

# CHAPTER 1

## CONSTRUCTION PLAN REQUIREMENTS

### 1.0 GENERAL

#### A. Purpose

The purpose of this chapter is to define the requirements for construction plan review. These requirements include items to be submitted with the construction plan submittal. It also includes improvements that must be incorporated on the construction plans.

### 1.1 PRE-DESIGN MEETINGS

A. City Code, Chapter 70, paragraphs 143 and 168, recommends predesign meetings with City departments prior to design of public facilities. While the Public Facilities Manual contains design criteria and policy, site specific situations require consultation with the City and may require interpretation by City personnel. Addressing these and any other key issues prior to plan submittal will greatly enhance the review and approval process and may eliminate the need for major design changes and subsequent plan revisions necessary to meet City requirements.

B. Variances and Deviations from the Public Facilities Manual (PFM) requirements are generally unacceptable. In the interest of time and review consistency, requests for 'major' variances should be submitted and approved prior to plan submittal. The need for a variance that may arise during review, may be incorporated into the next submittal letter.

C. Subdivisions that propose less than 50 lots and cannot be further subdivided resulting in more than 50 lots are not required to submit a Preliminary Subdivision Application with the Planning Department; however, a preliminary subdivision plan is encouraged if new roads or other public infrastructure are proposed. This will identify the level of engineering detail and extent of improvements that may be necessary. City staff shall review each subdivision plan, that does not go through the Preliminary Subdivision Process, on the basis of the following factors:

1. The completeness of the plan.
2. Compliance with the applicable provisions of City Code, the city zoning ordinance, the city public facilities manual and all other regulations and policies applicable to the project.
3. The capacity of the plan, in its proposed design, to function in a manner that is compatible with adjoining properties and streets and conducive to

the public health, safety and welfare. Assessment of such compatibility shall include the following factors:

- a. The adequacy of the number of access points to adjoining streets and the relationship of such access points to access points from neighboring developments and properties.
  - b. The number and nature of street connections to adjoining properties and the impact of such connections on the traffic flow onto and resulting safety of neighboring properties.
  - c. The availability of continuous and unobstructed access for emergency vehicles.
  - d. The capacity of the plan to provide sufficient drainage, stormwater management and flood control to meet federal, state and local requirements.
  - e. The adequacy of landscaping and other buffering features to ensure compatibility with adjoining properties, in accordance with article 19 of the city zoning ordinance.
  - f. The adequacy of water and sewer facilities to serve the site.
  - g. The adequacy of the plan in meeting all requirements imposed by article X of chapter 26 of this Code and the CBPA specifications manual for properties located wholly or partially within the CBPA district.
4. The capacity of the plan, in its proposed design, to ensure the safety and convenience of persons using and accessing the site, including the adequacy of the design to provide for the smooth flow of traffic on-site and minimalization of conflicts with pedestrian traffic.
  5. The capacity of the plan to address adverse environmental conditions of the property in accordance with the requirement of section 13-2600 of the zoning ordinance.

## **1.2 SUBMITTAL PACKAGE**

Construction plan review package must contain the following:

- A. Site/Subdivision plan submittal package checklist which must accompany plan submittals is contained in Guideline 18.
- B. Prior to reviewing Subdivision Plans, Site Plans and Soil Drainage Management Plans (SDMP/3 acre lots), review fees must be posted with the Department of Development & Permits. A current fee schedule is available from [on the City of Chesapeake website](#).
- C. Prior to issuance of any permit, the developer shall be required to pay for inspection services provided by the City. The fee schedule is posted on the City website.

- D. Eight sets of plans are required for approval. One set of the approved plans will be returned to the Engineer. One additional set of plans is required for subdivisions with pump stations. If additional approved sets are desired by the consultant they should be included in the submittal. Eight copies of pump station shop drawings are required.
- E. Four copies of the plan must be marked or highlighted to show all items that have changed since the last review.
- F. Subdivision development plans shall provide all services to lots to preclude proposed site plan from making any improvements offsite. Bonding of the improvements and recordation of the subdivision plat will be required prior to site plan approval.
- G. Combining Site Plan improvements as part of a subdivision plan may be permitted with prior approval from Development Engineering. Subdivision improvements shall be clearly identified on the plans. The manner in which the subdivision improvements are shown shall be approved in advance by the City. Separate approvals & review fees will be required for the site plan & subdivision plan.
- H. It is the developer's responsibility to determine the restrictions imposed by existing easements and rights-of-way within his project limits and to ensure that the proposed improvements do not conflict with these restrictions. This requirement includes, but is not limited to, existing easements or rights-of-way for Virginia Power, railroads, gas companies, city utility departments, and HRSD. Copies of existing agreements shall be submitted with the plans.
- I. All plans must be accompanied by a submittal letter, and two copies of all calculations (i.e. pavement design, drainage, utility, fire flow, etc.) necessary to substantiate the design. The letter shall include an explanation of any variances from the Public Facilities Manual.
- J. Drainage calculations shall contain a drainage summary including a description of current drainage, proposed improvements and methods used in design. All computer print outs must be accompanied by the input data and a description of the program origin, methodology, output terminology, etc., as necessary to support the program and simulation.
- K. Lighting calculations shall be required except for standard fixture/pole combination for Public Streets & multi-family sites. Calculations shall be submitted with the plan and include:
  - 1. Average maintained horizontal footcandles
  - 2. Average/minimum uniformity ratio
  - 3. Location and type of luminaire(s)

4. Mounting height
  5. Bracketing length
- L. A Geotechnical Report shall be required for plans which include a BMP (excluding manufactured facilities, i.e. Filterra type systems) and for pavement design for public streets. Identification and location of soil boring tests should be included.
  - M. A Phase 1 Environmental Site Assessment shall be required for all developments in accordance with PFM, Volume I, Chapter 17. Developments that are evaluated during the Preliminary Application Process are not required to resubmit.
  - N. All offsite easements and right-of-way must be obtained prior to any plan approval (70-90). The Department of Development & Permits reserves the right to verify the rights to ownership. All agreements and deeds of easements must be submitted to the Department of Development & Permits for review and approval.
  - O. Subdivisions that propose less than 50 lots are not required to submit a Preliminary Subdivision Application with the Planning Department however, the City highly recommends scheduling a Pre-design meeting with City staff. The following items are required to be submitted with Final Subdivision Plans, where no Preliminary Subdivision Application was required or provided:
    - a. An Address Plan in accordance with Section 70-24.b., paragraph 11, which includes an overall plan at a scale of 1"=200' with street names and lot numbers.
    - b. Street Name Reservation Form
    - c. CD with electronic version of the plan

### 1.3 COVER SHEET

The following items shall be incorporated on to the construction plan cover sheet.

- A. Plan Data
  1. Construction Plan Type: State whether the plan is a site plan or subdivision on the coversheet. A subdivision is defined as a plan which shows the division of a tract of land into 2 or more lots or other divisions for the purpose of building development or for the purpose of transfer of ownership including all changes in existing street or lot lines. All other plans for the development on a single tract of land including utility extensions or work within the existing right-of-way shall be classified as site plans. In the event that a tract is subdivided after receiving site plan approval it will be subject to all applicable subdivision ordinances. A plan revision shall be submitted to address any additional requirements resulting from the change in status.

2. Tax map number(s).
3. The name, mailing address, email address, and telephone number of the Developer/owner.
4. A statement identifying the benchmark, datum and adjustment used.
5. A table identifying the zoning, proposed use and the number of parking spaces required and provided with a breakdown specifying handicapped, van accessible and loading space. Proposed building height & square footage.
6. Stormwater Utility (Not required for residential subdivisions):
 

A table stating the impervious area of the site (sq. ft.) shall be included on the coversheet. Impervious area shall include areas built with the site and exclude areas located within the dedicated right-of-way. This impervious area shall be listed as follows:

  - a. Building foot print
  - b. Pavement
  - c. Other impervious area (sidewalk etc.)
  - d. Total impervious area
7. Acreage of disturbed area.
8. The following information shall be on all plans in a table on the cover sheet (each BMP shall be referenced individually).
  - a. Source of Flow to BMP – Public Only, Private Only or Public and Private
  - b. Type of BMP (Wet or Dry Detention, Infiltration Facilities, Dry Well, Grass Swales w/Check Dam, or Manufactured Systems)
  - c. Storage Capacity of BMP (acre – feet) The storage volume available from the normal water elevation (for wet facilities) or bottom invert (for dry facilities) to the elevation the facility rises to during a 50-year storm event.
  - d. Area Draining to BMP (acreage)
9. The numbers of all associated preliminary plans, use permits, rezonings, etc. All approved proffers and stipulations shall be listed on the plans.

- B. The following Construction Plan Assignment statement shall be on the applicable plans and shall apply to any subsequent plan revisions.

Construction Plan Assignment

RE: \_\_\_\_\_  
Subdivision/Site Plan (Name as Shown on Plan)

The undersigned Engineer/Firm agrees that the City of Chesapeake shall have the right to use these plans to complete the permanent physical improvements in the event that the developer defaults in their obligations to complete these facilities as required by City Code. The undersigned Engineer also agrees that the City may use these plans for "as built" records as necessary. The Engineer/Firm further agrees that these rights to use the plans shall be provided without cost to the City.

Name: \_\_\_\_\_ Title: \_\_\_\_\_  
(Type or Print)

Firm: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

- C. A vicinity map with a scale of not less than 1" = 1 mile must be on the cover sheet of plan submittals.

- D. The coversheet of construction plans shall contain a note stating the following:

The contractor shall provide written notification to all property owners and residents of property adjacent to a development or offsite improvements in accordance with the following requirements:

1. Provide 30-day advanced notice to property owners for construction within the right-of-way when private improvements are affected or pavement widening will occur between the existing pavement and the property owner.
2. Provide 30-day advance notice if any construction is occurring on offsite private property (including easements).
3. When private improvements are affected, the notice must indicate the impact on the private improvements. Private improvements include, but are not limited to, mailboxes, fences, entrances, landscaping, etc.
4. No notice is required for construction that is limited to the development site and right-of-way where private improvements are not affected.

5. In lieu of a required 30-day notice, the City will accept a signed acknowledgement that the property owner is satisfied that they have been provided an explanation of the project scope of work.
- E. The coversheet of all construction plans must include the following statement, signed by the professional engineer in responsible charge of the project, to facilitate DEQ's approval of the construction plans:  
  
"This is to certify that the sewer flows for this project were designed in accordance with the Regional Technical Standards."
- F. Permits and bonding for site plans only:  
  
The Design Engineer shall calculate the construction amount for site plans for land disturbing, entrance and right-of-way and CBPA permits using the format and unit prices given in Appendix 26. These unit prices are the minimum values acceptable to Development & Permits. The Design Engineer should adjust the prices upward in accordance with good engineering judgment to reflect non-standard applications or conditions. This bonding calculation shall be placed on the cover page of the site plan.
- G. When folded, the name of the plan shall be visible, and contain an area approximately 6" x 6" for approval stamps.

#### **1.4 PLAN SHEET REQUIREMENTS**

- A. The following information shall be provided on all plan sheets:
  1. The following drawing scale shall be used, however, other scales may be permitted with approval in advance from the review engineer.
    - a. Subdivision – (Excluding Townhouses)  
  
1" = 50' Horizontal  
1" = 2' Vertical (see f.)  
  
An overall plan sheet is required when plans consist of more than two plan sheets. Sheet shall be indexed to reflect individual plan sheets.  
  
1" = 100' will be acceptable for overall plans where individual streets are shown on a scale no smaller than 1" = 50'.
    - b. Townhouses  
  
1" = 25' Horizontal

1" = 2' Vertical (see f.)  
1" = 100' acceptable for overall plans

c. Site and Erosion and Sediment Control Plans

Less than (or equal to) 1AC: 1" = 25'

Over 1 AC – Smaller scales will be permitted, provided the connections to public facilities are shown on a scale no smaller than 1" = 25'.

d. Three acre lot (SDMP) scale shall be no smaller than 1" = 100'.

e. All improvements within existing rights-of-way to include entrances, turn-lanes, widenings, utility installations, and meter vault installations shall be shown on a scale of 1" = 25' or larger to eliminate potential construction problems.

f. A vertical scale of 1" = 5' may be used if the utility/storm drain inverts and clearances are given at crossings and potential conflicts.

2. A north arrow shall be provided on each plan sheet.

3. All plan elevations must be based on NAVD 88 datum. Reference source datum of datum (City of Chesapeake GPS monument number or acceptable other). Plans must indicate/describe onsite temporary benchmark (TBM) with location and elevation.

4. The plans must be prepared and sealed by a Professional Engineer or a Certified Land Surveyor as specified in State Code Subsection 54.1.

5. Plan sheet size shall not exceed 24" x 36". Plans shall be folded to approximately 9" x 12" size. Smaller plan sheets may be permitted with prior approval from the review engineer.

6. Title block shall contain, at a minimum, sheet number, total number of pages, name, address and phone number of consulting firm, name of plan, date, scale, and revision dates.

B. Plans must include the following:

1. Construction details are required for those improvements that do not conform to Virginia Department of Transportation or Chesapeake City Standards, or Hampton Roads Regional Standards.

2. Where applicable, provide a note stating that all abandoned pipes under existing city streets may be filled with flowable fill or sand and plugged in lieu of cutting the pavement for removal. Utilities to be relocated must be indicated and new location designated.
3. Site plans shall provide a note stating that all sidewalks and accessible paths shall be in compliance with ICC/ANSI A117.1 (current version).
4. Plans for water and sewer facilities shall state the 100-year flood elevations (per Appendix 16).
5. Property line boundaries shall be shown on the plans.
6. If a subdivision proposes to phase the development, then the plan shall show the following items:
  - a. All master improvements are required to support the initial phase.
  - b. All necessary design calculations to support improvements for interim and ultimate conditions.
  - c. Subdivision phase lines.
  - d. Adequate termination of utilities including any necessary easements (e.g. valve with a kicker joint on water mains, manhole for sewer mains)
  - e. Adequate termination of streets:
    1. One lot deep – barricade 70-94 (c).
    2. Greater than one lot deep requires cul-de-sac in accordance with City Standards. Temporary cul-de-sac temporary sign required.
    3. All right-of-way storm water must drain through recorded right-of-way or drainage easements.
    4. Fire hydrant spacing shall meet requirements per phase.
    5. Street improvements are required along all streets adjacent to lots being recorded (70-167).
    6. Stub streets or temporary cul-de-sacs constructed to ultimate top of bank for perimeter facilities (5-11-d)
7. In the event of construction phasing, Development & Permits reserves the right to request an overall plan to address drainage and street improvements.
8. All existing and proposed easement locations shall be shown within and immediately adjacent to the proposed development. Provide width and legal references for existing easements.
9. When traffic signals are required, the intersection shall be shown on a separate sheet in accordance with Chapter 11.

10. Wetland areas must be delineated on the plan. Improvements within any wetlands area may require Army Corps of Engineers, Coast Guard or Wetlands Board approval. It is the responsibility of the developer and his consultant engineer to determine if approval is required from these or any other regulatory agencies. Approval and all permits from the proper environmental authorities shall be obtained prior to construction.
11. Condominium and apartment plans must state that garbage collection is private. The collection point(s) shall be shown on the plan.

C. Traffic Control Requirements

Plans must contain traffic control notes which describe any measures necessary to maintain traffic flow and a safe working environment within or adjacent to the right-of-way, in accordance with Chapter 11.

D. Street and Pavement Requirements

1. A typical street section in accordance with City standards shall be shown on the plans.
2. A pavement structure summary is required for each street in a tabular form including proposed pavement materials, design C.B.R.'s optimum moisture and density.
3. Radius and stationing for the centerline of all streets and for all radial curbs shall be shown on the plan.
4. Profile sheets shall be provided for all streets where water and/or sewer are required.
5. Plans shall show the existing right-of-way lines, width and the centerline of the original right-of-way in order to determine the amount and location of right-of-way dedication and/or reservation requirements. (70-95)
6. Plans shall show the appropriate dedication and/or reservation in accordance with the approved MASTER TRANSPORTATION PLAN. (70-95)
7. Plans shall address the restoration of public right-of-way including ditches, shoulders, and swales.
8. Plans shall include a separate pavement marking plan for work within the existing right-of-way.

E. Drainage, Topographic and Erosion and Sediment Control Requirements

1. Where applicable, provide note stating that all abandoned ditches shall be filled and all abandoned pipes shall be removed.
2. Plans shall contain typical sections for all proposed ditches, swales and detention/retention areas.
3. Topographic survey of property being developed is required. This survey shall show all physical features including, but not limited to, ditch locations and grades, as well as public and/or private utilities whether overhead or underground. Topo shall also show the location of improvements and/or grade of adjacent properties including ditches a minimum of 25' from the property line or as necessary to ensure that proposed improvements are compatible with the existing facilities.
4. An Erosion and Sediment Control Plan shall be prepared in accordance with Virginia Erosion and Sediment Control Commission Handbook and current City Code. The use of construction sequencing rather than mechanical means to prevent erosion is encouraged; all nonstandard erosion and sediment control details shall be shown on a detail sheet. All standard Virginia Erosion and Sediment Control details shall be designated.
5. Soil Drainage Management Plan (SDMP) details shall be incorporated in construction plan when the septic tank system must conform to the Health Departments criteria for 3 acre lots.

F. Street Lighting Requirements

1. Lighting design and location shall be incorporated into construction plans. (70-167d)
2. The engineer shall coordinate street lighting design with all other affected utilities.

G. Landscape Plan Requirements: Where street trees are to be incorporated into a development, plans shall follow the requirements of the Chesapeake Landscape Ordinance and Specifications Manual, CZO 19-600. In addition, if trees are proposed in the right-of-way or a public project, the design shall follow species selection and conditions per Appendix X, and shall follow VDOT Guidelines for Planting along Virginia Roadways. All proposed street trees shall obtain prior approval from Department of Public Utilities and Development & Permits prior to submitting final development plans.

## **1.5 POST APPROVAL PLAN REQUIREMENTS**

- A. Plan approval is valid for a period of five (5) years. Permits requested and/or sections presented for plat recordation after the five (5) year period has expired will be subject to the City regulations and specifications in effect at that time.
  
- B. Any plan that is submitted for the approval after the 5 year deadline shall be treated as a new plan submittal and shall include all calculations, drainage area maps...etc. necessary to substantiate the entire design and satisfy current City regulations and specifications. Once an approved final subdivision plat for all or a portion of the development is recorded pursuant to § [15.2-2261](#), the approved plan for the remaining phases shall remain valid for a period of five years from the date of the latest recorded plat of subdivision for the property. The five year period of validity shall extend from the date of the last recorded plat.
  
- C. Plan Revisions - the following information must accompany plan revisions:
  - 1. A transmittal letter describing the revision in detail, stating the justification for the revision and its general location. This letter must include a statement from submitting engineer or surveyor that no other changes have been made to the plan.
  - 2. A revision block shall be incorporated on the plan with the revision numbered and described.
  - 3. A minimum of four of the eight prints of the plan revision must have the revisions circled in red, highlighted, or by digitally clouding.
  - 4. The plan revision must be approved prior to commencement of construction of the facilities covered by the revision under review.
  
- D. Duplicate Approved Plans – In the event that additional plans, stamped approved, are desired, subsequent to original plan approval, a letter will be required certified by the Engineer that no changes have been made since the original approval and that all plan revisions have been incorporated into the duplicate plans.

## **1.6 STORMWATER UTILITY FEE**

- A. The Stormwater Utility provides funding for the local stormwater management programs through a monthly user-charge assessed to all property owners. The user-charge is based on each parcel's contribution of stormwater flow to the local drainage system and regional water quality control facilities. City ordinance Sec. 26-431 through 434.

In order to properly achieve this goal, certain properties should be provided the option to receive fee adjustments (credits) due to special considerations. Stormwater Utility fee credits are available by providing water quality improvements and/or water quantity improvements (reduced peak discharge). In order to qualify for this credit, an application must be submitted which shows compliance with this policy.

- B. The stormwater utility fee can be reduced for privately owned and operated facilities. A 20% reduction is available for developments that provide stormwater quality and an additional 20% reduction is available for developments that provide for stormwater quantity. A 10% reduction for all other approved BMP facilities. Any credits provided, water quality or water quantity, shall be reduced by 50% if a public facility is used to accomplish the reduction. This reduction in credit is necessary since the City must maintain the system.
- C. A 100% credit may be approved to any person who owns and provides for complete private maintenance of storm drainage and stormwater facilities, provided that all permits from the DEQ have been obtained and all stormwater runoff discharges directly to waters of the US. In no case shall the credit reduce the minimum fee less than that generated by one (1) Equivalent Residential Unit (ERU) at the current utility rate.
- D. Applicability

Credits can accrue to any property upstream of and served by a qualifying stormwater treatment facility. Credits can be applied to that portion of the site that complies with the following criteria.

1. Stormwater Quantity - A stormwater quantity utility fee credit is available by submitting an application and supporting calculations which show that the post development site stormwater discharge has been withheld to "undeveloped" runoff levels by a BMP. In this instance, the term "undeveloped" shall be defined as the site having a runoff coefficient of 0.2 (using the Rational Method) and a rainfall time of concentration representative of the undeveloped site configuration and topographic characteristics. Other drainage calculation methodologies, acceptable to the City, may be used, provided comparable curve numbers, coefficients, etc. are used which reflect similar levels of development.
2. Water Quality - A stormwater quality utility fee credit is available by submitting an application and supporting calculations which show a structural BMP meeting the required removal efficiency. Calculations are required that demonstrate no net increase in non-point source pollutants other than what would be produced by an equivalent area with an equivalent impervious cover for the watershed. Pollutant loading

calculations must be in accordance with the Chesapeake Public Facilities Manual Volume I, Chapter 5.

E. Procedures

1. All development projects submitted for approval (excluding single family subdivisions) shall include in their initial submittal package; an application for Stormwater Utility Credit as well as all necessary drainage calculations to demonstrate compliance with the credit requirements.

Some large developments (e.g., Greenbrier) have regional, project-wide BMPs which may qualify most or all properties within the limits of their watershed for credits. Also, on smaller projects with existing, single-site BMPs, may be eligible for Stormwater Utility credits.

2. For exemptions, 100% credit, the following information shall be submitted:
  - a. Copy of the facility's VPDES permit.
  - b. Detailed site plan including topography, showing locations of all storm drains and end-of-pipe outfall locations. Site plan should also show direction of flow for stormwater runoff.
  - c. Control numbers for stormwater utility bills (existing BMP sites).
3. Development and Permits Department will review the credit request during the normal development approval process upon receipt of a complete application, complete calculations and all necessary supporting plans, drainage area maps and drainage summaries.

Once the calculations are approved and the City receives a copy of a properly executed maintenance agreement, the credit will become effective at the beginning of the following month.

F. Application Form

Application Form can be found in Appendix IX.