

HENDERSONVILLE WATER AND SEWER

WATER AND SEWER UTILITY EXTENSIONS AND SERVICES

**PROJECT NAME:**

Please address all correspondence to: Development Review Engineer  
305 Williams Street  
Hendersonville, NC 28792

**How to Use this Checklist for your Utility Project Submittal:**

- *This checklist serves as a guide for utility plan review and submittal. If you have questions, contact the Development Review Engineer for the City of Hendersonville.*
- *PLEASE NOTE: This is a comprehensive list--not all projects will require every component of each section. Please write "NA" in the checkbox for an item that is not required for your project—*

*Do not leave checkboxes BLANK.*

- *Submittal stages A-G are sequenced to follow the project workflow and should be submitted in order.*
- *PLEASE NOTE: Include this checklist, with the appropriately checked items, at each stage of submittal.*
- *Initial at the end of each Submittal stage in the space provided.*

*Submittals that do not included this checklist may be returned and/ or their processing delayed.*

- *Written approvals from the Engineering and/or Water & Sewer Departments are required for each stage of Submittal.*
- *Approvals from the Engineering and/or Water & Sewer Departments do NOT imply approval from other jurisdictions. Site plan approvals are separately processed by the City and/or Henderson County or other governing jurisdictions. It is the responsibility of the Plan Preparer(s) to determine the governing jurisdictions for their project.*
- ***MOST IMPORTANT: This document and its linked forms are subject to change; It is the responsibility of the developer and/or their plan preparer to verify that the checklist and associated forms supplied with the submittal are the most recent version posted on the City of Hendersonville Website.***

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**A. INITIAL CONTACT AND APPROVALS**

**Allow up to 10 working days for processing of Availability Requests.**

- Cover Memo/Project Narrative– To include brief overview of project and Developer/Owner information including:
  1. Nature of the project (subdivision, commercial development, etc.) including any issues unique to the project (Special Use variances required, additional impacts, etc.
  2. Project location, PIN #(s) and jurisdictional limits: City/County/town, etc.
  3. Developer Name, title physical address, phone contact and email address.
  4. Engineer Name, title physical address, phone contact and email address.

Preliminary Availability and Approval Determination:

- Availability Request & Governing Body Approval Form: *Confirm Water and/or Sewer Availability and Jurisdictional Approvals* – Request availability letter(s) from City using [“Water and Sewer Availability”](#) form. This form will be used by the City to:
  1. make a preliminary assessment of the proposed system requirements and
  2. determine the available infrastructure near the proposed project,

Once the Developer/Engineer submits the completed request, the City will process the request and provide the applicant with:

1. an Availability Letter outlining the available infrastructure;
2. A copy of the “Water and Sewer Availability” form reviewed, signed by the City reviewer.

The Developer will then submit the signed form to the governing body (if not the City) for their review and signature and will return this to the City for presentation to City Council.\*\*\*

\*\*\*This process is required for Utility Extensions, not services and the City must have received approval from the reviewing jurisdiction (if not the City) before City staff will request approval for extension from City Council\*\*\*

**Availability and Initial Jurisdictional Approvals DO NOT guarantee accessibility or service—the project must meet the requirements set forth by the Hendersonville Water & Sewer Department, The Hendersonville Engineering Department and the Hendersonville Fire Department and is contingent upon the approval of all these departments.**

- Pre-Submittal Plan Review Meeting (Optional) – Developer and Design Engineer may schedule meeting to review preliminary plans and specifications with Development Review Engineer and the Engineering and Water & Sewer Departments.

Section A Completed (initials): \_\_\_\_\_

**B. FORMAL SUBMITTAL**

**Allow up to 6 WEEKS for review of Submittal materials.**

Please Note: All materials must be submitted ELECTRONICALLY. Paper submittals will not be accepted. All submittals shall be in PDF and CAD format.

Please confirm your submittal is complete using this checklist and or contacting the Engineering Department. **Incomplete submittals will not be reviewed and will be returned.** In addition, fees may be incurred for plans requiring multiple reviews by the City.

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- Project Information – Required for permitting and approval of water and/or sewer extensions.
    - 1.  Narrative(s) describing proposed water and/or sewer extensions including:
      - a. approximate length of water and sewer lines, length of each pipe size proposed,
      - b. number of manholes proposed,
      - c. relationship to City's water and sewer master plans,
      - d. Interbasin Transfer (IBT) determination and
      - e. \*Henderson County *Growth Management Strategy* (GMS) area determination (USA – Urban Services Area or RTA - Rural / Urban Transition Area or RAA – Rural / Agricultural Area),
    - 2.  Engineer's Report including:
      - a. Proposed daily demands
      - b. size, material and length of infrastructure
      - c. pump station calculations (if applicable)
      - d. details of infrastructure (lift stations, manholes, number and types of valves, cleanouts, meters, etc)
      - e. Fire Hydrant Report including:
        - i. Results of Hydrant Flow Test\*
        - ii. Number of fire hydrants proposed, projected water flow rate for each hydrant (gpm).
        - iii. Projected water flows and residual pressures during peak demand (domestic peak demand plus fire flow)
        - iv. Hydrant flows and pressures must be calculated based on associated waterline sizes and fire flow requirements as outlined in the North Carolina Fire Code,
        - v. The Fire Marshal for the Project Area and their contact information\*\*;

\* The City must be contacted 72 hours prior to hydrant flow testing to coordinate with City Staff.

\*\* All Fire Department Connections and FDC signage must be approved by the City of Hendersonville Fire Marshal if inside City limits or the Fire Marshal of the Governing Jurisdiction;

- 3.  Vicinity Map (8-1/2" x 11") showing existing water and sewer lines and proposed water lines and/or sewer lines;

- Project Plans – One set (24" x 36") in PDF format and the CAD files.

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- Construction Water Source Plan – The Developer/Engineer will determine the source of water during construction and add a note to the plans in this regard\*\*\*. This sourcing must be approved by COH.
  - If the Developer/Engineer requests it, a service line and irrigation meter may be installed for construction water sourcing.
    1. The location of the construction water line, irrigation meter and RPZ must be added to the plans for review and approval by COH Environmental Services Coordinator.
    2. COH staff will coordinate with Developer/Engineer for the inspection of the line installation, installation of the irrigation meter and testing of the RPZ by a certified backflow tester.

\*\*\*If the CONSTRUCTION water line is to remain in service post-construction, a note indicating the same must be added to the plan.

If the line is to be abandoned post-construction, this must be noted on the plans and an inspection will need to take place to ensure the system is disconnected and capped off, prior to project acceptance.\*\*\*

- Proposed Backflow Prevention – Where required\*\*\*, the Developer/Engineer must include a USC approved Backflow Prevention Assembly. This installation must receive approval from the City Environmental Services Coordinator.

\*\*\*Contact the City Environmental Services Coordinator to determine if your project requires Backflow prevention

1. Complete the “**Backflow Prevention Approval**” form;
2. Once approved, all installations should be located on the plans and;
3. A note should be added to the plans indicating the assembly model, installation, specifications and sizing.

- Confirm Sewer Use Ordinance Compliance--Please complete **an industrial waste survey and/or food establishment waste survey permit Application** to be reviewed by the City Environmental Services Coordinator.

- Proposed, Utility Easement(s)– The plans must show the appropriate easements offset 10 FT on either side of utility lines and including a 10 FT offset around the footprints of vaults, meter boxes, hydrants and valves if these extend past the ROW and into private property. Additional information is outlined in the **Utility Easement Plat Checklist**.

- Review Fee\* – Water and Sewer Extensions, see schedule of rates and fees on COH W&S website.  
\*These fees are subject to change from time to time at the discretion of city council.

- Technical Specifications –City specifications may be obtained from the City’s website or from the Engineering Department at (828) 697-3065.

- Oversize Reimbursement Application(s) – Submit signed **Oversize Reimbursement Application(s)** to the City for city council review and approval, as mutually agreed upon by Developer and City, if applicable.

\*\*\*The Developer must have received **written Approval** of the final plans from The City of Hendersonville Engineering Department prior to applying for taps or building permits and prior to submittal to state agencies\*\*\*

- NCDEQ Application: Water – This application may be obtained at <https://deq.nc.gov/permits-regulations/denr-forms/division-of-water-resources>. Submittal shall include one original application. City staff will obtain the required signatures and will return application to Engineer for State submittal.

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- NCDEQ Application: Sewer – This application may be obtained at <https://deq.nc.gov/permits-regulations/denr-forms/division-of-water-resources>. Submittal shall include one original application. City staff will obtain the required signatures and will return application to Engineer for State submittal.
- NCDOT Right-of-Way Encroachment Application, if applicable – Forms may be obtained at <https://connect.ncdot.gov/municipalities/Utilities/EncroachmentForms/EA16-1.doc>. Submittal shall include one original encroachment agreement form. City staff will obtain the required signatures and will return applications to Engineer for NCDOT submittal.
- U.S. Army Corps of Engineers Permit(s), if applicable – Pre-Construction Notification (PCN) application form.
- Railroad Encroachment, if applicable.

After written Approval of the plan is issued by the Engineering Department, the engineer must submit:

- Graphic/Data Files for GIS: Proposed infrastructure,

Submit electronic files in a separate folder labeled with the following format:

For Water infrastructure:  
PROJECT NAME\_COH\_DATA FILES\_PROPOSED WATER

For Sewer infrastructure:  
PROJECT NAME\_COH\_DATA FILES\_PROPOSED SEWER

The file should include, in ESRI Geodatabase format and/or shapefiles, and/or .dwg of:

1. the proposed Water infrastructure, appurtenances, and associated proposed easements and/or
2. the proposed Sewer infrastructure, appurtenances and associated proposed easements.

Section B Completed (initials): \_\_\_\_\_

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**C. PRE-CONSTRUCTION**

- Preconstruction Conference – Developer/Owner or Developer/Owner's Engineer schedules preconstruction conference with City. Contact Rhonda Wiggins at [rwiggins@hvlnc.gov](mailto:rwiggins@hvlnc.gov) or (828) 233-3206 to schedule conference.
- Revised Final Plans – Submit 3 sets of revised final plans (24" x 36" paper) to be stamped as "Approved" at pre-construction meeting. City staff will stamp plans "**Approved for Construction**" during conference and scanned and distributed electronically.

Section C Completed (initials): \_\_\_\_\_

**D. CONSTRUCTION**

- Construction Progress Meetings – The Engineer schedules construction progress meetings with City, if project build time is anticipated to be greater than 60-days in duration. Schedule day and time each month for this progress meeting during preconstruction conference.
- Tap Applications –As of May, 2018:
  1. Plans must be approved prior to tap application.
  2. Apply for taps at the City Website: <https://www.hendersonvillenc.gov/Availability-Inquiries,-Taps,-Meters,-New-Services/Connections,-Extensions> go to the application on that page: <https://www.cognitofrms.com/CityOfHendersonville4/TapsMetersServicesApplication>
  3. CURRENTLY WE DO NOT HAVE SYSTEM DEVELOPMENT CHARGES, so there is no need to apply for taps in advance. Wait until project requires taps to avoid unnecessary delays.
  4. In addition, as a City standard, the City will make the physical tap for tapping sleeves and valves 6" and over, up to 12". The Contractor is responsible for installing and testing the saddle and the tapping fee will be according to the COH Rate Schedule. For tapping sleeves and valves under 6", the contractor may perform the physical tap, but the Engineer/Developer shall notify City 72-hours (minimum) prior and City staff shall be on site during the tapping.
- Meter Installation – All water meters are to be installed by City staff. PLEASE NOTE: no meters will be installed or water service provided until **an approved easement plat has been recorded and written Final Acceptance of the system is issued by the City.** In the case of multi-meter boxes, individual meters must be tagged by City officials with the corresponding service/unit address
- Major Tie-In Notification – The Engineer shall notify City 72-hours (minimum) prior to any major tie-ins with City's water distribution system. City staff shall be on-site during tie-ins.
- Proposed, Surveyed, Utility Easement Plat – Copy in PDF format. Prior to Meter Installation, or any water and sewer service, the proposed plat must be recorded. Submit the proposed plat to COH Engineering Department for review prior to recordation. Additional information is outlined in the **Utility Easement Plat Checklist**.

**PLEASE ALLOW 10 BUSINESS DAYS FROM THE METER INSTALLATION REQUEST TO THE TIME OF INSTALLATION OF METERS BY THE CITY.**

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Section D Completed (initials): \_\_\_\_\_

**E. CONSTRUCTION – TESTING**  
**To be coordinated with City Inspectors**

- Testing Notification: Water – The Engineer shall notify City 72-hours (minimum) prior to any line, storage tank or pump station testing operations. PLEASE NOTE: City staff shall be on-site during testing and during the application of disinfectant.
- Sampling Plan and Test Results – The Contractor or Engineer shall develop a sampling plan describing the specific location of each sample (i.e., disinfectant concentration, bacteriological) required for project. The Engineer shall approve this sampling plan and submit said plan to the City prior to any bacteriological sampling events. Original bacteriological testing results shall be sent to the City directly from the testing laboratory.
- Testing Notification: Sewer – The Engineer shall notify City 72-hours (minimum) prior to any line or pump station testing operations. PLEASE NOTE: City staff shall be on-site during testing.

Section E Completed (initials): \_\_\_\_\_

**F. PROJECT ACCEPTANCE**  
**Allow up to 10 working days for scheduling inspections.**

- “As-Built” Plans – The Engineer shall submit electronic files only.
  1. One paper copy (24” x 36” - surveyed and referenced to NAD 83) labeled “AS-BUILT” on each sheet (24” x 36” – surveyed and referenced to NAD 83).
  2. Electronic submittal shall be in PDF and electronic formats (.dwg or .dxf file) on DVD or flash drive as outlined in the **As-Built Drawing Checklist**.
- Final Inspection – The Engineer schedules final inspection with City. Contact Engineering Inspections Manager at [kfogo@hvlnc.gov](mailto:kfogo@hvlnc.gov) or (828) 697-3065 to schedule this inspection.
- Dedication Deed – The Engineer will be provided with an Easement/System Dedication Agreement from the City which references the previously recorded easement/system plat and for the Utilities Infrastructure and Appurtenances to be dedicated to the City.
- Close-Out Documentation – The Engineer shall submit:
  1. Engineer’s Certification,
  2. final walk-through report and checklist,
  3. all test results,
  4. Fixed Asset Evaluation form,
  5. recorded easements, deed agreement,
  6. Final as-builts and recorded easement plat
- Graphic/Data Files for GIS: Final –
  1. Submit electronic files of Final As-Builts in a separate folder labeled with the following format:

PROJECT NAME\_COH\_DATA FILES\_ASBUILT FINAL

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The file should include, in ESRI Geodatabase format and/or shapefiles, and/or dwg:

1. the final Water infrastructure, appurtenances, and associated proposed easements and/or
2. the final Sewer infrastructure, appurtenances and associated proposed easements.
3. A text file of the points for the infrastructure as-builts
4. A pdf of the final as-built for GIS reference

\*\*\*City will complete and submit ***Applicant's Certification*** upon receipt and approval of ALL close-out documents\*\*\*

- Storage Tanks and Pump Stations Documentation* – The Engineer shall submit documentation associated with all storage tanks and pump stations, including but not limited to, specifications, drawings, O&M manuals and start up results and certifications.
- Project Close-Out Meeting* – The Developer or Developer's Engineer schedules project close-out meeting with City. (Optional)
- Final Acceptance* – Upon successful completion of this checklist, and all other requirements that may not be referenced in this checklist, the City will issue a letter of final acceptance to the Developer/Owner. This letter will provide the official date of acceptance and the date in which the 12-month warranty period will terminate.

**Project Close-Out Meeting Date (OPTIONAL)**

**Final Acceptance Date**

**End of 12-Month Warranty Period**

**Warranty Inspection Date**

Section F Completed (initials): \_\_\_\_\_