

## Article III

### **PRELIMINARY ENGINEERING PLAN**

#### **300 PURPOSE**

To outline the procedure to be followed for a preliminary engineering plan submittal, including the specific information necessary for the submittal. The required information shall address the feasibility of the proposed improvement and identify particular problems that may be encountered. In general, the submitted information will be similar to what is required for RPC preliminary plan/plat approval. The Owner shall address these issues in the Final Engineering and Construction Plan. A Pre-Development Storm Water Tributary Map of the existing site shall also be provided as part of the Preliminary Engineering Plan.

When a reference is made to the Preliminary Engineering Plan, it shall include all pertinent reports and calculations necessary for review by the County Engineer.

#### **301 PROCEDURE**

A. Step 1

The Owner shall submit four (4) sets of the Preliminary Engineering Plan on 22"x34" size sheets and one (1) set of the Preliminary Engineering Plan on 11"x17" size sheets, including appropriate review fees and checklists to the County Engineer by the required submittal date for the preliminary plat to RPC.

B. Step 2

Upon receipt of the Preliminary Engineering Plan the County Engineer shall complete a review of this submission within 21 calendar days. The County Engineer shall provide written comments and/or approval. Marked checked prints may be returned to aid in understanding the comments made by the County Engineer. The County Engineer shall: (1) approve; (2) approve subject to the resolution of the attached comments; or (3) not approve the Preliminary Engineering Plan.

Review times for subsequent reviews shall be completed by the County Engineer based on the requirements of the Supplemental Specifications of these Standards.

Copies of the County Engineer's comments shall be submitted to the Owner, RPC and the appropriate Township. The Owner may request a meeting to review the submittal or the County

## Article III

### **PRELIMINARY ENGINEERING PLAN**

Engineer's comments. An agenda of the meeting topic(s) shall be sent to the County Engineer a minimum of two business days prior to the meeting. Approval or conditional approval does not constitute variance approval. Request for variances shall be as set forth in these Standards (See Article I and VI). Intended variances must be requested during the Preliminary Engineering Plan.

- C. Step 3  
The County Engineer shall submit the Preliminary Engineering Plan to other agencies deemed necessary by the County Engineer. Additional copies shall be provided to the County Engineer for these submittals upon request.
- D. Step 4  
All townships reviewing the Preliminary Engineering Plan shall be given ten calendar (10) days to review the plan.
- E. Preliminary Plan Approval:  
Approval of the Preliminary Engineering Plan by the County Engineer is not an acceptance of the entire proposed project. It is only an approval of the general concept, which should be used as a guide in the preparation of the Final Engineering and Construction Plan. Approval of the Preliminary Engineering Plan shall be effective for a period not to exceed one (1) year following the date of the approval unless an extension of time is granted in writing. Upon expiration of the Preliminary Engineering Plan approval, no approval of the Final Engineering and Construction Plan shall be given until the Preliminary Engineering Plan has been resubmitted (including appropriate review fees) and approved. Approval of the Preliminary Engineering Plan is not a waiver of any Standards that may change during the period of preparation of the Final Engineering and Construction Plan. The Final Engineering and Construction Plan shall meet the County's requirements in place at the time the Final Engineering and Construction Plan is submitted for review.

When a Preliminary Engineering Plan includes a multi-phased project, the Preliminary Plan approval shall remain in force as long as the proposed development is advancing in a reasonable

## Article III

### **PRELIMINARY ENGINEERING PLAN**

manner as determined by the County Engineer. When a proposed multi-phase project is not advancing, the County Engineer may require a resubmission of the Preliminary Engineering Plan (including appropriate review fees). The County Engineer shall advise the Owner of this requirement in writing.

Significant changes to the approved preliminary engineering plan shall be submitted to the County Engineer for approval prior to submittal of the Final Engineering Plan. A narrative describing the reason(s) for the revised plans shall be included with the revised plans. The narrative will need to address the reasons for significant changes to the plans, such as street alignment, street profile, pavement typical section, drainage changes, sight distance, adequate outlet, etc.

### **302 PLAN REQUIREMENTS**

The Preliminary Engineering Plan shall be submitted by cover letter and include a signed and completed submission Preliminary Engineering Plan Review checklist form which is available through the County Engineer (see Supplemental Specifications of these Standards for a copy of this checklist) along with the review fees. The Preliminary Engineering Plan shall be prepared by a Registered Professional Engineer (See Article I, Section 110) and shall include the following information as a minimum. An incomplete submission shall be cause for rejection by the County Engineer.

A. Identification:

1. Name of subdivision or development
2. Location by Range, Township, Quarter-Township, Farm Lot, (U.S.M. Lands) and/or Virginia Military Survey Name and Number
3. A clearly legible location map showing the location of the project with respect to the nearest road intersection.
4. North arrow
5. Written and graphical (bar) scale
6. Name, address and telephone number of Owner and the Design Engineer preparing the plan

B. General Information:

### Article III

#### **PRELIMINARY ENGINEERING PLAN**

1. Total development acreage
2. Number and location of lots (Index Map)
3. Development density (as defined in Article VI, Section F)
4. Plan showing proposed section/phase lines for the entire project
5. Copy of the preliminary plan, composite utilities and grading plan, and plat as submitted to RPC (plans shall be prepared per current RPC regulations)
6. Identification of all intended variances to these Standards along with a written request in accordance with these Standards.

#### C. Traffic Study:

The traffic study shall comply with the Delaware County Traffic Impact Standards (TIS), current edition. The following items outline the basic requirements. Please refer to the TIS for all required information. A copy of the TIS may be found in the Supplemental Specifications to these standards.

1. Projected ADTs, widths and classifications for all proposed streets.
2. Traffic volumes for turning movements at all major intersections and intersections with existing State, County or Township roads. AM and PM peak hour counts shall be provided. The current edition of the TIS shall be used to determine warrants for any traffic control devices, turn lanes, acceleration and deceleration lanes, etc.
3. All traffic projections shall account for offsite traffic from stub streets into adjacent properties and cut through traffic from existing public roads.
4. The current and future ADTs on existing public roads from which the proposed project takes access.
5. An analysis of the impact on the existing public road system, the capacity of the existing roads and intersections affected by the proposed project.

### Article III

#### **PRELIMINARY ENGINEERING PLAN**

6. In general an internal traffic study is not required if the Delaware County typical section is used throughout the proposed improvement (ADTs for each residential street shall be provided). At the discretion of the County Engineer, an internal traffic study may be requested for specific sites.
7. Commercial site traffic considerations based on ITE Manual, Current Edition.
8. Preliminary sight distance exhibits (if the TIS is submitted prior to the Preliminary Engineering Plan)
9. The Traffic Study shall be submitted concurrently to ODOT and other public agencies for their review and approval (if applicable).

D. Street and Structure Plan:

The following items outline the basic requirements. In addition, traffic and loading design calculations shall be included with the preliminary plan submittal (refer to Articles VI and VII for minimum standards and specifications for design).

1. Proposed typical sections for all streets showing: pavement and grading sections, right-of-way widths, slopes and composition with thickness of the proposed pavement (based on the AASHTO design methods and Art. VII). Each typical section shall also show the CBR value used for design of the proposed subgrade, pavement and total design value. Pavement design calculations and documentation shall also be submitted.
2. Centerline profile, including vertical alignment and vertical curve data including approximate “K” values and design speeds. Both existing right-of-way profiles are required for all open ditch streets (preliminary plan only).
3. Post development safety considerations and traffic projections including: traffic control devices, pedestrian traffic flow, etc.
4. All existing utilities showing their locations and easements, including all access easements.

### Article III

#### **PRELIMINARY ENGINEERING PLAN**

5. Design speeds and street classifications.
  6. Horizontal Street/Common Access Drive alignments (including street names) with stationing at 100-foot intervals and at all intersections, PC's and PT's.
  7. Horizontal curve data showing the centerline radius and delta angle for all curves.
  8. Pavement and right-of-way widths.
  9. Existing topography (specify source datum) at the following specified contour intervals:
    - Two-foot minimum contour intervals for subdivision lots utilizing centralized sewer systems;
    - One-foot minimum contour intervals for subdivision lots utilizing on-site sewage treatment systems;
    - Larger contour intervals (5-foot intervals maximum) may be approved by the County Engineer for sites with existing topography of 12% slopes or steeper.
    - Contour intervals provided in the Delaware County Auditor's website (DALIS) is acceptable for existing topography
  10. Sight distance exhibits in accordance with the requirements of Article VI (if not submitted with the TIS).
  11. Terrain classification.
  12. Extent of grading/clearing limits consistent with current RPC regulations.
  13. Location of sanitary sewers, water lines, storm sewers and preliminary flood routing paths.
  14. Adjoining parcel lines within 50 feet of the tract boundaries and existing roads within 200 feet of the tract boundaries.
  15. Proposed street connections for adjacent land (to existing or future development). The use of alternate road terminations (e.g. Permanent T-turnarounds, etc.) shall be approved in writing by the County Engineer.
- E. Storm Water Tributary Map Requirements:

## Article III

### **PRELIMINARY ENGINEERING PLAN**

See Article IX and the Supplemental Specifications for Storm Water Tributary Map requirements to be included with the Preliminary Engineering Plan.

F. Narrative:

The preliminary engineering plan must also include a narrative discussing and identifying any problems which the Design Engineer and/or Owner are aware of which shall affect the feasibility of the project.