECORD ONLY.

- 1. CONCRETE MIX DESIGNS
2. CONCRETE REINFORCING
3. STRUCTURAL STEEL (\*)
4. STEEL JOIST
5. STEEL DECK
6. COLD-FORMED METAL FRAMING (\*)
7. MASONRY MORTAR MIX DESIGNS
8. MASONRY GROUT MIX DESIGNS
9. MASONRY REINFORCING

E. DESIGN CALCULATIONS: THE CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER'S RECORD, DESIGN CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED FOR THE FOLLOWING ITEMS:

- 1. STRUCTURAL STEEL CONNECTIONS
2. STEEL JOIST AND STEEL JOIST SECTION OF GENERAL NOTES)
3. COLD-FORMED METAL FRAMING

GN.6 ALL DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS, UNLESS NOTED.

GN.7 THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.

GN.8 CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS/ROOFS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT LOADS DO NOT EXCEED THE DESIGN LIVE LOAD.

FD. FOUNDATION

FD.1 GEOTECHNICAL REPORT: FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY TTL, INC., TITLED "GEOTECHNICAL REPORT NEW LIBRARY CITY OF OPELIKA, OPELIKA, ALABAMA, PROJECT NO.000190203159.00 DATED MARCH 10, 2020". THE CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND FOLLOW ALL REQUIREMENTS AND RECOMMENDATIONS.

FD.2 MAXIMUM ALLOWABLE BEARING PRESSURE PER GEOTECHNICAL REPORT: 2000 PSF.

FD.3 ALL FOUNDATION BEARING SURFACES SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE TO ENSURE COMPLIANCE WITH PRESSURES NOTED. THE FINAL BEARING ELEVATIONS MAY VARY AS REQUIRED TO PROVIDE PROPER BEARING CAPACITY IN AN APPROVED BEARING STRATUM AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

FD.4 FOOTINGS SHALL BE NEATLY EXCAVATED WHERE POSSIBLE WITH SIDES AND TOP EDGES FREE OF LOOSE OR WET MATERIALS. WHERE NEAT EXCAVATION IS NOT POSSIBLE, FOOTING EXCAVATION SHALL BE FILLED WITH CONCRETE TO THE TOP OF FOOTING. THE BOTTOM EXCAVATION SHALL BE CLEAN AND DRY WITH ALL LOOSE MATERIAL REMOVED FOR AN ESSENTIALLY FLAT BEARING SURFACE. WHERE SOFT OR UNSUITABLE BEARING SURFACES ARE ENCOUNTERED, THE AREA SHALL BE UNDERCUT AS REQUIRED AND REPLACED WITH LEAN CONCRETE OR COMPACTED DENSE GRADED CRUSHED STONE AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

FD.5 COMPACTED FILL SHALL MEET THE REQUIREMENTS NOTED IN THE GEOTECHNICAL REPORT. EXCAVATED MATERIAL MAY BE USED AS BACKFILL MATERIAL WITH WRITTEN APPROVAL FROM THE GEOTECHNICAL ENGINEER STATING THAT SUCH MATERIAL IS SUITABLE AS BACKFILL AND INSTRUCTIONS ARE GIVEN FOR PROPER MOISTURE CONTENT AND COMPACTION.

FD.6 BACKFILL FOR FOUNDATION AND RETAINING WALLS SHALL BE A FREE DRAINING GRANULAR MATERIAL. BACKFILL SHALL BE COMPACTED SUFFICIENTLY TO PREVENT SUBSIDENCE OF SURFACE ADJACENT TO WALL. THE GRANULAR MATERIAL SHALL BE PLACED IN A 45 DEGREE WEDGE EXTENDING FROM THE BASE OF WALL.

FD.7 FOUNDATION AND RETAINING WALLS SHALL NOT BE BACKFILLED UNTIL CONCRETE HAS ATTAINED THE REQUIRED 28 DAY COMPRESSIVE STRENGTH.

FD.8 WHERE FOUNDATION WALLS HAVE EARTH PLACED ON EACH SIDE, PLACE FILL TO KEEP A COMMON ELEVATION ON EACH SIDE OF THE WALL.

FD.9 PROVIDE 4" OF COMPACTED GRANULAR FILL BENEATH ALL SLABS ON GRADE. PROVIDE 15 MIL VAPOR RETARDER BETWEEN BOTTOM OF SLAB AND TOP OF GRANULAR FILL.

FD.10 FOUNDATIONS SHALL BE CENTERED ABOUT COLUMN LINES, UNLESS NOTED.

CN. CONCRETE

CN.1 CONCRETING OPERATIONS SHALL COMPLY WITH ACI STANDARDS.

CN.2 MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS (PSI), TYPE OF CONCRETE, MAXIMUM W/C (WATER/CEMENTITIOUS MATERIALS RATIO), AIR CONTENT, SLUMP AND CONCRETE USE:

Table with 5 columns: STRENGTH, TYPE, W/C, AIR, SLUMP, USE

\*\*\* DO NOT USE AIR ENTRAINING ADMIXTURES IN INTERIOR CONCRETE SLABS TO RECEIVE A HARD TROWEL FINISH.

CN.3 REINFORCING BARS: ASTM A615 GRADE 60.

CN.4 WELDED WIRE REINFORCEMENT (WWR): ASTM A185. MINIMUM WWR AND EMBEDMENT TO BE THE GREATER OF ONE CROSS WIRE SPACING PLUS 2" OR 12".

CN.5 REINFORCING STEEL SHOWN IN SECTIONS AND DETAILS ARE SCHEMATIC INDICATION THAT REINFORCING EXISTS. SEE SCHEDULES, SECTION NOTES AND GENERAL NOTES FOR ACTUAL REINFORCING REQUIREMENTS.

CN.6 REINFORCING BAR PLACING ACCESSORIES IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE WHERE CONCRETE IS EXPOSED IN FINISHED BUILDING, PROVIDE ACCESSORIES WITH RUST PROOF LEGS.

CN.7 DETAIL REINFORCEMENT IN ACCORDANCE WITH ACI 315. REINFORCEMENT SHALL NOT BE WELDED UNLESS NOTED OR APPROVED BY THE STRUCTURAL ENGINEER.

CN.8 LAP SPLICES SHALL BE CLASS "B" TENSION LAP SPLICE, UNLESS NOTED.

CN.9 ALL REINFORCING MARKED "CONTINUOUS" SHALL BE SPLICED WITH CLASS "B" TENSION LAP SPLICE, UNLESS NOTED.

CN.10 CONCRETE COVERAGE OF REINFORCEMENT, UNLESS NOTED: FOOTINGS-----2" TOP & 3" BOTTOM & SIDES

CN.11 EARTH SUPPORTED SLABS: 4" THICK, REINFORCED WITH 6X6 W2.9/W2.9 WWR AT MID-DEPTH OF SLAB, UNLESS NOTED.

SS. STRUCTURAL STEEL

SS.1 FABRICATE AND ERECT ALL STRUCTURAL STEEL IN ACCORDANCE WITH AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".

SS.2 LATERAL FORCE RESISTING SYSTEM AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED AS FOLLOWS:
A. ROOF DIAPHRAGM: STEEL ROOF DECKING
B. LATERAL FORCE RESISTING SYSTEM: STEEL BRACED FRAMES

SS.3 STRUCTURAL STEEL AND STRUCTURAL STEEL CONNECTIONS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE:

Table with 2 columns: W AND WT SHAPES, S, M, AND HP SHAPES AND CHANNELS, STIFFENER PLATES, BASE PLATES, CAP PLATES, CONNECTION PLATES, AND ANGLES

STEEL PIPE ASTM A53, TYPE E OR S, GRADE B

HOLLOW STRUCTURAL SECTIONS ASTM A500, GRADE C

WELDED CONNECTIONS E70XX ELECTRODES, MINIMUM SIZE FILLET WELD 3/16"

HEADED ANCHOR RODS ASTM F1554 GRADE 36 ANCHOR AND HEAVY HEX NUT, UNLESS INDICATED.

SHEAR CONNECTORS ASTM A108, GRADE 1015 THROUGH 1020, HEADED-STUD TYPE, COLD FINISHED CARBON STEEL; AWS D1.1, TYPE B.

BOLTS ASTM A325 OR A490

NUTS ASTM A563

WASHERS ASTM F436

SS.4 WHERE NO CAMBER IS INDICATED, BEAMS SHOULD BE ERECTED WITH NATURAL CAMBER ORIENTED UPWARD.

SS.5 BEAMS SHALL BE EQUALLY SPACED IN BAYS, UNLESS NOTED.

SS.6 HSS MEMBERS SHALL HAVE A 1/4" CLOSURE PLATE.

SS.7 FOUR ANCHOR RODS MINIMUM FOR BASE PLATES UNDER COLUMNS.

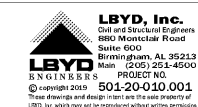
SS.8 GROUT UNDER BEARING PLATES SHALL BE NON-SHRINK, NON-METALLIC TYPE. GROUT SHALL HAVE A SPECIFIED DESIGN COMPRESSIVE STRENGTH TWO TIMES THAT OF THE SUPPORTING CONCRETE.

SS.9 STRUCTURAL STEEL MEMBERS SHALL NOT BE CUT, SPLICED, OR MODIFIED IN THE FIELD UNLESS NOTED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.

SS.10 STRUCTURAL STEEL NOT EXPOSED TO VIEW SHALL BE PRIMED WITH MANUFACTURER'S STANDARD SHOP PRIMER. STRUCTURAL STEEL EXPOSED TO WEATHER IN ITS FINAL POSITION SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. FOR STRUCTURAL STEEL EXPOSED TO VIEW, REFER TO PROJECT SPECIFICATIONS FOR FINISHED COATING SYSTEM.

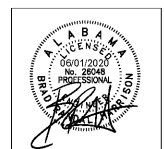
SS.11 SHOP PRIMER OR OTHER COATINGS SHALL NOT BE APPLIED TO THE FACE OF STRUCTURAL STEEL FRAMING SUBJECT TO HEADED STUD WELDING.

SS.12 DRAIN HOLES SHALL BE PROVIDED IN ALL STEEL AS REQUIRED TO PREVENT WATER ACCUMULATION. HOLES THROUGH STRUCTURAL STEEL MEMBERS SHALL BE GROUND SMOOTH AND NOT EXCEEDING 1/2" DIAMETER. DRAIN HOLES SHALL BE LEFT CLEAN AND UNOBSTRUCTED.



LATHAN ASSOCIATES ARCHITECTS, P.C. 300 CHASE PARK SOUTH SUITE 200, MOBILE, ALABAMA 36684 PH: 251-988-9112 FAX: 251-988-9196

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SHEET TITLE: GENERAL NOTES

Table with 2 columns: #, Description, Date

PROJ. MGR.: AC DRAWN: MBJ DATE: JUNE 1, 2020 CHECKED BY: BRH REVISIONS

JOB NO. 19-32 SHEET NO. S0.1 2 OF 18