

**SECTION 2.00
GENERAL PROVISIONS**

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SECTION 2.00

GENERAL PROVISIONS

2.01 GENERAL

All construction, both Development and Town projects, shall conform to the requirements and dimensions on Town approved construction plans, the Town of Holly Springs Engineering Design and Construction Standards, and the Code of the Town of Holly Springs. The design of streets, water systems, sanitary sewer systems, storm drainage systems, dam design, and grading plans shall be signed and sealed by a licensed North Carolina Professional Engineer, Professional Land Surveyor, Architect or Landscape Architect in accordance with N.C. General Statute 89. All construction drawings shall be prepared using survey grade data in all areas where work is being proposed including utility crossings and other environmentally sensitive areas. In addition, refer to Section 9 of these standards "As-Built Drawing Requirements."

2.02 QUALITY OF MATERIALS

It is the intent of this specification to provide materials of the highest standard known to the trade and to provide materials free from defects in workmanship and product. Equal materials not specified may be used if provided necessary documentation and samples necessary for the Engineer to determine their acceptability and **ISSUE A WRITTEN APPROVAL** are provided to him or her a **MINIMUM** of 14 **DAYS** before being brought onto the construction site. Current standards and/or the latest revisions shall apply in all cases where materials are described by these standards.

2.03 INSPECTIONS

The Contractor shall provide the necessary manpower and equipment required as a part of the inspection process. The contractor shall notify the Inspector at least 24 hours prior to required inspections. The presence of the Engineer or Development Inspector at the work site shall in no way lessen the Contractor's responsibility for conformity with the plans and specifications. Should the Engineer or Construction Inspector accept materials, or work that does not conform with plans and specifications, whether from lack of discovery or for any other reason, it shall in no way prevent later rejection or corrections to the unsatisfactory materials or work when discovered. The Contractor shall have no claim for losses suffered due to any necessary removals or repairs resulting from the unsatisfactory work. Any work which has been covered without the Construction Inspector's approval, shall, at the Development Inspector's request, be uncovered and be made available for inspection at the Contractor's expense. Work performed before or after Town staff's normal work hours or during the weekend or Town holidays shall comply

with the Town Code and shall include only such tasks that do not require observation by a Development Inspector, unless previous arrangements have been made for overtime with the Town Inspection Services.

2.04 CLEARING AND GRUBBING

The work of clearing and grubbing shall consist of the cutting, removal, and satisfactory disposal of all vegetation and all surface debris. Clearing and grubbing shall be conducted in a manner to prevent damage to vegetation that is intended to remain growing and to prevent damage to adjacent property. Tree protection fencing shall be installed to protect all areas that are to remain undisturbed or protected. Removal of root structure during the clearing and grubbing process requires an erosion control plan approval and Environmental Development Permit for all projects with 20,000, Sq Ft or greater of disturbed area as outlined in Section 4 of this document and Chapter 8, Article II of the Town Code of Ordinances.

2.05 EARTHWORK

Earthwork shall be defined as removal of earth or soft rock from its natural location or as the depositing of such material into fills areas as designated on the plans.

Rock excavation shall be defined, in the opinion of the Engineer, as all ledge rock or boulders over 0.5 cubic yard that cannot be excavated without blasting.

Fill material shall be free from construction material, debris, frozen material, organic matter, other degradable materials, masonry, concrete, brick, other unsuitable materials or any materials, which would cause the site to be regulated as a landfill by the State. For the top 2 feet below finished sub grade, no fill material shall be used weighing less than 100 pounds per cubic foot. The top 2 feet of backfill material shall be free from stones greater than 4 inches.

For all areas under a proposed roadway, the top 12 inches of sub base, and the entire base course shall be compacted to a density of 100% maximum Standard Proctor dry density as determined by AASHTO method T99. For that portion of fill under roadways and extending at a slope of 1 to 1 beyond the back of curb, compact to a density of NO LESS THAN 95% of the maximum Standard Proctor dry density as determined by AASHTO method T99. Fill material shall be placed in lifts of 8 inches or less of uncompacted soil.

Other fill material shall be compacted to a density of NO LESS THAN 90% of the maximum Standard Proctor dry density as determined by AASHTO method T99. Backfill material shall be placed in lifts of 12 inches or less of uncompacted soil.

In areas where landscaping and vegetation is proposed within the median or behind the back of curb, the top 12" of material shall be prepared to support installation and growth of landscaping and vegetation.

2.06 MAINTENANCE OF TRAFFIC

A. General

When construction occurs in a traffic zone, traffic control devices must be erected, maintained, relocated, and removed in accordance with the plans, specifications, NCDOT Supplement to the MUTCD, and the MUTCD. This requirement shall apply for all construction occurring on public streets, including construction or repairs by utility companies. The MUTCD referred to in this provision shall be the current edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, as prepared by the National Advisory Committee on Uniform Traffic Control Devices, including all standard documents referred to in Section 1A-7 of the MUTCD.

Traffic control devices shall include but not be limited to signs, drums, barricades, cones, delineators, flashing arrow panels, temporary guardrail, temporary concrete median barrier, vehicle-mounted temporary impact attenuators, pavement marking, raised reflective pavement markers, flaggers, and pilot vehicles.

B. Materials

Unless otherwise required, materials used in the fabrication and installation of construction traffic control devices shall be in accordance with the applicable provisions of the MUTCD.

All enclosed lens (Engineers Grade) sheeting required for use on traffic control devices shall have an identification mark on the surface. This mark signifies that the sheeting meets the requirements of Federal Specification L-S-300C for Minimum Reflectivity 1 Sheeting and Tape. The identification mark shall not interfere with the function of the device, but shall be visible both day and under illumination at night without the use of special devices.

C. Installation and Maintenance

Existing public streets or highways shall be kept open to traffic at all times by the Contractor unless permission to close the street, or portions thereof, is granted by the Executive Director of Utilities and Infrastructure Services.

The Town of Holly Springs Police Department must be contacted BY THE CONTRACTOR A MINIMUM OF 24 HOURS before any streets are closed or partially closed.

Work on any project shall not start until all traffic control devices required for the particular work activity are properly installed.

Traffic control devices shall be properly maintained, relocated as necessary, cleaned and operated during the time they are in use. During periods when use of the devices is not warranted, they shall be removed from the work area, covered, or otherwise positioned so that they do not convey their message to the traveling public.

The location, legends, sheeting, dimension, number of supports, and horizontal and vertical placement of warning signs, barricades, and other traffic control devices shall be as required by the plans or the MUTCD.

Weeds, brush, trees, construction materials, equipment, etc., shall not be allowed to obscure any traffic control device in use.

Competent and properly trained, attired, and equipped flaggers, using “stop” and “slow” paddles shall be provided when two-way traffic cannot be maintained.

The Contractor shall assume full responsibility for the continuous and expeditious maintenance or replacement of all construction-warning signs, barricades, and other traffic control devices. The Contractor shall continuously review and maintain all traffic control measures to assure that adequate provisions have been made for the safety of the public and workers. Failure to maintain all traffic control devices in a satisfactory condition shall be cause for suspension of construction operations until proper traffic control is re-established.

2.07 CONCRETE

Concrete shall be only plant-mixed or transit-mixed concrete conforming to ASTM C33 for aggregates and to ASTM C94 for ready-mixed concrete. Any concrete poured that has a slump over 4 inches as per ASTM C143, or has a batched time of more than 90 minutes, will be considered unacceptable. Concrete shall not be deposited on frozen sub grade. Concrete shall not be poured when the air temperature is falling below 40°F and the predicted low temperature for the succeeding 24-hour period is less than 32°F. All concrete when placed in the forms shall have a temperature of between 50° and 90°F and shall be maintained at a temperature of not less than 50°F for at least 72 hours for normal concrete and 24

hours for high early strength concrete, or for as much time as is necessary to secure proper rate of curing and designed compressive strength. Concrete shall be air entrained with 5-7% air. Retarders and accelerators shall be used only as directed by the Engineer.

2.08 PERMITS

Prior to construction of any project, it is the responsibility of the Owner/Developer to insure that any applicable permits from the Town, County, and State and Federal Governments are obtained. Following is a list of the most common permits and/or approvals required:

A. Town Permits

1. **Construction Drawing Approval:** Every construction site within the Town of Holly Springs shall require the approval of a construction drawing by the Engineering Department. A preconstruction conference shall also be required prior to the beginning of construction.
2. **Work Permit:** The creation of excessive noise associated with the construction that is regulated under this document, including but not limited to, erection, alteration, repair or demolition of any earthmoving activities, land clearing activities, street paving, or utility construction in a residential or business district, other than between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday, and between the hours of 8:00 a.m. and 6:00 p.m. on Saturdays shall require approval by the Utilities and Infrastructure Services. The applicant shall designate an individual person or persons in control of the construction who shall be responsible for seeing that the activity complies with the terms of the approval.
3. **Driveway Permit:** A Driveway Permit is required for all new residential and non-residential driveways on existing Town-maintained streets. The location of the driveway shall be shown on a plot plan. This permit may be obtained from the Executive Director of Utilities and Infrastructure Services.
4. **Burning Permit:** A Burning Permit shall be obtained a minimum of 24 hours prior to any burning. This permit may be obtained from the Town of Holly Springs Fire Department for a fee.
5. **Blasting Permit:** A Blasting Permit is required any time there is to be Transportation, use or storage of explosive materials. This permit is required a minimum of 24 hours in advance of any explosive materials or blasting agents being transported into the corporate limits of the Town. This

permit may be obtained from the Town of Holly Springs Fire Department for a fee.

6. **Town of Holly Springs Encroachment Agreement:** An Encroachment Agreement shall be obtained from the Executive Director of Utilities and Infrastructure Services for any work within the right of way of Town maintained streets. This includes (but is not limited to) utility installations, cuts and bores, irrigation systems, driveway modifications (such as paving or constructing a new driveway), and sidewalk modification. All repairs proposed for construction shall be in conformance with the Town of Holly Springs Engineering Design and Construction Standards. A fee may be charged for this permit if the work requires an inspection. Any encroachment within the right-of-way without approval from the Executive Director of Utilities and Infrastructure Services will be considered a trespass and will be prosecuted criminally.
7. **Environmental Development Permit:** An Environmental Development Permit is required whenever a project requires the approval of the Chapter 8 Article II. Soil Erosion & Sedimentation Control, Stream & Wetland Protection, Land Disturbance, Article III. Flood Damage Prevention, and Article V. NPDES Phase II Post-Construction Stormwater of the Holly Springs, NC Code of Ordinances. Holly Springs after all applicable environmental approvals (Erosion Control Plan, Post-Construction Stormwater Management Plan or Floodplain Development/Flood Study) have been granted by the Town, prior to any grading or site work may issue the Environmental Development Permit. No building permits will be issued by the Town until a Certificate of Compliance (indicating that all erosion and sedimentation control measures are installed) is issue by the Town.
8. **Timbering Plan:** A separate timbering plan is required for timbering or forestry activities that meet the criteria outlined in: Chapter 8 Article IV. Timbering of the Holly Springs, NC Code of Ordinances and Section 7.11 Forestry Activity, Timbering Operations and Site Clearing of the Unified Development Ordinance. Encroachment into buffer or tree save areas must be permitted by the Utilities and Infrastructure Services or the Department of Planning & Zoning as specified in the ordinances, and be in compliance with Town of Holly Springs Unified Development Ordinance Section 7.06 (D)(4)(e) Environmental Buffer Areas; 2003 N.C. Sess. Law Ch. 73, § 5.1; and North Carolina Administrative Code 15A NCGS 02B.0233 Neuse River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Existing Riparian Buffers.

Other departments of the Town of Holly Springs may require additional permits.

B. State and Federal Permits

Applications for State Permits are to be submitted for Town approval before submission to the applicable State agency, or as indicated below. **It is the responsibility of the Owner/Developer to ensure all permit applications, fees, and final plans are submitted and approvals obtained by the appropriate agency, after Town Board, Technical Review Committee and/or Town staff approval. All applicable permits MUST BE OBTAINED PRIOR TO ANY CONSTRUCTION.**

1. **Sanitary Sewer System Extension:** For any proposed extension of the public sanitary sewer system or for the construction of a privately maintained sanitary sewer collection system, a Sanitary Sewer Extension Permit from the North Carolina Department of Environmental Quality Division of Water Resources, must be obtained. The application for the permit should be submitted for Town approval sometime after Town approval of construction drawings for the project. Three copies of the application, a set of plans, and any pump station or gravity sanitary sewer calculations are required for approval by the Town. Fee schedules and application forms may be obtained from the Town of Holly Springs website. As-builts and a P.E. certification for the system must be provided to the Construction Inspector prior to the sanitary sewer system being placed in service. The Town for any project shall not provide sewer capacities until respective sewer permits for the project are issued from the state. Sewer extension permits shall expire within one year of issuance if construction has not begun. The Town may limit the number of units, which are permitted in any development, or development phase at any one time.
2. **Water System Extension:** For all public water line extensions, a Water Main Extension Permit from the North Carolina Department of Environmental Quality Division of Water Resources-must be obtained. The application for a permit should be submitted for Town approval sometime after approval of construction drawings for the project. Three copies of the application, a set of plans, and any flow calculations are required for approval by the Town. Application forms may be obtained from the Town website. The permit fee is based on linear footage. As-builts and a P.E. certification must be provided to the Construction Inspector prior to the water system being placed in service. Water capacities shall not be provided by the Town for any project until respective water permits for the project are issued from the state. Water extension permits shall expire within one year of issuance if construction has not begun. The Town may limit the number of units, which are permitted in any development, or development phase at any one time.

3. **North Carolina Department of Transportation Encroachment Forms and Driveway Permit:** When any part of the project will encroach on NCDOT right of way, an encroachment form must be submitted and approved by NCDOT prior to construction. All encroachment applications and driveway permits require 5 sets of plans and 5 copies of the encroachment form. Fee schedules and encroachment forms are available from the NCDOT.
 - a) For installation of utilities a 3-party agreement between the Developer, the Town of Holly Springs and the NCDOT is required. The fee is determined by NC DOT.
 - b) For roadway widening, sidewalk installation, addition of curb and gutter, storm drainage, etc., a 2-party agreement between the Developer and the NCDOT is required. Before submitted to NC DOT, the Town must first approve proposed improvement plans. The fee is determined by the NCDOT.
 - c) Driveway Permits must be obtained prior to the installation of any driveway cuts to be made on a State maintained road. These permits must be approved by the Town before submittal to NC DOT. The fee is determined by the NCDOT.

4. **North Carolina Division of Water Resources and United States Army Corps of Engineers Permits:** Appropriate permits for impacts to jurisdictional streams, wetlands and riparian buffers is required for all projects. Permits shall be for all impacts associated with the entire project as defined by a master type plan, unless approval by the Utilities and Infrastructure Services. Copies of approval letters and corresponding maps must be provided prior to construction drawing approval unless approved by the Executive Director of Utilities and Infrastructure Services. USGS stream information and Wake County Soil Survey information for all projects are required at initial construction drawing submittal. An Environmental Development Permit will not be issued for any plan that reflects a discrepancy in the location of the Neuse River Buffer unless the buffer shown on the plan is more conservative, or NCDEQ-DWR has approved the new location of the buffer.

5. **Federal Emergency Management Agency (FEMA) & NCDPS:** Encroachment into floodplains which appear on a Flood Insurance Rate Map (FIRM) and/or Flood Risk Information System (FRIS) by the FEMA and the NC Floodplain Mapping Program must comply with the Town of Holly Springs Flood Damage Prevention Ordinance, the NCDPS, Division of Emergency Management, Risk Management Section. Final versions of approved studies, map, digital files and as-built information shall be submitted to the Utilities and Infrastructure Services for historical reference.

2.09 ACCEPTANCE PROCEDURES

All improvements intended for public maintenance are eligible for acceptance by the Town of Holly Springs following the procedures outlined below:

1. After the installation of improvements in accordance with the Town Engineering Design and Construction Standards, and with plans approved by the Town Board and Executive Director of Utilities and Infrastructure Services, the Owner/Developer or designee shall contact the Construction Inspector to schedule a warranty inspection. Note that this inspection must be performed prior to recordation of a final plat for the project.
2. The Engineering Department will respond with a punch list within 10 working days from the punchlist inspection date.
3. The Owner/Developer or designee must complete all items indicated on the punch list, and any additional items noted, within 60 days of the date of the warranty inspection, for the Town to accept the infrastructure and begin one-year warranty. The Owner/Developer or designee must then request another warranty inspection if more than 60 days passes before the punchlist work is complete.
4. In accordance with UDO, plats will be withheld on any project that does not receive a Beginning of One Year Warranty Acceptance Letter.
5. Upon the acceptable completion of all punch list items and payment of any outstanding fees, the Owner/Developer or designee will receive a Beginning of One Year Warranty letter from the Town of Holly Springs. This acceptance begins a warranty for materials and workmanship of not less than 1 year in duration from the date of acceptance. The warranty will be to the Town from the Owner/Developer or designee. The Town will perform routine maintenance during the warranty period. In Triassic soil areas, an additional extended one-year warranty is required. Reference Section 3-J.
6. A warranty bond is required to guarantee the workmanship and materials during the warranty period. Refer to the Town UDO Section 9.05f for more information.
7. Sixty days before the end of the warranty period, the Owner/Developer or Designee shall request a final (end of one-year warranty) inspection from the Construction Inspector.

8. The Engineering Department will respond with a punch list on workmanship or materials within 30 days of the request.
9. The Owner/Developer or designee must complete all items indicated on the punch list, and any additional items noted, within 60 days of the final inspection. The Owner/Developer or designee must request another final inspection if more than 60 days passes before the punchlist work is complete.
10. Upon the acceptable completion of all final punchlist items, the Owner/Developer or designee will receive a final evaluation of One Year Warranty Acceptance Letter from the Engineering Department. The Town will begin total maintenance of the project as of the date of the letter.
11. In accordance with UDO, building permits may be withheld on any project that does not have an End of One Year Warranty Acceptance Letter by the time 90% of the building permits are issued for the project.

Until an End of One Year Warranty Acceptance Letter has been issued, all materials and workmanship are the responsibility of the Owner/Developer. The Town does not accept post-construction stormwater management devices for maintenance. The surety and operation & maintenance process are outlined in Section 8 of this document and in accordance with Chapter 8, Article VI. NPDES Phase II Post-Construction Stormwater Ordinance of the Holly Springs, NC, Town Code of Ordinances.

2.10 PLANTINGS, FENCES, OR STRUCTURES WITHIN TOWN UTILITY EASEMENTS

An “easement” shall mean any area to which the Town has unlimited access for servicing utility lines. Any plantings installed within an easement may be damaged or destroyed during the course of servicing. The Town will not be liable for any damage to plantings, fences, accessory structures located either within an easement or in any manner restricting access to the easement. Further, the Town shall not be liable for any incidental or consequential damage caused by the Town’s removal of any structure impairing the easement. Any contractor or landowner who has impaired the easement by allowing an obstruction to be placed on the easement shall indemnify and hold harmless the Town for any resulting incidental or consequential damages. The Town will reseed as necessary any bare or disturbed soil for erosion control purposes.

Small and medium shrubs, groundcovers, or grasses may be planted by the property owner within an easement (subject to the preceding paragraph) and as long as those planting do not inhibit access of the easement with required equipment by the Town and/or its agents.

Small trees (under 30 feet in height at maturity) may be planted a minimum of 10 feet from the centerline of the closest utility pipeline within the easement or 10 feet from the center of the easement, whichever is greater, and subject to the preceding paragraphs. Small trees as defined above shall include redbuds, fringe tree, serviceberry, crape myrtle, golden raintree, hawthorn, hornbeam, saucer or star magnolia, sassafras, smoke tree, sourwood, and sumac.

Large trees, fences, gates, or any type of structures (e.g. retaining walls or utility sheds) shall not be placed within any Town utility easement. Drainage Easements are private easements maintained by the property owner, requirements for private drainage easements is outlined in Section 8 of this document.

2.11 LICENSE REQUIREMENTS

All Contractors performing any construction activity involving the Town of Holly Springs utility system or street system shall be licensed to practice general contracting in the State of North Carolina. The Contractor shall be classified in the appropriate area of license for the type of construction to be performed and shall not perform construction activity which exceeds the limitations of the designated Contractor's license.

2.12 RETAINING WALLS

All retaining walls with a height of 4 feet or greater must be designed by either an Architect or Professional Engineer and shall be signed and sealed. The location of all retaining walls shall be shown on the construction drawings. Retaining walls including supports, foundations, reinforcement and any other wall appurtenances are not allowed within Town of Holly Springs right-of-way or easements. All necessary permits (e.g., building permit) must be obtained prior to any construction associated with retaining walls. Safety rails or fencing may also be required. Any public utility extend through retaining walls must be located inside steel encasement. Encasements shall extend 10' beyond retaining wall, foundation/footings and/or reinforcements or other appurtenances.

2.13 OSHA STANDARDS

All Contractors and their employees must comply with all OSHA standards while working on Town projects, while on Town of Holly Springs property or rights of way, and for all development projects within the Town of Holly Springs.

2.14 SAFETY AND HEALTH HAZARDS

The operations of any Contractor shall not expose Town of Holly Springs employees or residents to any hazardous chemicals or other occupational safety and health hazards. All Contractors working on Town projects or on Town of Holly Springs property or rights of way shall inform every individual who enters the project concerning hazardous chemicals which the Contractor might be using and to which the individual might become exposed by working in that area.

2.15 GEODETIC MONUMENTS

The Town of Holly Springs has installed a local geodetic monumentation grid, tied to NAD83, within and surrounding the Town limits. All surveyed information (when any portion of the project in design is within 2000 feet of the Town's geodetic monument) shall reference the nearest monument and shall be clearly noted on the first sheet of both construction plans and As-Builts submitted to the Town.

2.16 FAILURE TO RESPOND

Where the Project Owner does not respond to directives by the Town to complete certain repairs and/or work that, in the Town's opinion, causes a safety hazard or the potential for damages, the Town may have such work performed and charge the project owner all associated expenses plus a 25% mobilization fee (examples: trench repairs, street washing, etc.). This section shall not create an obligation of the Town to undertake such work or to be liable in any way for failure to undertake such work.

2.17 DUMPSTER PADS

The dumpster pad shall be designed and graded to minimize the amount of rainwater entering the dumpster pad area. Dumpster pads must be a minimum 20 feet from any curb inlet or yard inlet for stormwater collection. The outfall of any stormwater pipe that drains the area where a dumpster pad is located should traverse a minimum of 50 feet of vegetated area before reaching the bank of the watercourse. Where dumpster pads are adjacent to a watercourse and where stormwater drains in sheet flow directly into the watercourse, a minimum landscape area of 50 feet should be maintained between the pad and the bank of the watercourse. Dumpster pads cannot include area drains that connect to the sanitary sewer system.

2.18 CAR WASH STATIONS

Car wash stations for residential use, including single and multifamily developments, shall not be permitted.

2.19 UNDERGROUND POWER

All power shall be underground in residential subdivisions. All commercial power shall be underground.

END OF SECTION 2.00

