Department of
CITY PLANNING

OFFICE OF BUILDINGS
55 Trinity Avenue, 3rd Floor, Suite 3900
Atlanta, Georgia 30303
(404) 330-6150
www.atlantaga.gov

CITY OF ATLANTA – STRUCTURAL CHECKLIST

The intent of this checklist is to provide a general guideline for any buildings structural plan review and field verify. This checklist may not include items related to all possible projects. The goal is to acquaint plan reviewers and inspectors with a systematic performance for a structural set of plans. The proper codes and local codes have been utilized and that the proposed layout allows the occupants to safely occupy the building without being exposed to materials or conditions that present an unreasonable or life safety hazards. The review will be performed to verify compliance with the requirements found within those codes adopted and amended by the State of Georgia and enforced by the City of Atlanta WITH THIS CHECKLIST.

The purpose of this checklist is to establish minimum requirements to safeguard the public safety, health and general welfare through affordability with safety factors of structural strength, stability, ductility and minimum survival mode of the structures throughout the natural disaster for our local people only. Following are the local climatic conditions shall be complied with if applicable to the project.

All Items listed herein shall be complied with if applicable to the project.

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA							
GROUND SNOW LOAD	WIND		SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP
	SPEED	TOPOGRAPHIC EFFECTS	S_s=0.1g to 0.50g S_1= 0.07g to 0.25g	WEATHERING	FROST LINE	TERMITE	
5 PSF	IBC FIG: 1609A-1609C	Moderate	Per analysis B, C or D	MODERATE	12 INCHES	VERY HEAVY	22 DEG. F

ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP.
NO	5/7/2001	33	66.2 DEG. F

STRUCTURAL RELATED CONTACT PERSON:

Mohammed G. Kibria, Structural Engineer
Phone: 404-330-6507
Email: mgkibria@atlantaga.gov

Angela Epps, Project Manager (*Light Commercial*)
Phone: 404-330-8941
Email: adepps@atlantaga.gov

Al_Nisa Tinglin, Project Manager (*Commercial*)
Phone: 404-330-6696
Email: atinglin@atlantaga.gov

Rosemary Kernahan, Project Manager (*Residential*)
Phone: 404-330-6061,
Email: rkernahan@atlantaga.gov

Doug Maples, Assistant Director
Phone: 404-330-6991
Email: dmaples@atlantaga.gov

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GENERAL STRUCTURE

	G1	The structural drawings as submitted have been reviewed for code compliance and appear to be in compliance with the 2012 International Building Code with Georgia State Amendments. Future revisions to these drawings shall require further review and authorization.
	G2	Submit complete foundation, floor, and roof framing plans that indicate required materials, sizes, and locations for all structural elements. Provide details which indicate required connections between all structural framing components including anchorage to foundation. (IBC Section 1603.1)
	G3	Specify on the structural drawings the allowable soil bearing pressure in terms of pounds per square foot (PSF) utilized in the design of the foundation. The presumed design pressure shall not exceed the applicable value specified in IBC Table 1806.2 unless substantiated by a foundation and soils investigation. (IBC Sections 1803.6 and 1806.2)
	G4	Submit a foundation and soils investigation report to substantiate allowable soil bearing pressure greater than 2000 PSF based on the common soil classifications in this region, material class #4 of IBC Table 1806.2. The investigation report shall be signed and sealed by a professional engineer registered in the State of Georgia. the report shall provide the information required by IBC Section 1806.6. (IBC Sections 1803.1 and 1803.2)
	G5	Specify on the structural drawings the dead load and live load applicable to the design of the roof structure. (IBC Sections 1603.1, 1603.1.2, 1606, and 1607.12,)
	G6	Specify on the structural drawings that the design of the primary roof structural framing components which are located above and exposed to work floor areas within repair garages, storage warehouses, and manufacturing facilities have been designed to support a minimum concentrated live load of 2000 lbs. uniformly distributed over an area of 2.5 feet square. (IBC Sections 1603.1.8 and 1607.4 and Table 1607.1)
	G7	Indicate on the structural roof plans the concentrated loads due to mechanical equipment, cranes, solar panels, communication array equipment, and/or significant load items. Indicate on the roof framing plan the location(s) and operating weight(s) of all equipment considered in the structural design. If the roof structure is not designed to support concentrated loads, note accordingly on the structural drawings. (IBC sections 1603.1.8 and 1606.2)
	G8	Submit engineering documentation sealed and signed by a professional engineer registered in the state of Georgia which substantiates the structural adequacy of the existing roof structure to support the proposed mechanical rooftop equipment. Alternatively, submit a copy of the previously approved structural drawings for the existing building which clearly documents that the roof structure has been designed to accommodate each proposed mechanical equipment based on the specified location and operating weight. (IBC Sections 1603.1.8 and 1606.2)
	G9	Provide details that indicate required supplemental framing for support of proposed mechanical rooftop equipment. (IBC Section 1603.1)
	G10	Indicate on structural drawings the dead load(s) and live load(s) applicable to the design of the floor structure for all areas and intended uses including but not limited to assembly areas, balconies, breezeways, classrooms, corridors, decks, dwelling units (apartment and hotel), lobbies, mezzanines, offices, retail space, storage areas, and stairs. If utilized in the design, also indicate the applicable reduced live load(s) including reduction method used. (IBC Sections 1603.1, 1603.1.1, 1606, 1607.3, and 1607.10)
	G11	Indicate on drawings the dead load and live load applicable to the design of each mezzanine floor structure. Note: Minimum required design live load shall be 125 PSF for light storage. (IBC Sections 1603.1, 1603.1.1, 1606, 1607.3 and Table 1607.1)
	G12	Indicate on structural drawings the concentrated live load applicable to the design of the floor structure. Note: Floor structure in areas used for business (offices, lobbies, corridors), libraries, manufacturing, retail, and schools (classrooms, corridors) shall be designed to support either the minimum concentrated live load uniformly distributed over an area of 2.5 feet square or the applicable uniform live load specified in IBC table 1607.1, whichever load condition results in the greatest member stress. (IBC Section 1607.4)
	G13	Indicate on the structural drawings the applicable partition design live load. Note: Floor structure for areas in which partition locations are subject to change during the life of the structure (including but not limited to office buildings) shall be designed for a uniform live load of not less than 15 pounds per square foot (PSF) in addition to the minimum required floor design live load except for areas in which the specified live load exceeds 80 pounds per square foot (PSF). (IBC Sections 1603.1.8 and 1607.5)
	G14	State the following on the drawings for garages or other areas subject to heavy vehicle loads, including forklifts and moveable equipment: "The maximum weight of the vehicles allowed on the floor slab or elevated floor structure shall be stated on durable signs and conspicuously posted by the owner in the applicable area(s) of the building." (IBC Section1607.7.5)
	G15	Specify on the drawings the structural design and criteria utilized for floors and other surfaces intended to support heavy vehicle loads (gross vehicle weight rating greater than 10,000 pounds). (IBC Section 1607.7)

	G16	State the following on the structural drawings: "The floor design live load for each elevated floor structure or portion thereof that exceeds 50 pounds per square foot (PSF) shall be stated on durable signs and conspicuously posted by the owner in the applicable area(s) of the building.
	G17	Indicate on the structural drawings the following wind data applicable to the design of the structure: - Ultimate design wind speed (3-second gust) in miles per hour (mph); - Nominal design wind speed (3 second gust) in miles per hour (mph); - Risk Category;- Wind exposure category; - Internal pressure coefficient(s); -Design wind velocity pressure. -Base shear and the executed forces. (And compare to the seismic value). (IBC Sections 1603.1.4, 1604.5, 1609.1.1, 1609.3, 1609.3.1, and 1609.4; ASCE/SEI 7-10 Sections 1.5.1, 26.5.1, 26.7.3, and 26.11.1.) (Provide the calculated base shear, story forces and story drift for both orthogonal directions by wind analysis and seismic analysis and compare to use larger one.)
	G18	Indicate on the structural drawings the wind pressures in terms of pounds per square foot (PSF) applicable to the design of exterior components and cladding materials for the structure that are to be designed by other than the registered structural engineer-of-record for the project. The net design wind pressure acting in either direction normal to the surface of the components and cladding materials shall not be less than sixteen (16) PSF. (IBC sections 1603.1.4 and 1609.1.1; ASCE/SEI 7-10 Chapter 30) (Provide the calculated base shear, story forces and story drift for both orthogonal directions by wind analysis and seismic analysis and compare to use larger one.)
	G19	Identify on the structural plans and detail the lateral load-resisting system(s) for the proposed structure along two (2) orthogonal horizontal axes to ensure structural stability during seismic and wind design load conditions including but not limited to shear walls, braced frames, and moment resisting frames. (IBC Sections 1604.4, 1604.10, 1609.1, and 1613.1, and ASCE/SEI 7-10 Sections 12.1.1 and 26.1.1)
	G20	Specify and detail on the structural drawings a complete and continuous load path(s) for the adequate transfer of the applicable design wind and seismic forces from their point(s) of origin to the load-resisting elements and into the foundation. Provide complete details which clearly indicate all required connections between structural elements that comprise the load path of resistance including but not limited to roof/floor diaphragms, shear walls, braced frames, and moment-resisting frames. (IBC Sections 1604.4 and 1604.9; ASCE/SEI 7-10 Sections 12.1.1 and 26.1.1) (Provide the calculated base shear, story forces and story drift for both orthogonal directions by wind analysis and seismic analysis and compare to use larger one.)
	G21	Specify and detail on the structural drawings the secondary (emergency) roof drainage system (drains and/or scuppers). Overflow scuppers shall be located such that the bottom of each scupper is not less than 2 inches nor more than 4 inches above the top of finished roof unless the specific rain design load for the corresponding scupper location is indicated on the structural construction documents. (IBC Sections 1603.1.8 and 1611 and IPC Section 1108)
	G22	Specify on the structural drawings that each flat roof structure with a slope of less than one-fourth (1/4) inch vertical per foot horizontal is designed for ponding to ensure stability in the support of rainwater loads. (IBC Section 1611.2; ASCE/SEI 7-10 Sections 7.11 and 8.4)
	G23	Provide details for the construction of all guards and handrails. Details shall indicate required materials, sizes, and spacing for all posts and pickets including anchorage at base of posts. (IBC Sections 505.3.3, 1010.10, 1012, 1013, 1028.14, and 1607.8.1).
	G24	Provide a framing plan for each mezzanine that indicates required materials, sizes, and locations for all structural elements. Provide details which indicate required connections between all structural framing components to adequately resist all applicable design loads including gravity, wind, and seismic. (IBC Section 1603.1)
	G25	Specify on the drawings that all structural components of mezzanine including but not limited to walls, columns, beams, joists, floor decking, and guards shall consist of noncombustible materials for compliance with the requirements for buildings of Type I and II construction. (IBC Sections 602.2, 603 and IBC Table 601)
	G26	Provide details that indicate either expansion joint or connections as required at interface between two (2) adjacent structures. Connections between adjacent structures shall be capable of transmitting the applicable lateral wind and seismic design forces. Expansion joints shall be designed to accommodate independent lateral movement of both adjacent structures under wind and seismic conditions without contact. Expansion joint width for seismic loads shall comply with ASCE/SEI 7-10 section 12.12.3. (ASCE/SEI 7-10 Section 12.12.3 and Appendix C.1.2)
	G27	State on the structural drawings that the structure, with proposed modifications, has been analyzed for gravity and lateral loads and found to be incompliance with IBC Section 3403 or IBC Section 3404 for additions and alterations to an existing structure. If analysis reveals that any members will require modification to comply with IBC Section 3403 or 3404, provide details of those modifications as part of the construction drawings. (IBC Sections 3403.1, 3403.3, 3403.4, 3404.1, 3404.3, and 3404.4)
	G28	Provide details that indicate the required attachment to structure (type, size, and spacing of fasteners) on all sides of each exterior glazed system (including but not limited to window units, curtain walls, and storefronts) which exceeds ten (10) feet in height to adequately resist the applicable wind design pressures. (IBC Sections 1609.1, 2403.2, 2403.3, 2404.1, 2404.2, and 2404.3, and ASCE/SEI 7-10 Section 26.1.1 and Chapter 30)
	G29	State the following on the structural drawings: "Complete structural shop drawings for construction of each building component not designed by the design team-of-record and not specified on the project construction documents shall be sealed and signed by a professional engineer registered in the state of Georgia and get approval from Engineer In record prior to the submittal (See submittal requirements) and shall be available at the job site during the times of inspection." See shop drawing submittal requirements. (IBC Section 1603.1)

	G30	Shop drawings for the following building components not specified on the project construction documents approved for building permit shall be sealed and signed by a professional engineer registered in the state of Georgia and submitted to COA Structural Plan Review for review after approval by the project engineer-of-record: Complete structural shop drawings for construction of each building component not designed by the design team-of-record and not specified on the project construction documents shall be sealed and signed by a professional engineer registered in the state of Georgia and get approval from Engineer In record prior to the submittal (See submittal requirements) and shall be available at the job site during the times of inspection. (IBC Section 1603.1) - Awnings / Canopies - Glazed system (including but not limited to window units, curtain walls, and storefronts) which exceeds ten (10) feet in height - Light gauge steel framing - Ornamental guardrails - Precast concrete - Skylights- Stairs - Trusses (floor and roof) -Post tension cable profile. See shop drawing submittal requirements. NOTE: The Building department will not provide any framing inspections for the project until the required shop drawings have been submitted to Building Plan Review for review and approval. (IBC Section 1603.1)
	G31	Submit calculations sealed and signed by the project structural engineer-of-record which demonstrates the structural adequacy of each building or structure to resist the applicable load combinations of IBC Section 1605 including wind and seismic design loads. Calculations and engineering principles shall document each of the following: (A)Identify the load paths for transferring both wind pressures (acting on exposed wall and roof surfaces) and lateral seismic forces through the building structure and down to the foundation. (B) Structural adequacy of the applicable lateral load-resisting system(s) including but not limited to structural elements (frames, braces, struts, girts, etc.) and diaphragms (floors, roofs, walls). (C) Structural adequacy of connections (including nailing, anchoring, strapping, bolting, welding, etc.) between building structural components which transmit wind or seismic forces including attachments to the lateral load-resisting system(s). (D) Structural stability against overturning for the applicable lateral load-resisting system(s). (E) Compliance with the building drift limits of IBC Section 1604.3.1 and ASCE/SEI 7-10 Section 12.12.1. (F) For steel structures utilizing a lateral load resisting system other than Steel Systems Not Specifically Detailed for Seismic Resistance (per ASCE/SEI 7-12 Table 12.2-1), document design compliance with IBC section 2205. (IBC Sections 1604.3.1, 1604.4, 1604.9, 1604.10, 1609.1, 1609.1.1, and 1613.1, and ASCE/SEI 7-10 Chapters 12, 26, 27, and 28)
	G32	Submit calculations sealed and signed by the project structural engineer-of-record which demonstrate the structural adequacy of each building or structure to resist the applicable load combinations of IBC Section 1605 including but not limited to gravity, wind, and seismic design loads. Calculations shall document compliance for all structural components including but not limited to foundation, framing members, connections between structural components, and anchorages to the foundation. (IBC sections 1604, 1606 thru 1613 and ASCE/SEI 7-10 chapters 11, 12, and 26)

SEISMIC

	S1	Indicate on the structural drawings the following seismic data applicable to the design of the structure: - Mapped spectral response acceleration coefficients SS and S1; - Design spectral response acceleration coefficients SDS and SD1; - Risk Category; - Importance Factor, (Ie); - Applicable Site Class; - Seismic Design Category; - Basic Seismic Force Resisting System(s); - Response modification coefficients(s), R; - Seismic Response Coefficient(s), Cs; - Design Base Shear(s) for each of two separate and independent orthogonal directions; - Seismic Analysis Procedure. (IBC Sections 1603.1.5 and 1613.3, and ASCE/SEI 7-10 Sections 1.5.1, 11.4, 11.5, 11.6, 12.2, 12.6, and 12.8.) (Provide the calculated base shear, story forces and story drift for both orthogonal directions by wind analysis and seismic analysis and compare to use larger one.)
	S2	Indicate on the structural drawings the following seismic data for buildings of conventional light frame construction: (A) Risk Category; (B) Applicable Site Class; (C) Seismic Design Category. (IBC Sections 1603.1, 1613.3, and 2308.2, and ASCE/SEI 7-10 Sections 1.5.1, 11.4.2, and 11.6.)
	S3	Submit site-specific data prepared (sealed and signed) by a professional engineer or geologist registered in the state of Georgia to substantiate assignment of project site as either Site Class A, B, or C. Report shall be in accordance with ASCE/SEI 7-10 Sections 11.4.2 and 20.1. Classification shall be in accordance with ASCE/SEI 7-10 Table 20.3-1. (IBC Section 1613.3 and ASCE/SEI 7-10 Section 11.4)
	S4	Values of SS (short period mapped spectral acceleration) and S1 (1-second mapped spectral acceleration) shall not be less than 0.21g and 0.095g, respectively, for construction sites located in Atlanta unless substantiated by a site-specific seismic hazard analysis report prepared (sealed and signed) by a professional engineer or geologist registered in the state of Georgia. Report shall be in compliance with ASCE/SEI 7-10 Section 11.4.7 and Chapter 21. (IBC Section 1613.3; ASCE/SEI 7-10 Section 11.4)

	S5	Design values indicated on the structural drawings for the spectral response acceleration coefficients SDS and SD1 shall not be less 0.22g and 0.15g, respectively, for construction sites in COA which are classified as Site Class D unless values are substantiated by a site-specific seismic hazard analysis report prepared (sealed and signed) by a professional engineer or geologist registered in the state of Georgia. (IBC Section 1613.3 and ASCE/SEI 7-10 Section 11.4)
	S6	If the Seismic Design Category has been determined solely from ASCE/SEI 7-10 table 11.6-1, submit calculations sealed and signed by the project engineer-of-record which clearly document compliance with the following: 1. The approximate fundamental period of the structure (Ta) in each of the two orthogonal directions determined in accordance with ASCE/SEI 7-10 section12.8.2.1 is less than 0.8 Ts (determined in accordance with ASCE/SEI 7-10 Section 11.4.5; 2. The seismic response factor (Cs) is determined using equation 12.8-2 of ASCE/SEI 7-10 Section 12.8.1.1; and 3. Each floor and roof diaphragm is defined as rigid per ASCE/SEI 7-10 Section 12.3.1, or, if the diaphragms are flexible, the distance between vertical elements of the seismic force resisting system does not exceed forty feet. (ASCE/SEI 7-10 Section 11.6)
	S7	For each structure with a combination of different basic-seismic-force-resisting systems located along the same orthogonal axis, the response modification co-efficient (R) used for design shall not be greater than the least value of R for any system utilized in that same direction, except for the vertical combination allowance per ASCE/SEI 7-10 section 12.2.3.1. (ASCE/SEI 7-10 Sections 12.1.1 and 12.2.3, and IBC section 1603.1.5)
	S8	Where Simplified Design Procedure has been used, submit calculations sealed and signed by the structural engineer-of-record to document compliance with ASCE/SEI 7-10, section 12.14.1.1. (ASCE/SEI 7-10, section 12.14.1.1.)
	S9	Submit calculations sealed and signed by the structural engineer-of-record which document compliance with the additional seismic analysis requirements of ASCE/SEI 7-10 Table 12.3-1 to adequately address the apparent horizontal or vertical structural irregularity type(s) applicable to the proposed building structure. (ASCE/SEI 7-10 Section 12.3.2.1)
	S10	For Seismic Design Category C structures, provide details which indicate required anchorage of concrete and masonry walls to wood and metal deck roof/floor diaphragms to ensure wall lateral stability in accordance with the requirements of ASCE/SEI 7-10 section 13.4. Exception: Interior masonry partitions which are not part of the lateral force-resisting system shall be laterally supported in either the vertical or horizontal direction to resist wind and seismic loads. (ASCE/SEI 7-10, Sections 13.3.1 and 13.4)
	S11	All architectural, mechanical, and electrical components shall be installed to resist the seismic design forces specified per ASCE/SEI 7-10 section 13.2 unless exempt as listed in ASCE/SEI 7-10 section 13.1.4. Detail proposed method of compliance for each affected component including but not limited to nonstructural partitions, suspended ceilings, mechanical equipment, HVAC ductwork, electrical conduits, plumbing supply and waste piping, and fire-protection sprinkler piping. Indicate member sizes, support connections, and spacing requirements. Compliance for this project shall be based upon the requirements of Seismic Design Category C except for projects classified as Risk Category IV- in which case the requirements of Seismic Design Category D shall apply. Note: For design assistance, refer to SMACNA Seismic Restraint Manual: Guidelines for Mechanical Systems (third edition). (ASCE/SEI 7-10 Sections 13.5 and 13.6)
	S12	Provide detail(s) for installation of all gas piping to resist the seismic design forces specified per ASCE/SEI 7-10 section 13.3.1 and 13.6.8 except for piping located in Seismic Design Categories A and B and unless exempt as stated in ASCE/SEI 7-10 section 13.6.8.3. Indicate member sizes, support connections, and spacing requirements. (ASCE/SEI 7-10 Sections 13.1.3, 13.1.4, 13.3.1, and 13.6.8)
	S13	Component seismic attachments shall be positive connections without consideration of frictional resistance and shall be capable of resisting the prescribed seismic design force for each of two orthogonal directions (transverse and longitudinal). (ASCE/SEI 7-10 Section 13.3.1)
	S14	Essential architectural, mechanical, and electrical components shall be designed, arranged, and installed to ensure that the failure of any component during seismic design conditions shall not affect the operation of any other essential component. Essential architectural, mechanical, and electrical components include components for structures classified as Risk Category IV or components with an assigned importance factor (Ip) greater than 1.0. Document on plans the proposed methods for compliance. (ASCE/SEI 7-10 Sections 1.5.1 and 13.1.3)
	S15	Identify on plans all locations at which essential mechanical and electrical components (including but not limited to HVAC ductwork, electrical conduits, plumbing supply and waste piping, gas piping, and fire-protection sprinkler piping) are routed across structural expansion joint(s) for components in structures classified as Risk Category IV and for components with an assigned importance factor (Ip) greater than 1.0. Provide details that indicate installation of each component to adequately accommodate the relative seismic displacements at the expansion joint(s) for compliance with ASCE/SEI 7-10 Sections 13.3.2, 13.6.5, 13.6.6, 13.6.7, and 13.6.8. Note: For design assistance, refer to SMACNA Seismic Restraint Manual: Guidelines for Mechanical Systems (third edition). (ASCE/SEI 7-10 Sections 13.3.2, 13.6.5, 13.6.6, 13.6.7, and 13.6.8.)
	S16	The fire-protection sprinkler system for each building shall be installed to resist the seismic design forces and displacements specified per ASCE/SEI 7-10 Sections 13.3.1 and 13.3.2. State the following (verbatim) on the architectural cover sheet: “Plans for fire-protection sprinkler piping including complete seismic support details shall be reviewed and approved by the COA Fire Marshal’s Office prior to installation for compliance with ASCE/SEI 7-10 Sections 13.3.1, 13.3.2, and NFPA 13”. (ASCE/SEI 7-10 Sections 13.3.1, 13.3.2, and NFPA 13”.)

CONCRETE

	C1	Specify on the drawings the required sizes for all concrete structural elements including but not limited to spread footings, continuous strip footings, thickened slab footings, walls, grade beams, pilasters, pedestals, deep foundations (caissons, piles and pile caps), elevated slabs, beams, and columns. (IBC Sections 1603.1, 1807, 1808, 1809, 1810, 1901.2, 1901.3, 1905, 1906, and ACI 318-11)

	C2	Indicate the required type, size, spacing, and location of all reinforcement in concrete structural elements. (IBC Sections 1807.1.5, 1808.8, 1810.3.8, 1810.3.9, 1901.2, 1901.3, 1905, 1910.4, and 1912.4)
	C3	Specify on the structural drawings the 28-day design compressive strength (fc) of concrete for all structural elements. (IBC sections 1808.8.1, 1901.3, and 1904.2)
	C4	Indicate on the structural drawings the required material specifications for all steel reinforcement to be placed in concrete construction including ASTM designation, and material grade or yield strength (KSI) for compliance with. (ACI 318-11 section 3.5. (IBC Section 1901.3)
	C5	Specify on the structural drawings that steel reinforcement to be welded shall conform to the requirements of ASTM A 706 and that welding shall be in accordance with AWS D1.4, Structural Welding Code – Reinforcing Steel by American Welding Society. (IBC Section 1901.3, and ACI 318-11 Section 3.5)
	C6	Specify that the bottom of all foundations shall extend a minimum of twelve (12) inches below the top of finished grade. (IBC Section 1809.4 and 1809.5)
	C7	Specify on the drawings the minimum width of twelve (12) inches for all footings that resist loads. Alternatively, submit a subsurface investigation report sealed and signed by a professional geotechnical engineer licensed in the state of Georgia which documents the structural adequacy of footings less than twelve (12) inches in width. (IBC Section 1809.4)
	C8	Specify on the drawings the required thickness of concrete and the corresponding reinforcement for all slabs on grade. (IBC Sections 1901.3 and 1907)
	C9	Specify placement of a 6 mil (minimum) polyethylene moisture barrier (with joints lapped not less than 6 inches) directly beneath all interior concrete slabs on grade. Alternatively, the designer-of-record shall state on drawings that omission of the moisture barrier beneath the concrete slab on grade will not be detrimental to the intended use of the building. (IBC Section 1907)
	C10	Specify on the drawings the minimum required concrete cover for reinforcement for all concrete structural elements, including but not limited to foundations, slabs, walls, beams, and columns. (IBC Sections 1901.3)
	C11	Specify on the drawings the minimum required lap splice length for each type and size of steel reinforcement in compression and tension for all concrete structural elements including but not limited to foundations, slabs, walls, beams, and columns. (IBC Section 1901.3, and ACI 318-11 Sections 12.14 thru 12.19)
	C12	Indicate on structural drawings that the design of concrete structural elements including walls, formed slabs, beams, and columns is in accordance with ACI 318-11 (Building Code Requirements for Structural Concrete). (IBC Section 1901.2)
	C13	Detail continuous beam tension reinforcement required for positive moment at mid-span and for negative moment at supports including stirrups for compliance with the structural integrity requirements of. (ACI 318-11 Section 7.13. IBC Section 1901.2).
	C14	Specified thickness of structural concrete element (including but not limited to footing, slab, wall, beam) does not provide the minimum required embedment depth for the proposed reinforcement beyond either construction joint or free edge of element to ensure full tensile development in accordance with ACI 318-11 Sections 12.2, 12.4, and 12.5 for adequate transfer of design forces. (IBC Section 1901.2)
	C15	Specify on the structural drawings the type, size, and spacing of anchors required for connection of steel framing components to concrete structural elements including but not limited to headed bolts, headed studs, hooked (J- and L-) bolts, and expansion-type bolts. (IBC Sections 1901.3, 1908, and 1909)
	C16	Specify on structural drawings the minimum required embedment depth into concrete for all anchors required for connection of steel framing components to concrete structural elements. (IBC Sections 1901.3, 1908, and 1909)
	C17	For each anchor (connecting steel framing components to concrete structural elements) that is installed at a distance less than the specified anchor embedment depth from the edge, specify on structural drawings the minimum required clear distance from the edge of the concrete structural element. (IBC Sections 1908.3 and 1909, and ACI 318-11 Section D.8)
	C18	Indicate on the structural foundation drawings the relative elevations at the top of footings and at top of slab on grade. (IBC Section 1901.3)
	C19	For pre-engineered structural building systems, indicate on the foundation plan the design reactions (gravity, uplift, lateral thrust, etc.) that have been determined by the pre-engineered building structural engineer and utilized in the design of footings/column anchorage. (IBC Section 1604.9,)
	C20	Specified footing size(s) shall provide for sufficient weight to adequately resist the applicable design uplift and overturning forces indicated on the foundation plan for each pre-engineered building structure. (IBC Section 1604.8.1)
	C21	Specify on the drawings that control joints in the floor slab on grade shall be offset from the centerline of columns which are supported by monolithic cast slab footings. (IBC Sections 1901, 1908, and 1909)

	C22	State on the drawings that results for all concrete compressive strength tests shall be available on the job site for review by the inspector. (ACI 318-11 Section 1.3,)
	C23	Prior to final authorization of the building permit, submit complete fabrication drawings sealed and signed by a professional engineer registered in the state of Georgia that address the structural requirements for construction of all types of concrete wall panels including precast and tilt-up. Drawings shall indicate required steel reinforcement for the panels, steel embeds required for connections between wall panels and for anchorages between the roof/floor structure and wall panels, the minimum required 28-day concrete compressive strength, and all design loads including gravity, wind, and seismic. (IBC Sections 1603.1 and 1901.3)
Post tension	C24	➢ State and provide the following: -Provide structural framing plans where clearly showing the load carrying cables -Each post tensioned tendons capacity. -Numbers of tendons per beams and girders. -Jacking and stressing sequence of the tendons. -Tendons ending condition details of the post tensioned beams and girders typical and or each specific if differs. -Percentage of the elongation tolerance and the allowable elongation percentages

MASONRY DESIGN

	M1	Specify on the structural drawings the required type(s) of mortars per ASTM C 270. (ASTM C 270; IBC Section 2103.9)
	M2	Specify on structural drawings conformance of masonry grout with ASTM C 476. Alternatively, specify minimum required grout compressive strength equal to f'm (compressive strength of masonry) but not less than 2000 psi as determined in accordance with ASTM C 1019. (ASTM C 1019; IBC Sections 2103.13 and 2105.2.2.1.2)
	M3	Specify on the structural drawings the required net area compressive strength (f'm) of masonry. (IBC Sections 2105.2, 2107.1, and 2108.1; TMS 402-11/ACI 530-11/ASCE 5-11 Sections 2.1.3.1 and 3.1.8.1.1)
	M4	Masonry net area compressive strength (f'm) greater than 1500 psi (for concrete masonry) and 2500 psi (for clay masonry) shall be verified either by prism tests conducted per ASTM C 1314 or by unit compressive strength tests performed per ASTM C 140 (for concrete masonry) and ASTM C 67 (for clay masonry). State on structural drawings that test reports that document either a minimum unit compressive strength of ___(psi) or a prism minimum compressive strength (f'm) of ___(psi) shall be submitted to the building inspector. Note: For testing of prisms, at least one test shall be performed prior to construction and for each 5,000 square feet of wall surface area but not less than one set of three test prisms for each project. (IBC Sections 1704.5 and 2105.2.2.2, and TMS 602-11/ACI 530.1-11/ASCE 6-11 Section 1.4)
	M5	Specify on the structural drawings the required material specifications for all steel reinforcement to be placed in masonry construction including ASTM designation, and material grade or yield strength (KSI). (IBC Sections 2101.3 and 2103.14)
	M6	Structural backing for masonry veneer shall comply with the Span/240 deflection limit of IBC Table 1604.3. Submit engineering documentation which substantiates compliance for all structural components to which veneer anchor ties are attached including but not limited to wall studs greater than ten (10) feet in height, structural siding, and girts subject to the applicable wind and seismic design loads. (IBC Section 1604.3)
	M7	Specify the required type, size, and gauge of steel anchors for attachment of masonry veneer to structural backing including but not limited to corrugated sheet metal anchors, sheet metal anchors, wire anchors, joint reinforcement, and adjustable anchors. Note: Corrugated sheet metal anchors are allowed only for attachment of veneer to wood backing per TMS 402-11/ACI 530-11/ASCE 5-11 sections 6.2.2.6 thru 6.2.2.11. (IBC Sections 1405.6, 2101.3, and 2103.14; TMS 402-11/ACI 530-11/ASCE 5-11 Sections 6.2.2.5 thru 6.2.2.11)
	M8	Specify on the drawings the required spacing (horizontal and vertical) of anchors for attachment of masonry veneer to structural backing. Anchor spacing shall not exceed 32 inches horizontally or 18 inches vertically with at least one anchor for each 3.5 square feet of wall area reduced to 2.67 square feet for adjustable two-piece anchors. (IBC Sections 1405.6 and 2101.3; TMS 402-11/ACI 530-11/ASCE 5-11 Section 6.2.2.5.6)
	M9	Indicate on the structural drawings the structural construction requirements for lintels that support masonry above openings and supplement with details that indicate the applicable reinforcement and end bearing conditions. (IBC Sections 2101.3, 2104.1.5, and 2205; TMS 402-11/ACI 530-11/ASCE 5-11 Section 1.13)
	M10	Provide details which indicate the required anchorage of masonry walls to roof and floor structure to transfer the applicable horizontal design forces acting perpendicular and parallel to the wall. (IBC Sections 1604.8.2, 2101.3, and 2106.1; TMS 402-11/ACI 530-11/ASCE 5-11 Sections 1.18.2.1, 1.18.2.2, and 1.18.2.3)
	M11	Specify on the structural drawings the type, size, and spacing of anchors required for connection of steel framing components to masonry structural elements including but not limited to headed bolts, headed studs, hooked (J- and L-) bolts, and expansion-type bolts. (IBC Sections 2101.3, and 2103.14; TMS 402.1-11/ACI 530.1-11/ASCE 5.1-11 Section 2.4)
	M12	Specify on the structural drawings the minimum required embedment depth of all anchors into grouted masonry. (IBC Section 2101.3, and TMS 402-11/ACI 530-11/ASCE 5-11 Section 1.17)
	M13	Specify on the structural drawings the required type, size, and spacing of all horizontal and vertical reinforcement in masonry walls to adequately resist the applicable gravity, wind, and seismic design forces.

		(IBC Section 2101.3, and TMS 402-11/ACI 530-11/ASCE 5-11 Sections 1.18.3.2.3.1, 1.18.3.2.4, 1.18.3.2.5, 1.18.3.2.6, 2.3, and 3.3)
	M14	Specify the minimum required lap splice length for reinforcement in masonry as determined by eitherEquation 21-1 of IBC Section 2107.2 or Section 2.1.7.1.1 of TMS 402-11/ACI 530-11/ASCE 5-11. Note: If Equation 21-1 of IBC is used, in regions of flexure for reinforced masonry where the design tensile stress in the reinforcement exceed 80% of the allowable tensile stress, the required length of lap determined by Equation 21-1 shall be increased by 50%. (IBC section 2107.2 and TMS 402-11/ACI 530-11/ASCE 5-11 Section 2.1.7.1.1)
	M15	Specify on the structural drawings the type(s) of masonry shear walls proposed for the basic seismic-force-resisting system: ordinary reinforced, intermediate reinforced, or special reinforced. (IBC Section 2106.1, and TMS 402-11/ACI 530-11/ASCE 5-11 Section 1.18.3.2)
	M16	Ordinary reinforced masonry shear walls shall be reinforced both vertically and horizontally in accordance with the minimum requirements of TMS 402-11/ACI 530-11/ASCE 5-11 section 1.18.3.2.4. For vertical wall reinforcement, specify at least one no. 4 full height vertical rebar at all corners, within 16 inches of each side of openings, within 8 inches of each side of control and expansion joints, within 8 inches of the ends of walls, and at a maximum spacing of ten (10) feet. For horizontal wall reinforcement, specify either two (2) W1.7 wires at a maximum spacing of 16 inches or a continuous bond beam reinforced with at least one no. 4 rebar at a maximum spacing of ten (10) feet. Specify additional horizontal reinforcement at the top and bottom of wall openings which shall extend at least 24 inches and not less than 40 bar diameters beyond the opening; continuously along connections between wall and roof/floor structure; and within 16 inches of the top of walls. (IBC Section 2101.3, and TMS 402-11/ACI 530-11/ASCE 5-11 Sections 1.18.3.2.1 and 1.18.3.2.4)
	M17	Intermediate reinforced masonry shear walls shall be reinforced both vertically and horizontally in accordance with the minimum requirements of TMS 402-11/ACI 530-11/ASCE 5-11 section 1.18.3.2.5. For vertical wall reinforcement, specify at least one no. 4 full height vertical rebar at all corners, within 16 inches of each side of openings, within 8 inches of each side of control and expansion joints, within 8 inches of the ends of walls, and at a maximum spacing of 48 inches. For horizontal wall reinforcement, specify either two (2) W1.7 wires at a maximum spacing of 16 inches or a continuous bond beam reinforced with at least one no. 4 rebar at a maximum spacing of ten (10) feet. Specify additional horizontal reinforcement at the top and bottom of wall openings which shall extend at least 24 inches and not less than 40 bar diameters beyond the opening; continuously along connections between wall and roof/floor structure; and within 16 inches of the top of walls. (IBC Section 2101.3, and TMS 402-11/ACI 530-11/ASCE 5-11 Section 1.18.3.2.5)
	M18	Special reinforced masonry shear walls shall be reinforced both vertically and horizontally in accordance with the minimum requirements of TMS 402-11/ACI 530-11/ASCE 5-11 section 1.18.3.2.6. The sum of the cross-sectional area of horizontal and vertical reinforcement shall be at least 0.002 times the gross cross-sectional area of the wall. For horizontal wall reinforcement, specify a minimum cross-sectional area of reinforcement of 0.0007 times the gross cross-sectional area of the wall for running bond or a minimum of 0.0015 times the gross cross-sectional area of the wall for stack bond. For vertical wall reinforcement, specify a minimum cross-sectional area of reinforcement of 0.0007 times the gross cross-sectional area of the wall but not less than one-third of the required shear reinforcement. Reinforcement shall be uniformly distributed with a maximum spacing at the smaller of one-third the length of the shear wall, one-third the height of the shear wall, or 48 inches except spacing shall be reduced to a maximum of 24 inches for stack bond masonry. Shear reinforcement shall be anchored around vertical bars with a standard hook. Note: Wythes of stack bond masonry shall be constructed of fully grouted hollow open-end units, fully grouted hollow units laid with full head joints, or solid units. (IBC Section 2101.3, and TMS 402-11/ACI 530-11/ASCE 5-11 Section 1.18.3.2.6)
	M19	Detail on the structural drawings the method(s) of compliance for the required type, size, and spacing of anchors for attachment of walls to structural elements or perpendicular walls that provide lateral support. Note: Exterior masonry walls that are not part of the lateral force-resisting system shall be laterally supported in either the vertical or horizontal direction to resist wind and seismic loads. (IBC Section 1604.8, and TMS 402-11/ACI 530-11/ASCE 5-11 Section 1.18.2.1, and ASCE/SEI 7-10 Sections 12.11.1, 12.14.7.7, and 26.1.1)
	M20	Provide details that indicate the proposed lateral support of for interior nonstructural masonry partitions that are not part of the lateral force-resisting system to adequately resist a lateral seismic force (Fp) determined in accordance with ASCE/SEI 7-10 section 13.3.1. Note: Each partition shall be designed to cantilever or shall be reinforced in either the horizontal or vertical direction dependent upon the location of the lateral supporting elements. For vertical wall reinforcement, specify at least one no. 4 full height vertical rebar at a maximum spacing of 120 inches (48 inches for Seismic Design Category D) and within 16 inches of each end of partition. For horizontal wall reinforcement, specify either two (2) W1.7 wires at a maximum spacing of 16 inches or a continuous bond beam reinforced with at least one no. 4 rebar at a maximum spacing of 48 inches with reinforcement within 16 inches of the top and bottom of the partition. Each partition shall be designed to ensure independent structural stability and shall be isolated from the main structure (including but not limited to floor/roof framing, columns, and shear walls) to prevent the transfer of vertical and lateral forces into the partition. Isolation joints and all connections between the partitions and structural elements that provide lateral support shall be designed to accommodate the design story drift. (IBC Section 2101.3, and ASCE/SEI 7-10 Sections 13.3.1 and 13.5; TMS 402-11/ACI 530-11/ASCE 5-11 Sections 1.18.4.3.1, 1.18.4.4.1, and 5.1.2.2)
	M21	Provide details for the construction of each fire wall which ensure that the wall is structurally independent of all other construction so that new and/or existing construction on either side of the fire wall can collapse under fire conditions without affecting the structural integrity of the wall. Each fire wall shall be nonloadbearing and shall be designed to adequately resist the applicable lateral design forces including 5 psf for interior walls, seismic for all walls, and wind for exterior walls. Specify sufficient clearance between face of fire wall and adjacent steel framing on each side to accommodate thermal expansion of the steel structure without causing damage to the wall. (IBC Sections 706 and 1607.14 and IBC Table 721.1(2), and ASCE/SEI 7-10 Section 13.5 and Chapter 26, and NFPA 221-09, and NCMA-TEK Bulletin 5-8B)
	M22	Anchored brick veneer or stone veneer shall not be more than 30 feet height. Maximum allowable weight 50 psf and or maximum thickness 5 inches. Lintel shall be non-combustible to hold brick veneer. For gable roof height maximum 38 feet. When veneer used as an interior finish, it shall have maximum weight 40psf. (IBC SEC-1405,1406; IRC-703.7 and table R-703.7(1) and ACI-530 SEC-602)

STEEL

	ST1	Specify and detail on the structural drawings the required types, sizes, and locations for structural framing components including but not limited to beams, columns, joists, joist girders, purlins, girts, and braces. (IBC Sections 1603.1, 2205.1 and 2207.2,)
	ST2	Specify on the drawings the required material specifications for all steel framing components and connectors including ASTM designation, yield strength (KSI), and material grade (as applicable). (IBC Sections 2203.1, 2205.1, 2210.1, and 2211.1)
	ST3	Specify on the structural drawings that bolted connections shall be assembled and inspected in accordance with RCSC-2009 (Specification for Structural Joints using High-Strength Bolts). (IBC Sections 1705.2.1 and 2204.2, and ANSI/AISC 360-10 Section N5.6)
	ST4	Specify on the drawings that all structural welded joints shall conform to the provisions of AWS D1.1-10, Structural Welding Code by American Welding Society and that the proof of Welder Certification shall be available at the job site during times of inspection. (IBC Sections 1705.2.2.1 and 2204.1, and ANSI/AISC 360-10 Sections N5.4 and N5.5)
	ST5	Provide steel details in accordance with the provisions of AISC 341-10 for steel lateral load resisting systems (except for "steel systems not specifically detailed for seismic resistance" with a response modification coefficient R of 3.0). (IBC section 2205.2)
	ST6	Specify on the structural drawings that the design of special connections between steel framing components by other than the project structural engineer-of-record shall be performed by a professional engineer registered in the state of Georgia including but not limited to brace end connections, moment-resisting connections, modified beam seat connections, and member splice connections. Design forces and reactions for each applicable connection shall be indicated on the structural drawings. (IBC Sections 1603.1, 1604.2, 1604.4, 1604.10, 2204, and 2205)
	ST7	Specify on the drawings the required type, size, and gauge of metal deck applicable to floor, roof, and wall construction. (IBC Sections 1603.1 and 2210)
	ST8	Specify on the drawings the required type, size, and spacing of fasteners for attachment of metal floor and roof deck to supports (including side laps). Note: Attachments shall provide adequate shear capacity and stiffness to resist the applicable lateral wind and seismic design forces. (IBC Sections 1603.1, 1604.4, and 2210, and ASCE/SEI 7-10 Sections 12.1.1, 12.10.1, 12.14.7.4 and 26.1.1, and Steel Deck Institute Diaphragm Design Manual- third edition)
	ST9	Specify on the drawings the required type, size, and spacing of fasteners for attachment of metal wall panels to supports (including side laps) to adequately resist the applicable design wind pressures acting normal to the face of wall. (IBC Sections 1603.1, 1609.1 and 2210, and ASCE/SEI 7-10 Section 26.1.1 and Chapter 30)
	ST10	Provide details that indicate that the bottom surfaces of bearing plates and column base plates shall be grouted to insure full bearing contact on supports except for plates two (2) inches or less in thickness which bear on surfaces (such as concrete floors) constructed to specific levelness tolerances. (IBC Sections 1603.1 and 2205.1, and AISC Steel Construction Manual, fourth edition, Part 14)
	ST11	Structural details shall locate the edge of each joist and joist girder bearing plate at a distance of ½ inch or less from the inside face of masonry or concrete support except for the condition in which the top of plate is level with the support bearing surface. (IBC sections 1603.1, 2207.1, and 2207.2, and Steel Joist Institute Standard Specifications- 2010)
	ST12	Provide a design load diagram for each open web steel joist which supports concentrated load (in addition to the applicable uniform gravity design loads) for design input by the joist manufacturer. Diagrams shall clearly specify the magnitude and location of all design loads including but not limited to uniform and concentrated. Alternatively, specify joists (such as KCS series) which have been designed by the manufacturer for constant moment and shear capacity along the entire span. (IBC Sections 1603.1, 1604.2, 1606.2, 1607.4, 2207.1, and 2207.2)
	ST13	Provide details for stiffening the top and/or bottom chord of the open web steel joists at all locations in which the concentrated loads from the proposed mechanical equipment do not align with joist panel points. (IBC Sections 1603.1, 1604.2, 1606.2, 1607.4, and 2207.2)
	ST14	Specify on the drawings the required size, gauge, spacing, and height of light gauge steel studs for construction of exterior walls to ensure compliance with the applicable lateral deflection limits of IBC table 1604.3 under design wind conditions. (IBC Sections 1603.1, 1604.3, and 2211)
	ST15	Specify on the drawings the required type, size, quantity, and spacing of fasteners for connections between all light gauge steel framing components (studs, joists, rafters, runner track, framing clips, strap bracing, joist web stiffeners, horizontal bracing for loadbearing studs) including attachment to primary support structure and foundation. (IBC Sections 1603.1, 1604.4, and 2211)
	ST16	Provide detail(s) to indicate the required connection of full height light gauge steel wall framing to floor structure to accommodate the vertical deflection due to the applicable gravity design loads. Alternatively, submit engineering calculations which document the structural adequacy of the light gauge steel wall framing to support the applicable floor gravity design loads. (IBC Sections 1604.4 and 2211)
	ST17	Provide detail(s) to indicate the required connection at top of full height light gauge steel wall framing to roof structure (excluding direct interface with roof deck only) to adequately accommodate the vertical deflection due to the applicable gravity design loads. Alternatively, submit engineering calculations which document the structural adequacy of the light gauge steel wall framing to support the applicable roof gravity design loads. (IBC Sections 1604.4 and 2210)
	ST18	Specify on the drawings that the structural backing to which masonry veneer anchor ties are attached shall be corrosion resistant and have a base metal thickness of at least 0.043 inch (18 gauge minimum).

		(IBC Section 1405.6, and TMS 402-11/ACI 530-11/ASCE 5-11 Section 6.2.2.7.3)
	ST19	Identify on the structural plans all light gauge cold-formed steel frame shear walls that have been designed to resist the applicable lateral wind and seismic forces as specified by IBC sections 1609 thru 1613. Specify on the plans the shear wall construction requirements including the size, gauge, and spacing of wall studs, the proposed wall sheathing material (wood structural panel, gypsum board panel, sheet steel), and the required attachment pattern for compliance with the requirements of AISI S213-07/SI-10 for the appropriate shear wall type. (IBC Sections 1603.1, 1604.4, 1604.9, 1604.10, 2211.1, 2211.5, and 2505.2)
	ST20	Specify on the drawings that the steel material for studs and track for shear wall construction (in which steel or wood sheathing provides lateral resistance) shall comply with the requirements of ASTM A1003 and shall have a thickness of either 18 or 20 gauge for Grade 33 Type H steel and a thickness of at least 16 gauge for Grade 50 Type H steel. (IBC Sections 1603.1, 2211.1, 2211.5, and 2505.2, and AISI S213-07/SI-10, Table C2.1-3)
	ST21	Specify required type, size, and spacing of screws for attachment of shear wall sheathing (wood structural panel, gypsum board panel, sheet steel) to light gauge steel wall framing. Attachment shall be in accordance with AISI S213-07/SI-10. (IBC Sections 1603.1, 2211.1, 2211.5, and 2505.2, and AISC S213-07/SI-10)
	ST22	Specify on the drawings the required blocking along all unsupported edges of shear wall sheathing panels (wood structural panel, gypsum board panel, sheet steel) attached to light gauge steel studs. (IBC Sections 1603.1, 2211.1, 2211.5, and 2505.2, and AISI S213-07/SI-10)
	ST23	Specify on the drawings the hold-down anchorage hardware at the ends of each shear wall for conditions in which the overturning moment due to either design wind pressures or seismic design forces exceeds the dead load stabilizing moment. (IBC Sections 1604.4, 1604.9, 2211.1, and 2211.5, and ASCE/SEI 7-10 Sections 12.8.5 and 12.14.8.4; AISI S213-07/SI-10)
	ST24	Provide details which indicate the required connection of each exterior awning or canopy to the supporting structure to adequately resist the applicable design live and wind loads. (IBC Sections 1603.1, 1604.2, 1607.12.2.1, 1607.12.4, and 3105.3)

PREENGINEERED STRUCTURE

	PE1	The fabrication and erection drawings for construction of the pre-engineered building have been reviewed for code compliance and appear to be in compliance with the 2012 International Building Code with Georgia State Amendments. Future revisions to these drawings shall require further review and authorization. At the time of final authorization of the building permit, furnish two (2) complete sets of fabrication and erection drawings for construction of the pre-engineered building.
	PE2	The fabrication and erection drawings for construction of the pre-engineered building are either incomplete or were not included in the submitted plans. Provide complete fabrication and erection drawings for construction of the pre-engineered building which specify the required materials, sizes, and locations for all structural elements including but not limited to beams, columns, portal frames, joists, purlins, girts, braces, arches, wall and roof panels. Provide complete details which clearly indicate required connections between all structural framing components including anchorage to foundation to adequately resist all applicable design loads including gravity, wind, and seismic. Plans shall also specify the required size, quantity, and location of building anchor bolts. (IBC section 1603.1;)
	PE3	Specify on the structural drawings that pre-engineered trusses shall be designed by a professional engineer registered in the state of Georgia. (IBC sections 2210.1, 2211.3, 2301.2, and 2303.4.1)
	PE4	Specify on the structural drawings the applicable design load criteria for both top and bottom chords of pre-engineered floor and roof trusses including but not limited to dead, live, and wind loads. (IBC Sections 1603.1.1, 1603.1.2, 1603.1.8, 1606, 1607, 1609, 2210, 2211.3, and 2303.4.1)
	PE5	Specify on the structural drawings that all hardware (bolts, hangers, straps, etc.) required for connections between pre-engineered trusses shall be designed and specified by the truss design engineer. (IBC Sections 1604.2, 2210, 2211.3, and 2303.4.1)
	PE6	Specify on the structural drawings that pre-engineered metal plate connected wood trusses shall be braced in accordance with BCSI 1-08, "The Guide to Good Practice for Handling, Installing, Restraining and Bracing of Metal Plate Connected Wood Trusses" and related summary sheets. (IBC Section 2303.4.1)
	PE7	State on the structural drawings that "all pre-engineered truss shop drawings shall be available on the job site during the times of inspection and shall bear clear indication that they have been reviewed and approved by the project structural engineer-of-record" (or architect-of-record for projects without a structural engineer-of-record). (IBC Section 1603.1,)
	PE8	Indicate on pre-engineered wood building structural drawings the required material specifications for all framing components including but not limited to design stress values for glued laminated timber in accordance with AITC 117-10 (Standard Specifications for Structural Glued Laminated Timber of Softwood Species). (IBC Sections 2301.2, 2303.1, 2306.1, and 2307.1)
	PE9	Proposed demolition or alteration requires removal of or modifications to existing framing member(s) from the existing pre-engineered steel building. Submit letter sealed and signed by a professional structural engineer registered in the State of Georgia which indicates that the engineer has inspected the existing structure and the proposed structural components to be removed or modified and has determined that the structural integrity of the remaining existing structure will not be adversely affected by the proposed construction. (IBC Sections 1604.2, 1604.6, and 3404,)
	PE10	A Foundation Only Permit for a pre-engineered building requires the submission of both a letter of Engineering Certification and a complete anchor bolt plan in addition to the foundation plan. The letter of Engineering Certification shall be sealed and signed by a professional engineer registered in the state of Georgia and shall state the applicable building code as well as all design loads. (IBC Section 1603.1,)

	PE11	Indicate on the pre-engineered building structural drawings the gravity design loads for the roof structure including but not limited to dead, collateral, and live. (IBC Sections 1602.1, 1603.1.2, 16031.8, 1606, and 1607.12)
	PE12	Indicate on pre-engineered building structural drawings the following wind data applicable to the design of the structure: - Ultimate design wind speed (3-second gust) in miles per hour (mph);- Nominal design wind speed (3 second gust) in miles per hour (mph);- Risk Category;- Wind exposure category; - Internal pressure coefficient(s); (IBC Sections 1603.1.4, 1604.5, 1609.1.1, 1609.3, 1609.3.1, and 1609.4, and ASCE/SEI 7-10 Sections 1.5.1, 26.5.1, 26.7.3, and 26.11.1.)
	PE13	Indicate on pre-engineered building structural drawings the following seismic data applicable to the design of the structure: - Mapped spectral response acceleration coefficients SS and S1; - Design spectral response acceleration coefficients SDS and SD1; - Risk Category; - Importance Factor, (Ie); - Applicable Site Class; - Seismic Design Category; - Basic Seismic Force Resisting System(s); - Response modification coefficients(s), R; - Seismic Response Coefficient(s), Cs; - Design Base Shear(s) for each of two separate and independent orthogonal directions; - Seismic Analysis Procedure. (IBC Sections 1603.1.5 and 1613.3, and ASCE/SEI 7-10 Sections 1.5.1, 11.4, 11.5, 11.6, 12.2, 12.6, and 12.8.)
	PE14	Submit site-specific data prepared (sealed and signed) by a professional engineer or geologist registered in the State of Georgia to substantiate assignment of project site as either Site Class A, B, or C. Report shall be in accordance with ASCE/SEI 7-10 sections 11.4.2 and 20.1. Classification shall be in accordance with ASCE/SEI 7-10 table 20.3-1. (IBC Section 1613.3, and ASCE/SEI 7-10 section 11.4)
	PE15	Values of SS (short period mapped spectral acceleration) and S1 (1-second mapped spectral acceleration) shall not be less than 0.21g and 0.095g, respectively, for construction sites located in COA unless substantiated by a site-specific seismic hazard analysis report prepared (sealed and signed) by a professional engineer or geologist registered in the State of Georgia. Report shall be in compliance with ASCE/SEI 7-10 section 11.4.7 and chapter 21. (IBC Section 1613.3, and ASCE/SEI 7-10 section 11.4)
	PE16	Design values indicated on the structural drawings for the spectral response acceleration coefficients SDS and SD1 shall not be less 0.22g and 0.15g, respectively, for construction sites in COA which are classified as Site Class D unless values are substantiated by a site-specific seismic hazard analysis report prepared (sealed and signed) by a professional engineer or geologist registered in the State of Georgia. (IBC Section 1613.3, and ASCE/SEI 7-10 section 11.4)
	PE17	If the Seismic Design Category has been determined solely from ASCE/SEI 7-10 Table 11.6-1, submit calculations sealed and signed by the project engineer-of-record which clearly document compliance with the following: - The approximate fundamental period of the structure (Ta) in each of the two orthogonal directions determined in accordance with ASCE/SEI 7-10 section12.8.2.1 is less than 0.8 Ts (determined in accordance with ASCE/SEI 7-10 section 11.4.5. - The seismic response factor (Cs) is determined using equation 12.8-2 of ASCE/SEI 7-10 section 12.8.1.1. - Each floor and roof diaphragm is defined as rigid per ASCE/SEI 7-10 section 12.3.1, or, if the diaphragms are flexible, the distance between vertical elements of the seismic force resisting system does not exceed forty feet. (ASCE/SEI 7-10 section 11.6)
	PE18	For steel lateral load resisting systems (except for "Steel Systems not Specifically Detailed for Seismic Resistance" with a response modification coefficient, R, of 3.0), the structural system shall be designed and detailed in accordance with the provisions of AISC 341-10 (IBC Section 2205.2)
	PE19	Indicate on the pre-engineered building structural drawings the required material specifications for all steel framing components and connectors including ASTM designation, yield strength (KSI), and material grade (as applicable). (IBC Sections 2203.1, 2204.2, 2205.1, 2210.1, and 2211.1)
	PE20	Indicate on the pre-engineered building structural drawings the required types, sizes, and locations for structural framing components including but not limited to beams, columns, joists, joist girders, purlins, girts, and braces. (IBC Sections 1603.1, 2205.1 and 2207.2,)
	PE21	Specify on pre-engineered steel building structural drawings the required type, size, and gauge of metal deck applicable to floor, roof, and wall construction. (IBC Sections 1603.1 and 2210)
	PE22	Specify on pre-engineered steel building structural drawings the required type, size, and spacing of fasteners for attachment of metal floor and roof deck to supports (including side laps). Attachments shall provide adequate resistance of the applicable lateral wind and seismic design forces. NOTE: Roof deck installation shall be consistent with that specified on the architectural construction documents to ensure compliance with energy code. (IBC Sections 1603.1, 1604.4, and 2210, and ASCE/SEI 7-10 Sections 12.1.1, 12.10.1, 12.14.7.4, and 26.1.1, and Steel Deck Institute Diaphragm Design Manual, third edition)
	PE23	Specify on pre-engineered steel building structural drawings the required type, size, and spacing of fasteners for attachment of metal wall panels to supports (including side laps) to adequately resist the applicable design wind pressures acting normal to the face of wall. (IBC Sections 1603.1, 1609.1 and 2210, and ASCE/SEI 7-10 Section 26.1.1 and Chapter 30)
	PE24	When specified on the architectural construction documents for compliance with the energy code, indicate on pre-engineered building structural drawings 1" (thick) X 3" (wide) thermal blocks along the top of roof purlins for each building to accommodate the required insulation for compliance with ANSI/ASHRAE/IESNA Standard 90.1-2007. (IBC Section 1301.1.1)

	PE25	Indicate on pre-engineered building drawings that the design is in accordance with the 2012 International Building Code with the 2014 Georgia Amendments.

STRUCTURAL RETAINING WALL

	RT1	Submit a copy of COA-approved site grading plan which clearly indicates the applicable location for each retaining wall and for each detention pond wall (dam) and which specifies the elevation at top and bottom of each wall. Alternatively, for retaining walls that are located on single-family residential lots, provide a plan which clearly indicates the location of each dwelling, property line, and proposed wall including elevation at top and bottom of wall.
	RT2	Provide structural construction details for each retaining wall and for each detention pond wall (dam) as shown on City authorized site grading plans which specify required materials, wall and footing dimensions, reinforcing (type, size & spacing), concrete design strength, drainage method for relief of hydrostatic pressure, type of backfill material, and slope of backfill finished grade. (For modular type retaining walls, details shall indicate the required types, spacing, and embedment length of all geogrid reinforcement.) Note: Modular type construction is not suitable for dam walls which are penetrated by storm water outlet structures. (IBC Section 1807.2,)
	RT3	Structural construction details for each retaining wall exceeding six (4) feet in height and for each detention pond wall (dam) exceeding five (4) feet in height shall be sealed and signed by a professional structural engineer registered in the State of Georgia.
	RT4	Specify on the structural drawings for each retaining wall which exceeds 4 feet in height and for each detention pond wall (dam) the applicable soil parameters utilized in the wall design including but not limited to allowable soil bearing pressure, equivalent lateral fluid pressure (active and passive), surcharge load, internal angle of friction, coefficient of friction, and soil density. (IBC Section 1807.2)
	RT5	Specify on the structural drawings the horizontal wall reinforcement. (IBC Section 1901.2; ACI 318-11 sections 14.1.2 and 14.3.3).
	RT6	Specify on the structural drawings the vertical wall reinforcement. Vertical wall reinforcement shall comply with minimum values from ACI 318, Section 10.5.1 unless reinforcement meets the exception of ACI 318 Section 10.5.3. (IBC Section 1901.2, and ACI 318-11 Sections 10.5 and 14.1.2)
	RT7	Submit calculated factor of safety result value for over turning and sliding; sealed and signed by the structural engineer-of-record which demonstrate the structural adequacy of each proposed wall to resist the applicable design loads within the specified allowable soil bearing pressure and to maintain a minimum factor of safety of 1.5 against overturning and sliding. (IBC Sections 1610.1 and 1807.2).
	RT8	State the following on the structural construction details for each retaining wall which exceeds 10 feet in height (from top of footing) and for each detention pond wall (dam) submitted for building permit: "Prior to construction, soil design parameters stated on the COA structural construction wall details including but not limited to allowable soil bearing pressure, equivalent lateral fluid pressure (active and passive), internal angle of friction, coefficient of friction, and soil density shall be field-verified by a COA approved Third Party Geotechnical Testing Firm. A corresponding written report sealed and signed by a professional engineer registered in the state of Georgia and employed by the Third Party Geotechnical Testing Firm shall be submitted to COA Chief Commercial Building Inspector prior to construction beyond footing installation. In the event of conflict between field-verified soil parameters and those stated on the COA-approved details, construction shall not proceed until appropriate design modifications submitted by the wall design engineer-of-record have been reviewed and authorized by City Planning Building Plan Review.
	RT9	State the following on the structural construction details for each retaining wall which exceeds 10 feet in height (from top of footing) and for each detention pond wall (dam) submitted for building permit: "Prior to issuance of a Certificate of Completion for each wall by City Planning, written notification sealed and signed by the wall design engineer-of-record shall be submitted to the City Planning Chief Commercial Building Inspector which acknowledges receipt of a soils investigation report by a COA-approved Third Party Geotechnical Testing Firm and which confirms that all soil parameters applicable to the design of the wall are consistent with those reported as field-verified."
	RT10	Note directly on the plans the name of the COA approved Third Party Geotechnical Testing Firm responsible for performing the subsurface soils investigation and for verifying the soil design parameters specified on the structural construction details for each retaining wall which exceeds 10 feet in height (from top of footing) and for each detention pond wall (dam). Note: The City Planning Approved Third Party Geotechnical Testing Firm and the wall design engineer-of-record shall be independent of one another such that there is no business or employment relationship between parties.

COMMUNICATIONS TOWER STRUCTURE

	T1	Submitted structural drawings are incomplete. Furnish complete foundation and framing plans for tower, which clearly indicate required materials, sizes, and locations for all structural elements. Provide complete details which clearly indicate required connections between all structural framing components including anchorage to foundation to adequately resist all applicable design loads including gravity, wind, and seismic. (IBC Section 1603.1)
	T2	Submit engineering documentation, sealed and signed by a professional engineer registered in the State of Georgia, which substantiates (via engineering analysis) the structural adequacy of the existing tower to receive the additional antennas at the proposed indicated elevation(s) above grade and based on a basic wind speed not less than 90 MPH. Note: Documentation shall include a copy of the original design drawings for the tower structure which have been sealed and signed by the engineer-of-record. The sizes and properties of the structural components considered in engineering analysis calculations shall be reflected on the original design drawings.

		(IBC Section 3108.1, and TIA/EIA-222-G Annex B)
	T3	Submit complete details, sealed and signed by a professional engineer registered in the State of Georgia, which clearly indicate required structural framing for support of proposed antennas from the existing tower (including direct attachment of antennas to support framing) to adequately resist a minimum design wind speed of 90 MPH. (IBC Section 3108.1, and TIA/EIA-222-G Sections 2.6 and Annex B)
	T4	Provide details which indicate required anchorage of the equipment building to the foundation to adequately resist all applicable design loads including wind and seismic. (IBC Sections 1603.1, and ASCE/SEI 7-10 Sections 12.1.4 and 26.1.1)
	T5	Provide details for an anti-climbing device on each tower in addition to enclosing the tower with fencing not less than six (6) feet in height.
	T6	Specify on construction documents the materials, finishes, and colors for towers, antennas, buildings and related structures. Towers and antennas shall either have a galvanized steel finish or be painted a neutral color to minimize visual obtrusiveness. Accessory buildings and structures shall utilize materials, textures, and colors which blend the tower facilities to the natural setting and building environment.
	T7	Attach directly to cover sheet of construction documents submitted for permit a signed copy of approved "Tall Structure Permit" (TSP) including all conditions of approval. NOTE: The height of proposed tower and the elevation for each set of proposed antennas shall not exceed that specified by the TSP.

SPECIAL INSPECTIONS

	SP1	Specify on the plans the special (periodic and continuous) inspections required for this project which includes the Schedule of Special Inspection Services in accordance with IBC sections1704.2, 1704.3.1, and 1705.1. Special Inspections may include but not limited to the following: - Steel Construction (IBC Table 1705.2.2) - Concrete Construction (IBC Table 1705.3) - Masonry Construction (IBC Section 1705.4) - Soils (IBC Table 1705.6) - Driven Deep Foundations (IBC Table 1705.7) - Cast-In-Place Deep Foundations (IBC Table 1705.8) - Helical Pile Foundations (IBC Section 1705.9) - Sprayed Fire-Resistant Materials (IBC Section 1705.13) - Mastic and Intumescent Fire -Resistant Coating (IBC Section 1705.14) - EIFS (IBC Section 1705.15) - Special Cases (IBC Section 1705.1.1) - Fire-Resistant Penetrations and Joints (IBC Section 1705.16) - Smoke Control (IBC Section 1705.17) - Seismic Resistance (IBC Section 1705.11) (IBC sections1704.2, 1704.3.1, and 1705.1;IBC Table 1705.2.2; IBC Table 1705.3; IBC Section 1705.4; IBC Table 1705.6; IBC Table 1705.7; IBC Table 1705.8; IBC Section 1705.9; IBC Section 1705.13; IBC section 1705.14; IBC Section 1705.15; IBC Section 1705.16; IBC Section 1705.17; IBC Section 1705.11; IBC Section 1705.1.1)
	SP2	Provide the following note on the Cover Sheet: "Special Inspection reports and final report in accordance with Section 1704.2.4 shall be submitted to the building official prior to the time that phase of work is approved for occupancy". (IBC Section-Amendment 1701.4)
	SP3	Submit 2 copies of the Special Inspections Program documents which include the following: - Statement of Special Inspections, signed and sealed by the Design Professional in Responsible Charge (DPIRC). - Statement of Special Inspections Requirements for Seismic Resistance. - Schedule of Special Inspection Services with all line items indicated as "yes" or "no" and the Special Inspection Agent(s) shall be identified. Note: One of the copies will be returned to the applicant after acceptance by the Building Official.) (IBC Section-Amendment 1701.4 and 1704.3)
	SP4	Submit 2 copies of the metal building systems manufacturer fabricator's certificate of accreditation for IAS AC472 (International Accreditation Service). Accreditation requirements are available at www.iasonline.org/AC472 (IBC Sections 1704.2.5.1 and 1704.2.5.2)

WOOD DESIGN

	W1	Specify on the drawings that wood which is either embedded in earth or concrete, or placed on concrete in direct contact with earth, or directly exposed to the weather shall be preservative-treated including but not limited to posts, beams, columns, joists, sleepers, sills, and sole plates. (IBC Sections 2304.11.2.4, 2304.11.2.7, 2304.11.4, and 2304.11.5)
	W2	The fabrication and erection drawings for construction of the pre-engineered building are either incomplete or were not included in the submitted plans. Provide complete fabrication and erection drawings for construction of the pre-engineered building which specify the required materials, sizes, and locations for all structural elements including but not limited to beams, columns, portal frames, joists, purlins, girts, braces, arches, wall and roof panels. Provide complete details

		which clearly indicate required connections between all structural framing components including anchorage to foundation to adequately resist all applicable design loads including gravity, wind, and seismic. Plans shall also specify the required size, quantity, and location of building anchor bolts. (IBC section 1603.1;)
	W3	Specify on the structural drawings that pre-engineered trusses shall be designed by a professional engineer registered in the state of Georgia. (IBC sections 2210.1, 2211.3, 2301.2, and 2303.4.1)
	W4	Specify on the structural drawings the applicable design load criteria for both top and bottom chords of pre-engineered floor and roof trusses including but not limited to dead, live, and wind loads. (IBC Sections 1603.1.1, 1603.1.2, 1603.1.8, 1606, 1607, 1609, 2210, 2211.3, and 2303.4.1)
	W5	Specify on the structural drawings that all hardware (bolts, hangers, straps, etc.) required for connections between pre-engineered trusses shall be designed and specified by the truss design engineer. (IBC Sections 1604.2, 2210, 2211.3, and 2303.4.1)
	W6	Specify on the structural drawings that pre-engineered metal plate connected wood trusses shall be braced in accordance with BCSI 1-08, "The Guide to Good Practice for Handling, Installing, Restraining and Bracing of Metal Plate Connected Wood Trusses" and related summary sheets. (IBC Section 2303.4.1)
	W7	State on the structural drawings that "all pre-engineered truss shop drawings shall be available on the job site during the times of inspection and shall bear clear indication that they have been reviewed and approved by the project structural engineer-of-record" (or architect-of-record for projects without a structural engineer-of-record). (IBC Section 1603.1,)
	W8	Indicate on pre-engineered wood building structural drawings the required material specifications for all framing components including but not limited to design stress values for glued laminated timber in accordance with AITC 117-10 (Standard Specifications for Structural Glued Laminated Timber of Softwood Species). (IBC Sections 2301.2, 2303.1, 2306.1, and 2307.1)
	W9	Proposed demolition or alteration requires removal of or modifications to existing framing member(s) from the existing pre-engineered steel building. Submit letter sealed and signed by a professional structural engineer registered in the State of Georgia which indicates that the engineer has inspected the existing structure and the proposed structural components to be removed or modified and has determined that the structural integrity of the remaining existing structure will not be adversely affected by the proposed construction. (IBC Sections 1604.2, 1604.6, and 3404,)
	W10	A Foundation Only Permit for a pre-engineered building requires the submission of both a letter of Engineering Certification and a complete anchor bolt plan in addition to the foundation plan. The letter of Engineering Certification shall be sealed and signed by a professional engineer registered in the state of Georgia and shall state the applicable building code as well as all design loads. (IBC Section 1603.1,)
	W11	Indicate on the pre-engineered building structural drawings the gravity design loads for the roof structure including but not limited to dead, collateral, and live. (IBC Sections 1602.1, 1603.1.2, 16031.8, 1606, and 1607.12)
	W12	Indicate on pre-engineered building structural drawings the following wind data applicable to the design of the structure: - Ultimate design wind speed (3-second gust) in miles per hour (mph); - Nominal design wind speed (3 second gust) in miles per hour (mph); - Risk Category; - Wind exposure category; - Internal pressure coefficient(s); (IBC Sections 1603.1.4, 1604.5, 1609.1.1, 1609.3, 1609.3.1, and 1609.4, and ASCE/SEI 7-10 Sections 1.5.1, 26.5.1, 26.7.3, and 26.11.1.)
	W13	Indicate on pre-engineered building structural drawings the following seismic data applicable to the design of the structure: - Mapped spectral response acceleration coefficients SS and S1; - Design spectral response acceleration coefficients SDS and SD1; - Risk Category; - Importance Factor, (Ie); - Applicable Site Class; - Seismic Design Category; - Basic Seismic Force Resisting System(s); - Response modification coefficients(s), R; - Seismic Response Coefficient(s), Cs; - Design Base Shear(s) for each of two separate and independent orthogonal directions; - Seismic Analysis Procedure. (IBC Sections 1603.1.5 and 1613.3, and ASCE/SEI 7-10 Sections 1.5.1, 11.4, 11.5, 11.6, 12.2, 12.6, and 12.8.)
	W14	Submit site-specific data prepared (sealed and signed) by a professional engineer or geologist registered in the State of Georgia to substantiate assignment of project site as either Site Class A, B, or C. Report shall be in accordance with ASCE/SEI 7-10 sections 11.4.2 and 20.1. Classification shall be in accordance with ASCE/SEI 7-10 table 20.3-1. (IBC Section 1613.3, and ASCE/SEI 7-10 section 11.4)
	W15	Values of SS (short period mapped spectral acceleration) and S1 (1-second mapped spectral acceleration) shall not be less than 0.21g and 0.095g, respectively, for construction sites located in Gwinnett County unless substantiated by a site-specific seismic hazard analysis report prepared (sealed and signed) by a professional engineer or geologist registered in the State of Georgia. Report shall be in compliance with ASCE/SEI 7-10 section 11.4.7 and chapter 21. (IBC Section 1613.3, and ASCE/SEI 7-10 section 11.4)
	W16	Design values indicated on the structural drawings for the spectral response acceleration coefficients SDS and SD1 shall not be less 0.22g and 0.15g, respectively, for construction sites in Gwinnett County which are classified as Site Class D unless values are substantiated by a site-specific seismic hazard analysis report prepared (sealed and signed) by a professional engineer or geologist registered in the State of Georgia. (IBC Section 1613.3, and ASCE/SEI 7-10 section 11.4)
	W17	If the Seismic Design Category has been determined solely from ASCE/SEI 7-10 Table 11.6-1, submit calculations sealed and signed by the project engineer-of-record which clearly document compliance with the following:

		- The approximate fundamental period of the structure (Ta) in each of the twoorthogonal directions determined in accordance with ASCE/SEI 7-10 section12.8.2.1 is less than 0.8 Ts (determined in accordance with ASCE/SEI 7-10 section 11.4.5. - The seismic response factor (Cs) is determined using equation 12.8-2 of ASCE/SEI 7-10 section 12.8.1.1. - Each floor and roof diaphragm is defined as rigid per ASCE/SEI 7-10 section 12.3.1, or, if the diaphragms are flexible, the distance between vertical elements of the seismic force resisting system does not exceed forty feet. (ASCE/SEI 7-10 section 11.6)
	W18	For steel lateral load resisting systems (except for "Steel Systems not Specifically Detailed for Seismic Resistance" with a response modification coefficient, R, of 3.0), the structural system shall be designed and detailed in accordance with the provisions of AISC 341-10. (IBC Section 2205.2)
	W19	Indicate on the pre-engineered building structural drawings the required material specifications for all steel framing components and connectors including ASTM designation, yield strength (KSI), and material grade (as applicable). (IBC Sections 2203.1, 2204.2, 2205.1, 2210.1, and 2211.1)
	W20	Indicate on the pre-engineered building structural drawings the required types, sizes, and locations for structural framing components including but not limited to beams, columns, joists, joist girders, purlins, girts, and braces. (IBC Sections 1603.1, 2205.1 and 2207.2,)
	W21	Specify on pre-engineered steel building structural drawings the required type, size, and gauge of metal deck applicable to floor, roof, and wall construction. (IBC Sections 1603.1 and 2210)
	W22	Specify on pre-engineered steel building structural drawings the required type, size, and spacing of fasteners for attachment of metal floor and roof deck to supports (including side laps). Attachments shall provide adequate resistance of the applicable lateral wind and seismic design forces. NOTE: Roof deck installation shall be consistent with that specified on the architectural construction documents to ensure compliance with energy code. (IBC Sections 1603.1, 1604.4, and 2210, and ASCE/SEI 7-10 Sections 12.1.1, 12.10.1, 12.14.7.4, and 26.1.1, and Steel Deck Institute Diaphragm Design Manual, third edition) (IBC Sections 1603.1, 1604.4, and 2210, and ASCE/SEI 7-10 Sections 12.1.1, 12.10.1, 12.14.7.4, and 26.1.1, and Steel Deck Institute Diaphragm Design Manual, third edition)
	W23	Specify on pre-engineered steel building structural drawings the required type, size, and spacing of fasteners for attachment of metal wall panels to supports (including side laps) to adequately resist the applicable design wind pressures acting normal to the face of wall. (IBC Sections 1603.1, 1609.1 and 2210, and ASCE/SEI 7-10 Section 26.1.1 and Chapter 30)
	W24	When specified on the architectural construction documents for compliance with the energy code, indicate on pre-engineered building structural drawings 1" (thick) X 3" (wide) thermal blocks along the top of roof purlins for each building to accommodate the required insulation for compliance with ANSI/ASHRAE/IESNA Standard 90.1-2007. (IBC Section 1301.1.1)
	W25	Indicate on pre-engineered building drawings that the design is in accordance with the 2012 International Building Code with the 2014 Georgia Amendments.
	W26	Average dead load shall not exceed 15 psf for combined roof and ceiling, exterior walls, floors and partitions. Live load shall not exceed 40 psf for floors. Exception: Stone or masonry veneer up to lesser of 5-inch-thick or 50 psf with 30 feet maximum height above a non-combustible foundation. (IBC Section 2308.2)

SHOP DRAWING SUBMMITAL:

Complete structural shop drawings for construction of each building component not designed by the design team-of-record and not specified on the project construction documents shall be sealed and signed by a professional engineer registered in the state of Georgia and get approval from Engineer In record prior to the submittal (See submittal requirements) and shall be available at the job site during the times of inspection.
(IBC Section 1603.1)

Shop drawings are classified into 3 different categories (based on submittal requirements).

Category	Description	Examples of shop drawings	Submittal requirements
Primary	Part of main structure where structural drawings does not cover but depend on the shop drawings	Truss, precast, steel bracing etc.	**Mandatory submittal with main plans**
Secondary	Part of main structure where structural drawings cover partially. Analyzed force and main members specifications are provided.	Post tension, steel stud etc.	**Differed submittal before issuance**
Tertiary	Part of main structure where structural drawings cover all the structural requirements.	Reinforcement, Steel etc	**Differed submittal before inspection**