

**Delaware County Engineer's Office (DCEO)
Preliminary Engineering Plan
Review Checklist**

Project Name: _____

Plan Requirements

- Yes No N/A Proper number of plan sets (4 sets of full size and 1 set of half-size plans), traffic study (if applicable), storm water management report provided?
- Yes No N/A A CD or DVD containing PDFs of the plans, storm reports, etc shall also be provided with the plans for all submittals
- Yes No N/A Copy of approved zoning plan and text (Electronic format – PDF)
- Yes No N/A Completed preliminary plan review checklist provided?
- Yes No N/A Proper fees, including fee submission checklist been submitted? See http://www.co.delaware.oh.us/engineer/Review/Plan_Review_fee_schedule_cover_page.pdf for copy of fee submission checklist.
- Yes No N/A Storm water Management Report with all the various calculations, predevelopment and post-development tributary maps (See Article IV, Section 403 E, Article IX and the Supplemental Specifications).
- Yes No N/A Plans sent to other public agencies (DCEO to send plans to public agency, if applicable)

Note: The County shall contact the plans submitter if the above items have not been submitted with the plans. Failure to submit the items may result in delay or halting of the review process.

Identification - Section 302 A – This information is shown on the Title Sheet. A sample Title Sheet is available from DCEO. Please contact this office for a copy.

- Yes No N/A Name of subdivision or development
- Yes No N/A Location by Range, Township, Quarter-Township, Farm Lot (U.S.M. Lands), and/or Virginia Military Survey Name and Number
- Yes No N/A A clearly legible location map showing the location of the project with respect to the nearest road intersection(s)
- Yes No N/A North Arrow
- Yes No N/A Written and graphical (bar) scale
- Yes No N/A Name, address, and telephone number of Owner
- Yes No N/A Name, address, and telephone number of the Design Engineer preparing the plan
- Yes No N/A Regional Planning Number (Upper Right Hand Corner of Title Sheet)
- Yes No N/A Total development acreage
- Yes No N/A Number and location of lots (e.g., Index Map)
- Yes No N/A Project density

General Information - Section 302 B

- Yes No N/A The Preliminary Plan including its grading plan is to include the entire subdivision to confirm the entire development concept is feasible, that the street layouts will work, and to identify any major issues upfront, such as drainage issues, before the Final Plans for the various phases are to be prepared.
- Yes No N/A Does the grading and utility plan show simply enough proposed spot elevations or grading to confirm that the general layout including ponds will work?
- Yes No N/A Has plans and plat for any adjoining subdivisions been reviewed to insure the proposed project is compatible?
- Yes No N/A Plan showing proposed section/phase lines for the entire project.
- Yes No N/A Copy of the preliminary plan, composite utilities & grading plan, and plat as submitted to Regional Planning Commission (RPC) provided?
- Yes No N/A Include a signature line for our office to sign the Coversheet on larger developments that include multiple sections/phases.
- Yes No N/A Identification of all intended variances to these Standards along with a written request in accordance with these Standards
- Yes No N/A Nonconforming Standards, items clearly identified – list below: *

***Resolve or variance request required subject to preliminary plan approval by County Engineer for all intended variances.**

Traffic Study - Section 302 C - Traffic Study submittal shall comply with current traffic impact standards (TIS). For a copy of the current TIS, see the Supplemental Specifications to these Standards. The Preliminary Engineering Plan will not be approved until the TIS is approved.

- Yes No N/A Projected ADT's, widths, and classifications for all proposed streets
- Yes No N/A 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. Recommendations and warrants for any traffic control devices, turn lanes, acceleration, and deceleration lanes.
- Yes No N/A All traffic projections shall account for offsite traffic from stub streets into adjacent properties and cut through traffic from existing public roads.
- Yes No N/A The current and future ADT's on existing public roads from which the proposed project takes access.
- Yes No N/A An analysis of the impact on the existing roads and intersections affected by the proposed project.
- Yes No N/A An internal traffic study is not required if the appropriate Delaware County typical section(s) is used throughout the proposed improvement.
- Yes No N/A Any required approval by ODOT and/or other public agencies provided (copies of approval letters from other public agencies is acceptable)

Street and Structure Plan- Section 302 D

Proposed Typical Sections:

- Yes No N/A Pavement and grading sections with pavement thickness
- Yes No N/A Pavement width (See Art. VI, Table 601, 602, & 603)
- Yes No N/A R/W widths (See Art. VI, Table 601, 602, & 603)
- Yes No N/A Pavement cross slope (1/4" per foot), shoulder and ditch cross slopes (if appl.)
- Yes No N/A Typical section comply with current DCEO Standard Drawings (See Supplemental Specifications)
- Yes No N/A Pavement design calculations also submitted with plans (if not using County Typical Section Pavement Design per Art. VII)
- Yes No N/A Del-Co water line located outside the R/W?
- Yes No N/A Fire hydrants located correctly and per DCEO Standard Drawing(s)?

Pavement Composition:

- Yes No N/A County Typical Section Design used with ADT's shown
- Yes No N/A Pavement composition based on the AASHTO design methods (Section 705) or use of County Typical Section Pavement Design per Art. VII
- Yes No N/A CBR Value (Section 705)
- Yes No N/A SN value (Use: SN_s for Standard Delaware County Design and SN_D for designed pavement)

Plan and Profile:

- Yes No N/A Centerline profile
- Yes No N/A Both existing R/W profiles (for open ditch streets only)
- Yes No N/A Post development safety considerations and traffic projections including: traffic control devices, pedestrian traffic flow, etc.
- Yes No N/A All existing utilities and easements with their locations
- Yes No N/A If utility lines are on site, has the utility companies had an opportunity to review the preliminary plans? A copy of the plans will need to be sent to the utility companies for their review and comment.
- Yes No N/A Design speeds and street classifications (Typically 30 mph for local streets – See Tables 601, 602 and 603)
- Yes No N/A Terrain Classification (See Art. VI)

Horizontal Alignment and Vertical Alignment (with Stationing):

- Yes No N/A Horizontal Curve data showing the centerline radius and delta angle for all curves (See Art. VI, Section 601M for horizontal alignment requirements)
- Yes No N/A Stations shown at 100-foot intervals on centerline
- Yes No N/A Stations shown at all intersections
- Yes No N/A Stations shown at all P.C.'S, P.T.'S, and P.I.'S
- Yes No N/A Pavement and R/W widths shown
- Yes No N/A Street profiles with vertical curve data shown, with approximate "K" values and design speeds. "K" values must comply with ODOT L&D Manual, current edition.
- Yes No N/A Existing topography (specify source datum) at one-foot contour levels, including sites with onsite sewage treatment. Use of County Auditor's website (DALIS) is acceptable for existing topography. The USGS website: <http://water.usgs.gov/osw/streamstats/ohio.html>

may be used to aid in determining watershed characteristics for the site. Note that the Final Engineering Plan requirements for the Master Grading Plan require 1-foot contour intervals except in special circumstances.

Yes No N/A

Sight distance exhibits in accordance with the requirements of Article VI (If not submitted with TIS) for all proposed access points, including emergency access points, onto existing State, County or Township Roads. The height of object shall be determined based on the current roadway profile and for a future roadway profile assuming a profile increase of 6-inches, to account for future overlay(s). See Article VI, Section 602 for further information. The preliminary engineering plan cannot be approved by DCEO without approval of the sight distance exhibits.

Yes No N/A

Extent of grading/clearing limits consistent with current RPC requirements

Yes No N/A

Locations of sanitary & storm sewers, water lines, and flood routing paths

Yes No N/A

Adjoining parcels within 50 feet

Yes No N/A

Existing roads within 200 feet of tract boundary

Yes No N/A

Proposed street connections shown (if to ever be extended)

Yes No N/A

A preliminary profile of all storm sewers and/or culvert crossings under the proposed R/W is required to insure adequate cover per Article IX is provided.

Yes No N/A

Do storm water basins, sidewalk, or other embankment locations create any safety issues for vehicles or pedestrians?

Yes No N/A

Within R/W, sidewalk located 6' from face of curb as per DCEO Standard Drawings?

Predevelopment Storm Water Management Plan* – Section 302E and Supplement to Art. III in Supplemental Specifications to these Standards (Existing Conditions)

*Refer to Article IX for the **minimum** Standards and Specifications for Design

Yes No N/A

Proper scale used (1" = 500 feet maximum)

Yes No N/A

Shows the Boundaries of the entire drainage area (onsite and offsite)

Yes No N/A

Separate plans are required for the entire drainage area and the development area

Existing General Topography and Ground Contours shall be provided for the following:

Yes No N/A

The Development Area

Yes No N/A

All adjacent land within one hundred (100) feet of the Development Area

In addition, the following information shall be shown:

Yes No N/A

Boundary lines of the development area

Yes No N/A

Drainage structures (including those in the entire drainage area)

Yes No N/A

Highways, railroads, parks, and other recreational areas

Yes No N/A

Has all existing subsurface tile, including those on the County Drainage Maintenance Program, been accounted for in the design? Locations of the existing drainage maintenance tile systems within Delaware County are available from Delaware SWCD.

Yes No N/A

The existing subsurface tile system shall not be connected into the storm water management system unless approved as part of the preliminary engineering plan approval.

Yes No N/A

One-foot contour lines of the development area including sites with onsite sewage treatment. Use of County Auditor's website (DALIS) is acceptable

for existing topography. The USGS website <http://water.usgs.gov/osw/streamstats/ohio.html> may be used to aid in determining watershed characteristics for the site. Note that the Final Engineering Plan requirements for the Master Grading Plan require 1-foot contour intervals except in special circumstances

- Yes No N/A
- Yes No N/A
- Yes No N/A

Any existing above-ground structures or facilities on or in the development area

Existing pond or ponding areas shown

If an existing pond is to be used as a storm water control facility, the pond must be evaluated per current requirements (See Supplemental Specifications). This evaluation must be provided prior to submittal of the final engineering and construction plan.

- Yes No N/A
- Yes No N/A

100-year flood plain for any FEMA NFIS watercourse shown

Identification of the existing drainage outlet(s) for the site including size, material type, and condition of any storm sewer or culverts shall be shown. This information shall be based on an onsite investigation and observations of the outlet(s), (e.g., videotape, photographs, etc.) and submitted with the preliminary engineering plans. See Section 901 for additional requirements (e.g. minimum freeboard, minimum ditch/stream slope and velocity, etc.).

- Yes No N/A

An analysis of the capacity of the drainage outlet(s) for the site and a determination of the adequacy of the outlet(s) under the predevelopment conditions

- Yes No N/A
- Yes No N/A

Underground facilities (leach fields, wells, storage tanks, etc.)

Are on-site sanitary sewer systems shown on the plans for the proposed lots and existing adjacent lots? Where is storm water routed related to these systems?

- Yes No N/A

Does the major flood routing for the proposed site affect any property downstream (e.g., existing subdivisions, homes, etc.)? If so, the design engineer shall prepare the final engineering plans per Art. IV, IX and the Supplemental Specifications (Additional requirements for major flood routing).

Drainage Calculations – Section 302 E and the Supplement to Art. III, Table 901, provided in the Supplemental Specifications

- Yes No N/A

Calculations of the predevelopment peak flows from the delineated drainage areas for the 1, 2, 5, 10, 25, 50, and 100-year frequency, 24 hour storms. List the peak flows on the map.

Discussion of Project Issues – Section 302 F

- Yes No N/A

The plan must also include a discussion and identification of any problems which the design engineer and/or owner are aware of which could affect the feasibility of the project.

For County Engineer Use only

- Yes No N/A

Schedule meeting with design engineer, SWCD and Storm Water Department to review comments prior to sending formal review letter.

- Yes No N/A

Notify the Zoning Inspector when we receive the Preliminary Engineering Plan for review.

Yes No N/A

Does the street layout on the preliminary plan match that shown on the RPC Sketch Plan?

Yes No N/A

Were comments from the RPC Sketch Plan adequately resolved?

Yes No N/A

Provide a set of plans to Liberty Township Fire Department (LTFD) for their review. Do not approve plan until LTFD has provided an approval letter.

Comments:

Comment Disclaimer:

The County Engineer Reserves The Right To Make Any Additional Comments At Any Time Up To The Actual Approval Of This Project. See the Delaware County Standards for other items not addressed on this list.

Approved

Disapproved

Reviewed by: _____ Date: _____

Write letter to: _____