

**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      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](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      DESC permit application and associated support documentation included with submittal
- 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 Copy of approved zoning plan and text (Electronic format – PDF)
- 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 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: \*

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**\*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<sub>s</sub> for Standard Delaware County Design and SN<sub>D</sub> 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      Any existing above-ground structures or facilities on or in the development area
- Yes  No  N/A      Existing pond or ponding areas shown
- Yes  No  N/A      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      100-year flood plain for any FEMA NFIS watercourse shown

Yes  No  N/A 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 Underground facilities (leach fields, wells, storage tanks, etc.)

Yes  No  N/A 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.

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**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 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:

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**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: \_\_\_\_\_