

First Reading: March 5, 2024
Second Reading: March 12, 2024

ORDINANCE NO. 14093

AN ORDINANCE AMENDING CHATTANOOGA CITY CODE,
PART II, CHAPTER 32, ARTICLE XII, STREET
CONSTRUCTION.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA,
TENNESSEE:

SECTION 1. That Chattanooga City Code, Part II, Chapter 32, Article XII, Street Construction, be amended by deleting same in its entirety and substituting in lieu thereof the following:

ARTICLE XII. STREET CONSTRUCTION

Sec. 32-271. Purpose.

The purpose of this Article is to provide specifications and procedures for acceptance of public streets, sewers, stormwater facilities, and other infrastructure dedicated to the public through subdivision plans or otherwise.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-272. Conformity to Official Plans.

When a tract of land to be subdivided includes any part of a proposed road or street shown on the General Plan, Land Use Plan, Major Street Plan, or any other plan adopted by the Planning Commission or City Council, such street right-of-way should be platted by the subdivider in the location so designated, and at the width specified in the subdivision regulations.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-273. Street Design and Construction Standards.

- (a) Pavement, cul-de-sac and right-of-way widths and radii must be per City of Chattanooga design and construction standards.
- (b) The developer shall submit a pavement design prepared by a Tennessee licensed professional engineer for approval of the Transportation Division. For subdivisions that will be constructed

in stages, the pavement design shall be based on the number of lots from all stages and on a field evaluation of the subgrade soils conducted by a Geotechnical Engineer.

The Geotechnical Engineer shall complete a field evaluation of the roadway before any roadway construction begins. The Geotechnical Engineer shall conduct a field exploration of the soils along the roadway alignment at a spacing of no greater than five hundred (500) feet and obtain samples of the subgrade soils for laboratory evaluation. A composite soil sample of each soil type shall be obtained and tested for plasticity (Atterberg limits, ASTM D4318) and standard Proctor moisture-density relationship (ASTM D698). California Bearing Ratio (ASTM D1883) tests shall be conducted on a composite sample representative of the soil conditions, as determined by the Geotechnical Engineer. The California Bearing Ratio (CBR) test shall be conducted on soaked samples.

- (c) Preliminary or final plat approval by the Planning Commission does not constitute permission to begin any street or utility construction. Street and utility construction plans may be approved as a whole or in part. Construction of approved portions of the work shall not precede issuance of applicable Land Disturbing Activity Permits.
- (d) Quality assurance during construction will be required. The developer shall select a Geotechnical Engineering firm from the current Tennessee Department of Transportation ("TDOT") approved list and notify the city of that selection. Geotechnical firms who wish to provide quality assurance, but are not on TDOT approval list, may submit Tennessee DOT Form DT-0330 Parts I and II for approval at the discretion of the Transportation Department. The geotechnical firm shall contract directly with the developer to provide quality assurance on the project. The developer shall be responsible for scheduling the geotechnical firm. Minimum testing requirements are described in this article. Location and scheduling of testing shall be coordinated with the City's representative for assurance of reasonable conformance with the requirements described in this article prior to performing tests to avoid the expense of retesting. Testing milestones shall be established during the Preconstruction Conference required in Section 32-288 (d) of this article. A final report by the geotechnical engineer that the quality assurance tests and inspections have been performed and the construction has been completed in substantial compliance with City of Chattanooga design and construction standards, specifications, and applicable portions of subdivision regulations will be required before the plat is recorded. The final report shall be compiled in accordance with all applicable ASTM standards for geotechnical reporting. One (1) copy of the final report shall be given to the City.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11737, § 1, 9-6-05; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-274. Grading.

- (a) Before grading is started, the roadway construction area shall be cleared of conflicting trees, and all stumps, roots, weeds, logs, heavy vegetation, and other objectionable matter, and shall be grubbed to a depth below the proposed grade in cuts and the natural ground in fills so as to expose suitable subgrade. The cleared material shall be removed from within the right-of-way limits and disposed of in such a manner that it will not become incorporated within the fills, nor in any manner hinder proper operation of the storm drainage system.

(b) Suitable material may be used in the construction of embankments or at any other place needed. If rock is encountered, it shall be removed as determined by the geotechnical engineer. Where boulders are encountered, they should be removed 6 inches below the proposed grade. Onsite materials may be used, provided they are used according to the recommendations of the Geotechnical Engineer. If imported fill is used to construct road embankments, the materials shall meet the following requirements:

- (1) Standard Proctor Maximum Dry Density \geq one hundred (100) pounds per cubic foot within the top two (2) feet of finished subgrade elevation; or ninety-five (95) pounds per cubic foot below the top two (2) feet.
- (2) Liquid Limit \leq 60.
- (3) Plasticity Index \leq 35.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06; Ord. No. 12824, § 1, 3-25-14)

Sec. 32-275. Utility Construction.

- (a) Prior to any base material being placed, all underground work that is to be within the right-of-way or the right-of-way subgrade shall be completed and backfilled with stone, if necessary. This includes all drainage, sewerage, water, telephone, electrical, gas, cable television, and other utilities to the end that the completed roadway will not be disturbed for the installation of any utility main or service connection for any utility.
- (b) Sanitary sewer shall be constructed in accordance with City of Chattanooga Design and Construction standards and Tennessee Department of Environmental Health requirements.
- (c) Storm sewers shall be constructed in accordance with Best Management Practices (BMP) and City of Chattanooga design and construction standards.
- (d) All underground utility conduits and piping shall be installed prior to proof rolling and placement of base material. Installation and backfill shall be observed by the Geotechnical Engineer. In the event all utility construction is not complete due to circumstances beyond the control of the developer and/or contractor, proof rolling and placement of base material may begin subject to completion of all underground conduits and piping beneath the road and two (2) feet beyond the edge the proposed base material. A City representative will be present for up to two (2) sanitary sewer tests. One (1) test will be performed prior to proof rolling and placement of base material. A second test will be performed after all utility construction within the right-of-way is complete. In the event all utility construction is complete prior to the first test, only one (1) test will be performed.
- (e) Utility trenches shall be backfilled with either crushed rock, soil, or flowable fill according to the following requirements:
 - (1) Bedding: All utility trenches shall be bedded with a six (6) inch layer of either open-graded crushed rock or sand. Bedding shall be placed and compacted using a vibratory compactor. Where necessary, bell holes shall be cut into the bedding at pipe joints locations.

- (2) Initial Fill: After the utility line has been placed, the utility trench shall be backfilled with open graded crushed rock or sand to at least twelve (12) inches over the top of the utility. The backfill shall be compacted using a vibratory compactor.
- (3) Secondary Fill: From twelve (12) inches over the top of the utility to eighteen (18) inches below the subgrade elevation, the utility trench may be backfilled with either open-graded crushed rock, sand, or soil fill. Sand or soil backfill shall be placed in maximum one (1) foot layers and compacted. Sand or soil backfill shall be compacted to achieve at least ninety-five percent (95%) of the standard Proctor maximum dry density. Density tests shall be conducted for every one (1) foot layer of backfill at a frequency of one (1) test per one hundred (100) feet for utilities running along the longitudinal axis of the road, or one (1) test for utilities crossing the road. Open-graded crushed rock backfill does not require compaction in lifts, but must be consolidated using vibratory compaction equipment. The placement and consolidation must be observed by the geotechnical engineer.
- (4) Final Backfill: The final eighteen (18) inches of the utility trench backfill shall be backfilled with dense-graded crushed rock. The backfill shall be compacted to achieve at least ninety-five percent (95%) of the standard Proctor maximum dry density. Density tests shall be conducted at a frequency of one (1) test per fifty (50) feet for utilities running along the longitudinal axis of the road, or two (2) tests for utilities crossing the road.
- (5) Flowable fill: Flowable fill may be used as backfill for utility trenches. The material shall be designed to achieve a compressive strength of one hundred fifty (150) to five hundred (500) psi. The material shall meet the requirements of ACI 229R-99, Standard Specifications for Controlled Low Strength Cementitious Materials. Flowable fill may be used instead of the secondary fill and the final backfill. The material supplier shall submit a mix design verified by an independent testing laboratory within the past six (6) months.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-276. Subgrade.

- (a) All contractors must contact the Geotechnical Engineer prior to beginning subgrade work. This is imperative or the work may not be accepted.
- (b) The Subgrade shall be prepared to the lines and grades as designed and staked by the Subdivision Engineer and to correspond to the cross section as indicated on the typical cross section approved by the Transportation Department.
- (c) After the subgrade has been graded and shaped, it shall be scarified to a depth of eight (8) inches, then re-compacted to achieve a density of at least ninety-eight percent (98%) of the standard Proctor (ASTM D698) maximum dry density. The moisture content shall be within three percent (3%) of the optimum moisture content. The Geotechnical Engineer will conduct field density tests at a spacing of not more than one hundred (100) feet, staggered right and left of the centerline, with a minimum of three (3) tests. Any areas that do not meet compaction requirements shall be re-compacted and retested.

- (d) If an existing subgrade passes both the proof rolling and density tests, then scarifying and re-compacting will not be required. Proof rolling shall be performed using a fully-loaded, dual-tandem dump truck. The subgrade shall be trafficked by parallel passes of the truck starting at one (1) side of the roadway. Each pass shall overlap the preceding pass to ensure complete coverage. Two (2) complete proof rolling coverages are required.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06; Ord. No. 12823, § 1, 3-25-14)

Sec. 32-277. Fill and Embankments.

- (a) Any roadway embankment steeper than a three (3) to one (1) slope, shall be specially designed by a geotechnical engineer and then built to design specifications.
- (b) The embankment shall be protected from erosion using stormwater Best Management Practices.
- (c) Areas requiring two (2) feet or more of fill shall be observed and tested by the Geotechnical Engineer. Fill shall be placed in level lifts, thickness of loose lifts shall not exceed eight (8) inches, and compacted to at least ninety-five percent (95%) of the standard Proctor maximum dry density. The moisture content shall be within three percent (3%) of the optimum moisture content. The Geotechnical Engineer shall conduct field density tests for each one (1) foot layer of fill placed. Testing frequency shall be at least one (1) test per ten thousand (10,000) square feet, or one (1) test every two hundred (200) feet along the roadway centerline, staggered left and right of the centerline. A minimum of three (3) tests is required for each one (1) foot layer. Any areas that do not meet compaction requirements shall be re-compacted and retested.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-278. Base.

- (a) All contractors must contact the Geotechnical Engineer prior to beginning the base operation. This is imperative or the work may not be accepted.
- (b) Before placing base material, the subgrade shall be proof-rolled in the presence of the Geotechnical Engineer. Proof-rolling shall be performed using a fully-loaded, dual-tandem dump truck. The subgrade shall be trafficked by parallel passes of the truck starting at one (1) side of the roadway. Each pass shall overlap the preceding pass to ensure complete coverage of the roadway cross-section. Two (2) complete proof-rolling coverages are required. Any areas that deflect or yield, in the opinion of the Geotechnical Engineer, shall be corrected before base material is placed.
- (c) Base material shall be a dense-graded mineral aggregate base meeting the requirements of the Tennessee Department of Transportation "Standard Specifications for Road and Bridge Construction" section 303, Type A Grade D. The contractor shall provide a letter of certification from the base material supplier that the materials meet these requirements. Other types of base material may be used, if included in a design by a professional engineer and approved by the Geotechnical Engineer and the Transportation Department. The base material shall be compacted to at least ninety-five percent (95%) of the standard Proctor maximum dry density.

- (d) The base will be tested for thickness and compaction by the Geotechnical Engineer. Tests will be conducted at a maximum spacing of two hundred (200) feet, staggered right and left of the centerline.
- (e) Tolerances for base thickness. The minimum base design thickness shall be in accordance with the City of Chattanooga Standard Drawings. The average of all measurements shall be greater than or equal to the design thickness. Any test that is less than the design thickness, but no more than one-half (0.5) inches less than the design thickness, may be evaluated by the Geotechnical Engineer for acceptance or for corrective actions. Any test that is more than one-half (0.5) inches below the design thickness will require corrective actions.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06; Ord. No. 12823, § 1, 3-25-14)

Sec. 32-279. Prime.

- (a) After the base course has been thoroughly compacted and worked to the lines and grades as shown on the typical cross section, it shall be dampened if necessary.
- (b) TDOT approved Asphalt Emulsion primers may be used. Application shall be in accordance with manufacturers recommendations.
- (c) The type and grade of prime material shall depend on the condition of the base course and shall be approved by the Geotechnical Engineer and the City. The prime coat may be eliminated if approved by the Geotechnical Engineer and the City.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-280. Binder.

- (a) Contractors must contact the Geotechnical Engineer prior to beginning the binder course installation. This is imperative or the work may not be accepted.
- (b) The binder asphalt shall be placed over the prime coat. The binder asphalt shall be compacted to an average density of at least ninety-two percent (92%) of the theoretical maximum density as determined by the Marshall method (fifty (50) blows), with no individual test less than ninety percent (90%). The theoretical maximum density shall be provided by the asphalt binder supplier. The Geotechnical Engineer will test the thickness and compaction by obtaining cores every five hundred (500) feet, or a minimum of three (3) cores. If any area does not meet the minimum thickness or compaction requirements, additional cores will be taken at one hundred (100) foot intervals until two consecutive cores meet the requirements. Areas that do not meet the requirements shall be removed and replaced. As an option, the Geotechnical Engineer can be present during construction to check the laydown thickness and temperature of the asphalt and to conduct nuclear density tests after compaction. In this case, coring will be reduced to three (3) cores or one (1) every two thousand (2,000) feet. In any case, a minimum of three (3) cores will be required.
- (c) The binder asphalt shall meet the requirements of TDOT standard specifications section 307. Either 307B, 307BM or 307BM-2 mixes may be used. The minimum binder design thickness shall be in accordance with the City of Chattanooga Standard Drawings. .

- (d) Binder thickness tolerances. The average thickness of the binder shall be greater than or equal to the design thickness, with no individual test more than one-quarter ($\frac{1}{4}$) inch less than the design thickness. Areas deficient in thickness shall be evaluated by additional coring at one hundred (100) foot intervals to determine the area of deficient thickness. The deficiency may be corrected by increasing the thickness of the surface asphalt.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-281. Backfill Curbs.

Backfill behind curbs shall be completed promptly after the curbs are installed. Until the backfill behind curbs is completed, measures should be taken to minimize infiltration of water to the pavement sub grade. Careful attention must be given to slope of backfill to prevent water penetration behind curbs. Curbs shall be installed in accordance with standard City specifications as established by the Transportation Department.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06; Ord. No. 12823, § 1, 3-25-14)

Sec. 32-282. Tack Coat.

A tack coat shall be applied over the binder before placing the surface asphalt. The tack coat shall be CRS-2 emulsified asphalt, applied at a rate of five-hundredths (0.05) gallons per square yard of residual bituminous material. Other tack materials may be used or the tack coat may be eliminated, if approved by the Geotechnical Engineer and the City.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-283. Surface.

- (a) The surface asphalt shall be placed over the binder asphalt as soon as possible, but no more than ten (10) days after placing the binder, to avoid rainwater infiltration and to prevent damage from truck traffic. The time may be extended at the Transportation Department's discretion to deal with unusual circumstances, so long as the road continues to meet the structural requirements of this regulation. The surface asphalt shall be compacted to an average density of at least ninety-two percent (92%) of the theoretical maximum density as determined by the Marshall method (fifty (50) blows), with no individual test less than ninety percent (90%). The theoretical maximum density shall be provided by the asphalt surface supplier. The Geotechnical Engineer will test the thickness and compaction by obtaining cores every five hundred (500) feet, or a minimum of three (3) cores. Areas that do not meet the requirements shall be removed and replaced. As an option, the Geotechnical Engineer can be present during construction to check the laydown thickness and temperature of the asphalt and to conduct nuclear density tests after compaction. In this case, coring will be reduced to three (3) cores or one (1) every two thousand (2,000) feet. In any case, a minimum of three (3) cores will be required.
- (b) The surface asphalt shall meet the requirements of TDOT standard specifications section 411. The minimum design thickness of the surface asphalt shall be in accordance with the City of Chattanooga Standard Drawings.

Asphalt thickness tolerances. The average thickness of the asphalt (binder plus surface) shall be greater than or equal to the design thickness, with no individual test more than one-eighth ($\frac{1}{8}$) inch less than the design thickness. Areas deficient in thickness shall be evaluated by additional coring at one hundred (100) foot intervals to determine the area of deficient thickness. Deficient areas shall be corrected.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06; Ord. No. 12823, § 1, 3-25-14)

Sec. 32-284. Seasonal Limitations of Asphalt.

The outside temperature away from artificial heat and in the shade shall be forty degrees (40°) and rising for plant mix.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-285. "As Built" Drawings.

- (a) Upon completion of the construction of the required improvements, and prior to final acceptance by the Transportation Department, the developer will furnish "As Built" drawings of all sanitary sewer and stormwater structures. A registered professional engineer or surveyor will certify that the information furnished is a true and complete representation of the improvements that were constructed by the developer. The "As Built" drawings shall be furnished in electronic format, and shall be the true and accurate location and elevation of the structures shown, with a positional tolerance of seven-hundredths (0.07) feet horizontal and fourteen-hundredths (0.14) feet vertical. English units and NAD 83 State Plane co-ordinates shall be used. Structures shall be identified by the number shown on the drawing or provided by the engineer. The electronic file, in ASCII format, shall provide the following minimum information for sanitary sewer manholes and drainage structures, including drainage manholes:
- (1) Sanitary Sewer Manhole or Drainage Structure Number;
 - (2) Northing, Easting, and Rim Elevation;
 - (3) Invert Elevation; and
 - (4) Size, material, and direction for each pipe entering and leaving the sanitary sewer manhole or drainage structure.
- (b) All drainage structures and sanitary sewer manholes shall be located by the center of the structure or the manhole cover when fully seated.
- (c) The electronic file, in ASCII format, shall provide the following minimum information for stormwater detention basins when constructed as part of the development;
- (1) Detention Basin Number;
 - (2) Northing, Easting, and Elevation of limits of detention basin;
 - (3) Northing, Easting, and Elevation of bottom of detention basin;
 - (4) Northing, Easting, and Elevation of corners of overflow structure; and

- (5) Invert Elevation, size, material, and direction for each pipe entering and leaving the detention basin.

Prior to final acceptance by the Transportation Department and/or issuance of any Certificate of Occupancy, all new developments, redevelopments, and/or additions shall submit an inventory of the constructed stormwater drainage system, whether public or private, to the City of Chattanooga in electronic format. Electronic As-Built drawings shall be submitted in AutoCAD and .pdf format and shall show plainly the approved and constructed layout of the stormwater systems at the associated site. The as-built drawing shall include all stormwater features on the development, whether new or existing, including the outfall to the City drainage system (ex: catch basins, conduits, hydrologic features including ponds, streams, culvert inlets and outfalls, and all pervious surfaces, etc.).

Certain engineered water quality conveyances such as engineered swales and grass filter strips have a required slope and cross section to give maximum water quality benefits for the area and will therefore also require as-built cross sections to determine if they are built per designed specifications.

As-Built Drawings shall at a minimum comply with the following items:

- A registered professional engineer or surveyor will certify that the information furnished is a true and complete representation of the improvements that were constructed by the developer.
- The design engineer shall certify that the information reflects the original design or is an approved substitute for the original design by completing the As-Built Detention Facility Engineer's Certification Form (Attached).
- The As-Built drawings shall be furnished in electronic format (both an AutoCAD R13 or greater and a .pdf file shall be required) and shall be the true and accurate location and elevation of the structures shown, with a positional tolerance of seven-hundredths (0.07) feet horizontal and fourteen-hundredths (0.14) feet vertical.
- English units and NAD 83 State Plane co-ordinates shall be used. ASCII format may be used if the table is included in the drawing.
- All drainage structures and manholes shall be located by the center of the structure or the manhole cover when fully seated.
- Drainage features (including drainage manholes) shall at a minimum include the following:
 - (1) Drainage Structure Number;
 - (2) Drainage Structure Label (ex: oil skimmer, water quality unit type/model, etc.);
 - (3) Northing, Easting, and Rim Elevation;
 - (4) Invert Elevations;
 - (5) Size, Material, and Direction of flow for each pipe entering and leaving the drainage feature; and
 - (6) Detail drawings of water quality features including but not limited to profiles, contours, and elevations (ex: bio-retention areas, swales, grass filter strips, etc.).
- Detention systems shall at a minimum include the following:

- (1) Detention System Number;
- (2) Northing, Easting, and Elevation of the limits, corners, and bottom of detention systems;
- (3) Invert Elevation, Size, Material, and Direction of flow for each pipe entering and leaving the detention system;
- (4) Detail drawing for all outlet control and emergency overflow structures;
- (5) Detail drawing for any other detention systems as necessary (ex: underground detention system); and
- (6) Required and provided detention storage volume.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06; Ord. No. 12606, § 1, 5-29-12; Ord. No. 12823, § 1, 3-25-14)

Sec. 32-286. Geotextiles.

Geotextiles may be incorporated into pavement designs if necessary for subgrade soil conditions. Geotextiles shall meet the requirements of AASHTO M288-96 (or more recent editions). Geotextiles shall meet MARV strength values for Class 2 if the subgrade CBR > three (3) and Class 1 for CBR ≤ three (3).

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-287. Optional Rigid Pavements.

The developer may choose to construct (concrete) rigid pavements instead of flexible (asphalt) pavements. Rigid pavement shall be designed and constructed to meet the following requirements:

- (a) Grading: The grading requirements shall be the same as Section 32-274, except the requirements for liquid limit and plastic index are not applicable. The soils shall have a minimum CBR of three (3).
- (b) Subgrade: The subgrade requirements shall be the same as Section 32-276
- (c) Base: The base requirements shall be the same as Section 32-278. The base thickness shall be a minimum of four (4) inches.
- (d) Concrete Mix: The concrete mix shall be designed to provide a twenty-eight (28) day compressive strength of four thousand (4,000) pounds per square inch with a four (4) inch (± 1) slump and maximum water cement ration of forty-five-hundredths (0.45). An air entraining agent shall be added to achieve a five percent (5%) air content. The concrete mix shall have a nominal maximum aggregate size of one and one-half (1½) inches.
- (e) Concrete Design: The concrete thickness shall be six (6) inches. Reinforcing is not required. Control joints shall be spaced regularly in a square pattern as per the PCA recommendations. A longitudinal joint shall be constructed along the centerline. Lateral joints shall be spaced the same as the lane width. Joints shall be sealed using an approved

joint sealer. The joint sealer shall be submitted to the Geotechnical Engineer for approval before installation.

- (f) **Concrete Placement:** Concrete placement shall be according to ACI 304 *Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete*. Concrete shall be placed directly on the base. The ambient temperature at the time of placement shall be at least forty degrees (40°) F, and the forecast temperature in the first twenty-four (24) hours after placement shall be at least thirty-two degrees (32°). No standing water or frozen base shall be present at the time of placement. The concrete mix is expected to arrive at the site at the correct slump. If trucks arrive with a slump more than one (1) inch below the specified slump, then a maximum of twenty (20) gallons of water may be added, with the approval of the concrete supplier, to adjust the concrete slump. No water may be added after placement begins. If trucks arrive with a slump more than one (1) inch above the specified slump, the truckload shall be rejected. Concrete shall be placed within ninety (90) minutes of the batch time.
- (g) **Concrete Protection and Curing:**
 - (1) Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 305R for hot-weather protection.
 - (2) Curing shall be accomplished in strict compliance with ACI 308.
- (h) **Finish:** The concrete finish shall provide a durable, smooth surface, free of irregularities, but skid-resistant (such as burlap drag or broom finish).
- (i) **Quality Assurance:** An ACI certified representative of the geotechnical engineer shall be present to monitor concrete placement and conduct quality assurance testing. The representative shall keep a record of each truck load of concrete delivered to the site, including the information provided on the batch ticket and the amount of water added at the site. The first load of concrete shall be checked for slump, air content, and unit weight to determine acceptance. Compressive strength samples shall be taken randomly from the first thirty (30) cubic yards, and every fifty (50) cubic yards after that. Compressive strength samples shall include a set of six (6) cylinders. Two (2) cylinders shall be tested at seven (7) days and two (2) at twenty-eight (28) days and two (2) for reserve. The remaining cylinder shall be kept in reserve. Slump and air content tests shall be conducted for each set of compressive strength samples taken, or if visual indications of changes in the slump or other concrete properties are observed.

(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Sec. 32-288. Plan Review and Preconstruction Conference.

- (a) Prior to any street or utility construction, five (5) sets of engineering plans for road and utility construction shall be submitted to the Development Office to be stamped with a sign-off block for each department reviewing these five (5) sets of proposed plans.
- (b) The design engineer shall make any revisions or changes required by the various reviewers to bring the proposed design into conformance with the City of Chattanooga design and construction standards and the City of Chattanooga Subdivision Regulations. The design

engineer should then affix his seal and signature to the five (5) revised plans and return these revised plans to the Development Office for final review and approval.

- (c) N.P.D.E.S., A.R.A.P., T.V.A, Corps of Engineers, and other required permits and approvals, if necessary, should accompany these revised plans.
- (d) A preconstruction conference shall be held prior to beginning construction on a new subdivision involving street construction work, sanitary sewer, or stormwater facilities. The conference shall be attended by the developer, the contractors, a representative of the City, and the geotechnical engineer.


(Ord. No. 11451, § 1, 9-2-03; Ord. No. 11882, § 1, 9-5-06)

Secs. 32-289—32-299. Reserved.

SECTION 2. BE IT FURTHER ORDAINED, That this Ordinance shall take effect two

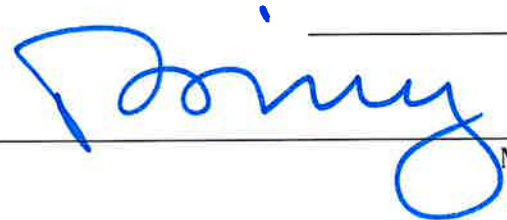
(2) weeks from and after its passage.

Passed on second and final reading: March 12, 2024



CHAIRPERSON

APPROVED: DISAPPROVED:



MAYOR

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