gwinnettcounty

Building Plan Review - Department of Planning and Development

COMMUNICATION TOWER

CONSTRUCTION CODE COMPLIANCE GUIDELINES

Plan review and permitting requirements for communication towers, antenna co-locations, equipment, structural modifications, and accessory buildings.

Permitting Procedure

1	A Building Permit (BLD) is required for the construction and installation of communication towers, antenna co-locations, equipment, structural modifications, and associated accessory buildings.
2	Submit two (2) sets of construction documents to Building Plan Review. A separate building permit is required for each tower and for each equipment building.
3	Verify with Fire Plan Review the requirements for on-site generator deisel or propane fuel storage tanks. Documents for projects which require review by Fire Plan Review shall bear the Fire Plan Review stamp of authorization.
4	Prior to issuance of a building permit for this project, a Commercial Development Permit (CDP) shall be obtained from the Development Review Section for authorization of corresponding site plans. Contact Development Review Section at (678) 518-6000 for additional information regarding requirements for a development permit.
5	Mechanical, electrical, and plumbing subcontractors shall submit affidavits for each building permit to the Building Permits Section at least two (2) business days before requesting inspections. (Obtain affidavit forms from the Building Permits Section.)
6	Attach directly to cover sheet of construction documents 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.)
7	Submit on business (tenant/developer as applicable) letterhead stationery the value of construction for each structure including all architectural and engineering design fees. The building permit fee shall be based on a cost of five (5) dollars per thousand (1000) dollars of the value of construction. In addition to the building permit fee, a fee of fifty (50) dollars will be assessed for each Certificate of Completion (C. C.) (for each tower and for each unoccupied equipment building) and for each Certificate of Occupancy (C. O.) (for each occupied building).

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8	Construction documents for all pre-manufactured buildings shall be reviewed and approved by the Georgia Department of Community Affairs (DCA) (or DCA-approved Third Party Agency) to indicate compliance with the Industrialized Building Act. At the time of final permit authorization, submit two (2) complete sets of revised construction documents which bear the approval stamp of DCA, and one (1) CD (for Fire Marshal's Office). [NOTE: In absence of DCA approval, Gwinnett County is not authorized to issue a permit for any pre-manufactured building which is assembled at a location other than the project construction job site.]
9	In accordance with the Gwinnett County Construction Code, construction documents for this project shall be permitted within six (6) months of the "Date of Review" or the project shall be deemed to have been abandoned. Abandoned projects shall require resubmission of complete construction documents to Department of Planning and Development for complete review.

Drawing and Document Submittal Requirements

10	Provide all Project Criteria (including the applicable codes) onto the front sheet of construction documents.
11	Indicate the correct street address for each building and structure of the project in the title block of each drawing including the cover sheet.
12	Each drawing (including cover sheet with index) shall bear a legible image copy of the seal of a professional engineer registered in the state of Georgia with handwritten signature thereon.
13	Provide either on or attached to cover sheet of construction documents a complete index of all submitted drawings which address the proposed scope of work including architectural, structural, mechanical, electrical, and plumbing.
14	Indicate on structural drawings the allowable soil bearing pressure in terms of pounds per square foot (PSF) utilized in the design of the tower 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; TIA/EIA-222-G section 9.3)
15	Submit 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, signed and sealed by a professional engineer registered in the state of Georgia, shall provide the information required by IBC section 1806.6. (IBC section 1803.1; TIA/EIA-222-G section 9.3 and ANNEX G)
16	Indicate on tower foundation drawings the applicable tower design base reactions due to gravity and wind load conditions. (TIA/EIA-222-G section 13.2)
17	Indicate on tower structural drawings the applicable design base reactions due to gravity and wind load conditions. (IBC sections 1603.1 and 3108.1; TIA/EIA-222-G section 13.2)

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18	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 based on a basic wind speed not less than 90 MPH. [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; TIA/EIA-222-G section 15.5)
19	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 based on a basic wind speed not less than 90 MPH. [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; TIA/EIA-222-G section 15.5)
20	Provide details which indicate required anchorage of equipment building to foundation to adequately resist all applicable design loads including wind and seismic. (IBC sections 1801.2; ASCE/SEI 7-10 section 12.1.3)
21	Specify required sizes for all concrete structural elements including but not limited to spread footings, continuous strip footings, thickened slab footings, walls, grade beams, piers, pilasters, pedestals, piles and pile caps, beams, and columns. (IBC sections 1603.1, 1807, 1808, 1809, 1810, 1901.2, 1901.3, 1905, and 1906; ACI 318-11; TIA/EIA-222-G section 9)
22	Indicate 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; ACI 318-11; TIA/EIA-222-G section 9)
23	Specify on structural drawings the 28-day design compressive strength (f'c) of concrete for all structural elements including but not limited to foundations, slabs, walls, beams, and columns for compliance with IBC table 1904.2. (IBC sections 1808.8.1, 1901.3, and 1904.2; TIA/EIA-222-G section 9)
24	Indicate on 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; TIA/EIA-222-G section 9)
25	Specify the required thickness of concrete and the corresponding reinforcement for all slabs on grade. (IBC sections 1901.3 and 1907)

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26	Specify the concrete cover for reinforcement for all concrete structural elements including but not limited to foundations, slabs, walls, beams, and columns. (IBC section 1901.3)
27	Specify 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; ACI 318-11 sections 12.14 thru 12.19)
28	Specify on 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; TIA/EIA-222-G section 9)
29	Specify on structural drawings the minimum required embedment depth into concrete for all anchors per item 30. (IBC sections 1901.3, 1908, and 1909)
30	Indicate the required types, sizes, and locations for structural framing components and connectors including but not limited to tapered tubular steel shafts, braces, girts, purlins, struts, plates, bolts, and screws. (IBC sections 1603.1, 2205.1; GCCC section 103.2)
31	Indicate on structural drawings the required material specifications for all steel framing components and connectors including ASTM designation, yield strength (KSI), and material grade (if applicable). (IBC sections 2203.1, 2205.1, 2210.1, and 2211.1; TIA/EIA-222-G section 5.4)
32	Specify on structural drawings that bolted connections shall be assembled and inspected in accordance with RCSC-2009 (Specifications for Structural Joints using High Strength Bolts). (IBC sections 1705.2.1 and 2204.2; TIA/EIA-222-G section 5.5)
33	In accordance with Gwinnett County Construction Code, submit complete electrical drawings which include riser diagrams, meter groupings with disconnects, panel-board sizes and locations, type of wiring and raceway systems, locations and types of receptacles and fixtures, panel-board schedules and load calculations. (GCCC sections 103.2.1 and 103.2.2)
34	Specify on construction documents the materials, finishes, and colors for towers, antennas, buildings and related structures to ensure compliance with Gwinnett County Telecommunications Tower and Antenna Ordinance. 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.
35	Provide details for an effective anti-climbing device on each tower in addition to enclosing the tower with fencing not less than six (6) feet in height. [Gwinnett County Telecommunications Tower and Antenna Ordinance section 108-57(a)]

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Helpful Information

Current Construction Codes:

- The Gwinnet County Construction Code (2015 Version)
- International Building Code, 2012 Edition with 2014, 2015 & 2017 Georgia State Amendments
- International Mechanical Code, 2012 Edition with 2014 & 2015 Georgia State Amendments
- International Plumbing code, 2012 Edition with 2014 & 2015 Georgia State Amendments
- International Fuel Gas Code, 2012 Edition with 2014 & 2015 Georgia State Amendments
- NFPA National Electrical Code, 2011 Edition
- International Energy Conservation Code, 2009 Edition with 2011, 2012 Georgia State Amendments
- International Existing Building Code, 2012 Edition with 2015 Georgia State Amendments
- International Residential Code for One & Two Family Dwellings, 2012 Edition with 2014 & 2015 Georgia State Amendments
- International Swimming Pool and Spa Code, 2012 Edition with 2014 Georgia State Amendments

Building Code Compliance Review Checklist:

For additional information, refer to the Building Code Compliance Checklist available at: www.gwinnettcounty.com/portal/gwinnett/Departments/PlanningandDevelopment/PlanReviewSections/BuildingPlanReview

Contact Information

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