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Table with 3 columns: Rev, Date, Comments

BID SET  
Every Contractor or Subcontractor, by submitting a bid for this project declares that they have reviewed all aspects of this project and have included all work required to complete a complete project that meets all building codes.

Questions or discrepancies are found between these, they should be submitted by the bidding General Contractor as a Request for Information before bids are due. These clarifications will be given after the bid date for issues that could clearly have been determined during the Bidding Period.

Information to all Bidders  
For more information about this bid, including a list of the most current documents, instructions to Bidders, Responsibility Chart, answers to RFIs, etc., go to project website. Note this address will be provided to bidders with invitation to bid.

It is the responsibility of ALL Bidders to become familiar with this site and the additional information that is contained there. If you do not have access to the internet you MUST contact your General Contractor for this information. No Charge Orders will be accepted for not reviewing this information.

No consideration will be given for Change Order Requests based on any of the following:  
1. Missing information on drawings but not clearly indicated as an exception on the initial bid.  
2. Items missing on drawings but not clearly indicated as a request for information during bidding.  
3. Items omitted to be industry standard for a particular system or assembly.  
4. Items that can reasonably be inferred from contract documents.



Client:  
**JIM ELLIS  
CADILLAC**

5880 PEACHTREE BLVD  
ATLANTA, GA 30341

Project:  
**JIM ELLIS  
CADILLAC**

5880 PEACHTREE BLVD  
ATLANTA, GA 30341

Project Number: 18123  
Drawn By: TTN  
Checked By: ARK  
Approved By: BP

Sheet Title:  
**GENERAL NOTES**

Sheet Number:  
**S001**

STRUCTURAL GENERAL NOTES

- 1. GENERAL
a. Provide construction conforming to the 2012 International Building Code with the latest State Amendments. Reference to other standards, specifications, or codes means the latest standard or code published and adopted.
b. The structural general notes apply except where indicated otherwise in the specifications. A detail shown for one condition applies for all like or similar conditions even though not specifically indicated on the drawings.
c. Verify all existing conditions, dimensions, and elevations before starting work. Notify the Architect and Structural Engineer of Record in writing of any discrepancy.
d. The structure is able to resist design loads only when structural work is complete. During construction, the structure is not self-supporting. The Contractor is solely responsible for the design, adequacy, and safety of erection bracing, shoring, temporary supports, and all other means, methods, techniques, sequences, and procedures of construction. Coordinate the structural contract documents with documents from architectural, mechanical, electrical, plumbing, civil, and all other consultants. Notify the Architect and Structural Engineer of Record in writing of any conflict and/or omission.
e. Coordinate and verify floor and roof opening sizes and locations with architectural, mechanical, plumbing, and electrical drawings. For additional openings not shown on the structural drawings refer to the architectural and mechanical drawings.
f. Review of the submittals and/or shop drawings by the Structural Engineer of Record is only for general conformance with the contract documents and does not relieve the Contractor of the responsibility to review and check shop drawings before submittal to the Structural Engineer of Record. The Contractor must review and stamp all submittals prior to submittal. 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. Do not begin fabrication until shop drawings are completed and reviewed by the Structural Engineer of Record. Electronic drawing files or model files will not be accepted for review or otherwise for additional costs.
g. Do not make shop drawings using reproductions of the contract documents or referencing the contract documents.
h. Provide an allowance of 10% of all structural materials to be fabricated and placed during progress of work as may be directed by the Structural Engineer of Record in addition to all structural materials indicated on the contract documents. Credit any unused quantity to the owner at the end of the project.

- 2. EXISTING CONDITIONS
a. Removal of existing structures requires thorough coordination of the contract documents with existing conditions. The Contractor must verify all relevant existing conditions, dimensions, and details prior to beginning construction. Report any deviations from conditions or dimensions shown on the contract documents to the Architect and Structural Engineer of Record for review and possible revision of the contract documents.
b. The nature of structural demolition and stabilization is inherently uncertain. The exact condition and capacity of each structural element cannot be verified prior to the commencement of work. As a result, it is imperative to report any discrepancies between the contract documents and actual field conditions, as well as any element of questionable structural integrity immediately to the Architect and Structural Engineer of Record for review.
c. No attempt has been made to define each specific structural element that must be removed, enhanced, or replaced. It is the responsibility of the Contractor to review the condition of individual elements, particularly rafters, joists, and structural deck boards, to determine which elements can be salvaged, which elements must be replaced, and which elements are questionable. The Contractor should consult with the Architect and Structural Engineer of Record to determine the appropriate procedure for handling elements in questionable condition.
d. Dimensions of or to existing elements shown on design drawings may not be accurate to necessary construction tolerances. Contractor to verify conditions in field and coordinate with design drawings, particularly for elements that will be fabricated off-site.

- 3. REINFORCED CONCRETE
a. Provide reinforced concrete conforming to the following standards:
- ACI 301-10, Specifications for Structural Concrete for Buildings
- ACI 318-11, Building Code Requirements for Structural Concrete
- ACI 302-IR-04, Guide for Concrete Floor and Slab Construction
- ACI 308R-10, Guide to Design of Slabs on Grade
b. Unless noted otherwise, provide concrete with the following minimum Exposure Classes, Type, minimum 28-day compressive strengths, and maximum water-to-cementitious materials ratio:
c. Location Exposure Class Type Strength w/cm
Foundations FO S0 PD C1 Normal Weight 3000 PSI 0.55
Basement Walls FO S0 PD C0 Normal Weight 3000 PSI 0.55
Int. Slabs on Grade FO S0 PD C0 Normal Weight 3000 PSI 0.55
Slabs on Metal Deck FO S0 PD C0 Normal Weight 3000 PSI 0.55
d. For Exposure Classes F1, F2, and F3, provide concrete entrained air by volume in concrete based on ACI 318 Table 4.4.1, shown below:
Nominal Maximum Aggregate Size, in Exposure Class Exposure Class
F1 F2 and F3
3/8 6
3/4 5 7
1 4 5 6
1 1/2 4 5 5
4 5 4
3 3.5 4.5
e. Fully document and submit for review the proposed materials and mix design for all concrete. The Contractor is responsible for obtaining the required design strength. All concrete test data must be available in the field.
f. The use of calcium chloride, chloride ions, or other salts is not permitted.
g. Place concrete at a slump of 3 to 4".
h. Unless noted otherwise, provide construction or contraction joints in slabs-on-grade such that the maximum area between joints does not exceed 225 square feet with the length not exceeding twice the width.
i. The location of construction joints requires the approval of the Structural Engineer of Record. Unless noted otherwise, thoroughly roughen by mechanical means and clean construction joints.
j. Chamfer or round all exposed corners a minimum of 3/4".
k. Detail concrete reinforcing according to ACI 308-46 detailing manual. Submit shop drawings for approval, showing all fabrication dimensions and locations for placing concrete reinforcing and accessories. Do not begin fabrication until shop drawings are completed and reviewed by the Structural Engineer of Record. Unless specifically approved otherwise, detail all concrete walls and beams in elevation.
l. Unless noted otherwise, provide reinforcing steel conforming to ASTM A615, Grade 60.
m. Provide welded wire fabric mesh in flat sheets conforming to ASTM A1064. Rolls are permitted. Lap welded wire fabric a minimum of 6" at each splice.
n. Fiber reinforcing may be substituted for welded wire fabric in slabs-on-grade with the approval of the Structural Engineer of Record. Provide macro fiber reinforcing conforming to ASTM C1119, Type III. Use Strax 2000, Forta Ferro, or Rheomesh 650. 100% virgin polypropylene Bottled Beads as directed by the fiber reinforcing manufacturer with approval of the Structural Engineer of Record.
o. Tie all reinforcing steel and embedded items securely in place prior to placing concrete. Provide sufficient supports to maintain the position of the reinforcement within specified tolerances during all construction activities. "Slacking" dowels, anchor rods, or other embedded items into wet concrete is not permitted.
p. Provide corner bars at all corners and intersections of all footings, beams, and walls.
q. Lap concrete reinforcing as shown in the "Concrete Reinforcing Schedule".
r. The placement of all reinforcing steel must be reviewed by a Professional Engineer registered in the Project State or by a representative responsible to him per ACI 318, 1.3.1.
s. Unless noted otherwise, provide the following concrete cover on all reinforcing steel:
Concrete against earth (not formed) 2"
Formed concrete exposed to earth or weather:
#5 bars and smaller 2"
#5 bars and larger 1 1/2"
t. Do not place pipes or ducts with a maximum dimension exceeding one-third the slab or wall thickness within the slab or wall unless specifically shown and detailed on the structural drawings.
v. Do not weld or tack weld reinforcing steel unless approved or directed by the Structural Engineer of Record. Provide reinforcing steel conforming to ASTM A706, Grade 60 where welding is approved or directed.

- 4. MASONRY
a. Provide concrete masonry conforming to the following standards:
- ACI 530-11, Building Code Requirements for Masonry Structures
- ACI 530-11.1, Specifications for Masonry Structures
b. Load bearing masonry walls are designed in accordance with Chapters 1 and 2 of ACI 530.
c. Provide light weight, hollow, load bearing concrete masonry units conforming to ASTM C50 with a compressive strength of masonry (fm) of 1500 PSI and a net strength of 2000 PSI on the net cross-sectional area of CMU determined in accordance with ASTM C140.
d. Provide mortar conforming to ASTM C 270, Type M or S. Standard masonry joint thickness is 3/8" and must not exceed 5/8".
e. Unless noted otherwise, provide grout for reinforced masonry conforming to ASTM C-476 with minimum compressive strength of 2500 PSI. Pea gravel concrete with a minimum compressive strength of 3000 PSI may be substituted for grout only with approval of the Structural Engineer of Record.
f. Unless noted otherwise, lay masonry units in running bond.
g. Provide ladder type horizontal joint reinforcing conforming to ASTM A1064. Unless noted otherwise, place 9 gage or heavier, zinc coated ladder type horizontal joint reinforcing at 10" on center. Lap horizontal joint reinforcing minimum 12". Use precastributed "L's and "T's at corners and intersections.
h. For grouted walls the maximum height of grout fills must not exceed 5'-0". The maximum ungrouted height of CMU walls prior to grouting must not exceed 12'-0". Refer to Table 7 of ACI 530.1 for the maximum ungrouted height of CMU walls thinner than 8". Consolidate and reconsolidate grout in accordance with paragraph 3.5.E of ACI 530.1. Walls higher than 5'-0" must have inspection holes at the base of the wall.
i. Lap vertical CMU wall reinforcing as shown in the "CMU Lap Splice Length Schedule".
j. Provide vertical control joints in all masonry walls not retaining earth. Unless noted otherwise on the architectural drawings, place vertical control joints at three times the wall height, but not closer than 25'-0" on center or farther than 50'-0" on center.
k. Unless noted otherwise, provide minimum (1) #5 vertical bar, grouted full height, at each side of openings and at all corners and ends of walls, including both sides at ends of wall panels at vertical control joints.

- 5. STRUCTURAL STEEL
a. Provide structural steel detailing, fabrication, and erection conforming to the following standards:
- AISI 302.05, Code of Standard Practice for Structural Steel Buildings and Bridges
- AISI 325-11, Steel Construction Manual, 14th Edition
- AISI 325-05, Detailing for Steel Construction, 3rd Edition
- AISI 360-10, Specification for Structural Steel Buildings
b. Provide steel shapes made of material conforming to the following standards, unless noted otherwise:
Wide Flange Shapes and WT Shapes ASTM A992
Angles and Channels ASTM A36
Plates ASTM A572, Grade 50
Hollow Structural Sections (HSS) ASTM A500, Grade C
Steel Pipe ASTM A53, Type E or S, Grade B
Headed Studs ASTM A106, Grade 1010 - 1020
Deformed Bar Anchors ASTM A1064
c. Unless noted otherwise, provide anchor rods for cast-in-place conditions in concrete that conform to ASTM E1454, Grade 36, unless noted otherwise, limit connections so they are snug tight.
d. Unless noted otherwise, provide anchors for post-installed conditions in concrete to conform to manufacturer's requirements and connections if they are pre-tensioned per manufacturer's specifications.
e. Unless noted otherwise, make all connections with 3/4" minimum diameter ASTM A36 bolts, grade A325, with washers and nuts included in the bolt plane. Unless noted otherwise, install connections so they are pre-tensioned. Calibrate tightening torque used so that the connections are tightened in accordance with Specification for Structural Joints using High-Strength Bolts, 2009. Use open end torque wrenches, calibrated torque wrenches, calibrated torque wrenches, or alternative bolt with test cell element. Do not use turn of the nut method, unless confirmed by observation during shop drawing review.
f. Make all welded connections in accordance with AWS D1.1, using type E, low hydrogen electrodes.
g. Unless specifically detailed on the plans or the "Welding Connection Schedule", provide the following beam connections:
- Where beam reactions are shown, provide connections to develop full design strength.
- Where beam reactions are not shown, provide connections to develop one-half the full design strength.
- Where reactions are subject to eccentricity, the eccentricity must be accounted for.
h. Submit shop drawings prepared in accordance with AWS D1.1. Do not begin fabrication until shop drawings are completed and reviewed by the Structural Engineer of Record.
i. The design of special connections between steel framing components, including but not limited to braced end connections, moment-resisting connections, modified beam-slab connections, and member splice connections, shall be designed by the Structural Engineer of Record and must be performed by a Professional Engineer registered in the Project State.
j. Do not use gas cutting torches to cut steel framing until all permanent bracing, moment connections, and floor/roof decks (diaphragms) are completely installed.
k. Provide temporary bracing for steel framing until all permanent bracing, moment connections, and floor/roof decks (diaphragms) are completely installed.
l. Unless noted otherwise or directed by the Architect, all steel as follows:
- Steel I-beams and channels be G60 galvanized finish.
- Steel exposed in walls, surfaces to receive fireproofing, connections designated as friction type, surfaces to be welded, or surfaces receiving welded studs shall be in the cleaned bare steel.
- Remnants formed with exterior or interior steel ship coating to 3 mils thickness.
m. Unless noted otherwise, by the Architect, all steel that is exposed to the public to be Architecturally Exposed Structural Steel (AESS) and should be fabricated per those details.

- 6. OPEN WEB STEEL JOISTS AND JOIST GRIDDERS
a. Provide steel joists and joist girders conforming to the following standards:
- SJI K-10, Standard Specification for Open Web Steel Joists, K-Series
- SJI LH/LH-L10, Standard Specification for Longspan Steel Joists, LH Series and Deep Longspan Steel Joists, DLH Series
- SJI JG-10, Standard Specification for Joist Gridders
b. Unless noted otherwise, design steel joists for a minimum net uplift of 15psf over entire roof area.
c. Provide bridging in accordance with SJI recommendations. For roof decking, add "X" bridging to the second panel at each end of each run of horizontal bridging, and every sixth panel in between. Provide one continuous run of "X" bridging near mid-span where four or more runs of bridging are required. For floor decking, all bridging to be "X" bridging installed immediately after erection and permanent fastening of joists. Install bridging before construction loads are applied to joists. Permanently attach ties of bridging to walls or beams where bridging terminates. Weld bridging to joists.
d. Coordinate joist spacing with mechanical openings. The average spacing between any three joists must not exceed the spacing shown on the drawings, and the spacing between any two roof joists must not exceed 6'-0".
e. Provide double joists under masonry walls parallel to the joist framing for masonry walls supported on steel framed floors.
f. Submit shop drawings for approval showing identification, layout, connection details, and fastening for joists and joist girders. Do not begin fabrication until the shop drawings are completed and reviewed by the Structural Engineer of Record.

- 7. STEEL DECKING
a. Provide fabrication and erection of steel decking conforming to the following standards:
- ANSISD10D, Standard for Steel Roof Deck
- ANSISD10C, Standard for Non-Composite Steel Roof Deck
- ANSISD10E, Standard for Composite Steel Floor Deck
- SDI COSP, Code of Standard Practice
- SDI Manual of Construction with Steel Deck (No. MOC2)
b. Provide steel deck of the type and gage indicated on the design documents.
c. Unless noted otherwise, provide steel decking with a G60 galvanized coating.
d. Install steel decking in accordance with the manufacturer's recommendation. Do not install steel decking until supporting joists are braced, bridged, and permanently fastened.
e. Install decking such that it is continuous over a minimum of three spans.
f. Submit shop drawings for approval showing identification, layout, connection details, and fastening for steel deck. Do not begin fabrication until the shop drawings are completed and reviewed by the Structural Engineer of Record.

- 8. COLD FORMED STEEL FRAMING
a. Provide cold formed steel framing detailing, fabrication, and erection conforming to the following standards:
- AISI S100, North American Specification for the Design of Cold-Formed Steel Structural Members
- AISI S200, North American Specification for Cold-Formed Steel Framing - General Provisions
- AWS D1.1, Structural Welding Code - Steel
- AWS D1.3-08, Structural Welding Code - Sheet Steel
b. Provide studs, runner track, and associated accessories of the type and thickness indicated on the drawings or as recommended by the manufacturer for the indicated application.
c. Provide studs, joists, runner track, and accessories manufactured of hot dip galvanized ASTM A1033 steel with the following yield strength:
- 53,000 PSI 33 mil mill members
- 50,000 PSI 54 mil, 68 mil, and 97 mil members
d. Provide minimum #12 (S-12) cadmium or zinc coated screws.
e. Install all cold formed steel framing in accordance with the manufacturer's recommendations.
f. Provide reinforcement for any bearing walls with the manufacturer's recommendations.
g. Provide lateral bracing in load bearing walls consisting of 1 1/2" cold rolled channels at 4'-0" on center vertically. Insert channels through stud web holes and screw or weld to each stud using 1 1/2" x 1/4" x 54 mil (R5 gage) clip angles. Provide clip angles 1/4" less than the stud width.
h. Provide joist bracing at 8'-0" on center maximum. Install joist bracing in accordance with the manufacturer's recommendations.
i. Provide on end header for all joists and clip angles.
j. Provide solid blocking behind all horizontal panel joints of exterior wall sheathing and interior shear wall sheathing.
k. Design of exterior walls subject to wind pressures is based on lateral bracing of stud flanges provided by sheathing. If sheathing is not applied to both faces of the wall, provide bracing in accordance with SSMMA Technical Note No. 2, published March 2000.

- 9. STEEL STAIRS
a. Steel stair design is responsible for the lateral stability of all steel stairs. Any attachment to the structure must be verified and approved by the Structural Engineer of Record.
b. All steel stairs indicated on the drawings must be made of steel stringers with steel pans filled with concrete.
c. Submit shop drawings and calculations showing plans, elevations, sections, and details describing the complete fabrication, erection, and anchorage of steel stairs. Shop drawings and calculations must be sealed by a Professional Engineer registered in the Project State. Do not begin fabrication until the shop drawings and calculations are completed and reviewed by the Structural Engineer of Record.

- 10. OTHER COMPONENTS
a. Provide shop drawings for construction of all applicable specialty items including but not limited to curtain wall glazing systems, light gage steel framing, ornamental guards, handrails, slights, and signage. Shop drawings must indicate the required materials, sizes, and locations for all posts and pickets including anchorage at the base of the posts. Shop drawings must be sealed by a Professional Engineer registered in the Project State.
b. Provide curtain wall glazing system shop drawings that clearly indicate the attachment to the structure on all sides of the exterior glazing system required to adequately resist applicable wind pressures.
c. The Glazing Contractor must provide engineering calculations to document compliance with 2012 International Building Code, Sections 2403.2 through 2403.4 for full jointed glazing.

- 11. DESIGN LOADS
a. Live Loads:
Roof 20 PSF
Floor Office 50 PSF + 15 PSF superimposed dead load

- b. Dead Loads:
Roof 20 PSF
Elevated Floor 45 PSF + 15 PSF superimposed dead load
Equipment area 100 PSF

- c. Wind Design Data:
c.1. Risk Category Category II
c.2. Exposure Category B
c.3. Ultimate Wind Speed (3 second gust): 115 MPH
c.4. Nominal Wind Speed 90 MPH
c.5. Enclosure Classification Enclosed Building
c.6. Internal pressure Coefficient a. 0.18
c.7. Components and Cladding Pressures See Table 6-2

- d. Seismic Design Data:
d.1. Risk Category Category I
d.2. Seismic Importance Factor I = 1.0
d.3. Mapped Spectral Response Accelerations: Ss = 0.105g
S1 = 0.050g
d.4. Site Class Site Class D
d.5. Spectral Response Coefficient Cs = 0.200g
Cs = 0.14g
d.6. Seismic Design Category Category C
d.7.1. Seismic Force Resisting System Structural steel systems not specifically detailed for seismic resistance
d.7.2. Response Modification Factor R = 3.0
d.7.3. Seismic Importance Factor I = 0.07

- d.8. Analysis Procedure Equivalent Lateral Force Procedure
Snow Loads:
e.1. Ground Snow Load Pg = 5 PSF
e.2. Snow Load Importance Factor I = 1.0
e.3. Snow Exposure Factor Ce = 1.0
e.4. Thermal Factor Ct = 1.0
e.5. Flat Roof Snow Load Pt = 5 PSF

- 12. FOUNDATIONS
a. The design of foundations, retaining walls, and slabs-on-grade is based on the following criteria established in geotechnical report number 2018039 by J. Stephen Emborg PE, of YSMVA Engineering and Environmental, LLC (NOVA) dated April 3, 2018.

- b. Bearing Pressure: 2500 PSF
c. Excavation: If the condition of the soils do not meet the recommended design criteria stated in the geotechnical report, notify the Architect and Structural Engineer of Record. Geotechnical Engineer must verify the condition and/or adequacy of all subgrades, fills, and backfills prior to the placement of foundations, footings, slabs, walls, etc. If any interference appears between existing foundations and the specified design, notify the Architect so that the foundations may be redesigned as required.
d. Coordinate top of footing elevations with the requirements of all trades including but not limited to plumbing, mechanical, or electrical.
e. Place all column footings and wall footings monolithically with adjacent footings at the same elevation.
f. All footings shall bear on original undisturbed soil where possible.
g. Remove organic soils and replace with clean structural fill in the direction of the Geotechnical Engineer. Place fill soils in 10' maximum (loose) lifts at moisture contents within Recommended moisture content. Compact all fill within 10'-0" of the following minimum densities:
- Within 18" of finished grade: 95% of maximum Standard Proctor
- Below 18" of finished grade: 90% of maximum Standard Proctor
h. Field density tests must be made as described by the Geotechnical Engineer to verify adequate compaction and design bearing pressure.
i. Sides of foundations must be formed unless conditions permit earth forming. Foundations placed against the earth require the following precautions: slope sides of excavations as approved by the Geotechnical Engineer and clean up sloping before and during concrete placement.
j. Where footing steps are necessary, slope no steeper than one vertical to two horizontal.
k. Unless noted otherwise, place all slabs on grade on a 10 mil polyethylene vapor retarder and a crushed stone base over a properly compacted subgrade. Lap joints of vapor retarder a minimum of 6 inches and seal watertight by taping edges and ends.

ENCLOSED STRUCTURE COMPONENTS AND CLADDING DESIGN WIND PRESSURES

Table with 4 columns: A, B, C, D and 4 rows: ROOF, ROOF OVERHANG, PARAPET, WALL. Values represent wind pressures in PSF.

ZONE WIDTH, z = 9.4 FEET  
COLUMN A, z = 9.4 FEET, volume 9.5 in

COLUMN B, Effective Windward Pressure = 2.0 psf  
COLUMN C, Maximum Positive Pressure = 0.0 psf  
COLUMN D, Maximum Negative Pressure = 0.0 psf

COLUMN A, Maximum Positive Pressure = 0.0 psf  
COLUMN B, Maximum Negative Pressure = 0.0 psf  
COLUMN C, Maximum Positive Pressure = 0.0 psf  
COLUMN D, Maximum Negative Pressure = 0.0 psf

Pressures shown on Windward Walls, To convert to an allowable load, multiply value by 0.6.

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