

GENERAL NOTES

- 1. These notes complement the drawings and should not be considered inclusive of all items.
2. Where a detail is shown for one condition, it shall apply for all like or similar conditions, even though not specifically shown on the drawings.
3. The contractor is responsible for means, methods, and sequences of construction to meet the requirements of the construction documents.
4. It is the contractor's responsibility to be in compliance with all applicable osha regulations.
5. Contractor is responsible for all temporary shoring required during construction.
6. All walls relying on top slab for support shall be braced until the slab has cured for a minimum of three days.
7. Contractor shall verify all dimensions and conditions before executing work.
8. Shop drawings shall be independently developed. Reproduction of structural design drawings for use as shop drawings is prohibited.

SUBMITTALS

- 1. All submittals shall be submitted to the architect for approval prior to work.
2. The contractor shall review all shop drawings prior to submittal to the architect and/or engineer for review of general compliance, dimensions, and quantity.
3. Contractor is not relieved of any requirements of the contract documents by virtue of the structural engineer's review of shop drawings, product data, etc., unless the contractor has clearly and explicitly informed the structural engineer in writing of any deviations or substitutions at time of submission, and the structural engineer has given written approval for the specific deviations or substitutions.
4. The review of shop drawings by the structural engineer is to make sure the main structural intent is correct, and review will exclude dimensions and quantities.
5. Each submittal will be reviewed and returned within 10 business days. Expedited review may be requested but may not be possible.
6. Submit concrete mix designs for approval prior to pouring concrete. Refer to concrete notes, plans, and details for mix design requirements.
7. Submit rebar drawings for approval prior to rebar placement. Drawing shall include the following at a minimum: rebar size, quantity, steel grade, bend schedule & diagram, lap splices, layout drawing for placement, and details as required for placement.
8. Submit steel decking drawings showing layout, decking type, attachment details, and all other information required to convey the design intent to the contractor for use as erection drawings.
9. Submit steel joist drawings showing layout, joist designation, type, number, and spacing. Also, include anchorage details, bracing, bridging, details, and all other information required to convey the design intent to the contractor for use as erection drawings.
10. Submit structural steel shop drawings showing fabrication of structural-steel components. Drawings should include details and an erection plan.

APPLICABLE CODES FOR DESIGN:

- 1. International Building Code: 2018 IBC with Ga. Amendments (2020)

CLASSIFICATION OF BUILDING FOR RISK:

- 1. Risk category: II
2. Seismic factor, Ie = 1.0
3. Snow factor, Is = 1.0

DESIGN LOADS:

- 1. DEAD LOAD
A. Roof: 15 psf
2. ROOF LIVE LOAD: 20 psf & 300 lbs. (not concurrent)
A. Live loads have been reduced as allowed the 2018 IBC.
3. GROUND SNOW LOAD, P_g, 5 psf
A. Flat-Roof Snow Load, P_f: 5 psf
B. Exposure Factor, C_e: 0.9
C. Thermal Factor, C_t: 1.0
4. WIND LOADS PER IBC 2018, ASCE 7-16
A. Basic Wind Speed (3 second gust)
a. Vult: 105 MPH
b. Vasd: 82 MPH
B. Wind Exposure: B
C. Internal Pressure Coefficients: +0.18, -0.18
D. Refer to drawing on S001 for velocity pressures for components & cladding design.
5. SEISMIC DESIGN DATA
A. S_s: 0.316
B. S_1: 0.099
C. Sps: 0.326
D. Spv: 0.159
E. Seismic Site Class: D
F. Seismic Design Category: C
G. Seismic Base Shear
a. Store/ Market Building: 15 kips
b. Retail/ Office Suite Building: 15 kips
H. Seismic Response Coefficients, C_d: 0.093
I. Seismic Forces Determined By: Equivalent Lateral Force Procedure
J. Seismic Resisting System (Based on ASCE 7-16 Table 12.2-1)
a. Building: A.8 - Intermediate reinforced masonry shear walls (R=3.5, Cd=2.25)

- 1. All foundations to be supported on suitable bearing material as determined by the owner's on-site geotechnical representative. Notify the architect / engineer immediately if suitable bearing material cannot be obtained, prior to installing foundations.
2. Sub-grade shall be compacted to 98% of standard proctor (ASTM 695.) unless a site-specific geotechnical report recommends otherwise.
3. If after excavation, the condition of the soil indicates a safe bearing capacity of less than 2000 psf, the architect / engineer shall be notified prior to placement of any foundation.
4. Coordinate footing elevations with below slab plumbing, and lower footing elevations as required to avoid interference. All top of footings required to be lower further than 2"-8" below finished floor elevation shall be coordinated with the structural engineer.
5. Plumbing lines that run parallel with wall footings shall be at least 2'-0" from the edge of the footing.
6. Plumbing lines that cross wall footings shall either cross below the footing with at least 12" of compacted fill between the top of the pipe and the bottom of the footing, or cross above the footing and through the wall. All pipes that cross footings, either above or below, shall be sleeved. Coordinate sleeve requirements with plumbing plans.
7. Piping (including conduit) shall not be embedded in or pass through foundations without written consent of the structural engineer.

FOUNDATIONS:

- 1. All foundations to be supported on suitable bearing material as determined by the owner's on-site geotechnical representative. Notify the architect / engineer immediately if suitable bearing material cannot be obtained, prior to installing foundations.
2. Sub-grade shall be compacted to 98% of standard proctor (ASTM 695.) unless a site-specific geotechnical report recommends otherwise.
3. If after excavation, the condition of the soil indicates a safe bearing capacity of less than 2000 psf, the architect / engineer shall be notified prior to placement of any foundation.
4. Coordinate footing elevations with below slab plumbing, and lower footing elevations as required to avoid interference. All top of footings required to be lower further than 2"-8" below finished floor elevation shall be coordinated with the structural engineer.
5. Plumbing lines that run parallel with wall footings shall be at least 2'-0" from the edge of the footing.
6. Plumbing lines that cross wall footings shall either cross below the footing with at least 12" of compacted fill between the top of the pipe and the bottom of the footing, or cross above the footing and through the wall. All pipes that cross footings, either above or below, shall be sleeved. Coordinate sleeve requirements with plumbing plans.
7. Piping (including conduit) shall not be embedded in or pass through foundations without written consent of the structural engineer.

CONCRETE & REINFORCING:

- 1. Construction of control joints shall be provided in floor slabs on grade such that the maximum span between joints is 16.0 ft., or as shown on the drawings.
2. Interior slabs-on-grade shall have a 10-mil polyethylene vapor retarder placed between the bottom of slab and sub-base. The vapor retarder joints shall be lapped at least 6 inches and taped.
3. Provide #4 bar x 4'-0" long at the mid-depth of slab at all re-entrant corners and at all discontinuous control joints in a slab-on-grade.
4. All bar splices shall be at a minimum the following lengths (unless noted otherwise on the drawings): 36" for #6 bars, 30" for #8 bars, and 24" for #4 bars. Welded lap splices are not allowed. Mechanical couplers can be used instead of lap splices; mechanical coupler product data must be submitted to SEOR for approval.
5. Corner bars are to be provided at all corners and intersections of reinforcement.
6. Extend wall footing reinforcing bars continuously through column footings.
7. Isolate columns from the slab with a diamond or circular box-out. The size should be adequate to allow for the column base plate and leveling. Isolation pockets shall be cleaned of debris and base plates shall be packed with a non-shrink grout (4000 psi minimum) prior to filling with concrete.
8. All concrete shall meet the following requirements:
A. General concrete requirements:
1. Portland cement: ASTM C 150, Type I
2. Fly ash, if used: ASTM C 618, class F or C, maximum 25%, by weight, of total cementitious material.
3. Ground granulated blast-furnace slag (GGBS), if used: ASTM C 989, grade 100 or 120, maximum 25%, by weight, of total cementitious material.
4. Combined fly ash and GGBS shall not exceed 33%, by weight, of total cementitious material.
5. Do not use admixtures containing calcium chloride.
6. Air-entraining admixture: ASTM C 260 (as needed, follow manufacturing dosage)
7. Water-reducing admixture: ASTM C 494/C 494M, type A (as needed, follow manufacturing dosage.)
8. Normal weight aggregates shall meet ASTM C 33 with a maximum size of 1" unless noted otherwise on plans
B. Slab-on-grade & elevated slabs concrete & reinforcing requirements:
a. Minimum 28-day compressive strength: 3000 psi
b. Welded wire reinforcement shall meet ASTM A 1064
c. Do not air-entrain slab concrete
d. Entrapped air content not to exceed 3%
e. Slump limit: 5 inches
f. Maximum water / cement ratio: 0.50
C. Foundation concrete & reinforcing requirements:
a. Minimum 28-day compressive strength: 3000 psi
b. Reinforcing bars shall meet ASTM A615, grade 60, deformed
c. Air content at point of placement of 3 - 6%
d. Slump limit: 5 inches
e. Maximum water / cement ratio: 0.55

CONCRETE MASONRY WALLS:

- 1. The design compressive strength, f_m, is 1500 psi.
2. Grout for masonry fill shall have a minimum compressive strength of 2000 psi @ 28 days. Comply with ASTM c476-02, with proportions by volume of 1-part portland cement to 2 1/4 to 3 parts fine aggregate. Grout slump should be 8 to 11 inches.
3. All masonry walls shall have horizontal joint reinforcement at 16" o.c. joint reinforcement shall be galvanized, w/1.7 (9 ga.), and ladder or truss-type. Brick shall be anchored to cmu backing with a 3-wire type joint reinforcement or prille hook & eye type joint reinforcing system (wire-bond series 900 truss levels, or equal.)
4. All mortar for concrete masonry units shall be Type S.
5. Welding of rebar is prohibited unless otherwise approved by the EOR. In such cases, ASTM A706 grade 60 must be used.
6. Masonry preparation, construction, and protection in hot or cold weather (greater than 90 degrees Fahrenheit or less than 40 degrees Fahrenheit) shall conform to the requirements of ACI 530.1 section 1.0.
7. Contractor is responsible for laterally bracing walls against wind during construction until the wall is braced at the top by the permanent structure (i.e. Roof or floor structure.)
8. Reinforce walls as shown on plans. Reinforced walls must be reinforced as shown in the "Typical Reinforced Masonry Wall Detail." ASTM A615 grade 60 rebar shall be used.
9. Unless noted otherwise, all bar splices shall be as noted in the "Typical Reinforced Masonry Wall Detail." welded lap splices are not allowed.
10. Vertical control joints in cmu walls shall not be spaced greater than 25'-0" o.c. unless noted otherwise on the plans. Vertical control joints shall be located from a corner 1/2 the distance of the adjacent wall's control joint distance from the corner.
11. Conduit and pipes are allowed in ungrouted cmu cells. The diameter shall fit within the unit cell with 1/4" clear from inside cell of cmu.

STRUCTURAL STEEL:

- 1. Structural steel shall be fabricated by a qualified fabricator who participates in the AISC certification program and is designated as an AISC certified plant, category (BU) at the time of bid.
2. Structural steel shall be erected by a qualified installer who participates in the AISC certification program and is designated as an AISC "certified erector, category (CSEA) at the time of bid.
3. Comply with applicable provisions of AISC's "Code of Standard Practice For Steel Buildings And Bridges."
4. All wide flange shapes shall be ASTM A992 (Fy=50 ksi.)
5. All HSS tubes shall be ASTM A500, Gr. C (Fy=50 ksi for square & rectangular, and Fy=46 ksi for round.)
6. All angles, channels, plates, and bars shall be ASTM A36 (Fy=36 ksi.)
7. All steel shall receive one shop coat of primer, except do not prime top flange of composite beams.
8. RCSC's Specification for Structural Joints Using High-Strength Bolts shall be followed for the design, detailing, fabrication, and erection of structural steel bolted connections.
9. All bolted connections shall be made using 3/4" dia. A325 bolts unless connection design or plans require larger bolts.
10. Typical bolted connections shall be installed to the "snug-tightened" condition. The use of ASTM F 1852, type 1 tension-control bolts are an acceptable substitute for snug-tightened bolts.
11. Bolted connections are preferred for field erection when possible.
12. Bolted connections shall be a minimum as shown in the typical steel connection details on the plans.
13. Bolted moment connections, and other connections indicated on the plans, shall be made using the "slip-critical" condition. Load-resisting washers or tension-control bolts shall be used for slip-critical connections.
14. All welds are to be made with e70xx electrodes unless noted otherwise on plans.
15. Certified welders must be used for all shop and field welding, and they must be certified for each type of weld they perform. Welder certificates shall be on site.
16. All steel below grade in contact with soil shall be coated with a bituminous paint or provide 3" of concrete cover.

METAL DECK:

- 1. Roof metal deck shall be 1-1/2", 22 ga., wide rib with Fy = 33 ksi (unless noted otherwise on the structural drawings.) See plans for attachment requirements. Roof metal deck shall receive one shop coat of primer on the top & bottom surfaces.
2. Non-composite form metal deck shall be 0.6c, 22 ga. Form deck. (Unless noted otherwise on the structural drawings.) See plans for attachment requirements. Form deck shall be 98% galvanized.
3. Attachments to main supporting members and perimeter connections shall be made using 5/8" puddle welds at the pattern indicated on the plans.
4. Sidelap attachments shall be made using #10 self-drilling screws.
5. At the roof deck attachment, in lieu of the 5/8" puddle welds, the Hilti deck fastening system can be used with the X-emp-19-15 pin. One additional sidelap per span must be install when the Hilti fastening system is used. See plans for the number of sidelaps required when the decking is attached using the 5/8" puddle weld.

Bar joists:

- 1. Joist manufacturer is to check the adequacy of the joist design and bracing system and modify system as required for a net uplift based on the wind pressure plan on drawing S001. The wind loads provided on the wind pressure plan are ultimate winds and shall be multiplied by 0.6 for the net uplift load combination, and they shall be combined with a dead load of 6 psf (10.6d = 6 psf, net uplift shall be = 0.6D + 0.1W).
2. Joist detailing and erection shall meet all applicable osha regulations.
3. In steel framing, where bar joists are used and columns are not framed in two directions, the bar joist at or closest to the column shall be bolted to provide lateral stability during erection. This same joist at the column shall utilize a stabilizer plate located at the bottom chord (do not weld bottom chord to stabilizer plate); the stabilizer plate shall have a guying hole to assist in lateral stability of the column during erection.
4. Where point loads are applied to a panel point, they shall be applied to either top or bottom chord, and are not within 6 inches of a panel point, a L2x2x1/8 angle (strut) shall be welded between the point load and opposite chord, and a panel point transfer the load.
5. Weight of roof top equipment has been taken into account in the sizing of the joists. Joist manufacturer shall verify the weight and location shown of all roof top equipment with the contractor and verify the location of the roof top equipment.
6. Bracing shall be provided in accordance with the AISC "Specifications," and additional bracing shall be furnished as required for erection stability.
7. Bracing shall be provided per SJI's "Specifications," and additional bracing shall be furnished as required for erection stability.

Cold-formed steel stud framing:

- 1. All cold-formed steel stud framing shall be manufactured by a current member of the steel stud manufacturer's association (SSMA.)
2. All structural members shall have a minimum thickness of 43 mil (18 ga) and a minimum flange width of 1-5/8", unless otherwise noted on the plans.
3. Top and bottom tracks shall be at least the same gauge as the attached studs.
4. All stud walls, if not sheathed on both sides, shall have bridging at a minimum of 48" on-center.
5. All studs shall be full length. Splices of studs are not permitted unless shown on the structural drawings.
6. Interior stud walls shall be laterally braced to the structure at a minimum of 48" on-center. A deflection track must be used at the top if attached directly to the structure.
7. Exterior walls shall be attached to the structure as detailed on the structural plans.

CONSTRUCTION TESTING:

- 1. It is the responsibility of the contractor to schedule the required testing with a third-party testing agency.
2. Concrete:
1. Test composite samples of fresh concrete obtained according to ASTM C 172.
3. Testing frequency, one composite sample for each 100 cu yd or fraction thereof of each concrete mixture placed each day.
4. Slump: ASTM C143, one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
5. Air content: ASTM C231 pressure method, for normal-weight concrete; ASTM C173 volumetric method, for lightweight concrete. One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
6. Concrete temperature: ASTM C1064; one test hourly when air temperature is 40 degrees f and below or 80 degrees f and above, and one test for each composite sample.
7. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
8. Compressive-strength tests: ASTM C39; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from the same composite sample and tested at age indicated.
9. Strength of each concrete mixture will be satisfactory if every average of and three consecutive compressive-strength tests equals or exceeds specified compressive-strength and no compressive-strength test value falls below specified compressive-strength by more than 500 psi.
10. Test results shall be reported in writing to the eor, concrete manufacturer, and contractor within 48 hours of testing.
11. Refer to the schedule of special inspections for additional requirements.
12. Soils:
A. Compaction tests for soils shall be according to ASTM D1556, ASTM D2922, and ASTM D6938, as applicable.
1. Paved and building slab areas: at subgrade and at each compacted subgrade and backfill layer, one test for every 2000 sq. ft. But in no case shall be fewer than three tests.
2. Foundation wall backfill: at each compacted backfill layer, at least one test for every 1000 ft or less of wall length but no less than two tests.
3. Refer to the schedule of special inspections for additional requirements.
4. For areas not meeting project completion and backfill requirements, follow the third-party testing agency's recommendations for meeting project requirements.

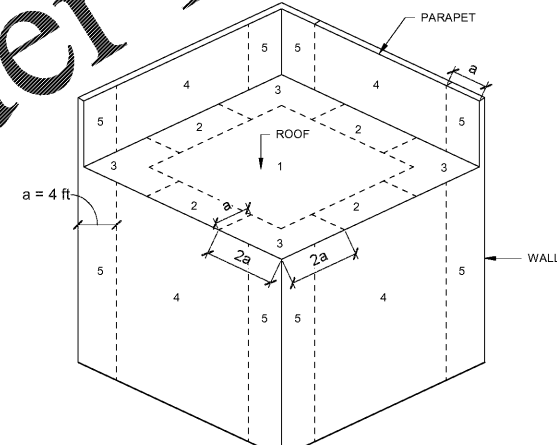
SPECIAL INSPECTIONS:

- 1. Special inspection reports and a final report in accordance with Section 1704.2.4 shall be submitted to the building official prior to the time that phase of the work is approved for occupancy. Special inspection reports and a final report in accordance with Section 1704.2.4 shall be submitted to the building official prior to the time that phase of the work is approved for occupancy.
2. Refer to separate document for the statement of special inspections and the schedule of special inspections.

ABBREVIATIONS

Table with 2 columns: Abbreviation and Full Name. Includes terms like SLOPED, ADJUSTABLE, ABOVE FINISHED FLOOR, ALTERNATE, ARCHITECT, BOTTOM CHORD, BRACED FRAME, BUILDING, BEAM, BOTTOM OF DECK, BOTTOM OF STEEL, BASE PLATE, BEARING, CANTILEVER, CENTER TO CENTER, CONTROL JOINT, CENTER LINE, CEILING, CLEAR, CONCRETE MASONRY UNIT, COLUMN, CONCRETE CONSTRUCTION, CONTINUOUS, COORDINATE, DIAMETER, DIMENSION, DOWN, DETAIL, DRAWING, EACH, EXTERIOR INSULATION & FINISHING SYSTEM, EXPANSION JOINT, ELEVATION, ENGINEER OF RECORD, EQUAL, EQUIPMENT, EACH WAY, EXISTING, EXTERIOR, FIELD DETERMINE, FOUNDATION, FINISHED FLOOR ELEVATION, FINISHED FLOOR LINE, FIELD MEASURE, FOOT/FEET, FOOTING, FIELD VERIFY, GAUGE, GENERAL CONTRACTOR, GENERAL, HEIGHT, HORIZONTAL, HEATING, VENTILATION & AIR CONDITIONING, INSIDE DIAMETER, INSULATION, INTERIOR, LONG, LOAD BEARING WALL, LARGE DIAMETER TAPCON, MAINTENANCE, MANUFACTURER, MAXIMUM, MECHANICAL, MEZZANINE, MINIMUM, MISCELLANEOUS, NOT APPLICABLE, NOT IN CONTRACT, NOT TO SCALE, ON CENTER, OUTSIDE DIAMETER, OUTSIDE FACE OF STUD, OVERHANG, OPPOSITE, POWER ACTUATED FASTENER, PLATE, PLUMBING, PANEL, PREFABRICATED, PRESSURE TREATED, RADIUS, REFLECTED CEILING PLAN, ROOF DRAIN, REINFORCE (D) (ING) (MENT), REQUIRED, REVISION, ROUGH OPENING, ROOF TOP UNIT, SCHEDULE, SHEET, SIMILAR, SOUTHERN PINE, SPECIFICATION, SQUARE, STAINLESS STEEL, STANDARD, STEEL, STRUCTURAL, SHEAR WALL, TOP CHORD, THICK, TRUSS BEARING, TO BE DETERMINED, TOP OF STEEL, TURN DOWN, TOP OF FOOTING, TOP OF MASONRY, TOP OF WALL, TOP OF PARAPET, TYPICAL, UNLESS NOTED OTHERWISE, VARIES, VERTICAL, WIDE, WORK POINT, WELDED WIRE FINISH, WITH.

Table: COMPONENTS & CLADDING WIND PRESSURES (PSF). Columns: ZONE, 10, 20, 50, 100. Rows: ROOF, WALL/SOFT, BACK SIDE, FRONT SIDE, TOTAL (FRONT + BACK).



TYPICAL BUILDING WIND ZONES: FLAT ROOF (≤10°)

- NOTES:
1. "*" AND "-" SIGNS INDICATE WIND ACTING TOWARD OR AWAY FROM SURFACE, RESPECTIVELY.
2. PRESSURES SHOWN ARE ULTIMATE LEVEL (LRFD) LOADS.

Vertical sidebar containing project information: INVENTOR, DATE, engineering consultant (5077 Dallas Hwy, Suite 201, Powder Springs, GA 30127), general contractor (BLACKWATER CONSTRUCTION, 2180 S. SALLIUM BLVD., SUITE 400 - DALLAS, GEORGIA, 30397), ISSUED DATE: 5/15/20, and RETAIL SUITES OFFICE SPACE (BOYD MORRIS ROAD & GA HWY 298 SPUR, BARTOW COUNTY, GA). Includes a professional engineer seal for GEORGIA, No. PE33841, Professional Engineer, Matt Hewitt, HMM.

Project identification: SHEET 01, DRAWING BY: S001, DATE: 5/15/20.