



"The Bedding Plant Capital of Connecticut"

TOWN OF CHESHIRE

Department of Public Works and Engineering

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ENGINEERING DEPARTMENT POLICIES FOR PLAN SUBMITTALS

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INTENT

The purpose of this document is to provide clarification of Engineering Department policies to professionals to assist them in the preparations of plans and reports to be submitted to the various Town of Cheshire regulatory agencies such as the Planning and Zoning Commission (PZC), Inland Wetlands Commission (IWC), Public Building Commission (PBC), and Water Pollution Control Authority (WPCA).

Design plans prepared shall also be in conformance with the Town of Cheshire's Guidelines and Specifications for Public Improvements, as amended. This is intended as supplementary information and is not to be used in lieu of any Law, Ordinance, Regulation, or Specification. These policies represent a minimum standard, and, as such, the Town may require additional information as deemed appropriate. **Plans that do not contain the minimum required information may not be considered for review.**

GENERAL REQUIREMENTS

Information shall be presented in a clear, concise, and readily interpretable manner. Use of variations of shading, hatching, symbols, line styles, and information tables is strongly encouraged, and in some cases may be required, in order to achieve clarity.

Information shall be presented to a level of scope, detail, accuracy, and completeness as is appropriate and/or necessary to meet all applicable regulations, standards, specifications, and requirements and sound professional and industry standard practices.

USE OF TOWN REFERENCE MATERIALS

Materials such as topography, GIS data, and any other information made available by the Town for public use shall be used in a proper and appropriate manner. The Town does not warrant the

suitability of any resources in its possession for any use, it is up the licensed professional to determine if the resources available are appropriate for the proposed use.

SURVEY INFORMATION

All survey information shall be compiled and presented pursuant to the Regulations of Connecticut State Agencies Sections 20-300b-1 through 20-300b-20 and the “Standards for Surveys and Maps in the State of Connecticut” as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26, 1996, as amended.

The boundary survey shall be prepared to a Horizontal Accuracy Class of A-2; and shall reference the basis of the bearings used. Unless otherwise approved, the reference datum shall be Connecticut State Plane NAD83. All plan sheets shall contain a north arrow and graphical scale indicator.

The topographic survey shall be prepared to a Topographical Accuracy Class of T-1, T-2, or T-3, as is appropriate, and shall include the basis of elevations used. Unless otherwise approved, the reference datum shall be NAVD88. Plans using “assumed datum” will not be accepted. A convenient, usable project benchmark shall be identified on the plans and be made visible in the field.

SHEET SIZE & SCALE

All plans submitted shall be neat and easy to read. Small type shall be avoided and notes shall be neat and concise. Notes shall be located near items they refer to and tie lines for notes shall be short and not cross each other wherever possible. Full size plans shall be submitted in bound sets of plain white paper measuring 24 inches by 36 inches (24” x 36”).

The drawing scale(s) shall be appropriate to comply with general requirements on the Town’s Zoning Regulations and shall be to an industry standard scale factor. The horizontal scale of drawings presenting information relating to any aspect of the construction of or modifications to improvements should not be less than a 40 scale (1” = 40’). This requirement is not intended to cover references or detailed sheets to assist in plan interpretation or clarifications.

EASEMENTS

The limits and purpose of any permanent or temporary easements (existing or proposed) affecting the property and public right-of-ways shall be clearly identified. Proposed easements shall be located such that they can be accessed by vehicles from a public or private street and shall be filed on the land records of the Town of Cheshire upon final approval of the regulating body.

Where required, sanitary sewer easements shall be a minimum of 20 feet wide and drainage easements shall be a minimum of 25 feet wide, with the main line pipes centered within the appropriate easement.

STORMWATER MANAGEMENT

Protection of water quality and reducing the discharge of pollutants from the Town's storm sewer system to the maximum extent practical shall be adhered to per the Town of Cheshire's Stormwater Management Plan (SMP). Proposed storm water drainage design, details, and reports shall be prepared in accordance with the CTDEEP 2004 Connecticut Stormwater Quality Manual and to Town Standards.

The Town of Cheshire uses zero net increase in post development runoff for all development projects. It shall be demonstrated in a drainage report that the project can meet the net zero increase requirements for the 10, 25, 50, and 100 year storm events. If there is more than one sub-catchment area exiting the site, this net zero increase requirements shall apply to all individual sub-catchment areas as well as the overall site.

This department encourages the use of Low Impact Development (LID) strategies, environmental structures, and environmentally sensitive designs. Sedimentation chambers are required prior to run-off from private properties entering a Town of Cheshire storm drainage system.

Infiltration designs (i.e. rain gardens, subsurface chambers, etc.) shall include all data and calculations to demonstrate that the system will perform as proposed.

Location, logs, and other pertinent information associated with any subsurface geotechnical investigation (i.e. borings, test pit, percolation tests) performed shall be included.

All drainage reports shall include a narrative summary. This summary shall include statements regarding the existing conditions of the site and post development conditions. A chart or table summarizing the pre and post development flows for the 10, 25, 50, and 100 year storm events shall be included. The report shall be written in a clear and concise manor and shall include information about the method used to evaluate the site drainage.

This office is interested in seeing the background calculations for the run-off coefficient, times of concentration, etc. and how they were chosen. Initially, pages of computer calculations (print outs) are not required. If these calculations are required by this Department to complete a review, then they will be requested. Reports should include the Design Engineer's conclusions and recommendations where appropriate.

EXISTING CONDITIONS

Existing conditions shall be shown on the plans (i.e. site topography, tree lines, specimen trees, wetlands & watercourses, upland review areas, floodway, storm drainage, above and below ground utilities, structures, impervious areas, fences, retaining walls, signage, etc.).

Existing trees, vegetated buffer, and other vegetation, and other existing landscaping features, to remain, including methods, measures, and details for protecting the same during construction, shall be shown.

Existing elevation contour lines at an interval appropriate to the nature of the existing topography shall be provided. Two-foot (2') contours are preferred, but smaller or larger contour intervals may be used if necessary. Spot elevations may also be necessary to accurately depict the existing elevation characteristics of the site.

SITE DEVELOPMENT

Site layout information shall be dimensioned, coordinated, annotated, detailed, and otherwise presented in such a manner that the proposed improvements can be accurately staked or otherwise laid out for construction. Proposed improvements, and their limits, shall be readily distinguishable from existing conditions.

All proposed buildings shall have their footprints adequately dimensioned, and shall show applicable finish floor, foundation wall, garage slab, and basement floor elevations. Footing drains and roof leader drains shall be identified with discharge points shown. Invert elevations of these drains shall also be shown.

All proposed retaining walls shall be identified on the plans and grades shall be shown at the base and top of all walls at both ends, all angle points, and all changes in slope. Submissions shall include a design for the walls and shall demonstrate that the type of wall system proposed is appropriate for the intended use and site conditions.

Proposed drainage facilities, drainage swales, and channels shall be shown and annotated to an extent required to determine the complete drainage path for any location on the site. Drainage shall not be directed onto adjacent property, nor shall the location or manner of drainage onto adjacent property change, without written evidence of proper permission.

Limits of cut slopes, fill slopes, land disturbances, and construction activities, including the total area of vegetation to be cleared shall be shown. List the total earthwork volumes calculated for the site based on the design.

Proposed elevation contour lines at an interval appropriate to the scope and nature of the proposed improvements shall be provided. Sufficient elevations information shall be provided around all foundations and to demonstrate the control of surface water on and off site. Spot elevations may also be necessary to accurately depict the proposed elevation characteristics of the design.

Location, logs, and other pertinent information associated with any subsurface geotechnical investigation (i.e. borings, test pit, percolation tests) performed shall be included.

Proposed site-related gas, water, electric, communications, and exterior lighting improvements shall be designed, detailed, and shown in accordance with all applicable regulations and standards, and in accordance with standard industry practice. A photometric plan may be required.

Plans shall show every sanitary and drainage pipe run, with length, type, and slope for every pipe.

Sanitary pipe invert elevations shall be given at the penetration into the building and at the connection point to the main collection pipe for all building sewer laterals. If sanitary pumping is proposed, then provide pump information (i.e. pump type, rated flow rates, performance curves, pump dosing cycle, chamber capacity, etc.).

Every drainage structure (i.e. catch basin, manhole, sediment chamber, culvert, flared end, etc.) shall include all pipe inverts (both inlet and outlet), sump depths, and top of grade elevations. Structures shall be labeled and details shall be provided for all.

Proposed improvements shall be shown and detailed to an extent necessary to properly present vehicular and pedestrian traffic flow circulation, ingress and egress, parking, emergency access lanes, and loading/unloading areas.

A parking table shall be provided outlining parking requirements and calculations thereof. Vehicle turning radius analysis shall be applied to design emergency and other non-passenger vehicle movements. Intersection Sight Distance (ISD) analysis shall also be performed for all site ingress and egress drives.

Accessible parking spaces, access ramps, routes, and other facilities shall be in accordance with all applicable state and federal codes and regulations. Accessible access ramps shall have details showing, at a minimum, inset spot elevations and running slope of ramps.

Refuse & recyclable collection and storage area(s) shall be identified on the plans for multi-family developments, along with proposed screening. Provide applicable details.

The location with name, size, and quantity of proposed site plantings shall be shown.

Location of property corners and concrete monuments along the public right-of-way shall be shown and labeled appropriately (i.e. found, set, or to be set).

A sequence of work shall be provided outlining the process and major milestones of construction for the site development proposed.

EROSION AND STABILIZATION

The transportation of eroded materials onto Town roads or into drainage systems is prohibited. The applicant shall demonstrate that appropriate permanent measures are utilized to ensure the stability

of earthen materials. All proposed solutions, such as plantings, permanent fabrics and other measures shall be selected based on site conditions of soil type, topography (grade), location, etc.

An Erosion & Sediment Control Plan shall be prepared in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control, showing location of all erosion & sediment (E&S) control measures needed. On-site storage areas for topsoil or other excavated material shall be shown.

The E&S Control Plan shall include a narrative and maintenance schedule, as outlined in the Town's Zoning Regulations. The narrative shall also designate the method and location proposed for disposal of clearing debris and materials removed from the site. Said plan shall also contain details and notes detailing any E&S measures required. The use of industry standard Best Management Practices (BMP's) is encouraged.

PROFESSIONAL CERTIFICATION

The preparer of the plans, and any supporting calculations, studies, or other such information, on the Applicant's behalf, is expected and required to be aware of and to have competent knowledge of applicable federal, state, and local standards, regulations and requirements, and appropriately comply with and apply the same. Said preparer is also expected to have an intimate knowledge of and control over every aspect and detail of the information presented on the plan.

The original (live) signature and seal (embossed) of the professional (i.e. engineer, land surveyor, landscape architect, soil scientist) responsible for the plans, reports, and supporting documentation (or portion thereof), as applicable. The signing professional(s) shall be appropriately licensed in the State of Connecticut. Plans that do not have a live signature and embossed seal, or are not certified by a licensed professional will not be accepted.

REVISIONS

All revisions after the initial submittal shall be clearly identified on the drawings. The Applicant should provide written responses addressing all Town review comments. It is strongly suggested that this office be contacted to clarify any of its review comments that are not clearly understood.

It should be noted, however, that it is not the duty of this office to design projects for applicants and questions of this nature will not be answered.

AS-BUILT PLAN SPECIFICATIONS

The purpose, expectation, and requirement for an As-Built Plan is to accurately present the as-built record information in order to locate, interpret, and evaluate the improvements and work

completed. In addition, the As-Built Plan is to identify and quantify deviations of the as-built product from the intended design.

All as-built plans submitted shall be class A-2 & T-2 and shall meet the standards established in the “Standards for Surveys and Maps in the State of Connecticut” as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26, 1996, as amended. Plans shall be appropriately certified, signed, and sealed by a registered land surveyor licensed in the State of Connecticut. **Plans that do not contain the minimum required information will not be considered for review.**

Final as-built plans shall be submitted and approved before a “Certificate of Occupancy” can be issued. Plans shall include:

- All improvements (buildings, structures, fences, walls, driveways, parking, walks, pools, etc.)
- Exterior wall dimensions for all buildings and distances from the foundation to all property lines (nearest tenth of a foot).
- Elevations of the finish floor, foundation wall, garage slab, and basement floor.
- All underground utilities (gas, electric, communications, propane tank, etc.)
- Water service or domestic water well, as applicable.
- Sanitary sewer lateral or subsurface sewage disposal system location, as applicable.
- Drainage improvements (rain gardens, subsurface chambers, footing drains, yard drains, etc.) with invert elevations.
- Elevations in the form of “spot elevations”, taken as part of the final actual field survey shall be provided. Sufficient elevations information shall be provided around all foundations and to demonstrate the control of surface water on and off site. If elevations are insufficient, two-foot (2’) contours may be required.
- Adequate spot elevations shall be provided for the entire driveway, driveway apron, and parking areas. Percentage of driveway slope shall also be shown.
- Benchmark shall be provided.
- Zoning table providing bulk & area requirements and existing as-built conditions.
- Building and impervious coverage calculations shall be provided.
- Any easements and/or right-of-ways shall be shown.
- Wetlands & watercourse boundaries and flood plain shall be shown.
- Plan shall show zoning setbacks, lot dimensions, bearings, and lot area.
- Abutting property owners as determined from the most recent Assessor’s records.
- All lot pins and street monumentation shall be shown.

Final as-built plans shall be submitted at least one week prior to any closing to provide adequate time for review and revisions.